TAHOE REGIONAL PLANNING AGENCY

Mail
PO Box 5310
Stateline, NV 89449-5310

Location
128 Market Street
Stateline, NV 89449

Contact
Phone: 775-588-4547
Fax: 775-588-4527
www.trpa.org

MEMORANDUM

Date:	June 30, 2011
To:	TRPA Hearings Officer
From:	TRPA Staff
Subject:	STPUD Emergency Retention Basin Replacement Project, 1661 Black Bart Avenue, South Lake Tahoe, California, Assessor's Parcel Number (APN) 025-091-15, TRPA File Number ERSP2011-0652

Requested Action: Hearings Officer action on the proposed project and a finding of no significant environmental effect.

Staff Recommendation: Staff recommends that the Hearings Officer make the required findings and approve the proposed project.

Required Motions: In order to approve the proposed project, the Hearings Officer must make the following motions, based on this staff summary and the evidence in the record:

1) A motion to approve the required findings (see Attachment A), including a finding of no significant effect; and 2) A motion to approve the proposed project subject to the conditions contained in the draft permit (see Attachment B).

Project Description/Background: The South Tahoe Public Utility District (STPUD) proposes to replace the existing basin liner at the STPUD Emergency Retention Basin facility near the corner of Black Bart Avenue and Pioneer Trail. In addition to the liner replacement, the applicant also proposes to remove or replace some of the existing ancillary facilities (pipes and hydrants, check dams, etc.) and to regrade the perimeter of the basins to correct erosion and settling issues, and reestablish the necessary freeboard. No new or relocation of land coverage will result from the project. All material necessary for the perimeter regrading will be obtained onsite from the central basin berm. The project is necessary to repair existing leaks in the basin liner, and prevent future leaks and maintenance problems.

Issues/Concerns: The proposed project (local public health and safety) is a special use within Plan Area Statement 101 – Bijou Meadows, and therefore requires Hearings Officer review in accordance with Chapter 4, Appendix A, of the TRPA Code of Ordinances.

Regional Plan Compliance: The proposed project complies with all requirements of the TRPA Goals and Policies, Plan Area Statements, and Code of Ordinances, including all required findings in Chapters 6 and 18 of the TRPA Code of Ordinances (see Attachments A and C for details).

Contact Information: If you have any questions, please contact Theresa Avance, AICP, Senior Planner at tavance@trpa.org or 775-589-5224.

TA

AGENDA ITEM V.A

Attachments:

A. Required Findings/Rationale
B. Draft Permit
C. Regional Plan Compliance Analysis
D. Site Plan

Attachment A: Required Findings/Rationale

The following is a list of the required findings as set forth in Chapters 6 and 18 of the TRPA Code of Ordinances. Following each finding, Agency staff has indicated if there is sufficient evidence contained in the record to make the applicable findings or has briefly summarized the evidence on which the finding can be made.

1. Chapter 6 – Required Findings:

   (a) The project is consistent with and will not adversely affect implementation of the Regional Plan, including all applicable Goals and Policies, Plan Area Statements and maps, the Code and other TRPA plans and programs.

   TRPA staff has reviewed the proposal and confirmed that the proposed project is consistent with the Regional Plan, and determined that the project will not adversely affect implementation of the Regional Plan.

   (b) The project will not cause the environmental threshold carrying capacities to be exceeded.

   TRPA staff has completed the "Project Review Conformance Checklist and Article V(g) Findings" in accordance with Chapter 6, Subsection 6.3.B of the TRPA Code of Ordinances. All responses contained on the checklist indicate compliance with the environmental threshold carrying capacities. A copy of the completed checklist will be made available at the Hearings Officer meeting and at TRPA.

   (c) Wherever federal, state or local air and water quality standards applicable for the Region, whichever are strictest, must be attained and maintained pursuant to Article V(g) of the TPRA Compact, the project meets or exceeds such standards.

   (Refer to paragraph (b), above.)

2. Chapter 18 – Special Uses:

   (a) The project, to which the use pertains, is of such a nature, scale, density, intensity and type to be an appropriate use for the parcel on which, and surrounding area in which, it will be located.

   The project replaces existing aging and damaged onsite infrastructure, and is necessary to ensure continued adequate operations and maintenance of the existing facility. No changes to the existing use and capacity will result from the project.

   (b) The project, to which the use pertains, will not be injurious or disturbing to the health, safety, enjoyment of property, or general welfare of persons or property in the neighborhood, or general welfare of the region, and the applicant has taken reasonable steps to protect against any such injury and to protect the land,

water, and air resources of both the applicant's property and that of surrounding property owners.

The existing facility is designed to temporarily store wastewater in case of emergency or maintenance at either the Wastewater Treatment Plant and/or the Luther Pass Pump Station. The facility has been in service since 1959, and is critical to STPUD's operations and compliance with the 1967 Porter Cologne Water Quality Control Act, which prohibits the discharge of any wastewater in the Tahoe Basin.

Repair and maintenance of the facility, as proposed, will not negatively impact the existing health, safety, enjoyment of property, or general welfare of persons or property in the neighborhood, and will reduce risk to the general welfare of the region by reinforcing preventative measures for possible environmental discharge, thus improving the health and safety of the public.

The proposed project will incorporate temporary and permanent best management practices (BMPs) to mitigate potential environmental impacts created by project construction.

(c) The project, to which the use pertains, will not change the character of the neighborhood, detrimentally affect or alter the purpose of the applicable planning area statement, community plan and specific or master plan, as the case may be.

The project is repair and replacement of existing basin liners and ancillary structures that serve an existing, established facility. The project and land use are consistent with the Plan Area Statement, and will not detrimentally affect the existing neighborhood or application of the Regional Plan.

Attachment B: DRAFT PERMIT

PROJECT DESCRIPTION: Emergency Retention Basin Replacement Project APN 025-091-15

PERMITTEE(S): South Tahoe Public Utility District FILE # ERSP2011-0652

COUNTY/LOCATION: El Dorado County/1661 Black Bart Avenue

Having made the findings required by Agency ordinances and rules, the TRPA Hearings Officer approved the project on July 7, 2011, subject to the standard conditions of approval attached hereto (Attachment Q) and the special conditions found in this permit.

This permit shall expire July 7, 2014 without further notice unless the construction has commenced prior to this date and diligently pursued thereafter. Commencement of construction consists of pouring concrete for a foundation and does not include grading, installation of utilities or landscaping. Diligent pursuit is defined as completion of the project within the approved construction schedule. The expiration date shall not be extended unless the project is determined by TRPA to be the subject of legal action which delayed or rendered impossible the diligent pursuit of the permit.

NO CONSTRUCTION OR GRADING SHALL COMMENCE UNTIL:

(1) TRPA RECEIVES A COPY OF THIS PERMIT UPON WHICH THE PERMITTEE(S) HAS ACKNOWLEDGED RECEIPT OF THE PERMIT AND ACCEPTANCE OF THE CONTENTS OF THE PERMIT;
(2) ALL PRE-CONSTRUCTION CONDITIONS OF APPROVAL ARE SATISFIED AS EVIDENCED BY TRPA'S ACKNOWLEDGEMENT OF THIS PERMIT;
(3) THE PERMITTEE OBTAINS A COUNTY BUILDING PERMIT. TRPA'S ACKNOWLEDGEMENT IS NECESSARY TO OBTAIN A COUNTY BUILDING PERMIT. THE COUNTY PERMIT AND THE TRPA PERMIT ARE INDEPENDENT OF EACH OTHER AND MAY HAVE DIFFERENT EXPIRATION DATES AND RULES REGARDING EXTENSIONS; AND
(4) A TRPA PRE-GRADING INSPECTION HAS BEEN CONDUCTED WITH THE PROPERTY OWNER AND/OR THE CONTRACTOR.

_____ _____

TRPA Executive Director/Designee Date

PERMITTEE'S ACCEPTANCE: I have read the permit and the conditions of approval and understand and accept them. I also understand that I am responsible for compliance with all the conditions of the permit and am responsible for my agents' and employees' compliance with the permit conditions. I also understand that if the property is sold, I remain liable for the permit conditions until or unless the new owner acknowledges the transfer of the permit and notifies TRPA in writing of such acceptance. I also understand that certain mitigation fees associated with this permit are non-refundable once paid to TRPA. I understand that it is my sole responsibility to obtain any and all required approvals from any other state, local or federal agencies that may have jurisdiction over this project whether or not they are listed in this permit.

Signature of Permittee(s)_____ Date_____

PERMIT CONTINUED ON NEXT PAGE

APN 025-091-15
FILE NO. ERSP2011-0652

Excess Coverage Mitigation Fee (1):Amount $_____ Paid _____ Receipt No._____

Security Posted (2): Amount $5,000 ___ Type ___ Paid _____ Receipt No._____

Security Administrative Fee (3):Amount $_____ Paid _____ Receipt No._____

Notes:
(1) Amount to be determined. See Special Condition 3.B., below.
(2) See Special Condition 3.C., below.
(3) $152 if a cash security is posted, or $135 if a non-cash security is posted.

Required plans determined to be in conformance with approval: Date:_____

TRPA ACKNOWLEDGEMENT: The permittee has complied with all pre-construction conditions of approval as of this date and is eligible for a county building permit:

_____ _____
TRPA Executive Director/Designee Date

SPECIAL CONDITIONS

1. This permit specifically authorizes the replacement of the existing basin liners at the STPUD Emergency Retention Basin facility near the corner of Black Bart Avenue and Pioneer Trail. Additionally, this permit authorizes removal or replacement of some of the existing ancillary facilities (pipes and hydrants, check dams, etc.), the regrading of the perimeter of the basins to correct erosion and settling issues, reestablish the necessary freeboard, and repaving of the access driveway. No new or relocation of land coverage will result from the project. All material necessary for the perimeter regrading will be obtained onsite from the central basin berm.

2. The Standard Conditions of Approval listed in Attachment Q shall apply to this permit.

3. Prior to permit acknowledgement, the following conditions of approval must be satisfied.

   A. The permittee shall provide a site plan for the project area, without an aerial overlay, that includes:

      (1) All property lines.

(2) Site plan scale and north arrow.

(3) Topographic contour lines at two (2) foot intervals, where available.

(4) Mapped land capability district boundaries.

(5) Locations and dimensions of existing structures and land coverage.

(6) Locations of proposed construction staging areas.

(7) The following land coverage calculations:

(a) Lot area.

(b) Mapped land capability delineations.

(c) Allowable land coverage for each land capability district.

(d) Existing land coverage for each land capability district.

(e) Previously mitigated land coverage for the project area.

(8) Location of areas of the existing access driveway to be paved or repaved. Any part of the dirt road/driveway that is required to be plowed for winter access shall be paved.

(9) Temporary erosion control structures located downslope of the proposed construction and staging areas. *Please Note: Straw bales are no longer acceptable for temporary erosion control or mulch material in the Lake Tahoe Basin. The use of straw has contributed to the spread of noxious weeds throughout the basin. The use of alternatives to straw bales, such as pine needle bales, filter fabric, coir logs and pine needle or wood mulches for erosion control purposes is required.*

(10) Vegetation protective fencing around the entire construction site. The fencing shall be no more than 12 feet from any area of approved disturbance. Trees located within the construction area that are to be retained shall be individually protected by fencing or other means as necessary.

(11) Permanent infiltration facilities for the existing and proposed paved driveway.

(12) The permittee shall submit calculations demonstrating that the infiltration and conveyance facilities are sized accordingly for the

slope and soil type of the property and will capture and infiltrate a 20 year/1 hour storm event.

(13) A note indicating: "All areas disturbed by construction shall be revegetated in accordance with the TRPA Handbook of Best Management Practices and Living with Fire, Lake Tahoe Basin, Second Edition."

(14) A note indicating: "Dust control measures shall be in place during construction. Broadcast mulch shall not be permitted as a dust control measure within 35 feet of structures."

(15) Location of all recorded easements inherent to the property or resulting from this project.

B. The affected property has approximately 311,821 square feet of excess land coverage. The permittee shall mitigate a portion or all of the excess land coverage on this property by removing coverage within Hydrologic Transfer Area 5 – Upper Truckee, or by submitting an excess coverage mitigation fee.

To calculate the amount of excess coverage to be removed, use the following formula:

Estimated project construction cost multiplied by the fee percentage of 5.0% (as identified in Table A of Subsection 20.5.A.(3), Chapter 20 of the TRPA Code of Ordinances) divided by the mitigation factor of 8. If you choose this option, please revise your final site plans and land coverage calculations to account for the permanent coverage removal.

An excess land coverage mitigation fee may be paid in lieu of permanently retiring land coverage. The excess coverage mitigation fee shall be calculated as follows:

Coverage reduction square footage (as determined by formula above) multiplied by the coverage mitigation cost fee of $8.50 for projects within Hydrologic Transfer Area 5 – Upper Truckee. Please provide a construction cost estimate by your licensed contractor, architect or engineer. In no case shall the mitigation fee be less than $200.00.

C. The security required under Standard Condition I.B. of Attachment Q shall be $5,000. Please see Attachment J, Security Procedures, for appropriate methods of posting the security and for calculation of the required security administration fee.

D. The permittee shall submit three sets of final construction drawings and plans to TRPA.

4. The permittee shall submit a projected construction completion schedule to TRPA prior to commencement of construction. Said schedule shall include completion dates for each item of construction, as well as BMP installation for the entire project area.

5. To the maximum extent allowable by law, the Permittee agrees to indemnify, defend, and hold harmless TRPA, its Governing Board, its Planning Commission, its agents, and its employees (collectively, TRPA) from and against any and all suits, losses, damages, injuries, liabilities, and claims by any person (a) for any injury (including death) or damage to person or property or (b) to set aside, attack, void, modify, amend, or annul any actions of TRPA. The foregoing indemnity obligation applies, without limitation, to any and all suits, losses, damages, injuries, liabilities, and claims by any person from any cause whatsoever arising out of or in connection with either directly or indirectly, and in whole or in part (1) the processing, conditioning, issuance, or implementation of this permit; (2) any failure to comply with all applicable laws and regulations; or (3) the design, installation, or operation of any improvements, regardless of whether the actions or omissions are alleged to be caused by TRPA or Permittee.

   Included within the Permittee's indemnity obligation set forth herein, the Permittee agrees to pay all fees of TRPA's attorneys and all other costs and expenses of defenses as they are incurred, including reimbursement of TRPA as necessary for any and all costs and/or fees incurred by TRPA for actions arising directly or indirectly from issuance or implementation of this permit. Permittee shall also pay all costs, including attorneys' fees, incurred by TRPA to enforce this indemnification agreement. If any judgment is rendered against TRPA in any action subject to this indemnification, the Permittee shall, at its expense, satisfy and discharge the same.

6. Excavation equipment shall be limited to existing areas of coverage and the area of approved disturbance to minimize site disturbance.

7. By acceptance of this permit, the permittee agrees that no snow plowing will occur over unpaved areas.

8. By acceptance of this permit, the permittee agrees that all mitigation measures outlined in the project application are hereby included as conditions of project approval and will be implemented as such.

9. Prior to release of security funds, the following conditions shall be met:

   A. The project shall be completed according to approved plans.

   B. The permittee shall apply for and receive the results of a Land Capability Verification for the entire project area.

   C. The permittee shall apply for and receive the results of an existing land coverage verification for the entire project area.

Attachment C: Regional Plan Compliance Analysis

A. Environmental Documentation: The applicant has completed an Initial Environmental Checklist (IEC) to assess the potential environmental impacts of the project and Vg findings have been completed in order to assess the potential impacts of the project. No significant environmental impacts were identified and staff has concluded that the project, as conditioned, will not have a significant effect on the environment. A copy of the IEC and Vg findings will be made available at the Hearings Officer hearing and at TRPA.

B. Plan Area Statement/Community Plan: The project is located within Plan Area Statements 101 – Bijou Meadows. The Land Use Classification for the Plan Area Statement is Recreation, with a Management Strategy of Mitigation. Local and Regional Public Health and Safety Facilities are a special use for the Plan Area Statement. Agency staff has reviewed the Plan Area Statement and has determined that the project, as conditioned in the attached permit, is consistent with the applicable planning statement, planning considerations, and special policies, and is considered a permissible use.

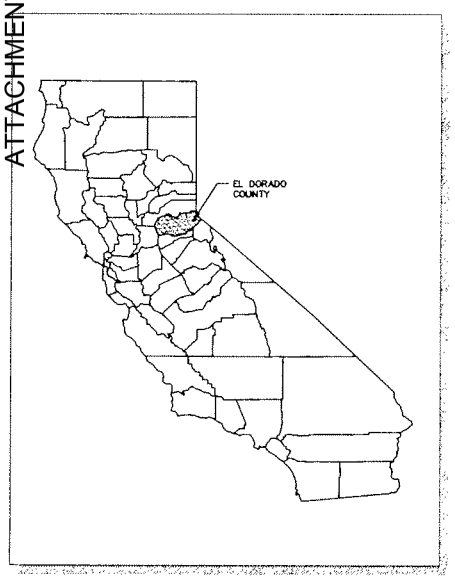
C. Land Coverage: No modifications to land coverage are proposed.

ATTACHMENT D

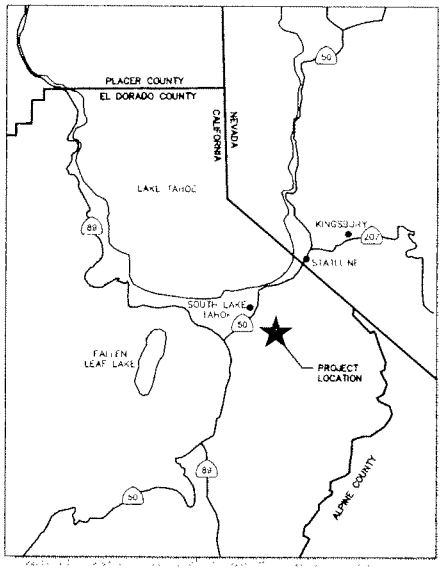
EMERGENCY RETENTION BASIN REPLACEMENT

PREPARED FOR:

SOUTH TAHOE PUBLIC UTILITY DISTRICT



CALIFORNIA COUNTIES

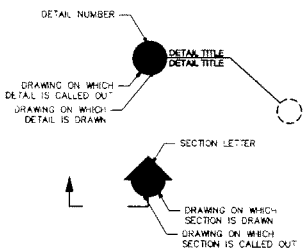


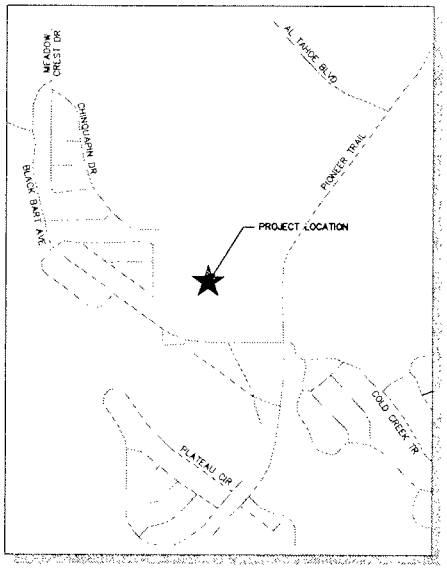
REGIONAL MAP

ABBREVIATIONS

ø	DIAMETER	MAX	MAXIMUM
~	APPROXIMATE	MIN	MINIMUM
EL	ELEVATION	NTS	NOT TO SCALE
FT	FEET	%	PERCENT
HDPE	HIGH DENSITY POLYETHYLENE	TYP	TYPICAL
SS	STAINLESS STEEL	EWF	EACH WAY, EACH FACE
NIS	NOT IN SECTION	BMP	BEST MANAGEMENT PRACTICE
O.C	ON CENTER	SF	SQUARE FEET
LF	LINEAL FEET	SY	SQUARE YARD
A/C	ASPHALT CONCRETE	PS	POUNDS PER SQUARE INCH

SYMBOLS





VICINITY MAP

DRAWING INDEX

DRAWING NUMBER	TITLE AND DESCRIPTION	LATEST REVISION NUMBER	LATEST REVISION DATE
GENERAL			
G01	TITLE PAGE	2	06/20/11
G02	GENERAL NOTES	2	06/20/11
G03	SITE STAGING AND ACCESS PLAN	2	06/20/11
G04	EXISTING CONDITIONS AND SITE PLAN	2	06/20/11
G05	BMP DETAILS	2	06/20/11
CIVIL			
C01	PROPOSED MODIFICATIONS	2	06/20/11
C02	PROPOSED EARTHWORKS	2	06/20/11
C10	LINER DETAILS	2	06/20/11
C11	LINER DETAILS	2	06/20/11
C12	LINER DETAILS	2	06/20/11
C13	LINER DETAILS	2	06/20/11
ELEC.			
E01	INSTRUMENTATION LAYOUT	2	06/20/11
E02	INSTRUMENTATION DETAILS	2	06/20/11
MECH.			
M01	MECHANICAL DETAILS	2	06/20/11
M02	MECHANICAL DETAILS	2	06/20/11

NOTES:
1. PIPE BENDS AND GEOSYNTHETICS ARE SHOWN NTS.
2. CONTRACT DOCUMENTS DATED APRIL 14, 2011, AND SUBSEQUENTLY ISSUED ADDENDA HAVE BEEN MERGED INTO ONE SET OF CONFORMED DOCUMENTS FOR THE CONVENIENCE OF THE DISTRICT AND THE CONTRACTOR. CONFORMED DOCUMENTS ARE FOR REFERENCE ONLY AND ARE NOT CONTRACT DOCUMENTS. IF INCONSISTENCIES OR AMBIGUITIES ARE FOUND BETWEEN CONFORMED DOCUMENTS AND CONTRACT DOCUMENTS OR ADDENDA, THE CONTRACT DOCUMENTS AND ADDENDA SHALL TAKE PRIORITY.

REV. NO.	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
0	04/14/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
1	05/31/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
2	06/20/11	CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC

DATE OF ISSUE: 06/20/11
DESIGNED BY: MAC
DRAWN BY: CM
CHECKED BY: MAC
APPROVED BY: MAC

REGISTERED PROFESSIONAL ENGINEER — MARK A. CHRISTIE — No. C 58666 — Exp. 06/30/12 — CIVIL — STATE OF CALIFORNIA

Ausenco Vector
143E Spring Hill Drive
Grass Valley, CA 95945
USA
T +1 530 272 2448
F +1 530 272 8633
W www.ausenco.com

Ausenco Vector

SOUTH TAHOE PUBLIC UTILITY DISTRICT
EMERGENCY RETENTION BASIN REPLACEMENT
EL DORADO COUNTY, CALIFORNIA

TITLE PAGE

DRAWING NO. G01

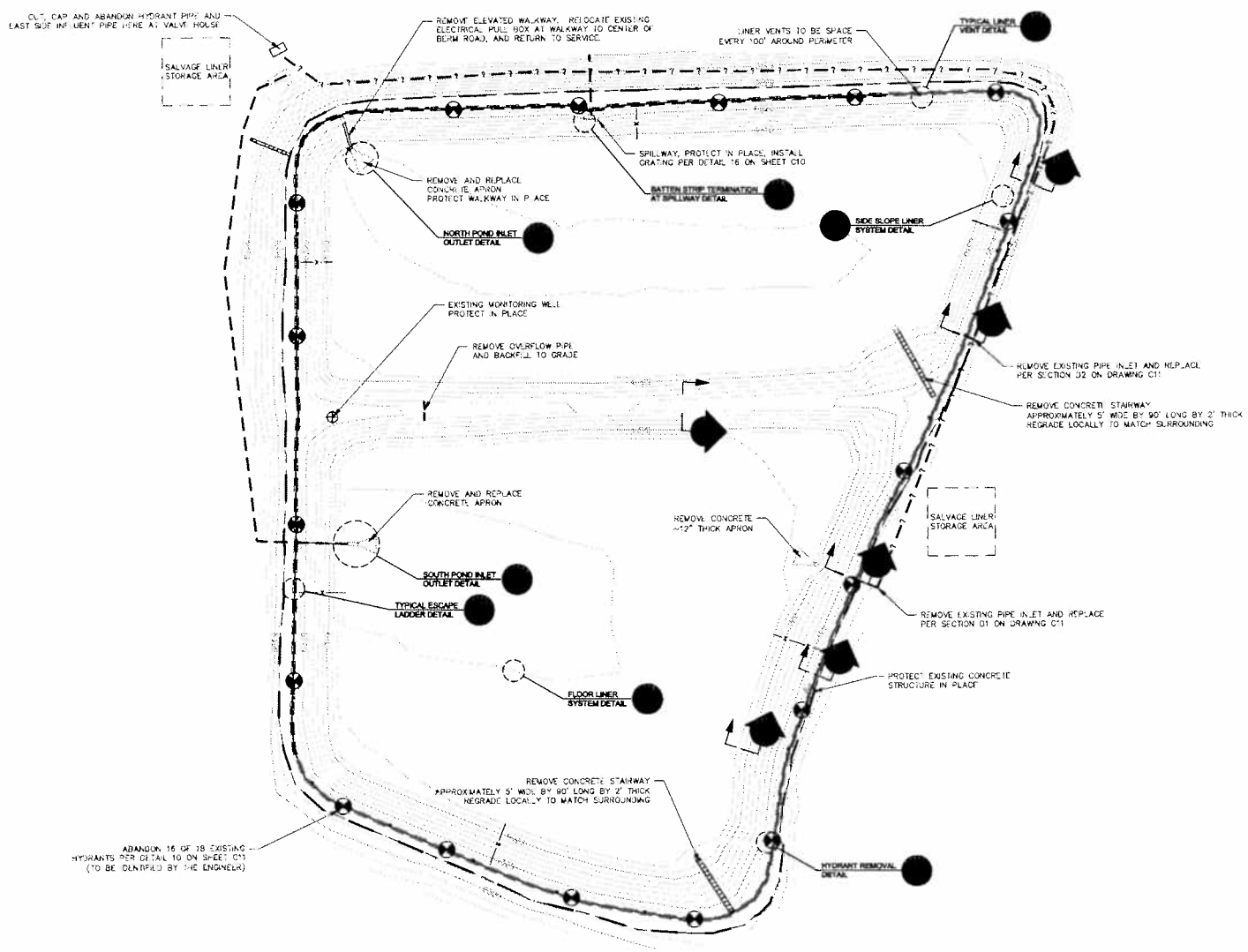
PROJECT NO. 101803.00

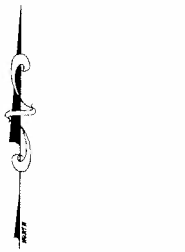
This drawing has not been published but rather has been prepared by Ausenco Vector (Vector Engineering, Inc.) for use by the client named in the title block, solely in respect of the construction operation, and maintenance of the facility named in the title block. Ausenco Vector shall not be liable for the use of this drawing on any other facility or for any other purpose.

CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION

LOCATION: N:\PROJ\101803.00 Retention Basin Replacement\CAD\Final Drawings\Conformed Drawings Issued for Construction Set # 2\G01.DWG TITLE PLOT: DATE: 6/20/2011 3:35 PM PLOT SCALE = 1.1 PLOTTED BY: CALEB MOYER

ATTACHMENT D





LEGEND

- EXISTING 10 FT CONTOUR
- EXISTING 2 FT CONTOUR
- PROPOSED ESCAPE LADDER
- PROPOSED FENCE LINE
- EXISTING PIPE
- PROPOSED LINER LIMITS
- PROPOSED LIMITS OF EARTHWORK
- EXISTING HYDRANT TO BE REMOVED

APPROXIMATE QUANTITIES

PLAN AREA OF POND = APPROXIMATELY 584,000 SF (MEASURED TO CREST OF SLOPE)

NOTES:

1. TOPOGRAPHY BASED ON GROUND SURVEY PERFORMED BY INSIGHT LAND SURVEYORS ON MAY 24, 2010.
2. CONTRACTOR TO REMOVE AND REPLACE EXISTING LINER.
3. CONTRACTOR TO SALVAGE EXISTING GEOTEXILE FROM BENEATH EXISTING LINER AND UTILIZE FOR CUSHION LAYER. SEE DETAIL 6 & 7 ON SHEET C10.
4. CONTRACTOR NOT TO DISTURB OUTSIDE OF LIMITS OF EARTHWORK SHOWN ON DRAWING.
5. ONE CELL OF THE POND SHALL REMAIN IN SERVICE AT ALL TIMES. REFER TO SECTION 017300, PROJECT EXECUTION, FOR OTHER SCHEDULING CONSTRAINTS. BERM MUST BE PROTECTED DURING THIS PHASING.
6. CONTRACTOR SHALL PROVIDE SURVEY COORDINATES FOR ALL PIPING ABANDONMENT LOCATIONS, LINER TERMINATIONS AND TOP OF SLOPE, AND NEW INSTALLATIONS.
7. CONTRACTOR SHALL CUT EXISTING LINER INTO APPROXIMATELY 10' X 50' STRIPS FOR REUSE BY THE DISTRICT. STRIPS SHALL BE NEATLY STACKED AND SECURED AT ONE OF TWO LOCATIONS IDENTIFIED. CONTRACTOR'S PREFERENCE. CONTRACTOR SHALL TAKE CARE TO MINIMIZE DAMAGE TO THE STRIPS DURING THE REMOVAL AND STACKING PROCESS.
8. CONTRACTOR SHALL PROVIDE TEMPORARY ANCHORAGE AT THE CENTER BERM FOR THE EDGE OF LINER FOR THE POND THAT WILL REMAIN IN SERVICE, AT OR ABOVE ELEVATION 6314.

REV. NO.	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
0	04/14/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
1	06/21/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
2	08/09/11	CONFORMED DRAWINGS ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC

DATE OF ISSUE: 08/09/11
DESIGNED BY: MAC
DRAWN BY: CM
CHECKED BY: MAC
APPROVED BY: MAC

REGISTERED PROFESSIONAL ENGINEER — MARK A. CHRITTON — No. C 58866 Exp 06/30/12 — CIVIL — STATE OF CALIFORNIA

Ausenco Vector
1430E Spring Hill Drive
Grass Valley, CA 95945
USA
T +1 530 272 2448
F +1 530 272 8533
W www.ausenco.com

Ausenco Vector

SOUTH TAHOE PUBLIC UTILITY DISTRICT

EMERGENCY RETENTION BASIN REPLACEMENT

EL DORADO COUNTY, CALIFORNIA

PROPOSED MODFICATIONS

DRAWING NO. C01

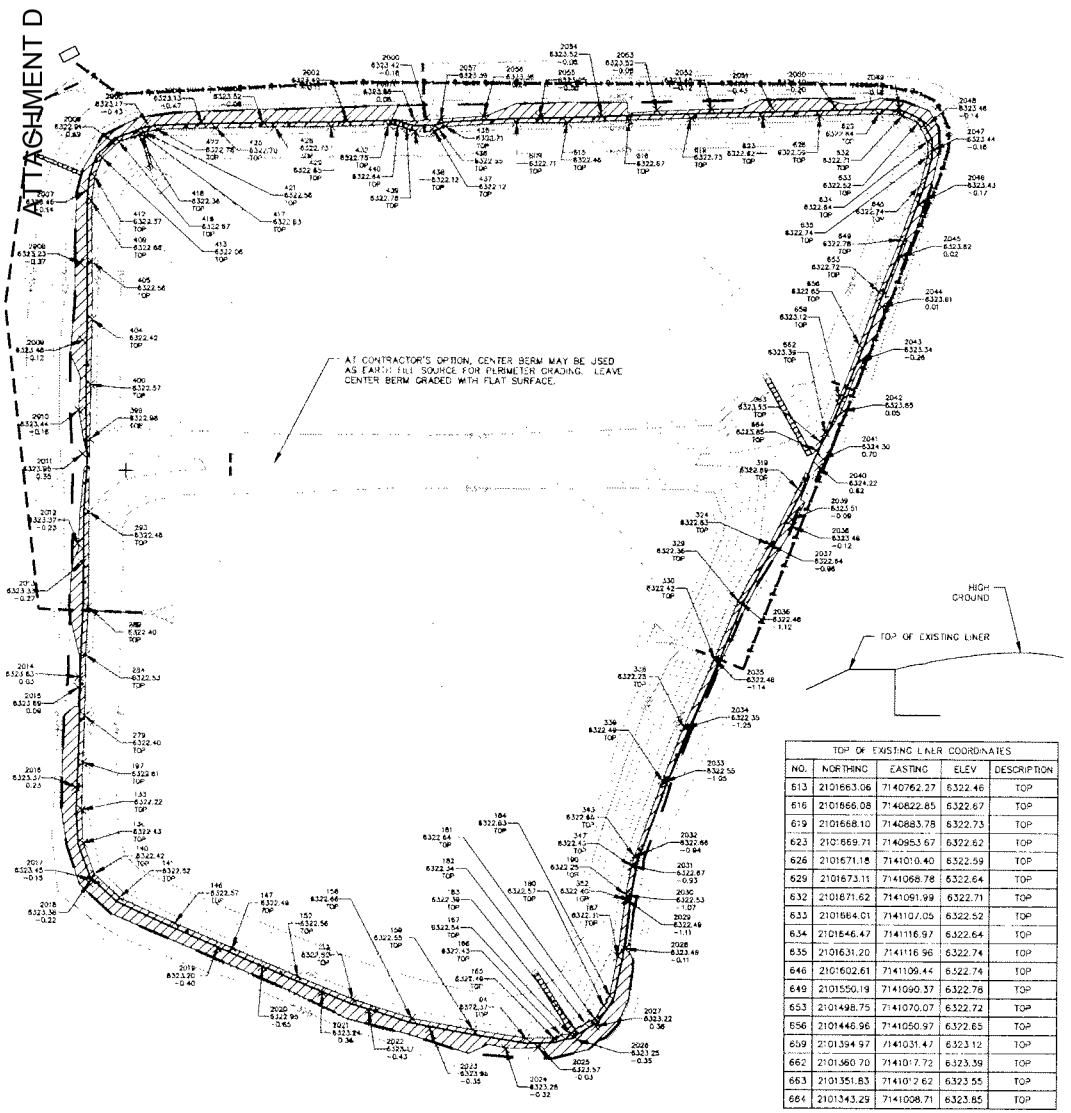
PROJECT NO. 101803.00

This drawing has not been published but rather has been prepared by Ausenco Vector (Vector Engineering, Inc.) for use by the client named in the title block, solely in respect of the construction operation, and maintenance of the facility named in the title block. Ausenco Vector shall not be liable for the use of this drawing on any other facility or for any other purpose.

CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION

LOCATION: K:\PROJ\101803.00 Reliability Basin Replacement\CAD\Final Drawings\Conformed Drawings Issued for Construction_Rev 2_08122011\PDF\DESIGN_LINER.dwg DATE: 8/29/2011 3:36 PM PLOTSCALE = 1.1176471 PLOTTED BY: CALEB WOLFE

ATTACHMENT D



TOP OF EXISTING LINER COORDINATES

NO.	NORTHING	EASTING	ELEV	DESCRIPTION
133	2100986.20	7140291.24	6322.22	TOP
136	2100953.28	7140292.91	6322.43	TOP
140	2100923.79	7140303.99	6322.42	TOP
141	2100900.28	7140328.36	6322.52	TOP
146	2100875.48	7140362.40	6322.57	TOP
147	2100851.57	7140438.50	6322.49	TOP
152	2100823.86	7140502.80	6322.56	TOP
153	2100801.67	7140556.94	6322.52	TOP
158	2100783.26	7140614.73	6322.66	TOP
159	2100772.48	7140674.89	6322.55	TOP
164	2100764.48	7140727.06	6322.37	TOP
165	2100764.66	7140754.22	6322.49	TOP
166	2100767.68	7140761.31	6322.43	TOP
167	2100768.77	7140770.05	6322.54	TOP
180	2100796.44	7140803.06	6322.57	TOP
181	2100783.47	7140794.12	6322.64	TOP
182	2100779.07	7140784.88	6322.34	TOP
183	2100773.22	7140775.42	6322.39	TOP
184	2100806.40	7140808.90	6322.63	TOP
187	2100845.40	7140816.51	6322.31	TOP
190	2100905.13	7140824.11	6322.25	TOP
197	2101032.46	7140292.05	6322.61	TOP
279	2101078.40	7140293.65	6322.40	TOP
284	2101138.09	7140294.46	6322.53	TOP
289	2101185.73	7140296.52	6322.40	TOP
293	2101279.45	7140296.60	6322.46	TOP
319	2101305.16	7140991.33	6322.69	TOP
324	2101250.14	7140963.47	6322.63	TOP
329	2101194.15	7140932.88	6322.36	TOP
330	2101137.12	7140909.98	6322.42	TOP
338	2101070.14	7140880.14	6322.28	TOP
339	2101017.14	7140859.52	6322.49	TOP
343	2100942.72	7140832.51	6322.65	TOP
347	2100933.29	7140829.85	6322.43	TOP
352	2100900.59	7140823.66	6322.40	TOP
399	2101351.34	7140297.23	6322.98	TOP
400	2101404.98	7140297.81	6322.57	TOP
404	2101468.86	7140298.85	6322.42	TOP
405	2101524.88	7140298.27	6322.58	TOP
409	2101584.49	7140297.48	6322.68	TOP
412	2101808.32	7140300.32	6322.37	TOP
413	2101626.89	7140307.35	6322.06	TOP
416	2101642.89	7140323.68	6322.67	TOP
417	2101653.48	7140341.70	6322.63	TOP
418	2101649.41	7140342.72	6322.36	TOP
421	2101651.86	7140348.65	6322.58	TOP
422	2101654.96	7140361.01	6322.78	TOP
425	2101656.80	7140417.93	6322.70	TOP
428	2101657.74	7140475.86	6322.73	TOP
429	2101658.44	7140530.76	6322.65	TOP
432	2101660.46	7140587.13	6322.75	TOP
435	2101658.92	7140642.66	6322.71	TOP
436	2101656.21	7140636.29	6322.55	TOP
437	2101654.26	7140631.95	6322.12	TOP
438	2101653.77	7140613.20	6322.12	TOP
439	2101636.99	7140604.48	6322.78	TOP
440	2101659.64	7140596.12	6322.64	TOP
609	2101662.86	7140712.62	6322.71	TOP

TOP OF EXISTING LINER COORDINATES

NO.	NORTHING	EASTING	ELEV	DESCRIPTION
613	2101663.06	7140762.27	6322.46	TOP
616	2101666.08	7140822.85	6322.67	TOP
619	2101668.10	7140883.78	6322.73	TOP
623	2101669.71	7140953.67	6322.62	TOP
626	2101671.18	7141010.40	6322.59	TOP
629	2101673.11	7141068.78	6322.64	TOP
632	2101671.62	7141091.99	6322.71	TOP
633	2101664.01	7141107.05	6322.52	TOP
634	2101646.47	7141116.97	6322.64	TOP
635	2101631.20	7141116.96	6322.74	TOP
646	2101602.61	7141109.44	6322.74	TOP
649	2101550.19	7141090.37	6322.78	TOP
653	2101498.75	7141070.07	6322.72	TOP
656	2101446.96	7141050.97	6322.65	TOP
659	2101394.97	7141031.47	6323.12	TOP
662	2101360.70	7141017.72	6323.39	TOP
663	2101351.83	7141012.62	6323.55	TOP
664	2101343.29	7141008.71	6323.65	TOP

HIGH GROUND COORDINATES

NO.	NORTHING	EASTING	ELEV	DIFFERENCE
2000	2101667.51	7140624.34	6323.42	-0.18
2001	2101665.97	7140611.93	6323.66	0.06
2002	2101664.26	7140546.26	6323.49	-0.11
2003	2101662.68	7140463.88	6323.52	-0.08
2004	2101661.90	7140404.12	6323.13	-0.47
2005	2101660.70	7140351.13	6323.17	-0.43
2006	2101643.70	7140315.64	6322.97	-0.69
2007	2101594.39	7140291.56	6323.46	-0.14
2008	2101523.35	7140287.18	6323.23	-0.37
2009	2101448.57	7140289.64	6323.48	-0.12
2010	2101379.62	7140285.99	6323.44	-0.16
2011	2101336.66	7140290.40	6323.95	0.35
2012	2101247.89	7140285.97	6323.37	-0.23
2013	2101228.52	7140290.56	6323.33	-0.27
2014	2101116.50	7140288.18	6323.63	0.03
2015	2101105.36	7140287.35	6323.69	0.09
2016	2101008.51	7140285.15	6323.37	-0.23
2017	2100917.62	7140300.52	6323.45	-0.15
2018	2100914.39	7140298.54	6323.36	-0.22
2019	2100850.99	7140424.20	6323.20	-0.40
2020	2100832.98	7140468.40	6322.95	-0.65
2021	2100808.13	7140526.93	6323.24	-0.36
2022	2100790.32	7140572.51	6323.17	-0.43
2023	2100773.14	7140632.17	6323.25	-0.35
2024	2100753.83	7140706.88	6323.28	-0.32
2025	2100755.29	7140736.83	6323.57	-0.03
2026	2100763.27	7140777.31	6323.25	-0.35
2027	2100776.52	7140795.16	6323.22	-0.38
2028	2100852.36	7140823.70	6323.49	-0.11
2029	2100900.27	7140825.40	6322.49	-1.11
2030	2100904.52	7140825.98	6322.53	-1.07
2031	2100933.04	7140831.40	6322.67	-0.93
2032	2100942.49	7140833.85	6322.66	-0.94
2033	2101016.29	7140861.15	6322.55	-1.05
2034	2101069.54	7140882.66	6322.35	-1.25
2035	2101136.60	7140911.02	6322.46	-1.14
2036	2101192.82	7140935.45	6322.48	-1.12
2037	2101249.69	7140964.60	6322.64	-0.96
2038	2101268.10	7140986.00	6323.48	-0.12
2039	2101274.86	7140985.01	6323.57	-0.09
2040	2101327.05	7141011.45	6324.22	0.62
2041	2101334.62	7141015.65	6324.30	0.70
2042	2101381.80	7141035.74	6323.65	0.05
2043	2101431.89	7141052.62	6323.34	-0.26
2044	2101484.18	7141072.69	6323.61	0.01
2045	2101533.27	7141091.42	6323.62	0.02
2046	2101584.99	7141109.09	6323.43	-0.17
2047	2101637.48	7141123.08	6323.44	-0.16
2048	2101682.28	7141116.92	6323.48	-0.14
2049	2101678.90	7141088.68	6323.42	-0.18
2050	2101679.61	7141025.45	6323.40	-0.20
2051	2101677.99	7140963.94	6323.17	-0.43
2052	2101677.11	7140903.55	6323.48	-0.12
2053	2101675.57	7140850.73	6323.52	-0.08
2054	2101669.84	7140796.22	6323.52	-0.08
2055	2101668.50	7140735.27	6323.25	-0.35
2056	2101669.01	7140680.20	6323.36	-0.24
2057	2101666.23	7140638.13	6323.39	-0.21

GRAPHIC SCALE

60' 0 30' 60' 120' 240'

LEGEND

- EXISTING 10 FT CONTOUR
- EXISTING 2 FT CONTOUR
- PROPOSED ESCAPE LADDER
- PROPOSED CREST HINGELINE
- EXISTING PIPE
- PROPOSED LINER LIMITS
- PROPOSED LIMITS OF EARTHWORK
- APPROXIMATE FILL AREA

APPROXIMATE QUANTITIES

SOIL TO BE ADDED TO OBTAIN A CREST ELEVATION OF 6323.6' = 440 CY

NOTES:

1. TOPOGRAPHY BASED ON GROUND SURVEY PERFORMED BY INSIGHT LAND SURVEYORS ON MAY 24, 2010
2. CONTRACTOR TO PROVIDE AS-BUILT SURVEY AT HINGE POINTS AND 50' X 50' GRID.
3. REF. US STATE PLANE NAD83 CALIFORNIA ZONE 2 VERTICAL DATUM NAVD88

REV. NO.	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
0	06/16/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
1	06/31/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
2	08/09/11	CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC

DATE OF ISSUE: 08/09/11
DESIGNED BY: MAC
DRAWN BY: CM
CHECKED BY: MAC
APPROVED BY: MAC

REGISTERED PROFESSIONAL ENGINEER — MARK A. CLARK — No. C 56666 Exp. 06/30/11 — STATE OF CALIFORNIA

Ausenco Vector
1436 Spring Hill Drive
Grass Valley, CA 95945
USA
T +1 530 272 2448
F +1 530 272 8533
W www.ausenco.com

Ausenco Vector

SOUTH TAHOE PUBLIC UTILITY DISTRICT

SOUTH TAHOE PUBLIC UTILITY DISTRICT
EMERGENCY RETENTION BASIN REPLACEMENT
EL DORADO COUNTY, CALIFORNIA
PROPOSED EARTHWORK

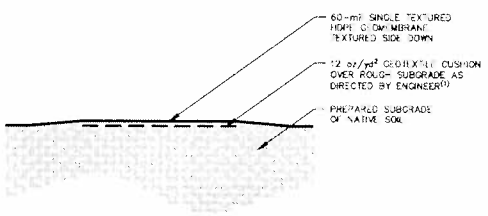
DRAWING NO. C02
PROJECT NO. 101803.00

This drawing has not been published but rather has been prepared by Ausenco Vector (Vector Engineering, Inc.) for use by the client named in the title block, solely in respect of the construction operation, and maintenance of the facility named in the title block. Ausenco Vector shall not be liable for the use of this drawing on any other facility or for any other purpose.

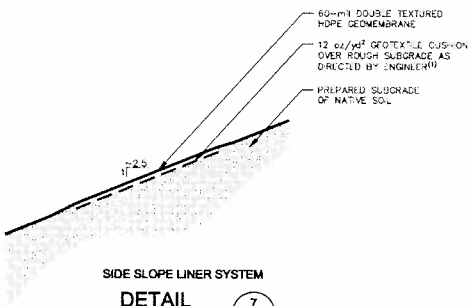
CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION

LOCATION: N:\PROJ\101803.00 Retention Basin Replacement\CAD\Final Drawings\Conformed Drawings Issued for Construction Rev 0 (06/21/11)\C02 DESIGN INTERIM.dgn DATE: 6/20/2011 8:38 PM PLOT SCALE = 1.000000' PLOTTED BY: CALEB MILLER

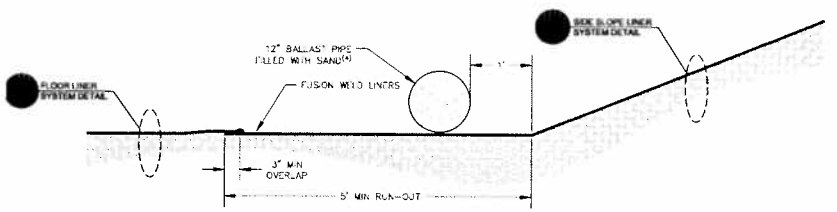
ATTACHMENT D



FLOOR LINER SYSTEM
DETAIL 6 (C01 | C10)
1" = 1'

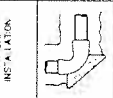
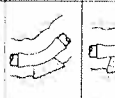
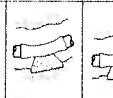
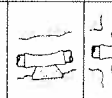
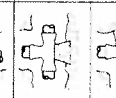
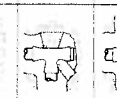
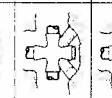


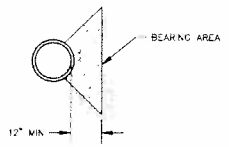
SIDE SLOPE LINER SYSTEM
DETAIL 7 (C01 | C10)
1" = 1'



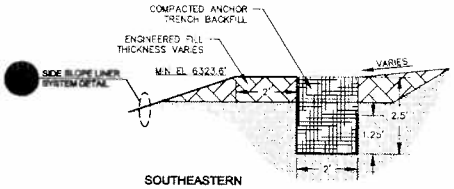
TYPICAL FLOOR TO SIDE SLOPE LINER SYSTEM TRANSITION
SECTION A (C01 | C10)
1" = 1'

THRUST BLOCK AREA REQUIRED - SQUARE FEET

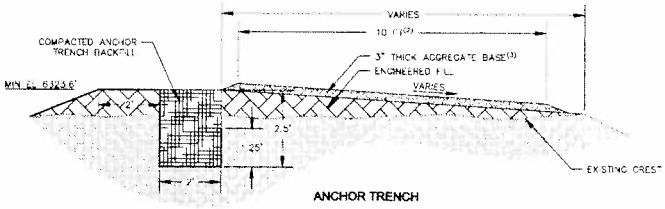
TYPE OF FITTING		90° ELBOW	45° ELBOW	22.5° ELBOW	11.25° ELBOW	TEE BRANCH	TEE W/ PLUG	CROSS W/ PLUG	CROSS W/ PLUGS
TYPICAL INSTALLATION									
SIZE OF PIPE	6"	4	4	2	2	4	4	4	4
	8"	10	6	3	3	10	10	10	10
	10"	12	8	4	4	15	15	15	15
	12"	18	10	8	6	20	20	20	20
	14"	21	12	6	6	22	21	22	21
	16"	27	15	8	8	22	27	27	27
	18"	45	25	13	13	32	45	45	45
	24"	65	35	18	18	45	65	65	65



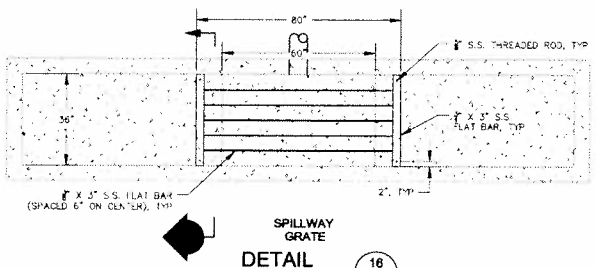
TYPICAL THRUST BLOCK
SEE NOTES 5-8
DETAIL 15 (C11 | C10)
1" = 4'



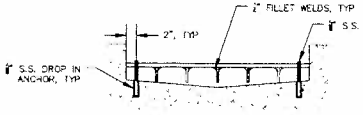
SOUTHEASTERN ANCHOR TRENCH
SECTION B (C01 | C10)
1" = 2'



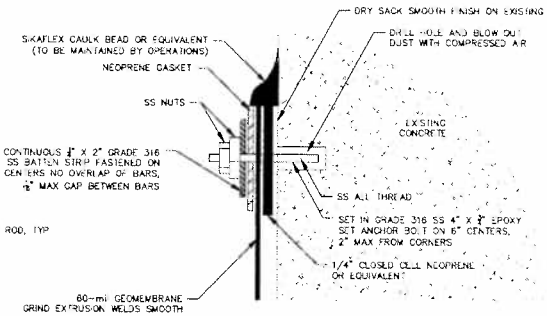
ANCHOR TRENCH
SECTION C (C01 | C10)
1" = 2'



SPILLWAY GRATE
DETAIL 16 (C01 | C10)
1" = 2'



SPILLWAY GRATE
SECTION K (C10 | C10)
1" = 1'



BATTEN STRIP TERMINATION AT SPILLWAY
DETAIL 8 (C01 | C10)
NTS

NOTES:
1. CONTRACTOR TO SALVAGE EXISTING GEOTEXTILE FROM BENEATH LINER AND UTILIZE FOR CUSHION LAYER.
2. CONTRACTOR TO FIELD FIT 10' WIDE ROAD ALONG NORTHWEST AND NORTHEAST CORNERS AND NORTHEAST EDGE.
3. INSTALL 3" OF RECYCLED AGGREGATE BASE, COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 312000 FOR AGGREGATE BASE. SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH SECTION 321216, PART 3.02.
4. PLACE BALLAST AT THE TOE OF SLOPES AND AT LINES RUNNING FROM THE EAST SLOPE CLEAR ACROSS THE FLOOR TO THE WEST SLOPE SPACED APPROXIMATELY 80 FEET APART. THE NORTH POND SHALL HAVE TWO BALLAST LINES ACROSS THE FLOOR AND THE SOUTH POND SHALL HAVE THREE BALLAST LINES ACROSS THE FLOOR. THE BALLAST SHALL CONSIST OF PIPE THAT IS HIGH DENSITY, HIGH MOLECULAR WEIGHT, POLYETHYLENE PIPE, SDR 26. THE PIPE SHALL CONFORM TO ASTM D3350 WITH A MINIMUM CELL CLASSIFICATION VALUE OF 345464C. EACH SEGMENT SHALL BE AT LEAST 20 FEET IN LENGTH, AND NO MORE THAN 40 WITH END CAPS. END CAPS SHALL SLIP ON AND BE MADE FROM POLYETHYLENE RESIN WHICH MEETS THIS SAME SPECIFICATION. THE PIPE SHALL BE 12 INCHES IN DIAMETER CAPPED WITH SLIP-ON END CAPS CONTINUOUSLY WELDED TO THE PIPE. THE END CAPS SHALL BE OUTFITTED WITH A 3/8 INCH BY 3 INCH EYE BOLT WITH 1-INCH OPENING BOLTED THROUGH A DRILLED HOLE IN END CAP.
5. JOINTS, FLANGE BOLTS AND FACE OF PLUGS TO BE KEPT CLEAR OF CONCRETE.
6. BLOCKS MUST BE POURED AGAINST UNDISTURBED SOIL.
7. THRUST BLOCKS TO BE CONSTRUCTED OF CLASS 4.2.5 C 2500 OR BETTER P.C.C.
8. NUTS AND BOLTS ON ALL MJ FITTINGS SHALL BE PAINTED WITH TWO COATS OF KOPPERS 505, TNEMEC 46-450, AMERON OR EQUAL, 15 MILS EACH COAT.

REV. NO.	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
0	04/14/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
1	05/31/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
2	06/20/11	CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC

DATE OF ISSUE: 06/20/11
DESIGNED BY: MAC
DRAWN BY: CM
CHECKED BY: MAC
APPROVED BY: MAC

REGISTERED PROFESSIONAL ENGINEER — MARK A. CHRISTIE — No. C 56866 — Exp. 06/30/12 — STATE OF CALIFORNIA

Ausenco Vector
1435 Spring Hill Drive
Grass Valley, CA 95945
USA
T +1 530 272 2448
F +1 530 272 8633
W www.ausenco.com

Ausenco Vector

SOUTH TAHOE PUBLIC UTILITY DISTRICT
EMERGENCY RETENTION BASIN REPLACEMENT
EL DORADO COUNTY, CALIFORNIA
LINER DETAILS

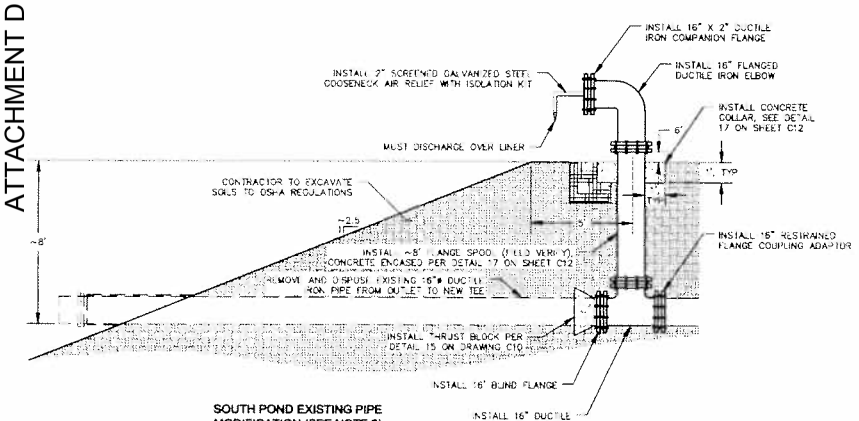
DRAWING NO. C10
PROJECT NO. 101803.00

The drawing has not been published but rather has been prepared by Ausenco Vector (Vector Engineering, Inc.) for use by the client named in the title block, solely in respect of the construction operation, and maintenance of the facility named in the title block. Ausenco Vector shall not be liable for the use of this drawing on any other facility or for any other purpose.

CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION

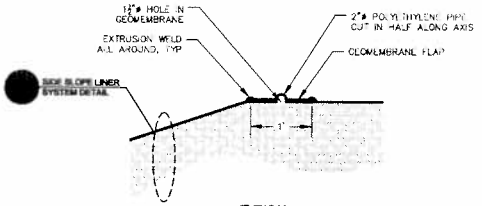
LOCATION: N:\STEP\101803.00 Relocation_Basin_Replacement\CAD\Final Drawings\Conformed Drawings Issued for Construction_Rev_0_06122011\DWG\DETAILS LINER.dwg DATE: 6/20/2011 3:40 PM PLOT SCALE = 1.1176'/1" PLOTTED BY: CHRIS MILLER

ATTACHMENT D



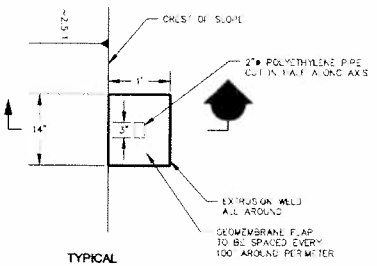
SOUTH POND EXISTING PIPE MODIFICATION (SEE NOTE 2)

SECTION D1 (C01 | C11) 1" = 3'



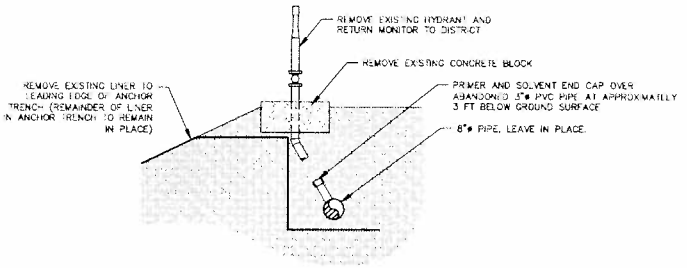
TYPICAL LINER VENT

SECTION E (C11 | C11) 1" = 1'



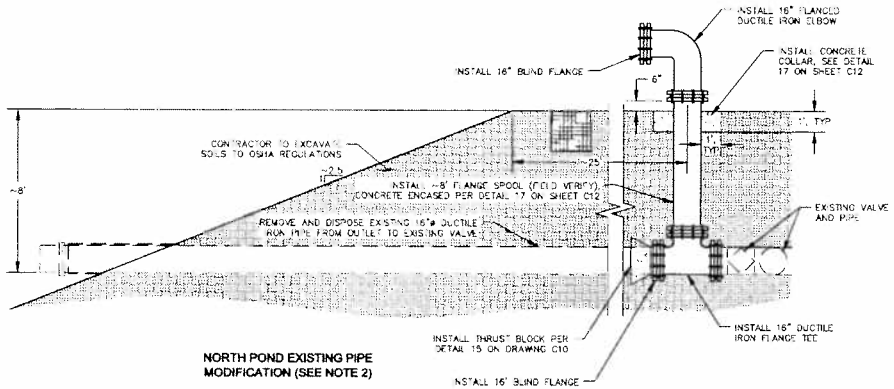
TYPICAL LINER VENT

DETAIL 9 (C01 | C11) 1" = 1'



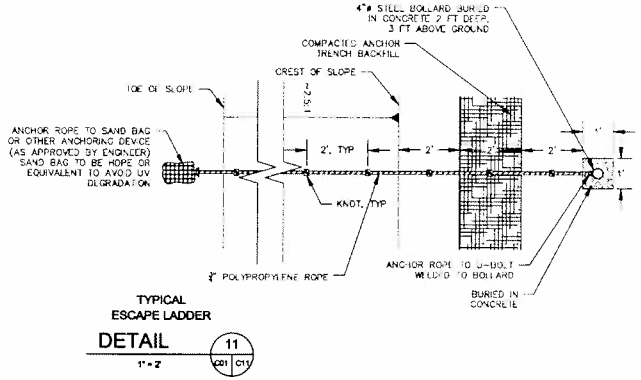
HYDRANT REMOVAL (SEE NOTE 3)

DETAIL 10 (C01 | C11) 1" = 2'



NORTH POND EXISTING PIPE MODIFICATION (SEE NOTE 2)

SECTION D2 (C01 | C11) 1" = 3'



TYPICAL ESCAPE LADDER

DETAIL 11 (C01 | C11) 1" = 2'

NOTES:
1. ALL STRUCTURAL CONCRETE SHALL BE CLASS A.
2. CONTRACTOR TO PROVIDE TWO 16" LAY FLAT DISCHARGE HOSES IN LABELED WEATHERPROOF BAGS. HOSE SHALL BE PREFABRICATED WITH FLANGE TO CONNECT TO THE FLANGE (HOSE CRAFT 800-584-4168 OR EQUIVALENT METHOD APPROVED BY ENGINEER). THE HOSE FOR THE NORTH POND SHALL BE 50 FT LONG; THE HOSE FOR THE SOUTH POND SHALL BE 25 FT LONG. BAG SHALL IDENTIFY THE LOCATION AND LENGTH OF THE HOSE. LAY FLAT HOSE SHALL BE PRESSURE RATED FOR AT LEAST 30 PSI.
3. CONTRACTOR TO FIELD FIT ANCHOR TRENCH AS NEEDED AT THE TWO (2) LOCATIONS WHERE HYDRANTS WILL REMAIN.

REV. NO.	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
0	04/14/11	ISSUED FOR CONSTRUCTION	CH	MAC	MAC	MAC
1	05/31/11	ISSUED FOR CONSTRUCTION	CH	MAC	MAC	MAC
2	06/20/11	CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION	CH	MAC	MAC	MAC

DATE OF ISSUE: 06/20/11
DESIGNED BY: MAC
DRAWN BY: CH
CHECKED BY: MAC
APPROVED BY: MAC

REGISTERED PROFESSIONAL ENGINEER — MARK A. CHRISTIE — No. C 39866 — Exp. 06/30/11 — STATE OF CALIFORNIA — CIVIL

Ausenco Vector
1435 Spring Hill Drive
Grass Valley, CA 95945
USA
T +1 530 272 2448
F +1 530 272 9533
W www.ausenco.com

Ausenco Vector

SOUTH TAHOE PUBLIC UTILITY DISTRICT

EMERGENCY RETENTION BASIN REPLACEMENT

EL DORADO COUNTY, CALIFORNIA

LINER DETAILS

DRAWING NO. C11

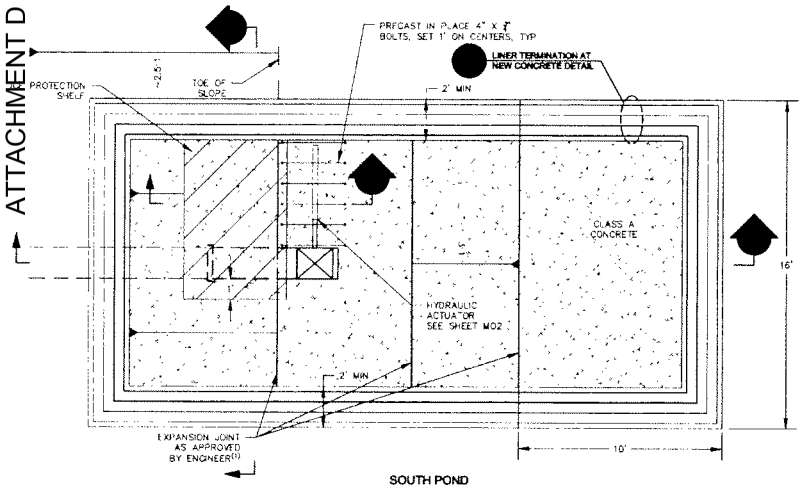
PROJECT NO. 101803.00

This drawing has not been published but rather has been prepared by Ausenco Vector (Vector Engineering, Inc.) for use by the client named in the title block, solely in respect of the construction operation, and maintenance of the facility named in the title block. Ausenco Vector shall not be liable for the use of this drawing on any other facility or for any other purpose.

CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION

LOCATION: N:\ENTITY\SOUTH TAHOE PUBLIC UTILITY DISTRICT\101803.00 Retention Basin Replacement\CAD\Final Drawings\Conformed Drawings Issued for Construction\Rev 2 06212011\LINER DETAILS_LINER.dwg — DATE: 6/20/2011 3:40:12 PM — PLOT STYLE: a 1:1 FULL.ctb — PLOTTED BY: CHRIS MILLER

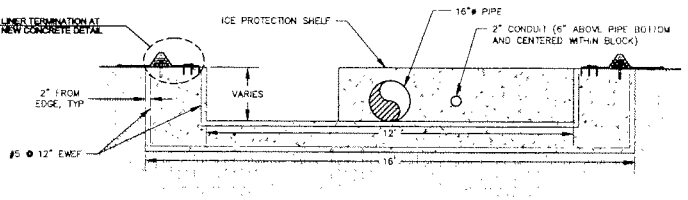
ATTACHMENT D



SOUTH POND INLET/OUTLET

DETAIL 12 (C01 | C12)

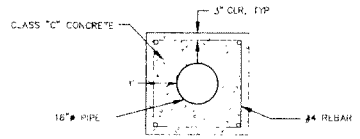
1" = 3'



SOUTH POND INLET / OUTLET SUMP

SECTION F1 (C12 | C12)

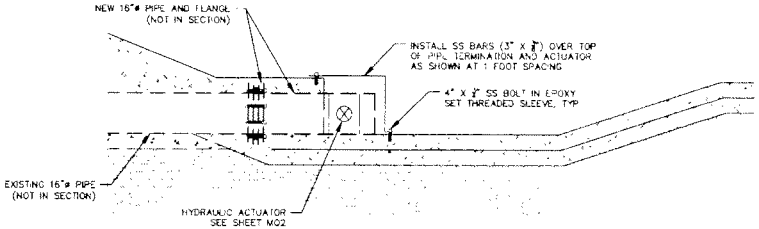
1" = 2'



NORTH & SOUTH POND CONCRETE COLLARS

DETAIL 17 (C11 | C12)

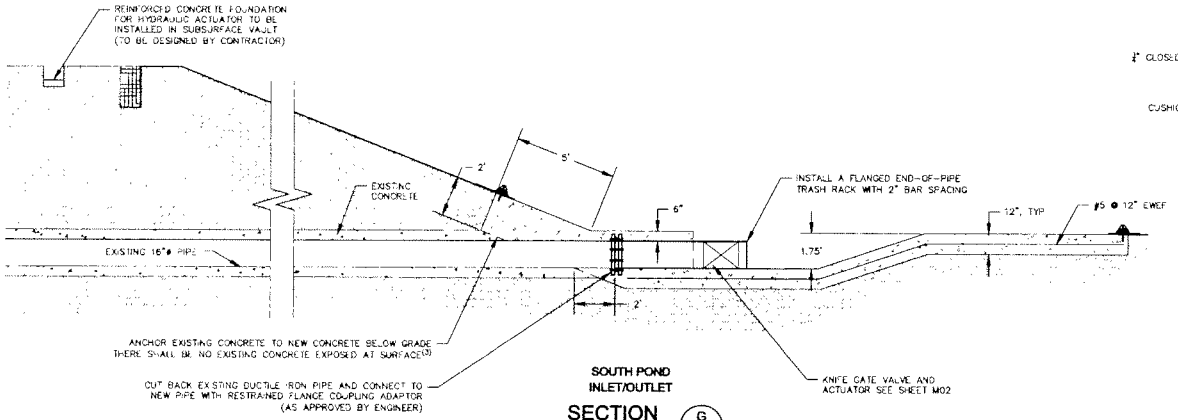
1" = 2'



ICE PROTECTION SHELF

SECTION F2 (C12 | C12)

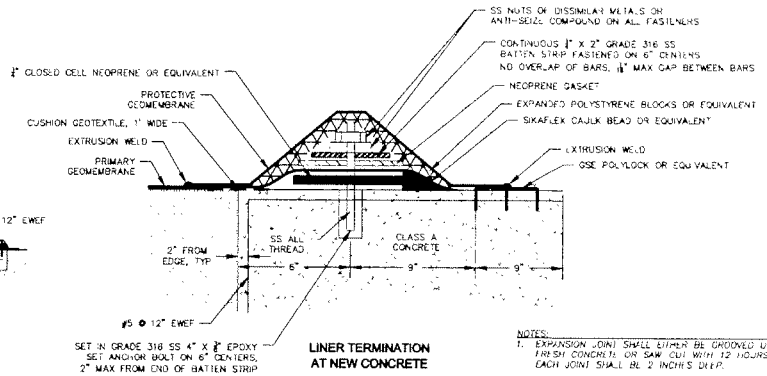
1" = 2'



SOUTH POND INLET/OUTLET

SECTION G (C12 | C12)

1" = 3'



LINER TERMINATION AT NEW CONCRETE

DETAIL 13 (C12 | C12)

NTS

NOTES:

1. EXPANSION JOINT SHALL EITHER BE GROOVED USING TOOLS IN FRESH CONCRETE OR SAW CUT WITH 12 HOURS OF POUR. EACH JOINT SHALL BE 2 INCHES DEEP.
2. ALL STRUCTURAL CONCRETE SHALL BE CLASS A.
3. CONTRACTOR SHALL SAW-CUT EXISTING CONCRETE, TAKING CARE TO REMOVE CONCRETE WITHOUT DAMAGING THE ENCASED PIPE. ANY DAMAGE TO EXISTING PIPE SHALL PROVIDE EPOXY SEAL AT EXPOSED REBAR AND SOARLY SURFACE OF EXISTING CONCRETE AS NEEDED TO ENSURE PROPER BONDING, AND INSTALL REBAR PER DETAIL 17 ON SHEET C12 PRIOR TO PLACING NEW CONCRETE ENCASEMENT.

REV. NO.	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
0	04/14/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
1	06/31/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
2	06/20/11	CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC

DATE OF ISSUE: 06/20/11
DESIGNED BY: MAC
DRAWN BY: CM
CHECKED BY: MAC
APPROVED BY: MAC

REGISTERED PROFESSIONAL ENGINEER — MARK A. CHRISTENSEN — No. C 58865 Exp 06/30/11 — STATE OF CALIFORNIA

Ausenco Vector
1435 Spring Hill Drive
Grass Valley, CA 95945
USA
T +1 530 272 2448
F +1 530 272 8833
W www.ausenco.com

Ausenco Vector

SOUTH TAHOE PUBLIC UTILITY DISTRICT

EMERGENCY RETENTION BASIN REPLACEMENT

EL DORADO COUNTY, CALIFORNIA

LINER DETAILS

DRAWING NO. C12

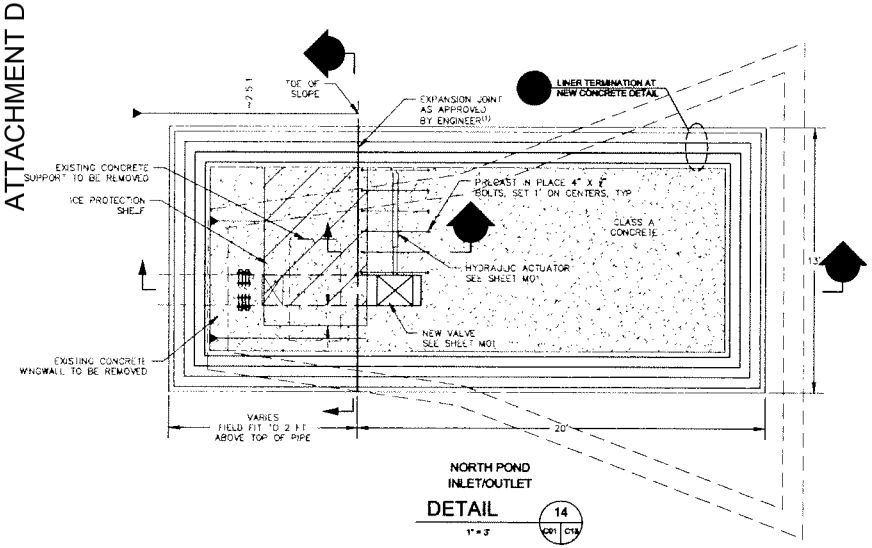
PROJECT NO. 101803.00

This drawing has not been published but rather has been prepared by Ausenco Vector (Vector Engineering, Inc.) for use by the client named in the title block, solely in respect of the construction operation, and maintenance of the facility named in the title block. Ausenco Vector shall not be liable for the use of this drawing on any other facility or for any other purpose.

CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION

LOCATION: N:\ETTEAM\101803.00 Retention Basin Replacement\CAD\Final Drawings\Conformed Drawings Issued for Construction\Sht 8 M02 M03 M04 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C32 C33 C34 C35 C36 C37 C38 C39 C40 C41 C42 C43 C44 C45 C46 C47 C48 C49 C50 C51

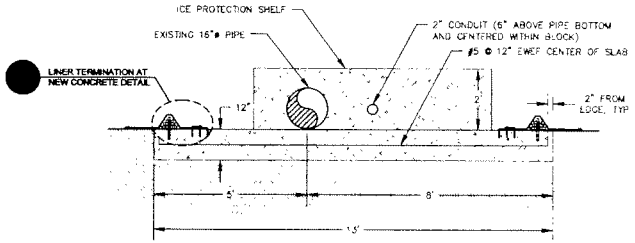
ATTACHMENT D



NORTH POND INLET/OUTLET

DETAIL 14 (C01 | C13)

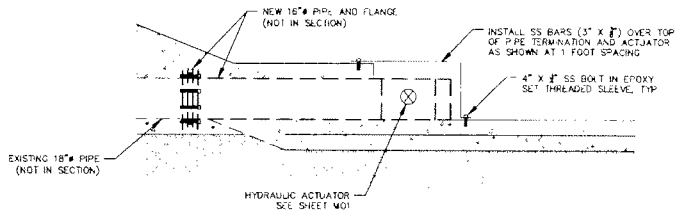
1" = 3'



NORTH POND INLET / OUTLET

SECTION H1 (C13 | C13)

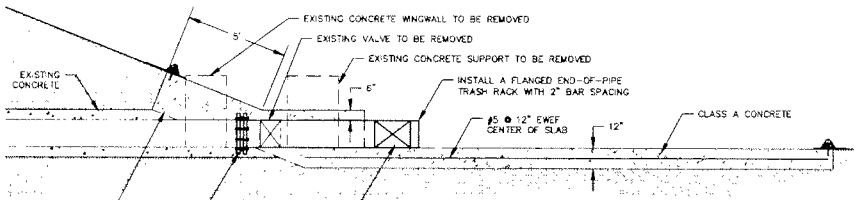
1" = 2'



ICE PROTECTION SHELF

SECTION H2 (C12 | C13)

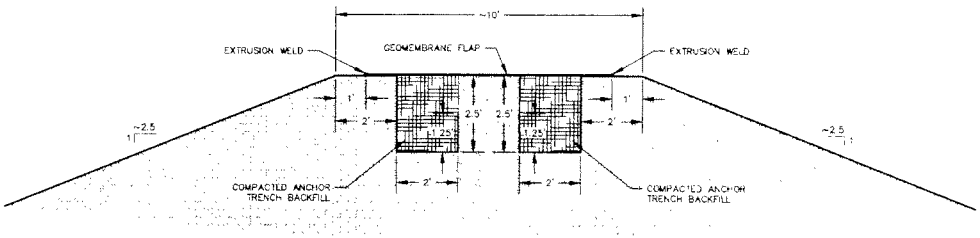
1" = 2'



NORTH POND INLET/OUTLET

SECTION I (C13 | C13)

1" = 3'



CENTER BERM ANCHOR TRENCH

SECTION J (C01 | C13)

1" = 2'

NOTES:

1. EXPANSION JOINT SHALL EITHER BE GROOVED USING TOOLS IN FRESH CONCRETE OR SAWCUT WITH 12 HOURS OF POUR. EACH JOINT SHALL BE 2 INCHES DEEP.
2. ALL STRUCTURAL CONCRETE SHALL BE CLASS A.
3. CONTRACTOR SHALL SAW-CUT EXISTING CONCRETE, TAKING CARE TO REMOVE CONCRETE WITHOUT DAMAGING THE ENCASED PIPE. ANY DAMAGE TO EXISTING PIPE SHALL PROVIDE EPOXY SEAL AT EXPOSED REBAR AND SCARIFY SURFACE OF EXISTING CONCRETE AS NEEDED TO ENSURE PROPER BONDING, AND INSTALL REBAR PER DETAIL 17 ON SHEET C12 PRIOR TO PLACING NEW CONCRETE ENCASEMENT.

REV. NO.	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
0	04/14/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
1	06/01/11	ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC
2	08/30/11	CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION	CM	MAC	MAC	MAC

DATE OF ISSUE: 08/30/11
DESIGNED BY: MAC
DRAWN BY: CM
CHECKED BY: MAC
APPROVED BY: MAC

REGISTERED PROFESSIONAL ENGINEER — MARK A. CHRISTIE — No. C 58966 Exp. 06/30/11 — STATE OF CALIFORNIA

Ausenco Vector
1435 Spring Hill Drive
Grass Valley, CA 95945
USA
T +1 530 272 2448
F +1 530 272 8533
W www.ausenco.com

Ausenco Vector

SOUTH TAHOE PUBLIC UTILITY DISTRICT

EMERGENCY RETENTION BASIN REPLACEMENT

EL DORADO COUNTY, CALIFORNIA

LINER DETAILS

DRAWING NO. C13

PROJECT NO. 101803.00

This drawing has not been published but rather has been prepared by Ausenco Vector (Vector Engineering, Inc.) for use by the client named in the title block, solely in respect of the construction operation, and maintenance of the facility named in the title block. Ausenco Vector shall not be liable for the use of this drawing on any other facility or for any other purpose.

CONFORMED DRAWINGS: ISSUED FOR CONSTRUCTION

LOCATION: K:\PROJECTS\101803.00 Retention Basin Replacement\CAD\Final Drawings\Conformed Drawings Issued for Construction Dec 8 2011\101803M01M02 LINER.dwg, 8/30/2011 8:51:07 PM, PDT, DWG to PDF.pc3, ANSI B (11.00 x 17.00 Inches), Plotted By: CHRIS MILLER