121 cont

Watershed Protection and Development Review Department
FY2007 Annual Report

Introduction

This report highlights key accomplishments and how the Department used additional resources to meet its performance goals during FY2007. The information is organized by business plan programs, focusing on those in the Drainage Utility Fund. Data on General Fund supported programs and performance measures are not included in the report but are available on request.

Infrastructure & Waterway Maintenance

FY2007 presented some special challenges in meeting the targeted budget goals because of the very wet year resulting in an unusual amount of personnel time spent handling flood complaints and flood problems. The number of 311 call responses in an average year is 1,600, compared to 2,400 responses in FY2007. Even with the increase in direct citizen responses, highlights of the year's accomplishments by several of the field crew activities were as follows:

- A second Erosion Repair crew was targeted for implementation at the beginning of the fiscal year. However, the equipment for the crew did not arrive until late spring at which time the second crew was hired. Even with this delayed start, the two crews completed 15 projects and stabilized 508 feet of stream channel embankments exceeding the budgeted goals of 14 projects and 500 feet, respectively.

- The Open Waterway Maintenance crews cleared 7.49 miles of creeks and channels exceeding the budgeted goal of 6.00 miles by 25%. The efforts of the group were recognized by the City Manager's office as the overall best in the "Gutsy" category for field responses overseeing the operation of the low water crossing gates both during and after scheduled working hours during storm events.

- The Lady Bird Lake Cleanup activity removed floating litter and debris from the Lake that met community expectations for visual and water quality conditions of the waterway, and crews spent over 8,400 hours by removing debris deposited as a result of major storm events. A team of trained observers conduct visual surveys by boat on the Lake between Tom Miller and Longhorn Dams on a quarterly basis. Forty-two locations are evaluated for aesthetic quality and rated between 1.0 and 5.0, 1.0 being the best score. The visual index of Lady Bird Lake averaged 1.5 for the year, well below the maximum goal limit of 2.00.

- The Storm Drain Cleaning crews are responsible for cleaning 400 miles or approximately 2,000,000 feet of pipelines that serve as the City's underground stormwater collection system. Five percent (5%), or 100,000 feet, is the long term annual cleaning goal. The annual budget goal was 80,000 feet, or 80%, of the annual long term need. In FY2007, the crews cleaned 75,554 feet falling short of the goal by 4,446 or 5.5%. However, these crews are the major responders to 311 calls and they handled 755 calls versus an average of 400 calls per year. They also cleaned 5,378 inlets, exceeding the budgeted goal of 5,000.

Activity/Performance Measure	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Budget	FY07 Actual
Creek Vegetation Control					
Miles of creek maintained	62.74	62.58	64.40	66.00	63.58
% of identified creeks(miles) maintained for vegetation control	94.5%	100%	100%	99.2%	99.8%

Activity/Performance Measure	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Budget	FY07 Actual
Erosion Repair					
Number of projects completed	12	14	16	14	15
% of prioritized projects provided increased erosion protection	6.7%	4.6%	5.3%	4.7%	5.0%
Pond Maintenance					
Number of residential ponds to be maintained	491	577	599	610	612
Number of residential ponds maintained	244	522	555	565	531
% of residential ponds maintained	49.7%	90.5%	92.7%	93.0%	86.8%
Storm Drain Cleaning					
Feet of pipeline cleaned	53,013	81,040	87,770	80,000	75,554
% of annual feet of pipeline targeted for cleaning completed (100,000 ft basis)	53%	81%	87.8%	80.0%	75.6%
Storm Drain Rehabilitation					
Feet of pipeline installed or repaired	5,493	4,878	4,776	4,000	3,186
% of annual feet of targeted pipeline installations & repairs completed (10,000 ft basis)	54.9%	48.8%	47.8%	40.0%	31.9%
Town Lake Cleanup					
Tons of litter, trash and debris removed form Town Lake	230.8	250.8	221.6	200.0	243.3
Maintain Visual Index of Pollution for Town Lake below 2.00	1.54	1.20	1.4	2.0	1.5
Open Waterway Maintenance					
Miles of creeks, channels and ditches cleared	7.78	6.60	7.15	6.0	7.49
% of annual targeted miles of open waterways cleared	25.9%	22.0%	71.5%	60.0%	74.9%

Flood Hazard Mitigation

The Flood Hazard Mitigation program works to reduce the impacts of flooding to protect lives, property and the environment. Some of the program's results and achievements in 2007 are discussed below:

- The division initiated design of the Waller Creek Tunnel project and supported the Financial Services Department in the creation of a Tax Increment Finance District to finance the project. Design phase services are underway. The project will include 5,400 LF of 22 ft. diameter tunnel from Waterloo Park to Town Lake to divert storm flows from Waller Creek. The project will allow development to occur in the portion of downtown Austin currently subject to the floodwaters of lower Waller Creek. The tunnel system will also provide flood protection to 42 existing buildings and 12 roadway crossings.

- The division completed the first year of the Onion Creek Buyout Project partially funded by a DEM/FEMA HMGP Buyout Grant Award ($6,255,823) for 118 houses located in the floodplain along Lower Onion Creek. Statistics: 81 appraisals conducted, 60 purchases approved by Council, 72 offers made, 47 property closings achieved.
- For the FEMA/NFIP & City Map Modernization project, staff completed floodplain model revisions for four watersheds, and processed protests and appeals from the public on the 22 preliminary maps. The FEMA "Letter of Final Determination" is anticipated by December 2007.

- Conducted six (6) floodplain variance evaluations/public hearings, including a major downtown redevelopment proposal---Market Place/Schlosser development. This variance required extraordinary effort by staff to direct the applicant to a no adverse floodplain impact configuration for the proposed floodplain development.

- The exceptional number of storms occurring during 2007 placed very high monitoring demands on FEWS staff; all storms were adequately monitored with numerous road closings. The particularly wet late spring and summer resulted in 18 FEWS mobilizations and several week-long periods of near continuous weather monitoring.

- WPDR led coordination with City congressional representation to achieve Water Resources Development Act (WRDA) 2007 inclusion of Project Authorization and Credit Language for previous buy-outs. WRDA 2007 progressed through House and Senate and Joint Committee, and House approval of Joint Committee WRDA bill proposal before August break. The bill was successfully passed in November 2007. This legislation offers Federal grant funding opportunity to the City of $46 million and recovery of previous City expenditures up to $4 million. Staff is continuing coordination with the Corps of Engineers on re-initiation of Williamson Creek Feasibility Study and Onion Creek project engineering design activities.

- Other Stormwater Pond Safety Activity highlights included:
    - Completed the Emergency Action Plan for the Duval Road Dams which will be used as a template for communication protocol for use with emergency action plans for the more than 60 high hazard dams located throughout the city of Austin.
    - The Dam Modernization Recommendations/Prioritization report was completed, and dam modernization design has been initiated for two dams-Far West and Sendera Dams.
    - The Drainage Criteria Manual and Environmental Criteria Manual were revised to incorporate dam safety criteria.
    - Initiated development of a policy for tree management on existing dams
    - Initiated correction of construction deficiencies to the Creekbend Floodwall which provides protection against flooding for more than 175 structures. Continued coordination with Field Operations to ensure compliance with FEMA maintenance plans for the Crystalbrook and Creekbend flood walls,
    - 34 dam inspections completed.

- Construction was completed on Rosedale Phase I Storm Drain Improvements. Major stormdrain improvements were made for the Rosedale area in the Shoal Creek watershed to address major house and street flooding conditions. This project also includes a large "stormceptor" for WQ enhancement in the urbanized area.

- Thirty-five house structures were provided increased flood hazard protection due to completion of storm drain system improvements.

Activity/Performance Measure	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Budget	FY07 Actual
Creek Flood Hazard Mitigation					
Number of structures at risk of creek flooding with increased protection through drainage system improvements	185	137	0	36	3*
Number of buyouts completed	84	98	113	148	160

* The Pond G Regional Flood and Erosion Control Pond construction was anticipated to be complete in FY07; however, the project was impacted by a significant number of rain delays resulting in fewer structures provided with increased protection than the FY2007 goal of 36.

Activity/Performance Measure	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Budget	FY07 Actual
Flood Early Warning System (FEWS)					
Number of Office of Emergency Management mobilizations completed	15	19	7	15	13
Flood Plain Management					
Number of floodplain development assistance meetings conducted	99	126	167	110	99
Number of requests for Flood Insurance Rate Map (FIRM) information	1,599	1,586	1,515	1,600	1,637
Localized Flood Hazard Mitigation					
Number of structures with increased flood hazard protection due to storm drain system improvements	8	17	17	20	35
Regional Stormwater Management					
Annual value of RSMP fees collected	$1,148,813	$1,535,139	$1,161,551	$1,000,000	$942,881
Number of participation projects completed	New for FY06	New for FY06	1	1	2

Water Quality Protection

The Environmental Resource Management Division (ERM) manages the activities in the Water Quality Protection program. This program works to protect and improve water quality in Austin's creeks, lakes and aquifers by preventing, detecting, evaluating and reducing water pollution. The FY2007 achievements for activities in this program are listed below.

- The Education group launched a campaign asking citizens to avoid using the combined fertilizer/herbicide product, Weed and Feed, that contains atrazine based on water quality monitoring data which shows that the herbicide, atrazine, is detected in more than 70% of the springs sampled and at more than 50% of surface water monitoring sites. For the first time television advertising was used to reach Austinites city-wide. A survey in the Travis Country pilot neighborhood showed promising results – 36% of the responders said they had stopped using weed and feed (50% said they had never used the product). Only 14% said they had not seen the educational campaign – the same number that still used weed and feed products.

- For the first time, all AISD fifth graders received water quality education through either Earth Camp, the four-day, outdoor program, Teacher-Led Earth Camp (led by AISD teachers who have previously attended the full Earth Camp program) or Earth School, the one-hour, hands-on lesson offered in the classroom. A total of 6,004 students were educated.

- The Water Quality Education group also took the lead on organizing Austin's first Green City Festival at City Hall. Eleven City departments and more than 30 non-profits exhibited. Speakers included the Mayor and City Manager and several Council Members. Approximately 4,500 Austinites attended the event. (www.greencityfest.org)

- WPDR staff used detailed stormwater monitoring & GIS data to estimate benefits, costs, and extent of opportunity to offer a new strategy to redevelopment and environmental protection in the BSZ; staff worked with an Advisory Group led by Councilmember Lee Leffingwell for a year. This work led to the passage of a new ordinance in November 2007.

- WPDR staff continued work on the pond geodatabase upgrade, completing accurate data entry for over 4,600 commercial and over 850 residential stormwater controls. The work will be integrated into program improvements for inspection and maintenance of these ponds.

- FY2007 was characterized by weather extremes when it came to rainfall. The first part of the year was dry which resulted in little stormwater sampling but the spring and summer were extremely wet with record rainfall in the area and 30+ consecutive days of rain. This resulted in a shortfall in the funding in the WQM lab analysis agreement. Several weeks of rain were not sampled while additional funding was secured.

- Green roof monitoring continued this year. The City monitoring at Escarpment Village continued as well as the cooperative study with The Lady Bird Johnson Wildflower Center. WQM installed a second monitoring station measuring runoff from a green roof on a private residence in south-west Austin. These data taken together will provide a clear picture of how green roofs perform with respect to water quality and how they should be managed. Initial indications are that properly managed green roofs may provide some benefit but there is a risk of runoff with high nutrient concentrations in some cases.

- In cooperation with the Education group and the Wildflower Center study plots were constructed to examine nutrient leachate from fertilized lawns. This study will look at application rates and types of fertilizers in order to minimize the amount if nutrients leaching to the ground water. The study was started in late FY2006 and scheduled to continue through mid-FY2008. Preliminary indications show that improperly applied fertilizers may leach nutrients in to the subsurface waters but slow-release fertilizers applied at the correct rate when needed may be used successfully without environmental impact.

- WQM established four monitoring stations to collect stormwater runoff data from several different parking lots. These lots represented different types and ages of sealant as well as unsealed parking lots. Analyses should be complete in FY2008, depending on rainfall patterns.

- City Hall requested creation of a Downtown Task Force to address citizen concerns about activities in the Downtown area. The Task Force was created and headed by the Economic Growth and Redevelopment Services Department; PPR staff are members of the task force to help address activities that can impact the environment. PPR staff investigated specific problems/issues expressed by stakeholders such as accumulation of gum, bird droppings, grime, etc. as well as grease and trash from food service activity along 6th Street. PPR recognized the need for sidewalk cleaning but Federal, State and City regulations prohibit wastewater discharges into storm drains. Staff communicated stormwater regulations regarding sidewalk washing activities to City Hall. By City Hall directive, Solid Waste Services (SWS) purchased washing equipment that meets regulatory needs and collects the wastewater to prevent pollution discharges. PPR staff worked with SWS to implement the washing in compliance with stormwater regulations. Samples of the wash water were collected and analyzed. As of August 2007, SWS is washing the downtown sidewalks on a daily basis. PPR distributed information packets to 6th Street and Congress Avenue businesses on how to help keep the alleyways clean. In addition, PPR is currently working on additional educational materials or "Guide To's" that will educate business owners and operators on Best Management Practices for the maintenance of downtown dumpsters, grease bins and pavement cleaning. Staff worked to develop a leaf blowing brochure and provided technical information for the possible development of a leaf blowing ordinance for the downtown area.

- Citizen Jarrett Cole contacted the East Austin Environmental Initiative (EAEI) of the Pollution Prevention and Reduction Section to request that a city-owned portion of property adjacent to his home on Rosewood Avenue in East Austin be cleaned and better maintained for citizen use. The EAEI was created to help improve the quality of life in Austin in a targeted area east of IH-35. The Initiative encourages environmental awareness, community activism and citizen involvement.

It provides a focus for citizens to obtain viable solutions to their environmental concerns. The City of Austin owns the heavily vegetated 2.283-acre tract of land located north of Rosewood Avenue and West of Ridgeway Drive that contains a natural ravine and a spring. In a coordinated effort with Easter Seals and WPDRD Field Ops, nearly 71 tons of large bulky material was removed from the area that revealed glass and other debris, indicating the possibility of an old dump site. EAEI staff evaluated the sight and collected surface samples to help determine the need of further assessment. The preliminary evaluation resulted in the need of a more thorough site assessment, conducted by an environmental consulting firm hired by the City. The goal is to characterize the dump site waste and remediate as necessary. A land survey was done to delineate the boundaries of the City property and fencing was installed to restrict access. PPR staff formed a team of experts that include staff from the Health and Human Services Department (HHSD). Soil sampling revealed elevated levels of lead and pesticides in specific areas. A remediation plan is being developed that includes the possibility of utilizing Brownfield funding for the cleanup. EAEI staff communicated actions and findings to the neighborhood through distribution of neighborhood notices, speaking with community members over the phone, and by attending a neighborhood meeting. Remediation efforts will continue into FY2008 and may include additional assessment on adjacent private property.

- PPR staff observed significant problems with polluting discharges coming from daily vehicle washing at the facilities. As a result, staff developed a letter providing information to help assist the rental car industry in complying with stormwater regulations. Approximately 100 letters were sent to facilities in the Austin area. Facility follow-up visits revealed significant improvement. PPR staff has not received Pollution Hotline calls from citizens since the mail out.

- This was a busy year for the EAEI. Staff produced and distributed two newsletters to the community and issued the first EAEI newsletter in Spanish translated by staff. EAEI staff participated in the Hispanic Health Festival, the HFC Homebuyers Fair at the Montopolis Recreation Center, the Green Garden Festival, the Earth Day Event at Republic Square, the Homewood Heights KAB cleanup, and the University Hills@Dotty Jordan Park KAB cleanup event. Additionally, staff participated in the Oak Springs cleanup and development, led the Rosewood Avenue site remediation project, and conducted tours of the Rhizome Collective headquarters and the Grove Landfill sites. Staff also assisted the City Brownfield Program with review of assessment reports for fuel tank sites and investigated environmental concerns related to the Pure Castings Company located in East Austin. Staff developed a new EAEI logo and brochure - Austin Guide to Apartments, providing information to tenants and managers on how to help protect the environment.

- Staff from the Pollution Prevention and Reduction Section (PPR) experienced an increase in high profile incidents in FY2007 that involved the release and successful recovery of large quantities of both hazardous and non-hazardous materials from the environment. PPR staff responds on a 24 hour basis and works with responsible parties and remediation contractors on the immediate recovery of released materials. PPR staff oversees any remediation activities necessary to restore impacted properties to pre-spill conditions. Notable incidents during the fiscal year included an 18 wheeler accident and a used oil tanker truck at the intersection of Parmer Lane and Hwy 290 East that resulted in the recovery of an estimated 5,000 gallons of used oil and fire fighting runoff; and a train derailment near East 6th Street that resulted in the release and recovery of approximately 1,000 gallons of fuel in a very busy intersection of town.

- On August 27, PPR staff responded to a 50,000 gallon sewage overflow from the AWU collection system into a remote tributary of Bull Creek in the creek bottom below West Rim Cove. The site is well downstream of Stillhouse Hollow, Barrow preserve and any current Jollyville salamander sites. Spill staff assisted AWU crews in recovering about 50% of the sewage from three different locations along the tributary. An undetermined amount of contaminated creek water released downstream into the main tributary of Bull Creek and Bull Creek Park. The cause of the spill appears to be blockage of grease and debris in the line. PPR staff ensured the cleanup was completed and initiated a benthic evaluation and sample collection of the creek. Samples showed

total fecal coliform levels above contact recreation standards (400 count) from the low water crossing on Lakewood Dr. to a point just upstream of the main park area. Another sample taken further upstream was below contact recreation standards. This event triggered the beginning of a permanent coordinated effort between the WPDRD, HHSD and AWU for these kinds of incidents. Overflow response strategy meetings began to establish roles, responsibilities and emergency contact numbers for a core City response team. The team continues to evaluate the area in an attempt to determine possible sources for the high bacteria which may not be related to this wastewater overflow event.

- Construction was completed on the final two (for a total of four ponds to treat TXDOT runoff) stormwater quality ponds at the intersection of Ben White and I-35 (Williamson Creek) as well as a large regional wet pond, the Z-K Arbor Walk wet pond. The Z-K pond has been nominated by the Texas Council of Engineering Companies for Engineering Excellence Award. The Barton Hills pond in Zilker Park is complete and functioning per design. Finally, the Rosedale Stormceptor was completed and is now being monitored for effectiveness by the WQ Monitoring group.

- In addition to Capital Project planning, design and implementation, the Stormwater Treatment section worked as technical advisors to ensure water quality standards were met on the following projects: State Highway 45 SW (TXDOT), US290/71 at Oak Hill, US290 from Oak Hill to Dripping Springs, Onion/Williamson Creek flood project (USACE/COA), Barton Springs Zone Redevelopment Ordinance.

- The Stormwater Treatment section completed the update of Innovative Water Quality Controls section of the Environmental Criteria Manual (ECM). This effort resulted in design criteria for alternatives to standard sand filters that include: Rainwater harvesting, disconnected impervious cover, biofiltration, porous pavement and rain gardens. In addition, the ECM update included written criteria for Urban Watershed Cost Recovery and for participation in the Fee-in-lieu program.

- PAHs and Coal Tar Sealant Update
    - In 2007, City overcame a challenge by a sealant company to overturn the ban. TCEQ unanimously ruled in favor of the sealant ban.
    - In September 2007, the New York Academy of Sciences (NYAS) completed a comprehensive look at PAH pollution in New York Harbor. City staff had extensive interaction with NYAS on sealant pollution. The research is significant in that it concludes that coal tar based pavement sealants are one of the primary sources of PAHs to New York Harbor, and that PAH pollution from pavement sealants are a problem even in the least auto-dependent city in the US.
    - During this year, both Home Depot and Lowes have ceased the sale of coal tar based sealants nationwide, partly due to the efforts in Austin.
    - Dane County, Wisconsin, became the second government jurisdiction to ban coal tar sealants.
    - Part of the biological work that ERM did to evaluate the effects of sealant on Austin streams was published this year in the peer reviewed literature and has garnered significant attention for this issue and the high quality of work the City of Austin has done. http://www.bioone.org/perlserv/?request=get-abstract&doi=10.1899%2F06-109.1
    - Additional research was accomplished this year on pavement sealants that compliments previous chemical and biological studies. An innovative photographic technique, adapted from the biomedical industry, was used to determine that at least 3% of coal tar sealants wear off annually.

- ERM staff made significant investment of time in the Water Treatment Plan #4 project, which required chemical and biological monitoring, permit review and technical oversight to determine the best practices with the least impacts for the project. Highlights are included below.

- ERM provided technical leadership and source information that influenced the approach to drinking water disinfection and stormwater treatment for the new treatment plant.
- ERM created and steered the implementation of Environmental Commissioning for the treatment plant to minimize effects on surrounding sensitive species. Information developed through the process was critical to the decision by City Council to reconsider the earlier decision to build at Bull Creek.
- ERM monitoring staff has collected a large amount of background data in and around the WTP4 site in the headwaters of Bull Creek, documenting its status and variability before ground is broken at the site.

- Native plants were successfully introduced into Barton Springs Pool during the fall of 2006. They survived, despite a record number of floods in 2007. This will help toward re-establishing a balanced and thriving ecosystem in the pool.

- A list of short-term improvement projects were developed for Barton Springs Pool in collaboration with PARD and input from numerous stakeholders. Projects will repair years of neglect of basic facilities, improve cleaning methods, enhance the visitor environment around the pool area, and initiate work to mitigate human impacts to the pool ecosystem.

Activity/Performance Measure	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Budget	FY07 Actual
Salamander Conservation					
Number of activities in compliance	43	43	43	43	43
% of activities in compliance with Federal 10(a) and State permits	100%	100%	100%	100%	100%
Environmental Impact Assessments					
% of environmental impact assessments completed	89%	100%	100%	100%	100%
Total number of assessments or reviews completed	352	516	568	320	513
Pollution Detection, Tracking & Forecasting					
% of projected water quality study reports published	70%	75%	100%	100%	100%
Number of water quality study reports published annually	14	10	19	12	12
Pollution Prevention & Reduction					
Gallons of pollutants recovered as a result of business inspections and spills response	4,902,363	1,970,806	778,529	1,100,000	775,782
Cubic yards of pollutants recovered as a result of business inspections and spills response	314	473	1,110	125	830
% of previously inspected facilities with 100% compliance at current fiscal year inspection	61.6%	62%	56.6%	60.0%	54.5%
Number of stormwater discharge permits issued	1,151	1,194	1,165	1,160	1,144
Water Quality Planning & Intergovernmental Compliance					
Number of activities in compliance	122	122	126	122	121
% of activities in compliance with State & Federal stormwater permits	100%	100%	100%	100%	100%
Stormwater Quality Evaluation					

Number of total storm sites successfully sampled and analyzed	1,002	1,009	871	800	1,502.5
% of total storm sites successfully analyzed annually	93%	97%	97.75%	90.00%	97.56%
Stormwater Treatment					
Cumulative number of acres treated	4,559	4,676	4,868	5,237	5,283
% of total suspended solids (TTS) removed per TSS produced annually in drainage areas with publicly-funded structural water quality controls	52%	50%	51%	52%	54%
Water Quality Education					
Number of students educated in Earth Camp	616	547	537	500	512
Number of storm drains marked	859	861	1,907	500	1,977
% of improvement in pre- and post-tests for Earth Camp students	56%	71%	48%	60%	77%

Stream Restoration Program (Creek Erosion)

The Stream Restoration Program's objective is to create a stable stream system that decreases property loss from erosion and increases the beneficial uses of our waterways. The Stream Restoration Program services include stream stability assessments, capital and in-house project planning, in-house design and plan preparation, project implementation, and technical assistance provided to other sections, divisions, City departments, and the private sector. The Stream Restoration Program selects localized erosion and stream reach projects and provides in-house designs, plans and construction management for the Field Operations Division Erosion Repair and Stream Stabilization Crews.

Through the Watershed Protection Master Plan, citizen reports and field reconnaissance staff have identified over 1,700 localized erosion sites and over 300 unstable stream reaches in urbanized watersheds. Many homes, businesses and public amenities, i.e., parks, utilities and bridges, are impacted by active erosion. The Stream Restoration Program focuses on stream channel stabilization to protect private properties and public infrastructure, and enhance the natural character of urban streams through the use of natural materials and plants. FY2007 Program Highlights include:

- Met performance goal by completing 14 localized erosion design/plans and completing 800 linear feet of stream stabilization design/plans.
- Exceeded performance goal by purchasing and removing four (4) properties from Erosion Hazard Zones.
- Responded to 171 requests for technical assistance.
- Assisted CSR Complaint Inspectors with 116 citizen service requests.
- Generated 62 work requests for Field Operations.
- Assisted FEMA inspectors with 65 site inspections.

On-going Projects:

- Continued construction on the Fort Branch Creek project (Manor Road to Tributary 1).
- Continued design on the Fort Branch Creek capital project (reaches 6 and 7).

Activity/Performance Measure	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Budget	FY07 Actual
Stream Restoration Program					
Number of erosion solutions proposed	12	12	14	14	14
Total number of erosion sites that need increased protection	1,814	1,802	1,788	1,774	1,774
% of erosion sites with increased erosion protection	0.66%	0.66%	0.78%	.79%	.79%

Brownfields

The Brownfields program provides incentives and information to owners of contaminated property so they can cleanup and redevelop the land.

- The program assisted nine Brownfield Property Owners by funding environmental site assessments. One site is slated to be an expanded grocery store and laundromat. Another site is planned as a mixed use project along the East 11th Street Redevelopment Corridor.
- Brownfield staff also developed and implemented the Brownfields Underground Storage Tank (UST) program which included partnering with TCEQ and updating the official state and city UST databases.

Activity/Performance Measure	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Budget	FY07 Actual
Brownfields					
Number of eligible sites assisted by the program	17	6	6	9	9
Number of potential Brownfield sites identified	244	106	6	9	9

Master Planning

The Master Planning program coordinates the integration of flood, erosion and water quality activities to develop, prioritize and implement cost effective, integrated solutions.

- WPDRD completed six integrated CIP projects this year, exceeding the projected performance measure goal of two projects. Those completed include ZK Pond, 3 erosion buyouts on Dixie Drive, Carson Creek Thornberry Road Culvert Channel Improvements, and Shoal Creek Rosedale Stormdrain Improvements Phase 1. Integrated projects benefit the City by coordinating capital project planning and implementing sustainable capital projects, resulting in more efficient utilization of our drainage dollars by addressing water quality, erosion and flooding needs with the same project. Further benefits include improving capital projects by minimizing the negative impacts one mission's projects could have on other mission goals. Implementation of fully integrated capital projects was a recommendation of the Watershed Protection Master Plan.

- Following the successful completion of the DIG 2006 scope of work, a contract extension was sought and granted to pursue additional work for this project. Dubbed DIG 2007, the scope of work was driven by the most successful components of the DIG 2006 project - GPS field data collection and manhole inspection. The scope of work for this extension was to perform GPS field data collection in 14 urban watersheds. In addition, additional work was able to be performed on three additional Urban Water Quality Protection Zone watersheds. The scope of work for manhole inspections included four Urban watersheds.

- The GPS field data collection effort yielded better than expected results, collecting detailed information on an impressive 236 ditches, 590 culverts, 714 manholes, 1,903 outfalls and 9,663 inlets. Together, this information represents an estimated 40% of the total number of surface visible features within the drainage infrastructure system.

Activity/Performance Measure	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Budget	FY07 Actual
Master Planning					
Number of integrated CIP solutions implemented	2	8	6	2	6

One Stop Shop

The Drainage Utility supports the environmental review and inspection functions in the One Stop Shop. Environmental inspections are part of the Site/Subdivision Inspection activity. The Environmental Inspection Section is responsible for inspecting construction projects for compliance with City Code requirements.

- On average inspectors were able to inspect 66% of the 1,421 permitted commercial sites and 51% of the 5,782 active residential lots monthly. Eighty-nine (89%) of these inspected commercial sites were compliant and 96% of the inspected residential lots.
- Environmental Inspectors issued 175 stop work orders due mostly to inadequate erosion and sedimentation controls or for development activities lacking a required approved site plan.
- Of the 3,367 total commercial ponds, 790, or 23%, were inspected. Of the 790 commercial ponds inspected, 338, or 43%, were non-compliant.
- The Barton Springs Zone Operating Permit Program inspected 100% of the 116 Water Quality Facilities (156 Water Quality Controls), and conducted a total of 483 Water Quality Facility inspections.
- The Development Community achieved a 92.9% compliance rate for commercial permitted sites, a 3.2% increase over the FY2006 compliance rate.

Activity/Performance Measure	FY04 Actual	FY05 Actual	FY06 Actual	FY07 Budget	FY07 Actual
Site/Subdivision Inspections					
Number of environmental inspections conducted	31,165	52,067	49,124	--	52,851

Support Services

The Drainage Utility Fund is the funding source for activities that support the department's missions of flood control, erosion control and water quality protection.

- Drainage fee revenue provides 97% of the Utility's revenue. In FY2007, the Utility collected $54.43 million in total revenue, exceeding the approved budget by $1.83 million, or 3.4%, and the year-end estimate by 1.0%. Revenue expectations were exceeded due to higher than anticipated amounts of interest income.

- Total expenditures of $30.31 million were $2.43 million less than budget and $0.73 million, or 2.2%, less than estimated. Most of the unanticipated savings came from contractual savings in the Infrastructure and Waterway Maintenance and Water Quality Protection programs. The combination of increased revenue and expenditure savings result in an unaudited ending balance of $11.34 million that is $2.05 million, or 2.2%, greater than estimated.

- The Department exceeded the CIP spending plan of $16.45 million by 1.0%. The FY2007 spending included many of the projects discussed in the program highlights above. Planned spending also paid for replacement of equipment used for infrastructure maintenance, preliminary engineering studies and project design phases.

- WPDR had 405 media contacts for an advertising equivalency value of $470,000. Topics that generated a lot of media coverage included Water Treatment Plant #4, erosion at Arroyo Seco in the opening article of the new Statesman Watch column, the Waller Creek Tunnel, Proposition 2

as well as several department-initiated media topics such as road closures, Flood Awareness Week, new Floodplain maps and the Arbor Walk Regional Detention and Water Quality Pond.

- In FY2007, WPDR/HR introduced a new employee orientation program for field operations personnel. This allows new employees to have knowledge of hazard control procedures and receive site specific awareness training.

Closing

WPDR had many accomplishments over the course of FY07. The Department continues to clarify services, performance measures, and the organizational structure in order to manage for results more effectively. Department staff will continue to emphasize collaborative relationships with other City departments and external agencies in order to meet its goals of flood control, erosion control, and water quality protection in the most efficient manner.

Watershed Protection and Development Review

FY2007 Annual Report

1

FY2007 Key Highlights

Water Quality Protection

- New education initiative launched: Avoid Weed and Feed campaign
- Organized Austin's first Green City Festival
- Growth of Grow Green landscaping program
- Passage of new Council Ordinance relating to redevelopment in the Barton Springs Zone

2

FY2007 Key Highlights

Water Quality Protection (continued)

- Construction completed on the final two stormwater quality ponds at Ben White / I-35 as well as the Z-K Arbor Walk wet pond
- COA overcame a challenge to overturn its ordinance banning the sale and use of coal tar sealants
- Native plants introduced into Barton Springs Pool in 2006 survived a record number of floods in 2007
- Effectively handled an increase in large scale spill events

3

FY2007 Highlights

Flood Hazard Mitigation

- Design initiated on Waller Creek Tunnel project
- Completed first year of Onion Creek Buyout project – 47 property closings achieved
- Construction completed on Rosedale Phase I storm drain improvements
- Conducted six floodplain variance evaluations/public hearings

4

FY2007 Highlights

Stream Restoration Program (Creek Erosion)

- Completed 14 localized erosion design/plans and 800 linear feet of stream stabilization design/plans
- Purchased and removed four (4) properties from Erosion Hazard Zones.
- Assisted FEMA inspectors with 65 site inspections.
- Assisted CSR Complaint Inspectors with 116 citizen service requests
- Continued construction on the Fort Branch Creek project (Manor Road to Tributary 1)

5

FY2007 Highlights

Infrastructure & Waterway Maintenance

- Provided 2,400 responses to 311 calls compared to annual average of 1,600
- Second Erosion Repair crew added in spring of FY07
  - Completed 15 projects
  - Stabilized 508 feet of stream channel embankments

6

FY2007 Highlights

One Stop Shop – Site/Subdivision Inspections (Environmental)

- On average inspectors were able to inspect
  - 66% of the 1,421 permitted commercial sites and
  - 51% of the 5,782 active residential lots
- 175 stop work orders issued by Environmental Inspectors
- Of 3,367 commercial ponds 23% were inspected
- 100% of the 116 Water Quality Facilities inspected by Barton Springs Zone Operating Permit Program

7

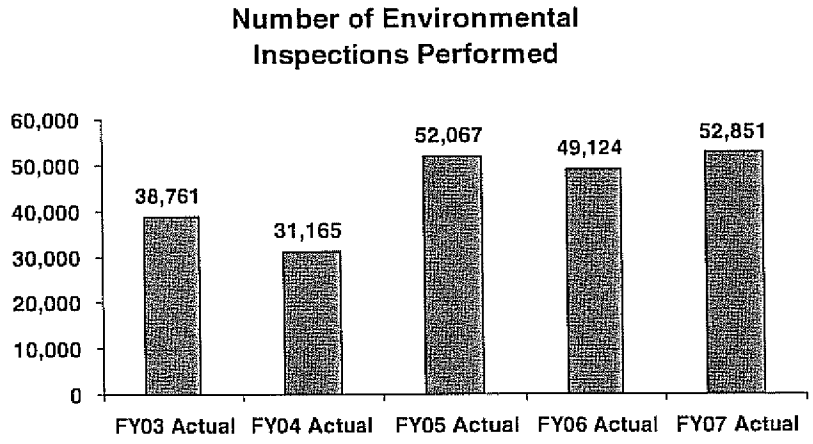
FY2007 Performance Data

Additional Performance Information	FY 2005 Actual	FY 2006 Actual	FY 2007 Budget	FY 2007 Actual
Number of erosion solutions proposed	12	14	14	14
Percent of annual pipeline installation and repair completed	48.8%	47.8%	40.0%	31.9%
Maintain visual index of pollution for Town Lake below 2.0	1.2	1.4	2.0	1.5
Number of structures with increased protection due to storm drain improvements	17	17	20	35
Gallons & cubic yards of pollutants recovered as a result of inspections & spills response	1,970,806/ 473	778,529/ 1,110	1,100,000/ 125	775,782/ 830

8

FY2007 Performance Data

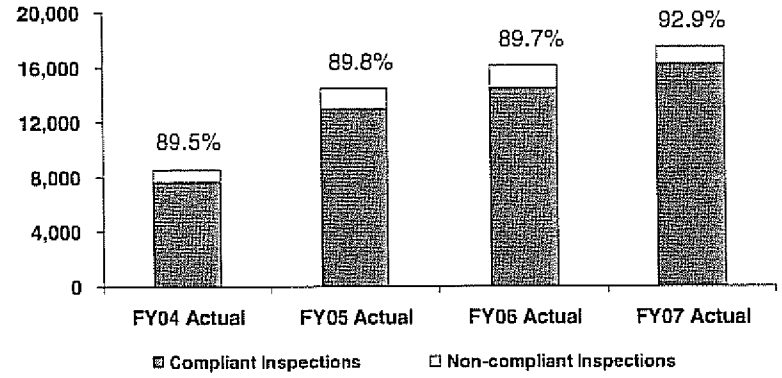
One Stop Shop – Site/Subdivision Inspections



9

FY2007 Performance Data

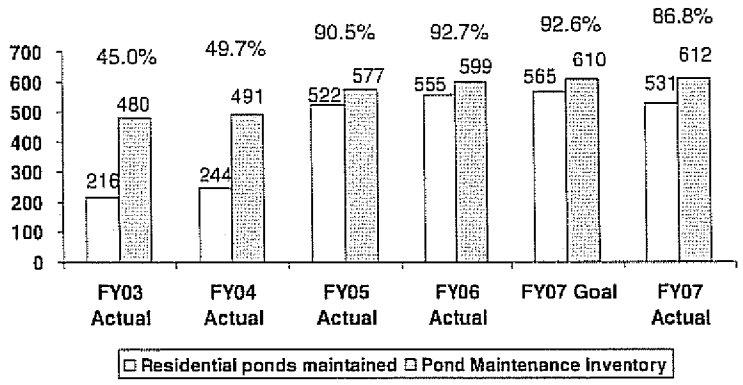
One Stop Shop – Site/Subdivision Inspections



10

FY2007 Performance Data

Infrastructure & Waterway Maintenance



11

Other Budget Highlights

- Met 101% of the $16.45 million Capital Improvement Program spending plan
- Completed 6 integrated CIP projects, exceeding FY07 Goal of 2 projects
- Implemented DIG 2007
  - GPS field data collected on 236 ditches, 590 culverts, 714 manholes, 1,903 outfalls and 9,663 inlets
  - Information collected on approx. 40% of the total number of surface visible features within the drainage infrastructure system

12

ENVIRONMENTAL BOARD MOTION 020608-C1

Date: February 06, 2008

Subject: River Place Center – SPC-2007-0561C

Motioned By: Jon Beall Seconded by: John Dupnik, P. G.

Recommendation
The Environmental Board recommends **conditional approval** of a variance request to Land Development Code25-8-454(D)(1)(a) - To exceed allowable impervious cover of 20% for River Place Center.

Rationale
This applicant will work with staff to include the application of Low Impact Development techniques.

Dissenting Opinion
The commitment to work with staff to implement Low impact Development techniques does not provide the surety that these issues will be addressed by the Applicant to the satisfaction of dissenting Board Members.

Vote 4-2-0-1-0

For: Neely, Ahart, Dupnik and Beall

Against: Anderson, and Moncada

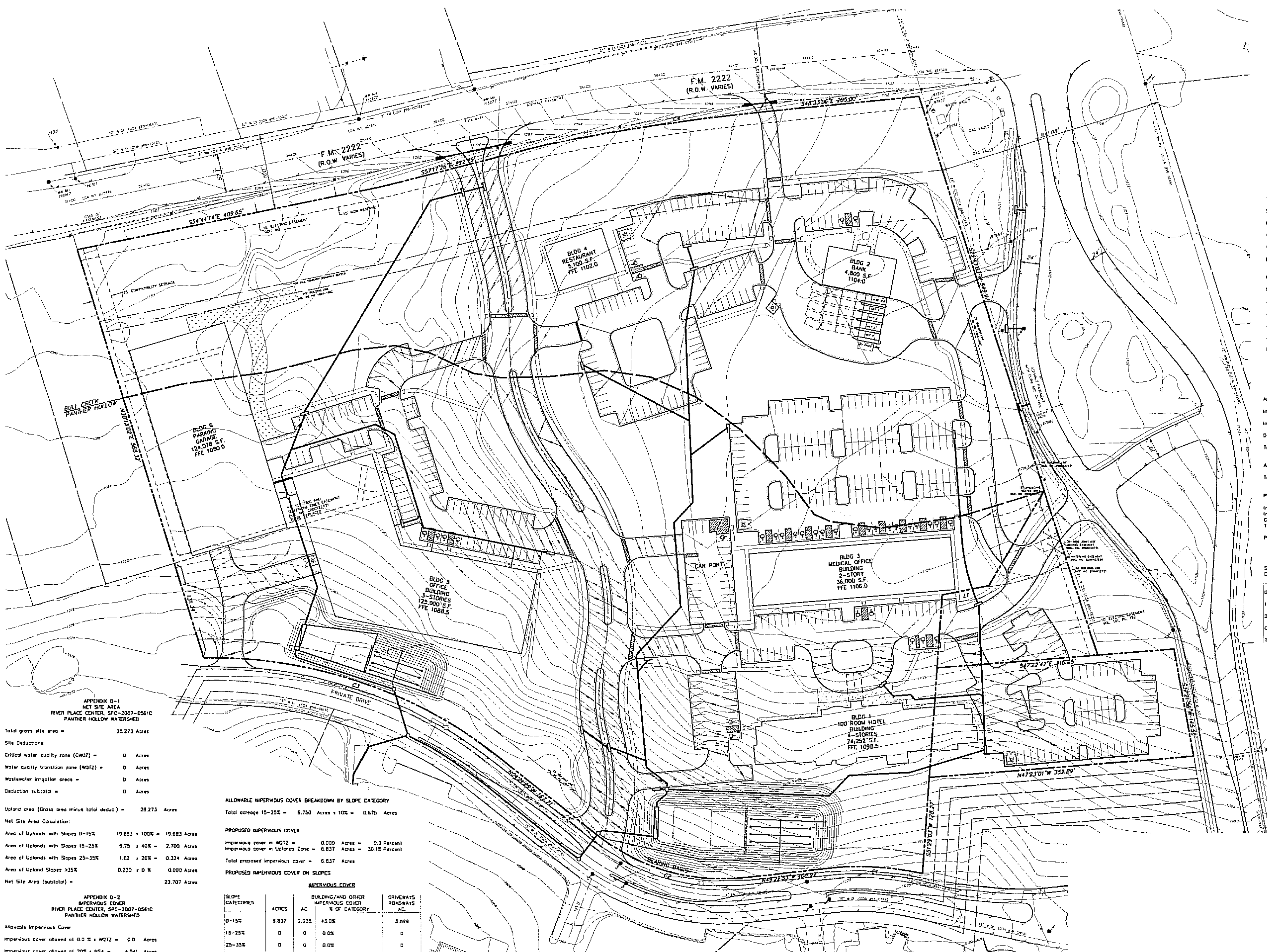
Abstain:

Absent: Maxwell

Recused:

Approved By:

Dave Anderson P.E., CFM
Environmental Board Chair



APPENDIX O-1
NET SITE AREA
RIVER PLACE CENTER, SPC-2007-0561C
BULL CREEK WATERSHED

Total gross site area =	9.160 Acres	
Site Deductions		
Critical water quality zone (CWQZ) =	0 Acres	
Water quality transition zone (WQTZ) =	0 Acres	
Wastewater irrigation areas =	0 Acres	
Deduction subtotal =	0 Acres	
Upland area (Gross area minus total deduc.) =	9.160 Acres	
Net Site Area Calculation:		
Area of Uplands with Slopes 0-15%	9.160 x 100% =	9.160 Acres
Area of Uplands with Slopes 15-25%	0 x 40% =	0.000 Acres
Area of Uplands with Slopes 25-35%	0 x 20% =	0.000 Acres
Area of Upland Slopes >35%	0.000 x 0 %	0.000 Acres
Net Site Area (subtotal) =		9.160 Acres

APPENDIX O-2
IMPERVIOUS COVER
RIVER PLACE CENTER, SPC-2007-0561C
BULL CREEK WATERSHED

Allowable Impervious Cover

Impervious cover allowed at 0.0 % x WQTZ =	0.0 Acres
Impervious cover allowed at 40% x NSA =	3.664 Acres
Deductions for perimeter roadway =	0.172 Acres
Total Impervious cover =	3.492 Acres

ALLOWABLE IMPERVIOUS COVER BREAKDOWN BY SLOPE CATEGORY

Total acreage 15-25% = 0.000 Acres x 10% = 0.000 Acres

PROPOSED TOTAL IMPERVIOUS COVER

Impervious cover in WQTZ = 0.000 Acres = 0.0 Percent
Impervious cover in Uplands Zone = 3.697 Acres = 40.4% Percent
Commercial Design Standards allow up to 5 percent increase due to additional sidewalks
Total impervious cover = 3.697 Acres

PROPOSED IMPERVIOUS COVER ON SLOPES

IMPERVIOUS COVER

SLOPE CATEGORIES	ACRES	BUILDING/AND OTHER IMPERVIOUS COVER AC.	% OF CATEGORY	DRIVEWAYS ROADWAYS AC.
0-15%	3.697	0.544	14.7%	3.153
15-25%	0	0	0.0%	0
25-35%	0	0	0.0%	0
Over 35%	0	0	0.0%	0
Total Site Area	9.160			

APPENDIX O-1
NET SITE AREA
RIVER PLACE CENTER, SPC-2007-0561C
PANTHER HOLLOW WATERSHED

Total gross site area =	28.273 Acres	
Site Deductions:		
Critical water quality zone (CWQZ) =	0 Acres	
Water quality transition zone (WQTZ) =	0 Acres	
Wastewater irrigation areas =	0 Acres	
Deduction subtotal =	0 Acres	
Upland area (Gross area minus total deduc.) =	28.273 Acres	
Net Site Area Calculation:		
Area of Uplands with Slopes 0-15%	19.683 x 100% =	19.683 Acres
Area of Uplands with Slopes 15-25%	6.75 x 40% =	2.700 Acres
Area of Uplands with Slopes 25-35%	1.62 x 20% =	0.324 Acres
Area of Upland Slopes >35%	0.220 x 0 %	0.000 Acres
Net Site Area (subtotal) =		22.707 Acres

APPENDIX O-2
IMPERVIOUS COVER
RIVER PLACE CENTER, SPC-2007-0561C
PANTHER HOLLOW WATERSHED

Allowable Impervious Cover

Impervious cover allowed at 0.0 % x WQTZ =	0.0 Acres
Impervious cover allowed at 20% x NSA =	4.541 Acres
Deductions for perimeter roadway =	0.0 Acres
Total Impervious cover =	4.541 Acres

ALLOWABLE IMPERVIOUS COVER BREAKDOWN BY SLOPE CATEGORY

Total acreage 15-25% = 6.750 Acres x 10% = 0.675 Acres

PROPOSED IMPERVIOUS COVER

Impervious cover in WQTZ = 0.000 Acres = 0.0 Percent
Impervious cover in Uplands Zone = 6.837 Acres = 30.1% Percent

Total proposed impervious cover = 6.837 Acres

PROPOSED IMPERVIOUS COVER ON SLOPES

IMPERVIOUS COVER

SLOPE CATEGORIES	ACRES	BUILDING/AND OTHER IMPERVIOUS COVER AC.	% OF CATEGORY	DRIVEWAYS ROADWAYS AC.
0-15%	6.837	2.938	43.0%	3.899
15-25%	0	0	0.0%	0
25-35%	0	0	0.0%	0
Over 35%	0	0	0.0%	0
Total Site Area	28.273			

NO.	DATE	REVISIONS	APP.

ASPEN GROWTH PROPERTIES
AUSTIN, TEXAS

RIVER PLACE CENTER
10815 RANCH ROAD 2222

IMPERVIOUS COVER EXHIBIT

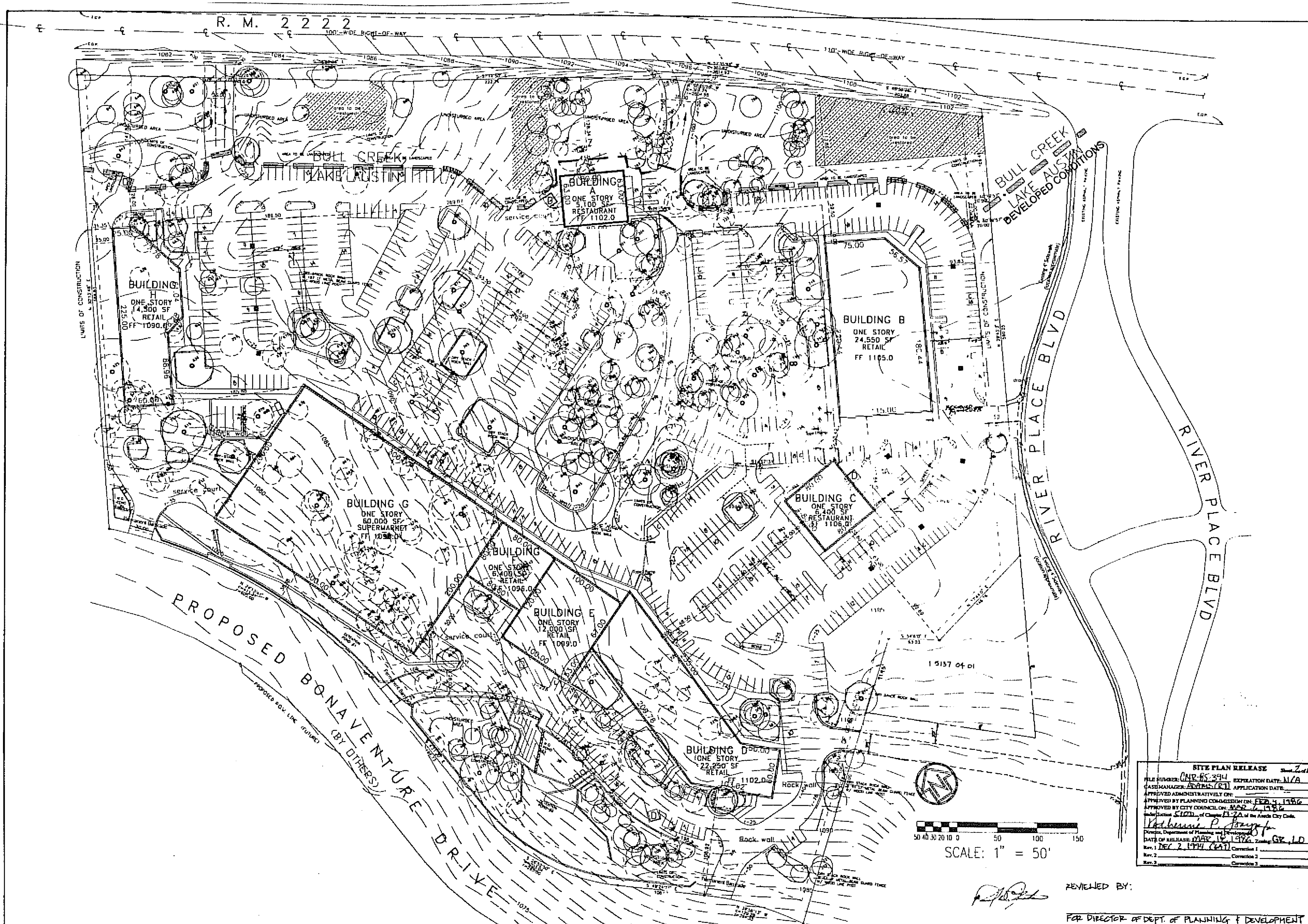
JONES & CARTER, INC.
ENGINEERS • PLANNERS • SURVEYORS
805 Las Cimas Parkway, Suite 230 Austin, Texas 78746-5493 (512) 441-9493

SCALE:	1" = 60'	DGN. BY:	JMS
DATE:	JANUARY 2008	DWN. BY:	JEH
JOB NO.	A434-002	DWG. NO.	–
SUBMITTED:		SURV. BY:	
		F.B. NO.	

STATE OF TEXAS
JAMES M. SCHISSLER
82472
REGISTERED
PROFESSIONAL ENGINEER

SHEET NO
1
OF 1

SPC-2007-0561C



C14R-85-394/C14R-84-231

LAND STRATEGIES INC.
DEVELOPMENT CONSULTING & PROJECT MANAGEMENT
1712 RIO GRANDE ■ AUSTIN, TEXAS 78701 ■ 512/474-0874

SUBSTITUTE (REVISED)
REVISION FILING DATE: AUGUST 22, 1994
SITE PLAN

RIVERPLACE CENTER

SHEET 2 OF 6

ITEM FOR ENVIRONMENTAL BOARD AGENDA

BOARD MEETING DATE REQUESTED:	February 6, 2008
NAME & NUMBER OF PROJECT:	White Stone Church SP-2007-0461D
NAME OF APPLICANT OR ORGANIZATION:	Prossner and Associates, Inc. (Kurt Prossner– Phone 918-3343)
LOCATION:	4101 N. Farm-to-Market Road 620
PROJECT FILING DATE:	August 8, 2007
WPDR/ENVIRONMENTAL STAFF:	Patricia Foran, 974-3427 patricia.foran@ci.austin.tx.us
WPDR/ CASE MANAGER:	Donna Galati, 974-2733 donna.galati@ci.austin.tx.us
WATERSHED:	Lake Travis (Water Supply Rural) Drinking Water Protection Zone
ORDINANCE:	Comprehensive Watershed Ordinance (current Code)
REQUEST:	Variance request to increase the allowable impervious cover (LDC 25-8-454(D)(1)(a)).

STAFF RECOMMENDATION: Recommended with conditions.

REASONS FOR RECOMMENDATION:	Findings of fact have been met.

AGENDA ITEM C-1

MEMORANDUM

TO: Betty Baker, Chairperson
Members of the Zoning and Platting Commission

FROM: Patricia Foran, Environmental Reviewer
Watershed Protection and Development Review Department

DATE: January 24, 2008

SUBJECT: White Stone Church/ SP-2007-0461D
4101 N. Farm-to-Market Road 620

White Stone Church is seeking a variance recommendation to exceed the amount of impervious cover allowed by watershed. Land Development Code (LDC) 25-8-454(D)(1)(a) establishes that impervious cover for a commercial development may not exceed 20% net site area.

Variance History

The applicant initially requested a variance to LDC 25-8-65(A) to omit the requirement to include the roadway deduction for the adjacent roadways in the calculation of allowable impervious cover. This first variance request was presented to the Environmental Board on December 5, 2007. Staff did not recommend this variance request because the findings of fact were not met. The Environmental Board unanimously recommended this variance with conditions. This variance request was presented to Zoning and Platting Commission on December 18, 2007. The Zoning and Platting Commission did not approve the variance request with a vote of 3-4.

According to LDC 25-1-218, an applicant is not allowed to file an application for the same or similar variance on the same site for a period of one year from the date of denial of the variance. The applicant is currently requesting a variance to LDC 25-8-454(D)(1)(a) to exceed the amount of impervious cover allowed by watershed. The variance request from LDC 25-8-454(D)(1)(a) was determined to be different from the variance request to LDC 25-8-65(A); as a result, this variance request is presented to the Environmental Board and Zoning and Platting Commission for consideration.

The applicant is requesting to exceed the amount of allowable impervious cover by 0.21 acres, for a total of 0.42acres. This would allow the applicant 0.21 acres of allowable impervious cover after factors such as slopes, septic drainfields, and boundary roadways are considered. Staff is

recommending this variance with conditions because the findings of fact are being met. This recommendation is based on several factors which deviate from the variance request first presented. Primarily, the applicant has agreed to enter into a restrictive covenant that would limit impervious cover to 0.052 acres on the nearby cemetery, which is less than 5% of the net site area of the tract (see attached plat for Block 1, Lots 3-6 and 9-12 of Mountain View subdivision). The applicant has also agreed to provide: 1) revegetation in accordance with COA specification 609(S) for seeding and planting; 2) landscaping in accordance with ECM, Section 2 using only native and drought tolerant plants; 3) grass swales and vegetative filter strips; 4) an IPM plan; and 5) drip irrigation for the septic system. These conditions will result in a level of water quality is at least equal to what would be possible without the variance.

Description of Project Area

The 1.39-acre site is located at 4101 N. Farm-to-Market Road 620. It is bounded by N. Farm-to-Market Road 620 on the north, Highland Drive to the east, and Double Dome Road on the south and west. The site is within the Lake Travis Watershed, which is classified as Water Supply Rural. The site is in the Drinking Water Protection Zone. There are no classified waterways on or immediately adjacent to this site and no portion is located within FEMA 100-year floodplain. The proposed use for this site is as a church. The site was undeveloped upon site plan submittal; a Stop Work Order was issued on November 19, 2007 for development without a permit or proper erosion controls. A portion of the site was cleared and three one-story elevated structures were placed in the cleared area.

Commercial projects in a water supply rural watershed are allowed up to 20% impervious cover based on net site area. This site has a net site area of 0.21 acres after considering slopes, septic fields, and allowable impervious cover by watershed. After considering roadway deductions, the site has 0.0 acres of allowable impervious cover. The applicant is proposing to retain the three one-story elevated structures, and construct a wood deck and associated sidewalks and parking. In total, 0.21 acres of impervious cover is proposed. The applicant is seeking a variance to exceed the amount of impervious cover allowed by watershed; this variance would provide the applicant with 0.21 acres of allowable impervious cover.

Hydrogeologic Report

The topography of the site ranges from 845 to 860 feet above mean sea level, generally sloping from southeast to northwest. Approximately 38% of the subject tract has slopes greater 15%; however, all development is proposed on slopes less than 15%.

The soil type of the tract area consists of Brackett-Purves-Real soil association, Brackett soil, rolling (BID). Brackett soils, rolling are clay loam with a gravelly surface layer. The underlying material is limestone and marl. The permeability is moderately slow. The site is underlain by the Glen Rose Limestone.

Vegetation

The vegetation within the project area is composed of partially cleared wooded species including Ashe juniper, Plateau live oak, Cedar elm, and hackberry. The site is located within the Live Oak-Ashe Juniper Parks region of Texas, which is an area dominated by woody plants most equal or greater than nine feet tall in clusters or as scattered individuals within continuous grasses or forbs.

Critical Environmental Features
An Environmental Assessment provided by the applicant, as well as site visits conducted by Watershed Protection Staff determined that there are no critical environmental features (CEF's) within 150 feet of the proposed LOC.

Water/Wastewater Report
Water service will be provided by WC&ID No. 17. There is an existing water line on the tract to which proposed project will connect. Wastewater service will be an on-site septic system.

Variance from Land Development Code LDC 25-8-341
The variance required by this project is to LDC Section 25-8-454(D)(1)(a) to exceed the amount of impervious cover allowed by watershed; this variance would provide the applicant with 0.21 acres of allowable impervious cover.

Similar Cases
The following projects located within a Water Supply Rural watershed had variance requests related to development intensity. The variance requests for Westlake Fire Department Fire Station #3 and Webb Addition were approved by the EV Board and subsequently the Zoning and Platting Commission.

Westlake Fire Department Fire Station #3 (SP-06-0002D) requested a variance from LDC 25-8-454(D)(1)(a) to exceed impervious cover limits (as well as two other variance requests). The EV Board recommended approval on May 17, 2006 by a vote of 5-0-0-4, with the following conditions:

1. Provide tree mitigation as agreed upon.
2. Rainwater harvesting for landscape irrigation.
3. Revegetate all previously disturbed area with COA specification 609(S) seeding.
4. Follow IPM plan.
5. Use of coal tar based asphalts prohibited.

Webb Addition (C8J-05-0046.0A) requested a variance from LDC 25-8-454(B) to exceed development density in the uplands zone. The EV Board recommended approval on June 1, 2005 by a vote of 8-0-0-1, with the following conditions incorporated in a restrictive covenant for the property:

1. Restrict construction on slopes in accordance with actual topographic survey when it becomes available.
2. Water quality controls that incorporate spreader berms and vegetative filter strips.
3. Wastewater disposal will utilize a drip irrigation system instead of a conventional septic system.
4. An IPM plan will be provided.
5. Landscaping will be accomplished predominantly with native and naturalized plant materials from the "Grow Green" plant list.

Recommendations:
Staff recommends with conditions the variance request with because the findings of fact have been met.

If you have any questions or need additional information, please contact Patricia Foran at 974-3427.

Patricia Foran, Environmental Review Specialist Senior
Watershed Protection and Development Review Department

Environmental Program Coordinator:
Ingrid McDonald

Environmental Officer:
Patrick Murphy

Watershed Protection and Development Review Department
Staff Recommendations Concerning Required Findings
Water Quality Variances

Application Name: *White Stone Church*
Application Case No: *SP-2007-0461D*
Code Reference: *LDC 25-8-454(D)(1)(a)*
Variance Request: *To exceed the amount of impervious cover allowed by watershed*

A. Land Use Commission variance determinations from Chapter 25-8, Subchapter A – Water Quality of the City Code:

1. The requirement will deprive the applicant of a privilege or the safety of property given to owners of other similarly situated property with approximately contemporaneous development.

   Yes *The requirement will deprive the applicant of a special privilege given to owners of other similarly situated property. The topography of the site is similar to properties in proximity to the subject tract. However, the site is unique compared to the properties in the surrounding area due to the fact that it is bordered completely by public roadways. Because of this unusual characteristic, this finding of fact is difficult to apply to this site.*

2. The variance:

   a) Is not based on a condition caused by the method chosen by the applicant to develop the property, unless the development method provides greater overall environmental protection than is achievable without the variance;

      Yes *The applicant is not choosing a development method that is less preferable than another method. The applicant is proposing minimal development on the site compared to leaving the site vacant.*

   b) Is the minimum change necessary to avoid the deprivation of a privilege given to other property owners and to allow a reasonable use of the property;

      Yes *The applicant is not able to construct/place any impervious cover on the subject tract without this variance.*

   c) Does not create a significant probability of harmful environmental consequences; and

Yes *The applicant is proposing a minimal amount of impervious cover that will be located entirely on slopes less than 15%. Approximately half of the proposed impervious cover will be structures that are elevated. Therefore, construction should not result in significant erosion/sedimentation.*

3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.

   Yes *The applicant is not required to provide water quality controls since impervious cover is limited to 20% based on net site area. The applicant has offered to provide the following items,: 1) revegetation in accordance with COA specification 609(S) for seeding and planting; 2) landscaping in accordance with ECM, Section 2 using only native and drought tolerant plants; 3) grass swales and vegetative filter strips; 4) an IPM plan; 5) drip irrigation for the septic system. In addition to these items, the applicant has also agreed to enter into a restrictive covenant that would limit impervious cover to 0.052 acres on the nearby cemetery, which is less than 5% of the net site area of the tract (see attached plat for Block 1, Lots 3-6 and 9-12 of Mountain View subdivision). Collectively, these conditions will result in water quality that is at least equal to what is possible without the variance.*

B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-393 (Water Quality Transition Zone), Section 25-8-423 (Water Quality Transition Zone), Section 25-8-453 (Water Quality Transition Zone), or Article 7, Division 1 (Critical Water Quality Zone Restrictions):

1. The above criteria for granting a variance are met;

   Not applicable.

2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and

   Not applicable.

3. The variance is the minimum change necessary to allow a reasonable, economic use of the entire property.

   Not applicable.

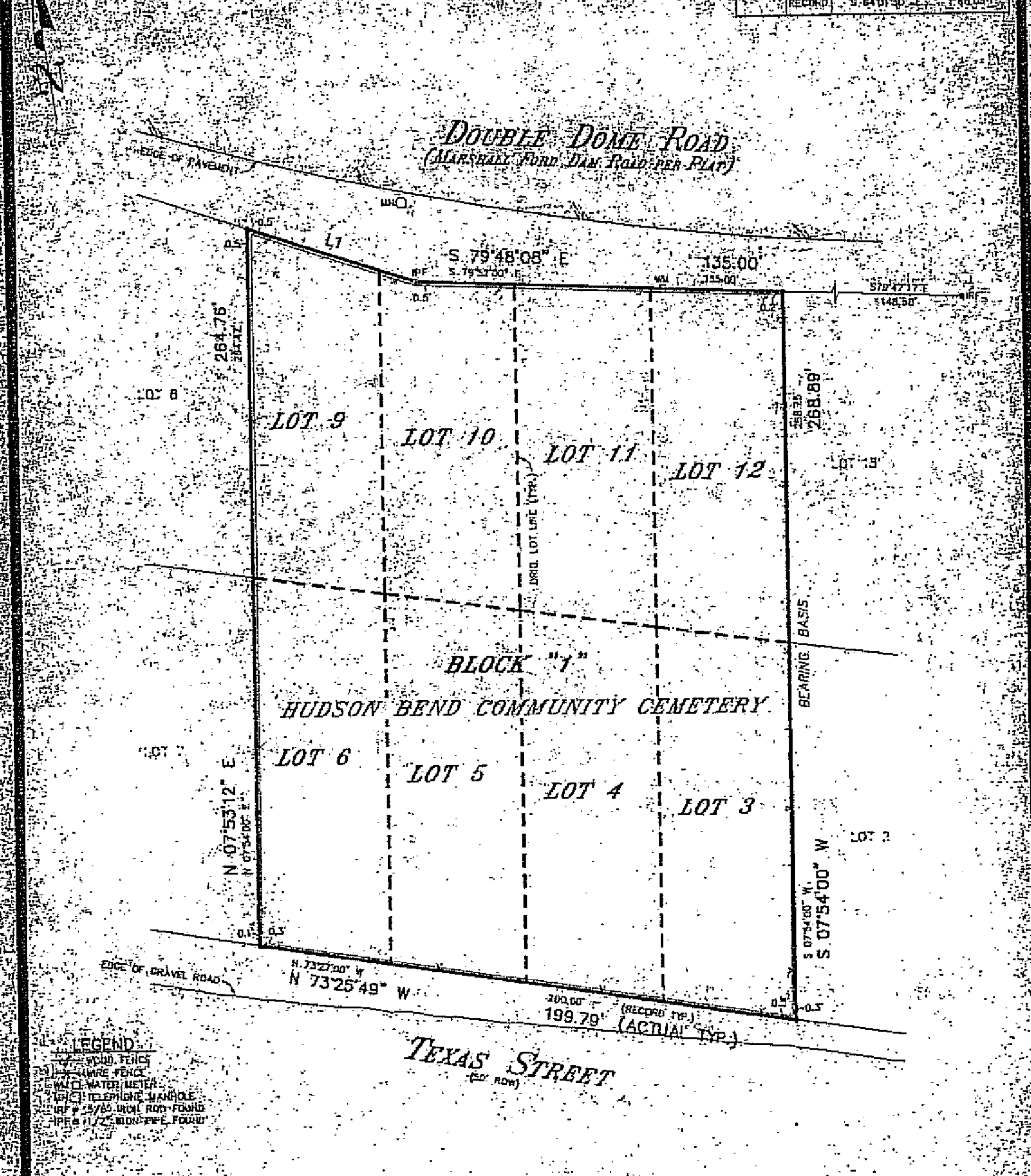
Reviewer Name: **Patricia Foran**

Reviewer Signature: Patricia Foran

Date: **January 24, 2007**

Staff may recommend approval of a variance after answering all applicable determinations in the affirmative (YES).

BOUNDARY SURVEY



EASEMENT RECORDED IN VOL. 589, PG. 300, DEED RECORDS, DOES NOT TRAVERSE THE PROPERTY.

PLAT OF SURVEY

Survey No. 06968 Scale: 1" = 40' GF 0610503-TOR

Subject tract is in Zone "X" as identified by the Federal Emergency Management Agency on Community Panel No. 48453C 0285E Dated: JUNE 16, 1993

LOT NO. 3, 4, 5, 6, 9, 10, 11 & 12 BLOCK NO. "1"

ADDITION OR SUBDIVISION MOUNTAIN VIEW, BOOK 4, PAGE 243, PLAT RECORDS

STREET ADDRESS TEXAS STREET CITY AUSTIN COUNTY TRAVIS

SURVEY FOR INDEPENDENCE TITLE COMPANY REFERENCE ARBORETUM REALTY

TO: STEWART TITLE GUARANTY COMPANY

STATE OF TEXAS, COUNTY OF TRAVIS

I HEREBY CERTIFY THAT THE ABOVE SURVEY WAS MADE THIS DAY ON THE GROUND AND IS TRUE AND CORRECT, AND THAT THERE ARE NO DISCREPANCIES, CONFLICTS, SHORTAGES IN AREA, ENCROACHMENTS, VISIBLE UTILITY LINES OR ROADS IN PLACE EXCEPT AS SHOWN HEREON, AND PROPERTY HAS ACCESS TO A DEDICATED ROADWAY, EXCEPT AS SHOWN HEREON.

All corners are 1/2-inch iron rod found unless otherwise noted. To the lien holders and/or the owners of the premises surveyed.

STATE OF TEXAS — REGISTERED — MARY P. HAWKINS — 4433 — PROFESSIONAL LAND SURVEYOR

Mary P. Hawkins

Date: 09-13-2006

SNS ENGINEERING, INC.
12465 Las Indios Trail, Suite 101
Austin, Texas 78729
(512) 335-3944 * (512) 250-8665 (Fax) JM

567/23

NET SITE AREA CALCULATIONS

Total gross site area = 60,588 s.f. (1.39 Acres)
Site Deductions: Critical Water Quality Zone (CWQZ) = 0.00 Acres
Water Quality transition =Zone (WQTZ) = 0.00 Acres
Wastewater irrigation areas = 1,500 s.f. 0.03 Acres
Deduction subtotal = 0.03 Acres

Upland area (Gross area minus total deductions) = 59,088 s.f. (1.36 ac.)

Net Site Area Calculation:

Color	Range Beg.	Range End	Percent	Area (GSA)		Area (NSA)
	0.00	15.00	62.1	38255	x 100%	38255
	15.00	25.00	25.5	15450	x 40%	6180
	25.00	35.00	11.1	6725	x 20%	1345
	35.00	Plus	1.3	158	x 0	0
			LOT 1	60588		45780

IMPERVIOUS COVER

Allowable Impervious Cover
Impervious cover allowed at 0% X WQTZ = 0.000
Acres Impervious cover allowed at 20% X 1.04 = 0.21 ac. (9,156 s.f.)
Deductions for perimeter roadway = 0.21 Acres
Total impervious cover allowed = 0.00 Acres (Variance Requested)

ALLOWABLE IMPERVIOUS COVER BREAKDOWN BY SLOPE CATEGORY
Total acreage 0–15% 37,625.14 x 20% = 7,525 s.f. (0.17 ac.)
Total acreage 15–25% 6,179.97 x 20% = 1,236 s.f. (0.028 ac.)
Total acreage 25–35% 1,345.05 x 20% = 269 s.f. (0.006 ac.)

EXISTING IMPERVIOUS COVER
Total existing impervious cover = n/a

PROPOSED TOTAL IMPERVIOUS COVER
Impervious cover in WQTZ = 0.000 Acres = 0.00%
Impervious cover in Uplands Zone = 9,145 s.f. (0.21 ac.)
Buildings 4,608 s.f. (0.106 ac.)
Wood Deck (x50%) 838 s.f. (1,676 x 50%)
Walks/Parking 3,699 s.f.
Total proposed impervious cover = 0.21 Acres (NSA –20%) (GSA –15.1%)

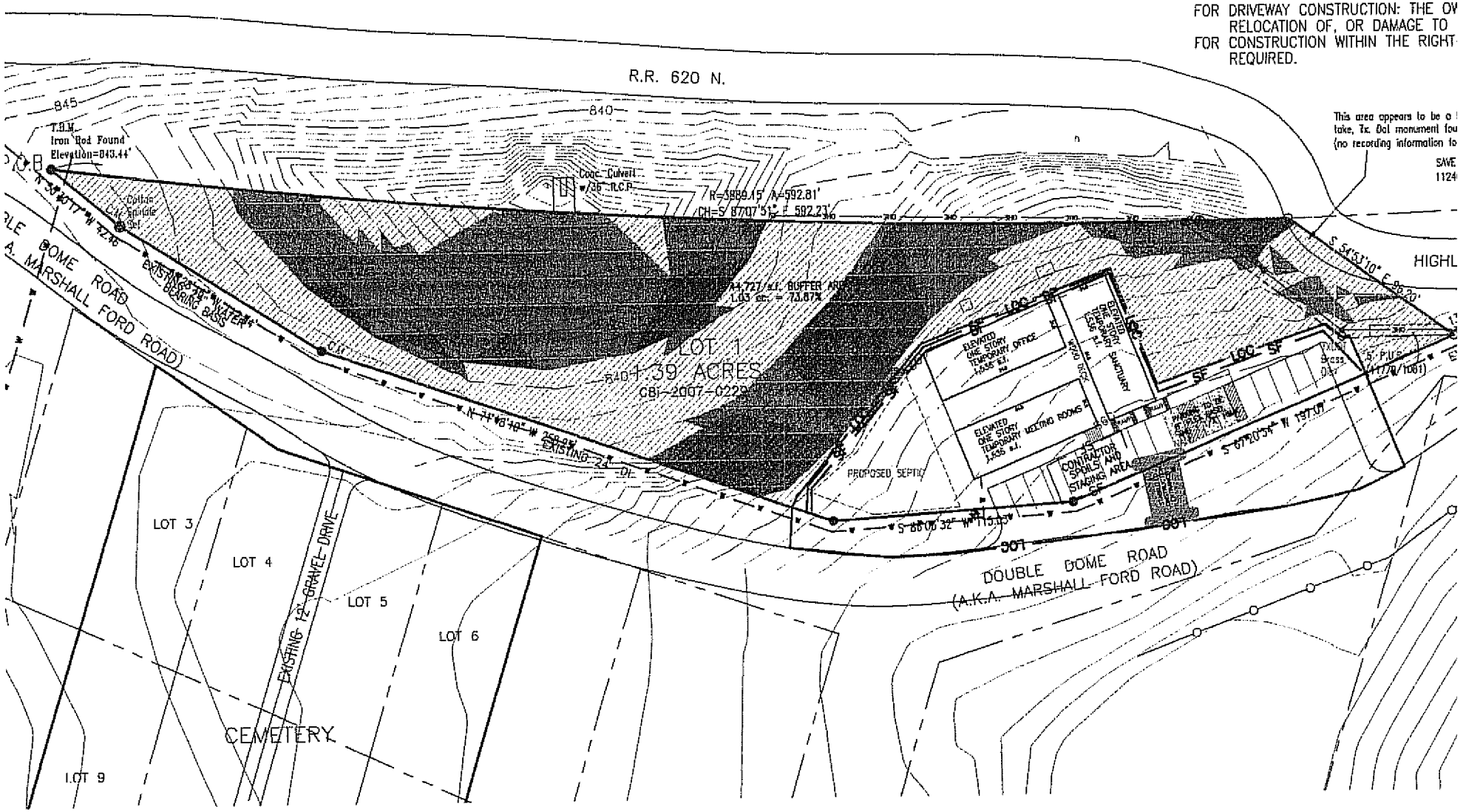
PROPOSED IMPERVIOUS COVER ON SLOPES

SLOPE CATEGORIES	Area (ac)	IMPERVIOUS COVER BLDGS./ Area (ac)	OTHER % of Category (%)	DRIVES, ROADS, ETC Area (ac)
0–15%	0.86	0.106	12.3	0.104
15–25%	0.36	0.00	0.00%	0.00
25–35%	0.15	0.00	0.00%	0.00
>35%	0.02	0.00	0.00%	0.00
Total Site Area	1.39			

Building Coverage = 4,608 s.f. F.A.R.=0.0761 (7.61%)

T OF THE LEANARD ECK SURVEY NO. 164
EAL PROPERTY RECORDS, TRAVIS COUNTY, TEXAS

WATER AND WASTEWATER SERVICE WILL
ALL EXISTING SHOWN TO BE REMOVED
THE CITY OF AUSTIN WATERSHED
DEPARTMENT.
FOR DRIVEWAY CONSTRUCTION: THE OV
RELOCATION OF, OR DAMAGE TO
FOR CONSTRUCTION WITHIN THE RIGHT
REQUIRED.



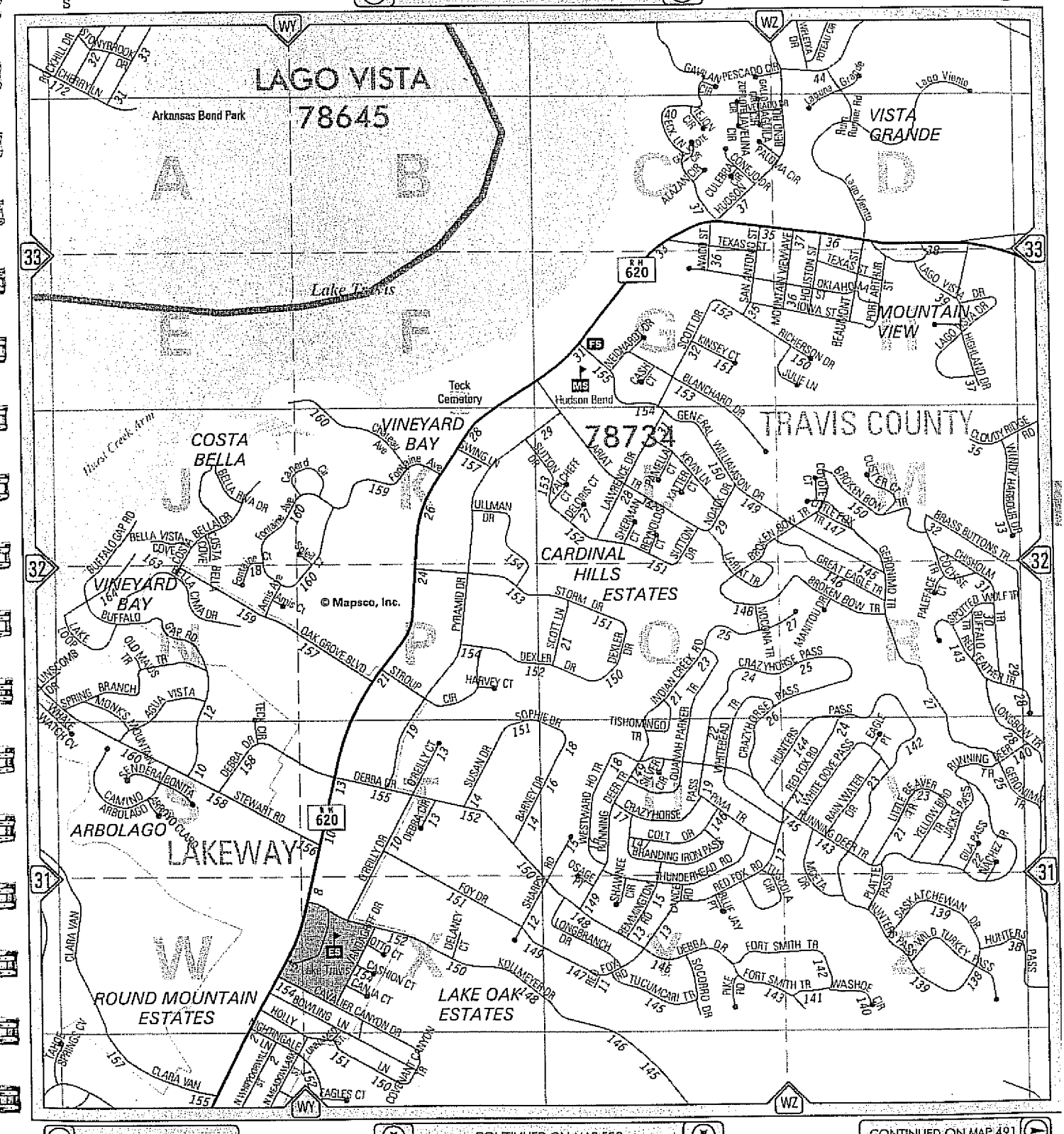
DIRECTIONS TO WHITE STONE CHURCH

SP-2007-0461D

This project is located within the 2-mile ETJ.

White Stone Church is located at 4101 N. Farm-to-Market Road 620.

Take Farm-to-Market Road 2244 west to Highway 71. Take Highway 71 west to Farm-to-Market Road 620. Go north on Farm-to-Market Road 620 for approximately 9 miles. Make a right onto Double Dome Road. The site is immediately to the left, located between Farm-to-Market Road 620 and Double Dome Road. Please also refer to attached map.



SCALE IN MILES
0 1/8 1/4 3/8 1/2

SCALE IN FEET
0 1000 2000 3000

Prossner and Associates, Inc.
Consulting Engineers

2601 Chitina Court
Cedar Park, Texas 78613
(512) 918-3343

January 17, 2008

Mr. Pat Murphy, Environmental Officer
City of Austin Watershed Protection and Development Review Department
505 Barton Springs Road
Austin, Texas 78701

Re: **Variance Request for White Stone Church – 4101 N FM 620 - SP-2007-0461D**

Mr. Murphy,

This correspondence is being submitted in support of a variance request from Section 25-8-454(D (1) (a))) of the City of Austin Land Development Code for the above referenced Site Plan Application. The variance request is to allow 40% impervious cover for a commercial development in the Uplands Zone over the 20% allowed under the Ordinance. Since the project is surrounded on all sides by roadways and per Ordinance Section 25-8-65(A) the Owner must account for the roadway deduction for the adjacent roadways in the net site area calculations, the tract ends up with (0) zero impervious cover allowable. It is our opinion that the tract should receive a variance to allow the increase in the impervious cover due to its unique location surrounded by roadway and the small size of the lot.

Net Site Area – 45,780 s.f.		
Impervious cover	20% - 9,156 s.f.	40% - 18,312 s.f.
Roadway Deductions –	9,267 s.f.	9,267 s.f.
Allowable impervious -	**< 111 s.f. >**	**9,045 s.f.**

Proposed Impervious cover **9,145 s.f.**

The tract contains 1.39 acres and has roadway on all sides. The allowable impervious cover after slope deductions is 9,156 square feet as the site is limited to 20% impervious cover of the net site area as it is in the Lake Austin watershed which is a Water Supply Suburban watershed. The north side fronts Hwy. 620 which is a five lane highway with approximately 65 feet of pavement width. The tract has approximately 592 linear feet of frontage which results in a roadway deduction of 6,514 square feet. The tract has 725 linear feet of frontage on Double Dome Road which is a two lane County roadway with approximately 16 feet of pavement which results in a roadway deduction of approximately 2,176 square feet. The tract also has 96 linear feet of frontage on Highland Drive which is a two lane County roadway with approximately 24 feet of pavement which results in a roadway deduction of approximately 577 square feet. Thus the total roadway deduction is 9,267 square feet and if the Owner is required to include the roadway deduction this would result in no development allowed on the tract as the boundary street deduction (9,267 s.f.) is greater than the allowable of 9,156 s.f. on the 1.39 acre tract.

It is our opinion that approval of the variance request will not provide the applicant with a special privilege over similar developments due to the unique size and shape which results in the roadway deduction being applied to the entire boundary of the tract. The Owner is proposing the construction of three (3) elevated structures with a wood deck which results in a total impervious cover of approximately 9,145 square feet. It must be noted that the impervious cover proposed would meet the 20% net site area impervious cover limit if the roadway deduction (25-8-65(A)) variance previously submitted had been approved by the City of Austin. We believe the variance request represents a minimum departure from the Land Development Code and the approval of the variance will not create any significant environmental consequences.

It must be noted that during the processing of the original variance request the Owner agreed to certain conditions placed on the site by the Environmental Board as follows:

1. The septic system will be designed using a drip irrigation disposal method;
2. The site would employ vegetative filter strips and grass swales to assist in water quality;
3. All revegetation on the site would employ City of Austin Specification 609(S);
4. The Owner will agree to provide landscaping on the site equivalent to what is required for projects within the City Limits; and
5. The Owner will submit an IPM Plan for the property.

Per staff recommendation the Owner also will provide a restrictive covenant to restrict development on Lots 3, 4, 5, 6, 9, 10, 11 and 12 of the Mountain View Subdivision, which they currently own and is used as a cemetery. The restriction will be for a limitation on impervious cover except for the installation of headstones on the individual grave plots, a columbarium wall not to exceed 30 inches wide by 60 feet long for storage of ashes, and a small tool shed not to exceed 12 feet by 12 feet for storage of lawn and other equipment to maintain the cemetery grounds.

The Owner will agree to all of the above as conditions of the approval of the new variance request. Should you have any questions or require any additional information, please contact our office.

Sincerely,

Kurt M. Prossner, P.E.
President

cc: Pastor Jim Durham

file:ruzicka/white_stone/impervious_cover_variance.doc

§ 30-5-454 UPLANDS ZONE.

(A) This section applies to development in an uplands zone. Density and impervious cover limits are based on net site area.

(B) For a duplex or single family residential use, density may not exceed:

(1) one unit for each two acres, with a minimum lot size of three-quarters acre; or

(2) if development intensity is transferred under Section 30-5-455 *(Transfer Of Development Intensity)*, one unit for each acre, with a minimum lot size of one-half acre.

(C) For a cluster housing use, density may not exceed:

(1) one unit for each acre; or

(2) if development intensity is transferred under Section 30-5-455 *(Transfer Of Development Intensity)*, two units for each acre.

(D) This subsection applies to a commercial or multifamily use.

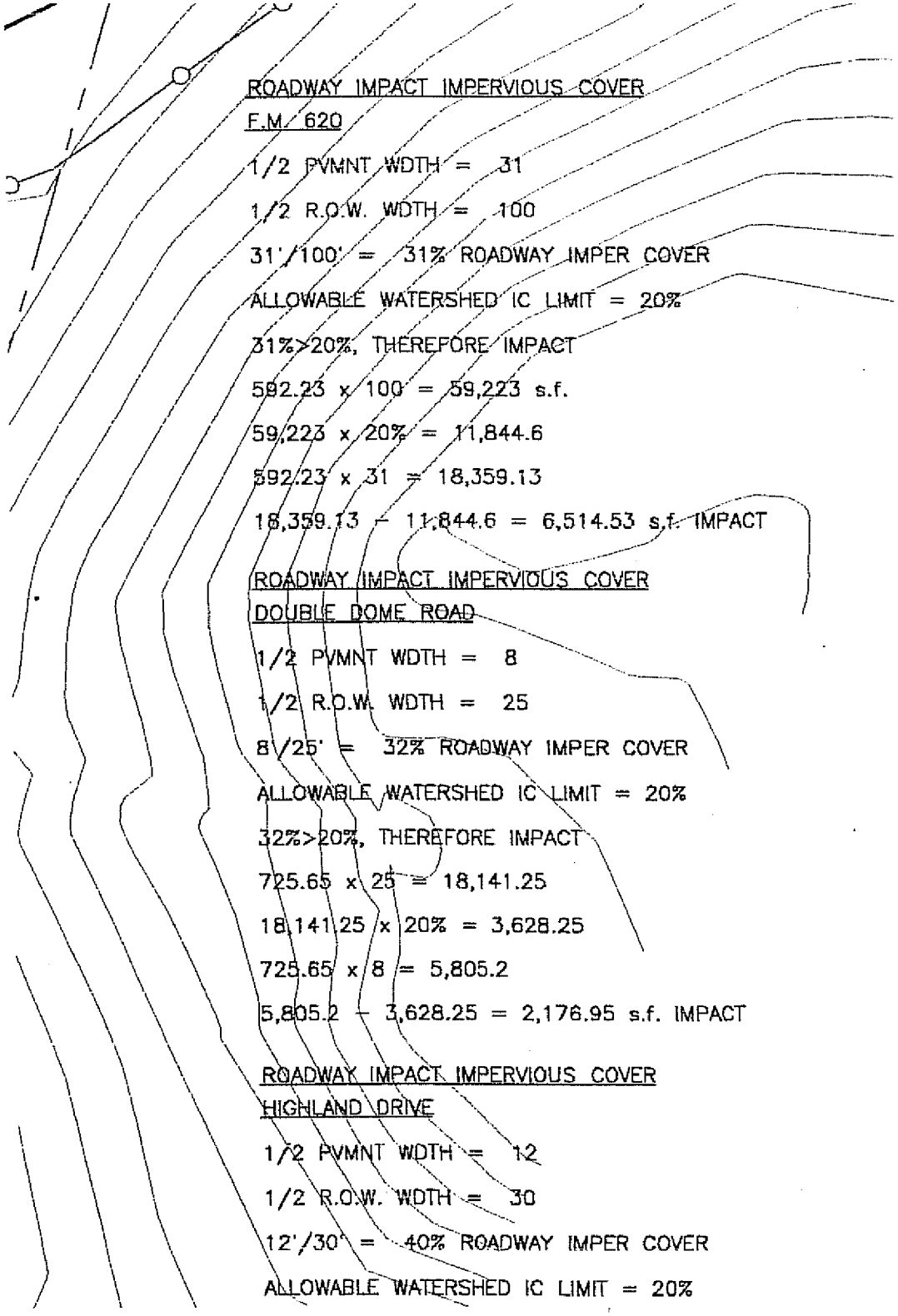
(1) Impervious cover may not exceed:

(a) 20 percent; or

(b) if development intensity is transferred under Section 30-5-455 *(Transfer Of Development Intensity)*, 25 percent.

(2) At least 40 percent of a site must be retained in or restored to its natural state to serve as a buffer, the buffer must be contiguous to the development, and the buffer must receive overland drainage. Use of the buffer is limited to fences, utilities that cannot reasonably be located elsewhere, irrigation lines not associated with wastewater disposal, and access for site construction.

Source: City Code Section 25-8-454; Ord. 031211-11; Ord. 031211-42.



ROADWAY IMPACT IMPERVIOUS COVER
F.M. 620

1/2 PVMNT WDTH = 31

1/2 R.O.W. WDTH = 100

31'/100' = 31% ROADWAY IMPER COVER

ALLOWABLE WATERSHED IC LIMIT = 20%

31%>20%, THEREFORE IMPACT

592.23 x 100 = 59,223 s.f.

59,223 x 20% = 11,844.6

592.23 x 31 = 18,359.13

18,359.13 - 11,844.6 = 6,514.53 s.f. IMPACT

ROADWAY IMPACT IMPERVIOUS COVER
DOUBLE DOME ROAD

1/2 PVMNT WDTH = 8

1/2 R.O.W. WDTH = 25

8'/25' = 32% ROADWAY IMPER COVER

ALLOWABLE WATERSHED IC LIMIT = 20%

32%>20%, THEREFORE IMPACT

725.65 x 25 = 18,141.25

18,141.25 x 20% = 3,628.25

725.65 x 8 = 5,805.2

5,805.2 - 3,628.25 = 2,176.95 s.f. IMPACT

ROADWAY IMPACT IMPERVIOUS COVER
HIGHLAND DRIVE

1/2 PVMNT WDTH = 12

1/2 R.O.W. WDTH = 30

12'/30' = 40% ROADWAY IMPER COVER

ALLOWABLE WATERSHED IC LIMIT = 20%

40%>20%, THEREFORE IMPACT

96.2 x 30 = 2886

2886 x 20% = 577.2

96.2 x 12 = 1154.4

1154.4 - 577.2 = 577.2 s.f. IMPACT

TOTAL ROADWAY IMPACT = 9,268.68 s.f.

ENVIRONMENTAL BOARD MOTION 020608-C2

Date: February 06, 2008

Subject: White Stone Church

Motioned By: Phil Moncada Seconded By: Rodney Ahart

Recommendation

The Environmental Board recommends **approval with conditions** of a variance request to Land Development Code 25-8-454 (D)(1)(a) 1) To increase the allowable impervious cover for White Stone Church.

Staff Conditions:

1. Revegetation in accordance with City of Austin specification 609(S) for seeding and planting;
2. Landscaping in accordance with ECM, Section 2 using only native and drought tolerant plants;
3. Grass swales and vegetative filter strips;
4. An IPM plan;
5. Drip irrigation for the septic system.

In addition to these items, the applicant has also agreed to enter into a restrictive covenant that would limit impervious cover to 0.052 acres on the nearby cemetery, which is less than 5% of the net site area of the tract. Collectively, these conditions will result in water quality that is at least equal to what is possible without the variance.

Rationale
With transfer we meet Lake Travis 20% impervious cover.

Vote 6-0-0-1-0

For: Anderson, Dupnik, Neely, Moncada, Ahart and Beall

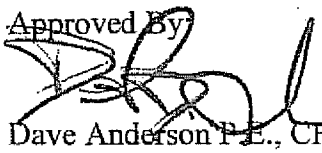
Against: None

Abstain: None

Absent: Dr. Mary Gay Maxwell

Recused:

Approved By:



Dave Anderson P.E., CFM, CE.
Environmental Board Chair

Water Treatment Plant #4

Alternate Site Evaluation and Selection

Board and Commission Briefing
February 2008

Council Directives and New Considerations

Council Directives

- Delay construction up to 1 year to explore alternate sites
- Consider smaller plant capacity – 150, 200, and 300 MGD
- Reconsider previous evaluation criteria

New considerations

- Developed sites
- Increased distance from intake (7 mi.)
- Allow for steeper slopes (up to 15%)

Alternate Site Evaluation

Focus on managing and balancing 3 issues

- Environmental Impact
  - Desire to minimize impacts, particularly on highly sensitive sites and species
- Cost
  - Known costs of environmental mitigation
  - Costs of construction, particularly tunneling
- Time
  - Avoid delays in design or construction to allow plant completion in 2014

Site Evaluation & Selection Process

- Multi-disciplinary review team (AWU, WPDRD, PW, Law) with consultant support
  - Core Review Team and Discipline Sub-groups (Engineering, Environmental, Legal, Financial)
- Criteria were not weighted
- Summary scores were not expressly used in selection and recommendation
- All criterion were considered individually and as part of a whole in a consensus based process

Site Evaluation & Selection Process

Search area

- North of Lake Austin and Travis
- Within 7 miles of intake
- No residential subdivisions
- Outside BCP
- Outside known Jollyville Plateau Salamander (JPS) habitat

	Review Criteria
Environmental	• Endangered species or JPS impact • Water quality sensitivity (surface and groundwater) • Overall environmental sensitivity (springs, woodlands, creeks, etc.) • Energy consumption and greenhouse gas emissions • Neighborhood impacts (light, noise, dust, view, etc.)
Engineering	• Slope and configuration *–Room for security buffer, site slope* *–Room for internal roads and spacing between structures* • System compatibility *–Site elevation* *–Integration into distribution system* *–Flexibility to meet future needs* *–Operational efficiency* •Proximity to intake • Access to adequate power supplies and roads
Endangered Species and Land Status	• BCP Status *–Preserve, acquisition area, outside BCP* • BCP infrastructure corridor access • JPS presence on-site or downstream • Ch. 26 status • Land Development Code *–Impervious cover limits, CEF's (caves, springs, rimrock, etc.), protected trees, creek setbacks* • Zoning *–Compatibility with adjacent land use*

Evaluation Criteria
Financial

- Total Phase I Costs
  - Raw Water Facilities
  - Plant Facilities
  - Transmission Mains
  - Environmental Commissioning & Mitigation
  - Inflationary Costs
  - Land / Easement Acquisition

Site Evaluation & Selection Process

83 sites initially identified through GIS analysis

- 83 sites reduced to 8 based on :
  - Proximity to dense residential development
  - Road access
  - Actual developable area
- Final 8 reviewed in detail by sub-groups, then forwarded to Core Review Team
- Staff recommendation given to Council

Council Decision and Follow-up

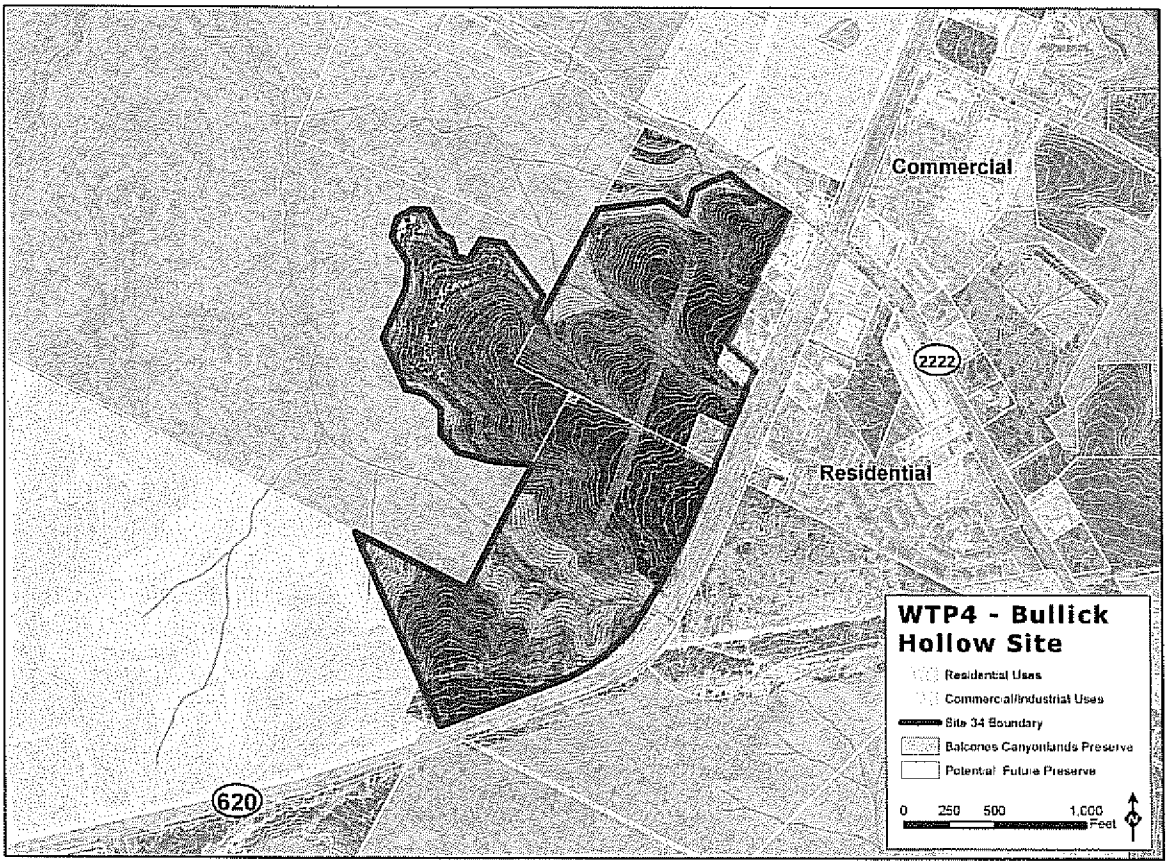
- On December 13, 2007 Council directed staff to:
  - Complete negotiations and execute purchase of Bullick Hollow tract
  - Continue negotiations for purchase of a backup site
  - Make a full presentation to the Env. Board and W/WW Commission on the outcome of the selection process
- Bullick Hollow purchased on January 15, 2008
- Negotiations continue for purchase of backup site

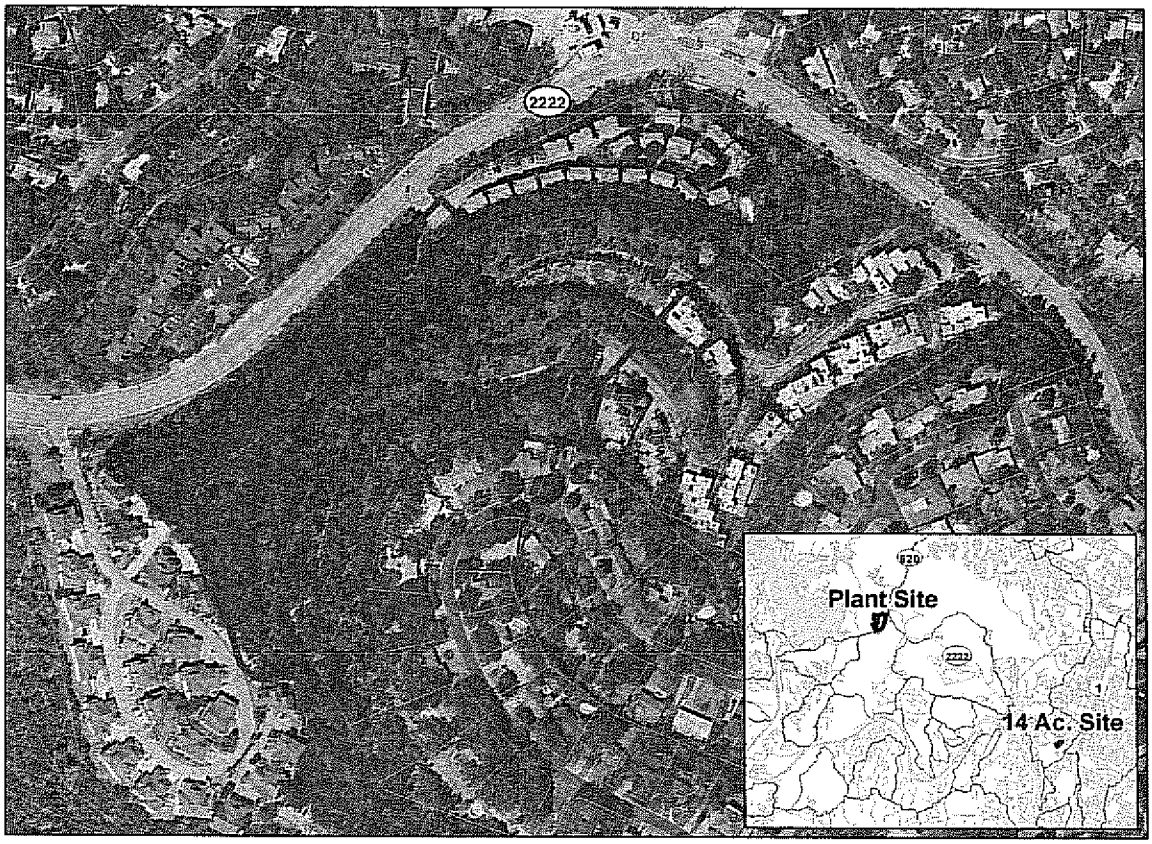
Bullick Hollow Site Description

- Aggregate of 3 parcels totaling approx. 91 acres in Austin's ETJ
- Surrounding area is commercial (RM 620), private preserve land (Theriot) and BCP acquisition land (Lucas, Purcell)
- Lake Travis watershed
- No nearby residential development
- Can accommodate a 300 MGD facility
- No Ch. 26 issues
- No other jurisdictions involved

Bullick Hollow Site Description (cont.)

- Outside of BCP with access to BCP utility corridors
- BCP mitigation available for listed bird and karst invertebrates
- No Jollyville Plateau Salamander impacts
- Lower greenhouse gas potential than other sites
- Additional 14 ac. tract in N. Dry Creek watershed acquired as part of purchase





	Bull Creek	Bullick Hollow
Engineering	•Moderate raw water tunnel length •Access to existing 36" and 48" mains	•Short raw water tunnels •Access to existing 48" main
Environmental	•JPS present on-site and downstream •CCAA or HCP likely for JPS •Listed KI present, but mitigated •Bird impacts expected •In Bull Creek headwaters •Elevation of structures required •Surrounded by BCP Preserve and high quality streams •Multiple springs and seeps	•No JPS •No KI found on site •Mitigation available for bird or KI •Preserve or acquisition land on 3 sides •Less greenhouse gas •Only small, wet weather streams nearby •No elevation of structures •Few springs and seeps
Land Status	•No Chapter 26 issues •No nearby homes	•No Chapter 26 issues •No nearby homes

WTP4 Environmental Commissioning

EC will be scaled back in recognition of the significantly reduced environmental sensitivity of the site

- Land Development Code requirements and variances are issues to be addressed during design
- Most of the EC work for this site will focus on the adjacent preserve lands and wet weather creeks
- Most environmental issues will be addressed by WPDRD staff working with AWU and consultants
- The EC Contractor will be utilized on an as needed basis
- AWU will continue to fund the WPDRD Project Coordinator to oversee the EC process
- A new EC plan specific to this site is being developed

WTP4 Next Steps

2008

- Geotechnical borings and tree survey
- Obtain permit for clearing for perimeter fence
- Continue preliminary design, estimated completion in July 2008
- Begin final design phase in July 2008
- Tree clearing for perimeter fence in fall/winter '08

WTP4 Next Steps

2009-2014

- Continue final design
- Site plan review
- Construction 2010-14
- Startup 2/14-5/14
- Operational by Summer 2014

RESOLUTION NO. _____

WHEREAS, the local governments within the Metropolitan Statistical Area of Central Texas, including the geographical counties of Bastrop, Caldwell, Hays, Travis and Williamson, recognize that they are in near-violation for the 8-hour National Ambient Air Quality Standards (NAAQS) for ozone; and

WHEREAS, the EPA, Region 6 has proposed a 8-O3 Flex Plan option that would assist local governments who are pro-actively seeking a means to remain in attainment with the NAAQS; and

WHEREAS, such a plan would achieve air quality and public health benefits by implementing early voluntary pollution control measures for ozone tailored to local conditions before air quality standard violation occur or before Federal measures are mandated; and;

WHEREAS, the 8-O3 Flex Plan is a voluntary local approach to ozone attainment whose purpose is to encourage early emissions reductions that will keep the area in attainment of the 8-hour standard; and

WHEREAS, the 8-o3 Flex Plan is implemented through an intergovernmental agreement between the Environmental Protection Agency, the State of Texas and the local community; and

WHEREAS, such a plan would achieve air quality and public health benefits by implementing early voluntary pollution control measures for ozone tailored to local conditions before air quality standar violation occur or before Federal measures are mandated; and **NOW, THEREFORE,**

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

The City Manager is authorized to negotiate and execute an Interlocal Agreement (8-O# Flex Plan) with other entities in the 5-county Austin/ San Marcos MSA to improve air quality in Central Texas region.

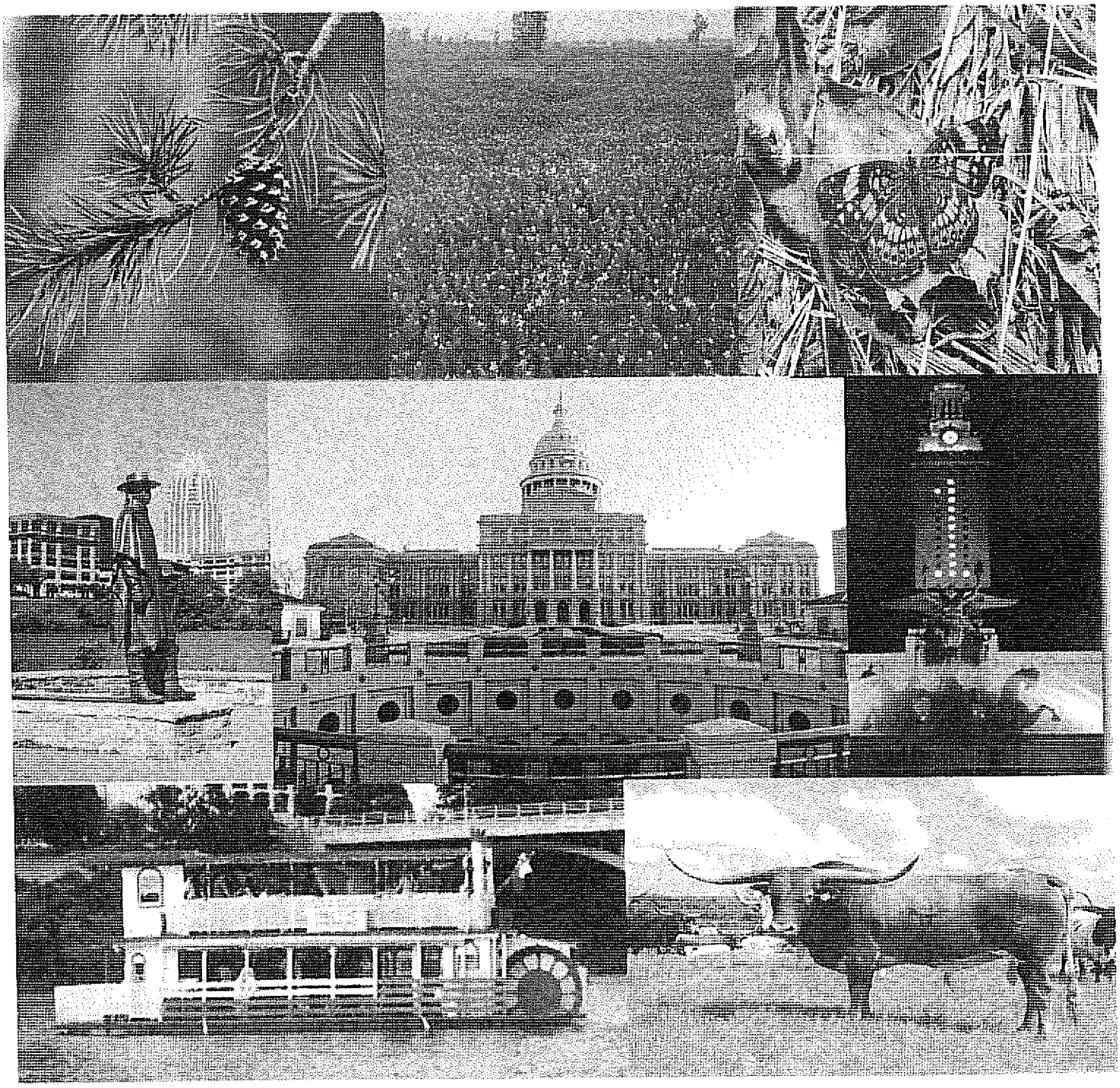
ADOPTED: February 28, 2008 **ATTEST:**_____

Shirley A. Gentry
City Clerk

Final Draft

8 Hour Ozone Flex Program Austin-Round Rock Metropolitan Statistical Area

January 2008



Chapter One: Introduction

Local governments, community and business leaders, environmental groups, and concerned citizens in the Austin-Round Rock Metropolitan Statistical Area (MSA) are committed to ensuring good air quality. These groups work with the Texas Commission on Environmental Quality (TCEQ) and the U.S. Environmental Protection Agency (EPA) to implement voluntary programs to assure continued attainment of the federal 8-hour standard for ground-level ozone (O_3).

The 8-hour O_3 Flex program is the latest in a series of regional initiatives and builds on the region's previous plans: the 1-hour O_3 Flex program and the Early Action Compact. These voluntary initiatives allow the region to address regional ozone problems proactively rather than wait to address them through the prescribed federal nonattainment process. Through these efforts, directed by the elected officials of the Central Texas Clean Air Coalition (CAC), the region has maintained compliance with the federal ozone standard despite a growth rate that far exceeds the state and national average.

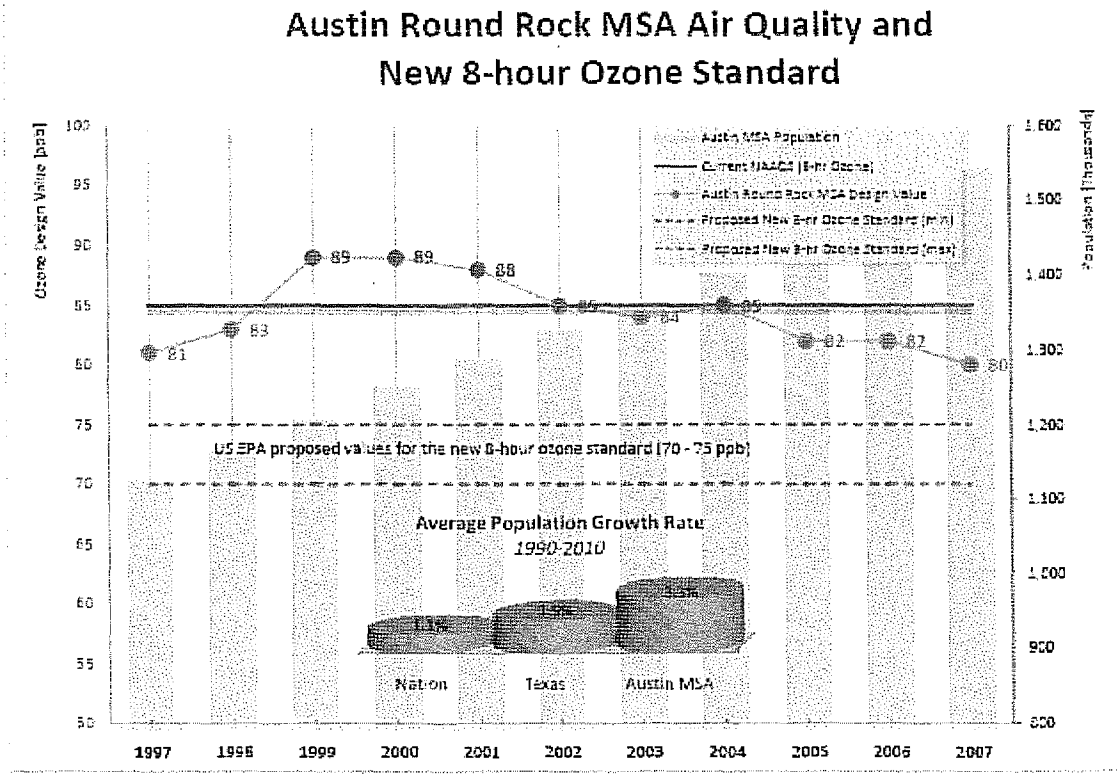


Figure 1.1 Austin Round-Rock MSA Air Quality and Population Growth Trends

1.1 Ground-level Ozone

Implementing the 8-hour O_3 Flex program supports reduction of emissions that produce ozone. Ozone is a form of oxygen with three atoms instead of the usual two. It is a photochemical oxidant. At ground level, ozone is the main component of smog. Ozone is not emitted directly into the air but is formed through chemical reactions between natural and man-made emissions of volatile organic compounds (VOCs) and nitrogen oxides (NOx) in the presence of heat and sunlight. Reducing ozone levels requires reductions in ozone precursors, predominantly VOCs and NOx.

1.2 Health and Environmental Effects

Ground-level ozone can be a health hazard. People with lung disease, children, seniors, and people who are active outdoors can be affected when ozone levels are unhealthy. Studies link ground-level ozone exposure to:

- lung irritation that can cause inflammation much like a sunburn;
- wheezing, coughing, pain when taking a deep breath, and breathing difficulties during exercise or outdoor activities;
- permanent lung damage to those with repeated exposure to ozone pollution; and
- aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like pneumonia and bronchitis.

Ground-level ozone can have detrimental effects on plants and ecosystems. These effects include:

- interfering with the ability of sensitive plants to produce and store food, making them more susceptible to certain diseases, insects, other pollutants, competition and harsh weather;
- damaging the leaves of trees and other plants, negatively impacting the appearance of urban vegetation, national parks, and recreation areas; and
- reducing crop yields and forest growth, potentially impacting species diversity in ecosystems.

1.3 Federal Ozone Standards

The Federal Clean Air Act directs EPA to set National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. Ground-level ozone is one of the pollutants for which EPA has promulgated primary and secondary NAAQS. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and seniors. Secondary standards set limits to protect public welfare, including protection

against visibility impairment, damage to animals, crops, vegetation, and buildings.

The current primary and secondary ozone standards are set at 0.08 parts per million (ppm), or 84 parts per billion (ppb) using the accepted rounding conventions. To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured annually at each regulatory monitor within an area must not exceed 0.08 ppm, or 84 ppb. The 3-year average is called the design value.

EPA and the states monitor ambient air quality by installing monitoring equipment and collecting air samples at specific monitoring sites. If the pollutants in the sampled air exceed levels allowed by the NAAQS, the area around the monitor (usually counties or MSAs) is determined to be non-compliant and may be designated as a nonattainment area for the non-compliant pollutant.

Nonattainment areas must follow a prescribed process for cleaning up their air and comply with additional federal requirements on industry and transportation. The additional requirements may make industrial operations more costly and can result in lost or delayed federal transportation funding.

1.4 Austin-Round Rock MSA's 8-Hour Ozone Flex Program

According to EPA guidance, "The 8-Hour Ozone Flex (8-O_3 Flex) program is a voluntary agreement between Federal, State/Tribal and local communities to encourage 8-hour ozone attainment areas nationwide to reduce ozone emissions as needed to maintain the National Ambient Air Quality Standard (NAAQS) for ozone. The program will support and reward innovative, voluntary, local strategies to reduce ground-level ozone, thereby improving air quality and helping areas maintain attainment. In addition, the program will allow States and locals to receive "credit" for these efforts in the State/Tribal Implementation Plans, and help them avoid a violation of the 8-hour ozone standard."

The local governments of the Austin-Round Rock MSA expressed their intent to participate in the 8-hour O_3 Flex program in a letter from the CAC Chair, Austin Mayor Will Wynn, dated December 20, 2006, to U.S. EPA Regional Administrator Richard E. Green. (See Appendix A)

In compliance with EPA's May 2006 guidance the region's 8-hour O_3 Flex program comprises the following elements:

- Chapters 1 & 2 contain the required air quality history and technical data;
- Chapter 3 is the Action Plan. It includes voluntary emission reduction measures, contingency measures, coordination and public participation, and schedules/reporting; and

- Chapter 4 is the Memorandum of Agreement. It is the formal acceptance of the region's 8-hour O_3 Flex program by EPA, TCEQ, and the local governments. It includes general commitments and objectives, responsibilities, expected duration, conditions for modification or early termination, signature page and date.

1.5 Eligibility Requirements

Participation in an 8-hour O_3 Flex program is available for areas that:

- currently are designated attainment or unclassifiable/attainment for the 8-hour ozone standard, as published on April 30, 2004 (69 FR 23858) and are monitoring attainment of the 1-hour ozone standard;
- were neither designated at the time of 8-hour designations nonattainment for the 1-hour ozone NAAQS nor designated attainment for 1-hour ozone standard with an approved 1-hour ozone maintenance plan;
- have not been redesignated to nonattainment for the 8-hour ozone standard;
- have a current design value which show attainment of the 8-hour ozone standard; and
- have air monitors in place and meet the requirements of 40 CFR 58 Appendix A, or the QA Handbook for Air Pollution Measurement System, Volume II (http://www.epa.gov/air/oaqps/qa/index.html).

The region meets all criteria in EPA's guidelines for participation in an 8-hour O_3 Flex program.

1.6 Geographic Boundaries

The proposed 8-hour O_3 Flex program applies to the five counties included in the Austin-Round Rock MSA. These counties are Bastrop, Caldwell, Hays, Travis, and Williamson (Figure 1.2). For Central Texas, using the defined MSA is a reasonable and suitable approach to setting the area's air quality planning boundaries.

The predominant sources of anthropogenic VOC and NOx in the region are on-road, non-road, and area. The impacts of, and increases in, emissions from these sources are primarily related to the urban character of the region (e.g., population densities, urban/suburban growth, commuting patterns).

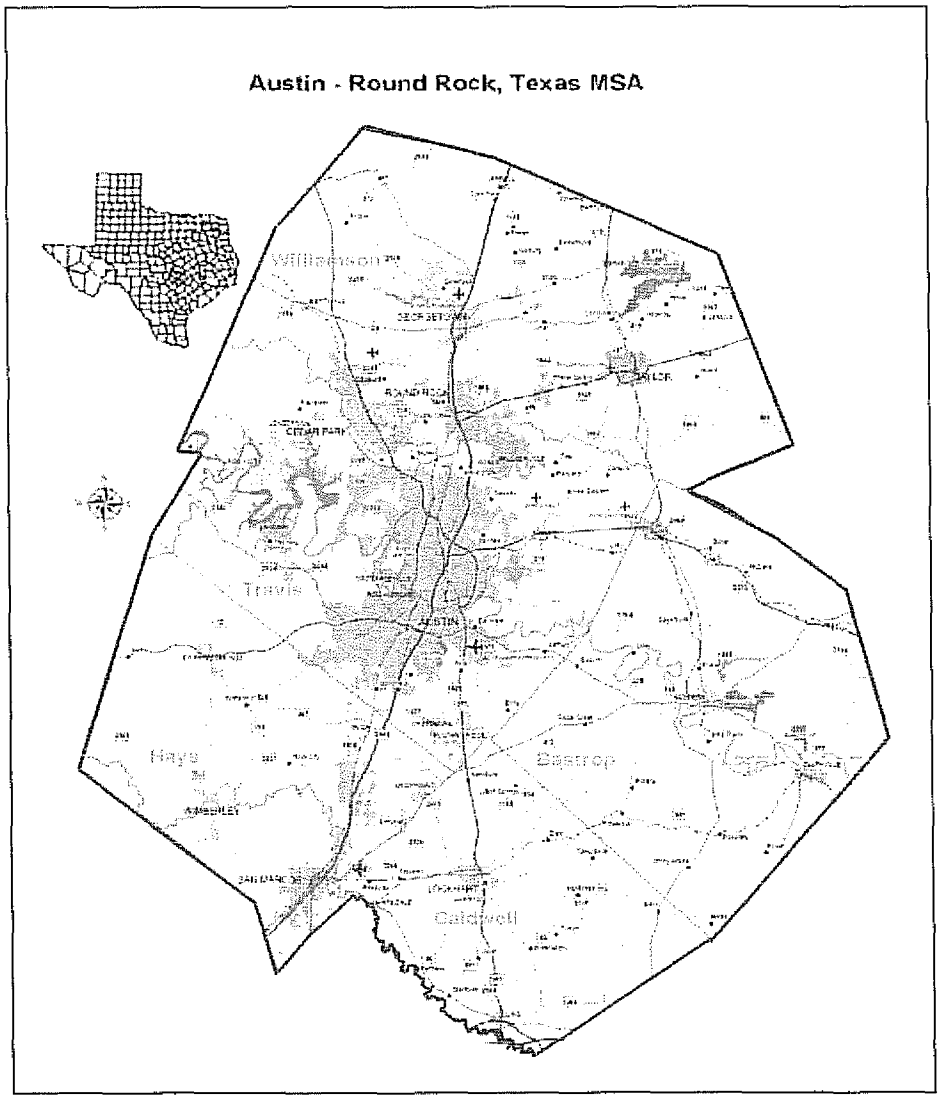


Figure 1.2 Map of Austin-Round Rock MSA

1.7 Participating Stakeholders

1.7.1 Signatory jurisdictions and participating agencies

Along with EPA and TCEQ, the following local governments are signatories of the Austin-Round Rock MSA 8-hour O_3 Flex Memorandum of Agreement (MOA):

City of Austin	City of Luling	Caldwell County
City of Bastrop	City of Round Rock	Hays County
City of Elgin	City of San Marcos	Travis County
City of Lockhart	Bastrop County	Williamson County

In addition to the government signatories, the following organizations participated in the development of this 8-hour O_3 Flex program. Several of these participants, denoted by the asterisk, have also made commitments to implement emission reduction measures. (See Appendix B for local government and participating agency commitments.)

*Capital Area Metropolitan Planning Organization (CAMPO)

*Capital Metropolitan Transportation Authority

*Capital Area Council of Governments (CAPCOG)

Central Texas Clean Cities

Central Texas Regional Mobility Authority

Clean Air Coalition of Central Texas

CLEAN AIR Force of Central Texas

Clean Air Partners Program

Clean School Bus Program

Environmental Defense

Greater Austin Chamber of Commerce

*Lower Colorado River Authority

*Texas Department of Transportation (TxDOT), Austin District

*Texas Department of Transportation (TxDOT), Headquarters Office

*Texas Commission on Environmental Quality, Austin Headquarters Office

University of Texas at Austin

Additional signatory jurisdictions and participating agencies may be added during the term of the MOA.

1.8 Building on Success

Central Texas has a history of proactive air quality initiatives. Since 1996, the Texas Legislature has provided near-nonattainment area funding to the area for use in performing planning functions related to the reduction of ozone concentrations in the area. The region was among the first in the nation to adopt an O_3 Flex Agreement. Designed to help the region maintain compliance with the 1-hour standard, implementation of the O_3 Flex emission reduction measures started in the 2002 ozone season.

In March 2004, the region adopted an Early Action Compact (EAC) to support maintenance of the 8-hour ozone standard. Emission reduction measures implemented for the EAC include a Vehicle Inspection and Maintenance Program, Heavy-Duty Vehicle Idling Restrictions, additional state rules, and a comprehensive collection of voluntary locally implemented measures. The region met the EAC objective of compliance with the 8-hour standard by December 31, 2007.

The Central Texas Clean Air Coalition (CAC) directs the region's air quality policy. The CAC is a voluntary association comprising elected officials from all five counties of the Austin-Round Rock MSA. It is responsible for development, adoption, and implementation for the region's clean air plans.

Since 1993 the CLEAN AIR Force of Central Texas (CAF), a non-profit organization comprising business, government, environmental and community leaders, has coordinated public awareness and education campaigns. Since its inception, the CAF has been at the forefront of local outreach efforts. This has provided the public with a solid understanding of air quality issues. The CAF continues to expand public awareness of the issues through education campaigns and programs.

Chapter Two: Background

2.1 Status of Air Quality

The ozone season for the Austin-Round Rock MSA begins April 1st and ends October 31st. The Austin-Round Rock MSA is designated in attainment of the NAAQS for ozone. The current design value is 80 ppb (calculated as an average of the 4th highest reading from 2005, 2006 and 2007). Figure 2.1 shows design value trend and fourth-highest readings at the two regulatory monitors in the Austin Round-Rock MSA.

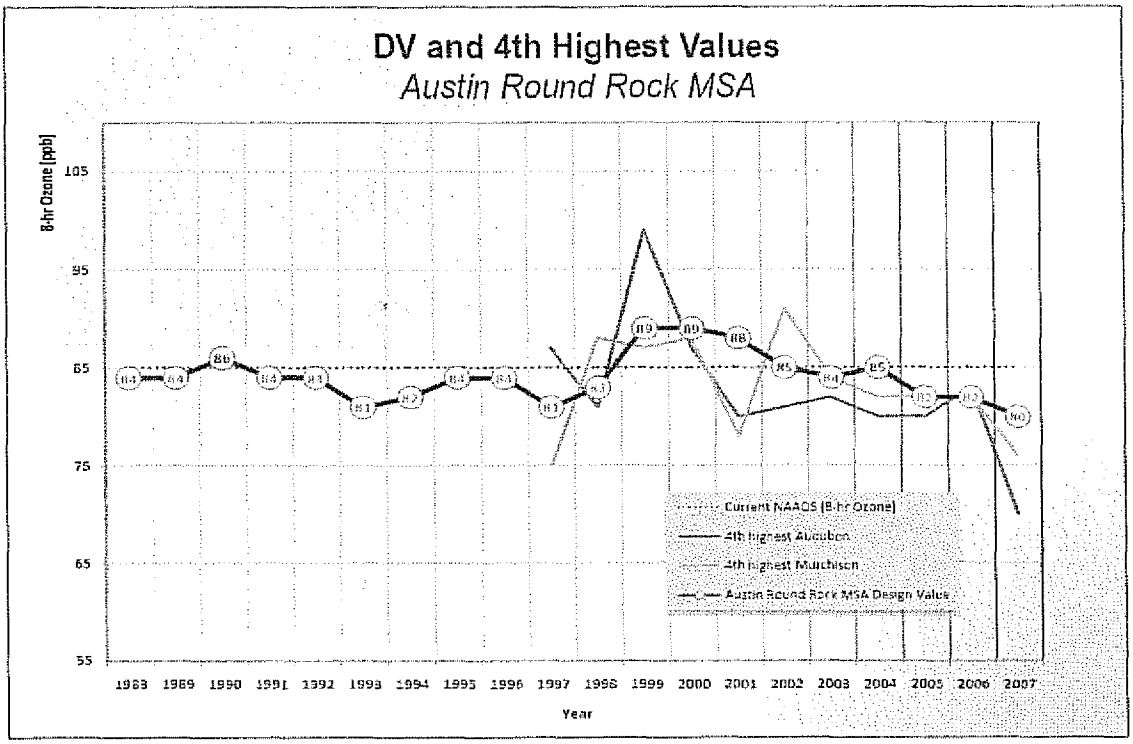


Figure 2.1 Austin Round Rock MSA 8-hr ozone design value historic trend. Note current 8-hr ozone design value is 80 ppb.

Figure 2.2 shows the number of days, from 1993 – 2006, that one or more monitoring stations measured a maximum ozone concentration of 75 ppb or greater. The number of high ozone days varied from a minimum of 6 in 1996 to a maximum of 34 in 1999. The trend in annual high ozone days must be interpreted with caution, as the locations and number of monitoring stations in the Austin monitoring network changed throughout the period. Figure 2.2 also presents the number of high ozone days using only the regulatory monitoring stations at Audubon (C38), and Austin NW / Murchison (C03). Note that the number of high ozone days is the same for all years with the exception of 2003 (13 versus 15) and 2006 (15 versus 18). The years 1995, 1997, 1999, and 2000

were characterized by 33, 23, 34, and 24 high ozone days, respectively. Annual high ozone days for the remaining years varied: they ranged from 6 in 1996 to 18 in 2006 (*Austin Conceptual Model*, UT Austin 2007).

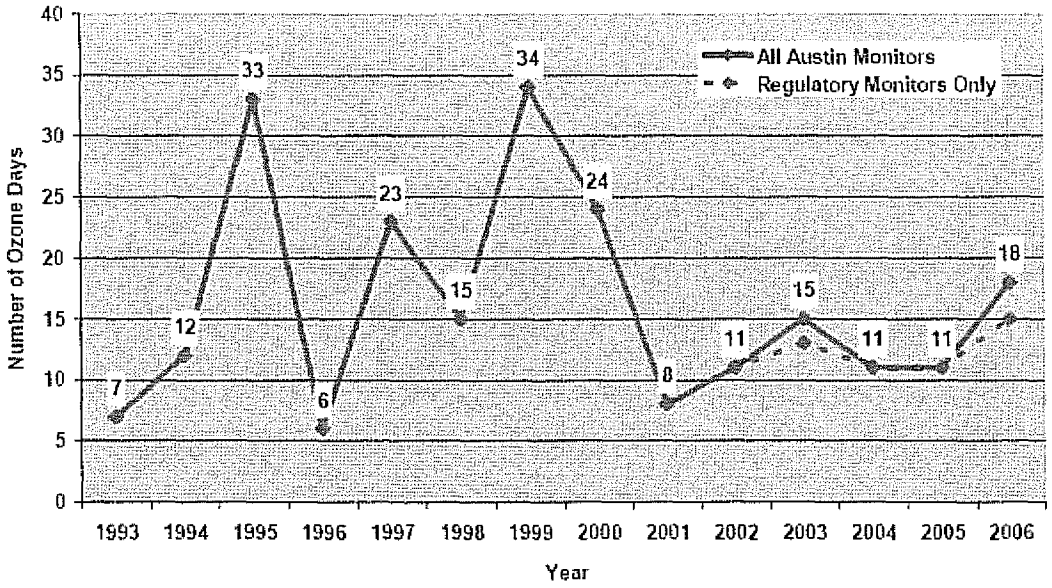


Figure 2.2 Annual number of days characterized by a maximum ozone concentration, averaged over 8 hours, of 75 ppb or greater at one or more Austin monitors, and at regulatory monitors only, during the 1993 through 2006 period.

Figure 2.3 presents the monthly frequency occurrence of high ozone days for 1993 - 2000 and for 2001 - 2006. Note the dramatic reduction in the frequency of occurrence of high ozone days during the July through October period. During 1993-2000, the average annual number of high ozone days in August/September was 11.9, compared to an average of 5.5 days during 2001-2006. In contrast, the May/June period was characterized by a relatively greater number of high ozone days in recent years. During May/June, the annual number of high ozone days for 2001-2006 was 5.5, compared to 2.6 days during 1993-2000. Although not shown, a similar trend was observed for days characterized by maximum ozone concentrations of 85 ppb or greater.

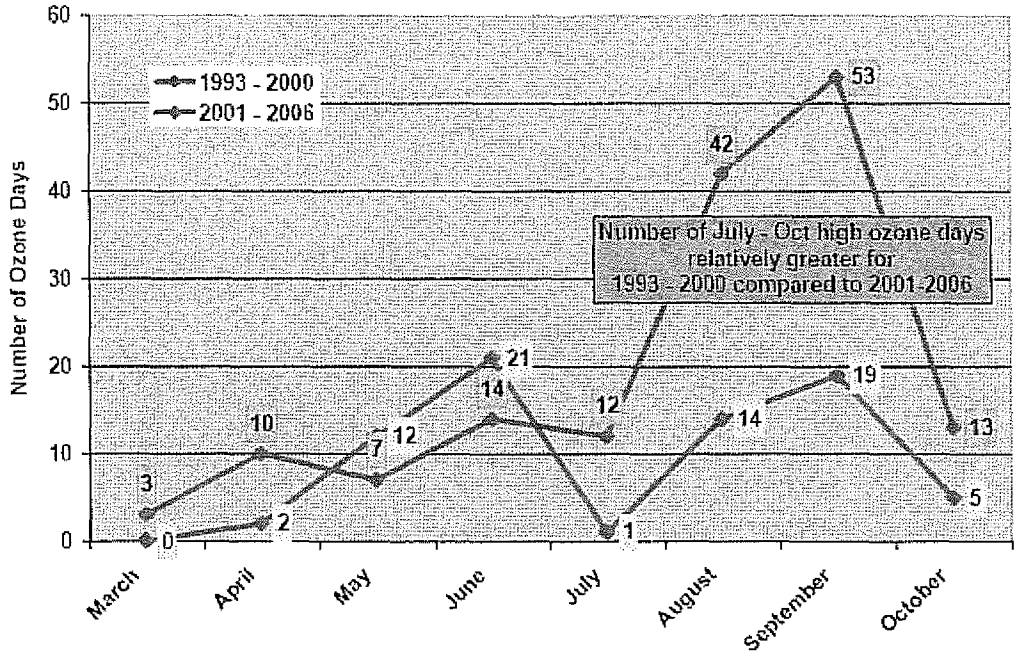


Figure 2.3 Number of days, by month, characterized by a maximum ozone concentration, averaged over 8 hours, of 75 ppb or greater at one or more Austin monitoring stations for the years 1993 - 2000 and for 2001 - 2006.

2.2 Sources of Pollutants

Ozone precursor emissions can result from both anthropogenic and biogenic sources and can be transported over long distances. The traditional emissions inventory (EI) accounts for ozone precursor emissions from point, area, mobile, and biogenic sources within a certain defined area, usually the MSA. The latest EI compiled for the Austin region represents 2002 emissions for the five-county MSA (*Austin-Round Rock MSA 2002 Ozone Precursor Emissions Inventory*, Final revision Dec 2006) and is listed in Tables 2.1 & 2.2 for VOC and NOx emissions respectively. The most recent data on point source emissions for the MSA counties are listed in Table 2.4. Large point sources located outside MSA counties with potential impacts on the area, depending on wind directions, are listed in Table 2.5.

2.2.1 2002 Emissions Inventory

This inventory encompasses the five Austin-Round Rock MSA counties, which includes Travis County, the most populous county of the region, and the four surrounding counties of Bastrop, Caldwell, Hays, and Williamson. (see Figure 1.2 for map)

The 2002 Austin-Round Rock MSA emissions inventory comprises five categories of emission sources. These include biogenic sources and four anthropogenic emission source categories: point, on-road mobile, non-road mobile, and area sources.

Tables 2.1 and 2.2 list NOx and VOC emissions in tons per average ozone weekday by major category for each of the five Austin-Round Rock MSA counties.

VOC 2002 Ozone Season tpd Emissions

COUNTY	Area	On-road Mobile	Non-Road Mobile	Point	Biogenic	Total	Anthropogenic
BASTROP	6.00	2.16	0.60	0.36	123.89	133.01	9.12
CALDWELL	15.95	1.09	0.54	0.06	80.95	98.59	17.64
HAYS	13.23	4.3	1.70	0.86	49.42	69.51	20.09
TRAVIS	57.22	31.11	20.16	0.99	71.64	181.12	109.48
WILLIAMSON	16.80	9.19	5.01	0.08	68.2	99.28	31.08
Grand Total	**109.21**	**47.85**	**28.02**	**2.35**	**394.1**	**581.51**	**187.41**

Table 2.1: 2002 VOC emissions by source category for each of the counties (all emissions are expressed in tons per day during an average ozone day) (*Austin-Round Rock MSA 2002 Ozone Precursor Emissions Inventory*, Final revision Dec 2006).

NOx 2002 Ozone Season tpd Emissions

COUNTY	Area	On-road Mobile	Non-Road Mobile	Point	Biogenic	Total	Anthropogenic
BASTROP	0.7	3.65	1.68	3.79	2.18	12.00	9.82
CALDWELL	0.72	2.06	1.24	2.46	4.93	11.41	6.48
HAYS	0.71	9.95	5.58	7.15	3.29	26.68	23.39
TRAVIS	3.77	58.33	17.45	6.56	4.78	90.89	86.11
WILLIAMSON	4.8	17.29	7.33	0.1	9.85	39.37	29.52
Grand Total	**10.7**	**91.28**	**33.30**	**20.06**	**25.03**	**180.35**	**155.32**

Table 2:2. 2002 NOx Emissions by Source Category for Each of the Counties (*Austin-Round Rock MSA 2002 Ozone Precursor Emissions Inventory*, Final revision Dec 2006).

Figures 2.1 and 2.2 provide a graphical comparison of emissions of NOx and VOC by source category in tons per average ozone day (weekday).

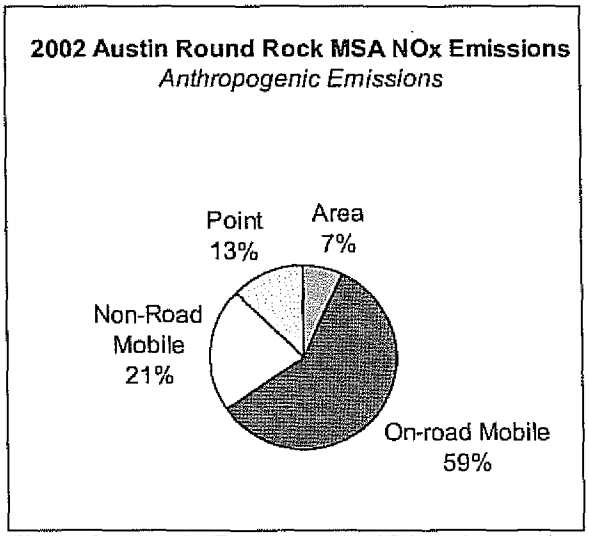


Figure 2.1 Austin-Round Rock MSA emissions inventory pie chart (2002 NOx emissions) (*Austin-Round Rock MSA 2002 Ozone Precursor Emissions Inventory*, Final revision Dec 2006).

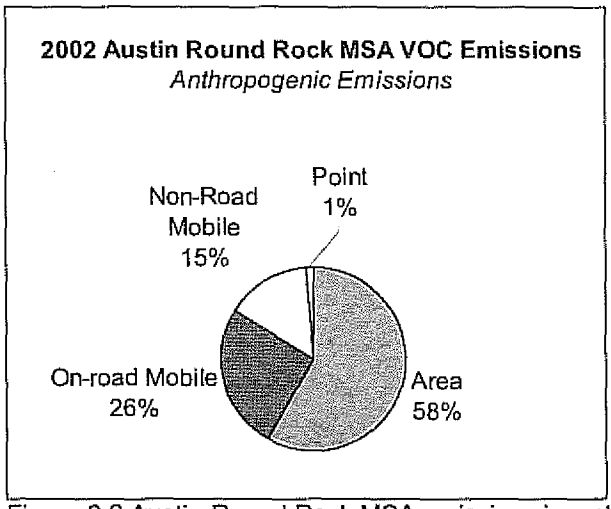


Figure 2.2 Austin-Round Rock MSA emissions inventory pie chart (2002 VOC emissions) (*Austin-Round Rock MSA 2002 Ozone Precursor Emissions Inventory*, Final revision Dec 2006).

The on-road mobile category comprises the vehicles (e.g., cars, trucks, buses) traveling the regional roads and highways. Non-road mobile sources account for the emissions of mobile equipment operated in areas other than public thoroughfares. The non-road category includes farm vehicles, lawn and garden equipment, construction, mining, and industrial equipment, railroad locomotives, aircrafts, and others.

Area sources, such as gasoline stations, dry cleaners, or oil wells, are numerous and individually produce low levels of contaminants. Identification of discrete sources is untenable because individually these sources do not approach the threshold that triggers reporting requirements. Nevertheless, the cumulative impact of the area source contribution to overall emissions is significant.

Point sources are stationary emitters that produce pollution levels sufficient to warrant a description of each singular source. The TCEQ maintains records of point sources. This category is subdivided into major and minor point sources. Major point sources with actual emissions or the potential to emit over 100 tons/year (t/y) of a criteria air pollutant are subject to TCEQ annual emissions inventory (EI) reporting requirements. Minor point sources, which emit fewer than 100 t/y of a criteria pollutant, only report emissions when specifically required by TCEQ. Since 2002, TCEQ has requested EI reports of point sources in the Austin region emitting 10 t/y of VOC and 25 t/y NOx. Table 2.3 lists point sources in the Austin MSA and their 2002 emissions. Tables 2.4 and 2.5 show 2005 emissions, collected by TCEQ, for the Austin-Round Rock MSA and surrounding counties respectively.

County	Company Name	TCEQ Acc	NOx [tpd]	VOC [tpd]	CO [tpd]
Bastrop	Acme Brick Company	BC0059O	0.16	0.13	0.65
	Bastrop Energy Partners (Bastrop Clean Energy)	BC0083R	0.57	0.04	0.19
	GenTex Power Corp and Calpine (lost Pines 1)	BC0082T	0.55	0.03	0.46
	Lower Colorado River Authority	BC0015L	2.46	0.09	0.07
	LCRA Hilbig Gas Storage	BC0057S	-	0.05	-
	Tiffany Brick Company LP	BC0018E	0.04	0.02	0.17
Bastrop Total			**3.78**	**0.37**	**1.54**
Caldwell	JL Davis	CA0011B	0.25	0.03	0.37
	Oasis Pipeline Co TX LP (Prairie Lea Compressor St.)	CA0027J	2.21	0.04	0.15
Caldwell Total			**2.46**	**0.07**	**0.52**
Hays	Texas Leigh Cement Co. (Portland Cement Mfg.)	HK0014M	6.09	0.51	9.52
	SW Texas State Univ. (Central Heating & Utilities)	HK0036C	0.63	0.08	0.24
	Hays Energy Project	HK0108C	0.43	0.26	0.7
Hays Total			**7.15**	**0.85**	**10.46**
Travis	3M Minnesota Mining and Manufacturing	TH0243G	0.12	0.03	0.42
	Austin White Lime Company	TH0010I	1.03	0.01	0.48
	Austin Hot Mix	TH0015V	0.01	0.09	0.05
	Motorola, Inc	TH0065G	0.05	0.14	0.02
	City of Austin Decker Creek Power Plant)	TH0004D	2.51	0.02	0.13
	City of Austin (Holly Power Plant)	TH0006W	0.75	0.001	0.04
	University of Texas at Austin (Hal C Weaver PP)	TH0104V	1.78	0.04	0.53
	Advanced Micro Devices	TH0142N	0.06	0.12	0.05
	Motorola Integrated Circuit	TH0172E	0.05	0.07	0.04
	Samsung Electronics	TH0602A	0.03	0.12	0.02
	Sand Hill Energy	TH0760E	0.1	0.001	0.17
	Koch Pipeline Co	TH0310Q	0.01	0.21	0.03
	Austin Research Laboratory	TH0052P	0.04	0.03	0.05
	Tyco Printed Circuit Group LP	TH0093B	0.01	-	-
	Austin American Statesman	TH0191A	-	-	-
	BFI Waste Systems	TH0232L	0.01	0.04	0.04
	Austin Counter Tops	TH0247V	-	0.04	-
	Lithoprint Company Inc	TH0732J	-	0.01	-
	Press Corps Inc	TH0765R	-	0.02	-
Travis Total			**6.56**	**0.99**	**2.07**
Williamson	Aquatic Industries Inc	WK0116E	-	0.1	-
	Seminole Pipeline Co	WK01480	0.1	0.01	0.07
	Laboratory Tops Inc	WK0171T	-	0.07	-
Williamson Total			**0.10**	**0.18**	**0.07**
TOTAL			**20.1**	**2.4**	**14.7**

Table 2.3 Summary in tons/day of Point Source Emissions for 2002 (*Austin-Round Rock MSA 2002 Ozone Precursor Emissions Inventory*, Final revision Dec 2006)

RN	ACCOUNT	SITE	COUNTY	REGION	SIC	VOC [tpy]	NOX [tpy]
RN102038486	BC0015L	LOWER COLORADO RIVER AUTHORITY	BASTROP	11	4911	31.77	428.02
RN101056851	BC0083R	BASTROP ENERGY CENTER	BASTROP	11	4911	12.89	237.27
RN100723915	BC0082T	LOST PINES 1 POWER PLANT	BASTROP	11	4911	8.30	200.44
RN100225846	BC0059O	ELGIN PLANT	BASTROP	11	3251	47.09	60.35
RN100212034	BC0018F	HANSON BRICK ELGIN FACILITY	BASTROP	11	3251	7.86	26.64
RN102204427	BC0057S	HILBIG GAS STORAGE FACILI	BASTROP	11	1311	23.33	0.64
RN100220177	CA0027J	PRAIRIE LEA COMPRESSOR STATION	CALDWELL	11	4922	38.38	981.30
RN100212018	CA0011B	LULING GAS PLANT	CALDWELL	11	1321	16.19	171.13
RN102597846	HK0014M	TEXAS LEHIGH CEMENT CO.	HAYS	11	3241	198.42	2168.00
RN100221480	HK0036C	CENTRAL HEATING & UTILITI	HAYS	11	8221	22.10	174.42
RN100211689	HK0108C	HAYS ENERGY PROJECT	HAYS	11	4911	15.35	165.49
RN100211945	HK0046W	PARKVIEW METAL PRODUCTS	HAYS	11	3469	27.68	
RN102533510	TH0104V	HAL C. WEAVER POWER PLANT	TRAVIS	11	4911	15.43	693.68
RN100214337	TH0010I	AUSTIN WHITE LIME COMPANY	TRAVIS	11	3274	7.94	647.06
RN100219872	TH0004D	DECKER CREEK POWER PLANT	TRAVIS	11	4911	33.39	518.32
RN100215052	TH0760E	SAND HILL ENERGY CENTER	TRAVIS	11	4911	1.98	283.31
RN100220045	TH0006W	HOLLY POWER PLANT	TRAVIS	11	4911	0.36	241.07
RN100218692	TH0243G	3M AUSTIN CENTER	TRAVIS	11	8731	12.68	50.62
RN101992246	TH0522W	SUNSET FARMS ELECTRIC	TRAVIS	11	4911	5.56	38.63
RN100215938	TH0502F	AUSTIN COMMUNITY RECYCLING AND DISPOSA FACILITY	TRAVIS	11	4953	7.86	19.21
RN102752763	TH0172E	INTEGRATED CIRCUIT MFG	TRAVIS	11	3674	13.77	17.44
RN100723741	TH0142N	ADVANCED MICRO DEVICES	TRAVIS	11	3674	30.81	17.33
RN100843747	TH0065G	ED BLUESTEIN SITE	TRAVIS	11	3674	21.42	15.40
RN100518026	TH0602A	AUSTIN FABRICATION FACILI	TRAVIS	11	3674	43.24	10.17
RN100542752	TH0232L	SUNSET FARMS LANDFILL	TRAVIS	11	4953	17.29	7.60
RN102776994	TH0015V	AUSTIN HOT MIX	TRAVIS	11	2951	30.15	3.06
RN101059873	TH0310Q	AUSTIN TERMINAL	TRAVIS	11	5171	54.43	1.25
RN100805662	TH0093B	AUSTIN DIVISION	TRAVIS	11	3672	2.30	0.16
RN101957769	TH0191A	AUSTIN AMERICAN STATESMAN	TRAVIS	11	2711	0.85	0.01
RN100216746	TH0247V	AUSTIN COUNTER TOPS	TRAVIS	11	3089	25.13	
RN100725712	WK0148O	SEMINOLE PIPELINE COUPLAN	WILLIAMSON	11	4619	2.41	27.62
RN100726179	WK0171T	DURCON LABORATORY TOPS INCORPORATED	WILLIAMSON	11	3821	13.98	3.17
RN100215193	WK0116E	AQUATIC INDUSTRIES INC	WILLIAMSON	11	3088	30.30	

Table 2.4 Point source emissions in tons/year in the Austin Round Rock MSA (data from 2005 Point Source Emissions Inventory; TCEQ)

RN	ACCOUNT	SITE	COUNTY	REGION	SIC	VOC [tpy]	NOX [tpy]
RN101612083	BF01291	FORT HOOD	BELL	9	9711	274.60	73.00
RN100228196	BF0053Q	TEMPLE PLANT	BELL	9	3086	231.44	3.52
RN100217975	BG0057U	SOMMERS DEELY SPRUCE POWER	BEXAR	13	4911	146.75	9434.08
RN100220474	BG0259G	1604 PLANT	BEXAR	13	3241	34.24	2407.41
RN100211507	BG0045E	PORTLAND CEMENT	BEXAR	13	3241	148.79	2176.14
RN100217835	BG0186I	VH BRAUNIG PLANT	BEXAR	13	4911	54.41	1188.86
RN102605375	CS0022K	BALCONES PLANT	COMAL	13	3241	12.54	2060.70
RN100212067	CS0018B	HUNTER PLANT	COMAL	13	3241	52.94	1288.95
RN100552454	CS0020O	BULK MINERAL HANDLING	COMAL	13	3274	5.51	575.94
RN100226844	FC0018G	FAYETTE POWER PROJECT	FAYETTE	11	4911	211.77	6834.16
RN100213776	FC0033K	GIDDINGS PLANT	FAYETTE	11	1321	91.00	462.39
RN100215136	FC0051I	LAGRANGE PLANT	FAYETTE	11	1321	11.06	209.10
RN100542927	LI0027L	RELIANT ENERGY LIMESTONE	LIMESTONE	9	4911	249.51	11879.00
RN100221472	MM0001T	ALCOA SANDOW PLANT	MILAM	9	3334	1190.09	7747.99
RN102147881	MM0023J	SANDOW STEAM ELECTRIC	MILAM	9	4911	77.49	4779.40
RN100226570	RI0035C	TWIN OAKS POWER ELECTRIC STATION	ROBERTSON	9	4911	1.83	2184.92

Table 2.5 Large point source emissions in tons/year in the surrounding and upwind counties (data from 2005 Point Source Emissions Inventory; TCEQ)

2.3 Monitoring

2.3.1 Number and locations of air quality monitors

TCEQ has two regulatory monitors (Audubon C38 and Austin NW / Murchison C03) in the Austin-Round Rock MSA. CAPCOG maintains the following additional ozone monitors:

- The Dripping Springs monitor (C614) has been in place since March 2003
- The San Marcos (C675) and the Round Rock (C674) monitors came on-line in June 2006
- CAPCOG started maintaining the Fayette County C603 monitor in 2002
- The McKinney Roughs monitor (C684) came on-line in August 2006
- CAPCOG installed a monitor at a Lake Georgetown site which started operating in September 2007. The Lake Georgetown site replaces the monitoring site at the Pflugerville Wastewater Treatment Plant, which began operations in December 2002 and was deactivated in November 2006.

Data from six of the sites is accessible on-line from TCEQ's Monitoring Operations website:
http://www.tceq.state.tx.us/cgi-bin/compliance/monops/site_info
The locations of the Austin area ozone monitors are shown below:

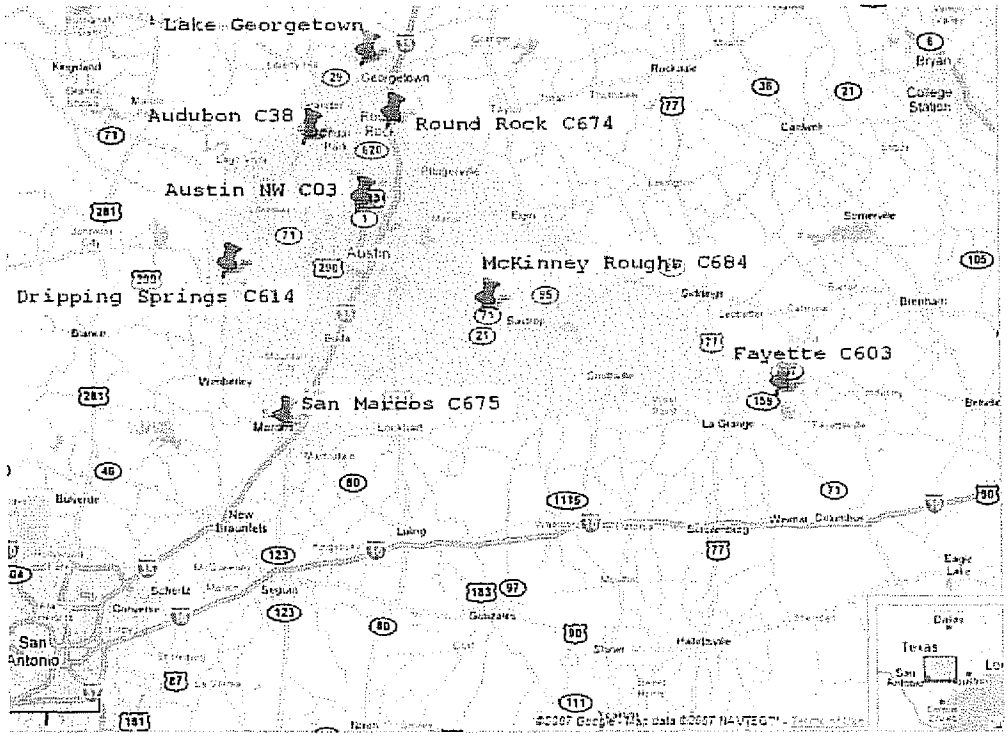


Figure 2.3 Austin Round-Rock MSA ozone monitoring network with regulatory monitors Audubon and Austin NW (red markers) and additional ozone monitors (blue markers)

Figure 2.4 shows readings from all Austin-Round Rock MSA ozone monitors during 2007 ozone season. Note that during the 2007 ozone season the region experienced unusually low ozone readings.

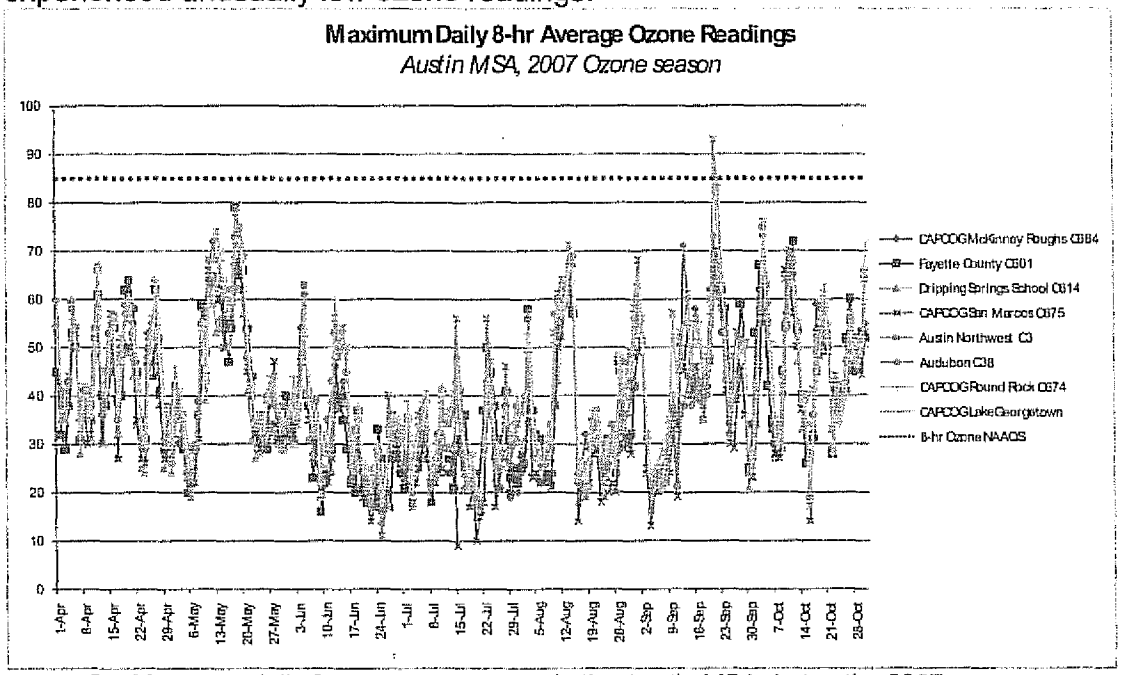


Figure 2.4 Maximum daily 8-hr ozone averages in the Austin MSA during the 2007 ozone season

2.4 Analysis of High Ozone Episodes

The HYSPLIT (Hybrid Single-Particle Lagrangian Integrated Trajectory) model was used to investigate the potential source regions of air entering the Austin Area. HYSPLIT uses meteorological model forecast data from the National Centers for Environmental Prediction (NCEP) archived by Air Resources Laboratory (ARL). Figures 2.5 and 2.6 present the residence time maps for the 20% highest ozone days for June and September based on the maximum ozone concentration at either the Murchison or Audubon monitoring station during the years 2001 through 2005. These back trajectories suggest long-range transport of continental air into Central Texas from upwind areas located to the east and northeast of Texas. Multi-day high ozone episodes are often associated with a ridge of high pressure that extends southwestward into Texas. The transport pattern prior to high ozone days is consistent with the large-scale clockwise circulation around this high pressure ridge. This high pressure ridge is often associated with local meteorological conditions that are favorable for the formation and accumulation of ground-level ozone. In addition, the continental air mass transported into Austin likely contains elevated concentrations of ozone and its precursor compounds associated with both biogenic and anthropogenic emissions from sources located in states and other areas of Texas upwind of Austin (*Austin Conceptual Model*, UT Austin, 2007).

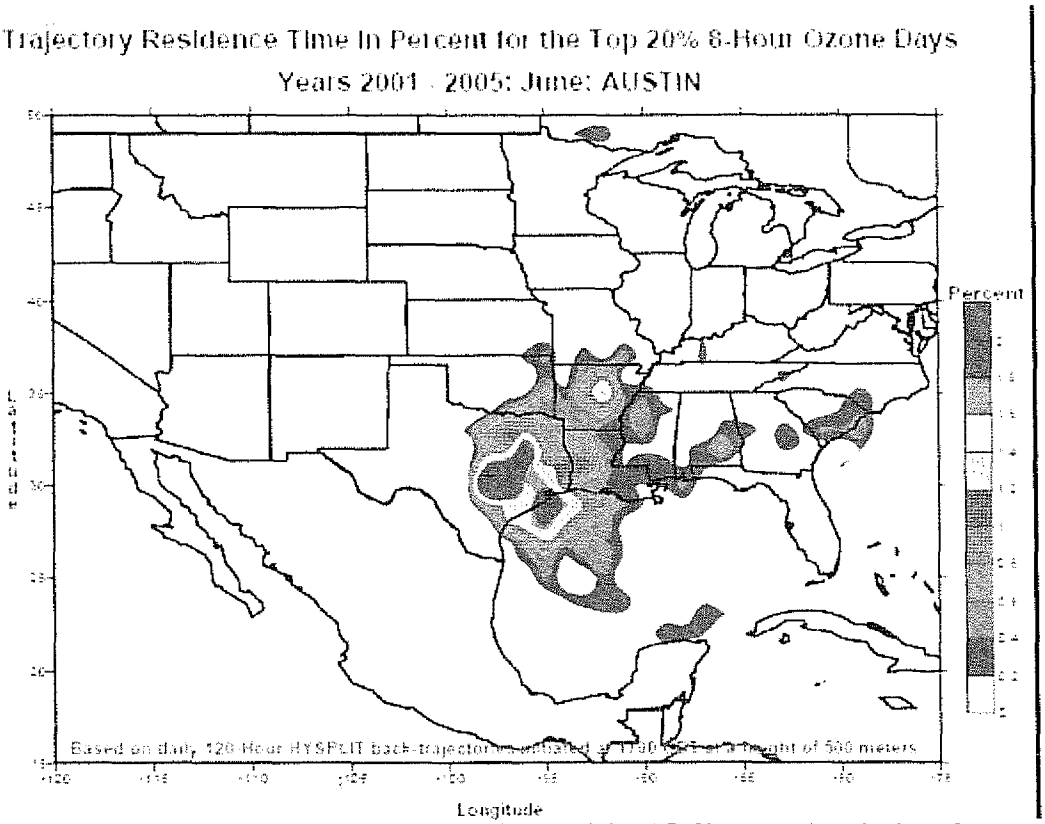


Figure 2.5 Trajectory residence time in percent for the highest 20% ozone days in June from 2001to 2005.

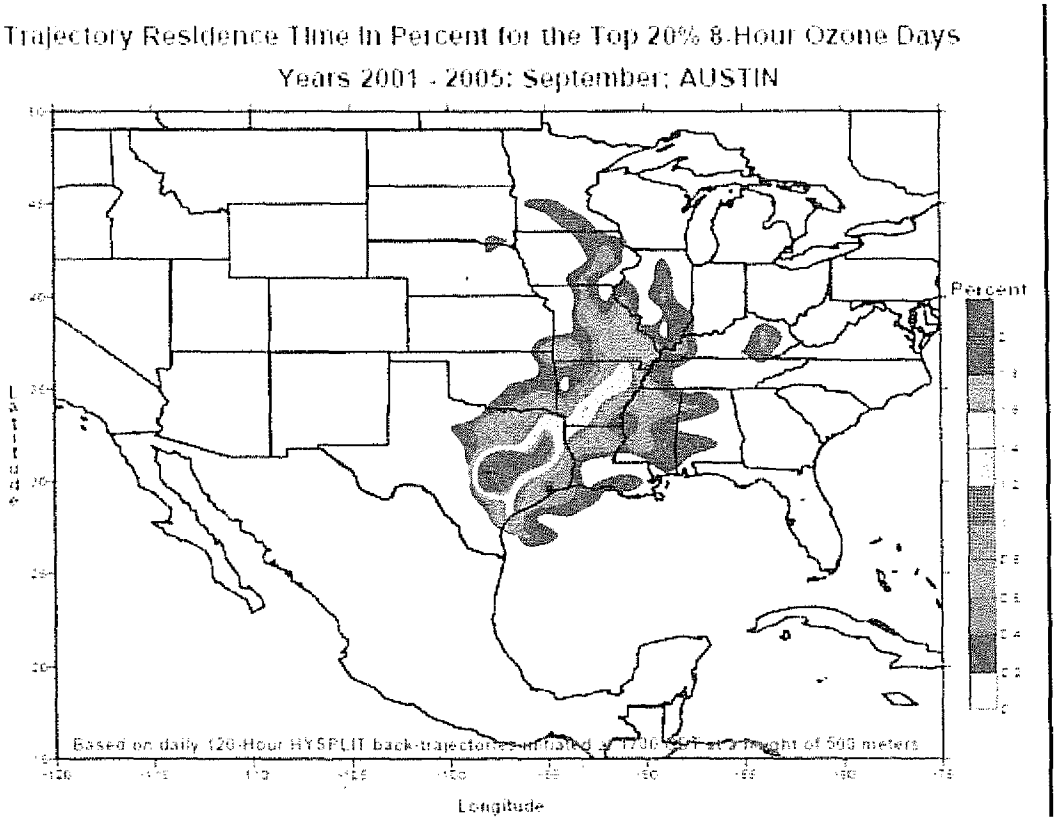


Figure 2.6 Trajectory residence time in percent for the highest 20% ozone days in September from 2001 to 2005.

According to the Austin Ozone Conceptual Model (*The University of Texas at Austin, July 26, 2007)*, from 1993 through 2006, one or more monitoring stations measured 75 ppb or greater on 228 days. The number of high ozone days varied from a minimum of 6 in 1996 to a maximum of 34 in 1999. The frequency of occurrence of high ozone days over the course of a typical ozone season is characterized by a bi-modal distribution, with a primary peak in the frequency of high ozone days during the August through early October period and a secondary peak during late May and June. In recent years (2001 through 2006) the average number of late summer high ozone days declined substantially. The frequency of occurrence of high ozone days was equally distributed between the May/June and August/September peaks.

The common meteorological condition occurring with high ozone is a clockwise circulation around a surface ridge of high pressure, often centered over the Central Plains or Ohio/Mississippi River Valleys. It generates northeasterly or easterly wind that transports continental air and haze into eastern Texas. This continental air mass is often characterized by reduced visibility, and likely contains elevated concentrations of ozone and its precursor compounds associated with both biogenic and anthropogenic emissions. High ozone concentrations are often measured at monitoring stations throughout the eastern half of Texas.

In the Austin-Round Rock MSA, monitoring data collected during these episodes shows background ozone concentrations of typically 80-85% of the observed local maximum. Based on these analyses, the enhancement of ozone concentrations due to emissions from sources within the Austin-Round Rock MSA generally ranged between 10 ppb and 20 ppb on individual high ozone days, with an average enhancement of 15 ppb. With background concentrations ranging from 65 ppb to 75 ppb, even relatively small contributions of ozone formed from local source emissions in the Austin-Round Rock MSA would have resulted in an exceedance of the 8-hour ozone NAAQS.

2.5 Regional Photochemical Modeling

Over the past eight years, the region has utilized its resources from the Texas Near Non-attainment Areas Grant Program to develop photochemical models for air quality planning. In 2001, Austin collaborated with San Antonio, Victoria, Corpus Christi, and TCEQ to develop a multi-day high ozone episode for photochemical modeling. The September 13-20, 1999 high ozone episode was selected for development with the Comprehensive Air Quality Model with Extensions (CAMx) photochemical grid model. The September 13-20, 1999 modeling episode fulfills both the requirements of the EPA guidance for modeling 8-hour ozone concentrations and the EPA's Protocol for Early Action Compacts.

The Austin and San Antonio areas used the episode to analyze the emission reductions from various control strategies being considered in the development of the EACs. In addition, the Austin, Corpus Christi, San Antonio, and Victoria near-nonattainment areas have used the episode for various air quality planning activities, including work on:

- sensitivity of ozone formation to reductions of VOC and NOx precursors;
- response of ozone to various VOC and NOx control strategies;
- comparisons with airborne ozone sampling data;
- comparisons with airborne ozone lidar data;
- development of programs to perform VOC sampling;
- the role of long range point source impacts on local ozone formation; and
- the role of transport on local ozone formation.

In addition to modeling the EAC measures, sensitivity analyses have been run using the 1999 modeling episode to evaluate both potential control strategies and potential sources of emissions growth. Those include runs to investigate the impact from local emission reduction measures included in the State Implementation Plan (SIP). Figure 2.7 demonstrates the emission reductions predicted by the vehicle Inspection and Maintenance program and the Texas Emission Reduction Plan (TERP) projects. Similar modeling analyses were conducted to investigate the impact from potential and new sources in the locations upwind from Austin-Round Rock MSA. Figure 2.8 shows potential

ozone impacts related to emissions from a proposed coal-fired power plant (Oak Grove).

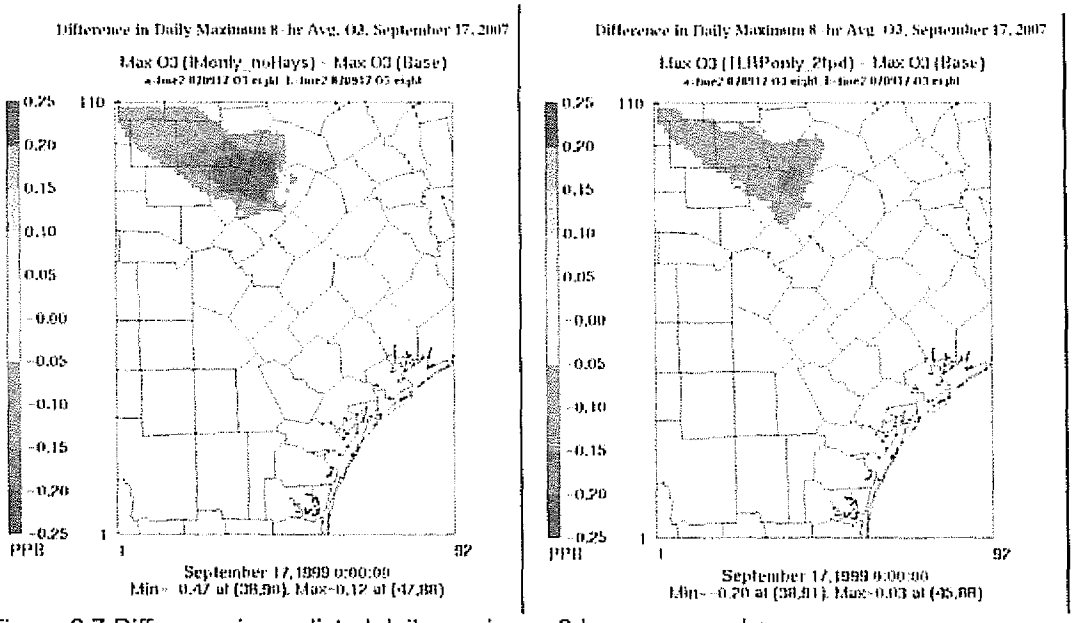


Figure 2.7 Difference in predicted daily maximum 8-hour averaged ozone concentrations on September 17 between the 2007 Future Case with no local controls applied but with I&M programs in Travis and Williamson Counties (left); TERP measures only (right).

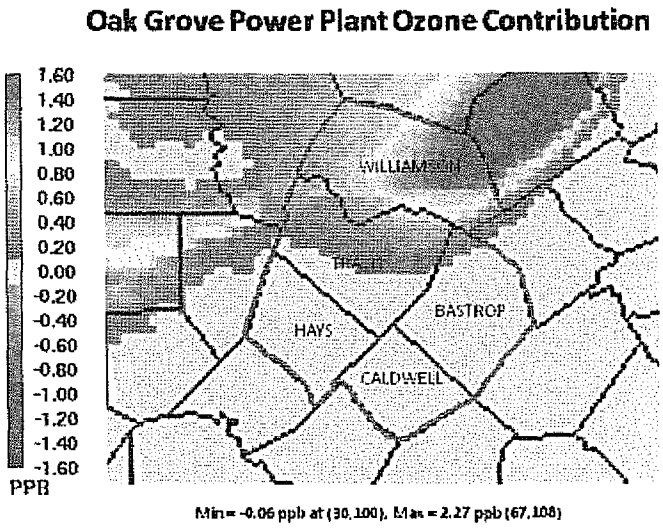


Figure 2.8 Difference in predicted daily maximum ozone concentration with and without Oak Grove Power plant averaged over 8 hours on September 15.

2.6 Trends and Measures of Success

The Austin-Round Rock MSA 2002 – 2015 emissions trend analysis is an upgrade from the 2003 Early Action Compact (EAC) analysis "*Emissions Inventory Comparison and Trend Analysis for the Austin-Round Rock MSA: 1999, 2002, 2005, 2007, & 2012.*" The existing document was upgraded by adding the final year (2015) to the on-road and non-road mobile, area and point source inventories and by adjusting the intermediate year emissions with a new base year (2002).

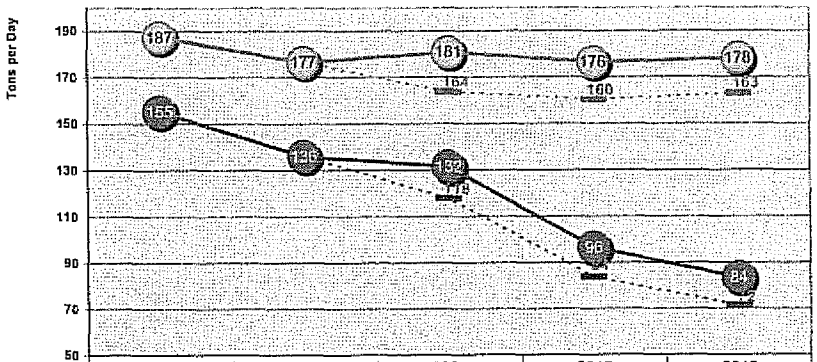
The 2015 emissions for the on-road mobile sources are from the Texas Transportation Institute (TTI) report: "*Austin Early Action Compact Region On-Road Mobile Source Emissions Inventories: 2007, 2015, And 2030: Revised Emissions Results*", TTI, February 2007. Emissions for 2002, 2005, 2007 and 2012 are from "*Austin/San Marcos Metropolitan Statistical Area On-road Mobile Source Emissions Inventories: 1995, 1999, 2002, 2005, 2007, and 2012*", TTI, August 2003.

Emission trends for the non-road mobile sources were developed by applying newly developed growth factors to the base year inventory (2002). The non-road growth factors were developed by running the US EPA NONROAD model for years 2002, 2005, 2007, 2012 and 2015. The area and point source emission trends were developed by applying growth factors obtained from the 2003 EAC document. The 2015 trends emission trends were developed by using the interpolation method (reference) for both area and point source categories.

Emissions data were used in the development of air quality trends within the MSA. These emissions are presented in the following categories: area source, non-road mobile source, point source and on-road mobile source. Figure 2.9 shows the total emissions trends of NOx and VOC in the Austin-Round Rock MSA. Figures 2.10 to 2.13 show separate emission trends of area sources, non-road and on-road mobile sources, and point sources, respectively.

Due to continued emission reductions from the federal mobile source control program, reductions in the non-road and on-road mobile source emissions are expected to be sufficient to offset projected increases in stationary source emissions. On a cautionary note, new construction of large point sources within or upwind of the region could adversely impact the area's ability to remain in compliance with the 8-hour ozone NAAQS.

Austin Round Rock MSA Emissions Trend
2002 - 2015

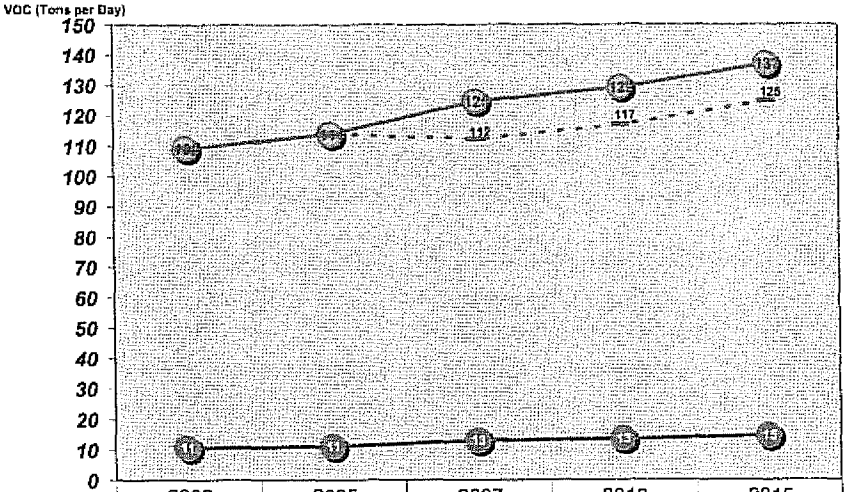


	2002	2005	2007	2012	2015
NOx TREND with *EAC	155.31	136.05	117.94	83.69	71.53
NOx TREND without EAC	155.31	136.05	131.55	96.50	83.53
VOC Trend with *EAC	187.43	176.66	163.85	160.37	163.09
VOC TREND without EAC	187.43	176.66	180.86	176.43	178.19

*State Assisted and Point Source Voluntary Measures Applied

Figure 2.9 Total NOx and VOC emissions trends in the Austin-Round Rock MSA

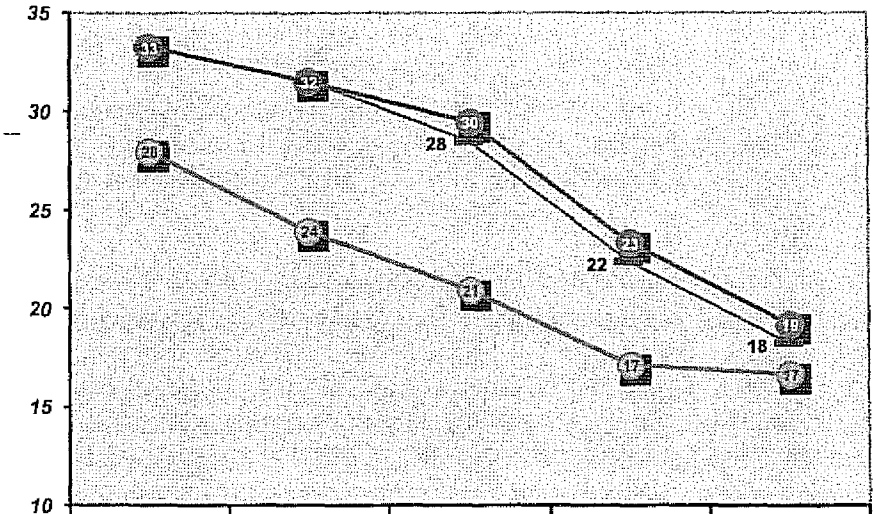
Area Source Emissions Inventory Trend
Austin Round Rock MSA



	2002	2005	2007	2012	2015
NOx	10.70	11.12	13.04	13.48	14.57
VOC	109.21	113.87	124.58	129.20	136.91
VOC with EAC controls	109.21	113.87	112.22	116.84	124.56

Figure 2.10 Area source emissions trends in the Austin-Round Rock MSA

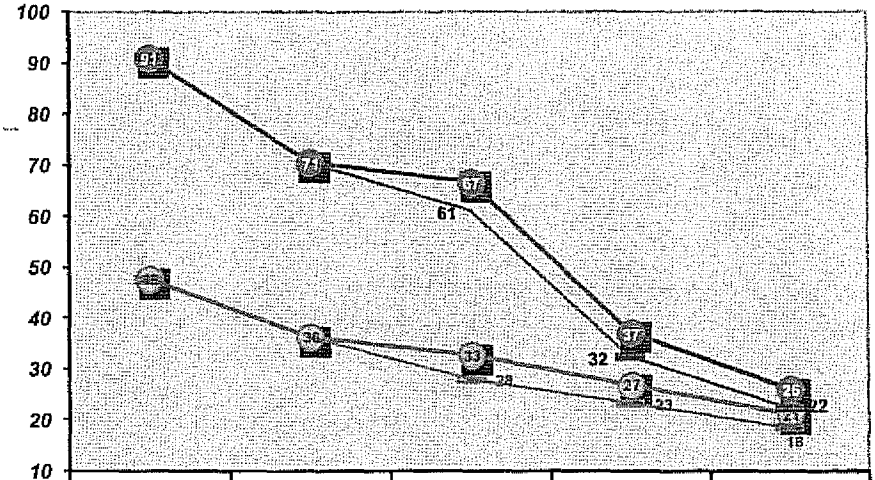
Nonroad Mobile Source Emissions Inventory Trend
Austin Round Rock MSA



	2002	2005	2007	2012	2015
NOx Trends without EAC	33.30	31.58	29.52	23.39	19.23
VOC Trends without EAC	28.02	23.98	20.92	17.12	16.65
NOx Trends with EAC	33.30	31.58	28.50	22.37	18.21

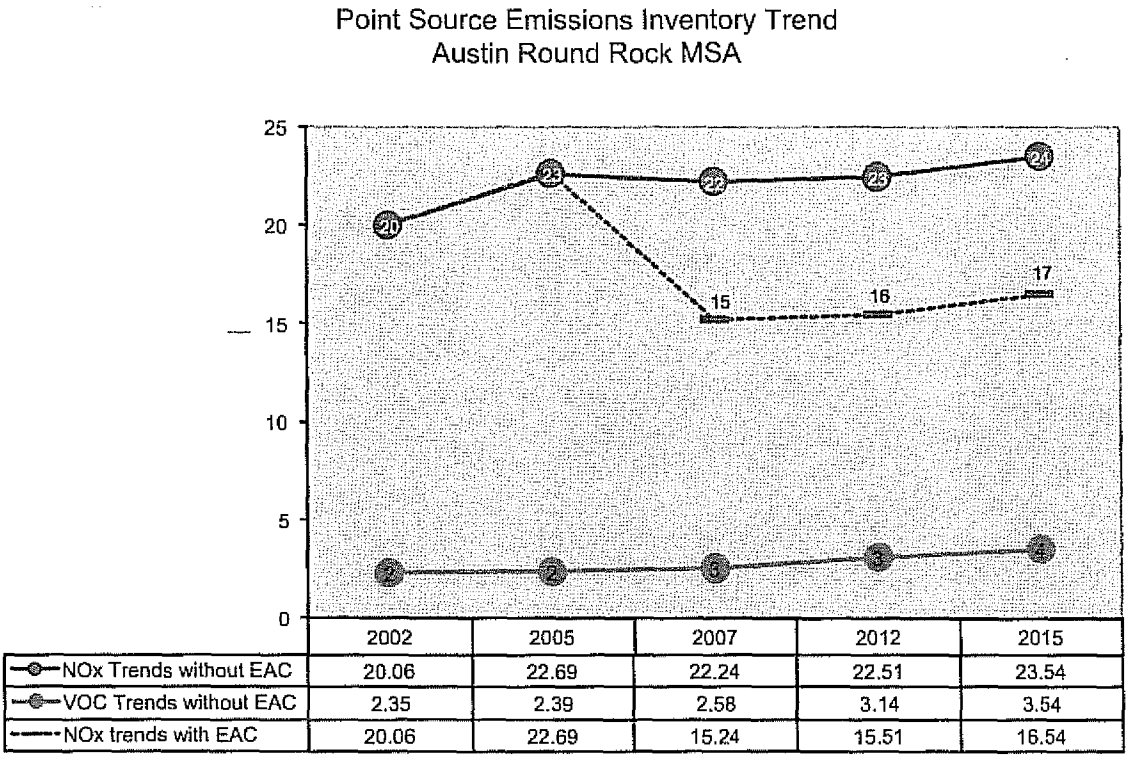
Figure 2.11 Non-road mobile source emissions trends in the Austin-Round Rock MSA

Onroad Mobile Source Emissions Inventory Trend
Austin Round Rock MSA



	2002	2005	2007	2012	2015
NOx Trends without EAC	91.25	70.66	66.75	37.12	26.18
VOC Trends without EAC	47.85	36.43	32.78	26.97	21.09
NOx Trends with EAC	91.25	70.66	61.16	32.34	22.20
VOC Trends with EAC	47.85	36.43	28.12	23.27	18.34

Figure 2.12 On-road mobile source emissions trends in the Austin-Round Rock MSA



	2002	2005	2007	2012	2015
NOx Trends without EAC	20.06	22.69	22.24	22.51	23.54
VOC Trends without EAC	2.35	2.39	2.58	3.14	3.54
NOx trends with EAC	20.06	22.69	15.24	15.51	16.54

Figure 2.13 Point source emissions trends in the Austin-Round Rock MSA

Chapter Three: Action Plan

The action plan charts the course for the region's air quality management through 2013. It outlines a collaborative, on-going management process that determines the appropriate response to defined implementation triggers and ensures the response is implemented. The action plan can be revised if necessary. While the action plan focuses on NOx and VOC emission reductions, many of the measures implemented will also reduce greenhouse gas emissions and petroleum-based fuel use, providing substantial co-benefits.

3.1 Planning measures

3.1.1 Air Quality Planning Activities

The Capital Area Council of Governments (CAPCOG) is committed to coordinating technical planning activities in support of the jurisdictions represented on the Clean Air Coalition, and to providing good science for assessing regional air quality problems. CAPCOG is enabled by the near-nonattainment (NNA) grant contract with TCEQ and uses funding provided by the Texas Legislature.

CAPCOG will continue to monitor the region's ozone levels and develop and refine the technical analysis required to develop successful control strategies. It will monitor control strategy performance and provide technical support for successful implementation of both voluntary and State-assisted measures adopted in the EAC SIP and/or 8-O_3 Flex program. Tasks included in the FY 08-09 NNA contract work plan are summarized as follows:

Monitoring air pollution levels

- Collect ozone concentration and meteorological data within the region by operating six ozone monitoring and meteorological data collection stations. Data collected will be reported to TCEQ's LEADS (IPS MeteoStar Leading Environmental Analysis and Display System) to supplement data collected at the two regulatory monitors operated in the area by TCEQ.
- Evaluate the patterns of ozone transport in Central Texas using aircraft-based instrumentation on planned routes to assess transported ozone, significant point sources and locally generated ozone distribution. Variability in ozone concentration and distribution of high ozone readings in the area may also be assessed using a mobile, ground-based monitoring platform.
- Continue VOC sampling program during the ozone season using canisters designed to capture VOCs in early morning ambient air prior to active photochemistry occurring. The data will be used for comparison with the VOC modeling emissions inventory for assessing emissions trends and for evaluating performance of the EAC VOC emission reduction measures.

Emissions Inventory Development

- Update the non-road mobile source emission inventories using the latest Non-road Emission Model and activity data to obtain accurate estimates of non-road emissions, e.g., lawn mowers, agricultural implements, pleasure boats.
- Coordinate with CAMPO and TCEQ to improve and update on-road mobile emissions estimates using the most recent travel demand model and MOBILE input data, including local fuel characteristics.
- Estimate emissions from area sources through a targeted outreach and compliance survey, current population data, or employment data.
- Review and confirm major point source emissions and update minor point source emissions from TCEQ permit files and local business data listings.
- Analyze regional growth trends and land use using data from Envision Central Texas and other studies to project future land uses and employment growth. The rural areas of the CAPCOG region have been transitioning to urban economies over the last decade. Residential and employment growth trends and land use allocations will be used in conjunction with the latest GIS data layers to update and spatially locate 2015 emission inventories, employment, and population projections.

Photochemical Modeling Tasks

- Use ozone monitoring and meteorological data for the 2007 and 2008 ozone seasons to update the conceptual model which characterizes meteorological conditions resulting in high ozone levels in the Austin region. Incorporate results of TxAQS II projects and airborne sampling to better characterize emissions source regions and meteorological components contributing to high ozone events in the region. Analyze conceptual model for completeness of the existing photochemical modeling episodes and determine if new episodes are needed for photochemical modeling analysis.
- Work with TCEQ and other NNAs to select and develop a joint modeling episode. The episode may be selected from the TxAQS time period since enhanced modeling input data is available. An additional modeling episode is needed to supplement the existing September 1999 episode model in order to evaluate high ozone events which occur earlier in the season, usually June or early July. This episode could also be used in conjunction with the 1999 episode for attainment analysis required if the area does not monitor attainment in the future.

Early Action Compact SIP and Ozone Flex Plan Implementation

- Provide contractor funding to continue existing, local voluntary emission reduction measure program commitments.
- Clean Air Partners Program – a CAPCOG subcontractor, in coordination with the CLEAN AIR Force of Central Texas, administers this program. The program provides guidance to over 100 companies with over 170,000

employees on the implementing measures aimed at reducing commute-related emissions by 10%. Results are provided annually.

- Regional Rideshare Program – CAPCOG, CAMPO, and the Alamo Area Council of Governments selected the GreenRide system developed by Ecology and Environment, Inc. as the framework for a shared regional web-based ride-matching program to reduce emissions from single-occupant vehicles.
- Energy conservation measure outreach efforts – SB 12 includes a requirement for local governments to implement energy conservation measures which will reduce demand for new electric generating units. This task provides staff and subcontractor assistance to member local governments in selecting effective energy conservation measures along with developing effective implementation plans.
- Provide program design and contractor funding assistance to support any enhancements for existing voluntary programs or implementation of new programs required by the 8-hour O_3 Flex program
- Provide updated analysis of the 8-hour O_3 Flex program Action Plan emission reduction measures. These may include analysis of recently developed measures, such as the GreenRide regional rideshare program, increased use of plug-in hybrid vehicles, or new analysis of existing control measures such as the vehicle I&M and remote sensing programs using updated EPA-approved software and/or emission factors. Perform analysis of any additional emission reduction measures for consideration in the 8-hour O_3 Flex program, as needed for contingency measures.
- Provide semi-annual performance analysis of adopted emission reduction measures, verify modeling inputs (particularly growth assumptions), evaluate impacts of transportation trends, collect and assess progress reports from local government 8-hour O_3 Flex program signatories and develop semi-annual reports required by EAC and the subsequent 8-hour O_3 Flex program.
- Monitor permit applications and other sources for proposed new or expanding business or industrial operations in the Austin area or adjacent regions. Monitoring consists of identification of new or expanding plants, verification of building schedules with anticipated dates of startup, and conducting emission inventories. Where appropriate, work with identified new or expanding businesses or industries by providing assistance, outreach materials, and information on voluntary control strategies designed to help mitigate proposed emissions increases. This will include, as appropriate, an impact analysis under the proposed revised ozone standard.

Public Outreach – CLEAN AIR Force of Central Texas

Support matching funding from CAMPO for CLEAN AIR Force of Central Texas program specialist to continue public involvement and public education designed to promote awareness of air quality issues and their solutions.

3.2 Primary Measures

These emission reduction measures are designed to be sufficient to prevent violations of the current 8-hour ozone standard through 2009. Although many of the measures will be implemented through 2013 as part of the 8-hour O_3 Flex program, analysis of expected emissions growth indicates additional emission reduction measures will be needed beginning in 2010. The additional 2010 measures are included as maintenance for growth offset measures.

Implementation dates for the primary measures vary; many measures are on-going, while others will be implemented within one year of the effective date of the 8-hour O_3 Flex program. The following state and local measures will be continued through 2013 as part of the 8-hour O_3 Flex program.

3.2.1 On-going Local EAC Measures

These measures include the renewed commitments of local governments and participating agencies to over 100 ongoing EAC emission reduction measures. The commitment to continue implementation of ongoing EAC measures through 2013 is triggered by the signing of the 8-hour O_3 Flex program Memorandum of Agreement (MOA).

These measures include specific measures implemented by local governments and participating agencies to reduce emissions from their operations and within their communities. Example measures include ozone action day education and response programs, fleet and fuel improvements, employee commute reduction, e-government, and transportation system and land-use improvements. Many of these measures were initially implemented as EAC or 1-hour O_3 Flex measures. All of the on-going measures are above and beyond those required by state and federal law. Measure specifics vary by jurisdiction, so emission reductions from the on-going local measures have not been quantified or included in the photochemical modeling. The on-going emission reduction measures implemented by local governments and participating agencies are found in Appendix B.

EAC Transportation Emission Reduction Measures (TERMS)

TERMs are transportation projects designed to reduce vehicle use, improve traffic flow, or reduce congested conditions. A transportation project that adds single-occupancy vehicle (SOV) capacity is not considered a TERM. General categories of TERMs include intersection improvements, traffic signal synchronization improvements, bicycle and pedestrian facilities, high-occupancy

vehicle lanes, major traffic flow improvements, park and ride lots, intelligent transportation system (ITS) and transit projects.

TERMS are similar to transportation control measures (TCMs) except that TCMs apply to non-attainment areas. TCMs are subject to nonattainment area SIP and transportation conformity requirements while TERMs are not.

Several jurisdictions and agencies committed to and implemented numerous TERMS in various locations in the MSA. Most of these TERMs will continue to reduce emissions past 2007.
2007 Emission Reductions: 0.72 tpd NOx, 0.83 tpd VOC (in EAC SIP)

Commute Solutions –
CAMPO hosts the Commute Solutions Coalition, a regional program to encourage alternatives to the drive-alone commute that will reduce congestion and improve air quality. Coalition members attend numerous events and provide information on commute alternatives. Commute Solutions also offers employers free training for employee transportation coordinators. The program also provides seed money for projects that provide or encourage commute alternatives through the Innovator Grant Program. And every year, Commute Solutions holds the Commuter Challenge, a month long contest where participants log their alternative commutes in order to be eligible for prizes. Commute Solutions also has a website: www.commutesolutions.com.

CLEAN AIR Force of Central Texas
Founded in1993, the CLEAN AIR Force of Central Texas (CAF) is a 501(c) (3) organization of business, government, environmental and community leaders united in the common goal of finding workable solutions for improving air quality in Central Texas. The CAF conducts and coordinates public awareness and education campaigns and implements voluntary programs to reduce emissions. Some of the programs the CAF implements include the High School Public Service Announcement (PSA) Contest, the Electric Lawn Mower Discount Program, the Ozone Action Day Alert Program, the Car Care for Clean Air Program that provides free emission testing and maintenance information, the Clean Air Partners Program, and the Clean School Bus Program. See also: www.cleanairforce.org.

Clean Air Partners Program
The Clean Air Partners Program assists employers in reducing emissions through a variety of strategies, while promoting their clean air success stories to the community. Clean Air Partners is a program of the CLEAN AIR Force of Central Texas (CAF), which helps with its coordination and marketing. By becoming a Partner, employers volunteer to carry out employee clean air programs and other clean business practices to reduce the emissions that contribute to unhealthy air in our region by 10% over three years. Common strategies include employee commute solutions programs (encouraging transit

use, vanpooling, carpooling, teleworking, biking, walking , flexible schedules), use of cleaner fleets, clean energy practices (e.g., GreenChoice), low-emission construction or landscaping activities, water conservation practices, and many other activities that can contribute to cleaner air. Employers report their achievements once a year through an online reporting tool. The Clean Air Partners Program currently consists of 106 Central Texas businesses, organizations and government entities, representing over 170,000 regional employees. See also: www.cleanairpartnerstx.org.

Clean School Bus Program

The Clean School Bus Program is a cooperative partnership among the CLEAN AIR Force of Central Texas, CAPCOG, TCEQ, EPA, and school districts in Central Texas. The program helps school districts reduce schoolchildren's exposure to Particulate Matter (PM) and NOx from school buses. Emission reductions are achieved by retrofitting, replacing, or re-powering older diesel school buses. The program also encourages policies and practices to eliminate unnecessary school bus idling. See also: www.cleanschoolbus.net.

Clean Cities

Clean Cities is a program designed to assist the United States to use its own renewable fuels and to cut dependence on foreign oil. The Department of Energy is committed to energy use in America's transportation sector that is more efficient, less dependent on foreign oil, less environmentally disruptive, sustainable and safe. By encouraging alternative fuel and vehicle use, the Clean Cities program helps enhance energy security and environmental quality at both the national and local levels.

Respondents to a 2006 survey of Central Texas Clean Cities members reported operating 1804 alternative fuel or clean technology vehicles. Members also reported using 98,527 gasoline gallon equivalents (GGEs) of compressed natural gas (CNG) and 6,178, 664 GGEs of liquefied petroleum gas, or propane. Alternative fueled mowers are also encouraged by Clean Cities members. One member reported using 2,450 gallons of alternative fuels to power mowers in 2006. The public can access alternative fuels through the three ethanol (E85), 36 bio-diesel, and 13 propane public fueling stations in the region. See also: www.ci.austin.tx.us/cleancities/.

The Austin Climate Protection Plan

The City of Austin's Climate Protection Plan is an aggressive plan to reduce or eliminate greenhouse gases. Many of the measures to reduce greenhouse gases will also reduce ozone-forming emissions, providing an implementation co-benefit. The Austin Climate Protection Plan uses a five-pronged approach:

- Municipal Plan – Make all City of Austin facilities, fleets and operations 100% carbon-neutral by 2020.
- Utility Plan – Increase efforts in conservation, energy efficiency and renewable energy programs and implement requirements for carbon

neutrality on any new generation. Offset need for 700 MW power plant through energy efficiency and meet 30% of power needs in Austin through renewable energy by 2020.

- Homes and Buildings Plan – Enhance building codes maximize energy efficiency. Implement zero net-energy capable standard for all new home construction and increase energy efficiency by 75% in all other new construction by 2015.
- Community Plan – Develop a comprehensive community plan to reduce greenhouse gas emissions through a network of stakeholders and technical advisors. Form a Climate Action Team to assess greenhouse gas emissions from community activities. Collaborate with stakeholders and technical experts to develop short- and long-term goals.
- "Go Neutral" Plan – Provide tools and resources for individuals and businesses to reduce their carbon footprint to zero. Develop an online carbon footprint calculator and a recognition program for those that achieve carbon neutrality.

See also: www.coolaustin.org

3.2.2 State Rules Implemented Through the EAC

The following emission reduction measures are implemented through state rule as part of the EAC. All these measures are above and beyond state and federal requirements:

Locally Enforced Idling Limitations – This measure limits idling of gasoline and diesel-powered engines in heavy-duty motor vehicles within the jurisdiction of any local government in the state that has signed a Memorandum of Agreement (MOA) with TCEQ to delegate enforcement to that local government.

The MSA's initial MOA to locally enforce idling limits began with the EAC and expires January 2, 2008. It is scheduled to be renewed through 2013 prior to the beginning of the 2008 ozone season.

- Administrative Code: Title 30, Subchapter J, *Operational Controls for Motor Vehicles, Division 1 Motor Vehicle Idling Limitations*, new Sections §§114.510-114.512, and 114.517

2007 Emission Reductions: 0.67tpd NOx (in EAC SIP)

Vehicle Emission Inspection & Maintenance – A version of the State vehicle emissions Inspection and Maintenance (I/M) program has been implemented in Travis and Williamson Counties. This version uses on-board diagnostics and a tailpipe test instead of the more expensive dynamometer test required in the Dallas and Houston nonattainment areas. Travis and Williamson counties administer an associated Low Income Repair Replacement Assistance Program (LIRAP).

- Administrative Code: Title 30, Subchapter C, *Vehicle Inspection and Maintenance and Low Income Vehicle Repair Assistance, Retrofit, and Accelerated Vehicle Retirement Program, Division 1 Vehicle Inspection and Maintenance,* Sections §§114.80-114.87

2007 Emission Reductions: 3.22 tpd NOx, 3.83 tpd VOC (in EAC SIP)

Stage 1 Vapor Recovery - Amendments to existing rules lowered the exemption level for facilities subject to Stage I vapor recovery controls from 125,000 gallons in a calendar month to 25,000 gallons of gasoline in a calendar month.

- Administrative Code: Title 30, Chapter 115, Subchapter C, *Volatile Organic Compound Transfer Operations, Division 2, Filling of Gasoline Storage Vessels (Stage I) for Motor Vehicle Fuel Dispensing Facilities*, Sections §§115.227 and 115.229

2007 Emission Reductions: 4.88 tpd VOC (in EAC SIP)

Degreasing Requirements - Amendments to existing rules extend restrictions on certain solvents.

- Administrative Code: Title 30, Chapter 115, Subchapter E, *Solvent-Using Processes, Division 1, Degreasing Processes*, §§115.412, 115.413, 115.415-115.457, and 115.419

2007 Emission Reductions: 5.55 tpd VOC (in EAC SIP)

Cut-back Asphalt Restrictions - Amendments to existing rules extend restrictions on the use of certain paving substances to the Austin-Round Rock MSA.

- Administrative Code: Title 30, Chapter 115, Subchapter F, *Miscellaneous Industrial Sources, Division 1, Cutback Asphalt*, Sections §§115.512, 115.516, 115.517, and 115.519

2007 Emission Reductions: 1.03 tpd VOC (in EAC SIP)

Low Emission Gas Cans – State rule established requirements relating to the design criteria for portable fuel containers and portable fuel container spouts and the sale or distribution of the portable fuel containers.

- Administrative Code: Title 30, Subchapter G, *Consumer-Related Sources, Division 2, Portable Fuel Containers*, Sections §§115.620-115.622, 115.626, 115.627, and 115.629

2007 Emission Reductions: 0.89 tpd VOC (in EAC SIP)

Texas Emission Reduction Plan (TERP) – This existing TCEQ program, created by the State Legislature in 2001, provides grants and other incentives to improve air quality. TERP can provide funding for:

i. Cleaner on- and off-road engines
ii. Cleaner fuels and other infrastructure programs
iii. Research and development of new technologies

A list of approved TERP grants in the MSA is found in Appendix C.

2007 Emission Reductions: 2.26 tpd NOx (2 tpd in EAC SIP)

The Texas Legislature provided funding for the TERP program through 2013. TCEQ will continue to notify potential TERP participants in the MSA of upcoming funding opportunities through 2013. Governments and businesses in the MSA will continue to apply for TERP grants when available and appropriate. Emission reductions from projects funded during the term of the MOA will be reported in the applicable 8-hour O_3 Flex program progress reports.

Local Power Plant Reductions – Austin Energy, LCRA and UT agreed to specific reductions in their EAC commitments.
2007 Emission Reductions: 1,866 tons per year NOX, approximately 7 tpd (in EAC SIP)

Other State and Federal Measures - In addition to the state measures listed previously, the following state and federal measures apply to the MSA.

Federal Measures	**Description**
Area and Non-Road Measures	EPA has implemented a series of strategies for area and non-road sources. Some of these include the gas engine rule and marine recreational engine standards.
On-Road Measures	EPA has implemented a series of strategies for on-road vehicles. Tier 1 and Tier 2 vehicle standards, low-sulfur diesel standards, and National Low Emission Vehicle standards
State Measures	**Description**
California Gasoline Engines	California standards for non-road gasoline engines 2.5 horsepower or larger
Gas-Fired Heaters and Small Boilers	Rule limiting NOx emissions from these small-scale residential and industrial sources.
Low Reid Vapor Pressure Gasoline	Low RVP gasoline is fuel that is refined to have a lower evaporation rate and lower volatility than conventional gasoline. It also reduces the evaporative emissions generated during vehicle refueling and reduces VOCs.

3.2.3 New Measures for the 8-hour O_3 Flex Program

The region is implementing the following new measures designed to keep ozone levels below the current 8-hour standard. These measures will be implemented within one year of the MOA signing, unless otherwise specified.

The Regional Web-based Rideshare Matching program, described below, will be fully implemented and quantified within the first year of the 8-hour O_3 Flex Program, as required.

Regional Web-based Rideshare Matching Program
The Capital Area Metropolitan Planning Organization (CAMPO) and the Alamo Area Council of Governments (AACOG) are partnering with Ecology and

Environment, Inc. to implement an inter-regional web-based rideshare matching and transportation information system covering 22 counties, including the Austin-Round Rock MSA. This program will help reduce drive-alone commutes in and between Austin and San Antonio, as well as throughout the 22-county region. This will reduce NOx and VOC emissions in both Austin and San Antonio. Program implementation began in late 2007. At a minimum, the Austin MSA portion of the program will continue through 2013 as part of the 8-hour O_3 Flex Program.

River Cities Rideshare, www.rcride.com, is a web and map-based ridesharing program designed for ease-of-use by commuters and administrators in order to maximize participation and usefulness. After accepting the Terms of Use Agreement, the user can access instant, map-based rideshare matches, as well as bus-route, biking or walking information. The program provides the user with a template email to send to prospective matches and an email notification feature if matches are identified in the future. The program is available in both English and Spanish.

Both the user and the program administrator can track and quantify miles and dollars saved, emissions reduced, and calories burned. The program administrator can use the program's incentive management feature to encourage participation. The amount of NOx and VOC reduced by the program will depend on participation rates and vary over time. Current daily emission reductions for the Austin area are estimated at 1215 grams per day VOC and 1541 grams per day NOx. This estimate will be updated and reported as part of the 8-hour O_3 Flex program progress report.

Expanded Clean Air Coalition

The Clean Air Coalition will invite at least five additional cities in the MSA to join the Coalition and implement emission reduction measures appropriate to their circumstances. The invitation will include information on regional ozone and offer support and technical assistance in determining appropriate emission reduction measures. At a minimum, potential members will be encouraged to implement an Ozone Action Day (OZAD) Education and Response Program. The CLEAN Air Force of Central Texas provides regional support for OZAD program implementation.

The CAC will extend invitations no later than one year after the MOA effective date. New members will implement any emission reduction measures they determine appropriate within one year of joining the CAC. New measure implementation will be quantified to the extent possible and included in the next applicable 8-hour O_3 Flex program progress report.

Ozone Watch and Warning System

The CAC requested TCEQ implement an ozone watch and warning system for the MSA in a letter dated October 2, 2007(see Appendix A). An ozone watch and warning system notifies participants when high ozone levels are expected to occur and sends a warning when high ozone levels are actually occurring. This system would replace the current ozone watch only system and offer extra protection for individuals sensitive to high ozone levels.

The CAC is hopeful that TCEQ can implement the MSA's Ozone Watch and Warning System within one year of the MOA effective date, however, TCEQ will determine the implementation date. Once implemented, program status will be included in the next applicable 8-hour O_3 Flex program progress report.

Primary TERMS

Various governments and agencies in the MSA commit to implement TERMS in the 2008 and 2009 timeframe as primary 8-hour O_3 Flex program measures. A list of the primary TERMs is found in Appendix D. The primary TERMs' status and emission reductions will be reported in the 8-hour O_3 Flex program progress report.

AirCheck Texas Local Initiative Projects

The state has authorized excess LIRAP funds to be used to develop and implement new air control strategies designed to assist local areas in complying with state and federal air quality rules and regulations, as well as programs to enhance and improve the AirCheck vehicle inspection and maintenance program. Travis and Williamson Counties, in cooperation with TCEQ, will develop and implement emission reduction measures using excess LIRAP funds. The measures will be implemented as expeditiously as practicable, quantified to the extent possible, and included in the next applicable 8-hour O_3 Flex program progress report.

Paving of Unpaved Roads

An in-use vehicle study conducted by the Texas Transportation Institute (TTI) indicates that vehicles emit more pollutants on unpaved roads, with other variables held constant. The study is found in Appendix E. Local governments will identify candidate road-paving projects and potential funding sources. Roads will be paved if sufficient funding is secured.

Voluntary Local Measures

In addition to continuing EAC measures, some governments and agencies are committing to implement new measures for the 8-hour O_3 Flex program. For example:

- The City of Austin will implement a carpool matching system for employees to its numerous on-going commitments.

- Travis County will implement a carpool parking incentive and an Ozone Action Day sign program at the County's drive through facilities to its on-going commitments.

One new agency, the Central Texas Regional Mobility Authority, committed to implement voluntary emission reduction measures. (See Appendix B)

Other measures

Other planning or emission reduction measures mutually agreed to by the signatory parties may be implemented. Once implemented, measure status will be included in the 8-hour O_3 Flex program progress report.

3.3 Maintenance for Growth Offset Measures

Implementation of one or more of these measures, intended to address expected emissions growth, will be implemented no later than December 31, 2010. The MOA signatories will evaluate the most recent emissions estimates and other relevant factors to determine the appropriate measure(s) to implement no later than January 1, 2010.

TERP

Local governments and businesses will continue to apply for TERP funding when available and as appropriate. TCEQ will notify the MOA signatories when TERP grant funding is available. Emission reductions from projects funded during the term of the MOA will be reported in the applicable 8-hour O_3 Flex program progress reports.

Maintenance for Growth TERMS

Various governments and agencies in the MSA commit to implement TERMS in the 2010 to 2013 timeframe. The specific 2010 to 2013 TERMs selected as growth offset measures will be determined no later than January 1, 2010. The status and emission reductions from these TERMs will be reported in the 8-hour O_3 Flex program progress report.

Further Expand the Clean Air Coalition

The CAC will invite all cities in the MSA with populations ≥ 10K to join the Clean Air Coalition and implement emission reduction measures appropriate to their circumstances. The invitation will include information on regional ozone and offer support and technical assistance in determining appropriate emission reduction measures. At a minimum, potential members will be encouraged to implement an Ozone Action Day (OZAD) Education and Response Program. The CLEAN Air Force of Central Texas provides regional support for OZAD program implementation.

Energy efficiency and conservation programs

Measures to reduce energy use through efficiency and conservation programs also reduce NOx and other pollutants generated as a by-product of energy

production. These measures will also reduce greenhouse gases and petroleum fuel use, providing an implementation co-benefit. Local governments, working through the Clean Air Coalition, CAPCOG and the EAC Task Force, will develop an inventory of energy efficiency and conservation programs implemented in the MSA by electric generation and/or distribution companies, state and local government agencies and other entities with available information. At a minimum, the inventory will be evaluated for adequacy, geographic coverage and effectiveness, and the emissions reductions quantified to the extent possible. Local governments may request assistance from TCEQ, the State Energy Conservation Office and the Texas A&M Energy Systems Lab in developing and evaluating the inventory. As part of the evaluation, local governments, working with implementing agencies, stakeholders and other interested parties, will determine whether the implemented measures are sufficient or improvements are needed.

Local governments will share the evaluation findings with implementing agencies, signatory parties, stakeholders and the public and recommend improvements if needed. Local governments will also provide citizens with information on applicable energy efficiency and conservation programs and encourage citizens to reduce energy use. The status of implemented measures will be included in the 8-hour O_3 Flex program progress report beginning with the next applicable report.

Other measures

Other emission reduction measure not specifically listed may be implemented as an emissions growth offset measures if the signatory parties agree to do so. The MOA signatories will identify and evaluate specific measures for consideration by July 1, 2010. Implementation dates and quantification possibilities will vary depending on measure specifics. The status of measures implemented will be included in the 8-hour O_3 Flex program progress report beginning with the first report after the measures are selected.

3.4 Tier I Contingency Measures

In addition to the Maintenance for Growth Offset Measures, which address anticipated increases in emissions due to growth, the region has prepared a series of contingency measures for implementation in the event that the region's design value reaches specified trigger levels.

Should the region's design value reach 84 ppb, the signatory parties will implement one or more of the following Tier I contingency measures. Within 90 days of a regulatory monitor recording a reading that would result in a design value of 84 ppb, the parties will work cooperatively to determine the cause of the increase and to select a specific Tier I contingency measure(s) that will be implemented. The Tier I measure(s) will be implemented as expeditiously as practicable, but no later than two years from the date of the trigger (i.e., the date

that one of the region's regulatory monitors records a reading that, if valid, would result in a 3-year design value of 84).

Voluntary Mobile Source Emission Reduction Program (VMEP)
Local governments will implement a VMEP consisting of one or more voluntary mobile source emission reduction measures. VMEP measures that may be implemented as a Tier 1 contingency measure include expanding, upgrading and/or promoting the regional web-based rideshare matching program, www.rcride.com, and/or the Clean Air Partners Program to increase participation and associated emissions reductions. Other VMEP measures may be implemented if mutually agreed upon by the signatory parties. Tier I Contingency VMEP emission reductions will be included in the 8-hour O_3 Flex program progress report.

TERP
Governments and businesses in the MSA will continue to apply for TERP grants when available and as appropriate, although TERP finds are not guaranteed beyond the current funding/fiscal cycle (2008-2009). TCEQ will notify the MOA signatories when TERP grant funding is available. Emission reductions from projects funded during the term of the MOA will be reported in the applicable 8-hour O_3 Flex program progress reports.

NOx emissions-reducing additives
The MOA signatories will encourage area fleets, school districts and other businesses with non-road diesel vehicles to voluntarily use diesel fuel that has been enhanced with a NOx emission-reducing additive to become Texas Low Emission Diesel (TxLED) equivalent fuel during all or part of the ozone season. Local governments will use diesel fuel with the NOx emission reduction additive or other form of TxLED equivalent fuel in their own operations during ozone season to the extent possible. The MOA signatories will work with MSA businesses and stakeholders to secure commitments and begin using the additive as expeditiously as practicable.

TERMS
Various governments and agencies in the MSA will commit to implement additional TERMs if the MSA design value reaches 84 ppb or higher. The Tier I contingency TERMs will be additional TERMs not previously committed to the 8-hour O3 Flex Program as primary TERMs. Governments and implementing agencies will identify Tier 1 contingency TERMs. Tier I TERMs will be implemented as expeditiously as practicable and according to the implementation schedule. The status and emission reductions from the Tier I contingency TERMs will be reported in the 8-hour O_3 Flex program progress report.

Expand participation in Locally Enforced Idling Limitations
The CAC will encourage other municipalities in the MSA to enter into a MOA with TCEQ to locally enforce idling limits for gasoline and diesel-powered engines in

heavy-duty motor vehicles within their jurisdiction. The CAC will invite new CAC members and other municipalities to consider participating in the MOA. TCEQ will give prompt consideration to locally enforced idling limit MOAs requested by local governments in the MSA.

Other Measures
Other planning or emission reduction measures mutually agreed to by the signatory parties may be implemented. Once implemented, measure status will be included in the 8-hour O_3 Flex program progress report.

3.5 Tier II Contingency Measures

Should the region's design value reach or exceed 85 ppb, the signatory parties will implement one or more of the following Tier II contingency measures. Within 90 days of a regulatory monitor recording a reading that would result in a design value of 85 ppb, the parties will work cooperatively to determine the cause of the increase and to select a specific Tier II contingency measure(s) that will be implemented. The Tier II measure(s) will be implemented as expeditiously as practicable, but no later than two years from the date of the trigger (i.e., the date that one of the region's regulatory monitors records a reading that, if valid, would result in a 3-year design value of 85 or greater).

Tier II contingency measure(s) will be quantified to the extent possible and implementation status will be included in the applicable 8-hour O_3 Flex program progress report.

Additional Tier I Measures
The signatory parties will consider implementing one or more of the Tier I measures that were not previously implemented.

Vehicle Inspection and Maintenance Program
MOA signatories will evaluate the vehicle inspection and maintenance program in Travis and Williamson Counties to determine if the program can reasonably be revised to increase vehicle emission reductions achieved by the program. Program revisions that may be considered include additional remote sensing and testing diesel vehicles. Other program revisions may also be considered.

The program could be expanded to Bastrop, Caldwell or Hays Counties if the county and largest city in the county request that TCEQ include that county in the program.

TERMS
Various governments and agencies in the MSA will commit to implement additional TERMS. The Tier I contingency TERMs will be additional TERMS not previously committed to the8-hour O_3 Flex program. The specific TERMs

selected as Tier 1 contingency measures will be determined as expeditiously as practicable. The status and emission reductions from the Tier I contingency TERMs will be reported in the 8-hour O_3 Flex program progress report.

Other measures
Other planning or emission reduction measures mutually agreed to by the signatory parties may be implemented. Once implemented, measure status will be included in the 8-hour O_3 Flex program progress report.

If unforeseen circumstances dictate the appropriateness of an emission reduction strategy not found in the plan, the signatory jurisdictions reserve the right to submit the alternative strategy to EPA for approval. Should an alternative strategy be submitted, its emission reductions will be equivalent or greater to those of the strategy it replaces.

3.6 Coordination and Public Participation

The CAC established an EAC Task Force (EACTF) composed of staff from signatory jurisdictions, participating agencies, and including representatives of business and advocacy organizations, to develop EAC recommendations. The EACTF continues to meet regularly and to facilitate EAC implementation and reporting. The CAC directed the EACTF to build on the success of the EAC and to prepare recommendations for an 8-hour O_3 Flex program.

The EACTF developed the 8-hour O_3 Flex program elements in consultation with its full membership. The CLEAN Air Force of Central Texas coordinated a print advertising campaign to introduce the proposed plan and to encourage public comments and suggestions. The newspaper ads ran in all five MSA counties. (See Appendix F)

Each jurisdiction will follow its own standard public involvement process. The complete plan will be posted on the CAF website, as well as on various other regional sites.

The EACTF will continue to assist local governments and participating agencies with implementing, tracking, and documenting the emission reduction measures associated with their jurisdiction's commitments. The Capital Area Council of Governments (CAPCOG) coordinates reporting requirements and quantifies results to the extent possible

3.7 Schedules and Reporting

3.7.1 Schedule of Activities and Milestones

Proposed Central Texas 8-Hour Ozone Flex Program (2008-2013)			
TRIGGER	**LEVEL**	**Implement one or more of the following MEASURE(S)**	**IMPLEMENTATION PERIOD**
Signing of 8 - Hour O3 Flex MOA	Selected Primary Emission Reduction Measures	Continue EAC SIP-Level and Voluntary Emission Reduction Measures	Ongoing, 2008--2013
		Continuation of analysis of measures' effectiveness and emissions growth	Ongoing, 2008--2013
		Continuation of area-wide programs such as Commute Solutions, Clean Cities, Clean School Bus	
		Renewal of Idling MOA	Prior to 2008 ozone season
Signing of 8 - Hour O3 Flex MOA	Primary Emission Reduction Measure(s)	Apply for TERP funding (as available)	Within 24 months
		TERMS	Within 1 year or as scheduled
		Regional RideShare Program	Within 1 year
		Invite 5 or more additional cities to join CAC & become 8-hour O3 Flex Program signatories	Within 1 year
		Request TCEQ implement Watch/Warning ozone alert system	As appropriate
		Implement AirCheck Texas Local Initiative Projects with LIRAP funds	As appropriate
		Pave unpaved roads	As appropriate
		Other measures identified and mutually agreed upon	Within 1 year
January 1, 2010	Maintenance for Growth Offset Measures	Apply for TERP funding (as available)	By December 31, 2010
		Invite all nonparticipating cities in MSA with populations ≥ 10K to join CAC & become 8-hour O3 Flex Program signatories	By December 31, 2010
		TERMS	By December 31, 2010
		Other measures identified and mutually agreed upon	As appropriate
		Energy efficiency and conservation programs	By December 31, 2010
84 ppb Ozone Design Value	Tier I Contingency Measure(s)	Apply for TERP funding (as available)	Within 24 months
		TERMS	Within 24 months
		Invite additional cities to join idling MOU	Within 24 months
		VMEP: Upgrade Regional RideShare Program & Clean Air Partner Program	Within 24 Months of 84 ppb DV
		Other measures identified and mutually agreed upon	As appropriate
		Voluntary use of NOx emissions-reducing additive to area fleets, school district buses, and/or non-road vehicles	Within 24 Months of 84 ppb DV
85 ppb or Greater Ozone Design Value (Violation)	Tier II Contingency Measure(s)	Tier I Contingency Measures not already implemented	Within 24 months of violation
		At the request of the county and its principal city, expand Inspection & Maintenance Program to Bastrop, Caldwell and/or Hays counties.	Within 24 months of violation
		Request upgrade of I&M Program to include additional remote sensing & inclusion of diesel testing	Within 24 months of violation
		TERMS	Within 24 months of violation
		Other measures identified and mutually agreed upon	Within 24 months of violation

3.7.2 8-hour O_3 Flex Program Progress Report

In accordance with EPA guidance, all signatories and participating agencies will review 8-hour O_3 Flex program activities twice yearly. The progress report will track and document, at a minimum, the latest information on implementation of control measures, ozone monitoring data, and the success of current measures. CAPCOG has primary responsibility for report generation and will provide appropriately detailed technical analysis.

CAPCOG, or its designee, will file reports with the TCEQ and EPA by June 30 and December 31 of each required reporting year; reporting periods will be from May 1 to October 31, and November 1 to April 30, to allow for adequate public notice and comment.

If, following submittal of the first progress report, the area's design value is maintained at 80 ppb or lower, or if the design value is not increasing, or is on the decline each year, the area will request EPA approval to submit reports annually.

Chapter Four: Memorandum of Agreement

This Memorandum of Agreement (MOA) is between the local governments representing Bastrop, Caldwell, Hays, Travis and Williamson Counties and the cities of Austin, Bastrop, Elgin, Lockhart, Luling, Round Rock and San Marcos (herein after referred to as the local governments), the Texas Commission on Environmental Quality (TCEQ), and the United States Environmental Protection Agency (EPA). The purpose of the MOA is to reduce ground-level ozone concentrations in the Austin-Round Rock Metropolitan Statistical Area (MSA) through adoption of an 8-hour O_3 Flex program as described in this document.

The 8-hour O_3 Flex program emphasizes local flexibility in selecting and implementing emissions reduction measures. Given the varied emissions contributions and socioeconomic characteristics of the entities in the MSA, not all measures can or should be implemented by all entities. Rather, each entity will implement the measures that work for its specific jurisdiction and, when added together, work for the region as a whole. Note that certain measures (e.g., Regional Rideshare Program, Watch/Warning Ozone Alert System), would apply region-wide.

4.1 General Provisions

The signatory parties commit to develop, implement and maintain this 8-hour O_3 Flex program according to applicable EPA guidelines and adhere to all terms and conditions stated in the guidelines.

4.2 EPA and TCEQ Responsibilities

4.2.1 Regulations that apply to an area would still apply under the 8-hour O_3 Flex program. The 8-hour O_3 Flex program does not shield an area from being redesignated nonattainment for the 8-hour ozone standard if the area is in violation of that standard. Should a violation occur, EPA would consider factors in section 107(d)(3)(A) of the Act. These include "air quality data, planning and control considerations, or any other air quality-related considerations the Administrator deems appropriate," including time to allow the implemented contingency measures to work. As long as the 8-hour O_3 Flex program and control measures in its Action Plan are being fully implemented, EPA would consider that circumstance in exercising its discretion in making a decision to redesignate the area to nonattainment.

4.2.2 The signatories' intent in entering into this MOA is to maintain the area's attainment designation and proactively implement and sustain air quality improvement strategies that are tailored to local conditions and are effective, practical and measurable in reducing ground-level ozone concentrations. This MOA should in no way be construed as a strategy to avoid or to defer a regulatory requirement.

4.2.3 EPA and TCEQ commit to informing the local governments of all available options and flexibility, to the extent allowed by the Federal Clean Air Act, in the event that the area, or any portion of the area, is monitoring exceedances or violations of the 8-hour ozone standard for the duration of this agreement.

4.2.4 EPA supports flexible approaches that account for the complex nature of ozone formation and has provided State Implementation Plan (SIP) credit for communities that adopt quantifiable measures for ozone reduction plans that may be required in the future. EPA will, consistent with the Federal Clean Air Act, allow the Austin-Round Rock MSA appropriate SIP credit for eligible strategies implemented under the terms of this Agreement.

4.2.5 If the regions design value reaches or exceeds 85 ppb, EPA and TCEQ commit to adopting into the SIP one or more of the Tier II Contingency Measures as selected by the local governments.

4.2.6 This MOA's terms do not abrogate any state or federal legal requirement. The TCEQ and the EPA enter this Agreement solely for the purpose of their responsibilities under Section 107(d)(3)(A) through (D) of the Federal Clean Air Act.

4.3 Local Government Responsibilities

4.3.1 As specified by EPA guidelines, the 8-hour O_3 Flex program developed by the MSA contains sections describing the region's air quality; an action plan; existing control measures; contingency measures; coordination and public participation process; schedules and reporting; and an MOA with signature and date page. These sections and associated appendices further define the commitments and actions of the local governments and participating entities.

4.3.2 The local interests may continue to conduct photochemical modeling to the extent that it informs and allows the area to better target contingency measures. However, there is no EPA requirement for photochemical modeling in support of or as a condition of participation in the 8-hour O_3 Flex program.

4.3.3 The local governments will continue to develop and regularly update area emissions inventories through CAPCOG. Note that, after consultation with EPA, the base year 2002 will be used for emissions inventories and for future emissions projections

4.3.4 The MSA is an EAC area. Therefore, in order to participate in the 8-hour O_3 Flex program, the area agrees to continue its existing EAC requirements. Specifically, the MSA agrees to keep the "Maintenance for Growth" requirement in place through 2012 as agreed to in the area's Early Action Compact with TCEQ and EPA.

4.3.5 The local governments have detailed in an Action Plan the events that will trigger a requirement to implement one or more contingency measures and have specified when those measures will be implemented. The local governments commit to revise or update these contingency measures if state/tribal or federal laws change during the MOA period.

4.3.6 The local governments agree to implement one new, voluntary emissions reduction measure within one year of the signing of the MOA.

4.4 Expected Memorandum of Agreement Duration

The signature date of this MOA is the start date of the agreement's term. This agreement remains in effect until December 31, 2013.

4.5 Conditions for Modification or Early Termination

This MOA may be modified or terminated by mutual consent of all signatory parties.

4.5.1 Any signatory party may withdraw from the MOA if provisions of the agreement are not carried out by the other signatory parties. As a voluntary program, the area can choose to end its participation at any time.

4.5.2 Failure to abide by the terms of the MOA, should violation of the 8-hour standard occur, could lead to redesignation as nonattainment for the 8-hour standard.

4.5.3 The signatory parties may review and modify this MOA as they deem necessary.

4.6 Signatures and Date

Executed in multiple copies by the signatory parties to this MOA. The representatives of the signatory parties executing this MOA represent their authority to sign the MOA and to bind the signatory party they represent to the terms of this MOA.

Appendix A Correspondence

Appendix B Emission Reduction Measures

Appendix C TERP

Appendix D TERMS

Appendix E TTI Study

Appendix F Public Participation

Appendix A
Correspondence

Executive Summary of the Austin-Round Rock MSA 8-hour Ozone (O_3) Flex Program

The Austin-Round Rock MSA 8-hour Ozone (O_3) Flex Program is a voluntary agreement between local governments, TCEQ, and EPA. The goal of the program is to implement measures as needed to continue attainment of the federal ozone standard (currently a design value[1] of 84 parts per billion of ozone) through 2013. The program provides the region with a flexible air quality management process. Through an on-going collaborative process, the program identifies specific air quality action triggers and determines the appropriate implementation response. Participants may revise the program as needed, allowing the region to respond quickly and efficiently to changes in air quality conditions or regulations.

In compliance with EPA's May 2006 8-hour O_3 Flex Program guidance, the region's 8-hour O_3 Flex Program consists of the following elements.

Overview

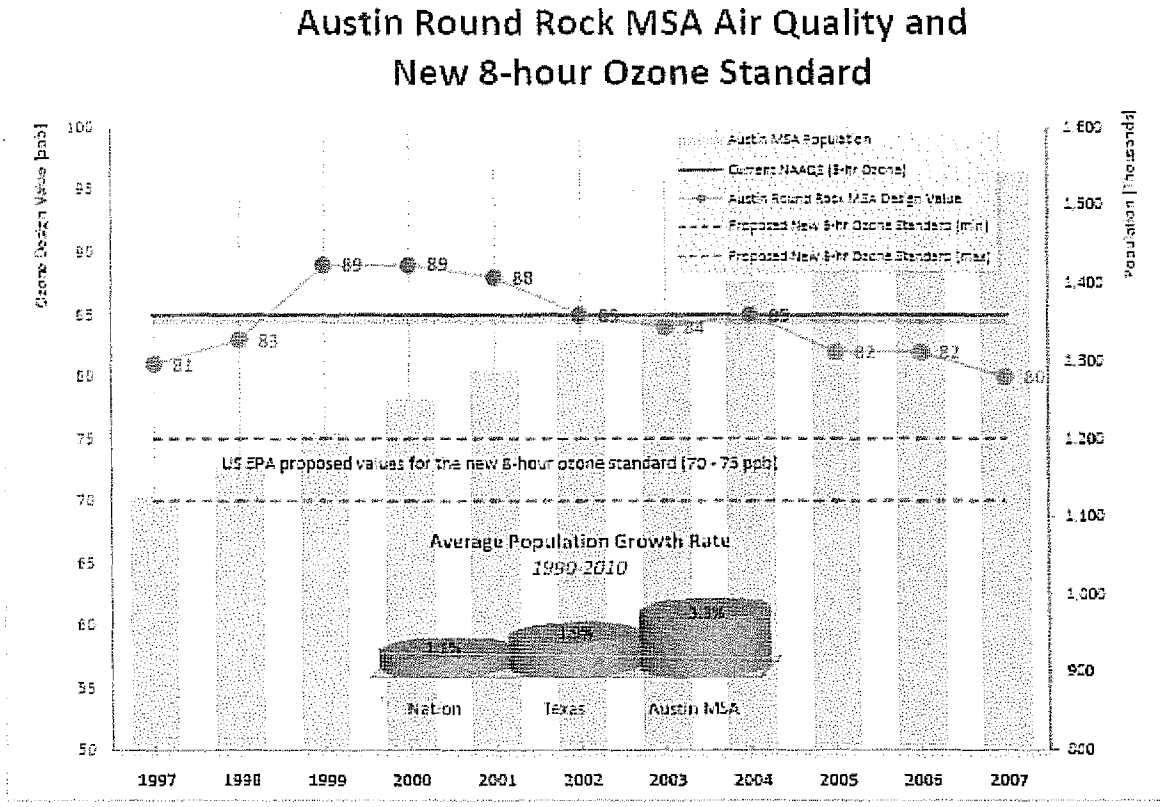
- Chapter 1 provides an overview of 8-hour O_3 Flex Program requirements, regional participants and past planning successes.
- The region currently meets all requirements for program eligibility.
- EAC signatories are the initial participants and additional local participants may be added.

Technical Evaluation

- Chapter 2 is a technical evaluation of the region's past, current, and anticipated future ozone levels. It includes monitoring and emission inventory data, analysis of high ozone episodes, regional photochemical modeling, and air quality trend analyses.
- The evaluation indicates that regional ozone levels will stay close to the current federal standard, with increased emissions due to population and energy sector growth somewhat offset by decreased emissions due to pollution controls, especially federal standards for mobile sources. The region will remain sensitive to transported emissions from outside the area, which can raise background ozone levels significantly.
- Note that EPA has proposed a new, more stringent ozone standard. If the standard changes, the region will need to revise program measures. The

[1] The design value is the 3-year average of the fourth-highest daily maximum 8-hour ozone concentrations measured annually at each regulatory monitor within the region. To remain in attainment, the region's design value must not exceed 0.08 parts per million, or 84 parts per billion.

following chart tracks the region's air quality and population growth against the current and proposed ozone standards:



Action Plan

- Chapter 3 is the Action Plan. It defines the action triggers and response options (see Attachment A). It includes planning activities, voluntary emission reduction measures and contingency measures. It also addresses coordination, public participation, schedules, and required reporting.
- Regional participants generally continue their Early Action Compact emission reduction commitments (see Attachment B).
- Primary emission reduction measures include a regional web-based rideshare program and an ozone watch/warning system.
- In 2010 the region will implement Maintenance for Growth Offset measures to account for expected emissions growth.
- If the region's design value reaches 84 part per billion (ppb) of ozone, the region will select and implement measures from the Tier I Contingency measures.
- If the region's design value is 85 parts per billion (ppb) or greater, the region will select and implement selected measures from the Tier II Contingency list.

Memorandum of Agreement

- Chapter 4 is the Memorandum of Agreement (MOA). It is the formal acceptance of the region's 8-hour O_3 Flex program by EPA, TCEQ, and the local governments. It includes general commitments and objectives, responsibilities, expected duration, conditions for modification or early termination, signature page and date.
- All parties commit to developing, implementing and maintaining the 8-hour O_3 Flex Program according to EPA guidelines.
- EPA commits to considering the region's participation in the program, including time to allow the implemented contingency measures to work, in exercising its discretion on whether to redesignate the area nonattainment, if a nonattainment situation occurs. EPA will also allow the MSA appropriate State Implementation Plan (SIP) credit for measures implemented under the program.
- EPA and TCEQ commit to informing local governments of all available options and flexibility available to the area if the area, or any portion of the area, is determined to exceed or violate the 8-hour ozone standard for the duration of the agreement.
- EPA and TCEQ commit to adopting into the SIP one or more of the Tier II contingency measures selected by local governments if the region's design value reaches or exceeds 85 ppb.
- Local governments commit to program implementation and may continue photochemical modeling activities.
- CAPCOG will continue to develop and regularly update area emissions inventories.
- The MSA agrees to continue existing EAC requirements, specifically the "maintenance for growth" requirement through 2012.
- Local governments agree to revise or update program contingency measures if state/tribal or federal laws change during the MOA period.
- Local governments agree to implement at least one new, voluntary emission reduction measure within one year of the MOA signing. The region is meeting this requirement by implementing a web-based rideshare matching program, River Cities Rideshare, that will help reduce drive-alone commutes in and between Austin and San Antonio, and throughout a 22-county region.

Attachment A – Triggers and Response Options

Proposed Central Texas 8-Hour Ozone Flex Program (2008-2013)			
TRIGGER	**LEVEL**	**Implement one or more of the following MEASURE(S)**	**IMPLEMENTATION PERIOD**
Signing of 8 - Hour O3 Flex MOA	Selected Primary Emission Reduction Measures	Continue EAC SIP-Level and Voluntary Emission Reduction Measures	Ongoing, 2008--2013
		Continuation of analysis of measures' effectiveness and emissions growth	Ongoing, 2008--2013
		Continuation of area-wide programs such as Commute Solutions, Clean Cities, Clean School Bus	
		Renewal of Idling MOA	Prior to 2008 ozone season
Signing of 8 - Hour O3 Flex MOA	Primary Emission Reduction Measure(s)	Apply for TERP funding (as available)	Within 24 months
		TERMS	Within 1 year or as scheduled
		Regional RideShare Program	Within 1 year
		Invite 5 or more additional cities to join CAC & become 8-hour O3 Flex Program signatories	Within 1 year
		Request TCEQ implement Watch/Warning ozone alert system	As appropriate
		Implement AirCheck Texas Local Initiative Projects with LIRAP funds	As appropriate
		Pave unpaved roads	As appropriate
		Other measures identified and mutually agreed upon	Within 1 year
January 1, 2010	Maintenance for Growth Offset Measures	Apply for TERP funding (as available)	By December 31, 2010
		Invite all nonparticipating cities in MSA with populations ≥ 10K to join CAC & become 8-hour O3 Flex Program signatories	By December 31, 2010
		TERMS	By December 31, 2010
		Other measures identified and mutually agreed upon	As appropriate
		Energy efficiency and conservation programs	By December 31, 2010
84 ppb Ozone Design Value	Tier I Contingency Measure(s)	Apply for TERP funding (as available)	Within 24 months
		TERMS	Within 24 months
		Invite additional cities to join idling MOU	Within 24 months
		VMEP: Upgrade Regional RideShare Program & Clean Air Partner Program	Within 24 Months of 84 ppb DV
		Other measures identified and mutually agreed upon	As appropriate
		Voluntary use of NOx emissions-reducing additive to area fleets, school district buses, and/or non-road vehicles	Within 24 Months of 84 ppb DV
85 ppb or Greater Ozone Design Value (Violation)	Tier II Contingency Measure(s)	Tier I Contingency Measures not already implemented	Within 24 months of violation
		At the request of the county and its principal city, expand Inspection & Maintenance Program to Bastrop, Caldwell and/or Hays counties.	Within 24 months of violation
		Request upgrade of I&M Program to include additional remote sensing & inclusion of diesel testing	Within 24 months of violation
		TERMS	Within 24 months of violation
		Other measures identified and mutually agreed upon	Within 24 months of violation

Attachment B

Local Government and Participating Agency Emission Reduction Measure Commitments

Emission Reduction Measure	**City of Austin**	**Travis County**	**City of Round Rock ***	**Williamson County**	**City of San Marcos ***	**Hays County ***	**City of Bastrop ***	**City of Elgin ***	**Bastrop County ***	**City of Lockhart ***	**City of Luling ***	**Caldwell County ***
Access Management							X	X		X		
Airport Clean Air Plan, includes:												
• ABIA Airside Incentives have infrastructure in place at airport for use by airside tenants	X											
• Alternative fuels for shuttle buses	X											
• Alternative fuels available for Aviation Fleet landside users.	X											
• ABIA alternative fuel infrastructure available at airport for landside users	X											
Alternative Commute Infrastructure	X						X	X				
Alternative Fuel Vehicles	X	X	X									
Business Evaluation of Fleet Useage, Including Operations and Right Sizing		X	X	X								
Cleaner Diesel		X	X	X		X	X	X	X			
Commute Solutions Programs, may include	X									X		
• Compressed Work Week	X	X	X						X		X	

Emission Reduction Measure	City of Austin	Travis County	City of Round Rock *	Williamson County	City of San Marcos *	Hays County *	City of Bastrop *	City of Elgin *	Bastrop County *	City of Lockhart *	City of Luling *	Caldwell County *
• Flexible Work Schedule	X	X	X									
• Carpool or Alternative Transportation Program, may include incentive	X	X										
• Transit Pass Subsidized by Employer	X											
• Teleworking (full time)	X											
• Teleworking (part time)	X		X									
Contractor provisions for high ozone days	X											
Direct Deposit	X	X	X	X	X	X	X		X	X		X
Drive-Through Facilities on Ozone Action Days		X								X		
e-Government and/or Available Locations	X	X	X	X	X	X						
Electric utility investments in energy demand management programs	X											
Environmental dispatch of power plants	X											
Expedited permitting for mixed use, transit oriented or in-fill development							X	X				

Emission Reduction Measure	City of Austin	Travis County	City of Round Rock *	Williamson County	City of San Marcos *	Hays County *	City of Bastrop *	City of Elgin *	Bastrop County *	City of Lockhart *	City of Luling *	Caldwell County *
Fueling of Vehicles in the Evening	X	X	X	X		X			X	X	X	X
Landscaping voluntary start at noon on high ozone days (education program)										X		
Low Emission Vehicles	X	X	X	X						X		X
Low VOC Asphalt		X	X									
Low VOC Roadway Striping Material	X	X	X	X		X	X	X		X		
Open Burning Restrictions			X				X	X				
Ozone Action Day Program, includes:	X	X	X	X	X	X	X	X	X	X	X	X
• Employee Education Program	X	X	X	X	X	X	X	X	X	X	X	X
• Public Education Program	X	X	X	X	X	X	X	X	X	X	X	X
• Ozone Action Day Notification Program	X	X	X	X	X	X	X	X	X	X	X	X
• Ozone Action Day Response Program	X	X	X	X		X						X
Resource Conservation	X	X	X	X	X	X					X	
Shaded Parking	X	X										
Shift the electric load profile	X											

Emission Reduction Measure	City of Austin	Travis County	City of Round Rock *	Williamson County	City of San Marcos *	Hays County *	City of Bastrop *	City of Elgin *	Bastrop County *	City of Lockhart *	City of Luling *	Caldwell County *
Texas Low Emission Diesel (TxLED) Equivalent for Fleets	X	X										
Transit-Oriented Development	X											
Transportation Emission Reduction Measures (TERMs)	X	X	X		X		X	X				
Tree Planting	X	X	X	X	X	X	X	X		X		
Urban Heat Island/Cool Cities Program	X											
Vehicle Maintenance	X	X	X	X	X	X			X			X

8-Hour O3 Flex Program Participating Agency Emission Reduction Measures

Emission Reduction Measure	Capital Metro	CAMPO	TxDOT Headquarters *	TxDOT Austin*	TCEQ	CAPCOG	LCRA	CTRMA
Transportation Emission Reduction Measures (TERMs)	X			X				
Access Management				X				
Low VOC Striping Material	X			X				X
Tree Planting				X			X	X
Commute Alternatives, including:								
• Compressed Work Week	X	X		X	X			
• Flexible Work Schedule	X	X		X	X	X		
• Carpool or Alternative Transportation, may include incentives	X				X		X	
• Employer Subsidized Transit	X	X						
• Teleworking (full time)								
• Teleworking (part time)		X		X	X			
• Bicycle and Pedestrian Facilities							X	
Direct Deposit	X	X		X	X	X	X	X

Emission Reduction Measure	Capital Metro	CAMPO	TxDOT Headquarters *	TxDOT Austin*	TCEQ	CAPCOG	LCRA	CTRMA
e-Government and/or Available Locations	X	X			X	X		
Fueling of Vehicles in the Evening	X			X				X
Resource Conservation	X	X		X	X	X	X	X
Ozone Action Day Education Program, includes:								
Employee Education Program	X	X		X	X	X	X	X
Public Education Program	X	X		X	X			X
Ozone Action Day Notification Program	X	X		X	X	X	X	X
Ozone Action Day Response Program								
Alternative Fuel Vehicles	X			X	X			
Right Sizing	X							
5-minute Limit on Diesel Idling	X						X	
Cleaner Diesel	X		X				X	
Vehicle Maintenance	X				X		X	
Vapor Recovery on Pumps	X							
Low VOC Asphalt	X							
Low-Emission Vehicles	X		X		X		X	
TERP (Texas Emission Reduction Program)	X		X					
Transit-Oriented Development	X							X

Emission Reduction Measure	Capital Metro	CAMPO	TxDOT Headquarters *	TxDOT Austin*	TCEQ	CAPCOG	LCRA	CTRMA
Shaded Parking					X			X

*** Denotes agency EAC commitments continued for the 8-hour O3 Flex Program, contingent on agency confirmation.**

2/6/08
File Copy

The 8-hour Ozone Flex Program

An Air Quality Improvement Plan
For the Austin-Round Rock MSA

8-hour Ozone (O3) Flex Program

- Voluntary initiative that builds on the success of the region's previous air quality plans
  - 1-hour O3 Flex Plan in 2001
  - Early Action Compact (EAC) in 2004
- Memorandum of Agreement (MOA) between local governments, TCEQ and EPA to implement measures as needed to maintain compliance with federal ozone standards through 2013.

Flexible Air Quality Management

- On-going collaboration with TCEQ and EPA
- Identifies specific action triggers
- Determines appropriate implementation response
- Program may be revised as needed, allowing quick response to changes in air quality conditions or regulations

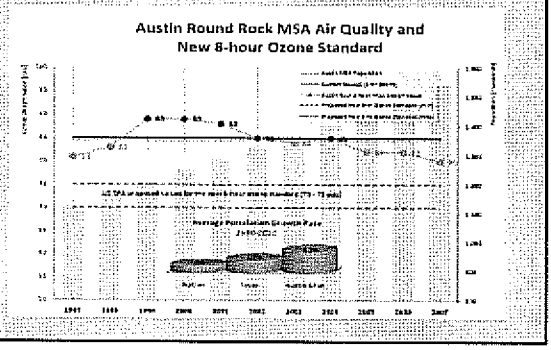
Program Benefits

- Allows emission reduction measures to be tailored to local circumstances
- Implementation co-benefits such as reductions in greenhouse gases, traffic congestion and fossil fuel use.

Ozone Standards

- Current ozone standard
  - A design value of 84 parts per billion (ppb) ozone
- Proposed ozone standard
  - A design value of 70 or 75 ppb ozone
- The design value is the 3-year average of the fourth-highest daily maximum 8-hour ozone concentrations measured annually at each regulatory monitor in the region

Current Air Quality Status



Program Components

- Overview
- Technical Evaluation
- Action Plan
- Memorandum of Agreement
- Appendices

Overview

- The region meets all eligibility requirements
- Proposed regional program meets EPA's program requirements
- Initial Participants are the EAC signatories and participating agencies, plus the CTRMA
- Additional local participants may be added

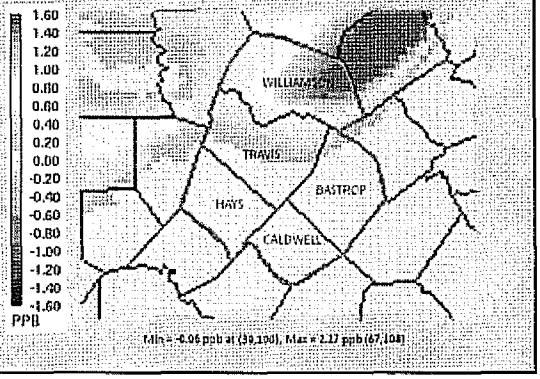
Initial Participants

- Bastrop County
- Caldwell County
- Hays County
- Travis County
- Williamson County
- City of Austin
- City of Bastrop
- City of Elgin
- City of Lockhart
- City of Luling
- City of Round Rock
- City of San Marcos
- CAPCOG
- CAMPO
- Capital Metro
- CTRMA
- LCRA
- TxDOT Headquarters
- TxDOT Austin District
- TCEQ
- EPA

Technical Evaluation

- Evaluates region's past, current and expected future ozone levels
- Indicates that regional ozone levels will stay close to the current ozone standard.
  - Increased emissions due to population and energy sector growth are somewhat offset by decreased emissions due to pollution controls, especially federal motor vehicle standards
- Transported emissions from outside the region could raise background ozone levels significantly

Oak Grove Power Plant Ozone Contribution



Action Plan

- Defines action triggers and response options
  - Response determined by signatories
- Includes planning activities, voluntary emission reduction measures and contingency measures
  - Must include one new, quantifiable measure and at least one violation contingency measure
- Addresses coordination, public participation and required semi-annual reporting

Trigger and Response

Upon signing the MOA, continue on-going activities through 2013

- EAC emission reduction measures
- Analysis of measure's effectiveness and emissions growth
- Programs such as Commute Solutions, CLEAN AIR Force, Clean Air Partners, Clean Cities, Clean School Bus, Austin Climate Protection Plan
- MOA for Local Enforcement of State Idling Limits (renewed prior to 2008 ozone season)

Idling Limits MOA

- MOA between local government and TCEQ
- Local government enforces the state idling rule (30 TAC 114.510, 511, 512 and 517)
- Renews MOA that expired Dec. 31, 2007
- Renewal is for a five year term
- Local government must submit a detailed implementation plan for enforcement within 45 days of the MOA effective date

Idling Limits

- Applies to vehicles greater than 14,000 lbs
- Applies April 1 through October 31
- Idling limited to 5 minutes with exemptions
  - Traffic conditions
  - Military or emergency vehicle
  - Engine needed for mechanical operations
  - Maintenance or diagnostic purposes
  - Public transit allowed 30 minutes
  - Road construction or maintenance
  - Airport ground support equipment

Idling Limits Sleeper Berth

Idling is allowed for drivers using the sleeper berth for a federally mandated rest period, but is prohibited:

- In a residential area (Local Govt. Code 244.001)
- In a school zone
- Within 1000 feet of a hospital
- Within 1000 feet of a school, during operating hours
- At a location within 2 miles of a truck electrification facility

Sleeper berth provision in effect until Sept 1, 2009.

Primary Measures

- Upon MOA signing, implement one or more primary measures within one year:
  - Apply for TCEQ Texas Emission Reduction Plan (TERP) grants
  - Transportation Emission Reduction Measures (TERMs)
  - Regional Rideshare Program (new quantifiable measure, already implemented)
  - Invite 5 cities to become signatories

Primary Measures

- Request TCEQ implement an ozone watch/warning system (TCEQ has committed to implement this beginning in April 2008)
- Air Check Texas Local Initiative Projects with LIRAP funds (Travis and Williamson Counties)
- Pave unpaved roads
- Other measures identified and agreed upon

Maintenance for Growth Offset Measures

- Implement one or more by Dec. 31, 2010
  - Apply for TERP grants
  - Invite all other cities with at least 10,000 population to become signatories
  - Additional TERMs
  - Energy efficiency and conservation program
  - Other measures identified and agreed upon
- Signatories will determine appropriate measures by January 1, 2010

Tier 1 Contingency Measures

- If the region's design value reaches 84 ppb, implement one or more within 2 years
  - **Apply for TERP grants**
  - **Additional TERMs**
  - **Ask additional cities to sign idling limits MOA**
  - **Upgrade regional rideshare program and Clean Air Partners program**
  - **Voluntary use of fuel additive to reduce emissions from fleets, school buses and non-road vehicles**
  - **Other measures identified and mutually agreed upon**

Tier 2 Contingency Measures

- If the design value is at least 85 ppb, implement one or more within 2 years
  - Remaining Tier 1 contingency measures
  - At request of county and largest city, expand vehicle inspection and maintenance (I/M) program to Bastrop, Caldwell or Hays counties
  - Request TCEQ upgrade I/M program to include additional remote sensing and diesel testing
  - Additional TERMs
  - Other measures identified and agreed upon

Memorandum of Agreement (MOA)

- Includes signatory commitments, expected duration, and conditions for modification or early termination
  - **Modified or terminated by mutual consent**
  - **Any party can withdraw if other parties do not carry out agreement provisions**
  - **Area may withdraw at any time**
  - **Failure to abide by terms could result in a nonattainment designation if a violation occurs**
- All parties commit to developing, implementing and maintaining the program according to EPA guidelines

EPA Commitments

- If a violation of the standard occurs
  - EPA will consider the region's participation in the program in exercising its discretion in the nonattainment designation process
  - EPA will allow the MSA appropriate State Implementation Plan (SIP) credit for measures implemented under the program

EPA and TCEQ Commitments

- EPA and TCEQ will inform local governments of all available options if the region exceeds or violates the federal ozone standard.
- EPA and TCEQ will adopt selected Tier 2 contingency measures into the SIP if the region violates the standard.

Local Government Commitments

- Implement the program
- Regularly update emissions inventories (CAPCOG)
- Continue EAC maintenance for growth requirements
- Revise or update contingency measures if applicable state or federal laws change
- Implement one new, quantifiable measure within one year (regional rideshare program)

ENVIRONMENTAL BOARD MOTION 020608-E1

Date: February 06, 2008

Subject: New Proposed 803 Flex Air Quality

Motioned By: Mary Ann Neely Seconded by: John Dupnik, P. G.

Recommendation
The Environmental Board recommends conditional approval of the 803 Flex Air program.

Rationale
The New proposed 803 Flex Air program is a voluntary initiative and will continue to build on the regions continued effort to reduce emissions and improve air quality.
The implementation of the 803 Flex Air Quality program has co-benefits such as reductions in greenhouse gases, traffic congestion, and fossil fuel use.

Vote 6-0-0-1-0

For: Anderson, Moncada, Neely, Ahart, Dupnik and Beall

Against:

Abstain:

Absent: Maxwell

Recused:

Approved By: P.E.
Dave Anderson P.E., CFM
Environmental Board Chair

MEMORANDUM

TO: Dave Anderson, P.E.
Chairman
City of Austin Environmental Board

FROM: Robert B. Botto, AICP
Environmental Planner
Watershed Protection and Development Review Department

DATE: February 14, 2008

SUBJECT: Village of Volente ETJ Release

Today, Austin's City Council agreed to exchange approximately 28 acres from Austin's extraterritorial jurisdiction (ETJ) for approximately 28 acres from the Village of Volente's ETJ. Volente, who requested the release, will eventually annex the area it acquired. The releases are located in western Travis County, north of Volente near Lime Creek Road. The property owner whose subdivision is now entirely within Volente, will also convey 800 acres of privately owned and managed bird habitat to Travis County. After taking title to the land, which will remain in Austin's ETJ, Travis County will manage it as part of the Balcones Canyonlands Preserve.

Watershed Protection staff evaluates proposed ETJ releases in terms of a municipality's ability to regulate the released area with water quality protections equivalent to our own. In our estimation, equivalent water quality protection will be provided through an interlocal agreement with the Village of Volente and restrictive covenants on the land we released from our ETJ. Volente will use a planned development district ordinance and their existing water quality regulations to regulate development. LCRA authorized Volente to regulate water quality after determining that Volente's regulations were equivalent to theirs. Volente's regulations limit impervious cover, density and building on steep slopes. The regulations also include provision for buffering streams and treating stormwater runoff. The proposed land use for the area released from Austin's ETJ is single-family residential.

Please do not hesitate to contact either myself at 974-2187 or Pat Murphy at 974-2821 with your questions or comments.

Sincerely,

Robert B. Botto

Robert B. Botto, AICP
Environmental Planner
Watershed Protection and Development Review Department

cc: Patrick Murphy, City of Austin
Virginia Collier, City of Austin

CITY OF AUSTIN ENVIRONMENTAL ASSESSMENT
FOR
1,070-ACRE VILLA MUSE TRACT

Travis County, Texas

Submitted to:

Land Design Studio
1135 West 6th Street
Austin, TX 78703

By:

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

February 2008

aci consulting
a division of aci group, LLC

aci
consulting

EXECUTIVE SUMMARY

City of Austin Environmental Assessment: Land Studio Designs, Villa Muse Tract
February 27, 2008

aci consulting was hired by Land Studio Designs to perform a City of Austin Environmental Assessment (EA) for the approximate 1,070-acre Villa Muse tract located north and south of Farm to Market 969 approximately four miles east of Farm to Market 973 in Travis County, Texas. The City of Austin EA was performed to identify potential *critical environmental features* (CEFs) as defined by the City of Austin's Land Development Code (LDC), § 25-8-121. Such features are defined to include springs, bluffs, canyon rimrocks, caves, sinkholes and recharge features, and wetlands located on the property. The assessment also evaluates the potential for endangered species habitat.

aci consulting scientists performed a site visit on February 21 and 27, 2008 to survey the entire subject area for any potential CEFs, as well as the natural habitat of the subject area.

Based on the field investigations, survey of ecoregions, vegetation types, hydrology, and important species and natural areas, this assessment revealed three potential CEFs within the subject area north of FM 969. These potential CEFs were each identified as a fringe wetland. This assessment also revealed that the natural habitat of the subject area is unlikely to be regularly utilized by the species included under the City of Austin Endangered Species Ordinance.

This executive summary supplements a complete City of Austin Environmental Assessment report compiled by aci consulting.

aci consulting

CITY OF AUSTIN ENVIRONMENTAL ASSESSMENT FOR 1,070-ACRE VILLA MUSE TRACT

Travis County, Texas

Submitted to:

Land Design Studio
1135 West 6th Street
Austin, TX 78703

By:

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

February 2008

aci consulting

TABLE OF CONTENTS

TABLE OF FIGURES

APPENDICES

aci consulting

Environmental Assessment in Accordance with the City of Austin Land Development Code for the Villa Muse 1,000-acre tract located in Travis County, Texas

February 28, 2008

1.0 PURPOSE

The purpose of this environmental assessment is to evaluate the 1,070-acre Villa Muse tract, hereafter referred to as the subject area, in accordance with the City of Austin Land Development Code ("LDC") §25-8-121. This environmental assessment was performed following the new standards in effect as of December 29, 2006. Specifically, this assessment evaluates the subject area for the occurrence of critical environmental features (CEFs) as defined in the LDC and for potential endangered species habitat. A site investigation was performed by **aci consulting** scientists on February 21 and 27, 2008.

2.0 PROJECT DESCRIPTION

The subject area is located south of FM 969 approximately four miles east of FM 973 in Travis County, Texas (Figure 1).

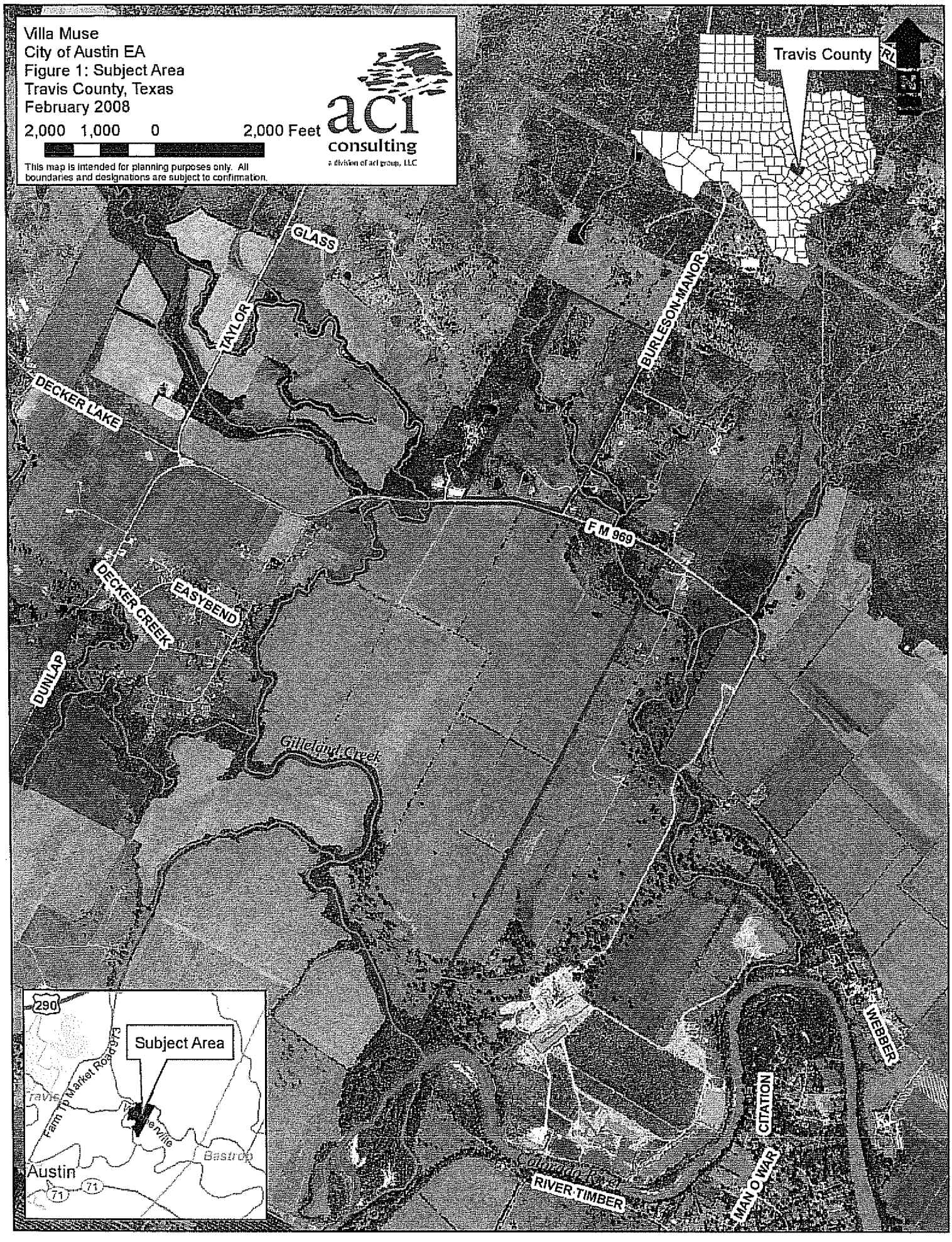
3.0 EXISTING ENVIRONMENT

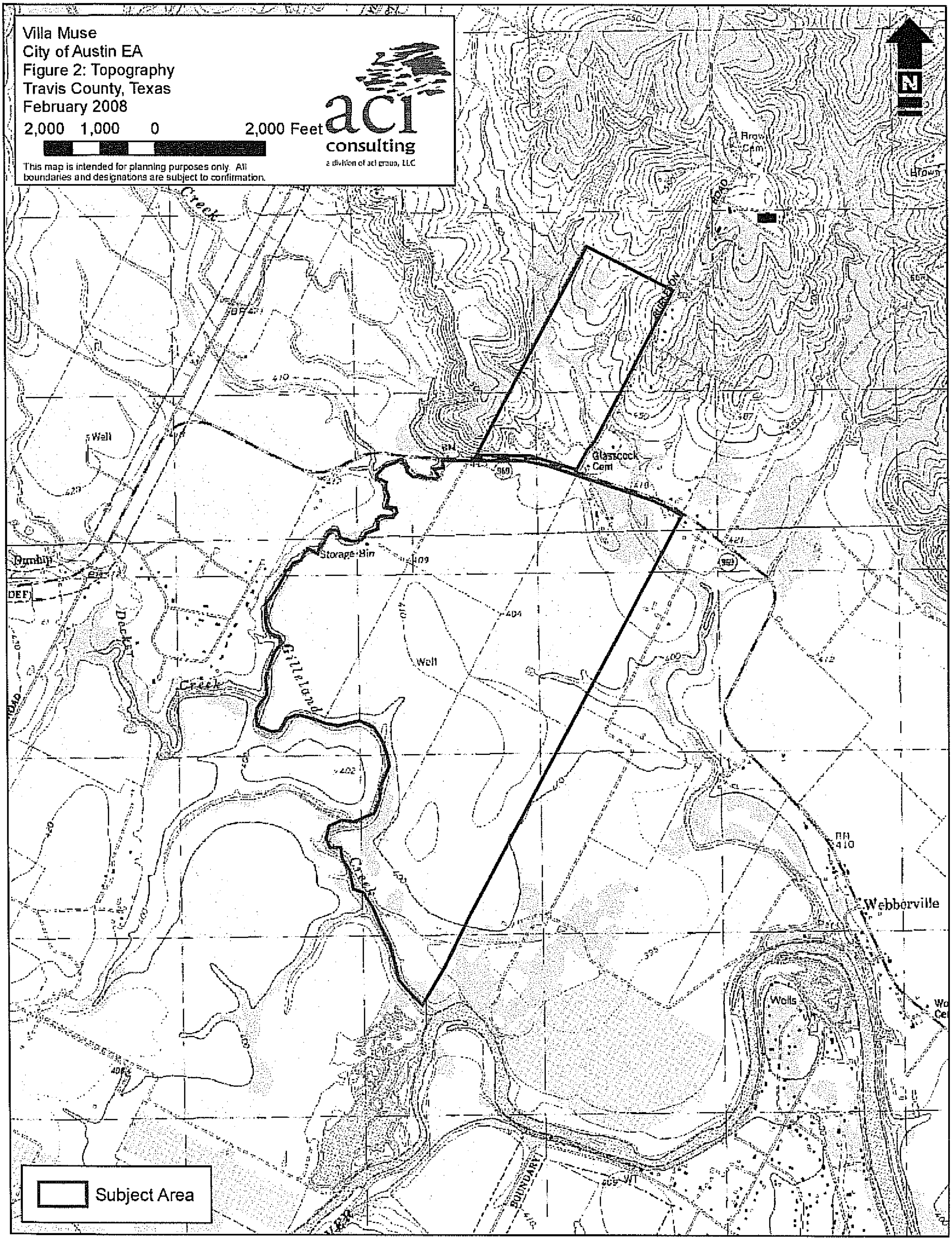
3.1 Hydrology

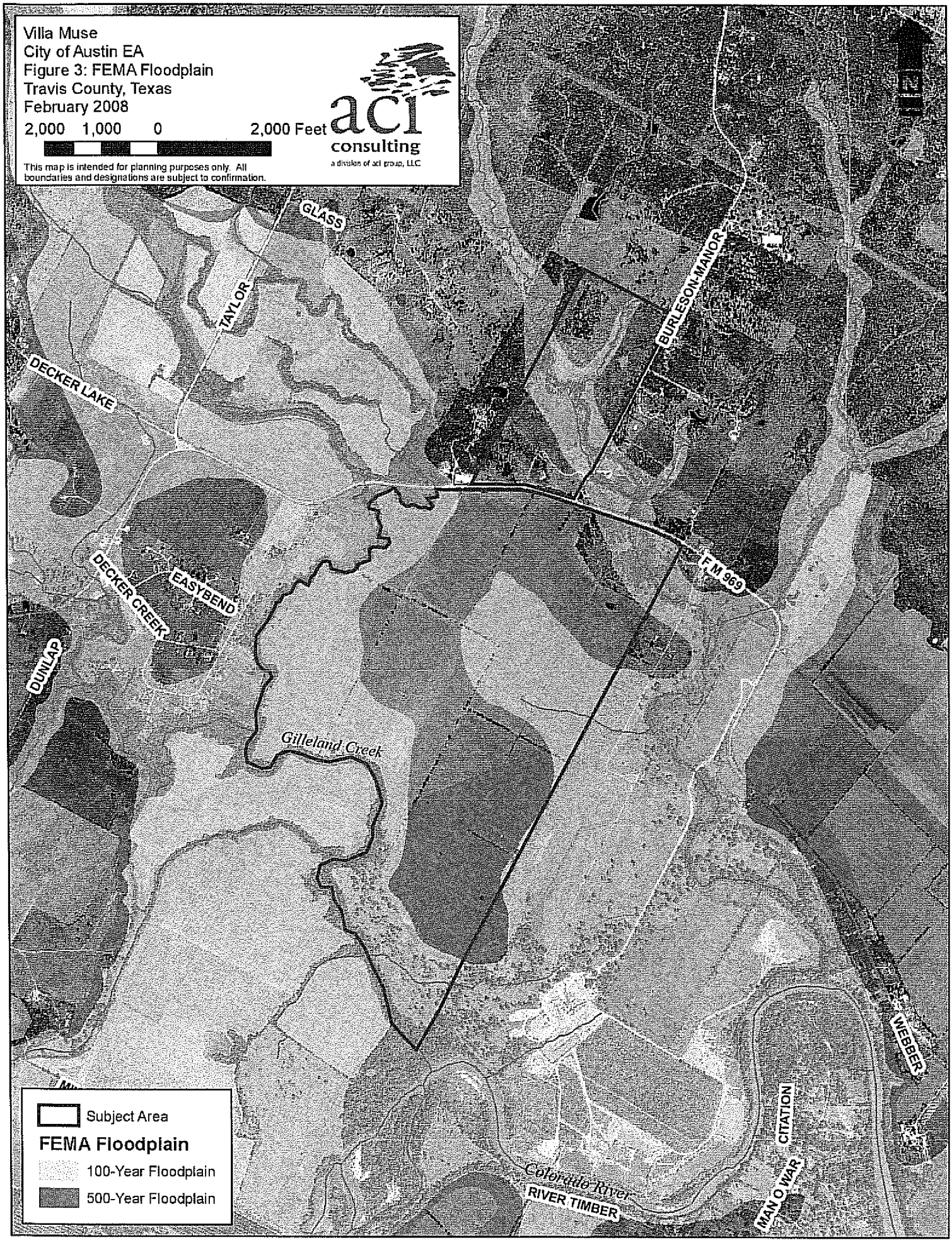
The subject area lies within the Gilleland watershed, which lies within the City's suburban watershed regulation area, and the Colorado watershed, which lies within the City's urban watershed regulation area. According to Edwards aquifer recharge zone maps, the subject area is not within the recharge, transition, or contributing zones of the Edwards aquifer (TCEQ 2001).

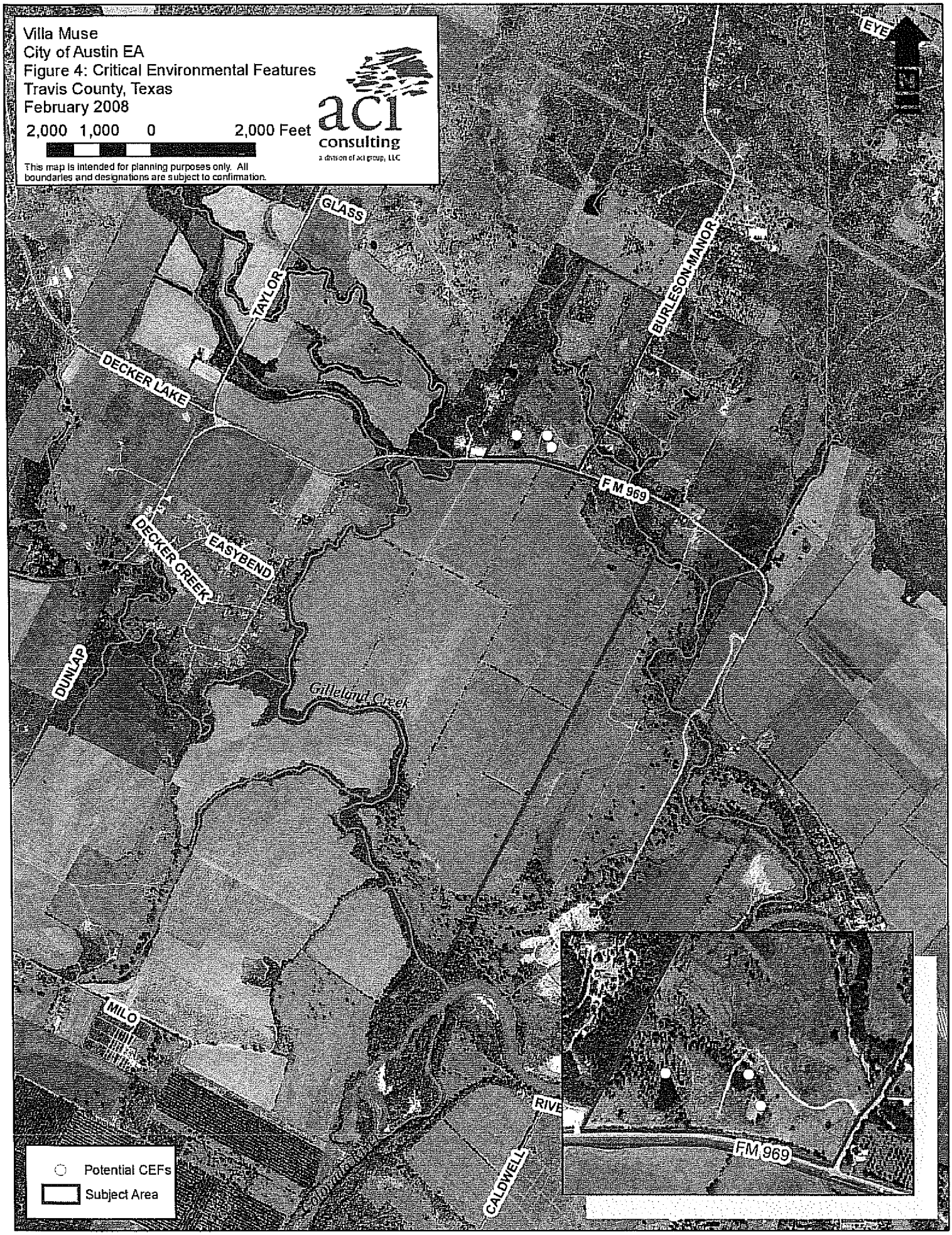
3.2 Topography

According to the *Manor* and *Webberville* USGS 7.5-minute topographic quadrangles, the elevation of the subject area ranges from approximately 400 to 410 feet above mean sea level south of FM 969. Topographic relief increases north of FM 969 ranging in elevations of approximately 420 to 480 feet above mean sea level (Figure 2). See Figure 3 for Federal Emergency Management Agency (FEMA) mapped floodplains within the subject area.


Villa Muse
City of Austin EA
Figure 1: Subject Area
Travis County, Texas
February 2008
2,000 1,000 0 2,000 Feet
This map is intended for planning purposes only. All boundaries and designations are subject to confirmation.
acl consulting
a division of acl group, LLC
Travis County
GLASS
TAYLOR
BURLESON-MANOR
DECKER LAKE
F M 969
DECKER CREEK
EASYBEND
DUNLAP
Gilleland Creek
WEBBER
CITATION
MAN O WAR
RIVER TIMBER
290
Subject Area
Farm To Market Road 973
Austin
71
Bastrop


Villa Muse
City of Austin EA
Figure 2: Topography
Travis County, Texas
February 2008
2,000 1,000 0 2,000 Feet
aci consulting
a division of aci group, LLC
This map is intended for planning purposes only. All boundaries and designations are subject to confirmation.
Subject Area
Creek
Gilleland
Creek
Dunlap
Storage Bin
Well
Glasscock Cem
Webberville
Wells
BOUNDARY
410
409
404
400
402
395
421
412
450
960
969
410


Villa Muse
City of Austin EA
Figure 3: FEMA Floodplain
Travis County, Texas
February 2008
2,000 1,000 0 2,000 Feet
This map is intended for planning purposes only. All boundaries and designations are subject to confirmation.
aci consulting
a division of aci group, LLC
N
GLASS
TAYLOR
BURLESON-MANOR
DECKER LAKE
DECKER CREEK
EASYBEND
F.M. 969
DUNLAP
Gilleland Creek
WEBBER
CITATION
MAN O WAR
Colorado River
RIVER TIMBER
Subject Area
FEMA Floodplain
100-Year Floodplain
500-Year Floodplain


Villa Muse
City of Austin EA
Figure 4: Critical Environmental Features
Travis County, Texas
February 2008
2,000 1,000 0 2,000 Feet
aci consulting
a division of aci group, LLC
This map is intended for planning purposes only. All boundaries and designations are subject to confirmation.
EYE
GLASS
TAYLOR
BURLESON-MANOR
DECKER LAKE
FM 969
DECKER CREEK
EASYBEND
DUNLAP
Gilleland Creek
MILO
RIVE
CALDWELL
FM 969
Potential CEFs
Subject Area

3.3 Geology

The subject area is underlain by Quaternary Alluvium (Qal), Fluvatile terrace deposits (Qt), and the Navarro Group (Kknm). Alluvium (Qal) typically consists of floodplain deposits, including indistinct low terrace deposits, both of which are composed of clay, silt, sand, and gravel. Fluvatile terrace deposits (Qt) consist of three or more levels which may correspond to coastal Pleistocene units and includes gravel, sand, silt, and clay in various proportions. The Navarro Group (Kknm) consists of clay in the upper and lower part typically described as calcareous with conchoidal fracture and medium dark gray in the upper part to light medium gray in the lower part. The thickness of this formation is approximately 600 feet (Barnes 1974).

3.4 Soils

Soils in this area are classified in the Houston Black-Heiden Association. Soils in this association are typically deep, nearly level and gently sloping, calcareous, clayey soils overlaying marl (SCS 1974). Seventeen soil units occur in the subject area:

- Bergstrom silt loam, 0 to1 percent slopes (BeA) – This soil typically occupies smooth, nearly level benches on flood plains. The surface layer is dark grayish-brown silt loam approximately 26 inches thick. The following layer is reddish-brown silt loam to a depth of approximately 60 inches. The underlying material is reddish-yellow calcareous silt loam to a depth of 80 inches. Permeability is moderate and available water capacity is high.
- Bergstrom silt loam, 1 to 3 percent slopes (BeB) – This soil is typically gently sloping and occupies long, narrow areas around intermittent drainageways and on bench slopes. The surface layer of this soil is dark grayish-brown silt loam approximately 23 inches thick. The next layer is reddish-brown silt loam extending to a depth of 60 inches. Permeability is moderate and available water capacity is high.
- Bergstrom silty clay loam, 0 to 1 percent slopes (BgA) – This soil occupies broad, smooth, nearly level benches on floodplains. The surface layer is dark-brown silty clay loam approximately 25 inches thick. The next layer is reddish-brown silt loam to a depth of approximately 60 inches. Permeability is moderate and available water capacity is high.
- Bergstrom silty clay loam, 1 to 3 percent slopes (BgB) – This gently sloping soil occupies the head and sides of shallow intermittent drainageways. It is also at the foot of low escarpments separating terrace benches, and in long, narrow areas immediately above river bluffs. The soil has surface layer of dark-brown silty clay loam approximately 22 inches thick followed by a layer of reddish-brown silt loam to a depth of approximately 60 inches. Permeability is moderate and available water capacity is high.
- Burleson gravelly clay, 1 to 3 percent slopes (BtC) – This soil typically occupies long and narrow areas below ridges or above valleys of less sloping Burleson gravelly clay. Nearly half of the soil surface is covered with

reddish-brown chert rock and gravel. The surface layer is dark-gray clay that contains about 10 percent gravel and is approximately 40 inches thick. The underlying material is brown silty clay to a depth of 60 inches. This soil has a high shrink-swell potential and a high available water capacity.

- Ferrish-Heiden complex, 8 to 20 percent slopes, severely eroded (FhF3) – This soil complex typically occupies rolling to hilly topography. The Heiden soils have a surface layer of dark grayish-brown clay approximately 15 inches thick while the Ferris surface layer is light olive-gray clay mottled with yellow approximately 6 inches thick. The next layer is grayish-brown clay mottled with olive yellow and extends to a depth of 50 inches. The underlying material is yellow silty clay. The soil poses a severe erosion hazard, a high shrink-swell potential, slow permeability and high available water capacity.
- Houston Black clay, 1 to 3 percent slopes (HnB) – This nearly level soil typically occupies smooth ridges. The surface layer is very dark gray clay approximately 40 inches thick. The next layer is dark-gray clay to a depth of approximately 80 inches. The lower part has mottles of olive yellow. This soil has a high shrink-swell potential and a slow permeability when wet. Available water capacity is high.
- Heiden clay, 3 to 5 percent slopes, eroded (HeC2) – This soil typically occupies side slopes on gently undulating topography. The surface layer is dark grayish-brown clay approximately 16 inches thick. The next layer is mottled grayish-brown clay and extends to a depth of 50 inches. The lower layer is mottled yellow silty clay to a depth of 60 inches. This soil has a high shrink-swell potential, slow permeability and high available water capacity.
- Heiden gravelly clay, 8 to 20 percent slopes, eroded (HgF2) – This soil occupies rolling to hilly topography. Gullies dissect the landscape. The surface layer is dark grayish-brown gravelly clay about 12 inches thick and nearly 60 percent of the surface layer is covered with chert gravel. The next layer is grayish-brown clay to a depth of about 48 inches and contains pockets of chert gravel. This soil has a high shrink-swell potential, slow permeability and high available water capacity.
- Hornsby gravelly loamy sand, 1 to 5 percent (HhC) – This soil typically occupies old high terraces, the tops and sides of small knolls or broad, irregularly shaped ridges. The surface layer is gravelly loamy sand approximately 18 inches thick. The next layer is gravelly sandy clay loam to a depth of 70 inches. The underlying material is light-gray gravelly clay to a depth of 82 inches. Permeability is moderate and available water capacity if high.
- Houston Black gravelly clay, 2 to 8 percent slopes, eroded (HoD2) – This soil occupies ridges and side slopes. The surface layer is dark-gray gravelly clay approximately 24 inches thick while chert rock covers 30 to 75 percent of the surface. The next layer is gray clay with pockets of chert gravel and extends

to a depth of 70 inches. This soil has a high shrink-swell potential, slow permeability and high available water capacity.

- Miller clay (Mc) – This nearly level soil is on smooth, single slopes, and large fans. The surface layer is dark-brown clay approximately 19 inches thick. The next layer is reddish-brown clay to a depth of approximately 70 inches. The underlying material is reddish-brown silty clay thinly stratified with silt loam to a depth of 120 inches. This soil has a high shrink-swell potential and slow permeability. Available water capacity is high.
- Norwood silty clay loam (No) – This nearly level soil occupies smooth bottoms in very shallow drainageways. The surface layer is grayish-brown silty clay loam approximately 18 inches thick. It overlies a layer of dark-brown silty clay loam stratified with fine sandy loam and silt loam. These soils are moderately permeable with a high available water capacity.
- Riverwash (Rw) – Riverwash consists of gravels, sands, and loamy materials. It occupies long, narrow areas adjacent to rivers. The surface of these areas is devoid of vegetation, except for a few trees. Riverwash is a source of sand and gravel.
- Travis soils, 1 to 5 percent slopes (TrC) – These soils occupy ridges and side slopes in a smooth undulating topography. The surface layer can range from a fine sandy loam approximately 14 inches thick to loamy sand greater than 14 inches thick. In areas were erosion is prevalent, the surface layer is sandy clay loam. The next layer is red sandy clay to a depth of 50 inches with underlying material of gravelly sandy clay loam to a depth of 75 inches. These soils are slowly permeable and available water capacity is high.
- Trinity clay (Tv) – This nearly level soil occupies long, narrow areas. The surface layer is of dark-gray clay approximately 45 inches thick. The next layer is gray, light brownish-gray and dark-gray, mottled clay. These soils have a high shrink-swell capacity, are slowly permeable and have a high available water capacity.
- Trinity clay, frequently flooded (Tw) – This soil is on floodplains. Surfaces are concave and the slope is dominantly approximately 0.5 percent. The surface layer is dark-gray clay approximately 38 inches thick. The next layer is stratified clay, silty clay, and gravelly clay in shades of gray and brown to a depth of 74 inches. Mottled, light olive-gray silty clay underlies this layer to a depth of 96 inches. These soils have a high shrink-swell capacity, are slowly permeable and have a high available water capacity.

3.5 Vegetation

The subject area lies within the Crops and Post Oak Woods/Forest designation, as noted on the Texas Parks and Wildlife "Vegetation Types of Texas" map (McMahan et al.

1984). Crop areas generally include cultivated cover crops or row crops used for the purpose of producing food and/or fiber for either man or domestic animals.

Post Oak Woods/Forest areas are generally located in sandy soils within the Post Oak Savannah. Woods are defined as areas with woody plants nine to thirty feet in height with nearly closed crowns, while forest areas are defined to be deciduous or evergreen tree dominant with a height of thirty feet or greater and nearly closed or closed crowns.

Canopy vegetation observed within the subject area includes, but is not limited to: pecan (*Carya illinoinensis*), cedar elm (*Ulmus crassifolia*), post oak (*Quercus stellata*), burr oak (*Quercus macrocarpa*), and mesquite (*Prosopis glandulosa*). The tree layer within the subject area has a height range of 15 to 40 feet and a canopy cover range of 30 to 70 percent. Vegetation within the shrub layer includes, but is not limited to: saw greenbriar (*Smilax bona-nox*), mustang grape (*Vitis mustangensis*), and rattlebush (*Sesbania drummondii*). Herbaceous layer vegetation observed within the subject area includes, but is not limited to: Texas prickly pear (*Opuntia spp.*), pencil cactus (*Opuntia leptocaulis*), annual sumpweed (*Iva annua*), broomweed (*Gutierrezia dracunculoides*), giant ragweed (*Ambrosia trifida*), coastal Bermuda grass (*Cynodon dactylon*), and various other grasses and forbs. Photographs of typical vegetation of the subject area are included as Appendix A.

The subject area is located in Sector 17 of the City of Austin Biological Resource Sector Map. The perimeter of the subject area borders designated areas of other significant woodlands to the north and east, but is not designated as priority woodlands, remnant prairies, or wetlands.

4.0 CRITICAL ENVIRONMENTAL FEATURES

Section 25-8-1 of the City of Austin LDC defines CEFs as "features that are of critical importance to the protection of environmental resources, and include bluffs, springs, canyon rim rocks, caves, sinkholes, and wetlands."

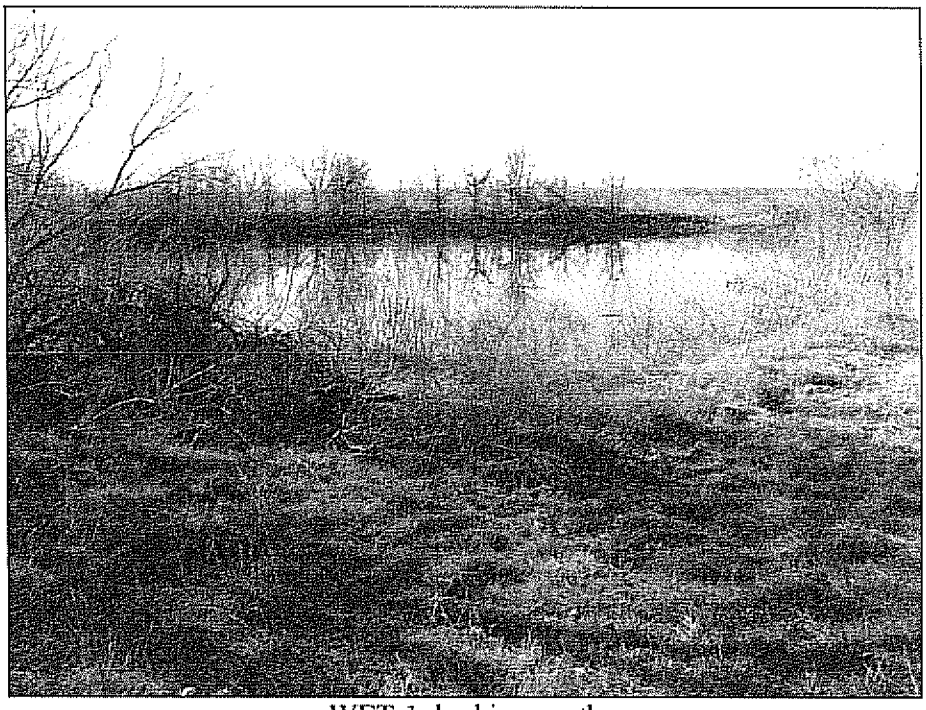
On February 21 and 27, 2008 **aci consulting** scientists conducted field investigations within the subject area in accordance with the City of Austin LDC. The field investigations were performed by surveying the entire subject area.

Aerial photographs and topographic maps were utilized to orient surveyors in the field. All identified potential CEFs were carefully examined and recorded. Each potential feature was marked in the field, described, photographed, and its latitude/longitude (NAD 83) recorded using a Global Positioning System (GPS) receiver.

Three potential CEFs (WET-1, WET-2, WET-3) were identified within the subject area during site reconnaissance. A photograph and description of WET-1, WET-2, and WET-3 are located below, and a map of the location of the potential CEFs is included as Figure 4. The City of Austin CEF worksheet is included as Appendix B.

WET-1

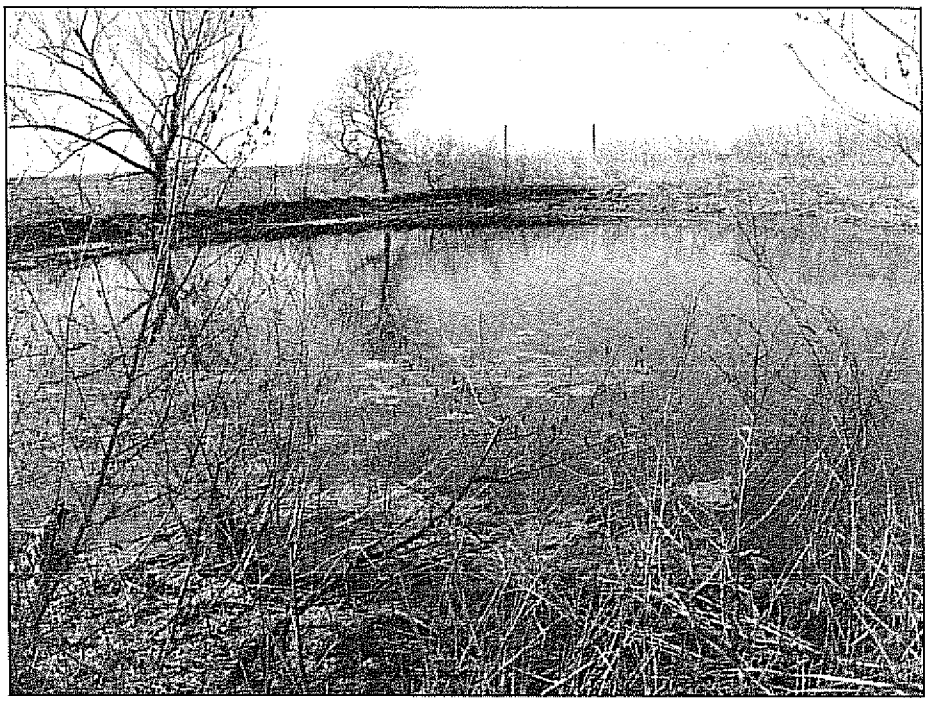
WET-1 is a potential fringe wetland located along the southern portion of the subject area north of FM 969. WET-1 has an approximate width and length of 165 feet and 190 feet, respectively, within the subject area, and a total area of 0.46 acre. The vegetation within this area includes, but is not limited to: spikerush (*Eleocharis spp.*), mesquite, and cedar elm. Mapped soils within this area include HeC2. The soils within this potential wetland area may be functionally considered hydric by the USACE due to their low chroma. Water was present within the area at the time of investigation. This feature likely qualifies as a City of Austin CEF.



WET-1, looking south

WET-2

WET-2 is a potential fringe wetland located approximately 60 feet southeast of WET-1. WET-2 has an approximate width and length of 116 feet and 177 feet, respectively, within the subject area, and a total area of 0.37 acre. The vegetation within this area includes, but is not limited to: spikerush, rattlebush, black willow, cedar elm and pencil cactus. Mapped soils within this area include HeC2. The soils within this potential wetland area may be functionally considered hydric by the USACE due to their low chroma. Water was present within the area at the time of investigation. This feature likely qualifies as a City of Austin CEF.



WET-2, looking south

WET-3

WET-3 is a potential fringe wetland located approximately 500 feet southwest of WET-1. WET-3 has an approximate width and length of 150 feet and 260 feet, respectively, within the subject area, and a total area of 0.68 acre. The vegetation within this area includes, but is not limited to: spikerush, rattle bush, black willow, cedar elm, and mesquite. Mapped soils within this area include FhF3. The soils within this potential wetland area may be functionally considered hydric by the USACE due to their low chroma. Water was present within the area at the time of investigation. This feature likely qualifies as a City of Austin CEF.

WET-3, looking south

5.0 SPECIES INCLUDED UNDER THE CITY OF AUSTIN ENDANGERED SPECIES ORDINANCE

The City of Austin Endangered Species Ordinance ("COA ESO") requires that an endangered species habitat survey be conducted prior to application for site development of a parcel of land (LDC §25-8-695). Plant and animal species for which habitat surveys must be conducted include: bracted twistflower (*Streptanthus bracteatus*), canyon mock-orange (*Philadelphus ernestii*), black-capped vireo (*Vireo atricapillus*) ("BCVI"), golden-cheeked warbler (*Dendroica chrysoparia*) ("GCWA"), whooping crane (*Grus americana*), red wolf (*Canis rufus*), Barton Springs salamander (*Eurycea sosorum*), and six species of karst invertebrates including: the Tooth Cave ground beetle (*Rhadine persephone*), Kretschmarr Cave mold beetle (*Texamaurops reddelli*), Tooth Cave spider (*Neoleptoneta myopica*), Tooth Cave pseudoscorpion (*Tartarocreagris texana*), Reddell harvestman (*Texella reddelli*), and Bone Cave harvestman (*Texella reyesi*).

A habitat survey in accordance with LDC §25-8-695 and the City of Austin Environmental Criteria Manual was also conducted by **aci consulting** scientists. Descriptions of the habitat within the subject area and potential habitat for each endangered species are included below.

5.1 Bracted Twistflower

This annual plant has delicate pink flowers and usually grows no taller than three feet. Bracted twistflower occurs on thin clay soils blanketing limestone. All Travis County populations occur in oak-juniper woodland with a canopy cover of 25 to 100 percent, and most known sites are in areas that contain thick brush which appears to provide protection from deer. Plants that occur in association with bracted twistflower include evergreen sumac (*Rhus virens*), Mexican silktassel (*Garrya ovata* var. *lindheimeri*), shin oak (*Quercus sinuata var. breviloba*), elbowbush (*Forestiera angustifolia*), and myrtlecroton (*Bernardia myricifolia*) (BAT 1990).

Field investigations indicate that the subject area lacks the requisite components to be considered bracted twistflower habitat. Thick brush was not abundant within the subject area nor was the majority of plant species associated with the bracted twistflower. No observations of this plant species were made during the site visit.

5.2 Canyon Mock-orange

This plant can be found growing on Cow Creek, Edwards Limestone, and a few strata of Glen Rose Limestone. These two formations both contain holes and solution cavities, which often give the rock a "honeycombed" appearance. Canyon mock-orange can be found in both xeric and mesic juniper woodland and typically grows in full shade to full sun along cliffs in humid canyons. It is found in association with the following plants: elbowbush, shrubby boneset (*Eupatorium havanense*), shin oak, fragrant sumac (*Rhus*

aromatica), Mexican silktassel, Texas mulberry (*Morus microphylla*), Ashe juniper (*Juniperus ashei*), and yaupon holly (*Ilex vomitoria*) (BAT 1990).

Limestone cliffs with holes or solution cavities are not present within the subject area nor are the majority of plants associated with the canyon mock-orange. No observations of this plant species were made during the site visit.

5.3 Black-capped Vireo (BCVI)

The BCVI is a migratory bird present in Texas only during its breeding season from March through September. BCVI habitat generally consists of shrub vegetation that extends from the ground to approximately 8 feet high, covering 30 to 60 percent or greater of the total area. Typical BCVI habitat in the Edwards Plateau Region includes vegetation species such as shin oak, evergreen sumac, Texas persimmon (*Diospyros texana*), and agarita (*Berberis trifoliolata*). Although Ashe juniper is often part of the vegetative composition in BCVI habitat, preferred areas have a low density and low cover of juniper (Campbell 1995).

The subject area does not possess the structural and compositional vegetative elements consistent with known BCVI habitat. The vegetation type on the tract is also inconsistent with the requisite tree density and tree species for BCVI. Therefore, the potential for the subject area to be regularly utilized by BCVI is highly unlikely.

5.4 Golden-cheeked Warbler (GCWA)

The GCWA is a migratory songbird endemic to Texas and only present during its breeding season of early March through early August. GCWA habitat typically consists of mature Ashe juniper woodlands interspersed with deciduous species. The areas most likely to be utilized by GCWA consist of nearly continuous cover of trees with 50 to 100 percent closed canopy (Campbell 1995). Deciduous species common in GCWA habitat include escarpment black cherry (*Prunus serotina*), Texas black walnut (*Juglans microcarpa*), ash (*Fraxinus* sp.), Texas oak (*Quercus buckleyi*), and cedar elm.

The subject area does not possess the structural and compositional vegetative elements consistent with known GCWA habitat. The vegetation type on the tract is also inconsistent with the requisite tree density and tree species for GCWA. Therefore, the potential for the subject area to be regularly utilized by GCWA is highly unlikely.

5.5 Whooping Crane

The whooping crane is a migrant species whose flyway crosses the northeastern portion of Travis County, an area characterized as the Blackland Prairie ecoregion. The whooping crane utilizes a variety of habitat during migration; croplands are preferred for feeding, and vast wetland areas are selected for feeding and roosting, preferring secluded areas removed from human disturbance (Campbell 1995).

Although the subject area is within the Blackland Prairie ecoregion and contains a large area of cropland, there are no vast wetland areas within the subject area that would provide the ideal setting for feeding and roosting. Therefore, the potential for the subject area to be regularly utilized by whooping cranes is unlikely.

5.6 Red Wolf

The red wolf is considered extirpated in Travis County. It was formerly known throughout the eastern half of Texas in brushy, forested, and coastal areas.

5.7 Barton Springs Salamander

The Barton Springs salamander is an entirely aquatic and neotenic amphibian known only to occur around four spring outlets within Zilker Park, Austin, Texas. The springs are collectively known as Barton Springs and consist of Parthenia, Eliza, Old Mill, and Upper Barton Springs [62 FR 23377] (USFWS 1997). The salamander inhabits areas near the spring openings where food sources are abundant, water chemistry and temperature are relatively constant, and where the salamander has access to both surface and subsurface habitat. The primary threat to the Barton Springs salamander is degradation to the quality and quantity of water that feeds Barton Springs from the Barton Springs watershed.

The subject area does not lie within the Edwards aquifer recharge or contributing zones; therefore, the potential for the subject area to be regularly utilized by the Barton Springs salamander is unlikely.

5.8 Karst Invertebrates

Karst invertebrates are subterranean species that have adapted to areas with consistent humidity and temperature levels with a continual influx of nutrients from the surface. The caves in which the invertebrates occur were formed as a result of dissolution of the limestone formations making up the Edwards aquifer.

Veni and Associates (1992) delineated four karst zones throughout central Texas. The subject area does not lie within any of the four delineated zones. As such, no impacts to endangered karst invertebrate species are anticipated within the subject area. Additionally, no features characteristic of possessing endangered species were found within the subject area (e.g. caves, solution cavities, etc.).

6.0 STATEMENT OF FINDINGS

Three potential CEFs (WET-1, WET-2, WET-3) were identified within the subject area during site reconnaissance. Habitat within the subject area is unlikely to be regularly utilized by the bracted twistflower, canyon mock-orange, BCVI, GCWA, whooping crane, red wolf, Barton Springs salamander, or endangered karst invertebrates.

7.0 REFERENCES

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

(BAT) Biological Advisory Team. 1990. Comprehensive Report of the Biological Advisory Team. Balcones Canyonlands Conservation Plan. Austin, Texas.

Campbell, L. 1995. Endangered and Threatened Animals of Texas: Their Life History and Management. Texas Parks and Wildlife Resource Protection Division, Austin, Texas.

McMahan, C.A., R.G. Frye, and K.L. Brown. 1984. The Vegetation Types of Texas. Texas Parks and Wildlife. Austin, Texas.

(SCS) Soil Conservation Survey. 1974. Soil Survey of Travis County, Texas. United States Department of Agriculture. Texas Agriculture Experiment Station.

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

(USFWS) U.S. Fish and Wildlife Service. 1997. Final Rule to List the Barton Springs Salamander as Endangered. Federal Register, vol. 62, p. 23377.

Veni & Associates. 1992. Geologic Controls on Cave Development and the Distribution of Cave Fauna in the Austin, Texas, Region. Prepared for U.S. Fish and Wildlife Service

aci consulting

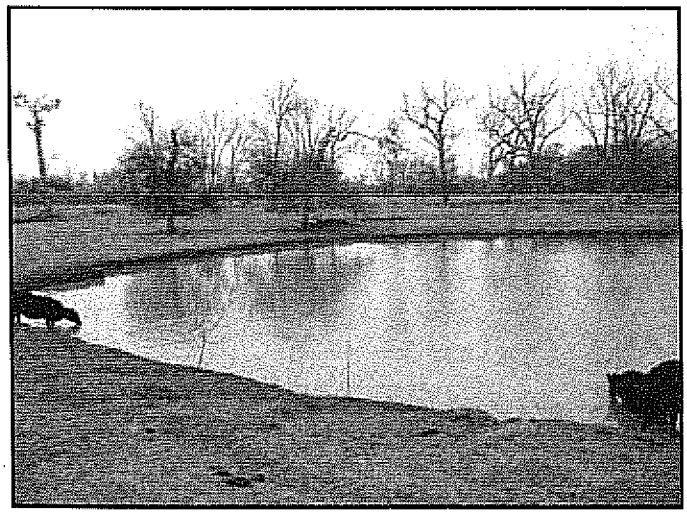
APPENDIX A

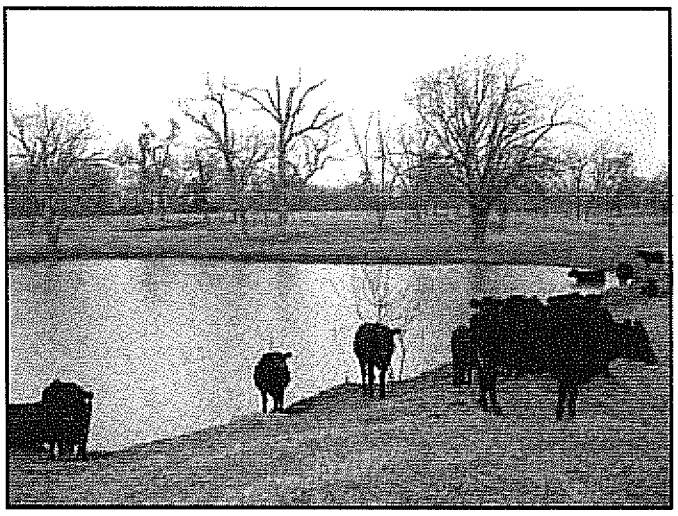
Typical Vegetation Photographs

Appendix A
Site Photos
Villa Muse Subject Area

Typical vegetation of subject area; looking east from west subject area boundary

Typical vegetation along Gilleland Creek riparian corridor

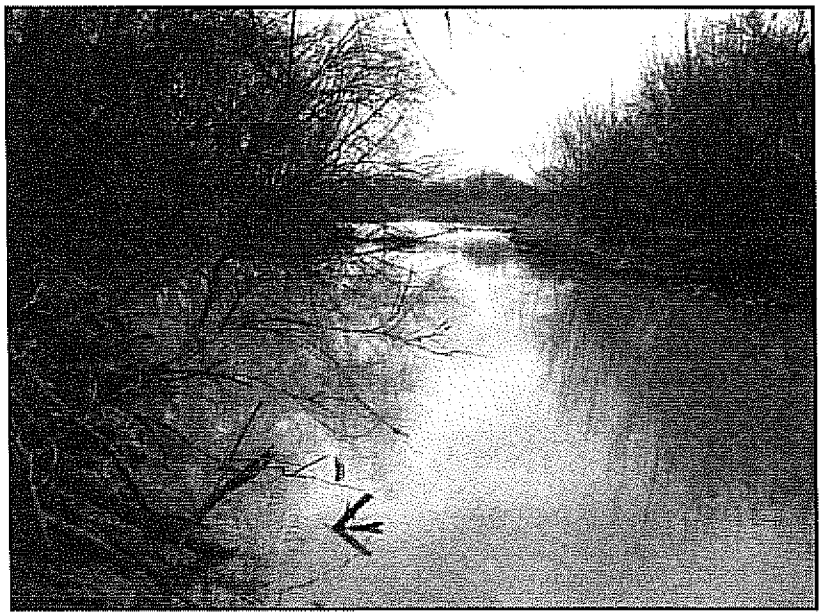




Stock pond at southern extent of subject area

aci consulting
a division of aci group, LLC

Appendix A
Site Photos
Villa Muse Subject Area

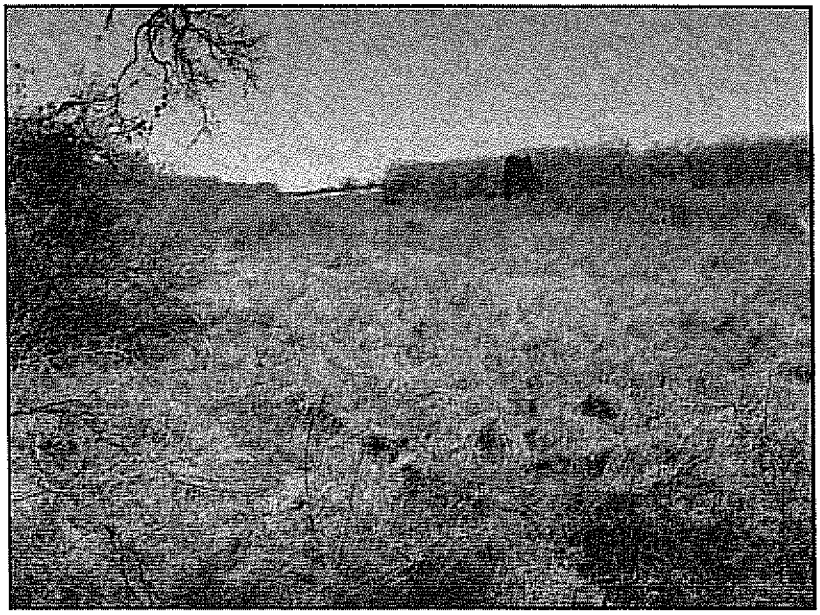


Confluence of Gilleland Creek and Colorado River at southern extent of subject area

Typical hydrology of Gilleland Creek along western subject area boundary

acl consulting
a division of acl group, LLC

Appendix A
Site Photos
Villa Muse Subject Area



Subject area north of FM 969, looking northeast
from west drainage fork

Typical vegetation of subject area north of FM 969; looking
west from entrance road

aci
consulting
a division of aci group, LLC

APPENDIX B

City of Austin CEF Worksheet

City of Austin Site Review Critical Environmental Feature Worksheet

1	Project Name:	Villa Muse Property	5	Primary Contact Name:	Corrie Colvin
2	Project Address:	FM 969, 4 miles east of FM 973, Travis County, Texas	6	Phone Number:	(512) 347-9000
3	Date:	2/27/2008	7	Prepared By:	Corrie Colvin
4	Environmental Assessment Date:	2/27/2008	8	CEFS Located? (yes,no) :	YES

9	FEATURE TYPE (Wetland,Rimrock,Recharge Feature,Seep,Spring)	FEATURE ID (eg S-1)	FEATURE LONGITUDE (WGS 1984 in Meters)		FEATURE LATITUDE (WGS 1984 in Meters)		WETLAND DIMENSIONS (ft)		RIMROCK DIMENSIONS (ft)	
			coordinate	*notation*	*coordinate*	*notation*	X	Y	Length	Avg Height
	Wetland	WET-1	-97.53425	DD	30.25522	DD	165	190		
	Wetland	WET-2	-97.534	DD	30.25459	DD	116	177		
	Wetland	WET-3	-97.53616	DD	30.25528	DD	150	260		

City of Austin Use Only WPDRO CASE NUMBER:	

For rimrock, locate the midpoint of the segment that describes the feature.

For wetlands, locate the approximate centroid of the feature and the estimated area.

For a spring or seep, locate the source of groundwater that feeds a pool or stream.

FULBRIGHT & JAWORSKI L.L.P.
A REGISTERED LIMITED LIABILITY PARTNERSHIP
600 CONGRESS AVENUE, SUITE 2400
AUSTIN, TEXAS 78701-2978
WWW.FULBRIGHT.COM

JCONVERSE@FULBRIGHT.COM
DIRECT DIAL: 512.536.4535

TELEPHONE: (512) 474-5201
FACSIMILE: (512) 536-4598

November 20, 2007

BY HAND DELIVERY
BY E-MAIL LAURA.HUFFMAN@CI.AUSTIN.TX.US

Ms. Laura Huffman,
Assistant City Manager
City of Austin
City Hall
Austin, TX 78701

Re: Villa Muse Request for Release from City of Austin's ETJ

Dear Ms. Huffman:

In our meeting with you regarding the captioned matter, you asked us to provide you with information to answer several questions that you raised in that meeting. Following is the information that we have to provide to you on those matters:

1. The capacity requirements for the utility infrastructure that is needed are:

Water	7,000 LUE's
Wastewater	7,000 LUE's
Fire Flow	3,500 gpm
Elevated Storage	1 mg
Wastewater Treatment Plant Capacity	3 mgd discharged into the Colorado River

2. The principal of the developer is Jay Aaron Podolnick. Mr. Podolnick's biographical information is attached to this letter. Additional individuals are currently consulting with Villa Muse on the development and some may be invited to participate in the equity of the development. Biographical information regarding these additional consultants also is attached for your information.

   At this point, several sources for the necessary capital investment required for Villa Muse have been identified, but none selected. These sources are private investors, equity funds and

Wall Street investment banks. Confidentiality agreements by which Villa Muse is bound prevent further disclosure at this time. We understand that you made this inquiry solely for the purpose of providing information to a law firm that the City might engage to help it with our client's request. Please assure that law firm that the likelihood of any conflict of interest in a matter such as this one is very unlikely because of its nature; however, if they have any concerns, please ask them to provide us with the names of Wall Street investment banks they represent in matters substantially related to this matter. We can then discuss the matter with that investment bank if it is one that has agreed to help our client in this matter.

3. In determining the need for the land owned by Villa Muse and the associated staging properties owned by Travis Aggregates and Chris Murray to be released from the City's ETJ, Villa Muse considered carefully the ability to, and the effects in both time and money of, attempting to develop this major project in the City's ETJ. To understand the decision of Villa Muse in this regard, we believe that you must first accept our client's belief that if this project is not completed in an area near Austin, Texas, by December, 2009, it will not be developed in Central Texas.

   Furthermore, you must accept the precept, on which our client has based its business plan and commitments, that Villa Muse Studios can be open for business within this two-year time frame. So jumping ahead in the information you requested, the milestones for this project to be open and operating by December, 2009 follows:

   District Creation - 4th Qtr. '07 to 1st Qtr. '08
   Development Agreement, Plan and Code - 4th Qtr. '07 to 2nd Qtr. '08
   Flood plain reclamation - 2nd Qtr. '08 through 3rd Qtr. '08
   Infrastructure development (phase I) - 2nd Qtr. '08 through 3rd Qtr. '09
   Roadway Improvements (Burleson-Manor Rd. Extn.) 1st Qtr. 08 through 3rd Qtr.'09
   Vertical development (Phase I) – 3rd Qtr. '08 through 4th Qtr. '09
   Studios Technical Facility Certification – October '09 through November '09
   Grand Opening –December 2009

   This development schedule can be met through administratively accelerating the Travis County entitlement and permitting process. After discussions that our client has had with the County and its engineering team, they are confident that the timeframe for the County's approval of development plans is four to six months if conducted without the encumbrance of Title 30 of the City's Land Development Code. By paralleling its construction engineering with the County's processing time and utilizing design-build delivery methods and third-party inspection processes that recognize and use sealed engineering and architectural inspections and approvals, construction can begin within an additional one to three months. Thus, our client's belief is that within five to nine months it can begin construction of the project.

   Our client's analysis of the time frames under Title 30's regulations to achieve

commencement of construction alone (that is not including additional delays from inspection activities that would be conducted by the City) is two to three years. It arrived at this conclusion based on a review of other major projects in the City's ETJ or municipal limits. For example, major development projects such as Robinson Ranch, Wildhorse Ranch PUD, Mueller Airport Redevelopment and the North Burnet Gateway Neighborhood Plan all point to the conclusion that it would take a year and a half to two years just to get entitlements. After that, the apparent expectation for construction appears to be an additional six to twelve months of processing site development permits and building permits would be needed.

One other but very important distinction also needs to be drawn from this comparison: Villa Muse, unlike the projects our client compared to its development, is not just a mixed use project of major proportion. Rather, Villa Muse is a major commercial, almost industrial level, development around which requisite support uses are being developed. Thus Villa Muse is a group of studios and backlot for the production of filmed and digital media and production of magnetic archival restorations (video, audio, live and animated) around which buildings are to be developed that allow for retail and residential uses to exist in support not only of the people working at the studios but also in support of the very activities of creating the productions. Thus, the dense, mid-rise urban-like core that will be built next to the studios must have certain characteristics so that the settings for shooting scenes and recording music and other sound recordings are fostered instead of homogenized and structured buildings.

In sum, the project site currently lies in Austin's ETJ within Travis County and is therefore not subject to the City's zoning codes. It falls under Title 30 of the Austin/ Travis County Subdivision Regulations which regulates the subdivision of land and related matters. Title 30 is oriented toward conventional suburban development such as residential subdivisions and does not anticipate the high density, mixed-use pattern of development envisioned for Villa Muse. Therefore the timing is not predictable to process a complex project under Title 30.

4. The development agreement that Villa Muse proposes with Travis County would have the following framework:

Our intent is to regulate the development of Villa Muse by utilizing a Form Based Code. Utilizing the Villa Muse Concept Plan, a Regulating Plan and Development Code will be prepared for the project and processed through Travis County. Together the plan and code will be used to guide and regulate the development of land Villa Muse by area type and will serve to integrate activities and uses, unifying their purpose and effectiveness. Components to be included are the Regulating Plan, the Development Code, Building Form Standards, Architectural Regulations, Street Typology and Landscape Regulations.

The Regulating Plan will fix and describe the concepts defined in the Villa Muse Master Plan and will create district and neighborhood boundaries and identify and locate street types, development parcels, public areas and amenities. It will also define the how lots for private

development are laid out and the location of allowable building types.

The Development Code is a prescriptive document which will define specific performance in each neighborhood. The codes will reinforce the goals of the Master Plan by prescribing elements and building types that promote an interactive streetscape. The code will be both narrative and illustrative and will cite both appropriate and inappropriate examples. Building Form standards which regulate the configuration, features and functions of buildings along with Architectural Regulations will regulate specific exterior building materials related to vernacular building practices in the region. These guidelines will foster harmony among buildings adding to the quality of the built environment.

Street Typology will address the proportion of building height to right-of-way width, the integration of parking and traffic movement and the use of service alleys and lanes as well as the dimensional specifications for all streets and alleys. Open space and Landscape Regulations will deal with streetscape planting and maintenance, as well as development of both public and private open space and storm water management.

All of the above will be tied to the land by deed restrictions. Also included will be a clearly defined process addressing how the code will be administered and project plans processed under the code. To ensure the Form Based Code can be implemented we will vet to resolve issues relating to state law, property rights, enforcement, and coordination with existing permitting procedures and institutional frameworks.

5. Villa Muse selected the PID for the main vehicle to finance the massive infrastructure required to develop Villa Muse because Chapter 372 of the Texas Local Government Code appears to provide the constitutional ability to direct the greatest amount of taxes collected within Villa Muse to the repayment of tax exempt bonds issued for the payment of the public improvement projects identified in the statute. A TIF would not be as desirable a vehicle to use for this purpose because of the limitations placed on that system by statute.

We hope that the foregoing answers your questions satisfactorily; however, if you have additional questions, please do not hesitate to let us know. Thank you for your attention and consideration of our client's request.

Very truly yours,

R. G. Converse

RGC/jc
Enclosures
cc: Jay Aaron Podolnick
Hiten Patel

James Carpenter
Jim Plummer (Firm--SAO)

TEAM MEMBERS
VILLA MUSE STUDIOS
AUSTIN, TEXAS

VILLA MUSE HAS ASSEMBLED A WORLD CLASS TEAM WITH PROVEN EXPERIENCE AND EXPERTISE IN BUILDING AND MANAGING SOME OF THE FINEST STUDIO FACILITIES IN THE WORLD.

ATTACHMENT ONE

CONFIDENTIAL

JAY AARON PODOLNICK

Founder/CEO

Born in Austin, Texas in 1952, Jay started playing guitar, composing and performing at the age of 12. He grew up in a show business family, and was exposed very early on to the many different aspects of the entertainment industry.

His grandfather Louis Novy ran Carl Hoblitzelle's Interstate Theaters in Austin, which included the Hancock Opera House, State Theater and the Paramount Theater during the early vaudeville days of the '30s and early '40s. During that period a wide variety of acts graced the Paramount stage ranging from Houdini, The Marx Brothers, George M. Cohan, Helen Hayes, John Philip Sousa, Lillian Gish, and the Ziegfeld Follies.

Jay's mother Lena worked with John Wayne on his early "Mesquiteers" movies, sang on live radio show broadcasts, and was managed by MGM's Roger Edens whose only other client was Judy Garland. Later, in the early '50s, she and Jay's father Earl Podolnick started Trans Texas Theaters, spreading movie screens across Texas. They were among the first to integrate movie houses in Texas, even in the face of pickets, death threats, and other pressure not to.

Earl was appointed by then Governor Preston Smith to the first Board of Directors of the Texas Film Commission, served on the advisory board of the U.T. School of Communications as well as the Board of the National Theater Owners of America, and was given the Lion of Judah Award by Prime Minister Yitzhak Rabin.

While attending The University of Texas at Austin in 1972, Jay opened Odyssey Sound, Texas's first 24-track recording studio. Odyssey played an integral part in Austin's "Golden Age" of singer-songwriters, and helped give birth to what Austin is referred to now as "The Live Music Capital of The World." The studio brought together local and national artists like Steve Miller, Roky Erickson, James Cotton Blues Band, Willie Nelson, Eric Johnson, The Electromagnets, Jerry Jeff Walker, Michael Murphy, Marcia Ball, Guy Clark, Townes Van Zandt, Ewing Street Times, B.W. Stevenson, Steve Fromholz, Shake Russell, and Christopher Cross.

In 1991, Jay recorded a solo album for Warner Brothers entitled "Jay Aaron Inside-Out" and has toured with such acts as The Pretenders, ZZ Top, The Beach Boys, The Cars, The Moody Blues, Kansas, Deep Purple, Robin Trower, Hall and Oates, Pat Travers, Triumph, The Fabulous Thunderbirds, and has been a fixture on the Texas music scene for over 35 years.

Jay has worked in the world's finest studios, including The Power Station (NYC), Abbey Road (London), Air Studios (London), Ocean Way (Los Angeles), Electric Lady (NYC), Village Recorders (Los Angeles), Hit Factory (NYC), Larrabee Studios (Los Angeles), Gateway Mastering (Portland, Maine), and Bernie Grundman Mastering (Los Angeles).

Projects have included:

"Seven Worlds" Eric Johnson album – Producer/Engineer/Composer
In 2002 "Seven Worlds" was named as "one of the top 50 albums every guitarist should own" by Guitar Player Magazine.

"Living In America" James Brown – Assisted Dan Hartman - tracking sessions with Stevie Ray Vaughan for the ROCKY IV soundtrack.

"Steamboat: Beyond 6th Street" Documentary – Executive Producer
A film by Brian Watkins, this documentary takes place at one of Austin's most famous live music venues. Filmed during the last 10 days of operation in 1999, it features performances from 30 bands, alongside interviews with artists and celebrities. Since 1979, Steamboat helped launch the careers of such artists as Stevie Ray Vaughan, Eric Johnson, Bob Schneider, Vallejo, Del Castillo, and Christopher Cross.

"Broken English" Marianne Faithfull album – Assistant Engineer
Assisted Bob Potter - tracking sessions for "Working Class Hero"

"The Electromagnets" album – Engineer

"Austin City Limits" – Producer/Engineer
Eric Johnson's first broadcast performance

"Rosebud" Stephen Doster Album – Producer/Engineer

"Crazy From The Heat" David Lee Roth – Assisted in engineering the remix of "California Girls" for Warner Bros.

Co-author *"Emerald Eyes"* and *"Showdown"* with Eric Johnson for *"Tones"* Warner Bros. and *"Seven Worlds"* Ark 21

VILLA MUSE STUDIOS – Founder/CEO
Jay has devoted the past 14 years to laying the groundwork for VILLA MUSE while assembling the management and design team from around the world.

RUPERT NEVE

Chief Technology Officer

Rupert Neve, one of the most famous names in audio equipment design, was born in England in 1926, but spent the first 17 years of his life in Argentina, where he was educated in both English and Spanish at St. Alban's College in Buenos Aires. From the age of 13 he designed audio amplifiers and radio receivers for sale.By 17 he had become involved in public address systems and the installation and repair of marine radio equipment for merchant ships visiting

the port of Montevideo. In 1946, peacetime found him running a public address and recording business in England for speakers such as Winston Churchill and Princess (now Queen) Elizabeth.

Rupert Neve & Company Ltd began making professional sound equipment in 1961, and his first mixing console followed three years later. The company gained an enviable reputation not only for sound quality, but also meticulous manufacturing standards and after-sales service. Custom equipment for the recording, television, film and broadcast industries grew rapidly, and in 1969 the operation established a new factory near Cambridge where the Neve Company continued until 1992. Manufacturing plants and sales depots were established in Scotland, Connecticut, Toronto and Hollywood.
Among many famous clients, Rupert designed the recording consoles used by Beatles producer George Martin and his engineer Geoff Emerick when they founded the famous AIR Studios in London.

By 1975 the Neve Company had grown to more than 400 employees worldwide, and seeking to remain a designer rather than a businessman Rupert eventually sold the company. After many freelance projects, Rupert joined British audio manufacturer Amek Ltd as a design consultant, which he remains to this day. In this role he has total freedom to research and design new products without any commercial pressures.

Rupert's design concepts are regarded as epoch-making in the world of professional audio. They have defined many present day techniques and materials, while achieving a sonic quality that surpasses all previous designs.It is safe to say that Rupert's sound has helped launch many of the great recording artists, and his discoveries have changed -- and continue to change -- the way we hear music.

In 1997, Rupert became one of a very few recipients of a Technical Grammy Award for Lifetime Achievement. In awarding his Grammy, the Recording Academy acknowledged Rupert's profound impact on the industry:

"For setting the standard for quality sound reproduction through his engineering and his innovative designs, which have made possible unparalleled advances in the quality of recorded sound; in recognition of his influence on a generation of audio designers; and for his dedication to purity of audio reproduction."

In 1989, Rupert was inducted into the Mix Magazine Tech Awards Hall of Fame in recognition of his lifetime contribution to excellence in recording and sound.

Ten years later, in 1999, he was honored as "Man of the Century" by Studio Sound magazine, which conducted a survey inviting readers to vote for the Top Ten personalities of the industry in various disciplines.

It is Rupert's prized honor to have been selected by his peers in the professional audio business as number one Audio Personality of the 20th Century.

Recognized as the developer of the modern mixing console, Rupert's handiwork is found in thousands of studios around the world, and is the platinum standard for modern audio. Rupert is a living legend in his field, with a legacy of innovation that continues to this day.

Last year alone, in 2006, Rupert was honored with a TEC Award for Signal Processing Technology/Hardware for his Portico 5042 "True Tape" Emulator, as well as a Mix Magazine Certified Hit Award for the 5088 Console and Portico Range of professional studio equipment. He was also honored by the Audio Engineering Society with its prestigious Fellowship Award "in recognition of your enormous contributions to analogue audio designs and mixing consoles – a career that spans over 60 years and has influenced generations of audio designers."

ED EVANS

Technical Director

Ed has been an audio professional for over 25 years, amassing extensive experience in all aspects of sound recording, audio for video technologies, and production techniques. Additionally, he is experienced in systems and facility design, facility management, computer systems operation and installation, and as an artist and client liaison.

Ed is the recipient of numerous Gold and Platinum records for his technical and artistic contributions in the recording field, and while he served as Technical Director at Power Station in New York, the facility received several Mix Magazine "TEC" awards for excellence.

As with many in this industry, Ed started a career as a recording artist just after high school, playing in various bands prior to signing a recording contract. Compelled by this initial association with the business of recording and recording technology, he soon started a recording studio with an associate, creating some of the equipment they needed himself. As a business, it was an education, which is to say it didn't make money. But it was the beginning of a long association with recording facilities.

To make money, Ed joined the engineering department of Airborne Instrument Labs, where he was on the team responsible for the design of test equipment for radar systems. This experience honed his design, troubleshooting and logic

skills. Happy with the work but wanting more direct exposure to the music and recording industries, he would soon find it at Automated Processes, Inc.

The original API was a manufacturer of recording equipment - primarily large recording "consoles". Ed joined the engineering department, where he was able to expand his design experience, and be involved in the first microprocessor-based synchronizer system, power amplifiers, operational amplifiers, the first operational automation system, VCAs, and other elements vital to the technology of recording and sound. It was a fertile environment, augmented by pursuing the artistic aspects in the studio, and remote recording. An opportunity then arose that afforded the chance to be more directly relevant to the process of professional recording.

Ed found his way into Media Sound, a premier recording facility in New York, claiming he was shipped "in the crate" of their API console being installed in the "Lounge", as the mix room was known. He was a staff technician in that facility for a number of years. It was an extremely creative atmosphere, where he was allowed to expand beyond the "technical support" moniker, to occasionally function as assistant engineer, and sub-system designer. It was at this facility that Ed met numerous luminaries in the recording field, including Bob Clearmountain, Tony Bongiovi and Bob Walters.

It was from this association that the core of Power Station was built. But in the interim there was a diversion.

Ed was offered a position of Technical Manager at the newly designed Sigma Sound of New York. It would be the first professional facility that he could be involved "from the ground up". He had direct design input for electrical and ergonomic systems and was responsible for technical support after the studio was running. This was his first managerial position in recording studios, but he was soon lured back to Media Sound, just as the Power Station Project started to become a reality.

Ed became aware of the project and the plans of the principals to leave Media and start the Power Station. Ed was asked to oversee the technical aspect of the new facility, originally under the direction of Tony Bongiovi. Ed became Technical Director, co-designing facilities based on client needs with a creativity and practical usefulness that gained respect in the industry. The basic responsibilities of Technical Director were always augmented with other creative tasks that he relished. Computer systems design, client liaison, office organization, and most aspects of running a business. He was occupied with facility design in all aspects, including budget analysis and business projections. He wrote business plans, while also maintaining studios. After a long and fruitful association, it was time for a change.

Once again an opportunity arose to expand experiences. He was offered a position with TouchDown as Technical Director. It was a risk that would allow Ed to become more global in experience. He accepted the position with the German facility that was to build a large complex of studios in Portugal. He was responsible for all things technical, directly leading the design process and overseeing all subcontracting designers.

Ed returned to the United States in 1994 where he joined the staff of the Hit Factory in New York as Director of Technical Operations. Following a brief but educational stint at the Hit Factory, Ed turned to PhotoMag Post Production Studios. His work there expanded the experiences in audio for video production, where he was technical director for a five-room post-production facility. Work here included Hi-Def productions, TV commercials and film work. While there he designed and built three studios for the facility.

After Photomag, Right Track asked him to be Technical Director of their facilities, including the newly finished Scoring 509. Numerous film scores were created there, including The Alamo, Stepford Wives, Two Weeks Notice and many others. While there, Ed designed and built two more rooms.

An opportunity in Las Vegas brought him there to oversee the technical aspects of a new five-room facility there, and he also did extensive consulting for clients as diverse as Paul Allan, C5, McGill University, and Manhattan Center Studios, to name a few.

STEVE DURR

Studio Design Team

Steve Durr is one of the leading acoustical facilities designers in the world, known for his award-winning studio designs. Over the course of 25 years, Steve has played an integral part in the design of facilities for such prestigious clients as Disney Studios, MGM Studios, Lenny Kravitz, Neil Young, Willie Nelson, Dreamworks, and many others throughout the world.

Steve's clients also include numerous professional sporting venues such The Indianapolis Motor Speedway, Bristol Motor Speedway, Kansas City Chiefs, Las Vegas Motor Speedway and Tennessee Titans. Steve has worked extensively with Vanderbilt University, The University of Nebraska and University of the South. Steve has designed projects for corporate clients such as Hilton Hotels, SC Johnston, Proctor and Gamble, and Nissan Manufacturing.

Steve Durr has designed over fifteen hundred recording studios throughout the world, acoustics and sound systems for restaurants, including B.B. King's, Billy

Bob's Texas, Loveless Café, and Blue Bird Café, as well as hundreds of houses of worship.

Born in Memphis, Tennessee -- the cradle of R&B – Steve moved to Louisiana in 1968. Steve credits necessity as the force behind his stellar rise as a recording engineer. "In those days, you had to be the engineer, the maintenance person, the manager, everything," he says. "When we lost our lease at the lettuce factory we were using, as a recording studio, we had to start all over again somewhere else. We had to be able to design a new studio completely from scratch. This was the start of my design career." Among Steve's credits as a recording engineer is "Love and Happiness," a million-seller recorded by Ernest Jackson.

A 1977 move to Nashville provided him the transition into his design career. Soon after arriving in Music City, to design the acoustics and sound reinforcement systems for Opryland theme park, Steve was commissioned to re-design the monitoring system at Nashville's legendary Woodland Studio. And as they say the rest is history. Other major design projects took him to Chicago, New York City, Boston, Atlanta, Austin, Los Angeles and throughout Canada.

Steve brought his wildly successful design business to the formation of Durrell in 2000. As president of Durrell, he was responsible for design and implementation of acoustics and sound systems at sporting facilities, houses of worship, clubs, recording studios and arenas throughout North America. He still remains true to the simple, honest philosophy that started with: "I have a sincere passion for music and sound and for making it the absolute best that it can be," says Steve, who attributes this to his enduring success.

Steven Durr Designs is his newly formed independent full service design firm offering expertise in room acoustics, studio design, and noise control by utilizing an extensive reference library, the latest design computers, and acoustical test equipment.

SAM TOYOSHIMA

Studio Design Team

Sam Toyoshima founded Acoustics Design Office (ADO) in 1975 as a division of JVC's Audio Engineering Research Center. ADO was to become the channel through which Toyoshima's expertise gained throughout a ten-year period of intensive research with JVC would be practically applied to the world of acoustic design, particularly studio design.

Since its inception, ADO has been responsible for the design of more than 100 of Japan's premier studios, and more than 50 studios worldwide. ADO's share of the studio design market in Japan has exceeded 70%.

In the mid-eighties, following a successful design collaboration in UK, Toyoshima co-founded Acoustics Design Group (ADG) along with London-based architect John Flynn, JVC's Hiroaki Suzuki (who currently heads research at the JVC Research division, and chairs WG4 of the international DVD Forum) and producer/engineer Hugh Padgham. The services of the new Group, with its well-grounded and broadly based international expertise, have become increasingly in demand through Asia, Europe and throughout the world.

A few of Sam Toyoshima's clients include:

- Abbey Road Studios, London
- Lucasfilm Ltd., San Rafael, California
- Townhouse Studios, London
- JVC Studios, Japan
- Olympic Studios, London
- Virgin Studios, London
- Sting
- Enya Studio, Dublin
- Metropolis Studios London

PETER GRUENEISEN

Studio Design Team
studio bau:ton • nonzero/architecture

During the decade and half between 1990 and 2005, studio bau:ton introduced a new architectural aesthetic to the design of media production facilities.

A multi-disciplinary outlook was studio bau:ton's basis to find integrated solutions for all aspects of media production, presentation and entertainment facilities and related projects. Grounded in the historical foundations of design and the building sciences, the team was continuously looking for new

architectural solutions to the evolving challenges of space, construction, technology, sound and vision.

While the firm has been re-structured, Peter Grueneisen, founding partner and former studio bau:ton Principal of Architecture, is continuing to design and manage a multitude of projects as the principal of his new company, nonzero/architecture.

A few of studio bau:ton's clients included:

20th Century Fox - Los Angeles, California
Sony Music Entertainment, Nogizaka - Tokyo, Japan
Disneyland Paris - Paris, France
Mega West Studios - Paris, France
Dave Matthews Studios - Charlottesville, Virginia
Quincy Jones - Studio City, California
Symphony - Buenos Aires, Argentina
Cinephase - Paris, France
USA Network - Hollywood, California
Experience Music Project - Seattle, Washington

DENNIS JANSON

Studio Design Team

The Janson Design Group has, since 1979, been a leader in the field of broadcast architecture and acoustic design for clients throughout the television broadcast, music recording, entertainment and performance industries.

As licensed architects and acoustical consultants, Janson Design Group provides the technical expertise, knowledge, talent and experience needed to meet the high demands in depth technical projects in these fields around the world.

The Janson Design Group is a recognized, award-winning design and acoustic firm that has been published in over a dozen magazines and featured in numerous industry publications. Winner of the 2002 TEC Awards for Best Acoustic Design of a Recording Studio.

The firm has also been recognized by the Society of Motion Picture and Television Engineers (SMPTE), The Audio Engineers Society (AES), The American Institute of Architects (AIA) and The National Association of Broadcasters (NAB).

A few of Janson Design Group's clients include:

- Kaufman Astoria Studios - New York, NY
- Steiner Studios at the Brooklyn Navy Yard, New York
- NBC Panasonic Theater - New York, NY
- Atlantic Recording Studios - New York, NY
- Right Track Recording Studios - New York, NY
- WGBH - FM1 Studios - Boston, MA
- Sky News Radio - London, England
- CBS - Late Night with David Letterman - New York, NY
- NBC Today Show - Studio A - New York, NY
- MSNBC
- National Geographic
- NBC Saturday Night Live

BARRY BONGIOVI

Director of Audio Operations

Barry Bongiovi's formal education was in Marketing, Art and Design, however, his interests in music and audio systems ultimately lead him to work in the recording industry.

In the late 1970's, through his interests in music and the emerging audiophile stereo market, he took a job in sales and installation at a local audio equipment show room. The challenge of educating his clients about the various products and, as a result, selling them high end sound systems proved to be rewarding for Bongiovi.

Although he enjoyed his work very much, he began to feel that there was more satisfaction to be gained at the professional sound studio level. His opportunity came when he procured a bid to sell equipment to the renowned Power Station Studios in New York City which was then constructing Studio B. What he saw while delivering the new equipment intrigued him so much that in 1980 he left his lucrative sales job to work for Power Station. Starting at the bottom of the ladder as a Production Assistant for next to no pay, in time he became an Assistant Engineer, Studio Manager and ultimately General Manager. During his time at Power Station he was exposed to most of the top professionals in the pop recording industry. Engineers such as Bob Clearmountain, Tony Bongiovi, Neil Dorfsman, Al Schmidt, Val Garay and Shelly Yakus, producers such as Phil Ramone, Russ Titleman, Jim Steinman, John Jansen, Rhett Davies, Mick Jones, Nile Rogers/Benard Edwards, Tommy LaPuma, Peter Collins and Jimmy Iovine, and artists such as Pat Metheny, The Rolling Stones, Roxy Music, Dire Straits, Devo, David Lee Roth, Stevie Nicks, Kiss, Chic, Donna Summer, Madonna,

David Bowie, Steve Winwood, Jeff Beck, Billy Squire, Duran Duran and Peter Gabriel, David Sanborn, Bob James and Miles Davis all worked with Barry early in his career and many remain friends and clients today.

His climb through the ranks gave him irreplaceable and valuable experience in the day to day operations of a top-flight studio as well as a clear understanding of what is necessary to successfully build and maintain a staff to service clients at the highest professional level. Upon becoming General Manager in 1987, the responsibility was his to direct the daily operations of Power Station's studios and to market the facility so as to attract most of the high echelon Pop and Jazz projects to pass through New York. With constant attention to marketing, service and performance, under Barry's stewardship Power Station became the benchmark studio in the recording industry.

In 1992 Barry left Power Station to join Sony Classical Productions, Inc. His job, once again, was to organize and manage the daily studio operations and staff of this young, rapidly growing division of Sony. Barry chose to go to SCPI for two reasons. First, the challenge of operating a studio in a large corporate environment was one he had not yet explored. The job afforded him the opportunity to gain experience in the operations of a major record label and at the same time to work with the great international artists on Sony Classical's extensive roster. Secondly, the advanced technology used to record, master and remaster classical music at the Sony facility was years ahead of any studio he had previously encountered. Within a few months, in addition to his regular duties, he began to market the unique remastering services available at Sony Classical to some long time clients in the pop, jazz and rock genres. Before long it was not unusual to see Carly Simon, Pat Metheny, Phil Ramone or Al Schmidt in the halls at the Sony facility. Sony Classical Productions broadened Barry's knowledge of studio operations and technologies, as well as classical music and remains a valuable part of his career in the industry. Working with classical music producers such as Thomas Frost, Andrew Kasdin, Steven Epstein, Tom Shepard, Michell Glotts, and David Mottly, and artists such as Yefim Bronfman, Yo Yo Ma, Emanual Ax, Kathleen Battle, Midori, and Wynton Marsalis, as well as conductors such as Zubin Mehta, James Levine, Lorin Maazel, John Williams and Ricardo Muti has given Barry, in combination with his long associations in the various popular fields, a truly unmatched breadth of experience and the ability to communicate directly and knowledgeably with any recording artist or producer.

While at Sony Classical, Barry was offered the opportunity to join a young international company then developing several multimedia studio complexes in Europe. The chance to travel widely and develop his skills in an international business setting proved irresistible. The company, Touchdown Studios, had an existing facility in Germany which housed two recording/mix rooms two post production suites, an in-house music production company, a substantial sound effects library and a small but growing music library. The second phase of the

project would be to build a large self sufficient resort and multimedia complex in the Algarve district of Portugal. This group of facilities was to house the most state-of-the-art rooms, equipped and staffed to service the music, film and video business in a luxurious environment conducive to relaxed creativity. Barry's responsibilities as Director of Operations were to include involvement in the overall facilities design, organizing and developing studio operations as well as developing the management and technical personnel necessary to achieve the goals of the business plan and to oversee marketing strategies, utilizing his broad previous client base to generate sales for the new facility. Unfortunately, financial backing for this project collapsed over the course of the fourteen months of his involvement and Barry returned to New York.

An offer to become Studio Manager at Hit Factory found him once again organizing and running the day to day operations of another multiroom studio facility. His duties and results were similar to his other ventures, in that he brought and maintained his loyal client base while expanding it. Hit Factory's involvement with film scoring added a new genre to Barry's already extensive experience, one which would lead him to collaborate on the design and construction of a truly remarkable facility, "A509," on his next job at Right Track Recording.

At Right Track Recording, where Barry has led a highly professional and expert staff for the past 9 years, his expertise and following have been well suited to the multi room facility. The atmosphere he created built this facility from a respectable organization into the busiest recording studios in the city. Barry's ideas for expansion of the facility and design input have grown Right Track Recording from a three room studio operation to a modern, state-of-the-art multi-media recording operation housed in a newly renovated former factory in Manhattan's Midtown West. In the fall of 2001 Right Track opened "Studio A509" a recording environment designed under Barry's supervision and with his specifications with the versatility to house a 100 piece orchestra - enough to accommodate classical and film score recording, Broadway play recordings, as well as hosting film/video commercial shoots. Barry supervised the construction, equipment installations and trained a staff specifically to the requirements of this extraordinary facility to get the very best results for clients ranging from the New York Philharmonic to Paramount Studios, most of whom have returned time and again. To round out the facility and keep pace with the rapidly changing sound recording business, Barry and Right Track designed two additional production suites in 2003. These rooms support voice over recording, budget surround mixing and music production projects. During the course of Barry's nine year tenure as General Manager, Right Track Recording tripled its gross income.

With 25 years of incomparably wide experience in all phases of the recording industry as well as a loyal and distinguished client base of artists and producers,

Barry Bongiovi is a unique asset in today's highly competitive and rapidly changing music business.

TOM COPELAND

Senior VP, Film Studios

With 33 years on the job, Tom Copeland is one of the state's best-known and most-respected advocates for its film production industry. During his ten years as director of the Texas Film Commission, a division of the Office of the Governor, he was the state's primary liaison and troubleshooter between Hollywood, state and local governments and the private sector. At the same time, he worked extensively with the Texas Legislature to recognize and support the industry and its contributions to Texas' economy. During his Film Commission leadership, total budgets of Texas-made films exceeded $3 billion.

Copeland has worked directly with Clint Eastwood, Oliver Stone, Jodie Foster, Sandra Bullock, Billy Bob Thornton, Horton Foote, Bill Wittliff, John Sayles and hundreds of film professionals who, while not household names, enjoy broad recognition and decision-making powers within the industry. Projects that Copeland helped land for Texas include *Miss Congeniality, Hope Floats, Courage Under Fire, Lonesome Dove, Terms Of Endearment, Places In The Heart, The Rookie, The Day After Tomorrow, Secondhand Lions* and 2004's *The Alamo.*

Copeland's film career began in 1974 as a crew member on the first five seasons of PBS' AUSTIN CITY LIMITS. That experience led to seven years as a freelance production assistant, grip, location scout, location manager and production manager. In 1983, Copeland joined the Texas Film Commission, beginning as a location scout and retiring 22 years later as its director. Over those 22 years, 1,009 film and television projects were made in Texas, with individual budgets up to $95 million. Since 2005, Copeland has been a professor at Texas State University – San Marcos, where his "Business of Film" and "Independent Shorts" classes bring hands-on production skills to his students, with frequent guest presentations from nationally-known film professionals. In this and in his work with Villa Muse, he continues his relationships with industry leaders, labor unions and government officials in Texas, Los Angeles and New York. He gives equal importance to his continued relationships with the state's rank-and-file film crews, whose skills have been the keystone of Texas' film industry.

Copeland is very proud of the team he built at the Film Commission. His close attention to "putting the right person in the right spot" resulted in a very high level of longevity and loyalty on his seven-person staff. He was proud to directly assist many Film Commission interns to careers in production, and he continues that career involvement with his students at Texas State.

Copeland says, "As a freelancer, I saw quite a range of production, working on features, commercials, music videos, political campaigns, you name it. I thought I had the big picture. But once I hit the Film Commission, I was working in every stage of those projects, from development all the way to distribution, and that gave me a lot of experience in the politics of Hollywood." He adds, "Of course, I learned quite a bit about Texas politics too."

JAMES R. CARPENTER

Director of Development
President / Carpenter & Associates

This third generation real estate company was founded in 1971 by Charles B. Carpenter. Jim began his career in real estate with his father in 1971; later becoming president of the company in 1980. Jim is a University of Texas graduate with a BBA in Finance and has a distinguished 30+ year real estate development career in Austin, Texas.

Through Jim's visionary leadership Carpenter & Associates, Inc., (C&A) has remained in the forefront of many of Austin's landmark developments, and redevelopments. A few notable projects include:

- Austin's Historic Congress Avenue "Gateway Projects" - C&A led the redevelopment in downtown Austin by assembling five blocks at the entrance to downtown to create a new "Gateway" to downtown and the State Capital".
- Pioneered Development in the Region East of Austin - C&A led the exploration, development and construction of the region's first urban-service levels of municipal water supplies. As the principal developer and original owner of regional water supplies, drainage and wastewater facility approvals, C&A initiated the early master-planned mixed-use developments in the area. C&A recruited development sources to the region that collectively still represent most all of the utility services that are fueling the massive volumes of planned development east of Austin.
- Since 1981 C&A has owned, directed or invested in over 10,000 acres of master-planned residential and mixed-use development projects in this region.

Current projects range from residential subdivision development and single-family home construction to commercial business/industrial subdivision development, and two new landmark master-planned developments for the Austin metropolitan area. The projects include:

- Secured Climate Storage - One of the largest climate-controlled self-storage developments in the United States. This development won the 2006 Austin Business Journal's Best Real Estate Development Award in the Industrial Development category.
- Colorado Riverland Ranch - An assemblage totaling over 1,600 acres in western Bastrop County, this project will soon be publicly announced. This development will provide extensive commercial/industrial uses and will finally address a long-standing economic deficiency in the Austin metropolitan region.
- Villa Muse - C&A assembled and acquired the 1,100 acre home for an innovative

mixed-use development that will be anchored by the 200-acre Villa Muse Studios. Villa Muse represents a campus for the creative industries that will offer world-class production and post-production facilities for the film, television, commercial, music and videogame industries. The 900-acre community development surrounding the studios will include a high-density urban downtown district mixing retail, office and residential uses, civic uses, and residential community sections designed as "living, breathing backlots" and themed neighborhood villages to provide an array of styles for any number of filming needs. Projected to create more than 40,000 new jobs and billions of dollars in new revenues to the Austin regional economy, Villa Muse represents a new major economic component for the State of Texas and Austin area.

BOB WALTERS

Senior VP, Recording Studios

From playing trumpet with the Army Air Force Band under Captain Glenn Miller, to creating and running two major sound recording facilities, Bob Walters parlayed a love of music and business into a distinguished recording career. Bob's entrepreneurial spirit surfaced in 1946 at Adelphi University, where he organized a dance band, which continued as The Bob Walters Orchestra through 1985. During that period, Bob was bandleader and vocalist. From 1961 through 1968, Bob also co-owned and was vice president of Sutherland Travel Service in New York City. In 1969 Bob became president and co-owner of Media Sound Studios, built in a magnificent converted church on West 57th Street in Manhattan.

He left Media Sound in 1976 and created Power Station Studios, serving as president. The four-story edifice eventually housed three state-of-the-art sound recording studios and one audio-to-video facility.

Extraordinarily successful, Power Station's client roster read likes a "Who's Who" of the music industry. Under Bob's guidance, Power Station won many awards, including Mix Magazine's coveted industry award as the world's top recording studio. This honor, based on write-in votes from industry peers around the globe, was awarded to Power Station for an unprecedented six consecutive years.

The Power Station was awarded over 400 Gold and Platinum records by artists such as Bruce Springsteen, Paul McCartney, David Bowie, The Rolling Stones, Aerosmith, Peter Gabriel, Count Basie Orchestra, Lionel Hampton, AC/DC, Barbra Streisand, Jeff Beck, KISS, Eric Clapton, Billy Joel, Sting, Madonna, Bob Dylan, and countless others.

Bob was also instrumental in launching the careers of many of the most well known producers and artists in the world, including Jon Bon Jovi, Bob

Clearmountain (Brian Adams, Bruce Springsteen), Scott Litt (REM, Patti Smith, Nirvanna, Incubus), and Neil Dorfsman (Paul McCartney, Sting, Eric Clapton, The Who, and B.B. King).

HITEN PATEL

Financial Consultant

Hiten is principal of Balefire Consulting, a financial advisory company. As financial advisor to Villa Muse, he has assisted in developing the overall corporate structure and financing plan, and in partnership with the various members of the Villa Muse team constructed the financial projections for Villa Muse Studios and Villa Muse Land Development.

Hiten is a 1999 honors graduate from the University of Chicago Graduate School of Business, where he received a Masters in Business Administration in finance and strategy. In addition, Hiten holds certificates of corporate finance and financial accounting from New York University's Stern School of Business and a Bachelor of Arts in economics and history from the University of California at Berkeley. In addition, he is a 2005 recipient of Citibank and Treasury & Risk Management Magazine's "40 under 40" Award.

Hiten has held several positions of increasing responsibility in his career, and has approached finance and accounting from several angles: auditor, banker, and financial management.

Hiten served in financial and strategic planning roles at Dell, Inc. Initially, Hiten was responsible for the Treasury-Corporate Finance group at Dell, where he was responsible for the team that managed Dell's significant capital structure, including $1.2 billion in lease capacity and its various commercial lending and credit relationships and Dell's multi-billion product leasing joint venture. Additionally, given Hiten's experience in mergers and acquisition and the acquisition process, he was charged with creating the Company's M&A capability. After this critical finance department role, Hiten was promoted to Director of Strategic Planning for the Enterprise Systems Group (corporate servers and storage devices), one of the fastest growing segments in Dell's product portfolio. In this role, Hiten developed analysis that focused on emerging and developing technologies and their future role in Dell's long-range enterprise product portfolio. In addition, Hiten led the team that conducted global customer interviews to identify enterprise product and service opportunities.

Prior to Dell, Hiten held positions as associate with Credit Suisse First Boston; Director of Financial Reporting and Acting Corporate Controller for Rickel Home Centers, Inc., a $600 million regional do-it-yourself retailer; Audit Manager and audit staff positions at Arthur Andersen, LLC., a global audit and accounting

advisory services firm; and Quality Assurance at Richard Eisner & Company, a regional audit and accounting advisory services firm.

MICHAEL CORENBLITH
Design Consultant

Production designer MICHAEL CORENBLITH has earned two Academy Award nominations for his dazzling, imaginative creation of Dr. Seuss' Whoville in Ron Howard's "How the Grinch Stole Christmas," and his recreation of the 1970 doomed Apollo moon mission in Howard's epic space adventure, "Apollo 13."

In addition to the Oscar nominations, Corenblith also won the British Academy Award (BAFTA) for "Apollo 13" and received a nomination for "Excellence in Production Design" from the Society of Motion Picture and Television Art Directors for "How the Grinch Stole Christmas."

Corenblith is currently designing his fifth film for Ron Howard, "Frost/Nixon," adapted from Peter Morgan's stage play recounting the behind the scenes story of the famous David Frost interviews of the former President in 1977.

A graduate of the University of Texas in Austin, Corenblith studied design at UCLA, and entered the entertainment industry as a lighting designer for television before moving to art direction, winning an Emmy Award in 1983 for his work on the Academy Awards show.

Corenblith began his work in feature films as key set designer on Paul Mazursky's 1984 comedy, "Down and out in Beverly Hills." He followed with assignments as Set Designer or Art Director on "Cat People," "Burglar," "Red Heat" and "Die Hard 2: Die Harder" before graduating to Production Designer on the film "Prince Jack."

A favorite of filmmaker Howard, Corenblith also collaborated with the director on "Ransom" and "EdTV." Among his recent design credits are 2007's top comedy, "Wild Hogs," and "Be Cool" both starring John Travolta, and the remakes of "Mighty Joe Young" and "The Alamo."

Corenblith was honored with the Ruben Marmaduke Potter Award by the Alamo Battlefield Association in recognition of his "advancement of the scholarship" of Alamo history through his stunning recreations of San Antonio de Bexar and The Alamo; the largest standing sets ever built in North America.

LEE DECARLO
Director of Archival & Restoration

Engineer/producer, Record Plant Studios in the 70's and 80's.

Designed the legendary Studio "C" at Record Plant's L.A. location.

Produced/engineered over 100 soundtracks, eight Academy Awards shows, ABC Sports and Olympic telecasts, as well as albums for Aerosmith, Aretha Franklin, Elton John, The Who, Paul McCartney, Chicago, Neil Young and The Rolling Stones.

Won 3 Emmys and a Grammy for Engineer of the Year for John Lennon's "Double Fantasy".

PAUL ALVARADO-DYKSTRA

VP, Strategic Development

Producer Paul Alvarado-Dykstra was mentored by award-winning filmmakers Guillermo del Toro (Pan's Labyrinth, Hellboy, Blade II) and Tim McCanlies (Secondhand Lions, The Iron Giant), Emmy-nominated producer Scott Carter (Real Time with Bill Maher, Politically Incorrect), and Oscar-nominated documentarian Frances Reid (Long Night's Journey Into Day). He is also co-creator of Fantastic Fest, the international sci-fi/horror/fantasy/animation film festival in Austin.

In 2001 he was supervising producer on the groundbreaking Ain't It Cool News pilot for Comedy Central and executive producer Scott Carter, and then writer-producer and co-creator of The Ain't It Cool News Update for XM Satellite Radio. He also co-founded Ain't It Cool, Inc., with Harry Knowles and served as both COO and contributing editor. He has repeatedly been a panelist for the SXSW and Austin Film Festivals, and is also a former vice president of Austin's acclaimed Hyde Park Theatre and a former board member of the Austin chapter of the American Advertising Federation. For three years he was marketing and PR director for Austin's historic Paramount Theatre, one of the largest arts organizations in Central Texas.

While earning his B.S. in journalism at Texas A&M University he founded the student-run Texas Film Festival, and helped found KEOS 89.1 FM Public Radio.

LAND DESIGN STUDIOS

Site Planning Consultants

Land Design Studio is a full service planning and design firm located in Austin, Texas. They believe their professional role and social responsibility is to act as an informed and objective mediator between the advances of human settlement and the management of our natural and cultural resources. Their goal is to successfully manage their client's needs while serving as a responsible steward of significant features in our natural and man-made environment.

They have continually expanded their core design services over the past decade to include those they feel are essential to achieving their mission. They combine an entrepreneurial spirit with their mission and desire to make the communities where we work better places to live. Their services begin with entitlement and conceptual planning and design down the list to the highly specific aspects of the project, including critical graphics for marketing the project to multiple stakeholders. Projects they are involved with typically include multiple land uses in a mixed-use format.

Their professional staff has several decades of combined experience in planning, urban design, architecture, landscape architecture, and graphic design. They believe the size of their office allows our design team to focus intently on each project and allows for greater collaboration between disciplines. Land Design Studio has worked on projects throughout the United States and abroad in both the public and private sectors. The benefit of this diversity is their ability to provide their clients with an informed perspective on a wide range of issues.

RONALD R. WILSON

Legal Consultant

A native Texan born in Galveston in 1953, Ron leads Ronald Wilson and Associates, a practicing law firm in Texas, California and New York, and has negotiated multi-million dollar contracts with Sony, Universal, Def Jam and Koch record labels.

A musician for over 40 years, Ron played bass with Lightnin Hopkins, Chuck Berry, Albert Collins and currently performs with the David Spann Band. The band has performed with Sammy Haggar, Train, Default, Lenny Kravitz, Buckcherry, Chicago, and Los Lonely Boys. Ron has also played on many albums as a session player and has received gold awards as a result of those performances.

Ron graduated University of Texas Law School in 1988, and was elected Member of the Texas House of Representatives from 1977 to 2004. There, he served as Chairman of the Alcoholic Beverages Committee, Chairman of the Health Services Committee, Chairman of the Licensing and Administrative Procedures and Oversight of the Higher Education Committee.

Ron also served as a member of the Legislative Budget Board, Legislative Council, Redistricting Committee, State Affairs Committee, Calendar Committee, Financial Affairs Committee, Energy Committee, Select Committee on Public Education, Elections and others.

While in the Legislature, Ron passed the Texas Lottery Bill, created The Texas Human Rights Commission and Martin Luther King Day Holiday bill.

Ron has also tried cases in both criminal and civil courts throughout the state of Texas.
He has acted as legal counsel for clients before the State Board of Medical Examiners, the Board of Public Accountancy, the State Office of Administrative Hearings, the Agriculture Department, the Air Control Board, the Alcoholic Beverage Commission,
the Attorney General, the Banking Department, the Board of Veterinary Medical Examiners, the Comptroller of Public Accounts, the Court of Appeals, the Court of Criminal Appeals, Texas Board of Pardons and Paroles, Texas Criminal Justice Department, Texas Education Agency, Texas General Land Office, Health and Human Services Department, the State Health Services Department, the Highways and Public Transportation Department, the Texas Department of Insurance, the Texas Licensing and Regulation Department, the Lottery Commission, the Railroad Commission, the Secretary of State, the State Securities Board, the Texas Supreme Court, the Texas Department of Transportation, and the Texas Commission on Environmental Quality.

AMY CADENHEAD
Research Coordinator

Amy Cadenhead, a native Austinite, has over 17 years experience in film and video production, and she is proud to say that it has all been in Texas.

Since 2005, she has been working as a freelance location scout and production consultant for a variety of commercial clients, as well as on assignments for the Texas Film Commission and the Austin Film Commission. In addition to production work, Amy remains involved in the operations of GMC Consulting and Spectrum Commercial Group, specializing in hospitality brokerage.

Amy began her production career producing corporate videos for Texas-based companies La Quinta Inns, H-E-B and KCI. She then worked for four years as a freelance crew member on feature films and television movies, where her experience as an art department buyer and coordinator honed her organizational and research skills.

In 1995, Amy joined the Texas Film Commission as a location scout, and five years later was named the head of the Commission's production department, specializing in location research. Finding appropriate locations, crews and other resources is the key to drawing productions to Texas, and she provided in-depth research to producers, directors, location managers and studio executives, working directly with Stephen Soderbergh, Tim McCanlies, Robert Rodriguez,

Elizabeth Avellán, Mike Judge, Luke Wilson, Thomas Hayden Church, Jon Avnet, Michael Mann, John Lee Hancock and many others. She also served as a liaison between filmmakers and government officials on the city, county and state levels, and Amy promoted Texas' film industry at national trade shows, film festivals and marketing events. Over her five years as the head of production, she oversaw the production of more than 300 projects, with total in-state spending of more than $550 million. A few of Amy's high-profile projects were *The Rookie, Office Space, Secondhand Lions, Cast Away, Traffic, The Texas Chainsaw Massacre, 25th Hour, Spy Kids, Miss Congeniality, Texas: The Big Picture* and *Ride Around The World.*

A highlight of Amy's Film Commission tenure was landing Texas' only $95 million film to date, Disney's *The Alamo.* Disney executives were seriously considering Montana, California and Canada; Texas was by no means a "done deal." Amy drew upon her extensive knowledge of Texas to recommend the perfect site for to build a historically accurate, 51-acre movie set; the producers agreed, and locked down this windfall project for Texas. For this accomplishment, Amy earned special recognition from the Governor's office, and five years later, the set continues to draw on-location filming to central Texas.

Amy has continued her relationships with principals in the film production industry in Texas and Los Angeles, and looks forward to promoting Texas for many years to come.

JODI SHORES

Administrative Coordinator

Prior to joining Villa Muse, Jodi served as Executive Assistant to the Director of the Bob Bullock Texas State History Museum, where she created and maintained the Museum's Business Contingency and Emergency Preparedness Plans, central filing system, general/administrative budget, and policies and procedures.

Previous to her work at the Museum, Jodi spent five years at the Texas State Film Commission as Office Manager and Events Coordinator, where she oversaw the day-to-day operations of the office and its staff as well as organized marketing events, including the annual Film Texas brunch in Los Angeles, openings for the Austin Film Festival and SXSW, and trade shows.

City of Austin
Policy for Extraterritorial Jurisdiction (ETJ) Adjustments
10/02/07

Purpose

The extraterritorial jurisdiction (ETJ) is the unincorporated land within five miles of Austin's full purpose city limit that is not within the city limits or ETJ of another city. It is the territory where Austin alone is authorized to annex land. The ETJ represents a city's potential growth boundary, both with respect to its future tax base and municipal service area. The ETJ further ensures a city's ability to capture its fair share of regional growth.

The ETJ also enables the City to extend regulations to adjacent land where development can affect quality of life within the city. ETJ regulations help to ensure that subdivisions that may be annexed by Austin in the future meet minimum standards for road access, water quality, and other factors.

It is for all of these purposes that the ETJ should be valued and promoted as a general public resource. However, there may be times when two cities mutually agree to an adjustment of ETJ boundaries to achieve more logical boundaries. The release of ETJ is a discretionary act on the part of cities. Before granting the request for an adjustment or release, the City of Austin seeks to ensure that the release will not negatively impact Austin's interests. Although the City of Austin has not acquired any substantive area through mutual transfer of ETJ, exchanges of ETJ are more likely to receive positive recommendations than requests for unilateral releases.

Requests for release of ETJ should establish a clear justification for release by meeting the standards that would help identify critical issues and potential negative impacts associated with a release.

This ETJ release policy is intended to:

- encourage orderly development
- protect the City's future tax base
- curtail the amount of jurisdiction that is being yielded annually
- create equity between competing jurisdictions, and
- provide a mechanism for assessing the appropriateness of future requests.

Adoption of the ETJ release policy would standardize the release process by providing a mechanism for measuring a request based on its individual merit. Standardization should make the release process more equitable for all jurisdictions and effectively reduce the amount of ETJ that is voluntarily released annually. The adoption of this policy is not intended to limit the authority of the City Council to consider or approve any particular release or exchange of ETJ.

Guiding Principles

1. The City of Austin should have no long-term annexation potential. The requesting jurisdiction should be in a better position than the City of Austin to annex and serve the property in the short term.
2. The release should serve the general public interest and convey benefits to all parties, either through the extension of services, enhanced environmental protection, or through mutual exchange of ETJ.
3. Development in the release area should be subject to equal or better water quality regulations than those in place at the time of release.
4. The release should not create a competitive disadvantage for similar development situated nearby within Austin's jurisdiction.
5. Requesting jurisdiction should be in compliance with all agreements regarding previous ETJ releases.

Annexation potential	Determine the potential for the area to be annexed (1) by the City of Austin and (2) by the receiving city including evidence of ability to provide services in accordance with annexation statutes.
Environmental impact	(1) Assess the area in terms of its environmental sensitivity, and (2) evaluate regulations that would apply should the release be granted.
Infrastructure investment	Determine the impact of the proposed release on existing or planned investments in (1) water and wastewater utility or (2) roadway infrastructure to serve this area
Long-term effects of cumulative ETJ releases to competing jurisdictions	Assess the effects (1) of limiting the geographic expansion of Austin's regulatory authority, (2) of increasing the amount of land near Austin, but beyond Austin's jurisdiction, available for development, and (3) on potential tax revenue.
Hardship or extenuating circumstances	Determine whether the release will relieve a condition (1) that causes a unique and undue hardship on a property owner, or (2) where unusual circumstances dictate the need for a release.

1. Annexation potential - The area requested for release should be evaluated for future annexation potential by the City of Austin and the requesting jurisdiction. An essential component of determining an area's annexation potential is the future ability to provide city services. The City of Austin should reasonably be able to serve an area at some future time in order to be considered for annexation. Geographic constraints, including certain physical barriers, such as lakes, rivers or canyons, can create jurisdictional islands and make service delivery cost prohibitive. The requesting jurisdiction should be in a better position than the City of Austin to annex and serve the property in the short term or provide assurances that the area would be included within a mandated three-year annexation plan and provided levels of service as defined by the statutory requirements set forth in Chapter 43 of the Texas Local Government Code.

Evaluation measurements should reflect current statutory requirements. Criteria would include:

- Current jurisdiction. Limited purpose jurisdiction should remain under City of Austin's regulatory authority. In addition, COA ETJ that is enclosed by City Full or Limited Purpose should not be released.
- Contiguity requirements. The distance between the existing city limits and the subject property limits the potential to establish contiguity required for annexation.
- Future ability to serve. General service assumptions would be used to determine if an area could feasibly be served by the City--present or future.
- Growth and development trends. A release should not physically restrict the City's future ability to annex and serve adjacent areas with future development potential. In addition, a release should not cause the loss of contiguity to existing ETJ.
- Potential future sales and property tax base or revenue generation.

Since the Desired Development Zone (DDZ) represents the preferred growth corridor and future property tax revenue for the City, ETJ releases within the DDZ would not be considered without a demonstrated hardship to justify the request. It is assumed that the City of Austin would be in a position to serve any area within the Desired Development Zone in the future.

2. Environmental impact - The request for release should be evaluated in terms of the potential impact on water quality and designated habitat. This would include a comparison of habitat management practices, watershed regulations, and any environmental regulations imposed by overlapping jurisdictions, including federal, state, special districts, or county controls, that would be applied prior to and subsequently after an area was released.

Measurable criteria would include:

- Identification of applicable COA "development zone".
- Comparison of all watershed regulations, non-point source pollution control ordinances or water quality controls that would apply before and after release.
- Comparison of development standards as it relates to impervious cover, density, and waterway and critical environmental feature set back requirements.
- Proposed wastewater treatment method and applicable treatment standards.
- Determination of habitat designation and if applicable the management practices of the responsible entity.

Release requests for the purpose of creating areas of "regulatory safe havens" typically do not serve the overall public interest and should not be considered. Development allowed under less restrictive controls often gains a competitive market advantage. To mitigate this effect, a release should be made contingent on encumbering the property with public or private controls that would mirror regulations in place prior to the release. These controls may include adoption of COA land development regulations by the requesting jurisdiction, imposition of private deed restrictions to the property that would apply COA impervious cover limitations, filtration standards, and set back requirements, or enforcement of LCRA non-point source pollution controls through an interlocal agreement.

3. Infrastructure investment – The request for release should be evaluated in terms of existing and planned investments by the City in utility and roadway infrastructure, including right of way that has been dedicated to or purchased by the City to serve the area. An area should not be released if the release would reduce the city's ability to recoup the costs of the investments in the area. Further, the potential impact of the proposed release on the Austin Water Utility's service area should be considered prior to release.

4. Long-term effects of cumulative ETJ releases to competing jurisdictions – Over time, the effect of releasing ETJ has resulted in the substantial loss of Austin's ETJ to neighboring jurisdictions. ETJ releases may contribute to the accelerated development of the outlying rural areas and facilitate the rapid expansion of the suburban municipalities. Potential tax base and sales tax revenue have been lost as a result. Requests for the release of Austin's ETJ should include an historical account of any territory acquired by the municipality from the City of Austin.

Releases should be evaluated according to the frequency and cumulative total of area the City has rendered to a requesting jurisdiction. This is particularly critical in areas of high growth potential or where environmental protections have been compromised as a result of previous releases.

5. Hardship or extenuating circumstances – There are situations where an ETJ release relieves a hardship condition or where a unique circumstance warrants a release. Where these situations exist, the standard criteria also apply. The creation of a regulatory safe haven will not be considered as a hardship condition. It should be incumbent on the jurisdiction requesting the release to adequately demonstrate the need for consideration as a hardship or a compelling or unusual circumstance. As a general rule, hardships should apply to a single ownership tract of land that is typically less than five acres.

Description of Request: Release from Austin's ETJ and enter into a non-annexation agreement for 30 years for approximately 1,917 acres, including the Villa Muse parcels and immediately adjacent acreage belonging to Travis Aggregates. Release from Austin's Wastewater CCN approximately 240 acres.

Staff Recommendation: This request comes from a developer, not from another municipality and is inconsistent with City's ETJ Adjustment Policy adopted by Council 10/11/07. This area is located in Austin's Desired Development Zone and release would create a donut hole in Austin's ETJ. Staff recommends retaining the acreage in Austin's ETJ.

Checklist for ETJ release review:

Property Description: Approximately 1,917 acres in eastern Travis County, located east of SH 130, at FM 969 and Burleson-Manor Road.		
Annexation Potential:		
☐ Does the area have the potential to be annexed by the City of Austin in the long-term?	Yes	No
☐ Does this request demonstrate that the requesting jurisdiction is in a superior position to serve the property with similar levels of service *and* will annex the area upon release or include the area in an annexation plan?	Yes	No
☐ Would the proposed release negatively impact the city's long term annexation plans?	Yes	No
Staff comments: This area is located in Austin's Desired Development Zone		
Environmental Impact:		
☐ Does this request clearly demonstrate that the requesting jurisdiction will provide similar or superior regulatory and/or watershed protections afforded through the development process?	Yes	No
☐ Does this request clearly demonstrate similar or superior regulatory and/or watershed protections applied to the area through conservation easements, transfer of development rights, or other private mechanisms prior to release, provided that the use of such controls is agreeable to each party?	Yes	No
Staff comments: This request comes from a developer, not another jurisdiction. The developer is proposing the creation of a special form-based Development Code that would be used to regulate and control development.		
Infrastructure investment:		
☐ Would release of this ETJ negatively impact the city's investment in any existing or planned water and wastewater utility infrastructure?	No	Yes
☐ Would release of this ETJ negatively impact the city's investment in any existing or planned roadway infrastructure?	No	Yes
Staff comments: This area is in Manville's water CCN and partially in both Austin's and Hornsby Glen's wastewater CCNs. In addition to release from Austin's ETJ, the developer is requesting release from Austin's CCN for the portion of the project north of FM 969 that is currently in Austin's wastewater CCN.		
Growth and Planning Impacts of cumulative ETJ releases:		
☐ Is the requesting jurisdiction in compliance with all agreements and contracts with the City of Austin?	Yes	No
☐ Have previous releases to this jurisdiction ensured that the release of ETJ has not created a competitive disadvantage for similar development within Austin's nearby jurisdiction?	Yes	No
☐ In a high growth area or the desired development zone, have previous releases ensured Austin's ability to maintain and expand its ETJ?	Yes	No

☐ In areas previously released to this jurisdiction and in keeping with Austin's goal of protecting water quality, has development occurred in accordance with terms and conditions that minimize the risk of pollution of the region's water resources?	Yes	No
☐ Do opportunities exist for exchange of ETJ in conjunction with the requested release?	Yes	No
☐ If exchange is proposed, does the result achieve more logical boundaries?	Yes	No
Staff comments: This release would create a donut hole in Austin's ETJ.		
Hardship or extenuating circumstances:		
☐ Is there a claimed hardship?	Yes	No
☐ If a hardship is claimed, does this request relieve a hardship condition?	Yes	No
☐ Are there special or unique circumstances for this request?	Yes	No
☐ Does the request clearly demonstrate justification for the release?	Yes	No
Staff comments:		

ENVIRONMENTAL BOARD MOTION 020608-E2

Date: February 06, 2008

Subject: Villa Muse Extra Territorial Jurisdiction Request

Motioned By: Phil Moncada Seconded by: Jon Beall

Recommendation
The Environmental Board recommends **disapproval** of Villa Muse request to release approximately 1,917 acres of City of Austin Extra Territorial Jurisdiction.

Staff Conditions:
The checklist adopted on October 11, 2007 by City Council and City Staff does not support this release request (which is from the proposed developer and not the governmental entity). The developer did not meet the checklist regarding environmental impacts.

Rationale
The Environmental Board does not have information that could show that this development will meet or exceed current code requirements. There is no Environmental site Assessment to review. This is a good project in the desired development zone, but the Environmental Board does not have adequate information to support it.

Vote 7-0-0-1-0

For: Anderson, Maxwell, Moncada, Neely, Ahart, Dupnik and Beall

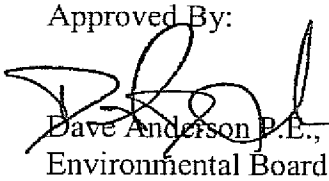
Against:

Abstain:

Absent: Mary Gay Maxwell

Recused:

Approved By:



Dave Anderson P.E., CFM
Environmental Board Chair

City of Austin Jurisdiction and Villa Muse

Legend

- Other Municipality
- Railroad
- Roads
- Villa Muse
- Lake
- Austin - Full Purpose
- Austin - Limited Purpose
- Austin - 2 Mile ETJ
- Austin - 5 Mile ETJ
- Other City Limits
- Other ETJs

Miles: 0 0.5 1 2 3 4

N

City of Austin
NPZD
Effective December 31, 2007