TAXPAYER EXHIBIT
B1
September 12, 2012
Pacific Coast Building Products, Inc., et al
514183

Pacific Coast Building Products, Inc.

State Board of Equalization Appeal
Hearing Packet

September 12, 2012

STATE BOARD OF EQUALIZATION

Appeal Name: Pacific Coast Building Products, Inc.
Case ID: 514183 ITEM #: B1
Date: 9/12/12 Exhibit No: 9.2
(TP) FTB DEPT PUBLIC COMMENT

Pacific Coast Building Products, Inc.

Index to Board of Equalization Appeal

Hearing Packet

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EXHIBIT 1

Audit Techniques Guide:
Credit For Increasing Research Activities
(Research Credit)
I.R.C. § 41

Internal Revenue Service
Large And Mid-Size Business Division (LMSB)
Pre-Filing And Technical Guidance (LM:PFTG)

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In planning the audit strategy, remember that the Research Credit Technical Advisor Team is available to help examiners effectively allocate limited audit resources to those issues that pose the greatest compliance risk.

Once the audit strategy has been addressed, a meeting should be held with the taxpayer to gain a general understanding of how the taxpayer reached its return (or claim) position. All members of the audit team involved with the research credit issue should attend this meeting. Consider sending a letter or issuing an Information Document Request (IDR) prior to the meeting, addressing potential subjects for discussion and documents to be produced. Consider requesting that a taxpayer contact be designated for the research credit issue. Some potential issues for discussion and documents to be produced at the meeting are as follows:

- Who prepared the research credit computation workpapers?
- What methodology was employed for capturing QREs reflected in the research credit computation workpapers (i.e., estimates, interviews, sampling, surveys, reviews of contemporaneous documents, etc.)?
- What documentation and other substantiation are available to support the taxpayer's claim for the research credit (including the base years)?
- Was this documentation prepared contemporaneously with the research activities?
- What legal standard(s), if any, did the taxpayer employ to determine credit-eligibility?

At the meeting, find out whether the taxpayer sent surveys/questionnaires to employees. If so, request copies of these surveys/questionnaires and responses and have the taxpayer show how these were used in the research credit computation. Also request any instructions that accompanied the surveys/questionnaires.

Advise the taxpayer that interviews of current (and former) employees and contractors may be conducted as part of the audit. A tour of the research facilities should also be considered.

7. SUBSTANTIATION AND RECORDKEEPING

At the commencement of the audit, the examiner should discuss with the taxpayer the contemporaneous books and records available to substantiate the research credit claimed. Contemporaneous books and records should form the basis of the examination, and should be requested, as needed, in examining the particular issues addressed in this audit techniques guide.

For example, the following types of documentation may be helpful:

a.	Chart of Accounts
b.	Accounting and Finance Manuals
c.	Organization Charts
d.	Department Descriptions
e.	Job Position Descriptions
f.	Product Lists
g.	Documentation of Experiments
h.	Patent Applications[14]
i.	Workpapers Used to Compute QREs
j.	Workpapers Used to Compute the Research Credit
k.	Workpapers Used to Compute the Base Amount
l.	Documentation on QREs/Gross Receipts from acquired/ disposed trades or businesses

The following information may assist the examiner in understanding the appropriation of company resources or details of research projects the taxpayer conducted during the examination year:

[14] The examiner should note that the securing of a patent would usually occur prior to the examination year, as research must first be performed before securing a patent.

a. Materials explaining research activities, including brochures, pamphlets, press releases, and other similar documents.

b. Submissions to management, the board of directors, review committees or other similar groups regarding research projects, activities, expenditures, and the research credit.

c. Documents prepared by or on behalf of internal audit, including quarterly and annual reports that refer in any manner to research activities.

d. Minutes, notes, or other similar recordings from budget, board of directors, managerial or other similar meetings concerning research activities.

e. Project authorizations, budgets, or work orders that initiates a research project.

f. The internal authorization policies for approving a research project.

g. Project summaries and/or progress reports and project meeting minutes.

h. Field and lab verification data/summary data.

i. Research credit studies conducted by outside consultants.

j. Papers, treatises, or other published documents regarding the taxpayer's research.

k. Complete copies of contracts (including all modifications), letter agreements, memoranda of understanding, or similar documents for research performed by or on behalf of a third party.

The taxpayer bears the burden of proving its qualification for the research credit. Welch v. Helvering, 290 U.S. 111 (1939); Helvering v. Taylor, 293 U.S. 507 (1935); I.R.C. § 6001.

To meet its burden, the taxpayer must prove it engaged in qualified research and substantiate the expenses incurred in the qualified research.

The Research Credit Technical Advisor Team has posted sample questions to the LMSB intranet website that can be used to facilitate production of the relevant information. Credible oral testimony may be helpful in evaluating and/or supplementing a taxpayer's contemporaneous documentation. To that end, it may be necessary to conduct interviews of taxpayer employees. A Research Credit Technical Advisor can provide guidance on the effective conduct of interviews.

Proposed Treasury Regulation section 1.41-4(d) provides that the rules generally applicable under section 6001 provide sufficient detail about required documentary substantiation for purposes of the research credit. Treasury Regulation section 1.6001-1 requires the keeping of records "sufficient to establish the amount of . . . credits, . . . required to be shown . . ." The consequence of failing to keep sufficient records substantiating a claimed credit may be denial of the credit. To facilitate compliance and administration, the Service and taxpayers may agree to guidelines for the keeping of specific records for purposes of substantiating the research credit.

As mentioned previously, the Research Credit Technical Advisor Team recommends considering, where appropriate, the use of expedited resolution procedures including Advanced Issue Resolution (AIR) and Pre-Filing Agreements (PFA). As a practical matter, many substantiation issues could be eliminated if taxpayers and the Service entered into specific research credit record retention agreements. The best time to propose such an agreement would likely be upon completion of the current examination cycle. At that time the examiner, CAS, and the taxpayer are in the best position to determine what taxpayer records are necessary. If the parties enter into such an agreement, the taxpayer will know what records need to be kept and maintained in order for the Service to effectively and efficiently audit the credit. Although such an agreement will not resolve other audit issues, such as whether the activities qualify under section 41(d), it should improve and expedite the audit process to the mutual benefit of the parties.

The examiner should also consider issuing a Notice of Inadequate Records, pursuant to Treasury Regulation section 1.6001-1(d), if the taxpayer does not keep sufficient or adequate records to support the research credit claimed.

EXHIBIT 2

State of California
Franchise Tax Board

Research & Development Credit:

Frequently Asked Questions

California Franchise Tax Board

You may support the gross receipts component with shipping and sales support records. Apportioning taxpayers may be able to utilize their tax apportionment work papers. However, sales by destination schedules should not include the application of Public Law 86-272, i.e. regardless of the sale's origination point.

19. What documents will FTB typically rely upon?

Documents we typically rely on to support various research credit elements include:

- Materials explaining research activities, including brochures, pamphlets, press releases, and other similar documents.
- Submissions to management, the board of directors, review committees or other similar groups regarding research projects, activities, expenditures, and the research credit.
- Documents prepared by, or on behalf of, internal audit, including quarterly and annual reports that refer in any manner to research activities.
- Minutes, notes, or other similar recordings from budget, board of directors, managerial, or other similar meetings concerning research activities.
- Project authorizations, budgets, or work orders that initiate a research project.
- The internal authorization policies for approving a research project.
- Project summaries and/or progress reports and project meeting minutes.
- Field and lab verification data/summary data.
- Research credit studies conducted by outside consultants.
- Papers, treatises, patents and their supporting work papers, letters, scientific articles acknowledging the work, supply invoices, or other published documents about the taxpayer's research.
- Human resource documents including self-appraisals, annual reviews, and time reports.
- Travel and entertainment reimbursement forms.
- Email.
- Original signed contracts (including all modifications), letter agreements, memoranda of understanding, or similar documents for research performed by, or on behalf of, a third party.
- Federal and state tax returns (including other state tax returns). This would also include apportionment work papers to prepare the various state tax returns.
- The general ledger.

In addition to the documents listed above, credible oral testimony by individuals with personal knowledge of the issues may be helpful in supplementing a taxpayer's contemporaneous documentation. However, oral or written testimony by itself is not a substitute for contemporaneous documentation. We may need to conduct interviews to provide documentation opportunities, or to confirm, clarify, or refute other documentary or testimonial evidence. We may disallow the credit for corporations who fail to maintain records in accordance with these rules. While there does exist a degree of flexibility in substantiating the credit, it neither relieves nor eliminates a taxpayer's obligation to keep and provide a record of their qualified research and expenditures.

20. How should we document our research and expenditures when our company is small, organizationally flat, and not in a highly regulated industry?

Again, you should maintain all documents necessary to support your credit and its components. It may be true that your circumstances may not provide documentation in a typical or structured format. The Franchise Tax Board recognizes this fact and tries to work with you to identify documentation opportunities. However, research is a coordinated activity. There is discussion of planning, methodology, goals, testing, etc.

Some examples of alternative or less formal documentation that may help us verify your credit and its components include, but are not limited to, e-mails, calendars, notes, correspondences, etc. Again, taxpayers providing detailed and well-maintained records to FTB upon request will expedite audits of the R&D Credit.

21. How does the inclusion of a partnership affect the R&D Credit?

If a partnership meets the ownership inclusion test then we treat the partnership as a group member. The partnership receives its appropriate share of group credit under the aggregation rules. The partnership's allocated group credit passes to its partners based on their proportionate distributive share of the research expense items. You report the allocated credit amount on line 40 of FTB Form 3523, *Research Credit.*

If the partnership is not part of a parent/subsidiary or brother/sister group, the partnership's California research expenses and gross receipts will not be included in any controlled group computation.

EXHIBIT 3

STATE OF CALIFORNIA
FRANCHISE TAX BOARD
P O Box 1673
Sacramento CA 95812-1673

LANCE FIRST
PRICEWATERHOUSECOOPERS, LLP
400 CAPITOL MALL, SUITE 600
SACRAMENTO CA 95814

Date: January 31, 2006
Case: 12040254584948120
Case Unit: 12040254584948386
In reply refer to: 343:APG

Regarding: Examination of Correspondence titled "Research and Development Credit Study"
CCN: 0477907
Taxpayer's Name: PACIFIC COAST BUILDING PRODUCTS, INC.
Taxable Year: 1999

We have reviewed the 1999 Research and Development (R&D) credit generated by Pacific Coast Building Products, Inc. in the amount of $411,749. We have determined that the R&D credit should be $327,808 instead of $411,749. Following is an explanation from which we based our determination:

California Revenue and Taxation Code (CR&TC) § 23609 states that in order for an activity or project to qualify for the research credit, the taxpayer must show that it meets all of the requirements in IRC § 41(d). CRTC § 23609 conforms to the Internal Revenue Code (IRC) § 41.

IRC § 41 states that for expenses to qualify for the research credit taxpayer [Pacific Coast Building Products, Inc.] must meet the following four tests:

1. The research must have qualified as a business deduction under IRC §174. [IRC § 41(d)(1)(A)]
2. The research must be undertaken to "discover information which is technological in nature." [IRC § 41(d)(1)(B)(i)]
3. The taxpayer must intend to use the information to develop a new or improved business component. [IRC § 41(d)(1)(B)(ii)]
4. The taxpayer must pursue a "process of experimentation" during substantially all of the research. [IRC § 41(d)(1)(C)]

Therefore, Pacific Coast Building Products, Inc.'s activities that were intended to develop or improve a business component's functionality, performance, reliability, or quality through a process of experimentation undertaken to discover technological information to eliminate uncertainty were qualified.

Qualified Wages
Per IRC § 41(b)(2)(A)(i) wages for the purpose of calculating research and development credit are wages paid or incurred to an employee for the performance of qualified services.

IRC § 41(b)(2)(D)(i) states that the "term" wages has the meaning given such term by IRC § 3401. Per IRC § 3401(a) the term "wages" mean all remuneration (other than fees paid to a public official) for services performed by an employee for his employer, including the cash value of all remuneration (including benefits) paid in any medium other than cash.

IRC § 41(b)(2)(B) states that the term "qualified service" means services consisting of
(i) engaging in qualified research, or
(ii) engaging in the direct supervision or direct support of research activities with constitute qualified research.

Reg. 1.41-2 (c)(1) defines that the term "engaging in qualified research" as used in section 41(b)(2)(B) means the actual conduct of qualified research (as in the case of a scientist conducting laboratory experiments).

Reg. 1.41-2 (c)(2) defines the term "direct supervision" as used in section 41(b)(2)(B) means the immediate supervision (first-line management) of qualified research (as in the case of a research scientist who directly supervises laboratory experiments, but who may not actually perform experiments). "Direct supervision" does not include supervision by a higher-level manager to whom first-line managers report, even if that manager is a qualified research scientist.

Reg. 1.41-2 (c)(2) defines the term "direct support" as used in section 41(b)(2)(B) means services in the direct support of either—
(i) Persons engaging in actual conduct of qualified research, or
(ii) Persons who are directly supervising persons engaging in the actual conduct of qualified research... Direct support of research activities does not include general administrative services, or other services only indirectly of benefit to research activities. For example, services of payroll personnel in preparing salary checks of laboratory scientists, of an accountant for accounting for research expenses, of a janitor for general cleaning of a research laboratory, or of officers engaged in supervising financial or personnel matters do not qualify as direct support of research.

As stated above, under IRC § 41(b) qualified services include:
- Actual conduct of qualified research
- Immediate supervision of persons actually conducting the research
- Direct support of persons who actually conduct qualified research. "Support" means services consisting of research data input, typing research reports, cleaning research equipment and fabrication of experimental model.

After reviewing the California Wages QRE Detail by Cost Center by Employee document and in accordance with Reg. 1.41-2(c)(2)(ii), we determined that wages paid for the following are considered non-qualified services: Payroll/Office Clerk, Accounting/Inventory, Accounting Clerk, Personnel/Office Clerk, Receptionist, Janitor, Shipping Clerk, Sales Orders Clerk, Customer Service Representative, Inside, Outside, Territorial and Contractor Sales Representatives, Delivery Driver, Architectural Block Sales, Division Sales and Marketing, and VP, Manufacturing.

The computations below describe the breakdown by cost center the total qualified wages per the study, amount disallowed and amount allowed:

	Total	Disallowed	Allowed
Pabco Paper Vernon	605,769	9,531	596,238
Pabco Gypsum Newark	332,469	206,714	125,755
H.C. Muddox Sacramento	214,251	8,301	205,950
Gladding McBean - Lincoln	476,216	50,570	425,646
Basalite Block Tracy	183,424	19,583	163,841
Basalite Block Dixon	350,033	28,325	321,708
	2,162,162	323,024	1,839,138

Qualified Supplies

Per IRC § 41 (b)(2)(C) the term "supplies" means any tangible property other than—

(i) land or improvements to land, and

(ii) property of a character subject to the allowance for depreciation.

Reg. 1.41-2 (b)(1) states that supplies and personal property (except to the extent provided in paragraph (b)(4) of this section) are used in the conduct of qualified research if they are used in the performance of qualified services (as defined in section 41(b)(2)(B), but without regard to the last sentence thereof) by an employee of the taxpayer (or by a person acting in a capacity similar to that of an employee of the taxpayer... Expenditures for supplies or for the use of personal property that are indirect research expenditures or general and administrative expenses do not qualify as in-house research expenses.

Reg. 1.41-2 (b)(2)(i) provides that in general, amounts paid or incurred for utilities such as water, electricity, and natural gas used in the building in which qualified research is performed are treated as expenditures for general and administrative expenses.

After reviewing the California Supplies QRE Detail by Cost Center by Account, we determined that any supplies that constitute indirect expenditures or general and administrative expenses and general overhead expenses and utility costs, such as water, electricity and natural gas are not qualified supplies.

Therefore, the amount disallowed consist of amounts paid for electricity, natural gas, water, office supplies, subscriptions, and waste removal, which are considered overhead expenses and/or utility costs

Below is the breakdown by cost center of the total qualified supplies per the study and amount disallowed and amount allowed:

	Total	Disallowed	Allowed
PABCO-Vernon	2,370,392	381,156	1,989,236
Pabco-Newark	1,201,047	98,832	1,102,215
HC Muddox	36,135	20,252	15,883
Gladding McBean-Lincoln	264,230	122,268	141,962
Basalite Block -Tracy	579,081	25,416	553,665
Basalite Block -Dixon	707,012	24,733	682,279
	5,157,897	672,657	4,485,240

Contract Expenses
Per IRC §41(b)(3)(A) the term "contract research expense" means 65 percent of any amount paid or incurred by the taxpayer to any person (other than an employee of the taxpayer) for qualified research.

Qualified research under IRC § 41 (b)(1) means the sum of the following amounts which are paid or incurred by the taxpayer during the taxable year in carrying on any trade or business of the taxpayer— (A) in-house research expenses, and (B) contract research expenses.

Per Reg. 1.41-2(e)(2) qualified contract expenses include:
(i) Contact entered into prior to research
(ii) Performed on behalf of the taxpayer
(iii) Bear expenses even if not successful

After reviewing the list of expenses in the California Contract QRE Detail by Cost Center by Account it appears that the expenses include expenses incurred for maintenance, consulting fees, legal fees, contract services, repair services, and temporary services. All expenses appear to be within IRC § 41(b)(1)(B).

Summary of Proposed Changes
We propose to disallow a total of $53,941 from the $411,749 R&D credit. Thus, our determination is to allow a total of $357,808 R&D credit. For the detailed calculation see the schedule in the next page.

Please note that since the statue of limitations for Pacific Coast Building Products, Inc. already expired, this determination is for informational purpose only. This determination would establish the pass-through R&D credit to the shareholders of Pacific Coast Building Products, Inc.

	PER POA	PER AUDIT
Wages	2,162,163	1,839,139
Supplies	5,157,897	4,485,240
65% Contract Price	280,287	280,287
Qualifying R&D Expenditures	7,600,347(A)	6,604,666(A)
x 50%	0.50	0.50
50% of Current Year QRE	3,800,174(C)	3,302,333(C)
Average Gross Receipts		
Ending 3/31/98	313,900,795	313,900,795
Ending 3/31/97	297,351,522	297,351,522
Ending 3/31/96	285,420,448	285,420,448
Ending 3/31/95	260,384,337	260,384,337
	1,157,057,102	1,157,057,102
Divided by four	4	4
	289,264,276	289,264,276
Fixed base percentage	0.50	0.50
Base Amount	144,632,138(B)	144,632,138(B)
Total QRE less Base Amount (A)-(B)	6,154,026(D)	138,027,472(D)
Incremental QRE: Lesser of (C) or (D)	3,800,174	3,302,333
Research Credit Percentage	0.11	0.11
Total Research Credit	418,019	363,257
Sec. 280C Credit Percentage Reduction	0.015	0.015
Sec. 280C Reduction of Credit	6,270	5,449
Incremental Research Credit	**411,749**	**357,808**

If you do not agree with the above position or have any additional information to provide that you wish to be considered with regard to the R&D credit for the taxable year 1999, please respond by **February 24, 2006**.

To ensure proper handling, attach a copy of this letter to the front to your reply and send to the address below.

Franchise Tax Board
Attn: 343:APG
P.O. Box 1673
Sacramento, CA 958182-1673

In the absence of a reply, we will make the proper adjustments as outlined in this letter for the shareholders.

Thank you for your cooperation. Please call me at the telephone number listed below if you have any questions regarding this matter.

Araceli Ponce-Garcia
Telephone: (916) 845-6754
Fax: (916) 843-0891

CC: Brad LaCour, Pass Through Entity Program Manager, (818) 908-6608
Chela Gutierrez, Supervisor, (916) 845-3965

EXHIBIT 4

STATE OF CALIFORNIA
FRANCHISE TAX BOARD
P. O. Box 1673
Sacramento CA 95812-1673

01.30.09

Please Respond By: 03/04/09

Author: Jamie W. Cole
Author's Title: Associate Tax Auditor

Taxpayer: PACIFIC COAST BUILDING PRODUCTS, INC.
CCN: 0477907
Taxable Years: FYE 03/31/1999, FYE 03/31/2000, FYE 03/31/2001, FYE 03/31/2002, FYE 03/31/2003

We have concluded the examination of Pacific Coast Building Products (PABCO) for the years indicated above. The issue examined was the Research Credit generated by the corporation. After analyzing the facts and available tax law we determined the PABCO does not qualify for Research Credit under Internal Revenue Code (IRC) Section 41 and California Revenue and Taxation Code Section (CR & TC) 23609. As a result of our examination we are denying the claims for refund for tax years ending 03/31/1999 through 03/31/2003. This letter sets forth our determination.

In order to qualify for the Research & Development (R & D) credit, Pacific Coast Building Products, Inc. (PABCO) must conduct qualified research and provide supporting contemporaneous documentation to substantiate the performance of qualified research in accordance with IRC Section 41 and CR & TC Section 23609. Pursuant to California Revenue and Taxation Code Section 23609, in order for and activity or project to qualify for the research credit, the taxpayer must show that it meets all of the requirements in Internal Revenue Code (IRC) Section 41(d) (Qualified Research Defined).

In addition, when taxpayers file claims for refund, they have the burden to establish by a preponderance of evidence that they are entitled to the refund. (*Consolidated Accessories Corp. v. Franchise Tax Board (1984) 161 Cal. App. 3d 1036, 1039; Paine v. State Bd of Equalization (1982) 137 Cal. App. 3d 438, 442; Honeywell, Inc. v. State Bd of Equalization (1982) 128 Cal. App. 3d 739, 744).*

It is our position that:

1. The taxpayer is unable to provide contemporaneous documentation to support the expenses reported as research and development costs because no qualified research was done during the years filed for the credit, and
2. The majority of expenses reported in the calculation of the credit do not qualify because they relate to personnel that are either specifically disallowed from qualifying for the

credit (for example: executives, mangers, administrative, and quality control personnel) or cannot be connected in any way to actual research projects, and

Documentation Requirements

Under the provisions in IRC § 41(c), there are three methods to calculating the research credit. These methods are: the Fixed-base Percentage method under IRC Section 41(c)(3), the Election of Alternative Incremental Credit under IRC Section 41(c)(4), and the Election of Alternative Simplified Credit under IRC Section 41(c)(5). In this case, PABCO used the Fixed-base Percentage method.

While the form used to calculate the amount of the credit follows the fixed-base percentage rules, the amounts entered into that format are primarily estimates created years later for purposes of filing the amended returns to claim the credit. The components used: wages, supplies and contract research expenses cannot be attributed to any research because they are estimates created years later. Our position is partially based on the fact that we have not received contemporaneous documentation indicating the expense calculations are for qualified research under IRC Section 41(d). This documentation does not exist because no qualified research was performed during the years the amended returns were filed. "Research" was not contemplated until PABCO hired Price Waterhouse Coopers LLP (PWC) specifically to file federal and California amended returns to claim the Research Credit. PWC prepared an "R & D Tax Credit Study," for PABCO. "Studies" are used to create research projects and costs for the purpose of amending tax returns to claim the Research and Development credit.

Substantiation

Treasury Regulation 1.41-4(d) requires taxpayers claiming a credit under IRC Section 41 to retain records in "sufficiently usable form and detail to substantiate that the expenditures claimed are eligible for the credit." The regulations do not specify exactly what records must be kept to document the credit. However, the taxpayer has an obligation to follow the broader language of Treas. Reg 1.41-4(d), as well as IRC Section 6001, which states that "Every person liable for any tax imposed by this title, shall keep records, render such statements, make such returns, and comply with such rules and regulations as the Secretary may from time to time prescribe." Failure to maintain records in accordance with these rules is basis for disallowing the credit.

In determining the validity of the research credit claimed, California has the authority, under CR&TC Section 23609 to follow IRC Section 41, which also provides for Treas. Reg. Section 1.41-4(d). Analysis of CR&TC Section 23609 provides that with few exceptions, the State of California conforms to the federal research credit computation. Treasury Decision 9104 eliminated the "unique" documentation requirements to define qualified research under Treasury Regulation Section 1.41-4(d). However, taxpayers are obligated to follow the broader language of the current Treasury Regulation Section 1.41-4(d), the requirements of Internal Revenue Code (IRC) Section 6001, and established case law related to record keeping (Revenue and Taxation Code Section 19504; *New Colonial Ice Co v. Helvering*, 292 US 435 [78 L.Ed. 1348](1934)). However, not just any document, schedule, or study will be sufficient.

A taxpayer must maintain records in sufficiently usable form and detail to substantiate that the expenditures claimed are eligible for the credit (Current Treasury Regulation Section 1.41-4(d)). Treasury Regulation Section 1.6001-1 requires the taxpayer to clearly establish full compliance with all of the relevant statutory and regulatory requirements. The regulation requires taxpayers to keep permanent books and records sufficient to establish the amount of gross income, deductions, credits, or other matters for as long as the contents thereof may become material in the administration of any internal revenue law, or in California's case the revenue and taxation law. Simply put, taxpayers must retain all relevant documentation for as long a period as may be required to address a material item: in this case the research credit and its related expenditures and components. Failure to maintain records in accordance with these rules is a basis for disallowing the credit. As stated above, all the information in your R & D credit studies provided was estimated years later in contemplation of changing the original costs of PABCO to fit the provisions of the research credit.

It is also clear from the above regulation and case law that contemporaneous documentation and support are generally required. Contemporaneous means the documentation or support should be from the time period of the underlying transactions, services, or activities. While the state can provide taxpayers with some degree of flexibility in substantiating their credit, this flexibility does not relieve the obligation to keep and provide a record of their qualified research and research expenditures. Extrapolations based upon data from a later period, or estimated qualifying percentages developed years later are not contemporaneous and do not have probative value. For example, if a taxpayer contemplates filing a research credit claim as an existing research entity, for income years after 12/31/99, the taxpayer will need to establish and provide contemporaneous documentation to support the qualified research expenditures and gross receipts from the base period of 1984 through 1988.

Likewise, to claim the credit for 1999-2003, the taxpayer must have documentation from these years to support that research was done and paid for. Since no research was contemplated until the decision was made to file claims for refund for the Research Credit you are unable to provide this contemporaneous documentation. It is clear that PABCO has no records showing how many hours each employee of PABCO worked on any given projects for any of the tax years in question. Nor are there records of how many hours any employee's work involved activities that might constitute research, let alone qualified research. There are also no records showing which supplies were used in activities that might constitute research. Instead, PABCO gave only rough estimates of time worked and supplies used, which have no reliability.

As with the IRS, the State of California is not required to accept estimates of qualified research expenses if documentation exists, or should exist, to verify the actual amount. Taxpayers are required to keep records substantiating the amount of any reported, claimed, or affirmatively raised deductions or credits (Appeal of *Don A. Cookston*, 83-SBE-048 (January 3, 1983)). Failure to maintain records in accordance with the above requirements is a basis for disallowing the credit.

However, the courts may allow the use of an estimation method, but only where the taxpayer can prove contemporaneous records do not exist and then only as long as the following two conditions are satisfied:

- The taxpayer must establish that it engaged in qualified research activities as defined in IRC Section 41(d).
- The failure to maintain a proper system to capture relevant information cannot be an "inexactitude of their own making." (*Cohan v. Commissioner*, 39 F.2d 540, 544 (2d Cir. 1930.))

Estimation is a method of last resort, in cases where the sole issue is the exact amount paid or incurred in the qualified research activity, and after supporting evidence has been provided showing a material research activity did, in fact occur. Accordingly, taxpayers must have factual support for every assumption underlying their estimates to meet their burden of proof. At a minimum, a valid estimation requires some indirect basis.

The R & D studies you provided are estimated qualifying percentages developed years later and as such do not meet your burden of proof to claim the research credit.

Fixed Based Percentage Calculations

Under the provisions in IRC § 41(c), there are three methods to calculating the research credit. These methods are: the Fixed-base Percentage method under IRC § 41(c)(3), the Election of Alternative Incremental Credit under IRC § 41(c)(4), and the Election of Alternative Simplified Credit under IRC § 41(c)(5). In this case, PABCO used the Fixed-base Percentage method. California Revenue and Taxation Code section 23609 states that for taxable years beginning on or after January 1, 2000, the California credit is 15% of the excess of qualified research expenses for the taxable year over the base period research expense amount, plus 24% of the basic research payments for corporations.

While the form used to calculate the amount of the credit follows the fixed-base percentage rules, the amounts entered into that format are primarily estimates created years later for purposes of filing the amended returns to claim the credit. The components used: wages, supplies and contract research expenses cannot be attributed to any research because they are estimates created years later. Our position is partially based on the fact that we have not received contemporaneous documentation indicating the expense calculations are for qualified research under IRC § 41(d). This documentation does not exist because no qualified research was performed during the years the amended returns were filed. "Research" was not contemplated until PABCO hired Price Waterhouse Coopers LLP (PWC) specifically to file federal and California amended returns to claim the Research Credit. PWC prepared an "R & D Tax Credit Study," for PABCO. "Studies" are used to create research projects and costs for the purpose of amending tax returns to claim the Research and Development credit.

01.30.09
CCN : 0477907
Case Unit : 12040254584948386

Qualified Research

In order to qualify for the Research & Development credit, PABCO, must conduct qualified research and provide supporting contemporaneous documentation to substantiate that qualified research was performed. To constitute qualified research under IRC Section 41(d)(1), the term "qualified research" means research:

1. With respect to which expenditures may be treated as expenses under section 174;
2. Which is undertaken for the purpose of discovering information which is technological in nature;
3. The application of which is intended to be useful in the development of a new or improved business component of the taxpayer
4. Substantially all of the activities of which constitutes elements of a process of experimentation for a qualified purpose

To be considered "qualified research", the taxpayer must be able to establish that the research activity being performed meets all four of the above tests. These tests must be applied separately to each business component of the taxpayer.

To substantiate qualified research we were provided copies of the Research & Development Credit Study for Pacific Coast Building Products for tax years 99-03, which were prepared by PWC. The study binder for tax year 1998 included a "Qualified Activity Narrative" for the Basalite Dixon Plant. The activity overview included a sampling of the research activity conducted by the taxpayer. At a later date we requested a summarization of all Research & Development projects. In response we were provided with "Qualified Activity Narratives" for each of the remaining plants. The narratives included a summarization of couple of research projects for each plant. The majority of R&D projects were simply listed by name, with no explanation whatsoever as to the nature of the project and how the research activity met the requirements of IRC Section 41(d)(1) and the regulations prescribed by the secretary under the same authority of IRC Section 41.

No relevant, contemporaneous documentation was ever provided to substantiate that the taxpayer was engaged in qualified research. In letter dated September 22, 2008 FTB inquired as to whether timesheets, project logs, notes, calendars, or journals were available to substantiate that the taxpayer was performing qualified research activities. The response from PWC was that these types of documentation do not exist. You also referred in your letter to an earlier request by FTB for any reports generated on the R& D projects informing management of the status and progress of the research project. You stated that PABCO did not maintain this type of official documentation. Therefore, the requirement that the taxpayer engaged in qualified research has not been met.

01.30.09
CCN : 0477907
Case Unit : 12040254584948386

Expense Calculations

The following costs were used to compute the credit:

Cost Categories	FYE 3/31/1999	FYE 3/31/00	FYE 3/31/01	FYE 3/31/02	FYE 3/31/03	
Wages	2,162,163	2,378,358	2,856,748	3,296,583	2,933,412	
Supplies	5,157,897	4,005,749	4,906,596	1,980,337	1,684,893	
Contract Research	280,287	308,757	574,009	1,309,585	484,432	
Total	**7,600,347**	**6,692,864**	**8,337,353**	**6,586,505**	**5,102,737**	

Qualified Wages

Pursuant IRC Section 41(b)(2), qualified research expenses include any wages paid or incurred to an employee for qualified services performed by such employee. Also under IRC Section 41(b)(2) qualified services are services consisting of engaging in qualified research or engaging in direct supervision or direct support of research activities.

To substantiate the wages listed above, a schedule of employees was provided which indicated a percentage, ranging from 0% to 100 %, as "qualified wages".

We cannot determine how much time was spent by employees on any project PABCO used to claim the Research and Development Credit. It is also clear that the plant managers did not have a clear understanding of what constitutes qualified activities for the purposes of IRC Section 41 because employees were included in the wage calculations that performed non-qualified activities. For example, Payroll/Office Clerk, Accounting/Inventory, Accounting Clerk, Personnel/Office Clerk, Receptionist, Janitor, Shipping Clerk, Sales Orders Clerk, Customer Service Representative, Inside Sales Representative, Outside Sales Rep., Territorial and Contract Sales Reps, Delivery Drivers, Architectural Block Sales, Division Sales and Marketing, and VP, Manufacturing, Plant Manager. Without contemporaneous documentation linking employees to actual research projects and the performance of actual qualified activities we cannot determine which employees may have performed qualified services.

To substantiate the percentage of each employees time allocated to qualified research expenditures the R & D Studies included a schedule for each plant of qualified wages, which included employee's names, job title, total wages paid per year and the percentage of the employees' wages allocated as qualified research expenditures.

No documentation was provided substantiating which employees worked on what projects, or how much time was spent doing research. All of the percentages were determined by plant management two to six years after the qualified services were completed. Management filled out activity surveys, which merely provided management's estimates of the percentage of time spent by plant employees performing qualified activities. We do not find it credible that plant

managers could provide accurate estimates years later for over 700 employees' activities for five years (1999 – 2003) without any supporting documentation.

Based on our determination that the taxpayer is not performing qualified research, we are disallowing all of the employee wages claimed for the credit. Since the taxpayer does not have the contemporaneous documentation to support the research or the amount of time spent on the research, we are not allowing the wages to be used in calculating the research credit. The wages included are based on extrapolations of data collected after the fact, and cannot be used to estimate the amounts of qualified services performed.

Supplies

Under the provision of IRC § 41(b)(2)(ii), "in house research expenses" include any amounts paid or incurred for supplies used in the conduct of qualified research. The supplies included in the calculation for the credit were estimated by multiplying the qualified departmental plant average percentages by the total supply expense account balances determined to be eligible for the credit. Again these are estimates and no supporting contemporaneous documentation was provided that supports the amount of supplies which were actually consumed during the performance of what plant executives believed to be qualified research. Per the analysis above, the taxpayer failed to substantiate that they are engaged in qualified research or have employees performing qualified services. Therefore, no supplies are qualified supplies under IRC Section 41(b).

Contract Research Expenses

The Contract Research expenses used to calculate the research credit must follow the general rule under IRC § 41(b)(3)(A), which states, " The term "contract research expenses" means 65 percent of any amount paid or incurred by the taxpayer to any person (other than an employee of the taxpayer) for qualified research". The statute stipulates that the contracted services must be for qualified research. As stated in your letters, dated Feb 20, 2007, March 2, 2007 and March 18, 2008, PABCO did not incur these expenses for "outside research", these were simply additional operating costs that should be categorized as supplies. Therefore, as explained above no supplies are qualified supplies under IRC Section 41(b).

CONCLUSION:

It is our determination that PABCO does not qualify to claim the research credit for the following reasons:

1. The taxpayer is unable to provide contemporaneous documentation to support the expenses reported as research and development costs because no qualified research was done during the years filed for the credit, and
2. The majority of expenses reported in the calculation of the credit do not qualify because they relate to personnel that are either specifically disallowed from qualifying for the credit (owners and supervisors) or cannot be connected in any way to actual research projects.

01.30.09
CCN : 0477907
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As a result, the following credits will be disallowed:

1998 (FYE 03/31/1999):	$411,749
1999 (FYE 03/31/2000):	$401,572
2000 (FYE 03/31/2001:	$625,302
2001(FYE 03/31/2002):	$493,988
2002 (FYE 03/31/2003):	$382,705
Total:	$2,315,316

This case will be subject to review before the final claim denial letters are sent.

STATEMENT OF TAXPAYER (Your response does not preclude protest action.):

☐ PACIFIC COAST BUILDING PRODUCTS, INC. agree(s) with the proposed adjustment(s) as presented.

☐ PACIFIC COAST BUILDING PRODUCTS, INC. agree(s) with the numbers and the facts as presented, but not with the conclusion for the reason stated below.

☐ PACIFIC COAST BUILDING PRODUCTS, INC. agree(s) with the numbers and facts as presented, but wish to withhold a decision regarding our conclusion.

☐ PACIFIC COAST BUILDING PRODUCTS, INC. agree(s) with the numbers as presented, but not the facts and has set forth the needed changes. Taxpayer will be provided with another opportunity to respond once these changes have been made.

☐ PACIFIC COAST BUILDING PRODUCTS, INC. agree(s) with the facts as presented, but not the numbers and has set forth the needed changes. Taxpayer will be provided with another opportunity to respond once these changes have been made.

If you do not agree, please state your reason and attach the necessary documentation to support your position.

01.30.09
CCN : 0477907
Case Unit : 12040254584948386

Taxpayer : _____

Title : _____

Date : _____

Representative's Signature (if applicable)* : _____

Date : _____

* A signed Power of Attorney must be on file.

EXHIBIT 5

Internal Revenue Service
Large and Mid-Size Business

Department of the Treasury
4330 WATT AVE.
SACRAMENTO CA 95661

Date: April 30 2009

Number of this Letter 962 (DO)
Person to Contact:
HARRY I. POTTER

PACIFIC COAST BUILDING PRODUCTS, IN
ATTN: KEN IRWIN
10600 WHITE ROCK RD., STE. 100
P.O. BOX 19074
RANCHO CORDOVA CA 95741-9074

Contact Telephone Number
(916) 974-5548
☒ Form 1120S-Small Business Corporation
Years: March 31, 2006
☐ Form 1065-Partnership
Years:
☐ Form 5500 Series-Employee Benefit Plan
Years:
Employer Identification Number:
94-6103555
Plan Number:
File Folder Number:
1

Dear PACIFIC COAST BUILDING PRODUCTS, IN:

Our recent examination of your returns for the above years shows no change is necessary in the information reported. We have accepted the returns as filed. This is the final notice you will receive regarding the examination.

If you have any questions, please write to the person whose name is shown at the top of this letter or call that person at the telephone number shown. If the number is outside your local calling area, you will be charged a long-distance fee. If you prefer, you may call the IRS telephone number listed in your local directory. An employee there may be able to help you, but this office is most familiar with your case.

Whenever you write to us, please include your area code and telephone number, the best time for us to call you, and this letter. You may want to keep a copy of the letter for your records.

Sincerely yours,

HARRY I. POTTER
INTERNAL REVENUE AGENT

Department of the Treasury - Internal Revenue Service

Form 4605-A

Examination Changes – Partnerships, Fiduciaries, Small Business Corporations, and Domestic International Sales Corporations

Name and Address of Taxpayer	Employer Identification Number (TIN)	Form Number:
PACIFIC COAST BUILDING PRODUCTS, IN 10600 WHITE ROCK RD., STE. 100 P.O. BOX 419074 RANCHO CORDOVA, California 95741-9074	[redacted]	1120S
	Person Examination Changes Were Discussed With:	Name and Title: KEN IRWIN Representative

1. Adjustments to ordinary, distributable net, or taxable income	Tax Period: 03/31/2005	Tax Period: 03/31/2006	Tax Period:
a.			
b.			
c.			
d.			
e.			
f.			
g.			
2. Total adjustment to ordinary, distributable net, or taxable income			
3. Ordinary, distributable net, or taxable income as reported	65,146,101.00	127,049,103.00	
4. Corrected, ordinary, distributable net, or taxable income	65,146,101.00	127,049,103.00	
5. Other adjustments			
a. Net income (loss) from rental real estate activities			
(1) Adjustment	0.00	0.00	
(2) As reported	283,634.00	233,289.00	
(3) Corrected	283,634.00	233,289.00	
b. Portfolio income (loss) interest			
(1) Adjustment	0.00	0.00	
(2) As reported	2,067,302.00	2,918,185.00	
(3) Corrected	2,067,302.00	2,918,185.00	

Remarks

THIS REPORT INDICATES THAT THE EXAMINATION RESULTED IN NO CHANGE TO THE TAX YEARS IN QUESTION.

Examiner's Signature:	[redacted]	Office:	Date:
HARRY L POTTER		SACRAMENTO	04/30/2009

RGS Version 1.00.00

[redacted]

Taxpayer: PACIFIC COAST BUILDING PRODUCTS, IN
TIN: 94-6103555 Page of

Form 4605-A – Other Adjustments (Continued)

	Tax Period: 03/31/2005	Tax Period: 03/31/2006	Tax Period:
c. Portfolio income (loss) - qualified dividends			
(1) Adjustment	0.00	0.00	
(2) As reported	1,750.00	53,608.00	
(3) Corrected	1,750.00	53,608.00	
d. Portfolio income (loss) dividends			
(1) Adjustment	0.00	0.00	
(2) As reported	179,728.00	683,494.00	
(3) Corrected	179,728.00	683,494.00	
e. Portfolio income (loss) net short-term gain (loss)			
(1) Adjustment	0.00	0.00	
(2) As reported	58,252.00	243,447.00	
(3) Corrected	58,252.00	243,447.00	
f. Portfolio income net long-term gain (loss) total			
(1) Adjustment	0.00	0.00	
(2) As reported	(890,702.00)	6,025,022.00	
(3) Corrected	(890,702.00)	6,025,022.00	
g. Net gain (loss) under section 1231 not casualty/theft			
(1) Adjustment	0.00	0.00	
(2) As reported	(293,036.00)	(135,495.00)	
(3) Corrected	(293,036.00)	(135,495.00)	
h. Other income (loss)			
(1) Adjustment	0.00	0.00	
(2) As reported	9,435.00	(22,665.00)	
(3) Corrected	9,435.00	(22,665.00)	
i. Charitable contributions 30 percent			
(1) Adjustment	0.00		
(2) As reported	22,274,122.00		
(3) Corrected	22,274,122.00		
j. Charitable contributions 50 percent			
(1) Adjustment	0.00		
(2) As reported	869,122.00		
(3) Corrected	869,122.00		
k. Section 179 expense deduction			
(1) Adjustment	0.00	0.00	
(2) As reported	47,397.00	48,673.00	
(3) Corrected	47,397.00	48,673.00	
l. Deductions related to portfolio income			
(1) Adjustment	0.00		
(2) As reported	184.00		
(3) Corrected	184.00		
m. Other deductions			
(1) Adjustment		0.00	
(2) As reported		11,406.00	
(3) Corrected		11,406.00	
n. Investment income included in portfolio income			
(1) Adjustment	0.00	0.00	
(2) As reported	2,247,020.00	3,601,679.00	
(3) Corrected	2,247,020.00	3,601,679.00	

Taxpayer: PACIFIC COAST BUILDING PRODUCTS, IN
[redacted] 55 Page of

Form 4605-A – Other Adjustments (Continued)

	Tax Period: 03/31/2005	Tax Period: 03/31/2006	Tax Period:
o. Investment expenses in deduct. related to portfolio income			
(1) Adjustment	0.00	0.00	
(2) As reported	184.00	11,406.00	
(3) Corrected	184.00	11,406.00	
p. Other credits (not related to rental activities)			
(1) Adjustment	0.00	0.00	
(2) As reported	1,082,017.00	1,098,849.00	
(3) Corrected	1,082,017.00	1,098,849.00	
q. Adj tax pref. items depreciation in serv. after 1986			
(1) Adjustment	0.00	0.00	
(2) As reported	(2,858,522.00)	34,772,320.00	
(3) Corrected	(2,858,522.00)	34,772,320.00	
r. Adj tax pref. items adjusted gain or loss			
(1) Adjustment	0.00	0.00	
(2) As reported	(64,270.00)	(205,297.00)	
(3) Corrected	(64,270.00)	(205,297.00)	
s. Adj tax pref. items depletion other than oil & gas			
(1) Adjustment	0.00	0.00	
(2) As reported	1,950,970.00	(4,864.00)	
(3) Corrected	1,950,970.00	(4,864.00)	
t. Adj. tax pref. items other adjustments & tax pref. items			
(1) Adjustment	0.00	0.00	
(2) As reported	7,889,469.00	9,565,415.00	
(3) Corrected	7,889,469.00	9,565,415.00	
u. Foreign taxes - gross income from all sources			
(1) Adjustment		0.00	
(2) As reported		14,034,164.00	
(3) Corrected		14,034,164.00	
v. Gross income sourced at shareholder level			
(1) Adjustment		0.00	
(2) As reported		14,023,954.00	
(3) Corrected		14,023,954.00	
w. Foreign gross income sourced at corporate - passive			
(1) Adjustment		0.00	
(2) As reported		4,017.00	
(3) Corrected		4,017.00	
x. Deductions allocated/apportioned at shareholder level - other			
(1) Adjustment		0.00	
(2) As reported		48,074.00	
(3) Corrected		48,074.00	
y. Deductions allocated/apportioned at corp. level - passive			
(1) Adjustment		0.00	
(2) As reported		7,190.00	
(3) Corrected		7,190.00	
z. Foreign taxes total foreign taxes accrued			
(1) Adjustment		0.00	
(2) As reported		134,161.00	
(3) Corrected		134,161.00	

Taxpayer: PACIFIC COAST BUILDING PRODUCTS, IN
TIN: 94-6103555 Page of

Form 4605-A – Other Adjustments (Continued)

	Tax Period: 03/31/2005	Tax Period: 03/31/2006	Tax Period:
aa. Tax-exempt interest income			
(1) Adjustment	0.00	0.00	
(2) As reported	1,093,829.00	1,937,470.00	
(3) Corrected	1,093,829.00	1,937,470.00	
ab. Nondeductible expenses			
(1) Adjustment	0.00	0.00	
(2) As reported	1,207,392.00	1,262,749.00	
(3) Corrected	1,207,392.00	1,262,749.00	
ac. Property distributions other than dividends			
(1) Adjustment	0.00	0.00	
(2) As reported	47,322,876.00	33,738,267.00	
(3) Corrected	47,322,876.00	33,738,267.00	
(1) Adjustment			
(2) As reported			
(3) Corrected			
(1) Adjustment			
(2) As reported			
(3) Corrected			
(1) Adjustment			
(2) As reported			
(3) Corrected			
(1) Adjustment			
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(2) As reported			
(3) Corrected			
(1) Adjustment			
(2) As reported			
(3) Corrected			
(1) Adjustment			
(2) As reported			
(3) Corrected			
(1) Adjustment			
(2) As reported			
(3) Corrected			

Form 4564 (Rev. Jan.1984)	Department of the Treasury Internal Revenue Service INFORMATION DOCUMENT REQUEST	Request Number: 5
To: (Name Of Taxpayer and Company, Division, or Branch) Pacific Coast Building Products		Subject: Research credit
		Submitted To: Ken Irwin
		SAIN No.604-06
		Date of Previous Requests:

Please return with listed documents to requester listed below.

Description of Documents Requested

1. Workpapers showing computation of the research credit on the 200503 and 200603 returns.
2. Was any outside party involved in the calculation of the amounts of the qualifying expenses and of the credit?
3. Was a study of the credit prepared by an outside party? If so, provide a copy.

RESPONSE DATE: 12/21/2007

FROM:	Requesters Name, Address & Telephone Number: Harry Potter, Revenue Agent Internal Revenue Service 4330 Watt Ave. Sacramento, CA 95821 (916) 974-5549	Date Of Request: 11/21/2007

EX 17

17

Form 4564 (Rev. Jan.1984)	Department of the Treasury Internal Revenue Service INFORMATION DOCUMENT REQUEST	Request Number: 17
To: (Name Of Taxpayer and Company, Division, or Branch) Pacific Coast Building Products		Subject: 200503 & 200603 R&E Credit Submitted To: Ken Irwin SAIN No. 802-04 Date of Previous Requests:
Please return with listed documents to requester listed below.		

Description of Documents Requested

This Information Document Request concerns Pacific Coast Building Products, Inc.'s and Subsidiaries (PCBP) Tax Credit under IRC §41 for the tax years ending March 31, 2005 and March 31, 2006.

In response to a prior related request, PCPB provided a copy of certain cost accumulations for the tax years ending March 31, 2005 and March 31, 2006 and an **Executive Summary**. The costs accumulations were divided into "QRE Summary", "Wages QRE", "Supplies QRE" and "Contract Research QRE". The **Executive Summary** reported on the results and certain aspects of a Research and Development Tax Credit Study prepared by PricewaterhouseCoopers for PCPB's tax years ending March 31, 1999 through March 31, 2005. This **Executive Summary** notes that the details of the study was provided in three sets of binders, namely, **Cost Accumulation Binders, Documentation Binders** and a **Base Period Binder**. The **Executive Summary** also references certain "Site Summary Memoranda".

Please provide the following information:

- The **Executive Summary** which assumedly accompanied a Research and Development Tax Credit Study prepared for the tax year ending March 31, 2006.
- All portions of the **Cost Accumulations Binders** that were not included in the sections "QRE Summary", "Wages QRE", "Supplies QRE" and "Contract Research QRE" for the tax years ending March 31, 2005 and March 31, 2006.
- All portions of the **Documentation Binders** for the tax years ending March 31, 2005 and March 31, 2006. It is our understanding that this will include the "Site Summary Memoranda" referenced in the **Executive Summary** previously provided.

RESPONSE DATE: 10/16/2008

FROM:	**Requesters Name, Address & Telephone Number:** Harry Potter, Revenue Agent Internal Revenue Service 4330 Watt Ave. Sacramento, CA 95821 (916) 974-5549	Date Of Request: 9/16/2008

Form 4564 (Rev. Jan.1984)	Department of the Treasury Internal Revenue Service INFORMATION DOCUMENT REQUEST	Request Number: 17
To: (Name Of Taxpayer and Company, Division, or Branch) Pacific Coast Building Products		Subject: 200503 & 200603 R&E Credit Submitted To: Ken Irwin SAIN No. 802-04 Date of Previous Requests:
Please return with listed documents to requester listed below.		

Description of Documents Requested

- All portions of the **Base Period Binder(s)** applicable to the tax years ending March 31, 2005 and March 31, 2006.

RESPONSE DATE: 10/16/2008

FROM:	**Requesters Name, Address & Telephone Number:** Harry Potter, Revenue Agent Internal Revenue Service 4330 Watt Ave. Sacramento, CA 95821 (916) 974-5549	Date Of Request: 9/16/2008

EXHIBIT 6

Pacific Coast Building Supplies R&D Study Wage Survey

PACIFIC COAST

Research and Development Tax Credit

Activities Survey
Fiscal Year Ended 2002

Cost Center: 1001-5000 Paper Machine

EMPLOYEE	JOB TITLE	ACTIVITIES														TOTAL %*
		A	B	C	D	E	F	G	H	I	J	K	L	M	NQ	
Shannon, James	Machine Tender						7.5					7.5			85	100%
Trancoso, Jose	Labor, Stock Prep						1					1			1	100%
Valles, Luis	Beater Engineer						1					1			1	100%
Waters, Joseph	Janitor	2.5		2.5											95	100%
Wright, Robert	Backtender						7.5					7.5			85	100%

*Total % must equal 100%

Signature: William Fraser
Print Name: William Fraser
Date: 07-08-02

CONFIDENTIAL

Qualifying Activities + **Non-Qualifying Activities** = **100% of Activities**

EXHIBIT 7

Pacific Coast Building Products
FYE 3/31/2000
Research and Development Tax Credit
Individual Time Survey for High-Level Management

Name: Bill Padavona

Title: General Manager

Dept. Name and #: Gladding McBean—Lincoln (1303)

Executive Summary

This survey was sent to you because you were identified as performing activities that qualify for the Research and Development Tax Credit. Due to your position at Pacific Coast Building Products ("PCBP" or the "Company"), the IRS may scrutinize your activities more than many of PCBP's other employees. This survey is intended to identify, as clearly as possible, those activities you have performed which would meet the definition of qualified research activities. We will be asking you to describe your participation in the product development process as they relate to 'qualified activities' as defined below. Please take a moment to complete this survey and return it as soon as possible.

Definition of Research and Development

Please use the following Tax Definition of Research and Development and Examples of Qualifying Activities for determining your qualifying percentage.

R&D Rules Summary

A. **Business-Component Test:** The goal of the activity must be to develop a new or improved Product, Process, Computer software system, Formula, Technique, or Invention, or any sub-component of these items (business components).

B. **Four-Part Activity Test:** To qualify, an activity must meet each of these criteria:

1. Be technological in nature - fundamentally rely on one of the following: physical or biological sciences, engineering, or computer science.
2. Be for a permitted purpose - the creation of new or improved level of: function, performance, reliability, quality, or cost reduction for a business component.
3. Focus on the elimination of technical uncertainty - any one of the following qualifies: capability uncertainty - *Can we do it?*, methodology uncertainty - *How will we do it?*, product design - *What is the appropriate design?*
4. Constitute a process of experimentation - for this purpose, "experimentation" may include: developing and evaluating different alternatives/hypotheses, performing experiments, and evaluating the results.

Examples of Qualifying Activities

1. **Product/Process Specification Development** – Evaluation of numerous and/or complex specifications intended to eliminate uncertainties relating to the function, performance, reliability or quality of a new or improved business component; development of functional requirements of a new or improved product/process with customers and engineering; analysis of the feasibility of these requirements; re-development of specifications based on test results.

2. **Product/Process Development** – Engineering design and development of new or improved function, performance, reliability, or quality features in products, as well as design for serviceability, user simplicity, and manufacturability.

3. **Testing Design and Execution** – Development of testing methodologies to analyze alternative hypotheses; performance and monitoring of extensive, comprehensive, intricate, or complex scientific or laboratory testing for internal (alpha) and/or external (beta) tests, the results of which were not readily discernable and applicable at the outset of development; analysis of testing results.

4. **Direct Supervision** - First-line supervision of those activities listed in A-D, above. Does not include second line supervision.

Qualifying Activities
Please list and describe your role in projects as they relate to qualified activities defined above, or provide additional documentation for activities related to R&D but not yet in a product development process (expand area below as needed to contain your write-up).

Please Note
Please keep in mind that the determination of direct (first level) vs. indirect (second level) supervision should be based upon function, rather than title. For example, a Director, who would normally be considered a "second line" or even a "third line" supervisor by title can still have qualified time. Any time spent participating in design review meetings and/or providing input on product/process designs qualifies as a **direct** R&D Activity (i.e. Process, hardware, or software development). Furthermore, if an individual is directly supervising a Manager, who is involved in the aforementioned qualifying activities, that person's time would be considered "direct supervision", and therefore, would qualify for the credit. However, if that person is supervising a Manager, who is supervising an engineer in the direct R&D activity, the director's time would be considered "second line" or "indirect," and therefore, not qualify for the credit.

Projects/activities: Please provide a brief description of your activities during the given year along with a few examples of qualified research and development projects with which you were involved. Details regarding educational background and industry experience should also be included in this section.

Pabco Building Products, LLC is one of two main subsidiaries that make up the Pacific Coast manufacturing sector. Each divisional company is operated independently with the power to make decisions deemed to be in the customers' and company's best interest. Pabco is headquartered in Newark, California and is a leading building products manufacturer with plants, yards, and mines across the Pacific Northwest and a highly diversified product line. Within the Pabco subsidiary are six manufacturing businesses—H.C. Muddox, Interstate Brick, Gladding McBean, Pabco Gypsum, Pabco Paper, and Pabco Roofing Products—which represent four distinct industries—gypsum wallboard, asphalt roofing products, clay pipe and terra cotta, and bricks. Although it may seem unusual for a manufacturing subsidiary to supply such a varied market, Pabco's product lines dovetail at the job site. Each of these businesses produces products specified by architects and needed by builders.

Gladding McBean is one of the more unusual manufacturing businesses now part of Pabco. The clay products manufacturer had been in continuous operation since May 1875, when in February 1976, after years of unprofitable operations, its owners announced it would soon be closed. Hearing of the impending closure, executives of Pacific Coast visited the Lincoln, California, plant, liked what they saw, and purchased it. Soon, the "pottery" plant was back on its feet and a fully functional segment of the Pabco business. It has been a steady and valuable contributor to Pacific Coast's profitability ever since. Today, Gladding McBean is the leading West Coast producer of vitrified (ceramic) clay pipe. It is a world leader in architectural terra cotta and a major source of clay roof tile and glazed terra cotta pottery.

As General Manager of Gladding McBean—Lincoln, I was involved in numerous stages of the research and development process and directly supervised individuals who performed R&D activities. I interacted with plant personnel to work through operations issues as well as increase the efficiency of our manufacturing line. During fiscal years ended 3/31/2002 thru 3/31/2005, we devoted a significant amount of time to improving our raw materials mixture through the

modification of our aggregates and additives. The previous mixture included contaminated grog which was purchased from an outside supplier. Grog is a pre-fired material added to the mixture to reduce shrinkage and support the weight of the piece in the wet stage of the process. The contamination resulted in a faulty glaze which would crack off of the product when fired in the kiln. As we were not aware that the grog was the cause of defect, we attempted to remedy this problem through experimentation with various raw materials. After four years of testing and once the grog had been identified as the problematic element, we resolved to grind the material to a finer grade, thus eliminating the problems associated with the contaminant.

Between 6/1/1999 and 3/31/2000, I supervised the development and implementation of a more automated method of manufacturing clay roofing and floor tiles. The purpose of this undertaking was to minimize costs by reducing the number of employees required on the manufacturing line at any given time. The old process involved a significant amount of labor-intensive, product handling by plant personnel as the finished brick had to be unloaded from pallets by hand and packaged for shipment. With the new machinery installed, the product could be handled with special conveyors and cradles and transferred mechanically onto pallets, thus eliminating a large portion of the labor previously involved in the process.

GLADDING, McBEAN MEMO

Date: July 13, 1999

To: Roof Tile Modernization Committee, Bill Funk

From: Jack Schwartz

CC: Al Mueller

RE: Roof Tile Modernization Meeting of July 13th

FTB's Opening Brief filed June 17, 2011, page 79

[Exhibit G, page *101 of 157]

Cost quotes. Investigate other sources for competitive pricing. Reviewed project financial status.

1) Jack Schwartz reviewed project progress.

2) Several drawings for the Green Tile Conveyor and the Dryer Conveyors were approved which will aid in getting these two lagging tasks underway.

3) Mike Welch will check on a replacement electric motor drive pulley and v-belts for the extruder.

4) Material have been received for the general extruder and dryer utilities.

5). The committee discussed at length different approaches to designing the recirculation fans for the dryers. The problem of having to have a drive system for the fans operate in a 200 degree environment was wrestled with. Bill Funk indicated the [redacted] he got for an electric motor able to withstand the 200 degree heat was extremely expensive ($800+ each). Orville Callison is [redacted] The hydraulic motor proposal was rejected. Additionally, Bill Funk is to contact at sheet metal fabricating company to help in designing the air distribution tube. Fred Goin will also be consulted.

6) Dave John [redacted]

GLADDING, McBEAN MEMO

Date: July 29, 1999

To: Roof Tile Modernization Committee, Bill Funk

From: Jack Schwartz

CC: Al Mueller, Dave Lucchetti

RE: Roof Tile Modernization Meeting of July 27th

FTB's Opening Brief filed June 17, 2011, page 79

July 29, 1999 [Exhibit G, page *102 of 157]

"The non asset items will be expenses instead of capitalized as per recent corporate instruction.

Accounting will handle the reallocation of prior costs."

1) The committee briefly discussed the work completed the previous week by WCS moving the extruder.

2) The committee decided the configuration and location of the blast heads of the dryer traveling air recirculation system.

3) Bill Funk updated the committee on the layout of the green tile conveyors. Competitive bids for the frame welding will be pursued.

4) We discussed the safety issue of potential pinch points at the discharge end of the dryer conveyors and came up with a tentative plan. A more concrete design will be developed when the conveyor is in place.

5) Bill Padavona informed the committee that non asset items will be expensed instead of capitalized as per recent corporate instruction. Accounting will handle the reallocation of prior costs.

6) Bids for the floor vents and the dryer conveyor perforated plates were approved.

7) The committee discussed tile conveyor transfer method suggested by Bill Funk for the Loading/Unloading Conveyor Unit. A more detailed plan will be developed.

8) Discussed methods to address potential hazard of having tile conveyed overhead above workers with the potential occurrence of falling tile. Bill Funk will have preliminary drawings of several shielding methods to be submitted at the next meeting.

JS

GLADDING, McBEAN MEMO

Date: August 12, 1999

To: Roof Tile Modernization Committee, Bill Funk

From: Jack Schwartz

CC: Al Mueller, Dave Lucchetti

RE: Roof Tile Modernization Meeting of August 10th

FTB's Opening Brief filed June 17, 2011, page 80

August 12, 1999 [Exhibit G, page *103 of 157]

"By pricing comparison Guntert Sales was chosen as the primary supplier for structural steel purchases."

"Committee discussed the purchase of the $36,000 conveyor chain for the drying tunnel conveyors."

1) By pricing comparison Guntert Sales was chosen as the primary supplier for structural steel purchases.

2) Committee okayed quote from WCS for molded urethane castings for the green tile conveyor versus water cut units. Sample castings will be evaluated before total order is okayed.

3) Committee discussed the purchase of the $36,000 conveyor chain for the drying tunnel conveyors. This chain will be out 14 weeks from date of order, so a decision needs to be made soon.

4) Bill Funk indicated the high temperature fan motors for the circulation fans of the dryer tunnels are also 14 weeks out.

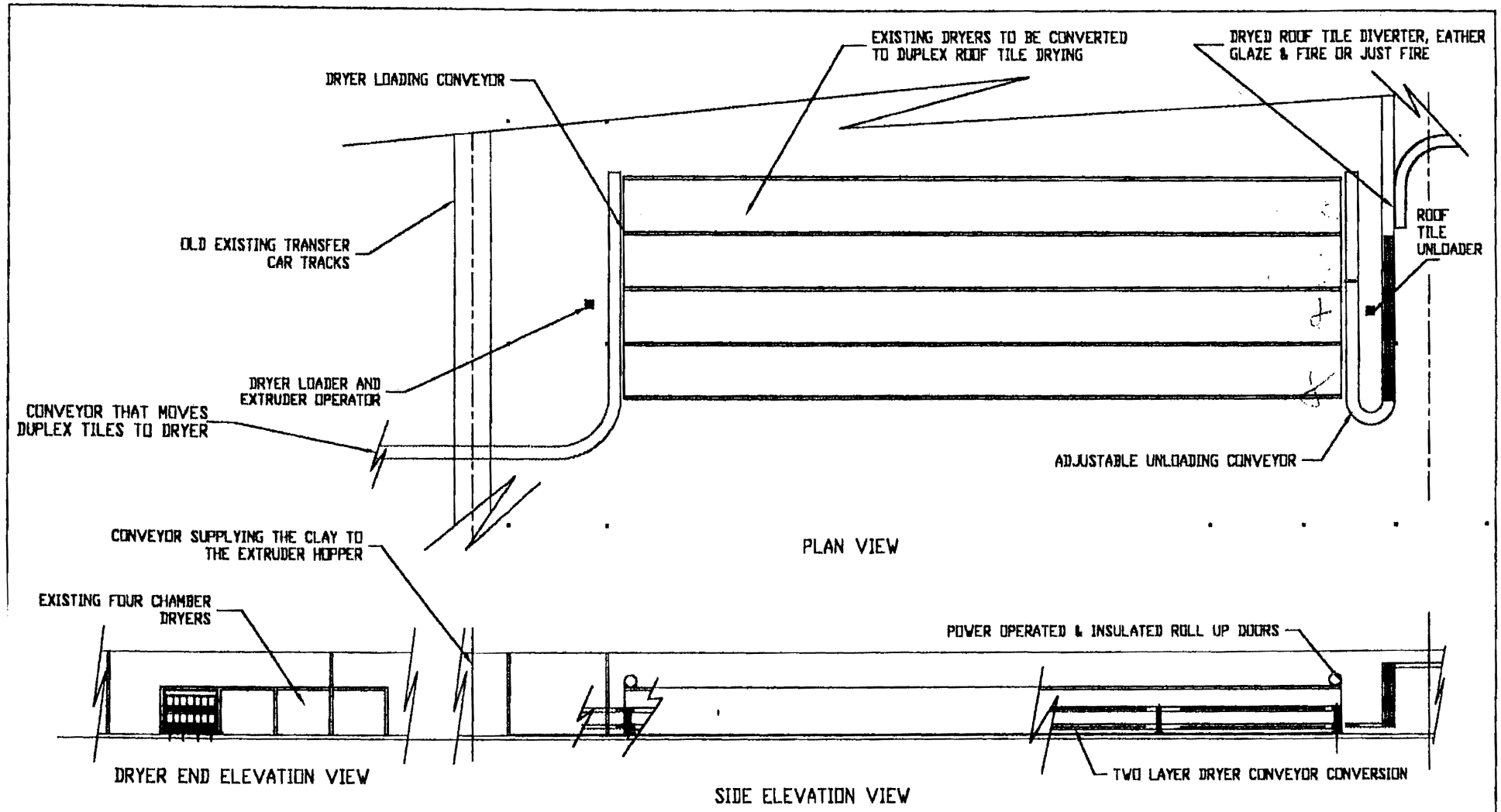
5) Because of the problems associated with sediment accumulation and clogging of the automated pug mill water addition system using recycled water, domestic water will be supplied to the extruder instead of glaze water recycled water.

6) Committee briefly discussed electrical circuitry requirements to prove out operation of individual dryer components by way of indicator lights.

7) Bill Funk indicated he hired a draftsman to aid him in completing the lagging design work.

8) The committee discussed changing the arrangement of the dryer unloading conveyor to eliminate the required 180 turn. Bill Funk will submit revised drawings.

9) Dave John reviewed the financial report.



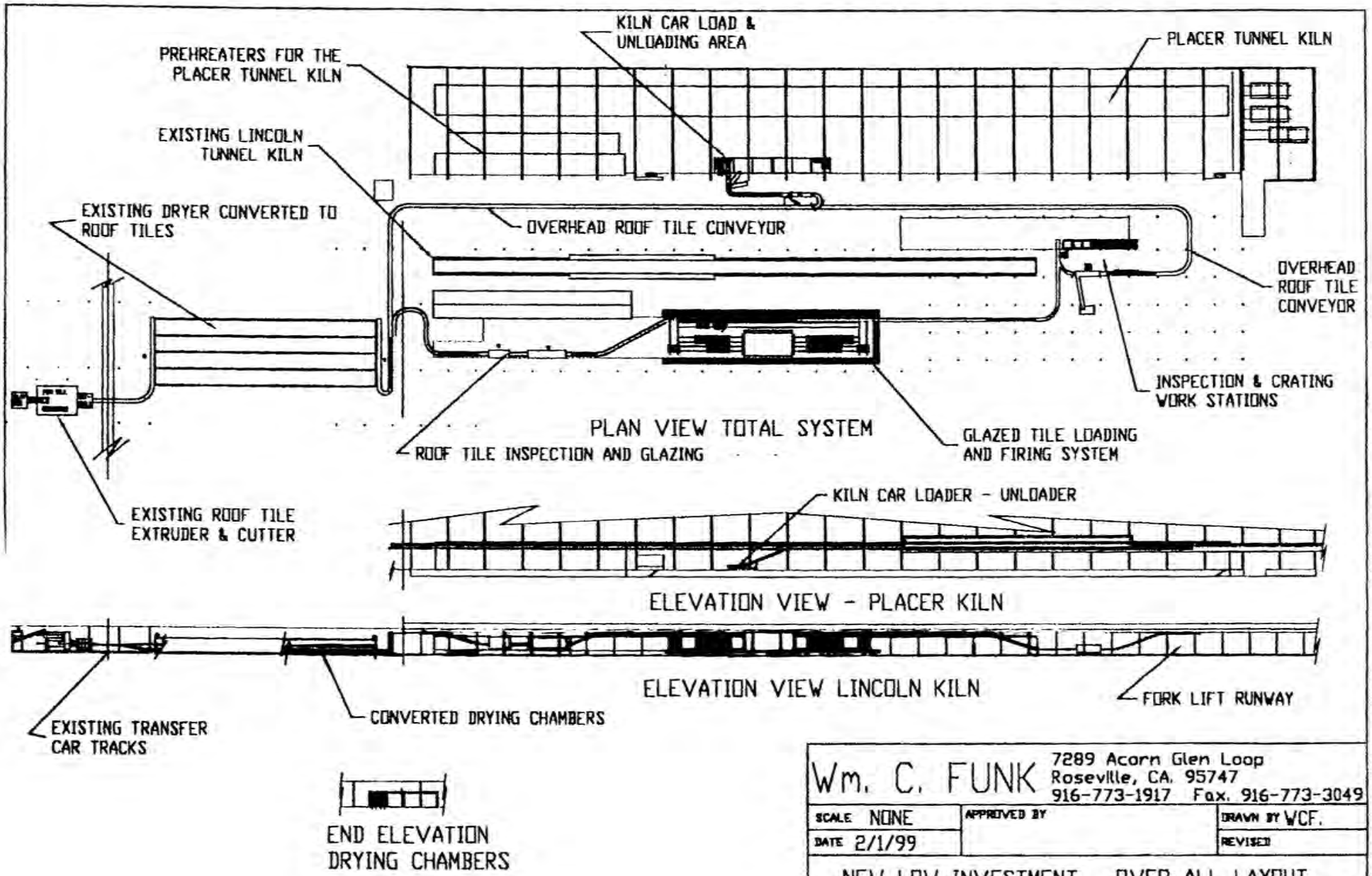
Wm. C. FUNK
7289 Acorn Glen Loop
Roseville, CA. 95747
916-773-1917 Fax. 916-773-3049

SCALE NONE	APPROVED BY	DRAWN BY WCF.
DATE 2/1/99		REVISED

NEW DRYER & EXTRUDER - LAYOUT

GLADDING, McBEAN

DRAWING NUMBER 808 - 28



Wm. C. FUNK
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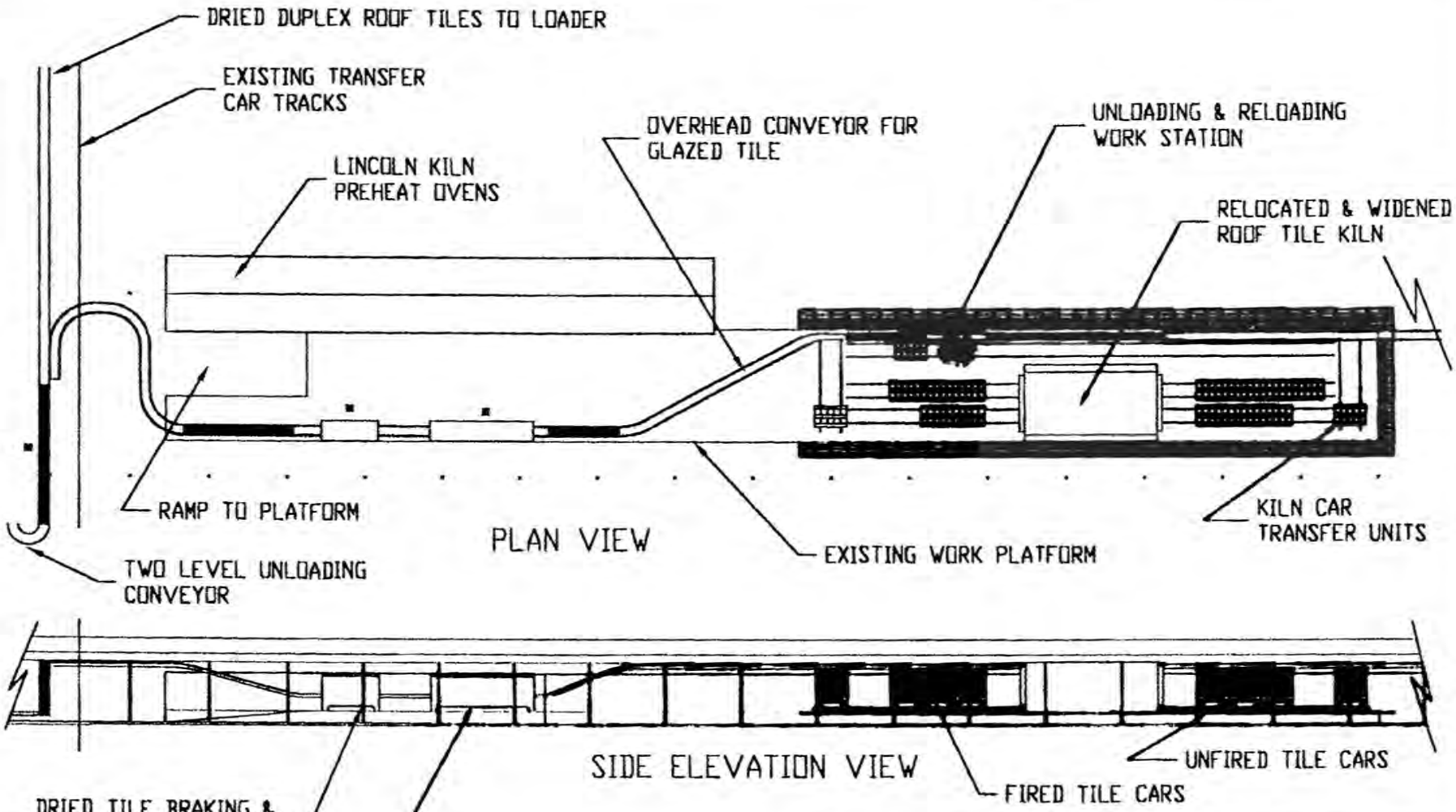
916-773-1917 Fax. 916-773-3049

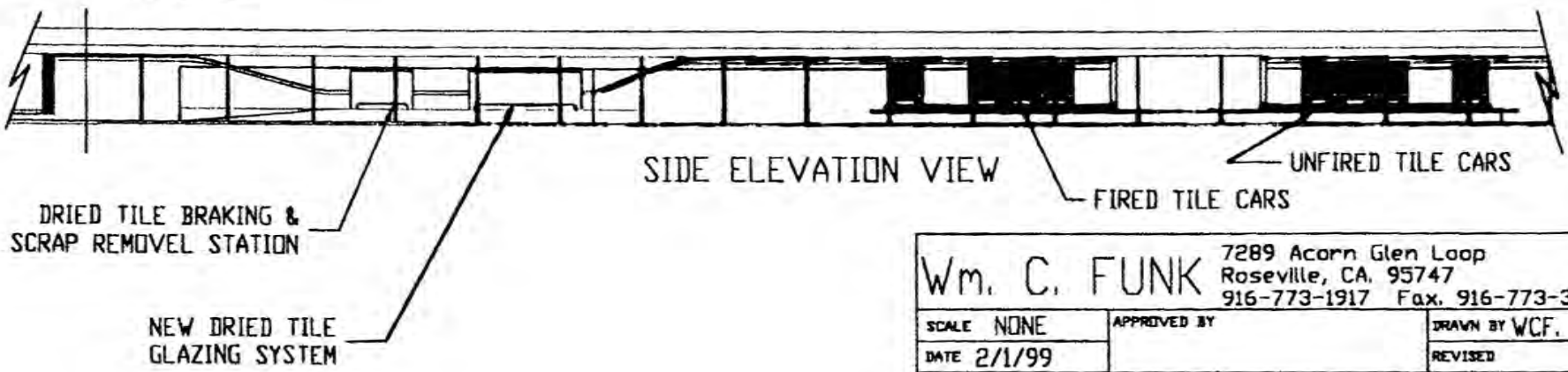
SCALE NONE	APPROVED BY	DRAWN BY WCF.
DATE 2/1/99		REVISED

NEW LOW INVESTMENT OVER ALL LAYOUT

GLADDING, McBEAN

DRAWING NUMBER 808 - 26





Wm. C. FUNK
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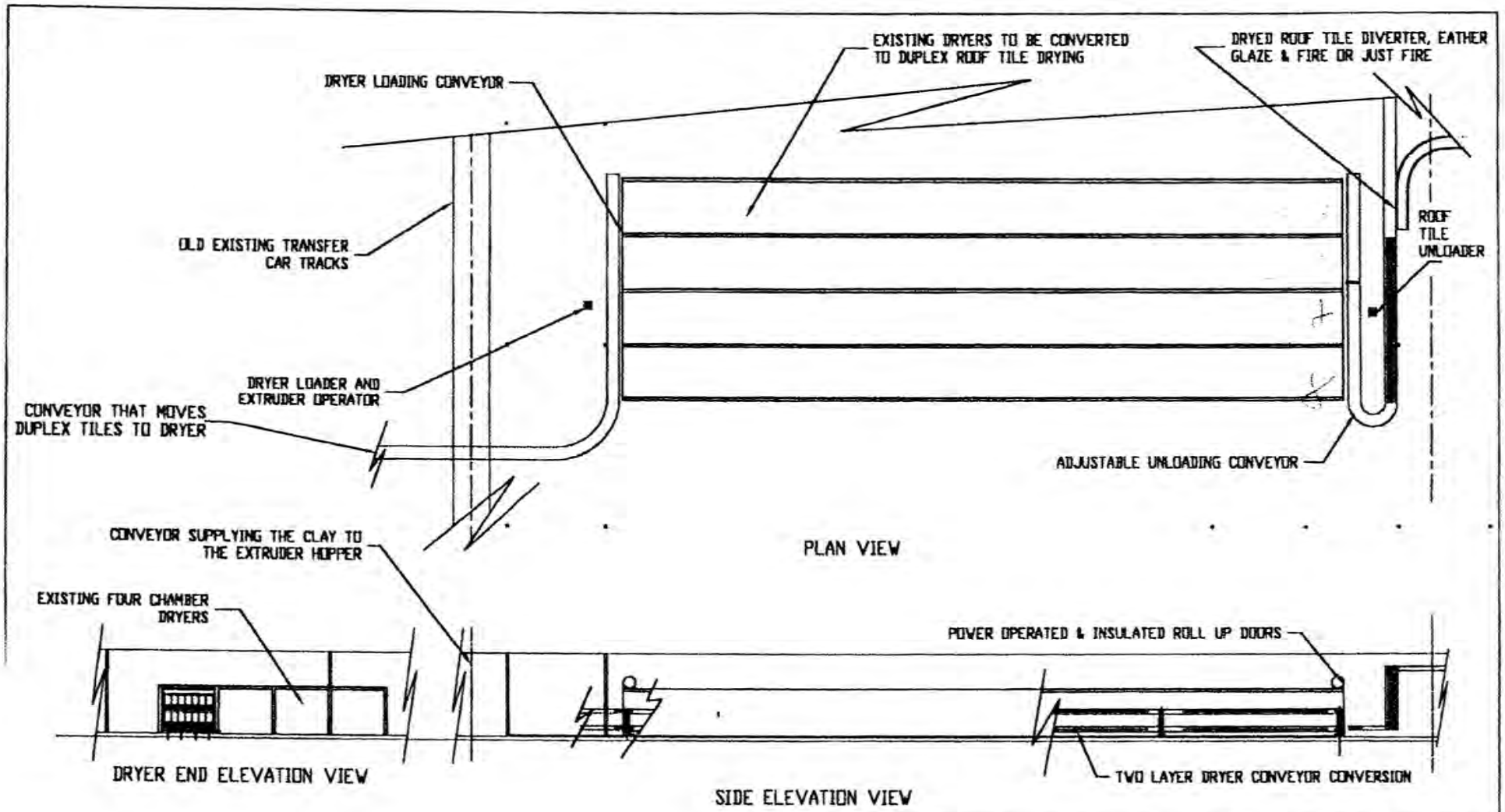
Roseville, CA. 95747
916-773-1917 Fax. 916-773-3049

SCALE NONE	APPROVED BY	DRAWN BY WCF.
DATE 2/1/99		REVISED

ROOF TILE - GLAZING SYSTEM

GLADDING, McBEAN

DRAWING NUMBER 808 - 27



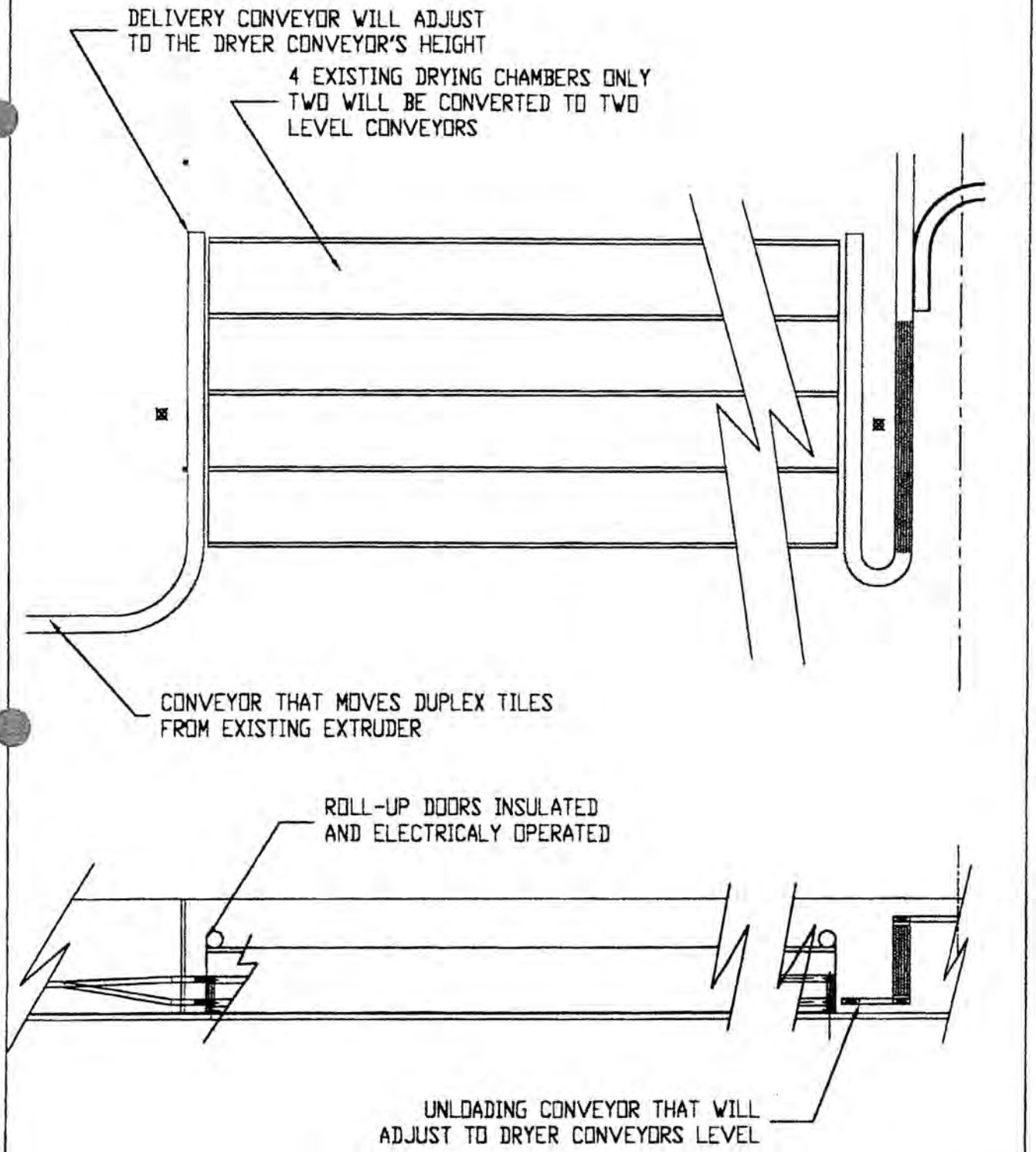
Wm. C. FUNK
7289 Acorn Glen Loop
Roseville, CA. 95747
916-773-1917 Fax. 916-773-3049

SCALE NONE	APPROVED BY	DRAWN BY WCF.
DATE 2/1/99		REVISED

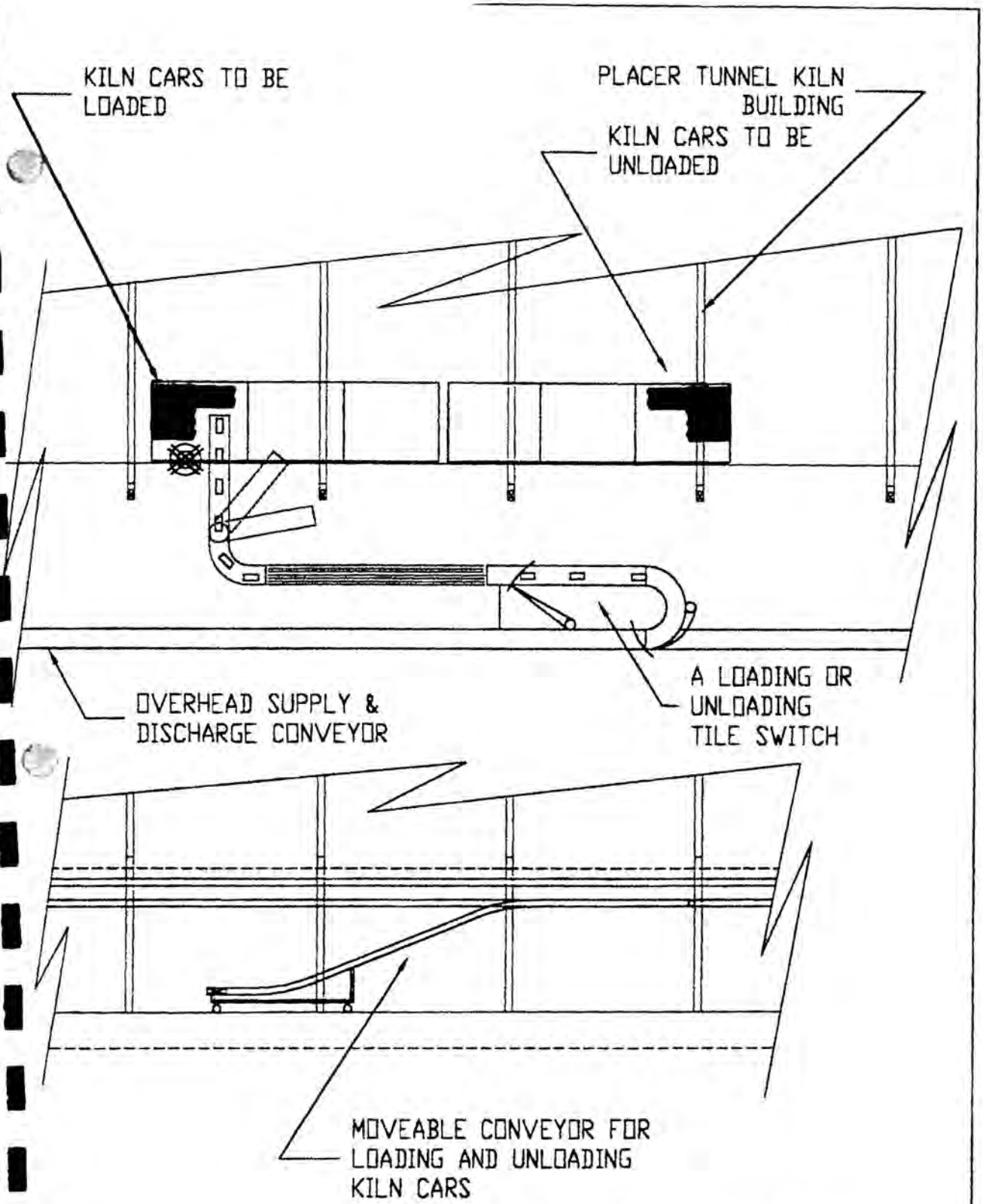
NEW DRYER & EXTRUDER - LAYOUT

GLADDING, McBEAN

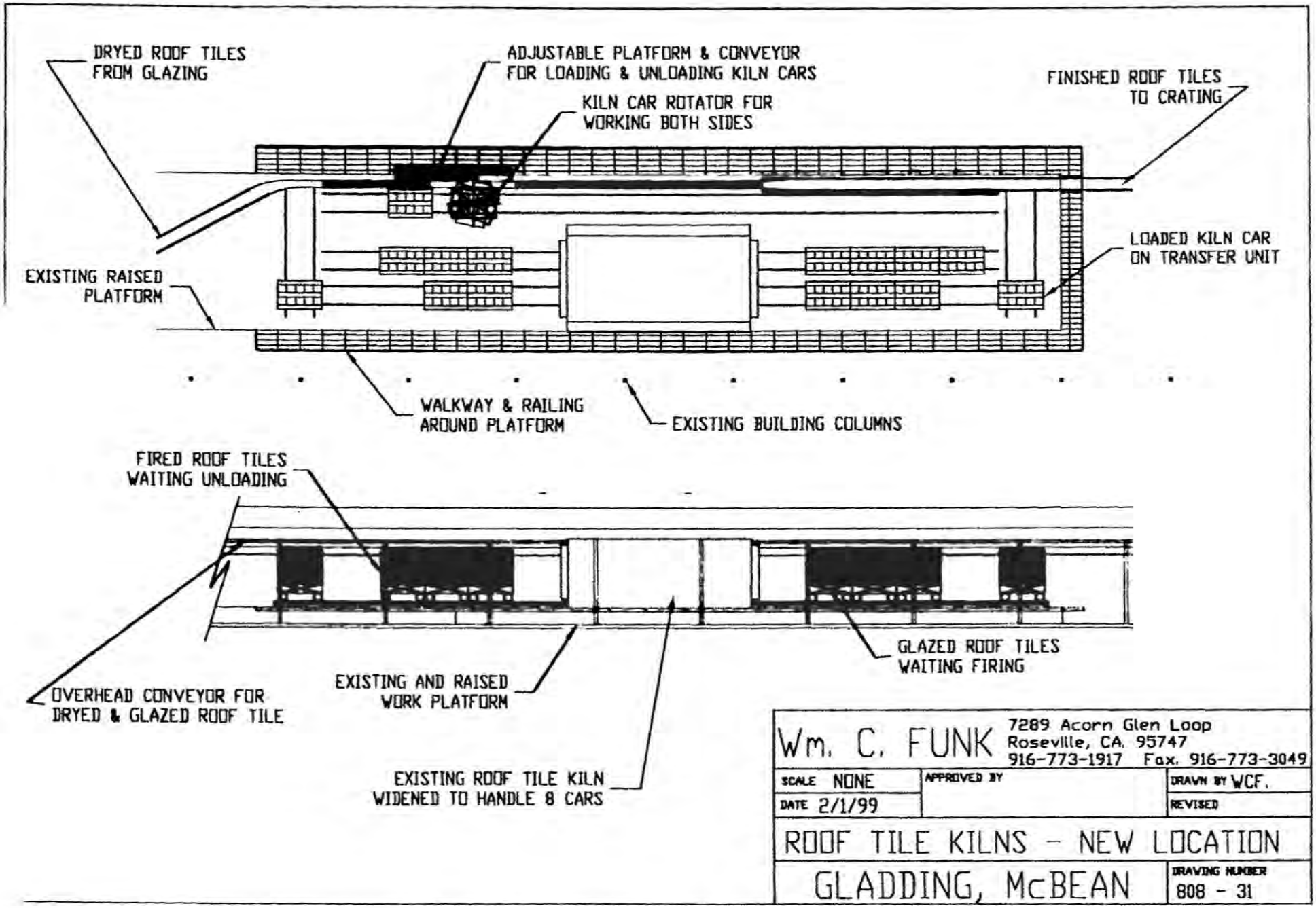
DRAWING NUMBER 808 - 28

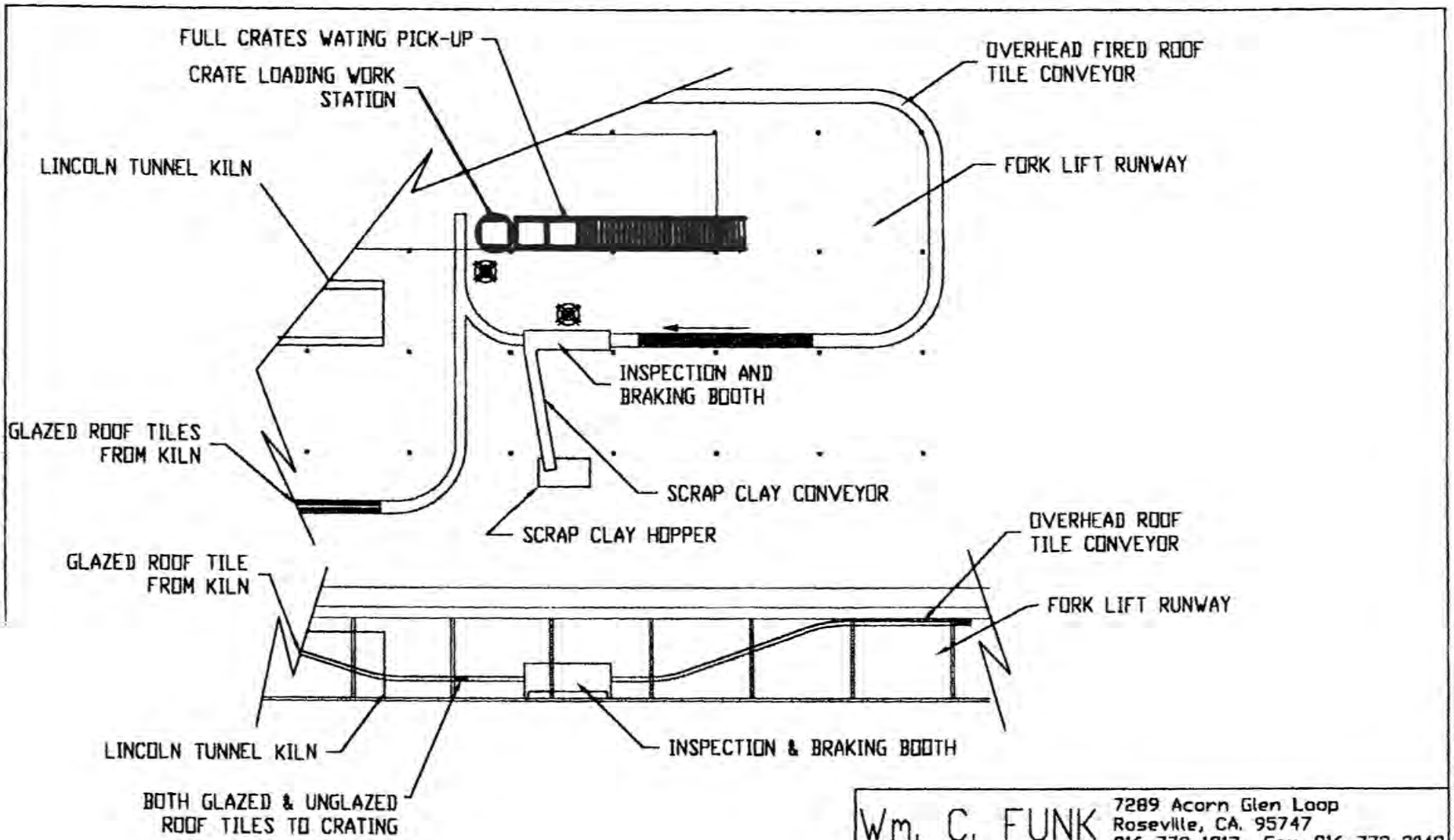


Wm. C. FUNK	7289 Acorn Glen Loop Roseville, CA. 95747 916-773-1917 Fax. 916-773-3049	
SCALE NONE	APPROVED BY	DRAWN BY W.C.F.
DATE 2/1/99		REVISED
DRYER EXTRUDER CLOSE-UP		
GLADDING, McBEAN		DRAWING NUMBER 808 - 29



Wm. C. FUNK	7289 Acorn Glen Loop Roseville, CA. 95747 916-773-1917 Fax. 916-773-3049	
SCALE NONE	APPROVED BY	DRAWN BY W.C.F.
DATE 2/1/99		REVISED
KILN CAR LOADER-UNLOADER		
GLADDING, McBEAN		DRAWING NUMBER 808 - 30


DRYED ROOF TILES FROM GLAZING
ADJUSTABLE PLATFORM & CONVEYOR FOR LOADING & UNLOADING KILN CARS
KILN CAR ROTATOR FOR WORKING BOTH SIDES
FINISHED ROOF TILES TO CRATING
LOADED KILN CAR ON TRANSFER UNIT
EXISTING RAISED PLATFORM
WALKWAY & RAILING AROUND PLATFORM
EXISTING BUILDING COLUMNS
FIRED ROOF TILES WAITING UNLOADING
GLAZED ROOF TILES WAITING FIRING
OVERHEAD CONVEYOR FOR DRYED & GLAZED ROOF TILE
EXISTING AND RAISED WORK PLATFORM
EXISTING ROOF TILE KILN WIDENED TO HANDLE 8 CARS
Wm. C. FUNK
7289 Acorn Glen Loop
Roseville, CA. 95747
916-773-1917 Fax. 916-773-3049
SCALE NONE
APPROVED BY
DRAWN BY WCF.
DATE 2/1/99
REVISED
ROOF TILE KILNS - NEW LOCATION
GLADDING, McBEAN
DRAWING NUMBER
808 - 31



Wm. C. FUNK
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Roseville, CA. 95747
916-773-1917 Fax. 916-773-3049

SCALE NONE	APPROVED BY	DRAWN BY WCF.
DATE 2/1/99		REVISED

CRATING WORK STATION

GLADDING, McBEAN

DRAWING NUMBER 808 - 32

1 SEWER PIPE BUILDING
1A SEWER PIPE BUILDING
2 SEWER PIPE DRYER
3 KILN BUILDING
3A KILN BUILDING
4 POLYESTER MIXING ROOM
5 MACHINE SHOP
6 GROG CRUSHER
7 G V GROG SHED
8 CARPENTER SHOP
9 WAREHOUSE
10 STORAGE & TOILET
11
12
13
14 YARD OFFICE
15 FIRST AID
15A PERSONNEL OFFICE & CONFERENCE
16
17 CONTROL LABORATORY
18 STORAGE SHED
19 T C BUILDING
19A T C BUILDING
20 CER LAB & SPRAY ROOM
21
22 KILN BUILDING
23 CHANGE HOUSE
24 CARPENTER SHOP
25
26 OFFICE & DR ROOM VAULT
27 CLAY STORAGE
28 PRECAST OFFICE
29 SCALES
30 AUGER MACHINE BLD'G
31
32 RING STORAGE
33 DRYING AREA
34 CARRIER DRYER
35 FITTING SHED
36 STORAGE SHED
37 TRANSFORMER HOUSE
38 UTAH STORAGE SHED
39 GARAGE
40 TUNNEL KILN

41 REPAIR SHOP
42 SHOE HOUSE
43 TRUCK REPAIR
44 GUARD HOUSE
45 STORAGE SHED
46 STORAGE
47 AUGER MACHINE BLD'G
48 CO CAR GARAGE
49
50 CO CAR GARAGE
51 TUNNEL KILN BLD'G
51A TUNNEL KILN BLD'G
52 PUMP HOUSE
53 AUGER MACHINE BLD'G
53A AUGER BLD'G
54
55 SPEED-SEAL
56 DRYING
57 DIE SHOP

58 LIFT TRUCK STORAGE
59 PLACER KILN BUILDING
60 PLACER KILN BUILDING
61 4" S P DRYER
62 POLYESTER BLD'G
63 EAST-WEST S P DRYER, 6' & 8'
64 STOREROOM
65 WELDING SHOP
66 PIPE STORAGE
67 CLAY PREP
68 URETHANE BLD'G
69 PROPANE PLANT (ACROSS HIGHWAY)
68A EPOXY BRANCH-STICKING BLD'G

70 SPLIT-TILE PLANT

SHUTTLE KILN

N 1" = 60'

PLANT AREA 84.67 ACRES

GLADDING, McBEAN & CO.
LINCOLN, CALIFORNIA

CLAY ROOF TILE PROPOSAL #2
DUPLEX EXTRUSION WITH GLAZE TILE OPTION

GLADDING McBEAN COMPANY
LINCOLN, CALIFORNIA
FEBRUARY 5,1999

SUBMITTED TO:

AL MUELLER
DAVID LUCCHETTI

SUBMITTED BY:

JERRY STACY
BILL PADAVONA
JACK SCHWARTZ

PREPARED BY:

BILL PADAVONA
DAVE JOHN
BILL FUNK

February 4, 1999

To: Al Mueller
Bill Padavona
Gary Lancaster

From: Jim Anderson

Replaces January 15th memo on this topic

Clay Tile Roofing Market

As indicated in my earlier report on this topic, accurate market size information is very difficult to come by. Attempts have been made to annalize market size by estimating manufacturing capacity and utilization, and by using published information provided by the National Roofing Contractors Association. Neither option provided information that I would consider to be totally accurate. For instance, in 1997 N.R.C.A. reported that the market for clay roofing products for residential buildings was 2.25% of the $1.557 billion market. They then report in 1998, that the market for the same segment of the market is 6.7% of the $1.8 billion market. These two number are obviously grossly different therefore hard to believe, therefor trying to qualify them with a production capacity estimate makes sense.

The following two schedules provide an analysis of the market using the manufacturing capacity method and the N.R.C.A. poll method. You will notice that the two methods provide roughly the same result if we assume a 75% manufacturing utilization, and 70% re-usable tile on re-roof projects. Based on these facts, and assumptions I now believe that the national market is roughly 360,000 squares, and the western market is 240,000 squares.

Manufacturing Capacity Method

	100% utilization	75% utilization
US Tile	240,000	180,000
MCA	70,000	53,000
Ludowici	40,000	30,000
Redlands	40,000	30,000
Deleo	10,000	7,500
Gladding	10,000	7,500
Total	410,000	308,000
Import	50,000	50,000
Total	**460,000**	**358,000**

N.R.C.A. Poll Method - Nation

Steep Re-Roof 3.1% of 3.6 Billion = $112 Million

Squares @ $500/Square installed	223,200
" " " 70% Re-Usable	156,000

Steep New Construction 3.8% of 1.8 Billion = $68 Million

Squares @ $315/Square	217,142
Total Squares, most probable	**373,000**

Product Mix

While this is impossible to know exactly, looking at the purchases of Pacific Supply, and my knowledge of the market I believe it closely approximates the following.

2 Piece	40%
S Profile	57%
Flat	3%

Obviously the "S" profile is the product of choice on large projects such as housing tracts, shopping centers and commercial buildings because of its low installed cost, thus the high usage. This being the case, it is the profile that presents the most opportunity for sales volume growth.

To increase sales of any of these profiles, our selling prices would have to be reduced considerably. I do think it is possible for us to post a reasonable increase in sales without matching the price of our low price competition if we were to maintain the hand made appearance of our products. The schedule below illustrates elasticity in demand for each profile.

Profile		Market Average Price	New Price /Sales Vol.	Gmb. Mix %		Gmb. Mix %
2 Piece	Red	$127	$140/ 1000	7%	$130/1500	7%
	Mix 165	$130	$145/ 6500	43%	$135/8000	38%
"S" Profile	Red 200	$ 70	$ 75/ 1000	7%	$ 70/2500	12%
	Mix	$ 75	$ 80/ 1000	7%	$ 75/2500	12%
Flat Profile	Red	NA	$140/ 1000	7%	$135/1250	6%
	Mix	NA	$145/ 4500	29%	$140/5250	25%
Total			/15000		/21000	

I expect that we would be able to reach 15,000 squares of sales in one year and 21,000 squares in two years.

Assuming the clay roof tile market in the West does not change, our market share would increase from our current 4% to the following levels:

Year One 15,000 Squares	Year Two 21,000 squares
6%	9%

This kind of growth given our new pricing seems to be very achievable.

USA 25,000 59

Glazed Tiles

This market is very small, possibly 1-2% of the total. If we chose to play in this market, we would have to be able to offer the market a price somewhere between $550 - $650, depending on the glaze. Below is a schedule showing our activity pertaining to glazed tile in calendar year 1998.

Squares Bid	Squares Sold
3007	159

I have to assume that we our invited to bid on most glazed tile projects. This being the case I estimate That the total market to be somewhere around 6000squares.

Light Weight Tiles

Judging from the purchases of Pacific Supply, this is not a very large market either. I do believe however, that there is a need for an attractive shake replacement product that will perform well, with an installed weight of less than 600 pounds per square. This market is high priced -$160+, and is currently wide open, as the fiber cement products have failed. Total market potential may be as high as 10,000 squares annually. As discussed to manufacture a light weight product we would have to use a ram press method of production. This process would have a negative impact on the atheistic nature of our current product. Due to this fact, and the potential size of the market, I am not in favor of pursuing this market.

Marketability of proposed process Lincoln Interlocking 35% of our business

The sales plan I submitted in my January 15th memo is contingent upon our ability to manufacture a product that has the same character and quality of our existing products. While I do not think that this will be a problem for the products that are currently made in the duplex form, Cordova and S, the Lincoln Interlocking tile is a concern. While we continue to make improvements to the character of this new product, I cannot, at this time, endorse it as a replacement for our current product. If our Capital Improvement plan is accepted in principal, we would then work aggressively towards an acceptable product. I am fairly confident that we should be able to obtain that goal.

THOUGHTS FOR A MINIMUM CAPITAL SYSTEM FOR
MANUFACTURING ROOF TILES USING
THE DUPLEX EXTRUSION

The two methods submitted at the Dec. 28, 1998 meeting, for manufacturing clay roof tiles were both expensive and it was assumed that sales would go to 35,000 SQS per year. There was some doubt that sales would not move to this new level quickly! Therefore, the decision was made to produce roof tiles between 15,000 and 20,000 net SQS per year. How can the duplex roof tile be manufactured with the maximum labor saved and the minimum capital investment?

By using the existing extruder, cutting and drilling machines and operating them in their present position would reduce the investment by $335,000.00. There are several items that could be added to the system, as the production increases, they are: The automatic dryer loader and unloader. The automatic tile separator and scrap reject unit. The automatic tile, inspection and reject machine. The car loading conveyor as one of the two units could, at the low production rate, operate as both a loader and unloader. The palletizing stations could be reduced to just one position, saving $10,000 of the $30,000, investment. The delayed portion of this system would be $370,000.00.

The tile drying system at this point could go two ways: First, use the Lincoln kiln with it's conversion estimated at $200,000. With a holding capacity of 9,600 to 10,400 roof tiles on one level and wouldd be a continuous system, loading at one end and unloading from the other end. This Lincoln dryer would require filling 2.4 times per week. Second, the four existing drying chambers installed in-between the extruder and the Placer kiln has several advantages. The 4 chambers have an air heater, blower, and controls installed and are in operating condition. Missing would be new end doors, a two level conveyor and air circulating fans. This dryer will have the capacity of holding a one weeks supply of tiles on 5.2 conveyor layers for a production rate of 9000 SQS/yr. net. A production rate of 15,000 will require 8.8 conveyor layers. A production rate of 20,000 will require 11.7 conveyor layers. Another way of looking at the problem is, how many conveyor layers will be required to support one days production. At 9,000 net sqs/yr. it will require 1.0 layer/day. 15,000 net sqs it will require 1.8 layers per day and at 20,000 sqs/yr. it will require 2.3 layers per day.

My thoughts are that this would be the best chamber to convert. Mainly because of the much slower drying rate and the large holding capacity and with random loading and unloading. At an estimated cost of $37,500 per layer, 4 layers would be installed at start-up and the additional layers as production requires. The net result would be $200,000 saved from the Lincoln and to convert the four existing chambers would be $150,000. With and additional $150,000 to be installed as production requires.

The over head conveyors and inclined sections will cost more, as they are longer and more complex. The initial estimate was $82,000. and could increase to $120,000.

SUMMARIZING THE COST ESTIMATES:

1. Conveyor motor control system ---------- $25,000
2. The complete overhead conveyor system ---- $95,000
3. Two drying chamber conversions
   A. Four conveyor belts & pulleys ------- $53,000
   B. Motor, drives & bearings ---------- $10,168
   C. Insulated & powered roll-up doors -- $11,200
   D. Building, installation & materials --- $75,632

   Total estimated cost ------- $150,000
4. Kiln car loader -- unloader ---------- $85,000
5. Palletizing station, one area only ---------- $20,000
6. TV. monitors and pug mill controls ---------- $40,000
7. Tile cutter ---------- $20,000

Total estimate ---------- $435,000
with 10% for contingency---- $43,500
Sales tax 7.25% --- $34,691

Total Investment ---------- $513,191

THE LABOR REQUIRED TO OPERATE THIS NEW LOW INVESTMENT DUPLEX ROOF TILE OPERATION:

The production time is based on selling 9,000 SQS/ year, which will require manufacturing 9000/.92 = 9,783 over 50 weeks / year, giving 195.7 SQS/week, or 27,202 tiles/week, 17.5 kiln cars/ week with an avg. of 1552 tiles/kiln car, and an avg. of 139 tiles/SQS, the handling rate will be 40 tiles per minute.

		min./week
1.	Dryer loader and extruder operator ----------	680
2.	Dryer unloader ----------	680
3.	Kiln car loader ----------	680
4.	Kiln car unloader ----------	680
5.	Breaker and inspector ----------	680
6.	Pallatizer ----------	680
7.	Fork lift and operator 71 crates/week @ 5 min.----	355
	Total production man minutes -------	4,435
	Hours per week -------	74
	15% dead time ---------	85
	@ 20.00 $/hr. ----------	$1,700.00/week

Giving: 1700. $/week / 25,020 = .068 $/tile

190	Cordova ----------	12.91 $/SQS
107	Spanish 18" --------	7.27
120	Interlocking --------	8.15

THOUGHTS AND CALCULATIONS FOR UPGRADING THE ROOF TILE SYSTEM TO PRODUCE 15,000 NET SQS / YEAR

This rate of 15,000 will require that 15,000/.92 = 16,304 are manufactured over 50 weeks/yr. = 326 sqs/week and at an average of 139 roof tiles /avg. sqs will require that 326 x 139 or 45,314 roof tiles must be mfg. every week.

Assuming the duplex tiles are extruded and the dryer loaded at a rate of 40 tiles per minute will require 45,314/40 = 1,133 minutes per week or 18.9 hours. The new dryer system will hold an average of 5,147 roof tiles per conveyor. Assuming that 4 drying conveyors are installed at this level of production, with a holding capacity of 5,147 x 4 = 20,588 roof tiles. This will require loading the dryer 45,314/20,588 = 2.2 times per week and the extruder will operate 18.9/3 = 6.3 hours three times a week.

The production rate for this extruding and handling system will be 40 tile in duplex per minute. This would require that each of the 5 work stations from the dryer unloading forward will work at a speed of 40 tiles per minute or 45,314/40 = 1,133 minutes per week. With an average of 1,552 roof tiles per kiln car, 45,314/1,552 = 29.2 kiln cars per week loaded or 29.2/5 = 5.8 kiln cars loaded every week day. The time required to load or unload one average kiln car is 1,552/40 = 38.8 minutes each or 38.8 x 5.8/60 = 3.75 hours per day. Because the cars must be both loaded and unloaded, each requiring 3.75 hours or 7.5 hours per day of operation, for the loading conveyor and operator.

A LABOR SUMMERY: @ 15,000 SQS/YR

To sell 15,000 SQS/yr. the production must be 15,000/.92 or 16,304 gross SQS/ year, extruded in 50 weeks / year, 326 SQS/week, 45,325 tiles/week, 29.2 kiln cars/ week with an avg. of 1552 tiles/car, an avg. of 139 tiles/SQS. The duplex roof tiles will be extruded and handled throughout out this manufacturing process at a rate of 40 tiles per minute.

Extruding ---- 40/min.
min./week

1.	Dryer loader and extruder operator ----	1,133
2.	Dryer unloader ----------	1,133
3.	Kiln car loader ----------	1,133
4.	Kiln car unloader ----------	1,133
5.	Breaker and inspector ----------	1,133
6.	Pallatizer ----------	1,133
7.	Fork lift and operator 124 crates/week @ 5 min. (41,700 / 338 tiles per crate) ----	620
	Total production man minutes -------	7,418
	Hours per week -------	123.6
	15% dead time ---------	142.2
	@ 20.00 $/hr. ----------	$2,844
	for 41,700 tiles sold	

Giving: .068 $/tile
190 Cordova ------- 12.96 $/SQS
107 Spanish 18" ---- 7.30
120 Interlocking --- 8.18

Deprecation over 10 years in $ per SQS equal 513,191/10/15,000 = $3.42 $ per SQS.

A LABOR SUMMARY: @ 20,000 SQS/YR.

The to sell 20,000 SQS/yr. the production must be 20,000/.92 or 21,739 gross SQS/ year, extruded in 50 weeks / year, 435 SQS/week, 60,434 tiles/week, 39 kiln cars/ week with an avg. of 1552 tiles/car, an avg. of 139 tiles/SQS. The duplex roof tiles will be extruded and handled throughout out this manufacturing process at a rate of 40 tiles per minute.

Extruding ---- 40/min.

		min./week
1.	Dryer loader and extruder operator ----	1,511
2.	Dryer unloader ----------	1,511
3.	Kiln car loader ----------	1,511
4.	Kiln car unloader ----------	1,511
5.	Breaker and inspector ----------	1,511
6.	Pallatizer ----------	1,511
7.	Fork lift and operator 165 crates/week @ 5 min. (55,600 / 338 tiles per crate) -----	825
	Total production man minutes ------	9,891
	Hours per week ------	164.8
	15% dead time --------	189.6
	@ 20.00 $/hr. ---------	$3,792
	for 55,600 tiles sold	

Giving: .068 $/tile

190 Cordova ------- 12.96 $/SQS
107 Spanish 18" ---- 7.30
120 Interlocking --- 8.18

This rate of 20,000 will require that 20,000/.92 = 21,739 are manufactured over 50 weeks/yr. = 435 sqs/week and at an average of 139 roof tiles /avg. sqs will require that 435 x 139 or 60,465 roof tiles must be mfg. every week.

Assuming the duplex tiles are extruded and the dryer loaded at a rate of 40 tiles per minute will require 60,465/40 = 1,511.6 minutes per week or 25.2 hours. The new dryer system will hold an average of 5,147 roof tiles per conveyor.

Assuming that 4 drying conveyors are installed at this level of production, with a holding capacity of 5,147 x 4 = 20,588 roof tiles. This will require loading the drier 60,465/20,588 = 2.9 times per week and the extruder will operate 25.2/4 = 6.3 hours four times a week.

The production rate for this extruding and handling system will be 40 tile in duplex per minute. This would require that each of the 5 work stations from drier unloading forward will work at a speed of 40 tiles per minute or 60,465/40 = 1,511.6 minutes per week. With an average of 1,552 roof tiles per kiln car, 60,465/1,552 = 38.9 kiln cars per week loaded or 38.9/5 = 7.8 kiln cars loaded every week day. The time required to load or unload one average kiln car is 1,552/40 = 38.8 minutes each or 38.8 x 7.8/60 = 5.04 hours per day. Because the cars must be both loaded and unloaded, each requiring 5.04 hours or 10.08 hours per day of operation, for the loading conveyor and operator. At this level of operation the second unloading conveyor may be required or use a early shift to unload and a late shift to load the kiln cars, to solve this over time problem.

THOUGHTS ABOUT THE ROOF TILE KILN, MOVED INTO THE AREA OF THE PLACER KILN.

This kiln will fire a load of roof tile on tile setters on a 12 hour cycle, from cold to hot and back to cold. The tiles must be pre dried in another chamber. There are some glazed roof tile that will require 18 hours to fire. This kiln will carry 15 of the 4" tall tile setters in a stack, 5 rows per car and 2 rows across the car. The kiln will accommodate 4 cars per firing, however the kiln could be widened to hold two rows of cars, or 8 cars per firing. Each kiln car will carry 15 x 5 x 2 = 150 roof tiles and setters per car or 600 roof tiles presently and 1200 roof tiles when widened to two car rows. The load area of each car is 48" wide x 73.5" long and from the floor to the first tile is 39", and to the top tile setter it is 98". Giving a 59" tall stack of tile setters.

Cycling the kiln once per day, will fire both the regular roof tile and the slow firing glazed tile. The capacity of the presently configured kiln at 5 cycles per week and 48 weeks per year in 5 X 48 x 600 = 144,000 roof tiles per year. This divided by the average number of tiles per SQS of 139 pc. will give 1036 SQS per year. The maximum output, assuming that the kiln is operated or cycled once a day for 360 days per year = 360 x 600 / 139 = 1,554 SQS per year. If the two cycles per day were to work the maximum production would be 2 x 1,554 = 3,108 SQS / year and of course if the kiln were widened for a 8 car firing cycle the production would be 6,216 SQS per year. Being more realistic and producing the hard to fire glazed roof tile at 1 cycle/day x 5 days/week x 48 weeks/year x 1200 tiles/cycle / 139 tiles/SQS = 2072 SQS/year.

LABOR REQUIRED TO OPERATE THIS SYSTEM IS AS FOLLOWS:

Assuming that the equipment and employees could perform each job position at a rate of 30 roof tiles pre minute or 2 seconds per tile.

A. The dryer's unloading position: Is to pick the tile up off the dryer conveyor and moving it over to the take-a-way conveyor. Because the take-a way conveyor will raise and lower to the correct dryer conveyor level, the operator must move each duplex tile over about 30" , lay it down at a speed of 1 unit every 4 seconds. Lifting the tile from one level to another is not required. Because of the longest handling time, this position will have the device that will initially brake the duplex unit into the individual roof tiles. This manual job will add labor at a rate of 2 sec. per tile or for 2,000 SQS per year at 278,000 roof tiles will require (278,000 x 2 / 60 / 60 + 15% extra) = 178 hrs./yr. and at 20. $/hr. will cost $3,560.00 / year.

B. The final separation, roof tile inspection, rejecting all unwanted clay and positioning the tiles on the conveyor for glazing will be another position. This employee will handle the roof tiles at a rate of 2 seconds per roof tile. Here the operator is required to slide all rejected clay over to a chute, where a conveyor will move it to a large hopper for disposal. The unbroken support clay will be broken off and the roof tiles will be positioned for glazing. The labor time is the same as above or 178 hrs./year and will cost $3,560.00 $ / year.

C. The operator for the glazing spray booth: This position will require the attention of one operator full time to ensure that each tile is glazed the same and fully covered. This work position requires on physical labor and could be a rotation spot for the more physically challenging work positions. The labor time is the same as above or 178 hrs./year and will cost $3,560.00 $ / year.

D. Loading, Unloading and Moving the kiln cars: This position will require two employees, one on each side of the kiln cars, to remove the fired tiles and place another roof tile onto that tile setter. This work can be accomplished by designing and building two conveyors and work platforms, that independently move up and down so the operators can stand at a comfortable work height and the conveyor will be at the same level as the tile setter being unloaded and then loaded. The new dried and glazed tiles will move in on the same conveyor as the fired tiles move out on. A diverter and stopping gate will be installed at each end of the kiln car loading area, thus supplying tiles as required and preventing jams as the tiles move to the crating area. The kiln car would be moved by one of the two operators, in this way the glazing conveyor would operate continuously. My estimate for the labor required is 4 seconds per tile per men, because the line speed is the same as above but two men are required the time and hours will be twice as much. The labor time is twice that of above or 356 hrs./year and will cost $7,120.00 $ / year.

E. The crating work area: An overhead conveyor will move the fired and glazed roof tiles to the same crating system as used in the regular duplex roof tile system. This one will work at a rate of one tile every 2 seconds, Therefore, this position will require the same time and cost as described in A. The labor time is 178 hrs./year and will cost $3,560.00 $ / year.

F. The fork-lift and driver: The required labor for this job will be 278,000 roof tiles at about 300 tiles per crate or 927 crates per year. Assuming the trip takes 5 minutes each the 927 trips will take 77 hrs. per year or $1,540.00 $ / year.

SUMMARIZING THE LABOR COST FOR THIS
GLAZING AND FIRING OPERATION

A LABOR SUMMARY: @ 2,158 GROSS or 1,964 NET SQS/YR.

To sell 1,964 SQS/yr. the production must be 2,158 x .91 or 1,964 gross SQS/ year, extruded in 50 weeks / year, 43.2 SQS/week, 6,004 tiles/week, at 5 days/week = 5,560/5 = 1,200.9 glazed roof tiles per day, an avg. of 139 tiles/SQS. The roof tiles will be extruded and handled throughout this manufacturing process at a rate of 40 tiles per minute. This kiln will carry 15 of the 4" tall tile setters in a stack, 5 rows per car and 2 rows across the car. The kiln will accommodate 4 cars per firing, however the kiln could be widened to hold two rows of cars, or 8 cars per firing. Each kiln car will carry 15 x 5 x 2 = 150 roof tiles and setters per car or 600 roof tiles presently and 1200 roof tiles when widened to two car rows.

Extruding --- 40/min.
min./week

1. Dryer loader and extruder operator --- 150
2. Dryer unloader ---------- 150
3. Kiln car loader and unloader ---------- 150
4. Breaker and inspector ---------- 150
5. Glazing booth operator ----------150
6. Pallatizer ---------- 150
7. Fork lift and operator 16.1 crates/week
   @ 5 min. (5,460 / 338 tiles per crate) ----- 81

Total production man minutes ------ 981
Hours per week ----- 16.35
15% dead time -------- 18.80
@ 20.00 $/hr. ------ $376.05
for 5,460 tiles sold

Giving: .069 $/tile
190 Cordova ------- 13.08 $/SQS
107 Spanish 18" ---- 7.37
120 Interlocking --- 8.26

CAPITAL INVESTMENT REQUIRED FOR THIS
GLAZING AND FIRING PORTION OF THE OPERATION.

1.	Enlarge the kiln for 8 car firing	$50,000
2.	Moving the existing kiln to this location & electrical	20,000
3.	Two transfer units and rails, semi automatic	50,000
4.	Overhead and adjustable kiln conveyors	45,000
5.	New glazing booth & equipment	75,000
6.	Overhead & regular conveyors for total system	75,000
7.	Braking, inspection and reject both	8,000
8.	Walk ways and hand railings	15,000
	Total estimated investment	338,000
	Contingencies at 15 %	50,700
	Sales Tax 7.25%	28,181
	Investment	$416,881

Deprecation over 10 years in $ per SQS equal 416,881/10/1964
= $21.23 $ per SQS.

CLAY ROOF TILE PROPOSAL
PROFIT AND LOSS STATEMENT
DUPLEX w/Pipe (21.5) SCENARIO

Old Price

	9,000 SQS	15,000 SQS	20,000 SQS
SALES $	1,444,150	2,005,500	2,403,000
SALES %	100.0%	100.0%	100.0%
COS $	651,037	1,036,662	1,353,642
COS %	45.1%	51.7%	56.3%
GROSS MARGIN $	793,113	968,838	1,049,358
GROSS MARGIN %	54.9%	48.3%	43.7%
SELLING EXPENSE	229,569	279,569	304,569
ADMIN EXPENSE	277,765	277,765	277,765
ADD.OPER COSTS	507,334	557,334	582,334
NET PROFIT $	285,779	411,504	467,024
NET PROFIT %	19.8%	20.5%	19.4%
+ Depreciation		50,000	
Cash Flow		461,000	

PROJECTED RETURN ON INVESTMENT
DUPLEX w/Pipe (21.5) SCENARIO

	9,000 SQS	15,000 SQS	20,000 SQS
INVESTMENT	513,191	513,191	513,191
NET PROFIT	285,779	411,504	467,024
R.O.I.	55.7%	80.2%	91.0%
PAYBACK YEARS	1.80	1.25	1.10

CLAY ROOF TILE PROPOSAL
PROFIT AND LOSS STATEMENT
REG & GLAZE DUPLEX w/Pipe (21.5) SCENARIO

	16,820 SQS	21,820 SQS
SALES $	3,006,498	3,404,000
SALES %	100.0%	100.0%
COS $	1,399,334	1,717,623
COS %	46.5%	50.5%
GROSS MARGIN $	1,607,164	1,686,377
GROSS MARGIN %	53.5%	49.5%
SELLING EXPENSE	279,569	304,569
ADMIN EXPENSE	277,765	277,765
ADD.OPER COSTS	557,334	582,334
NET PROFIT $	1,049,830	1,104,043
NET PROFIT %	34.9%	32.4%

PROJECTED RETURN ON INVESTMENT
DUPLEX w/Pipe (21.5) SCENARIO

	16,820 SQS	21,820 SQS
INVESTMENT	930,072	930,072
NET PROFIT	1,049,830	1,104,043
R.O.I.	112.9%	118.7%
PAYBACK YEARS	0.89	0.84

PROPOSAL COSTS

DUPLEX OPTION - EQUIPMENT- W/O GLAZE

EQUIPMENT DESCRIPTION		ESTIMATED COST
CONVEYOR MOTOR CONTROL SYSTEM		$ 25,000
THE COMPLETE OVERHEAD SYSTEM		$ 95,000
TWO DRYING CHAMBER CONVERSIONS		
A. FOUR CONVEYOR BELTS & PULLEYS	$ 53,000	
B. MOTOR, DRIVES & BEARINGS	$ 10,168	
C. INSULATED & POWERED ROLLUP DOORS	$ 11,200	
D. BUILDING, INSTALLATION & MATERIAL	$ 75,632	$ 150,000
KILN CAR LOADER -- UNLOADER		$ 85,000
PALLETIZING STATION, ONE AREA ONLY		$ 20,000
T.V. MONITORS & PUG MILL CONTROLS		$ 40,000
TILE CUTTER		$ 20,000
EQUIPMENT COST		$ 435,000
10% CONTINGENCY		$ 43,500
SALES TAX @ 7.25%		$ 34,691
TOTAL WITH CONTINGENCY		$ 513,191

GLAZE OPTION - ADDITIONAL EQUIPMENT

EQUIPMENT DESCRIPTION	ESTIMATED COST
ENLARGE THE KILN FOR 8 CAR FIRING	$ 50,000
MOVING THE EXISTING KILN TO THIS LOC. WITH ELECT	$ 20,000
~~PUG MILL & EXTRUDER~~ Ohd one Ads Kiln Conveyor	$ 50,000
2 TRANSFER UNITS & RAILS, SEMI AUTOMATIC	$ 45,000
NEW GLAZING BOOTH & EQUIPMENT	$ 75,000
OVERHEAD & ADJUSTABLE CONVEYORS FOR TOTAL SYS	$ 75,000
BRAKING, INSPECTION & REJECT BOOTH	$ 8,000
WALKWAYS & HAND RAILINGS	$ 15,000
EQUIPMENT COST BEFORE CONTINGENCY	$ 338,000
15% CONTINGENCY	$ 50,700
SALES TAX @ 7.25%	$ 28,181
TOTAL COST WITH CONTINGENCY	$ 416,881

Proposal by March 29

CLAY ROOF TILE PROPOSAL
INCOME STATEMENT
DUPLEX w/Pipe (21.5)
9,783 GROSS PRODUCTION SQUARES
'@ NEW NET PRICES

		NET SQS./YEAR	$ PER SQ	TOTAL $	% OF SP
SALES	CORDOVA	5,500	$ 159	$ 872,850	60.4%
	18' S TILE	200	$ 167	$ 33,400	2.3%
	INTERLOCK	3,300	$ 163	$ 537,900	37.2%
	TOTAL SALES	9,000	$ 160	$ 1,444,150	100.0%
COST					
DIRECT	CLAY MIX		$ 5.23	$ 47,082	3.3%
	FUEL		$ 10.53	$ 94,753	6.6%
	LABOR		$ 11.01	$ 99,066	6.9%
	TOTAL DIRECT		$ 26.77	$ 240,900	16.7%
OVERHEAD	INDIRECT		$ 2.00	$ 18,000	1.2%
	MAINTENANCE LABOR		$ 1.00	$ 9,000	0.6%
	SALARY BENEFITS		$ 2.65	$ 23,848	1.7%
	BURNER LABOR		$ 2.34	$ 21,032	1.5%
	DEPRECIATION		$ 5.70	$ 51,319	3.6%
	PROPERTY TAX		$ 0.35	$ 3,150	0.2%
	INSURANCE		$ 0.35	$ 3,150	0.2%
	ELECTRIC		$ 2.71	$ 24,379	1.7%
	MAINT. & REPAIR PARTS		$ 4.52	$ 40,651	2.8%
	FUELS & OILS		$ 0.40	$ 3,600	0.2%
	GENERAL		$ 1.00	$ 9,000	0.6%
	TOTAL OVERHEAD		$ 23.01	$ 207,129	14.3%
TOTAL DIRECT & OVERHEAD COST			$ 49.78	$ 448,029	31.0%
	LOSS MATERIAL		$ 3.99	$ 35,882	2.5%
TOTAL PLANT COST			$ 53.77	$ 483,911	33.5%
	PACKAGING MATERIAL		$ 7.76	$ 69,836	4.8%
	YARD COST		$ 10.81	$ 97,290	6.7%
NET PLANT COST			$ 72.34	$ 651,037	45.1%
SALES, GENERAL & ADMINISTRATION			$ 56.37	$ 507,334	35.1%
TOTAL ALL COSTS			$ 128.71	$ 1,158,371	80.2%
PROFIT			$ 31.75	$ 285,779	19.8%

CLAY ROOF TIL[illegible]OPOSAL
DUPLEX w/Pipe (21.5)
STANDARD COST COMPARISON CURRENT VS PROPOSED IN SQUARES

# OF SQUARES 9,783 R		NEW CORDOVA	CURR STD CORDOVA	% Chg	NEW 18' S TILE	CURR STD 18' S TILE	% Chg	NEW INTERLOCK	CURR STD INTERLOCK	% Chg	NEW GLAZE CORDOVA	NEW GLAZE 18' S TILE	NEW GLAZE INTERLOCK
DIRECT COST													
CLAY PREP MATERIAL		$ 3.706	$ 3.706	0.0%	$ 3.210	$ 3.210	0.0%	$ 3.132	$ 3.132	0.0%	$ 3.706	$ 3.210	$ 3.132
CLAY PREP LABOR		$ 1.858	$ 1.858	0.0%	$ 1.605	$ 1.605	0.0%	$ 1.570	$ 1.570	0.0%	$ 1.858	$ 1.605	$ 1.570
GLAZE MATERIAL											$ 119.700	$ 38.520	$ 48.000
		$ 5.564	$ 5.564	0.0%	$ 4.815	$ 4.815	0.0%	$ 4.702	$ 4.702	0.0%	$ 125.264	$ 43.335	$ 52.702
FUEL DRYER		$ 2.500	$ 5.928	-57.8%	$ 2.210	$ 5.836	-62.1%	$ 2.210	$ 5.016	-55.9%	$ 2.500	$ 2.210	$ 2.210
FUEL KILN /REG AND GLAZED		$ 8.664	$ 11.552	-25.0%	$ 7.496	$ 9.994	-25.0%	$ 7.308	$ 9.744	-25.0%	$ 25.750	$ 14.500	$ 16.260
		$ 11.164	$ 17.480	-63.9%	$ 9.706	$ 15.830	-61.3%	$ 9.518	$ 14.760	-64.5%	$ 28.250	$ 16.710	$ 18.470
MANUFACTURING LABOR		$ 13.680	$ 27.852	-50.9%	$ 7.700	$ 35.545	-78.3%	$ 8.640	$ 44.806	-80.7%	$ 17.480	$ 9.800	$ 11.040
TOTAL DIRECT COST		$ 30.408	$ 50.896	-40.3%	$ 22.221	$ 56.190	-60.5%	$ 22.860	$ 49.508	-53.8%	$ 170.994	$ 69.845	$ 82.212
OVERHEAD COST													
INDIRECT	V	$ 2.000	$ 4.744	-57.8%	$ 2.000	$ 4.104	-51.3%	$ 2.000	$ 3.526	-43.3%	$ 2.000	$ 2.000	$ 2.000
MAINTENANCE LABOR	V	$ 1.000	$ 3.424	-70.8%	$ 1.000	$ 2.962	-66.2%	$ 1.000	$ 2.545	-60.7%	$ 1.050	$ 1.050	$ 1.050
SALARY BENEFITS	SF	$ 2.797	$ 6.682	-58.1%	$ 2.420	$ 5.782	-58.1%	$ 2.079	$ 4.967	-58.1%	$ 3.077	$ 2.662	$ 2.287
BURNER LABOR	V	$ 2.730	$ 4.578	-40.4%	$ 1.540	$ 3.961	-61.1%	$ 1.730	$ 3.403	-49.2%	$ 2.730	$ 1.540	$ 1.730
DEPRECIATION	F	$ 5.246	$ 1.236	324.4%	$ 5.246	$ 1.069	390.6%	$ 5.246	$ 0.919	471.0%	$ 26.090	$ 26.090	$ 26.090
PROPERTY TAX	F	$ 0.322	$ 0.330	-2.3%	$ 0.322	$ 0.285	12.9%	$ 0.322	$ 0.245	31.4%	$ 0.322	$ 0.322	$ 0.322
INSURANCE	F	$ 0.322	$ 0.330	-2.3%	$ 0.322	$ 0.285	12.9%	$ 0.322	$ 0.245	31.4%	$ 0.322	$ 0.322	$ 0.322
ELECTRIC	V	$ 3.000	$ 4.992	-39.9%	$ 2.596	$ 4.319	-39.9%	$ 2.230	$ 3.711	-39.9%	$ 3.150	$ 2.342	$ 2.342
MAINT. & REPAIR PARTS	V	$ 5.003	$ 11.716	-57.3%	$ 4.328	$ 10.136	-57.3%	$ 3.719	$ 8.709	-57.3%	$ 5.503	$ 4.091	$ 4.091
FUELS & OILS	V	$ 0.400	$ 1.609	-75.1%	$ 0.400	$ 1.392	-71.3%	$ 0.400	$ 1.196	-66.6%	$ 0.420	$ 0.420	$ 0.420
GENERAL	V	$ 1.000	$ 1.609	-37.9%	$ 1.000	$ 1.392	-28.2%	$ 1.000	$ 1.196	-16.4%	$ 1.000	$ 2.000	$ 3.000
TOTAL OVERHEAD		$ 23.820	$ 41.249	-42.3%	$ 21.174	$ 35.689	-40.7%	$ 20.048	$ 30.663	-34.6%	$ 45.664	$ 42.838	$ 43.653
TOTAL DIRECT & OVERHEAD COST		$ 54.228	$ 92.145	-41.1%	$ 43.394	$ 91.879	-52.8%	$ 42.908	$ 80.171	-46.5%	$ 216.658	$ 112.683	$ 125.865
8% LOSS FACTOR REG		$ 4.338	$ 12.103	-64.2%	$ 3.472	$ 2.857	21.5%	$ 3.433	$ 22.258	-84.6%	$ 19.499	$ 10.141	$ 11.328
9% LOSS FACTOR GLAZED													
TOTAL COST BEFORE PKG MAT'L		$ 58.566	$ 104.248	-43.8%	$ 46.866	$ 94.736	-50.5%	$ 46.341	$ 102.429	-54.8%	$ 236.157	$ 122.825	$ 137.193
PACKAGING MATERIAL		$ 8.762	$ 8.740	0.3%	$ 8.436	$ 8.436	0.0%	$ 6.048	$ 6.090	-0.7%	$ 10.852	$ 10.545	$ 7.560
TOTAL PLANT COST / SQUARE		*$ 67.33*	*$ 112.99*	*$ (0.40)*	*$ 55.30*	*$ 103.17*	*$ (0.46)*	*$ 52.39*	*$ 108.52*	*$ (0.52)*	*$ 247.11*	*$ 133.37*	*$ 144.75*
NET PRICE / SQUARE		*$ 144.00*	*$ 158.40*	*$ (0.09)*	*$ 73.00*	*$ 167.00*	*$ (0.56)*	*$ 143.00*	*$ 163.00*	*$ (0.12)*	*$ 550.00*	*$ 550.00*	*$ 550.00*
Weight Factor		0.00301	0.00301		0.00511	0.00511		0.00481	0.00481				
Cost / Piece		$ 0.354	$ 0.595	-40.4%	$ 0.517	$ 0.964	-46.4%	$ 0.437	$ 0.904	-51.7%	$ 1.301	$ 1.246	$ 1.206
Pieces / Square		190	190		107	107		120	120		190	107	120

CLAY ROOF TILE PROPOSAL
INCOME STATEMENT
DUPLEX w/Pipe (21.5)
17,045 GROSS PRODUCTION SQUARES
'@ NEW NET PRICES

		NET SQS./YEAR	$ PER SQ	TOTAL $	% OF SP
SALES	CORDOVA	7,500	$ 144	$ 1,080,000	53.9%
	18' S TILE	2,100	$ 73	$ 153,300	7.6%
	INTERLOCK	5,400	$ 143	$ 772,200	38.5%
	TOTAL SALES	15,000	$ 134	$ 2,005,500	100.0%
COST					
DIRECT	CLAY MIX		$ 5.15	$ 77,232	3.9%
	FUEL		$ 10.37	$ 155,509	7.8%
	LABOR		$ 11.03	$ 165,426	8.2%
	TOTAL DIRECT		$ 26.54	$ 398,167	19.9%
OVERHEAD	INDIRECT		$ 2.00	$ 30,000	1.5%
	MAINTENANCE LABOR		$ 1.00	$ 15,000	0.7%
	SALARY BENEFITS		$ 2.77	$ 41,550	2.1%
	BURNER LABOR		$ 2.20	$ 33,051	1.6%
	DEPRECIATION		$ 3.42	$ 51,319	2.6%
	PROPERTY TAX		$ 0.21	$ 3,150	0.2%
	INSURANCE		$ 0.21	$ 3,150	0.2%
	ELECTRIC		$ 2.67	$ 39,994	2.0%
	MAINT. & REPAIR PARTS		$ 4.45	$ 66,689	3.3%
	FUELS & OILS		$ 0.40	$ 6,000	0.3%
	GENERAL		$ 1.00	$ 15,000	0.7%
	TOTAL OVERHEAD		$ 20.33	$ 304,903	15.2%
TOTAL DIRECT & OVERHEAD COST			$ 46.87	$ 703,070	35.1%
	LOSS MATERIAL		$ 3.69	$ 55,352	2.8%
TOTAL PLANT COST			$ 50.56	$ 758,422	37.8%
	PACKAGING MATERIAL		$ 7.74	$ 116,090	5.8%
	YARD COST		$ 10.81	$ 162,150	8.1%
NET PLANT COST			$ 69.11	$ 1,036,662	51.7%
SALES, GENERAL & ADMINISTRATION			$ 37.16	$ 557,334	27.8%
TOTAL ALL COSTS			$ 106.27	$ 1,593,996	79.5%
PROFIT			$ 27.43	$ 411,504	20.5%

CLAY ROOF TILE PROPOSAL
DUPLEX w/Pipe (21.5)
STANDARD COST COMPARISON CURRENT VS PROPOSED IN SQUARES

# OF SQUARES 17,045 R		NEW CORDOVA	CURR STD CORDOVA	% Chg	NEW 18' S TILE	CURR STD 18' S TILE	% Chg	NEW INTERLOCK	CURR STD INTERLOCK	% Chg	NEW GLAZE CORDOVA	NEW GLAZE 18' S TILE	NEW GLAZE INTERLOCK
DIRECT COST													
CLAY PREP MATERIAL		$ 3.706	$ 3.706	0.0%	$ 3.210	$ 3.210	0.0%	$ 3.132	$ 3.132	0.0%	$ 3.706	$ 3.210	$ 3.132
CLAY PREP LABOR		$ 1.858	$ 1.858	0.0%	$ 1.605	$ 1.605	0.0%	$ 1.570	$ 1.570	0.0%	$ 1.858	$ 1.605	$ 1.570
GLAZE MATERIAL											$ 119.700	$ 38.520	$ 48.000
		$ 6.564	$ 5.564	0.0%	$ 4.815	$ 4.815	0.0%	$ 4.702	$ 4.702	0.0%	$ 125.264	$ 43.335	$ 52.702
FUEL DRYER		$ 2.500	$ 5.928	-57.8%	$ 2.210	$ 5.836	-62.1%	$ 2.210	$ 5.016	-55.9%	$ 2.500	$ 2.210	$ 2.210
FUEL KILN /REG AND GLAZED		$ 8.664	$ 11.552	-25.0%	$ 7.496	$ 9.994	-25.0%	$ 7.308	$ 9.744	-25.0%	$ 25.750	$ 14.500	$ 16.260
		$ 11.164	$ 17.480	-63.9%	$ 9.706	$ 15.830	-61.3%	$ 9.518	$ 14.760	-64.5%	$ 28.250	$ 16.710	$ 18.470
MANUFACTURING LABOR		$ 13.680	$ 27.852	-50.9%	$ 7.700	$ 35.545	-78.3%	$ 8.640	$ 44.806	-80.7%	$ 17.480	$ 9.800	$ 11.040
TOTAL DIRECT COST		$ 30.408	$ 50.896	-40.3%	$ 22.221	$ 56.190	-60.5%	$ 22.860	$ 49.508	-53.8%	$ 170.994	$ 69.845	$ 82.212
OVERHEAD COST													
INDIRECT	V	$ 2.000	$ 4.744	-57.8%	$ 2.000	$ 4.104	-51.3%	$ 2.000	$ 3.526	-43.3%	$ 2.000	$ 2.000	$ 2.000
MAINTENANCE LABOR	V	$ 1.000	$ 3.424	-70.8%	$ 1.000	$ 2.962	-66.2%	$ 1.000	$ 2.545	-60.7%	$ 1.050	$ 1.050	$ 1.050
SALARY BENEFITS	SF	$ 2.797	$ 6.682	-58.1%	$ 2.420	$ 5.782	-58.1%	$ 2.079	$ 4.967	-58.1%	$ 3.077	$ 2.662	$ 2.287
BURNER LABOR	V	$ 2.730	$ 4.578	-40.4%	$ 1.540	$ 3.961	-61.1%	$ 1.730	$ 3.403	-49.2%	$ 2.730	$ 1.540	$ 1.730
DEPRECIATION	F	$ 3.011	$ 1.236	143.6%	$ 3.011	$ 1.069	181.6%	$ 3.011	$ 0.919	227.7%	$ 23.855	$ 23.855	$ 23.855
PROPERTY TAX	F	$ 0.185	$ 0.330	-43.9%	$ 0.185	$ 0.285	-35.2%	$ 0.185	$ 0.245	-24.6%	$ 0.185	$ 0.185	$ 0.185
INSURANCE	F	$ 0.185	$ 0.330	-43.9%	$ 0.185	$ 0.285	-35.2%	$ 0.185	$ 0.245	-24.6%	$ 0.185	$ 0.185	$ 0.185
ELECTRIC	V	$ 3.000	$ 4.992	-39.9%	$ 2.596	$ 4.319	-39.9%	$ 2.230	$ 3.711	-39.9%	$ 3.150	$ 2.342	$ 2.342
MAINT. & REPAIR PARTS	V	$ 5.003	$ 11.716	-57.3%	$ 4.328	$ 10.136	-57.3%	$ 3.719	$ 8.709	-57.3%	$ 5.503	$ 4.091	$ 4.091
FUELS & OILS	V	$ 0.400	$ 1.609	-75.1%	$ 0.400	$ 1.392	-71.3%	$ 0.400	$ 1.196	-66.6%	$ 0.420	$ 0.420	$ 0.420
GENERAL	V	$ 1.000	$ 1.609	-37.9%	$ 1.000	$ 1.392	-28.2%	$ 1.000	$ 1.196	-16.4%	$ 1.000	$ 2.000	$ 3.000
TOTAL OVERHEAD		$ 21.310	$ 41.249	-48.3%	$ 18.665	$ 35.689	-47.7%	$ 17.539	$ 30.663	-42.8%	$ 43.154	$ 40.329	$ 41.144
TOTAL DIRECT & OVERHEAD COST		$ 51.718	$ 92.145	-43.9%	$ 40.885	$ 91.879	-55.5%	$ 40.399	$ 80.171	-49.6%	$ 214.148	$ 110.174	$ 123.356
8% LOSS FACTOR REG		$ 4.137	$ 12.103	-65.8%	$ 3.271	$ 2.857	14.5%	$ 3.232	$ 22.258	-85.5%	$ 19.273	$ 9.916	$ 11.102
9% LOSS FACTOR GLAZED													
TOTAL COST BEFORE PKG MAT'L		$ 55.856	$ 104.248	-46.4%	$ 44.156	$ 94.736	-53.4%	$ 43.631	$ 102.429	-57.4%	$ 233.422	$ 120.090	$ 134.458
PACKAGING MATERIAL		$ 8.762	$ 8.740	0.3%	$ 8.436	$ 8.436	0.0%	$ 6.048	$ 6.090	-0.7%	$ 10.952	$ 10.545	$ 7.560
TOTAL PLANT COST / SQUARE		***$ 64.62***	***$ 112.99***	***$ (0.43)***	***$ 52.59***	***$ 103.17***	***$ (0.49)***	***$ 49.68***	***$ 108.52***	***$ (0.54)***	***$ 244.37***	***$ 130.64***	***$ 142.02***
NET PRICE / SQUARE		***$ 144.00***	***$ 158.40***	***$ (0.09)***	***$ 73.00***	***$ 167.00***	***$ (0.56)***	***$ 143.00***	***$ 163.00***	***$ (0.12)***	***$ 550.00***	***$ 550.00***	***$ 550.00***
Weight Factor		0.00301	0.00301		0.00511	0.00511		0.00481	0.00481				
Cost / Piece		$ 0.340	$ 0.595	-42.8%	$ 0.492	$ 0.964	-49.0%	$ 0.414	$ 0.904	-54.2%	$ 1.286	$ 1.221	$ 1.183
Pieces / Square		190	190		107	107		120	120		190	107	120

CLAY ROOF TILE PROPOSAL
INCOME STATEMENT
DUPLEX w/Pipe (21.5)
22,727 GROSS PRODUCTION SQUARES
'@ NEW NET PRICES

		NET SQS./YEAR	$ PER SQ	TOTAL $	% OF SP
SALES	CORDOVA	9,000	$ 133	$ 1,197,000	49.8%
	18' S TILE	4,800	$ 73	$ 350,400	14.6%
	INTERLOCK	6,200	$ 138	$ 855,600	35.6%
	TOTAL SALES	20,000	$ 120	$ 2,403,000	100.0%
COST					
DIRECT	CLAY MIX		$ 5.12	$ 102,340	4.3%
	FUEL		$ 10.30	$ 206,074	8.6%
	LABOR		$ 10.68	$ 213,648	8.9%
	TOTAL DIRECT		$ 26.10	$ 522,062	21.7%
OVERHEAD	INDIRECT		$ 2.00	$ 40,000	1.7%
	MAINTENANCE LABOR		$ 1.00	$ 20,000	0.8%
	SALARY BENEFITS		$ 2.82	$ 56,460	2.3%
	BURNER LABOR		$ 2.13	$ 42,688	1.8%
	DEPRECIATION		$ 2.57	$ 51,319	2.1%
	PROPERTY TAX		$ 0.16	$ 3,150	0.1%
	INSURANCE		$ 0.16	$ 3,150	0.1%
	ELECTRIC		$ 2.66	$ 53,286	2.2%
	MAINT. & REPAIR PARTS		$ 4.44	$ 88,854	3.7%
	FUELS & OILS		$ 0.40	$ 8,000	0.3%
	GENERAL		$ 1.00	$ 20,000	0.8%
	TOTAL OVERHEAD		$ 19.35	$ 386,907	16.1%
TOTAL DIRECT & OVERHEAD COST			$ 45.45	$ 908,970	37.8%
	LOSS MATERIAL		$ 3.58	$ 71,623	3.0%
TOTAL PLANT COST			$ 49.03	$ 980,592	40.8%
	PACKAGING MATERIAL		$ 7.84	$ 156,849	6.5%
	YARD COST		$ 10.81	$ 216,200	9.0%
NET PLANT COST			$ 67.68	$ 1,353,642	56.3%
SALES, GENERAL & ADMINISTRATION			$ 29.12	$ 582,334	24.2%
TOTAL ALL COSTS			$ 96.80	$ 1,935,976	80.6%
PROFIT			$ 23.35	$ 467,024	19.4%

CLAY ROOF TILE PROPOSAL
DUPLEX w/Pipe (21.5)
STANDARD COST COMPARISON CURRENT VS PROPOSED IN SQUARES

# OF SQUARES 22,727 R		NEW CORDOVA	CURR STD CORDOVA	% Chg	NEW 18' S TILE	CURR STD 18' S TILE	% Chg	NEW INTERLOCK	CURR STD INTERLOCK	% Chg	NEW GLAZE CORDOVA	NEW GLAZE 18' S TILE	NEW GLAZE INTERLOCK
DIRECT COST													
CLAY PREP MATERIAL		$ 3.706	$ 3.706	0.0%	$ 3.210	$ 3.210	0.0%	$ 3.132	$ 3.132	0.0%	$ 3.706	$ 3.210	$ 3.132
CLAY PREP LABOR		$ 1.858	$ 1.858	0.0%	$ 1.605	$ 1.605	0.0%	$ 1.570	$ 1.570	0.0%	$ 1.858	$ 1.605	$ 1.570
GLAZE MATERIAL											$ 119.700	$ 38.520	$ 48.000
		$ 5.564	$ 5.564	0.0%	$ 4.815	$ 4.815	0.0%	$ 4.702	$ 4.702	0.0%	$ 125.264	$ 43.335	$ 52.702
FUEL DRYER		$ 2.500	$ 5.928	-57.8%	$ 2.210	$ 5.836	-62.1%	$ 2.210	$ 5.016	-55.9%	$ 2.500	$ 2.210	$ 2.210
FUEL KILN /REG AND GLAZED		$ 8.664	$ 11.552	-25.0%	$ 7.496	$ 9.994	-25.0%	$ 7.308	$ 9.744	-25.0%	$ 25.750	$ 14.500	$ 16.260
		$ 11.164	$ 17.480	-63.9%	$ 9.706	$ 15.830	-61.3%	$ 9.518	$ 14.760	-64.5%	$ 28.250	$ 16.710	$ 18.470
MANUFACTURING LABOR		$ 13.680	$ 27.852	-50.9%	$ 7.700	$ 35.545	-78.3%	$ 8.640	$ 44.806	-80.7%	$ 17.480	$ 9.800	$ 11.040
TOTAL DIRECT COST		$ 30.408	$ 50.896	-40.3%	$ 22.221	$ 56.190	-60.5%	$ 22.860	$ 49.508	-53.8%	$ 170.994	$ 69.845	$ 82.212
OVERHEAD COST													
INDIRECT	V	$ 2.000	$ 4.744	-57.8%	$ 2.000	$ 4.104	-51.3%	$ 2.000	$ 3.526	-43.3%	$ 2.000	$ 2.000	$ 2.000
MAINTENANCE LABOR	V	$ 1.000	$ 3.424	-70.8%	$ 1.000	$ 2.962	-66.2%	$ 1.000	$ 2.545	-60.7%	$ 1.050	$ 1.050	$ 1.050
SALARY BENEFITS	SF	$ 2.797	$ 6.682	-58.1%	$ 2.420	$ 5.782	-58.1%	$ 2.079	$ 4.967	-58.1%	$ 3.077	$ 2.662	$ 2.287
BURNER LABOR	V	$ 2.730	$ 4.578	-40.4%	$ 1.540	$ 3.961	-61.1%	$ 1.730	$ 3.403	-49.2%	$ 2.730	$ 1.540	$ 1.730
DEPRECIATION	F	$ 2.258	$ 1.236	82.7%	$ 2.258	$ 1.069	111.2%	$ 2.258	$ 0.919	145.8%	$ 23.102	$ 23.102	$ 23.102
PROPERTY TAX	F	$ 0.139	$ 0.330	-58.0%	$ 0.139	$ 0.285	-51.4%	$ 0.139	$ 0.245	-43.4%	$ 0.139	$ 0.139	$ 0.139
INSURANCE	F	$ 0.139	$ 0.330	-58.0%	$ 0.139	$ 0.285	-51.4%	$ 0.139	$ 0.245	-43.4%	$ 0.139	$ 0.139	$ 0.139
ELECTRIC	V	$ 3.000	$ 4.992	-39.9%	$ 2.596	$ 4.319	-39.9%	$ 2.230	$ 3.711	-39.9%	$ 3.150	$ 2.342	$ 2.342
MAINT. & REPAIR PARTS	V	$ 5.003	$ 11.716	-57.3%	$ 4.328	$ 10.136	-57.3%	$ 3.719	$ 8.709	-57.3%	$ 5.503	$ 4.091	$ 4.091
FUELS & OILS	V	$ 0.400	$ 1.609	-75.1%	$ 0.400	$ 1.392	-71.3%	$ 0.400	$ 1.196	-66.6%	$ 0.420	$ 0.420	$ 0.420
GENERAL	V	$ 1.000	$ 1.609	-37.9%	$ 1.000	$ 1.392	-28.2%	$ 1.000	$ 1.196	-16.4%	$ 1.000	$ 2.000	$ 3.000
TOTAL OVERHEAD		$ 20.465	$ 41.249	-50.4%	$ 17.819	$ 35.689	-50.1%	$ 16.693	$ 30.663	-45.6%	$ 42.309	$ 39.484	$ 40.299
TOTAL DIRECT & OVERHEAD COST		$ 50.873	$ 92.145	-44.8%	$ 40.040	$ 91.879	-56.4%	$ 39.553	$ 80.171	-50.7%	$ 213.303	$ 109.329	$ 122.511
8% LOSS FACTOR REG		$ 4.070	$ 12.103	-66.4%	$ 3.203	$ 2.857	12.1%	$ 3.164	$ 22.258	-85.8%	$ 19.197	$ 9.840	$ 11.026
9% LOSS FACTOR GLAZED													
TOTAL COST BEFORE PKG MAT'L		$ 54.943	$ 104.248	-47.3%	$ 43.243	$ 94.736	-54.4%	$ 42.718	$ 102.429	-58.3%	$ 232.500	$ 119.168	$ 133.537
PACKAGING MATERIAL		$ 8.762	$ 8.740	0.3%	$ 8.436	$ 8.436	0.0%	$ 6.048	$ 6.090	-0.7%	$ 10.952	$ 10.545	$ 7.560
TOTAL PLANT COST / SQUARE		*$ 63.70*	*$ 112.99*	*$ (0.44)*	*$ 51.68*	*$ 103.17*	*$ (0.50)*	*$ 48.77*	*$ 108.52*	*$ (0.55)*	*$ 243.45*	*$ 129.71*	*$ 141.10*
NET PRICE / SQUARE		*$ 133.00*	*$ 158.40*	*$ (0.16)*	*$ 73.00*	*$ 167.00*	*$ (0.56)*	*$ 138.00*	*$ 163.00*	*$ (0.15)*	*$ 550.00*	*$ 550.00*	*$ 550.00*
Weight Factor		0.00301	0.00301		0.00511	0.00511		0.00481	0.00481				
Cost / Piece		$ 0.335	$ 0.595	-43.6%	$ 0.483	$ 0.964	-49.9%	$ 0.406	$ 0.904	-55.1%	$ 1.281	$ 1.212	$ 1.176
Pieces / Square		190	190		107	107		120	120		190	107	120

CLAY ROOF TILE PROPOSAL
INCOME STATEMENT
REG. & GLAZE DUPLEX w/Pipe (21.5)
GROSS PRODUCTION SQUARES
@ NEW NET PRICES

17,045 R
2,000 GL
19,045 TOT

HA Ind

		NET SQS./YEAR	$ PER SQ	TOTAL $	% OF SP
SALES	CORDOVA	7,500	$ 144	$ 1,080,000	35.9%
	18' S TILE	2,100	$ 73	$ 153,305	5.1%
	INTERLOCK	5,400	$ 143	$ 772,194	25.7%
	GLAZED TILE	1,820	$ 550	$ 1,001,000	33.3%
	TOTAL SALES	16,820	$ 179	$ 3,006,498	100.0%
COST					
DIRECT	CLAY MIX & GLAZE		$ 14.08	$ 236,795	7.9%
	FUEL		$ 11.75	$ 197,576	6.6%
	LABOR		$ 11.16	$ 187,744	6.2%
	TOTAL DIRECT		$ 36.99	$ 622,114	20.7%
OVERHEAD	INDIRECT		$ 2.00	$ 33,640	1.1%
	MAINTENANCE LABOR		$ 1.01	$ 16,911	0.6%
	SALARY BENEFITS		$ 2.77	$ 46,527	1.5%
	BURNER LABOR		$ 2.20	$ 37,061	1.2%
	DEPRECIATION		$ 5.53	$ 93,007	3.1%
	PROPERTY TAX		$ 0.19	$ 3,150	0.1%
	INSURANCE		$ 0.19	$ 3,150	0.1%
	ELECTRIC		$ 2.67	$ 44,991	1.5%
	MAINT. & REPAIR PARTS		$ 4.48	$ 75,419	2.5%
	FUELS & OILS		$ 0.40	$ 6,764	0.2%
	GENERAL		$ 1.09	$ 18,385	0.6%
	TOTAL OVERHEAD		$ 22.53	$ 379,007	12.6%
TOTAL DIRECT & OVERHEAD COST			$ 59.52	$ 1,001,121	33.3%
	LOSS MATERIAL		$ 4.92	$ 82,691	2.8%
TOTAL PLANT COST			$ 64.44	$ 1,083,812	36.0%
	PACKAGING MATERIAL		$ 7.95	$ 133,697	4.4%
	YARD COST		$ 10.81	$ 181,824	6.0%
NET PLANT COST			$ 83.19	$ 1,399,334	46.5%
SALES, GENERAL & ADMINISTRATION			$ 33.14	$ 557,334	18.5%
TOTAL ALL COSTS			$ 116.33	$ 1,956,668	65.1%
PROFIT			$ 62.42	$ 1,049,830	34.9%

CLAY ROOF TILE PROPOSAL
DUPLEX w/Pipe (21.5)
STANDARD COST COMPARISON CURRENT VS PROPOSED IN SQUARES

# OF SQUARES		NEW CORDOVA	CURR STD CORDOVA	% Chg	NEW 18' S TILE	CURR STD 18' S TILE	% Chg	NEW INTERLOCK	CURR STD INTERLOCK	% Chg	NEW GLAZE CORDOVA	NEW GLAZE 18' S TILE	NEW GLAZE INTERLOCK
17,045 R													
2,000 G													
RECT COST													
CLAY PREP MATERIAL		$ 3.706	$ 3.706	0.0%	$ 3.210	$ 3.210	0.0%	$ 3.132	$ 3.132	0.0%	$ 3.706	$ 3.210	$ 3.132
CLAY PREP LABOR		$ 1.858	$ 1.858	0.0%	$ 1.605	$ 1.605	0.0%	$ 1.570	$ 1.570	0.0%	$ 1.858	$ 1.605	$ 1.570
GLAZE MATERIAL											$ 119.700	$ 38.520	$ 48.000
		$ 5.564	$ 5.564	0.0%	$ 4.815	$ 4.815	0.0%	$ 4.702	$ 4.702	0.0%	$ 125.264	$ 43.335	$ 52.702
FUEL DRYER		$ 2.500	$ 5.928	-57.8%	$ 2.210	$ 5.836	-62.1%	$ 2.210	$ 5.016	-55.9%	$ 2.500	$ 2.210	$ 2.210
FUEL KILN /REG AND GLAZED		$ 8.664	$ 11.552	-25.0%	$ 7.496	$ 9.994	-25.0%	$ 7.308	$ 9.744	-25.0%	$ 25.750	$ 14.500	$ 16.260
		$ 11.164	$ 17.480	-63.9%	$ 9.706	$ 15.830	-61.3%	$ 9.518	$ 14.760	-64.5%	$ 28.250	$ 16.710	$ 18.470
MANUFACTURING LABOR		$ 13.680	$ 27.852	-50.9%	$ 7.700	$ 35.545	-78.3%	$ 8.640	$ 44.806	-80.7%	$ 17.480	$ 9.800	$ 11.040
TAL DIRECT COST		$ 30.408	$ 50.896	-40.3%	$ 22.221	$ 56.190	-60.5%	$ 22.860	$ 49.508	-53.8%	$ 170.994	$ 69.845	$ 82.212
ERHEAD COST													
INDIRECT	V	$ 2.000	$ 4.744	-57.8%	$ 2.000	$ 4.104	-51.3%	$ 2.000	$ 3.526	-43.3%	$ 2.000	$ 2.000	$ 2.000
MAINTENANCE LABOR	V	$ 1.000	$ 3.424	-70.8%	$ 1.000	$ 2.962	-66.2%	$ 1.000	$ 2.545	-60.7%	$ 1.050	$ 1.050	$ 1.050
SALARY BENEFITS	SF	$ 2.797	$ 6.682	-58.1%	$ 2.420	$ 5.782	-58.1%	$ 2.079	$ 4.967	-58.1%	$ 3.077	$ 2.662	$ 2.287
BURNER LABOR	V	$ 2.730	$ 4.578	-40.4%	$ 1.540	$ 3.961	-61.1%	$ 1.730	$ 3.403	-49.2%	$ 2.730	$ 1.540	$ 1.730
DEPRECIATION	F	$ 3.011	$ 1.236	143.6%	$ 3.011	$ 1.069	181.6%	$ 3.011	$ 0.919	227.7%	$ 23.855	$ 23.855	$ 23.855
PROPERTY TAX	F	$ 0.185	$ 0.330	-43.9%	$ 0.185	$ 0.285	-35.2%	$ 0.185	$ 0.245	-24.6%	$ 0.185	$ 0.185	$ 0.185
INSURANCE	F	$ 0.185	$ 0.330	-43.9%	$ 0.185	$ 0.285	-35.2%	$ 0.185	$ 0.245	-24.6%	$ 0.185	$ 0.185	$ 0.185
ELECTRIC	V	$ 3.000	$ 4.992	-39.9%	$ 2.596	$ 4.319	-39.9%	$ 2.230	$ 3.711	-39.9%	$ 3.150	$ 2.342	$ 2.342
MAINT. & REPAIR PARTS	V	$ 5.003	$ 11.716	-57.3%	$ 4.328	$ 10.136	-57.3%	$ 3.719	$ 8.709	-57.3%	$ 5.503	$ 4.091	$ 4.091
FUELS & OILS	V	$ 0.400	$ 1.609	-75.1%	$ 0.400	$ 1.392	-71.3%	$ 0.400	$ 1.196	-66.6%	$ 0.420	$ 0.420	$ 0.420
GENERAL	V	$ 1.000	$ 1.609	-37.9%	$ 1.000	$ 1.392	-28.2%	$ 1.000	$ 1.196	-16.4%	$ 1.000	$ 2.000	$ 3.000
TAL OVERHEAD		$ 21.310	$ 41.249	-48.3%	$ 18.665	$ 35.689	-47.7%	$ 17.539	$ 30.663	-42.8%	$ 43.154	$ 40.329	$ 41.144
TAL DIRECT & OVERHEAD COST		$ 51.718	$ 92.145	-43.9%	$ 40.885	$ 91.879	-55.5%	$ 40.399	$ 80.171	-49.6%	$ 214.148	$ 110.174	$ 123.356
3% LOSS FACTOR REG		$ 4.137	$ 12.103	-65.8%	$ 3.271	$ 2.857	14.5%	$ 3.232	$ 22.258	-85.5%	$ 19.273	$ 9.916	$ 11.102
3% LOSS FACTOR GLAZED													
TAL COST BEFORE PKG MAT'L		$ 55.856	$ 104.248	-46.4%	$ 44.156	$ 94.736	-53.4%	$ 43.631	$ 102.429	-57.4%	$ 233.422	$ 120.090	$ 134.458
PACKAGING MATERIAL		$ 8.762	$ 8.740	0.3%	$ 8.436	$ 8.436	0.0%	$ 6.048	$ 6.090	-0.7%	$ 10.952	$ 10.545	$ 7.560
TAL PLANT COST / SQUARE		***$ 64.62***	***$ 112.99***	***$ (0.43)***	***$ 52.59***	***$ 103.17***	***$ (0.49)***	***$ 49.68***	***$ 108.52***	***$ (0.54)***	***$ 244.37***	***$ 130.64***	***$ 142.02***
ET PRICE / SQUARE		***$ 144.00***	***$ 158.40***	***$ (0.09)***	***$ 73.00***	***$ 167.00***	***$ (0.56)***	***$ 143.00***	***$ 163.00***	***$ (0.12)***	***$ 550.00***	***$ 550.00***	***$ 550.00***
Weight Factor		0.00301	0.00301		0.00511	0.00511		0.00481	0.00481				
Cost / Piece		$ 0.340	$ 0.595	-42.8%	$ 0.492	$ 0.964	-49.0%	$ 0.414	$ 0.904	-54.2%	$ 1.286	$ 1.221	$ 1.183
Pieces / Square		190	190		107	107		120	120		190	107	120

CLAY ROOF TILE PROPOSAL
INCOME STATEMENT
REG. & GLAZE DUPLEX w/Pipe (21.5)

22,727	**R**	**GROSS PRODUCTION SQUARES**
2,000	**GL**	**@ NEW NET PRICES**
24,727	**TOT**	

		NET SQS./YEAR	$ PER SQ	TOTAL $	% OF SP
SALES	CORDOVA	9,000	$ 133	$ 1,197,000	35.2%
	18' S TILE	4,800	$ 73	$ 350,400	10.3%
	INTERLOCK	6,200	$ 138	$ 855,600	25.1%
	GLAZED TILE	1,820	$ 550	$ 1,001,000	29.4%
	TOTAL SALES	21,820	$ 156	$ 3,404,000	100.0%
COST					
DIRECT	CLAY MIX & GLAZE		$ 12.00	$ 261,903	7.7%
	FUEL		$ 11.37	$ 248,141	7.3%
	LABOR		$ 10.93	$ 238,474	7.0%
	TOTAL DIRECT		$ 34.30	$ 748,517	22.0%
OVERHEAD	INDIRECT		$ 2.00	$ 43,640	1.3%
	MAINTENANCE LABOR		$ 1.00	$ 21,911	0.6%
	SALARY BENEFITS		$ 2.77	$ 60,378	1.8%
	BURNER LABOR		$ 2.14	$ 46,698	1.4%
	DEPRECIATION		$ 4.26	$ 93,007	2.7%
	PROPERTY TAX		$ 0.14	$ 3,150	0.1%
	INSURANCE		$ 0.14	$ 3,150	0.1%
	ELECTRIC		$ 2.67	$ 58,283	1.7%
	MAINT. & REPAIR PARTS		$ 4.47	$ 97,584	2.9%
	FUELS & OILS		$ 0.40	$ 8,764	0.3%
	GENERAL		$ 1.07	$ 23,385	0.7%
	TOTAL OVERHEAD		$ 21.08	$ 459,952	13.5%
TOTAL DIRECT & OVERHEAD COST			$ 55.38	$ 1,208,469	35.5%
	LOSS MATERIAL		$ 4.53	$ 98,823	2.9%
TOTAL PLANT COST			$ 59.91	$ 1,307,292	38.4%
	PACKAGING MATERIAL		$ 8.00	$ 174,456	5.1%
	YARD COST		$ 10.81	$ 235,874	6.9%
NET PLANT COST			$ 78.72	$ 1,717,623	50.5%
SALES, GENERAL & ADMINISTRATION			$ 26.69	$ 582,334	17.1%
TOTAL ALL COSTS			$ 105.41	$ 2,299,957	67.6%
PROFIT			$ 50.60	$ 1,104,043	32.4%

CLAY ROOF TILE PROPOSAL
DUPLEX w/Pipe (21.5)
STANDARD COST COMPARISON CURRENT VS PROPOSED IN SQUARES

# OF SQUARES		NEW CORDOVA	CURR STD CORDOVA	% Chg	NEW 18' S TILE	CURR STD 18' S TILE	% Chg	NEW INTERLOCK	CURR STD INTERLOCK	% Chg	NEW GLAZE CORDOVA	NEW GLAZE 18' S TILE	NEW GLAZE INTERLOCK
22,727 R													
2,000 G													
DIRECT COST													
CLAY PREP MATERIAL		$ 3.706	$ 3.706	0.0%	$ 3.210	$ 3.210	0.0%	$ 3.132	$ 3.132	0.0%	$ 3.706	$ 3.210	$ 3.132
CLAY PREP LABOR		$ 1.858	$ 1.858	0.0%	$ 1.605	$ 1.605	0.0%	$ 1.570	$ 1.570	0.0%	$ 1.858	$ 1.605	$ 1.570
GLAZE MATERIAL											$ 119.700	$ 38.520	$ 48.000
		$ 5.564	$ 5.564	0.0%	$ 4.815	$ 4.815	0.0%	$ 4.702	$ 4.702	0.0%	$ 125.264	$ 43.335	$ 52.702
FUEL DRYER		$ 2.500	$ 5.928	-57.8%	$ 2.210	$ 5.836	-62.1%	$ 2.210	$ 5.016	-55.9%	$ 2.500	$ 2.210	$ 2.210
FUEL KILN /REG AND GLAZED		$ 8.664	$ 11.552	-25.0%	$ 7.496	$ 9.994	-25.0%	$ 7.308	$ 9.744	-25.0%	$ 25.750	$ 14.500	$ 16.260
		$ 11.164	$ 17.480	-63.9%	$ 9.706	$ 15.830	-61.3%	$ 9.518	$ 14.760	-64.5%	$ 28.250	$ 16.710	$ 18.470
MANUFACTURING LABOR		$ 13.680	$ 27.852	-50.9%	$ 7.700	$ 35.545	-78.3%	$ 8.640	$ 44.806	-80.7%	$ 17.480	$ 9.800	$ 11.040
TOTAL DIRECT COST		$ 30.408	$ 50.896	-40.3%	$ 22.221	$ 56.190	-60.5%	$ 22.860	$ 49.508	-53.8%	$ 170.994	$ 69.845	$ 82.212
OVERHEAD COST													
INDIRECT	V	$ 2.000	$ 4.744	-57.8%	$ 2.000	$ 4.104	-51.3%	$ 2.000	$ 3.526	-43.3%	$ 2.000	$ 2.000	$ 2.000
MAINTENANCE LABOR	V	$ 1.000	$ 3.424	-70.8%	$ 1.000	$ 2.962	-66.2%	$ 1.000	$ 2.545	-60.7%	$ 1.050	$ 1.050	$ 1.050
SALARY BENEFITS	SF	$ 2.797	$ 6.682	-58.1%	$ 2.420	$ 5.782	-58.1%	$ 2.079	$ 4.967	-58.1%	$ 3.077	$ 2.662	$ 2.287
BURNER LABOR	V	$ 2.730	$ 4.578	-40.4%	$ 1.540	$ 3.961	-61.1%	$ 1.730	$ 3.403	-49.2%	$ 2.730	$ 1.540	$ 1.730
DEPRECIATION	F	$ 2.258	$ 1.236	82.7%	$ 2.258	$ 1.069	111.2%	$ 2.258	$ 0.919	145.8%	$ 23.102	$ 23.102	$ 23.102
PROPERTY TAX	F	$ 0.139	$ 0.330	-58.0%	$ 0.139	$ 0.285	-51.4%	$ 0.139	$ 0.245	-43.4%	$ 0.139	$ 0.139	$ 0.139
INSURANCE	F	$ 0.139	$ 0.330	-58.0%	$ 0.139	$ 0.285	-51.4%	$ 0.139	$ 0.245	-43.4%	$ 0.139	$ 0.139	$ 0.139
ELECTRIC	V	$ 3.000	$ 4.992	-39.9%	$ 2.696	$ 4.319	-39.9%	$ 2.230	$ 3.711	-39.9%	$ 3.150	$ 2.342	$ 2.342
MAINT. & REPAIR PARTS	V	$ 5.003	$ 11.716	-57.3%	$ 4.328	$ 10.136	-57.3%	$ 3.719	$ 8.709	-57.3%	$ 5.503	$ 4.091	$ 4.091
FUELS & OILS	V	$ 0.400	$ 1.609	-75.1%	$ 0.400	$ 1.392	-71.3%	$ 0.400	$ 1.196	-66.6%	$ 0.420	$ 0.420	$ 0.420
GENERAL	V	$ 1.000	$ 1.609	-37.9%	$ 1.000	$ 1.392	-28.2%	$ 1.000	$ 1.196	-16.4%	$ 1.000	$ 2.000	$ 3.000
TOTAL OVERHEAD		$ 20.465	$ 41.249	-50.4%	$ 17.819	$ 35.689	-50.1%	$ 16.693	$ 30.663	-45.6%	$ 42.309	$ 39.484	$ 40.299
TOTAL DIRECT & OVERHEAD COST		$ 50.873	$ 92.145	-44.8%	$ 40.040	$ 91.879	-56.4%	$ 39.553	$ 80.171	-50.7%	$ 213.303	$ 109.329	$ 122.511
8% LOSS FACTOR REG		$ 4.070	$ 12.103	-66.4%	$ 3.203	$ 2.857	12.1%	$ 3.164	$ 22.258	-85.8%	$ 19.197	$ 9.840	$ 11.026
9% LOSS FACTOR GLAZED													
TOTAL COST BEFORE PKG MAT'L		$ 54.943	$ 104.248	-47.3%	$ 43.243	$ 94.736	-54.4%	$ 42.718	$ 102.429	-58.3%	$ 232.500	$ 119.168	$ 133.537
PACKAGING MATERIAL		$ 8.762	$ 8.740	0.3%	$ 8.436	$ 8.436	0.0%	$ 6.048	$ 6.090	-0.7%	$ 10.952	$ 10.545	$ 7.560
TOTAL PLANT COST / SQUARE		*$ 63.70*	*$ 112.99*	*$ (0.44)*	*$ 51.68*	*$ 103.17*	*$ (0.50)*	*$ 48.77*	*$ 108.52*	*$ (0.55)*	*$ 243.45*	*$ 129.71*	*$ 141.10*
NET PRICE / SQUARE		*$ 133.00*	*$ 158.40*	*$ (0.16)*	*$ 73.00*	*$ 167.00*	*$ (0.56)*	*$ 138.00*	*$ 163.00*	*$ (0.15)*	*$ 550.00*	*$ 550.00*	*$ 550.00*
Weight Factor		0.00301	0.00301		0.00511	0.00511		0.00481	0.00481				
Cost / Piece		$ 0.335	$ 0.595	-43.6%	$ 0.483	$ 0.984	-49.9%	$ 0.406	$ 0.904	-55.1%	$ 1.281	$ 1.212	$ 1.176
Pieces / Square		190	190		107	107		120	120		190	107	120

DUPLEX CLAY ROOF TILE PROPOSAL
SUMMARY KEY CHANGES

	15,000 SQS REGULAR				20,000 REGULAR		
COST, PRICE, MARGIN	***NEW***	CURRENT	CHANGE		***NEW***	CURRENT	CHANGE
CORDOVA							
PRICE	***$ 144.00***	$ 158.40	-9.1%		***$ 133.00***	$ 158.40	-16.0%
COST	***$ 64.62***	$ 112.99	-42.8%		***$ 63.70***	$ 112.99	-43.6%
MARGIN	***$ 79.38***	$ 45.41	74.8%		***$ 69.30***	$ 45.41	52.6%
18 S TILE							
PRICE	***$ 73.00***	$ 167.00	-56.3%		***$ 73.00***	$ 167.00	-56.3%
COST	***$ 52.59***	$ 103.17	-49.0%		***$ 51.68***	$ 103.17	-49.9%
MARGIN	***$ 20.41***	$ 63.83	-68.0%		***$ 21.32***	$ 63.83	-66.6%
INTERLOCK							
PRICE	***$ 143.00***	$ 163.00	-12.3%		***$ 138.00***	$ 163.00	-15.3%
COST	***$ 49.68***	$ 108.52	-54.2%		***$ 48.77***	$ 108.52	-55.1%
MARGIN	***$ 93.32***	$ 54.48	71.3%		***$ 89.23***	$ 54.48	63.8%

MANNING	***NEW***	CURRENT	CHANGE
CORDOVA	***7.0***	25.5	-72.5%
18 S TILE	***7.0***	32.5	-78.5%
INTERLOCK	***7.0***	41.5	-83.1%

		Gladding McBean					
		Roof Tile Modernizaton Project Analysis Report					
			24-Jan-00				
ulp							Total Proj
ea	Category	Cost to Date	% Completion	Projected Cost	Bid Cost	Variance	Variance
						( ) UnFav	( ) UnFav
A	**Roof Tile Extruder - Move**					-	
	Clay Machinery	62,424	100%	$ 62,424	$ 63,352	928	
	Clay Machinery Other	6,629	100%	$ 6,629	$ 5,717	(911)	
	All Phase Electrical	4,125	100%	$ 4,125	$ 4,125	(0)	
	Apparatus Unlimited	231	100%	$ 231	$ 231	-	
	California Industrial & Rubber	540	100%	$ 540	$ 540	-	
	Fred Rader Mill Supply	57	100%	$ 57	$ 57	-	
	Gerlinger Steel	178	100%	$ 178	$ 178	-	
	Grainger	153	100%	$ 153	$ 153	-	
	Hilti Inc.	144	100%	$ 144	$ 144	-	
	Motion Industries	360	100%	$ 360	$ 360	-	
	Ramos Oil	707	100%	$ 707	$ -	(707)	
	Rocklin Windustrial	1,509	100%	$ 1,509	$ 1,509	0	
	Valley Electric	2,909	100%	$ 2,909	$ 2,923	14	
	Tofft Hardware	307	100%	$ 307	$ 307	0	
	Gladding McBean-Material	-	100%	$ -	$ 3,403	3,403	
	Total A - Extruder - Move	80,271	100%	80,271	82,998	2,727	2,727
B	**Converting Cutters**					-	
	Clay Machinery	32,400	100%	$ 32,400	$ 10,000	(22,400)	
	Gerlinger Steel	92	100%	$ 92	$ -	(92)	
	Total B - SpanishS Cutter	32,400	100%	$ 32,400	$ 10,000	(22,400)	(22,400)
	Green Tile Conveyor						
	Bearing Agencies	259	100%	$ 259	$ 259	-	
	Belmont Mfg	-	100%	$ -	$ 208	208	
	Custom Fabricators	365	100%	$ 365	$ 75	(290)	
	Custom Welding	4,095	100%	$ 4,095	$ 3,450	(645)	
	Electrix	1,660	100%	$ 1,660	$ 1,660	-	
	Fastenal Company	1,896	100%	$ 1,896	$ 1,752	(144)	
	Guntert Sales	4,567	100%	$ 4,567	$ 5,103	536	
	W.C.S Inc	20,137	91%	$ 22,137	$ 26,532	4,395	
	Gladding McBean-Material	-	100%	$ -	$ 3,043	3,043	
	Total C- Green Tile Conveyers	$ 32,978	94%	$ 34,979	$ 42,082	7,103	7,103
E	**Drying Chambers**						
	Bearing Agencies	1,252	100%	$ 1,252	$ -	(1,252)	
	Clay Machinery	1,390	100%	$ 1,390	$ 1,390	-	
	Castle Metals	256	100%	$ 256	$ 256	-	
	California Industrial & Rubber	240	100%	$ 240	$ 240	-	
	Custom Welding	1,012	100%	$ 1,012	$ 1,012	-	
	Electrix	2,040	100%	$ 2,040	$ 580	(1,460)	
	Fastenal Company	1,896	100%	$ 1,896	$ 1,752	(144)	
	Gerlinger Steel	2,332	100%	$ 2,332	$ 1,135	(1,197)	
	Guntert Sales	2,155	100%	$ 2,155	$ 2,934	779	
	Morgan Mechanical	19,603	73%	$ 26,853	$ 19,645	(7,208)	
	Instruments / Cts	20,993	100%	$ 20,993	$ 19,255	(1,738)	
	National Concrete	1,158	100%	$ 1,158	$ 4,679	3,521	
	McMaster- Carr	383	100%	$ 383	$ -	(383)	
	Motion Industries	58	100%	$ 58	$ -	(58)	
	Rolock of California	887	100%	$ 887	$ -	(887)	
	Sacramento Wire Rope	1,827	100%	$ 1,827	$ 1,569	(258)	
	Valley Electric	2,541	100%	$ 2,541	$ -	(2,541)	
	Total E- Drying Chambers	$ 60,022	89%	$ 67,272	$ 54,446	(12,826)	(12,826)

Gladding McBean

Roof Tile Modernizaton Project Analysis Report

24-Jan-00

Equip Area	Category	Cost to Date	% Completion	Projected Cost	Bid Cost	Variance ( ) UnFav	Total Proj Variance ( ) UnFav
F	**Tile Drying Conveyers**			$ -		-	
	Bearing Agencies	44,408	100%	$ 44,408	$ 39,700	(4,707)	
	Belmont Manufacturing Services	5,266	100%	$ 5,266	$ 115	(5,151)	
	Dart Reformers	2,940	100%	$ 2,940	$ 2,940	-	
	Diamond Perf.	10,526	100%	$ 10,526	$ 17,940	7,414	
	Electrix	4,620	100%	$ 4,620	$ 4,620	-	
	Gerlinger Steel	1,002	100%	$ 1,002	$ 369	(633)	
	Guntert Sales	29,257	100%	$ 29,257	$ 26,572	(2,685)	
	Morgan Mechanical	34,416	95%	$ 36,227	$ 21,918	(14,309)	
	McMaster- Carr	382	100%	$ 382	$ 372	(10)	
	The New York Blower Company	3,704	100%	$ 3,704	$ 2,011	(1,693)	
	Sunsource	3,046	100%	$ 3,046	$ -	(3,046)	
	W.C.S Inc	1,436	100%	$ 1,436	$ 2,284	848	
	W.C.S Inc	3,068	100%	$ 3,068	$ 3,750	682	
	Gladding McBean-Material	-	100%	$ -	$ 0	0	
	Total F- Tile Drying Conveyers	$ 144,072	99%	$ 145,883	$ 122,592	(23,291)	(23,291)
G	**Dryer Unloading Conveyor**					-	
	Bearing Agencies	285	100%	$ 285	$ 286	1	
	Belmont Manufacturing Services	122	100%	$ 122	$ 50	(72)	
	California Industrial Rubber	880	100%	$ 880	$ 361	(518)	
	Castle Metals	590	100%	$ 590	$ 590	-	
	Custom Welding	1,360	100%	$ 1,360	$ 725	(635)	
	Gerlinger Steel	114	100%	$ 114	$ 114	-	
	Guntert Sales	960	100%	$ 960	$ 997	37	
	H&B Machinery	-	100%	$ -	$ 8,802	8,802	
	Kaman		0%	$ 99	$ 99	-	
	Morgan Mechanical		0%	$ 1,718	$ 1,718	-	
	Sierra Conveyor Company	1,882	100%	$ 1,882	$ 1,392	(490)	
	Sunsource	633	100%	$ 633	$ 633	-	
	Valley Electric	417	100%	$ 417	$ 417	-	
	Gladding McBean-Material		0%	$ (0)	$ (0)	-	
	Total F- Tile Drying Conveyers	$ 6,194	77%	$ 8,011	$ 16,185	8,174	8,174
H	**180 Turn and Covey To OH**					-	
	Bearing Agencies	496	100%	$ 496	$ 286	(210)	
	Belmont Manufacturing Services	374	100%	$ 374	$ -	(374)	
	California Industrial Rubber	1,799	100%	$ 1,799	$ 636	(1,163)	
	Clay Machinery	3,959	100%	$ 3,959	$ 53	(3,906)	
	Custom Welding	125	100%	$ 125	$ 465	340	
	Gerlinger Steel	39	100%	$ 39	$ -	(39)	
	Guntert Sales	2,664	100%	$ 2,664	$ 2,664	-	
	H&B Machinery	-	0%	$ -	$ (0)	(0)	
	Kaman	-	0%	$ -	$ 99	99	
	Sierra Conveyor Company	10,067	100%	$ 10,067	$ 8,928	(1,139)	
	Weichhart Stamping Co.	175	100%	$ 175	$ 159	(16)	
	Yuba City Steel	4,167	100%	$ 4,167	$ 2,844	(1,323)	
	Gladding McBean-Material		0%	$ 0	$ 0	-	
	Total F- Tile Drying Conveyers	$ 23,864	100%	$ 23,864	$ 16,133	(7,730)	(7,730)

Gladding McBean

Roof Tile Modernizaton Project Analysis Report

24-Jan-00

	Category	Cost to Date	% Completion	Projected Cost	Bid Cost	Variance ( ) UnFav	Total Proj Variance ( ) UnFav
I	**Convey to Transfer**						
	Bearing Agencies	410	100%	$ 410	$ 286	(124)	
	Belmont Manufacturing Services	456	100%	$ 456	$ -	(456)	
	Clay Machinery	3,955	100%	$ 3,955	$ 1,678	(2,277)	
	Custom Welding	340	100%	$ 340	$ 340	-	
	Gerlinger Steel	39	100%	$ 39	$ -	(39)	
	Guntert Sales	2,664	100%	$ 2,664	$ 2,664	-	
	H&B Machinery		0%	$ -	$ -	-	
	Kaman	-	0%	$ -	$ 99	99	
	Sierra Conveyor Company	5,588	98%	$ 5,702	$ 6,259	557	
	Sunsource	633	100%	$ 633	$ 633	-	
	California Industrial Rubber	1,252	100%	$ 1,252	$ 1,092	(160)	
	Tofft Hardware	40	100%	$ 40	$ -	(40)	
	Weichhart Stamping Co.	159	100%	$ 159	$ 159	-	
	Yuba City Steel	4,167	100%	$ 4,167	$ 2,969	(1,198)	
	Gladding McBean-Material		0%	$ 0	$ 0	-	
	Total I - Convey to Transfer	$ 19,702	99%	$ 19,816	$ 16,179	(3,637)	(3,637)
J	**Roof Tile Transfering**						
	Bearing Agencies	594	100%	$ 594	$ 443	(151)	
	Belmont Manufacturing Services	885	100%	$ 885	$ 510	(375)	
	California Industrial Rubber	752	100%	$ 752	$ 752	(0)	
	Clay Machinery	10,157	100%	$ 10,157	$ 7,217	(2,940)	
	Custom Fabrication	5,458	100%	$ 5,458	$ 5,458	-	
	Custom Welding	1,440	100%	$ 1,440	$ 340	(1,100)	
	Gerlinger Steel	269	100%	$ 269	$ 230	(39)	
	Guntert Sales	5,698	100%	$ 5,698	$ 5,788	90	
	H&B Machinery		0%	$ 0	$ 0	-	
	Morgan Mechanical	2,471	100%	$ 2,471	$ -	(2,471)	
	Sierra Conveyor Company	1,109	98%	$ 1,131	$ 7,021	5,889	
	Sunsource	1,900	100%	$ 1,900	$ 1,900	-	
	Valley Electric	399	100%	$ 399	$ -	(399)	
	Weichhart Stamping Co.	159	100%	$ 159	$ 159	-	
	Total J - Roof Tile Transferring	$ 31,291	100%	$ 31,314	$ 29,818	(1,496)	(1,496)
K	**Car Loading and Unloading**			$ -	$ -	-	
	Bearing Agencies	2,275	100%	$ 2,275	$ 2,265	(9)	
	Belmont Manufacturing Services	564	100%	$ 564	$ 565	0	
	California Industrial Rubber	1,799	100%	$ 1,799	$ 1,799	0	
	Clay Machinery	1,076	100%	$ 1,076	$ 991	(85)	
	Custom Welding	528	100%	$ 528	$ 528	-	
	Gerlinger Steel	166	100%	$ 166	$ 166	-	
	Grainger		0%	$ -	$ -	-	
	Guntert Sales	7,464	99%	$ 7,539	$ 7,554	15	
	Morgan Mechanical	1,488	100%	$ 1,488	$ 1,488	-	
	Motion Industries	86	100%	$ 86	$ -	(86)	
	H&B Machinery	-	0%	$ -	$ 1,465	1,465	
	KVP Falcon	-	0%	$ -	$ 2,595	2,595	
	Sierra Conveyor Company	1,109	95%	$ 1,167	$ 1,109	(58)	
	Sunsource	2,634	100%	$ 2,634	$ 5,041	2,407	
	Valley Electric	63	100%	$ 63	$ 63	-	
	Weichhart Stamping Co.	159	100%	$ 159	$ 159	-	
	Yuba City Steel	3,450	100%	$ 3,450	$ 3,450	-	
	Gladding McBean-Material		0%	$ 5,492	$ 5,492	-	
	Total K - Car Loading & Unloading	$ 22,859	80%	$ 28,484	$ 34,728	6,244	6,244

Gladding McBean

Roof Tile Modernizaton Project Analysis Report

24-Jan-00

							Total Proj
ea	Category	Cost to Date	% Completion	Projected Cost	Bid Cost	Variance	Variance
						( ) UnFav	( ) UnFav
L	**Convey To Inspection**						
	Bearing Agencies	410	100%	$ 410	$ 410	1	
	Belmont Manufacturing Services	374	100%	$ 374	$ 50	(325)	
	California Industrial Rubber	1,799	100%	$ 1,799	$ 971	(828)	
	Clay Machinery	3,959	100%	$ 3,959	$ 1,380	(2,579)	
	Custom Welding	188	100%	$ 188	$ 188		
	Gerlinger Steel	39	100%	$ 39	$ 39	-	
	Guntert Sales	2,628	100%	$ 2,628	$ 2,782		
	H&B Machinery		0%	$ 0	$ 0	-	
	Sierra Conveyor Company	1,159	98%	$ 1,182	$ 2,068	886	
	Weichhart Stamping Co.	159	100%	$ 159	$ 159	-	
	Yuba City Steel	4,167	100%	$ 4,167	$ 4,167	-	
	Gladding McBean-Material	-	0%	$ -	$ (0)	(0)	
	Total L - Convey To Inspection	$ 14,880	100%	$ 14,904	$ 12,212	(2,691)	(2,691)
M	**Breaking And Inspecting**			$ -		-	
	Compass Equipment INC.	17,920	100%	$ 17,920	$ 16,239	(1,681)	-
	Sunsource	633	100%	$ 633	$ 633	-	
	Total M- Breaking And Inspecting	$ 17,920	100%	$ 17,920	$ 16,872	(1,048)	(1,048)
N	**Crate Loading**			$ -	$ -	-	
	Motion Industries	364	100%	$ 364	$ 354	(10)	
	Sierra Conveyor Company	10,643	100%	$ 10,643	$ 10,729	86	
	Sunsource	633	100%	$ 633	$ 633	-	
	Gladding McBean-Material	-	100%	$ -	$ (0)	(0)	
	Total N - Crate Loading	$ 11,640	100%	$ 11,640	$ 11,716	76	76
O	**Full Crate Accumulation**					-	
	Sierra Conveyor Company	6,842	100%	$ 6,842	$ 7,886	1,044	
	Valley Electric	189	100%	$ 189	$ -	(189)	
	Total O - Full Crate Accumlation	$ 7,031	100%	$ 7,031	$ 7,886	855	855
P	**General Hydraulic & Electrical Equip.**						
	Apparatus Unlimited	3,155	100%	$ 3,155	$ -	(3,155)	
	Bearing Agencies	2,416	100%	$ 2,416	$ 2,395	(21)	
	California Industrial Rubber	356	100%	$ 356		(356)	
	Electrix	29,813	89%	$ 33,423	$ 20,429	(12,993)	
	E&M Electric	7,292	100%	$ 7,292	$ 6,201	(1,092)	
	Deky Latief	2,800	100%	$ 2,800	$ 2,800	-	
	Gerlinger Steel	364	100%	$ 364	$ 364	0	
	Grainger	1,830	100%	$ 1,830	$ 840	(990)	
	Guntert Sales	610	100%	$ 610		(610)	
	McMaster Carr	792	100%	$ 792		(792)	
	Sunsource	37,187	100%	$ 37,187	$ 23,148	(14,040)	
	Valley Electric	3,739	100%	$ 3,739	$ 3,397	(342)	
	Total P - Gen Hydraulic & Electical Equip.	$ 90,355	96%	$ 93,965	$ 59,574	(34,391)	(34,391)
	Total Cost of all Equipment	595,479	96%	617,755	533,424	(84,330)	(84,330)
	Contingency		0%		$ 39,596		
	Sales Tax	27,282	96%	$ 28,367	$ 28,364	(3)	
	Total Cost Project	622,761	96%	$ 646,122	$ 601,384	(44,738)	(44,738)
te:	Amt of Gladding McBean Mall Remaining			$ 5,492	$ 11,938		
	Amt of GMcB Labor Used at 12/31/99	$ 69,748					
	Amt of Bill Funk Prof Svc Charges12/31/99	59,867					

EXHIBIT 8

PABCO® Paper

4460 Pacific Boulevard
Vernon, CA 90058-2206
(323) 581-6113
Fax (323) 581-0125

Date: April 10, 2003

To: Emil Kopilovich

From: Bill Fraser

RE: Stock Ratio Control AFE

Enclosed is the Vernon AFE for a stock ratio control system. This capital request covers the installation of a stock ratio control system. Currently the plant blends two different stock systems when manufacturing Greyback. This is done manually by adjusting two hand valves. When the stock freeness changes, adjustments are made to the valves. Since there is no real reference point, this adjustment is a close guess at best. Also, when flow conditions change in either stock system, the ratio fluctuates accordingly. By installing a stock ratio control system we will have accurate flow measurement to maintain constant stock flows on a continual basis and assist the operators when making adjustments. This should help with the control of stock freeness to the machine. If you have any questions, please give me a call.

AUTHORIZATION FOR FUNDS EXPENDITURE

Location: Vernon **Date:** 04-10-03

Project Title: Stock Ratio Control

Background:

The Vernon plant currently blends two different stock systems when manufacturing Greyback. This is done manually by adjusting two hand valves. When the stock freeness changes, adjustments are made to the valves. Since there is no real reference point, this adjustment is a close guess at best. Also, when flow conditions change in either stock system, the ratio fluctuates accordingly. By installing a stock ratio control system we will have accurate flow measurement to maintain constant stock flows on a continual basis and assist the operators when making adjustments. This will help with the control of stock freeness to the machine.

Scope of Project:

Vernon will install two flow meters and control valves on the current stock feed systems to the machine chest.

Cost of Project:

Item	Cost
2 - Flow meters	$ 8,000
Control Valve	$ 4,000
Controller	$ 2,500
Pipes and fittings	$ 1,500
Wiring and conduit	$ 1,500
Labor	$ 1,500
Taxes	$ 1,095
Grand Total for Project -	**$20,095**

Benefits:

The main benefit for the project would be the improvement of stock control to the machine chest during production of Greyback. This will reduce the variation in stock entering the chest.

DATE: 04-10-03

PABCO Building Products, LLC

AUTHORIZATION FOR FUNDS EXPENDITURE

Company Code 1000 Cost Center 1001-6150

Project Title Stock Ratio Control

Asset Category Machinery & Equipment
(Land, Buildings, Improvements, Furniture & Fixtures
Machinery & Equipment)
Description Install Stock Ratio Control System
Purchase Order Number _____

Financing 9 Buy Ω Lease
Purchased From _____
(Attach all agreements)

Accounting Dept. Use Only

AFE# _____

AUC Asset # _____

A/P Posting G/L# _____

Fixed Asset # _____

Project Type

Ω Maintain Existing Capacity
Ω Environmental
Ω Safety and Health
Ω New Venture
Ω Cost Reduction
Ω Expand to Maintain Market Share
Ω Expand to Increase Market Share
9 Other (Describe) – Quality

1. **Attach Detailed Explanation**
2. **Attach Financial Analysis (Cost/Benefit, Net Present Value, Internal Rate of Return, etc.)**

Estimated Cost		Accounting Department Use Only: Amount Capitalized to Fixed Assets		Accounting Department Use Only: Amount to be Expensed		The following Assets should be retired (Asset #_____) Description
Material	$ 17,500	Material	$	Material	$	
Labor	1,500	Labor		Labor		
Installation		Installation		Installation		
Freight		Freight		Freight		
Taxes	1,095	Taxes		Taxes		
Other		Other		Other		
Contingency		Contingency		Contingency		
Total	$ 20,095	Total	$	Total	$	*Attach approved ADR Form*

Overrun greater than 10% or $10,000 (whichever is larger) requires resubmission.

Routing for Approval and Date:

Branch/Facility/Sales Manager_____ Fleet Manager_____

Vice President or Designee_____ Corporate Controller_____

President_____

Post-completion audit required: Yes No Date for audit to be completed:_____

EXHIBIT 9

Pacific Coast Building Products
FYE 3/31/2003
Research and Development Tax Credit
Individual Time Survey for High-Level Management

Name: Terry B. Harold
Title: Corporate Technical Manager
Dept. Name and #: Basalite Concrete Products, LLC #1406

Executive Summary

This survey was sent to you because you were identified as performing activities that qualify for the Research and Development Tax Credit. Due to your position at Pacific Coast Building Products ("PCBP"), the IRS may scrutinize your activities more than many of PCBP's other employees. This survey is intended to identify, as clearly as possible, those activities you have performed which would meet the definition of qualified research activities. We will be asking you to describe your participation in the product development process as they relate to 'qualified activities' as defined below. Please take a moment to complete this survey and return it as soon as possible.

Definition of Research and Development

Please use the following Tax Definition of Research and Development and Examples of Qualifying Activities for determining your qualifying percentage.

R&D Rules Summary

A. Business-Component Test: The goal of the activity must be to develop a new or improved Product, Process, Computer software system, Formula, Technique, or Invention, or any sub-component of these items (business components).

B. Four-Part Activity Test: To qualify, an activity must meet each of these criteria:

1. Be technological in nature - fundamentally rely on one of the following: physical or biological sciences, engineering, or computer science.
2. Be for a permitted purpose - the creation of new or improved level of: function, performance, reliability, quality, or cost reduction for a business component.
3. Focus on the elimination of technical uncertainty - any one of the following qualifies: capability uncertainty - *Can we do it?*, methodology uncertainty - *How will we do it?*, product design - *What is the appropriate design?*
4. Constitute a process of experimentation - for this purpose, "experimentation" may include: developing and evaluating different alternatives/hypotheses, performing experiments, and evaluating the results.

Examples of Qualifying Activities

1. **Product/Process Specification Development** – Evaluation of numerous and/or complex specifications intended to eliminate uncertainties relating to the function, performance, reliability or quality of a new or improved business component; development of functional requirements of a new or improved product/process with customers and engineering; analysis of the feasibility of these requirements; re-development of specifications based on test results.

2. **Product/Process Development** – Engineering design and development of new or improved function, performance, reliability, or quality features in products, as well as design for serviceability, user simplicity, and manufacturability.

3. **Testing Design and Execution** – Development of testing methodologies to analyze alternative hypotheses; performance and monitoring of extensive, comprehensive, intricate, or complex scientific or laboratory testing for internal (alpha) and/or external (beta) tests, the results of which were not readily discernable and applicable at the outset of development; analysis of testing results.

4. **Direct Supervision** - First-line supervision of those activities listed in A-D, above. Does not include second line supervision.

Qualifying Activities
Please list and describe your role in projects as they relate to qualified activities defined above, or provide additional documentation for activities related to R&D but not yet in a product development process (expand area below as needed to contain your write-up).

Please Note
Please keep in mind that the determination of direct (first level) vs. indirect (second level) supervision should be based upon function, rather than title. For example, a Director, who would normally be considered a "second line" or even a "third line" supervisor by title can still have qualified time. Any time spent participating in design review meetings and/or providing input on product/process designs qualifies as a **direct** R&D Activity (i.e. Process, hardware, or software development). Furthermore, if an individual is directly supervising a Manager, who is involved in the aforementioned qualifying activities, that person's time would be considered "direct supervision", and therefore, would qualify for the credit. However, if that person is supervising a Manager, who is supervising an engineer in the direct R&D activity, the director's time would be considered "second line" or "indirect," and therefore, not qualify for the credit.

Projects/activities: Please provide a brief description of your activities during the given year along with a few examples of qualified research and development projects with which you were involved. Details regarding educational background and industry experience should also be included in this section.

Pacific Coast Building Products
Basalite Concrete Products, LLC
Terry B. Harold
Corporate Technical Manager
Date of Hire: December 7, 2001

Educational Background and Industry Experience: BS Construction Management, California State University Sacramento. Over 30 years experience in the concrete industry. Experience has included; quality technician, management of quality departments, general management of concrete production facilities, technical sales management for concrete admixture products, and technical sales management for coal fly ash. For the last three and half years I have directed the research and development activities associated with concrete masonry units, segmental retaining wall units, interlocking concrete pavers, and sacked concrete products.

FYE 3/31/03

A continuing activity during the period was the development of new colors in dry cast units for the sales department. The process involves the development of a mix design that will meet ASTM performance specifications and be aesthetically acceptable to the customer. The process involves developing a theoretical design then actual physical testing. The results are then analyzed and adjustments are made if necessary. This same process also applies for mortar color development.

Research and development of the use of coal fly ash as a partial cement replacement to improve the quality and physical attributes of all products containing cement was initiated. The initial testing took place in Dixon, Denver, and Tracy. The process involved the development of theoretical designs then actual physical testing. The results are then analyzed and adjustments are made if necessary. As a result of this testing the Denver and Tracy facilities started using fly ash. Research is not complete and will continue in subsequent years.

Another major project during this period was the development and testing of mix designs that were altered using admixtures, fly ash, cementitious content, aggregate types, and various combinations of aggregates to produce a segmental retaining wall unit that would comply with Colorado Department of Transportation specification requirements for resistance to deterioration associated with continuous freezing and thawing. This process was initiated during this period, but not finalized.

There was also some testing of concrete admixtures and aggregate combinations to improve the performance and quality of our concrete masonry units.

The quality manual was completed, reviewed, and distributed for use at each location towards the end of the fiscal year.

Qualifying Percentage – The grid below will be used to quantify the amount of credit to be claimed for your activities related to the R&D Tax Credit. Note that the sum of the percentages allocated should equal 100%, regardless of the length of employment by the Company during the given year. [Please refer to the Note mentioned above for more information regarding direct supervision (qualified), and indirect supervision (non-qualified)]

Project	Time Performing a Qualified Act.	Time Directly Supervising	Non-Qualified Time	Total
1. Designing the Manufacturing Line				
2. Testing and Selecting Different Machine Alternatives				
3. Designing the Building/Plumbing/Vacuum Systems Around the Machines				
4. Developing other Manufacturing/R&D Process Enhancements				
5. Developing Software for Internal Use Purpose				
6. Developing New Products or Improving Existing Products	40			40
7. Product and Process Audits		10		10
8. In-process Quality Checks for New and/or Enhanced Products and Manufacturing Processes	40			40
9. Product Specification and Product Development Test				
10. Determining Product Specifications				
11. Direct support of Individuals Who Perform Research				
12. Technical Meetings				
13. Improvement Change Requests Relating to Products and/ or Processes	10			10

14. Financial/ Personnel Matters				
15. Work Performed Outside of the U.S.				
16. Sales Related Activities				
17. Training				
18. Released Product Support				
19. Second Line Supervision				
20. Business Development				
TOTAL				**100%**

Signature: Terry B. Harold

Print Name: Terry B. Harold

Date: July 11, 2005

Contemporaneous Documentation Included in Pacific Coast's R&D Credit Study

Basalite Technical Service

Technical Project 6/3/2005

Fly Ash Trials - Port Neal & Victorville Cement

Requested By:	D Puskas	Date:	04/24/2002	Product Type:	Sack Mix
Opened By:		Plant #	1403	Request Type:	R&D
TR	*175*			Distribution:	

Identification of Uncertainty

Objective:

Test Victorville Cement content @ 15.8%
Determine optimum Class C fly ash replacement rates.
Vary coarse to fine aggregate ratios for optimum strengths

Development of New or Improved Business Component

Resolution:

Aggregates: Lemon Cove
Cement: Victorville
Fly Ash: ISG Port Neal Class C

1. Control 15.8% - 45%CA
2. 25% Fly Ash - 45%CA
3. 25% Fly Ash - 50%CA
4. 25% Fly Ash - 55%CA
5. 25% Fly Ash - 60%CA
6. 25% Fly Ash - 45%CA 55% Crusher Fines

Alternatives to Eliminate Uncertainty and Process of Evaluation

Treasury Regulation Section 1.41-4(a)(5) Process of Experimentation

"A process of experimentation is a process designed to evaluate one or more alternatives to achieve a result where the capability or the method of achieving that result, is uncertain . . . . A process of experimentation must fundamentally rely on principles of physical and biological sciences. . . and involves the **identification of uncertainty** concerning the **development or improvement of a business component**, the identification of one or more **alternatives intended to eliminate that uncertainty**, and the identification and the conduct of a process of **evaluating the alternatives** (through, for example, modeling , simulation, or a systematic trial and error methodology).

- It is excluded as occurring after commercial production.
- It is excluded as adaptation of an existing business component.
- It is excluded as duplication of an existing business component.
- It is excluded as Routine or Ordinary Inspection for Quality Control.

This project is not "qualified research."

Project 10: Basalite—Dixon [Exhibit G, pages *86-96 of 157]

Appellants submitted with their Opening Brief 145 alleged "Technical Projects" for their Basalite – Dixon plant. These "Technical Projects" consist of a single page listing an "Objective" and, sometimes, a "Resolution." **These documents illustrate nothing more than routine quality control activities**

These documents do not meet even the less stringent requirements of being an IRC §174 research deduction expense, because these projects are not considered "research or experimental." The term "research or experimental expenditures" does not include (i) the ordinary testing or inspection of materials or products for quality control (quality control testing).

Moreover, there is no follow-up. No Hypothesis. No alternatives. No actual testing. No analysis. No refinement. That is, there is no process of experimentation.

As there are 145 alleged "Technical Projects." Beginning with what respondent has labeled Project 10(a), respondent **will discuss every 20th "Technical Project"** sheet in this *Analysis of All Other Projects*. Should your Board request it, respondent will discuss the remaining 138 "Technical Project" sheets, if given the opportunity in further briefing.

Project 10(a): Technical Project: Adjustment of Clalite Mix designs [Exhibit G, page *86 of 157]

DATE: May 25, 2001

Objective: "Adjustment of Clalite Mix designs. Reduce cracking and evaluate mix designs for possible changes to facilitate reduce core-bar cracking and production problems."

Resolution : "530 series mix design trials in progress, 5-25-01. Increased Admixture adopted in standard Mix designs. 6-01-01"

Contemporaneous Documentation
Included in Pacific Coast's R&D Credit Study

Basalite Technical Service

Technical Project 6/3/2005

Adjustment of Clalite Mix designs

Requested By: D. Puskas Date: 05/25/2001 Product Type: Block

Opened By: Plant # 1401 Request Type: R&D

TR *112* Distribution:

Hypothesis

Evaluated Alternatives (analysis)

Objective:

Adjustment of Clalite Mix designs. Reduce cracking and evaluate mix deisgns for possible changes to facilitate reduce core-bar cracking and production problems.

Resolution:

530series mix design trials in progress, 5-25-01.
Increased Admixture adopted in standard Mix designs. 6-01-01

Process of Experimentation
(systematic trial and error)

Improved Business Component
(quality and reliability)

This sheet alone is not enough to prove that any "qualified research" occurred. What can be gleaned from the limited information provided is that appellants are engaged in the "adjustment of clalite mix designs" which is adapting an existing formula from their Denver plant, *Clalite*, and engaging in routine quality control. This is a specifically excluded activity.

Moreover, this document does not meet even the requirements of demonstrating an IRC §174 expense. Alone, it is not "research or experimental". The term "research or experimental expenditures does not include (i) the ordinary testing or inspection of materials or products for quality control (quality control testing).

Moreover, there is no follow-up. No Hypothesis. No alternatives. No actual testing. No analysis. No refinement.

The following are the reasons this alleged "project" does not qualify for the R&D credit.

- Does not meet IRC 174 expense requirements as it is not "research or experimental"
- The term "research or experimental expenditures does not include (i) the ordinary testing or inspection of materials or products for quality control (quality control testing).
- There is no indication of a qualified purpose.
- No modification required.
- No hypothesis formed.
- No methodical plan to test the hypothesis.
- No evidence of alternatives tested.
- No evidence of scientific/laboratory testing.
- No systematic trial and error.
- No analysis.
- No attempt to refine a hypothesis.
- It is *excluded* as occurring after commercial production.
- It is *excluded* as adaptation of an existing business component.
- It is *excluded* as Routine or Ordinary Inspection for Quality Control.

This project is not "qualified research."

Basalite Technical Service

Technical Project

6/3/2005

Fly Ash Trials - Phoenix & ISG - Victorville

Requested By:	D Puskas	Date:	04/30/2002	Product Type:	Sack Mix
Opened By:		Plant #	1403	Request Type:	R&D
TR	*176*			Distribution:	

Objective:

Test Victorville Cement content @ 15%
Determine optimum Class C fly ash replacement rates
Vary coarse to fine aggregate ratios for optimum strengths
Compare ISG Port Neal to Phoenix

Resolution:

Aggregates: Lemon Cove
Cement: Victorville
Fly Ash: ISG Port Neal

1. Control - 15% Cement, 50% Sand, 50% Rock
2. 25% Fly Ash, 50% Sand, 50% Rock
3 25% Fly Ash, 45% Sand, 55% Rock
4 30% Fly Ash, 50% Sand, 50% Rock
5 30% Fly Ash, 50% Sand, 50% Rock

Aggregates: Lemon Cove
Cement: Victorville
Fly Ash: Phoenix

1. 25% Fly Ash, 50% Sand, 50% Rock
2. 25% Fly Ash, 45% Sand, 55% Rock
3. 30% Fly Ash, 50% Sand, 50% Rock
4. 30% Fly Ash, 50% Sand, 50% Rock

*Victorville cement, Lemon Cove aggregates % as noted. T.Harold

Basalite Technical Service

Technical Project

6/3/2005

Goshen - Fly Ash Replacement Trial

Requested By:	D Puskas	Date:	03/05/2002	Product Type:	Sack Mix
Opened By:		Plant #	1402	Request Type:	R&D
TR	*162*			Distribution:	

Objective:

Determine Replacement rate of Cement/Fly Ash.

Resolution:

1. Run Control with 15.8% Cement using Victorville Cement.
2. Reduce Cement to 13.8% to determine Strength Performance against 15.8% Standard.
3. Replace 15% of Cement loading with Fly Ash A & with Fly Ash B.

   Lab Batch: 8.06#/1.42#
4. Replace 20% of Cement loading with Fly Ash A & with Fly Ash B.

   Lab Batch: 7.58#/1.9#
5. Replace 25% of Cement loading with Fly Ash A & with Fly Ash B.

   Lab Batch: 7.11#/2.37#
6. Replace 30% of Cement loading with Fly Ash A & with Fly Ash B.

   Lab Batch: 6.64#/2.84#
7. Replace 35% of Cement loading with Fly Ash A & with Fly Ash B.

   Lab Batch: 6.16#/3.32#
8. Replace 40% of Cement loading with Fly Ash A & with Fly Ash B.

   Lab Batch: 5.7#/3.78#

* Six 3 x 6 cylinders will be run from each batch. 3 each for 7 & 28 day strength testing.
Set time, Slump, & Aggregate Gradation will be included for each Lab Batch.
** Victorville cement, pre-blend Lemon Cove aggregates (55%sand 45%rock) T.Harold

Basalite Technical Service

Technical Project

6/3/2005

Fly Ash Trials - Port Neal & Victorville Cement

Requested By:	D Puskas	Date:	04/24/2002	Product Type:	Sack Mix
Opened By:		Plant #	1403	Request Type:	R&D
TR	*175*			Distribution:	

Objective:

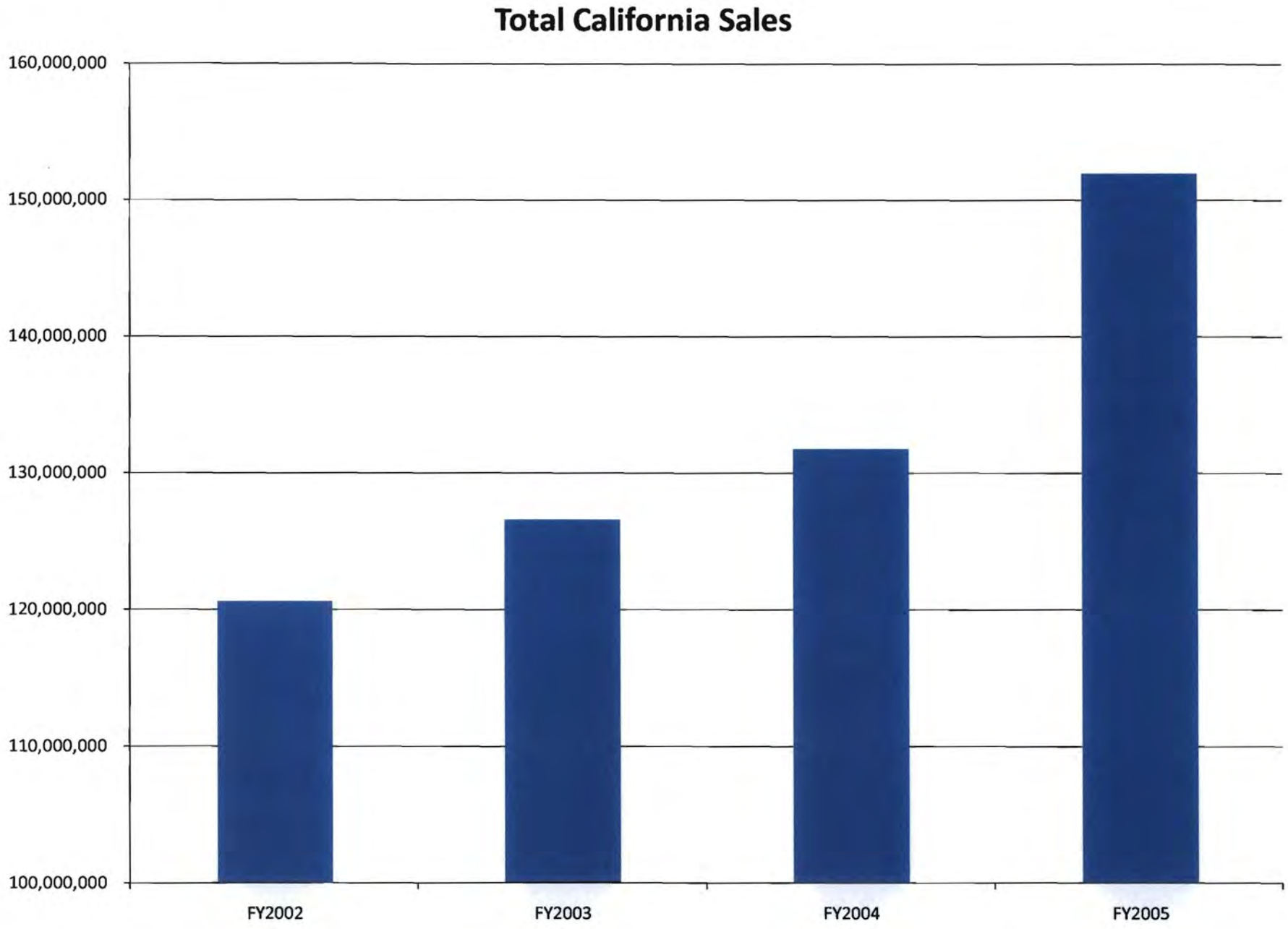
Test Victorville Cement content @ 15.8%
Determine optimum Class C fly ash replacement rates.
Vary coarse to fine aggregate ratios for optimum strengths

Resolution:

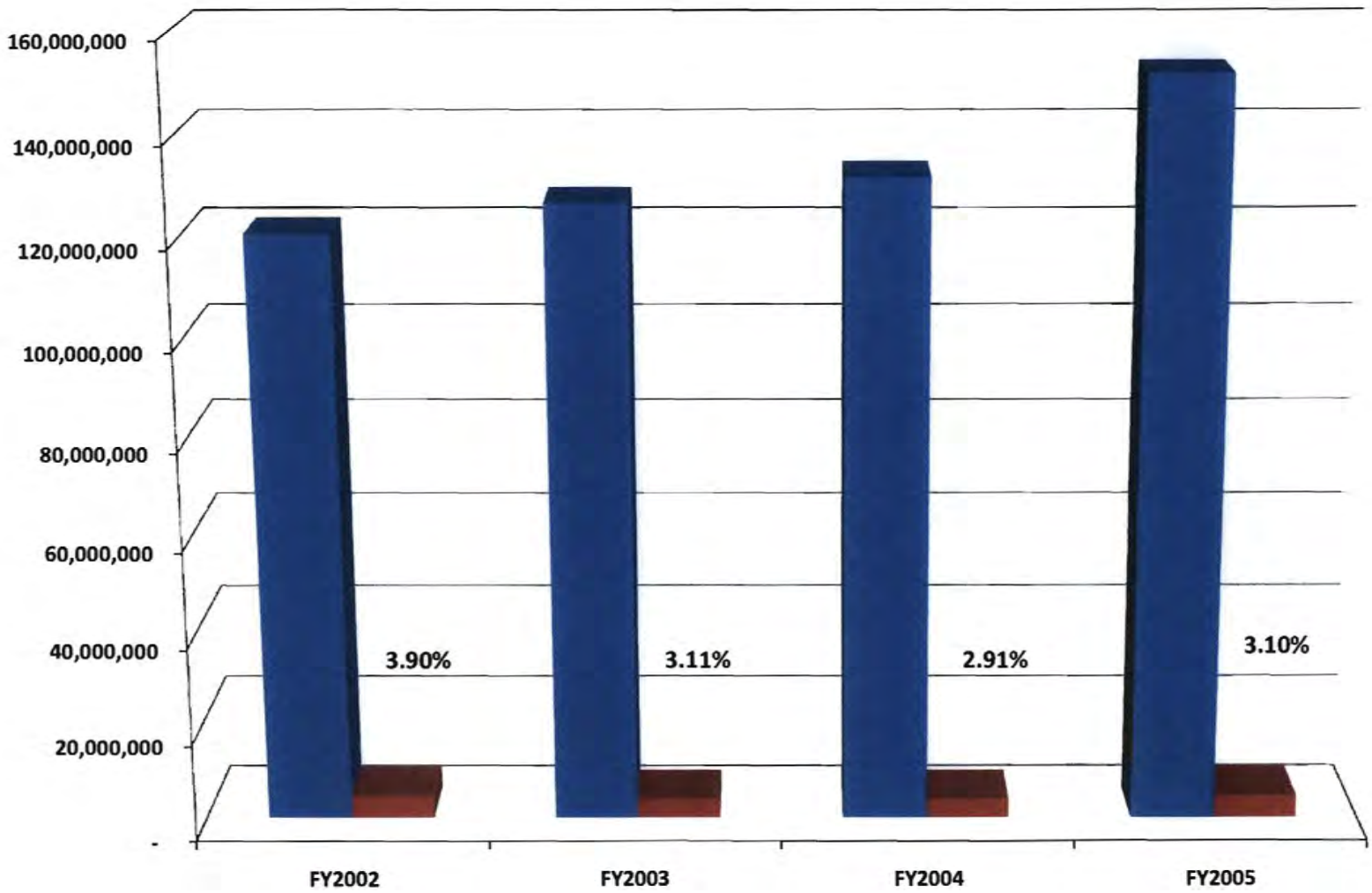
Aggregates: Lemon Cove
Cement: Victorville
Fly Ash: ISG Port Neal Class C

1. Control 15.8% - 45%CA
2. 25% Fly Ash - 45%CA
3. 25% Fly Ash - 50%CA
4. 25% Fly Ash - 55%CA
5. 25% Fly Ash - 60%CA
6. 25% Fly Ash - 45%CA 55% Crusher Fines

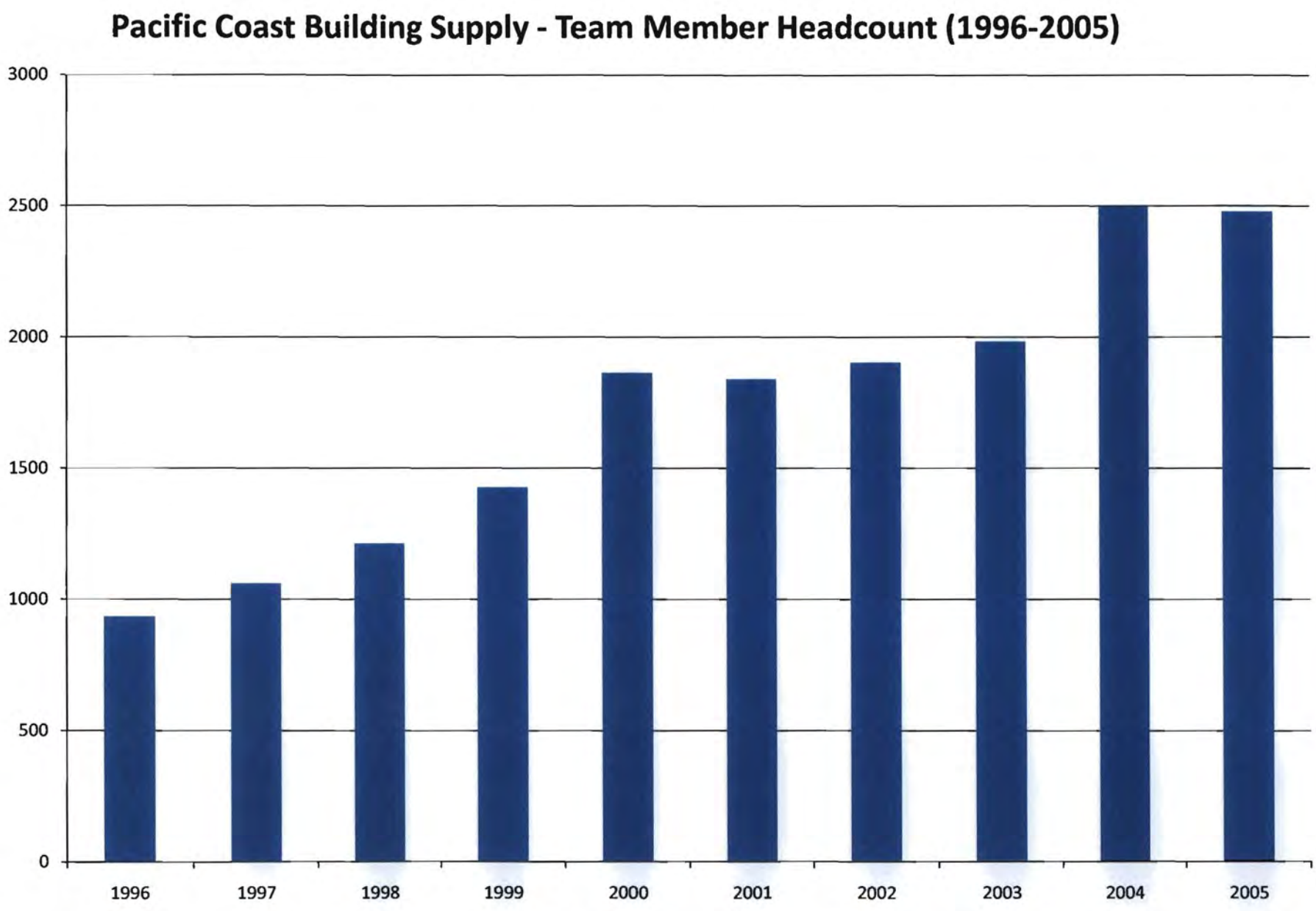
EXHIBIT 10


Total California Sales
160,000,000
150,000,000
140,000,000
130,000,000
120,000,000
110,000,000
100,000,000
FY2002
FY2003
FY2004
FY2005

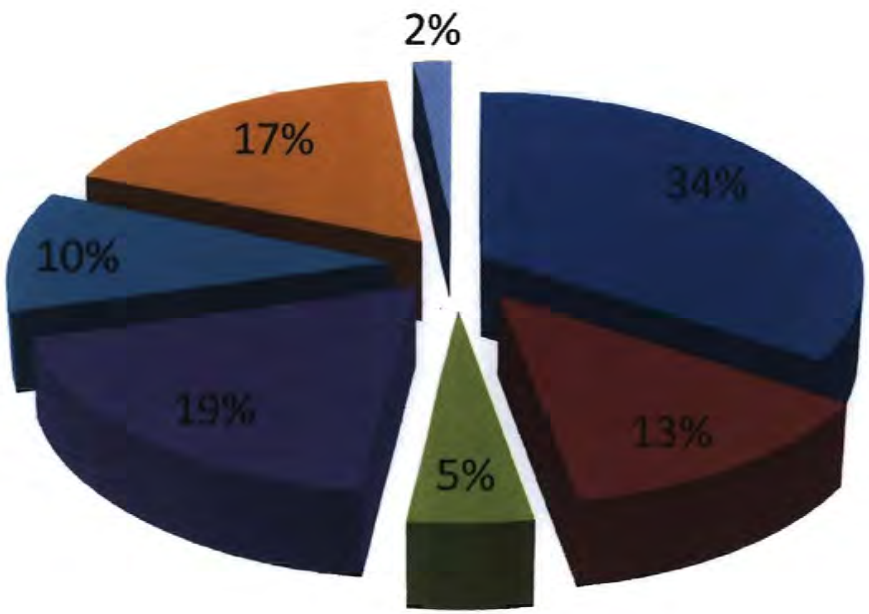
R&D and Sales Comparison



	FY2002	FY2003	FY2004	FY2005
Sales	$ 120,594,346	$126,585,237	$131,755,251	$151,933,647
R&D	$4,704,701	$3,931,487	$3,838,707	$4,704,701

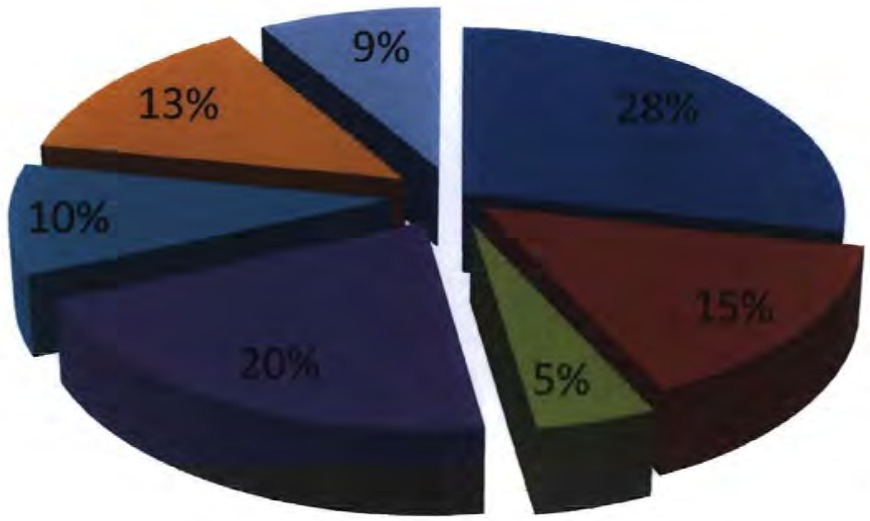

Pacific Coast Building Supply - Team Member Headcount (1996-2005)
3000
2500
2000
1500
1000
500
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005

FY 2004 California Qualified Research Expenditures by Plant



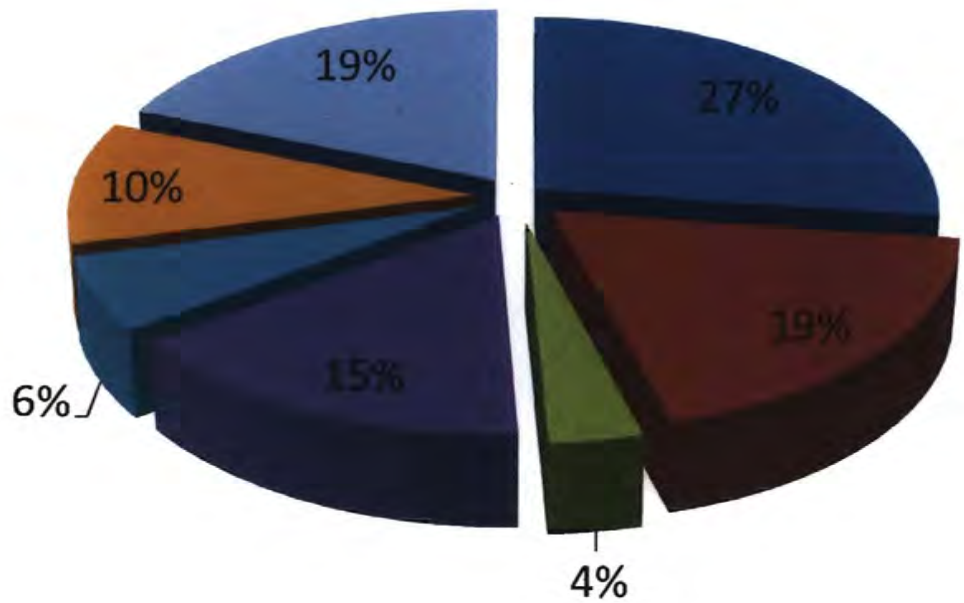
- Vernon (PABCO Paper)
- Newark (PABCO Gypsum)
- H.C. Muddox
- Gladding McBean
- Basalite Block - Tracy
- Basalite Block - Dixon
- Pacific Coast Companies, Inc.

FY 2003 California Qualified Research Expenditures by Plant



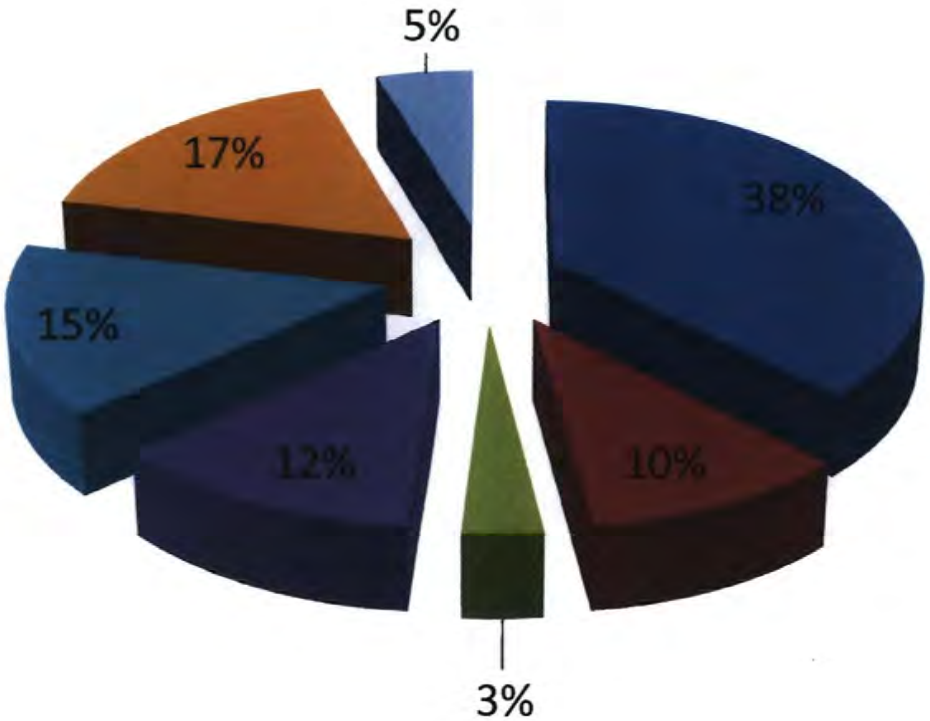
- Vernon (PABCO Paper)
- Newark (PABCO Gypsum)
- H.C. Muddox
- Gladding McBean
- Basalite Block - Tracy
- Basalite Block - Dixon
- Pacific Coast Companies, Inc.

FY 2002 California Qualified Research Expenditures by Plant



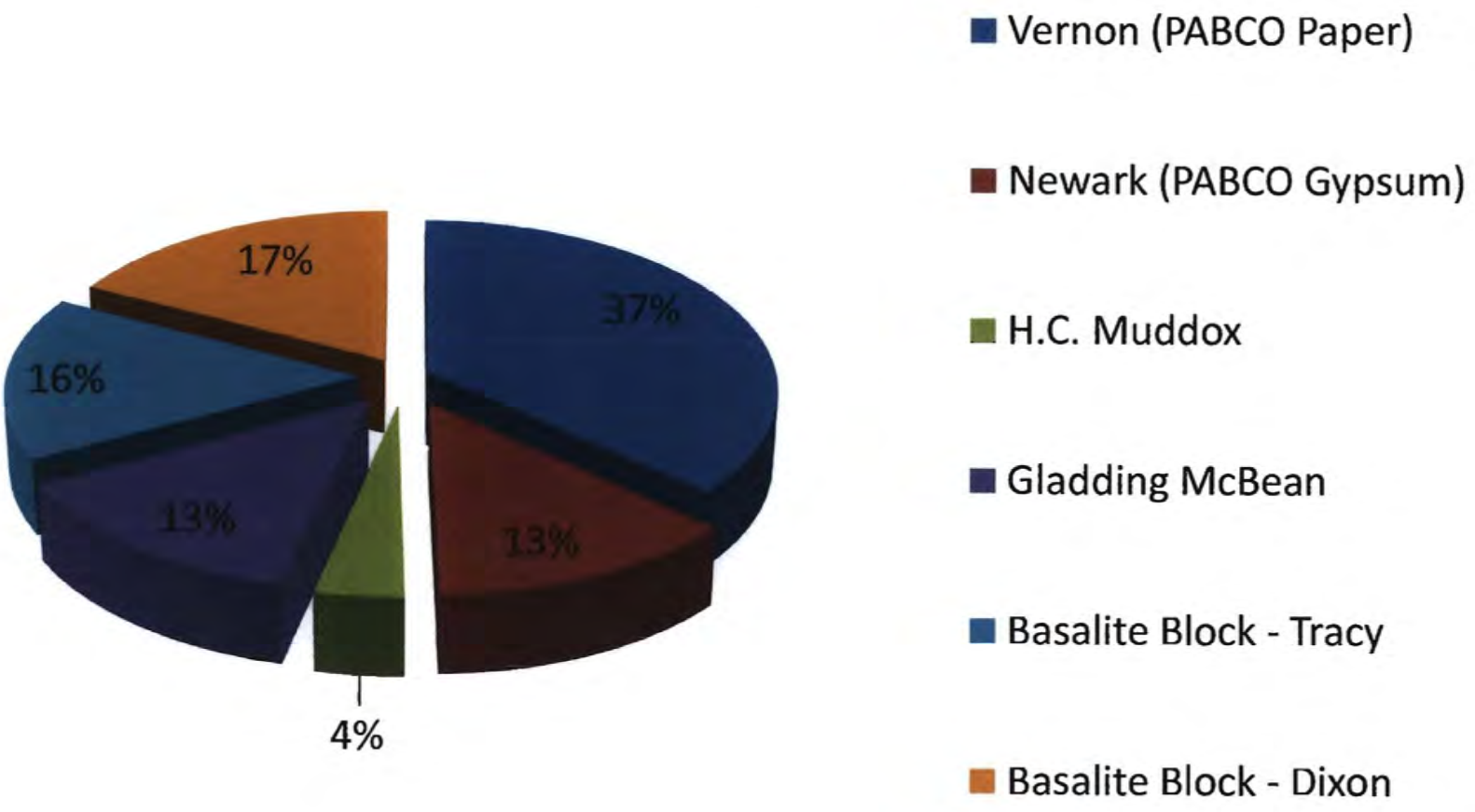
- Vernon (PABCO Paper)
- Newark (PABCO Gypsum)
- H.C. Muddox
- Gladding McBean
- Basalite Block - Tracy
- Basalite Block - Dixon
- Pacific Coast Companies, Inc.

FY 2001 California Qualified Research Expenditures by Plant

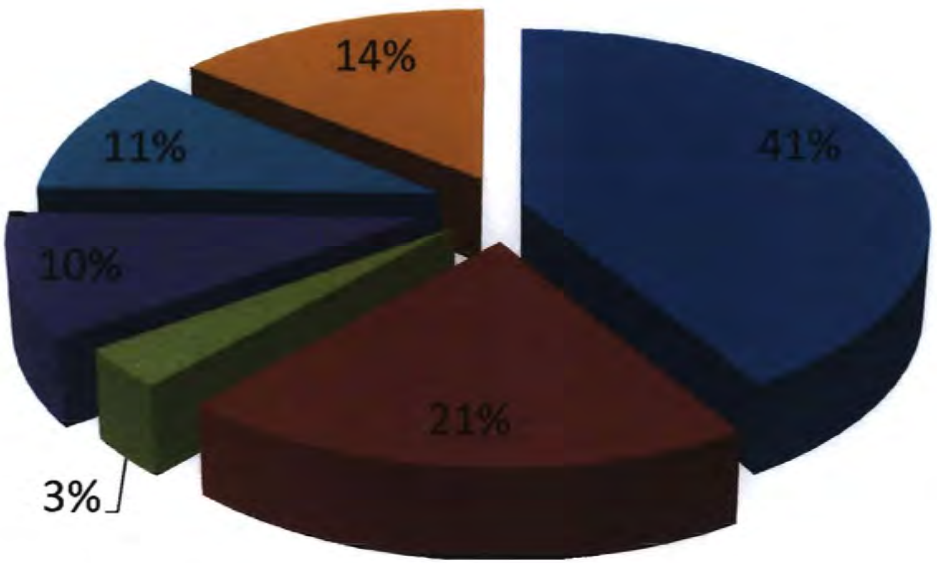


- Vernon (PABCO Paper)
- Newark (PABCO Gypsum)
- H.C. Muddox
- Gladding McBean
- Basalite Block - Tracy
- Basalite Block - Dixon
- Pacific Coast Companies, Inc.

FY 2000 California Qualified Research Expenditures by Plant



FY 1999 California Qualified Research Expenditures by Plant



- Vernon (PABCO)
- Newark (PABCO)
- H.C. Muddox
- Gladding McBean
- Basalite Block - Tracy
- Basalite Block - Dixon

EXHIBIT 11

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09.07.2012 08:54

4
09.07.2012 09:05

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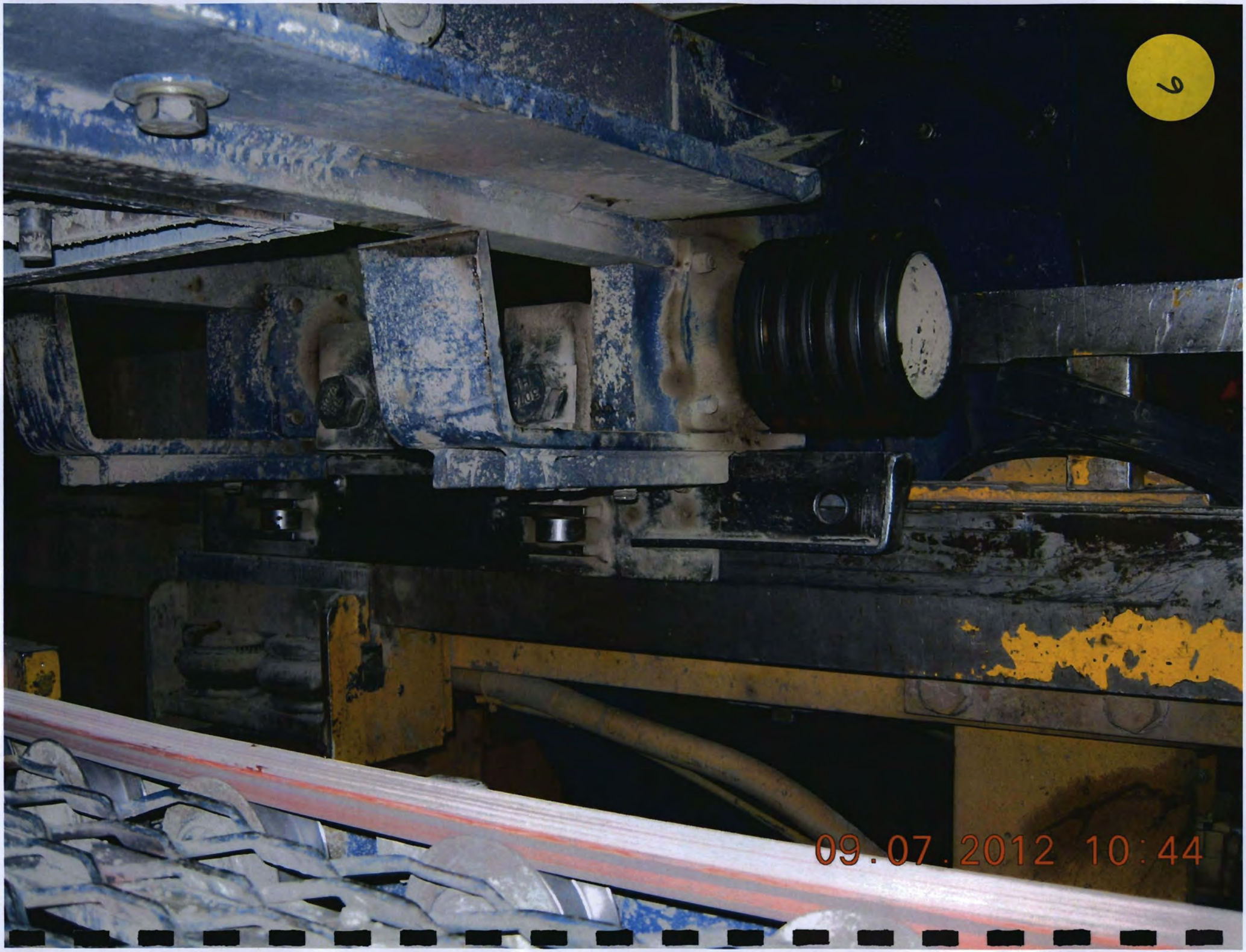
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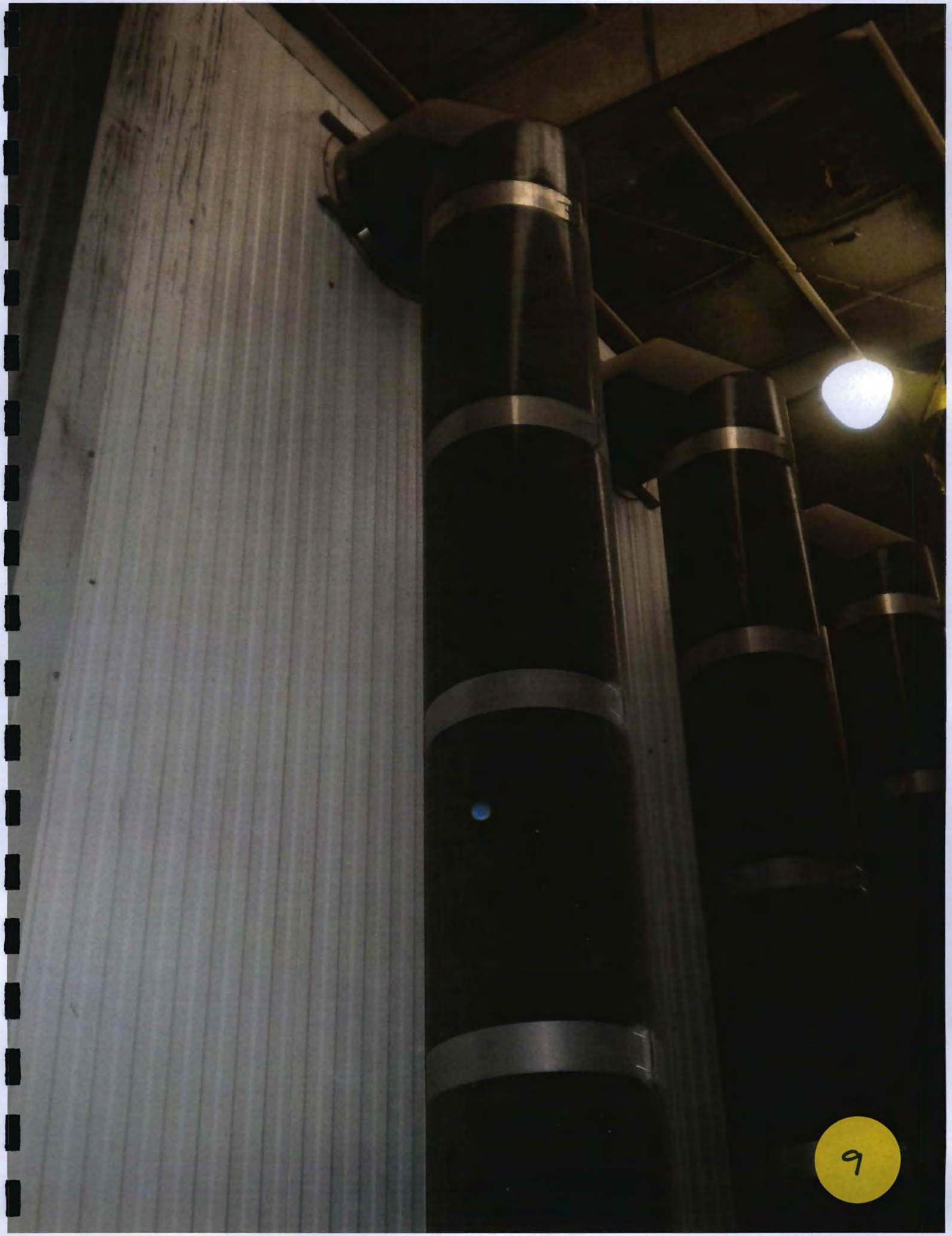

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01

HOT

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