



ITEM FOR ENVIRONMENTAL BOARD AGENDA

BOARD MEETING
DATE REQUESTED: November 14, 2007

NAME & NUMBER OF PROJECT: EMBARCADERO
SP-06-0665D

NAME OF APPLICANT OR ORGANIZATION: Embarcadero Partners, LP (Contact: Mac Pike- 478-8300
John M. Joseph - 472-8800)

LOCATION: River Hills Road

PROJECT FILING DATE: June 15, 2007

WPDR/ENVIRONMENTAL STAFF: Craig Carson, 974-7690
craig.carson@ci.austin.tx.us

WPDR/ CASE MANAGER: Lynda Courtney, 974-2810
lynda.courtney@ci.austin.tx.us

WATERSHED: Lake Austin (Water Supply Rural)
Drinking Water Protection Zone

ORDINANCE: Comprehensive Watershed Ordinance (current Code)
REQUEST: Variance requests are as follows:

1. To allow construction on slopes greater than 25% [LDC Section 25-8-302(B)], and,
2. To reduce the wastewater treatment by land application requirement of 7,000 square feet per Living Unit Equivalent (LUE), to 5,000 square feet per LUE [LDC Section 25-8-361(E)], and,
3. To allow cut/fill greater than 4 feet [LDC Section 25-8-341/342].

STAFF RECOMMENDATION: Recommend approval.

REASONS FOR RECOMMENDATION: Findings of fact have met.

AGENDA ITEM B-1



MEMORANDUM

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

FROM: Craig Carson, Senior Environmental Reviewer
Watershed Protection and Development Review Department

DATE: November 14, 2007

SUBJECT: Embarcadero (SP-06-0665D)
River Hills Road

Variance Request:

Variance from LDC 25-8-302(B) – Construction on slopes > 25%
Variance from LDC 25-8-361(E) – Reduction from 7,000 square feet per Living Unit Equivalent (LUE) for on-site wastewater disposal to 5,000 square feet per LUE.
Variance from LDC 25-8-341/342- Cut/fill greater than 4 feet.

The applicant is proposing to construct a 54 unit residential condominium complex with associated private drives and wastewater system on a 51.84 acre tract of land. Due to topographical constraints of the property, the net site area is 30.57 acres (or 1,331,629 square feet, or 59% gross site area). With slope category reductions, the total allowable impervious cover is 6.11 acres.

Through a transfer of development intensity [LDC 25-8-455(A)(5&6)], the applicant is allowed to increase the site's impervious cover to a maximum of 25% net site area in a rural water supply watershed. In this case, the applicant has 0.85 acres (or 37,026 square feet, or 1.6% gross site area/ 2.8% net site area) of transfer to the Uplands for locating wastewater irrigation fields in the Uplands and 0.75 acres (or 32,670 square feet, or 1.45% gross site area/ 2.5% net site area) of transfer to the Uplands for CEF setbacks located in the Uplands, for a total increase of 1.60 acres of impervious cover. As stated earlier, LDC 25-8-454(D)(1)(b) restricts the maximum allowable impervious cover in this watershed to 25% (including all allowable transfers), which on this site plan would be 7.64 acres (or 332,798 square feet, or 14.7% gross site area/ 25% net site area).

The applicant's project proposes a total impervious cover of 7.46 acres (or 324,958 square feet, or 14.39% gross site area/ 24.4% net site area). This includes all proposed construction and 0.15 acres (or 6,534 square feet, or 0.29% gross site area/ 0.49% net site area) of impervious cover in the form of an existing access road on the northern end of the property.

Since the impervious cover on this project exceeds 20%, the project is subject to water quality and storm water detention requirements. This project has proposed 4 water quality ponds and 1 storm water detention pond. These ponds are proposed to be built on slopes and thus have large cuts and fills associated with them. The maximum cut related to these ponds is in water quality pond # 4 and is 32.2 feet. The maximum fill related to these ponds is in water quality pond # 1 and is 24.15 feet.

Related Project:

On the north end of the Embarcadero property is a small asphalt road (0.15 acres of impervious cover, or 6,534 square feet, or 0.29% gross site area/ 0.49% net site area) which leads to several pieces of property. One of these adjacent property owners has submitted a Planned Unit Development (PUD) Application to the City which is being reviewed at this time, called "The Pier PUD (C814-06-0202)". The Pier PUD is currently proposing to use a portion of the Embarcadero site to meet the 10 acre requirement for PUDs. The portion of the Embarcadero tract they are currently proposing as part of the Pier PUD contains the 0.15 acre (or 6,534 square feet, or 0.29% gross site area/ 0.49% net site area) of existing impervious cover associated with the driveway access. There are no Embarcadero related improvements taking place in the northern portion of the property which are included in the PIER PUD's proposal (see Exhibit 5).

Description of Project Area

This is a 51.84 acre (gross area) tract of undeveloped land, and is located in the City of Austin's 2-mile ETJ, in Travis County. The site is along the east side of North River Hills Drive, between Sumner Court and Taylor Drive, approximately one mile north of Bee Caves Road. The site is in the Lake Austin Watershed, which is classified as "Water Supply Rural", and is also in the Drinking Water Protection Zone. The site is currently undeveloped (except for an old remnant piece of abandoned asphalt road that runs through the middle of the property) and consists of wooded areas with scattered open spaces. The property is long and narrow and drains in a southwest to northeast direction. The site ranges from approximately 532 to 780 feet above mean sea level. Drainage on this site occurs primarily by overland sheet flow along the southwest to northeast overall slope of the tract. None of this site is within the 100-year flood plain, and could be best described as being located at the top of the drainage area. Approximately forty three percent of the gross site area has slopes greater than 15%. The majority of site consists of stair-step topography typical of the Hill Country where bands of steeper slopes separate terraced areas. Specifically, the majority of the site is comprised of the top of two hills in the southern portion of the property with four of these terraced areas stair-stepping downward in a northeasterly direction separated by smaller, steeper (greater than 25% slopes) topographical sections.

Vegetation

The site is located within the Live oak –Ashe juniper woodlands vegetation region of Texas. The vegetation is characterized as woodland with a low percentage of grassy openings. Tree species are dominated by Ashe juniper, Live oak, Texas oak, Cedar elm, and Hackberry. Shrub species include bumelia, Texas persimmon, Yaupon, Wafer ash, and American beautyberry. Woody vines include wild grapevine and greenbriar. Herbaceous species include Virginia creeper, twistleaf yucca, prairie verbena, wood sorrel, yellow columbine, and cedar sage. Grassy areas are dominated by silvery bluestem, little bluestem, threeawn, buffalograss, and various herbs and forbs. The upland tree species are dominated by Ashe juniper with occasional live oak, and shin oak. This site did have potential Black-Capped Vireo habitat and funds have been contributed to the Balcones Canyonland Conservation Preserve.

Critical Environmental Features

Since this site is located in the upper portion of the watershed, there are five drainages that begin along the eastern property line that drain to Lake Austin. A "rimrock" Critical Environmental Feature (CEF) is found along the top edge of each of these drainages. The southern most rimrock is the largest, while each subsequent rimrock feature gets progressively smaller heading in a northerly direction. City staff, (including ERM) have worked with the applicant, and have granted an administrative variance to the setback distances associated with these CEFs. The southernmost rimrock has a 75 foot minimum setback while the other three have a 50 foot minimum setback. Staff has determined that these setbacks will protect these features.

Water/Wastewater

As stated above, the majority of the site consists of stair-step topography typical of the Hill Country, where bands of steeper slopes separate terraced areas. These terraced areas are flatter and have deeper soil profiles, and are typically the most desirable locations to develop. The applicant proposes to use some of these flatter areas as irrigation fields for an on-site wastewater system since the land is located at the upper end of a sensitive watershed. These flatter areas have a much deeper soil profile necessary for complete wastewater absorption, which in turn provides superior water quality protection than irrigating wastewater in areas with steeper slopes and little to no soils.

The applicant has proposed an on-site wastewater disposal system which treats the effluent twice before it is pumped to the irrigation fields. According to the attached COA Permit Application Review Committee's August 17, 2007 Memorandum, the State requires treatment to the following standards: 20 mg/L BOD5, 20 mg/L TSS for these type on-site wastewater systems. By providing a "Secondary Treatment", the applicant proposes to exceed these standards [Proposed system will meet: 10 mg/L BOD5, 15 mg/L TSS, 3 mg/L NH3-N, and 4 mg/L DO]. In addition, this wastewater system continuously monitors conditions in the wastewater irrigation fields and constantly makes adjustments to the system so the effluent is always discharged at the appropriate dosing rate. This type of wastewater system helps ensure 100 percent of the effluent can be assimilated into the soil matrix and plant tissue. The wastewater system will discharge the secondary effluent to six separate irrigation fields, totaling 3.73 acres (or 162,479 square feet, or 7.2% gross site area/12.20% net site area).

Water will be provided by an LCRA owned and maintained water system and will connect to a water main located on River Hills Road, near the southern portion of this project. Staff is supportive of the proposed wastewater treatment system.

Variance Requests

The variances being requested by this project are as follows:

1. Variance from City Code Section 25-8-302(B)- Construction on slopes > than 25%.

This variance is required to allow construction of portions of the condominium units on slopes greater than 25%. The applicant's design minimizes construction on slopes greater than 25%, while also ensuring adequate protection of the site's CEFs, and ensuring the wastewater irrigation fields are located on flatter areas which have deeper soil profiles for better effluent absorption. In working with City staff, the applicant reduced the construction on slopes greater than 25%, from 1.60 acres (or 69,696 square feet, or 3.09% gross site area/ 5.23% net site area) to 0.955 acres (or 41,560 square feet, or 1.84% gross site area/ 3.12% net site area). This is a reduction of 0.645 acres (or 28,096 square feet, 1.24% gross site area/ 2.11% net site area) on slopes greater than 25%.

2. Variance from City Code Section 25-8-361(E) – Reduction from 7,000 S.F. to 5,000 S.F. per LUE for wastewater irrigation.

This variance is requested because of the applicants propose an advanced wastewater disposal system. The applicant's on-site wastewater disposal system is a state of the art computer monitored system that maximizes the systems efficiency and environmental protection while requiring less square footage for effluent disposal per LUE.

**3. Variance from City Code Section 25-8-341- Cut greater than 4 feet.
Variance from City Code Section 25-8-342-Fill greater than 4 feet.**

These variances were initially requested as an administrative variance (which is allowed by Code). However, due to the magnitude of the cut/fill staff felt it more appropriate to bring them to the EV Board with the other variances for their decision. Projects located in the Lake Austin Watershed do not require water quality controls if the impervious cover is less than 20%. On this project however, due to impervious cover transfers, the impervious cover will exceed 20% and therefore water quality requirements apply. There are 4 water quality ponds and 1 detention pond proposed for this project. Both the cut and fill variances are required to construct these ponds. Due to the topography of the property, all of these ponds will all be located on slopes, which is allowed by the City Code. The location of these ponds on slopes increases the magnitude of cut/fill required. However, these deeper ponds will minimize the footprint of the ponds. If the ponds were designed shallow, their size would be much larger than the ponds currently designed. Below is a table that outlines the maximum cut/fill for each pond:

Pond	Maximum Cut	Maximum Fill
Water Quality Pond 1	7.2 feet	24.15 feet
Water Quality Pond 2	7.0 feet	16.0 feet
Water Quality Pond 3	12.24 feet	24.0 feet
Water Quality Pond 4	32.2 feet	15.0 feet
Detention Pond	25.1 feet	No fill

Water Quality ponds 1 thru 3 will all have fill that is structurally compacted and will be retained by a vertical reinforced concrete retaining wall and water quality pond 4 will be constructed of structural compacted fill stabilized and armored by mortared stacked rock placed at a slope of 1 to 1. The detention pond will be cut out of the slope and will have a vertical reinforced concrete retaining wall. Once these ponds are constructed, stabilized, and used, the overall water quality from site run-off will be improved.

During construction of these ponds is when there will be the most potential for environmental damage from erosion and siltation. To ensure that a sediment discharge event does not take place during the construction of these ponds, the applicant will provide a staged erosion control plan for all of the ponds to ensure soil does not leave the property. This erosion control plan will require that run-off is diverted around these ponds until they are constructed, revegetated, and stable. This plan to divert the run-off will ensure the run-off is spread as much as possible into a sheet flow conditions and will include mechanisms such as temporary sediment traps, to catch any sediment that leaves the site. Once the ponds are constructed and stabilized, the erosion controls diverting the run-off around the ponds will be removed to allow the ponds to function as designed.

Similar Cases

The following projects had similar construction issues and received recommendations from the Environmental Board that were subsequently approved by the Zoning and Platting Commission:

For a variance from LDC, Section 25-8-302(B):

AISD's North East Middle School (SP-05-1609DX): requested a variance from LDC 25-8-301/302 to build a portion of the school building on slopes greater than 25%. The EV Board recommended approval 8-0-0-1 on March 1, 2006 with the following conditions:

- 1 3:1 slopes or greater where possible.
- 2 Terraced retaining wall construction for cut/fill exceeding 4 feet.
- 3 Revegetation of all disturbed slopes.
- 4 Plant shade trees on the periphery of the sports complex.
- 5 Specify use of native seeding for revegetation.
- 6 Specify use of Class I, Native Trees for shade trees.

For a variance from LDC, Section 25-8-361(E):

Greenshores On Lake Austin (C8-01-0251): requested a variance from LDC 25-8-361 to reduce the 7,000 square feet of irrigated land for each LUE to 5,000 square feet. The EV Board recommended approval 5-1-0-2 on January 23, 2002 with the following conditions:

- 1 Seeding of irrigation area with a mix of native grasses approved by COA.
- 2 The irrigation area will have at least 16 to 18 inches of topsoil. If necessary to import topsoil to meet this requirement, the soil will be a COA approved native topsoil.
- 3 A final contingency plan for effluent storage will be developed and approved by COA.
- 4 All undeveloped land in Section A is to be dedicated as a conservation easement.
- 5 A tree survey and mitigation plan for all of the developed portion of the subdivision will be completed and approved by the COA, and will comply with the COA Tree Ordinance and ECM as if the subdivision were located entirely within the COA.
- 6 The proposed Section 10(a) permit will be completed prior to final subdivision approval.
- 7 A COA approved IPM plan will be adopted for the subdivision.
- 8 All conditions are to be included as plat restrictions.

For a variance from LDC, Section 25-8-341/342:

Alexan at Vaught Ranch (SP-05-1499D): requested a variance from LDC 25-8-341 and LDC 25-8-342 to allow cut and fill greater than 4 feet. The EV Board recommended approval 7-0-0-2 on February 1, 2006 without conditions.

Recommendations

Staff recommends approval of the variance requests because the findings of fact have been met.

Conditions

Staff recommends granting the variances with the following conditions:

- 1 All disturbed areas within the CEF setbacks and designated 40% natural area not associated with water quality or detention ponds will be revegetated with the COA 609-S specifications.
- 2 Other disturbed areas outside the CEF setbacks and designated 40% natural area will be restored with the COA 604S.6 specifications except for the wastewater irrigation fields which will be revegetated with burnuda grass and/or what is called out in their wastewater permit.
- 3 All disturbed areas within the 40% natural area related to the construction of the 4 water quality ponds and detention pond construction shall be revegetated using the Hill Country Roadway revegetation requirements.
- 4 All irrigation areas will have at least 16-18 inches of topsoil. If it is necessary to import topsoil to meet this requirement, the soil will be a COA approved native soil.

- The applicant shall take all measures necessary, including installation of erosion control devices to ensure any newly placed soils remain in place.
- 5 A contingency plan for effluent storage will be developed and approved by the City of Austin prior to site plan release.
 - 6 All trees greater than 19 caliper inches that are removed require tree mitigation per the COA tree ordinance and associated Environmental Criteria Manual. All trees used for mitigation will be Class I native trees.
 - 7 Implementation of a City approved Integrated Pest Management Plan.
 - 8 Restricted use of Common Areas defined in Restrictive Covenant.
 - 9 Any fill greater than 4 feet will be structurally contained.

If you have any questions or need additional information, please feel free to contact me at 974-2711.

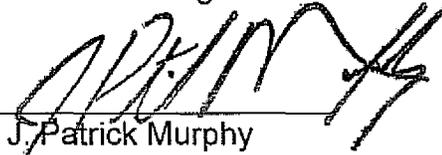


Craig Carson, Environmental Review Specialist
Watershed Protection and Development Review

Environmental Program Manager:


Ingrid McDonald

Environmental Officer:


J. Patrick Murphy



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

Application Name: Embarcadero Partners, LP
Application Case No: SP-06-0665D
Code Reference: Land Development Code Section 25-8-302(B) Construction of a Building or Parking Area
Variance Request: To allow construction on slopes greater than 25%.

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 variance will not be providing a special privilege to the applicant. Due to the property's long and narrow shape, overall "stair-step" topography, and CEF setbacks, there are limited areas within the slope category of 0 to 15%. Isolated small bands that are not representative of the average slope break up the flatter areas on the upper portion of this property. Additionally, to maximize protection to groundwater from wastewater effluent, the applicant has designed the project so that the wastewater fields are placed on the flatter portions of the property. These flatter terraced areas have much deeper soil profiles, which provide a much more protective effluent disposal field. As a result of these considerations, portions of some of the buildings are placed on slopes greater than 25%.

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. This condition was caused by the site's topography, shape, CEF setbacks, and the applicant's desire to install all wastewater irrigation fields in areas that have a deep soil profile. These issues required that the buildings be positioned so that portions of some of them are on slopes greater than 25%.

- 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. Although the applicant is requesting a variance to construct on slopes greater than 25%, the majority of the buildings are constructed on slopes from 0 to 15%, but because of the site conditions listed above, portions of some of the units have been placed slopes greater than 25%. The applicant worked closely with City staff to ensure a minimum amount of construction takes place on slopes greater than 25%. In the initial plan submittal, the applicant was proposing 1.60 acres (or 69,696 square feet, or 3.09% gross site area/ 5.23% net site area) of development on slopes greater than 25%. After working with staff, the applicant reduced their need for construction on slopes greater than 25% to 0.955 acres (or 41,560 square feet, or 1.84% gross site area/ 3.12% net site area). This is a reduction of 0.645 acres (or 28,096 square feet, or 1.24% gross site area/ 2.11% net site area) on slopes greater than 25%.

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

Yes. The applicant's design has minimized the construction of the condo units on slopes greater than 25%. Additionally, temporary and permanent erosion controls will be in place to ensure the environment is protected from erosion.

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's plan has 4 water quality ponds and 1 detention pond associated with it. All run-off from this site will be treated by these ponds. The limited construction on slopes greater than 25% should not impact water quality.

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.

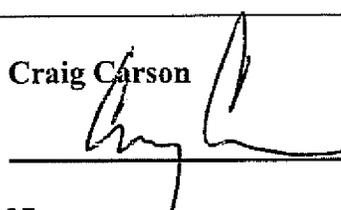
2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and

Not applicable.

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

Not applicable.

Reviewer Name: Craig Carson

Reviewer Signature: 

Date: August 20, 2007

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



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

Application Name: Embarcadero Partners, LP
Application Case No: SP-06-0665D
Code Reference: Land Development Code Section 25-8-361(E)

Variance Request: To reduce the requirement of 7,000 square feet per unit for on-site wastewater disposal to 5,000 square feet per unit.

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 variance will not be providing a special privilege to the applicant. Any development located at this or similarly situated sites which require wastewater disposal would require some type of on-site wastewater disposal system. In this case the applicant has chosen an advanced on-site wastewater disposal system that allows less square footage for wastewater disposal per living unit.

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 variance request is required to install a state of the art wastewater treatment and disposal system which provides greater overall environmental protection, while requiring less area for effluent disposal. The applicant has proposed a treatment system which has a primary and secondary treatment for the effluent prior to being pumped to the irrigation fields. Additionally, a computer continuously monitors the conditions in the wastewater disposal fields and adjusts the flow of effluent to ensure the disposal fields are properly dosed to prevent effluent from leaving the site.

The proposed wastewater system design has also incorporated larger holding capacities within the disposal system for long rain events, and has “haul and disposal” capabilities in the rare cases in which the system may have to be shut down. These redundant systems combine to

ensure that no leaching of effluent occurs. This system is designed to ensure maximum efficiency 24 hours a day.

- 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. According to the engineer's calculations the requested reduction in square footage of the disposal fields per living units still provides more than the minimum square footage for this type of system. State regulations typically require an effluent application rate of 0.1 gpd/sf corresponding to 3058 sf of drip irrigation area per LUE and the applicant proposes an effluent application rate corresponding to providing 5,000 sf of drip irrigation area per LUE. According to the City's Permit Application Review Committee (PARC), this is a conservative rate given the on-site soil properties.

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

Yes. This reduction in the size of the disposal fields does not increase the potential for harmful environmental consequences because this system provides a primary treatment and secondary treatment of effluent prior to its delivery to the disposal fields. In addition, not only is the amount of effluent sent to the disposal fields monitored, but the conditions of the disposal fields themselves are also monitored. The wastewater system also has designed into it a three day holding capacity in case the system cannot discharge effluent to the irrigation fields due to wet weather conditions. Lastly, incorporated into its design, the wastewater system has the ability to have effluent pumped directly into disposal trucks for permitted disposal if the wastewater disposal fields can not be used for periods longer than three days.

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 proposed wastewater disposal system provides continuous monitoring of all site conditions which will ensure that wastewater effluent losses do not occur off-site. Additionally, the effluent is chlorine disinfected with re-chlorination prior to effluent delivery to the irrigation system. The TCEQ permit requirements include effluent limits of 20 mg/L BOD₅, 20 mg/L TSS for these types of systems, and the applicant proposed an enhanced secondary treatment with nitrification treatment meeting effluent limits of 10 mg/L BOD₅, 15 mg/L TSS, 3 mg/L NH₃-N and 4 mg/L DO. Lastly, the COA's PARC has determined that using the wastewater irrigation system as proposed, the levels of nutrients applied to the site can be maintained at rates which can easily be assimilated into the sites soil matrix and plant tissue.

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.

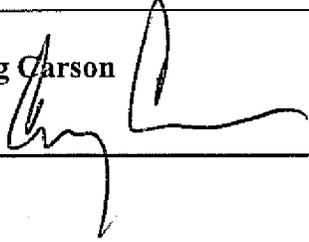
2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and

Not applicable.

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

Not applicable.

Reviewer Name: Craig Carson

Reviewer Signature: 

Date: August 17, 2007

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



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

Application Name: Embarcadero Partners, LP
Application Case No: SP-06-0665D
Code Reference: Land Development Code Section 25-8-341/342

Variance Request: To allow cut/fill greater than 4 feet.

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, due to the site's topographic constraints, these ponds will need to be constructed on slopes, which increase the amount of cut/fill. These type of water quality and detention ponds have been allowed on other sites with the same type of topographic constraints.

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. In this case, due to the topographic constraints of the property, the water quality and detention ponds would be built on slopes. Without these ponds, water quality of run-off from this site would be more degraded, than with these proposed ponds.

- 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. According to the engineer's calculations the amount of cut/fill needed to construct these water quality and detention ponds is the minimum amount needed to ensure the ponds are correctly sized.

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

Yes, once the ponds are completed, they will ensure run-off from this site is properly treated, thus increasing the water quality leaving this site. During construction, the applicant will be using an aggressive erosion control measures to ensure these ponds will not be the

source of sedimentation during their construction. Once constructed, these ponds will increase the overall water quality leaving this site.

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

Yes, once the ponds are constructed, the quality of water leaving the site will be better than without the ponds.

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: Craig Carson

Reviewer Signature: _____

Date: August 17, 2007

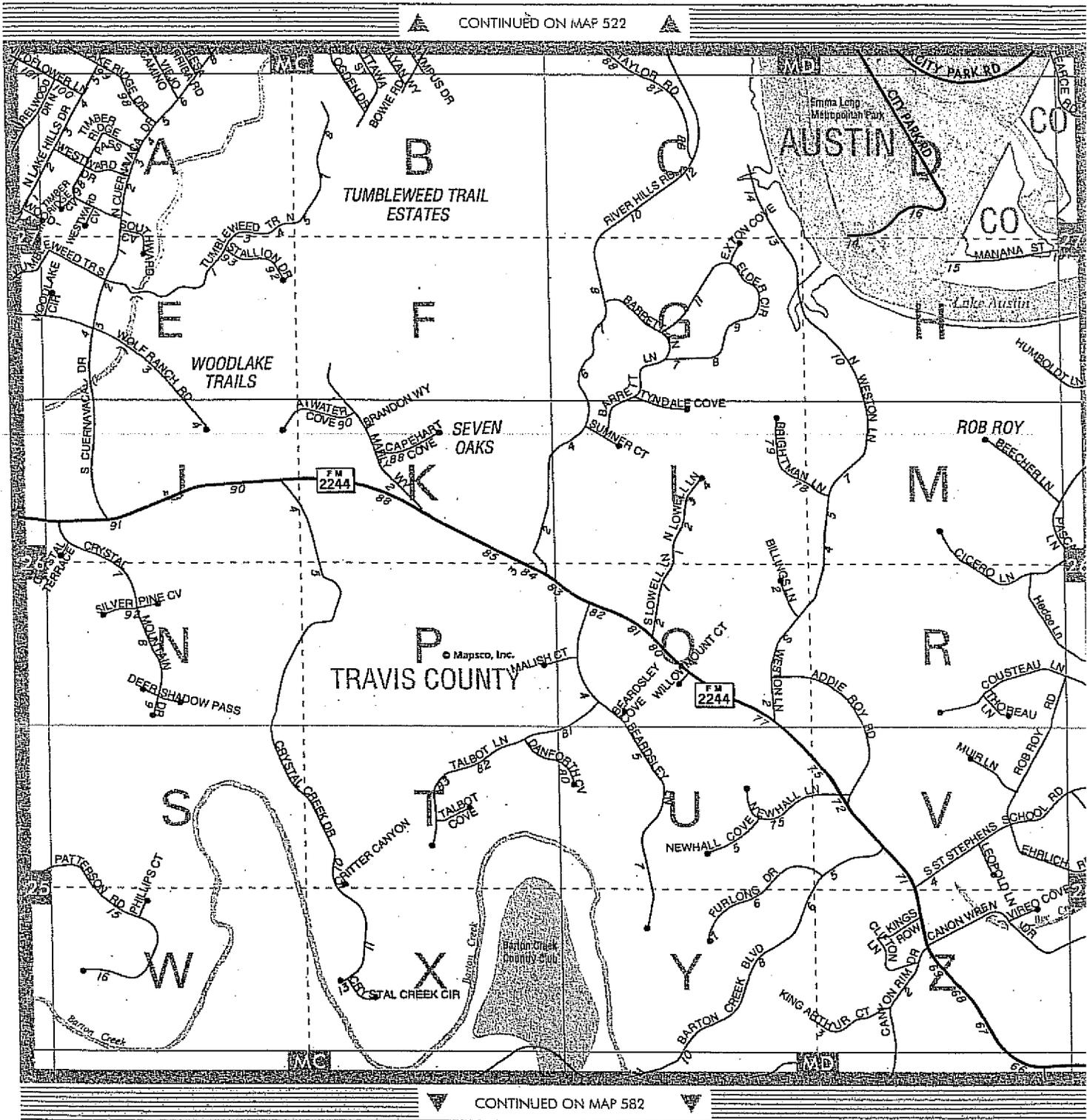
Staff may recommend approval of a variance after answering all applicable determinations in the affirmative (YES).

Directions To Site:

Take Bee Caves Road (RM 2244) past 360, until you take a right on North River Hills Road.

Travel approximately 1 mile and the site is on the right side of the road.

CONTINUED ON MAP 522



CONTINUED ON MAP 582

CONTINUED ON MAP 551

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CONTINUED ON MAP 553



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 please call our Research Department at (800) 950-5308.
 ***** 8:00 AM - 5:00 PM Monday thru Friday *****





CLARK, THOMAS & WINTERS

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AUSTIN, TEXAS 78767

FAX (512) 474-1129

300 WEST 6TH STREET, 15TH FLOOR
AUSTIN, TEXAS 78701

February 28, 2007

John M. Joseph
(512) 495-8895
jmj@ctw.com

Ms. Lynda Courtney
Case Manager, Watershed Protection and Development Review Department
City of Austin
P.O. Box 1088
Austin, Texas 78767

RE: Embarcadero Condominiums Variance Requests

Dear Ms. Courtney,

I am writing to you on behalf of my client, Embarcadero Partners, L.P. ("Developer"), to formally request that the three variances addressed below be granted.

(1) Section 25-8-302: Construction of a Building or Parking Area

This Land Development Code ("LDC") provision prohibits the construction of a building or parking area on a slope with a gradient of more than 25%. Developer requests a variance from this provision that would allow for the construction of buildings and parking areas on slopes with a gradient of more than 25%.

This variance is necessary due to the topography of the property. Approximately 25.95% of the property contains slopes with a gradient of more than 25%. Developer proposes to construct pavement for private drives and parking and residential condominiums on only 3.98% of property containing slopes with a gradient of more than 25%. The attached Exhibit A, "Building on Slopes > 25%," illustrates that Developer has sought to minimize the portions of the development that deviate from the requirements of § 25-8-302; however, this variance remains necessary for the remaining portions that inevitably must be located on slopes with a gradient of more than 25%.

A variance from § 25-8-302 should be granted, pursuant to § 25-8-41, because the topography of the subject property is such that a variance would be necessary for any type of residential development. While the method of development chosen by Developer, a condominium regime, does not create the need for a variance, it does provide greater overall environmental protection because development is clustered, leaving larger areas of open space than would be possible with other types of development, such as single-family residences. Furthermore, a condominium regime allows for the construction of environmentally friendly alternative standard internal roadways because they will be private roadways. This variance is necessary to allow for the

February 28, 2007

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reasonable development of the property and, if granted, it would not create a significant probability of harmful environmental consequences. Lastly, the water quality that will result from the granting of this variance will be equal to the water quality achievable without the variance because Developer will: construct surface drainage wherever possible to minimize concentrated runoff flows; provide for a large downstream buffer for sheet flow; and implement an erosion control plan that has been carefully designed to prevent erosion.

(2) Section 25-8-281(C): Critical Environmental Features

~~This LDC provision requires that buffer zones with a width of 150 feet be established around each critical environmental feature on the property. Developer requests a variance from this provision that would allow for the width of the buffer zones on the property to be reduced to a width of 50 feet.~~

This variance is necessary due to the topography of the property; access is very narrow. The property contains five "critical environmental features," as defined by § 25-8-1(5), all of which are rimrock. The five rimrocks are 165, 96, 53, 68 and 40 feet in length, all are four feet high. Developer proposes to construct pavement for private drives, residential condominium buildings, storm drains, water and wastewater utility lines and appurtenances, temporary erosion and sedimentation controls and permanent erosion controls within 150 feet, but over 50 feet, from each of the five critical environmental features.

An administrative variance from § 25-8-281(C) may be granted, pursuant to § 25-8-281(D), if Developer can demonstrate that the proposed measures preserve all characteristics of each critical environmental feature. To that end, Developer proposes to divert runoff flows from each feature and to implement standard erosion controls in the buffer zones surrounding each feature. Environmental geologist, Kristen Miller White, performed a geologic assessment of the property and determined there is no recharge to or discharge from these features. Therefore, it is her opinion that these proposed measures will preserve all characteristics of each critical environmental feature. Ms. White believes that the locations of these rimrocks—at the top of drainage basins—renders them much less sensitive than rimrocks located within a drainage-head or creek. Therefore, I assert that a variance from § 25-8-281(C) should be granted.

(3) Section 25-8-361(E): Wastewater Restrictions

This LDC provision requires that a development using wastewater treatment by land application have at least 7,000 square feet of irrigated land for each LUE, if the irrigated land has six inches or more of topsoil. Developer requests a variance from this provision that would allow for the provision of 5,000 square feet of irrigated land for each LUE.

This variance is necessary due to the topography of the property. Within the property, there is at least 7,000 square feet of irrigated land available for each LUE. However, a portion of the

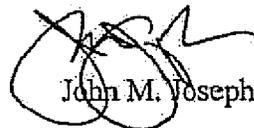
February 28, 2007
Page 3

available land is sloped in excess of 15%, as shown in Exhibit B; therefore, it is not included in the square footage calculation. The proposed irrigated areas on the property, some of them on slopes with a gradient between 15% and 25%, as shown in Exhibit C, possess a minimum of 18 inches of topsoil, three times that required for the 7,000 square foot per LUE standard. Furthermore, Developer proposes to use computer-operated sub-surface effluent drip irrigation on the property. Project engineer, Ed Moore, contends that the computer-operated sub-surface effluent drip irrigation system on vegetated land with 5,000 square feet of irrigation area per LUE provides better water quality than the use of conventional on-site sewage disposal systems that were anticipated by the city's requirement for 7,000 square foot of sewage disposal area per LUE. Mr. Moore implemented this same type of irrigation system with the Greenshores on Lake Austin development, the effectiveness of which warranted the granting of a variance from § 25-8-316(E).

A variance from § 25-8-361(E) should be granted, pursuant to § 25-8-41, because the topography of the subject property is such that a variance would be necessary for any type of residential development. While the method of development chosen by Developer, a condominium regime, does not create the need for a variance, it does provide greater overall environmental protection because development is clustered, leaving larger areas of open space for irrigation than would be possible with other types of development, such as single-family residences. This variance is necessary to allow for the reasonable development of the property and, if granted, it would not create a significant probability of harmful environmental consequences, as explained above. Lastly, the water quality that will result from the granting of this variance will exceed the water quality achievable without the variance, if a less sophisticated irrigation system were implemented.

Thank you for your assistance with the above variance requests. If you have any questions or concerns, please do not hesitate to contact me by phone at (512) 495-8895 or by email at jmj@ctw.com.

Very truly yours,



John M. Joseph

cc: Glen T. Nickerson, Embarcadero Partners, L.P.
Mac Pike, Embarcadero Partners, L.P.
Wally Scott III, Embarcadero Partners, L.P.
Ed Moore, The Moore Group, Inc.
Kevin Flahive, Clark Thomas & Winters, P.C.

CLARK, THOMAS & WINTERS

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FAX (512) 474-1129

300 WEST 6TH STREET, 15TH FLOOR
AUSTIN, TEXAS 78701

August 20, 2007

Kevin M. Flahive
(512) 495-8849
kmf@ctw.com

Via Email & Regular Mail

Mr. Craig Carson, Senior Environmental Reviewer
Watershed Protection & Development Review Dept.
P.O. Box 1088
Austin, Texas 78767

RE: Embarcadero Condominiums: Variance Requests
Case Number: SP-06-0665D
Owner/Applicant: Embarcadero Partners, L.P.

Dear Craig:

As you know, Embarcadero Partners, L.P., ("Embarcadero Partners") has requested four variances from City of Austin Land Development Code requirements for the above-referenced Embarcadero Condominiums project. The requested variances are from the requirements of the following LDC provisions: § 25-8-281(C) (Setbacks from CEFs); § 25-8-302 (Building on Slopes); § 25-8-361(E) (Wastewater Irrigation Area/LUE); and § 25-8-361(F)(1), (4) (Wastewater Irrigation on Slopes).

I am writing to you today to confirm my understanding of the status of each variance request, based on our telephone conversation earlier this morning:

- § 25-8-281(C) – Scott Heirs will administratively approve the requested variance for reduced setbacks from critical environmental features so long as the agreed to setbacks are clearly shown on the site plan and a mulch sock is placed above the southernmost critical environmental feature on the site, which is labeled RR-1.
- § 25-8-302 – You will support this requested variance before the Environmental Board and Zoning & Platting Commission, as many of the units or portions thereof that are to be constructed on slopes with a gradient in excess of 25% are to be placed on these slopes to maximize setbacks from critical environmental features.
- § 25-8-361(E) – The Permit Application Review Committee's IOM states that the proposed computer-operated sub-surface effluent drip wastewater irrigation system exceeds city and state requirements and irrigation square footage per LUE of wastewater service may be reduced from 7,000 sq. ft. per LUE to 5,000 sq. ft. per LUE. Based on

August 20, 2007

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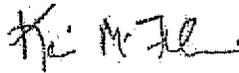
this finding, you will support this requested variance before the Environmental Board and the Zoning and Platting Commission.

- § 25-8-361(F)(1), (4) – Neither you, nor Joan Balogh, will support this requested variance before the Environmental Board and Zoning and Platting Commission.

Based on my communication of the above understanding of the status of each requested variance, Embarcadero Partners' hereby withdraws its request for a variance from the requirements of § 25-8-361(F)(1), (4). Therefore, Embarcadero Partners desires to move forward with only two variance requests to be presented before the Environmental Board on September 5, 2007.

Please let me know if you have any objections, questions or concerns regarding my understanding of the current status of any of the requested variances. If not, please remove the request for a variance from § 25-8-361(F)(1), (4) from the variance request packet.

Regards,



Kevin M. Flahive

CC: Mr. Mac Pike, Embarcadero Partners, L.P.
Mr. Wally Scott, III, Embarcadero Partners, L.P.
Mr. Glen Nickerson, Embarcadero Partners, L.P.
Mr. Ed Moore, P.E., The Moore Group

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300 WEST 6TH STREET, 15TH FLOOR
AUSTIN, TEXAS 78701

October 30, 2007

Kevin M. Flahive
(512) 495-8849
kmf@ctw.com

Via Email & Regular Mail

Ms. Lynda Courtney
Case Manager, Watershed Protection and Development Review Department
City of Austin
P.O. Box 1088
Austin, Texas 78767

RE: Case Number: SP-06-0665D
Project: Embarcadero Condominiums
Owner/Applicant: Embarcadero Partners, L.P.

Dear Ms. Courtney,

I am writing to you on behalf of my client, Embarcadero Partners, L.P. ("Applicant"), to formally request that the variance addressed below, the third commission variance requested for this project, be supported by City staff and presented to the Environmental Board and Zoning and Planning Commission for approval.

City of Austin Land Development Code §§ 25-8-341(A), 342(A)

These two Land Development Code ("LDC") provisions prohibit cut or fill on a tract of land in excess of four feet of depth or height. Applicant requests a variance from these provisions to allow for the cut and fill necessary to construct the four water quality ponds and one detention pond required for this project.

The range of maximum cut needed for construction of the ponds ranges from 7-feet to 32.20-feet. The range of maximum fill needed for construction of the ponds ranges from no fill at all to 24.15-feet of fill. The fill for three of the four ponds will be vertical reinforced concrete retaining walls, while the fill for the remaining pond will be mortared stacked rock placed at a slope of 1:1. For a description of the maximum cut, maximum fill and fill material to be used for each pond, please see the attached Exhibit A.

The primary reason for this cut/fill variance, as well as the other two commission variances sought for this project, is the challenging topography of the site. As you know, the wastewater irrigation fields were given priority and placed on the flattest portions of the site. The internal private drives were designed to use as much of the existing private drives as possible. The units have been orientated along the internal private drives in a manner that minimizes building on

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slopes to the greatest extent possible. After the placement of the wastewater irrigation fields, the internal private drives and the units, the remaining available portions of the site, on which the ponds must be located, generally contain slopes with a gradient of more than 25%. The project engineer, Ed Moore, has sought to minimize the amount of cut/fill needed for construction of the ponds; however, the slopes on which the ponds must be constructed still require substantial cut/fill.

An additional issue to be considered, as City staff is well aware, is the timing of the design of the ponds. LDC § 25-8-211(B)(3) requires water quality controls for development in watersheds, other than the Barton Springs Zone, with impervious cover that exceeds 20% of the net site area. At the time of Applicant's submittal of the site plan for this project on December 14, 2006, Applicant was under the impression that the above-referenced code provision is interpreted by City staff not to include in the impervious cover calculation that impervious cover which is entitled through development intensity transfers (§ 25-8-455). Applicant's belief was reinforced by the fact that City staff issued a single comment stating that water quality controls would be required, which was subsequently cleared in the first site plan update submitted by Applicant. Throughout the next seven to eight months, City staff made no mention, either through site plan comments or verbally in discussions regarding the project, that water quality controls would be required for this project. It was not until City staff raised this issue in September of 2007, that Applicant became aware that water quality controls would be required. As a result, the four water quality ponds were the last improvements within the project to be designed.

Lastly, it should be noted that the water quality ponds are located at the highest possible points within the 40% buffer zone to maximize overland flow and recharge in the undisturbed remainder of the 40% buffer zone. While it may be possible to locate the water quality ponds in areas of the 40% buffer zone with slopes of lesser gradients, such placement would not maximize overland flow and recharge.

A variance from LDC §§ 25-8-341(A), 342(A) should be granted, pursuant to LDC § 25-8-41, because the topography of the subject property is such that a variance would be necessary for any type of residential development with impervious cover that exceeds 20% of the net site area. While the method of development chosen by Applicant, a condominium regime, does not create the need for this variance, it does provide greater overall environmental protection because development is clustered, leaving larger areas of open space than would be possible with other types of development, such as single-family residences. Furthermore, a condominium regime allows for the construction of environmentally friendly alternative standard internal roadways because they will be private drives. This variance is necessary to allow for the reasonable development of the property and, if granted, it would not create a significant probability of harmful environmental consequences. In fact, the water quality that will result from the granting of this variance will be superior to the water quality achievable without the variance because the Applicant will be able to locate the water quality ponds higher in the 40% buffer zone, thereby maximizing overland flow and recharge in the undisturbed remainder of the 40% buffer zone.

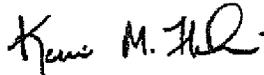
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October 30, 2007

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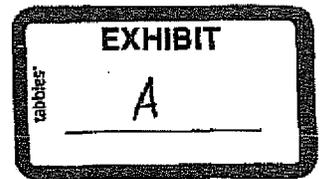
Thank you for your assistance with the above variance request. If you have any questions or concerns, please do not hesitate to contact me by phone at (512) 495-8849 or by email at kmf@ctw.com.

Regards,



Kevin M. Flahive

CC: Glen T. Nickerson, Embarcadero Partners, L.P.
Mac Pike, Embarcadero Partners, L.P.
Wally Scott III, Embarcadero Partners, L.P.
John M. Joseph, Clark Thomas & Winters, P.C.
Ed Moore, The Moore Group, Inc.
Pat Murphy, COA WPDR
Ingrid McDonald, COA WPDR
Craig Carson, COA WPDR



Embarcadero Pond Cut/Fill Summary

10-29-07

WQ Pond #1

Max. Fill: 24.15 feet

Max. Cut: 7.20 feet

Proposed fill will be structural compacted fill to be retained by a vertical reinforced concrete retaining wall.

WQ Pond #2

Max. Fill: 16.00 feet

Max. Cut: 7.00 feet

Proposed fill will be structural compacted fill to be retained by a vertical reinforced concrete retaining wall.

WQ Pond #3

Max. Fill: 24.00 feet

Max. Cut: 12.24 feet

Proposed fill will be structural compacted fill to be stabilized and armored by mortared stacked rock placed at a slope of 1:1.

WQ Pond #4

Max. Fill: 15.00 feet

Max. Cut: 32.20 feet

Proposed fill will be structural compacted fill to be stabilized and armored by mortared stacked rock placed at a slope of 1:1.

Detention Pond #1

Max. Fill: No Fill

Max. Cut: 25.10 feet



MEMORANDUM

TO: Craig A. Carson, Environmental Review Specialist Sr. WPDRD/OSS LUR
Ingrid McDonald, Environmental Program Coordinator WPDRD/OSS LUR

FROM: Edward D. Peacock, Supervising Engineer, WPDRD/ERM WRE

DATE: August 17, 2007

SUBJECT: Embarcadero WSC TCEQ SADDS Permit Application Review WQ0014732.001

The Permit Application Review Committee (PARC) including staff from WPDRD and AWU has reviewed the application for a proposed TCEQ Subsurface Area Drip Dispersal System (SADDS) for the Embarcadero Water Supply Corporation located at 1201 River Hills Drive. The applicant has proposed a package treatment plant with secondary treatment for 16,200 gallons per day (gpd) of wastewater, serving 54 single family condominium style homes. Disinfection and filtration of effluent occurs prior to effluent delivery to a subsurface drip irrigation system. The effluent is routed to subsurface drip irrigation fields for disposal.

PARC has found the proposed TCEQ permit for wastewater treatment and land application of effluent appropriate for implementation based on site factors, TCEQ requirements, and technical safeguards incorporated into the draft permit.

Site factors include:

1. Loam and clay loam soils present with depths ranging from 18- to 49-inches as determined from sufficient onsite testing by the applicant.
2. Primary irrigation area areas with slopes ranging form 0 – 15 percent as indicated on application maps.

TCEQ permit requirements and applicant's site plan proposals include:

1. TCEQ typically requires effluent application rate of 0.1 gpd/sf corresponding to 3058 sf of drip irrigation area/LUE (30 TAC 222)
 - Applicant proposes effluent application rate corresponding to providing 5,000 sf of drip irrigation area/LUE, a conservative application rate given the on-site soil properties.
2. TCEQ typically requires effluent limits of 20 mg/L BOD₅, 20 mg/L TSS for these systems.
 - Applicant proposes a enhanced secondary treatment with nitrification treatment meeting effluent limits of 10mg/L BOD₅, 15 mg/L TSS, 3 mg/L NH₃-N and 4 mg/L DO.

TCEQ permit technical safeguards incorporated into the draft permit include:

1. Chlorine disinfection with re-chlorination prior to effluent delivery to irrigation system.
2. Filtration of effluent prior to delivery to irrigation system; back flushing of irrigation system every 2 months.
3. Installation of 3-day effluent storage tanks; contract for pump and haul of wastewater effluent off-site if storage capacity is exceeded.

August 17, 2007

4. Vector control.
5. Contamination of surface water prohibited; no losses of effluent permitted off-site via runoff
 - Flow detection sensors throughout irrigation system; automatic zone shut-off if flow irregularities detected
 - Corrective measures implemented immediately.
6. Contamination of groundwater prohibited; no losses of effluent permitted off-site via percolation or leaching below the root zone
 - Soil moisture sensors installed in each irrigation zone; automatic zone shut-off if saturated soils detected
 - Corrective measures implemented immediately
7. Development of subsurface drip irrigation management plan
 - Maintenance schedule
 - Vegetation management for year around vegetative ground cover
 - Soil management for maintenance of soil depth
 - Weekly field checks for development of springs/seeps
 - Weekly field checks for stressed vegetation, surficial erosion, and surface runoff; corrective measures implemented immediately
 - Facility operator available 7 days/week; facility operator inspects treatment plant daily and subsurface drip irrigation zones weekly.
8. Development of subsurface drip irrigation monitoring plan to include:
 - Effluent
 - Soils
 - Shallow groundwater and /or springs and seeps:

In conclusion, the use of a subsurface drip irrigation system for management of wastewater effluent offers an excellent option for the proposed Embarcadero wastewater system. The liquid loading can be maintained at a conservative rate and with pretreatment proposed; the levels of nutrients applied to the site can be maintained at rates which can be assimilated into soil matrix and plant tissue.

If you have questions regarding the PARC review of this permit, please contact Joan Balogh at 974-2746, Seyed Miri at 972-0202, or me at 974-2224.

Sincerely,

Edward D. Peacock, P.E.
Supervising Engineer, Water Resource Evaluation
Environmental Resources Management Division
Watershed Protection and Development Review Department

Cc: Thomas E. Ennis, P.E., LEED, AP Manager, Environmental Resources Management Division WPDRD
Seyed M. Miri, P.E., Manager, Utility Development and Environmental Protection Division, AWU
J. Patrick Murphy Jr., Program Manager, Environmental Policy, Office of Director, WPDRD
Joan I. Balogh, Sr. Environmental Scientist, Environmental Resources Management Division, WPDRD

TOWN OUT 1/11/10

EMBARCADERO

1201 River Hills Road

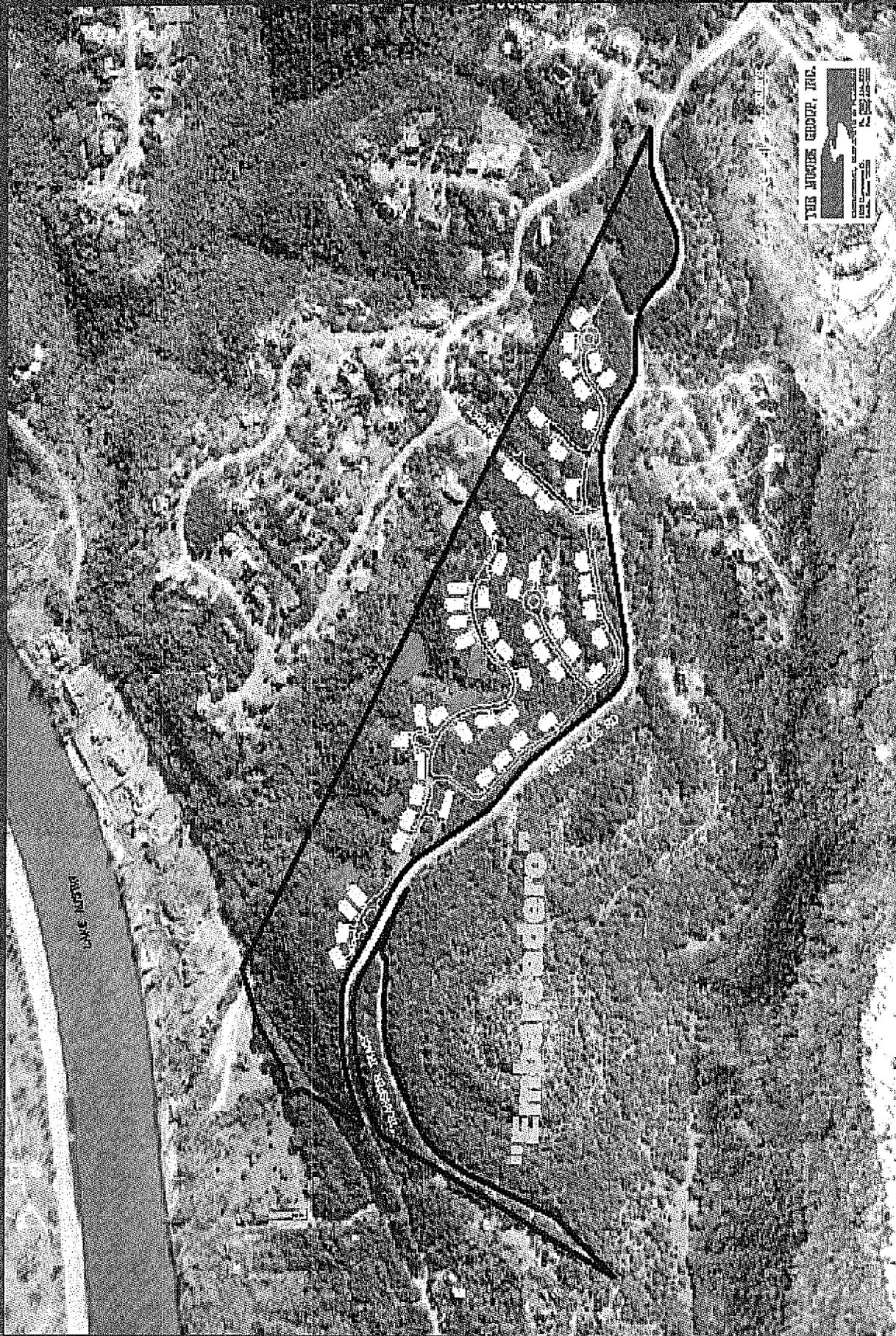
Developer/Property Owner: Embarcadero Partners, L.P.

Project Engineer: The Moore Group, Inc.

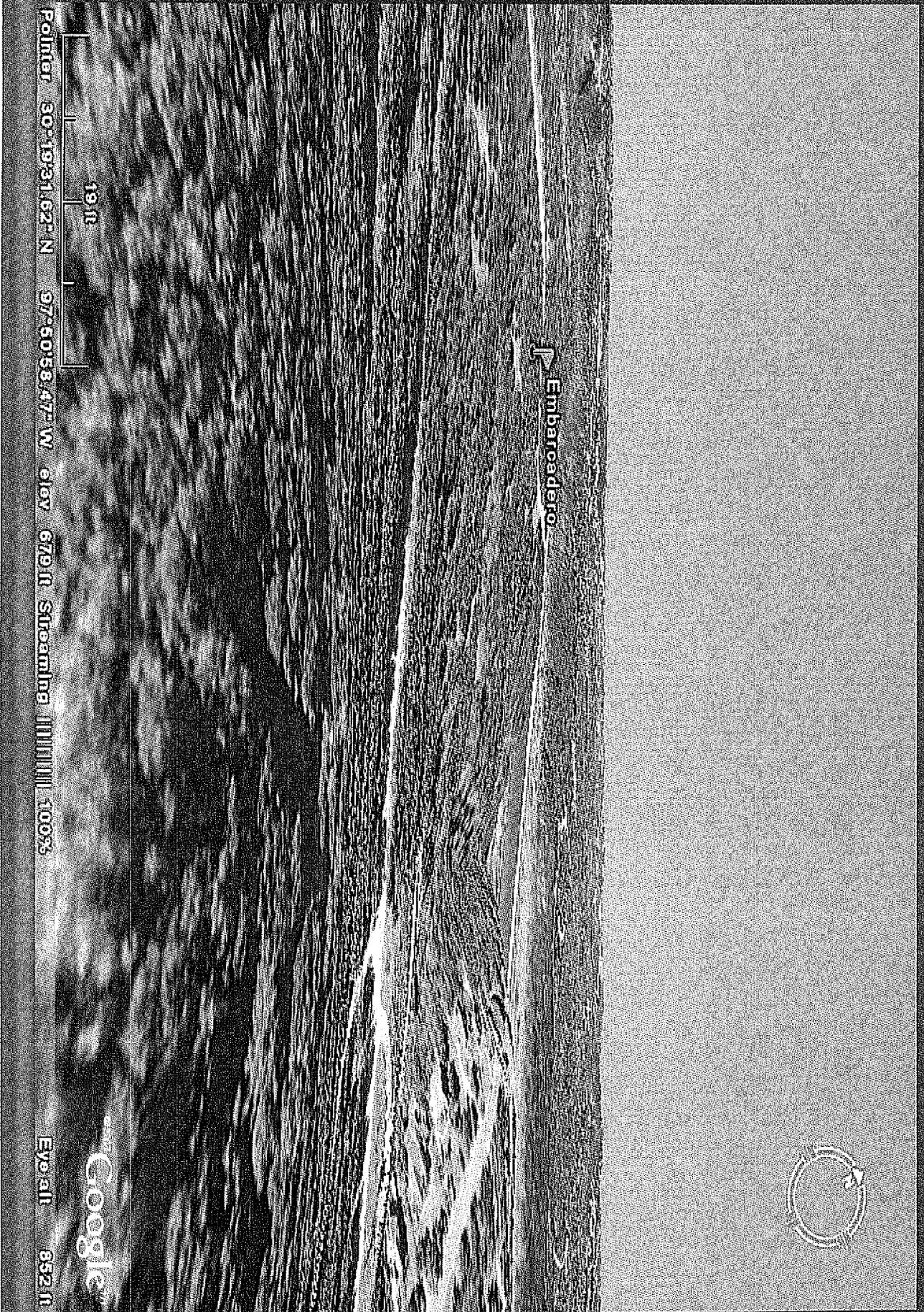
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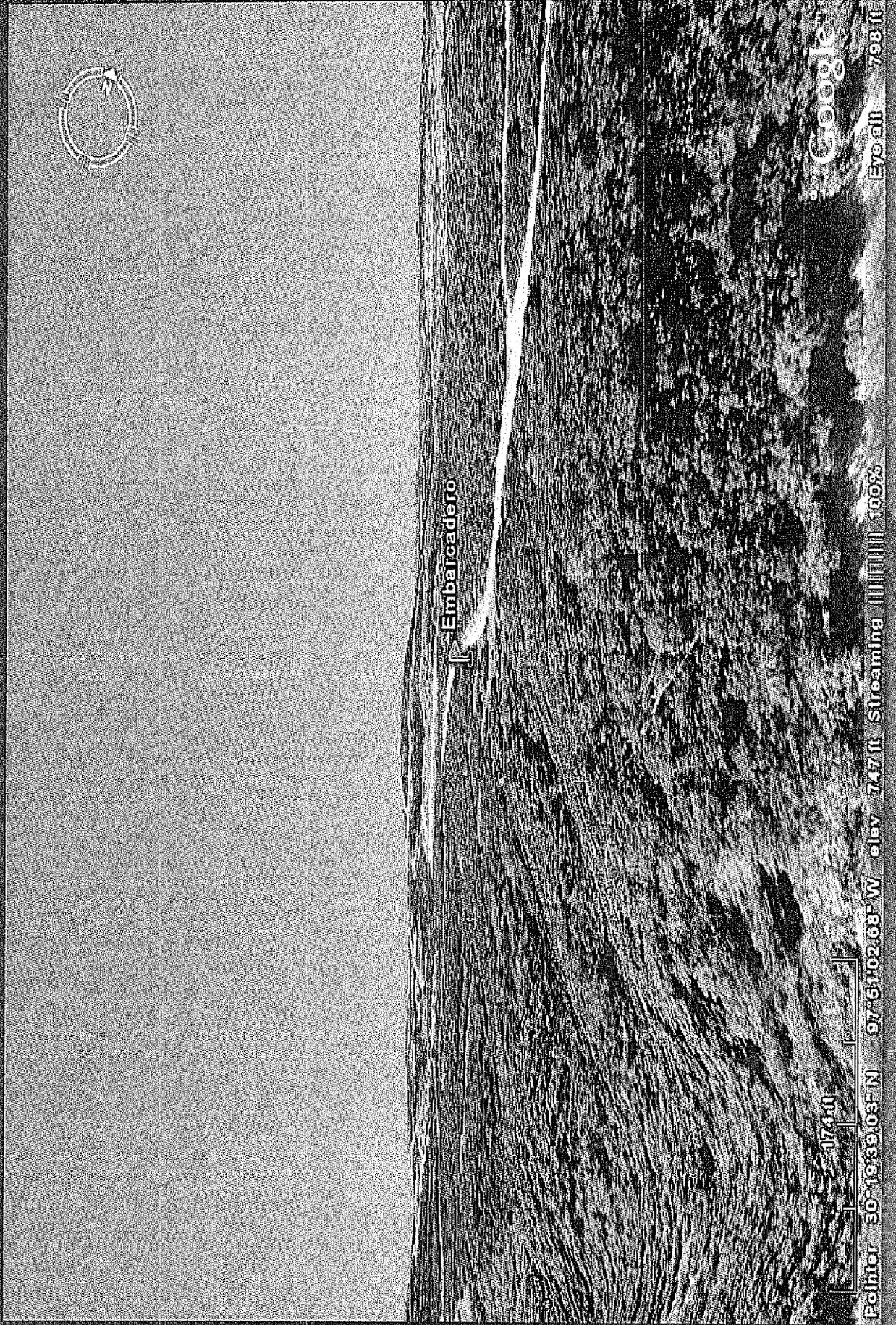
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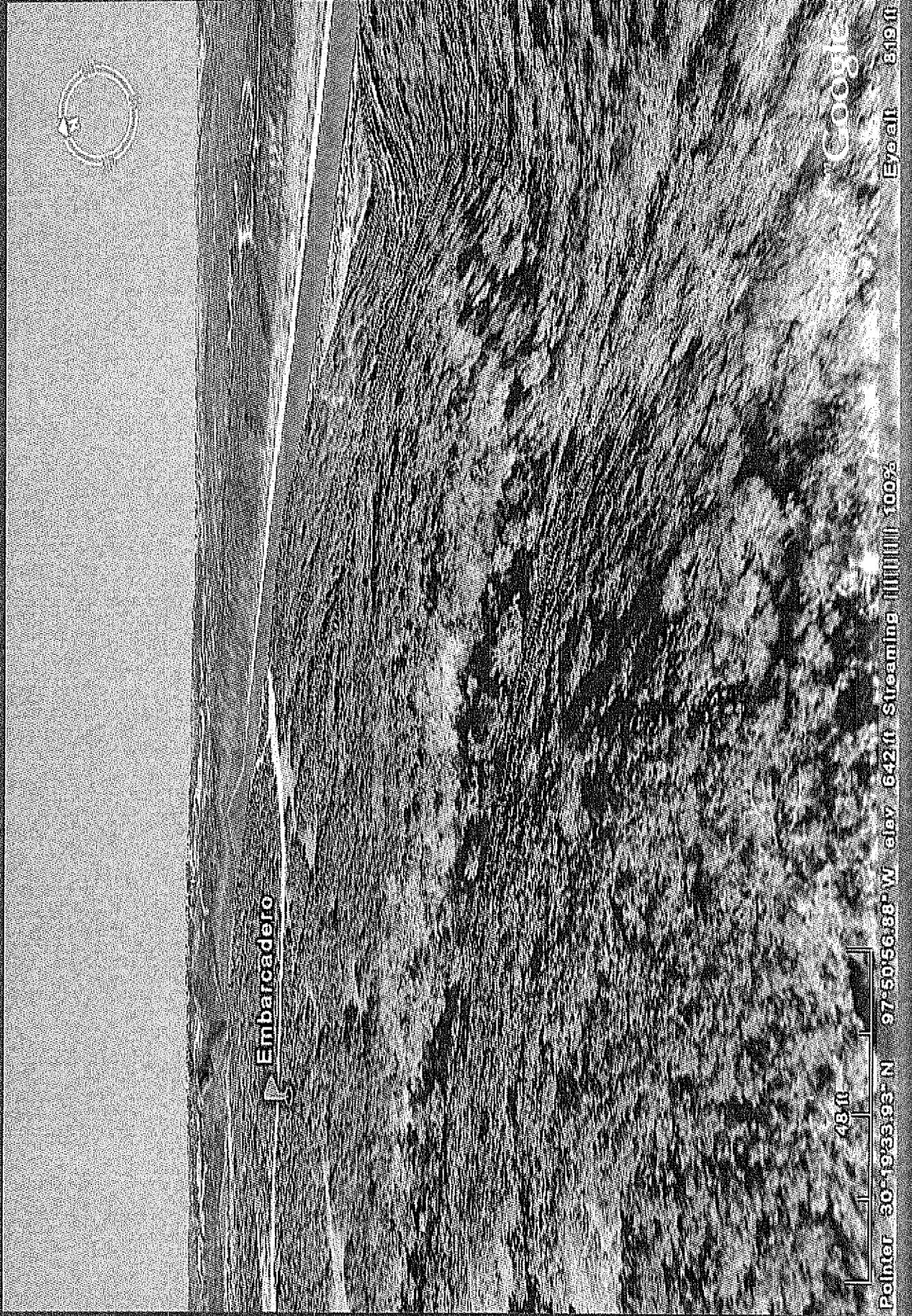
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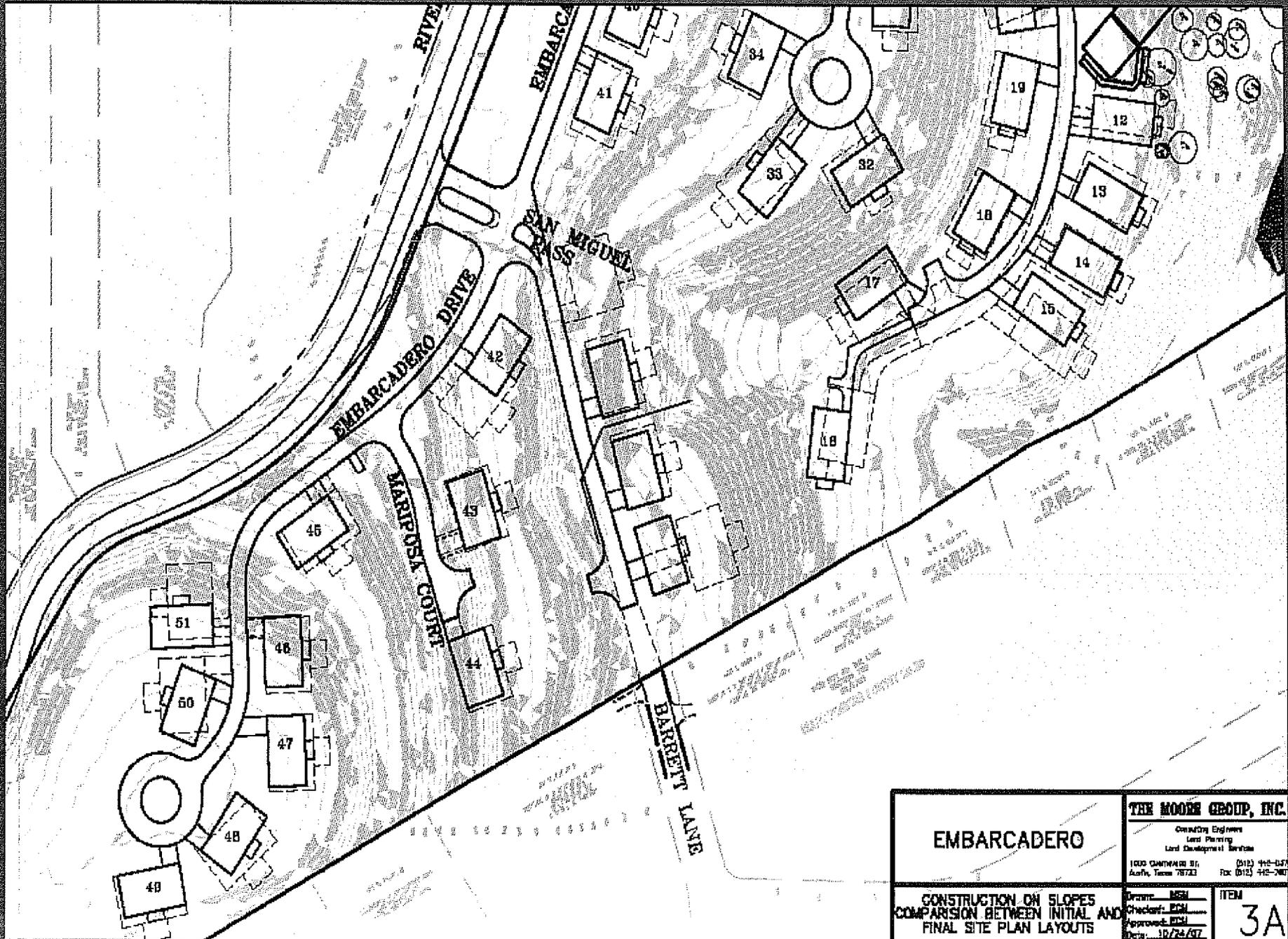


Three Variances Requested

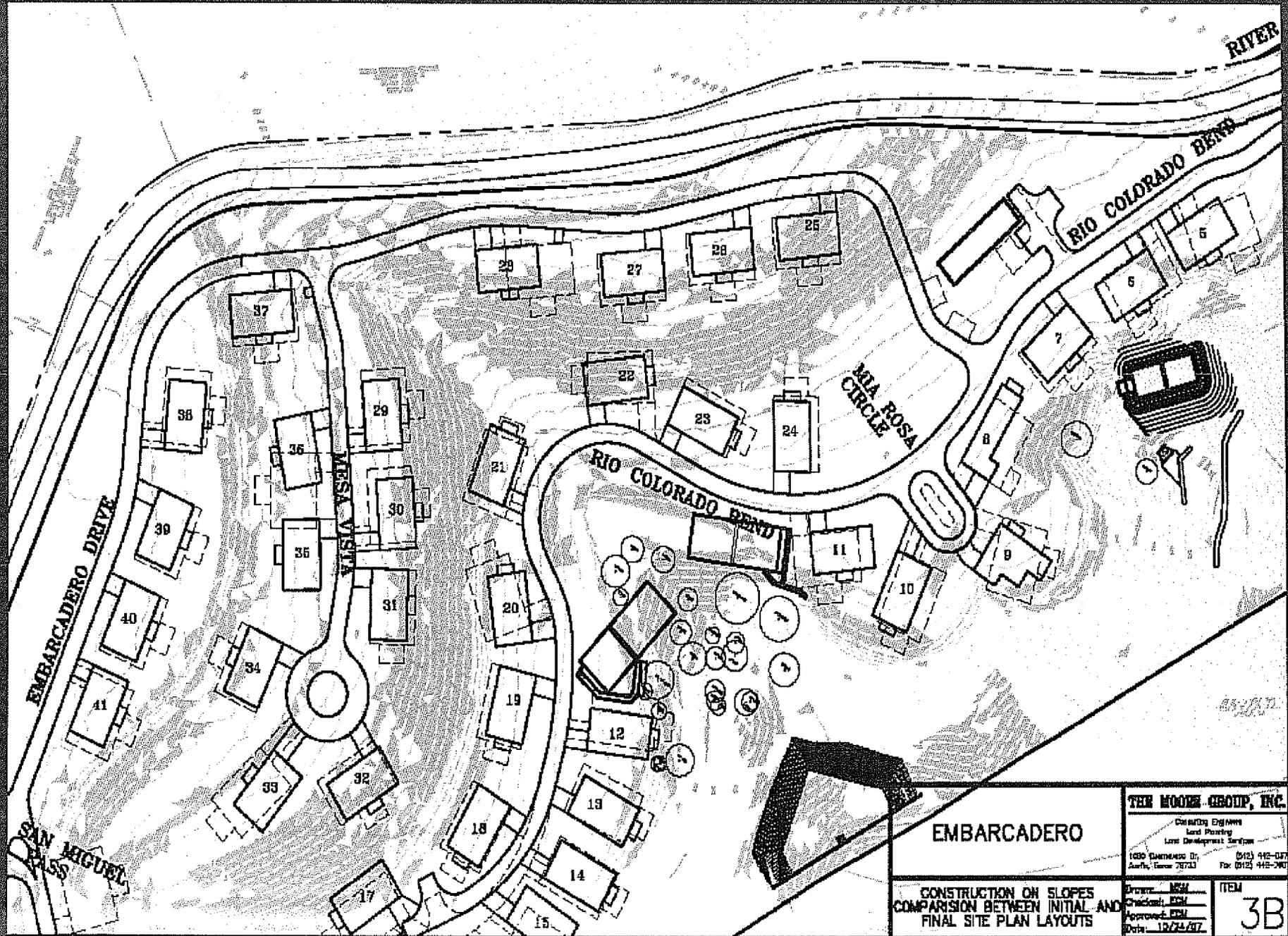
1. LCD § 25-8-302 to allow for construction of units and internal drives on slopes with a gradient of more than 25%
2. LDC § 25-8-361 (E) to allow for a reduction in the amount of irrigated land per LUE for wastewater treatment by land application from 7,000 square feet per LUE to 5,000 square feet per LUE
3. LDC § 25-8-341(A), 342(A) to allow for cut and fill in excess of four feet for the construction of four water quality ponds and one detention pond

Variance #1: Construction on Slopes with a Gradient of More than 25%

- 44.5% of the NSA of the site contains slopes with a gradient of more than 25%
- Applicant and City staff have re-oriented all units to minimize the amount of proposed construction on slopes, resulting in a 40% reduction (from 1.60 acres to .95 acres)
- A portion of the remaining .95 acres of construction on slopes results from the Applicant's efforts to maximize setbacks from critical environmental features
- This variance request has City staff support due to the topographical challenges of this site coupled with Applicant's mitigation of construction on slopes while maximizing setbacks from critical environmental features

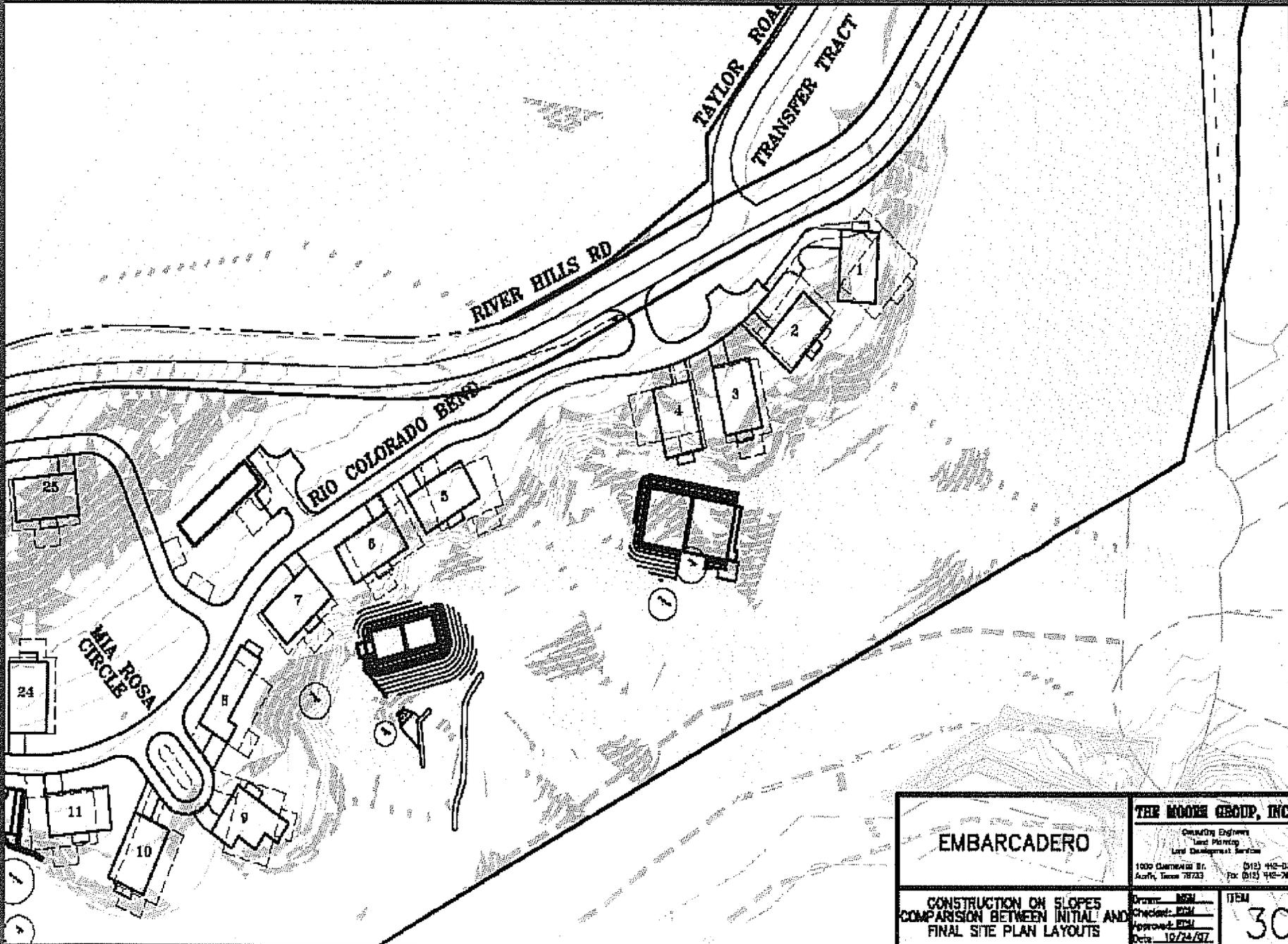


EMBARCADERO	THE MOORE GROUP, INC.	
	Consulting Engineers Land Planning Land Development Services	
CONSTRUCTION ON SLOPES COMPARISON BETWEEN INITIAL AND FINAL SITE PLAN LAYOUTS	1000 CAMINO DE SI Arlife, Texas 78723	(512) 442-0371 Fax: (512) 442-7807
	Drawn: <u>MSH</u>	ITEM
	Checked: <u>ECM</u>	3A
	Approved: <u>ECM</u>	
Date: <u>10/24/97</u>		



SAN MIGUEL
255

EMBARCADERO		THE MOORE GROUP, INC.	
		Consulting Engineers Land Planning Landscape Architecture	
		1030 Camino del Rio Suite 2000 San Diego, CA 92108 Phone: (619) 442-0177 Fax: (619) 442-2000	
CONSTRUCTION ON SLOPES COMPARISON BETWEEN INITIAL AND FINAL SITE PLAN LAYOUTS		Drawn: <u>MMW</u> Checked: <u>ECM</u> Approved: <u>ECM</u> Date: <u>12/24/07</u>	ITEM 3B



EMBARCADERO

THE MOORE GROUP, INC.

Consulting Engineers
 Land Planning
 Land Development Services
 1000 GERMERSHILL BL. DALLAS, TEXAS 75242
 (214) 442-2477
 Fax: (214) 442-7407

CONSTRUCTION ON SLOPES
 COMPARISON BETWEEN INITIAL AND
 FINAL SITE PLAN LAYOUTS

Drawn: BSM
 Checked: EJM
 Approved: EJM
 Date: 10/24/97

ITEM
30

Variance #2: Reduction in Square Footage of Irrigated Land Per LUE from 7,000 SF to 5,000 SF

- Based on conservative modeling submitted for this project, which provides for an average daily flow from each LUE of 300 gallons per day, TCEQ regulations require a minimum of 3,000 SF of irrigated land per LUE of wastewater service
- Project will utilize a computer-managed sub-surface effluent drip irrigation system (a.k.a. a beneficial re-use irrigation system) that re-uses the treated effluent to irrigate vegetation and/or landscaping on-site
- The computer controls regulate effluent to the fraction of the gallon to ensure against run-off or surface ponding, while providing telemetry monitoring technology that immediately alerts the system monitor to high water, power outages and irrigation line ruptures or clogging
- City of Austin Senior Environmental Scientist, Joan Balogh, has determined that the proposed locations of the wastewater irrigation fields and the conditions thereon are appropriate for this proposed system

- The Project Engineer has designed computer-managed sub-surface effluent drip irrigation systems similar to the proposed system, which are currently in successful operation at the following Austin-area locations:
 - Commander's Point – 64 single family unit condominium regime
 - Cypress Hills – 800 single family homes and mixed-use development
 - Greenshores on Lake Austin – 140 single family home development
 - Sandy Creek Yacht Club – 150 boat slip marina and restaurant development
 - The Waldorf School – 19 acre school campus

In addition to the projects that The Moore Group has designed, there are 59 other computer-managed sub-surface effluent drip irrigation systems similar to the proposed system, which are currently in successful operation at the following Austin-area locations:

- Dripping Springs Middle School
- Dripping Springs High School
- Mountain Valley Intermediate School
- Arlon Seay Intermediate School
- Spring Branch Middle School
- Bill Brown Elementary School
- Smithson Valley High School
- Steiner Ranch
- Crystal Mountain Office Park
- Granite Shoals Elementary
- Polo Club – Subdivision Cluster System
- Austin Recovery Center
- Riverside Mobile Home Park
- St. Stevens Episcopal School
- Bastrop Middle School
- Brown Distributing
- Reno Elementary School
- High Point North Alternative School
- Red Rock Elementary School
- Dripping Springs Apartments
- Bishop RV Park
- Cross Point Church
- Hudson Bend Middle School
- Madrone Ranch
- The Backyard RV Park
- Bee Cave McDonalds (Bee Cave & Hwy 71)
- Texas Disposal System
- Bastrop Jack in the Box
- Cranes Mill Elementary School
- Hoffman Lane Elementary School
- Cedar Creek Middle School Expansion
- Bee Cave Home Depot
- Waller Elementary School

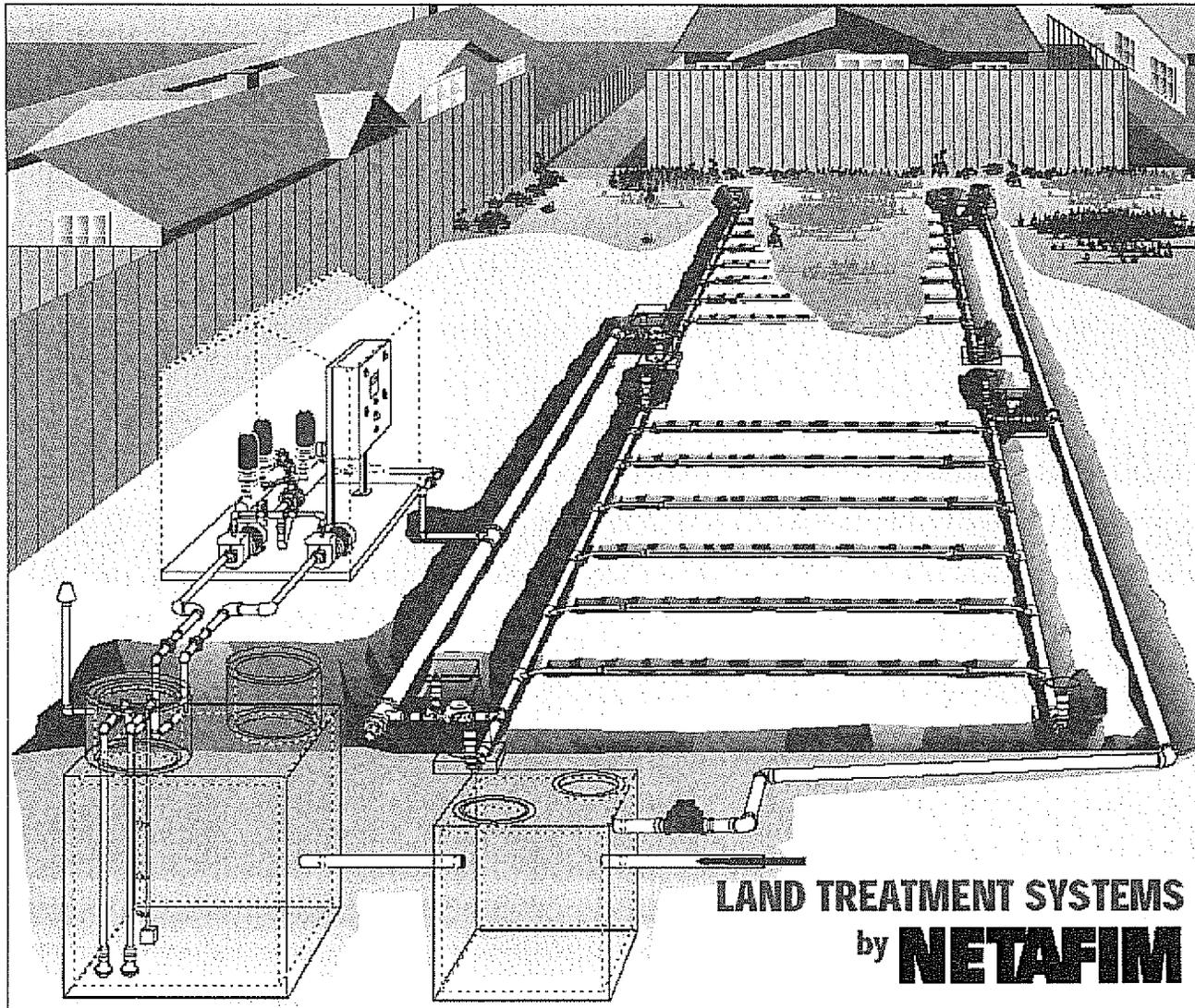
- Belterra Subdivision
- The Crossings Resort
- Somerset Elementary School
- Trinity Church and School
- The Salt Lick, Driftwood, TX
- Cedar Creek Elementary School Expansion
- Northwest Austin YMCA
- Cedar Creek Intermediate School
- Northshore Marina
- Blue Bonnet Elementary School
- Spicewood Elementary School
- Northwest Elementary School
- Cedar Breaks
- Ridge Harbor Subdivision
- Sky Forest Subdivision
- Grace Fellowship Church
- Children's Center of Austin
- The Hollows at Northshore
- Highpointe Subdivision
- Shadow Creek Subdivision
- Meadows at Buda 85 hp Duplex Lift Station
- Comal High School
- Waterford on Lake Travis
- Secured Climate Self Storage
- Central Texas State Veterans Cemetery

Drip Irrigation System

APPLICATIONS

A land treatment system that utilizes drip technology can provide a cost effective solution to a variety of challenges. The modular component approach to Netafim's Land Treatment Systems provides flexibility in design of systems that provide effluent disposal of a few hundred gallons per day up to several million.

1. *Cities*: A replacement for spray systems. Eliminates the need to transport the effluent to central treatment facilities.
2. *Schools and Churches*: Facilities which are in the rural areas may use the marginal land nearby.
3. *Subdivision Developments*: The use of onsurface disposal allows for an efficient and economical use of the existing land.
4. *Parks, Rest Areas*: An on-site system provides trouble free operation which is monitored continuously through a telephone line.
5. *Industry*: When disposal of process water into municipal systems is too costly or not possible, the land treatment system becomes a viable solution.



LAND TREATMENT SYSTEMS
by **NETAFIM**

NETAFIM IRRIGATION, INC. 865 225-1200
WEST COAST: 8470 E. Howe Ave. • FORTY, CA 94727 • 209-633-6800 • FAX: (209) 633-6822

Drip Irrigation System

LAND TREATMENT SYSTEMS

by **NETAFIM**

ANSWERING THE CHALLENGE

Our society faces a constant challenge to maintain and preserve the environment for generations to come. A major issue in pollution control is the treatment and disposal of domestic and industrial wastewater. Netafim, the world's

leading manufacturer of drip irrigation systems, has helped answer that challenge with the development of "Bioline" subsurface dripperline for land treatment.

HOW IT WORKS

Land Treatment by subsurface slow rate disposal is considered to be an innovative technology which successfully answers the challenge of proper environmental management. Subsurface slow rate disposal is achieved through an underground drip absorption system which allows for minimal drainage of effluent through the ground, with the subsurface strata serving as a huge slow rate bio-filter. This system achieves organic and nitrogen removal while at the same time substantially reducing fecal coliform and facilitating phosphorous fixes to the soil. The loading rate is designed according to soil characteristics with data such as soil restrictive layers, rainfall, evaporation and evapotranspiration rates, and nutrient balances taken into careful consideration.

Netafim's subsurface slow rate disposal system for land treatment consists of the following components:

1. **Pre-treatment:** Wastewater is treated first by conventional methods such as septic tanks or aerobic treatment. Pre-treatment achieves physical settling of macro-solids and assists in degradation of various pollutants.
2. **Pumping and Control:** Required to operate the dosing cycles, zone selection, filter backflushing, lateral flushing, flow control and other system monitoring features such as power outages, high water levels and flow variances.
3. **Filtration:** A fully or semi-automatic Arskal disc filter prevent the solids from entering into the delivery system.

ADVANTAGES

1. **Environmentally Friendly:** Dripperlines are plowed into the soil. Subsurface application ensures little or no disturbance to existing trees or vegetation and eliminates the problem of offensive odor and aerosol dust outside the disposal field, thus drastically reducing the need for buffer zones.

2. **Uniform Distribution:** The use of "Bioline", a pressure compensating emitter, ensures excellent distribution uniformity and minimizes all risk due to local surfacing.

3. **Low Precipitation Rate:** A low rate of precipitation allows the absorption field to remain saturated and results in continuous biodegradation in the soil. The placement of

dripperlines in the soil promotes ideal conditions for biological reduction.

4. **Intensive Vegetation:** Drip Irrigation has been known for years to be the superior irrigation system. The use of a drip system for effluent disposal and land treatment intensifies the vegetation growth, which consumes the nutrients and reduces leakage to groundwater due to evapotranspiration.

5. **Use of Marginal Land:** Slow rate release through a self compensating emitter allows for on line control of actual flow with very high uniformity. These control functions

allow for the use of marginal land that is not permitted for any other disposal methods.

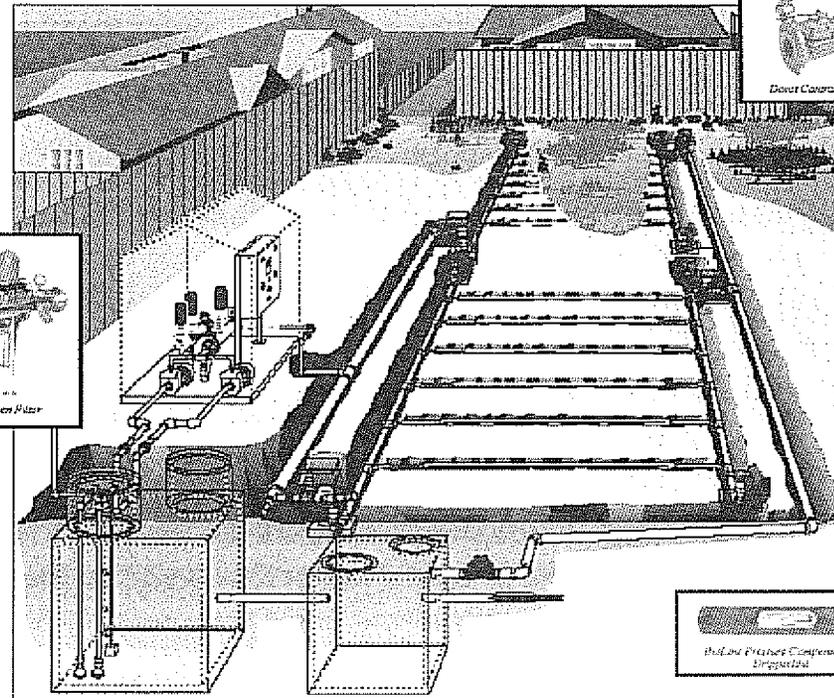
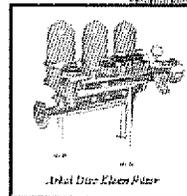
6. **Minimal Operator Dependency:** The use of a pressurized delivery system in conjunction with pressure compensating emitters allows for continuous on-line control of the actual flow and ongoing performance verification of the system. Automated network flushing minimizes operator dependency and increases system efficiency.

7. **Root Control:** Introduction of vegetation control chemicals uniformly through each emitter inhibits root intrusion into the system.

A disc filter's set is backwashed on a preset frequency and/or by sensing pressure differential through the filters. In a case where the pre-treatment is insufficient, a slow sand filter may be used in addition to a disc filter set.

4. **Pipes and Valves:** A drip soil absorption field is divided into zones, with only one zone being activated with each dose cycle. The delivery network includes A.R.L. air release valves that allow air to escape during the filling of the lines, and introducing air into the line at the end of each cycle.

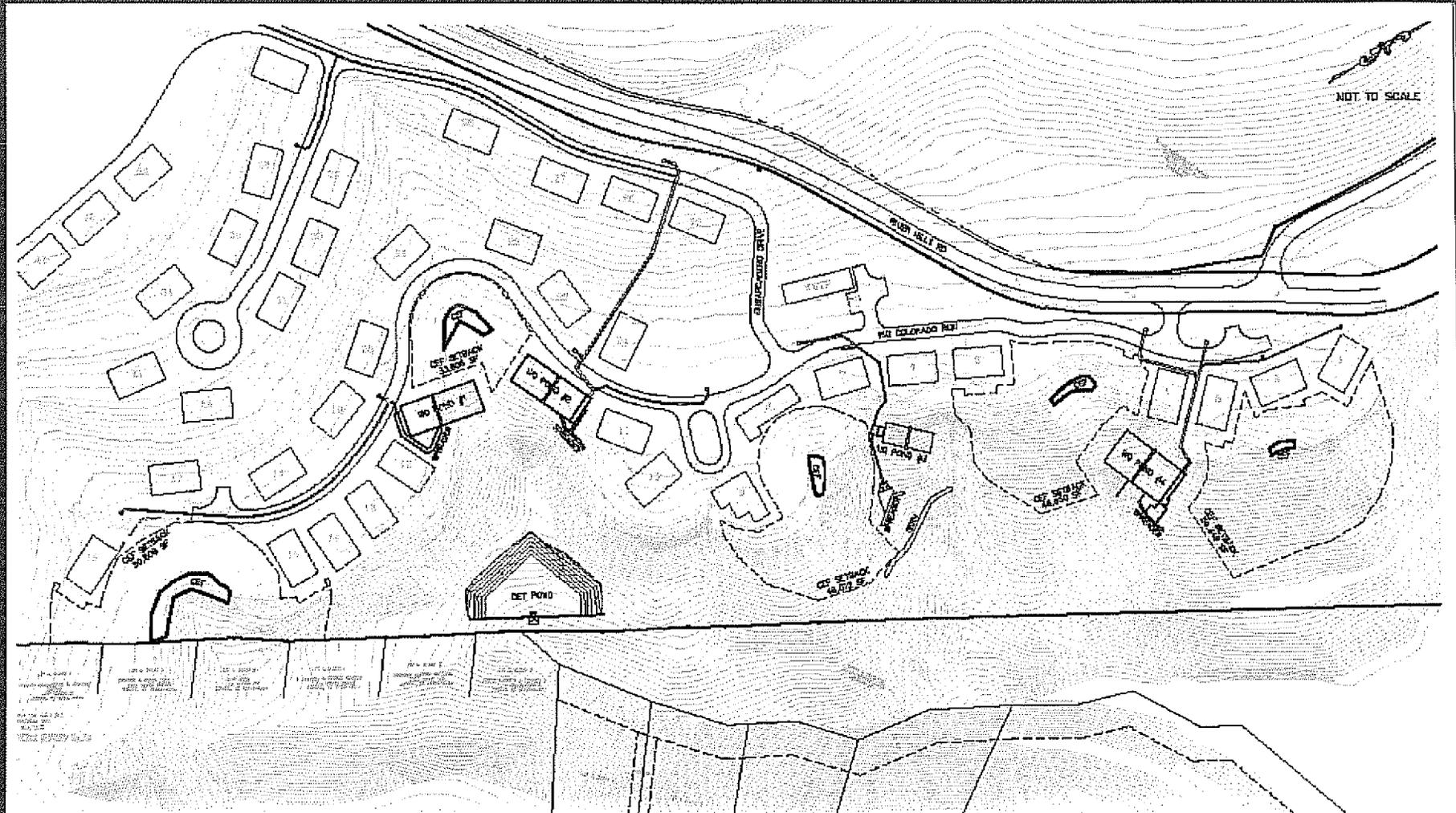
5. **Dripperline:** A drip soil absorption field consists of polyethylene tubing laterals (Bioline) installed in parallel lines within each zone. "Bioline" incorporates a sophisticated emitter welded inside the tube during extrusion. Emitter spacing is selected by the system designer. Each emitter incorporates an internal mechanism that discharges constant flow of 0.010 gallons per minute regardless of system pressure between 7 and 70 psi. Higher flow rate emitters are also available. Each emitter is impregnated with a biocide (Vinylzine™) to reduce slime sedimentation. The dripperline's distal end is connected to a collecting manifold allowing periodical line flushing. Bioline is generally installed subsurface at a depth of 6 to 20 inches.



Variance #3: Cut & Fill in Excess of Four Feet for Water Quality and Detention Ponds

- Due to placement of wastewater irrigation fields and units on the flattest portions of the site, to ensure safe wastewater effluent irrigation and minimize the amount of construction on slopes, the water quality and detention ponds must be located on slopes
- Proposed ponds are placed at the highest possible elevations within the 40% Buffer Zone to maximize overland flow and recharge in the undisturbed remainder of the 40% Buffer Zone
- The maximum amount of cut and fill for each pond is as shown on the following illustrations:

Pond Locations



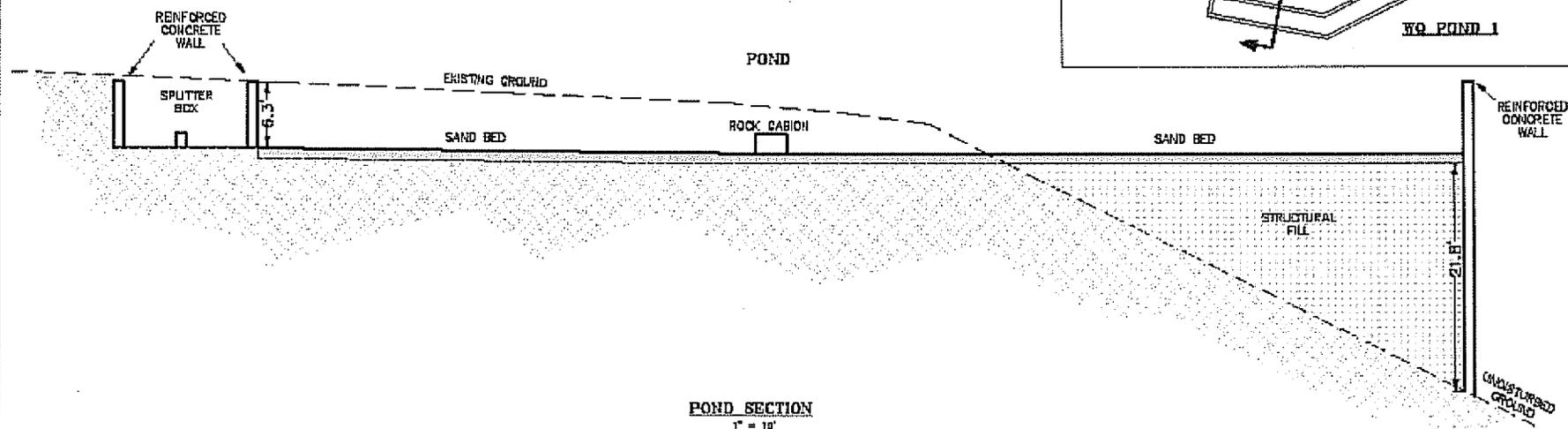
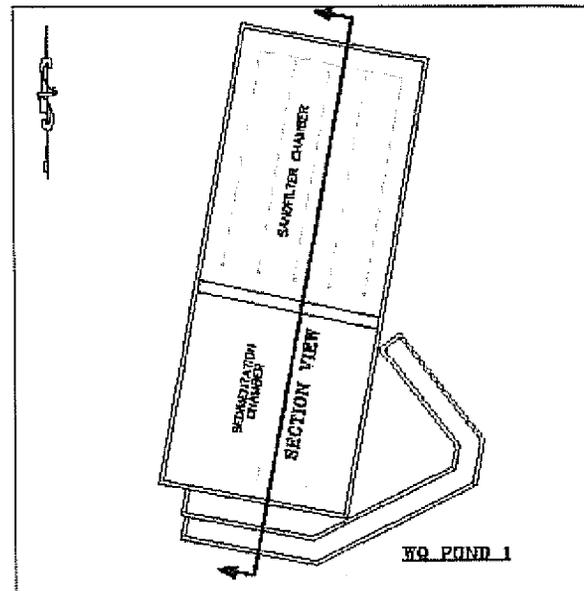
1. ALL POND AREAS SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE SHOWN ON THIS PLAN.
 2. ALL POND AREAS SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE SHOWN ON THIS PLAN.
 3. ALL POND AREAS SHALL BE CONSTRUCTED TO THE PROPOSED FINISH GRADE SHOWN ON THIS PLAN.
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EMBARCADERO - PROPOSED WATER QUALITY POND EXHIBIT	THE MOORE GROUP, INC.  ENGINEERING, SURVEYING & PLANNING 2000 DOWNEY BLVD SUITE 100 DOWNEY, CA 90241 (714) 952-1000	
	Drawn: _____ Checked: _____ Approved: _____ Date: _____	SHEET 1 NO. OF 5 SHEETS
POND & CEF LOCATIONS		

Water Quality Pond #1

EMBARCADERO
WQ POND CUT-FILL EXHIBIT
WATER QUALITY POND #1

MAX FILL: 24.15 FEET
MAX CUT: 7.20 FEET



POND SECTION
1" = 10'

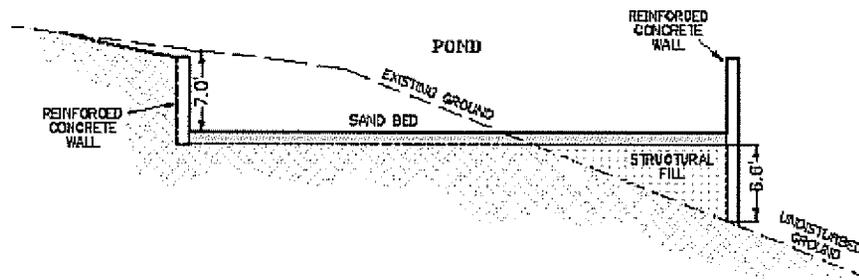
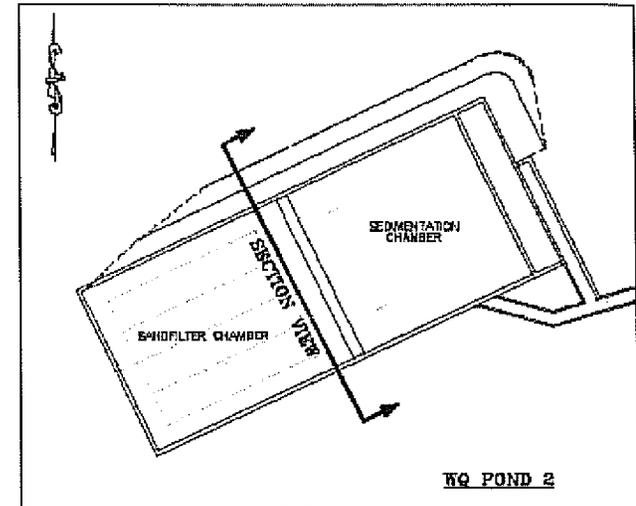
THE MOORE GROUP, INC.

ENGINEERING, SURVEYING & PLANNING
1000 CANTERBURY DR. PH. (512) 442-0177
AUSTIN TEXAS 78723 FAX (512) 442-7802

Water Quality Pond #2

EMBARCADERO
WQ POND CUT-FILL EXHIBIT
WATER QUALITY POND #2

MAX FILL: 16.0 FEET
MAX CUT: 7.0 FEET



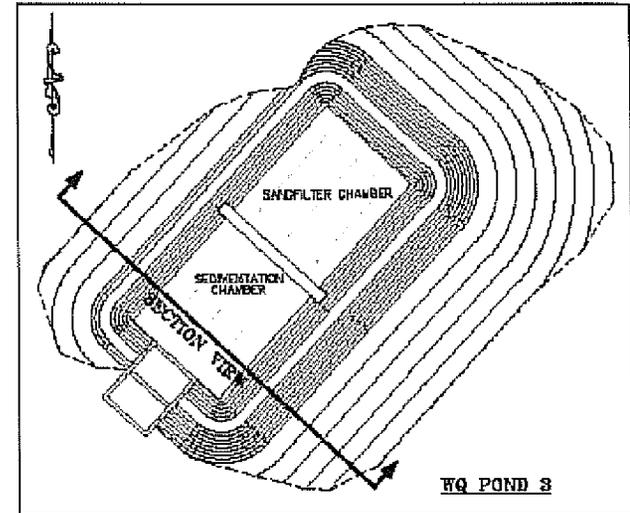
POND SECTION
1" = 10'

THE MOORE GROUP, INC.

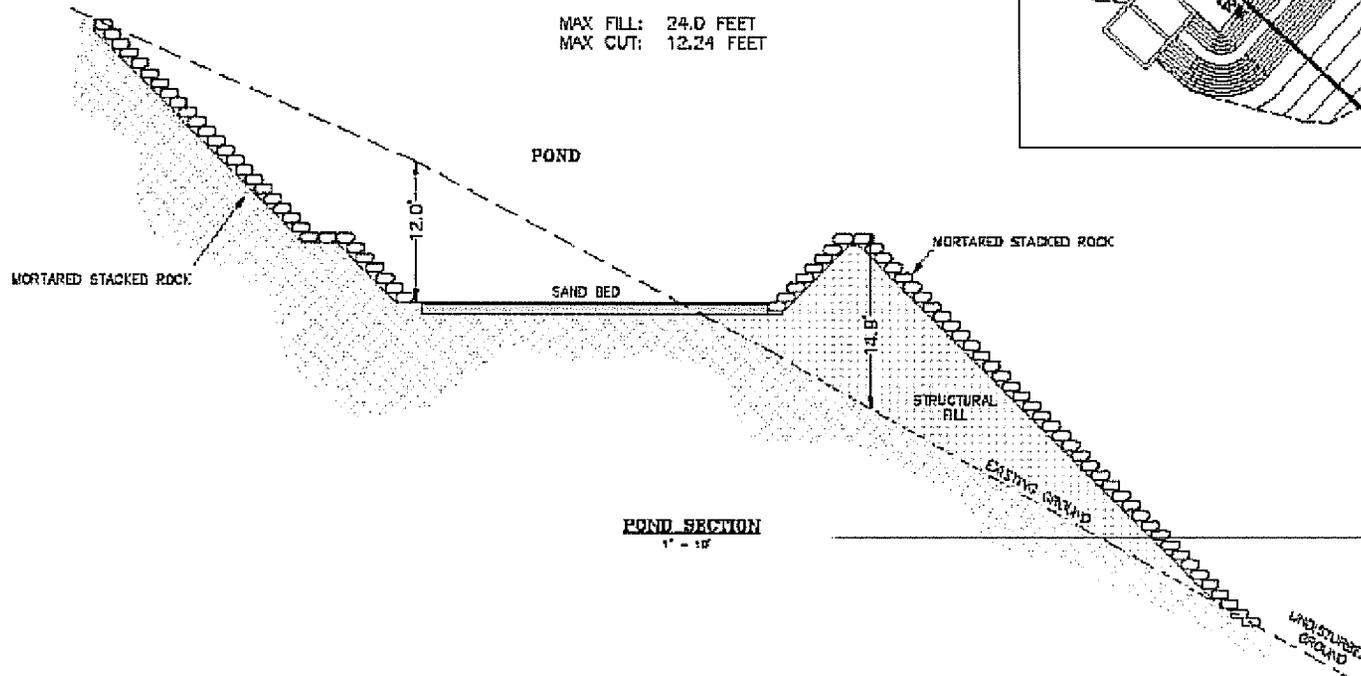
ENGINEERING, SURVEYING & PLANNING
1000 Duerrwade Dr. P.O. Box 442-0377
North Texas 75032 Fax: (972) 442-7807

Water Quality Pond #3

EMBARCADERO
WQ POND CUT-FILL EXHIBIT
WATER QUALITY POND #3



MAX FILL: 24.0 FEET
MAX CUT: 12.24 FEET



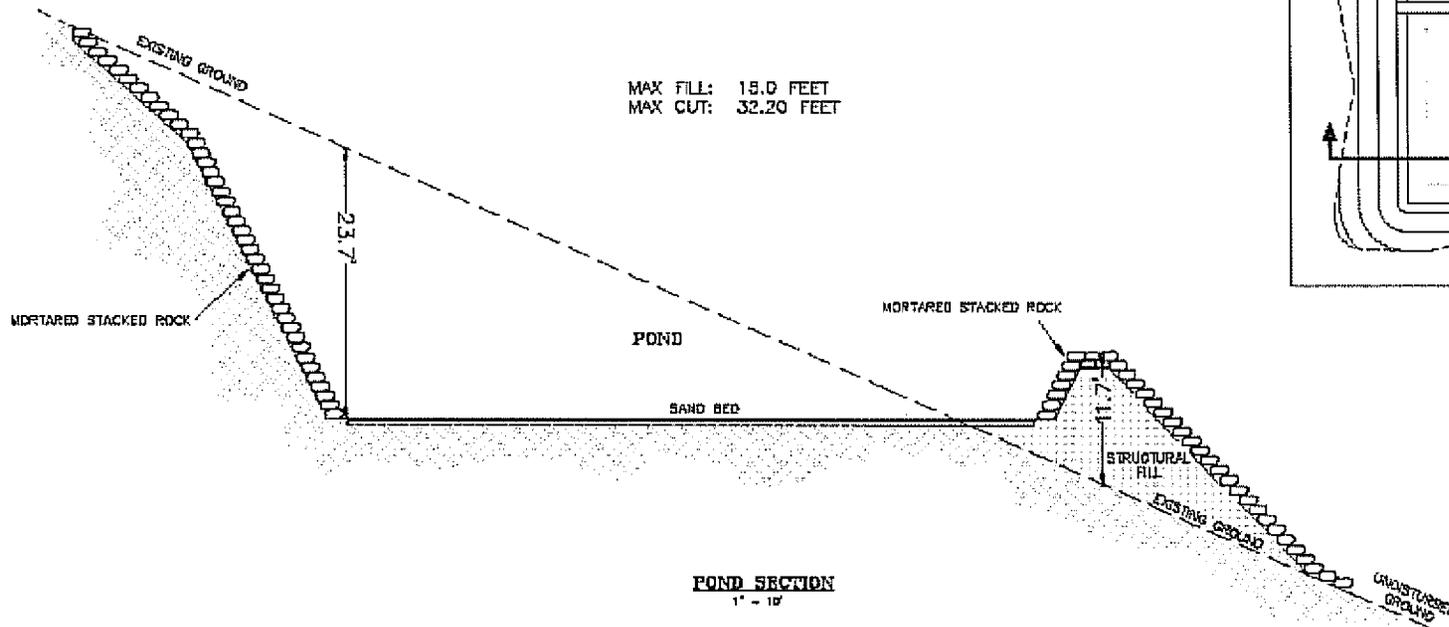
POND SECTION
1" = 10'

THE MOORE GROUP, INC.

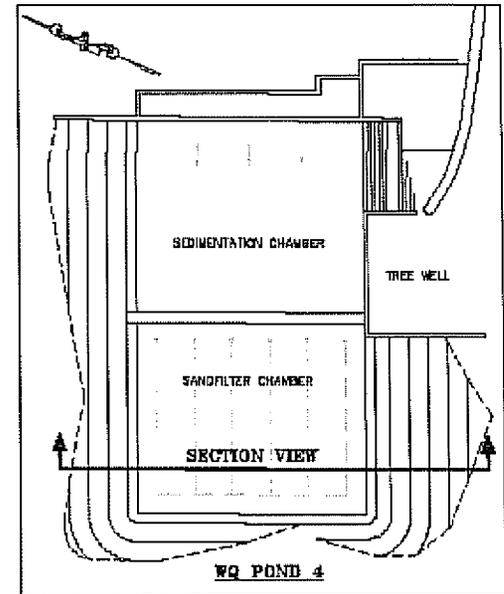
ENGINEERING, SURVEYING & PLANNING
1000 Commerce Dr. Ph. (512) 442-8327
Austin, Texas 78703 Fax. (512) 442-7907

Water Quality Pond #4

EMBARCADERO WQ POND CUT-FILL EXHIBIT WATER QUALITY POND #4



MAX FILL: 18.0 FEET
MAX CUT: 32.20 FEET



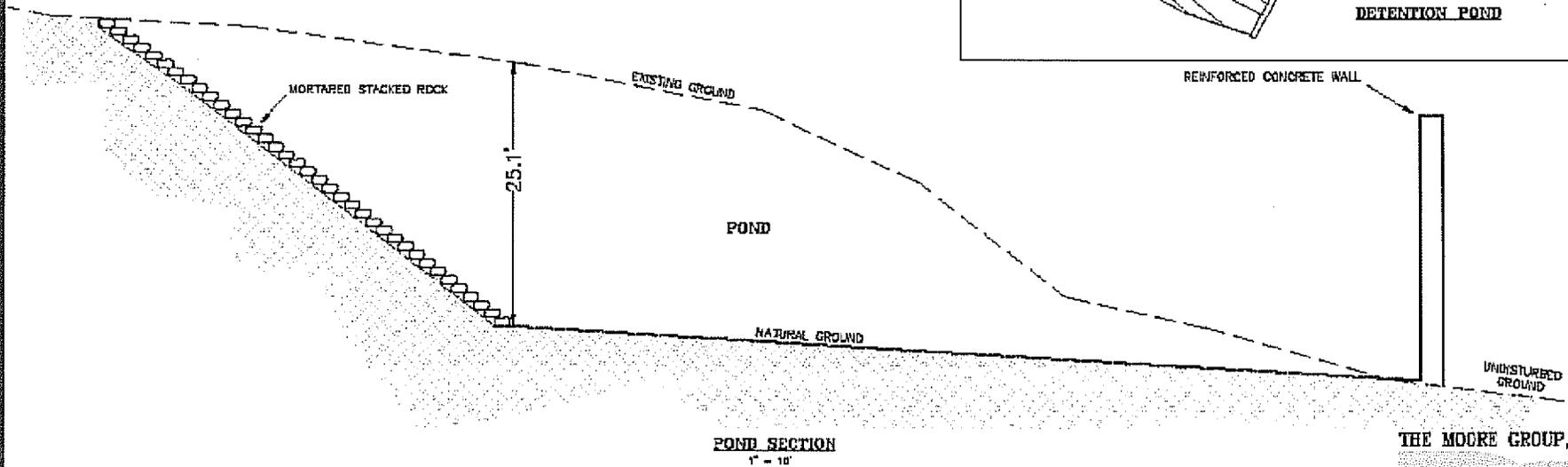
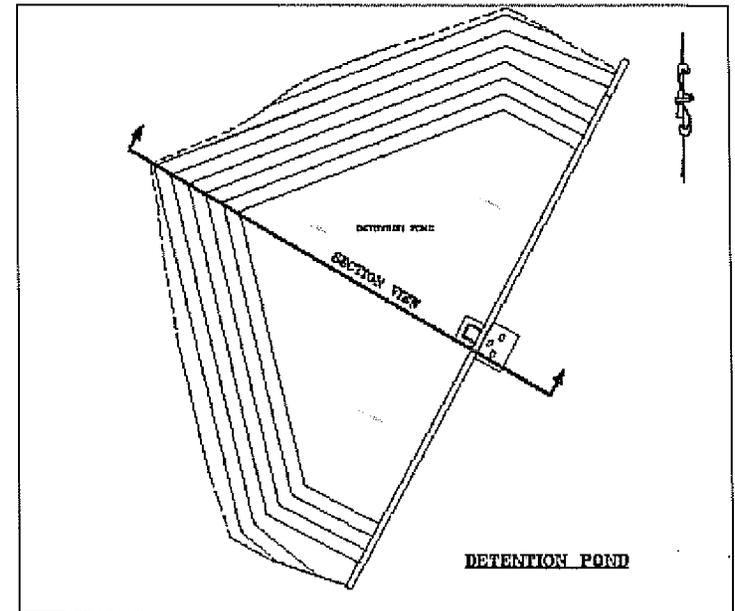
THE MOORE GROUP, INC.

ENGINEERING, SURVEYING & PLANNING
10000 CAMBRIDGE DR. PH. (510) 443-0377
ACRBLD, TEXAS 75723 FAX (510) 443-7802

Detention Pond

EMBARCADERO DETENTION POND CUT-FILL EXHIBIT

MAX FILL: NO FILL
MAX CUT: 25.10 FEET



THE MOORE GROUP, INC.

ENGINEERING, SURVEYING & PLANNING
1000 Commerce St. Ph. (512) 442-3817
Austin, Texas 78722 Fax: (512) 442-7802

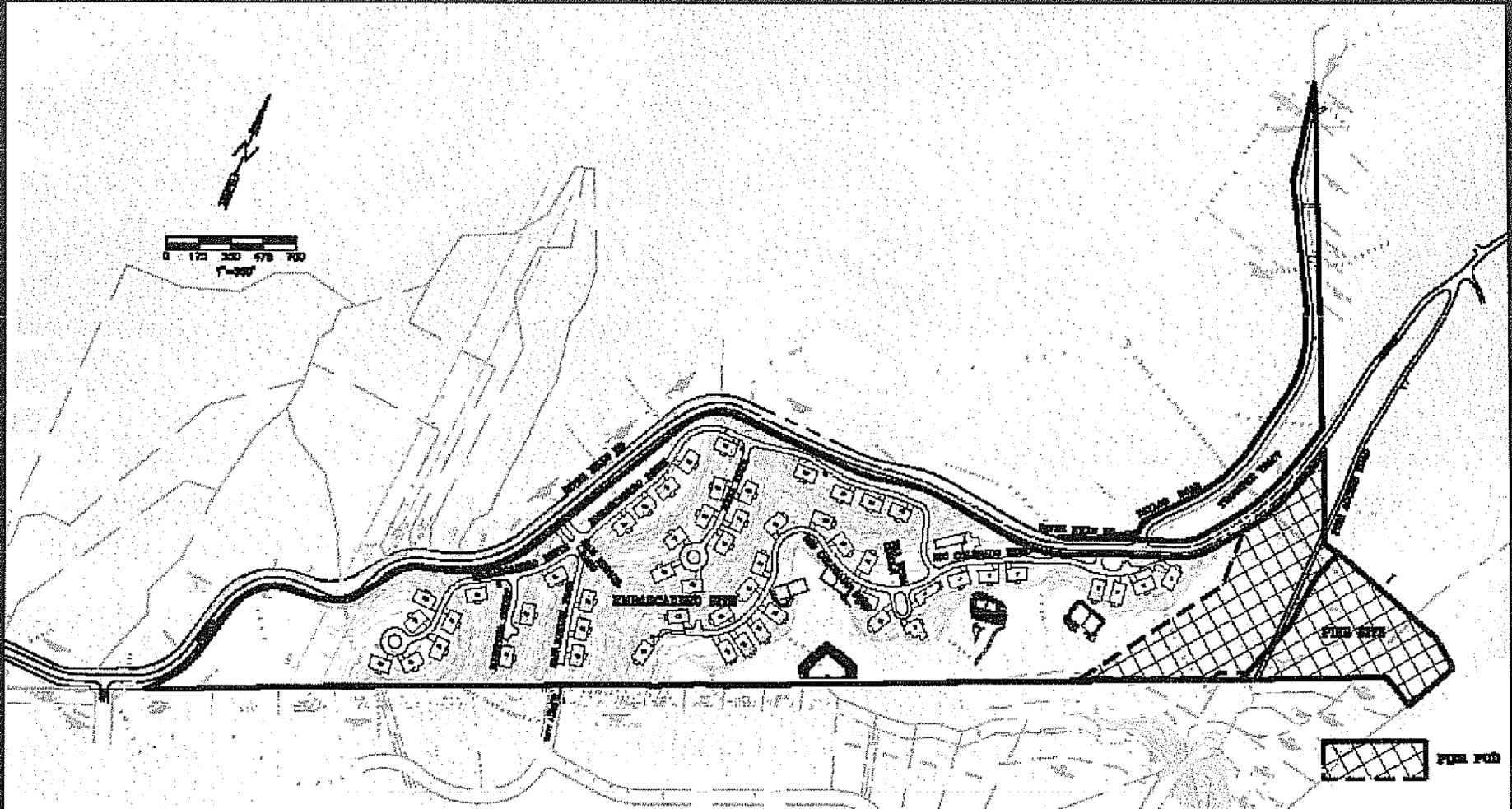
Staging of Construction

1. Install temporary barrier measures including Silt Fence, Mulch Tubes and Rock Berms. These must be located downslope of all areas that will be disturbed. Redundant controls will be used where flows concentrate. The temporary barrier measures must be continually maintained throughout construction.
2. Construct temporary construction access roads. In order to minimize areas disturbed by construction equipment, access roads will be provided to the proposed ponds. No other access for construction equipment will be allowed. The roads will help capture soil from tracked equipment and wheels of construction equipment and be built similar to a Stabilized Construction Entrance, per the standard City of Austin detail for pond access roads.
3. Construct Temporary Sediment Basins. Downslope of proposed earthwork, according to the criteria of the City of Austin Environmental Criteria Manual, Sediment Basins will be constructed. These will capture silt from disturbed areas located upslope. The Temporary Sediment Basins must be continually maintained throughout construction.
4. Construct Detention Pond. The detention pond is located downslope of the majority of the site and will further act as a sediment trap.

Staging of Construction

5. Construct the Water Quality Ponds to an interim level to act as sediment traps prior to construction of the proposed roads, utilities and homes.
6. Begin Site Road and Utility construction. Continue to maintain the controls described above to keep accumulations of sediment from building up. Install erosion control mat on disturbed slope areas as shown in the plans.
7. When Site Roads are complete to an extent that will mitigate disturbance from home construction, home construction can begin. Begin permanent erosion control measures / seeding / erosion control mat as soon as possible to stabilize all disturbed areas.
8. When homes are complete, continue to stabilize disturbed areas with seeding and growing grass. Continue to maintain all controls. Finish out the Water Quality Ponds.
9. When the site is stabilized to City of Austin standards, remove the temporary controls. The rock berms and mulch tubes may remain in place permanently at the discretion of the City of Austin environmental inspector and the engineer.

Embarcadero / Pier Relationship



<p>EMBARCADERO</p>	<p>THE MOORE GROUP, INC. Consulting Engineers Land Planning Land Development Services 1800 Commerce St. (412) 448-0377 Austin, Texas 78763 For (512) 442-7492</p>								
<p>EMBARCADERO SITE / PIER SITE / PIER P.U.D. EXHIBIT</p>	<table border="1"> <tr> <td data-bbox="1732 1421 1848 1445"> Drawn: <u>MSJ</u> </td> <td data-bbox="1858 1421 1942 1445"> ITEM </td> </tr> <tr> <td data-bbox="1732 1445 1848 1469"> Checked: <u>EFM</u> </td> <td data-bbox="1858 1445 1942 1469"> 5 </td> </tr> <tr> <td data-bbox="1732 1469 1848 1494"> Approved: <u>EFM</u> </td> <td></td> </tr> <tr> <td data-bbox="1732 1494 1848 1518"> Date: <u>10/24/97</u> </td> <td></td> </tr> </table>	Drawn: <u>MSJ</u>	ITEM	Checked: <u>EFM</u>	5	Approved: <u>EFM</u>		Date: <u>10/24/97</u>	
Drawn: <u>MSJ</u>	ITEM								
Checked: <u>EFM</u>	5								
Approved: <u>EFM</u>									
Date: <u>10/24/97</u>									



ENVIRONMENTAL BOARD MOTION 111407-B1

Date: November 14, 2007

Subject: Embarcadero SP-06-0665D

Motioned By: Phil Moncada

Seconded by: John Dupnik

Recommendation

The Environmental Board recommends **disapproval** of a variance request to Land Development Code 25-8-302(B) 1) To allow construction on slopes greater than 25% and Land Development Code 25-8-361(E) 2) To reduce the wastewater treatment by land application requirement of 7,000 square feet per LUE, to 5, 000 square feet per Living Unit Equivalent and Land Development Code Section 25-8-341/342 3) To allow cut/fill greater than 4 feet.

Rationale

The Environmental Board has not been provided adequate information regarding water quality structures to assess safety concerns. There are zoning questions that may change impervious cover and site layout. There are issues with access and maintenance of ponds. There are also concerns about on-site wastewater treatment in the City's water supply.

Vote 6-1-0-0

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

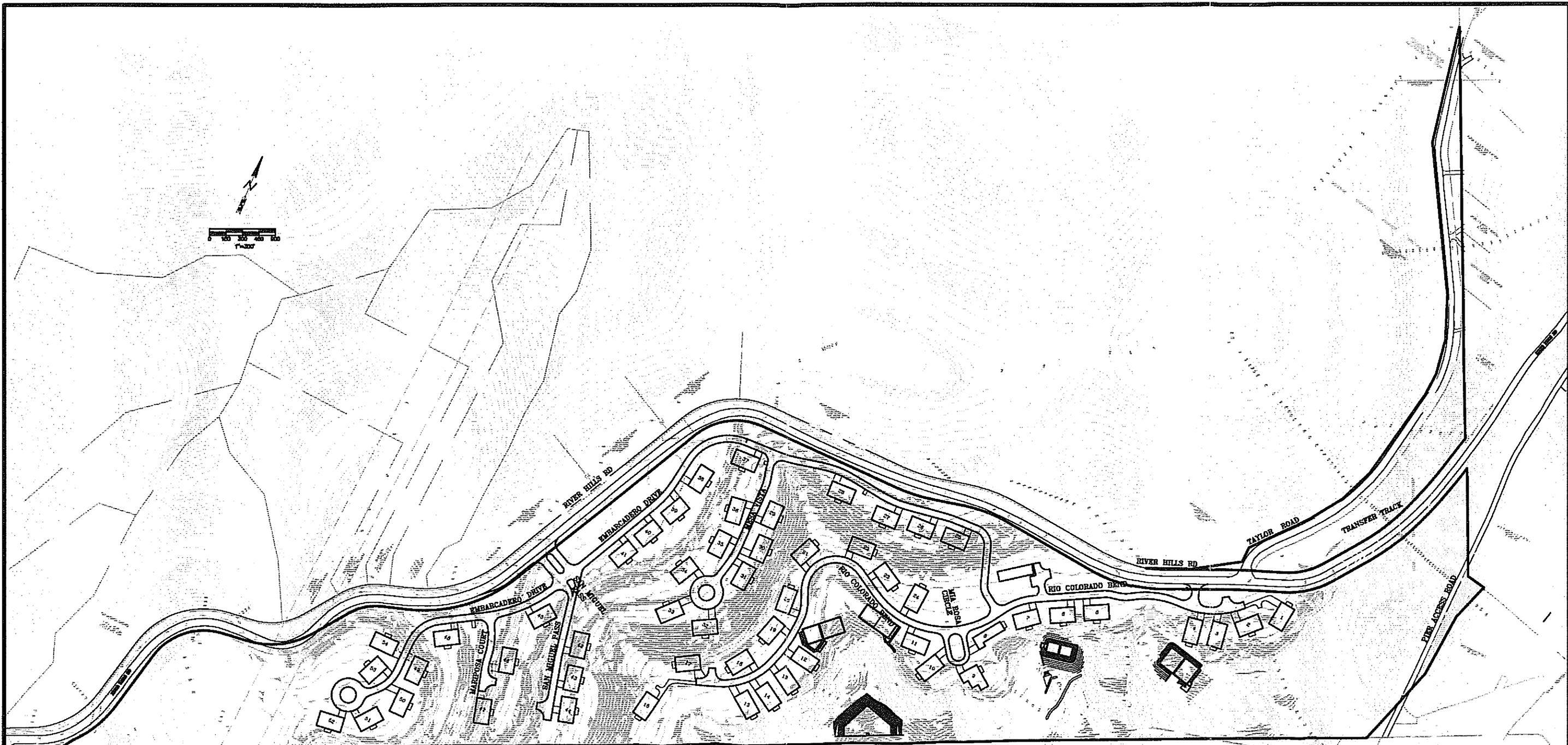
Against:

Abstain: Jon Beall

Absent:

Approved By:


Dave Anderson P.E., CFMP[®]
Environmental Board Chair



BUILDING OVER SLOPE AREA > 25% = 0.955 ACRES

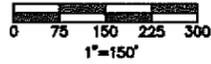
EMBARCADERO

CONSTRUCTION ON
SLOPES > 25% EXHIBIT
CURRENT PLAN

THE MOORE GROUP, INC.
Consulting Engineers
Land Planning
Land Development Services
1000 Cuernavaca Dr. (512) 442-0377
Austin, Texas 78733 Fax (512) 442-7807

Drawn: MSM
Checked: ECM
Approved: ECM
Date: 10/24/07

ITEM
1



LEGEND

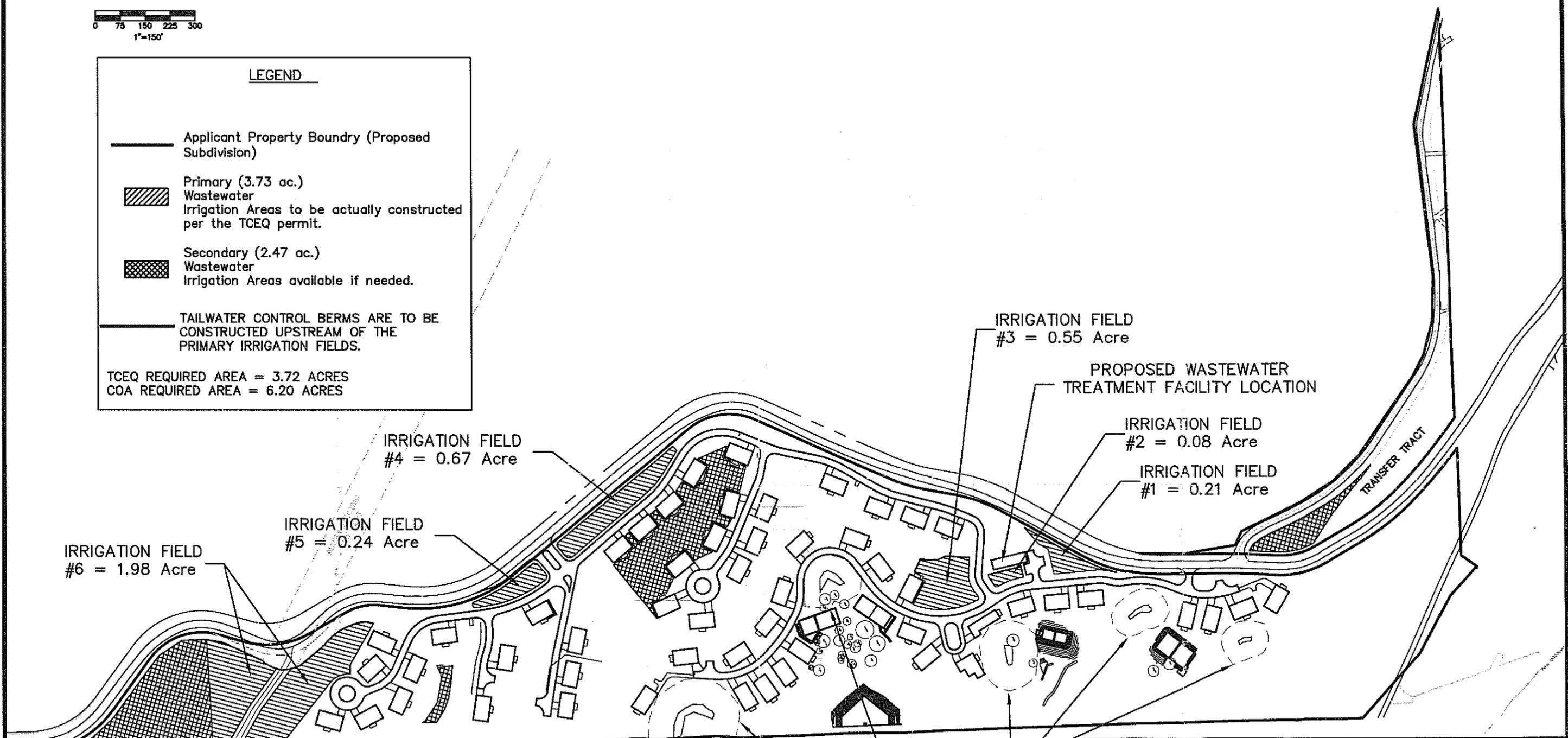
— Applicant Property Boundry (Proposed Subdivision)

 Primary (3.73 ac.) Wastewater Irrigation Areas to be actually constructed per the TCEQ permit.

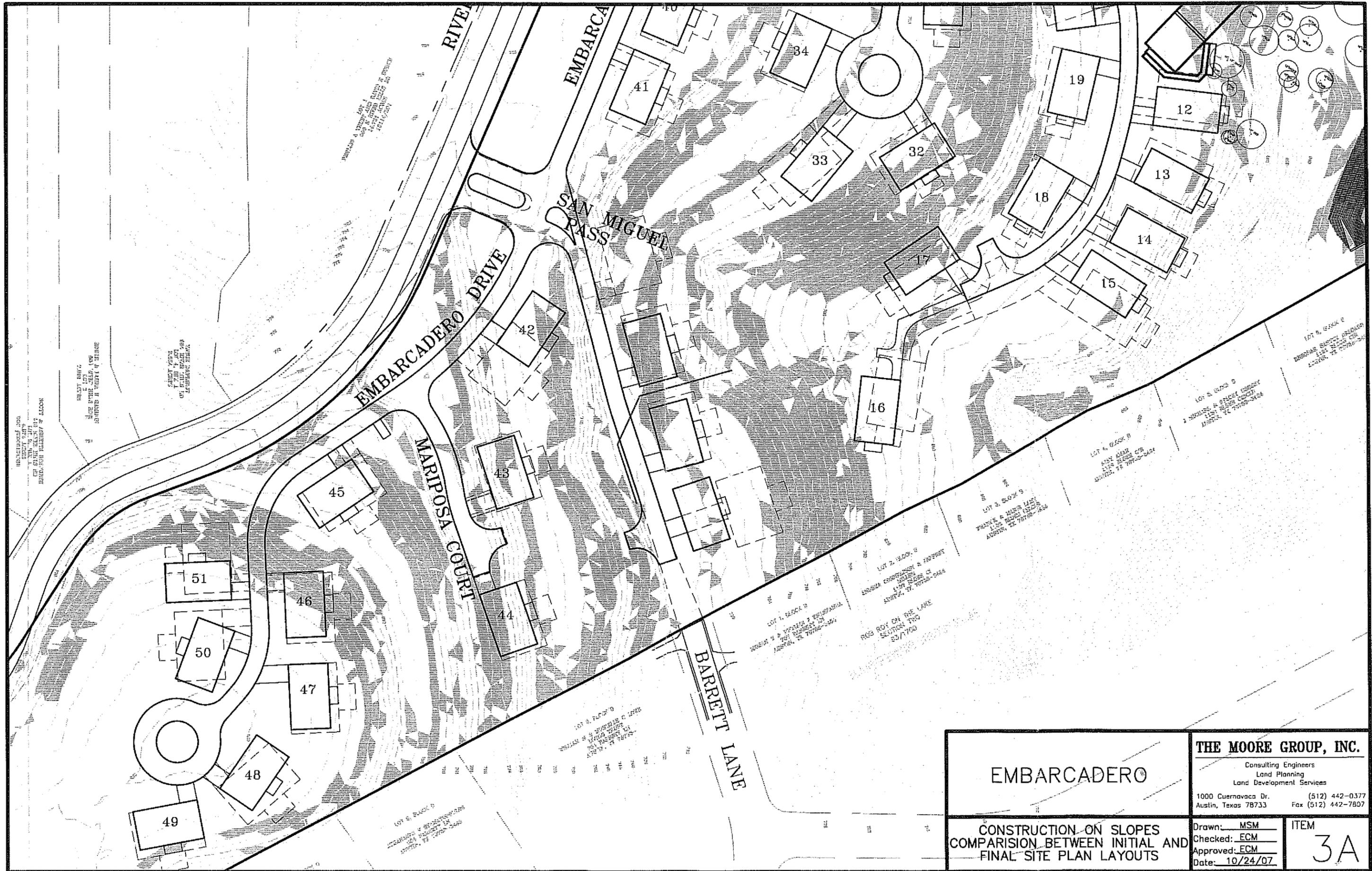
 Secondary (2.47 ac.) Wastewater Irrigation Areas available if needed.

— TAILWATER CONTROL BERMS ARE TO BE CONSTRUCTED UPSTREAM OF THE PRIMARY IRRIGATION FIELDS.

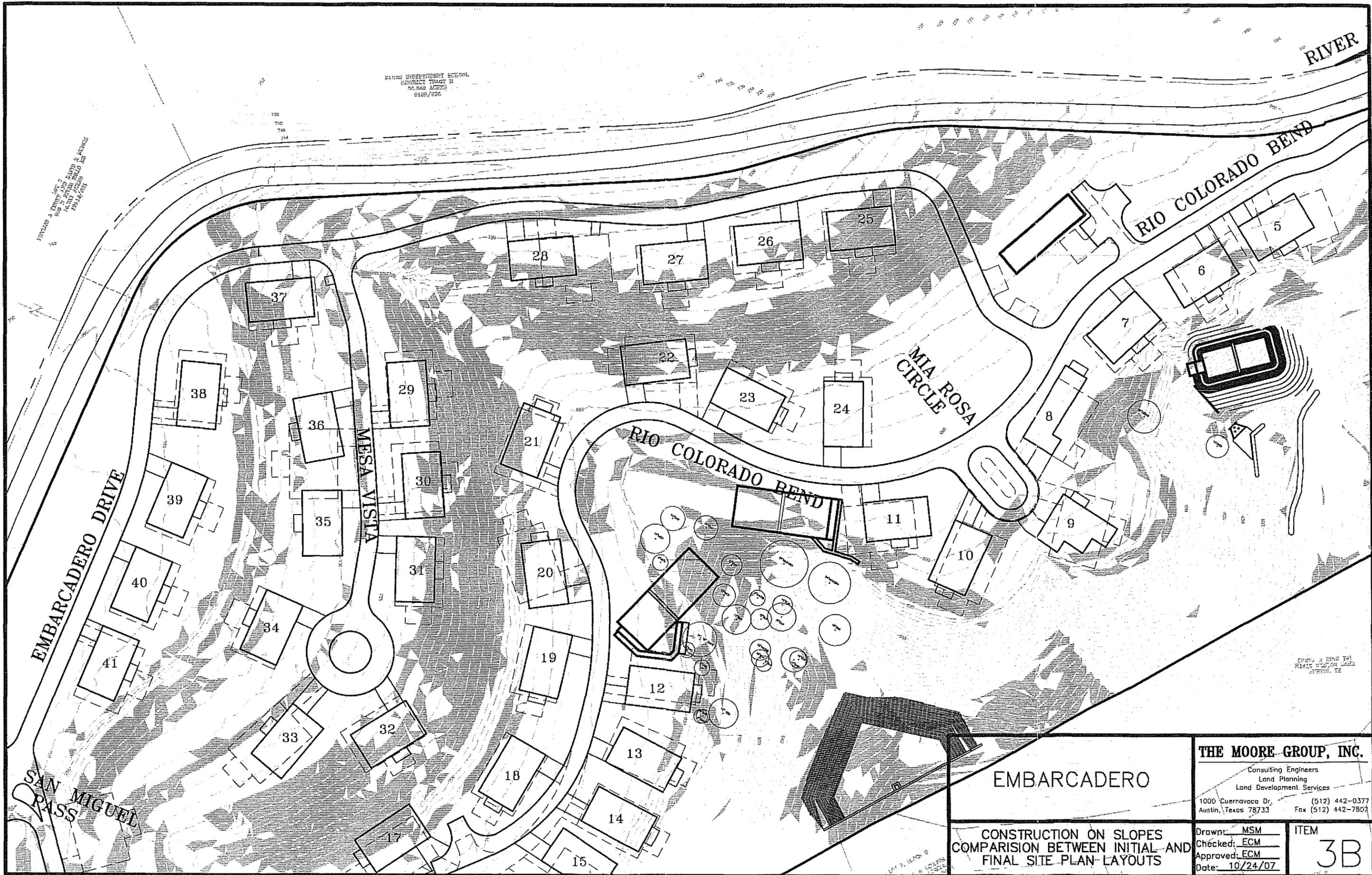
TCEQ REQUIRED AREA = 3.72 ACRES
COA REQUIRED AREA = 6.20 ACRES



<h2>EMBARCADERO</h2>		<p>THE MOORE GROUP, INC.</p> <p>Consulting Engineers Land Planning Land Development Services</p> <p>1000 Cuernavaca Dr. (512) 442-0377 Austin, Texas 78733 Fax (512) 442-7807</p>	
<p>WASTEWATER TREATMENT PLANT IRRIGATION FIELDS AND CEF SETBACKS EXHIBIT</p>		<p>Drawn: <u>MSM</u> Checked: <u>ECM</u> Approved: <u>ECM</u> Date: <u>10/24/07</u></p>	<p>ITEM</p> <p>2</p>



EMBARCADERO		THE MOORE GROUP, INC.	
		Consulting Engineers Land Planning Land Development Services	
		1000 Cuernavaca Dr. (512) 442-0377 Austin, Texas 78733 Fax (512) 442-7807	
CONSTRUCTION ON SLOPES COMPARISON BETWEEN INITIAL AND FINAL SITE PLAN LAYOUTS		Drawn: <u>MSM</u>	ITEM
		Checked: <u>ECM</u>	3A
		Approved: <u>ECM</u>	
		Date: <u>10/24/07</u>	



RANGE ELEMENTARY SCHOOL
REVERTS TRACT II
NO ROAD ACCESS
01/24/06

APPROX. 1.5% SLOPE
AND 2% SLOPE
AND 3% SLOPE
AND 4% SLOPE
AND 5% SLOPE
AND 6% SLOPE
AND 7% SLOPE
AND 8% SLOPE
AND 9% SLOPE
AND 10% SLOPE

Check with the
Platting Division
Austin, TX

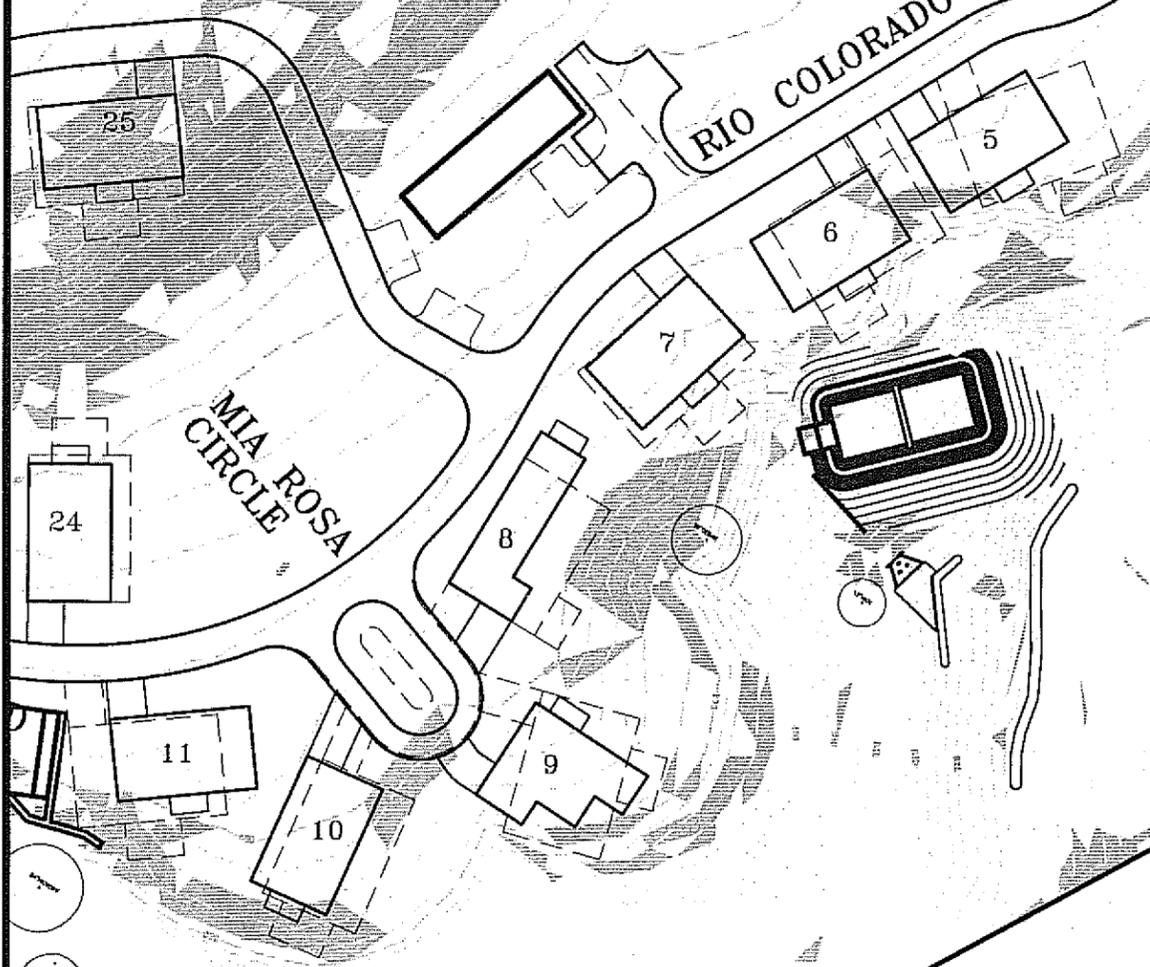
STATE ENGINEERING BOARD
EXPIRES 09/01/08
04240 JAMES H.
04240/031

TAYLOR ROAD
TRANSFER TRACT

RIVER HILLS RD

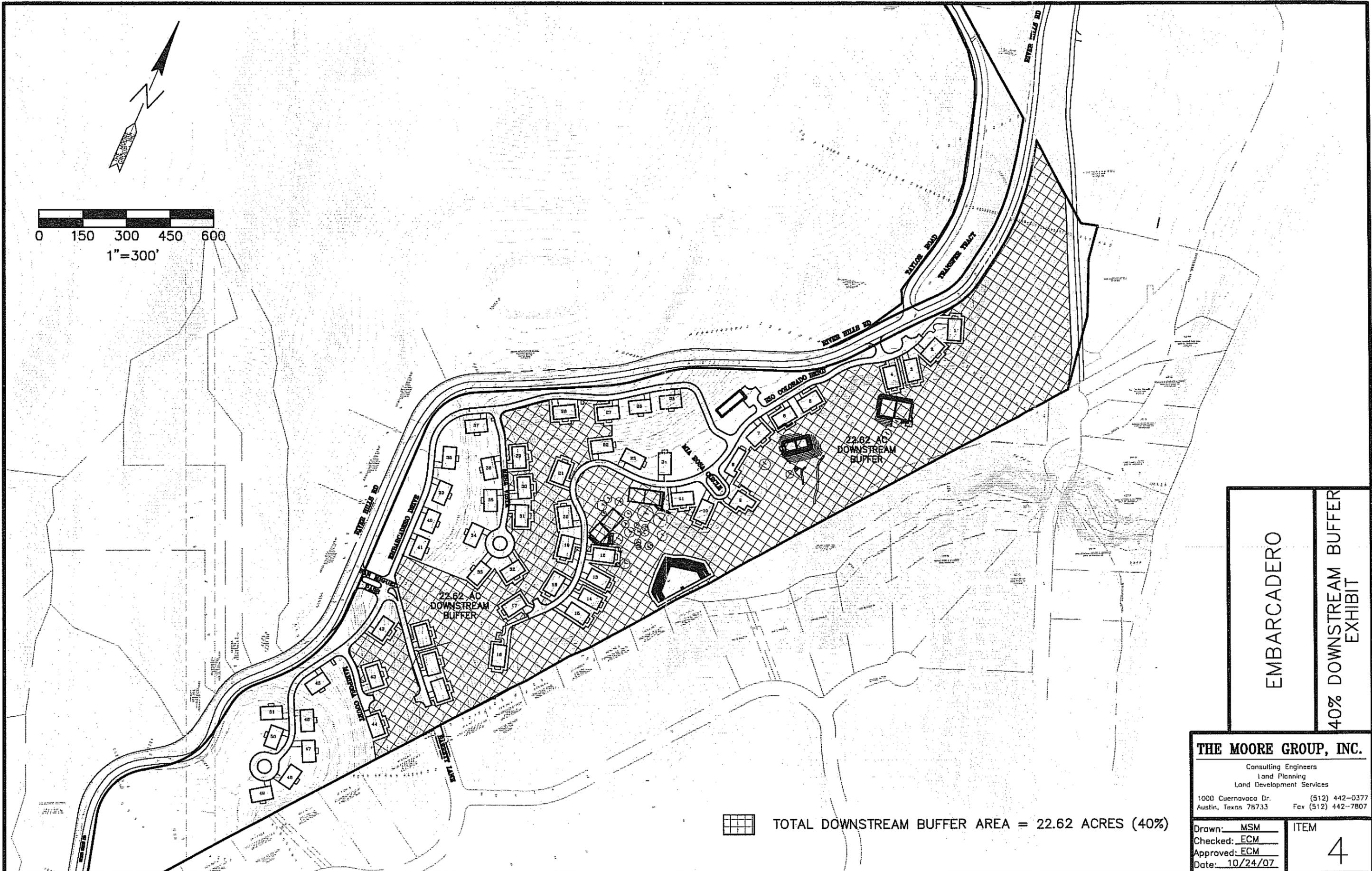
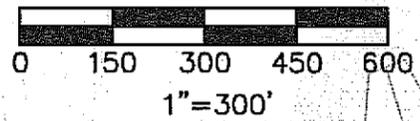
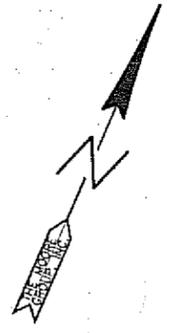
RIO COLORADO BEND

MIA ROSA
CIRCLE



EMBARCADERO	THE MOORE GROUP, INC. Consulting Engineers Land Planning Landscape Development Services 1000 Cuernavaca Dr. Austin, Texas 78733 (512) 442-0377 Fax (512) 442-7807	
	CONSTRUCTION ON SLOPES COMPARISON BETWEEN INITIAL AND FINAL SITE PLAN LAYOUTS	Drawn: MSM Checked: ECM Approved: ECM Date: 10/24/07

ITEM
30



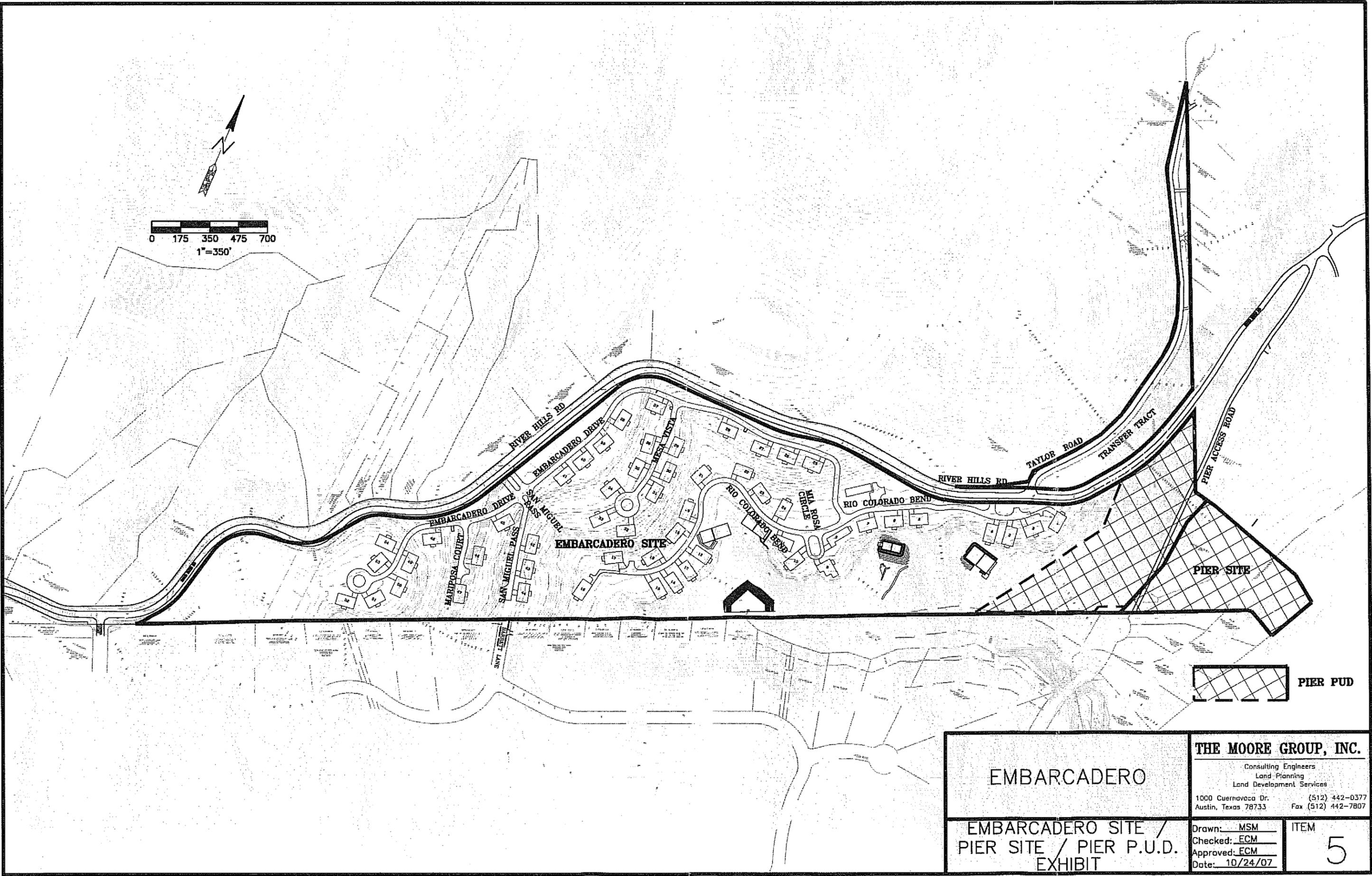
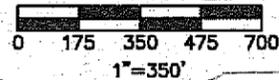
EMBARCADERO
40% DOWNSTREAM BUFFER
EXHIBIT

THE MOORE GROUP, INC.

Consulting Engineers
Land Planning
Land Development Services
1000 Cuernavaca Dr. (512) 442-0377
Austin, Texas 78733 Fax (512) 442-7807

Drawn: MSM
Checked: ECM
Approved: ECM
Date: 10/24/07

ITEM
4

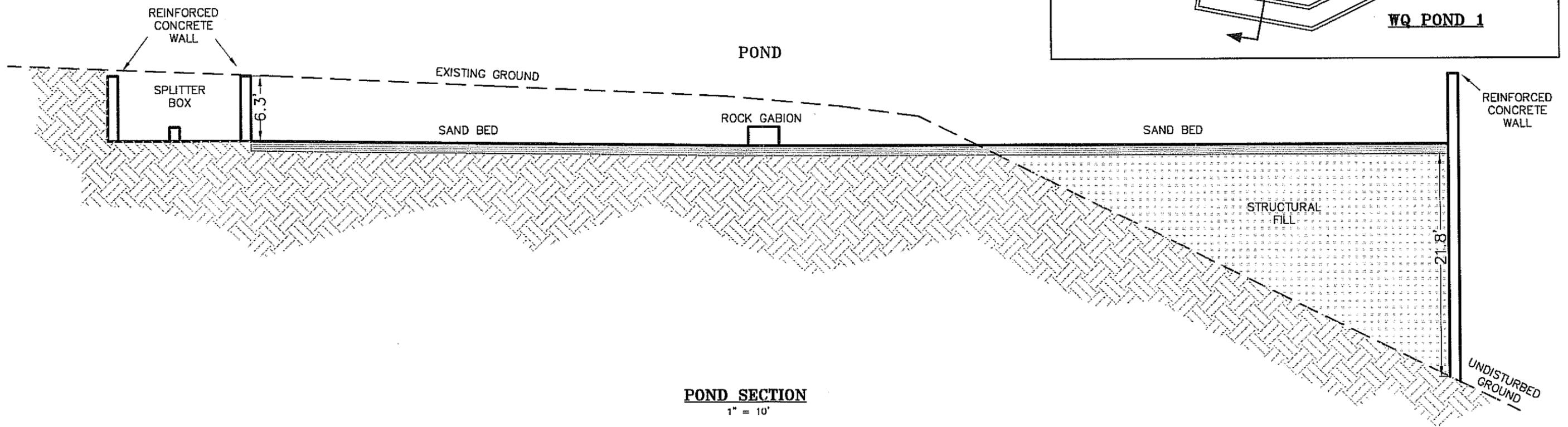
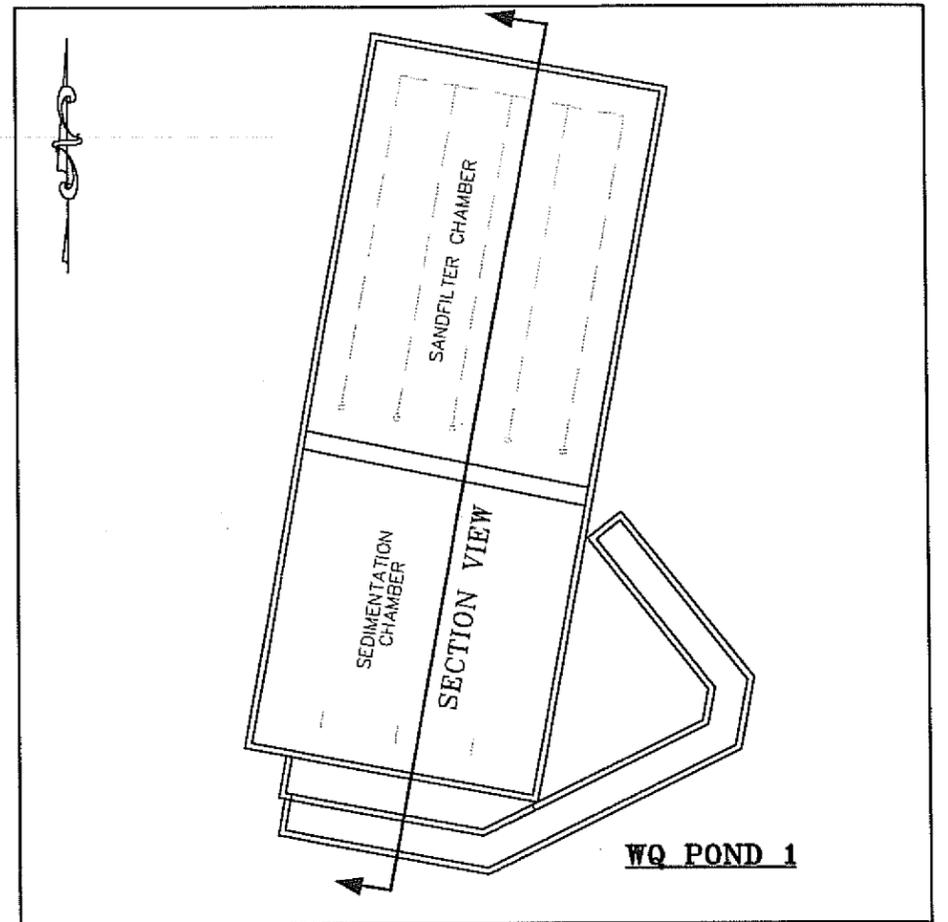


 PIER PUD

EMBARCADERO		THE MOORE GROUP, INC.	
		Consulting Engineers Land Planning Land Development Services	
		1000 Cuernavaca Dr. (512) 442-0377 Austin, Texas 78733 Fax (512) 442-7807	
EMBARCADERO SITE / PIER SITE / PIER P.U.D. EXHIBIT		Drawn: <u>MSM</u> Checked: <u>ECM</u> Approved: <u>ECM</u> Date: <u>10/24/07</u>	ITEM 5

**EMBARCADERO
WQ POND CUT-FILL EXHIBIT
WATER QUALITY POND #1**

MAX FILL: 24.15 FEET
MAX CUT: 7.20 FEET



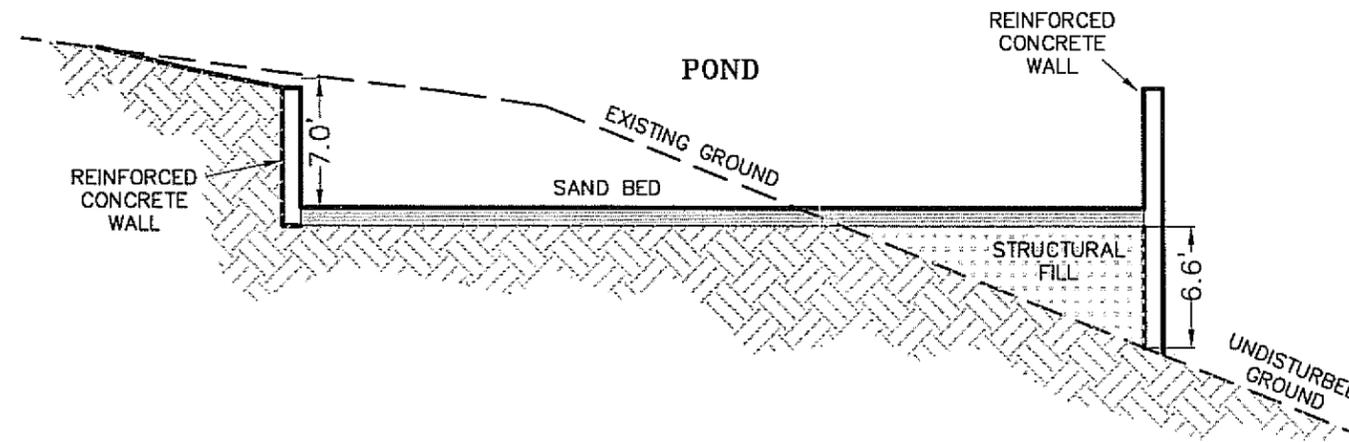
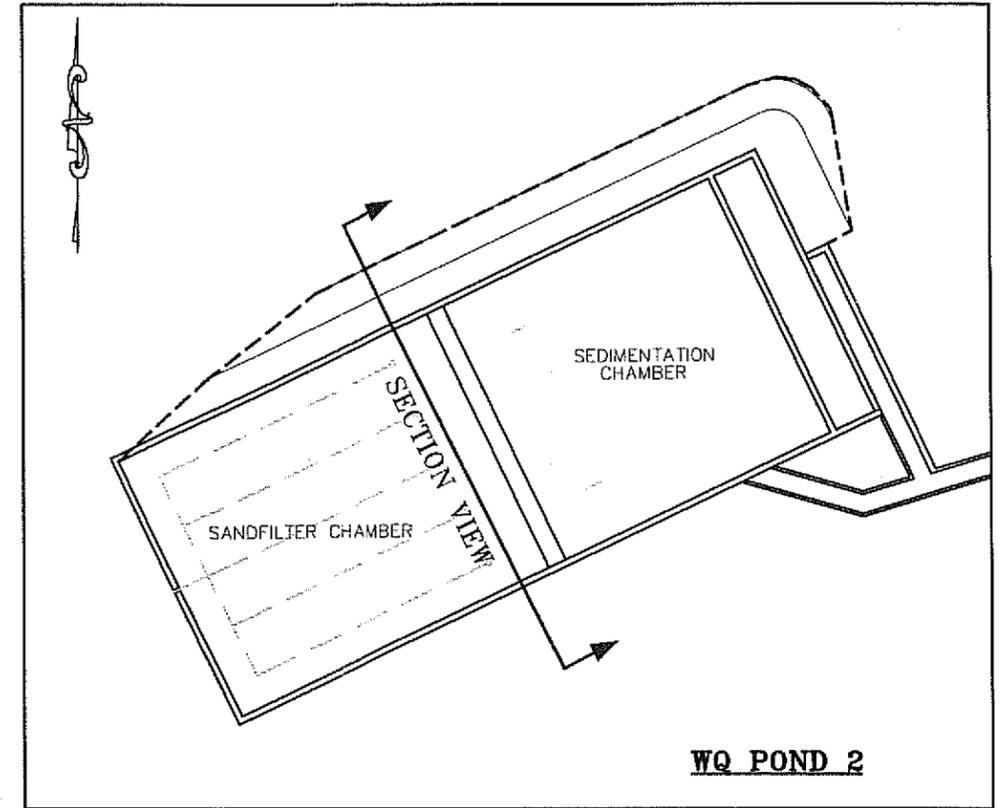
POND SECTION
1" = 10'

P:\05-11B Embarcadero\Dwg\Const Plans\Exhibits\Board & Commission Cut-Fill Exhibits

THE MOORE GROUP, INC.
ENGINEERING, SURVEYING & PLANNING
1000 Cuernavaca Dr. Ph. (512) 442-0377
Austin, Texas 78733 Fax (512) 442-7807

EMBARCADERO
 WQ POND CUT-FILL EXHIBIT
 WATER QUALITY POND #2

MAX FILL: 16.0 FEET
 MAX CUT: 7.0 FEET



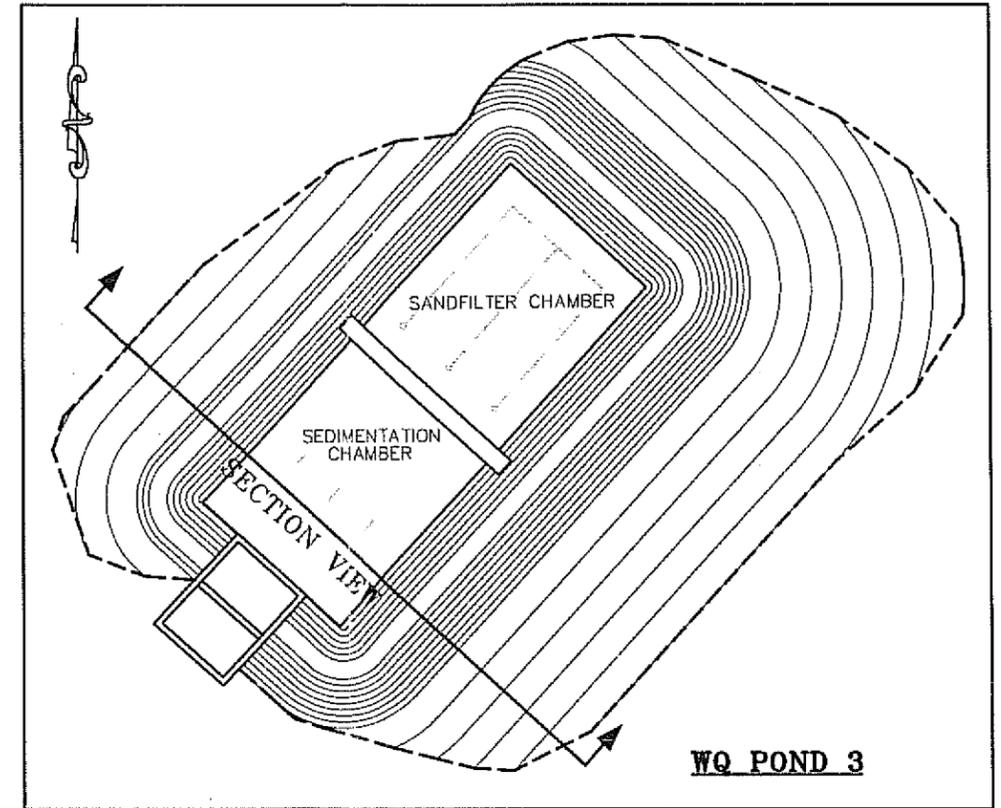
POND SECTION
 1" = 10'

P:\05-118 Embarcadero\Dwg\Const Plans\Exhibits\Board & Commission Cut-Fill Exhibits

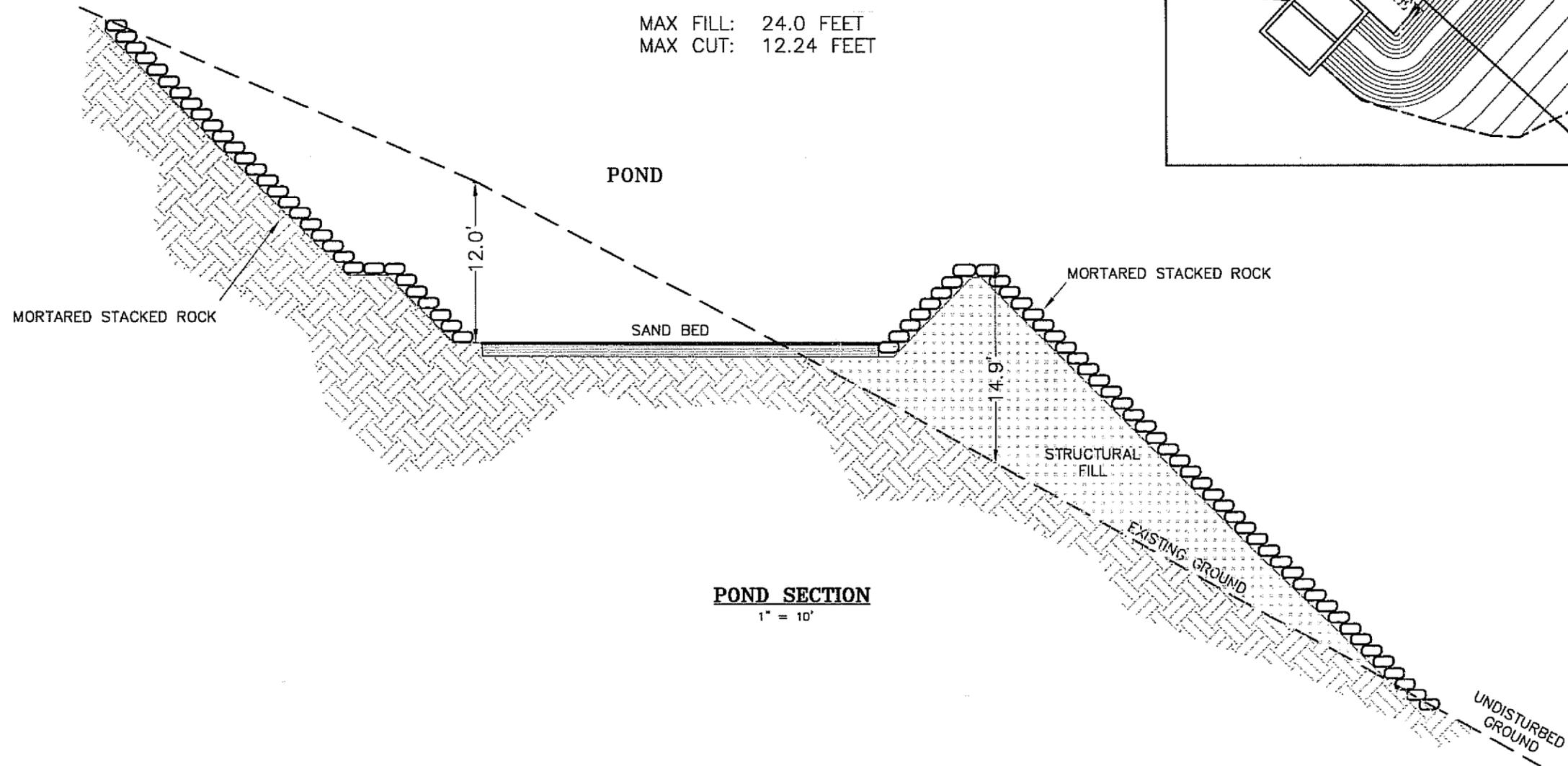
THE MOORE GROUP, INC.

ENGINEERING, SURVEYING & PLANNING
 1000 Cuernavaca Dr. Ph. (512) 442-0377
 Austin, Texas 78733 Fax (512) 442-7807

EMBARCADERO
 WQ POND CUT-FILL EXHIBIT
 WATER QUALITY POND #3



MAX FILL: 24.0 FEET
 MAX CUT: 12.24 FEET



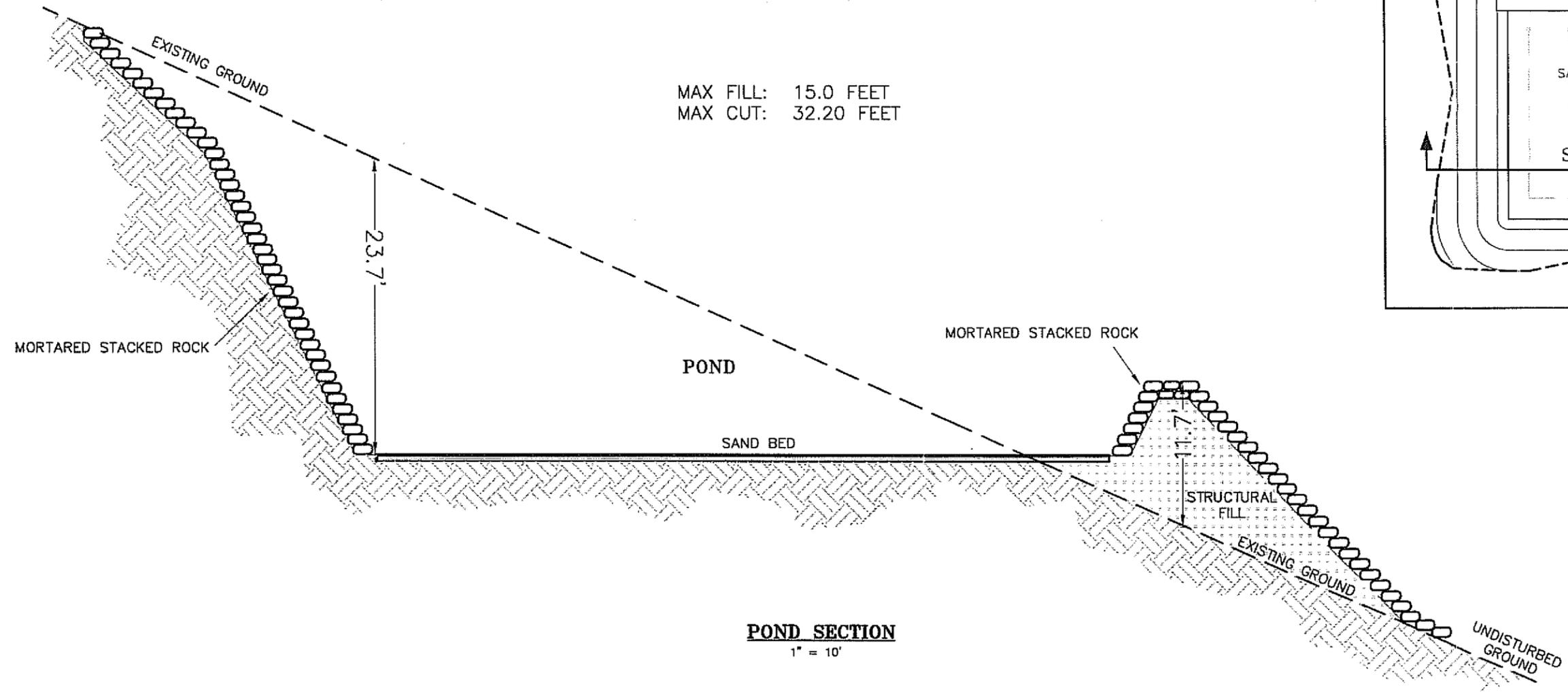
POND SECTION
 1" = 10'

P:\05-118 Embarcadero\Dwg\Const Plans\Exhibits\Board & Commission Cut-Fill Exhibits

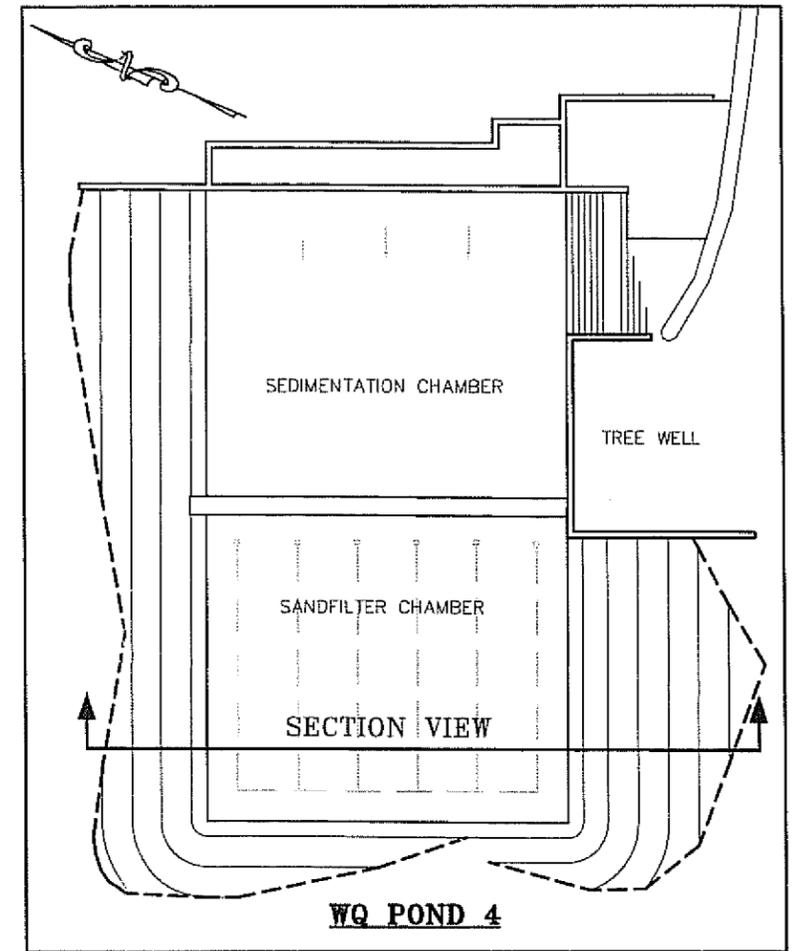
THE MOORE GROUP, INC.

ENGINEERING, SURVEYING & PLANNING
 1000 Cuernavaca Dr. Ph. (512) 442-0377
 Austin, Texas 78733 Fax (512) 442-7807

**EMBARCADERO
WQ POND CUT-FILL EXHIBIT
WATER QUALITY POND #4**



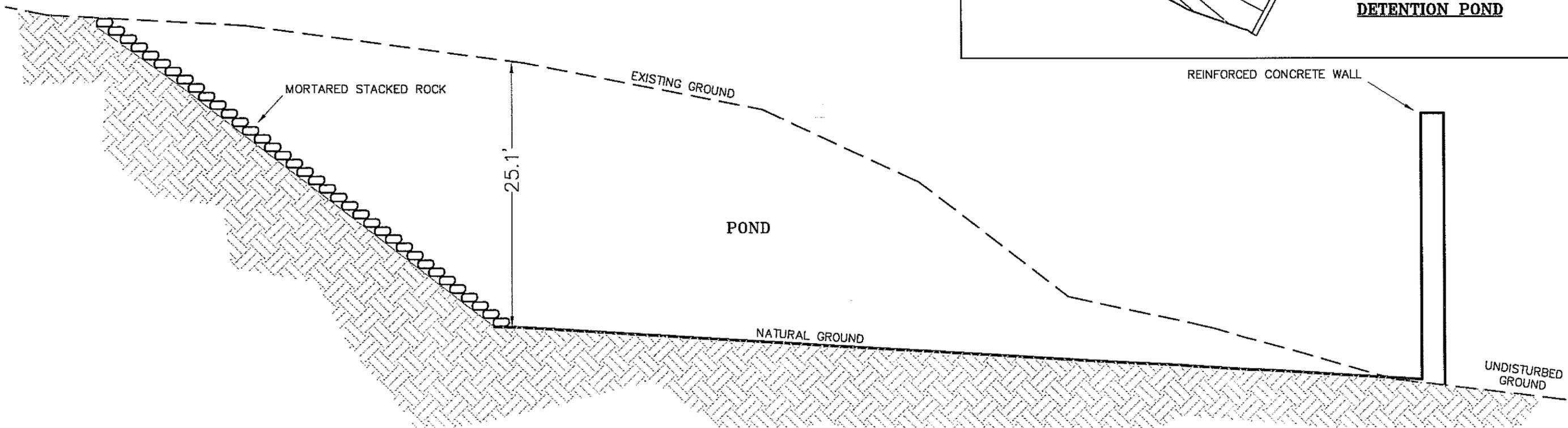
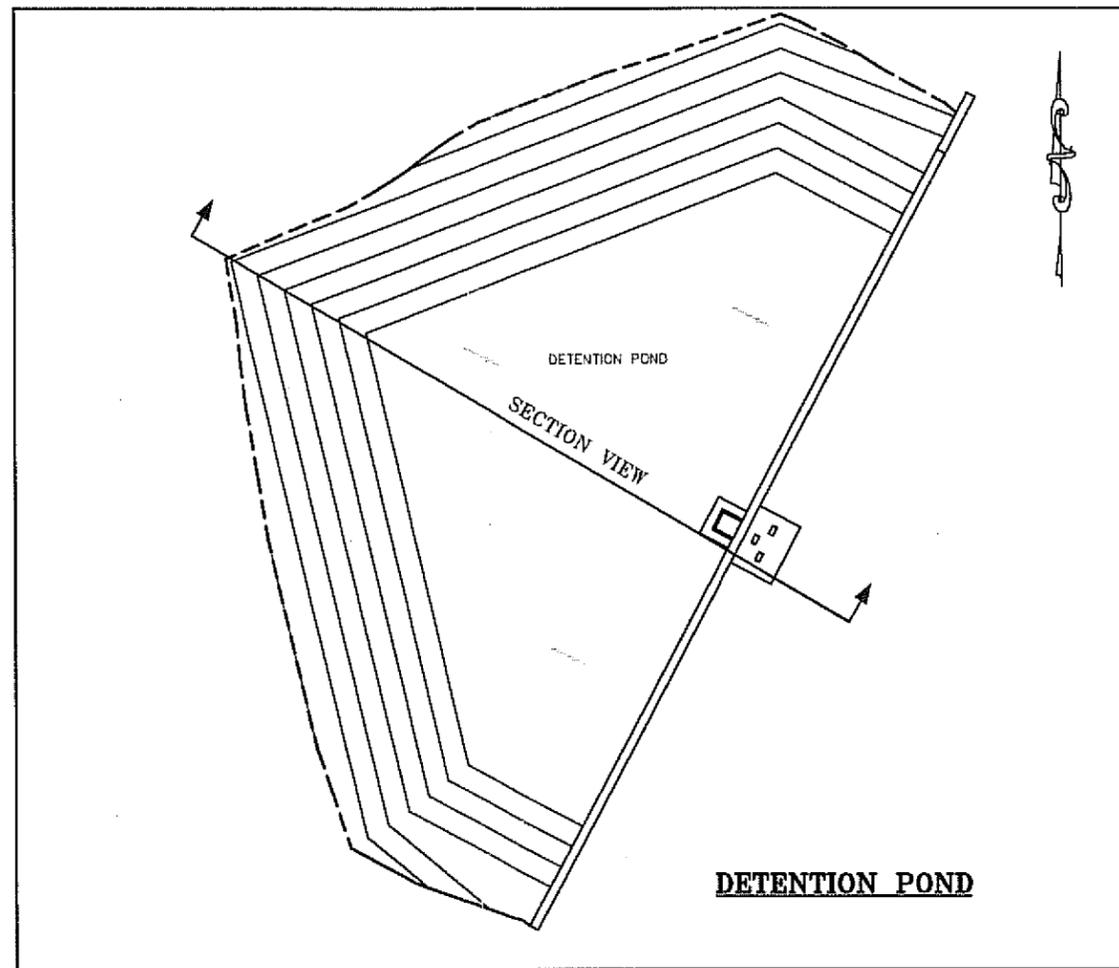
MAX FILL: 15.0 FEET
MAX CUT: 32.20 FEET



P:\05-11B Embarcadero\Dwg\Const Plans\Exhibits\Board & Commission Cut-Fill Exhibits

EMBARCADERO DETENTION POND CUT-FILL EXHIBIT

MAX FILL: NO FILL
MAX CUT: 25.10 FEET



POND SECTION
1" = 10'

THE MOORE GROUP, INC.

ENGINEERING, SURVEYING & PLANNING
1000 Cuernavaca Dr. Ph. (512) 442-0377
Austin, Texas 78733 Fax (512) 442-7807



ENVIRONMENTAL BOARD MOTION 111407-B2

Date: November 14, 2007

Subject: Pearson Business Center (SP-2007-0139D)

Motioned By: Phil Moncada

Seconded by: Mary Gay Maxwell

Recommendation

The Environmental Board recommends **conditional approval** of a variance request to Land Development Code 25-8-341 and 25-8-342 1) To allow cut/fill greater than 4 feet.

Staff Conditions

1. All remaining slopes will be at a 3:1 ratio.
2. All disturbed areas will be revegetated with native seeding.
3. All areas in both borrow pits will be revegetated, unless it is stable bare rock.

Rationale

1. Findings of fact have been met.
2. Minimal departure from Code.
3. Cut and fill will occur on site.
4. Industrial park use.
5. Preservation of a Little Walnut Creek Tributary

Vote 7-0-0-0

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

Against:

Abstain:

Absent:

Approved By:

Dave Anderson P.E., CFM
Environmental Board Chair



ENVIRONMENTAL BOARD MOTION 111407-B3

Date: November 14, 2007

Subject: Cameron Industrial Park (SP-2007-0407C)

Motioned By: Rodney Ahart

Seconded by: Mary Ann Neely

Recommendation

The Environmental Board recommends **conditional approval** of a variance request to Land Development Code 25-8-261 1) to allow construction in the Critical Water Quality Zone.

Staff Conditions

1. The applicant will follow a City of Austin approved Integrated Pest Management (IPM) Plan.
2. The applicant will restore disturbed areas in the Critical Water Zone with 609.S standard specifications.
3. The applicant will increase water quality volume by 10% over Code requirements.
4. The applicant will increase the tree mitigation rate from 33" to 44".

Rationale

1. Findings of Fact have been met.
2. The site is located in the Desired Development Zone.
3. No adverse flood impacts will be evident downstream of the property.
4. Preservation of a Little Walnut Creek Tributary.
5. All square feet encroached for building footprints will be compensated by adding setback to the stream, such that the area setback is still 50 feet; and never less than 35 feet.

Vote 7-0-0-0

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

Against:

Abstain:

Absent:

Approved By:



Dave Anderson P.E., CFM *pe*
Environmental Board Chair

Common Variance Requests & Logical Methods for their Evaluation

Variance Request	Requirements	Intent	Mitigation Measures	Typical Examples
1. Cut & Fill	<ul style="list-style-type: none"> a) Max. 4 feet cut & fill allowed (except unlimited under buildings or within ROW). b) Must restore & stabilize cut & fill areas. c) Up to 8-ft. administrative variance allowed in DDZ if not located on a slope gradient >15% or <100 feet of classified waterway. d) Administrative variances given for stormwater facilities (e.g., flood & WQ structural controls). 	<ul style="list-style-type: none"> a) Maintain slope stability. b) Prevent loss of site character. c) Minimize site disturbance. d) Protect surface & groundwater quality by minimizing sediment discharges. 	<ul style="list-style-type: none"> a) Structural containment (retaining walls). b) Restoration & revegetation. c) Terracing. d) Minimum setback from significant features. e) Limit depth and/or height. f) Reduce IC (e.g., reduced parking). g) Enhanced erosion & sedimentation controls (see below for more detail). h) Reduced footprint of disturbance. i) Preserve trees and/or natural areas not already required to preserve. j) Meet Landscaping Ordinance for projects in the ETJ. 	Roadways, driveways, parking, level building slab, floodplain & drainage modifications.
2. Construction on Steep Slopes	<ul style="list-style-type: none"> a) No roadway or driveway on slope >15% unless necessary for primary access to >2 acres with gradient of <15% or building sites for at least 5 residential units. b) No buildings/parking structures on slope >25% or parking areas on slope >15%. c) Building/parking structure OK on slope 15-25% if terraced, vegetation restored, <10% footprint on slopes >15%. 	<ul style="list-style-type: none"> a) Maintain slope stability. b) Protect fragile environments. c) Prevent concentration of runoff. d) Reduce erosion & sedimentation. 	<ul style="list-style-type: none"> a) Structural containment (retaining walls). b) Restoration & revegetation. c) Terracing. d) Enhanced erosion & sedimentation controls: <ul style="list-style-type: none"> - Place temporary erosion basins off-line unless designed as a dam (i.e., not located in natural draws/channels). - Require site plan to phase clearing & grading, with temporary stabilization. - Require spoils to be hauled off-site or stored away from concentrated flow. - Require more robust perimeter controls (e.g. filter fabric-encased gabions); superior to silt fencing. e) Preserve trees and/or natural areas not already required to preserve. f) Meet Landscaping Ordinance for projects in the ETJ. 	Similar to cut & fill (e.g., buildings, parking); more common in western watersheds with steep slopes.
3. Stream Buffers (CWQZ & WQTZ)	<ul style="list-style-type: none"> a) CWQZ: dev't prohibited (except fences, parks, trails, docks, etc.). Utility lines may cross CWQZ (Director approval needed in BSZ). Street crossings in CWQZ limited (except Urban wsheds). Limits vary with wshed (e.g., BSZ, WS Rural) & waterway classification (major, intermed., minor). No variances to CWQZ in BSZ (SOS). b) WQTZ: 30% IC allowed in Suburban & 18% in WS Sub. wsheds; few variances requested. In BSZ & WS Rural wsheds, WQTZ same as CWQZ (except SFR OK if min. lot size 2 ac. & max. density 1 unit/3 ac.); WQTZ variances possible in BSZ (Is 	<ul style="list-style-type: none"> a) Keep development out of harm's way. b) Preserve function & character of riparian zones. c) Filter pollutants (esp. effective in undisturbed land in riparian soils). 	<ul style="list-style-type: none"> a) Grant public access easement for public trail. b) Headwaters protection (buffer & protect smaller streams not protected by current code). c) Native landscaping (Grow Green plant list, Integrated Pest Management plan, waste-water or stormwater irrigation limits). d) Reduce NSA IC. e) Ensure infiltration volume is maintained (compensate on other areas of site for lost buffers). f) Erosion Hazard Zone (technical setback defined by erosive potential of channel). g) Preserve trees and/or natural areas not already required to preserve. h) Meet Landscaping Ordinance for projects in the ETJ. 	CWQZ variances occasional for driveway crossings or encroachments to allow "reasonable use", utility lines, reduction of floodplain area, redirect drainage ways. Very few WQTZ variances requested (except in BSZ).

Common Variance Requests & Logical Methods for their Evaluation

Variance Request	Requirements	Intent	Mitigation Measures	Typical Examples
4. CEF Setbacks	<p>a) CEFs include: bluffs, canyon rimrocks, caves, sinkholes, springs, & wetlands.</p> <p>b) Protected by 150-300 ft. buffer; must be protected from runoff through drainage patterns and/or special controls. SFR lots may not include or be within 50 ft. of CEF.</p> <p>c) Administrative variances are allowed if all characteristics of the CEF are preserved.</p> <p>d) Wetlands may be mitigated.</p>	<p>a) Preserve biologic, hydrogeologic, & aesthetic integrity of unique environmental features.</p>	<p>a) Increased CEF setbacks on another part of the site (e.g., linear stream setbacks where CWQZ does not exist).</p> <p>b) Stormwater attenuation: slow or divert runoff around feature.</p> <p>c) Off-site CEF protection.</p> <p>d) Native landscaping (Grow Green plant list, IPM plan, irrigation limits).</p> <p>e) Prohibit underground storage tanks or require tertiary containment.</p> <p>f) Constructed wetlands (e.g., wet prairie with 609S plants in detention pond) or wet pond to replace lost wetlands.</p> <p>g) Headwaters protection (buffer & protect smaller streams not protected by current code) or increased CWQZ.</p> <p>h) Preserve trees and/or natural areas not already required to preserve.</p> <p>i) Meet Landscaping Ordinance for projects in the ETJ.</p>	<p>Driveways, utility lines, drainage modifications.</p>
<p>5. Impervious Cover (IC);</p> <p>Density;</p> <p>Net Site Area (NSA)</p>	<p>a) Net site area IC & density limits for all watershed classifications except Urban.</p> <p>b) Urban watersheds use zoning IC limits only.</p> <p>c) IC allowed in WQTZ for Suburban watersheds (30%) and WS Suburban (18%).</p> <p>d) Variances not allowed for SOS IC limits.</p> <p>e) Boundary street IC deductions in all but Urban watersheds (impact greatest in WS watersheds); IC deducted from site if road IC higher than site IC limit.</p>	<p>a) Minimize runoff & maximize infiltration to protect quality & quantity of surface & groundwater.</p> <p>b) Limits established based on sensitivity of watershed and impact on drinking water.</p> <p>c) Conserve open space.</p>	<p>a) Increase capacity/size and/or upgrade type of structural controls (esp. Innovative Low Impact Development controls). [ECM 1.6.7]</p> <p>b) Acquire off-site lands to mitigate overall IC.</p> <p>c) Treat previously untreated off-site areas.</p> <p>d) Prohibit harmful land uses (e.g., service stations, auto repair, etc.).</p> <p>e) Increased creek setbacks.</p> <p>f) Native landscaping (Grow Green plant list, IPM plan, irrigation limits).</p> <p>g) Porous pedestrian/bike surfaces.</p> <p>h) Porous pavement for net additional IC (non-recharge ONLY).</p> <p>i) Clustered IC with undisturbed soils/vegetation.</p> <p>j) Increased creek buffers and headwaters protections.</p> <p>k) Preserve trees and/or natural areas not already required to preserve.</p> <p>l) Meet Landscaping Ordinance for projects in the ETJ.</p>	<p>Increased amount of impervious cover or density; boundary street impacts; sites with little or no NSA.</p>

Common Variance Requests & Logical Methods for their Evaluation

Appropriateness (Findings of Fact)

Findings for Land Commission Variances:

- (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;
- (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;
 - (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; and
 - (c) does not create a significant probability of harmful environmental consequences; and
- (3) Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.

Additional Findings for Stream Buffers:

- (4) The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and
- (5) The variance is the minimum change necessary to allow a reasonable, economic use of the entire property.

Glossary

BSZ	Barton Springs Zone	NSA	Net Site Area
CEFs	Critical Environmental Features	ROW	Right-of-Way
CWQZ	Critical Water Quality Zone	SFR	Single-Family Residential
DDZ	Desired Development Zone	SOS	Save Our Springs water quality ordinance
Dev't	Development	WQ	Water Quality
ETJ	5-mile Extra-Territorial Jurisdiction	WQTZ	Water Quality Transition Zone
IC	Impervious Cover	WS Rural	Water Supply Rural watersheds
IPM	Integrated Pest Management	WS Suburban	Water Supply Suburban watersheds
MFR	Multifamily Residential	Wshed	Watershed



ENVIRONMENTAL BOARD MOTION 111407-D2 001

Date: November 14, 2007

Subject: Resolution for the variance request evaluation criteria

Motioned By: Rodney Ahart Seconded By: Dave Anderson, PE, CFM

Recommendation

The Environmental Board made a Resolution adopting the "Common Variance Request and Logistical Method for their Evaluation" table and the "Consent Agenda Item Checklist" as tools for the City of Austin Environmental Board and Watershed Protection and Development Review Staff.

Staff Conditions

Not Applicable.

Rationale

Not Applicable.

Vote 7-0-0-0

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

Against: None

Abstain: None

Absent: None

Approved By:  P.E.

Dave Anderson P.E., CFM, Chair

Variance Request Evaluation Criteria Subcommittee Resolution EB 111407

Resolution adopting the “Common Variance Request and Logistical Method for their Evaluation” table and the “Consent Agenda Item Checklist” as tools for the City of Austin Environmental Board and Watershed Protection and Development Review Staff.

WHEREAS the Variance Request Evaluation Criteria Subcommittee was formed as a result of the January 2007 Environmental Board Retreat to establish guidelines for the environmental review of development projects, and

WHEREAS the Variance Request Evaluation Criteria Subcommittee held four meetings with City of Austin Watershed Protection and Development Review and Austin Energy Green Building Program staff, and

WHEREAS the “Common Variance Requests and Logistical Method for their Evaluation” table was developed outlining the five most typical variance requests presented to the Environmental Board:

- 1) Cut & Fill
- 2) Construction on Steep Slopes
- 3) Stream Buffers (Critical Water Quality Zone & Water Quality Transition Zone)
- 4) Critical Environmental Features and
- 5) Impervious Cover, Net Site Area and Density

with Land Development Code Requirements, Land Development Code Intent, Possible Mitigation Measures and Typical Examples, and

WHEREAS the “Common Variance Requests and Logistical Method for their Evaluation” table was created with the purpose to preserve biologic, hydro geologic and aesthetic integrity of unique environmental features by conserving open space, minimizing runoff and maximizing infiltration to protect quality and quantity of surface and groundwater, maintaining slope stability and reducing erosion, and

WHEREAS the Variance Request Evaluation Criteria Subcommittee also developed a checklist for placing development projects on consent agenda. The “Consent Agenda Item Checklist” includes:

- 1) Staff Recommendation
- 2) One-Star Green Building
- 3) No increase in impervious cover (IC) or a reduction in IC than what is allowed by code/zoning
- 4) All minimum setbacks met for Critical Environmental Features (CEFs)
- 5) Integrated Pest Management (IPM) Plan

- 6) Development proposed in the Desired Development Zone (DDZ)
- 7) No Opposition, and

THEREFORE BE IT RESOLVED that the City of Austin Environmental Board and Watershed Protection and Development Review staff adopt the "Common Variance Requests and Logistical Method for their Evaluation" table and the "Consent Agenda Item Checklist" for future use as tools in the environmental evaluation of development projects.

ADOPTED: November 14, 2007

ATTEST: _____



Handwritten signature of David J. Anderson, PE, CFM, in black ink, written over a horizontal line.

David J. Anderson, PE, CFM
Environmental Board Chair

Attachments:



MEMORANDUM

TO: City of Austin Environmental Board Members

FROM: Pat Murphy
City of Austin Environmental Officer
Watershed Protection and Development Review Department

DATE: November 9, 2007

SUBJECT: Circle Drive PEC Tract
Wastewater Service Extension Request (SER #2696)

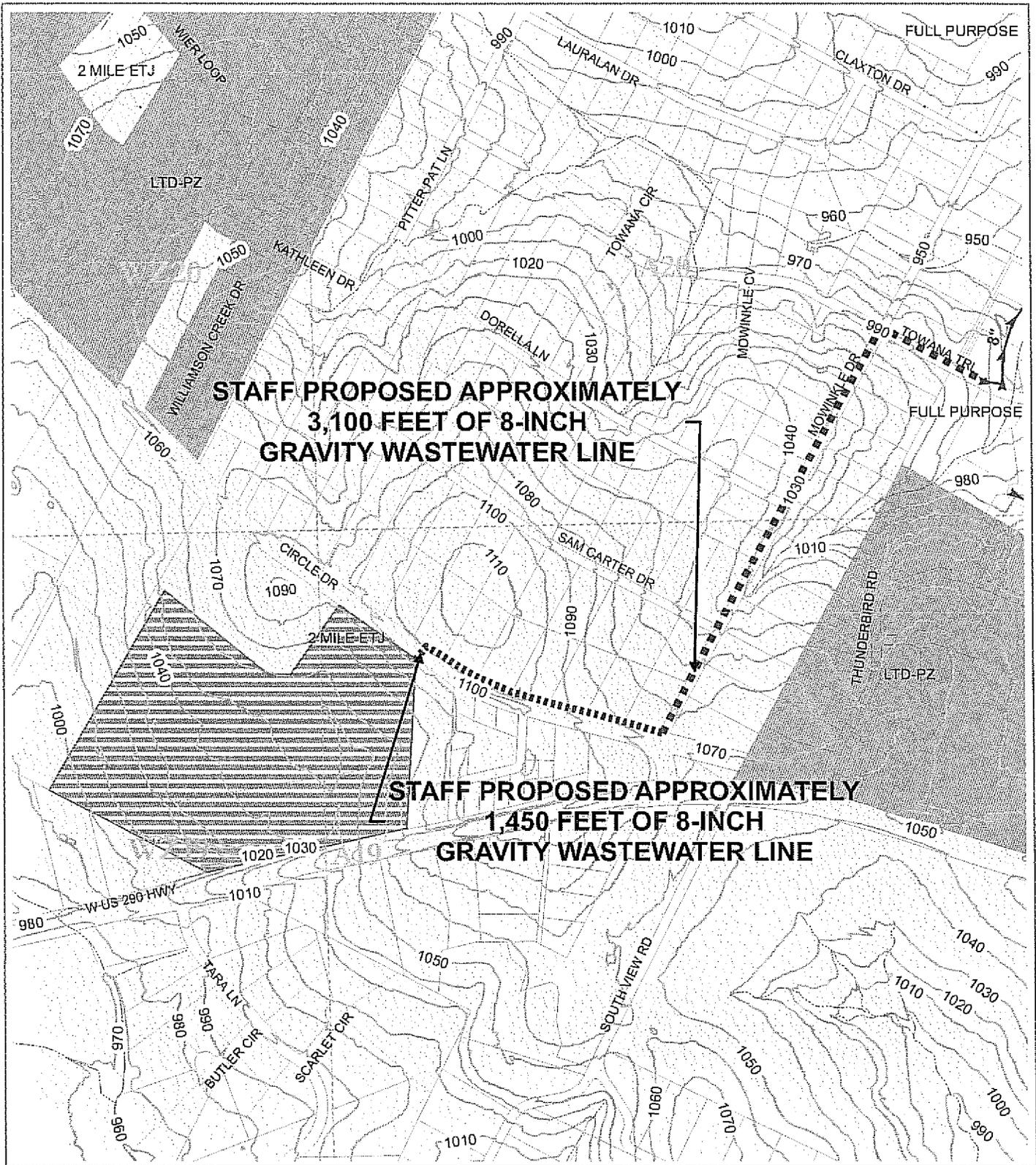
We are at this time unable to recommend the applicant's wastewater service extension request. Enclosed please find the project site map and staff's evaluation of the proposed extension.

Pat Murphy
City of Austin Environmental Officer
Watershed Protection and Development Review Department

PM:rb

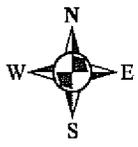
Attachment

cc: Austin Water Utility



**STAFF PROPOSED APPROXIMATELY
3,100 FEET OF 8-INCH
GRAVITY WASTEWATER LINE**

**STAFF PROPOSED APPROXIMATELY
1,450 FEET OF 8-INCH
GRAVITY WASTEWATER LINE**



-  Subject Tract
-  Full-purpose City Limit
-  Limited-purpose City Limit
-  2-Mile ETJ

W.W. S.E.R. Name: Circle Drive PEC Tract
W.W. S.E.R. Number: 2696

Service Extension Request (Wastewater) Circle Drive PEC Tract (SER #2696)

1) Will future development be required to comply with current code?

The service extension would provide wastewater to a proposed multifamily development with 264 units located in the Barton Springs Contributing Zone in Slaughter Creek. The development would be expected to comply with current code and is subject to the SOS ordinance.

2) Does the requested service result in more intense development than would be possible absent the service?

The type of wastewater treatment determines how intensely the site can be developed. There are three treatment options: 1) onsite treatment systems treating less than 5,000 gallons/day, 2) onsite treatment systems treating more than 5,000 gallons/day that require a state permit, and 3) centralized treatment provided by the city. The size of the proposed multifamily use precludes the first, while cost and permitting obstacles make the second unlikely. Option three is preferable from the applicant's perspective and would result in more intense development than they could achieve absent the service. The applicant is limited to 25% impervious cover on a net site area basis with or without the service; however, centralized treatment increases the net size area and thus the amount of land that could be developed.

3) Is the site in an area in which we are encouraging development?

The site is located in the Drinking Water Protection Zone. The city's official policy is to encourage development in the Desired Development Zone.

4) Would centralized service solve known or potential environmental problems?

Centralized service allows the site to be developed more intensely; however, absent service, the applicant would need to treat wastewater onsite.

5) Is serving the area consistent with long term service area and annexation goals?

The project site is located in Austin's 2-mile ETJ and nearby both the city's full and limited purpose annexation areas. In August, 2007, the applicant submitted the required petition for annexation; however, the subject tract is not contiguous to either the full or limited purpose annexation areas, which disqualifies it from consideration for annexation.



ENVIRONMENTAL BOARD MOTION 111407-C3

Date: November 14, 2007

Subject: Circle Drive Pedernales Electric Cooperative Tract SER # 2695

Motioned By: Dave Anderson, P. E.

Seconded by: Mary Ann Neely

Recommendation

The Environmental Board does not support Service Extension Request #2695 to provide wastewater service to the Circle Drive Pedernales Electric Cooperative Tract (SER #2695).

Rational to not grant wastewater service extension request:

- Large potential increase in development intensity over that absent service.
- Land use appropriateness to area.
- Low annexation potential.
- Increased traffic loading onto Hwy 290 and Circle Drive.
- Dedicating additional wastewater capacity to nearby existing development that relies on aging or failing onsite systems.

Vote 7-0-0-0

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

Abstain:

Absent:

Approved By:

Dave Anderson P.E., CFM
Environmental Board Chair



ITEM FOR ENVIRONMENTAL BOARD AGENDA

BOARD MEETING

DATE REQUESTED: November 14, 2007

ITEM: Proposed extension for ACWP ordinances
020627-155 and 030731-55

**NAME OF APPLICANT
OR ORGANIZATION:** Austin Water Utility

AWU STAFF: Gopal Guthikonda 972-0240
Gopal.Guthikonda@ci.austin.tx.us

**ACWP
REPRESENTATIVE:** Joe Sasil at Earth Tech 479-1609
Joe.Sasil@earthtech.com

WPDR STAFF: Jason Traweek 974-2332
jason.traweek@ci.austin.tx.us

ORDINANCE: 020627-155 and 030731-55 (amendment)

REQUEST: To grant a time extension for Ordinances No. 020627-115 and 030731-55 which established an administrative variance process for variances from certain land development codes for certain wastewater collection system construction projects needed to eliminate sanitary sewer overflows. Both ordinances are set to expire 12/31/2007. The extension is necessary to accommodate new administrative variances that may apply to correction/revisions to the permitted site plans.

STAFF RECOMMENDATION: Recommended

ORDINANCE NO. 020627-115

AN ORDINANCE ESTABLISHING AN ADMINISTRATIVE VARIANCE PROCESS FOR VARIANCES FROM LAND DEVELOPMENT CODE SECTIONS 25-1-133, 25-1-134, 25-7-61(A)(5)(b), 25-8-281, 25-8-321 (A), 25-8-341, 25-8-342, AND 25-8-361 FOR CERTAIN WASTEWATER COLLECTION SYSTEM CONSTRUCTION PROJECTS TO ELIMINATE SANITARY SEWER OVERFLOWS.

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

PART 1. In this ordinance:

- (A) Director means the director of the Watershed Protection and Development Review Department.
- (B) AO means the EPA Region 6 Administrative Order entered in Clean Water Act Docket No. VI-99-1221 requiring elimination of sanitary sewer overflows from the City wastewater collection system no later than December 31, 2007.
- (C) AO Related Austin Clean Water Program Projects means projects that are necessary to eliminate sanitary sewer overflows as required under the AO.

PART 2. An administrative variance process is established allowing the director to grant a variance from the Land Development Code Sections 25-1-133 (*Notice of Applications and Administrative Decisions*), 25-1-134 (*Procedures and Requirements for Notice*), 25-7-61(A)(5)(b) (*Criteria for Approval of Plats, Construction Plans, and Site Plans*), 25-8-281 (*Critical Environmental Features*), 25-8-321 (A) (*Clearing of Vegetation*), 25-8-341 (*Cut Requirements*), 25-8-342 (*Fill Requirements*), and 25-8-361 (*Wastewater Restrictions*) for AO Related Austin Clean Water Program Projects.

PART 3. The director may grant a variance under this ordinance if the director determines that:

- (1) the variance promotes restoration and does not degrade a stream or aquifer;

- (2) the work requiring a variance does not create a significant probability of harmful environmental consequences;
- (3) the variance will result in stream stability and water quality that is at least equal to the stream stability and water quality achievable without the variance; and
- (4) the project seeking a variance will not result in an extension of the City's water and wastewater service area boundaries.

PART 4. The director shall prepare written findings to support the grant or denial of a variance request under this ordinance. The director shall submit a semi-annual report to Council, the Environmental Board, and the Parks and Recreation Board that includes: (1) any variance granted under this ordinance, (2) the construction status of any project granted a variance under this ordinance, and (3) the status of the review and permitting process for AO Related Austin Clean Water Program Projects.

PART 5. An interested party and the Environmental Board may appeal a decision by the director under this ordinance to the City Manager, in accordance with Code Chapter 25-1, Article 7, Division 1.

PART 6. This ordinance expires on December 31, 2007.

PART 7. The Council waives the requirements of Sections 2-2-3 and 2-2-7 of the City Code for this ordinance.

PART 8. This ordinance takes effect on July 8, 2002.

PASSED AND APPROVED

June 27, 2002

§
§
§

Gustavo L. Garcia

Gustavo L. Garcia
Mayor

APPROVED:

Sedora Jefferson

Sedora Jefferson
City Attorney

ATTEST:

Shirley A. Brown

Shirley A. Brown
City Clerk

ORDINANCE NO. 030731-55

AN ORDINANCE AMENDING ORDINANCE NO. 020627-115 RELATING TO ADMINISTRATIVE VARIANCES FOR THE AUSTIN CLEAN WATER PROGRAM.

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

PART 1. Ordinance No. 020627-115, Part 1 is amended to read as follows:

PART 1. In this ordinance:

- (A) Director means the director of the Watershed Protection and Development Review Department.
- (B) AO means the EPA Region 6 Administrative Order entered in Clean Water Act Docket No. VI-99-1221 requiring elimination of sanitary sewer overflows from the City wastewater collection system no later than December 31, 2007.
- (C) AO Related Austin Clean Water Program Projects means projects that are necessary to eliminate sanitary sewer overflows as required under the AO, and include:
 - (1) repair, replacement, or new construction of wastewater lines and any items necessary to construct, access, and maintain the lines;
 - (2) improvements to creek beds and banks if necessary to maintain stable drainage and wastewater facilities; and
 - (3) permanent maintenance access routes for wastewater lines outside existing city streets, if in compliance with standards set out in Exhibit A attached to and incorporated as part of this ordinance.

PART 2. Ordinance No. 020627-115, Part 2 is amended to read as follows:

PART 2. An administrative variance process is established allowing the director to grant a variance from the Land Development Code Sections 25-1-133 (*Notice of Applications and Administrative Decisions*), 25-1-134 (*Procedures and Requirements for Notice*), 25-7-61(A)(5)(b) and (c) and (B) (*Criteria for Approval of Plats, Construction Plans, and Site Plans*), 25-8-211 (*Water Quality Control Requirement*), 25-8-261 (*Critical Water Quality Zone Development*), 25-8-281 (*Critical Environmental Features*), 25-8-301 (*Construction of a Roadway or a Driveway*), 25-8-321(A) (*Clearing of Vegetation*), 25-8-341 (*Cut Requirements*), 25-8-342 (*Fill Requirements*), [and] 25-8-361 (*Wastewater Restrictions*) 25-8-453 (*Water Quality Transition Zone*), 25-8-392 (*Critical Water Quality Zone*), 25-8-393 (*Water Quality Transition Zone*), 25-8-422 (*Critical Water Quality Zone*), 25-8-423 (*Water Quality Transition Zone*), and 25-8-452 (*Critical Water Quality Zone*) for AO Related Austin Clean Water Program Projects.

PART 3. The unamended portions of Ordinance No. 020627-115 remain in effect.

PART 4. This ordinance expires on December 31, 2007.

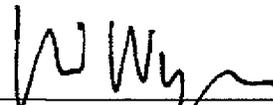
PART 5. The Council waives the requirements of Sections 2-2-3 and 2-2-7 of the City Code for this ordinance.

PART 6. This ordinance takes effect on August 11, 2003.

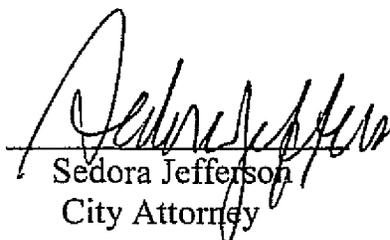
PASSED AND APPROVED

_____ July 31 _____, 2003

§
§
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Will Wynn
Mayor

APPROVED: 
Sedora Jefferson
City Attorney

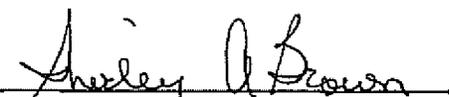
ATTEST: 
Shirley A. Brown
City Clerk

Exhibit A
Ordinance No. 030731-55

Austin Clean Water Program
Description and Details of Proposed Access Paths in Critical Water Quality Zones
6/17/03

The purpose of this memorandum is to describe proposed access paths as part of the Austin Clean Water Program improvements. These paths are generally about twelve feet in width built of earthen and rock material. The paths are being constructed for the purpose of emergency access to ACWP sewer projects as well as occasional programmed maintenance (five year maintenance cycle). It is expected that the path would be used on an average, once about every five years by the Water and Wastewater Utility. Currently five proposed access paths have been identified throughout the Cross-town Interceptor Basin. Currently we expect that approximately eight more will be need throughout the rest of the City.

- I. Description.** Access paths shall provide dedicated vehicular access from existing public Right-of-Way to manholes within a drainageway (creek or manmade channel), hence within the Critical Water Quality Zone (CWQZ). Dedicated vehicular access shall include an access easement and a gated, stabilized access path to the manhole. The stabilized access path will include one or both of the following, depending on location of the manhole within CWQZ and site topography:
 - a. path over flat or gently sloping land in the creek overbank area;
 - b. path over a steep slope, as in the side slope of a streambank.

- II. Design Details.** Stabilized access paths will consist of the following elements:
 - a. Existing on-site soils, graded to a minimum slope of 4(H):1(V)
 - b. Six-inch layer of loosely placed 3"x5" limestone "Berm Rock" to prevent soil erosion and provide traction for equipment
 - c. Maximum cross-slope of 2%
 - d. Runoff from off-site and from the access path shall be maintained as sheet flow, which shall be intercepted at 20 foot intervals along the path to be diverted to stable, vegetated areas
 - e. Access paths shall be sited to avoid significant trees and/or tree clusters, tall slopes and Critical Environmental Features (CEFs). In the event that a steep, tall slope is unavoidable, the access path will need to be cut into the slope, with the side slopes of the cut stabilized with a retaining structure.
 - f. Access paths and retaining structures shall be designed such that:

1. There is no reduction of channel cross-sectional area or increase in Water Surface Elevation (WSEL)
2. The adjacent streambank is stable so that the access path is not outflanked
3. The adjacent streambank is not subject to local scour due to the access path.

The Drainage Engineer (DE) and Environmental Reviewer (ER) of the Watershed Protection and Development Review Department (WPDRD) will participate in siting and design of access paths. DE and ER shall review and comment on designs at 30%, 60%, 90% and 100% plan submittals for adherence to design guidelines.

III. Frequency of Use. Since the rehabilitated pipes and manholes are designed with the capacity to convey sanitary flows and the Infiltration/Inflow associated with the 5-year design storm, it is anticipated that access will be needed no more frequently than once every 5-years to remediate spills, or in emergency situations (during sanitary sewer overflows due to vandalism, pipe failure, or unexpected blockages).

IV. Applicability. The above criteria are applicable only to Austin Clean Water Program (ACWP) Projects in watersheds outside of the Barton Springs Zone. Any access paths for ACWP projects within the Barton Springs Zone shall be temporary. Any disturbance caused by the access paths shall be properly stabilized and re-vegetated per applicable COA Codes and Criteria Manuals.

V. Currently identified Access Paths in Cross-town Tunnel interceptor Basin

Project Name	Watershed	BSZ (Y/N)	Retaining Structure Needed?
Lower Hancock	Shoal	N	No
Spicewood @ Woodhollow	Shoal	N	No
Spicewood @ Foster	Shoal	N	Yes
Shoal Tunnel, 29 th to 34 th	Shoal	N	No
Little Walnut 290 @ 183	Little Walnut	N	No



ENVIRONMENTAL BOARD MOTION 111407-D1

Date: November 14, 2007

Subject: Austin Clean Water Program Ordinance Extension

Motioned By: Dave Anderson, P. E.

Seconded by: Mary Ann Neely

Recommendation

The Environmental Board supports City of Austin staff request to extend two Austin Clean Water Program Ordinances to coincide with extension of Environmental Protection Agency Administrative Order.

Rationale

The two Ordinances of interest have been used effectively as part of the Austin Clean Water Program to improve water quality conditions throughout the City of Austin.

Vote 6-0-0-1

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

Abstain:

Absent: *Moncada

Approved By:

Dave Anderson P.E., CFM
Environmental Board Chair

*Phil Moncada absent due to recusal.

CONSENT AGENDA ITEM CHECKLIST

- 1) staff recommendation
- 2) one-star green building
- 3) no increase in impervious cover (IC) or a reduction in IC than what is allowed by code/zoning
- 4) all minimum setbacks met for Critical Environmental Features (CEFs)
- 5) Integrated Pest Management (IPM) Plan
- 6) development proposed in the desired development zone (DDZ)
- 7) construction of a boat dock in critical water quality zone (CWQZ) if only variance requested
- 8) no opposition*

All would apply if applicable.

*Any board member can move to have an item bumped from the consent agenda if he/she wants a full presentation and board discussion on the dais.