

SECTION THREE

RESPONSES TO COMMENTS

SECTION THREE RESPONSES TO COMMENTS

This section contains the letters of comment that were received on the Draft EIR and Partially Recirculated Draft EIR. Following each comment letter is a response intended to either supplement, clarify, or amend information provided in the Draft EIR and Partially Recirculated DEIR, or refer the commenter to the appropriate place in the Draft EIR where the requested information can be found. Those comments that are not directly related to environmental issues are briefly described and noted for the record.



Letter 1

STATE OF CALIFORNIA
GOVERNOR'S OFFICE of PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



ARNOLD SCHWARZENEGGER
GOVERNOR

RECEIVED

CYNTHIA BRYANT
DIRECTOR

December 29, 2009

JAN 05 2010

COUNTY OF SHASTA
PERMIT COUNTER

Lisa Lozier
Shasta County Department of Resources Management
1855 Placer Street, Suite 103
Redding, CA 96001

Subject: Knighton & Chum Creek Commons Retail Center EIR General Plan Amendment 08-002 and
Zone Amendment 08-003
SCH#: 2009012088

Dear Lisa Lozier:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on December 28, 2009, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

A

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Acting Director, State Clearinghouse

Enclosures

cc: Resources Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2009012088
Project Title Knighton & Chum Creek Commons Retail Center EIR General Plan Amendment 08-002 and Zone
Lead Agency Amendment 08-003
Shasta County

Type EIR Draft EIR
Description NOTE: Review Per Lead

Development and operation of a commercial retail and entertainment center on approximately 92 acres in Shasta County, located at the northeast corner of the Knighton Road and the Interstate Highway 5 interchange. When completed the project would include approximately 740,000 square feet of mixed commercial development (which may include retail shops, restaurants, lodging, food supplies, recreation activities and equipment, traveler services and entertainment-related facilities) to be phased over three to four years. The northern most 18 acres of the project site would serve as an open space buffer between the proposed commercial development and existing low-density residential uses to the north and would contain the on-site water storage and wastewater treatment facilities.

Lead Agency Contact

Name Lisa Lozier
Agency Shasta County Department of Resources Management
Phone (530) 225-5532 **Fax**
email
Address 1855 Placer Street, Suite 103
City Redding **State** CA **Zip** 96001

Project Location

County Shasta
City Redding
Region
Lat / Long 40° 30' 35" N / 122° 20' 12" W
Cross Streets Knighton Road and Interstate 5
Parcel No. 055-160-001, 008, 009, 012; 055-270-001
Township 31N **Range** 4W **Section** 28 **Base** MDBM

Proximity to:

Highways I-5
Airports Redding Municipal
Railways Union Pacific
Waterways Churn Creek, Sacramento River
Schools Pacheco Elementary
Land Use Undeveloped fallow land & small-scale agriculture/A-1 Limited Agriculture, PD Planned Development, Restrictive Flood F-2/A-cg Part-time Agriculture, C-Commercial

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Economics/Jobs; Fiscal Impacts; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects; Aesthetic/Visual

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Game, Region 1; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 2; Regional Water Quality Control Bd., Region 5 (Redding); Department of Toxic Substances Control; Native American Heritage Commission; State Lands Commission

3.1 Responses to Draft EIR Comments

Letter 1 **Scott Morgan, Acting Director, State Clearinghouse, Governor's Office of Planning and Research**

Response 1A: The comment is noted. All letters received from the Clearinghouse are included in Section Three and in accordance with CEQA Guidelines Section 15088, written responses to all comments are provided.

Letter 2

Lisa Lozier
Shasta County Planning Division
1855 Placer Street, Ste. 103
Redding, CA 96001

DEPARTMENT OF
RESOURCE MANAGEMENT
RECEIVED

DEC 28 2009

PLANNING/BUILDING
DIVISIONS

12-25-09

Re: Knighton Retail Center Draft Environmental Impact Report (DEIR)

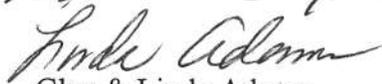
My wife and I live in the Churn Creek Bottom south of the proposed site for a Retail Center at Knighton and Churn Creek Roads. We value our agricultural neighborhood and are opposed to this development for the following reasons:

- Increased noise, air and water pollution
- Removal of prime agricultural land
- Too close proximity to Pacheco School
- Inadequate sewer and water services, especially storm water run-off.
- Increased traffic and congestion

A

Please remain consistent with your decision of two years ago and deny the approval of the Retail Center at this site.

Sincerely,



Glen & Linda Adams

Letter 2 Glen & Linda Adams

Response 2A: The comment is noted. Comments of proposed project opposition should be directed to the County Planning Commission and Board of Supervisors during project deliberations. Noise impacts are addressed in Draft EIR Section 3.10, air quality is addressed in Section 3.3, water quality is addressed in Section 3.8, agricultural impacts are addressed in Section 3.2, Pacheco School impacts are addressed in Section 3.11, sewer, water and storm water impacts are addressed in Section 3.13, and traffic impacts are addressed in Section 3.12.

December 4, 2009

DEPARTMENT OF
RESOURCE MANAGEMENT
RECEIVED

DEC 07 2009

Shasta County Planning Department
Attn: Lisa Lozier, Senior Planner
1855 Placer St.
Redding, CA 96001

PLANNING/BUILDING
DIVISIONS

Re: Proposed Retail Development Churn Creek at Knighton Rd

Dear Ms. Lozier:

Atrocity is the only word sufficient to describe a 92 acre retail development in Churn Creek Bottom. Below are listed just a few of the reasons:

TRAFFIC

We are property owners and residents in the area close to the proposed development. We presently feel like we are running the gauntlet to drive from our residence on the west side of I-5 off Knighton Rd to the northbound freeway on-ramp. In that short section of roadway other vehicles come at you from the southbound off-ramp from I-5, southbound Riverland Drive, northbound Riverland Drive and westbound over the freeway turning left onto the southbound freeway on-ramp. To continue on to the intersection of Knighton and Churn Creek often involves waiting for trucks to turn into the truckstop, trucks and other vehicles pulling across Knighton leaving that very busy facility. The roadway is dangerous at present. It is incomprehensible to add the volume of traffic that would be generated by the planned development without **first** bringing the roads up to adequate size. Dealing with the dangerous situation while future road improvement happens is simply not acceptable.

A

DESTRUCTION OF PRIME FARMLAND

Good farmland cannot be reproduced. Once it is destroyed it can never be recovered. That in itself should be a sobering thought to those seeking to add money to the County's coffers with no regard for the General Plan which calls for preservation of the agricultural

B

character and open space that makes Shasta County a desirable place to live.

B cont.

RUINATION OF A NEIGHBORHOOD AND COMMUNITY

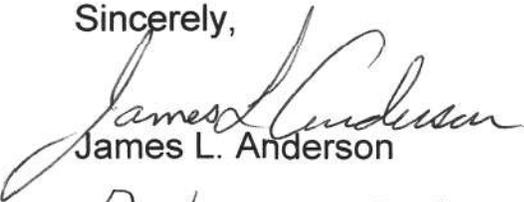
The widening to 5 lanes of Churn Creek Rd from the intersection with Bonneyview down the hill into the Bottom would require condemning many parcels of property and displacement of many families who have been long term residents of this community. The cost to the County would be in the millions and a once rural road through a small acreage farm area would become just a high speed connection to more concrete asphalt jungle. **Why?** Tax revenue of course.

C

"Reduced to less-than-significant after mitigation". There is no way to mitigate the damage this development will cause regardless of the fallacious DEIR conclusions.

Take the development elsewhere where services are available. Leave the Churn Creek Bottom without the visual, noise, air, water pollution and increased traffic associated with the proposed commercial development.

Sincerely,


James L. Anderson


Rebecca S. Anderson
7451 Danish Lane
Redding, CA 96002

Letter 3 James L. & Rebecca S. Anderson

Response 3A: The comment is noted. Traffic impacts resulting from the proposed project, including impacts identified by the commenter, are addressed by Mitigation Measures #3.12-1a through #3.12-8 beginning on page 3.12-15 of the Draft EIR and in the Partially Recirculated DEIR (PRDEIR) and the response to comments thereon.

Response 3B: This is not a comment related to the adequacy of the EIR, but rather an opinion of the commenter that the highest and best use of the proposed project site is for agricultural/open space purposes.

Response 3C: The comment is noted. Commenter opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

December 27, 2009

RECEIVED

DEC 28 2009

Shasta County Dept. of Resource Management, Planning Division
1855 Placer Street
Suite 103
Redding, Ca 96001

COUNTY OF SHASTA
PERMIT COUNTER

I am writing this letter in response to the proposed shopping center in Churn Creek Bottom.

I feel that the increased traffic in this area due to the project will be another Hilltop and Cypress nightmare. The study done for the DEIR on traffic indicated that there would be degradation of traffic on both north and south bound approaches to the I-5 interchanges. Cal Trans has major problems with the traffic. Of great concern is the fact that a large truck stop is right across the street and the trucks would be going in and out constantly further congesting the area.

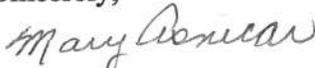
A

Since this is a major transportation route for people getting to and from the Redding Municipal Airport, it will affect that also leading to further congestion.

B

These issues are only a sample of many. As such I feel it is imperative that this proposal be defeated.

Sincerely,



Mary Ashnicar
19268 Knighton Rd.
Redding, Ca

Letter 4 *Mary Ascinar*

Response 4A: The comment is noted. Traffic impacts resulting from the proposed project, including impacts identified by the commenter, are addressed by Mitigation Measures #3.12-1a through #3.12-8 beginning on page 3.12-15 of the Draft EIR and in the Partially Recirculated DEIR (PRDEIR) and the response to comments thereon.

Response 4B: See Response 4A above.

RECEIVED

DEC 28 2009

COUNTY OF SHASTA
PERMIT COUNTER

December 27, 2009

Lisa Lozier
Shasta County Planning Division
1855 Placer St., Ste. 103
Redding, CA 96001

Subject: Knighton Retail Center Draft Environmental Impact Report (DEIR)

Dear Ms. Lozier

As a resident of Churn Creek Bottom since 1961 and a lifetime resident of Redding, I am very concerned about plans to develop a retail center at Knighton Road and Churn Creek Roads. The proposed site is a part of an agricultural neighborhood where farming and ranching are a way of live and always has been. My home is situated less than 1 1/4 miles from the proposed site.

When my late husband and I moved to the Bottom the site proposed for the retail center was a working ranch belonging to Crystal and Howard Thatcher. Howard was also the Chevrolet dealer in Redding, along with Mr. Lowden. This area has a lot of history and none of it retail. The first mistake was to allow the freeway through the bottom whereas there were other areas to build it without destroying good farm land, however, due to some folks who felt money was more important than preserving the rural lifestyle, very few of the residents knew about it until too late. The second error was to allow the truck stop to build. There have been many problems since it was built including noise, more traffic, more pollution, prostitution and lower property values for residents.

A

I believe the removal of prime agricultural land encourages urban sprawl and soon we will have nothing but drained wells due to the added water needed for such a project and ground water pollution due to inadequate sewer and water services. Another concern is safety as the proposed main entrance from Knighton Road would be located very close to the Northbound I-5 offramp. I understand that it is also proposed to widen Knighton Road be widened to multiple lanes in each direction. This would entail taking more prime land and would create a major thoroughfare to Airport Road. Cars are already speeding on that road since Knighton was put through to Airport and would be worse if widened. As for Churn Creek Road, there are times now that I can hardly get out of my street due to added traffic, including large trucks.

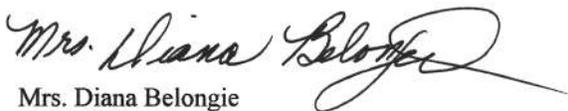
B

Another point is why do we need another mall roughly twice the size of Mt. Shasta Mall when there are so many empty store spaces all over town, including in the Mall ?

C

Thank you for your consideration in this important matter.

Sincerely,



Mrs. Diana Belongie
19339 Smith Road
Redding, CA 96002

Letter 5 Mrs. Diana Belongie

Response 5A: The comment is noted. Commenter opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Response 5B: The comment is noted. Potential effects to wells in the vicinity of the project site are addressed under Impact #3.8-3 and Impact #3.13-2 of the Draft EIR and Appendices I, J and P of the Draft EIR. Traffic impacts resulting from the proposed project, including impacts identified by the commenter, are addressed by Mitigation Measures #3.12-1a through #3.12-8 beginning on page 3.12-15 of the Draft EIR and in the Partially Recirculated DEIR (PRDEIR) and the response to comments thereon.

Response 5C: The comment is noted. The commenter/resident of Churn Creek Bottom is voicing an opinion regarding the need for the proposed project. Commenter opposition should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

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DEC 28 2009

COUNTY OF SHASTA
PERMIT COUNTER

December 28, 2009

Lisa Lozier
Shasta County Planning Division
1855 Placer Street, Suite 103
Redding, California 96001

Subject: Knighton Retail Center Draft Environmental Impact Report (DEIR)

Dear Ms. Lozier

As a citizen of Shasta County and one of your constituents, I'm writing you to provide my comments on the DEIR for the proposed Retail Center at Knighton & Churn Creek Roads. Specifically, I am opposed to this development, because it violates both the letter and spirit of the current General Plan and Zoning.

A

Changing the General Plan to accommodate this development will permanently change / damage the character of the neighborhood, violate zoning protections regarding the suitability of the subject property for the uses to which it has been restricted, and will detrimentally affect nearby property and community identity.

B

Further, the land in question is very unique in that it is the best of the best agricultural soil in existence (Class 1). This land cannot be traded or substituted. It is what it is, and should therefore remain protected by the General Plan without amendment.

C

Thank you for your consideration of this important matter.

Sincerely,



Melita Bena
13765 Creek Trail
Redding, CA 96003

Letter 6 Melita Bena

Response 6A: The comment is noted. Commenter opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Response 6B: The comment is a statement that the project conflicts with provisions of the Shasta County General Plan regarding land use designations and commercial development at the I-5/Knighton Road intersection. Land use designations and potential General Plan conflicts have been addressed in the Land Use and Planning section of the Draft EIR (Section 3.9). As noted on Draft EIR page 3.9-14 Impact #3.9-2, this is a matter of policy that must be decided by the Board of Supervisors.

Response 6C: This is not a comment related to the adequacy of the EIR, but rather an opinion of the commenter that the highest and best use of the proposed project site is for agricultural purposes due to Class 1 soil.

Citizens for Responsible Government

A local group of citizens working to uphold civil liberties, protect democracy and create strong foundations for peace

P.O. Box 3904
Redding, CA 96099-3904
crgredding@peaceredding.org

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DEC 28 2009

COUNTY OF SHASTA
PERMIT COUNTER

Ms. Lisa Lozier, Senior Planner
County of Shasta
Department of Resource Management
1855 Placer Street, Suite 103
Redding, CA 96001

Shasta County Supervisors and Staff: re: Knighton and Churn Creek Commons Retail Center DEIR

As the Chair of Citizen for Responsible Government and a local resident, I am writing to ask the supervisors to reject the approval of the currently proposed retail development on Knighton Rd.. From all I can determine, it is at the same location as the previously proposed AutoMall. The citizens of Shasta County rejected that proposal as did the supervisors. That was in much better economic times. I question why Shasta County is wasting staff time and taxpayer money considering this proposed development.

A

Shasta County is one of the most economically depressed areas in the state. Some of the highest unemployment and lowest standard of living exists here. Without going into a long analysis, I submit that the reason is the ideology that serves development of urban sprawl and more "big box" stores are factors in this situation. The creation of more such developments will only serve the short term interests of the few, not the long term interests of the citizens.

B

The fact that there will not be anymore sales tax collected in Shasta County before or after any such development should be noted. Only the appearance of such an increase exists. This is due to the fact that the people only have a certain amount to spend, whether they spend in the county or the cities of Anderson or Redding. Due to the failure of the county and the cities to share revenue, all of you fight over the tax revenue at a cost to taxpayer with little or no gain for the consumers or the citizens. Since a majority of Shasta County residents live in these cities, how does it benefit us to waste taxpayers' money for infrastructure build out while creating urban blight within the cities where most of us live?

C

Make no mistake, the approval and subsequent construction of the proposed mall will cause urban blight in both Redding and Anderson. With the shrunken amount of consumer dollars in the new economic climate which shows few signs of changing soon, it is irresponsible of the county to go forward with this development. Any consumer dollars the new mall would attract would come from dollars spent in our already under-utilized commercial centers in the cities. As we have seen from development in Redding and Anderson, this hurts local small businesses and higher paid workers more than any other groups. Big box stores take most of their profits back to their corporate headquarters and keep workers' pay to a minimum, so the money is not circulating locally as in the case of local businesses which return the majority of their gross income to the community.

D

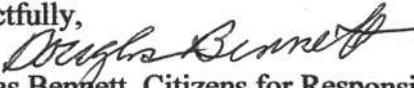
In addition, the urban encroachment into the Churn Creek Bottom area will open the door to more expansion and the loss of some of the best farm and pasture land in Shasta County. While I know many on staff may not see the value of this prime agricultural land, I would ask the supervisors to realize the loss of this type of land across the country will be of utmost importance in the future. Recent statistics show that prime farm land is being lost at the rate of 2 acres a minute in the United States. Coupled with the projected increases in population, 50% increase from 2000 in 2050, prime agricultural land will become more important as secure local sources of healthy food. In deed, some current suppliers of local organic produce and feed stock will be affected by this development.

E

While there are questionable mitigations that could be accepted to alleviate pollution, drainage, traffic, sewage treatment and other problems, I urge Shasta County to reject this proposed development as harmful and unwise on its face. I doubt all CEQA and other environmental laws can be satisfactorily met considering that the Knighton Rd. area in question is in the hundred year flood plane and so close to the Sacramento River. The economic justifications for this proposed development don't stand up to scrutiny, and it does not serve the citizens of Shasta County or the residents and taxpayers in our largest urban areas in any way. Please, disallow this development and preserve the rural agricultural nature of the Churn Creek Bottom area.

F

Respectfully,



Douglas Bennett, Citizens for Responsible Government
P.O. Box 993904
Redding, CA 96099-3904
530-604-0804

Letter 7 Douglas Bennett, Citizens for Responsible Government

Response 7A: The comment is noted. Comments of proposed project opposition should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Response 7B: See Response 7A above.

Response 7C: The comment is noted. Fiscal impacts of the proposed project, including projected revenues from sales tax and other sources, are summarized on pages ES-5 and ES-6 of the Draft EIR. Urban blight is discussed and analyzed on pages 3.9-2 through 3.9-4 of the Draft EIR. Appendix L (Urban Decay analysis) and Appendix M (Fiscal Impact Analysis) provide additional detail on this subject. Comments of proposed project opposition should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Response 7D: Urban blight is discussed and analyzed on pages 3.9-2 through 3.9-4 of the Draft EIR. Appendix L (Urban Decay analysis) and Appendix M (Fiscal Impact Analysis) provide additional detail on this subject. Comments of proposed project opposition should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Response 7E: This is not a comment related to the adequacy of the EIR, but rather an opinion of the commenter that the highest and best use of the proposed project site is for agricultural purposes. Impacts of the proposed project on agricultural resources are discussed and analyzed on pages 3.2-1 through 3.2-10 of the Draft EIR.

Response 7F: The comment is noted. Commenter opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Rod Evans
7488 Danish Lane
Redding, Ca 96002
(530) 941-5867

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DEC 28 2009

COUNTY OF SHASTA
PERMIT COUNTER

Ms. Lisa Lozier, Planner
County of Shasta
Dept. of Resource Management
1855 Placer St
Redding, CA 96001

Re: DEIR comment letter for Knighton & Churn Creek Commons Retail Center

Dear Ms. Lozier:

On behalf of the Churn Creek Bottom Homeowners and Friends assn., I submit the following comments and questions regarding the County's consideration of the proposed Knighton & Churn Creek Commons Retail Center.

I find it baffling that you as the lead agency could in good faith assert that this DEIR adequately addresses the impacts that would be created by the building of this project. You appear to believe that it is the public's obligation to show that the project will have impacts that would render this DEIR inadequate under CEQA law. Your submission of the document seriously misunderstands that it is not the public's burden, but rather the County's to demonstrate with substantial evidence that a project be studied in every relevant issue to the degree that would ensure adequacy and completeness. The courts have been unequivocal in holding that it is the lead agency's responsibility to disclose in a diligent manner so as to afford the fullest possible protection to the public and the environment. Shasta County has failed to do this during its administrative review up to this point, having determined at the very earliest stage of consideration that the project was going to be built, irregardless of information that would state otherwise. The public and the CEQA process is not served by your approach to try and shoehorn a project into approval for which it clearly does not qualify.

A

Traffic:

Unfortunately, the Knighton Road entrance to the development is seriously constrained by the close proximity of Churn Creek Rd. to I-5. This is then compounded by the fact that a busy truck stop entrance/exit is directly across from the entrance to the proposed project. We have retained a qualified traffic expert who has reviewed the DEIR at our request and I will submit Mr. Pyburn's observations as a supplement to this letter. Mr. Pyburn's letter addresses our concerns that we would like for you to address in your response.

B

Storm Water Runoff:

The DEIR makes many flawed assumptions regarding the handling of storm water runoff. Approximately 95% of the proposed project sits in the 100 year flood plain. Your projections are based on unsupported data that contradicts available FEMA studies and data. The DEIR purports that the proponent has secured ACID facilities to assist with the runoff. Although the proponent has applied to be able to utilize ACID facilities, this has not been approved. Approximately two years ago, the ACID board declined to accept storm water runoff into its irrigation ditches in a similar development proposal at the same location.

We have retained the services of a qualified Hydrology engineer. We are submitting his observations of the DEIR as an attachment. We would like for you to address the concerns raised in Mr. Braithwaite's letter and accompanying document regarding the impacts of storm water runoff and water quality.

C

Aesthetics:

While the DEIR recognizes the significant and irreversible aesthetic effects that the project would degrade, it does not quantify the value of those effects. I would suggest that the entire community would suffer a loss of rural identity, thus costing that community in terms of fewer people and business's that would want to enter a community that looks just like every other community that is completely commercialized. An excellent example of this is the preliminary plans by Mr. Bob Moore, the owner of "Moore's Flour Mill" who plans to build an agricultural themed business on Churn Creek Bottom acreage that would enhance rather than detract from the community's rural identity.

D

Agricultural Resources:

With the current trend of locally grown food on smaller plots of land increasing exponentially on a daily basis, what justification could government leaders and planners make to take out of production the limited amount of the highest quality soil our area possesses. I believe that the future value of this lands potential to grow food far outweighs the benefit derived from a commercial development that could be sited on substandard soil as well as class 1 soil.

E

Land Use and Planning:

Consideration of the proposed project by one municipality (Shasta County), rather than the four municipalities (County, Redding, Anderson, Shasta Lake) that would be affected by its impacts shortchanges the greater community. The DEIR severely underestimates the urban decay effects, and ignores the benefits of regional planning concepts when analyzing this project. Sweeping changes to the County's General Plan should only be undertaken after a major General Plan update and revision. Our organization earlier requested that Shasta County perform this update prior to consideration of this project, however, our request was arbitrarily denied.

F

Public Services and Recreation:

The DEIR projects that approximately \$715,000 would be generated through sales tax revenue for public agencies. Shasta County Sheriff Tom Bosenko has projected that he will have to increase his Department by Three Deputies and several staff positions to handle the increased workload that this project will generate. Please explain the revenue projections considering the costs of the increased staff versus the amount of sales tax revenue collected for such services.

G

Summary:

I urge Shasta County to undertake an objective, good faith assessment of the proposed project's impacts relative to its benefits, and to follow proper procedures outlined under CEQA for doing so. This has not been done in this DEIR. At the very least you must recirculate this document. Please do not forsake the opportunity to plan our community to the benefit of all, it is your duty and part of the sacred trust that each citizen has placed in your hands.

H

Sincerely,



Rod Evans, Steering Committee
Churn Creek Bottom Homeowners and Friends Association

PACIFIC HYDROLOGIC INCORPORATED
1050 WEST STREET
REDDING, CA 96001
PH: 530.245.0864 FAX: 530.245.0867
PACIFIC_HYDROLOGIC@SBCGLOBAL.NET

December 18, 2009

RECEIVED

DEC 28 2009

COUNTY OF SHASTA
PERMIT COUNTER

Rod Evans
c/o Churn Creek Bottom Homeowners and Friends
P.O. Box 493091
Redding, CA 96049-3091

Re: Review of DEIR, Knighton & Churn Creek Commons Retail Center

Dear Rod, Homeowners, and Friends:

Thank you for continuing to consider Pacific Hydrologic Incorporated (PHI) for review of the subject DEIR. PHI has completed a cursory review of this DEIR and found reason to be concerned with the information presented in the DEIR. These concerns are summarized below after which they are individually discussed in greater detail followed by a paragraph discussing conclusions of the review.

Summary of Concerns:

- Potential impacts 3.8-5, 3.8-7, 3.8-8, and 3.8-9 have been identified as not significant and needing no mitigation based on conditions that do not exist.
- Mitigation measures proposed to address potential impact 3.8-6 are based on an analysis that lacks credibility.

Specific Concerns:

3.8-5, 3.8-8 – The entire proposed project is located within the FEMA Base Floodplain or Special Flood Hazard Area (SFHA). The parcel proposed for development represents over 90-percent of the floodplain width at some locations. This floodplain has been studied by FEMA using detailed study methods including specific estimates of flood flow and flood depths and is designated by FEMA as an AO Zone with an average flooding depth of 1-foot. Redirection of flood flows by development within this area cannot be avoided. FEMA defines the AO Zone as follows (from FEMA web site).

76. **Zone AO:** Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet.

Average flood depths derived from detailed hydraulic analyses are shown within this zone. Mandatory flood insurance purchase requirements apply.

I cont.

Measures identified in the drainage study supporting the DEIR intended to address the FEMA Base Flood and assumed to exist prior to preparation of this DEIR were developed using an analysis that is not consistent with the analysis relied upon by FEMA. In areas mapped by FEMA using detailed study methods, FEMA requires that new projects show they do not increase the risk of damage to structures or properties using the data and models relied upon by FEMA and corrected or modified as appropriate. The data and models are available from the FEMA Library within two weeks notice and FEMA provides a review service and issues a Conditional Letter of Map Revision (CLOMR) verifying the adequacy of proposed measures to meet the minimum standards of FEMA within 6-months of application. A Letter of Map Revision (LOMR) will be required after construction of any development, therefore the proper analysis to address the minimum standards of FEMA does not constitute additional work necessary for development. Without an issued CLOMR the real potential project impacts on the FEMA Base Floodplain are unknown.

J

3.8-7, 3.8-9 – Given the fact that the project is proposed on a parcel that almost completely encompasses the full width of the FEMA floodplain and the fact that the study intended to address the FEMA Base Flood has not been prepared to FEMA standards, there is a modest if not high risk that the project will redirect flood flows in a manner that will place existing housing within the SFHA and redirect flood water over busy roads creating a hazardous condition for the public.

K

3.8-6 – The drainage study relied upon for identification of measures necessary to mitigate increased runoff has relied on tenuous data and methods.

L

Further descriptions of these and other concerns are included in the PHI letter of July 6, 2009 (copy attached).

M

Conclusions:

Considering the location of the proposed development within the mapped FEMA floodplain and based on thresholds of significance identified in section 3.8.2 of the DEIR it is clear that impacts 3.8-5, 3.8-7, 3.8-8, and 3.8-9 are potentially significant and require mitigation. Mitigation measures for Impact 3.8-6 which has been identified as potentially significant have been based on a clearly unreliable analysis.

N

Sincerely,



Norman S. Braithwaite, PE, President
Pacific Hydrologic Incorporated

Letter 8 Rod Evans, Churn Creek Bottom Homeowners and Friends Association

Response 8A: The comment is noted. This is not a comment related to any one specific environmental topic, but rather a statement by the commenter that the environmental analysis reflects pre-determination that the project should be approved.

Response 8B: The comment is noted. The widening of Knighton Road from the I-5 southbound ramps to Churn Creek Road is necessary to accommodate forecasted traffic volumes generated by the project. Traffic impacts resulting from the proposed project, including impacts identified by the commenter, are addressed by Mitigation Measures #3.12-1a through #3.12-8 beginning on page 3.12-15 of the Draft EIR and in the Partially Recirculated DEIR (PRDEIR) and the response to comments thereon.

Response 8C: The opinion of the commenter that the assumptions of the Draft EIR regarding “the handling of storm water runoff” and that “projections are based on unsupported data that contradicts available FEMA studies and data” is noted.

The impacts’ analysis in the Draft EIR was based on a hydrologic study prepared by Hydmet, Inc. for PACE Civil Inc., a Redding engineering firm. The methodology for the study was described, in Appendix K to the EIR, as:

The Redding Hydrology manual (*Hydrology manual, City-wide Master Storm Drain Study, Appendix C, City of Redding Department of Public Works, 1993, Revised 2005*) was used to evaluate the hydrology of the project. The hydrologic model uses the U.S. Army Corps of Engineers HEC-1 (version 4.1, June 1998) flood hydrograph model. The HEC-1 Data processor was written with XML format and Microsoft Dot Net Framework. The U.S. Army Corps of Engineers HEC-RAS (version 3.1.2, April 2004) model was used to evaluate the floodplain.

The Draft EIR does not purport to have “secured ACID facilities to assist with the runoff.” The Draft EIR, rather, as detailed in Appendix K, Analysis of Churn Creek Floodplain and Detention Storage, provides for total onsite retention of any drainage volumes exceeding those currently emanating from the site, some of which is currently drained through ACID facilities. Please see, however, Appendix U and the DEIR errata noting that all storm water is now proposed to be retained on the project site.

The comments of the Hydrology engineer attached to the comment letter are addressed in Responses 8I through 8N below.

Response 8D: The comment is noted. This is not a comment related to the adequacy of the EIR, but a statement of concern that the proposed project will result in loss of rural identity, a project related impact discussed at page 3.1-6 of the Draft EIR Impact #3.1-1.

Response 8E: The comment is noted. This is not a comment related to the adequacy of the EIR, but rather an opinion of the commenter that the highest and best use of the proposed project site is in the production of food crops.

Response 8F: The comment is noted. See Comment Letter 16, Responses 16Y, 16Z, 16AA and 16BB regarding the adequacy of the urban decay analysis completed for the proposed project.

Response 8G: See Section Four – Errata amendments to Draft EIR pages 3.11-5 and 3.11-6 regarding revenue projections as they relate to public safety costs.

Response 8H: The comment is noted. This is not a comment related to any one specific environmental topic, but rather an opinion of the commenter that the environmental analysis presented in the Draft EIR does not reflect an objective, good faith, assessment of the proposed project’s impacts relative to its’ benefits.

Response 8I: The comment is noted. The Draft EIR (Appendix K) recommends “redirection” of flood flows, as a component of the project, as follows:

The purpose of the HECRAS analysis was to determine the influence of the project on the Churn Creek overflow 100-year floodplain. The project grading plan diverts part of the shallow overflow to the east side of the project. ... A channel will be constructed on the west side of Churn Creek Road to carry the diverted flow. The Channel is adjacent to Churn Creek Road on the west. It varies from 30 ft wide and three feet deep for the north half to 50 ft wide and one foot deep for the south half. Table 4 shows the Churn Creek overflow 100-year floodplain elevations with and without the project. The proposed bypass ditch creates decreased in the 100-year water surfaces and more than compensates for flow displacement due to project grading and fill. Please also see Appendix U of the DEIR and the DEIR errata based thereon.

Response 8J: The comment is noted. The Appendix K study is consistent with, and refers to, the FEMA baseline data for the project site defining probable flood elevations as one foot above project site grades. FEMA review is, in view of the detailed analysis undertaken, not essential to evaluation of project impacts. Please see, however, Appendix U of the DEIR and the DEIR errata based thereon.

Response 8K: The analysis in Appendix K, conducted in full compliance with the U.S. Army Corps of Engineers modeling standards referenced in Response 8I above, refutes the commenter’s unsubstantiated assumption that “the project will redirect flood flows in a manner that will place existing housing within the SFHA and redirect flood water over busy roads creating a hazardous condition for the public.” Please also see Appendix U of the DEIR and the DEIR errata based thereon.

Response 8L: See Response 8C above.

Response 8M: PHI Letter of July 6, 2009 was not attached to the 12/18/09 PHI letter attached to the Rod Evans letter.

Response 8N: The opinion is noted. See Responses 8C, 8I, 8J, and 8M above. Please also see Appendix U of the DEIR and the DEIR errata based thereon.

**Bridgette Brick-Wells
12005 Iron Mountain Rd., Redding CA 96001**

December 28, 2009

Lisa Lozier
Shasta County Planning Division
1855 Placer Street, Suite 103
Redding, California 96001

RECEIVED

DEC 28 2009

COUNTY OF SHASTA
PERMIT COUNTER

Subject: Knighton Retail Center Draft Environmental Impact Report (DEIR)

Dear Ms. Lozier

As a citizen of Shasta County and one of your constituents, I'm writing you to provide my comments on the DEIR for the proposed Retail Center at Knighton & Churn Creek Roads. Specifically, I am opposed to this development, because it violates both the letter and spirit of the current General Plan and Zoning and serves a very myopic purpose which elides many important issues:

A

1) The land in question is agricultural land and is both in use and zoned as such; clearly, this is its highest and best use because we have very little viable ag land in our area and to pave it over is to destroy forever a vital resource for our community. The land in question is very unique in that it is the best of the best agricultural soil in existence (Class 1). This land cannot be traded or substituted and should, therefore, remain protected by the General Plan without amendment.

B

2) To build another mall in this area that will compete with the existing mall will only condemn the Mt. Shasta Mall to failure. And at a time when retail spending is down (think Mervyns, Gottschalks, etc.) does this make any sense? Do we really need to generate new development when there are existing large retail buildings in the Dana Drive area sitting empty? Turning Dana Drive, like the Downtown Mall area and the Enterprise District before it, into another "revitalization" area is not the best use of our tax dollars.

C

3) The revenue generated for the county by the proposed development will only offset the lost revenue from existing retail which will be displaced by the proposed development. Providing a revenue stream from people outside of our region at an extreme cost to those who live here is untenable, at best.

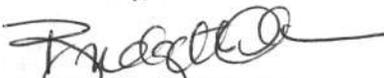
D

4) Last, and certainly not least, the area surrounding the proposed development is residential/agricultural. To build a major mall in the middle of that area will destroy the area and lead to increased crime, urban blight, and environmental degradation.

E

Thank you for your consideration of this important matter.

Sincerely,


Bridgette Brick-Wells

Letter 9 Bridgette Brick-Wells

Response 9A: The comment is noted. Commenter opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Response 9B: This is not a comment related to the adequacy of the EIR, but rather an opinion of the commenter that the highest and best use of the proposed project site is for agricultural/open space purposes.

Response 9C: The comment is noted. The potential impact of the proposed project on existing area shopping centers such as the Mt. Shasta Mall and the Dana Drive retail stores is discussed and analyzed on pages 3.9-2 through 3.9-4 of the Draft EIR. Appendix L (Urban Decay analysis) provides additional detail on this subject.

Response 9D: See Comment Letter 7, Response 7C.

Response 9E: The comment is noted.



Dixie O. Ten Broeck, RN

Phone: 530.243-1888

Fax: 530.243-6424



Lisa Lozier
Shasta County Planning Division
1855 Placer Street, Suite 103
Redding, California 96001

28 December 2009

Subject: Knighton Retail Center Draft Environmental Impact Report (DEIR)

Why is it that every time "Big Money" rears its ugly head, the Planning folks of Shasta County are encouraged to abandon all prudence concerning Churn Creek Bottom and the Knighton Road interchange region? As happened just a few years ago, here They, with their "Big Money," come again: "It's all right to ignore the obvious aspects of traffic over-congestion, to ignore the actuality of flood plains and potential for disaster, to ignore the impact on schools (particularly Pacheco Elementary), to ignore the impact on farmland (that could/would never be UN-done),and to ignore all common sense." (Then those same "They" and their "Big Money" hire some folks who'll "sell their bodies" and offer skewed projections. Hmm, there's a name for such folks, isn't there?)

A

Please, leave the Knighton Road region as it is! The truck stop is more than enough impact on this area already. There is absolutely no need to add more "city" here - another huge and unnecessary shopping center, acres of water-proofed hard-surface, thousands more vehicles, all while destroying more of the only remaining prime farm land in this County.

B

Please, don't run Shasta County through all this again, don't allow the "Big Money" people to ruin Churn Creek Bottom and the Knighton Road area! As the French advise their children, "be wise" in your actions, and continue to be good stewards of this irreplaceable and unique region.

C

Sincerely,

Dixie O. Ten Broeck, a friend of Churn Creek Bottom for many years

311 Rosewood Drive
Redding, CA 96003

Letter 10 Dixie O. Ten Broeck

Response 10A: The comment is noted. Comments of proposed project opposition should be directed to the County Planning Commission and Board of Supervisors during project deliberations. Traffic impacts are addressed in Draft EIR Section 3.12 and in the PRDEIR and responses to comments thereon, potential flooding impact is addressed in Section 3.8 (please also see Appendix U of the DEIR and the DEIR errata based thereon), Pacheco School impacts are addressed in Section 3.11 and agricultural impacts are addressed in Section 3.2.

Response 10B: The comment is noted. This is not a comment on the environmental analysis. Commenter opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Response 10C: See Response 10B above.

12/28/09

A letter to Shasta County Planning Division Concerning the proposed Knighton Retail Center:

Two years ago the Shasta County Planning Commission made a correct and excellent decision not to allow major development in Churn Creek Bottom. Recently a new development proposal has surfaced. This proposed mall located at Knighton and Churn Creek Roads would undo the good of the ban on major development. I strongly oppose such a move. The proposed mall would reduce the quality of life for the residents of Shasta County.

A

The major drawbacks are

- Too much more traffic would pass near Pacheco School. Statistically more traffic near children means more accidents involving children.
- Overtaxed drainage systems cannot handle storm runoff from huge parking lots.
- Traffic on Churn Creek will be far more congested.
- If the traffic backs up on Knighton it would cause traffic flow problems on I-5 both North and Southbound. We really do not need to approve potential daily traffic jams.
- Big developments should not be built on farmland.
- There is so much marginal land near I-5 it is foolhardy to co-opt the best land for such an inappropriate use.

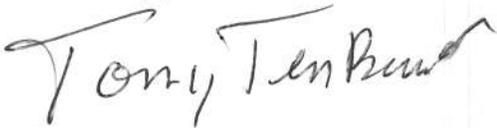
B

Please reject this proposal with the message that Shasta County does not want malls on farmland or in residential neighborhoods.

C

Thank you.

Sincerely,



Tony Ten Broeck
311 Rosewood Dr.
Redding, Ca 96003

Letter 11 Tony Ten Broeck

Response 11A: The comment is noted. Commenter opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Response 11B: The comment is noted. Pacheco School impacts are addressed in Draft EIR Section 3.11, drainage system impact is addressed in Section 3.8 (please also see Appendix U of the DEIR and the DEIR errata based thereon), traffic impacts are addressed in Section 3.12 and in the PRDEIR and the responses to comments thereon and agricultural impacts are addressed in Section 3.2.

Response 11C: The comment is noted.

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COUNTY OF SHASTA
PERMIT COUNTER

12/28/09

Lisa Lozier
Shasta County Planning Division
1855 Placer Street, Suite 103
Redding, California 96001

Subject: Knighton Retail Center Draft Environmental Impact Report (DEIR)

Dear Ms. Lozier

As a citizen of Shasta County and one of your constituents, I'm writing you to provide my comments on the DEIR for the proposed Retail Center at Knighton & Churn Creek Roads. Specifically, I am opposed to this development, because it violates both the letter and spirit of the current General Plan and Zoning.

A

Changing the General Plan to accommodate this development will permanently change / damage the character of the neighborhood, violate zoning protections regarding the suitability of the subject property for the uses to which it has been restricted, and will detrimentally affect nearby property and community identity.

B

Further, the land in question is very unique in that it is the best of the best agricultural soil in existence (Class 1). This land cannot be traded or substituted. It is what it is, and should therefore remain protected by the General Plan without amendment.

C

Thank you for your consideration of this important matter.

Sincerely,



Sherrie Brookes
21919 Berkeley Dr
Palo Cedro, CA 96073

Letter 12 Sherrie Brookes

Response 12A: See Comment Letter 6, Response 6A.

Response 12B: See Comment Letter 6, Response 6B.

Response 12C: See Comment Letter 6, Response 6C.

12/28/2009

DEPARTMENT OF
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DEC 28 2009

PLANNING/BUILDING
DIVISIONS

Lisa Lozier
Shasta County Planning Division
1855 Placer Street, Suite 103
Redding, California 96001

Subject: Knighton Retail Center Draft Environmental Impact Report (DEIR)

Dear Ms. Lozier

As a citizen of Shasta County and one of your constituents, I'm writing you to provide my comments on the DEIR for the proposed Retail Center at Knighton & Churn Creek Roads. Specifically, one reason that I am opposed to this development, is because it violates both the letter and spirit of the current General Plan and Zoning.

A

Changing the General Plan to accommodate this development will permanently change / damage the character of the neighborhood, violate zoning protections regarding the suitability of the subject property for the uses to which it has been restricted, and will detrimentally affect nearby property and community identity.

B

Further, the land in question is very unique in that it is the best of the best agricultural soil in existence (Class 1). This land cannot be traded or substituted. It is what it is, and should therefore remain protected by the General Plan without amendment.

C

Thank you for your consideration of this important matter.

Sincerely,

Leslie Bryan
814 Loma Street
Redding, CA 96003

Letter 13 *Leslie Bryan*

Response 13A: See Comment Letter 6, Response 6A.

Response 13B: See Comment Letter 6, Response 6B.

Response 13C: See Comment Letter 6, Response 6C.

DEPARTMENT OF
RESOURCE MANAGEMENT
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DEC 28 2009

December 22, 2009

Lisa Lozier
Shasta County Planning Division
1855 Placer Street, Suite 103
Redding, California 96001

PLANNING/BUILDING
DIVISIONS

Subject: Knighton Retail Center Draft Environmental Impact Report (DEIR)

Dear Ms. Lozier

I am very concerned about plans to develop a Retail Center at Knighton & Churn Creek Roads. The proposed site is part of an agricultural neighborhood where farming and ranching are a way of life. I live in the Churn Creek Bottom neighborhood, which is less than 2 miles from the proposed site.

This project could start within a year, and will mean:

- More noise, more truck traffic and more pollution, resulting in a diminished quality of life and lower property values for area residents. | A
- Removal of prime agricultural land and encourages more like projects (leap-frog development) | B
- Encourages sprawl rather than in-filling resulting in city blight due to more vacant retail/commercial buildings | C
- Ground water pollution due to inadequate sewer and water services | D
- Incompatible mixture of big-rigs and school buses | E

I support the growth of Shasta County, but only when it's guided by a strategic plan that encompasses all the communities and that which addresses the quality of life of our residents. I object to haphazard and parochial planning that only addresses the few at the expense of many. | F

Please let me know as soon as possible how you plan to help our community.

Sincerely,



Charles Capp
20019 Falcon Dr.
Redding 96002

Letter 14 Charles Capp

Response 14A: The comment is noted. Noise impacts are addressed in Draft EIR Section 3.10, traffic impacts are addressed in Section 3.12 and in the PRDEIR and responses to comments thereon and air quality impacts are addressed in Section 3.3.

Response 14B: The comment is noted. Agricultural impacts are addressed in Draft EIR Section 3.2 and growth inducing impacts of the proposed project are discussed in Section 5.6 at page 5-14.

Response 14C: The comment is noted. Urban blight is discussed and analyzed on pages 3.9-2 through 3.9-4 of the Draft EIR. Appendix L (Urban Decay analysis) and Appendix M (Fiscal Impact Analysis) provide additional detail on this subject.

Response 14D: The comment is noted. Sewer, water and storm water impacts are addressed in Draft EIR Section 3.13 (please also see Appendix U of the DEIR and the DEIR errata based thereon) and groundwater quality impacts are addressed in Section 3.8.

Response 14E: The comment is noted. Pacheco School impacts are addressed in Draft EIR Section 3.11 and traffic impacts are addressed in Section 3.12.

Response 14F: The comment is noted. Comments regarding opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

December 22, 2009

DEPARTMENT OF
RESOURCE MANAGEMENT
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DEC 28 2009

PLANNING/BUILDING
DIVISIONS

Lisa Lozier
Shasta County Planning Division
1855 Placer Street, Suite 103
Redding, California 96001

Subject: Knighton Retail Center Draft Environmental Impact Report (DEIR)

Dear Ms. Lozier

As a citizen of Shasta County and one of your constituents, I'm writing you to provide my comments on the DEIR for the proposed Retail Center at Knighton & Churn Creek Roads. Specifically, I am opposed to this development, because it violates both the letter and spirit of the current General Plan and Zoning.

A

Changing the General Plan to accommodate this development will permanently change / damage the character of the neighborhood, violate zoning protections regarding the suitability of the subject property for the uses to which it has been restricted, and will detrimentally affect nearby property and community identity.

B

Further, the land in question is very unique in that it is the best of the best agricultural soil in existence (Class 1). This land cannot be traded or substituted. It is what it is, and should therefore remain protected by the General Plan without amendment.

C

Thank you for your consideration of this important matter.

Sincerely,

Sara Capp
Sara Capp
20019 Falcon Dr.
Redding Ca, 96002

Letter 15 Sara Capp

Response 15A: See Comment Letter 6, Response 6A.

Response 15B: See Comment Letter 6, Response 6B.

Response 15C: See Comment Letter 6, Response 6C.

David P. Cincotta
Direct: (415) 984-9687
Fax: (800) 365-1372
DCincotta@jmbm.com

Two Embarcadero Center, 5th Floor
San Francisco, California 94111-3813
(415) 398-8080 (415) 398-5584 Fax
www.jmbm.com

Ref:68000.0002

December 24, 2009

Lisa Lozier, Senior Planner
Planning Division
County of Shasta
1855 Placer Street, Suite 103
Redding, California 96001

Re: Comments on Draft Environmental Impact Report for Knighton and
Churn Creek Commons Retail Center (“DEIR”)

Dear Ms. Lozier:

On behalf of the Hawkins Company, we have prepared the following comments on the DEIR for the Knighton and Churn Creek Commons Retail Center. We have assembled comments from other consultants and experts and have incorporated them by reference in several areas and have attached additional reports to be incorporated in the analysis and review for the final Environmental Impact Report (“EIR”). The attached exhibits from consultants are meant to be supplemental to the comments contained in this letter. We have organized the comments by category as they are presented in the DEIR.

Chapter Two. Project Description

Attached as Exhibit A is the final project description that was transmitted to Shasta County on April 8, 2009, and should be inserted in the final EIR. Many of the references to the project description throughout the DEIR omit the references to the “regional” nature of this development. Please update those references.

A

Chapter Three. Setting Impacts and Mitigation Measures

Chapter 3.1 Aesthetics

On page 3.1-8, Mitigation Measure #3.1-3 restricts the security lighting to no more than 20 percent of total on-site exterior lighting. We do not understand what criterion was used to determine that 20 percent complies with the 2005 Building Energy Standards referenced in the chapter. Per the 2005 Building Energy Standards (Chapter 6 Outdoor Lighting and Signs), the lighting power is only required to be reduced by 50 percent, and should not exceed an 80 percent reduction. As presented, the mitigation measure exceeds the required lighting reduction under the building energy standard. While complying with the County Zoning Ordinance

B

Section 17.84.050 and the 2005 Building Energy Standards, the project applicant would provide safe lighting for the shopping center's patrons while still meeting those design criteria and still reduce impacts associated with light pollution to **less than significant**.

B cont.

On page 3.1-8, the report identifies that building materials have the potential to create glare, and therefore proposes to mitigate that potential impact by requiring the use of glare-reducing and non-reflective materials and paints. This is in contradiction to Mitigation Measure 3.3-2b which suggests the use of energy efficient windows, high-albedo (reflective) roofing materials, awnings, light shelves, and interior transom windows. These materials are of a composition that will create glare and reflectivity. Please address the compliance requirements for these opposing impacts.

C

Chapter 3.2. Agricultural Resources

On page 3.2-3, there is an error in calculating the acreage of Prime Farmland. The area is correctly calculated below based on the designation of Prime Farmland depicted in Figure 3.2-2. Prime Farmland, as shown in Figure 3.2-2 of the DEIR, consists of 60.51 acres. This is based on a comparison of the Prime Farmland designated on Figure 3.2-2 of the DEIR to an ALTA/ACSM Land Title Survey prepared by Seinturier and Associates, Inc., December 2007, a copy of which is attached as Exhibit B. The acreage to be preserved in perpetuity as Prime Farmland of equal quality or better at a minimum ratio of 1:1 would therefore be 42.51 acres (18 acres of the project site will remain viable for farming above the on-site waste water treatment plant subterranean leach field).

D

Taylor property	45.01 acres
Wood property	<u>15.50 acres</u>
Total Prime farmland	60.51 acres
Less: Waste water plant	<u>18.00 acres</u>
Prime farmland to mitigate	42.51 acres

Based on Exhibit 3.2-2, the Campbell Property (5 acres) is Unique farmland, and the Riley property (26.03 acres) is a portion urban and built-up land (7.5 acres) and the remainder (18.5 acres) is grazing or other land.

In addition, the mitigation measure should be revised to allow the project applicant to locate a site that is mutually agreeable with Shasta County to mitigate the foregoing impact rather than to use a qualified land conservation organization or require the selection of 3 potential sites be submitted to Shasta County for consideration. Corresponding mitigation measure 3.2-1 should be revised to reflect the foregoing two paragraphs.

E

Impact #3.2-2 is beyond the control of the applicant and is entirely within the control of the County to control surrounding land uses. As a result, with this mitigation measure in the control of the County the impact will be reduced to **less than significant**.

F

Mitigation Measure 3.2-4 identifies measures, such as the final project site design being submitted to the ACID for review and approval, which do not mitigate any significant environmental impact. There is no jurisdictional authority to permit ACID to have approval of the final project site design. ACID's authority is limited to review and approval of the engineering plans for drainage. The applicant shall submit for necessary engineering approval by ACID prior to the relocation or piping of the existing ditch that traverses the project. In addition, ACID staff will be consulted regarding any short-term impacts to irrigation facilities resulting from construction of the project. This mitigation measure should reduce the impact to **less than significant**.

G

Chapter 3.3 Air Quality

Section 3.3-1 On page 3.3-5 Subheading "Attainment States." It is not clear what the term "District" is referring. Please clarify.

H

Mitigation Measure #3.3-2(a) There is no objective standard provided to determine which SMMs are "feasible" for the proposed project. Please provide objective standards to assist in determining which measures may be feasible. Several of these mitigation measures listed may not be feasible. They are as follows:

The Project shall utilize a central water heating system featuring the use of low NOx hot water heaters. It is not practical or logical for a retail center that spreads over 92 acres to have a central water heating system. It would not be efficient with such long runs of pipe infrastructure, heaters and pumps. This is even more true when it is clear that this Project will not be just one structure. This mitigation measure should be deleted and replaced with a requirement to create energy efficient water heating systems for each user throughout the entire project.

The Project shall include the installation of solar water heaters for at least 25% of the building floor area. We believe this is not a feasible mitigation for the majority of the center in that most commercial retail tenants use very little hot water, thus creating a situation where great expense results in little benefit. This element of the mitigation should be removed.

I

The Project shall orient building and main entrances to streets with bus service. There is no bus service offered to streets adjacent to the project making this element of mitigation impossible at this time. Further, in the event bus service is provided in the future, it is likely that the project buildings will be in place, and likely oriented to best integrate the center as a functional unit, including internal pedestrian & vehicular traffic. This element of mitigation should be deleted.

The Project shall provide for shower facilities for pedestrian employees use. The Project shall provide for shower/locker facilities, where appropriate, for bicycling and pedestrian commuters. The provision of such facilities is extremely problematic from maintenance and more importantly a security perspective. The monetary cost of constructing and maintaining such facilities combined with the security risk to people render this element of mitigation not feasible. This element of mitigation should be deleted.

I cont.

Mitigation Measure #3.3-2b Bullet #12 The stated mitigation measure does not match prudent construction practices. The EIR should be clarified such that “pre-wire” mean conduit installed for future use with high speed modern connection / DSL and extra phone lines. It is a more efficient method to install conduit and then allow the actual and final use to dictate how much “wiring” shall be used. This mitigation should be changed accordingly.

J

Mitigation Measure #3.3-2c We believe that compliance with Title 24 would render the significance after mitigation to be “less than significant.” The standard by which the result after this mitigation is “significant and unavoidable” is not clear. A change to the significance after mitigation should be made to be “less than significant.”

K

Mitigation Measure #3.3-3a Bullet #5 and #6 It is unclear why a 96 hour period comes to be the threshold for dust maintenance measures. Dust palliatives should be acceptable for soil stabilization. Some inconsistency is found in the requirement for soil stabilization between the Fifth and Sixth Bullets as the Sixth allows dust palliative by name and the Fifth does not. The fifth Bullet should be modified to allow dust palliative as a soil stabilizer.

L

Mitigation Measure 3.3-3a It is unclear whether the use of aqueous diesel fuel is feasible because of questions regarding such fuel’s availability and any potential negative impact its use may have to construction equipment. This mitigation measure should be modified to allow for the unavailability of such fuel and any proven negative impacts to equipment using such fuel. This particular mitigation measure is also problematic for local smaller contractors who may have difficulty obtaining aqueous fuel and the equipment which can operate efficiently with it.

M

Mitigation Measure 3.3-3b It is not clear whether the more feasible application of dust palliatives or crushed rock to all inactive portions of the development is an acceptable mitigation. The growing of grass requires watering, mowing and potentially other maintenance that causes it to be more costly in terms of dollars as well as use of water. A one time dust cap is more efficient and feasible. A change to this mitigation measure should be made in accordance with the foregoing.

N

Chapter 3.4 Biological Resources

We believe the mitigation measures required by this analysis should be reviewed more closely. For example, the necessity of a qualified botanist to conduct a survey for Henderson’s bent grass appears excessive in light of the fact that, according to the DEIR, the site is considered a marginal location for grass and the closest known location is 4 miles away. Further mitigations provide marginal benefits as well. Of the four birds identified as potential visitors to the site, the site is determined a “marginal” habitat for all but one (Loggerhead Shrike) and the one bat species is considered unlikely to breed on the site.

O

Chapter 3.5 Cultural Resources

On **page 3.5-3**, the list of previous studies does not acknowledge the existence of a subsequent report entitled Determination of Eligibility and Effect for the Proposed Shasta Regional Auto Mall Project, Shasta County, California dated June 30, 2006, prepared by Peak & Associates, Inc. A copy of that report has been enclosed as Exhibit C to this document. The attached report describes the performance and results of a sub-surface investigation consisting of twenty (20) shovel test pits (STP) and concludes that “As an isolated artifact, resource OCM-1 (Observed Cultural Material-1) is not eligible for consideration as an historic property under NRHP criteria for significance.” Please confirm that based on the findings of the Determination of Eligibility report, this impact should be **less than significant**.

P

In **Appendix E** of the DEIR, the same exclusion of this available report is made.

In **Mitigation Measure #3.5-1**, a site reconnaissance was done in the Peak & Associates’ report. An additional reconnaissance would be unnecessary. Please delete the first bullet point of this mitigation measure.

Q

On **page 3.5-9**, the Mitigation Measure requires notification of the Wintu and the Wintu Tribe of Northern California. The report, however, never identifies a distinction between the Wintu and the Wintu Tribe of Northern California. On page 3.5-2, the Wintu is identified as the Northern dialect of the Wintu. Please identify if there are two opposing tribal groups of interest.

R

On **bullet items three and four**, please clarify that pursuant to Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98 and Section 15064.5(d) of the CEQA Guidelines, the project applicant shall contact either a qualified archaeologist or the County Coroner, and by statute, that person is responsible to contact the Native American Heritage Commission, if he/she determines it is appropriate to do so.

S

Chapter 3.6 Geology, Soils, and Mineral Resources

On **page 3.6-1**, a more recent geotechnical investigation for the project site prepared in November 2007 by KC Engineering Company has been performed. A copy of that report has been enclosed as Exhibit D to this document.

This report is more representative of the project site as it included soils investigations across the entire 92 acres. The recommended structural features are different than what was recommended under the referenced 1998 report by Brown and Mills, Inc. Please evaluate the recommendations of this more recent report.

T

Chapter 3.8 Hydrology and Water Quality

Please see the letter from Bonnie Lampley of Lawrence and Associates dated December 7, 2009 attached hereto as Exhibit E and the letter from Fred Lucero of Pace Engineering dated December 22, 2009 and attached hereto as Exhibit F that address comments and questions regarding the content of this chapter.

U

Mitigation 3.8-2 We believe the standard for identifying best management practices (“BMP’s”) prior to site plan approval is not the most beneficial time to provide such review. Site plan approval will happen concurrently with the certification of this EIR. A more realistic, appropriate and productive time would be to have the BMP’s identified prior to issuance of a building permit.

V

Mitigation 3.8-2 It is not clear whether the sample list of BMP’s are additional items that are not listed in the California Stormwater Quality Association’s (“CSQA”) handbook. To clarify that the CSQA handbook will be the standard for BMP’s the sentence of the mitigation measure “Typical BMPs..... Pollution control mechanisms” should be deleted.

W

Chapter 3.9 Land Use, Planning, Population and Housing

Impact 3.9-3 and 3.9-7 identify potential land use conflicts which are beyond the control of the applicant and are entirely within the control of Shasta County through its authority to control land uses. As a result of the control of the County, these impacts should be reduced to **less than significant**.

X

Impact 3.9-8 relies heavily on the Urban Decay Analysis prepared by EPS and incorporated as Appendix L. We believe that there are several discrepancies and inaccuracies within the UDA that we would ask to be clarified. The project description in the Urban Decay Analysis identifies the project as a “destination shopping mall”. The project however is a regional commercial retail, dining, entertainment, traveler services and lodging shopping center. See Chapter Two Project Description. A “mall” generally means enclosed shopping facilities similar to the existing mall in Redding. Because of this incorrect designation, the applicant is not

Y

sure whether the UDA analysis is correct given the use of an incorrect designation criteria. The project will be a hybrid shopping center. Changes to the UDA should be made to reflect the correct designation of the Project as a regional commercial retail, dining, entertainment, traveler services and lodging shopping center.

Y cont.

Table 3-1, on **page 22** of the UDA, provides a summary of existing local, community and regional retail space in the regional market. This table lists numerous developments (Churn Creek, Dana Drive, Hilltop Center) that are too small (each under 300,000 square feet) to be deemed regional centers. By UDA's own definition on page 9, a regional center is a minimum of 400,000 gross leasable area. In addition, **footnote [4]** of **Table 3-1** indicates that the author of the report "added a 20% contingency factor to include any retail supply that was omitted" from the report that was analyzed to prepare the UDA. Therefore, 621,000 square feet of additional space was arbitrarily added to the analysis. In a market the size of Redding, it is incomprehensible that any regional space should be unaccounted for in any study. In addition, the only community space that may not be accounted for would likely be older, smaller developments not in competition with the same tenant mix as the project. This 20% contingency factor – 621,000 square feet of arbitrary space – must be removed from the UDA analysis.

Z

Page 36 (3rd bullet) of the UDA states that the Redding region only captures 75% of the current trade areas retail expenditures. This would imply therefore that **25%** of the dollars in the region are currently being spent outside of the area and that an unmet supply exists to the current demand. Was there any analysis done to evaluate the benefit to the Redding region of recapturing any of the 25% retail expenditures that are currently being spent outside of the region? Such analysis should be provided.

AA

Page 38 of the UDA erroneously states that a 10% vacancy of more than 5 years may lead to urban decay. In our current portfolio of over 3 million square feet, we currently experience 8% vacancy and believe that our portfolio is successfully rented. In addition, lenders typically require a 10% vacancy factor in any project financing. We consider a shopping center at a 90% occupancy level as viable and profitable. Please explain the reasoning to use a term of 5 years and 10% vacancy leading to urban decay when such a long term vacancy rate is an acceptable measure without causing urban decay.

BB

The future developments that were analyzed for a possible cumulative urban decay must also be considered in the proper context. Such developments will only develop new space as the market dictates.

CC

In summary, the applicant requests that the UDA be re-evaluated in light of the matters addressed above and that the impact be deemed **less than significant**.

DD

Chapter 3.10 Noise

Section 3.10.2 On pages 3.10-19, it is unclear what factual basis was used to set the threshold of significant increase of noise level at 4 dB. Please clarify. Section 3.10.2 sets the threshold for significance at 4 dB yet Appendix N Page 4 indicates a change of at least 5 dB is required before any noticeable change in human response would be expected. The EIR should be clarified to correct this conflict.

EE

Mitigation 3.10-2; 3.10-2a & b; 3.10-3 There appears to be a conflict between the potential impact possibly being “Significant” for these mitigation measures. The impact of on-site circulation and loading dock activity may result in an exceeding of the Shasta County General Plan noise level criteria; it is not a certainty as improvement measures will mitigate most impacts. The significance determination should be modified from “Significant” to “Potentially Significant.” The EIR should be changed to reflect the potentiality of the Impact.

FF

Mitigation 3.10-3 The impact is unclear. Reference is made to the “Shasta County noise level criteria.” It is not clear whether this is a different criteria than the State of California standard for the impact to be mitigated pursuant to Mitigation Measure 3.10-2 (Shasta County General Plan noise level criteria). The EIR should be clarified to resolve this conflict.

GG

Mitigation 3.10-2a & b Consistent with the comment above regarding noise level standard conflict between Mitigation Measure 3.10-2 and 3.10-3, it does not appear that the measure mitigates the stated Impact. If the Impact is noise levels which exceed the Shasta County noise level criteria, then the mitigation should be “measures to comply with the Shasta County noise level criteria.” This mitigation measure should be modified accordingly.

HH

Mitigation 3.10-4 It should be acknowledged that some roadway construction activity may need to be done during evening hours to accommodate traffic considerations. Furthermore, some construction activity should be permitted so long as the Shasta County noise level criteria is not exceeded. Please revise accordingly.

II

Mitigation 3.10-6 It does not appear that the mitigation measure is based on substantive fact that only a concrete building must be installed and that aerators must be installed below ground levels in order to mitigate the stated Impact. It is likely that adequate sound suppression systems can be installed, or that the wastewater treatment plant can be installed in a manner that can accomplish mitigation of the stated Impact of the wastewater treatment plant resulting in elevated noise levels within the immediate area. The EIR should be revised to state as a mitigation measure that the “Applicant shall cause the wastewater system to be in compliance with the Shasta County noise level criteria.”

JJ

Chapter 3-11 Public Services and Recreation

Mitigation Measure 3.11-1 creates an unnecessary burden on the project applicant. The applicant typically only hires private security for its shopping centers when a specific need for such security arises, including location in less desirable areas, special events, etc. The Project will generate substantial revenue for the County which will create a surplus in both the General Fund and the Public Safety Fund (according to the Fiscal Impact Analysis, Exhibit M to DEIR). These Funds derive revenue from taxes paid as a result of this Project. Thus this Project through the resulting payment of taxes accounts for more than its share of any cost related to an increase in public safety services. With the annual fiscal surplus in both the General and Public Safety Funds, we do not understand how the additional revenue generated by sales and property tax shall not suffice to provide the funds necessary for the County to provide adequate security.

KK

Mitigation Measures 3.11-2a and 2b are very perplexing. The DEIR Fiscal Impact Analysis states that the impact fees, sales taxes and property taxes will generate an additional \$913,000 of annual funds to be provided to the County Service Area #1 – Fire Protection. We believe that the fees generated by the project are deemed to be the applicant’s fair share of any costs. We also do not understand the basis for arriving at the additional annual costs for fire protection. Table C-3 shows the Project’s impact to Fire Protection expenditures to be \$913,000, and yet Table C-1 indicates the total expenditures for Fire Protection services in CSA #1 are \$6,742,451 for FY 2008-09. Table C-3 is allocating a disproportionate share of CSA #2 fixture expenditures to the Project. We do not understand how the conclusion was arrived at providing an executed agreement describing the fair share cost and a schedule for payment when these fees and the amount assessed and schedule of payments are already defined through Ordinance 665, property taxes assessments, and sales tax payment provisions. Please clarify.

LL

Chapter 3.12. Traffic and Circulation

Within these comments are references to the Oasis EIR which is a document that was certified as adequate and complete by the City of Redding in 2008. It does not appear to have been considered in the preparation of this DEIR as different standards of significance are presented from the standards in the DEIR. Please comment and add additional analysis as necessary.

MM

The following comments are also supplemented by a detailed memorandum from Kittelsen and Associates, dated December 23, 2009 and included as Exhibit G to this document. Both these comments and the memorandum are to be considered as comments to be considered by the County in preparation of the Final EIR.

NN

It should be noted that two approved funding sources – Ordinance 665 Public Facilities Impact Fee and Resolution 91-115, Major Road Impact Fee – are not identified in the

OO

DEIR as resources for some mitigation measures. The payment of these fees by the Project applicant will satisfy the applicant's obligations for the mitigation measures.

OO
 cont.

Page 3.12-8, in Cumulative (2030) No Project paragraph the report mentions the *Shasta County Regional Improvement Program Impact Fee Nexus Study* (hereafter "Nexus Study") which has never been adopted by the Regional Transportation Planning Agency and was rejected by local jurisdictions of Shasta County, Redding and Anderson, the jurisdictions in the traffic study area. **Please comment and revise as needed.**

PP

Page 3.12-8, Table 3.12-7 implies that all of these vehicle trips are generated by the project itself which does not account for the fact that a significant amount of traffic is already on the I-5. Pass-by and diverted trips will visit the Project but are not generated by the Project. The table is reasonably accurate as to the number of trips that will come into the Project and be internalized. This table implies to the general public that all of these are new trips generated that would not be on the roadways but for the Project. **Please comment and revise as needed.**

QQ

Page 3.12-9, Caltrans paragraph indicates a target level of LOS C. The target level is LOS C/D and is able to be revised in conjunction with the local jurisdiction, Shasta County to a different level of service. The Caltrans Guide should be quoted accurately and completely concerning these items. For consistency, the same target LOS D should be used for I-5 and interchanges as in the City of Redding General Plan Transportation Element. **Please comment and revise as needed.**

RR

Page 3.12-10, In the italicized paragraph at the top of the page it indicates that the LOS level is C. While it may be accurate for "NEW" roadways it is not accurate for existing facilities. The word "new" should be inserted in front of "roadways and intersections to accurately reflect the Shasta County's General Plan statements. Please comment and revise as needed.

SS

Page 3.12-10, the concluding paragraph indicates that the minimum acceptable operating LOS is a C which is not accurate for existing roadways in Policy C-61 which indicates that up to an F is acceptable. There are no new roads proposed by this project therefore the minimum acceptable LOS on the existing roadways and intersections would be up to an F. Please correct and revise as needed.

TT

Page 3.12-10, Table 3.12-8 in the first section of the table indicates under discussion that Churn Creek is planned to be improved to 4 lanes. There is no plan to improve "all" of Churn Creek to four lanes. There is a portion of the intersection at Knighton and Churn Creek and its tapers that will have 4 lanes but the rest of the frontage only has two lanes with a turn lane. **Please correct and revise as needed.**

UU

Page 3.12-12. Under Roadway Segments the second bullet point indicates that an increase in V/C ratio of 0.05 would be "unacceptable". This seems to be in conflict with the first

VV

paragraph which indicates that a roadway segment that operates at LOS up to F is acceptable. The V/C ratio only tells if there is a percentage increase in traffic and does not identify whether there is a substantial increase in traffic in relation to the existing traffic load and capacity, as defined by CEQA, and therefore does not need to be mitigated. By having this bullet point it renders the first bullet point, which is the policy of the county, meaningless. Shasta County is the lead agency to set the threshold of significance. The Oasis EIR has a simple significance threshold that should be considered and analyzed by the County as a basis for determining significance. The DEIR should at least be consistent in its analysis for significance levels with the City of Redding. **Please comment and revise as needed.**

VV
 cont.

Page 3.12-13, Under Intersections the second bullet point has an increase in stop time of only 5 seconds as an intersection that is “unacceptable” and needs to be mitigated. This standard is meaningless for intersections which already have levels of services of E and F. The CEQA evaluation standard of substantial increases in traffic in relation to existing traffic should be used. **Please comment and revise as needed.**

WW

Page 3.12-13, Under Freeway Ramp Merge, Diverge the second bullet point has an increase of 10 or more passenger car equivalents as a ramp operation that is “unacceptable” and needs to be mitigated. This standard is also meaningless for ramps which already have levels of service of E and F. The CEQA evaluation of substantial increase in traffic in relation to existing traffic should be used. **Please comment and revise as needed.**

XX

Page 3.12-15, **Mitigation Measure #3.12-1b** should be changed to the signalizing and restriping of the entrance to the Project as Table 3.12-9 capacity criteria was incorrect due to Knighton Road being considered a Minor Collector versus the Major Collector designation used in the Table 3.12-2. . **Please comment and revise as needed.**

YY

Page 3.12-20, **Cypress Avenue/I-5 Northbound On-Ramp Merge** this paragraph is a perfect example of the problem outlined above wherein the existing level of service on the NB ramp is LOS D and the Project slightly increases the density to an LOS E. The LOS E is an acceptable capacity level pursuant to policy C-61 yet the paragraph calls the impact “significant”. The density is in terms of passenger cars per mile while the significance determination is “10 trips” or PCEs and there is no correlation stated. In addition, it is not noted that there are no trips generated northbound on the ramp itself from the intersection. This minimal increase is not a “significant” increase in the total overall cars per mile on the segment of I-5. Finally, the number of cars per mile does not seem to take into consideration that these trips are a part of the pass-by calculations that are not evident in this report and should be discounted by this factor.

ZZ

Perhaps more significant is that this intersection is outside the jurisdiction of Shasta County. The recent California Appeals Court ruling in *Tracy First v. City of Tracy*, 177 Cal.App.4th 1, 99 Cal Rptr 3d 621 (hereafter “Tracy First”), no mitigation may be imposed. Furthermore, the responsibility for improvements to mainline I-5 is the State of California. The

taxes of California citizens are intended to build, maintain and improve the highway system. In this case, there are no additional northbound cars from the intersection of Cypress that enter I-5. **Please comment and revise as needed.**

ZZ
cont.

Pages 3.12-23 and 24, Tables 3.12-15 & 16 When comparing the two tables it is clear that the cumulative traffic without the project, a number of intersections drop to an unacceptable LOS of F ; Cypress Av, Riverside Av, Rancho Rd and Knighton Rd. These are already future problems that just the normal growth of the county without the project. These cumulative increases are much higher of a ratio compared against the increase by the project. For instance the current delay at Cypress SB in PM is 32 and NB is 29 (Table 3.12-4) and the cumulative without the project shows an increase delay to 88 and 75 (Table 3.12-15) respectively for an increase of 56 and 46. When looking at cumulative plus the project for the same intersections the increase is from 88 to 97 and 75 to 87 comparing Tables 3.12-15 and 16. This is only an increase of 9 and 11 respectively. This amounts to the overall growth in the county compared to the projects growth is about 500% higher for the SB and about 400% higher on the NB intersections. It may be helpful to include a table comparing these ratios. In addition, by utilizing a significant threshold approach that is in line with Appendix G of CEQA Guidelines, such as a drop in LOS from acceptable to unacceptable level, similar to the concept used in the Oasis Specific Plan EIR, a more accurate determination of the substantial effect in relation to the existing traffic can be evaluated. **Please comment and revise as needed.**

AAA

Page 3.12-25, The following bullet points have need to be revised given that the intersections fail without the project and a majority of these locations are already planned for improvements under the approved impact fee programs: Cypress Avenue/I-5 SB and NB Ramp, Bonnyview R/I-5 NB Ramp, Riverside Av/I-5 NB and SB Ramp. There is an interpretation of “significant” based upon a delay standard that is neither in keeping with CEQA nor consistent with the application of the Oasis EIR thresholds of significance. The use of an increase of 5 second delay is not reasonable to determine “significant” in these instances when applying the CEQA standards of a substantial increase in traffic in relation to the existing traffic load and capacity, and should not require mitigation. **Please comment and revise as needed.**

BBB

Page 3.12-26 in the **Mitigation Measures** lead paragraph there is a citation to the Nexus Study to be used as a “fairshare” calculator for the mitigation measures that follow the paragraph. This should be deleted as it is not a formally adopted study and approved method of funding these improvements. It should be substituted with the impact fee program adopted by Shasta County as referenced on page 12-13 under 3.12.3 Impacts and Mitigation Measures as *Major Road Impact Fees Program* adopted by the Board of Supervisors as Resolution 91-115 (hereinafter “Resolution 91-115”) to which the project is subject to paying.

CCC

In addition, it should be noted that the fairshare for the mainline improvements that are desired by Caltrans is all the taxes paid to the State of California for highway building, operation and maintenance. Additionally, any mitigation measure that requires improvements that create a better LOS than C/D is requiring more improvements than is necessary to mitigate

DDD

the impact of this Project. The assessment of any fairshare calculation for those improvements above and beyond the Project impact is beyond the responsibility of this Project. **Please comment and revise as needed.**

DDD
cont.

Page 3.12-32, Impact # 3.12.6: Freeway Ramp Merge Diverge This section of the report is similar to the above comments on the cumulative sections. This whole section on merge/diverge has to do with the mainline improvements that Caltrans is hoping to make and is not anything that can be controlled by Shasta County nor the project. The impacts on the mainline of I-5 and its capacity are unclear and therefore do not rise to the level of “substantial” in relations to the existing (cumulative already calculated and then adding the project) traffic load and the capacity of the roadway as required by Appendix G of CEQA and listed on page 3.12.2 bullet 1. Comparing tables 3.12-18 with 3.12-19 it seems clear that the merge/diverse components are in failure in the cumulative without the project and that the incremental increase from the project does not raise to the level of “substantial”. **Please comment and revise as needed.**

EEE

As a general comment of the cumulative section there not clear that there was any credit given for projects in the future having to mitigate their own impacts. It would seem reasonable to provide a decrease in the overall cumulative impacts by an amount that a prospective project might be required to mitigate. For instance, if a project were to go in by the intersection of Cypress and I-5 would it not be reasonable to assume so amount of mitigation at that intersection similar to the ones the project is putting in at Knighton Rd between the NB ramp and Churn Creek? By not including the planned program improvements as outlined in the Resolution 91-115 or Ordinance 665, a number of improvements are not assumed to be completed and therefore resulting in a higher level of impact from this Project which then burdens this Project with improvements that are already being funded to construct. Any reference to the Nexus Study should be removed. The overall “substantial” threshold criteria of V/C 0.05, time delay of 5 seconds, and the 10 PCE’s should be substituted with a threshold criteria related to a change in LOS similar to the methodology used in the Oasis Specific Plan EIR. **Please comment and revise as needed.**

FFF

Chapter 3.13. Utilities and Service Systems

Please see attached letters from Lawrence and Associates, Exhibit E, and Pace Engineering, Exhibit F, that address questions and comments regarding the content of this chapter. The Lawrence and Associates letter references two technical memoranda which are attached as Exhibits E-1 and E-2.

GGG

In **Mitigation Measure #3.13-1**, we believe that a non-existent procedure has been suggested in complying with the oversight of the Central Valley Regional Water Quality Control Board for the review and approval of the on-site wastewater treatment facility. A more correct description for that process is proposed as follows:

HHH

“The project proponent shall establish an appropriate mechanism to maintain and operate the on-site wastewater treatment facility in compliance with Regional Water Quality Control Board requirements as delineated in Waste Discharge Requirements that shall be issued for the facility.”

HHH
cont.

Chapter 3.14 Global Climate Change

Mitigation 3.14-1a. There are specific areas that are unclear in this mitigation measure:

- The Stated Impact, in part, states the “Project could potentially result.” The significance does not recognize this. A change to the significance should be made to “potentially significant.”

- It is unclear how to fulfill a mitigation measure “in the spirit of AB32.” This should be deleted.

- It is unclear what authority or data supports the mandate to follow “suggested measures” of the California Climate Action Team Strategies and the Department of Justice Attorney General.

- We don’t understand what measures are required by the language discussed above.

This mitigation measure should be clarified to allow such measures to be modified when such measures conflict with other policies and objectives of the County. These measures will be incorporated into the final design of the Project as developed with the staff of Shasta County.

III

Chapter Four. Evaluation of Alternatives

Section 4.3 Alternatives Rejected

While we agree that the alternative for a different site should be rejected, we believe further analysis would be helpful in the rejection of this alternative. All sites do not even meet the standards for a regional center of being able to create 400,000 square feet of retail space and having a minimum of 46 acres as identified by the County’s consultant.

JJJ

The applicant conducted an investigation of vacant potential off-site locations identified on Figure 4-1. As identified below, it is clear that no alternative location exists, and it is even difficult to understand how the DEIR identified these locations.

KKK

1. Fawndale. Significantly north of the existing population base. No apparent land for development because all of the land around the interchange is mountainous or currently used for mobile home/RV purposes.
2. Wonderland. Significantly north of the existing population base. All of the available sites that were observed were substantially smaller than required for a regional development.
3. Shasta Dam. North of the existing population base. The only available site appeared to be 8-10 acres in size, which is substantially too small for a comparable project. The location had limited I-5 visibility and inferior access.
4. Pinegrove. This intersection is north of the existing population base. The only available site appeared to be an approximately 5 acre parcel, which is too small for any shopping center development.
5. Oasis. Other than the Levinson project that has already received EIR approval at this intersection, no other parcels of property appeared of sufficient size to develop any retail shopping center, regional or otherwise. In addition, the market would not support further commercial development in competition with the Levinson project. Finally, all such available land had inferior visibility off of I-5 and inferior access.
6. Twin View. We located one 6-10 acre developable parcel, which is too small to be comparable to the proposed project. Visibility from I-5 is limited and the access is inferior.
7. Lake/299 E. We located an 8.5 acre parcel near the I-5 interchange but it did not have any visibility from I-5. Access to this site is inferior.
8. Cypress. We did not locate any vacant sites at the interchange.
9. Bonnyview. An 18 acre site at Bonnyview and Churn Creek that would be suitable for a neighborhood/community retail shopping center or for one regional superstore tenant. The access to this site is inferior as is visibility from I-5. We also located a 19 acre site at the northwest corner of Bonnyview & I-5. This site may have wetland issues. The "for sale" sign on the site indicated it was zoned for multi-family use. Access to this site is substantially inferior.
10. Riverside. We located 2 parcels that could be assembled into a 41 acre development. It is still too small for a regional shopping center. It has inferior access to the site. In addition, high-voltage power lines traverse a portion of the site, which may make that portion undevelopable.

KKK
cont.

11. Anderson S/B. We located a fairly large parcel at Balls Ferry & I-5. The access to the property is substantially inferior and the main hard corner is all ready developed. Therefore, any new development would have to develop around this existing development. The site has minimal street frontage but does have equivalent I-5 visibility. The surrounding area however is improved for industrial uses. Finally, further studies would be required to determine the extent, if any, of possible wetland issues.
12. Anderson N/B. We located one site of approximately 10-15 acres. It is located across the street from the existing WalMart development and would be ideally suited as a complementary use to that existing development. The site has limited visibility off of I-5 and access is substantially inferior to the proposed project.
13. Gas Point. We located a 24 acre site at the northwest corner of Gas Point and I-5. This is too small for a regional retail shopping center. In addition, this location is too far south of the existing population base. The access to the site appears to be through a residential street, which would create significant other issues against any such commercial development.

KKK
cont.

For all the reasons stated above, none of these alternative locations are feasible.

Section 4.3 Alternatives Rejected

The second sentence in the first paragraph should be modified for accuracy as follows: delete “a” and modify “impact” to “impacts.”

LLL

Section 4.4. Project Alternatives

In paragraph **4.4.2 Reduced Size Alternative**, it should be noted that the reduced size alternative also is not of sufficient size to create a regional shopping center based on the standards established by the County’s economic consultant. This alternative does not meet “most of the basic objectives” as required by CEQA. For example, it could not qualify as a regional center, it would not attract new retailers, it would not produce 1,000 jobs, etc., and it would greatly reduce the economic gains of taxes to the County.

MMM

In paragraph **4.4.3 Avoidance of Sensitive Areas Alternative** there are several critical facts missing from the analysis. Primarily, it should be noted that the biological impacts of the proposed Project have already been determined as “less than significant.” Furthermore, the existing site itself has been determined to have minimal riparian vegetation benefits. In fact, this document refers to the site’s riparian features as “patchy and marginal,” and it “doesn’t serve as a riparian habitat with regard to wildlife.” In other words, there is no environmentally sensitive area to be protected.

NNN

In paragraph **4.5 Analysis of Project Alternatives** it is stated that the analysis of alternatives is “qualitative” and should focus on the “relative comparative level of impact.” Yet the table on **page 4-17 and 18** includes a quantitative analysis of the number of impacts reduced, increased and unchanged which is deceptive and not constructive to the discussion on the alternatives. We believe the table in its entirety is not helpful without considerable discussion and references to the analysis and moreover, the quantitative portion of the table should be eliminated entirely.

OOO

Please review and revise the chapter accordingly.

Chapter Five. Consequences of Project Implementation

Based on our earlier comments regarding the analysis of potential impacts throughout the document, we believe this chapter should be reviewed and revised considerably. Some of the specific revisions we believe require further review are those specific environmental effects in paragraph **5.3 Significant Environmental Effects That Cannot Be Avoided** under Agricultural Resources and Land Use, Planning, Population and Housing on page 5-8.; specifically, Impact # 3.2-2, Impact # 3.903, Impact # 3.907 and Impact # 3.9-8. None of these impacts are directly related to the proposed Project and all could be reduced to “less than significant” by land use controls under the authority of Shasta County.

PPP

Appendix L. Knighton and Churn Creek Commons Urban Decay Analysis, EPS, June 2009

Several of these comments were made in the discussion of Chapter 3.9 Land Use We have repeated them here for ease in reviewing them in connection with Appendix L.

Page 4 of the UDA **Project Description**. The description in the introductory paragraph is incorrect. The correct project description is the one in the Draft EIR as summarized in the Executive Summary page ES-1 and as again provided with this letter. This project is not a “mall.” The appropriate classification would be a “regional hybrid shopping center” as defined by ICSC (see page 16) with predominant elements of a regional power center including components of entertainment and food services, travel and lodging services, and regional power center retailers. This misclassification of the project as a mall leads to mischaracterization of the project as a regional/super regional retail center as defined on Page 9 of the UDA. Typical regional/super regional centers have two full-line department stores and would not be enclosed. This definition comes from ICSC and does not match the Project’s correct description. In addition, the classification of a portion of the project as a “Community Retail Center” is also incorrect. Simply because a certain type of tenants may also be found in a community center does not change the overall designation of the Project from a regional hybrid shopping center. Centers that have regional size draws will always have a component that would not on its own draw from an area larger than a community trade area. **Please comment and revise as needed.**

QQQ

Page 11 of the UDA **Trade Area Definition**. The definition of **RTA** as used in the UDA dismisses Siskiyou and Modoc Counties and also does not reach into Tehama County far enough south. A Regional Hybrid Shopping Center will draw farther than the area described in Table 2-1 and shown on Map 2-1. In addition, Table 2-1 uses the Regional/Super Regional classification to determine the distance of the trade area; Regional and Super Regional by definition from ICSC is defined as a “mall” with department stores as anchors. **Please comment and revise as needed.**

QQQ
cont.

Page 17 of the UDA **Supply Projections and Characterization**. The opening paragraph indicates that “it examines the demand for the two retail center types” which as discussed above, is not an accurate reflection of the type of project proposed by the applicant. In addition, the first paragraph under **General Trends** states that there was an increase in vacancy to 25%. This rate is not accurate based on an actual inventory of vacant space. Table 3-1 overall square footage of space as 3,725,900 square feet, and that there was approximately 931,000 square feet of empty space that is not supported by documentation and would amount to a vacancy rate of 25%. This overstates the amount of vacant space significantly. In addition, the fact that landlords are currently offering incentives to retailers is not an objective criteria for determining what the market is as a long term viable and growing retail draw. **Please comment and revise as needed.**

RRR

Page 22 of the UDA **Table 3-1**. This table has a significant flaw in that it assumes, for no reason based in fact, that there is a 20% contingency factor that is listed as “uncaptured retail.” The report has included this as an assumption that NRB could not adequately identify all of the available retail space in Redding/Anderson trade area. This amounts to a total of 621,000 square feet of retail space that is not being reported by NRB. While this size factor may be usual in a larger market where identification of all available retail space is difficult - such as San Francisco or Los Angeles - this factor is unreasonable in that the Redding/Anderson trade area can not hide that significant size of space. This amount is not accurate based upon an actual physical inventory. When this amount is taken out of the cumulative impacts it would reduce the impact to less than significant. **Please comment and revise as needed.**

SSS

Page 28 of the UDA. Under the Community and Regional Trade Area paragraphs there is an assumption that only 75% of the available retail trade dollars is captured in the market. The inverse of this is that 25% of every household retail dollar is spent outside the trade areas. This means that 25% of people spend their money farther south than Red Bluff and farther north than Dunsmuir. This indicates that there is a lack of supply of retail goods and services in the Redding/Anderson trade areas that shoppers want. This amount is not supported by any documentation. In addition, the 25% leakage factor is unreasonable when considering a community retail supply. Community Retail by description is retail used by people in a particular community. People shop for particular items that they need; for example, groceries, medicine, and hardware within their own community. **Please comment and revise as needed.**

TTT

Page 34 of the UDA **Table 3-9**. This table indicates that cumulatively there will be an oversupply of 1,210,000 square feet in 2015. This figure includes 621,000 square feet that is discussed in subparagraph D above that does not have any supporting documentation. It also includes other projects still in the planning stages, such as the Oasis project. The Oasis project, similar to the proposed Project, are of sufficient size that they will be developed as the market dictates the theoretical oversupply significantly. In addition, when the retail capture rate is reconfigured based upon the comments above the oversupply is reduced again. These factors will reduce the impacts for potential urban decay to less than significant. **Please comment and revise as needed.**

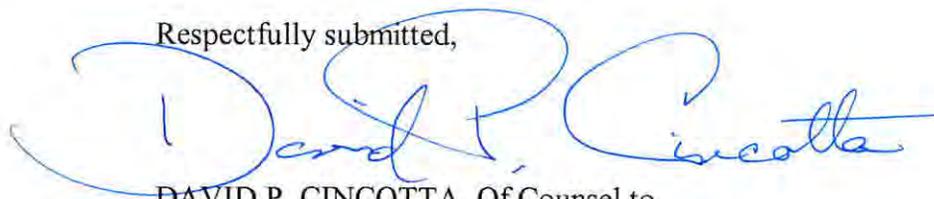
UUU

Page 38 of the UDA **Urban Decay Assumptions**. Under the paragraph **Duration and Extent of Oversupply** there is an assumption that an oversupply of greater than 10% for a period of more than 5 years “may” be large enough to lead to physical abandonment of buildings. This threshold of 10% vacancy is unreasonable given the fact that most all lenders and developers use a 10% vacancy factor in their pro-forma economic analysis as normal in analyzing a successful shopping center. Therefore, a threshold of 10% is not reasonable to start urban decay given most larger retail developments assume a 10% vacancy as normal. This allows for the normal events of tenants terminating leases, new businesses reletting vacant spaces and the time it takes to get new permitting and construction. This is the normal life cycle of a shopping center. There is also no supporting documentation presented in the report that supports such a low threshold to begin urban decay. **Please comment and revise as needed.**

VVV

In conclusion, we hope that these comments and the attached reports will assist the County in the preparation of a more complete environmental document for the public and the decision makers to obtain a better understanding of the potential impacts of the proposed Project. If you have any questions regarding any of the comments or analysis provided, please do not hesitate to contact us.

Respectfully submitted,



DAVID P. CINCOTTA, Of Counsel to
Jeffer, Mangels, Butler & Marmaro LLP

nrb

Exhibit A

Knighton & Churn Creek Commons Retail Center; Redding, California

Project Description

The Project Sponsor is proposing to construct and operate a regional retail, dining, entertainment and lodging center. The Project will be located on ninety-two (92) total acres on the northeast corner of the intersection of Interstate 5 and Knighton Road, which includes approximately eighteen (18) acres of "Transition" area on the northerly portion of the Project. The proposed conceptual build-out as shown on the attached site plan is estimated to be approximately seven hundred forty thousand (740,000) SF of retail and entertainment business to be phased in over 3-4 years. There will be approximately thirty-four hundred (3400) parking spaces, which will include the appropriate number of accessible parking spaces as required by the Americans with Disabilities Act. Figure 1 illustrates a conceptual layout of the potential building areas. The Transition area will contain open space for containment of the water supply and wastewater facilities necessary to service the development.

The Project will generate approximately one thousand (1000) new permanent jobs and approximately five hundred (500) new construction jobs. When complete, the Project will generate approximately \$250 million in sales annually and the value of the Project will be approximately \$150 million dollars. The Project will require a General Plan amendment, a zoning map amendment, and a Conditional Use Permit or a Planned Development Permit.

The proposed site is bordered by I-5 to the west, Churn Creek Road to the east, and Knighton Road to the south. The Project, as shown, has its primary access off of Knighton Road and secondary access points off of Churn Creek Road, See Figure 1. Approximately seventy-five (75%) percent of all traffic will come from the I-5/Knighton Road interchange, which will require some realignment. Approximately nine (9%) percent of the traffic to the development will come from the north along Churn Creek Road, which will not require any modifications. The following transportation improvements are planned to increase roadway capacities to accommodate the total build out and background increases for the proposed Project: (1) reconfigure the Knighton Road interchange, with traffic signals at each ramp; (2) widen Knighton Road between Riverland Drive and Churn Creek Road; (3) widen Churn Creek Road between Knighton and the second access point to the Project; (4) widen Churn Creek Road to three (3) lanes between the second and final access points to the Project; and (5) modify signalization along the access routes to ensure safety.

The Project will not be connected to the municipal water system. Instead, a 300-GPM well on-site, which will also utilize water storage tanks to handle excess demands, will provide water to the Project. The Project will not be connected to the municipal sewage collection system. Instead, the Project will utilize on-site sewage treatment and disposal. The sewage collection system will feature gravity sewer mains draining to a centrally located pump station that will convey raw sewage to an on-site sewage treatment facility.

Site buffering will be provided by native vegetation, including cold hardy and drought resistant plants, and other low maintenance landscape materials to encourage and promote environmental protection, energy efficiency, and water conservation. The buffers will meet or exceed County requirements. Interior parking areas will also utilize plant materials and trees to provide appropriate landscaping. Appropriate landscaping will be provided and irrigation will be

facilitated by the on-site water supply. Lastly, signage and lighting uses will comply with the appropriate section of the County Code.

The goals and objectives of the Project are as follows:

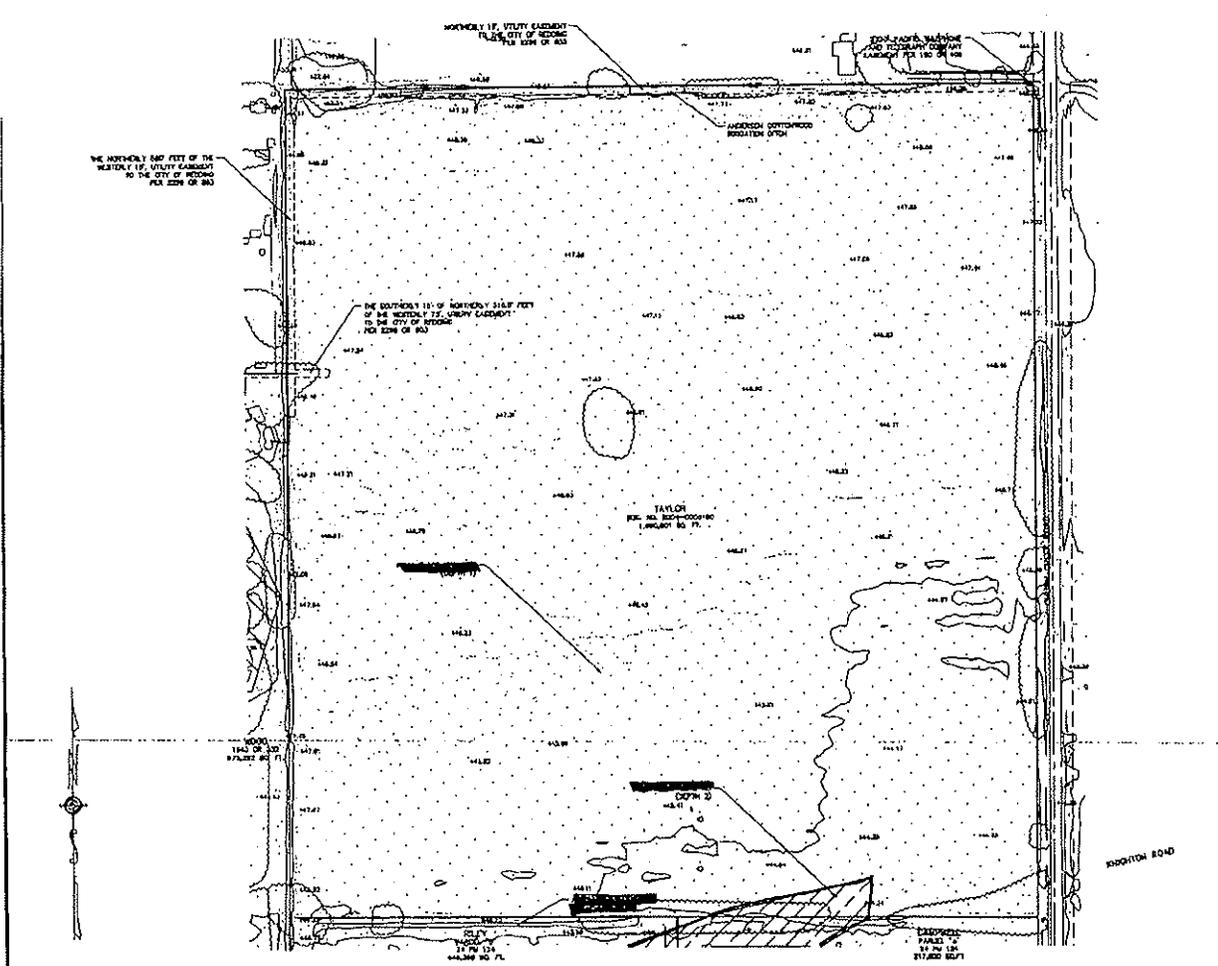
1. To provide the public with regional shopping opportunities, including retail, dining, entertainment and lodging components.
2. To provide a regional shopping experience that is of a quality consistent with the culture of Shasta County.
3. To provide a regional “one-stop” shopping destination whereby commerce is intertwined with transportation in Shasta County by utilizing the existing transportation services in the I-5 corridor and encourage alternative forms of transportation thereby reducing carbon emissions.
4. To construct buildings and improvements in the development that exceed state energy efficiency standards.
5. To attract regional retail customers currently using the I-5 corridor to commute through Shasta County that are currently not stopping and shopping in the County.
6. To provide new job opportunities for Shasta County.
7. To develop a regional shopping destination that promotes Shasta County’s economic stability and diversity by expanding and providing a stable, long-term revenue base to Shasta County.
8. To develop a regional shopping center development of sufficient size that it will attract new retailers into the Shasta County market and address such retailer’s location, visibility, co-tenancy and traffic requirements and ensure long-term viability.
9. To develop a regional commercial shopping development that provides a feasible economic return to its investors and Shasta County.

The Project will require a General Plan Amendment, a Planned Development Permit/Rezone, and such other permits as required by the Shasta County Zoning Code.

Exhibit B

TAYLOR PROPERTY NOTES

TR4 ITEM 4. AN EASEMENT FOR DRAINAGE DITCH AND UTILITIES PURPOSES, RECORDED ON DECEMBER 31, 1912 BOOK 115, PAGE 333 DEEDS. THE EXACT LOCATION AND EXTENT OF SAID EASEMENT IS NOT Delineated.



ALTA/ACSM LAND TITLE SURVEY
 ASSESSOR'S PARCEL NUMBERS
 055-160-008, 009, & 012, 055-270-001,
 and 055-160-001
 for
 HAWKINS COMPANY

BEING A PORTION OF THE SOUTHEAST ONE-QUARTER OF SECTION
 17, TOWNSHIP 33 NORTH, RANGE 4 WEST, MOUNT Diablo BASE
 AND MERIDIAN, COUNTY OF SASTA, STATE OF CALIFORNIA



Exhibit C

**DETERMINATION OF ELIGIBILITY AND
EFFECT FOR THE PROPOSED SHASTA
REGIONAL AUTO MALL PROJECT,
SHASTA COUNTY, CALIFORNIA**

Prepared by

Peak & Associates, Inc.
3161 Godman Avenue, Suite A
Chico, California 95973
(530) 342-2800

Prepared for

Quad Knopf, Inc.
One Sierragate Plaza, Suite 270C
Roseville, CA 95678

June 30, 2006
(Job #05-091)

INTRODUCTION

Quad Knopf, Inc. is assisting Shasta County with the preparation of an Environmental Impact Report for the proposed Shasta Regional Auto Mall, located in Shasta County, California. The proposed Shasta Regional Auto Mall will be located in an approximately 107 acre tract located north of Knighton Road, west of Churn Creek Road, south of East Niles Lane, and east of the Interstate 5 right-of-way. The approximately 107 acre tract is located within the southeast quarter of Section 29, Township 31 North, Range 4 West. The approximately 107 acre tract is delineated on a copy of the United States Geological Survey (USGS) 7.5 minute series Enterprise and Cottonwood topographic quadrangles (Map 1).

Melinda A. Peak, senior historian with Peak & Associates, Inc. served as principal investigator for the study, with Neal Neuenschwander serving as the field director for the field investigation.

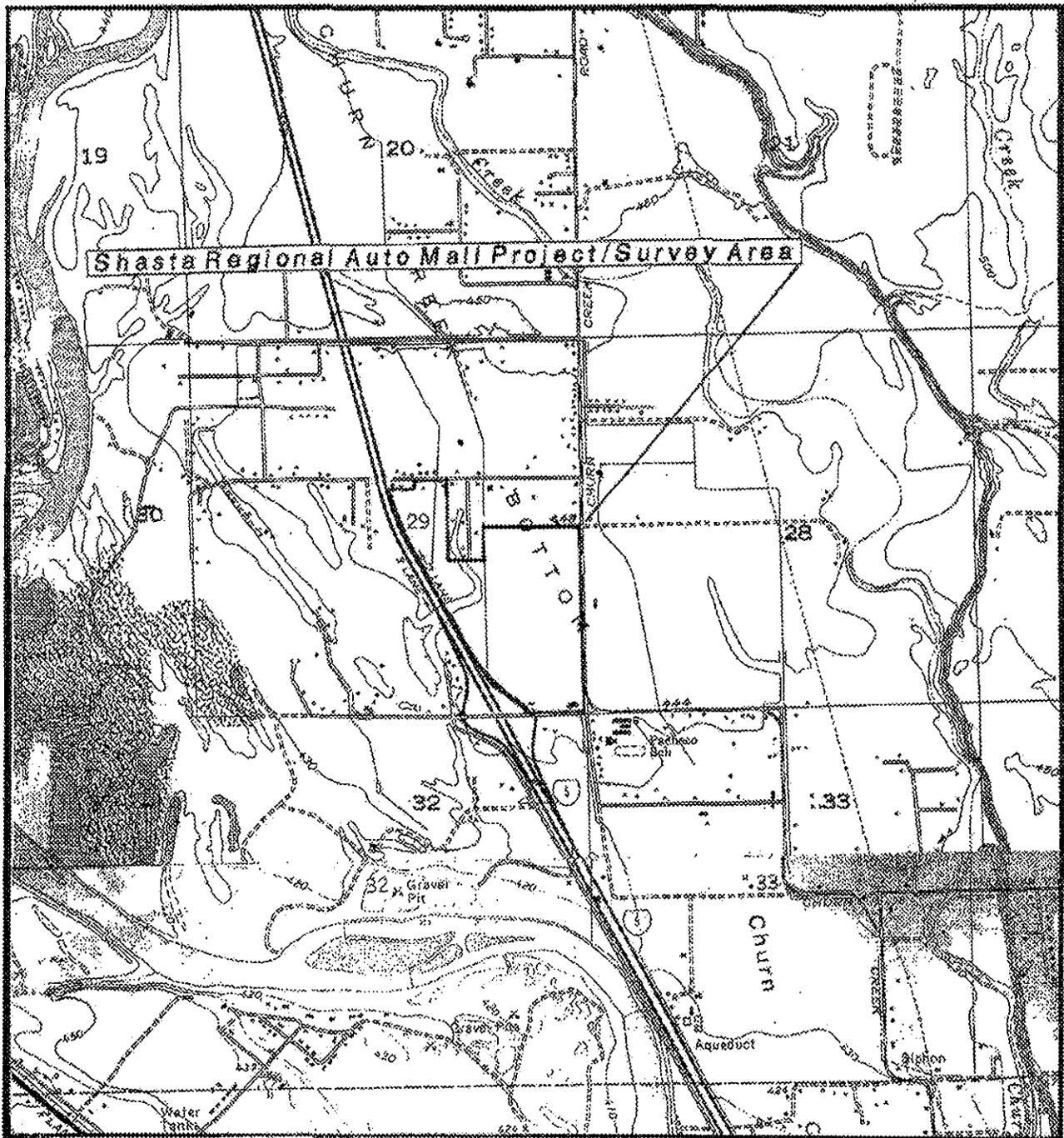
REGULATORY CONTEXT

The Section 106 review process is implemented using a five step procedure: 1) identification and evaluation of historic properties; 2) assessment of the effects of the undertaking on properties that are eligible for the National Register; 3) consultation with the State Historic Preservation Office (SHPO) and other agencies for the development of a memorandum of agreement (MOA) that addresses the treatment of historic properties; 4) receipt of Advisory Council on Historic Preservation comments on the MOA or results of consultation; and 5) the project implementation according to the conditions of the MOA.

The Section 106 compliance process may not consist of all the steps above, depending on the situation. For example, if identification and evaluation result in the documented conclusion that no properties included in or eligible for inclusion are present, the process ends with the identification and evaluation step.

FRAMEWORK FOR EVALUATION

Decisions regarding management of cultural resources hinge on determinations of their significance (36 CFR 60.2). As part of this decision-making process the National Park



Shasta Regional Auto Mall Project/Survey Area

SCALE 1:24,000

ENTERPRISE, CALIF. 1957 (1969)
 COTTONWOOD, CALIF. 1965.

CONTOUR INTERVAL 10 Feet
 Magnetic Declination 19.0°18.0 degrees

BASE MAP IS MAPPED, EDITED, AND PUBLISHED BY THE U.S. GEOLOGICAL SURVEY

Map 1

Service has identified components which must be considered in the evaluation process, including:

- o *criteria for significance;*
- o historic context; and
- o integrity.

Criteria for Significance

Significance of cultural resources is measured against the National Register criteria for evaluation:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and,

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past; or
- (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Historic Context

The historic context is a narrative statement "that groups information about a series of historic properties based on a shared theme, specific time period, and geographical area" To evaluate resources in accordance with federal guidelines, these sites must be examined to determine whether they are examples of a defined "property type". The property type is a "grouping of individual properties based on shared physical or associative characteristics". Through this evaluation, each site is viewed as a representative of a class of similar properties rather than as a unique phenomenon.

A well developed historical context helps determine the association between property types and broad patterns of American history. Once this linkage is established, each resource's potential to address specific research issues can be explicated.

integrity

For a property to be eligible for listing in the National Register it must meet one of the criteria for significance (36 CFR 60.4 [a, b, c, or d]) and retain integrity. Integrity is defined as "the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period".

The following discussion is derived from National Register Bulletin 15 ("How to Apply the National Register Criteria for Evaluation").

Within the concept of integrity, there are seven aspects or qualities that define integrity in various combinations. The seven aspects are: location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity, a property will possess several or usually most of these aspects. The retention of specific aspects is necessary for a property to convey this significance. Determining which of the seven aspects are important involves knowing why, where and when the property is significant.

The prescribed steps in assessing integrity are as follows:

- define the essential physical features that must be present for a property to represent its significance;
- determine whether the essential physical features are visible enough to convey their significance;
- determine whether the property needs to be compared with similar properties; and,
- determine, based on the significance and essential physical features, which aspects of integrity are particularly vital to the property being nominated and if they are present.

Ultimately, the question of integrity is answered by whether or not the property retains the identity for which it is significant.

All properties change over time. It is not necessary for a property to retain all its historic physical features or characteristics. However, the property must retain the essential physical features that enable it to convey its historic identity. The essential physical features are those features that define why a property is significant.

A property's historic significance depends on certain aspects of integrity. Determining which of the aspects is most important to a particular property requires an understanding of the property's significance and its essential physical features. For example, a property's historic significance can be related to its association with an important event, historical pattern or person. A property that is significant for its historic association is eligible for listing if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person.

A property important for association with an event, historical pattern, or person ideally might retain some features of all seven aspects of integrity. Integrity of design and workmanship, however, might not be as important to the significance, and would not be relevant if the property were an archeological site. A basic integrity test for a property associated with an important event or person is whether a historical contemporary would recognize the property as it exists today. For archeological sites that are eligible under Criteria a and b, the seven aspects of integrity can be applied in much the same way as they are to buildings, structures, or objects.

In sum, the assessment of a resource's National Register eligibility hinges on meeting two conditions:

- o the site must possess the potential to be eligible for listing in the National Register under one of the evaluation criteria either individually or as a contributing element of a district based on the historic context that is established; and
- o the site must possess sufficient integrity, i.e. it must retain the qualities that make it eligible for the National Register.

For the National Register, "a district possesses a significant concentration, linkage, or continuity of ... objects united historically or aesthetically by plan or physical development." The identity of a district derives from the relationship of its resources, which can be an arrangement of functionally related properties.

CULTURAL HISTORY

Archeological Background

Since it is necessary to discuss cultural events within a temporal framework, it is proposed to use a very simple chronology proposed by Farber⁸ and Neuenschwander (1984) based on results from the Squaw Creek site (see below). This chronology is used, as suggested by the authors, simply as a convenient division of time for this cultural area that does not imply acceptance of any particular theoretical view of regional prehistory. The chronology formulated by Fredrickson (1973) for the North Coast Ranges has also been applied to the region (c.f. Peak & Associates 1984). His periods are temporal events, but they are

defined by a dominance of certain economies, subsistence practices and general aspects of the ordering of society. The periods are generally similar to those offered earlier by Willey and Phillips (1958) and have a wide area of applicability, however, as pointed out by Farber and Neuenschwander, the latest prehistoric period defined by Fredrickson, the Emergent, implies aspects of cultural development that are not documented ethnographically or archaeologically in much of the Cascades region.

The following chronology simply offers a basic temporal framework within which to assess the particular events that were transpiring in northeast California, with particular reference to the southern Cascades, during a certain period.

The periods advanced by Farber and Neuenschwander, with approximate dates in years before the present (B.P.) are given below. The present is defined as 1950, to conform with radiocarbon dating conventions.

Early Prehistoric Period	7600 B.P. - 5000 B.P.
Middle Prehistoric Period	5000 B.P. - 1450 B.P.
Late Prehistoric Period	1450 B.P. - 100 B.P.

Those closest to the project area are the Squaw Creek site and district and the Clickapudi district. Squaw Creek is located west of the project area and north of Pit River, a fact that may be of considerable cultural significance. Clickapudi Creek is not as far west of the project area and south of Pit River. The archaeological sites in the western portion of the project area should relate closely to Clickapudi, but the eastern project parcels, within ethnographic Pit River Indian territory, may have different cultural relationships.

The Sacramento Canyon sites are located still farther west and provide comparison with archaeological sequences in Central California and the North Coast Ranges. The sequence labelled "Tehama County" was developed from the long term CSU, Sacramento, project directed by Jerald Johnson in the Dye Creek area east of Red Bluff. The relevant sites are within Yana ethnographic territory and the sequence is important for the similarities and differences between this area and ethnographic Wintu territory.

Early Prehistoric Period--Within the immediate project vicinity, only Component I at Squaw Creek dates to the Early Prehistoric Period. At this time contacts with the North Coast Ranges and Central Valley are evident, with Borax Lake Wide Stems and other wide stem variant points present (Clewett 1977, Clewett and Sundahl 1983). Squaw Creek rises in the Klamath Mountains and flows south to the Pit River. Since Squaw Creek demonstrates North Coast and Valley influence, it is reasonable to expect that the influence was also present along the lower reaches of the Pit River. The Lorenzen site (Baumhoff and Olmsted 1963), far up the Pit River drainage, also contained Borax Lake points. The Borax Lake points are believed by Baumhoff and Olmsted to date later than their age at Squaw Creek, but this may be a measure of site disturbance or excavation techniques. Sixteen similar points have been reported from Sacramento Canyon sites (Goldberg and Raven 1983; Basgall and Hildebrandt 1987:170-175). Kowta (1984) sees

some relationship between site location for this temporal period and Elk distribution in northern California. He believes that the people who used the wide stem points were highly mobile big game hunters who traveled in small bands.

With only one component at one site providing the bulk of the data, plus inferences from surrounding areas, there is little that can be said about the settlement and subsistence practices of the early period in the project vicinity beyond what has been mentioned above. The earliest deposits at Squaw Creek appear to reflect occasional visits by a highly mobile band practicing, primarily, big game hunting supplemented with collection and processing of seeds. As time went on their use of the site became more substantial, new forms of dart points became the norm and reliance on plant foods increased (Clewett and Sundahl 1983:83). The shift to different point styles could result from a change in hunting practices (lowered emphasis on big game?), an improved technology for taking large game, or a change in the group using the site to a population with different cultural affiliations.

Middle Prehistoric Period--The long time span assigned to Component II at Squaw Creek defines the Middle Prehistoric Period. This period stretches from the first intensive occupation of most sites in the southern Cascades through the introduction of the bow and arrow and generally features a population with less emphasis on big game hunting and more emphasis on vegetable food collecting and processing. Over time, these groups become increasingly adapted to their environment, in part by responding to long term changes in environmental conditions. This long time period is broken up into more than one major cultural phase in all of the archaeological sequences in the region, including Squaw Creek after reanalysis of Component II based on results from the Clickapudi Creek sites.

The Middle Period in the Southern Cascades, as manifested at Dye Creek by the Deadman and Kingsley phases (Greenway 1982), is characterized by large side-notched, large stemmed, large corner-notched and McKee point forms. It is probable that this area was already occupied by ancestral Yana in this period. Excavations along the route of the California-Oregon Transmission Line (Hull, Nilsson and Kelly 1991) produced ample evidence at two sites of the Kingsley phase but minimal evidence of use in the preceding Deadman phase. The latter consisted of a single McKee uniface found at CA-SHA-1723 at 130-140 cm depth.

Late Prehistoric Period--The introduction of the bow and arrow marks the beginning of the Late Prehistoric Period. This is considered a prime temporal marker, since the appearance of smaller projectile points begins almost everywhere at this time *circa* 1700 B.P. to 1500 B.P. In some areas, its introduction is accompanied by a simple reduction in size of the projectile point forms currently used in the region. Elsewhere, the introduction of the bow and arrow apparently came as a package, that is, the style of the new, smaller point forms were completely different from the earlier forms.

Perhaps correlated with the results of the introduction of the bow and arrow, but occurring somewhat later in time depending on the region, was a widespread intensification of

resource exploitation. For the southeast Great Basin, Bettinger and Baumhoff (1982) see this as a shift to resources requiring comparatively high energy to process but which are common (i.e., grass seeds), in comparison to those requiring less energy to process but are less common or are more widely distributed (i.e., deer). The shift in the Central Valley is clearly towards acorn processing and an anadromous fishing emphasis, seen in the Northern Valley as the Shasta Complex, which appears to coincide with the movement of the Wintu into the area. In the southern Cascades there appears to be a more conservative response, which Clewett and Sundahl (1983) term the Tehama Complex.

The Tehama Complex reflects a seasonal round similar to the ethnographic for the Yana, i.e., villages are seasonally occupied, there are diversified resource exploitation strategies, and seasonal settlements are located both on major rivers and their tributaries. This seasonal scheduling stands in contrast to that of the Shasta Complex is better correlated with the population increase and intensified resource exploitation characteristic of that period. The villages are permanent, located next to the major rivers, and there is heavy reliance upon anadromous fish and acorns. In the Sacramento Canyon the Mosquito Creek phase reflects this period. Like the preceding Vollmers phase, the sites are relatively small with a limited variety of artifacts, representing the specialized spring-summer camps similar to the Shasta Complex. However, Basgall and Hildebrandt (1987:450-451) are not convinced that these sites represent the Shasta Complex as exemplified in the Redding vicinity and they certainly do not reflect the Tehama Pattern. Farber (1985) also does not accept the Shasta/Tehama dichotomy and argues that the Tehama Complex is, basically, the Shasta Complex adapted to the differing environmental constraints of the foothills versus the valley. This conclusion is drawn from excavations of two sites near Redding (Farber and Neuenschwander 1984; Farber, Ritter and Jensen 1985) where mano and metate technology, absent in the Shasta Complex according to Sundahl (1982), appears with otherwise typical Shasta Complex materials.

Farber's suggestion of essential continuity between the Shasta and Tehama complexes has gained little acceptance, in part because the Shasta Complex is identified with the Wintu, a group speaking a Penutian language that moved into the northern Sacramento Valley from the south in the Late Prehistoric Period. It is assumed that they displaced a population that spoke a language of the Hokan family, since Hokan languages surrounded Wintu territory at the time of Euro-American contact. The similarities seen in the earlier prehistoric periods between the North Coast Ranges and the prehistoric cultures of Shasta and Tehama Counties are then viewed as a reflection of a widespread Hokan occupation of northern California with similar subsistence strategies and technology. If there is not a strong dichotomy between the Shasta Complex and the Tehama Complex (and certainly there are more differences than presence of absence of mano and metate) then the identification of population movements and external relationships becomes a much more difficult archaeological problem.

The Late Prehistoric Period in the above areas is heralded by the appearance of the Gunther series, as well as small corner-notched and side-notched point forms believed to be smaller versions of dart point forms that preceded them in this region (Clewett and

Sundahl 1983). The Tehama Complex is the earliest appearance of the period in this region and is replaced by the Shasta Complex *circa* 1200 B.P., both in the lower Pit River and upper Sacramento Valley areas. Gunther series points only comprise part of the projectile point forms in the Tehama Complex, but they become dominant in the Shasta Complex. There is a strong southern Cascade influence demonstrated by the small side- and corner-notched point specimens. The relatively few Desert Side Notched and Cottonwood Triangular points are a measure of the lessened Great Basin influence, which clearly is not a major factor.

Ethnology

The Wintu are the northernmost dialectical groups of the Wintun, whose territory roughly incorporates the western side of the Sacramento Valley from the Carquinez Straits north to include most of the upper Sacramento River drainage, the McCloud River, and the lower reaches of the Pit River. The Wintun, a collective name, were subdivided into three subgroups with the Southern, Central, and the Northern dialects known respectively as Patwin, Nomiaki, and Wintu. Within the Wintu region, nine subgroups existed, the closest being the Stillwater Wintu, or *Dawpom* ("front ground").

Although economic subsistence was heavily weighted toward the acorn, the staple of the diet, the rich riverine resources of the Sacramento River supplied a large variety of foodstuffs. Hunting of game and small mammals augmented the diet with protein. Seasonal procurement of vegetable foods and the hunting of game occurred throughout the territory held by villages.

Villages were usually situated along rivers and streams or close to springs where reliable water supplies allowed a semi-permanent occupation. Major villages were located along the river banks, with locations oriented to higher spots on the natural levees. Smaller villages tended to be along the tributary streams and near springs. Cultural resources surveys in the region have demonstrated that there was very heavy use of tributary streams and other areas at a distance from the main river, while early ethnographies had emphasized the concentration of population primarily along the Sacramento River.

History

The approximately 107 acre parcel lies on the lands of Rancho Buena Ventura, the most northerly land grant in California. The 26,000 grant was obtained by Pierson B. Reading in December 1844 from Governor Micheltorena. A house was constructed for Reading's overseer of the rancho, and the land was stocked with cattle. The first house was burned by the Wintu in 1846. After Reading participated in the Bear Flag Revolt at Sonoma, he returned to his rancho and erected a more permanent home seven miles east of the community of Cottonwood.

The towns of Redding and Anderson were established on the Rancho Buena Ventura Land Grant. Elias Anderson purchased the American Ranch, as it had become to be

known, in 1856, and on his land grew the nucleus of what is now the City of Anderson. The American Ranch was an early stopping place for travelers and traders on the old California-Oregon Road (Hoover, Rensch and Rensch 1970:485, 488).

By 1881, the town of Anderson had 225 residents, with two hotels, three blacksmith shops, a wagon shop, a harness shop, three saloons and a flour mill. A post office was established at American Ranch in 1855, and then was transferred to Anderson in 1878.

In 1872, Elias Anderson granted a right-of-way for the California and Oregon Railroad (now Southern Pacific Railroad) through his property (Gudde 1969:10).

RESEARCH

A records search was conducted for the project area at the Northeast Center of the California Historical Resources Information System on July 11, 2005 (Appendix A). No known prehistoric or historic period sites have been identified within, or directly adjacent to, the approximately 107 acre tract. Prehistoric period resources have been documented within a one-quarter mile radius of the project area. Twenty-six acres of the approximately 107 acre tract was inspected by Sean Jensen, Jensen & Associates, in 1998 with no cultural resources identified (Jensen & Associates 1998). The remaining 81 acres of the approximately 107 acre tract was also inspected by Sean Jensen in 2005 (Genesis Society 2005).

NATIVE AMERICAN CONSULTATION

A letter was sent to the Native American Heritage Commission (NAHC) requesting a check of the Sacred Lands files on June 7, 2005. No Sacred Lands are identified in or near the project area (Appendix B). Letters requesting information about the project area were sent on September 14, 2005 to Robert Burns, Wintu Educational and Cultural Council, the Wintu Tribe and Toyon Wintu Center, Caleen Sisk-Franco, Tribal Chair, Winnemem Wintu Tribe, Barbara Murphy, Chair, and Tracy Edwards, Chief Executive Officer, Redding Rancheria, and Carol Bowen

A reply was received on October 1, 2005 from Kelli Hayward, Lead Cultural Representative, Wintu Tribe and Toyon-Wintu Center which stated that the area is within the Wintu Ancestral Territory and the approximately 107 acre tract is a known sensitive cultural site, but it is the Tribe's practice not to disclose the whereabouts of their sites to non-traditional people. The letter states, "...the Wintu Tribe of Northern California & Toyon-Wintu Center takes the opposition in any disturbances in traditional Wintu areas."

On September 28, 2005, Mark Franco, Headman, Village of Kerekmet, Winnemem Wintu Tribe responded, "...We appreciate the opportunity to comment on this project and must state at the outset that we are opposed to any large scale projects or developments in this

area." Headman Franco points out that this area of Wintu territory, "...is heavily saturated with the remains of village sites and large uncharted mass graves from the 1880's which were created to handle the numbers of Wintu who died from influenza and malaria." He continues, "We have just completed the reburial of 100 plus individuals; men, women, children and babies for our Toyon relatives from a development not very far from your project site."

Complete copies of both correspondence cited above are presented in Appendix B. As of June 30, 2006, no other replies have been received by Peak & Associates to our September 14, 2005 letter.

FIELD ASSESSMENT

The approximately 107 acre tract was examined by Sean Jensen in two phases with 26 acre inspected in 1998 (Jensen & Associates 1998) and the remaining 81 acres inspected in 2005 (Genesis Society 2005).

FIELD RESULTS

One prehistoric period resource was discovered by Jensen in 2005 (Genesis Society 2005:3). In his words,

"The observed cultural material consists of a total of approximately 15 flakes, cores and edge modified tools of basalt, distributed within an area extending approximately 40 meters by 30 meters. Examination of lands at and in the vicinity of the 15+/- flakes, cores and tools failed to identify any additional cultural material, and inspection of rodent holes and other disturbed areas revealed no evidence of buried cultural material suggestive of primary habitation, midden development, or other prehistoric activities."

No specific identification (temporary number) was assigned to the resource by Jensen in 2005, and the only documentation of the resource, other than the verbal description, was a topographic map with an area identified as "Observed Cultural Material". For the purposes of discussion, and for the preparation of the Department of Parks and Recreation 523 Series site forms, the resource discovered by Jensen in 2005 will be assigned the temporary designation OCM-1.

EVALUATION OF SITE

OCM-1

According to Jensen (Genesis Society 2005:3),

"Typically, limited surface finds of lithics flakes and cores do not justify recordation as an archaeological site and warrant no additional treatment, since isolated finds are common occurrences throughout the Redding area and do not necessarily denote the presence of primary habitation (i.e., buried middens).

In the present case, however, the items observed include more than just one or two flakes, and while the observed cultural items are not located adjacent to a natural surface water source, the Sacramento River is located a relatively short distance away (approximately one mile west of the observed cultural material). For these reasons, these few flakes, cores and tools remain problematic with regard to the question of whether or not a larger accumulation of cultural material is present below the surface. Therefore, additional evaluation is recommended in order to augment the findings of the present surface reconnaissance. The purpose of the additional evaluation is to make a more definitive determination as to whether buried cultural materials are present at this location, and should include, at a minimum, the following tasks:

1. Excavate between 5 and 10 shovel test pits (STPs) within the area in which flakes and cores have been observed, maintaining excavation increments of 10 cm and sifting soil through ¼" mesh screen.
2. Sort and count by 10-cm excavation level all observed cultural material recovered, differentiating the assemblage in terms of major artifact categories present. Return all excavated cultural material to respective STPs upon completion of counting and evaluating.
3. Inspect exposed sidewalls in the excavated STPs for evidence of cultural lenses or layers, or other indicators of the presence of prehistoric habitation.
4. Prepare a summary report upon completion of STP excavation, defending one of the following general conclusions / recommendations:
 - No evidence of prehistoric habitation or subsurface accumulation of cultural material was encountered, and no additional subsurface evaluation is warranted (Except possibly a recommendation for monitoring of initial ground-disturbing impacts within the subject area, depending on specific observations made during STP excavation).

- Evidence of prehistoric habitation and subsurface accumulation of cultural material was observed and is present, in which case a recommendation for additional evaluation (for example excavation of formal test units) may be appropriate, depending on (1) the density and depth of cultural material encountered, (2) the range of artifact types and other cultural material present, and (3) an estimation of whether or not the observed cultural material is primary to this location or perhaps represents secondary deposition (disturbed deposit). The report prepared upon completion of any such additional evaluation (formal testing) would contain very specific recommendations as to any mitigation justified on the basis of specific findings of the formal testing program."

STP Field Investigation

During May, 2006, Peak & Associates, Inc. Staff Archeologist Neal Neuenschwander went to the reported location of OCM-1 and discovered a basalt core tool first identified by Sean Jensen in 2005. Twenty shovel test pits (STPs) were excavated in the area surrounding this basalt core tool (see Appendix C). The 20 STPs were roughly 40 centimeters in diameter, and were excavated to a minimum depth of 50 centimeters (cm) when no cultural material was encountered. The excavation of the STPs occurred in 10 cm increments with all of the sediment passed through an 1/8th size mesh shaker screen.

Results

Nineteen of the twenty STPs were completely sterile with no evidence of prehistoric period artifacts, or culturally modified sediment (midden soil) discovered. One of the STPs had a basalt debitage fragment in the upper (0 to 10 cm) level.

Recommendations

OCM-1 appears to be a surface manifestation of previous cultural activity. The single observed surface artifact, a bifacially-worked basalt core tool (knife?), is an isolated artifact that is commonly found in the general area during archeological inspections (cf. Jensen and Associates 2001; Peak & Associates, Inc. 2004). These types of core tools (choppers, scrappers, knives) are most-likely expedient tools created on-the-spot to butcher slain animals prior to their transport back to the nearby village sites. These types of activities did not typically leave much in the way of cultural material, normally a tool, and, possibly a hammerstone and a few primary decertification debitage fragments created during the manufacture of the tool. Once documented, these isolated artifacts no longer possess any ability to yield information important in prehistory (Criterion d) and are therefore not eligible historic properties under the NRHP.

As an isolated artifact, resource OCM-1 is not eligible for consideration as an historic property under NRHP criteria for significance.

EFFECTS OF THE PROPOSED PROJECT

As a result of the identification and evaluation efforts, an agency official may find that there are no historic properties present or there are historic properties present but the undertaking will have no effect upon them as defined in Section 800.16 (i).

If the agency official finds there are historic properties which may be affected by the undertaking, the agency official shall apply the criteria of adverse effect. "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association" (Section 800.5 (a)).

There are three possible findings:

Finding of no historic properties affected: There is no effect of any kind on the historic properties.

Finding of no adverse effect: There could be an effect, but the effect would not be harmful to the characteristics that qualify the property for inclusion in the National Register; or

Adverse effect: There could be an effect, and that effect could diminish the integrity of such characteristics.

As OCM-1 does not appear to qualify as an historic property, so therefore, there are no historic properties within the project area and **no historic properties will be affected.** With regard to Section 106 of the NHPA, it is recommended that agency seek concurrence from the California SHPO with a finding of no historic properties affected per 800.4(d) (1).

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Kowta, Makoto

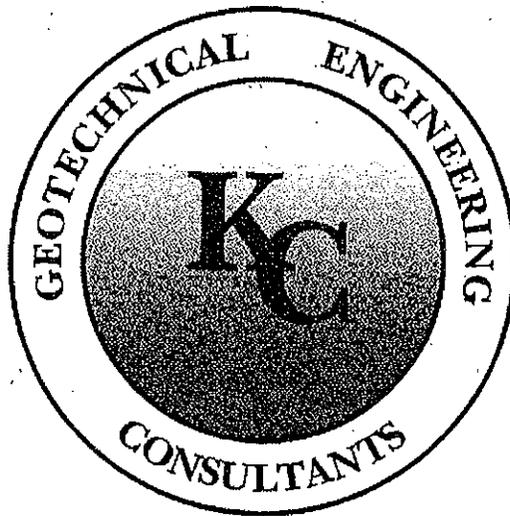
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Exhibit D

GEOTECHNICAL INVESTIGATION
on
PROPOSED SHASTA COMMERCIAL DEVELOPMENT
Knighton Road and Churn Creek Road
Shasta County, California
for
HAWKINS COMPANIES LLC



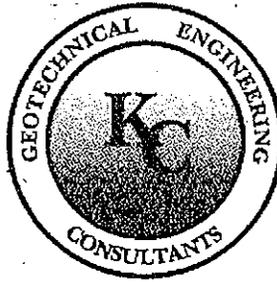
By

KC ENGINEERING COMPANY

Project No. RD2643

21 November 2007

865 Cotting Lane, Suite A
Vacaville, California 95688
(707) 447-4025 fax 447-4143



8798 Airport Road
Redding, California 96002
(530) 222-0832 fax 222-1611

KC ENGINEERING COMPANY
A SUBSIDIARY OF MATERIALS TESTING, INC.

Project No. RD2643
21 November 2007

Ms. Denise Stark
Hawkins Companies LLC
855 Broad Street, Suite 300
Boise, ID 83702-7153

Subject: Proposed Shasta Commercial Development
Knighton Road and Churn Creek Road
Shasta County, California
GEOTECHNICAL INVESTIGATION REPORT

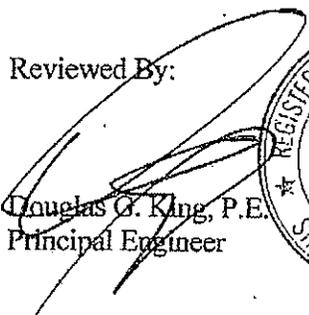
Dear Ms. Stark:

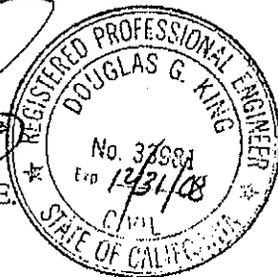
In accordance with our proposal dated 18 September 2007, **KC ENGINEERING COMPANY** has investigated the geotechnical conditions of the surface and subsurface soils at the subject site of the proposed commercial development to be located northwest of the intersection of Knighton Road and Churn Creek Road in Shasta County, California.

The accompanying report presents our conclusions and recommendations based on our investigation. Our findings indicate that the proposed development and other site improvements are geotechnically feasible for construction on the subject site provided the recommendations of this report are carefully followed and incorporated into the project plans and specifications.

Should you have any questions relating to the contents of this report or should you require additional information, please contact our office at your convenience.

Reviewed By:


Douglas G. King, P.E.
Principal Engineer



Respectfully Submitted,
KC ENGINEERING COMPANY


Andrew L. King
Staff Engineer

Copies: 6 to Client

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GEOTECHNICAL INVESTIGATION

Purpose and Scope

The purpose of the geotechnical investigation for the proposed commercial development to be located northwest of the intersection of Knighton Road and Churn Creek Road in Shasta County, California, was to determine the surface and subsurface soil conditions at the subject site. Based on the results of the investigation, geotechnical criteria were established for the grading of the site, drainage, and the design of the foundations for the proposed structures and related site improvements.

Our investigation services included the following tasks:

- a. A review of available geotechnical and geologic literature concerning the site and vicinity;
- b. Site reconnaissance by the Soil Engineer;
- c. Excavation of six (6) exploratory test pits, drilling of eight (8) vertical borings, and sampling of the subsurface soils;
- d. Laboratory testing of the samples obtained to determine their engineering characteristics;
- e. Analysis of the data and formulation of conclusions and recommendations; and
- f. Preparation of this written report.

Site Location and Description

The subject site is located on the northwest side of the intersection of Knighton Road and Churn Creek Road in Shasta County, California (see Figure 1 "Vicinity Map"). The site is bounded on the north by existing residential buildings, on the east by Churn Creek Road, on the south by Knighton Road, and on the west by Interstate 5. The ground surface topography on-site consists of relatively level terrain with a localized swale on the northwest corner. This depression is on the order of seven (7) feet in depth with a general north and south orientation. East of the swale is a recently disked and planted field. The southern portion of the site consists of open grassy fields with a horse corral to the southwest. A portion of the Gold Leaf Nursery is situated within the property on the east. At the time of the investigation, the property was surrounded by barbed wire fencing. Medium to large sized trees are located along the south and east boundary, adjacent to the paved roadways.

The above description is based on a reconnaissance of the site by the Soil Engineer, on a Preliminary Site Plan dated 10-11-07 prepared by the client, and on the USGS Topographic Map as obtained from the 3D TopoQuads program by DeLorme. The Preliminary Site Plan is the basis for our "Site Plan" included as Figure 2 in the Appendix.

Proposed Development

It is our understanding that the proposed development will consist of commercial buildings ranging from 6,000 square feet to 158,700 square feet along with roadway access. Construction might consist of one and two story wood or masonry block structures with concrete slab on grade floors. It is anticipated that the proposed roadways and parking stalls will be paved with asphalt concrete. Additional improvements will likely include underground utilities and landscaping. Structural loading due to the commercial buildings and pavement is anticipated to be relatively light with concentrated column loads.

Field Investigation

The first phase of the field investigation was performed on 01 November 2007 and included a reconnaissance of the site, the excavation of six (6) exploratory test pits. Eight (8) exploratory test borings were drilled on 07 November 2007 to conclude the field investigation. The approximate locations of the test pits and borings are shown on Figure 2, "Site Plan" included in the Appendix. It should be noted that the exploratory test pits were loosely backfilled with the excavated trench spoils. Where the test pits are located within any building footprint or site improvement, the loose material must be excavated and replaced as engineered fill.

The test pits were excavated to a maximum depth of eight (8) feet below the existing ground surface. The excavation was performed with a rubber tired Case 580 Super L backhoe equipped with a 30 inch wide bucket. Visual classifications were made from the spoils and the trench walls. As the excavation proceeded, disturbed bulk samples were obtained from representative soil layers. Samples were obtained, examined for identification purposes, and labeled.

The exploratory drilling was performed with a truck-mounted mobile B-24 drill rig using power-driven, 4-inch diameter continuous flight solid augers. Visual classifications were made from the auger cuttings and the samples in the field. As the drilling proceeded, relatively undisturbed tube samples were obtained by driving a 3-inch O.D., split-tube sampler, containing thin brass liners, into the boring bottom. The sampler was driven into the in-situ soils under the impact of a 140 pound hammer having a free fall of 30 inches. The number of blows required to advance the sampler 12 inches into the soil were adjusted to the standard penetration resistance (N-Value). When the

sampler was withdrawn from the boring bottom, the brass liners containing the relatively undisturbed samples were removed, examined for identification purposes, labeled and sealed to preserve the natural or in-situ moisture content.

The samples were then transported to our laboratory for testing. Classifications made in the field were verified in the laboratory after further examination and testing.

The stratification of the soils, descriptions and laboratory testing of specific soil samples are shown on the respective "Logs of Test Pits" and "Log of Test Borings" contained within the Appendix.

Laboratory Investigation

The laboratory testing program was directed towards providing sufficient information for the determination of the engineering characteristics of the site soils so that the recommendations outlined in this report could be formulated. A summary of all laboratory test results is presented in the Appendix.

Moisture content and dry density tests (ASTM D2937) were performed on representative relatively undisturbed soil samples in order to determine the consistency of the soil and the moisture variation throughout the explored soil profile as well as to estimate the compressibility of the underlying soils. In addition, a consolidation test (ASTM D2435) was performed on a selected sample of the underlying bearing stratum of the proposed buildings to estimate settlement.

The strength parameters of the foundation soils were determined from applicable UBC criteria and laboratory testing. Standard field penetration resistance (N-Values) also assisted in the determination of strength and bearing capacity. The standard penetration resistances are recorded on the respective "Logs of Test Borings."

Sieve analysis (ASTM C136) tests were performed on selected soil samples to assist in the identification and classification of the subsurface soils. In addition, the expansive soil characteristics were evaluated by means of Atterberg Limits Tests (ASTM D4318).

R-value testing was performed on materials representative of the proposed subgrade for the roadways. The test was performed in conformance with Cal Test 301.

Subsurface Conditions

Based on our field exploration and laboratory investigation, the surface and subsurface soil conditions are generally uniform across the site. In general, the upper subsurface profile consists of ten (10) feet of firm to stiff brown sandy clay underlain by medium dense brown poorly graded gravel with sand to the depths explored. The upper sandy clay was found to contain a small amount of gravel on the east central portion of the site. It should be noted that laboratory testing shows the near surface clay to have low expansion potential.

Groundwater was encountered at sixteen (16) feet below the existing ground surface in boring #3 during the field investigation. However, fluctuations in the groundwater level are anticipated with variations in seasonal rainfall and irrigation on the site. A more thorough description and stratification of the soils encountered along with the results of the laboratory tests are presented in the Appendix. The approximate locations of the exploratory borings and test pits are shown on Figure 2, "Site Plan," in the Appendix.

Site Geology & Seismicity

According to the Redding Sheet of the Geologic Map of California by the California Division of Mines and Geology dated 1962, the geologic deposits underlying the site are mapped as Recent Alluvium from the Quaternary period. These soils consist of alluvium, old alluvium, and young stream terrace deposits.

The site is not located within an Alquist-Priolo Special Studies Zone. There are no known active or inactive faults crossing the site as mapped and/or recognized by the State of California. However, the site, as well as the entire State of California, is located in a seismically-active region. Earthquake related ground shaking should be expected during the design life of structures constructed on the site. The California Geological Survey (formerly the California Division of Mines and Geology) has defined an active fault as one that has had surface displacement in the last 11,000 years; or has experienced earthquakes in recorded history. The nearest active fault is the Battle Creek Fault System located 10.7 miles southeast. Using an attenuation relationship developed by Idriss (1994) and the EQFAULT program by Blake (1994), a maximum peak ground acceleration of 0.23g was calculated for the site. However, based on the Interactive Probabilistic Seismic Hazard Map on the CGS website, the peak ground acceleration that has a 10% of exceedence in 50 years is 0.23g. Using hazard deaggregation as performed on the US Geological Survey website, the major seismic contributor for the site is Western United States shallow gridded seismicity with a 29% contribution. The structures at the site should be designed in accordance with the 2001 California Building Code to withstand the anticipated ground accelerations.

UBC Earthquake Design Criteria

The 2001 California Building Code (CBC) Chapter 16, Division IV Earthquake Design requires that structures be designed using certain earthquake design criteria. The criteria are based in part on the seismic zone, soil profile and the proximity of the site to active seismic sources (faults). During an earthquake event, structures located close to active faults can be subjected to near source energy motions that may be damaging to structures, if the effects of these energy motions are not considered in the structural design. The CBC indicates that the types of seismic sources (active faults) that generate near source (N_a and N_v) factors greater than 1.0 are classified as Type A or Type B. In 1998, the International Conference of Building Officials (ICBO) published a map folio to be used in scaling distances to the Type A or Type B faults. According to this map folio, and the information from published maps and the EQFAULT program, the nearest fault is a Type B Fault which is the Battle Creek Fault System. Based on our review of published maps and the probabilistic ground motion parameters from the CGS website, the following 2001 California Building Code earthquake design criteria should be used by the Structural Engineer:

Seismic Zone:	3	Seismic Zone Factor:	0.30
Soil Profile Type:	S_D	Near Source Factors:	$N_a = 1.0$; $N_v = 1.0$
Seismic Source Type:	B	Seismic Coefficients:	$C_a = 0.36N_a$; $C_v = 0.54N_v$

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

General

From a geotechnical point of view, the proposed commercial development and associated improvements are feasible for construction on the subject site provided the recommendations presented in this report are incorporated into the project plans and specifications.

All grading and foundation plans for the development must be reviewed by the Soil Engineer prior to contract bidding or submittal to governmental agencies to ensure that the geotechnical recommendations contained herein are properly incorporated and utilized in design.

KC ENGINEERING CO. should be notified at least two working days prior to site clearing, grading, and/or foundation operations on the property. This will give the Soil Engineer ample time to discuss the problems that may be encountered in the field and coordinate the work with the contractor.

Field observation and testing during the grading and/or foundation operations must be provided by representatives of *KC ENGINEERING CO.*, to enable them to form an opinion regarding the adequacy of the site preparation, the acceptability of fill materials, and the extent to which the earthwork construction and the degree of compaction comply with the specification requirements. Any work related to the grading and/or foundation operations performed without the full knowledge and under the direct observation of the Soil Engineer will render the recommendations of this report invalid.

Geotechnical Considerations

The primary geotechnical concerns for the site are considered to be the consolidation potential of the surface clay and the relatively level surface topography. The surface soil is prone to settlement with changes in stress and, consequently, must be carefully considered in the design of grading and foundation operations. Large areas of level ground topography is difficult to control surface water. Positive surface drainage away from building foundations must be designed and constructed to minimize moisture variation within the near surface soils. The recommendations provided in the following sections addresses these and other conditions.

Liquefaction Potential Evaluation

Soil liquefaction is a phenomenon in which loose and saturated cohesionless soils are subject to a temporary, but essentially total loss of shear strength, because of pore pressure build-up under the reversing cyclic shear stresses associated with earthquakes. Soils typically found most susceptible to liquefaction are saturated and loose, fine to medium grained sand having a uniform particle range and less than 5% fines passing the No. 200 sieve. According to Special Publication 117 by the Division of Mines and Geology, the assessment of hazards associated with potential liquefaction of soil deposits at a site must consider translational site instability (i.e. lateral spreading, etc.) and more localized hazards such as bearing failure and settlement.

The data used for evaluating liquefaction potential of the subsurface soils consisted of the in-situ Standard Penetration resistance values $(N_1)_{60}$ values, the unit weights, gradations, in-situ moisture contents, the groundwater level, the location of the site to the nearest active fault, and the predicted ground surface acceleration. Potentially liquefiable soils were encountered in the depths explored across the site, however, the deposits were found to be medium dense to very dense by exploration.

Based on the data obtained and in view of the above noted criteria, it is our opinion that localized liquefaction of the near-surface soils is considered not probable.

Demolition

Prior to any grading on the site, demolition of the existing structures and removal of any buried debris at the site should be completed. Demolition should include the complete removal of all surface and subsurface structures. Where any of the following are encountered: concrete, septic tanks, pipelines, foundations, debris and trash, these should also be removed, with the exception of items specified by the owner for salvage. In addition, all underground structures must be located on the grading plans so that proper removal may be carried out. It is vital that **KC ENGINEERING CO.**, intermittently observe the demolition operations and be notified in ample time to ensure that subsurface structures are not covered.

Excavations made by the removal of any structure should be left open by the demolition contractor for backfill in accordance with the requirements for engineered fill. The removal of any underground structures should be done under the observation of the Soil Engineer to assure adequacy of the removal and that subsoils are left in proper condition for placement of engineered fills. Any soil exposed by the demolition operations, which are deemed soft or unsuitable by the Soil Engineer, shall be excavated as uncompacted fill soil and be removed as

required by the Soil Engineer during grading. The demolition operation should be approved by the Soil Engineer prior to commencing grading operations. Any resulting excavations should be properly backfilled with engineered fill under the observation of the Soil Engineer. Should the location of any localized excavation be found to underlie any structure, backfill should be compacted to a minimum relative compaction of 95% or the excavation widened to extend 5 feet beyond the footprint of the structure and backfilled to the specifications for engineered fill as recommended in the "grading" section herein.

Grading

It is anticipated that grading will be required on the site to achieve road and pad elevations. Any existing undesirable items that do not meet the requirements of engineered fill (fence posts/wood, basements, old building foundations, concrete rubble, buried pipes, septic and/or other buried tanks) should be excavated and removed from the site. To grade the proposed site to the desired elevation, native or import materials may be used. Recommendations for both materials are presented below.

The surface of the areas to be graded should be stripped to remove all existing debris, vegetation and/or other deleterious materials. It is estimated that stripping on the order of two (2) inches may be required, however, the actual depth of stripping should be determined in the field by the Soil Engineer. Stripped material from the site may not be used as engineered fill but may be stockpiled and used later for landscaping purposes.

After stripping and clearing of the site is completed, the surface soils should be scarified to a depth of eight (8) inches, moisture conditioned as necessary to provide above optimum moisture content, and compacted to a minimum of 90% relative compaction as determined by ASTM D1557. The site may then be filled to the desired finished grades by placing engineered fill in lifts of eight (8) inches in uncompacted thickness and compacting to a relative compaction of 90% in accordance with the aforementioned test procedure. Fill placed deeper than ten (10) feet below finished grade should obtain a greater degree of compactive effort. These soils should be compacted to a minimum relative compaction of 95% as recommended above.

It is noted that the test pits were loosely backfilled. All test pits located within five (5) feet laterally of any structure should be excavated and replaced with engineered fill as recommended herein unless removed by planned grading.

All cut and fill slopes should not be steeper than 2:1 (horizontal to vertical). Slopes should be rounded at the upper extremities. The previously noted compaction requirements should be followed for fill slope construction. The slopes should be built by over-constructing the slope face

and cutting back the loose surface materials to a firm adequately compacted design grade. Track walking of slope surfaces is good for surface disturbance for hydro seeding, but does not provide adequate soil density and is an unacceptable method of slope compaction.

After the completion of the slope grading, erosion protection must be provided. Hydro-seeding and/or slope planting, preferably with deep-rooted native plants requiring little to no irrigation, must be provided on all exposed surfaces of cut and fill slopes. Graded slopes should not be left exposed through a winter season without the completion of erosion control measures and slope planting.

All fill material should be approved by the Soil Engineer. The material should be a soil or soil-rock mixture which is free from excessive organic matter or other deleterious substances. The fill material should not contain rocks or lumps over 6 inches in greatest dimension and not more than 15% larger than 2-½ inches. Oversized materials can be placed in the deeper fills as directed in the field by the Soil Engineer based on site conditions. All soils encountered during our investigation would be suitable for use as engineered fill when placed and compacted at the recommended moisture content.

Should import material be used to achieve the design grades, the import material should be approved by the Soil Engineer before it is brought to the site. Import material may be of any type but should meet the above requirements and not be more expansive than the native site soils for the recommendations in this report to be applicable.

Prior to compaction, each layer should be spread evenly and should be thoroughly blade mixed during the spreading to obtain uniformity of material in each layer. The fill should be brought to a water content that will permit proper compaction by either (a) aerating the material if it is too wet, or (b) spraying the material with water if it is too dry. Compaction should be performed by footed rollers or other types of approved compaction equipment and methods. Compaction equipment should be of such design that they will be able to compact the fill to the specified density. Rolling of each layer should be continuous over its entire area and the equipment should make sufficient trips to ensure that the required density has been obtained. No ponding or jetting is permitted.

The standard test used to define maximum densities and optimum moisture content of all compaction work shall be the Laboratory Test procedure ASTM D1557 and field tests shall be expressed as a relative compaction in terms of the maximum dry density and optimum moisture content obtained in the laboratory by the foregoing standard procedure. Field density and moisture tests shall be made in each compacted layer by the Soil Engineer in accordance with Laboratory Test Procedure ASTM D2922 and D3017, respectively. When footed rollers are

used for compaction, the density and moisture tests shall be taken in the compacted material below the surface disturbed by the roller. When these tests indicate that the compaction requirements on any layer of fill, or portion thereof, has not been met, the particular layer, or portion thereof, shall be reworked until the compaction requirements have been met.

No soil shall be placed or compacted during periods of rain or on ground, which contains free water. Soil that has been soaked and wetted by rain or any other cause shall not be compacted until completely drained and until the moisture content is within the limits noted above or approved by the Soil Engineer. Approval by the Soil Engineer shall be obtained prior to continuing the grading operations.

Surface Drainage

A very important factor affecting the performance of structures is the proper design, implementation, and maintenance of surface drainage. Ponded water may cause loss of soil strength and may also seep under structures or other site improvements such as pavement. Should surface water be allowed to seep under the structures, differential foundation movement resulting in structural damage and/or standing water under the slab may occur. To minimize the potential for the above problems, the following surface drainage measures are recommended:

- a) Liberal building pad and surface drainage must be provided by the project Civil Engineer to remove all storm water from the pad and to prevent storm and/or irrigation water from ponding adjacent to or seeping beneath the structures and/or pavement areas. All hardscapes must also slope away from the structures.
- b) Enclosed or trapped planter areas adjacent to the structure foundation should be avoided if possible. Where enclosed planter areas are constructed, these areas must be provided with adequate measures to drain surface water (irrigation and rainfall) away from the foundation. Positive surface gradients and/or controlled drainage area inlets should be provided. Care should be taken to adequately slope surface grades away from the structure foundation and into area inlets. Drainage area inlets should be piped to a suitable discharge facility.
- c) Downspouts from roof collection points should be discharged into a controlled positive surface drainage system to carry storm water away from the structures and graded areas. In doing this, the possibility of soil saturation adjacent to the foundation and engineered fills is reduced. Downspout water may be allowed to

discharge directly onto hardscape surfaces provided positive drainage is maintained.

- d) Over-irrigation of plants is a common source of water migrating beneath a structure. Consequently, the amount of irrigation should not be any more than the amount necessary to support growth of the plants. Foliage requiring little irrigation (drip system) is recommended for the areas immediately adjacent to the structure.

Foundations

Provided that the site is prepared as previously recommended, the proposed building may be satisfactorily supported on a spread footing foundation system in conjunction with a slab-on-grade floor. Design parameters for spread footing foundations are provided below:

Spread Footings

Continuous and isolated spread footings should extend to a depth of eighteen (18) inches below lowest adjacent grade (i.e., trenching depth) and limited to two (2) feet in width. At this depth, the recommended design bearing pressure for isolated and continuous should not exceed 1,500 p.s.f. due to dead plus live loads. The above allowable pressures may be increased by 1/3 due to all loads which include wind and seismic. All foundations must be adequately reinforced to provide structural continuity and resist the anticipated loads as determined by the project Structural Engineer. However, continuous footings are to be reinforced with a minimum of 4 No. 4 bars, 2 at the top and 2 near the bottom of the footing. Additional reinforcement will be as required by the structural engineer and in accordance with structural building code requirements. Foundations designed in accordance with the above criteria are estimated to experience a total settlement of less than one and a half (1.5) inch with three quarters (3/4) inch differential settlement. Should additional bearing be required, supplemental recommendations will be made available when actual building loads can be reviewed.

To accommodate lateral building loads, the passive resistance of the foundation soil can be utilized. The passive soil pressures can be assumed to act against the front face of the footings for the entire depth below the ground surface. It is recommended that a passive pressure equivalent to that of a fluid weighing 250 p.c.f. be used. For design purposes, an allowable friction coefficient of 0.30 can be assumed at the base of the spread footings.

Retaining Walls/Sound Walls

Any retaining walls that are to be incorporated into the development should be designed to resist lateral pressures exerted from a media having an equivalent fluid weight as follows.

Gradient of Back Slope	Equivalent Fluid Weight (p.c.f.)			Coefficient of Friction
	Unrestrained Condition (Active)	Restrained Condition (At Rest)	Passive Resistance	
Horizontal	40	60	250	0.30

It should be noted that the effects of any surcharge or compaction loads behind the walls must be accounted for in the design of the walls.

If keyed or interlocking non-mortared walls such as Keystone or Earthstone walls are utilized, the following soil parameters would be applicable for design using on-site, native materials within the reinforced fill zone: Internal friction angle = 25 degrees, unit weight = 97.0 p.c.f. These walls should be designed and constructed in accordance with the manufacturers recommendations.

The above criteria are based on fully drained conditions. In order to achieve fully-drained conditions, a drainrock filter blanket should be placed behind the wall. The blanket should be a minimum of 12 inches thick and should extend the full height of the wall to within 12 inches of the surface. If the excavated area behind the wall exceeds 12 inches, the entire excavated space behind the drainage blanket should consist of compacted engineered fill or blanket material. The drainage blanket material should consist of Class II permeable material that meets CalTrans Specification, Section 68. A 4-inch perforated drain pipe should be installed in the bottom of the drainage blanket and should be underlain by at least 4 inches of filter type material. A 12-inch cap of native soil material should be placed over the drainage blanket. Piping with adequate gradient shall be provided to discharge water that collects behind the walls to an adequately controlled discharge system away from the structure foundation.

Retaining walls may either be founded on a spread footing or a pier foundation. Sound walls should be founded on pier foundations. Piers should be a minimum of 6 feet deep designed on the basis of skin friction acting between the soil and that portion of the pier that extends below a depth of one (1) feet below finished grade. For the soils at the site, an allowable skin friction value of 450 p.s.f. can be used for combined dead and live loads. This value can be increased by one-third for total loads which include wind or seismic forces. Spacing should be determined as required by the load distribution, but minimum spacing should not be less than 3 pier diameters,

center to center. Maximum spacing and the minimum depth of piers is to be determined by the Structural Engineer. To resist lateral loads, the passive resistance of the soil can be used. The soil passive pressures can be assumed to act against the lateral projected area of the pier described by the vertical dimension of twice the pier diameter. It is recommended that a passive pressure equivalent of that of a fluid weighing 250 p.c.f. be used below 1 foot.

Non-Structural Slab-on-Grade Construction

Interior slabs used in conjunction with spread footings and exterior concrete flatwork placed on improperly prepared soils may experience some cracking due to moisture variations within the underlying soils. To reduce the potential cracking of the slabs-on-grade, the following are recommended:

- a) The near surface soil areas to receive slabs should be thoroughly wetted prior to placing concrete. This work should be done under the observation of the Soil Engineer.
- b) Slabs should be underlain by a minimum of 4 inches of Caltrans Class II Aggregate Base placed between the finished subgrade and the slabs to serve as subbase support.
- c) Slabs should be a minimum of 4 inches thick and be reinforced with a minimum of No. 4 bars spaced 18 inches center to center, each way (or equivalent). The actual slab thickness and reinforcement should be determined by the project structural engineer in accordance with the structural requirements. The reinforcement shall be placed in the center of the slab section unless otherwise designated by the design engineer.
- d) Where moisture sensitive floor coverings are anticipated, a Class A 10-mil minimum vapor retarder membrane that meets ASTM E 1745 (such as Stego-Wrap by Stego Industries LLC or equivalent) should be placed between the subbase support material and the slab to minimize moisture condensation under the floor covering and upward vapor transmission. It is noted that polyethylene films (visqueen) do not meet these specifications. The vapor retarder must be adequately lapped and taped/sealed at penetrations and seams in accordance with ASTM E1643. The vapor retarder must be placed continuously across the slab area, including closure strips. Therefore, the membrane must extend beyond the closure strip contact to allow for adequate lapping and sealing of the seam.

- e) If it is desired to place a granular cushion between the vapor retarder and the slab, it should be 2 inches thick and meet the following specifications. The cushion material as recommended by ACI 302.1R should meet a gradation of 100% passing the No. 4, 10 to 30 % passing the No. 100, and 0 to 5% passing the No. 200 screen. It is noted that clean sand does not meet the ACI requirements. Alternative materials must be approved by the Soils Engineer prior to use. The cushion material should be dry to slightly dampened at the time of concrete placement.
- f) To prevent excessive moisture or water vapor migration through the slab, it is recommended that all slab-on-grade concrete be placed with a maximum water to cement ratio of 0.5 and be appropriately cured. In addition, the slab should not be subjected to rainfall or cleaning water prior to placement of the floor coverings.
- g) Interior and exterior slabs should be provided with crack control tool or saw cut joints to allow for expansion and contraction of the concrete. In general, construction joints should be spaced no more than 24 times the slab thickness in each direction.

Pavement Areas

A preliminary R-Value of 10 was obtained within the development in accordance with CTM 301 from the respective location shown on the "Site Plan" as R-Value. It is recommended that the subgrade for the roadways be evaluated during grading to determine whether additional R-Value testing should be performed. A range of traffic indices (TI) is provided in the table below. We emphasize that the performance of the pavement is critically dependent upon adequate and uniform compaction of the subgrade soils, as well as engineered fill and utility trench backfill within the limits of pavements.

Preparation of Subgrade: After underground utilities have been placed in the areas to receive pavement and removal of excess material has been completed, the upper eight (8) inches of the subgrade soil shall be scarified, moisture conditioned and compacted to a minimum relative compaction of 95% at above optimum moisture content in accordance with the grading recommendations specified in this report.

Aggregate Base: All aggregate base material placed subsequently should also be compacted to a minimum relative compaction of 95% based on the ASTM Test Procedure D1557. The

construction of the pavement in the street, roadway and parking areas should conform to the requirements set forth by the latest Standard Specifications of the Department of Transportation of the State of California and Shasta County.

Asphalt Concrete: Based on an R-Value of 10 obtained in accordance CTM 301 along with a range of traffic indices, the recommended minimum pavement sections for asphalt concrete surfaces are summarized in the table below. The appropriate traffic index (TI) will be determined by the project Civil Engineer or governing agency.

Traffic Condition	Traffic Index (TI)	Asphalt Concrete (Inches)	Class II Aggregate Base ¹ (Inches)
Roadways	6.0	2.5	13.5
		3.0	12.5
	8.0	2.5	21.0
		3.0	20.0
Parking	4.5	2.5	8.5
		3.0	7.5

NOTES:

- (1) Minimum R-Value = 78
- (2) R-Value: Resistance Value
- (3) All layers in compacted thickness to CalTrans Standard Specifications.

Portland Cement Concrete: Where PCC pavement areas are utilized, the concrete should be poured on the compacted aggregate base layer described above. The concrete should be designed by the project Structural Engineer and be a minimum of six (6) inches thick and reinforced with a minimum of #4 rebar spaced at 16 inches on center, each way.

General Construction Requirements

Utility trenches extending underneath all traffic areas must be backfilled with native or approved import material and compacted to relative compaction of 90% to within 8 inches of the subgrade. The upper 8 inches should be compacted to 95% relative compaction in accordance with Laboratory Test Procedure ASTM D1557. Backfilling and compaction of these trenches must meet the requirements set forth by the Shasta County, Department of Public Works.

Applicable safety standards require that trenches in excess of 3.5 feet must be properly shored or that the walls of the trench slope back to provide safety for installation of lines. If trench wall

sloping is performed, the inclination should vary with the soil type and applicable OSHA Safety Standards.

With respect to state-of-the-art construction or local requirements, utility lines are generally bedded with granular materials. These materials can convey surface or subsurface water beneath the structures. It is, therefore, recommended that all utility trenches which possess the potential to transport water be sealed with a compacted impervious cohesive soil material or lean concrete where the trench enters/exits the building perimeter. This impervious seal should extend a minimum of 2 feet away from the building perimeter.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. It should be noted that it is the responsibility of the owner or his representative to notify *KC ENGINEERING CO.*, in writing, a minimum of two working days before any clearing, grading, or foundation excavation operations can commence at the site.
2. The recommendations of this report are based upon the assumption that the soil conditions do not deviate from those disclosed in the borings and from a reconnaissance of the site. Should any variations or undesirable conditions be encountered during the development of the site, *KC ENGINEERING CO.*, will provide supplemental recommendations as dictated by the field conditions.
3. This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information and recommendations contained herein are brought to the attention of the Architect and Engineer for the project and incorporated into the plans and that the necessary steps are taken to see that the Contractor and Subcontractors carry out such recommendations in the field.
4. At the present date, the findings of this report are valid for the property investigated. With the passage of time, significant changes in the conditions of a property can occur due to natural processes or works of man on this or adjacent properties. In addition, legislation or the broadening of knowledge may result in changes in applicable standards. Changes outside of our control may render this report invalid, wholly or partially. Therefore, this report should not be considered valid after a period of two (2) years without our review, nor should it be used, or is it applicable, for any properties other than those investigated.
5. Notwithstanding, all the foregoing applicable codes must be adhered to at all times.

APPENDIX

Vicinity Map

Site Plan

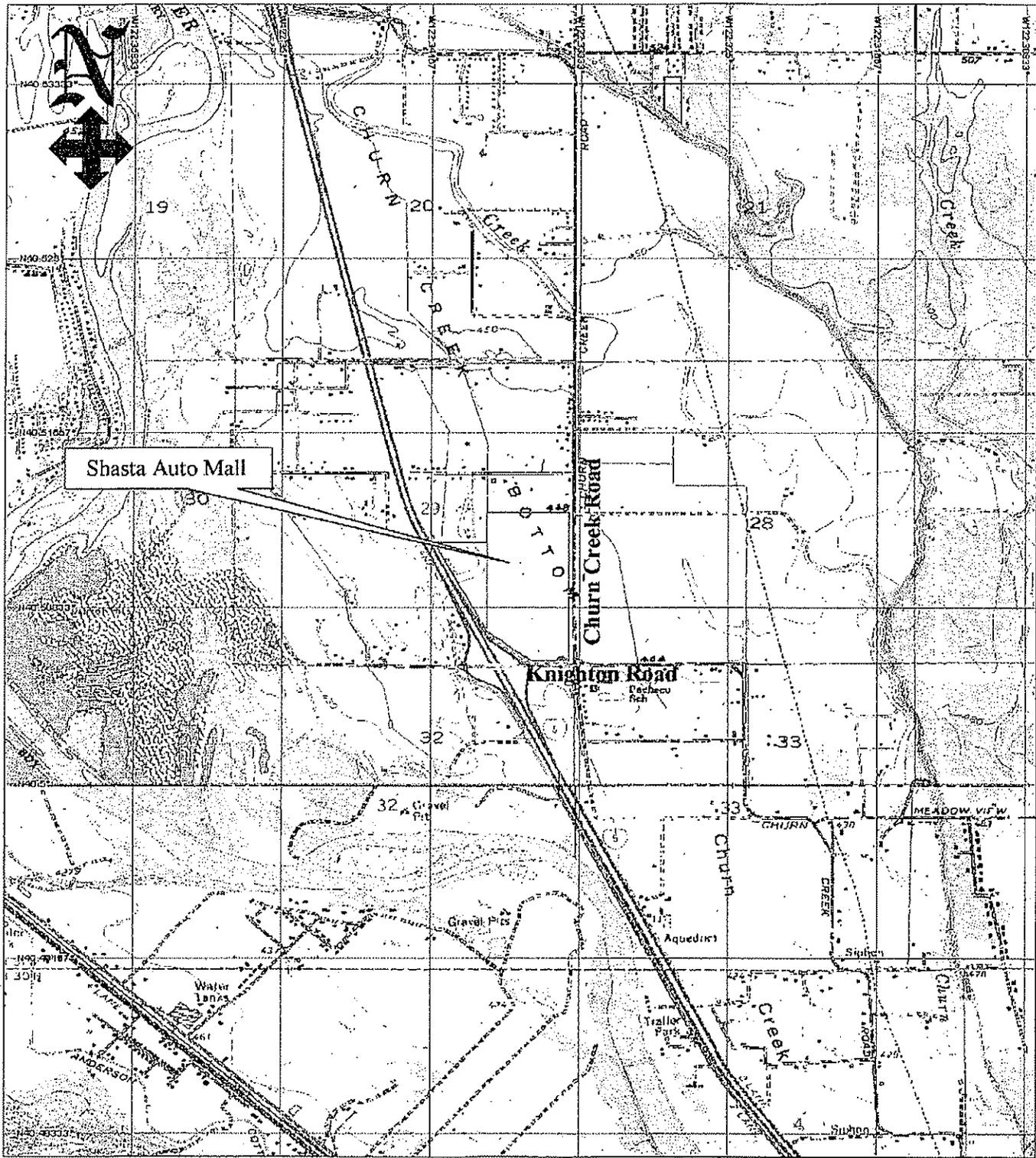
Log of Test Borings

Logs of Test Pits

Subsurface Exploration Legend

Plasticity Chart & Data

Laboratory Test Results

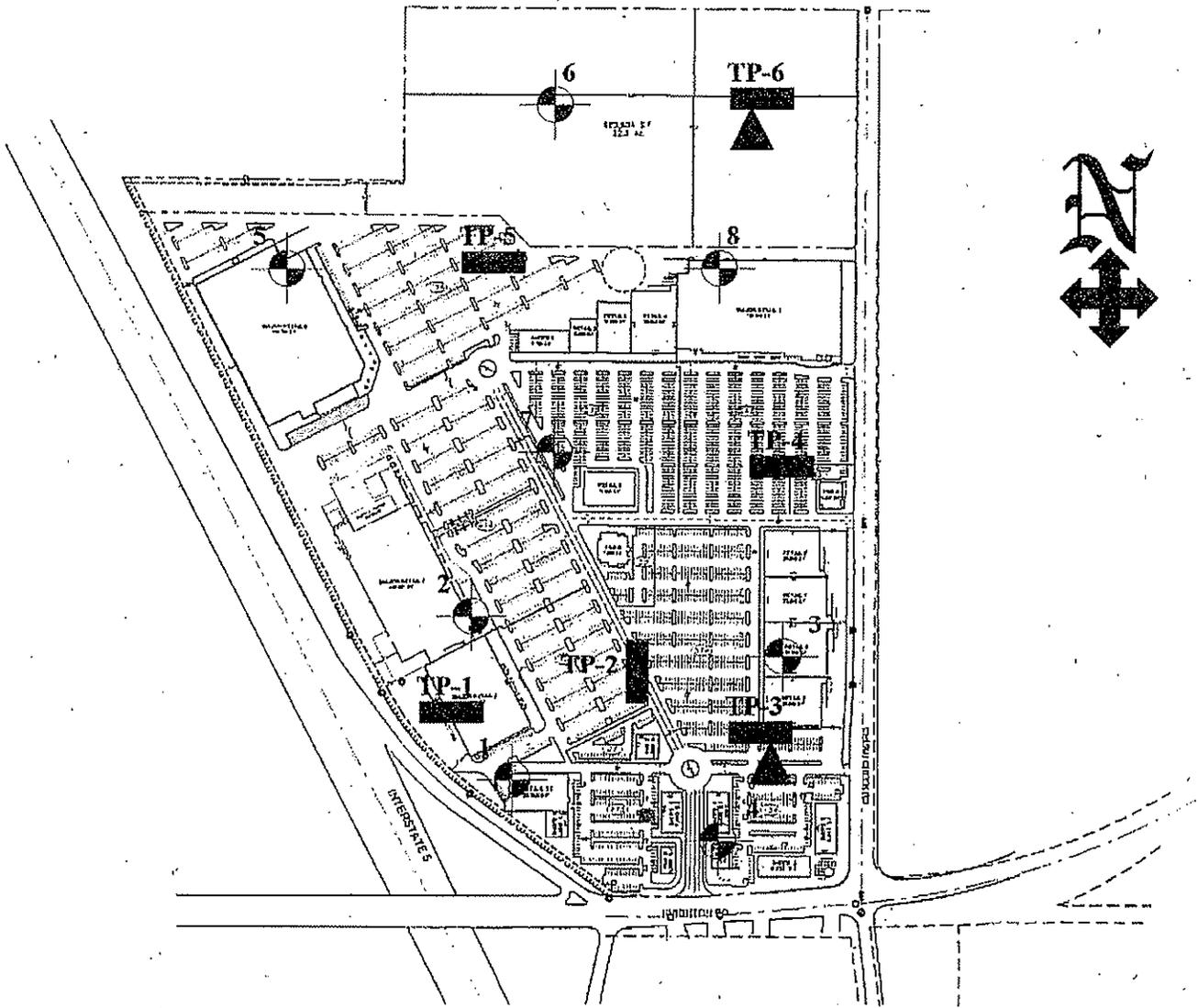


3-D TopoQuads Copyright © 1999 DeLorme, Yorktown, ME 04096 Source Data: USGS



KC ENGINEERING COMPANY
 8798 Airport Road
 Redding, CA 96002

Project No. RD2643
 Proposed Commercial Development
 Shasta County, California
Figure No. 1 "Vicinity Map"



LEGEND



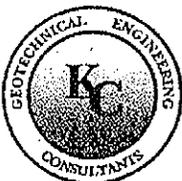
Approximate Test Pit Location



Approximate Boring Location



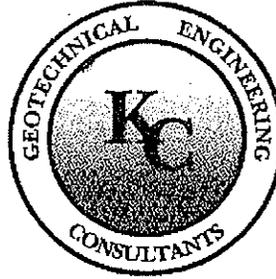
Approximate R-Value Location



KC ENGINEERING COMPANY
 8798 Airport Road
 Redding, CA 96002

Project No. RD2643
 Proposed Commercial Development
 Shasta County, California
Figure No. 2 "Site Plan"

865 Cotting Lane, Suite A
 Vacaville, California 95688
 (707) 447-4025 fax 447-4143



8798 Airport Road
 Redding, California 96002
 (530) 222-0832 fax 222-1611

KC ENGINEERING COMPANY
 A SUBSIDIARY OF MATERIALS TESTING, INC.

TEST PIT LOG

Client: Hawkins Companies LLC
 855 Broad Street, Suite 300
 Boise, ID 83702-7153

Project No: RD2643
 Date of Test Pits: 1 November 2007

Project: Proposed Commercial Development
 Churn Creek Road
 Shasta County, California

TEST PIT NO.	DEPTH (feet)	USCS	DESCRIPTION
TP-1	0 - 8'	CL	Brown Sandy CLAY, moist, hard
	8 - 9'	GP	Brown Poorly Graded GRAVEL w/ Sand, moist, loose -#200 = 2.6%
TP-2	0 - 10'	CL	Brown Sandy CLAY, moist, very stiff -#200 = 65.1%, LL = 29, PI = 9
	10 - 10.5'	GP	Brown Poorly Graded GRAVEL w/ Sand, moist, loose
TP-3	0 - 10'	CL	Brown Sandy CLAY, moist, very stiff R = 10
	10 - 12'	GP	Brown Poorly Graded GRAVEL w/ Sand, moist, loose
TP-4	0 - 5'	CL	Brown Sandy CLAY, moist, very stiff
	5 - 10'	GP	Brown Poorly Graded GRAVEL w/ Sand, moist, loose

* No Groundwater Encountered at the Time of the Field Investigation

TEST PIT NO.	DEPTH (feet)	USCS	DESCRIPTION
TP-5	0 - 10.5'	CL	Brown Sandy CLAY, moist, very stiff
	10.5 - 11'	GP	Brown Poorly Graded GRAVEL w/ Sand, moist, loose
TP-6	0 - 10'	CL	Brown Sandy CLAY, moist, very stiff -#200 = 52.3%, LL = 26, PI = 8, R = 26

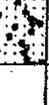
* No Groundwater Encountered at the Time of the Field Investigation

LOG OF TEST BORING

BORING NO.: 1

PROJECT: Shasta Commercial Development
 CLIENT: Hawkins Companies LLC
 LOCATION: Knighton Rd and Churn Creek Rd
 DRILLER: RAM
 DRILL RIG: Mobile B-24
 DEPTH TO WATER: INITIAL ∇ :

PROJECT NO.: RD2643
 DATE: 11-7-07
 ELEVATION: n/a
 LOGGED BY: AK
 BORING DIAMETER: 4"
 FINAL ∇ : AFTER: hrs.

DEPTH	SAMPLE NO.	SAMPLER	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	ADDITIONAL TESTS AND REMARKS (LL, PI, UCC, ϕ &c, Gradation)
0				Brown Sandy CLAY, moist, stiff	CL				
1-1						10	87.4	11.9	
5				Brown GRAVEL w/ Sand, moist, medium dense	GP				
1-2						25			
10									
1-3						79			
15				Refusal @ 13.5' Dry at Time of Drilling					
20									
25									

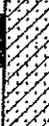
This information pertains only to this boring and is not necessarily indicative of the whole site.

LOG OF TEST BORING

BORING NO.: 2

PROJECT: Shasta Commercial Development
 CLIENT: Hawkins Companies LLC
 LOCATION: Knighton Rd and Churn Creek Rd
 DRILLER: RAM
 DRILL RIG: Mobile B-24
 DEPTH TO WATER: INITIAL ∇ :

PROJECT NO.: RD2643
 DATE: 11-7-07
 ELEVATION: n/a
 LOGGED BY: AK
 BORING DIAMETER: 4"
 FINAL ∇ : AFTER: hrs.

DEPTH	SAMPLE NO.	SAMPLER	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	ADDITIONAL TESTS AND REMARKS (LL, PI, UCC, σ &c, Gradation)
0				Brown Sandy CLAY, moist, soft	CL				
2-1						5			
5									
2-2						4			
10									
2-3				Brown GRAVEL w/ Sand, moist, dense	GP	42		3.6	
15									
20				Refusal @ 20' Dry at Time of Drilling					
25									

This information pertains only to this boring and is not necessarily indicative of the whole site.

LOG OF TEST BORING

BORING NO.: 3

PROJECT: Shasta Commercial Development
 CLIENT: Hawkins Companies LLC
 LOCATION: Knighton Rd and Churn Creek Rd
 DRILLER: RAM
 DRILL RIG: Mobile B-24
 DEPTH TO WATER: INITIAL ∇ : 16'

PROJECT NO.: RD2643
 DATE: 11-7-07
 ELEVATION: n/a
 LOGGED BY: AK
 BORING DIAMETER: 4"
 FINAL ∇ : 15' AFTER: 5 hrs.

DEPTH	SAMPLE NO.	SAMPLER	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	ADDITIONAL TESTS AND REMARKS (L.L. PI, UCC, e&c, Gradation)
0				Brown Sandy CLAY, moist, very stiff	CL				
3-1						18	96.0	14.0	%<200=60.0
5				As Above, stiff		9			
3-2									
10									
15									
3-3				Brown GRAVEL w/ Sand, wet, very dense	GP	84			
20									
25				Refusal @ 22.5' Groundwater @ 15'		100+			

This information pertains only to this boring and is not necessarily indicative of the whole site.

LOG OF TEST BORING

BORING NO.: 4

PROJECT: Shasta Commercial Development
 CLIENT: Hawkins Companies LLC
 LOCATION: Knighton Rd and Churn Creek Rd
 DRILLER: RAM
 DRILL RIG: Mobile B-24
 DEPTH TO WATER: INITIAL $\frac{1}{2}$:

PROJECT NO.: RD2643
 DATE: 11-7-07
 ELEVATION: n/a
 LOGGED BY: AK
 BORING DIAMETER: 4"
 FINAL $\frac{1}{2}$: AFTER: hrs.

DEPTH	SAMPLE NO.	SAMPLER	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	ADDITIONAL TESTS AND REMARKS (LL, PI, UCC, ϕ &c, Gradation)
0				Brown Sandy CLAY, moist, stiff	CL				
4-1						11	93.3	13.1	
4-2						13			
4-3				Brown GRAVEL w/ Sand, moist, medium dense	GP	23			
4-4						22	122.4	8.6	
23.5				Refusal @ 23.5' Dry at Time of Drilling					

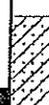
This information pertains only to this boring and is not necessarily indicative of the whole site.

LOG OF TEST BORING

BORING NO.: 5

PROJECT: Shasta Commercial Development
 CLIENT: Hawkins Companies LLC
 LOCATION: Knighton Rd and Churn Creek Rd
 DRILLER: RAM
 DRILL RIG: Mobile B-24
 DEPTH TO WATER: INITIAL ∇ :

PROJECT NO.: RD2643
 DATE: 11-7-07
 ELEVATION: n/a
 LOGGED BY: AK
 BORING DIAMETER: 4"
 FINAL ∇ : AFTER: hrs.

DEPTH	SAMPLE NO.	SAMPLER	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	ADDITIONAL TESTS AND REMARKS (LL, PI, UCC, ϕ &c, Gradation)
0				Brown Sandy CLAY, moist, stiff	CL				
5-1						15	93.3	14.0	%<200=66.4
5-2						15			
5-3				Brown GRAVEL w/ Sand, moist, very dense	GP				
52						52	95.3	9.7	
Refusal @ 18.5'				Refusal @ 18.5' Dry at Time of Drilling					

This information pertains only to this boring and is not necessarily indicative of the whole site.

LOG OF TEST BORING

BORING NO.: 6

PROJECT: Shasta Commercial Development
 CLIENT: Hawkins Companies LLC
 LOCATION: Knighton Rd and Churn Creek Rd
 DRILLER: RAM
 DRILL RIG: Mobile B-24
 DEPTH TO WATER: INITIAL ∇ :

PROJECT NO.: RD2643
 DATE: 11-7-07
 ELEVATION: n/a
 LOGGED BY: AK
 BORING DIAMETER: 4"
 FINAL ∇ : AFTER: hrs.

DEPTH	SAMPLE NO.	SAMPLER	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	ADDITIONAL TESTS AND REMARKS (LL, PI, UCC, σ_{vc} , Gradation)
0				Brown Sandy CLAY, moist, very stiff	CL				
6-1						18	109.7	7.3	
5				Brown GRAVEL w/ Sand, moist, medium dense	GP				
6-2						18			
10									
13				Refusal @ 13' Dry at Time of Drilling					
15									
20									
25									

This information pertains only to this boring and is not necessarily indicative of the whole site.

LOG OF TEST BORING

BORING NO.: 7

PROJECT: Shasta Commercial Development
 CLIENT: Hawkins Companies LLC
 LOCATION: Knighton Rd and Churn Creek Rd
 DRILLER: RAM
 DRILL RIG: Mobile B-24
 DEPTH TO WATER: INITIAL ∇ :
 FINAL ∇ :

PROJECT NO.: RD2643
 DATE: 11-7-07
 ELEVATION: n/a
 LOGGED BY: AK
 BORING DIAMETER: 4"
 FINAL ∇ : AFTER: hrs.

DEPTH	SAMPLE NO.	SAMPLER	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	ADDITIONAL TESTS AND REMARKS (L, PI, UCC, ϕ &c, Gradation)
0				Brown Sandy CLAY, moist, firm	CL				
7-1						6	86.4	13.4	%<200=52.7
7-2						9			
10				Brown GRAVEL w/ Sand, moist, very dense	GP				
7-3				Refusal @ 12.5' Dry at Time of Drilling		100+			

This information pertains only to this boring and is not necessarily indicative of the whole site.

LOG OF TEST BORING

BORING NO.: 8

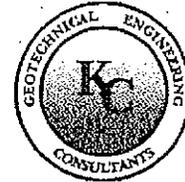
PROJECT: Shasta Commercial Development
 CLIENT: Hawkins Companies LLC
 LOCATION: Knighton Rd and Churn Creek Rd
 DRILLER: RAM
 DRILL RIG: Mobile B-24
 DEPTH TO WATER: INITIAL ∇ :

PROJECT NO.: RD2643
 DATE: 11-7-07
 ELEVATION: n/a
 LOGGED BY: AK
 BORING DIAMETER: 4"
 FINAL ∇ : AFTER: hrs.

DEPTH	SAMPLE NO.	SAMPLER	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	ADDITIONAL TESTS AND REMARKS (LL, PI, UCC, a&c, Gradation)
0				Brown Clayey SAND w/ Gravel, moist, medium dense	SC				
3	8-1	■	▨			10	100.1	11.3	%<200=31.9
5									
7				Refusal @ 7' Dry at Time of Drilling					
10									
15									
20									
25									

This information pertains only to this boring and is not necessarily indicative of the whole site.

UNIFIED SOIL CLASSIFICATION SYSTEM



KC ENGINEERING COMPANY

8798 Airport Road
Redding, CA 96002

SAMPLER AND LAB TESTING LEGEND

	Auger
	Bulk Sample, taken from auger cuttings
	California Sampler, 3 inch O.D.
	Bulk/Grab Sample
	Pitcher
	Standard Penetration Test
	Shelby Tube
	No Recovery

LL=Liquid Limit (%)
PI=Plasticity Index
Φ=Friction Angle
C=Cohesion
UCC=Unconfined Compression
R value=Resistance Value
Consol=Consolidation Test

MAJOR DIVISIONS		SYMBOLS		TYPICAL NAMES
COARSE GRAINED SOILS More than half of material is larger than No. 200 Sieve	GRAVELS More than half of coarse fraction is larger than No. 4 sieve	Clean gravels (<5% fines)	GW	Well graded gravels, gravel-sand mixtures
		Gravel with fines	GP	Poorly graded gravels, gravel-sand mixtures
	SANDS More than half of coarse fraction is smaller than No. 4 sieve	Clean sands (<5% fines)	GM	Silty gravels, poorly graded gravel-sand-silt mixtures
		Sands with fines	GC	Clayey gravels, poorly graded gravel-sand-clay mixtures
			SW	Well graded sands, gravelly sands
			SP	Poorly graded sands, gravelly sands
FINE GRAINED SOILS More than half of material is smaller than No. 200 Sieve	SILTS AND CLAYS Liquid Limit is less than 50%	ML	Inorganic silts and very fine sands, silty or clayey fine sands, clayey silts with slight plasticity	
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
		OL	Organic silts and clays of low plasticity	
	SILTS AND CLAYS Liquid Limit is more than 50%	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
		CH	Inorganic clays of high plasticity, fat clays	
		OH	Organic silts and clays of medium to high plasticity	
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils	

SOIL GRAIN SIZE U.S. STANDARD SIEVE OPENINGS

CLAY	SILT	SAND			GRAVEL		COBBLES	BOULDERS
		FINE	MEDIUM	COARSE	FINE	COARSE		
0.002	0.075	0.425	2.00	4.75	19.0	75	300	

SOIL GRAIN SIZE IN MILLIMETERS

RELATIVE DENSITY (Coarse-grained soils)

SANDS & GRAVELS	BLOWS/FOOT ¹
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	> 50

CONSISTENCY (Fine-grained soils)

SILTS & CLAYS	STRENGTH ²	BLOWS/FOOT ¹
Very Soft	< 500	0 - 2
Soft	500 - 1,000	2 - 4
Firm	1,000 - 2,000	4 - 8
Stiff	2,000 - 4,000	8 - 15
Very Stiff	4,000 - 8,000	15 - 30
Hard	> 8,000	> 30

1 - Number of blows of 140 pound hammer falling 30 inches to drive a 2-inch O.D. split spoon sampler (ASTM D1586)

2 - Unconfined compressive strength in lb/ft² as determined by lab testing or approximated by the standard penetration test (ASTM D1586) or pocket penetrometer.

WEATHERING (Bedrock)

Fresh	No visible sign of decomposition or discoloration; rings under hammer impact
Slightly weathered	Slight discoloration inwards from open fractures; little or no effect on normal cementation; otherwise similar to Fresh
Moderately weathered	Discoloration throughout; weaker minerals decomposed; strength somewhat less than fresh rock but cores can not be broken by hand or scraped with knife; texture preserved; cementation little to not affected; fractures may contain filling
Highly weathered	Most minerals somewhat decomposed; specimens can be broken by hand with effort or shaved with knife; texture becoming indistinct but fabric preserved; faint fractures
Completely weathered	Minerals decomposed to soil but fabric and structure preserved; specimens can be easily crumbled or penetrated

STRENGTH (Bedrock)

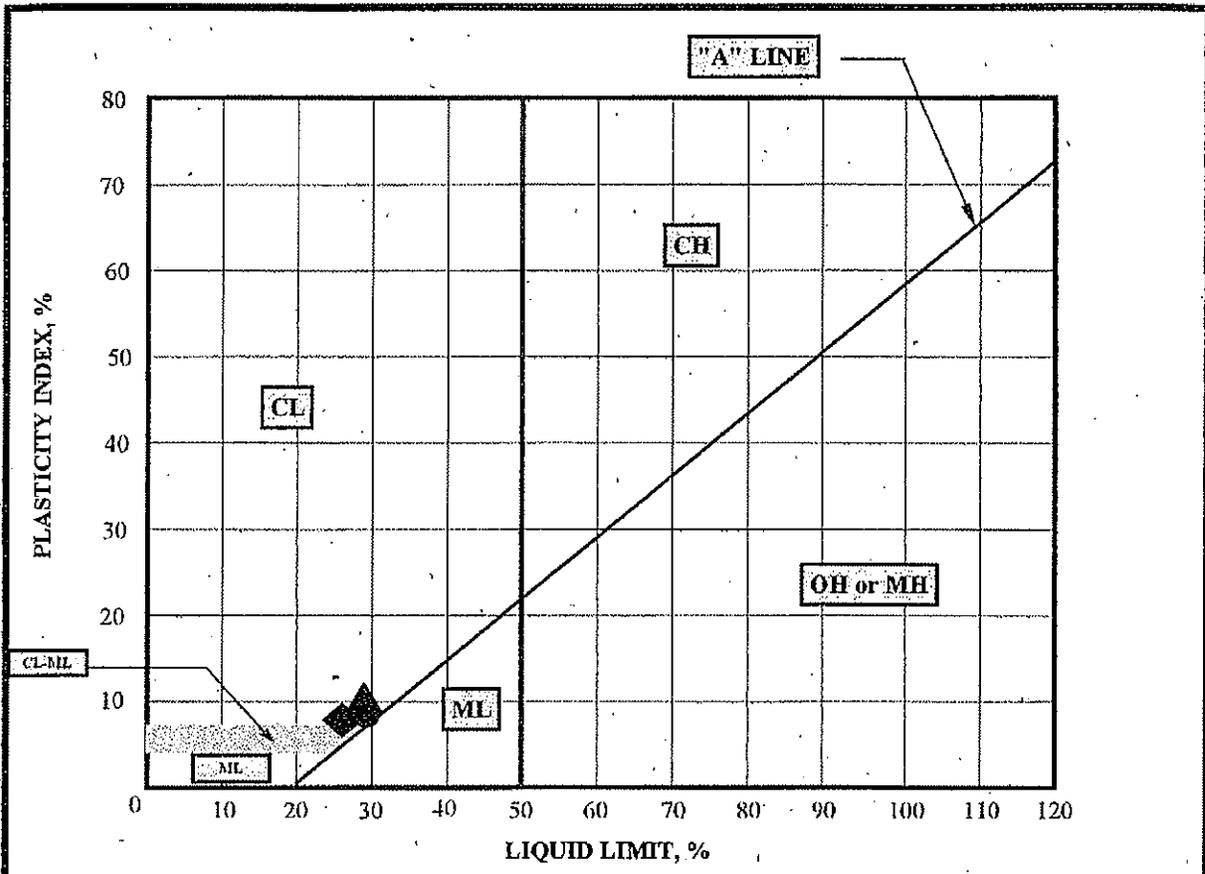
Plastic	Very low strength
Friable	Crumbles easily by rubbing with fingers
Weak	An unfractured specimen will crumble under light hammer blows
Moderately strong	Specimen will withstand a few heavy hammer blows before breaking
Strong	Specimen will withstand a few heavy ringing blows and will yield with difficulty only dust and small flying fragments
Very strong	Specimen will resist heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments

BEDDING (Bedrock)

BEDDING (Bedrock)	SPACING (inches)
Very thickly bedded	> 48
Thickly bedded	24 to 48
Thin bedded	2.5 to 24
Very thin bedded	5/8 to 2.5
Laminated	1/8 to 5/8
Thinly laminated	< 1/8

FRACTURING (Bedrock)

FRACTURING (Bedrock)	SPACING (inches)
Very little fractured	> 48
Occasionally fractured	12 to 48
Moderately fractured	6 to 12
Closely fractured	1 to 6
Intensely fractured	5/8 to 1
Crushed	< 5/8



KEY SYMBOL	SAMPLE NUMBER	DEPTH	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, LL, %	PLASTIC LIMIT, PL, %	PLASTICITY INDEX, PI, %	LIQUIDITY INDEX	UNIFIED SOIL CLASSIFICATION SYMBOL
●	TP 2-1	4.0 feet	--	29	20	9	n/a	CL
▲	5-1	2.0 feet	--	29	19	10	n/a	CL
◆	TP 6-1	2.0 feet	--	26	18	8	n/a	CL



KC ENGINEERING CO.

PLASTICITY CHART AND DATA

Proposed Shasta Commercial Development
 Knighton & Churn Creek Road, Shasta County, California

PROJECT

DATE

FIGURE

RD2643

11/21/2007

13



Materials Testing, Inc.

8798 Airport Road
Redding, California 96002
(530) 222-1116, fax 222-1611

865 Cotting Lane, Suite A
Vacaville, California 95688
(707) 447-4025, fax 447-4143

CLIENT: Hawkins Companies LLC
8645 W. Franklin Road
Boise, Idaho 83709

CLIENT NO: RD2643-002
REPORT NO: 0300-010
DATE: 11/16/07

SUBJECT: Commercial Development
Shasta County, California

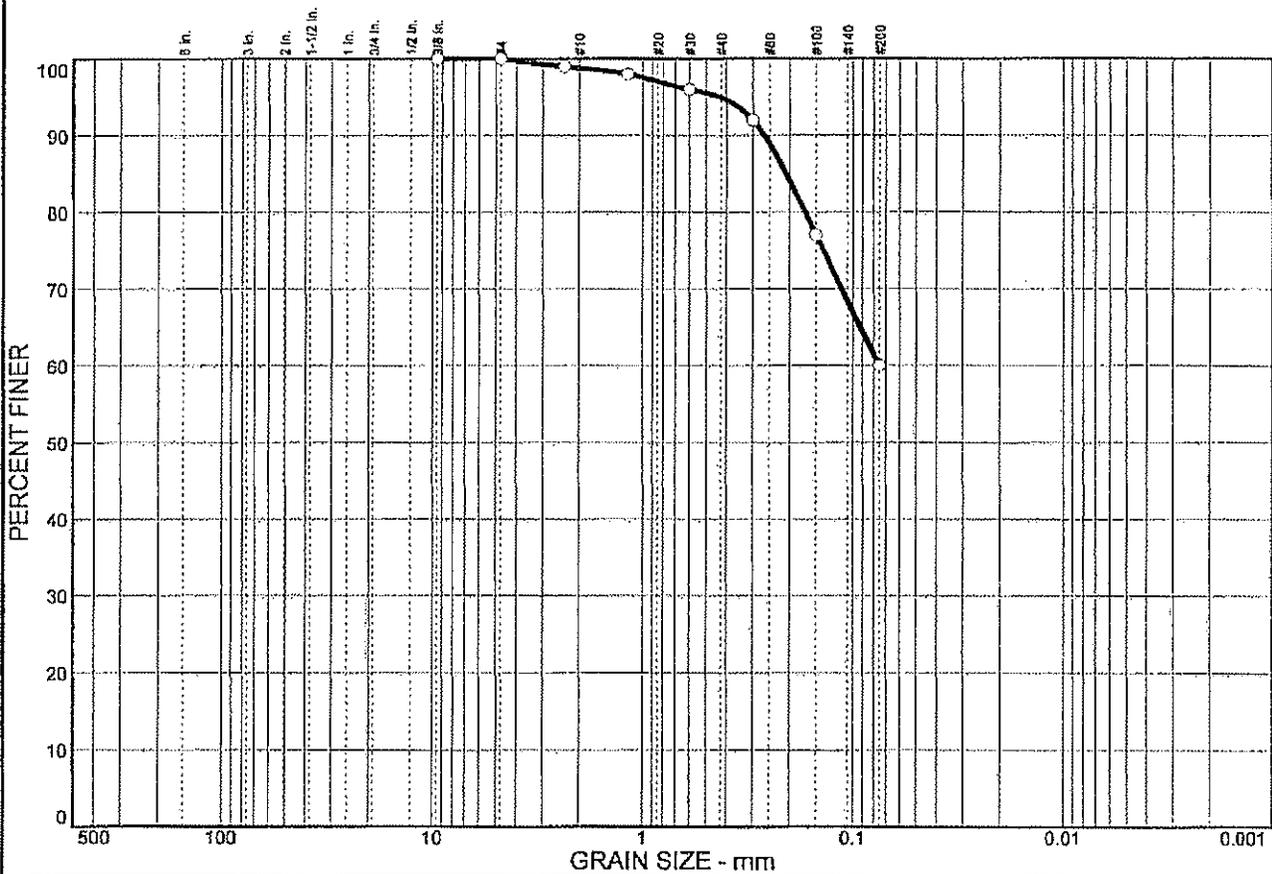
SUBMITTED BY: KC Engineering

**DENSITY OF IN PLACE SOIL BY THE DRIVE TUBE METHOD (ASTM D2937)
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX OF SOILS (ASTM D4318)
DATA SHEET**

Sample #	Description	Dry Density p.c.f.	Moisture Content %	Liquid Limit	Plastic Limit	Plastic Index
1-1 @ 2.0'	Brown Sandy Clay (Visual)	87.4	11.9	---	---	---
2-3 @ 12.0'	Brown Gravel with Sand (Visual)	---	3.6	---	---	---
3-1 @ 2.0'	Brown Sandy Clay (Visual)	96.0	14.0	---	---	---
4-1 @ 2.0'	Brown Sandy Clay (Visual)	93.3	13.1	---	---	---
4-4 @ 22.0'	Brown Gravel with Sand (Visual)	122.4	8.6	---	---	---
5-1 @ 2.0'	Brown Sandy Clay	93.3	14.0	29	19	10
5-3 @ 17.0'	Brown Gravel with Sand (Visual)	95.3	9.7	---	---	---
6-1 @ 2.0'	Brown Sandy Clay (Visual)	109.7	7.3	---	---	---
7-1 @ 2.0'	Brown Sandy Clay (Visual)	86.4	13.4	---	---	---
8-1 @ 2.0'	Brown Clayey Sand with Gravel (Visual)	100.1	11.3	---	---	---

Construction Materials Testing and Quality Control Services
Soil - Concrete - Asphalt - Steel - Masonry

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	40.0	60.0	60.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8 in.	100.0		
#4	100.0		
#8	99.0		
#16	98.0		
#30	96.0		
#50	92.0		
#100	77.0		
#200	60.0		

Soil Description

Brown Sandy Clay (Visual)

Atterberg Limits

PL= — LL= — PI= —

Coefficients

D₈₅= 0.208 D₆₀= 0.0750 D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= CL AASHTO= —

Remarks

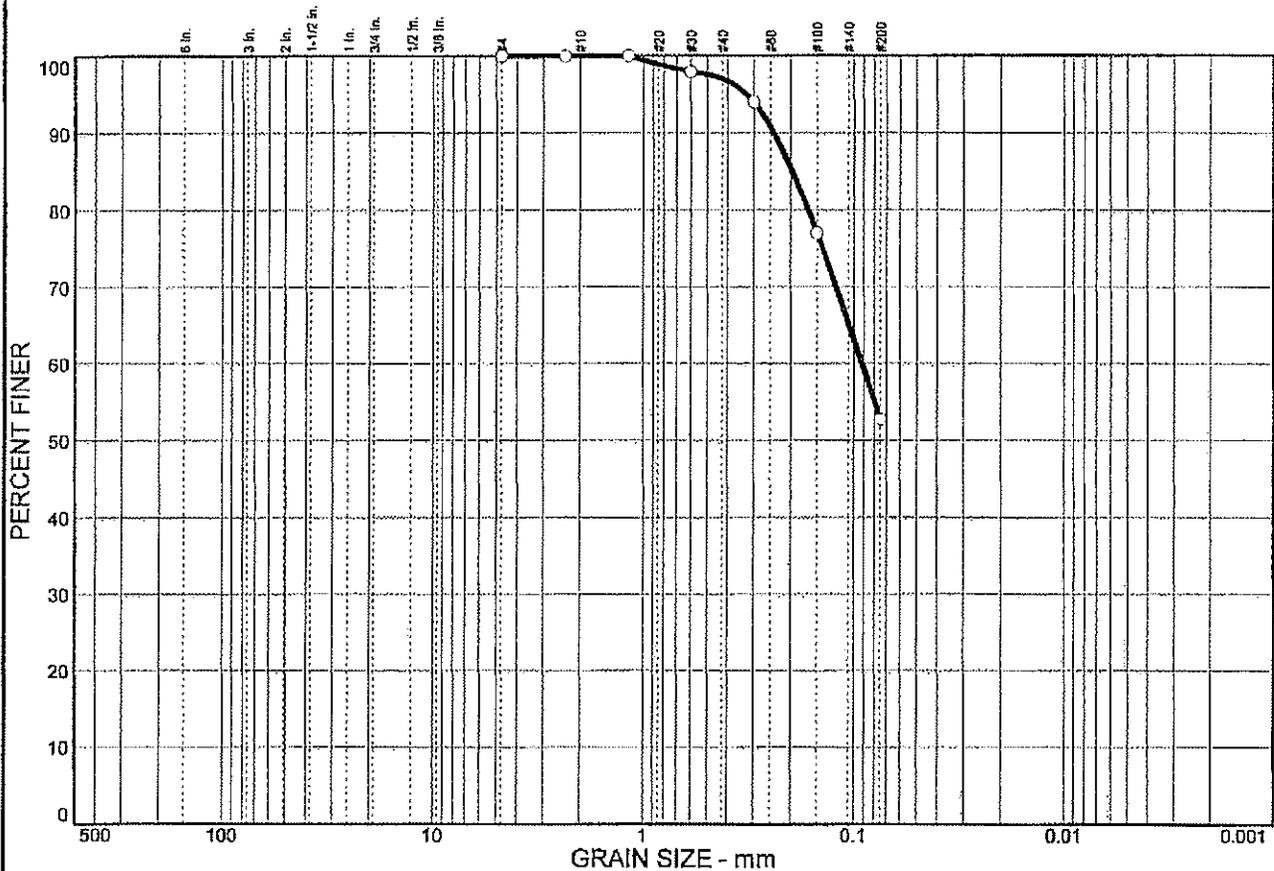
* (no specification provided)

Sample No.: 3-1 Source of Sample: Commercial Development Date: 11/16/07
 Location: Elev./Depth: 2'



Client: Hawkins Companies LLC
 Project: Commercial Development
 Shasta County, California
 Project No: RD2643-001 Report Number: 0400-006

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	47.3	52.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	100.0		
#16	100.0		
#30	98.0		
#50	94.0		
#100	77.0		
#200	52.7		

Soil Description

Brown Sandy Clay (Visual)

Atterberg Limits

PL= — LL= — PI= —

Coefficients

D₈₅= 0.196 D₆₀= 0.0916 D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= CL AASHTO= —

Remarks

* (no specification provided)

Sample No.: 7-1
 Location:

Source of Sample: Commercial Development

Date: 11/16/07
 Elev./Depth: 2'



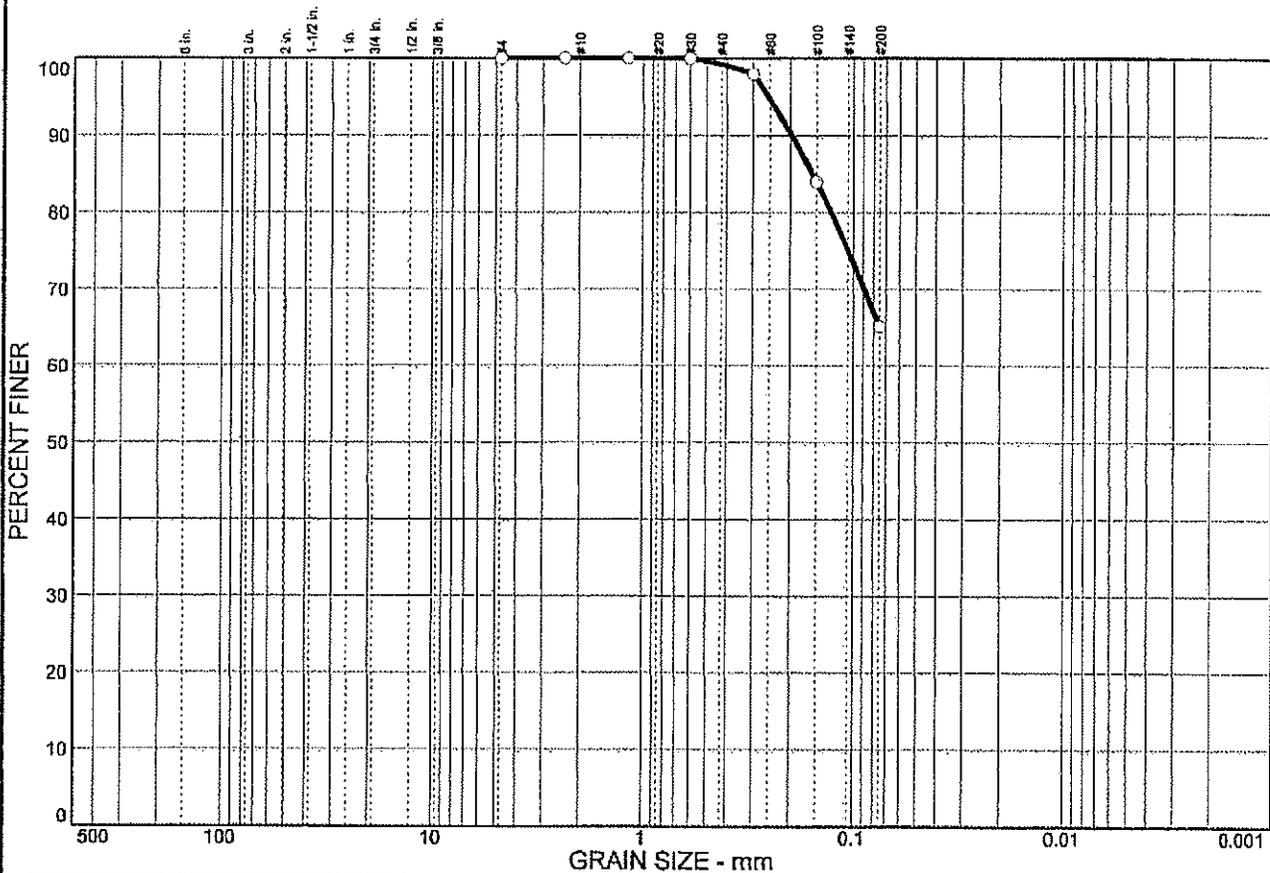
Materials
 Testing, Inc.

Client: Hawkins Companies LLC
 Project: Commercial Development
 Shasta County, California

Project No: RD2643-001

Report Number: 0400-008

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	34.9	65.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	100.0		
#16	100.0		
#30	100.0		
#50	98.0		
#100	84.0		
#200	65.1		

Soil Description

Brown Sandy Clay

Atterberg Limits

PL= 20 LL= 29 PI= 9

Coefficients

D₈₅= 0.156 D₆₀= D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= CL AASHTO= —

Remarks

* (no specification provided)

Sample No.: TP2-1
 Location:

Source of Sample: Shasta Regional Auto Mall

Date: 11/14/07
 Elev./Depth: 4'

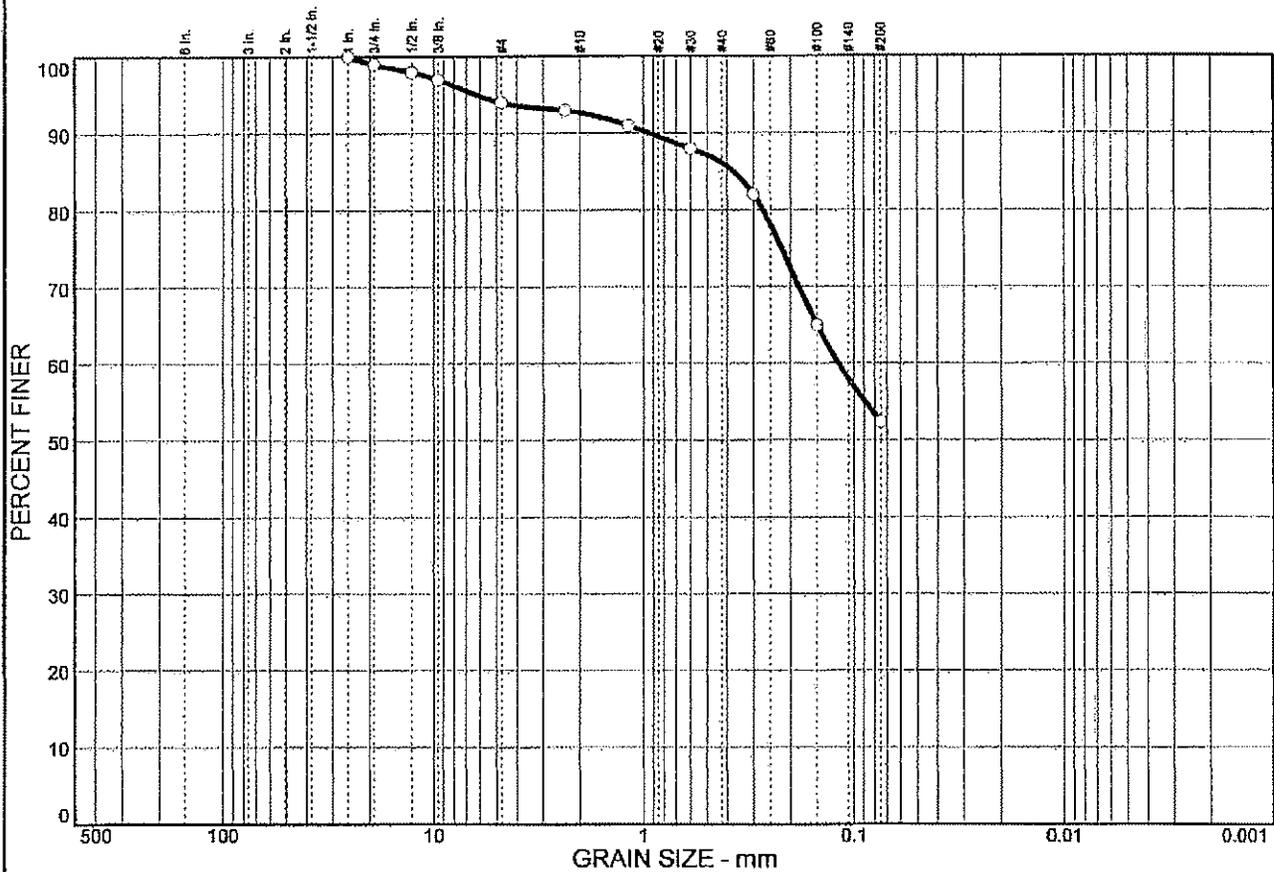


Client: Hawkins Companies LLC
 Project: Shasta Regional Auto Mall
 Shasta County, California

Project No: RD2643-001

Report Number: 0400-002

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	6.0	41.7	52.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 in.	100.0		
3/4 in.	99.0		
1/2 in.	98.0		
3/8 in.	97.0		
#4	94.0		
#8	93.0		
#16	91.0		
#30	88.0		
#50	82.0		
#100	65.0		
#200	52.3		

Soil Description

Brown Sandy Clay

Atterberg Limits

PL= 18 LL= 26 PI= 8

Coefficients

D₈₅= 0.372 D₆₀= 0.119 D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= CL AASHTO= --

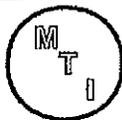
Remarks

* (no specification provided)

Sample No.: TP6-1
 Location:

Source of Sample: Commercial Development

Date: 11/14/07
 Elev./Depth: 2'



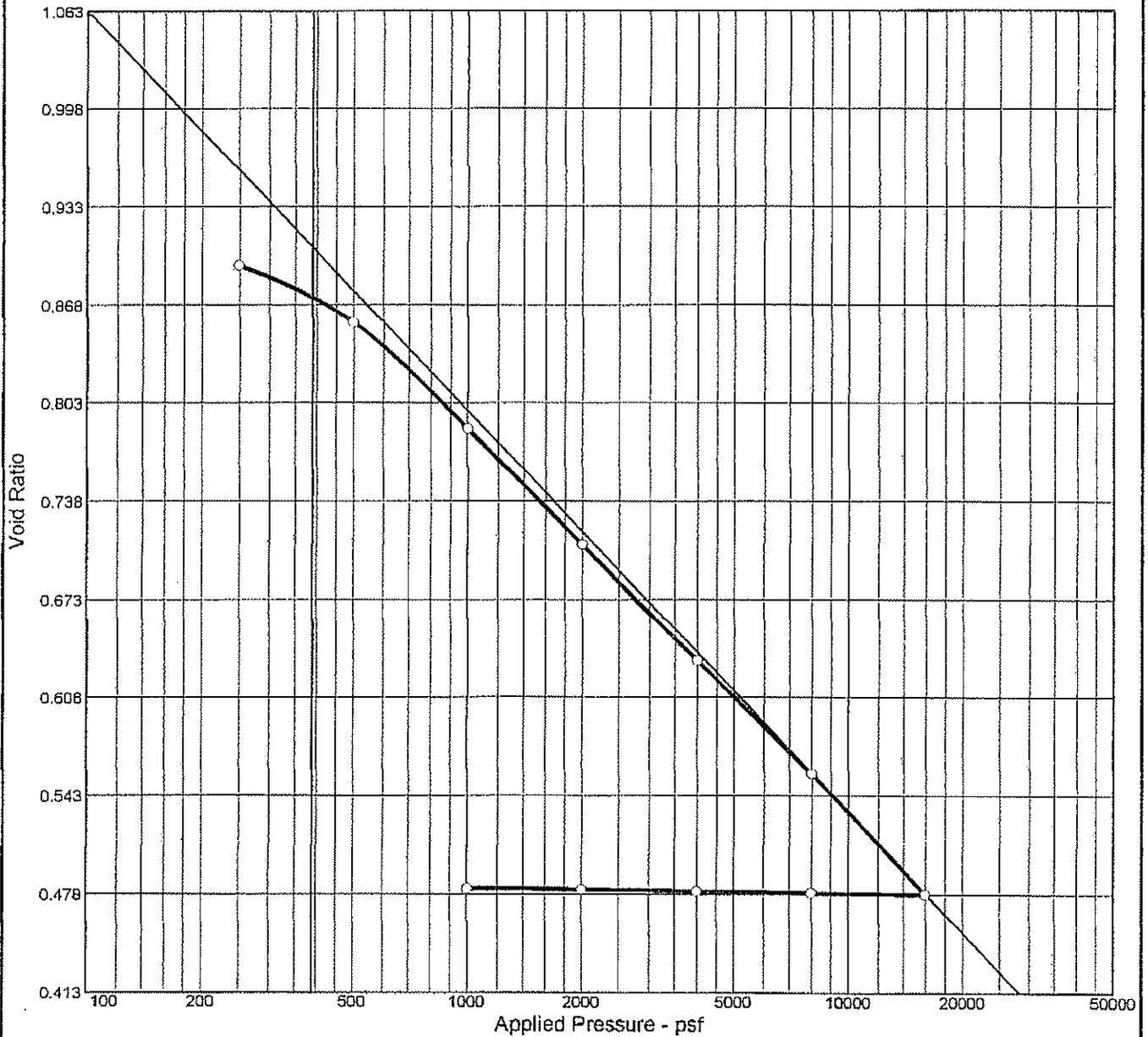
**Materials
 Testing, Inc.**

Client: Hawkins Companies LLC
 Project: Commercial Development
 Shasta County, California

Project No: RD2643-001

Report Number: 0400-003

Consolidation Test Report



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	P _c (psf)	C _c	C _r	Swell Press. (psf)	Heave %	e ₀
Sat.	Moist.											
40.2 %	14.0 %	85.3			2.61	195	570	0.27				0.910

MATERIAL DESCRIPTION										USCS	AASHTO
Brown Sandy Clay										CL	

Project No. RD2643-001			Client: Hawkins Companies LLC		
Project: Commercial Development Shasta County, California					
Source: Commercial		Sample No.: 2-1		Elev./Depth: 2	
			Materials Testing, Inc.		

Remarks:

Report Number:



Materials Testing, Inc.

8798 Airport Road
Redding, California 96002
(530) 222-1116, fax 222-1611

865 Cotting Lane, Suite A
Vacaville, California 95688
(707) 447-4025, fax 447-4143

CLIENT: Hawkins Companies LLC
8645 W. Franklin Road
Boise, Idaho 83709

Client No: RD2643-001
Report No: 0300-004
Date: 11/14/07

SUBJECT: Shasta Regional Auto Mall
Shasta County, California

Submitted by: KC Engineering

"R" VALUE TEST RESULTS (CTM-301)

Sample: TP3-1 @ 1.5'
Description: Brown Sandy Clay
Location: —

SIEVE ANALYSIS

Sieve Size	2"	1-1/2"	1"	3/4"	1/2"	3/8"	#4
As Received (% Pass)							---
As Used (% Pass)							---

RESISTANCE VALUE

Specimen Number	Dry Unit Weight, PCF	Moisture (%)	Exudation Pressure (PSI)	Expansion Pressure Dial Reading & PSF		R-Value
1	111.0	17.9	479	0	0	18
2	106.9	19.2	403	0	0	12
3	104.2	20.9	252	0	0	10

R-Value @ 300 PSI Exudation Pressure = 10

R-Value @ Expansion = --

Construction Materials Testing and Quality Control Services
Soil - Concrete - Asphalt - Steel - Masonry



Materials Testing, Inc.

8798 Airport Road
Redding, California 96002
(530) 222-1116, fax 222-1611

865 Cotting Lane, Suite A
Vacaville, California 95688
(707) 447-4025, fax 447-4143

CLIENT: Hawkins Companies LLC
8645 W. Franklin Road
Boise, Idaho 83709

Client No: RD2643-001
Report No: 0300-005
Date: 11/14/07

SUBJECT: Shasta Regional Auto Mall
Shasta County, California

Submitted by: KC Engineering

"R" VALUE TEST RESULTS (CTM-301)

Sample: TP6-1 @ 2'
Description: Brown Sandy Clay
Location: ---

SIEVE ANALYSIS

Sieve Size	2"	1-1/2"	1"	3/4"	1/2"	3/8"	#4
As Received (% Pass)							---
As Used (% Pass)							---

RESISTANCE VALUE

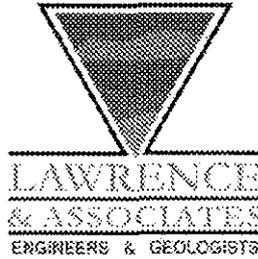
Specimen Number	Dry Unit Weight, PCF	Moisture (%)	Exudation Pressure (PSI)	Expansion Pressure Dial Reading & PSF		R-Value
1	121.3	12.9	534	0	0	63
2	116.6	16.0	243	0	0	19
3	112.8	16.6	162	0	0	9

R-Value @ 300 PSI Exudation Pressure = 26

R-Value @ Expansion = ---

Construction Materials Testing and Quality Control Services
Soil - Concrete - Asphalt - Steel - Masonry

Exhibit E



007130.02

December 7, 2009

Ms. Lisa Lozier
Shasta County Planning Division
1855 Placer Street
Redding, CA 96001

Dear Ms. Lozier:

SUBJECT: COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT, KNIGHTON ROAD SITE, SHASTA COUNTY, CALIFORNIA

The following are our comments on the Draft Environmental Impact Report (DEIR) for the proposed development (Project) at the intersection of Knighton Road and I-5. We reviewed the following sections of the DEIR:

- Section 3.8, Hydrology and Water Quality (portions relating to groundwater, not drainage)
- Section 3.13, Utilities and Service Systems
- Appendix I, Water Supply Assessment

SECTION 3.8 – HYDROLOGY AND WATER QUALITY

Page 3.8-2, 2nd full ¶: Last sentence states that certain areas of the County “... *have the greatest allocations of water...*” There should be a distinction between surface water and groundwater. Two of the entities mentioned, Bella Vista Water District (BVWD) and Clear Creek Community Services District (CCCSD) use mainly surface water; BVWD has very limited groundwater resources, with CCCSD having somewhat greater groundwater resources. Currently, BVWD is experiencing water shortages because of cutbacks to their surface-water supply, and therefore isn’t a prime area for future development (as the DEIR states). The cities of Redding, Anderson, and Cottonwood, and the Anderson Cottonwood Irrigation District (ACID) all overlie the most productive parts of the Redding groundwater

basin. Redding uses a mixture of surface- and groundwater. Anderson and Cottonwood both rely solely on groundwater. ACID currently relies solely on surface water.

Page 3.8-4, 3rd full ¶: The discussion of aquifer characteristics should be put in perspective. The writer should describe the aquifer's ability to transmit water as "good" or "bad" (or whatever would be the writer's opinion). Having conducted the testing, I would characterize the aquifer's ability to transmit water as "good" to "very good" – groundwater flows through the aquifer in this area well. Also, groundwater in the production well flows into the well mainly from the horizontal direction, not upward or downward. This is because the aquifer is constrained by clay layers that inhibit the vertical movement of water (although a small amount water still moves downward through the clay layers, whether or not the well is pumping).

SECTION 3.13 – UTILITIES AND SERVICE SYSTEMS

Page 3.13-1, 3rd ¶: Anderson Landfill is closer to site than West Central Landfill. Please clarify if the Anderson Landfill cannot be utilized.

Page 3.13-4, 3rd full ¶: Three regional aquifers have been delineated at the site, and there is at least one shallower aquifer, the perched zone, ranging from 11 to 25 feet below ground surface (bgs). There may be deeper zones (below 325 feet bgs), also.

The discussion of the static water level (about 52 feet bgs) for the deeper zone should be expanded to include a description of the depth of the aquifers. For example, although the static water level in the deeper aquifer is at 52 feet bgs, the actual aquifer is between 240 and 325 feet bgs (the upper aquifer extends from 108 to 125 feet bgs and the intermediate aquifer extends from 158 to 209 feet bgs).

Page 3.13-4, 4th full ¶: The discussion of the screened interval of the production well should include a definition of the "screened interval" (where groundwater enters the well casing). Similar to the discussion in the previous comment, the writer should clarify the distinction between where water enters the well and the static water level.

Page 3.13-5, 1st ¶: Please include a brief summary on how the water demand was calculated or upon what it is based so the reader does not have to search through the appendices as much.

Page 3.13-5, 2nd ¶: States that there are no applicable Federal regulations. There are Federal regulations that apply, although they are “administered” by the State, or the State has their own version. If Federal and State regulations do not match, then Federal regulations will apply. Perhaps a list of Federal regulations should be included here (e.g., the Clean Water Act).

Page 3.13-6, 5th ¶: We do not understand why the California Urban Water Management Planning Act (UWMPA) applies to this Project. The UWMPA applies to urban water suppliers providing water to 3,000 or more customers or more than 3,000 acre-feet of water annually. Please clarify.

Page 3.13-7, 2nd full ¶: The California Public Utilities Commission (CPUC) generally regulates private utility entities delivering utility services. If the Project’s water supply were to become part of a County Service Area (CSA), it would not be under CPUC authority.

Pages 3.13-8 & -9, Thresholds of Significance: Perhaps the last four bullets should be rewritten to match the intent of the prefatory sentence. For example, the fourth bullet would make more sense if it read “Have insufficient supplies...”.

Page 3.13-9, 1st full ¶: A wastewater technical memo, dated January 20, 2009 by Lawrence & Associates, titled “*Preliminary Wastewater Impacts Analysis for Knighton Road Development*” (L&A 1/20/09 Wastewater Technical Memo) was not provided by the applicant, but is attached hereto. This memo contains the technical details of the contaminant modeling and recommendations for wastewater treatment.

We believe the wrong standard for nitrate was used; this paragraph references a 5 mg/L standard in the State Water Resources Control Board (SWRCB) basin goals. The Basin Goals for the Sacramento/San Joaquin Basins do not contain a 5 mg/L standard. The Basin Goals reference §64431, Table 64431-A of Title 22 California Code of Regulations, which is the listing of Maximum Contaminant Levels (MCL) for various parameters. Table 64431-A lists the MCL for nitrate+nitrate as nitrogen at 10 mg/L (or 45 mg/L for nitrate as nitrate). The Project’s wastewater-treatment system will reduce the nitrogen concentrations in the effluent so that there will not be a statistically significant impact on the underlying groundwater (this will be the standard to which the State permit will hold the

Project). As concluded in the January 2009 Wastewater Memo by L&A, it is anticipated that this level will be well below the MCL.

Page 3.13-9, Mitigation Measure #3.13-1: This mitigation, as proposed, would require the Regional Water Quality Control Board (RWQCB) to “certify” the wastewater system. The RWQCB has no procedures or authority to “certify” wastewater systems. The RWQCB will issue Waste Discharge Requirements (WDR) which will describe the conditions under which the system may operate, require monitoring of various system components, and reporting of those results. The WDR also will contain provisions for penalties or limitations of system operations if the permit conditions are not met or monitoring results show exceedences of permit limits. The correct wording for this mitigation would be:

“The project proponent shall establish an appropriate mechanism to maintain and operate the on-site wastewater treatment facility in compliance with Regional Water Quality Control Board requirements as delineated in Waste Discharge Requirements that shall be issued for the facility.”

APPENDIX I – WATER SUPPLY ASSESSMENT

Page 4-1, 1st ¶: A more recent Technical Memo by Lawrence & Associates, dated January 20, 2009, titled “Update to Preliminary Water-Supply Impacts for Knighton Road Development” (L&A 1/20/09 Water Supply) has been attached for your evaluation and should be considered an update to the 5/12/08 memo.

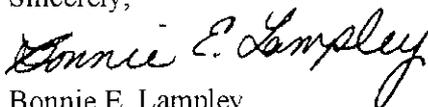
There are several incorrect values for water demand – 125 gallons per minute (gpm) should be 122 gpm; 400 gpm should be 337 gpm; 90 gpm should be 63 gpm; and 275 gpm should be 212 gpm.

Page 4-1, 5th ¶: States that historic agricultural consumptive use is estimated at about 193 acre-feet per year, or 2.1 acre-feet per acre. Please provide a reference or basis for this statement. For example, was data provided by ACID of delivered water or was data taken from published values for the area (e.g., from the *Shasta County Water Resources Master Plan, Phase I Report*).

- Page 4-2, 2nd ¶: For clarification, please add underlined phrase to “It is not anticipated that future water demands on the site well will exceed...”
- Page 5-1, 2nd ¶: Please clarify how the County provides residents with groundwater as the County has no intrinsic water rights to groundwater used by its citizens (other than beneath specific County-owned property), and the County does not directly supply water to most residents (the Shasta County Water Agency assists with some small County Service Area water suppliers). Each landowner in the County has an overlying right to use the groundwater beneath their land for beneficial uses.
- Page 5-3, 1st ¶: States that groundwater quantity will not vary significantly between wet and dry years, but does not define what “significant” is. Please clarify the quantitative analysis to define the significant level. Also, different aquifers will have different responses. The shallowest aquifers (and the wells in those aquifers) may be more depleted in extended droughts than would deeper aquifers.
- Page 5-3, 2nd ¶: Parts of the County reliant upon surface water delivered through the Central Valley Project (CVP) have experienced severe water shortages in the past. Groundwater users with wells that do not penetrate far enough into an aquifer or with wells in very shallow aquifers may have experienced problems during droughts. Please clarify the differing impacts between surface-water and groundwater supplies.
- Page 6-2, 2nd ¶: The water demand values in this paragraph reflect numbers from an early draft of our analysis (May 2008). Our January 2009 water-supply memo updated the initial figures, and should be used as the basis for the EIR:
- Average annual demand, total = 90 gpm
Maximum day demand, total = 122 gpm
Peak hour demand, total = 337 gpm
Maximum day demand, irrigation = 63 gpm
Peak hour demand, irrigation = 212 gpm

Please feel free to contact me if you have any questions regarding these comments.

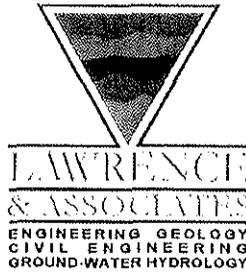
Sincerely,



Bonnie E. Lampley

Principal Hydrogeologist

Exhibit E-1



Technical Memo

To: Mr. Brian Huffaker, Hawkins Companies
From: Ms. Bonnie Lampley
CC: Mr. Paul Reuter, PACE Civil, Inc.
Date: January 20, 2009
Re: Update to preliminary water-supply impacts for Knighton Road development

Mr. Huffaker,

As you requested, this technical memo presents an update of the preliminary analysis of potential water-supply impacts from the Hawkins Companies proposed commercial development at Knighton Road and Interstate 5, Shasta County, California. We understand that the development will consist of approximately 741,000 square feet of commercial development, of which about 26,000 square feet will be restaurants and the remainder, retail.

We submitted our initial preliminary analysis to you in May 2008. The intent of the preliminary analysis was to provide initial information to the Shasta County Planning Department (Planning) for their preparation of a "Request for Proposals" for the Project's Environmental Impact Report (EIR). Planning has now selected a consultant to prepare the EIR, and you requested that we update the preliminary analysis to reflect current conditions.

As in the initial memorandum, we are providing no interpretation as to the significance of the potential water-supply impacts. The information presented herein is to be used by Shasta County and their consultant for the EIR.

The analysis is based solely on information from previous studies, information available in-house at L&A, and new information presented by PACE Civil, Inc. (Pace), in part as follows:

L&A, August 1998, rev. January 1999, *Well Installation, Aquifer Testing and Ground-Water Modeling for Flying J Knighton Road Travel Plaza Shasta County, California.*

L&A, August 2006, *Water-Supply Evaluation for the Proposed Shasta Regional Auto Mall, Knighton & I-5, Shasta County, California.*

Pace, May 2008, pers. comm., water demand calculations for Hawkins Companies development; January 16, 2009, memo re water and wastewater systems.

Project Water Demand

Based on information provided by Pace, the maximum-day demand (MDD) for non-irrigation needs will be approximately 122 gpm; and the peak demand (two-hour) will be approximately 337 gpm. For irrigation, Pace calculated a MDD of 63 gpm and a peak demand of 188 gpm. Peak demands will be met from storage, not directly from the well.

Pace calculated the maximum-day demands because that is the value on which water-system design is based. For long-term calculation of water-supply impacts, however, we also need the average-annual demand. We estimated the combined domestic and irrigation average-annual demand at 122 gpm, based on the conversion factor used in the California Waterworks Standards. The Waterworks Standards states that MDD should be at least 1.5 times the average-annual demand. Therefore, taking $122 \text{ gpm} + 63 \text{ gpm}$ and dividing by 1.5 gives an annual-average demand of 122 gpm.

The highest irrigation demand probably will occur at night, while the highest potable demand will occur during the day. Therefore, the potable and irrigation peak demands will not occur at the same time. For analysis of impacts, however, we will assume that both potable and irrigation maximum-day demands occur at the same time, and that the average-annual demands are additive. This approach is conservative and will not lead to underestimation of impacts.

Yearly, the Project would use about 200 acre-feet of water ($122 \text{ gpm} \times 1440 \text{ minutes/day} \times 365 \text{ days/year} \div 325,851 \text{ gallons/acre-foot}$). One acre-foot is the amount of water that would cover one acre, one-foot deep. A typical household uses up to one acre-foot of water per year.

Project Water Supply

Water for the Project will be supplied by an on-site water well. There is an existing 350-foot deep, 10-inch cased production well at the site; this well, and the associated observation wells, were installed and tested for the previously proposed Flying J truck-stop project. This well is planned to serve as the supply well for the current Project. **Figure 1** (attached) shows a site plan with the existing well locations.

Results from the Flying J drilling program showed at least three aquifer zones beneath the site – from 108 to 125 feet (“upper”), 158 to 209 feet (“intermediate”), and 240 to 330 feet (“lower”). The upper two zones are separated from the lower zone by a clay layer from 209 to 240 feet below ground surface. The Production Well was completed below the clay layer; the 81-foot-long screened interval extends from 244.5 to 325.5 feet bgs.

Static water levels in the upper and intermediate aquifers are about 30 feet bgs; water level in the lower aquifer is about 52 feet bgs. The similarity in water levels in the upper and intermediate aquifers suggests that these two zones could be considered as one aquifer.

During the aquifer test, maximum drawdown in the Production Well (pumping well) was approximately 33 feet after 24 hours of pumping at 500 gpm. Data from the aquifer test was used to calculate aquifer coefficients (transmissivity and storativity). The calculated transmissivity (approximately 37,500 to 49,500 gpd/foot) was similar to that observed for similar deposits in the

Redding ground-water basin. Calculated storativity (approximately 2.5 to 4.9×10^{-4}) was also similar to that observed for similar deposits in the Redding ground-water basin. The calculated storativity for the lower aquifer indicates that it is confined. Hydraulic conductivity (derived from transmissivity and taking into account aquifer thickness) in the lower aquifer ranged from approximately 60 to 80 feet/day. Vertical permeability in the clay zone between the intermediate and lower aquifers was calculated to be 0.093 gpd/square foot. This is equivalent to approximately 0.125 feet/day.

Well Interference

Interference is the decrease in water level in a well caused by the pumping of a neighboring well. The level of interference caused by pumping a well depends, in part, on the pumping rate, the length of time the pumping occurs, the distance between wells, and geologic conditions. Interference increases with increasing pumping rate and increasing pumping time. Interference will be greater for wells closer to a pumping well. Interference increases with decreasing hydraulic conductivity, which is dictated by geologic conditions.

Interference decreases when pumping decreases or stops. That is, interference can be considered a more-or-less immediate (within hours or days) impact that happens when a pumping well operates.

Because the Hawkins Companies Project will use the same well analyzed previously, we can use the same groundwater model set up for the Flying J and Auto Mall projects, and change the pumping rate to the current maximum-day and annual-average demands to predict groundwater impacts.

For the maximum-day demand of 184 gpm, the model shows about one foot of interference at 2,250 feet (0.4 miles) from the well and about six inches at 4,050 feet (0.8 miles) (**Figure 2**). For the annual-average demand of 122 gpm, the model shows about one foot of interference at 1,200 feet (0.2 miles) from the well and about six inches at 3,000 feet (0.6 miles) in the deep aquifer (**Figure 3**).

In all scenarios, the model shows no detectable interference in the upper and intermediate aquifers. Although interpretation of the 1998 well-testing data suggested that there could be interference in the intermediate aquifer from pumping the deep aquifer, recharge of the treated wastewater for the current Project will ameliorate those effects. Because most domestic wells in the area are screened in the upper or intermediate aquifers, most of the domestic wells would not experience interference from the Project well. Current seasonal variation of water levels is about 20 to 25 feet in the area.

Groundwater Availability

In addition to the relatively short-term or immediate impacts from interference, long-term availability impacts must be considered. If withdrawals from a groundwater basin are greater than long-term recharge (replenishment of the water), "overdraft" occurs. One result of overdraft is declining groundwater levels, usually over a period of years. Therefore, Project water use must be compared to the quantity of water in the aquifer and the amount of annual recharge.

The groundwater budget for the Redding basin as a whole was estimated in the Shasta County Water Resources Master Plan.¹ Total inflow into the groundwater system of the Redding basin is estimated to be 293,600 acre-feet. Groundwater discharge from the basin is estimated to be about 37,300 acre-feet from pumping and about 266,000 acre-feet to surface streams.

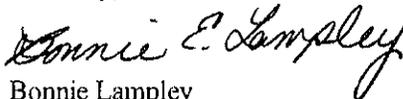
The total water demand in the Redding basin as of the date of the Shasta County Water Resources Master Plan (1997) was 280,460 acre-feet. This demand was met mainly with surface water. The projected demand estimated for the year 2030 is 342,350 acre-feet, or an increase of about 62,000 acre-feet. To conservatively estimate groundwater-availability impacts, we will assume that all of the additional year 2030 demand will be supplied by groundwater. This gives a total groundwater pumpage for the year 2030 of 99,300 acre-feet (62,000 + 37,300 acre-feet).

Current total pumpage in the Redding Basin is about 13% of groundwater recharge (37,300 ÷ 293,600 acre-feet). Estimated total future pumpage would be about 33% of groundwater inflow/recharge (99,300 ÷ 293,600 acre-feet). Pumping from the Project (200 acre-feet/year) would be about 0.07% of total Redding basin groundwater inflow.

Note that the net amount of water that the Project will remove from the groundwater basin will be less than the 200 acre-feet/year pumped. About 90 acre-feet/year will be returned to the basin from recharge of the treated wastewater. Thus, the net withdrawal will be about 110 acre-feet per year.

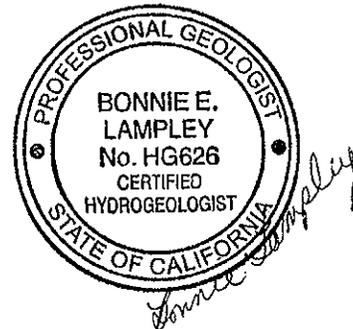
Please feel free to contact me if you have additional questions regarding this memo.

Sincerely,

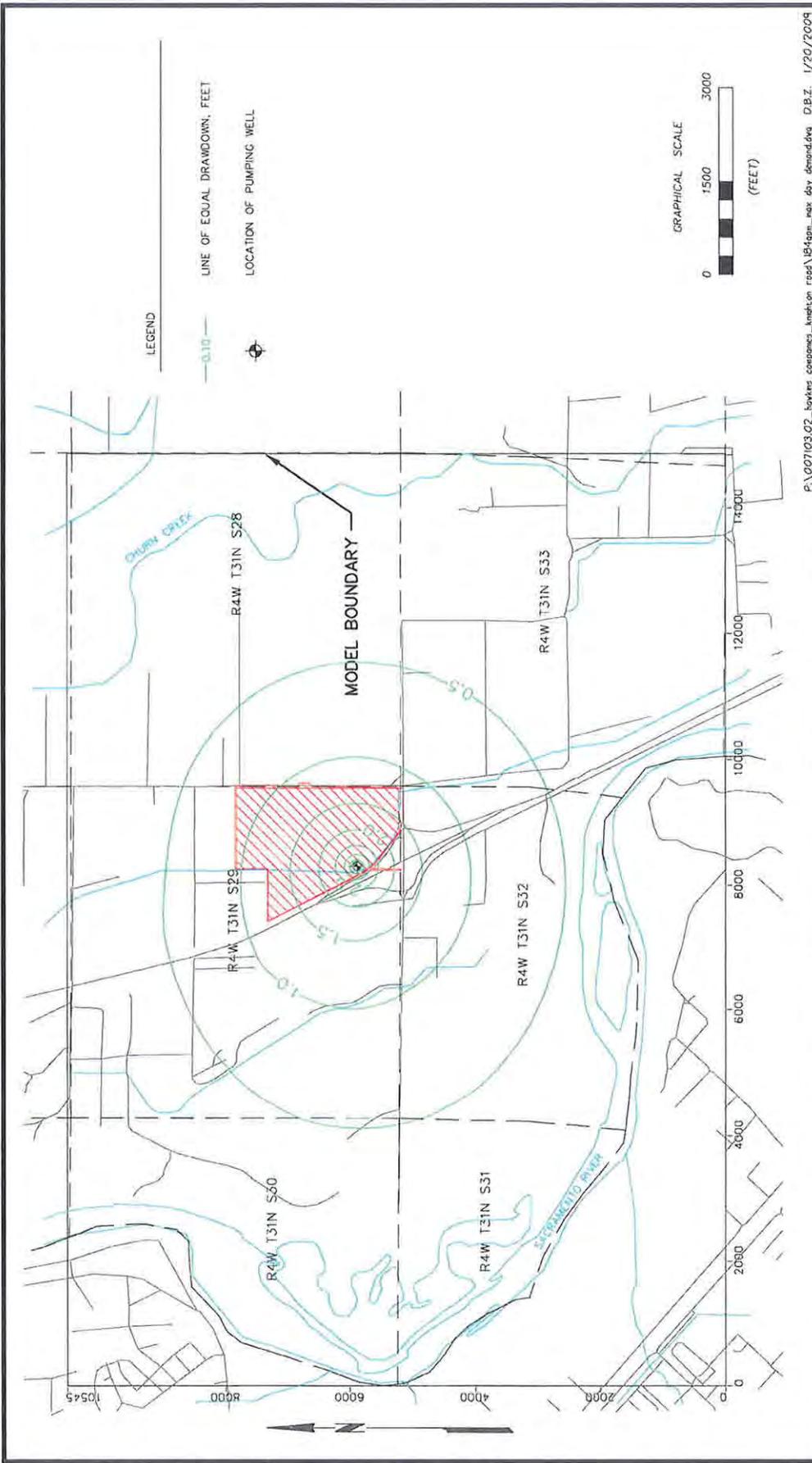


Bonnie Lampley
Principal Hydrogeologist

enc.: Figure 1. Site plan showing well locations
Figure 2. Predicted drawdown at maximum-day demand
Figure 3. Predicted drawdown at annual-average demand

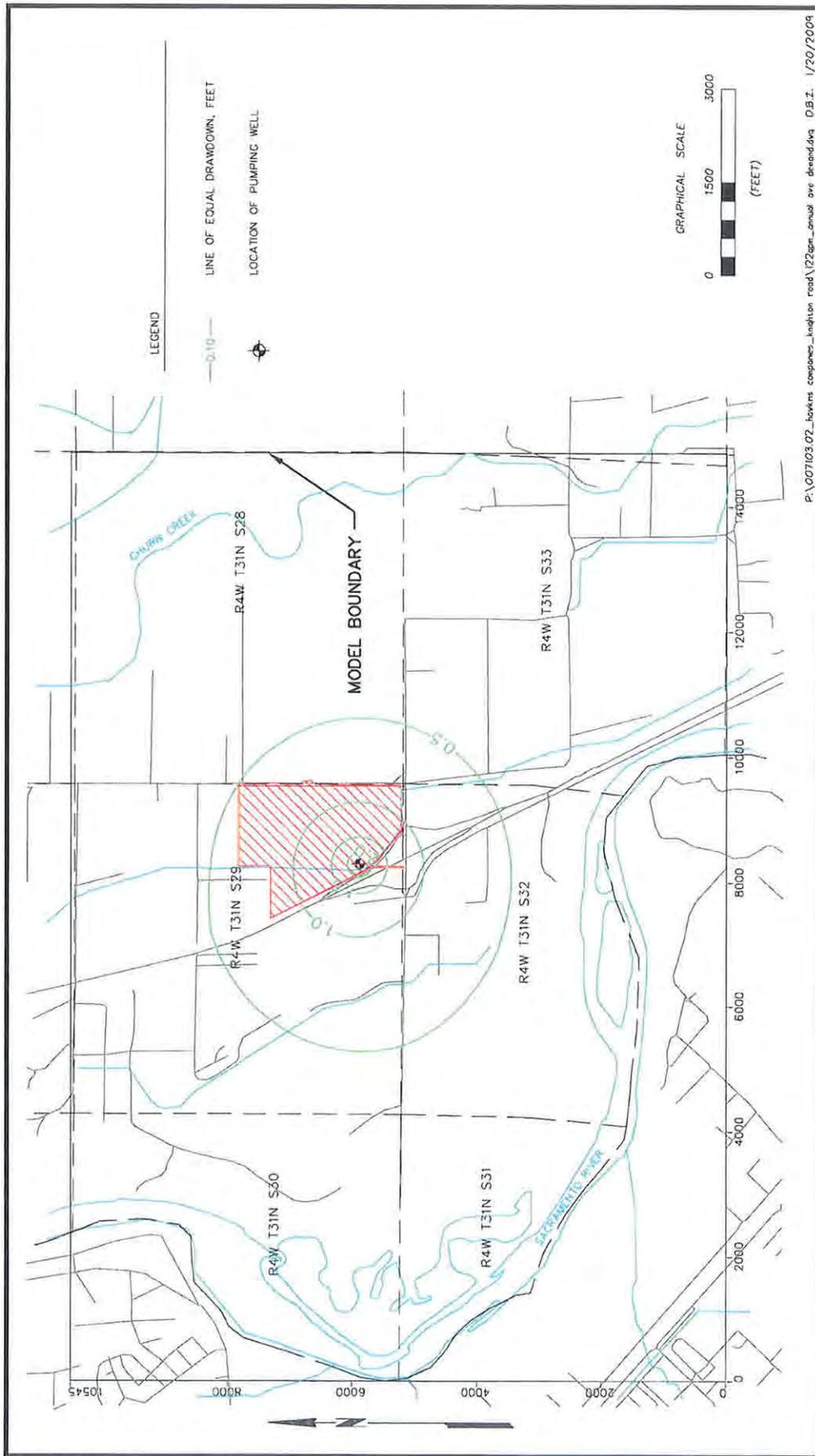


¹ Shasta Co. Water Agency, CH2M Hill, 1997, *Shasta County Water Resources Master Plan, Phase I Report, Current and Future Water Needs*, Figure 19 and pp. 101 – 103.



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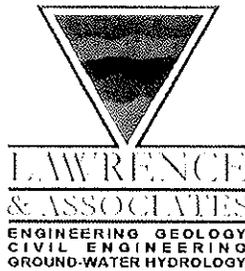
<p>CLIENT: HAWKINS COMPANIES</p>	<p>PROJECT: WATER SUPPLY</p>	<p>DRAWN BY: D. ZAITZ</p>	<p>CHECKED BY: B. LAMPLEY</p>	<p>LAWRENCE & ASSOCIATES 2001 MARKET STREET, RM. 923 REDDING, CA 96001 PHONE (530) 244-9703 FAX (530) 244-5021</p>	<p>SCALE: 1" = 1500'</p>
				<p>PREDICTED DRAWDOWN AT MAXIMUM DAY DEMAND (184 GPM FOR 30 DAYS)</p>	<p>DATE: 1/20/09</p>
				<p>JOB NO.: 007103.02</p>	<p>FIGURE 2</p>



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<p>CLIENT: HAWKINS COMPANIES</p>	<p>PROJECT: WATER SUPPLY</p>	<p>LAWRENCE & ASSOCIATES 2001 MARKET STREET, RM. 523 REDDING, CA 96001 PHONE (530) 244-9703 FAX (530) 244-3021</p>	<p>SCALE: 1"=1500'</p>
		<p>DATE: 1/20/09</p>	<p>DATE: 1/20/09</p>
		<p>DRAWN BY: D. ZAITZ</p>	<p>CHECKED BY: B. LAMPLEY</p>
		<p>FIGURE 3</p>	

Exhibit E-2



Technical Memo

To: Mr. Brian Huffaker, Hawkins Companies
From: Ms. Bonnie Lampley
CC: Mr. Paul Reuter, PACE Civil, Inc.
Date: January 20, 2009
Re: Preliminary wastewater impacts analysis for Knighton Road development

Mr. Huffaker,

As you requested, this technical memo presents an update of the preliminary analysis of potential wastewater-disposal impacts from the Hawkins Companies proposed commercial development at Knighton Road and Interstate 5, Shasta County, California. We submitted our initial preliminary analysis to you in May 2008. We understand that the development will consist of approximately 741,000 square feet of commercial development, of which about 26,000 square feet will be restaurants and the remainder, retail.

The intent of the preliminary analysis was to provide initial information to the Shasta County Planning Department (Planning) for their preparation of a "Request for Proposals" for the Project's Environmental Impact Report (EIR). Planning has now selected a consultant to prepare the EIR, and you requested that we update the preliminary analysis to reflect current conditions.

As in the initial memorandum, we are providing no interpretation as to the significance of the potential wastewater-disposal impacts. The information presented herein is to be used by Shasta County and their consultant to develop appropriate inquiries for the EIR.

The analysis is based solely on information from previous studies, information available in-house at L&A, and new information presented by PACE Civil, Inc. (Pace), in part as follows:

L&A, February 1999, *Effects of Wastewater Disposal on Ground Water at Flying J Knighton Road Travel Plaza Shasta County, California.*

L&A, October 2001, *Trenching, Piezometer Installation, Groundwater Elevation Monitoring, and Groundwater Mounding Assessment, Flying J Knighton Road Site, Shasta County, California.*

L&A, August 2006, *Wastewater Evaluation for the Proposed Shasta Regional Auto Mall, Knighton & I-5, Shasta County, California.*

Pace, May 2008 and December 2008, pers. comm., wastewater generation calculations and percolation-testing results for Hawkins Companies development.

The following discussion does not include reiteration of the development of models or other analytical tools used in these reports. Please refer to the original documents for that background information.

Project Wastewater Generation, Treatment, and Disposal

Based on information provided by Pace, wastewater generation will be about 80,000 gallons per day. The wastewater will be treated so that the nitrate as nitrogen (N) level of the effluent going to the disposal field will be approximately 3 mg/L. The Maximum Contaminant Level for nitrate as N is 10 mg/L.

After treatment, the wastewater will be disposed to an on-site leachfield in the northern part of the Project site. The preliminary layout showed a 400-foot × 400-foot square leachfield area. The size was based on the average measured percolation rate of 10 minutes per inch. It did not account for groundwater mounding or quality effects. After considering both groundwater mounding and quality effects, we calculated that an approximately 562-foot × 566-foot area would be required to minimize groundwater mounding effects. **Figure 1** shows the leachfield and backup location.

Groundwater Mounding

Groundwater mounding refers to the development of an area of high groundwater level beneath a leachfield (or any area of water discharge). If the amount of wastewater that is discharged to a leachfield is greater than the amount of water that can move through the soil and away from the disposal site, groundwater levels will become higher. As water levels rise, a groundwater mound develops and becomes higher with time. The groundwater mound increases the slope of the water table so that water moves more rapidly through the soil. A groundwater mound will continue to steepen until equilibrium is reached or the mound reaches the discharge point (the leachfield, in this example). If the mound reaches the leachfield, the leachfield will “fail” (it won’t be able to discharge any more wastewater and water will back up into the system).

To evaluate groundwater mounding beneath the proposed leachfield, we used the Hantush equation. The Hantush equation calculates the rise in groundwater height beneath a rectangular recharge area that is underlain by a shallow water table. The Hantush equation takes into account soils characteristics (percolation rate, specific yield), depth to groundwater, depth to a low-permeability layer below groundwater, the size of the recharge area, and the recharge rate. **Attachment A** contains the calculation of groundwater mounding for this Project, using the 562-foot × 566-foot leachfield size.

For the calculation, we used a percolation rate of 10 minutes per inch (per Pace). We assumed a depth to water based on previous (2001 and 2002) and current (July 2008 to present) shallow groundwater monitoring at the site. **Figure 2** shows a graph of that data; **Table 1** shows the data.

Table 1: Depth to Water in Shallow Piezometers

Date	Previous Piezometers			New Piezometers In Area of Proposed Leachfield					
	P-1	P-2	P-3	P-6	P-7	P-8	P-9	P-10	P-11
	(feet below ground surface)								
7/14/2008	13.70	13.20	13.11	13.11	12.60	13.03	12.74	12.99	12.27
7/28/2008	13.78	13.28	13.16	13.41	12.89	13.24	12.96	13.20	12.54
8/11/2008	13.76	13.27	13.15	13.40	12.87	13.24	12.96	13.20	12.53
8/26/2008	13.84	13.32	13.17	13.49	12.95	13.30	13.00	13.22	12.49
9/10/2008	13.89	13.37	13.19	13.60	13.03	13.36	13.05	13.28	12.55
9/22/2008	13.86	13.34	13.21	13.60	13.06	13.42	13.13	13.37	12.62
10/8/2008	13.35	12.91	12.82	12.64	12.21	12.78	12.68	13.22	12.42
10/17/2008	13.65	13.15	12.99	13.78	13.18	13.55	13.33	13.83	12.95
11/4/2008	15.57	15.14	Dry	16.44	15.88	16.32	16.17	16.81	15.89
11/18/2008	15.63	16.87	Dry	18.22	17.77	18.26	18.10	18.69	17.83
12/2/2008	15.60	18.51	Dry	19.78	19.41	19.95	19.83	20.39	19.11
12/15/2008	15.61	Dry	Dry	21.32	21.07	21.60	Dry	Dry	Dry
12/29/2008	15.62	Dry	Dry	19.83	19.47	19.98	Dry	Dry	Dry
Calculation of Confidence Intervals for Depth to Water During Irrigation Season									
Significance Level	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Standard Deviation	0.17	0.15	0.13	0.36	0.31	0.24	0.21	0.24	0.19
Number	8	8	8	8	8	8	8	8	8
99% Confidence Interval	13.73 ± 0.16	13.23 ± 0.13	13.10 ± 0.12	13.38 ± 0.32	12.85 ± 0.28	13.24 ± 0.22	12.98 ± 0.19	13.29 ± 0.22	12.55 ± 0.18

Figures 3 and 4 show maps of the shallow groundwater gradient (assumed to be the direction of shallow groundwater movement) for July and December 2008. The direction of the shallowest groundwater gradient is to the south. This makes the proposed leachfield area upgradient of the rest of the Project property and downgradient of most residential areas surrounding the site.

In the area of the proposed leachfield, shallow groundwater level has ranged between 12.21 and 21.32 feet below ground surface (bgs). As observed previously at the site, the highest water levels occur during the irrigation season, and remain high for about four months. The average high water level in the leachfield area was 13.05 feet bgs this summer. Based on a 99% confidence interval, the average high water level was 13.28 feet bgs.

Because this year (and last) have been drier than normal, current water levels may be lower than normal. Therefore, we compared current water levels to previous water levels from 2001 and water-year 2002 which had slightly higher than normal precipitation. We used data from piezometers P-1, -2, and -3, which have overlapping data sets. In 2002, water levels were about two feet higher than this year. Therefore, to calculate mounding, we added two feet to the water levels measured this year, to account for wetter-than-normal periods. Thus, the base water level assumed for the proposed leachfield area is 11 feet bgs.

We first calculated mounding using the preliminary leachfield area of 400-feet \times 400-feet and a time period of 120 days (the period during the irrigation season when water levels are highest). This calculation showed a separation between the bottom of the leachfield (assumed to be one foot bgs) and groundwater of 2.1 feet. While this suggests that a leachfield this size would not fail, the separation is less than three feet. The Regional Water Quality Control Board (RWQCB), who will have permitting authority for this system, has a general guideline of five feet of separation at a minimum for untreated wastewater, down to three to four feet for highly treated effluent, such as proposed here.

The maximum size for a leachfield in the designated area is 562 feet \times 566 feet (7.3 acres; one-half of the designated area for primary and backup leachfields). At this size, the separation would be about 4 feet in the middle of the leachfield (where the mound would be highest).

In addition to separation from the leachfield itself, the groundwater mound cannot intercept the bottom of the proposed stormwater ditch that will run along the north and east sides of the leachfield. Comparing the groundwater-mound elevations (ground-surface elevation minus depth to the top of the mound) to the elevation of the bottom of the stormwater ditch (supplied by Pace) shows that the groundwater mound will not intercept the ditch. **Figure 5** shows a graph comparing the predicted groundwater-mound elevation to that of the bottoms of the stormwater ditch and leachfield.

Groundwater Quality

Groundwater quality impacts could come from downward migration of contaminants or other compounds below the leachfield. To evaluate this potential impact, we used the groundwater model previously developed for the site. The model is a three-dimensional, numerical model using the publicly available program ModFlow, developed by the United States Geological Survey.

To model the proposed leachfield, we added a recharge area 562 \times 566 feet in size. The recharge rate was set at 147 inches per year $[(80,000 \text{ gallons/day} \div 7.48 \text{ gallons/cubic foot}) \div 318,092 \text{ square feet} \times 12 \text{ inches/foot} \times 365 \text{ days/year}]$. The recharge concentration was set at 3 mg/L, assumed to be nitrate+nitrite as N. The model was run for 30 years, at this recharge rate and concentration.

The modeling shows the following (**Figures 6, 7, and 8**):

- ✦ In the uppermost, perched aquifer nitrate attributable to the Project wastewater could extend up to 900 feet from the north and west property lines, and up to 1,800 feet from the east property line; detectable levels would not extend past the southern property line (**Figure 6**). There should be no drinking-water wells completed in this zone, because all wells must have a minimum 20-foot surface seal. That is, this zone should be sealed off in nearby drinking-water wells.
- ✦ In the upper aquifer within about 400 feet of the northern property line, nitrate from Project wastewater would be between 1 mg/L and nondetected (**Figure 7**). In the upper aquifer to the south and east, nitrate attributable to Project wastewater could extend to about 2,000 feet from the property line. Detectable nitrate from Project wastewater would not extend past the western property line in the upper aquifer.

- ✦ In the intermediate aquifer, detectable levels of nitrate from Project wastewater will not extend past the north or west property lines (**Figure 8**). Nitrate levels between 1 mg/L and nondetectable may extend up to 1,600 feet from the eastern property line.
- ✦ Domestic wells to the south, completed in the intermediate aquifers within about 300 feet of the Project property line could capture less than 0.1 mg/L nitrate from the Project; detectable levels could extend to the south for about 2,000 feet (0.4 miles).
- ✦ Detectable levels of nitrate from the Project wastewater will not occur in the deep aquifer.
- ✦ The existing site well would not capture detectable levels of nitrate from the Project.

Note that current background concentration beneath the site is about 2 mg/L, in the uppermost saturated interval (perched groundwater). This is based on data collected from the site's piezometers in 2008. The intent of that sampling was to characterize total nitrogen concentrations beneath the Project site. **Table 2** shows those results; **Figure 9** shows a map of the results from the July sampling event:

Table 2: Nitrogen Sampling Results

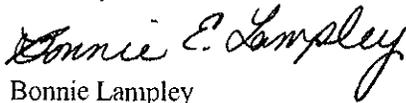
		Nitrogen, Total	Nitrate+Nitrite	Total Kjeldahl N
		(mg/L)	(mg/L)	(mg/L)
P-1	7/14/2008	2.25	2.05	0.2
P-1	8/13/2008	4.91	1.21	3.7
P-2	8/13/2008	4.13	2.53	1.6
P-3	7/14/2008	7.58	6.98	0.6
P-3	8/13/2008	12.00	5.14	6.9
P-6	7/14/2008	4.40	0.20	4.2
P-6	8/13/2008	0.43	0.03	0.4
P-7	8/13/2008	6.45	0.65	5.8
P-8	8/13/2008	0.59	0.09	0.5
P-9	7/14/2008	2.05	2.05	<0.5
P-9	8/13/2008	5.34	2.24	3.1
P-10	7/14/2008	1.41	1.21	0.2
P-10	8/13/2008	1.42	0.32	1.1
P-11	8/13/2008	43.2	0.06	43.1
Mean		4.07	1.90	2.36
Median		4.13	1.21	1.35
75th percentile		5.34	2.24	3.83
95th percentile		9.35	5.88	6.30
Standard deviation		3.29	2.07	2.34
Confidence		95%	95%	95%
95% confidence interval		1.79	1.13	1.32
Mean lies between		2.28 and 5.86	0.77 and 3.03	1.04 and 3.68

Note: P-11 not used in calculations because it is significantly different than other values.

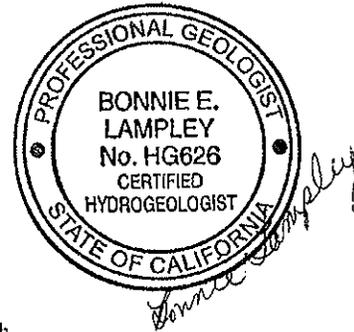
While it is unlikely that all areas of the model domain have average nitrate+nitrite concentrations of 2 mg/L, this value does not seem unreasonable given the number of domestic wastewater disposal systems and agriculture in the area. Assuming a background concentration of about 2 mg/L, the Project's wastewater is unlikely to have a detectable effect on the perched aquifer. Because the Project wastewater will be at about the same concentration as background once it reaches groundwater, it will essentially "blend in" with background.

Please feel free to contact me if you have additional questions regarding this memo.

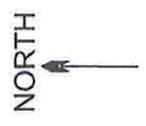
Sincerely,



Bonnie Lampley
Principal Hydrogeologist

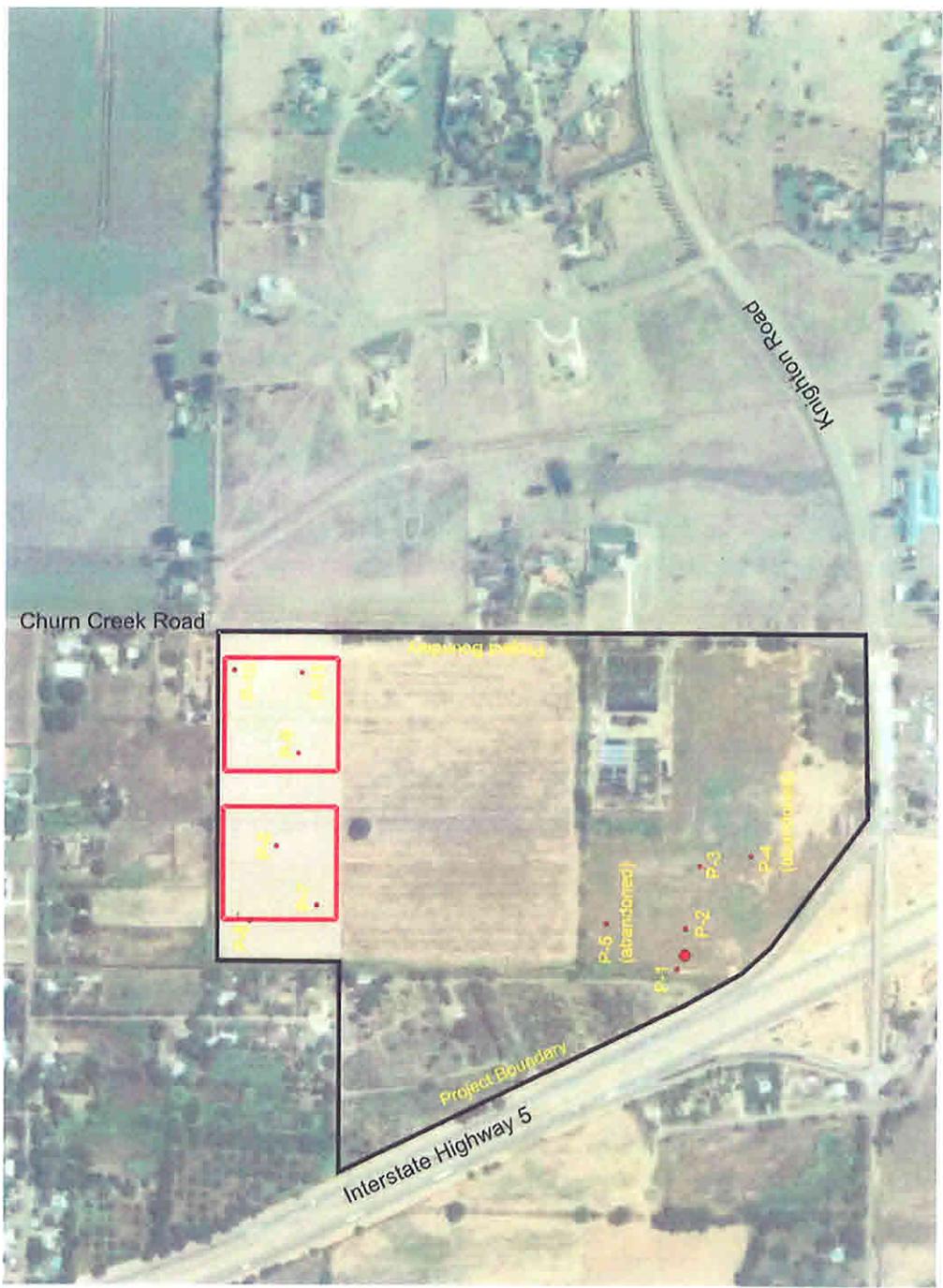


- enc.:
- Figure 1. Site plan showing well and leachfield location
 - Figure 2. Hydrographs of shallow groundwater
 - Figure 3. Shallow groundwater-elevation contour map, July 2008
 - Figure 4. Shallow groundwater-elevation contour map, December 2008
 - Figure 5. Comparison of groundwater-mound elevation to stormwater ditch
 - Figure 6. Map of nitrate & nitrite as N and Total Kjeldahl nitrogen
 - Figure 7. Modeled nitrate concentrations in perched groundwater
 - Figure 8. Modeled nitrate concentrations in the upper aquifer
 - Figure 9. Modeled nitrate concentrations in the intermediate aquifer



- Proposed Primary and Backup Leachfields
- Water-Supply Well
- Piezometer

Scale ~ 1 inch = 800 feet.
 0' 800'



SITE MAP SHOWING APPROXIMATE LOCATIONS OF WATER-SUPPLY WELL AND WASTEWATER-DISPOSAL LEACHFIELD	SCALE: 1 INCH ~ 800 FEET DATE: JANUARY 20, 2009 JOB NO.: 007103.01	LAWRENCE & ASSOCIATES 2001 MARKET STREET, ROOM 523 REDDING, CALIFORNIA 96001 PHONE: (530) 244-9703 FAX: (530) 244-5021 DRAWN BY: B. LAMPLEY
CLIENT: HAWKINS COS.	PROJECT: WATER & WASTEWATER MODELING	FIGURE 1

KNIGHTON ROAD & I-5 SITE DEPTH TO SHALLOW GROUNDWATER - 2008

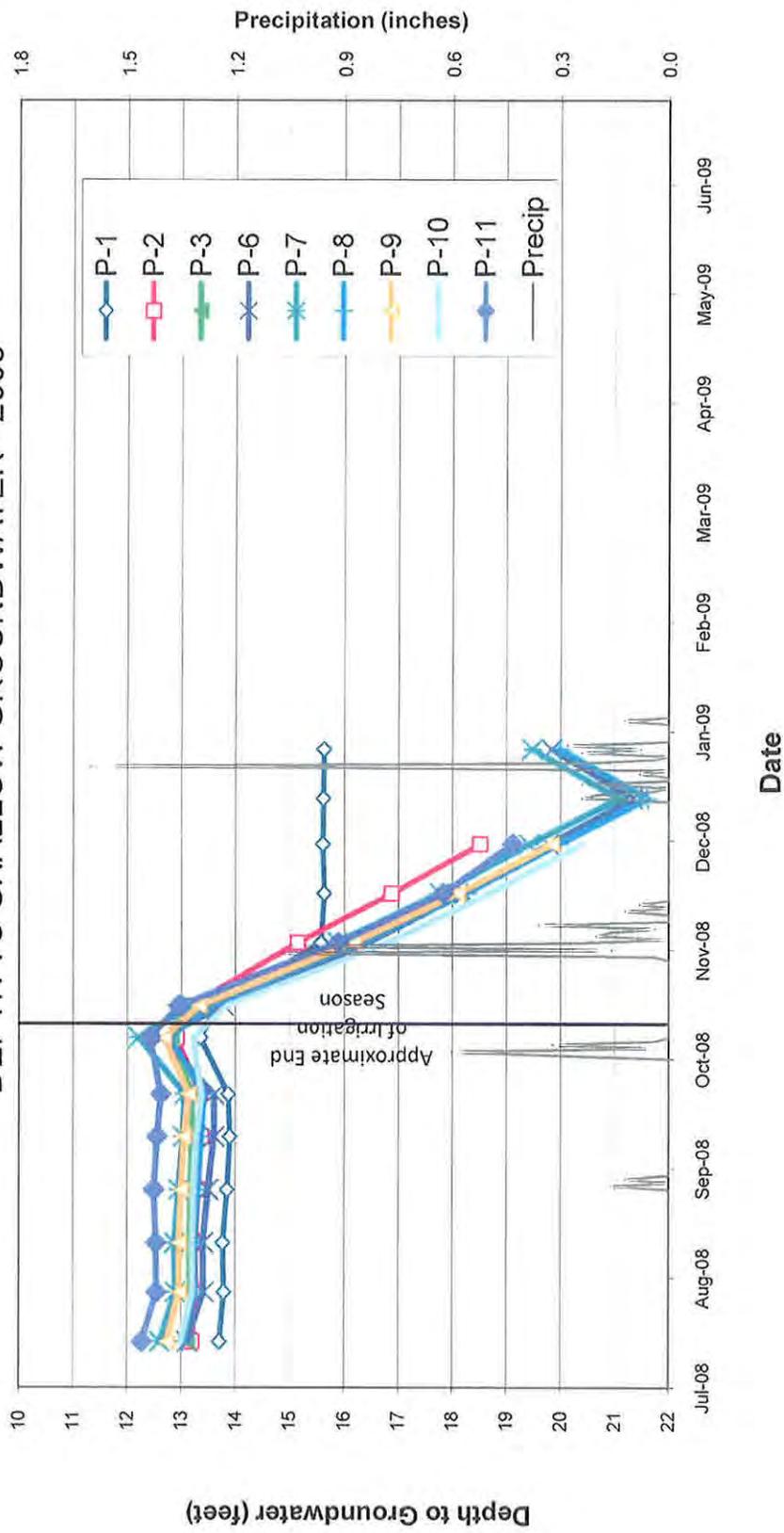


FIGURE 2



GROUNDWATER ELEVATION CONTOUR MAP		LAWRENCE & ASSOCIATES		SCALE 1 INCH = 200 FEET	
JULY 28, 2008		2001 MARKET STREET RM. 523 REDDING, CA 96001		DATE: 12-05-08	
PROJECT: KNIGHTON ROAD DEVELOPMENT		PHONE (530) 244-5703 FAX (530) 244-5021		JOB NO.: 007103.01	
CLIENT: HAWKINS COMPANIES	DRAWN BY: D. ZAITZ	CHECKED BY: B. LAMPLEY	FIGURE 3		



GROUNDWATER ELEVATION CONTOUR MAP DECEMBER 2, 2008		SCALE: 1 INCH = 200 FEET DATE: 12-05-08 JOB NO.: 007103.01
CLIENT: HAWKINS COMPANIES	PROJECT: KNIGHTON ROAD DEVELOPMENT	CHECKED BY: B. LAMPLEY
DRAWN BY: D. ZAITZ		FIGURE 4
LAWRENCE & ASSOCIATES 2001 MARKET STREET, RM. 523 REDDING, CA 96001 PHONE (530) 244-8703 FAX (530) 244-5021		

Groundwater, Stormwater Ditch, & Ground Surface Elevations Hawkins Companies Knighton Road Leachfield

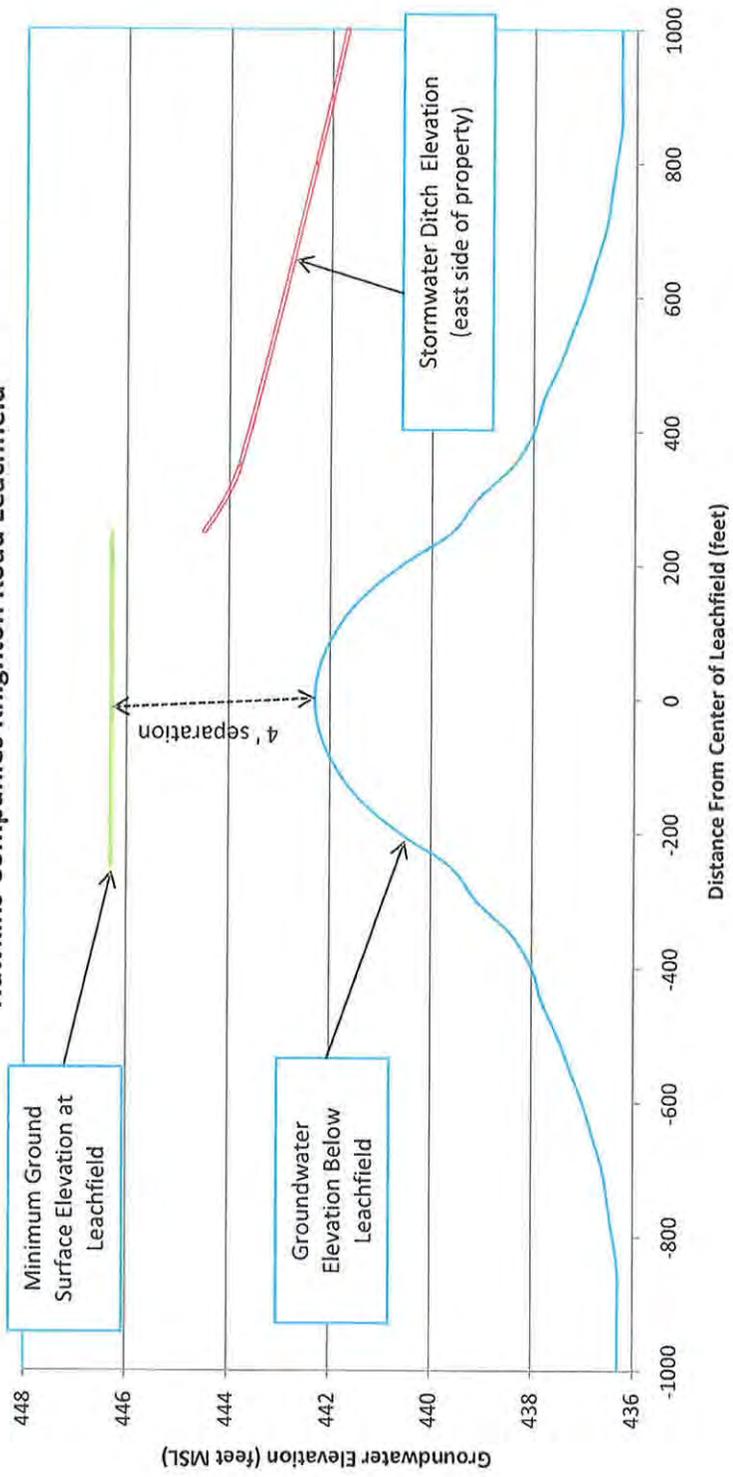


FIGURE 5



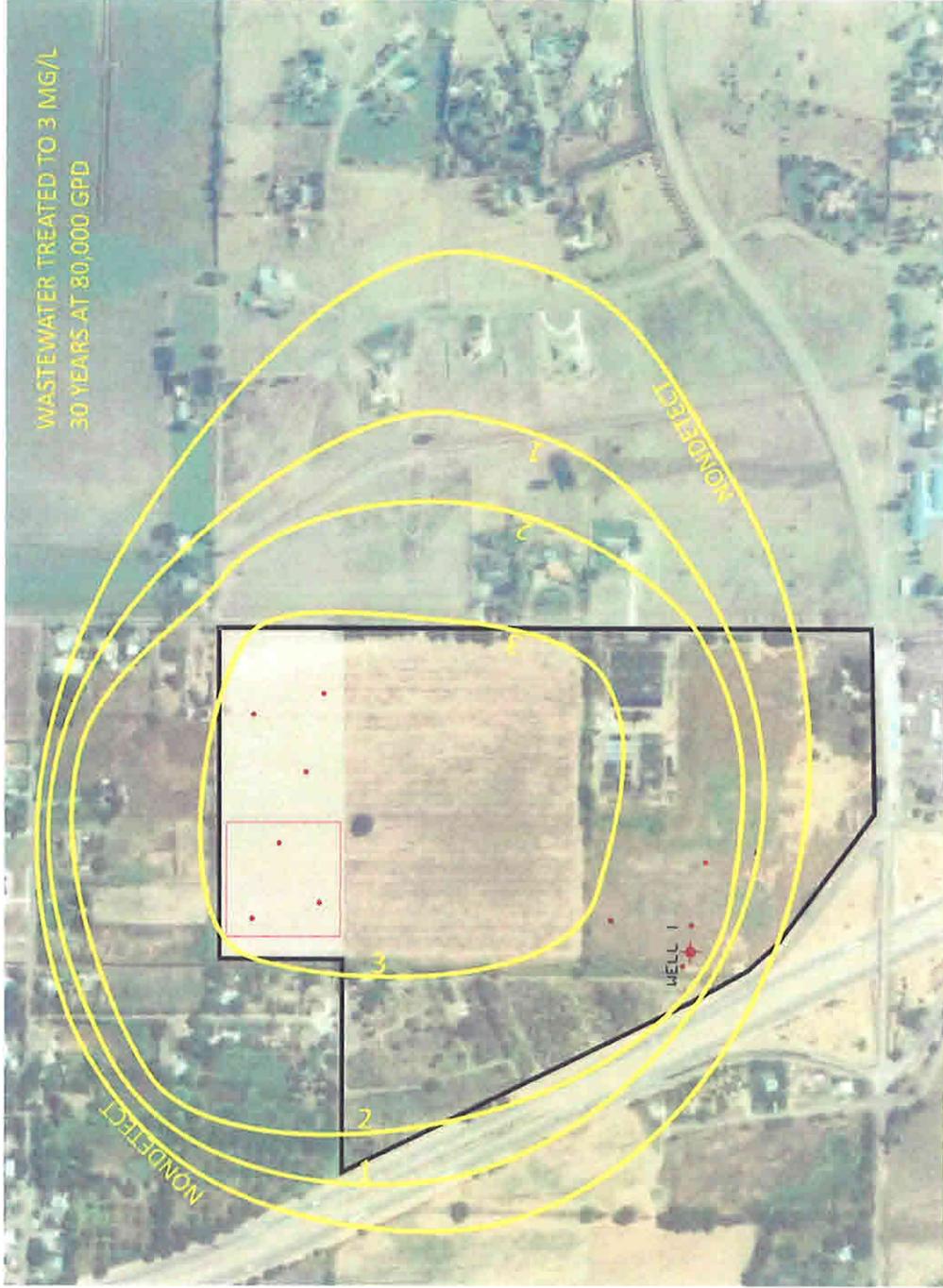
Line of equal nitrate+nitrite concentration, mg/L

1 mg/L

Nondetect = Current analytical detection limit of 0.1 mg/L

Piezometer

Scale ~ 1 inch = 800 feet.



CLIENT: HAWKINS COS.	PROJECT: WASTEWATER MODELING	SCALE: 1 INCH ~ 800 FEET
		DATE: JANUARY 20, 2009
		JOB NO.: 007103.01
DRAWN BY: B. LAMPLEY		FIGURE 6

NITRATE CONCENTRATION IN PERCHED AQUIFER
 ATTRIBUTABLE TO WASTEWATER
 BACKGROUND CONCENTRATION ~ 2 MG/L

LAWRENCE & ASSOCIATES
 2001 MARKET STREET, ROOM 523
 REDDING, CALIFORNIA 96001
 PHONE: (530) 244-9703
 FAX: (530) 244-5021



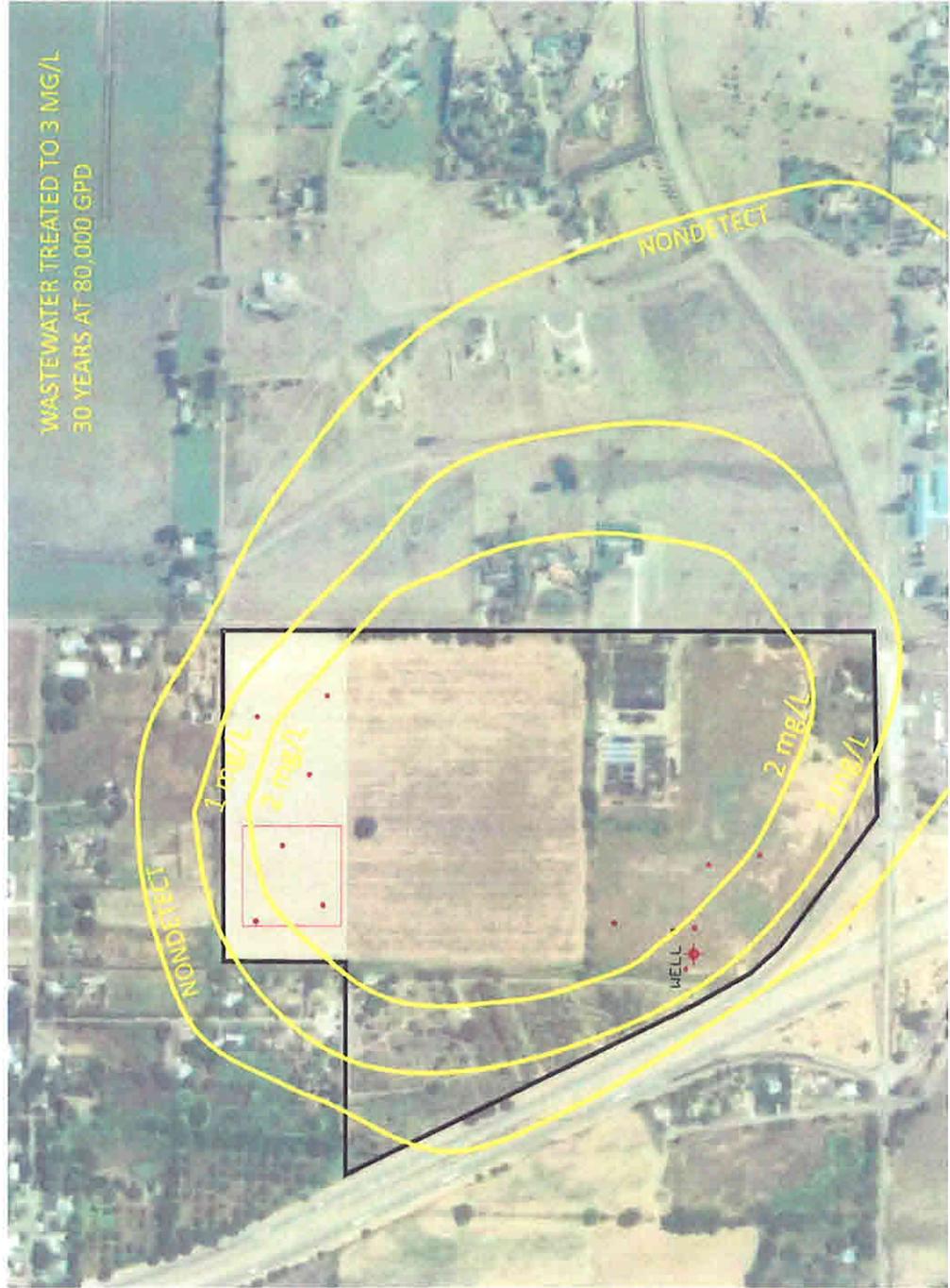
Line of equal nitrate+nitrite concentration, mg/L

1 mg/L

Nondetect = Current analytical detection limit of 0.1 mg/L

Piezometer

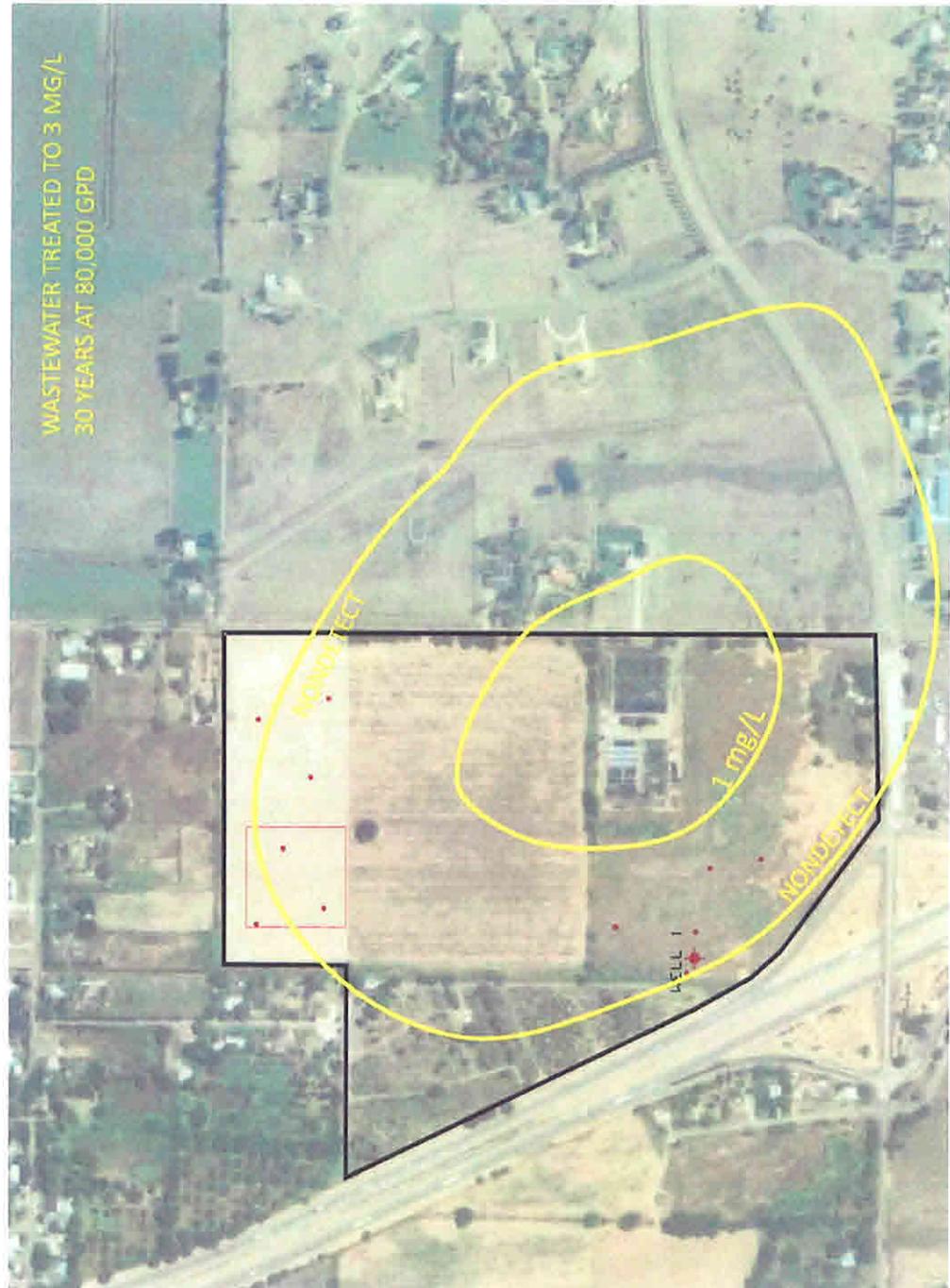
Scale ~ 1 inch = 800 feet.



CLIENT: HAWKINS COS.	PROJECT: WASTEWATER MODELING	DRAWN BY: B. LAMPLEY	SCALE: 1 INCH ~ 800 FEET
	NITRATE CONCENTRATION IN UPPER AQUIFER ATTRIBUTABLE TO WASTEWATER BACKGROUND CONCENTRATION ~ NONDETECT	LAWRENCE & ASSOCIATES 2001 MARKET STREET, ROOM 523 REDDING, CALIFORNIA 96001 PHONE: (530) 244-9703 FAX: (530) 244-5021	DATE: JANUARY 20, 2009
	NITRATE CONCENTRATION IN UPPER AQUIFER ATTRIBUTABLE TO WASTEWATER BACKGROUND CONCENTRATION ~ NONDETECT	FIGURE 7	JOB NO.: 007103.01

NORTH

WASTEWATER TREATED TO 3 MG/L
30 YEARS AT 80,000 GPD



Line of equal nitrate+nitrite concentration, mg/L

1 mg/L

Non-detect = Current analytical detection limit of 0.1 mg/L

Piezometer

Scale ~ 1 inch = 800 feet



NITRATE CONCENTRATION IN INTERMEDIATE AQUIFER
ATTRIBUTABLE TO WASTEWATER
BACKGROUND CONCENTRATION ~ NONDETECT

LAWRENCE & ASSOCIATES
2001 MARKET STREET, ROOM 523
REDDING, CALIFORNIA 96001
PHONE: (530) 244-9703
FAX: (530) 244-5021

SCALE: 1 INCH ~ 800 FEET
DATE: JANUARY 20, 2009
JOB NO.: 007103.01

CLIENT: HAWKINS COS.

PROJECT: WASTEWATER MODELING

DRAWN BY: B. LAMPLEY

FIGURE 8



NITRATE & NITRITE AS NITROGEN AND TOTAL KJELDAHL NITROGEN JULY 28, 2008		SCALE: 1 INCH = 200 FEET DATE: 12-05-08 JOB NO.: 007103.01
CLIENT: HAWKINS COMPANIES	PROJECT: KNIGHTON ROAD DEVELOPMENT	DRAWN BY: D. ZAITZ CHECKED BY: B. LAMPLEY
LAWRENCE & ASSOCIATES 2001 MARKET STREET, RM. 523 REDDING, CA. 96001 PHONE (530) 244-5703 FAX (530) 244-5021		FIGURE 9

ATTACHMENT A
GROUNDWATER-MOUNDING CALCULATIONS

**Hantush Analytical Method to Determine Height of Mounding in
Response to Vertically Downward Recharge from a Rectangular Area**

**From: *Septic Tank System Effects on Ground Water Quality*,
Canter, L.W. and Knox, R. C., 1986.**

(Enter data only in yellow-shaded cells)

Site: Knighton Road - Hawkins Companies

Scenario: 120 days with water table starting at 11 feet below leachbeds

Application rate of 0.25 gpd/sq. foot; 80000 gpd

Water table rise = $(W_m * t) / (30 * Sy) * \text{SUM}(W^*(a_n, b_n)) =$ **6.0 feet**

Water table height = Water table rise + Initial w.t. height = **30.0 feet**

Depth to water = 35 feet - water table height = **5.0 feet**

Depth to bottom of leach beds = **1.0 feet**

Separation between leachbed and groundwater **4.0 feet**

7.3 acres or 562-foot x 566-foot leachfield area for indicated separation.

where:

b	35	thickness of layer above aquiclude, feet (incl. additional soil)
wl	11	depth to water table, feet
h _i	24	initial height of water table above aquiclude, feet (35' below original ground)
W _m	0.25	recharge rate, gpd/sq. ft.
t	120	time after recharge starts, days
Sy	0.3	specific yield
K	12.0	hydraulic conductivity, feet/day (90 gpd/ft ² or 10 mpi)
T	2149	transmissivity, gpd/ft
a _m	281	one-half length of recharge area, feet
b _m	283	one-half width of recharge area, feet
x	0	x coordinate of obs. pt. in relation to center of recharge area, feet
y	0	y coordinate of obs. pt. in relation to center of recharge area, feet
a ₁	0.4182	1.37 (b _m + x) sqrt(Sy/Tt)
a ₂	0.4182	1.37 (b _m - x) sqrt(Sy/Tt)
b ₁	0.4152	1.37 (a _m + x) sqrt(Sy/Tt)
b ₂	0.4152	1.37 (a _m - x) sqrt(Sy/Tt)
W*		W*(a,b); from tables in Appendix D
W*(a ₁ ,b ₁)	0.4498	
W*(a ₁ ,b ₂)	0.4498	
W*(a ₂ ,b ₁)	0.4498	
W*(a ₂ ,b ₂)	0.4498	

Exhibit F



December 22, 2009

2031.01

Lisa Lozier
Shasta County Planning Division
1855 Placer Street
Redding, CA 96001

Dear Lisa,

Subject: Knighton and Churn Creek Commons Retail Center
Comments on Draft Environmental Impact Report (DEIR), October 30, 2009

The purpose of this letter is to provide comments regarding the water and wastewater facilities and the drainage facilities for the subject project. The comments are in response to our review of the following sections of the DEIR:

- Section 3.8, Hydrology and Water Quality (portions relating to drainage and groundwater).
- Section 3.13, Utilities and Service Systems.
- Appendix I, Water Supply Assessment.

SECTION 3.8 – HYDROLOGY AND WATER QUALITY

Page 3.8-5: The description of existing drainage facilities listed in this section does not fully correspond to Shasta County record drawings, the project topographic survey, and PACE Engineering's surveys. For example, this section identifies 12-inch laterals that drain into ACID's 36-inch pipe. These laterals are not identified on any of the project surveys. On the other hand, there are facilities that have been identified in the project surveys and record drawings which are not listed in this section. A comparison of all available records needs to occur in order to clarify the existing drainage facilities.

In addition, it is not clear which pipes are being identified as having a capacity of 5 cubic feet per second in the last paragraph of this section. The pipes, as well as their capacities, need to be clarified.

Page 3.8-5, Last ¶: This paragraph states that the 36-inch ACID concrete irrigation/drainage pipe provides drainage for the proposed project site easterly drainage area. This statement is not true. The 36-inch ACID pipe passes through the site from north to south but the easterly portion of the proposed project site does not drain into that pipe.

Page 3.8-6, 4th ¶: This paragraph states that the capacity of the 18-inch storm drain pipe across Knighton Road is about 5 cubic feet per second; the 18-inch pipe is not specifically referenced, it just says “drains on the north side of Knighton Road.” Originally, Hydmet provided an analysis that the 18-inch storm drain had a capacity of 15 to 17 cubic feet per second. However, in subsequent discussions with ACID regarding the capacity of this pipe, we concluded that the hydraulic head required to push this much flow into the pipe was not reasonable for this project. As a result, the allowable head was reduced, which in turn reduced the maximum capacity of this pipe to 8 cubic feet per second.

Page 3.8-7, Last ¶: Please provide the basis for estimating the disturbance of at least 2.9 million cubic yards of soil. Our current estimates indicate that the soil moved will be less than one tenth of this amount.

Page 3.8-15, Last ¶: This paragraph states that the 18-inch culvert crossing Knighton Road has a capacity of 15 to 17 cubic feet per second. The calculation for this culvert has been revised to reflect a reasonable capacity of 8 cubic feet per second for this culvert (see comments above for Page 3.8-6).

SECTION 3.13 – UTILITIES AND SERVICE SYSTEMS

Page 3.13-4, 3rd ¶: The design capacity of 265,000 gallons of wastewater per day should be changed to a *peak wet weather flow* design capacity of 240,000 gallons of wastewater per day. This flow rate represents a peak, short duration flow, that occurs during a wet weather event after significant rainfall has fallen. It does not represent an average annual flow rate, nor is it indicative of the flow rate during dry weather.

Page 3.13-6: All references to “California Department of Health Services (DHS)” should be changed to “California Department of Public Health (CDPH).”

Feel free to give me, or Paul Reuter, a call if you have any questions or wish to discuss our comments further.

Sincerely,



Fred A. Lucero
Principal Engineer

FAL

c: Brian Huffaker, Hawkins Companies (bhuffaker@hcollc.com)

M:\Jobs\2031.01 Knighton Road Development\LTR-Hawkins-12-21-09.doc

Exhibit G



KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

101 S Capitol Boulevard, Suite 301, Boise, ID 83702 208.338.2683 208.338.2685

December 23, 2009

Project #: 8477.0

Lisa Lozier
Shasta County Department of Resource Management
Planning Division
1855 Placer Street, Suite 103
Redding, CA 96001

RE: Transportation and Circulation Review of the Knighton & Churn Creek Commons Retail Center Draft EIR

Dear Lisa:

Kittelison & Associates Inc. (KAI) has completed an initial review of the Traffic and Circulation portion of the Knighton & Churn Creek Commons Retail Center Draft EIR dated October 2009. The purpose of the review was to identify whether the typical EIR standards and engineering practices were followed for the traffic and circulation analysis. The findings of the review were separated into two categories of comments:

- Significant issues in the study that affect the mitigation recommendations
- Other issues that may not affect the conclusions or recommendations

Significant Issues Affecting Mitigations

The scope of the traffic analysis is appropriate for the size of the project and the adjacent transportation system. While the study scope is generally appropriate there are a number of key issues and assumptions in the technical analysis that in our opinion should be revised in order to determine the appropriate project mitigation recommendations. One general issue that affects many sections of the DEIR is reference to the *Shasta County Regional Improvement Program Impact Fee Nexus Study*. It is our understanding that this study was not adopted by the Shasta County Regional Transportation Planning Agency (SCRTPA) or the local agencies, so the study recommendations should not be assumed in the DEIR

Following is a list of the key issues and assumptions that we recommend be reviewed and modified:

1. **The secondary thresholds of significance used in the DEIR.** A majority of the mitigations identified in the traffic and circulation section of the DEIR are due to meeting one of the secondary thresholds of significance that apply once a facility has already dropped below the minimum level of service (LOS) threshold. A common issue with these types of secondary thresholds of significance is that they may not meet the intent of the criteria specified by CEQA for the specific circumstances which they were applied. The 10 passenger car equivalents for the ramp merge and diverge analysis is a

good example of a threshold with extremely low level of significance (0.4% increase based on existing traffic on I-5) given it was applied to the freeway volume on I-5 and the ramp volumes. We believe that the low level of significance for some of the threshold measures results in not accurately identifying project impacts.

2. **Pass-by trips and diverted trips were not included in the trip generation estimates:** The existing plus project scenario does not include pass-by trips. Based on the *ITE Trip Generation Handbook* which was used for the trip generation estimates, the assumed land uses have been observed to achieve an average pass-by rate between 15 and 30 percent and a diverted rate between 20 and 40 percent. It is reasonable to assume some of the traffic to the new retail center would already be traveling on I-5 and other nearby roadways. We do not understand why the standard methodology for trip generation was not followed and ask for clarification.
3. **The Knighton Road and Churn Creek Road volume thresholds changed from a Major Collector to a Minor Collector.** For the existing conditions analysis, Knighton Road and Churn Creek Road are assumed to be Major Collectors with an average daily traffic (ADT) threshold of 18,000 for LOS E. Under the existing plus project conditions and cumulative conditions, Knighton Road is assumed to be a Minor Collector with an ADT threshold of 15,000 for LOS E. Under cumulative conditions, Churn Creek Road is assumed to be a Minor Collector with an ADT threshold of 15,000. Both roadways should have been assumed to be Major Collectors with a LOS E Threshold of 18,000 ADT for the purpose of evaluating them as two-lane roadways. This discrepancy results in Knighton Road being identified as significantly impacted under existing plus project conditions. Please clarify this inconsistency.
4. **Future planned and programmed improvements were not assumed in the existing plus project or cumulative analysis.** A number of improvements in the study area are included in existing impact fee programs or are part of funded plans but were not assumed in the future cumulative scenarios. Projects like the Churn Creek Road/Rancho Road roundabout, or impact fee funded improvements like the Bonnyview Road and Knighton Road interchange improvements should have been assumed in the future cumulative scenarios. Many planned and programmed improvements correspond with the mitigation measures identified in the DEIR under cumulative conditions which would not have been identified as needing mitigation if the planned improvements had been assumed in the analysis. Please provide an analysis including all future planned and programmed improvements in the cumulative analysis.
5. **The proportionate share computations are not documented.** The computations of the proportionate share percentages were not provided in the DEIR, but the report references that they were developed based on the *Shasta County Regional Improvement Program Impact Fee Nexus Study* which was never adopted. Please clarify method for calculating proportionate share and modify as necessary to remove the reliance on the nexus study.

Each of the above issues is described in greater detail in the following sections.

1. The secondary thresholds of significance used in the (Section 3.12.2):

A majority of the mitigations identified in the traffic and circulation section of the DEIR are due to meeting one of the secondary thresholds of significance. For the purpose of this discussion, the secondary thresholds of significance are defined as the thresholds that apply after a transportation facility has dropped below the acceptable LOS threshold. Following are the secondary thresholds described on Page 3.12-12 and 3.12-13 of the DEIR:

Roadway Segments: A roadway segment that operates unacceptably experiences an increase in its daily volume to capacity ratio (V/C) of 0.05 or greater due to the addition of project traffic.

Intersections: An intersection that operates at an unacceptable LOS without the project, experiences an increase of 5 or more seconds of control delay due to the addition of project traffic.

Freeway Ramp Merge and Diverge: A freeway ramp that operates at an unacceptable level experiences an increase of 10 or more passenger car equivalents (PCE's).

A common issue with these types of secondary thresholds of significance is that there is not an industry standard for determining whether they meet the criteria specified by CEQA. As described in the DEIR Section 3.12.2 (Thresholds of Significance), Appendix G of the CEQA Guidelines describes the criteria for transportation. The two key criteria for determination of significance are:

CEQA Level of Service Criteria

- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways

CEQA Traffic Volume Criteria

- Cause and increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections.)

In the case of the secondary thresholds of significance, the primary CEQA criteria to be tested are the traffic volume criteria.

The issue with the DEIR criteria is that the secondary criteria do not appear to appropriately reflect the CEQA criteria of "substantial in relation to the existing traffic load" due to the specific situations in which they were applied in this particular DEIR. In fact, many EIR's such as the Oasis Road Specific Plan Master EIR (Oasis DEIR) do not utilize these types of secondary

thresholds. Following is a brief summary of why application of these secondary criteria do not provide a good assessment of the impacts of the proposed project.

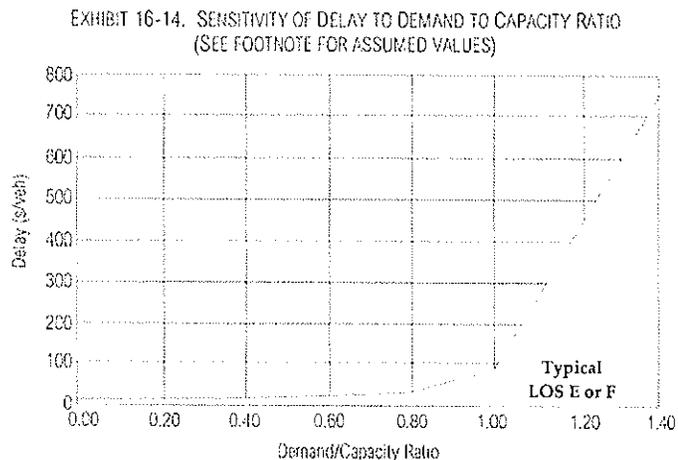
Roadway Segments

Roadway segment analysis is a typical part of traffic planning studies but understanding where it is applicable is equally important. The size (number of lanes) of roadway segments in an urban setting with intersections and traffic signals is dictated by intersections along the corridor. Contrary, to the footnote on Table 3.12-1 of the DEIR, the Highway Capacity Manual does not provide daily traffic volume thresholds for roadway segment LOS analysis. The typical methodology for determining daily traffic thresholds is to estimate the capacity of the roadway segment traffic at an assumed (typical) intersection and utilizes regional factors to back calculate the equivalent average daily traffic thresholds. Because this methodology starts with the intersection and uses approximately factors to obtain the LOS thresholds, a site-specific intersection analysis provides a much more accurate evaluation of the lane needs for any roadway.

Therefore, use of the criteria as small as a V/C ratio of 0.05 is beyond the accuracy of determining the daily traffic thresholds themselves. Generalized service volume tables are typically used for broad planning-level analysis such as city-wide applications to identify system-wide needs and not for site-specific improvement needs because the factors used to develop such volumes can vary significantly. We would recommend the intersection analysis be used to confirm the number of lanes required prior to recommending mitigation since that is much more accurate and the information is included in the DEIR.

Intersections

The secondary threshold of 5 seconds of delay used for the intersection analysis is one of the typical thresholds used in these types of studies. The unique issue in the case of this DEIR is that the impact of traffic demand on delay is much more pronounced at the LOS E and LOS F than at LOS A, B, C or D. Exhibit 16-14 from the Highway Capacity Manual is for signalized intersections.



Source: Highway Capacity Manual, Transportation Research Board, 2000.

As shown in the exhibit, delay increases very quickly when an intersection is near capacity in the LOS E and LOS F area. A very small change in demand and the resulting demand/capacity ratio can easily result in an increase of 5 seconds of delay. For this reason, use of a single 5 second increment of delay does not indicate a consistent level of impact across all LOS and demand ranges. Therefore, use of an alternative measure that is responsive to the large changes

in delay that occur in LOS E and F or, in the case of LOS E, maintaining the LOS may be better approaches.

Freeway Ramp Merge/Diverge Analysis

The issue with the secondary threshold criteria is most pronounced in the freeway ramp analysis. The threshold of significance of 10 passenger car equivalents (similar to vehicles per hour) was used for both ramp volumes and freeway volumes and is low enough to trigger a significant impact at all of the locations.

Because a majority of the freeway segments would already be operating at LOS E and F in the cumulative 2030 timeframe, the ramp merge and diverge points could be expected to operate similarly. This is why the only mitigation for the ramps was to add a third lane on I-5. Because the threshold to determine if the project impact was significant was only 10 passenger car equivalents (PCE's), on either the ramp or the freeway at the merge or diverge location, the analysis resulted in the project having a significant impact at all the locations that were LOS E or F under background conditions. During the weekday p.m. peak hour cumulative conditions, no ramp merge or diverge locations change from an acceptable LOS D to an unacceptable LOS E or LOS F. Only three ramp merge/diverge locations change from an acceptable LOS D to an unacceptable LOS E with the addition of the project and those are only during the Saturday afternoon, a time period which many EIR's do not study including the Oasis Road Specific Plan EIR in the City of Redding. Therefore, many ramp merge and diverge locations simply remain at LOS F.

There are three issues associated with the way in which these threshold criteria are utilized:

1. The 10 PCE criteria is applied to the freeway mainline to determine if a ramp had significant impact without presenting analysis or threshold of significance criteria for freeway mainline segments.
2. The 10 PCE criteria are below what should be considered "substantial in relation to the existing traffic load" as described in CEQA.
3. Other large-development EIR's such as the Oasis DEIR have used different criteria that would result in different findings even though I-5 has similar characteristics throughout the region.

Application of the 10 PCE criteria to freeway mainline

The 10 PCE threshold criteria was applied to locations in which less than 10 PCE's were added to the ramp but greater than 10 PCE's were added to the freeway mainline. For instance, no site-generated traffic from the Knighton & Churn Creek Commons Retail Center is added to the NB on-ramp at Cypress Avenue but it is shown to require Mitigation Measure 3.12-3 (add a third lane to I-5) because more than 10 trips are added to I-5. While the freeway volume approaching a ramp will affect the outcome of the ramp merge and diverge operation, the

freeway mainline volume is not discussed in the threshold language and is likely the reason the ramp needs a third northbound lane on I-5.

If the 10 PCE threshold on the freeway mainline at ramps is assumed to be significant, many additional interchanges that were not studied as part of the DEIR could be determined to be significantly impacted. The typical practice for evaluating the need for freeway improvements at locations in which only freeway mainline traffic is added is to evaluate the freeway mainline LOS. Appendix O of the DEIR contains this analysis but it is not referenced anywhere in the DEIR.

We would recommend that appropriate thresholds of significance be developed that meet the CEQA requirements and that a freeway mainline analysis be included in the DEIR.

The 10 PCE criteria may not meet the CEQA definition of “substantial.”

As stated in the CEQA guidelines, the traffic increase should be “substantial in relation to the existing traffic load and capacity.” Table 1 shows the 10 PCE threshold as a percentage of the existing freeway ramp and freeway mainline volumes at the I-5/Cypress Avenue interchange:

TABLE 1 EXAMPLE 10 PCE PERCENT AT CYPRESS AVE

Ramp or Highway Segment	Peak Hour Volume (PCPH)	10 PCE as a Percentage of Segment Traffic
I-5 NB Cypress Avenue On-Ramp	1,374	0.71%
I-5 SB Cypress Avenue On-Ramp	679	1.47%
I-5 NB North of Cypress Avenue	3,275	0.31%
I-5 SB South of Cypress Avenue	2,734	0.37%

As shown in Table 1, the 10 PCE criteria results in a very low percentage change in volume with respect to existing traffic, especially when applied to the I-5 mainline volume at a ramp location. This low level of impact is also inconsistent with the percentage impact used in the DEIR for roadway segments which is a V/C ratio increase of 0.05 (or 5.00% of the capacity). For the purpose of describing the level of development that could generate 10 PCE a comparison to a small single family home subdivision can be made. Approximately, 10 single-family homes would generate 10 PCE along an adjacent roadway. Therefore, utilizing the 10 PCE criteria, a 20-unit housing development near an interchange could be deemed as having a significant impact on I-5 needing a third through lane in each direction. This level of development is very small and typically would not even require a traffic study under Caltrans requirements.

If a volume-related threshold is used, it should be related to the measure of effectiveness used to determine the LOS which is “density” or be a percentage of volume so that the relative change compared to the existing conditions is considered. A single volume threshold of 10 PCE does not reflect a “substantial” change in traffic for the high volume ramps and on the freeway mainline.

The 10 PCE Threshold is not Consistent with Other Studies

In order to compare the ramp merge/diverge criteria Oasis DEIR was obtained and reviewed. The Oasis DEIR includes a large mixed-use residential and commercial center. The DEIR included the following significance criteria for ramp merges/diverges and weaves:

“Freeway Merge/Weave:

- Cause the level of service to fall below the freeway mainline measure of effectiveness or below LOS C/D for the weave.”

As shown above, the threshold of significance is different from what was used in the Knighton Road & Churn Creek Commons Retail Center DEIR. The key difference between the Oasis EIR thresholds of significance and the Knighton Road & Churn Creek Commons Retail Center DEIR is that the Oasis EIR generally defined the significance threshold to be a drop in LOS, for any LOS below the acceptable LOS C/D boundary which was the target for that study.

For the purpose of comparison, an evaluation was performed using the general threshold methodology in the Oasis EIR with the minimum LOS D per the Knighton Road & Churn Creek Commons Retail Center DEIR. Table 2 identifies the segments which would not meet the criteria during the weekday p.m. peak hour.

TABLE 2 CUMULATIVE 2030 FREEWAY MERGE/WEAVE ANALYSIS USING ALTERNATIVE THRESHOLDS (WEEKDAY P.M. PEAK HOUR)

Highway Segment	Direction	Mainline LOS Cumulative No Project	Ramp LOS Cumulative without Project (DEIR App. O)	Ramp LOS Cumulative with Project (DEIR App. O)	Significant?
Cypress Avenue	NB On-Ramp	F	F	F	No
	NB Off-Ramp	F	F	F	No
	SB On-Ramp	F	F	F	No
	SB Off-Ramp	F	F	F	No
Bonnyview Road	NB On-Ramp	F (1)	D	D	No
	NB Off-Ramp	C	D	D	No
	SB On-Ramp	D	F	F	No
	SB Off-Ramp	F	F	F	No
Knighton Road	NB On-Ramp	C	C	D	No
	NB Off-Ramp	C	C	D	No
	SB On-Ramp	D	E	F	Yes
	SB Off-Ramp	E	E	F	Yes
Riverside Avenue	NB On-Ramp	C	E	F	Yes
	NB Off-Ramp	E	F	F	No
	SB On-Ramp	F	F	F	No
	SB Off-Ramp	E	F	F	No

1. Volumes in the LOS worksheets are inconsistent between ramp and segment analysis. The volume in freeway segment analysis is 4,440 vph and the equivalent volume for the ramp analysis is 3,215 vph. Segment would be LOS D if volumes from ramp analysis were used.

As shown in Table 2, there are only three ramp locations that experienced a drop in LOS below LOS D resulting in a significant impact, but even those locations already exceeded LOS D without the proposed project indicating the need for mitigation without the project traffic. All other locations remained to have the same LOS.

2. Pass-by trips and diverted trips were not included in the trip generation estimates

Based on our discussion with Fehr and Peers, the DEIR traffic analysis utilized a regional model for estimating cumulative trip making characteristics and ITE procedures for the existing plus project conditions. For the existing plus project conditions, we believe inclusion of pass-by and diverted trips should be considered.

As summarized in Table 3.12-7 in the DEIR (Vehicle Trip Generation Summary), the proposed development's trip generation rates were based upon the *ITE Trip Generation 8th Edition*. When utilizing the ITE procedures, the following four types of trips are identified:

- primary trips (sometimes referred to as new trips),
- pass-by trips,
- diverted link trips, and
- internal trips.

While the study identified internal trips, it did not include pass-by trips from Knighton Road and Churn Creek Road or diverted trips from I-5.

Based on the *ITE Trip Generation Handbook*, the assumed land uses have been observed to achieve an average pass-by rate between 15 and 30 percent and a diverted rate between 20 and 40 percent. Due to the low forecast traffic volumes on the facilities providing direct access to the site, the development will not achieve the average pass-by rates identified in the *ITE Trip Generation Handbook*; however, the site will have pass-by and diverted trips, especially from I-5 which currently carries approximately 60,000 ADT. Incorporating pass-by and diverted trips into the analysis will not impact the findings associated with the site frontage and access points but will impact the proposed development's impact to facilities not directly adjacent to the site.

Pass-by and diverted trips are a key type of trip that is documented in the ITE procedures and used in nearly all traffic studies for retail developments. Because of the location along I-5, it is not reasonable to ignore pass-by and diverted trips given they could affect the site-generated trips on I-5 by 30 percent.

3. The Knighton Road and Churn Creek Road volume threshold changes from a Major Collector to Minor Collector

For the existing conditions analysis, Knighton Road and Churn Creek Road are assumed to be a two-lane Major Collectors with an average daily traffic (ADT) threshold of 18,000 for LOS E. Under the cumulative conditions Knighton Road and Churn Creek are assumed to be a Minor

Collectors with an ADT threshold of 15,000 ADT for LOS E. Following are two key inconsistencies that require explanation for these two roadways:

1. A consistent capacity should be used in both scenarios. The 18,000 ADT threshold in its current two lane configuration is reasonable since the SCR Circulation Map identifies Knighton Road as an Arterial over the entire length and the Churn Creek an Arterial between Rancho Road and I-5.
2. The capacity thresholds for Knighton Road should have been adjusted in the section between the I-5 NB ramp and Churn Creek Road which has additional existing lanes and is planned for further expansion as part of the Knighton & Churn Creek Retail Center project.

This discrepancy results in Knighton Road being identified as significantly impacted under existing plus project conditions.

4. Future planned and programmed improvements not assumed in the existing plus project or cumulative analysis.

There are a number of proposed roadway projects identified in existing funding programs that include projects within the DEIR traffic and circulation study area:

- Shasta County and City of Redding Public Facilities Impact Fee Program (Ordinance 665)
 - South Bonnyview Road interchange
 - Knighton Road Interchange
- Resolution 91-115 (Shasta County BOS Establishing Major Road Impact Fees for the SCR Area)
 - South Bonnyview Road from SR273 to Rancho Road w/ I-5 Interchange improvements
 - Cypress Avenue with freeway improvements on I-5
 - Knighton Road 4-lane expressway from I-5 to Airport Road
- City of Redding Improvement Projects:
 - Churn Creek Road/Rancho Road intersection improvements

The DEIR did not assume any of the above improvements in the future conditions analysis. It is our understanding that the Public Facilities Impact Fee Program and Resolution 91-115 have both been adopted by Shasta County and the City of Redding improvements at the Churn

Creek/Rancho Road intersection are funded. Projects that are part of these programs that include a funding mechanism, along with any other funded projects in the study area, should be assumed constructed in the cumulative analysis.

In addition to these projects, there will likely be some level of improvements between now and 2030 along I-5. While we are not proposing inclusion of speculative projects, the potential for such projects should be acknowledged since Caltrans can continue to utilize the traditional state and federal funding sources for improvements over the next 20 years.

5. The proportionate share computations are not documented

The proportionate share computations were not included in the DEIR and therefore could not be reviewed. On pages 3.12-13 and 3.12-26 reference is made to the *Shasta County Regional Improvement Program Impact Fee Nexus Study* as a basis for determining the proportionate share for each of the mitigations. The *Shasta County Regional Improvement Program Impact Fee Nexus Study* has not been adopted by the SCRTPA and was rejected by the local jurisdictions. In addition, it is unclear how planned and programmed projects were considered in the proportionate share analysis given some improvements will likely be partially or fully completed as part of existing funded programs. We recommend the proportionate share computations be provided for review.

Other Issues

Following are some of the other issues identified in the traffic and circulation chapter of the report. These issues may not significantly change the findings or recommendations of the DEIR, but nevertheless should be corrected for accuracy.

- The highway segment analysis for I-5 identified on page 3.12-3 is not included in the report but the calculations are included in the Appendix O.
- The Caltrans regulatory language on Page 3.12-9 does not accurately quote the Caltrans Guide for Preparation of Traffic Impact studies. Following is the quote “Caltrans endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” on (see Appendix C-3) on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State facility is operating at less than the appropriate target LOS, the exiting MOE should be maintained.” This statement is important because it emphasizes consultation between agencies to determine the appropriate target LOS and acknowledges the difficulty in mitigation to LOS C/D standard.
- The regulatory setting discussion does not reference the City of Redding standard of LOS D for I-5 and the interchanges.

- On page 3.12-10 at the top of the page under policy C-6k, the LOS C statement should be modified to be for “new” roadways and intersections. Similarly, the sentence after Policy-C8c should be modified to state: LOS C for new County facilities, LOS D for Caltrans facilities, and LOS E for existing County facilities
- Table 3.12-8 indicates under discussion that Churn Creek is planned to be improved to 4 lanes and this has potential to be inconsistent. There is no plan to improve “all” of Churn Creek to four lanes. There is a portion of the intersection at Knighton and Churn Creek and its tapers that will have 4 lanes but the rest of the frontage only has two lanes with a turn lanes. With the correction of the error in the capacity used for the roadway segment analysis for Churn Creek, four lanes will not be required even under cumulative plus project conditions. (see significant issue 3)
- The traffic analysis did not include the truck stop access points on the south side of Knighton Road or identify how they will tie into the recommended mitigation measures.
- Traffic volumes at the I-5 ramp merge and diverge locations is not summarized in the level of service tables or on figures yet they are the threshold of significance used for the merge and diverge analysis.
- Mitigation measure 3.12-2 recommends widening Knighton Road to six lanes between the I-5 northbound ramps and Churn Creek Road to achieve LOS A. The recommendation should be to widen Knighton Road to four lanes which results in LOS C which is well above the County standard of LOS E.

Conclusions

The traffic and circulation section of the Knighton Road & Churn Creek Commons Retail Center DEIR included many key assumptions and analysis procedures that should be reviewed and revised in order to determine the appropriate project mitigation recommendations. The key issues we identified include:

- The *Shasta County Regional Improvement Program Impact Fee Nexus Study* is referenced throughout the study although it has not been adopted.
- The secondary thresholds of significance do not seem to accurately reflect the CEQA criteria of “substantial in relation to the existing traffic load” due to the specific situations in which they were applied. This situation is most acute with respect to the ramp merge and diverge analysis.
- Pass-by trips and diverted trips were not included in the trip generation estimates
- The Knighton Road and Churn Creek Road volume thresholds change from a Major Collector level of 18,000 ADT to the Minor Collector level of 18,000 ADT for no apparent reason.
- Future planned and programmed improvements are not assumed in the existing plus project or cumulative analysis.

- The proportionate share computations are not documented.

These issues along with a number of other minor issues have a significant impact on the analysis results, determination of significance, and recommended mitigation measures.

The most significant impact of the assumptions made for DEIR is the project's impact to I-5 and the need for a third travel lane in each direction. The additional widening on I-5 has already been determined to be needed by Caltrans. The methodology used for determining the I-5 improvements was unreasonably conservative and could result in a small residential subdivision of 20 homes having similar "significant" impacts to I-5 that require a third travel lane. Other DEIR's such as the Oasis DEIR have utilized more reasonable criteria.

It is our recommendation that the issues identified in this memorandum be addressed by the DEIR consultant and Shasta County prior to issuance of a final EIR. Please let us know if you have any questions or comments regarding the items identified in this memorandum.

If you have any questions or comments concerning the items identified in this letter and our recommendation that the project team consider addressing them in the transportation and circulation analysis of the Knighton & Churn Creek Commons Retail Center EIR please let us know. We can be reached at (208) 338-2683.

Sincerely,
KITTELSON & ASSOCIATES, INC.



Andy Daleiden, PE
Senior Engineer



John F. Ringert, PE
Principal Engineer

Cc: Jeff Hess, Hawkins Companies
Brian Huffaker, Hawkins Companies

Response 16A: Section 2.3 Project Description, beginning at page 2-1 of the Draft EIR, is amended as shown below to more precisely reflect the purpose of the 18 acre Transition area at the proposed project's northerly boundary and the regional nature of the proposed project:

2.3 Project Description

The project applicant has proposed to develop and operate a ~~commercial~~ regional retail, dining, entertainment and lodging center on approximately 92 acres in Shasta County, located at the northeast corner of the Knighton Road and the Interstate Highway 5 interchange, which includes approximately eighteen (18) acres of "Transition" area on the northerly portion of the proposed project site. When completed the project would include approximately 740,000 square feet of mixed commercial development (which may include retail shops, restaurants, lodging, food supplies, recreation activities and equipment, traveler services including gasoline fueling facilities and entertainment-related facilities) to be phased in accordance with market conditions and required improvement thresholds. There will be approximately 3,400 parking spaces, which will include the appropriate number of accessible parking spaces as required by the Americans with Disabilities Act. The northernmost 18 acres of the project site would serve as an open space Transition buffer between the proposed commercial development and existing low-density residential uses to the north, and would contain the wastewater treatment facilities, and potentially a portion of the water supply system, needed to serve the project (see [Figure 2-3](#)).

The proposed project site is bordered by I-5 to the west, Churn Creek Road to the east, and Knighton Road to the south. The proposed project, as envisioned, has primary access off Knighton Road and secondary access points off Churn Creek Road (see [Figure 2-3](#)). Proposed transportation improvements to accommodate the volume of traffic anticipated at proposed project completion, including increases in background traffic from other sources, include: (1) reconfiguration of the Knighton Road interchange, with traffic signals at each ramp; (2) widening Knighton Road between Riverland Drive and Churn Creek Road; (3) widening Churn Creek Road between Knighton Road and the final access point to the proposed project; and (4) modification of signalization as required for safety along the access routes.

The water supply system for the proposed project would consist of a 300-gallon per minute (GPM) on-site well and water storage tanks of sufficient capacity to handle excess demands from the proposed project. The waste water system for the proposed project would consist of an on-site sewage treatment and disposal system comprised of gravity sewer mains, a central pump station, and a Membrane Bioreactor (MBR) treatment plant.

Native cold- and drought-resistant plant landscaping, and other low maintenance landscape materials would be used within the proposed project to promote energy efficiency, water conservation, aesthetic appeal and visual buffering. The landscaped areas would meet or exceed Shasta County landscape requirements. Interior parking areas would also use plant materials and trees to provide appropriate shade and landscaping. Irrigation would be provided by the on-site water supply system. Signage and exterior lighting would comply with the appropriate sections of the Shasta County Code.

Response 16B: The application of a 20% limit on the total on-site exterior lighting for security lighting (watts per square foot of outdoor area) stated in Mitigation Measure #3.1-3 was derived from voluntary reductions applicable to similar projects and does exceed the 2005 Building Energy Standards requirement of 50%. Because the intent of the mitigation is to achieve compliance with the requirements of the 2005 Building Energy Standards, Mitigation Measure #3.1-3 found at page 3.1-8 of the Draft EIR is amended as follows:

Mitigation Measure #3.1-3:

Outdoor lighting shall be controlled by timers, which will include shutting off on-site lighting, with the exception of security lighting located at on-site buildings. Security lighting shall account for no more than ~~20~~50 percent of total on-site exterior lighting (watts per square foot of outdoor area). All outdoor lighting shall be directed downward to prevent unwanted spill, and away from I-5, other public roadways, and all adjoining properties. Exterior lighting shall be limited to a maximum of 0.5 horizontal foot candles (HFC) at a distance of 25 feet beyond the property lines, and shall use “cutoff” light fixtures.

Response 16C: On page 3.1-8, Impact #3.1-4: Creation of a new source of glare, discusses the proposed project potential to reflect light off exterior project feature surfaces during daylight hours and associated impact in the vicinity of the project. Mitigation Measure #3.1-4 concluded that the project design shall maximize to the extent feasible the use of glare-reducing materials, including non-reflective paints and building materials, to reduce the amount of glare created by the project structures.

On page 3.3-16, Impact #3.3-2, discusses the proposed projects potential to cause a violation of any air quality standard or contribute substantially to an existing or projected air quality violation due to area source or operational emissions. Additionally mitigation measures have been proposed to reduce this impact. Specifically, Mitigation Measure #3.3-2b concluded that the proposed project shall use energy efficient windows, high-albedo (reflective) roofing materials, awnings, light shelves, and interior transom windows where feasible.

In the comment letter it is brought to attention that on Page 3.1-8, the report identifies that building materials have the potential to create glare, and therefore proposes to mitigate that potential impact by requiring the use of glare-reducing and non-reflective materials and paints. The comment states that this is in contradiction to Mitigation Measure #3.3-2b which suggests the use of energy efficient windows, high-albedo (reflective) roofing materials, awnings, light

shelves, and interior transom windows. These materials are of a composition that will create glare and reflectivity. Please address the compliance requirements for these opposing impacts.

While to some extent they can be seen as contradictory, the mitigation measures can be used in conjunction with one another to reduce the amount of glare off the building as well as reduce the energy required to heat or cool the facility. It has been stated in both mitigation measures to use these where feasible.

For example, in the event a building has a flat roof, which would not reflect daylight onto the surrounding vicinity, a high-albedo roof would be most applicable. In the event that a roof has a slope to it that could potentially reflect light onto the surrounding properties, a cream colored clay roof could be installed that would have a high reflectivity of heat but low reflectivity of glare.

Another example, is in the event that the applicant will be using a high amount of energy efficient windows as required by Mitigation Measure #3.3-2b, a highly reflective material, the use of awning to block light, a major reflective source, would be applicable.

With that noted, while the subject mitigation measures may sound like a contradiction, they are consistent when considered in the proper perspective.

Response 16D: The corrections regarding calculation of various FMMP farmland classifications are noted and the third paragraph at page 3.2-3 of the Draft EIR is amended as follows:

As shown in Figure 3.2-2, ~~78.4~~ 67.2 acres of the project site are designated as Prime Farmland and 6.8 acres are designated as Unique Farmland. The remaining portion of the project site (~~7.5~~ 18 acres) is classified as Grazing Land, Other Land or Urban and Built Up Land. ~~Large~~ An areas (approximately 20 acres) of Prime Farmland ~~are is~~ located ~~to the northeast and southeast~~ of the site. Larger areas of Prime Farmland are located farther north and northeast of the site. Nearby lands to the east are classified as Other Land and lands to the south are classified as Urban and Built-Up.

The Impact #3.2-1 discussion found at page 3.2-7 of the Draft EIR and corresponding Mitigation Measure #3.2-1 are amended as follows to reflect the farmland classification corrections made on page 3.2-3 of the Draft EIR.

Impact #3.2-1: Conversion and loss of Prime Farmland to a non-agricultural use.

Discussion/Conclusion: A large portion of the project site is designated as Prime Farmland or Unique Farmland. Implementation of the proposed project would therefore result in the conversion of approximately ~~67.2~~ 60.5 acres of Important Farmland (18 acres of the project site will remain viable for farming above the on-site waste water treatment plant subterranean leach field).

According to the County General Plan, there has been a significant loss of agricultural land in Shasta County since 1969.

As discussed above, a Land Evaluation and Site Assessment (LESA) model was prepared for the proposed project. The final score, 83.58, indicates that the conversion of the project site to a non-agricultural use is considered significant.

Because prime agricultural land is a non-renewable environmental resource, this impact is *potentially significant, unavoidable, and irreversible*.

Mitigation Measures

Implementation of the following mitigation measure will reduce this impact; however, there are no mitigation measures that can reduce this impact to a level of less than significant. Therefore, this impact is *significant, unavoidable, and irreversible*.

Mitigation Measure #3.2-1:

Prior to recording any final map or issuance of any building permits for the project site, the project proponent shall preserve in perpetuity Prime Farmland of equal quality or better quality at a minimum ratio of 1:1, or ~~67.2~~ 60.5 acres, and shall protect the land for agricultural uses through land use restrictions such as agricultural conservation easements. A qualified land conservation organization shall be used to facilitate the establishment of the conservation easements. To accomplish the above, the project proponent shall select three potential sites for consideration by the County Director of Resource Management. The sites shall be available as close as possible to the project site, to the satisfaction of the County Director of Resource Management. The proposed conservation easement for the selected property shall be submitted to the County for review and approval.

Response 16E: The commenter request to allow the proposed project applicant to locate a site that is mutually agreeable with Shasta County will be accomplished by selection of three potential sites by the applicant, as the mitigation measure is written, and there is no need to further amend the mitigation measure. Use of a qualified land conservation organization to facilitate establishment of the conservation easement is the preference of the County.

Response 16F: The potential for development pressure to evolve on surrounding agricultural lands after implementation of the proposed project is present regardless of whether the proposed project applicant has control over it or not and this potential impact must remain significant, unavoidable, and irreversible.

Response 16G: As stated, Mitigation Measure #3.2-4 found at page 3.2-9 of the Draft EIR does reduce Impact #3.2-4 to be less than significant.

Response 16H: On page 3.3-5 under subheading “Attainment Status,” in the first line the term “District” is used without a proper reference before its use. In this event the term “District” is referring to the Shasta County Air Quality Management District. To properly reference the term “District” on the first paragraph, first line, of subsection “Attainment Status” on page 3.3-5, the Draft EIR is amended as follows:

The ~~District~~ Shasta County Air Quality Management District (District) is required by the California Health and Safety Code to endeavor to achieve and maintain the state ambient air quality standards at the earliest practicable date and has developed an Attainment Plan with specific emission control strategies in order to achieve this goal. The Plan is a coordinated effort with participation from air districts in the Northern Sacramento Valley Air Basin. The Plan must be re-evaluated once every three years and must contain features such as best available control technology thresholds, use of reasonable available control technology for existing emission sources, transportation control measures, area-wide and indirect source control programs, emission inventory analysis, and public education.

Response 16I: The comment is noted. Mitigation Measure #3.3-2a at page 3.3-17 of the Draft EIR is amended as follows to clarify the intent and timing of specified Level “A” SMMs and Level “B” BMMs mitigation measures and eliminate those measures that are not feasible:

Mitigation Measure # 3.3-2a:

For the control of operational emissions, the project applicant shall implement all appropriate and feasible Shasta County AQMD Level “A” SMMs and Level “B” BMMs for the control of ozone precursors. The following Shasta County AQMD operational SMMs are deemed feasible for the size, location, and character of the proposed project:

- *The project shall provide for the use of energy-efficient lighting (includes controls) and process systems, such as water heaters, furnaces, and boiler units.*
- *Individual users within the proposed project site ~~The project~~ shall utilize a central water heating system featuring the use of low-NO_x hot water heaters.*
- *The project shall utilize energy-efficient and automated controls for air conditioning.*

Table 3.3-8 contains BMM deemed feasible for a facility of the size, location and character of the proposed project:

**Table 3.3-8
Mitigation Measures for Controlling Indirect Source Emissions**

Best Available Mitigation Measures (BAMM)	Emission Reduction Efficiency		
	ROG	NO_x	PM₁₀
<i>The project shall improve the thermal efficiency of commercial and industrial structures as appropriate by: (1) reducing thermal load with automated and timed temperature controls, or (2) occupancy load limits.</i>	1.0 - 2.0% 1.5%	1.0 - 3.0% 2.0%	1.0 - 5.5% 3.25%
<i>The project shall incorporate shade trees, adequate in number and proportional to the project size, throughout the project site to reduce building heating and cooling requirements.</i>	1.0 - 2.0% 1.5%	1.0 - 3.0% 2.0%	1.0 - 5.5% 3.25%
<i>The project shall include the installation of solar water heaters for at least 25 percent of the building floor area.</i>	1.0 - 7.5% 4.25%	1.0 - 7.5% 4.25%	1.0 - 7.5% 4.25%
<i>The project shall orient buildings and main entrances to streets with bus services.</i>	0.2 - 1.2% 0.7%	0.2 - 1.2% 0.7%	0.2 - 1.2% 0.7%
<i>The project shall provide for and/or include on-site services such as cafeterias, food vending machines, automatic tellers, etc., as appropriate.</i>	0.2 - 3.4% 1.8%	0.3 - 4.5% 2.4%	0.3 - 4.5% 2.4%
<i>The project shall provide on-site pedestrian facility improvements such as walking paths and building access which are physically separated from street and parking lot traffic.</i>	0.2 - 1.2% 0.7%	0.2 - 1.6% 0.95%	0.2 - 1.6% 0.95%
<i>The project shall provide for shower facilities for pedestrian employee's use. The project shall provide shower/locker facilities, where appropriate, for bicycling and pedestrian commuters</i>	0.2 - 2.4% 1.3%	0.3 - 3.2% 1.75%	0.3 - 3.2% 1.75%
<i>The project shall provide for synchronized traffic signals, as deemed necessary by local transportation planning agencies, along streets impacted by project development.</i>	4.0 - 8.0% 4.0%	4.0 - 8.0% 4.0%	4.0 - 8.0% 4.0%
<i>The project shall contribute to traffic-flow improvements that are deemed not to be substantially growth-inducing.</i>	4.0 - 8.0% 6.0%	4.0 - 8.0% 6.0%	4.0 - 8.0% 6.0%

Best Available Mitigation Measures (BAMM)	Emission Reduction Efficiency		
	ROG	NO_x	PM₁₀
<i>The project shall design interior major streets to serve the main entrances to buildings.</i>	<i>0.1 - 3.0% 1.55%</i>	<i>0.1 - 3.0% 1.55%</i>	<i>0.1 - 3.0% 1.55%</i>
TOTAL EMISSIONS REDUCTION FROM BAMM	<i>11.9-38.7%</i> <i>10.5-27.6%</i> <i>23.3017.05%</i>	<i>12.1-43.0%</i> <i>10.6-31.1%</i> <i>25.6018.90%</i>	<i>12.1-48.0%</i> <i>10.6-36.1%</i> <i>28.1021.40%</i>

Source: Shasta County Air Quality Management District

Response 16J: The comment is noted. Mitigation Measure #3.3-2b at page 3.3-18 of the Draft EIR is amended as follows to clarify the intent of providing conduit at the time of construction to accommodate future high speed modems, DSL and extra phone lines:

Mitigation Measure # 3.3-2b:

Implementation of the following mitigation measures will substantially reduce air quality impacts related to human activity within the proposed project area:

- *Trees shall be selected to shade paved areas that will shade 30% of the area within 15 years. Structural soil should be used under paved areas to improve tree growth.*
- *If transit service is available to the project site, improvements shall be made to encourage its use. If transit service is not currently available, but is planned for the area in the future, easements shall be reserved to provide for future improvements such as bus turnouts, loading areas, route signs and shade structures. In the event transit services are not planned for the area in the future, efforts to extend or expand service to the project are shall be coordinated with local transit operators.*
- *Projects shall include as many clean alternative energy features as possible to promote energy self-sufficiency. Examples include (but are not limited to): photovoltaic cells, solar thermal electricity systems, small wind turbines, etc. Rebate and incentive programs are offered for alternative energy equipment.*
- *Two 110/208 volt power outlets shall be installed for every two loading docks in commercial areas.*
- *Passive solar building design and landscaping conducive to passive solar energy use shall be promoted;*
- *Energy efficient windows (double pane and/or Low-E) shall be installed as feasible;*
- *High-albedo (reflecting) roofing materials shall be used as feasible;*

- *Awnings or other shading mechanism for windows shall be installed when practicable;*
- *Porch, patio and walkway overhangs shall be constructed where practicable;*
- *Daylighting (natural lighting) systems such as skylights, light shelves, interior transom windows etc. shall be installed when practicable;*
- *Electrical outlets around the exterior of the buildings shall be installed to encourage use of electric landscape maintenance equipment to promote the use of low or non-polluting landscape maintenance equipment (e.g. electric lawn mowers, reel mowers, leaf vacuums, electric trimmers and edgers, etc.); and*
- *~~Structures shall be pre-wire with~~ Conduit to accommodate high speed modem connections/DSL and extra phone lines shall be installed in structures at the time of initial construction.*

Response 16K: The comment is noted. Compliance with Title 24 would not in and of itself reduce Impact 3.3-2 to a less than significant level as explained on page 3.3-16 and 3.3-17 of the Draft EIR.

Response 16L: The comment is noted. As stated in the fifth bullet of Mitigation Measure #3.3-3a, the Shasta County Grading Ordinance establishes the 96 hour threshold for addressing application of soil stabilizers/dust palliatives to previously graded areas of construction sites. Mitigation Measure #3.3-3a at page 3.3-22 of the Draft EIR is amended as follows to clarify that dust palliatives constitute a soil stabilizer:

Mitigation Measure #3.3-3a:

To reduce emissions and thus reduce cumulative impacts, the following measures shall be implemented:

- *The idling time of all construction equipment used at the site shall not exceed five minutes.*
- *The hours of operation of heavy-duty equipment shall be minimized.*
- *All equipment shall be properly tuned and maintained in accord with manufacturer's specification.*
- *When feasible, electric carts or other smaller equipment shall be used at the project site.*

URBEMIS Mitigation Measures to reduce calculated emissions below SCAQMD thresholds:

- *The applicant shall be responsible for applying non-toxic soil stabilizers/dust palliatives (according to manufacturer's specifications) to all inactive construction areas (previously graded areas which remain inactive for 96 hours), in accordance with the Shasta County Grading Ordinance.*
- *All areas (including unpaved roads) with vehicle traffic shall be watered two times per day or have dust palliatives applied for stabilization of dust emissions.*
- *Aqueous diesel fuel for all diesel equipment shall be used.*
- *Low-volatile organic compound paints capable of reducing ROG emissions by 15% compared to existing architectural coating rules shall be used.*

Response 16M: The comment is noted. The requirement for the use of aqueous diesel fuel for all diesel equipment is derived from the URBEMIS program. Because this fuel is not yet readily available throughout California and because construction equipment may not be designed to use aqueous diesel fuel, Mitigation Measure #3.3-3a is amended as follows:

Mitigation Measure #3.3-3a:

To reduce emissions and thus reduce cumulative impacts, the following measures shall be implemented:

- *The idling time of all construction equipment used at the site shall not exceed five minutes.*
- *The hours of operation of heavy-duty equipment shall be minimized.*
- *All equipment shall be properly tuned and maintained in accord with manufacturer's specification.*
- *When feasible, electric carts or other smaller equipment shall be used at the project site.*

URBEMIS Mitigation Measures to reduce calculated emissions below SCAQMD thresholds:

- *The applicant shall be responsible for applying non-toxic soil stabilizers/dust palliatives (according to manufacturer's specifications) to all inactive construction areas (previously graded areas which remain inactive for 96 hours), in accordance with the Shasta County Grading Ordinance.*

- *All areas (including unpaved roads) with vehicle traffic shall be watered two times per day or have dust palliatives applied for stabilization of dust emissions.*
- *Aqueous diesel fuel for all diesel equipment (designed to operate with aqueous fuels) shall be used when available.*
- *Low-volatile organic compound paints capable of reducing ROG emissions by 15% compared to existing architectural coating rules shall be used.*

Response 16N: The requirement for suitable grass cover on inactive portions of the development site is found in the SCAQMD SMM measures. That agency should be contacted by the project proponent at the time of construction regarding any acceptable measures to stabilize soil in lieu of this requirement.

Response 16O: The mitigation measures included in Mitigation Measures #3.4-1a through #3.4-1c are standard protocol to insure that sensitive species, both plant and animal, are positively not on the proposed project site because both plants and animals migrate from one location to another over time.

Response 16P: The following text of the Draft EIR, page 3.5-3, is amended as follows to include a reference to the previous study dated June 30, 2006 prepared by Peak & Associates, Inc. as noted by the commenter.

IDENTIFICATION OF HISTORICAL RESOURCES IN THE PROJECT SITE

Previous Studies

A records search was conducted at the Northeast Center of the California Historical Resources Information System on July 11, 2005 for the project area. The search included the following resources: National Register of Historic Places, the California Register of Historical Resources, California Points of Interest, California Inventory of Historic Resources, and California State Historic Landmarks.

The results of the records search indicated that two cultural resource studies have been conducted within portions of the Knighton & Churn Creek Commons Retail Center project site with negative results (Jensen, 1998; Genesis Society, 2005). In addition to the two studies identified by the records search, a report titled *Determination of Eligibility and Effect for the Proposed Shasta Auto Mall Project, Shasta County, California* dated June 30, 2006 was prepared by Peak & Associate, Inc. in association with a previously proposed project. Known prehistoric period resources have been documented within a one-quarter mile radius of the Knighton & Churn Creek Commons Retail Center project site.

The text of the third paragraph found at page 3.5-9 of the Draft EIR under the Impact #3.5-1 Discussion/Conclusion is also amended to include reference to the previous study dated June 30, 2006 prepared by Peak & Associates, Inc. as follows:

The inspection of the Knighton & Churn Creek Commons Retail Center project site by archeologists determined that there was no significant surface evidence of historical or archaeological resources present (Jensen 1998; Genesis Society 2005; Peak and Associates 2006).

Appendix E of the Draft EIR is also amended as follows:

Identification of Historical Resources in the Project Site

Previous Studies

A cultural record search was conducted by the Northeast Center of the California Historical Resources Information System at California State University, Chico on July 11, 2005. The search included the following resources: National Register of Historic Places, the California Register of Historical Resources, California Points of Interest, California Inventory of Historic Resources, and California State Historic Landmarks.

The results of the records search indicated that two cultural resource studies have been conducted within portions of the Knighton & Churn Creek Commons Retail Center project site with negative results (Jensen, 1998; Genesis Society, 2005). In addition to the two studies identified by the records search, a report titled *Determination of Eligibility and Effect for the Proposed Shasta Auto Mall Project, Shasta County, California* dated June 30, 2006 was prepared by Peak & Associate, Inc. in association with a previously proposed project. Known prehistoric period resources have been documented within a one-quarter mile radius of the Knighton & Churn Creek Commons Retail Center project site.

As pointed out by the commenter, Peak & Associates conducted an excavation at the potential artifact site area reported by the earlier Genesis Society study in 2006. The excavation of 20 shovel test pits found only one artifact which allowed Peak and Associates to conclude the proposed project site does not have the potential to yield information important to the prehistory of the local area and will not help to address important research questions, and the site is therefore not eligible for the National Register of Historic Places or for the California Register of Historical Resources. As stated in the Discussion/Conclusion of Impact #3.5-1 at page 3.5-8 of the Draft EIR, although the inspection of the proposed project site determined that there was minimal surface evidence of historical or archaeological resources, as with any inspection of the ground surface, there is always the possibility that historical or archaeological resources may be present, but are obscured from view from overlying sediments or vegetation, or have been buried by previous human activities and a finding of **less than significant** can not be made based solely on the results of the sub-surface investigation completed by Peak and Associates in 2006.

Response 16Q: Although a focused site reconnaissance was completed for a portion of the proposed project site in 2006, future reconnaissance may be necessary for other portions of the project site if evidence of historical significance emerges. The Mitigation Measure must be left as written.

Response 16R: The comment is noted. This is not a comment on the environmental analysis and Peak and Associates are not knowledgeable about any common interests or opposing interests of any of the groups on the Native American Heritage Commission Shasta County list. There are a number of Native American groups who represent the Native American people in the region, including Wintu and other groups (see Native American Consultation section of text for names of groups, Draft EIR page 3.5-3). The information presented on Draft EIR page 3.5-2 is background setting information, and has no relevance to the groups contacted: they are all groups that have asked the Native American Heritage Commission to be placed on the list for the County.

Response 16S: Bullet Item 3 relates primarily to CEQA Guidelines Section 15064.5, with an archeologist called in to make a decision regarding an inadvertent find of artifacts or other materials that could represent an archeological resource requiring evaluation, and to ensure that there is no effect to the resource from the project. The Native Americans who have expressed an interest in the project will also be invited to view any findings; this is not required by law.

Bullet Item 4 relates to Health and Safety Code 7050.5 and Public Resource Code Section 5097.98 should human remains be located. The County Coroner should be notified to make a determination, and if the remains are human and Native American, the Coroner is to notify the Native American Heritage Commission (NAHC). The NAHC will appoint a “Most Likely Descendant” of whatever group they deem appropriate for the project.

Response 16T: Differing structural-guidance recommendations in the two studies have no relevance for the CEQA-required environmental impacts evaluation for this project.

Response 16U: The comment referred letters provide valuable additional data. Responses to these comments are below:

A. Lawrence & Associates letter of December 7, 2009

Section 3.8 – Hydrology and Water Quality

Page 3.8-2, 2nd full paragraph – The comment is noted. The text of the Draft EIR is amended as follows:

Regional Water Demand

According to the Shasta County General Plan (1998), approximately 580,000 acre-feet of water annually are required to sustain all existing land uses within the County. It is also estimated that this requirement will increase to 671,850 acre-feet by 2030. Overall, the County’s water supply is more than adequate to meet

all existing and projected future needs. Although the supply is adequate, resources are not allocated throughout the County evenly. Certain areas of the County, including the City of Redding and the area under the jurisdiction of the Anderson-Cottonwood Irrigation District (ACID), ~~the Bella Vista Water District (BVWD)~~, and the Clear Creek Community Services District (CCCSD), have the greatest allocations of water and are therefore prime areas for future development in regards to water supply. The Bella Vista Water District (BVWD) and CCCSD use mainly surface water; BVWD has very limited groundwater resources, with CCCSD having somewhat greater groundwater resources. Currently, BVWD is experiencing water shortages because of cutbacks to their surface water supply, and therefore isn't a prime area for future development. The cities of Redding, Anderson, and Cottonwood, and the ACID all overlie the most productive parts of the Redding groundwater basin. Redding uses a mixture of surface and groundwater. Anderson and Cottonwood both rely solely on groundwater. ACID currently relies solely on surface water.

Page 3.8-4, 3rd paragraph – The comment is noted. The text of the Draft EIR is amended as follows:

During the aquifer test, maximum drawdown in the Production Well (pumping well) was approximately 33 feet after 24 hours of pumping at 500 gpm. Data from the aquifer test was used to calculate aquifer coefficients (transmissivity and storativity). The calculated transmissivity (approximately 37,500 to 49,500 gpd/foot) was similar to that observed for similar deposits in the Redding groundwater basin and is good as water flows well through the aquifer in the area of the proposed project. Calculated storativity (approximately 2.5 to 4.9 x 10⁻⁴) was also similar to that observed for deposits in the Redding ground-water basin. The calculated storativity for the lower aquifer indicates that it is confined. Hydraulic conductivity (derived from transmissivity and taking into account aquifer thickness) in the lower aquifer ranged from approximately 60 to 80 feet/day. Groundwater in the Production Well flows into the well mainly from the horizontal direction because the aquifer is constrained by clay layers that inhibit the vertical movement of water (although a small amount of water still moves downward through the clay layers, whether or not the well is pumping). Vertical permeability in the clay zone between the intermediate and lower aquifers was calculated to be 0.093 gpd/square foot. This is equivalent to approximately 0.125 feet/day.

Section 3.13 – Utilities and Service Systems

Page 3.13-1, 3rd paragraph is amended as follows:

It is anticipated that the West Central Landfill located at 14095 Clear Creek Road in Igo on 1,058 acres is the nearest landfill to will serve the proposed project site. The landfill is permitted to accept up to 700 tons of waste per day on a permitted disposal area of 107 acres. The landfill has a capacity of 7,078,000

cubic yards with a remaining capacity, as of 2001, of 6,605,722 cubic yards and is projected to close in 2019. Another landfill (such as the Anderson Landfill) may be determined by the County to be the appropriate landfill at the time service is required.

Page 3.13-4, 3rd full paragraph – The information supplied by the commenter is noted. The text of the Draft EIR is amended as follows:

Groundwater Levels

Three regional aquifers have been delineated at the site, and there is at least one shallower aquifer; the perched zone, ranging from 11 to 25 feet below ground surface (bgs). Although three regional aquifer zones have been delineated at the project site, similar water levels in the upper two zones suggest that these zones could be considered as one (see Appendix I, *Water Supply Assessment Knighton & Churn Creek Commons Retail Center, July 2009*). Static water levels in observation wells completed in the upper and intermediate zones are about 30 feet below ground surface (the upper aquifer extends from 108 to 125 feet bgs and the intermediate aquifer extends from 158 to 209 feet bgs). Static water level for water from the deep zone is about 52 feet bgs (the actual aquifer is between 240 and 325 feet bgs). There may be deeper zones (below 325 feet bgs), also. Thus, the lower aquifer is distinct from the intermediate and upper zones. Most of the domestic wells in the vicinity are screened in the upper aquifer or above, with a few in the intermediate zone. The site production well was screened in the lower aquifer.

Page 3.13-4, 4th full paragraph, last sentence – The comment is noted. The text of the Draft EIR is amended as follows to provide the definition of the “screened interval”:

WATER SUPPLY

The project site is remote from urban water systems, and must therefore be served by on-site water supply and distribution facilities. The source for all potable water will be an on-site well installed and tested in 1998 as part of the environmental review process for the formerly proposed Flying J Travel Plaza project (see Appendix J, *Well Installation, Aquifer Testing and Groundwater Modeling for Flying J Knighton Road Travel Plaza, Shasta County, California*). This well, which is 325 feet deep, is located in the southwest portion of the project site (see Figure 6-1 of Appendix I, *Water Supply Assessment Knighton & Churn Creek Commons Retail Center, July 2009*). The screened interval (where groundwater enters the well casing) is from 245 to 325 feet below ground surface (bgs); the sanitary seal extends to 235 feet bgs. The casing is 10 inches in diameter; the screened interval is wire-wrapped stainless-steel.

See Response 16U, A, Section 3.13, Page 3.13-4, 3rd full paragraph above for static water level clarification. The distinction between where water enters the well and the static water level is evident.

Page 3.13-5, 1st paragraph – The comment is noted. A repetition in the Draft EIR text of the water demand calculations incorporated in the referenced Appendix is not essential.

Page 3.13-5, 2nd paragraph – The comment is noted. The text of the Draft EIR is amended as follows:

Regulatory Setting

FEDERAL

~~There are no federal regulations applicable to the proposed utility service systems.~~

Clean Water Act (CWA)

The CWA administered through the Regulatory Program of the Corps regulates the water quality of all discharges into waters of the U.S. including wetlands and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water-quality certification requirements for “any applicant applying for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable water.”

Page 3.13-6, 5th paragraph – The commenter is correct. The text of the Draft EIR is amended as follows:

~~California Urban Water Management Planning Act~~

~~The Urban Water Management Planning Act (§10610-10656 of the California Water Code) requires that all urban water suppliers prepare urban water management plans and update them every five years.~~

Page 3.13-7, 2nd full paragraph – The commenter is correct. The text for the Draft EIR is amended as follows:

~~California Public Utilities Commission (CPUC)~~

~~The CPUC regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to: assure California utility customers receive safe, reliable utility service at reasonable rates; protect utility customers from fraud; and promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.~~

Page 3.13-8 & 3.13-9, Thresholds of Significance – The commenter’s suggestions for modification to CEQA Thresholds are noted. The topical analysis provided under each threshold is not affected by the commenter’s proposed threshold modifications.

Page 3.13-9, 1st full paragraph – The correction regarding nitrogen concentration established in RWQCB’s basin goals and additional supportive data is appreciated. The text of the Draft EIR is amended as follows:

Discussion/Conclusion: Wastewater discharges from operation of the proposed sanitary wastewater treatment and disposal system could potentially cause nitrogen contamination to groundwater in the project area. The Water and Wastewater Facilities Narrative provided by PACE CIVIL, INC (January 20, 2009) describes the operation of the system and how it will meet the standard of 5 10mg/liter for nitrogen concentrations established in RWQCB’s basin goals. The analysis found that nitrogen attributable to project discharges would be essentially nondetectable below the upper aquifer, beneath the project site and nondetectable in all aquifers beyond the project boundary. Additionally, the Project’s wastewater-treatment system will reduce the nitrogen concentrations in the effluent so that there will not be a statistically significant impact on the underlying groundwater (this will be the standard to which the State permit will hold the Project). Wastewater quality impacts would not adversely affect groundwater pumped from neighboring wells.

Page 3.13-9, Mitigation Measure #3.13-1 – The comment is noted. The text of the Draft EIR is amended as follows:

Mitigation Measure #3.13-1:

The project proponent shall establish an appropriate mechanism to maintain and operate the on-site wastewater treatment facility in compliance with Regional Water Quality Control Board requirements as delineated in Waste Discharge Requirements that shall be issued for the facility. ~~and the facility shall be in place, operational, and certified by the Regional Board prior to issuance of certificates of occupancy.~~

Appendix I – Water Supply Assessment

Page 4-1, 1st paragraph – The receipt of the updated technical memo is acknowledged. The text of Appendix I, Water Supply Assessment is amended as follows:

4.1 Project Demand

According to the Preliminary Water Supply Analysis (L&A, 2008) (Appendix A), for potable water, Pace Civil, Inc.(Pace) calculated the annual-average project demand to be approximately ~~9063~~ gpm with a MDD of approximately ~~125122~~ gpm and a peak demand (two-hour) of approximately ~~400337~~ gpm. For

irrigation, Pace calculated the average annual project demand to be approximately 32 gpm with a MDD of approximately ~~9063~~ gpm and a peak demand (two hour) of ~~275212~~ gpm. Peak demands will be met from storage, not directly from the well.

The revised usage data based on the updated technical memo is acknowledged; however, the data changes make no significant impact on the Water Supply Assessment's conclusions.

Page 4-1, 5th paragraph – The stated acre-foot per year figure is typical to that for Central Valley crop consumptions requirements additive to precipitation; it is only approximate.

Page 4-2, 2nd paragraph – The requested clarification is noted. The text of Appendix I, Water Supply Assessment is amended as follows:

4.4 Future Demand

It is not anticipated that future water demands will exceed the 200 acre-feet anticipated to meet the needs of the proposed project in that the on-site well is intended to solely serve the proposed project.

Page 5-1, 2nd paragraph – The comment is noted. The text of Appendix I, Water Supply Assessment is amended as follows:

The County of Shasta has no intrinsic water rights to groundwater used by its citizens (other than beneath specific County-owned property), and the County does not directly supply water to most residents (the Shasta County Water Agency assists with some small County Service Area water suppliers). Each landowner in the County has an overlying right to use the groundwater beneath their land for beneficial uses. ~~historically supplied its residents with native groundwater derivative of the Redding basin through appropriative and prescriptive groundwater rights (overlying rights of the overlying landowners).~~

Page 5-3, 1st paragraph – There is no quantitative threshold for a definition of wet year/dry year groundwater quantity significance; comparison for the widely varying quantities available in wet years and dry years of surface water supplies may assist the commenter's understanding of the term. The comment's comparison of effects in shallow and deeper aquifers is valid.

Page 5-3, 2nd paragraph – The comment is noted. See Response 16U, A, Appendix I – Water Supply Assessment, Page 5-3, 1st paragraph above.

Page 6-2, 2nd paragraph – The comment is noted. The text of Appendix I, Water Supply Assessment is amended as follows:

For the MDD of ~~184122~~ gpm, the model shows about one foot of interference at 2,250 feet (0.4 miles) from the well and about six inches at 4,050 feet (0.8 miles)

(reference Figure 2 in Appendix A). For the annual-average demand of ~~12290~~ gpm, the model shows about one foot of interference at 1,200 feet (0.2 miles) from the well and about six inches at 3,000 feet (0.6 miles) in the deep aquifer (reference Figure 3 in Appendix A).

The revised usage data based on the updated analysis does not modify the conclusions of the Water Supply Assessment or the significance analyses of the EIR.

B. PACE Engineering letter of December 22, 2009

Section 3.8 – Hydrology and Water Quality

Page 3.8-5 – The noted lack of correspondence between the Draft EIR-noted existing drainage facilities and those described by the commenter is of minimal consequence in view of the project’s implementation of onsite drainage for storm flows exceeding those currently generated on the project site; further records comparison would be of little value.

The EIR reference to the pipe with 5.0 cfs capacity is, for the same reason, deleted from the EIR as having no value in the EIR’s environmental evaluation process.

Please note that Appendix U of the DEIR and DEIR errata based thereon provide for onsite retention of all stormwater.

Page 3.8-5, last paragraph – The comment is noted. The text of the Draft EIR is amended as follows:

The 36-inch ACID concrete irrigation/drainage pipe passes through the project site from north to south and provides drainage for the westerly portion of the project site,~~the proposed project site easterly drainage area;~~ Knighton Road abutting the proposed project site and a portion of the existing truck stop south of Knighton Road. Also, only runoff south of Niles Lane enters the existing truck stop south of Knighton Road. As a practical matter only runoff south of Niles Lane is served by the existing drains connecting to the 36-inch pipe in Knighton Road because of blockage by roads and east-west irrigation ditches to the north of Niles Lane. There is one 18-inch area drain inlet into the ACID 36-inch concrete irrigation/drainage pipe about 400 feet northerly of Knighton Road, and two 18-inch area drain inlets on the northerly side of Knighton Road with 12-inch laterals to the 36-inch irrigation/drainage pipe on the southerly side of Knighton Road. There are three storm drain inlets connecting directly to the 36-inch concrete irrigation/drainage pipe on the south side of Knighton Road in front of the existing truck stop.

Page 3.8-6, 4th paragraph – The Draft EIR statement regarding the capacity of “drains on the north side of the Knighton Road” has been removed from the EIR as not essential to the environmental analysis. See Response 16U, B, Section 3.8, Page 3.8-5 above. The text of the Draft EIR has been amended as follows:

~~The capacities of the drains on the north side of Knighton Road and the drain within the project site side are about 5.0 cubic feet per second (cfs) each.~~

Page 3.8-7, last paragraph – The reference to 2.9 million cubic yards of soil disturbance is irrelevant to the NPDES program requirements. The project will be subject to the NPDES program because soil disturbance of more than one acre will occur at the time of proposed project implementation. The text of the Draft EIR is amended as follows:

STATE

Regional Water Quality Control Board Permitting

The National Pollution Discharge Elimination System (NPDES) program, under Section 402(p) of the Federal Clean Water Act, is administered locally by the Central Valley Regional Water Quality Control Board on behalf of the U.S. Environmental Protection Agency. The program is designed to reduce pollution from storm water discharge and may require a permit from parties discharging to lakes, streams and other water bodies. In the case of the proposed project, a construction activity permit would be required since construction activities associated with the project would result in the disturbance of more than one acre, ~~and movement of at least 2.9 million cubic yards of soil.~~ The permit would require that the following measures be implemented during construction activities: eliminate or reduce non-storm water discharges to storm water systems and other waters of the nation, develop and implement a Storm Water Pollution Prevention Plan (SWPPP), and perform inspections of storm water control structures and pollution prevention measures.

Page 3.8-15, last paragraph – The comment is noted. See Response 16U, B, Section 3.8, Page 3.8-6, 4th paragraph above.

Section 3.13 – Utilities and Service Systems

Page 3.13-4, 3rd paragraph – The comment is noted. The text of the Draft EIR is amended as follows:

Project Wastewater Flows

Based on the analysis contained in the PACE CIVIL narrative, a peak wet weather flow design capacity of 265,000 gallons of wastewater per day was determined to be more than adequate.

Page 3.13-6 – The comment is noted. The text of the Draft EIR is amended as follows:

Safe Drinking Water Act (Chapter 7 of the California Health and Safety Code)

The adoption of implementing regulations and the enforcement of the drinking water laws of California are the responsibility of the California Department of Public Health Services—(~~Department~~CDPH). A key feature of the Safe Drinking Water Act is the requirement that no person may operate a public water system without having secured a domestic water supply permit from the ~~Department~~CDPH. The statutes provide a clear definition of a public water system. Basically, anyone who serves drinking water to at least 25 persons for at least 60 days out of the year, or who serves domestic water to 15 or more service connections, is a public water system and must have a domestic water supply permit.

California Code of Regulations, Title 22, Reclamation Criteria

The California Department of Public Health Services—(~~CDPH~~DHS) has established statewide reclamation criteria in Chapter 3, Division 4, Title 22, California Code of Regulations (CCR), Section 60301, et seq. (Title 22) for the use of reclaimed water for food crop, fodder, fiber, seed crop and landscape irrigation and impoundment supply. The permit implements the reclamation criteria in Title 22.

In 1996, the State Water Quality Control Board and ~~CDPH~~DHS set forth principles, procedures, and agreements to which the agencies committed themselves, relative to the use of recycled water in California, in a document titled *Memorandum of Agreement Between the Department of Health Services and the State Water Resources Control Board on the Use of Reclaimed Water* (MOA). Consistent with the MOA and as authorized by the California Water Code [Section 13522.5(a)] Regional Water Quality Control Boards may issue Master Reclamation Permits, which are required for “any person recycling or proposing to recycle water, or using or proposing to use recycled water, within any region for any purpose for which recycling criteria have been established.”

Response 16V: The commenter’s opinion is appreciated. BMP identification and selection should be incorporated, as noted in the Draft EIR, prior to site plan approval as indicated in Mitigation Measure #3.8-2 as amended (see Comment Letter 19, Response 19J). The BMP’s are not, in all instances, building related but site-related.

Response 16W: As stated in Mitigation Measure #3.8-2 as amended (see Comment Letter 19, Response 19J), the sample list of BMP’s are typical of those found within the *California Stormwater Quality Association’s Stormwater Best Management Practice Handbook—New Development and Redevelopment* and are not additional items.

Response 16X: The potential for development pressure to evolve on surrounding lands after implementation of the proposed project is present regardless of whether the proposed project applicant has control over it or not and this potential impact must remain significant and unavoidable.

Response 16Y: The comment is noted. This Urban Decay Analysis's (UDA) project language does not materially affect the UDA's quantitative analysis and can be removed with no effect on conclusions. However, one of the project goals, per the project proponent's 1/20/2009 project description, is to "create an economically viable destination shopping mall..." This reference does not lead to mischaracterization of the project – see definition in its entirety on Page 4 of the UDA.

Response 16Z: The comment is noted. The existing Churn Creek, Dana Drive, and Hilltop Center space contains retailers considered "regional" in character by the Urban Land Institute. Also, the older existing space included in the UDA is available for occupancy at competitive lease rates and a good possibility of absorption exists. EPS suggests keeping the current approach.

Because retail inventory data sources may exclude unanchored or smaller retail centers, EPS included a contingency factor of 20 percent to account for retail supply that may have been omitted from the data sources EPS consulted. EPS discussed the contingency estimate, as well as other estimates of existing City of Redding space, with Jim Hamilton, the City of Redding's Planning Director. Because the contingency factor is an estimate informed by previous analysis in other jurisdictions, EPS would not disagree with the notion of testing an alternative scenario.

EPS prepared a sensitivity run that analyzed the impact of reducing the contingency factor from 20 to five percent (see revised Table 3-1 of Draft EIR Appendix L below). The five percent contingency yielded approximately 150,000 total square feet of additional square footage, which still provides a conservative accounting for space that may not have been captured by the NRB Shopping Center Directory or EPS's additional research and site visits. EPS also updated the supply-side analysis to reflect current information on the planning status of the Oasis development project (see revised Table 3-2 of Draft EIR Appendix L below).¹

¹ Per the City of Redding's Planning Director, the Oasis project has 300,000 square feet approved. Although the project has proposed 3 million square feet of nonresidential space at buildout, it is possible that a portion of this space will not be developed or will be converted to residential land uses. Based on discussions with the City of Redding's Planning Director, approximately 750,000 square feet can be considered as planned, with a total of 1.05 million square feet identified for the project area.

**Table 3-1
 Knighton and Churn Creek Commons
 Urban Decay Analysis
 Summary of Existing Local, Community, and Regional Retail**

Existing Retail

5.0% Supply Contingency

Item	Location	Retail Type	Sq. Ft.	Note	Anchor Tenants
Community Retail					
84 Lumber (closed)	City of Redding	Community	50,000		Vacant
Churn Creek (North of HWY 44) [1]	City of Redding	Community	163,000	[5]	Home Depot, Barnes and Noble, Food 4 Less, Office Max
Dana Drive [2]	City of Redding	Community	112,500	[5]	Wal-Mart, Costco, (vacant former Circuit City store)
Discovery Village	City of Redding	Community	37,000		Men's Warehouse, Aaron Brothers
Downtown Mall [3]	City of Redding	Community	225,300		Boutiques, Restaurants, Cascade Theater
K-Mart	City of Redding	Community	120,000	[5]	
Lowe's	City of Redding	Community	125,000	[5]	
Hilltop Pavilion	City of Redding	Community	178,000		Kohl's department store, Trader Joe's
Old Alturas Drive	City of Redding	Community	125,000	[5]	WinCo Foods, Cinemark Movies 10
Shasta Crossroads	City of Redding	Community	321,000		Target, Sports Authority, Ashley Furniture, Food Maxx
Village Plaza	City of Redding	Community	80,000		
Anderson Marketplace	City of Anderson	Community	208,600		Wal-Mart Supercenter
Uncaptured Retail [4]			<u>87,000</u>		
			349,000		
Subtotal Community Retail			<u>1,832,400</u>		
			<u>2,094,400</u>		
Regional/Super-Regional Retail					
Churn Creek (North of HWY 44) [1]	City of Redding	Regional	82,000	[5]	See above
Dana Drive [2]	City of Redding	Regional	112,500	[5]	See above
Hilltop Center	City of Redding	Regional	110,000		Petco, Gottshalks
Hilltop Drive	City of Redding	Regional	300,000		World Market; Pier 1 Imports; TJ Maxx; Bed, Bath & Beyond; Best Buy; Michael's; Big Lots!; PetSmart

Item	Location	Retail Type	Sq. Ft.	Note	Anchor Tenants
Mt. Shasta Mall	City of Redding	Regional	590,000		Macy's, Old Navy, Sears, JCPenney Gap Outlet, Tommy Hilfiger, Dress Barn, Prime Cinemas
Prime Outlets at Anderson Uncaptured Retail [4]	City of Anderson	Regional	165,000 <u>68,000</u> 272,000		
Subtotal Regional/Super-Regional Retail			<u>1,427,500</u> <u>1,631,500</u>		
Subtotal Comm. & Regional/Super-Regional Retail			<u>3,259,900</u> <u>3,725,900</u>		
Total Retail			<u>3,259,900</u> <u>3,725,900</u>		

"existing"

Source: NRB Shopping Center Directory, Redding Record Searchlight, LoopNet, Redding Mall Properties, and EPS.

[1] Estimated to be 2/3 community-serving and 1/3 region-serving retail.

[2] Estimated to be 1/2 community-serving and 1/2 region-serving retail.

[3] Redding Mall Properties has estimated that approximately 338,000 square feet of gross leasable space exists in the Downtown Mall. EPS has estimated that 2/3 of this space is occupied as retail.

[4] EPS added a ~~20~~5% contingency factor to include any retail supply that was omitted by the NRB Shopping Center Directory and unaccounted in EPS's supplemental research.

[5] Square footage reflects rough estimates based on average sizes for selected tenants.

**Table 3-2
 Knighton and Churn Creek Commons
 Urban Decay Analysis
 Summary of Developed, Planned, and Approved Retail Square Footage**

Proposed Retail

Project Name	Community				Regional				Total Retail Development	
	Under Construction	Approved	Planned	Total	Under Construction	Approved	Planned	Total		
City of Anderson										
Vineyards at Anderson [1]	-	-	100,000	100,000	-	-	-	-	-	100,000
City of Redding										
Bonnyview Shopping Center [2]	-	210,000	-	210,000	-	-	-	-	-	210,000
Oasis Road Specific Plan [3]	-	-	-	-	-	<u>300,000</u>	<u>750,000</u>	<u>1,050,000</u>	<u>1,050,000</u>	<u>1,050,000</u>
Downtown Gateway [4]	-	10,000	-	10,000	-	<u>340,000</u>	<u>2,660,000</u>	<u>3,000,000</u>	-	10,000
Redding Riverfront Specific Plan	-	-	187,200	187,200	-	-	-	-	-	187,200
Wal-Mart Expansion [5]	-	80,000	-	80,000	-	-	-	-	-	80,000
Shasta County (Unincorporated)										
Knighton and Churn Creek Commons [6]	-	-	290,000	290,000	-	-	447,000	447,000	-	737,000
Total Projected Square Footage	-	300,000	577,200	877,200	-	<u>300,000</u>	<u>1,197,000</u>	<u>1,497,000</u>	<u>3,447,000</u>	<u>4,324,200</u>

"nonres_sum"

Source: City of Redding, Shasta County, Villages at Anderson DEIR, and EPS.

[1] This project proposes 40,000 square feet of commercial and 200,000 square feet of mixed use office-retail. The amount of retail-specific land uses in the project has not yet been determined.

[2] Estimated to be 100 percent community-serving retail.

Project Name	Community				Regional				Total Retail Development
	Under Construction	Approved	Planned	Total	Under Construction	Approved	Planned	Total	

[3] Development of the Oasis Road Specific Plan is in the long-term horizon and anticipated to occur over the next two or three decades. Approved development refers to the Oasis Towne Center.

[4] The Downtown Gateway is anticipated to contain approximately 13,800 commercial square feet. EPS has estimated that approximately 10,000 square feet will be community-serving retail.

[5] Estimated based on average sizes of Walmart discount stores and supercenters.

[6] Derived in Table 1-1.

The adjustments in this revised analysis result in a lower probability of potential urban decay impacts from the individual proposed project and cumulative development. As shown in Table 3-9 below, the revised estimate of existing and proposed retail space is estimated to yield an oversupply in 2015 of 15 percent and an oversupply in 2020 of 7 percent. In comparison, the original UDA estimated an oversupply of retail space in 2015 of 23 percent and an oversupply in 2020 of 16 percent. As stated in the UDA, the likelihood of urban decay is estimated to increase when an oversupply in retail square footage of over 10 percent lasts beyond 3 to 5 years. Moreover, the sensitivity run indicates that development of the proposed project independently would not result in a level of oversupply that could trigger urban decay impacts. As shown in Table 3-10 below, a five percent contingency results in a breakeven impact on supply in 2015 and an undersupply of space in 2020 of over 9 percent.

**Table 3-9
Knighton and Churn Creek Commons
Urban Decay Analysis
Net Retail Demand from Cumulative Development**

Cumulative Development
<u>5.0% Supply Contingency</u>

Retail Category	Demand (Sq. Ft.) [1]	Supply (Sq. Ft.) [1]	Difference:		CTA and RTA Percent Oversupplied/ Undersupplied
			Undersupply/(Oversupply) Sq. Ft.	Acres [2]	
Regional Retail					
2009	2,933,000	1,428,000 4,632,000	1,505,000 4,301,000	138.2 449.5	-
2015	3,303,000	2,175,000 2,419,000	1,128,000 884,000	103.6 84.2	-
2020	3,595,700	2,175,000 2,419,000	1,420,700 4,176,700	130.5 408.4	-
Community Retail					
2009	628,000	1,832,000 2,094,000	(1,204,000) (1,466,000)	(110.6) (134.6)	-
2015	690,000	2,522,000 2,784,000	(1,832,000) (2,094,000)	(168.2) (192.3)	-
2020	767,000	2,522,000 2,784,000	(1,755,000) (2,017,000)	(161.2) (185.2)	-

Retail Category	Demand (Sq. Ft.) [1]	Supply (Sq. Ft.) [1]	Difference:		CTA and RTA Percent Oversupplied/ Undersupplied
			Undersupply/(Oversupply) Sq. Ft.	Acres [2]	
Net Retail Demand - Regional and Community Retail					
2009	3,561,000	3,260,000 3,726,000	301,000 (165,000)	27.6 (15.2)	-9.2% 4.4%
2015	3,993,000	4,697,000 5,203,000	(704,000) (1,210,000)	(64.6) (111.1)	15.0% 23.3%
2020	4,362,700	4,697,000 5,203,000	(334,300) (840,300)	(30.7) (77.2)	7.1% 16.2%

"net_demand"

Source: EPS.

[1] Cumulative totals. See Table 3-9 and Table 3-10 for supply and demand comparisons.

[2] A FAR of 0.25 is assumed in calculating acreage undersupply/oversupply.

Table 3-10
Knighton and Churn Creek Commons
Urban Decay Analysis
Net Retail Demand from Individual Project

Individual Project (Existing Supply + Project) 5.0% Supply Contingency

Retail Category	Demand (Sq. Ft.) [1]	Supply (Sq. Ft.) [1]	Difference:		CTA and RTA Percent Oversupplied/ Undersupplied
			Undersupply/(Oversupply) Sq. Ft.	Acres [2]	
Regional Retail					
2009	2,933,000	1,428,000 1,632,000	1,505,000 1,301,000	138.2 119.5	-
2015	3,303,000	1,875,000 2,079,000	1,428,000 1,224,000	131.1 112.4	-
2020	3,595,700	1,875,000 2,079,000	1,720,700 1,516,700	158.0 139.3	-

Retail Category	Demand (Sq. Ft.) [1]	Supply (Sq. Ft.) [1]	Difference:		CTA and RTA Percent Oversupplied/ Undersupplied
			Undersupply/(Oversupply) Sq. Ft.	Acres [2]	
Community Retail					
2009	628,000	<u>1,832,000</u> 2,094,000	<u>(1,204,000)</u> (1,466,000)	<u>(110.6)</u> (134.6)	-
2015	690,000	<u>2,122,000</u> 2,384,000	<u>(1,432,000)</u> (1,694,000)	<u>(131.5)</u> (155.6)	-
2020	767,000	<u>2,122,000</u> 2,384,000	<u>(1,355,000)</u> (1,617,000)	<u>(124.4)</u> (148.5)	-
Net Retail Demand - Regional and Community Retail					
2009	3,561,000	<u>3,260,000</u> 3,726,000	<u>301,000</u> (165,000)	<u>27.6</u> (15.2)	<u>-9.2%</u> <u>4.4%</u>
2015	3,993,000	<u>3,997,000</u> 4,463,000	<u>(4,000)</u> (470,000)	<u>(0.4)</u> (43.2)	<u>0.1%</u> <u>10.5%</u>
2020	4,362,700	<u>3,997,000</u> 4,463,000	<u>365,700</u> (100,300)	<u>33.6</u> (9.2)	<u>-9.1%</u> <u>2.2%</u>

"net_proj"

Source: EPS.

[1] Cumulative totals. See Table 3-9 and Table 3-10 for demand calculations. Supply resulting from the proposed project is derived in Table 3-2.

[2] A FAR of 0.25 is assumed in calculating acreage undersupply/oversupply.

Response 16AA: The comment is noted. The UDA capture rate of 75 percent is high based on the region's insular location. EPS recommends keeping the current approach - it is reasonable to assume that some leakage will occur, as in any other regional economy.

Response 16BB: The comment is noted. A variety of methodologies can potentially be used to estimate urban decay. The method EPS used (10% vacancy of five years or more) does not definitively argue urban decay will result. Rather it estimates the potential for conditions conducive to urban decay occurring as a result of the individual project and cumulative development. Indeed, Page 39 indicates that "...the above findings do not guarantee that urban decay will result from cumulative development of all anticipated retail. Rather they suggest that this result cannot be ruled out." In addition, based on EPS's adjustments noted in Comment Letter 16, Response 16Z, the revised results of the UDA indicate a lower probability of urban decay from the individual Project and cumulative development.

Response 16CC: The comment is noted. New nonresidential development, including the proposed project and other proposed projects, will be developed in the future pursuant to favorable market conditions. However, as demonstrated in the current economic downturn, the market can result in an oversupply of nonresidential development. Thus, it is important to evaluate the potential role of cumulative development in causing urban decay.

Response 16DD: As a result of changes made in the Urban Decay Analysis (see Response 16Z above), the estimated oversupply of retail space from the individual proposed project and cumulative development fell to a level that is not estimated to result in urban decay based on the definition applied in the Economic Planning Systems Urban Decay Analysis. As there is no single, legally accepted definition and method of measuring of urban decay, the revised analysis does not, however, guarantee that potential urban decay impacts will be less than significant.

Response 16EE: CEQA establishes thresholds of significance for any periodic or substantial increase in noise associated with a project. Many jurisdictions establish a 3 dB (barely perceptible) increase in noise as the test of significance. Where a 5 dB increase results in a clearly perceptible (noticeable) change in noise, this document utilized the 4 dB increase as the test of significance. The Shasta County General Plan does not provide guidance on this issue. Therefore, this author utilized the 4 dBA increase as the threshold of significance.

Response 16FF: The analysis indicates that the project loading dock and truck circulation activities will result in an exceedance of the Shasta County standards. The mitigation measures identified as Mitigation Measures #3.10-2a and #3.10-2b will ensure compliance with both the daytime and nighttime noise level criteria. It is unclear which “improvement measures” the commenter is referring to which “will mitigate most impacts”.

The discussion on Impact #3.10-3 should be restated to “potentially significant”. The final project design could include any of the suggested mitigation measures as a part of the project design. In addition, the commercial building could conduct a more detailed analysis of HVAC equipment noise when the heating and air requirements are defined. At that time it may be determined that the HVAC equipment complies with the County standards.

The Discussion/Conclusion under Impact #3.10-3 of the Draft EIR (page 3.10-22) is amended as follows:

Impact #3.10-3: Roof-top HVAC equipment may result in noise levels which exceed the Shasta County noise level criteria.

Discussion/Conclusion: During the summer months HVAC equipment may run continually during the nighttime hours. Therefore, the HVAC equipment would be required to comply with the 45 dB Leq hourly noise level criterion. This is a *potentially significant* impact.

Response 16GG: The criteria used for evaluating the HVAC equipment are contained in Table N-IV (Noise Level Performance Standards for New Projects Affected by or Including Non-transportation Sources). For Impacts 3.10-2 and 3.10-3, each of the impacts being evaluated are

for non-transportation noise sources. There are no State of California standards as mentioned in the comment. Since the HVAC equipment may operate during the nighttime hours, the strictest criterion is the hourly 50 dBA Leq.

Response 16HH: An analysis was conducted to determine a conservative estimate of noise levels associated with Impacts 3.10-2 and 3.10-3. Implementation of the mitigation measures will result in compliance with the Shasta County standards.

Response 16II: The comment is noted. To clarify that restriction of construction activities to daytime hours refers to proposed project on-site construction, Mitigation Measure #3.10-4, page 3.10-23 of the Draft EIR, is amended as follows:

Mitigation Measure #3.10-4:

On-site construction activities shall be restricted to daytime hours. Construction equipment shall be equipped with proper mufflers and in good working order.

Fixed construction equipment such as compressors and generators shall be located as far as possible from sensitive receptors. All impact tools shall be shrouded or shielded and all intakes and exhaust ports on power construction equipment muffled or shielded.

Response 16JJ: The analysis of noise impacts associated with the wastewater treatment plant is based upon noise measurements conducted for recently constructed wastewater plants. The Draft EIR analysis indicates that the impacts can be mitigated based upon the Mitigation Measure #3.10-6. However, substituting the mitigation measures with a performance-based mitigation measure would be appropriate. Mitigation Measure #3.10-6, page 3.10-24 of the Draft EIR, is amended as follows:

Mitigation Measure #3.10-6:

~~*All pumps shall be submersible pumps or located inside of enclosures. The blowers shall be located inside a concrete block building. Aerators shall be located below perimeter ground level in the aeration basins. All equipment operations shall comply with the daytime exterior noise level criterion of 55 dB Leq, and the nighttime exterior noise level criterion of 45 dB Leq at the nearest residential property lines.*~~

The applicant shall construct a wastewater treatment plant, which will result in compliance with the noise criteria contained within Shasta County General Plan Policy N-b, Table N-IV.

Response 16KK: The comment is noted. See Section Four – Errata amendments to Draft EIR pages 3.11-5 and 3.11-6 regarding revenue projections as it relates to public safety costs.

Response 16LL: The comment is noted. The Draft EIR Fiscal Impact Analysis indicates that fire protection services funding will be generated by 6.02 percent of the 1 percent property tax as well as General Fund transfers in. Neither impact fees nor sales taxes are included as fire protection services revenue sources. Impact fees are used for capital costs and CSA No. 1 does not receive a share of the Proposition 172 Public Safety Sales Tax.

The annual costs of fire protection services shown in Table C-3 were provided by the County Fire Warden. The annual costs of \$913,000 at buildout represent the County Fire Warden's estimated equipment and staffing costs required to serve the proposed project based on the proposed land use plan. It does not include CSA #2 costs.

Response 16MM: The traffic study did not use or reference the Oasis DEIR.

Response 16NN: The comment is noted.

Response 16OO: The traffic related comments herein were prepared after circulation of the original DEIR and prior to re-circulation of the DEIR. The recirculated DEIR provided a revised traffic analysis which either supplemented or supplanted the traffic information contained in the original DEIR. Therefore, with respect to all traffic related comments, please refer to the PRDEIR and the responses to comments thereon.

Response 16PP: See Response 16OO above.

Response 16QQ: See Response 16OO.

Response 16RR: See Response 16OO.

Response 16SS: See Response 16OO.

Response 16TT: See Response 16OO.

Response 16UU: See Response 16OO.

Response 16VV: See Response 16OO.

Response 16WW: See Response 16OO.

Response 16XX: See Response 16OO.

Response 16YY: See Response 16OO.

Response 16ZZ: See Response 16OO.

Response 16AAA: See Response 16OO.

Response 16BBB: See Response 16OO.

Response 16CCC: See Response 16OO.

Response 16DDD: See Response 16OO.

Response 16EEE: See Response 16OO.

Response 16FFF: See Response 16OO.

Response 16GGG: Responses to comments in “the attached letters” from Lawrence and Associates and PACE Engineering have been provided in Response 16U above.

Response 16HHH: See Response 16U, A, Section 3.13, Page 3.13-9, Mitigation Measure #3.13-1 above. The revised Mitigation Measure incorporated in the EIR as a result of that comment is:

Mitigation Measure #3.13-1:

The project proponent shall establish an appropriate mechanism to maintain and operate the on-site wastewater treatment facility in compliance with Regional Water Quality Control Board requirements as delineated in Waste Discharge Requirements that shall be issued for the facility. ~~and the facility shall be in place, operational, and certified by the Regional Board prior to issuance of certificates of occupancy.~~

Response 16III: “The project could potentially result” phrase precedes a discussion of Impact #3.14-2 and is correctly used in that regard. That discussion concludes that the subject impact (on project water resources) is less than significant.

Although not critical to the understanding of the listed mitigation measures, the phrase “in the spirit of AB32” in Mitigation Measure #3.14-1a is excised from the EIR (DEIR page 3.14-14) as follows:

Mitigation Measure #3.14-1a:

The proposed project shall reduce its cumulative contribution to greenhouse gases ~~in the spirit of AB 32, pursuant to The Global Warming Solutions Act of 2006, by implementing the following suggested~~ appropriate and feasible measures or such replacement measures that Shasta County determines to be effectively equivalent from the California Climate Action Team Strategies and the Department of Justice Attorney General.

The data in the preceding Impact (“a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change”) is sufficient to support the conclusion that the project, in combination with growth and development at the local, regional and state level would result in a “significant, cumulatively considerable and unavoidable impact”.

The required measures are clearly and adequately detailed as listed.

The County may, if it wishes, modify the suggested measures, upon the introduction of adequate evidence supporting such modification, prior to certification of the EIR.

Response 16JJJ: The comment is noted. The comment supports the conclusion reached in Section 4.3 at page 4-5 of the Draft EIR.

Response 16KKK: The comment is noted. The comment supports the conclusion reached in Section 4.3 at page 4-5 of the Draft EIR.

Response 16LLL: The second sentence in the first paragraph of Section 4.3 – Alternatives Rejected at page 4-5 of the Draft EIR is amended as follows:

4.3 Alternatives Rejected

According to the CEQA Guidelines, two major provisions are necessary for an adequate alternative site analysis—feasibility and location. The EIR should consider alternate project locations if a significant project impacts could be avoided or substantially lessened by moving the project to an alternate site.

Response 16MMM: The comment is noted. The comment supports the conclusion reached in Section 4.4.2 at page 4-6 of the Draft EIR.

Response 16NNN: The comment is noted. CEQA requires identification and analysis of a reasonable range of alternatives in the Draft EIR that would avoid or lessen any of the environmental effects of a proposed project. The Avoidance of Sensitive Areas Alternative has been included in the Draft EIR to accomplish this requirement. Although the sensitive areas depicted by Figure 4-2 found after page 4-8 of the Draft EIR, have not been identified in the Draft EIR as containing legally protected resources, these areas do have the potential to provide habitat or contain cultural resources that other areas of the proposed project site do not and consideration of avoidance of these areas is considered appropriate for defining this alternative.

Response 16OOO: The inclusion of Table 4-1 is common practice in Draft EIR's to provide a mechanism for clearly determining the environmentally superior alternative among the alternatives considered.

Response 16PPP: The comment is noted. See Response 16F.

Response 16QQQ: The comment is noted. The UDA's reference of the proposed project as a mall does not lead to mischaracterization of the project - see definition in its entirety on Page 4 of the UDA. However, one of the project goals, per the project proponent's 1/20/2009 project description, is to "create an economically viable destination shopping mall..."

EPS stands behind its approach in designating proposed retail space in the proposed project as community and regional retail. According to the Shopping Center Development Handbook², community centers are anchored around junior department stores and supermarkets. More

² Published by the Urban Land Institute, 3rd edition.

recently, anchors consist of discounters (Kmart, Marshalls), and large-format specialty stores such as Sports Authority (sporting goods), Home Depot (building supply), or Borders (books). The designation of community retail is consistent with proposed tenants identified by the proposed project proponent. In addition, the consumer demand trends vary for community and regional retail establishments. Disaggregating the project's tenant base into these two categories is helpful in more precisely estimating household expenditures and retail space demanded.

Concerning the established trade areas, EPS recommends keeping the current approach. In Table 2-1 the UDA describes a community trade area (CTA) as an area with a radius of three to seven miles and with a population of approximately 50,000 persons. This is consistent with the Urban Land Institute's (ULI) characteristics (10-20 minute drive; 40K-150K people) and the International Council of Shopping Centers (50K people; three-seven miles). The population in the identified CTA is about 100,000 persons.

Also in Table 2-1, the UDA describes a regional trade area (RTA) as an area with a radius of five to 25 miles and with a population of around 250,000, which is consistent with the International Council of Shopping Centers. The RTA includes Shasta County, northern Tehama County, and eastern Trinity County and contains approximately 230,000 people.

EPS stands behind its designation of the CTA and RTA. Siskiyou and Modoc populations are negligible in population and the southern Tehama area is largely served by Chico's regional retail establishments.

Response 16RRR: The comment is noted. The comment misinterpreted the language in the General Trends section - the 25 percent vacancy estimate was based on a broker interview, included as a qualitative description of current market trends, and was not used to prepare the quantitative analysis. EPS recommends keeping the General Trends discussion - it is important to recognize current impacts on retail resulting from the economic downturn.

Response 16SSS: The comment is noted. See Comment Letter 16, Response 16Z.

Response 16TTT: The comment is noted. The UDA capture rate is high based on the region's insular location. EPS recommends keeping current approach - it is reasonable to assume that some leakage will occur, as in any other regional economy.

Response 16UUU: The comment is noted. See Comment Letter 16, Responses 16Z and 16TTT.

Response 16VVV: The comment is noted. See Comment Letter 16, Response 16BB.

David P. Cincotta
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Ref: 68000.0002

December 28, 2009

VIA E-MAIL & FEDERAL EXPRESS

Lisa Lozier, Senior Planner
Planning Division
County of Shasta
1855 Placer Street, Suite 103
Redding, California 96001

Re: Comments on Urban Decay Analysis Appendix of the Draft
Environmental Impact Report for Knighton and Churn Creek Commons
Retail Center ("DEIR")

Dear Ms. Lozier:

Enclosed with this letter is a letter from Greg Kerfoot of Location Strategies, LLC with comments regarding the Urban Decay Analysis prepared by EPS.

We appreciate the opportunity to comment on the DEIR and its accompanying appendices. We look forward to reviewing the Responses to Comments when it is available.

Thank you, again.

Sincerely,



DAVID P. CINCOTTA, Of Counsel to
Jeffer, Mangels, Butler & Marmaro LLP

nrb

Enclosure

A



December 28, 2009

Ms. Lisa Lozier
Senior Planner
Shasta County Department of Resource Management
Planning Division
1855 Placer Street, Suite 103
Redding, CA 96001

Mr. Jeffery L. Hess
Chief Operating Officer
Hawkins Companies
855 Broad Street, Suite 300
Boise, ID 83702

Subject: Knighton and Churn Creek Commons Urban Decay Analysis

Dear Ms. Lozier and Mr. Hess,

Location Strategies, LLC has been retained by Hawkins Companies (the project proponent) to review and comment on the Knighton and Churn Creek Commons Urban Decay Analysis dated October 12, 2009 and prepared by Economic & Planning Systems, Inc. (EPS). Specifically, Location Strategies evaluated the assumptions, methodologies and findings provided by EPS.

B

Location Strategies generally considers the overall methodology used by EPS to be a reasonable approach to measuring future demand for retail space. However, many of the critical assumptions used in the analysis resulted in an underestimate of retail demand and an overestimate of cumulative retail supply.

C

Retail space demand was underestimated by 1,322,730 square feet in 2015 because no adjustment was made for sales from beyond the trade areas. Although supply estimate methodology is more subjective than demand estimate methodology, 2015 retail space supply was overestimated by as much as 1,270,300 square feet. Either one of these elements offsets the 2015 cumulative development oversupply of 1,210,000 square feet presented in the Knighton and Churn Creek Commons Urban Decay Analysis (table 3-9, page 34).

D

It is respectfully requested that EPS address the concerns identified below.

Underestimate of Demand

In calculating demand, the EPS analysis did not account for sales from beyond the regional and community trade areas. This resulted in underestimating the demand for 2015 retail space by 1,322,730 square feet.

Demand for Retail Square Feet

<u>Element</u>	<u>Trade Area</u>	<u>Total</u>	<u>Difference</u>
Regional Retail	3,302,836	4,393,442	1,090,606
Community Retail	<u>689,556</u>	<u>921,680</u>	<u>232,124</u>
Total	3,992,392	5,315,122	1,322,730

E

Regional Retail

*“[Regional] square feet demand is calculated by dividing total consumer expenditures for each projection year by the average sales per square foot amount by retail category” (footnote 2, table 3-8, page 33). Per table 3-8, square feet demand is 3,302,836 in 2015 in the regional trade area (RTA). Accounting for rounding error, EPS appears to have determined this by dividing projected consumer trade area expenditures (\$861,114,693) by the average Urban Land Institute’s sales per square foot (\$261). This technique is misleading because it divides trade area expenditures by total sales per square foot which includes trade area sales and sales from beyond the trade area. As stated by EPS, “a trade area represents an area surrounding a retail center in which the majority of customer patronage (60 to 80 percent) is expected to be drawn” (paragraph 1, page 11). This means that 20 to 40 percent of the customer patronage comes from beyond the trade area. Assuming the EPS-defined regional trade area accounts for 75 percent of the sales, average Urban Land Institute’s trade area sales per square foot would actually be \$196 (\$261 x 75 percent). **Therefore, adjusting the EPS methodology for sales from beyond the trade area results in 2015 regional retail square feet demand of 4,393,442 -- 1,090,606 square feet more than estimated by EPS.***

F

Community Retail

“[Community] square feet demand is calculated by dividing total consumer expenditures for each projection year by the average sales per square foot amount by retail category” (footnote 2, table 3-7, page 32). The square foot demand is 689,556 in 2015 in the community trade area (CTA) per table 3-7. As in the RTA, it appears that EPS divided projected consumer trade area expenditures (\$206,456,247) by the average Urban Land Institute’s sales per square foot for community retail (\$299) to arrive

G

at this estimate. Had EPS adjusted for sales from beyond the trade area and assuming the EPS-defined community trade area accounts for 75 percent of the sales, average Urban Land Institute's trade area sales per square foot would actually be \$224 (\$299 x 75 percent). **Community retail square feet demand should be 921,680 -- 232,124 square feet more than tendered by EPS.**

G cont.

Overestimate of Supply

It appears that the EPS inventory of existing and future retail square footage has been overestimated by as much as 1,270,300 square feet. If only half of this overestimate is correct, the difference is nearly the total square footage of the proponent's project.

<u>Element</u>	<u>Sq. Ft.</u>	<u>Reason</u>
Contingency Factor	621,000	Space type and location unknown
Downtown Mall	235,300	Not competitive with the project
Abandoned Space	74,000	Not due to the project
Oasis Towne Center	<u>340,000</u>	Likely post 2015 opening
Grand Total	1,270,300	

H

Contingency Factor

*"EPS added a 20% contingency factor to include any retail supply that was omitted by the NRB Shopping Center Directory and unaccounted in EPS's supplemental research" (footnote 4, table 3-1, page 22). This 20% contingency factor arbitrarily adds 621,000 square feet of non-specific retail space to the trade area inventory. While it is understood that commercially-available retail directories may not be 100% accurate, they are generally consistent from market-to-market and this omission error is built into national averages and benchmarks. Without a physical inventory of the type and location of this contingency factor space, it is impossible to know how or if it would be influenced by the proponent's project. **Location Strategies contends that this 20% contingency factor (nearly the size of the proposed development) overstates the existing supply of retail space in the trade area. Is this contingency factor arbitrary or based on a known sampling error provided by NRB?***

I

Downtown Mall

"Downtown Redding, with its historic architecture, expanding arts venues, and ongoing downtown Mall redevelopment, has the potential to become a community destination offering cultural amenities in a pedestrian-friendly environment" (paragraph 2, page 3). EPS has

J

identified Downtown Mall as having 225,300 square feet of retail space (footnote 3, table 3-1, page 22) and includes it in the retail inventory. As part of its redevelopment, Downtown Mall is being positioned to attract start-up businesses, boutique retail, galleries, performing arts and unique restaurants. This is an effective strategy as it allows Downtown Redding to compliment Redding’s traditional shopping centers rather than compete with them. **As none of Downtown Mall’s target tenants would be appropriate for the proponent’s project, the inclusion of Downtown Mall’s square footage into the competitive inventory overstates the competitive environment.**

J cont.

Abandoned Space

“EPS was retained by the County to analyze the potential urban decay impacts that could result from the retail land uses planned for the Project” (paragraph 1, page 4). The spirit of an urban decay analysis is to identify potential impacts of planned developments. EPS correctly stated the difficulty of releasing space formerly used by larger retailers (paragraph 6, page 37). This is exemplified by the closure of Gottschalk’s which was due to a company-wide closing and not new developments in Redding. The former Redding Gottschalk’s (74,000 square feet) is a secondary location for retail and will be difficult to release. The vacant building does not represent an alternative for potential retail, traveler services and entertainment users of the proponent’s project. **Therefore, secondary-location vacancies caused by outside factors should not be included in the competitive inventory as the space will be difficult to release regardless the proponent’s project.**

K

Oasis Towne Center

“...Oasis Towne Center has been approved by the City of Redding, and is anticipated to include 340,000 square feet...it is anticipated that [Oasis Towne Center] would be constructed by 2015” (Paragraph 1, Page 27). Oasis Towne Center is part of the Oasis Road Specific Plan and is located on Redding’s north side, four miles north of Mt. Shasta Mall. However, conversations with national retailers suggest the project is unlikely to open until after 2015. **Oasis Towne Center’s inclusion overstates the likely supply of retail space in the trade area through 2015.**

L

Evaluating retail demand without considering sales from beyond the trade areas is a fundamental concern in the EPS analysis, and it is inconsistent with the EPS assertion that trade areas only contribute a portion the retailers’ sales. Overstating supply through unsubstantiated adjustments and the failure to differentiate the type and quality of the space also weakens the EPS study.

M

Location Strategies is prepared to review our concerns with representatives of Shasta County and EPS to resolve the issues outlined above.

Sincerely,

A handwritten signature in black ink, appearing to read "Greg Kerfoot". The signature is written in a cursive style with a large, looping initial "G".

Greg Kerfoot
Managing Member
Location Strategies, LLC

Greg Kerfoot

Greg Kerfoot is the managing member of Location Strategies, LLC, specializing in retail location research for the development, investment, retail and management communities. Prior to starting Location Strategies, Kerfoot served as the real estate research department head for Sears, Roebuck and Co., Homart Development Co. and May Department Stores Company. He was also vice president of real estate asset management while at Sears.

A recipient of the ICSC Trustees Distinguished Service Award, Kerfoot is past chairman of the ICSC Research Advisory Task Force, and he chaired the inaugural ICSC Research Conference. Greg has a MA from Miami University, Ohio and a BA from California State University, Chico. Both degrees are in geography.

Location Strategies Website: LocationStrategiesLLC.com

Letter 17 David P. Cincotta, Of Counsel to Jeffer Mangels Buler & Marmaro LLP

Response 17A: The comment is noted. The comment does not raise a specific environmental concern related to the proposed project to which a response can be prepared.

Response 17B: The comment is noted. The comment does not raise a specific environmental concern related to the proposed project to which a response can be prepared.

Response 17C: The comment is noted. The comment does not raise a specific environmental concern related to the proposed project to which a response can be prepared.

Response 17D: This comment summarizes findings; responses are described in Responses 17F through 17L below.

Response 17E: See Responses 17F and 17G below.

Response 17F: The comment is noted. As a standard method, EPS estimates market demand based on the neighborhood, community, or regional trade areas in a project. As a conservative approach, EPS does not typically estimate demand from consumers outside of these trade areas. In addition, based on EPS's adjustments noted in Comment Letter 16, Response 16Z, the revised results of the UDA indicate a lower probability of urban decay from the individual Project and cumulative development.

Response 17G: The comment is noted. As a standard method, EPS estimates market demand based on the neighborhood, community, or regional trade areas in a project. As a conservative approach, EPS does not typically estimate demand from consumers outside of these trade areas. In addition, based on EPS's adjustments noted in Comment Letter 16, Response 16Z, the revised results of the UDA indicate a lower probability of urban decay from the individual Project and cumulative development.

Response 17H: See Responses 17I, 17J, 17K, and 17L below.

Response 17I: The comment is noted. See Comment Letter 16, Response 16Z.

Response 17J: The comment is noted. EPS recommends keeping the current approach; it is arguable that the restaurant and entertainment uses anticipated in the proposed project will compete with those existing and proposed in the downtown mall.

Response 17K: The comment is noted. See Comment Letter 16, Response 16Z.

Response 17L: The comment is noted. See Comment Letter 16, Response 16Z.

Response 17M: The comment is noted. See Responses 17F and 17G above for a response to comments on the UDA's market demand estimates.

See Comment Letter 16, Response 16Z for a response to comments on the UDA's contingency factor.

See Comment Letter 16, Response 16QQQ for a response to comments on the UDA's differentiation of retail space.

RECEIVED

DEC 28 2009

COUNTY OF SHASTA
PERMIT COUNTER

December 28, 2009

Ms. Lisa Lozier, Senior Planner
County of Shasta
Department of Resource Management
1855 Placer Street, Suite 103
Redding, CA 96001

Dear Planner Lisa Lozier:

The proposed Hawkins Development Project on Churn Creek Bottoms is a serious mistake and should not go forward.

This land is valuable and an important resource for all Shasta County residents. It is deemed "significant" and "unique" farmland. I understand the loam is 10 to 16 feet deep in many places. Most of Shasta County has poor soils. This amazing and important resource should not be paved over. Increasingly in a world with climate change communities must have local food sources. This is our prime farmland.

A

Additionally, it is incredibly absurd to propose new giant-sized commercial mall type developments when so many commercial buildings sit vacant in our community. Build on Hilltop, Downtown Redding, or any of the other vacant commercial spots that dot our town and county. These empty carcasses of buildings already have the infrastructure in place, which makes better sense economically and resource-wise. These other locations are closer to the populations centers.

B

Further, this poorly thought-out development only causes more suburban sprawl and rural encroachment. As we get wiser we know that development is best done close to the population by in-filling where infrastructure develop costs have already been invested. Sprawl encourages extra driving and increases CO2. Changes will be made soon in the practice of driving distances for shopping. It must as we are reaching peak oil and to decrease CO2 which is causing climate change. This development is beyond the established RABA bus routes.

C

There is no good reason for this development.

Please make these comments part of the public record.

Sincerely,

/s/ Michael Cobbold

Michael Cobbold
1055 East St
Redding, CA, 96001

Letter 18 Michael Cobbold

Response 18A: The comment is noted. This is not a comment related to the adequacy of the EIR, but rather an opinion of the commenter that the highest and best use of the proposed project site is for agricultural purposes. Impacts of the proposed project on agricultural resources are discussed and analyzed on pages 3.2-1 through 3.2-10 of the Draft EIR. The commenter's opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Response 18B: The comment is noted. See Comment Letter 7, Responses 7C and 7D.

Response 18C: The comment is noted. Air quality impacts are addressed in Draft EIR Section 3.3, traffic impacts are addressed in Section 3.12 and in the PRDEIR and the responses to comments thereon, global climate change is addressed in Section 3.15, and growth inducing impacts of the proposed project are discussed in Section 5.6 at page 5-14. In addition, public transportation bus routes throughout the County are periodically modified in response to demand generated by new development.

Letter 19

DEPARTMENT OF
RESOURCE MANAGEMENT
RECEIVED

DEC 28 2009

PLANNING/BUILDING
DIVISIONS

Lisa Lozier
Shasta County Planning Division
1855 Placer St, Suite 103
Redding, CA 96001

Dear Ms Lozier,

I am a long-time resident of Churn Creek Bottom, and as such, I am writing to express my concerns about the retail/commercial development proposed for the northeast corner of Knighton and I-5. I shall list them with no priority.

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| <p>1. This is a huge plan, and the traffic generated by it is bound to cause a huge problem. Widening the short stretch of Knighton between the freeway and Churn Creek Road is not an adequate solution. Besides the development's traffic, there is traffic using that road generated by big rigs, RVs, and autos from the truck stop, trips to and from the airport, vehicles servicing the commercial on Airport Road, school buses and parents going to and from the school, and by local residents. It is currently a very busy intersection.</p> | A |
| <p>2. Why is it that all the planning agencies in Shasta County can't get together and work out a regional plan? Each one seems to be grabby and self-centered and not concerned with the community as a whole. In these times of tight budgets, each one doing its own thing appears to be very inefficient.</p> | B |
| <p>3. I am concerned about the impact of the project to Churn Creek Road north of Knighton and its residents. This is an old, narrow, country road with no shoulders, limited width bridges, many driveways, school bus stops, a difficult intersection at Victor/Rancho/Churn Creek, and a busy intersection at Churn Creek/Bonneyview. I feel that this project, with its significant traffic problems on Knighton, will funnel significant traffic up and down Churn Creek Road for which it is not designed. Besides, all this future use will create a safety issue for the local residents and a significant negative effect on property values.</p> | C |
| <p>4. The project plans to place a buffer on the north end. Vehicles on I-5 will be given a view of the back-sides of the buildings; it is like that all along the freeway. I suggest, if approved, that the buffer be re-located to the west side of the project to be between the freeway and the back-sides.</p> | D |
| <p>5. I object to the permanent loss of Agricultural land when I see no need. One of the Supervisors claimed that agriculture was impossible next to a freeway; I see lots of agriculture along freeways. Our local newspaper has written about the enormous and growing number of square feet of vacant retail/commercial space in our community. I believe that this project will only compound this situation. I worry about blight that it might cause.</p> | E |
| <p>6. If approved, the proposed project will have significant negative effects on the surrounding area. This is a leap-frog situation that will put tremendous development pressures on neighboring properties and to all the lands along the freeway from Redding through Anderson. This will be a far-reaching decision and should not be taken lightly.</p> | F |
| <p>7. This project is grossly out of scale for the location. It is going to be like trying to force a square peg into a round hole. There is currently commercial zoning for this location. Why not stick to the General Plan, a document that many of us have used to make life-style decisions? Consideration of this project is a betrayal; how can we put trust in County government if this is approved?</p> | G |
| <p>8. There is no urban sewer or water service yet this an urban development. This makes no sense to me.</p> | H |

9. I am concerned about Pacheco School which has been at this location since, I believe, the 1950's. First came the truck stop, and now a retail center is contemplated. It is impossible to believe that there will be no impact on the school, the children, the parents, or the staff. Just think about drop-off and pick-up times when parents are coming and going, buses are making their runs, and children are out and about. The school recently created a new spot along Pacheco Road for parent drop-off and pick-up just to mitigate the problems caused by the construction of Knighton Road. What is the school going to have to do to mitigate the effects of the planned retail center? Why is it that the interests of the children seem to be unimportant?

I

10. Another issue that bothers me is the drainage of the acres and acres of parking lot. During and after a rain, I notice the rainbow of colors of the pollutants that have collected on the blacktop from the parked vehicles. It doesn't take long for new paving to accumulate dark deposits in the middle of the parking stalls. This compromised water must be drained as customers don't like to walk/drive through puddles. I fear that those pollutants will drain into the soil and the local irrigation system to be distributed throughout the area.

J

11. As noted in #2 above, I am bothered by the appearance of a lack of regional planning. I understand that plans for the Oasis project are progressing and that its traffic issues are being addressed. This is an area of poor soil and rock -- not prime agricultural soil. Also, I believe that the Oasis site has urban water and sewer services available. Do we need two new retail centers? I think not. I don't think we even need one new retail center.

K

12. Since the completion of the Knighton Road extension which connects I-5 with Airport Road, the fire trucks and other emergency vehicles have used it for faster access to the freeway and adjacent areas. Big rig, school, retail, commercial, and residential traffic mixed with a roaring fire truck does not seem like a good mix.

L

13. Supervisor Les Baugh, in an article printed in the Anderson Valley Post on 1 April 2009 in reference to the location of the new county court house, hoped that logic would win the day. He noted a recent traffic study predicted that the already busy freeway will be so congested that travel times will double in the near future and asked about purposely planning to add to the congestion of I-5. He then asked that SB375 be considered which is California legislation that mandates vehicle emission reductions. Les Baugh stated, "Part of SB375 logic is to locate core services in more densely populated areas to eliminate extended travel." This is precisely the same reason for not allowing this development at the Knighton Road/I-5 intersection.

M



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Letter 19 George Cole

Response 19A: The comment is noted. Traffic impacts resulting from the proposed project, including impacts identified by the commenter, are addressed by Mitigation Measures #3.12-1a through #3.12-8 beginning on page 3.12-15 of the Draft EIR, also please see the PRDEIR and the responses to comments thereon.

Response 19B: The comment is noted.

Response 19C: See Response 19A above.

Response 19D: The comment is noted. The proposed 18 acre open space buffer at the north end of the proposed project is intended to buffer existing residential uses abutting the proposed project site on the north from impacts associated with the proposed commercial uses (noise, light and glare, etc.) and to accommodate the on-site wastewater treatment operation.

Response 19E: This is not a comment related to the adequacy of the EIR, but rather an opinion of the commenter that the highest and best use of the proposed project site is for agricultural purposes. Impacts of the proposed project on agricultural resources are discussed and analyzed on pages 3.2-1 through 3.2-10 of the Draft EIR. Urban blight is discussed and analyzed on page 3.9-2 through 3.9-4 of the Draft EIR. Appendix L (Urban Decay analysis) and Appendix M (Fiscal Impact Analysis) provide additional detail on this subject. Comments regarding opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Response 19F: The comment is noted. Growth inducing impacts of the proposed project are discussed in Section 5.6 at page 5-14 of the Draft EIR.

Response 19G: The comment is a statement that the project is out of scale for the proposed location and that the proposed project conflicts with provisions of the Shasta County General Plan regarding land use designations and commercial development at the I-5/Knighton Road intersection. Land use designations and potential General Plan conflicts have been addressed in the Land Use and Planning section of the Draft EIR (Section 3.9). As noted on Draft EIR page 3.9-14 Impact #3.9-2, this is a matter of policy that must be decided by the Board of Supervisors.

Response 19H: The project design provides for sewer and water facilities. The environmental effects of the construction and operation of these facilities are evaluated in Sections 3.8 beginning at page 3.8-1 and 3.13 beginning at page 3.13-1 of the Draft EIR and Appendices I, J, P and Q.

Response 19I: The comment is noted. Pacheco School impacts are addressed in Draft EIR Section 3.11 and traffic impacts are addressed in Section 3.12, and in the PRDEIR and the responses to comments thereon.

Response 19J: The onsite treatment of drainage from the site is addressed by Mitigation Measure #3.8-2 (page 3.8-11 of the Draft EIR) as amended below, which requires Best

Management Practices for runoff water quality protection and source control before discharge to receiving waters.

Mitigation Measure #3.8-2:

The applicant shall design and construct the project drainage system in accordance with the drainage system volume requirements specified by Hydmet, Inc (Stormwater Retention Storage Churn Creek Flood Plain, April 2011 by John H. Humphry). The drainage system shall be subject to review and approval by the Shasta County Public Works Department and the Shasta County Environmental Health Division prior to issuance of grading permits for the project. ~~Prior to approval of the proposed project site plan~~ At the time of application for the individual grading permits, the project proponent shall identify all appropriate and feasible storm water runoff Best Management Practices (BMPs) for that portion of the project to be implemented within the project site. These BMPs shall be selected from the California Stormwater Quality Association's Stormwater Best Management Practice Handbook—New Development and Redevelopment and shall conform to the standards set forth by the Central Valley Regional Water Quality Control Board. Typical BMPs that could be used shall include but would not be limited to catchbasin inserts, compost stormwater filters, sandfilters, vegetated filter strips, biofiltration swales, oil/water separators, bioretention basins, or other equally effective measures. Other BMPs shall include but would not be limited to administrative controls such as signage at inlets to prevent illicit discharges into storm drains, parking lot and other pavement area sweeping, public education, and hazardous waste management and disposal programs. BMPs shall identify and implement mechanisms for the routine maintenance, inspection, and repair of pollution control mechanisms. In addition, the BMPs shall be reviewed for adequacy by the Shasta County Planning and Public Works Departments.

Also, see Comment Letter 62, Response 62B.

Response 19K: The comment is noted. This is not a comment on the environmental analysis. Commenter opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.

Response 19L: See Response 19K above.

Response 19M: The comment is noted. This is not a comment on the environmental analysis. Commenter opposition to the proposed project should be directed to the County Planning Commission and Board of Supervisors during project deliberations.