

**Ranelletti, Darin**

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**From:** Ranelletti, Darin  
**Sent:** Thursday, August 23, 2012 10:30 AM  
**To:** Zahn, Robert  
**Subject:** Zoo stormwater facility - trees  
**Attachments:** Zoo - Storm Water Control Plan.pdf

Robert,

Per our conversation, attached are the plans for the Zoo's proposal to construct a stormwater retention area (called a "bio-retention area" which would collect and treat stormwater runoff) located near the lower parking lot. The project involves removing six Eucalyptus trees and installing storm drain lines via a trenchless boring system. No Protected Trees are proposed for removal. Included on the plans are tree protection measures to further limit impacts to protected trees.

Back in June, Mitch Thomson and I visited the site and discussed the proposal. At the time Mitch believed a tree permit may not be required pending the review of the plans. Can you review the plans and confirm whether you believe the project may result in impacts to protected trees and whether a tree permit is required?

Let me know if you have any questions.

Thanks,

Darin Ranelletti

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510-238-3663 direct phone  
510-238-6538 fax



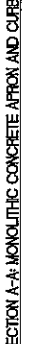
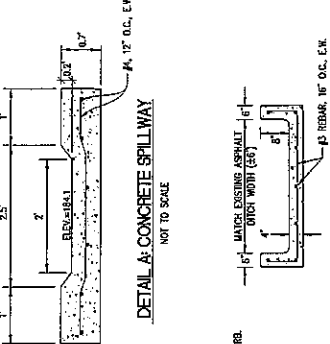


**TREE TABLE**

NUMBER OF TREES TO BE REMOVED	
EUCALIPTUS	6
OAKS	0
OTHERS	0

**TREE PROTECTION NOTES:**

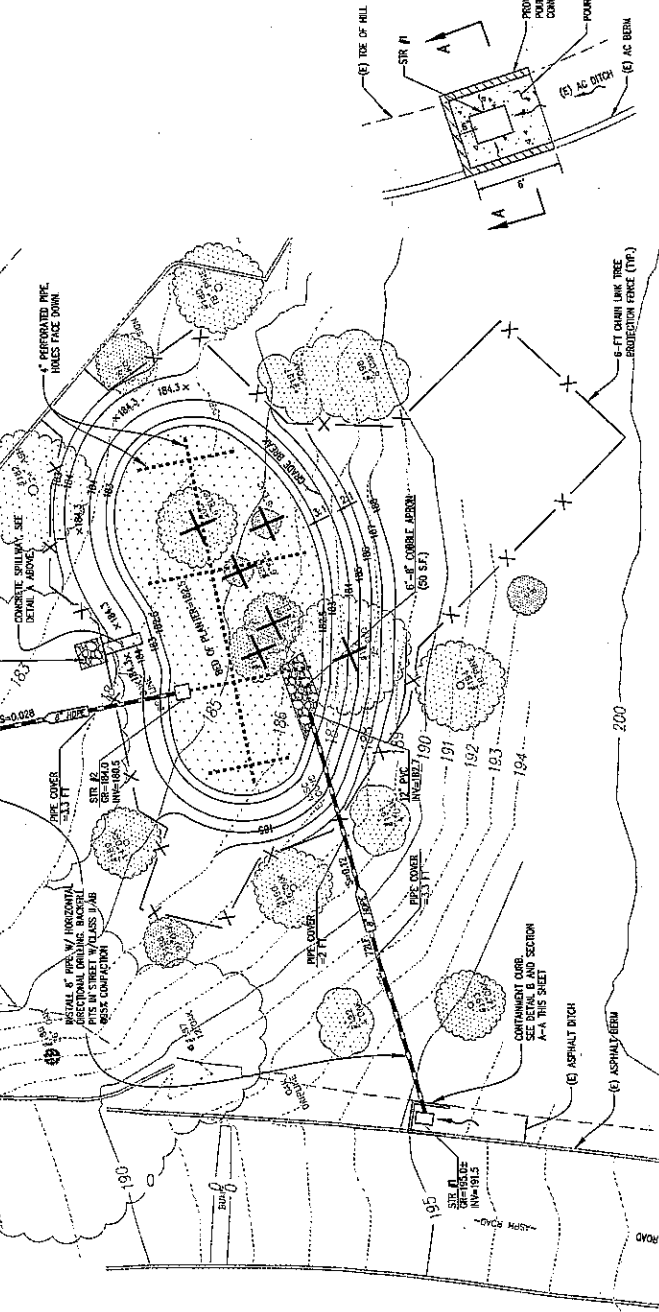
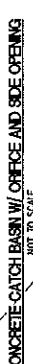
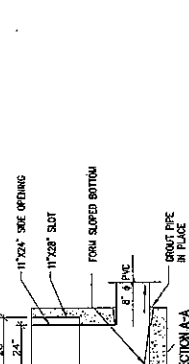
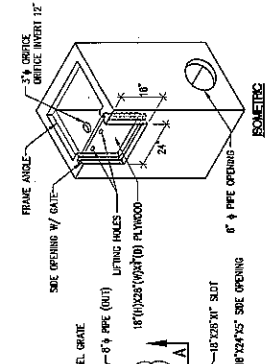
1. A ROOT PROTECTION ZONE WILL BE ESTABLISHED AROUND EACH TREE OR ANY GROUP OF TREES AS INDICATED ON THIS SHEET. THE ZONE SHALL BE MAINTAINED AS SHOWN ON THE CIVIL DRAWINGS AND FENCING SHALL BE INSTALLED AT THE PERIMETER OF THE ZONE.
2. TREE PROTECTION MEASURES ARE TO COMPLY WITH THE CITY OF OAKLAND TREE PROTECTION ORDINANCE.
3. THE ROOT PROTECTION ZONE SHALL BE AN AREA SERVED BY THE ROOT PROTECTION ZONE FROM THE TRUNK OF THE TREE TO A DISTANCE OF ONE (1) LINEAR FOOT FOR EACH INCH DIAMETER FROM AT GROUND HEIGHT (4.5') OF THE TREE, OR TO THE OUTLINE, WHICHEVER DISTANCE IS GREATER. EXAMPLES: A 10-INCH DIAMETER TREE WILL HAVE A 10 FOOT PROTECTION ZONE, ASSUMING THE TRUNK OF THE TREE IS A SHORTER DISTANCE.
4. NO WORK SHALL BE DONE WITHIN THE TREE PROTECTION ZONE UNLESS THE TREE HAS BEEN REMOVED AND REPAIRED BY THE CONTRACTOR DURING CONSTRUCTION. THE FENCING WILL BE CHAIN LINK PERMANENTLY CONSTRUCTED FENCE DURING THE INSTALLATION OF THE DISPOSAL.
5. ALL ROOTS LARGER THAN ONE-INCH IN DIAMETER ARE TO BE CUT CLEANLY WITH HAND TOOLS.
6. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE WORK DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR NET BURLAP.
7. NO EQUIPMENT, VEHICLES OR MATERIALS SHALL BE OPERATED OR STORED WITHIN THE ROOT PROTECTION ZONE. NO CLEAN-OUT AREAS WILL BE CONSTRUCTED SO THAT THE MATERIAL WILL BE IN OR ADJACENT TO THE ROOT PROTECTION ZONE.
8. NO GRADE CHANGE IS ALLOWED WITHIN THE ROOT PROTECTION ZONE.
9. ROOTS OR BRANCHES IN CONTACT WITH CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS BY QUALIFIED TREE WORK PERSONNEL AS DIRECTED BY THE ZOO'S REPRESENTATIVE.
10. ALL UN-PROTECTED SIZE TREES SHALL BE REMOVED BY THE CONTRACTOR WITHOUT PRIOR PERMISSION FROM THE ZOO'S REPRESENTATIVE. PROTECTED SIZE TREES SHALL NOT BE REMOVED.
11. UN-PROTECTED SIZE TREES WHICH ARE MAINTAINED OR LEFT IN PLACE BY THE CONTRACTOR'S REQUEST DURING CONSTRUCTION SHALL BE MAINTAINED AS DETERMINED BY THE ZOO'S REPRESENTATIVE. DAMAGE OR REMOVAL OF PROTECTED SIZE TREES MAY RESULT IN REPLACEMENT TREES AND/OR FINES UP TO THE VALUE OF THE TREES AS DETERMINED BY THE ZOO'S REPRESENTATIVE. PROTECTED TREES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND FINALS.
12. TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE WATERING THE ROOT PROTECTION ZONE, INSTALLATION OF WOOD CHIP MULCH OR WASHING FOLIAGE, AS DETERMINED BY THE ZOO'S REPRESENTATIVE.
13. NO WIND, HAILS OR OTHER MATERIALS MAY BE ATTACHED TO PROTECTED TREES.



**PZ PERMIT**

ALL CONCRETE TO BE 5 SICK, 3/4" AGGREGATE w/ 1 LB OF LAMP BLACK PER CY

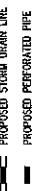
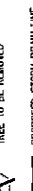
TREE TO BE REMOVED



**STORM DRAIN SCHEDULE**

STRUCTURE NO.	DESCRIPTION
STR #1	CHRISTY US2 2X3 CATCH BASIN WITH STEEL GRATE OR EQUAL
STR #2	2'X2' DRAIN BOX WITH STEEL GRATE, OFFICE, & SIDE OPENING. SEE DETAILS THIS SHEET.
STR #3	CENTRAL PRECAST CP188 CATCH BASIN WITH STEEL GRATE OR EQUAL.

ALL STORM DRAIN PIPE SHALL BE PVC SIZE 40 OR BETTER

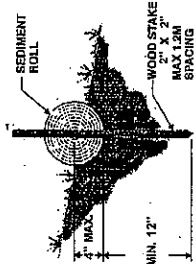
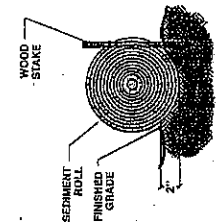


DATE: 09/27/2012  
DRAWN: JCB  
CHECKED: JS SHAW  
SCALE: AS SHOWN  
JOB NO.: 20020230  
SHEET NUMBER



DATE	03/27/2012
DRAWN BY	IC
CHECKED BY	UD
SCALE	AS SHOWN
JOB NO.	212227.08
DRAWING NO.	02

- EROSION CONTROL NOTES**
- TEMPORARY EROSION CONTROL MEASURES, EFFECTIVE DURING RAINY SEASON (OBJECT 1 TO AREA 1)**
1. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE LATEST ASHC MANUAL OF STANDARDS FOR EROSION AND SEDIMENT CONTROL MEASURES.
  2. THESE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE LATEST ASHC MANUAL OF STANDARDS FOR EROSION AND SEDIMENT CONTROL MEASURES PERFORMED BETWEEN APRIL 2 AND SEPTEMBER 30 UNLESS APPROVAL HAS BEEN OBTAINED FROM THE CITY ENGINEER.
  3. CONTRACTORS SHALL ALWAYS CHECK AND MAINTAIN ALL EROSION CONTROL MEASURES DURING RAINY SEASON. ALL EROSION CONTROL MEASURES SHALL BE CLEANED AFTER EACH STORM.
  4. CONTRACTORS SHALL MAKE SPOT INSPECTIONS DURING/AFTER EACH FOLLOWING SEVERE STORMS, REPAIR OR REPLACE EROSION CONTROL MEASURES IF NEEDED.
  5. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT MAY ARISE DURING CONSTRUCTION DUE TO UN-ANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.
  6. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY RECLEANED AS DIRECTED BY THE CITY ENGINEER. ALL DEBRIS SHALL BE REMOVED TO AN APPROVED STORM DRAIN RUNWAY TO ANY STORM DRAIN SYSTEM.



- NOTES:**
1. FIBER ROLL SHALL BE PROPERLY INSTALLED, MAINTAINED AND INSPECTED REGULARLY TO MAXIMIZE FUNCTION.
  2. THE FIBER ROLL SHALL BE PLACED ON SLOPE CONTIGUOUS PER MANUFACTURER'S SPECIFICATION.
  3. FIBER ROLL TO BE PLACED IN A ROW WITH THE ENDS TIGHTLY ADJUTING, USE STRAW, ROCKS, OR FILTER FABRIC TO FILL GAPS BETWEEN MATERIAL TO PREVENT EROSION OR FLUX AROUND FIBER ROLL.
  4. FIBER ROLL TO BE PLACED BEHIND EDGE OF PAVEMENT.

DETAIL A: FIBER ROLL  
 NOT TO SCALE

