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June 27, 2008

Jill Bicknell, EOA, Inc.
Assistant Program Manager
SCVURPPP
111 West Evelyn Ave, Suite 110
Sunnyvale, CA 94086
Tel. 408/720-8811
jbicknell@eoainc.com

RE: Request for Qualifications (RFQ for Professional Civil Engineers Registered in the State of California to Design, Review and/or Certify Storm Water Treatment Best Management Practices and Hydromodification Flow Control Facilities

Dear Ms. Bicknell,

Thank you for the opportunity to submit our qualifications to provide design or review services for proposed storm water treatment control Best Management Practices (BMPs) and hydromodification flow control facilities for new and redevelopment projects.

SANDIS is professional services firm specializing in civil engineering, land surveying and planning. As a well established Santa Clara County firm with over 43 years of experience, SANDIS has a great deal of experience working both in the public and private sectors on projects involving storm water management and treatment, including projects requiring BMPs and hydromodification flow control. We have also successfully managed a number of multi-year on-call engineering and surveying contracts within Santa Clara County.

In addition to our technical expertise, SANDIS' strong project management is the lifeline to all projects. Strong management and leadership skills lead to successful project delivery and cost savings. Projects such as this require the flexible use of both time and resources. Our project managers, engineers, surveyors, and administrative staff will collaborate with the SCVURPPP to ensure that your needs and requests are responded to in an expedient manner.

We look forward to an opportunity to work with you. Please feel free to call me at 650.969.6900 or email me at kolcott@sandis.net if you have any questions or would like to schedule a team interview.

Very truly yours,

SANDIS



Ken N. Olcott, PE
President

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Firm Profile *43 Years Experience*

Firm Background

SANDIS is a professional services corporation specializing in civil engineering, land surveying, and planning. With 43 years of experience, SANDIS understands the technical design needs associated with storm water management and modeling projects.

To ensure the success of each project, SANDIS will work closely with SCVURPPP staff so that our review and/or design are in accordance with county/agency standards and meet the long term needs of the community. As such, we will approach each project as an extension of the agency's staff, ensuring cooperative, well thought out solutions. In working closely together, SANDIS is able to anticipate and adapt to design changes while still meeting construction schedules and budgets.

Primary Point of Contact

SANDIS' team will be led by Ken Olcott. Ken has over 20 years providing utility infrastructure design services for municipalities. Contact information is:

Ken Olcott, PE, President
Principal-in-Charge/Quality Assurance
SANDIS, Civil Engineers Surveyors Planners
605 Castro Street
Mountain View, CA, 94041
t.650.969.6900 / f.650.969.6472
kolcott@sandis.net
www.sandis.net

In-House Services

Engineering Services: site layout; grading and drainage plans; utility plans; road improvements; public works, drainage/flood studies; creek improvements; storm water pollution prevention permit (SWPPP); NPDES compliance; construction erosion control plan; post construction erosion control plan; storm water quality control plan; regional water quality control board coordination; hydronic heating lines alignment and routing; chilled water alignment and routing; gas lines alignment and routing; steam lines alignment and routing; electrical system alignment and routing; telecommunications lines alignment and routing; cost estimating; bidding & permitting services; preparation of record drawings; and construction administration.

Surveying Services: boundary survey; topographic survey; ALTA/ACSM survey; construction staking; record of survey; easements/plats/legal descriptions; subdivision mapping; control survey; condominium plans; FEMA certificates; as-built survey; GPS surveys; leveling; lot line adjustments; right-of-way engineering; monumentation; corner records; tentative map; parcel maps; hazmat surveys; public information research; elevation verification; structural steel plumb and alignment; bolt and pile verification; establishing street ties; and horizontal and vertical control plans.

Planning Services: feasibility studies; assist with right of way acquisitions; facility and infrastructure assessments; master planning; storm and sewage master planning; subdivision planning; and storm water management.



Firm Profile *43 Years Experience*

Management Approach

The best way to start off a project is to get involved early, understand the program goals, develop a road map to achieve desired goals, and focus on the successful implementation of that plan. SANDIS will lead SCVURPPP representatives toward project success through focusing our efforts of the seven “Keys to Success” (see box). For communication to have a truly positive impact on projects, communication must be meaningful, fact based, and timely. At the start of each assignment, SANDIS will meet with SCVURPPP to identify key objectives and concerns.

We have found it tremendously useful to have face-to-face meetings with all involved parties to ensure that proper direction and expectations are understood. By doing so, it enables us to develop a final project program including schedule and project budget AND enables us to eliminate the potential management and coordination problems between the owner and other consultants. Throughout the life of the project, we will continue to maintain open lines of communication.

KEYS TO SUCCESS

- **Communication.** SANDIS will conduct regular face to face meetings, as well as daily email and telephone conversations.
- **Team Concept.** SANDIS will rally the agency staff and other consultants to form a team to plan, design, construct and deliver successful projects.
- **Project Understanding.** SANDIS will break down our projects into fundamental components to develop understanding through preliminary work and coordination.
- **Master Schedule.** SANDIS will maintain and be mind-full of the ‘big picture’ of the project and how it impacts the community.
- **Master Budget.** SANDIS will adhere to the ‘big picture’ of project budget.
- **Project Planning.** SANDIS will create a plan/road map for each project, including: schedules, budgets, work plan, story boards, milestones, and deliverables.
- **Execution of project plans.** SANDIS will ensure that timely execution of the project is delivered.

Stability

Throughout SANDIS’ 43 years of business in the County of Santa Clara, we have been involved in countless municipal projects and have steadily grown from a single office to a firm with three established offices. Our revenues for the past five years clearly show the firm’s stability and commitment to the community.

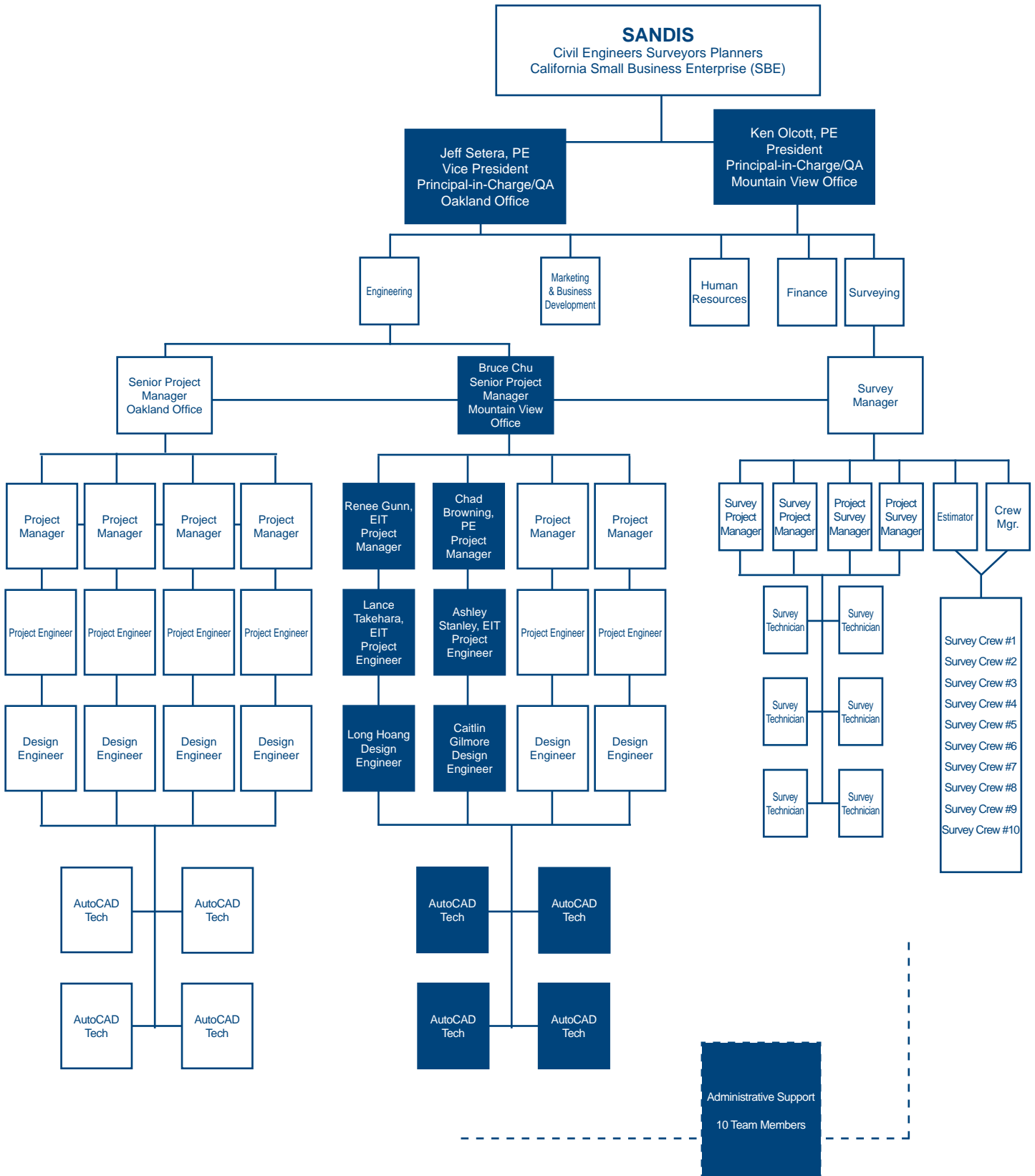
| | |
|-----------------------|---------------------|
| 2003 | \$8,499,571 |
| 2004 | \$8,431,729 |
| 2005 | \$7,445,915 |
| 2006 | \$8,567,085 |
| <u>2007</u> | <u>\$11,480,050</u> |
| 5 Year Average | \$8,884,870 |

Organization Structure

SANDIS’ engineering and surveying departments are divided into teams. Our engineering teams consist of a Principal-in-Charge, Project Manager, Project Engineer and Design Engineer. Our surveying teams consist of a Survey Manager / Principal-in-Charge, Survey Project Manager, Survey Technician, Survey Crew Manager and field crews. During weekly team meetings, project needs, schedules and budgets are discussed. Should the need for additional staffing be required, SANDIS shifts our team model and assigns additional engineering designers and AutoCAD personnel. As always, the Principal-in-Charge, Project Manager and Project Engineer stay involved in the project from the kick-off through to completion.

Each team is staffed individually to create a self-sufficient unit. The primary benefit to this type of system is that it fosters an environment of team work to complete projects and enhances quality control. A detailed quality control checklist is used daily by each team member to ensure that plans are well documented. Our Project Manager and Senior Project Manager regularly review plans for completeness. Additionally, Ken Olcott will perform an independent third party peer review. We find that this method of quality assurance is extremely effective and allows us to provide our clients with truly complete project documents.

Team Leadership *Expertise*



Team Leadership *Expertise*

Qualifications & Training of Key Team Members

SANDIS' engineering and surveying departments are comprised of highly qualified team members that are experienced in storm water management, best management practices and hydromodification flow control facilities. Team members include:

Ken Olcott, PE, LEED AP (RCE #51079)

- 21 Years Experience
- Registered Civil Engineer, California # 51079
- LEED Accredited Professional, USGBC
- Master Science, Civil Engineering, SJSU
- Bachelor of Arts Mathematics, SJSU
- SANDIS Leadership Training Presenter
- 2006 Grading and Drainage Plan Training Session
- 2007 FEMA and Firm Maps Training Session
- 2008 Storm Drain Pump Stations Training Session
- 2008 SWPPP & C.3 Requirements Training Session
- 2008 Storm Drain Systems Training Session
- 2007 Retention and Detion Ponds Training Session

Bruce Chu

- 23 Years Experience
- Diploma in Civil Engineering, University of Technology, Sydney, Australia
- SANDIS Leadership Training Program
- 2006 Grading and Drainage Plan Training Session
- 2007 FEMA and Firm Maps Training Session
- 2008 Storm Drain Pump Stations Training Session
- 2008 SWPPP & C.3 Requirements Training Session
- 2008 Storm Drain Systems Training Session
- 2007 Retention and Detion Ponds Training Session

Chad Browning, PE, LEED AP (RCE #68315)

- 10 Years Experience
- Registered Civil Engineer, California #68315
- LEED Accredited Professional, USGBC
- Bachelor of Science, Civil Engineering, CSU Long Beach
- SANDIS Leadership Training Program
- 2008 SCVURPPP Annual C.3 Workshop "Sharing Experience with Implementation of Stormwater Requirements at Development Projects"
- 2006 Grading and Drainage Plan Training Session
- 2007 FEMA and Firm Maps Training Session
- 2008 Storm Drain Pump Stations Training Session
- 2008 SWPPP & C.3 Requirements Training Session
- 2008 Storm Drain Systems Training Session
- 2007 Retention and Detion Ponds Training Session

Renee Gunn, EIT

- 6 Years Experience
- Engineering-in-Training, Tennessee, Civil Engineering
- Master of Science, Agricultural & Biological Engineering, Purdue University
- Bachelor of Science, Agricultural & Biological Engineering, Purdue University
- SANDIS Leadership Training Program
- 2006 Grading and Drainage Plan Training Session
- 2007 FEMA and Firm Maps Training Session
- 2008 Storm Drain Pump Stations Training Session
- 2008 SWPPP & C.3 Requirements Training Session
- 2008 Storm Drain Systems Training Session
- 2007 Retention and Detion Ponds Training Session
- City of San Jose C3/Drainage Workshop

Lance Takehara, EIT

- 7 Years Experience
- Engineer in Training, California
- Bachelor of Science, Civil Engineering, Santa Clara University
- 2006 Grading and Drainage Plan Training Session
- 2007 FEMA and Firm Maps Training Session
- 2008 Storm Drain Pump Stations Training Session
- 2008 SWPPP & C.3 Requirements Training Session
- 2008 Storm Drain Systems Training Session
- 2007 Retention and Detion Ponds Training Session
- Town of Atherton C3/Drainage Workshop

Ashley Stanley, EIT

- 3.5 Years Experience
- Engineer in Training, California
- Bachelor of Science, Civil Engineering, University of Nevada, Reno
- 2006 Grading and Drainage Plan Training Session
- 2007 FEMA and Firm Maps Training Session
- 2008 Storm Drain Pump Stations Training Session
- 2008 SWPPP & C.3 Requirements Training Session
- 2008 Storm Drain Systems Training Session
- 2007 Retention and Detion Ponds Training Session

Experience of Key Team Members

| Personnel/Title | Role | Years Experience | Years with SANDIS |
|---------------------|------------------------|------------------|-------------------|
| Ken Olcott, PE | PIC/Quality Assurance | 21 | 11 |
| Bruce Chu | Senior Project Manager | 23 | 8 |
| Chad Browning, PE | Project Manager | 10 | 3 |
| Renee Gunn, EIT | Project Manager | 6 | 3 |
| Lance Takehara, EIT | Project Engineer | 7 | 3 |
| Ashley Stanley, EIT | Project Engineer | 7 | 2 |

** the above table highlights the level of experience our team members have. This table shows a portion of our available staff.

Ken Olcott, PE

President/Principal

Project Role: Principal-in-Charge/Quality Assurance

Ken Olcott has over 21 years of experience in the planning and development of storm water management systems. His expertise includes an extensive amount of experience for utility and street improvements, grading and earthwork, drainage calculations and analysis, and erosion/sediment control procedures. Ken and Bruce have collaborated and led our team on the design of stormwater management systems for municipalities and private developments as well as provided peer review of BMPs. As Principal-in-Charge, Mr. Olcott oversees team direction and adherence to project budget and schedule while also contributing to the design and creativity efforts. As a LEED Accredited Professional, he actively looks for areas where sustainability can enhance a project, while staying within the parameters of the project budget.

Storm Water Management:

- Newark Center for Health Sciences and Technology, Ohlone Community College District
- Marilyn Drive Residential Development, Mountain View
- Merrill Oak Grove Garden Townhomes, San Jose
- New University Campus, UC Merced
- El Camino Hospital, Mountain View
- Camino Medical Group, Mountain View
- West Valley Branch Library, San Jose
- One Pearl Place, San Jose
- Ohlone Court, San Jose
- Sienna Senior Center - Italian Gardens, San Jose
- Martha & Sixth Family Apartments, San Jose
- Sierra & Piedmont Apartments, San Jose
- Community Center, Mountain View
- Centennial Plaza, Mountain View
- Alameda Free Library, Alameda County
- Cupertino Public Library, Cupertino
- Aquatic Center, Morgan Hill
- Sports Center, Monterey
- East Oakland Sports Complex, Oakland
- Carlyle Luxury Apartments, Santa Clara
- Avalon Skyview, Mountain View
- The Crossing (Naval Base Reuse), San Bruno
- Stonegate Condominiums, San Mateo

Public Works Contracts:

- Spring Valley Subdivision Water Service, Milpitas
- Water Main Replacement # 05-28, Mountain View
- Water Main Replacement # 02-20, Mountain View
- Malvalli Sewer Line Extension, Los Altos Hills
- Equinox Sanitary Sewer Improvements, Palo Alto
- Sewer Line Relocation, Redwood City
- Sanitary Sewer Main # 02-21, Mountain View
- Sanitary Sewer Main #05-29, Mountain View
- Sunnyview Lane – Woodleaf Way Storm Drain Improvements, Mountain View
- County of Santa Clara Crime Lab, San Jose
- Transmission Pipeline Replacement Project Phase 3, Half Moon Bay
- Fire Water System Survey, Santa Clara Valley Medical Center, San Jose

Credentials

- 21 Years Experience/ 11 Years with SANDIS
- Registered Civil Engineer, California # 51079
- LEED Accredited Professional, USGBC
- Master Science, Civil Engineering, SJSU
- Bachelor of Arts Mathematics, SJSU



Bruce Chu Associate Principal

Project Role: Senior Project Manager

Bruce Chu has over 23 years experience in providing engineering services for public agencies. His experience includes street and utility improvements, grading and earthwork, drainage calculations and analysis, parking lot layout, and erosion/sediment control procedures. Bruce will provide team direction on design concepts and monitor adherence to project budget and schedule. Bruce has worked closely with Ken and our team on the design of stormwater management systems for municipalities and private developments as well as provided peer review of BMPs.

Storm Water Management:

- El Camino Hospital, Mountain View
- Camino Medical Group, Mountain View
- NASA - Moffett Field, Mountain View
- Charleston East, Mountain View
- Santa Clara County Crime Lab, San Jose
- West Valley Library, San Jose
- Midtown Parking Garage, Milpitas
- Ohlone Community College New Campus, Newark
- Edenvale Community Center, San Jose
- Harker School Science & Technology Building, San Jose
- The Globe, Fremont
- Durham Road Development, Fremont
- Vietnamese Heritage Garden, San Jose
- Campus Engineer, De Anza Community College
- Kirsch Center for Environmental Studies, De Anza College
- The Crossings, San Bruno
- Engineering Building, UC Santa Cruz
- Humanities Building, UC Santa Cruz
- Santa Clara Square, Santa Clara
- YMCA, East Palo Alto
- Menlo School, Menlo Park
- Animal Shelter, Palo Alto
- Twelve Bridges Library, Lincoln
- Cowell Center, UC Santa Cruz
- Cupertino Public Library, Cupertino
- Town & Country Village, Palo Alto
- Kaiser Permanente, Napa
- Sunrise Assisted Living, Menlo Park
- El Camino Real Condo Development, Colma

Public Works Contracts:

- Spring Valley Subdivision Water Service, Milpitas
- Water Main Replacement 02-20, Mountain View
- County of Santa Clara Crime Lab, San Jose
- Sanitary Sewer Main 02-21, Mountain View
- Moffett Blvd. Pedestrian Overcrossing, Mountain View
- Evelyn Avenue Corridor Design, Mountain View
- Malvalli Sewer Line Extension, Los Altos Hills
- Equinox Sanitary Sewer Improvements, Palo Alto
- Campus Engineer, De Anza College, Cupertino

Credentials

- 23 Years Experience / 8 Years with SANDIS
- Diploma in Civil Engineering, University of Technology, Sydney, Australia

Chad Browning, PE

Project Manager

Project Role: Project Manager

Chad Browning has over 10 years experience as a civil engineer in California. His experience includes utility and street improvements, grading and earthwork, drainage calculations and analysis, site planning, parking lot layout, and erosion/sediment control design. Chad will provide team direction on design concepts and monitor adherence to project budget and schedule.

Storm Water Management:

- Marilyn Drive Development, Mountain View
- Story Road Commercial Development, San Jose
- Santa Clara Square, Santa Clara
- Valley Heath Center, Sunnyvale
- Vallco Shopping Center Renovation, Cupertino
- Town & Country, Palo Alto
- USDA Agriculture Research Technology Center, Salinas
- Trinity School Expansion, Menlo Park
- Countryside Estates, Milpitas
- Encinal School Improvements, Atherton
- Genentech FRC-III, South San Francisco
- Abbott Labs Research & Technology Center, Alameda
- Christopher High School, Gilroy
- Development Center, Porterville
- de Young Museum, San Francisco
- Lucas Valley Pedestrian Tunnel, Marin County
- Black Oak Casino, Sonoma
- Cancer Center, UC Davis
- Valley Heath Center, Milpitas and Sunnyvale
- Kaiser, Vallejo
- Department of Health Services Lab, Richmond
- Contra Costa County District Attorneys Office
- Golden Gate Parking Structure, San Francisco
- Gilead NRB 1 and Annex, Foster City
- Genentech FRC III, South San Francisco
- Valley Heath Center, Milpitas
- Valley Heath Center, Sunnyvale
- The Globe, Fremont

Additional Experience:

- Spring Valley Subdivision Water Service, Milpitas
- Utility Relocation Study, UCSF Mission Bay
- Utility Relocation - UCSF Animal Research Facility at Hunter's Point, South San Francisco
- Medical Center Way Slope Stability Study, UCSF Parnassus Campus
- CalTrans Infrastructure Study, Sacramento
- CalTrans Infrastructure Study, San Luis Obispo
- Golden Gate Parking Structure, San Francisco

Credentials

- 10 Years Experience / 3 Years with SANDIS
- Registered Civil Engineer, California #68315
- LEED Accredited Professional, USGBC
- Bachelor of Science, Civil Engineering, CSU Long Beach



Team Leadership *Expertise*

Renee Gunn, EIT Project Manager

Project Role: Project Manager

Renee Gunn has a wealth of experience in community project ranging from the developments of new parks to transit oriented facilities as well as private developments. Renee's design expertise includes a broad depth of experience in the preparation of drainage calculations and analysis, grading and earthwork, site planning, parking lot layout, and erosion/sediment control documents. As Project Manager, Renee provides overall project management, coordination, and design direction as well as construction administration support.

Storm Water Management:

- Oak Grove Garden Townhomes, San Jose
- Ohlone Community College New Campus, Newark
- Edenvale Community Center, San Jose
- Guadalupe River Visitor's Center, San Jose
- Harker School Science & Technology Building, San Jose
- Durham Road Development, Fremont
- Vietnamese Heritage Garden, San Jose
- John Muir Core Laboratory, Concord
- Kristy Yamaguchi Always Dream Park, Fremont
- Hercules Library, Hercules
- Moffett Trail/Grade Separation, Mountain View
- YMCA, East Palo Alto
- Monterey County Government Center
- Downtown Parking Garage, Mountain View
- Children's Emergency Center, Placer County
- Twelve Bridges Library, West Sacramento
- Downtown Government Center, Merced
- Community College Campus Improvements, De Anza College
- Merrill Gardens, Campbell
- Merrill Gardens, Willow Glen

Public Works Contracts:

- Stevens Creek/Moffett Boulevard Grade Separation, Mountain View
- San Tomas Aquino Creek Trail Reach 2, Santa Clara
- Monterey County Government Center, Salinas
- Downtown Parking Garage, Mountain View
- County of Santa Clara Crime Lab, San Jose
- Sanitary Sewer Main Replacement, Mountain View
- Midtown Parking Garage, Milpitas

Credentials

- 6 Years Experience / 3 Years with SANDIS
- Engineering-in-Training, Tennessee, Civil Engineering
- Master of Science, Agricultural & Biological Engineering, Purdue University
- Bachelor of Science, Agricultural & Biological Engineering, Purdue University

Lance Takehara, EIT Project Engineer

Project Role: Project Engineer

Lance Takehara has a wealth of experience in public utility and roadway improvements. Lance's experience also includes a significant number of grading and earthwork, drainage calculations and analysis, site planning, parking lot layout, and erosion/sediment control design.

Lance's responsibilities also entail: coordinating project staff including drafters, interns and design engineers; communicating design objectives and ensuring conformance to City/County/State codes and uniform codes; making design decisions for each project based on objectives and scope of work; and ensuring design objectives and project requirements are met.

Storm Water Management:

- Story Road Utility Improvements, San Jose
- El Camino Hospital, Mountain View
- Camino Medical Group, Mountain View
- CSMA Auxiliary Parking Lot, Mountain View
- Summerhill Marilyn Drive Development, Mountain View
- Mardesich/Grant Road Development, Mountain View
- Corporate Campus Soccer Field, Mountain View
- Bayview/NASA Corporate Campus, Mountain View
- Charleston East Corporate Campus, Mountain View
- Shorebird Corporate Campus, Mountain View
- Spring Valley Subdivision Water Service, Milpitas
- El Camino Real & F Street Improvements, Colma
- Master Utility Plans, Menlo School
- YMCA Utility Improvements, East Palo Alto
- Trestle Glen Utility Improvements, Colma
- West Valley College Utility Improvements, Saratoga
- Wilke Way Utility Improvements, Palo Alto
- Downtown Specific Plan, Burlingame

Credentials

- 7 Years Experience / 3 Years with SANDIS
- Bachelor of Science, Civil Engineering, Santa Clara University
- Engineer-in-Training - Civil Engineer, California

Ashley Stanley, EIT Project Engineer

Project Role: Project Engineer

Ashley Stanley will serve as the Project Engineer for this project. Her design phase responsibilities typically include the preparation of: calculations for site grading/cut fill; roadway slopes; utility design/layout; storm drain design including detention basins and grassy swales; pump station; pipeline design; and ADA site access and code requirements. During the construction phase of projects, Ashley response to RFIs, performs site walks, provides alternate design and details, as required.

She is actively involved with the selection of the grading approach; site layout; identification of construction materials to be used; analysis of storm drain, water and sewer systems for flow, pressure, pipe size, demand, site conditions; and design of construction details to be specified.

Storm Water Management:

- Performing Arts Center, De Anza College
- Great America Amusement Park Improvements, Santa Clara
- Trinity School Expansion, Menlo Park
- USDA Agricultural Research Technology Center, Salinas
- Spring Valley Subdivision Water Service, Milpitas
- Marilyn Drive, Mountain View
- Genentech FRC-III, South San Francisco
- Encinal School, Menlo Park School District
- Laurel School, Menlo Park School District

Credentials

- 7 Years Experience / 2 Years with SANDIS
- Engineer in Training, California
- Bachelor of Science, Civil Engineering, University of Nevada, Reno

Storm Water Management, Hydrologic Models and Analysis

Understanding of Storm Water Management Practices, Issues and Requirements

As part of the National Pollutant Discharge Elimination System (NPDES), SANDIS has been actively involved in the development of Storm Water Treatment Best Management Best Practices and Storm Water Pollution Prevention Plans (SWPPP) for countless projects throughout the County of Santa Clara. During the past 30 years, our professional staff has closely watched and monitored amendments to the CWA, first in 1987 then in 1999.

The 1999 amendments established a Phase II, requiring permits for storm water discharges from Small Ms4s and from construction sites disturbing between one and five acres of land. The Ninth Circuit Court upheld the Phase II regulations on all but three issues contested. Additionally, with the recent implementation of the revised C.3 Provisions of the NPDES. We have designed projects that implement a wide range of site design, source control and stormwater treatment best management practices including bioswales, flow through planters, pervious pavement, filterra, detention basins and mechanical units.

As a firm committed to Leadership in Energy and Environmental Design (LEED), SANDIS' Principals and Project Managers ensure that all SANDIS team members have up to date information regarding any changes that may impact storm water quality.

With the growing population in Santa Clara County and the increasing demand on natural resources, SANDIS clearly understands the significance of maintaining and preserving water quality.

Understanding of Continuous Simulation Hydrologic Models and Analysis of Output Data

Since the inception of SANDIS, our team members have been conducting hydrologic modeling. Through the advent of computer aided software, HEC and Hydra application, modeling has transitioned to a electronic process. When HEC-I was first publically released in 1995, SANDIS transitioned from hand calculations to computer modeling. With over 13 years of experience running hydrologic models that perform continuous simulation of local rainfall conditions, our projects have ranged from storm drain analysis of small (<1 acre) individual buildings to watershed size analysis. The output of the models is reviewed and summarized in reports written for every project. Projects that are team members conducted modeling include:

- Marilyn Drive Development, Mountain View
- El Camino Hospital, Mountain View
- NASA - Moffett Field, Mountain View
- Charleston East, Mountain View
- Ohlone Community College New Campus, Newark
- The Globe, Fremont
- Durham Road Development, Fremont
- Vietnamese Heritage Garden, San Jose
- Campus Engineer, De Anza Community College
- Kirsch Center for Environmental Studies, De Anza College
- The Crossings, San Bruno
- Engineering Building, UC Santa Cruz
- Humanities Building, UC Santa Cruz
- YMCA, East Palo Alto
- Menlo School, Menlo Park
- Cowell Center, UC Santa Cruz
- El Camino Real Condo Development, Colma
- Gilead NRB 1 and Annex, Foster City
- Harker School Science & Technology Building, San Jose
- Merrill Gardens, Willow Glen
- Tresle Glen, Colma
- La Scala, Colma

Project Experience *Case Study in Design Expertise*

Newark Center for Health Sciences and Technology, Ohlone Community College District

SANDIS provided surveying and engineering services for the development of a master plan for a new 130,000 gsf community college campus in Newark. Prior to the campus development, this site was undeveloped. It also contained existing wetland / water meadows that are now being maintained. Adjacent areas have been graded to produce retention ponds to accommodate storm water run-off from the developed areas of the site. The new campus includes student services, classrooms, laboratories, physical education facilities and faculty offices. As part of this project, SANDIS worked closely with the architectural team and owner’s representative to establish water management protocols for future development on the adjacent sites.

During the master planning phase, SANDIS: worked with the Architect and City of Newark to discuss special design requirements and to determine project design constraints; developed storm, sanitary and water master plan for 81-acre full build out; coordinated, lead and attended agency meetings with City of Newark Public Works, Union Sanitary District, Alameda County Water District, Alameda County Floor Control & Water Conservation District, State Regional Water Quality Control Board, Department of Fish & Game, and Army Corp of Engineers; reviewed feasibility of conceptual design developed by the Architect; prepared site constraints/opportunity report; participated in charettes/workshop with the to discuss civil engineering related issues; prepared master plan utility and storm runoff management layout for costing and future phase determination; evaluated, analyzed and recommended solutions for overland drainage release issues and easements; and evaluated and recommended solutions for storm water runoff quality issues and potential wetland mitigations.

Following the master planning phase, SANDIS prepared: grading plan; storm, sanitary and water plans; detention pond design and drainage report; water system analysis; on-site sanitary sewer report; technical specifications; horizontal control plan; fire design plan with pipe sizing, flow analysis, fire system layout including fire hydrants, FDCs and PIVs for bidding purposes for site work only; construction notes and details; and SWPPP and erosion control plan guidelines for the project contractor for their preparation of a SWPPP, erosion control plan and their filing of the NOI. Off-site improvements included: plans for frontage improvements plans for utility service connections only (excluding relocated intersection, signal improvements/modifications, miscellaneous grading and hardscape improvements within the landscape easement). SANDIS is currently providing construction administration and post occupancy services. Surveying services included an aerial topographic survey of the entire site.

The grading, drainage, and utilities of the Ohlone Newark College Campus were designed not only to convey runoff off-site, but also to slow and cleanse stormwater prior to discharge. Rather than “hard-piping” runoff directly to the discharge point, the storm drainage system utilized various landscape-based and mechanical elements that were incorporated into the site and landscape design meant to reduce pollutants in stormwater flowing off-site

The Ohlone College storm drainage system actually consisted of two independent systems that ultimately fed into a large vegetated swale/retention pond south of the campus. The system was split in two to separate relatively “clean” runoff from roof, site hardscape, and landscaping areas from “dirty” water coming from parking lots and vehicular access areas.

The storm drainage system installed in the center of the College collects runoff from the main building roof, landscaping areas, and site hardscaping surrounding the building. Much of the site hardscape drains to landscaping areas prior to being collected by area drains, which effectively filters out suspended solids and allows much of the dissolved organics and phosphorous to be removed by natural biological processes. Roof downspouts were allowed to directly connect to the underground system as no significant introduced chemicals were anticipated from roof runoff. After being collected by downspouts and area drains, runoff is transported via underground pipe to a vegetated swale aptly nicknamed the “stormwater garden” due to the visible stormwater flow in this area and the natural grasses and vegetation.

| | |
|---------------------------------|--|
| References/Contact Information: | Simon Barros Ohlone Community College District 43600 Mission Boulevard Fremont, CA 94539 510.659.6144 |
| Key Personnel: | Ken Olcott, PE, Principal-in-Charge Bruce Chu, Senior Project Manager Chad Browning, PE, Project Manager Lance Takehara, Project Engineer |

Project Experience *Case Study in Design Expertise*

The “stormwater garden” further filters and cleanses runoff prior to collection and discharge into the large swale/retention pond south of the site.

The storm drainage system installed at the periphery of the campus collects runoff from the two major parking lots, landscape islands, and drive aisles. Additional BMP measures were provided for runoff from this system due to the increased potential for suspended solids and toxins. Bioswales were incorporated along the east and west property lines to provide suspended solids and chemical removal for drive aisles. To further aid in pollutant removal, two hydrodynamic separators were installed immediately upstream of the large retention pond to capture suspended solids. As a tertiary measure, discharge from the hydrodynamic separators was directed to two sedimentation ponds that spill into the large swale/retention pond.

Both on-site systems collecting runoff from the Campus discharge into a large vegetated retention basin that extends approximately 900’ to the south. After passing through the stormwater garden, hydrodynamic separators, and sedimentation basins, stormwater flows through this long grassed channel that further filters out suspended solids. Being fully planted year-round, the swale also serves as a biological filter that reduces dissolved toxins and chemicals such as nitrogen and phosphorous which have the potential to cause eutrophication in local streams and the San Francisco Bay. The primary discharge point of the retention pond is through a 12” restrictive outlet pipe that limits the flow such that stormwater is stored during heavy storms, reducing the potential for downstream flooding and bank erosion.

Through careful site planning with stormwater quality in mind, the designers of the Ohlone Newark Campus delivered a product that is not only functional but aesthetically pleasing as well. Our services included the incorporation of proposed Civil LEED site design systems into design documents. In keeping with environmental stewardship, this campus is set to be the very first community college campus in the US to be completely sustainable. The project is currently registered with USGBC as a LEED NC 2.1 rating.

Oak Grove Townhomes, San Jose

SANDIS is currently providing engineering and surveying services for the development of 17 townhomes and two single family houses, located on a 1.82 acre site. Surveying includes the preparation of a boundary and topographic survey and a tentative and final map. Engineering includes the preparation of: grading and drainage plans; storm, sanitary sewer and water plans; minor 3-day off-site improvement plans; private street set including plan and profile for all streets; erosion control plan; storm water pollution prevention plan (SWPPP); and condo plans.

The existing storm drain system had numerous design challenges including the city requirement for regular storm drainage to enter the storm drain system, a condition of Planned Development Permit approval that all drive aisles be pervious pavement, a site sloping away from the city’s storm drain system and C3 considerations. Due to the proximity to Calabazas Creek and the limited vegetative BMP measures that would drain into the city’s storm drain system, a mechanical filtration unit was chosen. SANDIS’ design solution includes a storm drain duplex pump system to lift water into the city’s system. Vegetative swales slope towards the creek for overland flow release in case of catastrophic circumstances. A unique system utilized for private streets includes the use of pervious pavers and dry wells to allow for percolation deep into the soil while preventing migration under the building foundations and providing a stable driving surface. A mechanical storm water cleansing unit upstream of the pump filters the water before it leaves the site. The unit is designed to treat the 0.2” per hour storm even if the permeable pavers and dry well system is not functioning. The unit also extends the life and reduces the maintenance of the pump system by removing floatables and sediment.

Faced with our client’s desire to remain on site and to create as small of a footprint as possible, we were faced with limited space for site utilities. Coordination with the architect, arborist and landscape architect allowed for minimal site disruption while meeting all utility separation and city requirements.

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| References/Contact Information: | Ms. Libby Glass Barry Swenson Builders Architectural 777 North First Street, 5th Floor San Jose, CA 95112 408.938.6305 |
| Key Personnel: | Ken Olcott, PE, President Bruce Chu, Senior Project Manager Renee Gunn, Project Manager Long Hoang, Project Engineer |

Project Experience *Case Study in Design Expertise*

The Globe, Fremont

SANDIS is currently providing surveying and engineering services for a 23.21 acre retail/commercial development. The development will be conducted in three on-site phases, which consists of the planning and remodeling of a one one-story commercial/retail building and the construction of eight one story commercial/retail buildings with parking structure and associated improvements. The multi-parcel site is anticipated to contain 462,250 s.f. of mixed uses including: apparel retailers; home/hardware stores; book store; pet stores; camera retailers; jewelry retailers; various restaurants and deli type establishments; health club; and a teen center.

SANDIS' engineering services includes the preparation of: site plan; details for stripes, signs, ADA access and handicap ramps; grading plan; utility plan for sanitary sewer, storm drain, and water (domestic and fire service) lines; earthwork calculations; horizontal control plan; demolition plan; storm drain media treatment unit; design of fire line; construction notes and details; hydrology and hydraulic calculations; hydrology map; NPDES and SWPPP; pavement plan; technical specifications; engineering quantity and cost estimate (used to calculate fees for plan review and any bonds that may be required). Off-site engineering services include the preparation of: off-site improvement plans; off-site storm drain systems; construction notes and details; design of new public water main; relocation of existing public water main and sanitary sewer line; and design plans for sanitary sewer line. During the final phases of the project, SANDIS will provide bidding and negotiation services as well as construction administration.

The site is approximately 2.3 acre in size with elevations ranging from approximately 30' at the highest elevation to approximately 24' on the low end of the. On-site stormwater runoff ultimately discharges into the existing City of Fremont storm drainage system. Some of the on-site runoff discharges into one grassy swale located in the parking lot north of the building. The remainder of the on-site runoff discharges into multiple Stormfilter® units located around the building. All storm water will be collected and piped via storm drainage piping to the existing storm drainage.

The storm drain system was analyzed to determine the systems response to the 10-year storm. StormCAD was used to model the storm drain network and produce the hydraulic grade line (HGL). Our analysis concluded that during the 10-year storm, the ground in the swale will be

saturated, but the water will be contained in the swale. At no location along the solid storm drain system will the water be above the rim. The project will retain the existing drainage patterns as much as possible by conforming to the existing grading. Grassy dry swales and media filtration were chosen as integrated management practices for this site to satisfy C.3 requirements.

The northern most portion of the parking lot drains into one grassy swale. Swales provide stormwater treatment while conveying the water to the storm drain system. The southern 2 aisles of the parking lot drain into a vegetated bio-retention planter. The square footage of the planter was maximized while still providing adequate parking spots and drive aisles. The remainder of the site drains into three Stormfilter units located throughout the site.

Since the project involves the replacement of impervious area, a stormwater cleansing system has been designed to meet Alameda County C.3 requirements per the Alameda County wide Clean Water Program, C.3 Stormwater Technical Guidance (August 31, 2006) manual for the entire site. The Clean Water Program and C.3 manual have been developed to satisfy obligations under Provision C.3 of the county wide municipal stormwater National Pollutant Discharge Elimination System (NPDES) permit.

On-site stormwater will be treated via one grassy swale, a series of bio-retention planters and three Stormfilter® units. The grassy swale has been designed to be more than efficient for the water entering it. It was sized to satisfy stormwater cleansing requirements per the August 31, 2006 Edition of the Alameda County wide Water Pollution Prevention Program's C.3 Technical Guidance Manual. Due to the nature of swales and the way they are used to treat water, we utilized "residence time design", using Manning's Equation to compute the amount of contact time water entering the swale has before discharging into a drop inlet. This calculation, we feel, more accurately models the flow dynamics in a swale, and ensures that important factors such as side slope, longitudinal slope, bottom width,

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| References/Contact Information: | Fred Kim Imperial Investment & Development 428 South Main Street Milpitas, CA 95035 408.719.8088 |
| Key Personnel: | Ken Olcott, PE, President Bruce Chu, Senior Project Manager Chad Browning, PE, Project Manager Ashley Stanley, EIT, Project Engineer |



Project Experience *Case Study in Design Expertise*

grass height, design flood conveyance capacity, water inlet location (whether or not the water enters at the beginning or uniformly along the swale), etc. are all factored into the calculation to ensure that swales are designed such that the minimum requirements (defined by scientific research and the State) are met.

Sizing for the bio-retention planters are based on the sizing method outlined in the C3 manual. The size of the planter shall be 4% of the impervious surface of the drainage area. The water entering the planter will also flow through the Stormfilter Vault.

The remainder of the site will be treated using Stormfilter® units. The Stormfilter® units have been placed strategically on-site so that all captured water will pass through them. In addition, the Stormfilter® units have been sized to satisfy stormwater cleansing requirements per Alameda County C.3 Technical Guidance Manual.

Availability *Team Commitment*

SANDIS' breadth of experience and storm water management expertise, make our team uniquely qualified to service SCVURPPP. Having submitted several projects through the review, we are excited about the opportunity to become a team member to the evaluation process.

With over 43 years of experience, SANDIS has a well establishment management plan that allows us to manage existing projects and allocate resources to kick-off new projects. Through active outreach, we maintain a well-balanced workload and backlog to keep our technical staff engaged. SANDIS has sufficient resources available to begin this contract immediately and to adequately keep it staff through the life of each project.

Appendix *Proof of Training*



Santa Clara Valley Urban Runoff Pollution Prevention Program

Campbell • Cupertino • Los Altos • Los Altos Hills • Los Gatos • Milpitas • Monte Sereno • Mountain View • Palo Alto
San Jose • Santa Clara • Saratoga • Sunnyvale • Santa Clara County • Santa Clara Valley Water District

ANNUAL C.3. WORKSHOP:

“SHARING EXPERIENCE WITH IMPLEMENTATION OF STORMWATER REQUIREMENTS AT DEVELOPMENT PROJECTS”

Tuesday, June 3, 2008

Sunnyvale Community Center Ballroom
550 E Remington Drive, Sunnyvale

WORKSHOP AGENDA

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| 8:30 | Registration and Refreshments | |
| 9:00 | Welcome and Introduction | Jill Bicknell |
| | <ul style="list-style-type: none">Announcement of 2008 SCVURPPP Site Design Award Winners | <i>Santa Clara Valley Urban Runoff Pollution Prevention Program</i> |
| 9:20 | Standards for Green Building – How Do They Relate to C.3. Compliance? | Laura Prickett |
| | | <i>Santa Clara Valley Urban Runoff Pollution Prevention Program</i> |
| 9:50 | Low Impact Development – Latest Trends and Approaches | Jill Bicknell |
| | | <i>Santa Clara Valley Urban Runoff Pollution Prevention Program</i> |
| 10:15 | Break | |
| 10:30 | Panel Discussion –Implementation of C.3. in Local Projects | |
| | <ul style="list-style-type: none">Modern Ice - A Case Study in Urban Stormwater Management | Mike Campbell <i>HMH Engineers</i> |
| | <ul style="list-style-type: none">Stormwater Management for Synthetic Turf Fields, San Jose | Mark Slichter <i>Callander Associates</i> |
| | (Continued on Back) | |



Appendix *Proof of Training*

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| | <ul style="list-style-type: none">• Innovative Detention and Conveyance at Happy Hollow Park and Zoo, San Jose | George Otte <i>Nolte Engineers</i> |
| | <ul style="list-style-type: none">• The Green Roof on Stanford Parking Structure 6, Stanford, CA | Karla Tompkins <i>Stanford</i> |
| | <ul style="list-style-type: none">• Bioretention Areas and Swales at VMware Headquarters, Palo Alto | Ed Boscacci <i>BKF Engineers</i> |
| 11:40 | What's New in Stormwater Regulations? | |
| | <ul style="list-style-type: none">• Municipal Regional Permit | Sue Ma <i>Regional Water Quality Control Board</i> |
| | <ul style="list-style-type: none">• Construction General Permit | Jill Bicknell <i>SCVURPPP</i> |
| 12:00 | Lunch and Vendor Exhibits | |
| 12:45 | Inspection of Stormwater Treatment Measures During and After Construction | Ed Boscacci <i>BKF Engineers</i> |
| 1:30 | Inspection and Maintenance of Landscaping in Stormwater Treatment Measures | Sarah Sutton <i>Design, Community and Environment</i> |
| 2:00 | Break and Vendor Exhibits | |
| 2:15 | Inspections of Stormwater Treatment Measures – Local Experiences | |
| | <ul style="list-style-type: none">• City of Mountain View's Stormwater Treatment BMP Inspection and Maintenance Tracking Program | Eric Anderson <i>City of Mountain View</i> |
| | <ul style="list-style-type: none">• Inspecting the Installation of Permanent Stormwater Treatment Measures, City of Fremont | Tim Berger <i>City of Fremont</i> |
| 3:00 | Adjourn | |

Appendix *Proof of Training*

Atherton Drainage Criteria Workshop

March 28, 2008

3PM – 5PM?

AGENDA

1. Introduction
 - Atherton Official
 - Author of drainage criteria
 - Team of Plan Reviewers
2. Atherton drainage criteria background – adopted in end of 2007
3. Q & A
4. Future actions



SANDIS

CIVIL ENGINEERS
SURVEYORS
PLANNERS