Construction Defect Litigation from the Plaintiff Perspective

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Pete Fowler CONSTRUCTION Services, Inc.

Construction Defect Litigation from the Plaintiff Perspective

INTRODUCTION

Construction Defect Litigation from the Plaintiff Perspective is a series of case studies in successful planning, analysis and execution of expert work on behalf of plaintiff real property owners. This program will walk you through the process, standards and reasoning for inspection, analysis, testing, reporting, specifying repairs, and estimating costs of the repair work.

Construction defect litigation can be expensive, confusing and long lasting, but it doesn't have to be. Through this presentation, PFCS will break down the process, and provide approaches and alternatives that add value to property owners involved in Construction defect litigation.

PROGRAM OUTLINE

1. Introduction
2. In the Beginning
3. Inspection & Evaluation
4. Analysis & Estimate
5. Testing
6. Reports and Possible Further Work
7. Conclusion

LEARNING OBJECTIVES

- Discuss building performance analysis standards
- Discuss various strategies for approaching construction defect cases from the plaintiff's perspective
- Outline a beginning-to-end process for handling construction defect litigation
- Show real-life case studies applying various approaches to construction defect litigation matters
- Show examples of good work

BACK-UP MATERIALS (CASE STUDIES)

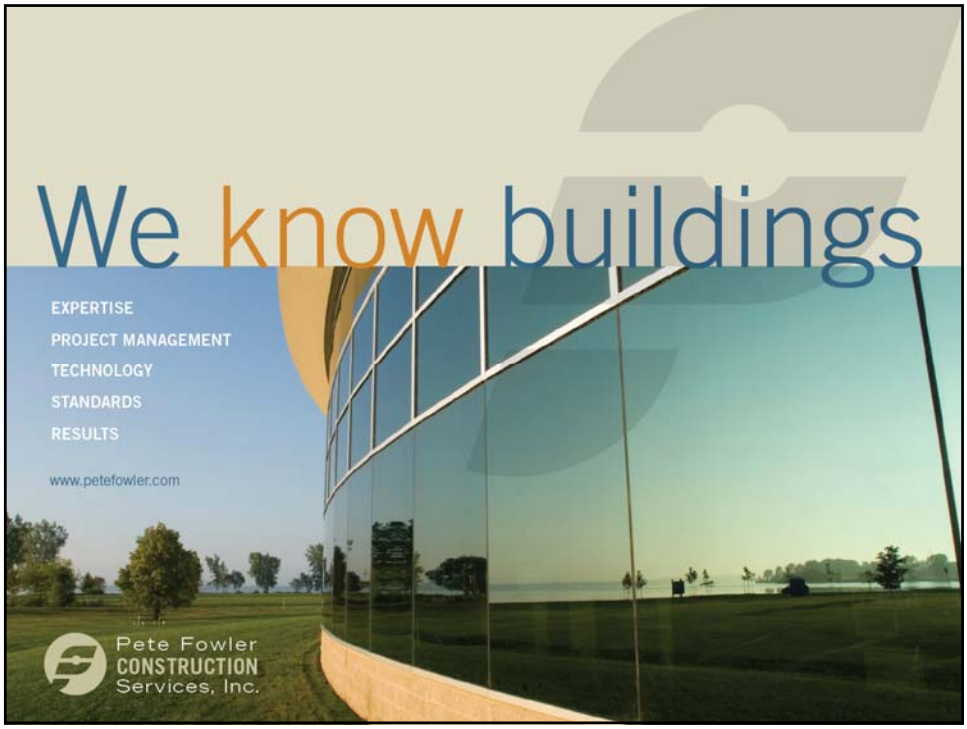
1. Small Multi-family Project (PFCS 06-295)
2. Small Single Family Project (PFCS 15-165)
3. Small Commercial Project (PFCS 15-121)
4. Medium Multi-family Project (PFCS 14-320)
5. Medium Commercial Project (PFCS 15-161)
6. Medium Residential Project (PFCS A2-124)
7. Medium Multi-family Project (PFCS 12-281)
8. Large Residential Project (PFCS 14-301)

PROGRAM CONTENTS

1. Introduction
    A. Presenter Information
    B. Webinar Materials
    C. CE Certificates
    D. Feedback
    E. Learning Objectives
    F. Property Condition Assessment (ASTM E2018)
    G. Building Leak Evaluation (ASTM E2128)
    H. PFCS Building Performance Analysis Method
    I. Plaintiff Project Process Flowchart
    J. Case Study
2. In the Beginning
    A. Project Intake
    B. Strategy
    C. Plan & Proposal
    D. First 10 Things
    E. Issues List
    F. Case Studies
3. Inspection & Evaluation
    A. PFCS Building Performance Methodology
    B. Standards for Inspection and Evaluation
    C. Distillation and Utilization of gathered data
4. Analysis & Estimate
    A. What is a Construction Defect?
    B. What Should Be Fixed!?
    C. Logic & Critical Thinking
    D. IIACC Method and Issue by Issue Analysis
    E. Plans, Specifications, Codes, Standards
    F. Repair Estimating
    G. Case Studies
5. Analysis & Estimate
    A. PFCS Building Leakage Evaluation Seminar
    B. ASTM E2128 Standard Guide for Evaluating Water Leakage of Building Walls
    C. ROI
    D. Investigation Documentation
    E. Case Studies
6. Testing
    A. PFCS Building Leakage Evaluation
    B. ASTM E2128 Standard Guide for Evaluating Water Leakage of Building Walls
    C. ROI
    D. Investigation Documentation
    E. Case Studies
7. Reports and Possible Further Work
    A. Strategy
    B. PFCS Communicating in Writing
    C. Inspection Summary
    D. Issues List
    E. Testing Summary & Maps
    F. Opinion Letter
    G. Report
    H. Specifications and RFPs to Contractors
    I. Others Possible Work
    J. Case Studies
8. Conclusion
    A. Learning Objectives
    B. Program Outline
    C. Back-Up Materials
    D. Recommendations
    E. Webinar Materials
    F. CE Certificates
    G. Feedback
    H. Program Outline

BACK-UP MATERIALS (CASE STUDIES)

1. Small Multi-family Project (PFCS 06-295)
    A. Inspection Notes and Photos
    B. Issues-Discussion Matrix
    C. Scope and Estimate
    D. Opinion Letter with Recommendations
2. Small Single Family Project (PFCS 15-165)
    A. Plan and Proposal
    B. Document Summary
    C. Property Condition Assessment (Report)
3. Small Commercial Project (PFCS 15-121)
    A. Proposal
    B. Document Summary
    C. Property Condition Assessment (Report)
4. Medium Multi-family Project (PFCS 14-320)
    A. Inspection Summary ready for litigation
    B. Issues List
    C. Testing Plan
5. Medium Commercial Project (PFCS 15-161)
    A. Investigation Report and Map
    B. Report with Maps
    C. Specifications
6. Medium Residential Project (PFCS A2-124)
    A. Defect List
    B. Estimate
    C. Report
7. Medium Multi-family Project (PFCS 12-281)
    A. Report
    B. RFP to Contractors
8. Large Residential Project (PFCS 14-301)
    A. Contracting Recommendations
    B. Architectural Expert Memo in response to RFP
    C. Owners, Attorney, and Expert Meeting Agenda



Construction Defect Litigation from the Plaintiff Perspective

Pete Fowler CONSTRUCTION Services, Inc.

2015

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PFCS: Who We Are

SOLUTIONS

We are a team of construction experts and project management professionals who specialize in creating REAL PRACTICAL SOLUTIONS for property owners & managers, builders & developers, construction contractors, product manufacturers & suppliers, lawyers and insurers.

PFCS: We Know Buildings

PFCS: We Know Buildings

CLIENTS

- Property Owners & Managers
- Builders & Developers
- Contractors
- Product Manufacturers
- Insurers
- Lawyers

PFCS Services

BUILDING LIFECYCLE

Building Inspection, Testing and Property Assessment

Specifications for Building Maintenance and Repairs

Construction Budgets and Cost Estimating

Construction Management

Quality Assurance Plans and Inspections

CLAIMS & LITIGATION

Construction Defect Litigation (Also see BLM)

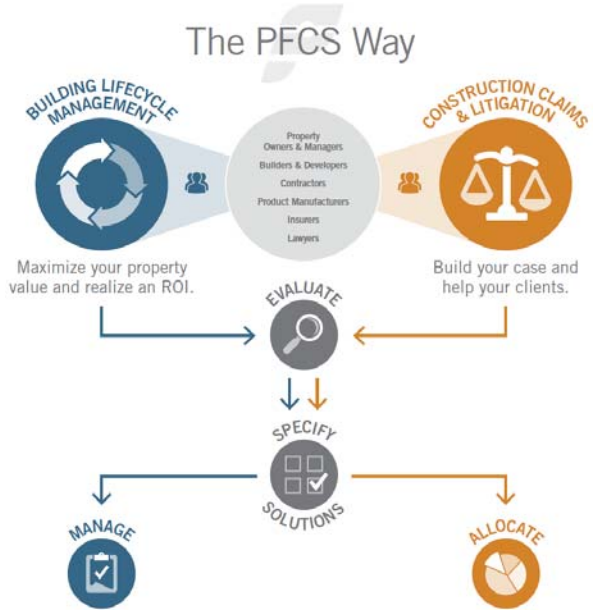
General (Property) Liability Claims

Construction Accidents

Traditional Claims related to contracts, payments, performance, change orders and delays

The PFCS Way: SOLUTIONS

- **EXPERTISE:** Technical experts who are focused on real practical solutions is surprisingly hard to find. We found them. And we work to keep that focus.
- **PROJECT MANAGEMENT:** To deliver valuable work with measurable return on investment (ROI), we have to manage the Scope, Budget and Schedule of our work.
- **TECHNOLOGY:** We use proprietary technology to create valuable work faster, better and cheaper, to make the information available to all applicable stakeholders, and to create a permanent digital record at no extra cost.
- **STANDARDS:** To help clients manage building lifecycle performance and costs, we compare each project to industry standards and best practices, then apply professional judgment to develop strategies and step-by-step plans for maximizing ROI for maintenance and repair expenditures.



The PFCS Way

ON ALL PROJECTS

Building Information Management: We pick up where Zillow and Google leave off. We use technology to collect, organize, structure and store documents and building info forever.

Evaluate Performance: We perform structured building inspection and testing evaluations, exceeding the highest standards.

Specify Solutions: We analyze, report, make recommendations and compose specifications and estimates for construction, maintenance & repairs.

BLM OR LITIGATION?

Manage Quality: We apply professional construction management discipline to get work done, and create and execute construction quality assurance plans.

Allocate Responsibility: For insurance and legal clients we use our expertise in evaluating, specifying and managing construction to compare what happened in problem projects to what should have. We apply professional judgment to allocate responsibility.

Program Outline

1. Introduction
2. In the Beginning
3. Inspection & Evaluation
4. Analysis & Estimate
5. Testing
6. Reports and Possible Further Work
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1. INTRODUCTION

Introduction

A. Presenter Information
B. Webinar Materials
C. CE Certificates
D. Feedback
E. Learning Objectives
F. Property Condition Assessment (ASTM E2018)
G. Building Leak Evaluation (ASTM E2128)
H. PFCS Building Performance Analysis Method
I. Plaintiff Project Process Flowchart
J. Case Study

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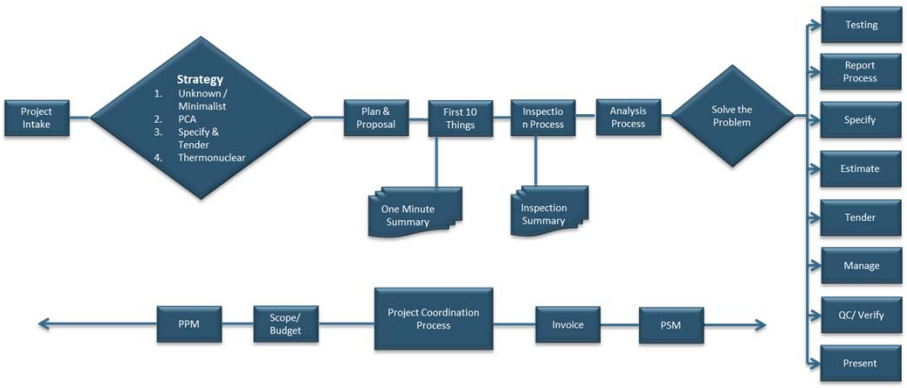
Learning Objectives

- Discuss building performance analysis standards
- Discuss various strategies for approaching construction defect cases from the plaintiff's perspective
- Outline a beginning-to-end process for handling construction defect litigation
- Show real-life case studies applying various approaches to construction defect litigation matters
- Show examples of good work

Process Flowchart



Case Studies

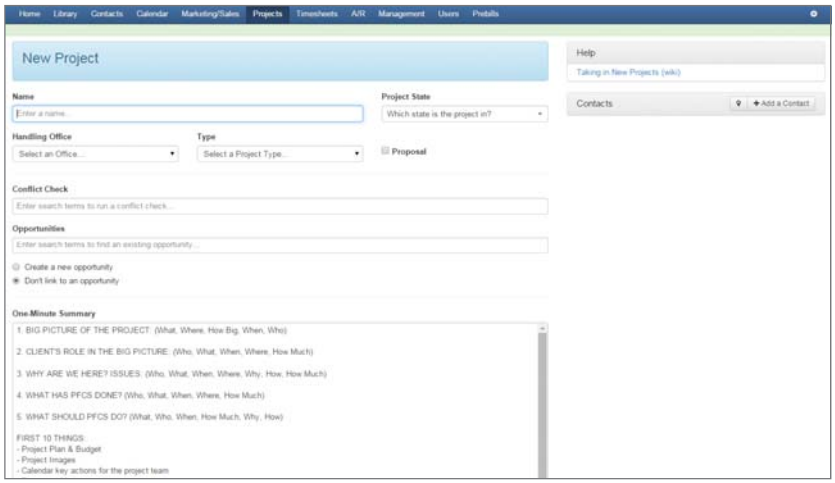
1. Small Multi-family Project (PFCS 06-295)
   A. Inspection Notes and Photos
   B. Issues-Discussion Matrix
   C. Scope and Estimate
   D. Opinion Letter with Recommendations
8. Large Residential Project (PFCS 14-301)
   A. Contracting Recommendations
   B. Architectural Expert Memo in response to RFP
   C. Owners, Attorney, and Expert Meeting Agenda

2. IN THE BEGINNING

Contents

A. Project Intake
B. Strategy
C. Plan & Proposal
D. First 10 Things
E. Issues List
F. Case Studies

Project Intake



Strategy

Options

A. Unknown / Minimalist
B. PCA
C. Specify & Tender
D. Analyze Completely & Present Formally

Plan & Proposal

Line	Scope of Work / Deliverables	Status	Original Plan		Current Plan	
			Hours	Costs	Hours	Costs
1	Level 1: Preparatory Work					
2	A. Client Access Information (including One Minute Summary)		2	$ 290.00	2	$ 290.00
3	B. Images and Information		1	$ 145.00	1	$ 145.00
4	C. Issues / Inspection Checklist		2	$ 290.00	4	$ 580.00
5	D. Document Index		2	$ 290.00	8	$ 1,160.00
6						
7	Level 2: Preliminary Investigation					
8	A. Document Review and Summary		4	$ 580.00	16	$ 2,320.00
9	B. Interviews with Key Players		2	$ 290.00	4	$ 580.00
10	C. Visual Inspection: Prepare, Execute, Process Documentation		16	$ 2,320.00	20	$ 2,900.00
11	D. Contract Summary		2	$ 290.00	3	$ 435.00
12	E. Meetings / Telephone Conferences		0	$ -	8	$ 1,160.00
13						
14	Level 3: Analysis					
15	A. Update Issues Lists		4	$ 580.00	4	$ 580.00
16	B. Preliminary Analysis (Issues-Discussion Matrix)		6	$ 870.00	16	$ 2,320.00
17	C. Opinion Letter w- Recommendations		10	$ 1,450.00	24	$ 3,480.00
18	D. Players List		2	$ 290.00	4	$ 580.00
19	E. Meetings / Telephone Conferences		0	$ -	8	$ 1,160.00
20						
21	Level 4: Detailed Analysis					
22	A. Testing Protocol				4	$ 580.00
23	B. Testing: Coordinate, Conduct and Process Documentation				32	$ 4,640.00
24	C. Issues List Update				8	$ 1,160.00
25	D. Finalize Analysis (Issues Summary Report)				24	$ 3,480.00
26	E. Construction Cost Estimate (Level 4)				24	$ 3,480.00
27						
28	Level 5: Final Analysis					
29	A. Presentation Outline				8	$ 1,160.00
30	B. Presentation				32	$ 4,640.00
31	C. Meetings				16	$ 2,320.00
32	D. Deposition Testimony				40	$ 5,800.00
33	E. Trial Testimony				40	$ 5,800.00
34						
35						
36	Total		53	$ 7,685.00	350	$ 50,750.00

First 10 Things

A. Project Plan & Budget
B. Project Images
C. Calendar key actions for the project team
D. Document Management
E. Project Timeline (5-20 key events)
F. Project Players (3-15 key players)
G. Locations/Components/Issues
H. Client Access Invitations
I. If there is nothing to do, calendar a note…
J. Review with the Expert or Technical Lead

Issues List

A. "A problem well stated…"
B. A Sensible List
C. WBS
D. Uniformat

2. IN THE BEGINNING

Issues List

3. A SENSIBLE LIST

3. A SENSIBLE LIST

"A PROBLEM WELL STATED IS A PROBLEM HALF-SOLVED."

CHARLES KETTERING

© Lifehack Quotes

Read about industry impacts on our blog at www.petefowler.com

2. IN THE BEGINNING

Issues List

3. A SENSIBLE LIST

Work Breakdown Structure

WBS AS OUTLINE FOR SCOPE, BUDGET AND SCHEDULE

Scope	Budget	Actual	Schedule
1. Item 1	$ XXX	$ XXX	Plan/Actual
2. Item 2	$ XXX	$ XXX	Plan/Actual
3. Item 3	$ XXX	$ XXX	Plan/Actual
4. Item 4	$ XXX	$ XXX	Plan/Actual
5. Item 5	$ XXX	$ XXX	Plan/Actual
6. TOTAL	$ X,XXX	$ X,XXX	

And compare performance to plan.

Read about industry impacts on our blog at www.petefowler.com

Issues List

Organizational Schemes

UNIFORMAT (PFCS STANDARD)

Level 1 Structure

A. Substructure
B. Superstructure
C. Interiors
D. Services
E. Equipment & Furnishings
F. Special Construction & Demolition
G. Building Site work
H. Other

UNIFORMAT (PFCS STANDARD)

B 2010 Siding
- Leaks
- Incorrect Nailing

B 2060 Exterior Paint
- Deteriorated Trim
- Delaminating

B 3001 Roof
- Damage
- Leaks
- Missing Underlayment

C 3011 Interior Paint
- Inadequate Coverage
- Wrong Color

Case Studies

2. Small Single Family Project (PFCS 15-165)
   A. Plan and Proposal
   B. Document Summary
   C. PCA
4. Medium Multi-family Project (PFCS 14-320)
   A. Inspection Summary ready for litigation
   B. Testing Plan

3. INSPECTION & EVALUATION

Contents

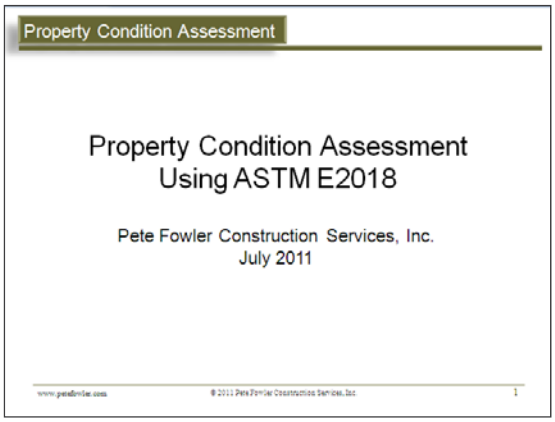
A. PFCS Building Performance Analysis Standards
B. Standards for Inspection and Evaluation
C. Distillation and Utilization of gathered data
D. Case Studies

Inspection & Evaluation

- Property Condition Assessment (ASTM E2018)
- Evaluating Water Leakage of Buildings (ASTM E2128)
- PFCS Building Lifecycle Management
- Other Inspection & Testing Standards
- Prioritizing
- Case Study

Property Condition Assessment

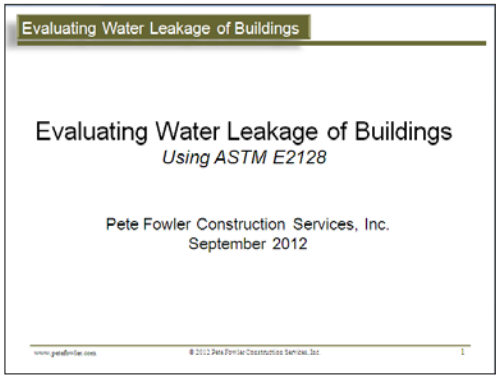
- Document Review and Interviews
- Walk-Through Survey
- Opinions of Probable Costs to Remedy Physical Deficiencies
- Property Condition Report (PCR)



Building Leak Evaluation

Systematic Approach to an Evaluation: Overview

1. Review of Project Documents
2. Evaluation of Design Concept
3. Determination of Service History
4. Inspection
5. Investigative Testing
6. Analysis
7. Report Preparation



Building Performance Analysis

PFCS BPA PROCESS

1. Document & Information Management
2. Meetings/Interviews with Key People
3. Building Information Management
4. Inspection
5. Analysis
6. Testing (Only as Necessary)
7. Estimate
8. Report/Property Condition Report (PCR)

Other Inspection & Testing Standards

- ASTM E1105 Standard Test Method for Field Determination of Water Penetration: 5 page test method; a procedure for determining the resistance to water penetration of windows and doors.
- AAMA 511-08 Voluntary Guideline for Forensic Water Penetration Testing of Fenestration Products: 11 pages. Offers a method & systematic approach for testing of fenestration products.
- AAMA 502-08 Voluntary Specification for Field Testing of Newly Installed Fenestration Products: 10 pages. Field test apparatus, sampling, test procedures and reports used in verifying water penetration resistance.
- PFCS Building Inspection and Testing: Our practices re: analysis of building performance from design, through construction and use.

Prioritizing

PLAYING DOCTOR

3. INSPECTION & EVALUATION

Prioritizing

PLAYING DOCTOR

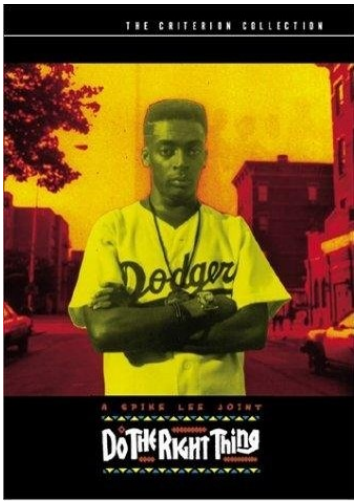
- Playing (Building) Doctor: Examine, Diagnose, Prescribe
- Hippocratic Oath
- Examine: Structure, Standards
- Diagnose: Its not always obvious
- Prescribe: Do the right thing(s). And remember that one size does NOT fit all.
- Over Engineering: Not everyone can afford it.
- Evaluate: Apply Professional Judgment

3. INSPECTION & EVALUATION

Prioritizing

DO THE RIGHT THING

- Building Life-Cycle Management
- Building Information Management
- Building Performance Analysis
- Prioritize
- Plan
- Execute
- Compare

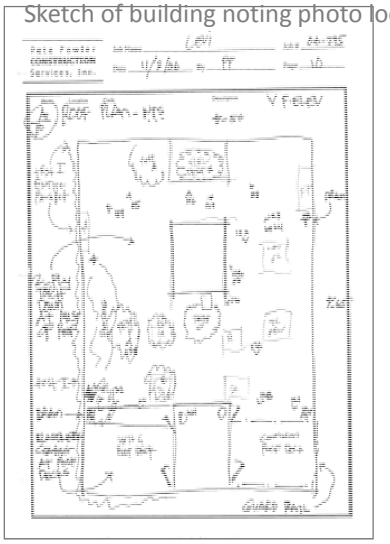


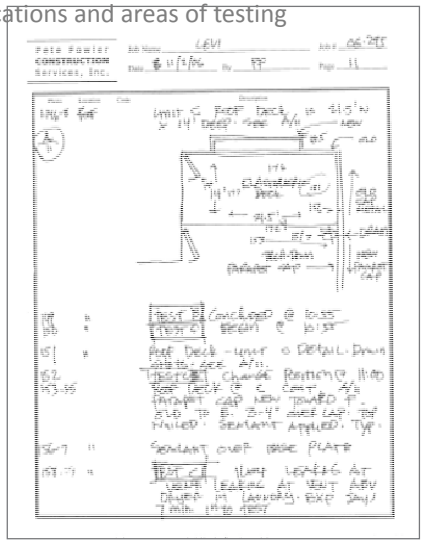
Case Studies

3. Small Commercial Project (PFCS 15-121)
   - A. Proposal
   - B. Document Summary
   - C. Property Condition Assessment (Report)
4. Medium Multi-family Project (PFCS 14-320)
   - A. Inspection Summary ready for litigation
   - B. Testing plan
5. Medium Commercial Project (PFCS 15-161)
   - A. Investigation Report and Map
   - B. Report with Maps

Case Study

Sketch of building noting photo locations and areas of testing

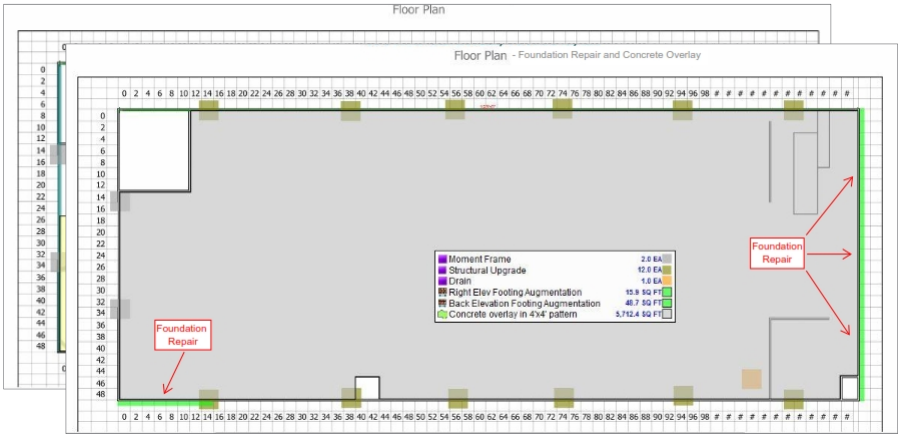




3. INSPECTION & EVALUATION

Case Study

CASE STUDY: COMMERCIAL



4. ANALYSIS & ESTIMATE

Contents

A. Analyzing Construction Defects
B. What is a Construction Defect?
C. What Should Be Fixed!?
D. Logic & Critical Thinking
E. IIACC Method
F. Plans, Specifications, Codes, Standards
G. Estimating
H. Case Studies

Analyzing Construction Defects

- PFCS Analysis Process
- Strategy: SOLVE THE PROBLEM
  - Test, Specify, Estimate, Tender, Manage, Verify (QC)
- RFP's to co-experts
- Issues Update
- Issues Discussion
- Plan Review
- "Second 10 Things"

What is a Defect?

Construction:

1. (*Noun*) To make or form by combining or arranging parts or elements.
2. To draw (a geometrical figure) with suitable instruments and under specified conditions.
3. To set in logical order.

Defect:

1. (*Noun*) An imperfection that impairs worth or utility: shortcoming <the grave defects in our foreign policy>.
2. An imperfection (as a vacancy or an unlike atom) in a crystal lattice.
3. [Latin defectus]: A lack of something necessary for completeness, adequacy, or perfection: deficiency <a hearing defect>.

Construction Defect: ??

4. ANALYSIS & ESTIMATE

What is a Defect?

PFCS' DEFINITION

- The failure of a building assembly to be constructed in a reasonably workmanlike manner **AND** a failure to perform in a manner that should be reasonably expected by the buyer, owner or user.
- A condition which makes the property unsuitable for its intended use, or causes damage such that the expected service life is shortened unreasonably or an unreasonable maintenance burden is caused.

Read about industry impacts on our blog at **www.petefowler.com**

What Should Be Fixed!?

Specialty Consultants

- Types of Specialty Consultants
  - Architect, Engineer (Structural, Civil, Geotechnical, etc.), MEP, Accounting, Property Appraisal
- Recommend thinking about the work required from the specialty consultant and preparing a Request for Proposal (RFP) and interviews to select the best consultant for the conditions encountered at the project.

Logical and Critical Thinking

FROM ASKING THE RIGHT QUESTIONS BY BROWNE & KEELEY:

1. What are the issues and conclusion?
2. What are the reasons?
3. What words or phrases are ambiguous?
4. What are the value conflicts and assumptions?
5. What are the descriptive assumptions?
6. Are there any fallacies in the reasoning?
7. How good is the evidence?
8. Are there rival causes?
9. Are the statistics deceptive?
10. What significant information is omitted?
11. What reasonable conclusions are possible?

IIACC Method

Issue: Describe the issue in English, so everyone who needs to use the information to make a decision can understand. What and where.

Investigation: What have we done to figure out how the assembly is performing? Inspection. Interviews. Document Review. Testing. Maps/Diagrams. Reports.

Analysis: What should be considered? Codes. Standards. Design intent. Maintenance Manual. Performance. Aesthetics.

Conclusion: What do we *think*? Should we consider politics?

Costs: What do all of the parties think it is going to cost to fix?

Plans, Specifications, Codes & Standards

Plans: Make references to plan sheets and details.

Specifications: Make references to variations from requirements in the specifications. Copy the pages into the file organized by issue or by party.

Codes: Refer to code requirements

Standards: Make references by issue or party.

Estimating Basics

IDENTIFY OR ESTIMATE ALL COSTS

- Remember the 100% Rule
- Costs are always an issue in solving building problems. But, it is my experience that cost is often not the primary issue, even if it appears to be.
- To figure out project costs, we need to identify the steps between “where we are” and “where we want to be” and estimate the cost of the steps; it is not as hard as most people make it out to be. This is the heart of solving building problems. Like the Issues List, we can usually identify 5 to 15 steps that will move the situation to conclusion.

4. ANALYSIS & ESTIMATE

Estimating Basics

5 LEVELS – 10 STEPS

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Level 5 Estimating

5 Levels - 10 Steps

3/10/2009

Line	Steps	Level 1 Order of Magnitude	Level 2 Conceptual	Level 3 Preliminary	Level 4 Detailed	Level 5 Bid / Construction / Trial
1	Format	Summary Sheet Only	Add capital letters (or numbers if L1 are letters) with 2 to 15 items under each of the main categories	Conform with the WBS rules: Main Category, then capital letters or numbers, then alternate with each new level.	See PFCS Samples for deeper and deeper levels. Conform to rules of WBS.	Final Pass for clarity and ease of making references and following all of the component parts.
2	Scope	A Level 1 Work Breakdown Structure (WBS): 1 paragraph to 1 page. There are only basic quantities (no real QTO) in approximate figures	Add details with 2-10 categories each with letters and CSI codes. Basic QTO on main items (SF, FA, LF, etc.) Usually not calculated units like Cubic Yards (CY)	Level 3 WBS with letters, numbers, and CSI codes. More detailed QTO.	Complete, detailed QTO.	Final Pass. Check QTO on key items.
3	Time/Labor	Little or no breakdown of labor / time in this step	Rough Estimate, Typical crews, Round numbers, slightly over estimating. No calls	Productivity rates, Use Walker's book on big #'s	Use Walker's Labor Rates	Final Pass
4	Material	A guesstimate. Little QTO, Quantities only - not cost of materials. Assembly level estimates at the most	QTO, Rough Estimate, Slightly over estimating. Books only for big #'s, NO calls unless faster than book	Calls, Books, Maybe Alternatives	Calls, Bids, Alternatives refined	Final Pass
5	Equipment	WAG. Often none	Rough Estimate. No Calls	Calls, Books	Calls, Books, Bids	Final Pass
6	Subs	Unit prices, WAG, Use books only on BIG #'s	Books, NO calls	Some Calls	Lots of Calls, Maybe send info, Maybe Bids	Final Pass
7	GC's	% of Direct Cost	Reconsider % or Amount	Reconsider % or Amount	Broken Down	Same as L4
8	OH	% of Direct Cost	Reconsider % or Amount	Reconsider % or Amount	Possibly Broken Down	Same as L4
9	Profit	% of Direct Cost	Reconsider % or Amount	Reconsider % or Amount	Reconsider % or Amount	Reconsider % or Amount
10	Non-Construction	WAG	SWAG	More Support	More Support	Calls Bids
11	Time:	1-4 Hours	2-24 Hours	16-100 Hours	50-200 Hours	100+ Hours

4. ANALYSIS & ESTIMATE

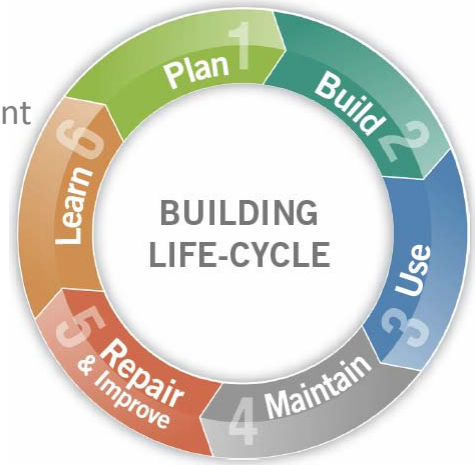
Level 2+ Estimating

CONSTRUCTION COST FLOW CHART

4. ANALYSIS & ESTIMATE

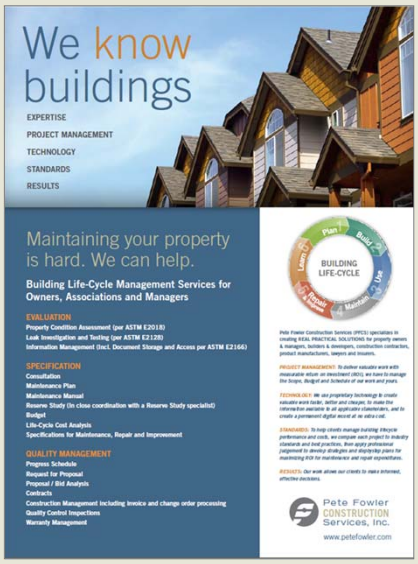
BLM Defined

PFCS Definition of Building Lifecycle Management: Actions taken with the intent of making intelligent, proactive decisions about building design, construction, use, maintenance, repair, and improvement, all while considering the entire service-life of the property.



3. INSPECTION & EVALUATION

Building Lifecycle Management



4. ANALYSIS & ESTIMATE

Lifecycle Cost Analysis

Building Lifecycle Management

BLM Matrix

#	Code	Description	Construction		Year 1		Year 5		Year 10		Year 20		Year 35		Year 50		Year 100		TOTAL	
			Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
2	A	**Substructure**																		
3	A1010	Foundations, Concrete & Reinforcing																		
4	A2025	Moisture Protection / Waterproofing																		
5	B	**Superstructure**																		
6	B1004	Wood Framing & Hardware																		
7	B2011	Exterior Enclosure: Masonry Veneer																		
8	B2013	Exterior Enclosure: Siding & Trim																		
9	B2015	Exterior Wall Insulation																		
10	B2018	Exterior Wall Accessories & Decorative Metal																		
11	B2020	Windows																		
12	B2022	Storefronts																		
13	B2023	Curtain Walls / Exterior Glazing																		
14	B2030	Exterior Doors																		
15	B2050	Joint Sealants																		
16	B2060	Exterior Coatings (Paint)																		
17	B3000	Roofs																		
18	B3006	Gutters & Downspouts																		
19	C	**Interiors**																		
20	C1021	Toilet & Bath Accessories (Incl. Shower Doors)																		
21	C1023	Cabinets																		
22	C1030	Finish Carpentry & Architectural Woodwork																		
23	C2000	Stairs (Interior and Exterior)																		
24	C3010	Gypsum Wallboard & Interior Plaster																		
25	C3011	Tile & Stone Assemblies (Incl. Showers)																		
26	C3020	Floor Finishes																		
27	D	**Services**																		
28	D2000	Plumbing																		
29	D3000	HVAC: Heating, Ventilating & Airconditioning																		
30	D4000	Fire Protection																		
31	D5000	Electrical																		
32	E	**Equipment and Furnishings**																		
33	E1000	Equipment and Appliances																		
34	F	**Special Construction and Demolition**																		
35	F2020	Hazardous Components Abatement																		
36	F4000	Building Maintenance																		
37	G	**Building Sitework**																		
38	G2030	Pedestrian Paving																		
39	G2041	Fences, Gates and Walls																		
40	G2042	Fountains & Swimming Pools																		
41	G2050	Landscaping																		
42	G2055	Site Grading & Drainage																		
43	G4020	Site Lighting																		
44	H	**Other**																		
45	H1000	Health & Safety Requirements																		
46	H2000	General Conditions																		
47	H3000	Project / Construction Management																		
48	H4000	Quality Requirements																		
49	H5000	Regulatory Requirements (Codes & Standards)																		
50	H7000	Design: Architectural																		
51	H8000	Design: Engineering																		
52																				

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4. ANALYSIS & ESTIMATE

Why Lawyers Should Care

	Total Cost of Ownership		
Issues	With Defects	Without Defects	Difference
1. Substructure	$	$	$
2. Superstructure	$	$	$
3. Interiors	$	$	$
4. Services	$	$	$
5. Equipment & Furnishings	$	$	$
6. Special Construction & Demo	$	$	$
7. Site Work	$	$	$
Total	$	$	$

Case Studies

6. Medium Residential Project (PFCS A2-124)
   A. Defect List
   B. Estimate
   C. Report
7. Medium Multi-family Project (PFCS 12-281)
   A. Report (Not CD)
   B. RFP to Contractors

5. TESTING

Contents

A. PFCS Building Leakage Evaluation Seminar
B. ASTM E2128 Standard Guide for Evaluating Water Leakage of Building Walls
C. ROI
D. Investigation Documentation
E. Case Studies

Building Leakage Evaluation

Pete Fowler CONSTRUCTION Services, Inc.

March 27, 2014

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CA 949.240.9971 CO 303.554.0381 OR 503.246.3744

ASTM E2128-01A SECTIONS

ASTM E21218-01a Sections

- Scope
- Referenced Documents
- Terminology
- Significance and Use
- Systematic Approach to an Evaluation: Overview
  - Review of Project Documents
  - Evaluation of Design Concept
  - Determination of Service History
  - Inspection
  - Investigative Testing
  - Analysis
  - Report Preparation
- Annex A1: Mandatory Information
- Appendixes (X1 through X8)

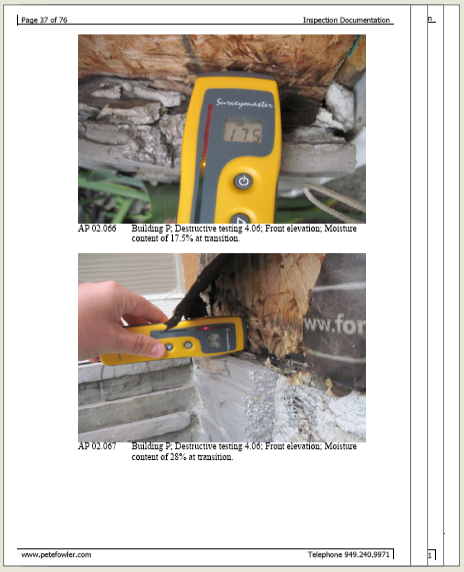
5. TESTING

ROI

5. TESTING

3. SAMPLE DOCUMENTS

Investigation Documentation



Page 37 of 76 Inspection Documentation

AP 02.066 Building P; Destructive testing 4.06; Front elevation; Moisture content of 17.5% at transition.

AP 02.067 Building P; Destructive testing 4.06; Front elevation; Moisture content of 28% at transition.

www.petefowler.com Telephone 949.240.9971

Case Studies

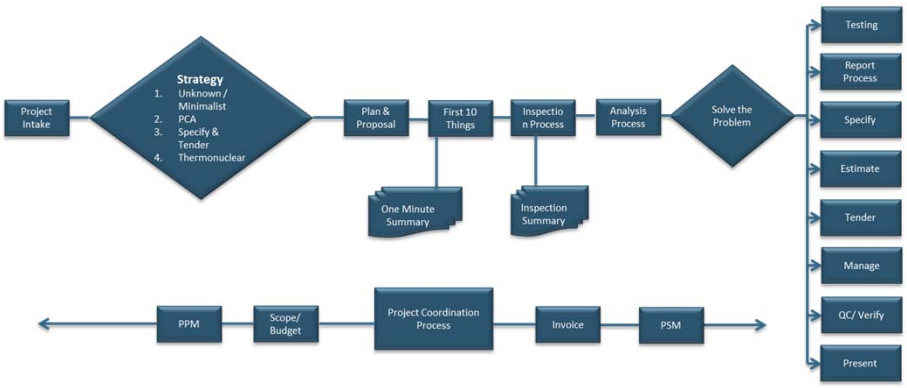
1. Small Multi-family Project (PFCS 06-295)
   A. Inspection Notes and Photos
4. Medium Multi-family Project (PFCS 14-320)
   A. Inspection Summary ready for litigation
   B. Testing Plan

6. REPORTS AND POSSIBLE FURTHER WORK

Contents

A. Strategy
B. PFCS Communicating in Writing
C. Inspection Summary
D. Issues List
E. Testing Summary & Maps
F. Opinion Letter
G. Report
H. Specifications and RFPs to Contractors
I. Others Possible Work
J. Case Studies

Strategy



PFCS Communicating In Writing

A. Communicating in Writing © 2005
B. Writing is work
C. Summarize from A to Z
D. Lots of Passes
E. Prepare. Draft. Polish.
F. Awesome Work: PFCS Service Guarantee. Item 5 of 6. We always communicate in plain English so our clients can use the information to make informed decisions.

Inspection Summary

Pete Fowler CONSTRUCTION Services, Inc.

Inspection Summary

Date: February 05, 2015
To: FILE
From: Pete Fowler Construction Services, Inc.
Project: Giroux Glass v. Regal Industries, Inc. (PFCS 15-102)
Regarding: Inspection Summary
Note: For mediation purposes only. Protected under all applicable evidence codes.

Project Overview

This project concerns Westlake Landmark which consists of two office buildings in Westlake Village, CA. Construction of both buildings was completed in 2006. Both buildings are three story steel framed and concrete construction with cement plaster (stucco) cladding and stone clad walls with parapets, low sloped roofs, and aluminum storefront style glazing (windows).

General Inspection Summary

On 1/29/2015 Rene Gallegos attended a visual inspection and observation of repairs being performed by Viola Construction.

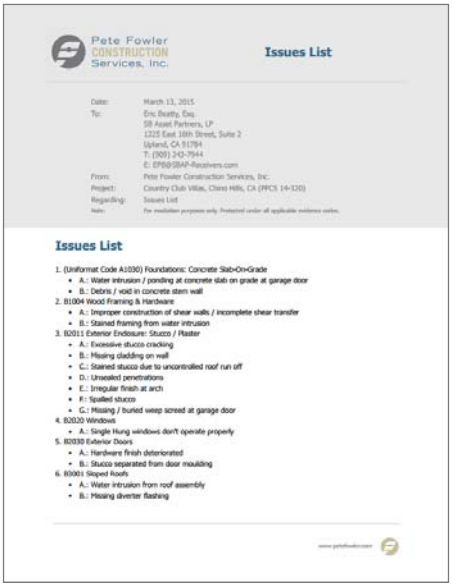
GENERAL INSPECTION INFORMATION

- 167 total photographs were taken, along with notes for each of the photographs. See PFCS Client Access https://access.petefowler.com/
- John Claudio, Esq. was in attendance
- Mark of Bert Howe was in attendance
- All exterior elevations were photographed
- Access to the building interiors was not permitted

VIOLA CONSTRUCTION SUPERVISOR

We spoke with the Viola Construction Supervisor. He explained that the locations of their work at the windows was indicated on the plans that we photographed (see photos below in the Building Exteriors section). The window work included removal existing sill/window glazing stops where the gap to the mullion exceeded 1/16-inch, and replace with a new sill with a gap less than 1/16-inch on each side, and to apply clear silicone sealant at the vertical face of the new aluminum stop material (see Images section on the last page of this report for a marked up photograph indicating the names of the respective window components).

Issues List



Pete Fowler CONSTRUCTION Services, Inc.

Issues List

Date: March 13, 2015
To: Eric Beatty, Esq.
SB Asset Partners, LP
1225 East 16th Street, Suite 2
Upland, CA 91784
T: (909) 242-7944
E: EPBB@BAP-Receivers.com
From: Pete Fowler Construction Services, Inc.
Project: Country Club Villas, Chino Hills, CA (PFCS 14-320)
Regarding: Issues List
Note: For mediation purposes only. Protected under all applicable evidence codes.

Issues List

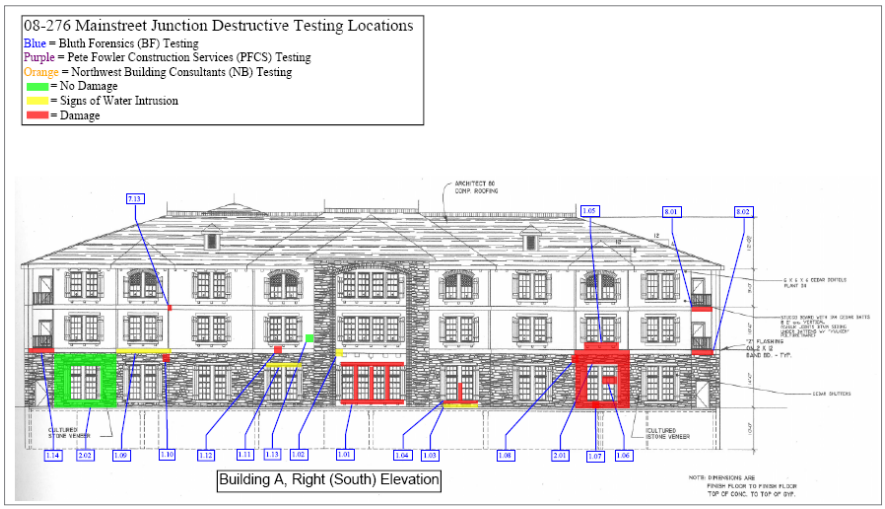
1. (Uniformat Code A1030) Foundations: Concrete Slab-On-Grade
   - A.: Water intrusion / ponding at concrete slab on grade at garage door
   - B.: Debris / void in concrete stem wall
2. B1004 Wood Framing & Hardware
   - A.: Improper construction of shear walls / incomplete shear transfer
   - B.: Stained framing from water intrusion
3. B2011 Exterior Enclosure: Stucco / Plaster
   - A.: Excessive stucco cracking
   - B.: Missing cladding on wall
   - C.: Stained stucco due to uncontrolled roof run off
   - D.: Unsealed penetrations
   - E.: Irregular finish at arch
   - F.: Spalled stucco
   - G.: Missing / buried weep screed at garage door
4. B2020 Windows
   - A.: Single Hung windows don't operate properly
5. B2030 Exterior Doors
   - A.: Hardware finish deteriorated
   - B.: Stucco separated from door moulding
6. B3001 Sloped Roofs
   - A.: Water intrusion from roof assembly
   - B.: Missing diverter flashing

Testing Summary

#	PFCS Test No.	Corresponding Test No.[1]	Who[2,3]	Building	Elevation	Photo Ref	Orientation	Date	Testing Location	Damage	SWI	Observation
1	1											Failed sealant adhesion, unprimed trim, deteriorated wood trim, rusted fasteners, window fasteners over SAM, omitted vertical leg on flashing, deteriorated GWB sheathing, microbial growth on GWB and OSB sheathing, inconsistent GWB gaps and overdriven fasteners, corroded GWB staples, SAM applied over window sill flanges.
2	1										X	
3	1										X	Warped window frames, 1/8" to 1/4".
4	1											Grouted joint between stone and wood block and omission of dynamic sealant joint, corroded metal lath, microbial growth on GWB and OSB sheathing
5	1											Omission of keyed scratch coat, lath not fully embedded in mortar, improper WRB Termination at grade, deteriorated WRB
14												SAM applied over sill flange, improper window fastening (too close to corner and too far apart), warped and cracked wood trim, one layer of WRB under stone, stained GWB sheathing, rusted and overdriven fasteners
15												
16												
17												Metal head flashing lapped over WRB, deteriorated WRB, fungal growth on trim cuts, microbial growth on GWB and rusted fasteners
18												Significant moisture staining at GWB.

6. REPORTS & POSSIBLE FURTHER WORK

Testing Map



6. REPORTS & POSSIBLE FURTHER WORK

Testing Map

Opinion Letter

Pete Fowler CONSTRUCTION Services, Inc.

Opinion Letter

Date: 04/04/2007
To: James Jones, Esq.
Jones & Lester
300 East Esplanade Drive
Suite #1200
Oxnard, CA 93036
T: 805-604-2655
E: jjones@joneslester.com
From: Pete Fowler Construction Services, Inc.
Project: Levi v Odatt (PFCS 06-295)
Regarding: Opinion Letter
Note: For mediation purposes only. Protected under all applicable evidence codes.

Dear Mr. Jones and Mr. Branch:

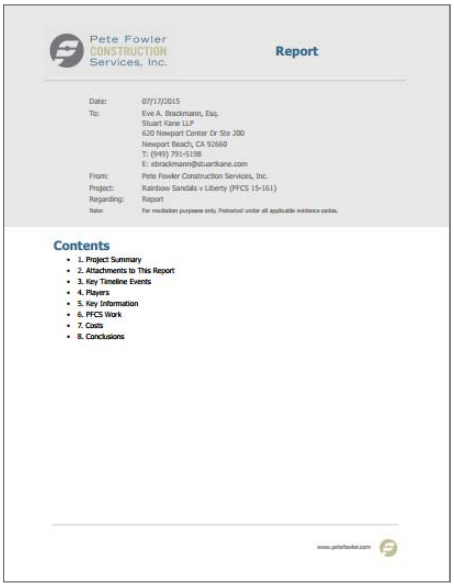
Pete Fowler Construction Services, Inc. (PFCS) has analyzed documents and information related to roofing, waterproofing and water damage at 18 North Venice Blvd, Venice, CA. Our findings are summarized in this preliminary report.

I. Project Summary

The project is a 3-level, 4-unit condominium building near the beach in Venice, CA constructed around 1988-89. The building occupies the entire lot except for minimum set-backs (5 to 10-feet) at all four elevations. Level 1 consists of individual parking garages accessed at the back elevation, storage rooms, a studio and an entry foyer to access the elevator to the second floor (Units A and B or 1 and 2) and the third floor (Units C and D or 3 and 4). The building has a low slope roof, roof-top deck areas, wood siding and stucco exterior building walls, and a slab-on-grade foundation. There are four balcony decks on front and four on the back elevations.

Ms. Levi is the owner of the top right unit (Unit C or 3). She purchased the building before completion and sold three of the units as condominiums. Low-slope roof replacement work and replacement of the roof-top deck areas was performed by an unlicensed roofer hired by the HOA during the winter of 2004-05. Ms. Levi reported dramatic leakage into her unit. There was additional leakage into the neighboring unit and the garage during the winter of 2005. This was due in part to the removal of the old roof and lack of protection during the rains. Although some repairs have been made the roof continues to leak into Units C and D (3 and 4). The owner is suing the HOA due to the leaks. There is interior damage and Ms. Levi has received estimates in the range of approximately $100,000 for the interior repairs.

Report



Pete Fowler CONSTRUCTION Services, Inc.

Report

Date: 07/17/2015
To: Eve A. Brackmann, Esq.
Stuart Kane LLP
620 Newport Center Dr Ste 200
Newport Beach, CA 92660
T: (949) 791-5198
E: ebrackmann@stuartkane.com
From: Pete Fowler Construction Services, Inc.
Project: Rainbow Sandals v Liberty (PFCS 15-161)
Regarding: Report
Note: For mediation purposes only. Protected under all applicable evidence codes.

Contents

- 1. Project Summary
- 2. Attachments to This Report
- 3. Key Timeline Events
- 4. Players
- 5. Key Information
- 6. PFCS Work
- 7. Costs
- 8. Conclusions

Specifications

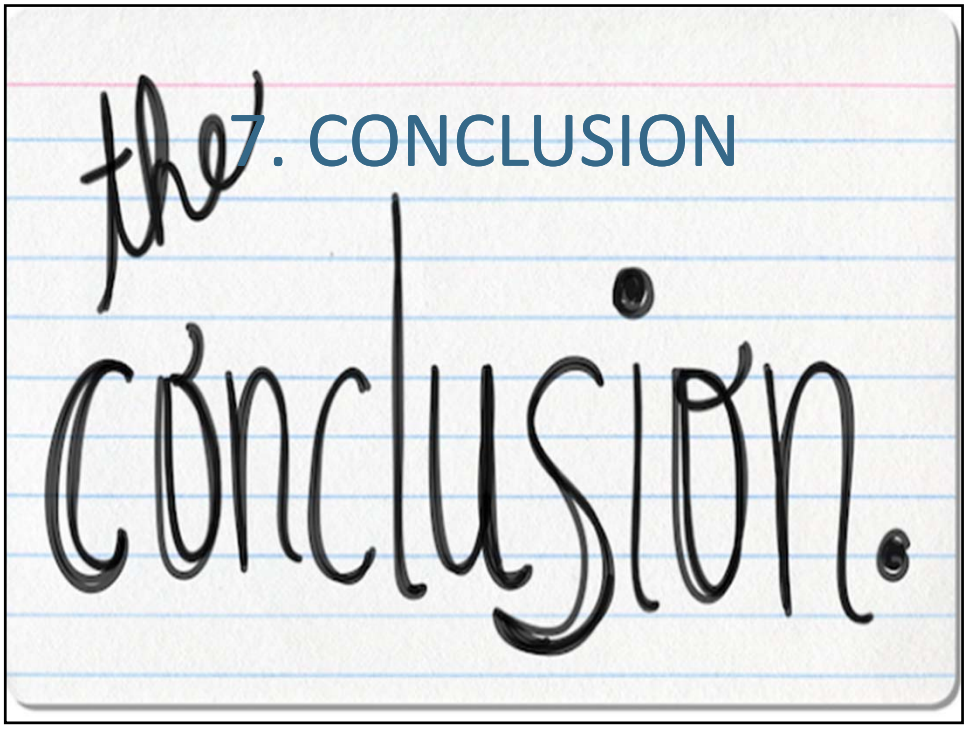
1. General	SIMPLY (REALLY, PLAIN ENGLISH) DESCRIBE THE WORK HERE: WHAT: WHERE (Locations): HOW MANY:
2. Materials	DESCRIBE THE MATERIALS IF WE ARE BEING SPECIFIC. IF NOT, THEN DESCRIBE WHAT WE WANT. GENERALLY A NATIONAL MANUFACTURER WITH EXCELLENT INSTALLATION INSTRUCTIONS. LOCAL TECHNICAL SUPPORT IS GREAT. BUT REALLY GOOD TECHNIAL SUPPORT THAT IS NOT LOCAL, IS SOMETIMES BETTER THAN LOCAL SUPPIORT THAT IS NOT. EXAMPLE FOR AN ELECTRICAL SCOPE: A. Materials shall be of top quality and the invoices for materials shall be collected, maintained, and made available upon request by the Owner's Representative. B. Materials and components will be listed and labeled when and where required by the applicable code and municipality. C. All manufacturers' instructions, documentation, warranty, and maintenance information shall be delivered to the Owner's Representative at the time of payment application.
3. Execution	LIST THE SCOPE OF WORK HERE IN A LETTERED LIST. IF YOU GET TO Z, IT'S TOO MUCH DETAIL.
4. Quality Assurance	DESCRIBE HOW WE ARE MANAGING THE QUALITY. ARE THERE HOLD POINT INSPECTIONS? ARE WE RELYING ON THE MUINICIPALITY?

6. REPORTS & POSSIBLE FURTHER WORK

Other Possible Work

A. Investigation Recommendations
B. RFP to Specialty Experts
C. Inspection Request incl. Unbiased (Random) Selection
D. Allocation
E. Presentation
F. Testimony
G. RFP to Contractors
H. Contract Composition & Negotiation
I. Construction Management
J. Quality Verification incl. Inspection

Read about industry impacts on our blog at **www.petefowler.com**



Conclusion

A. Learning Objectives
B. Program Outline
C. Back-Up Materials
D. Recommendations
E. Webinar Materials
F. CE Certificates
G. Feedback
H. Program Outline

1. INTRODUCTION

Learning Objectives

- Discuss building performance analysis standards
- Discuss various strategies for approaching construction defect cases from the plaintiff's perspective
- Outline a beginning-to-end process for handling construction defect litigation
- Show real-life case studies applying various approaches to construction defect litigation matters
- Show examples of good work

7. CONCLUSION

Back-Up Materials

1. Small Multi-family Project (PFCS 06-295)
2. Small Single Family Project (PFCS 15-165)
3. Small Commercial Project (PFCS 15-121)
4. Medium Multi-family Project (PFCS 14-320)
5. Medium Commercial Project (PFCS 15-161)
6. Medium Residential Project (PFCS A2-124)
7. Medium Multi-family Project (PFCS 12-281)
8. Large Residential Project (PFCS 14-301)

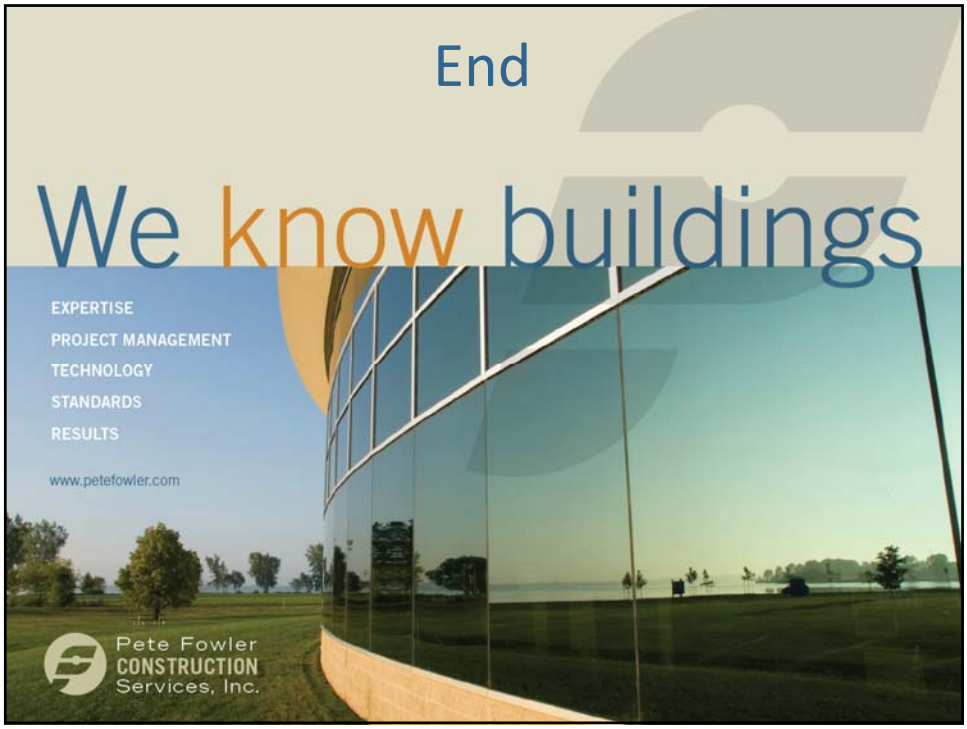
Recommendations

1. Read through the program materials
2. Read the back-up materials
3. Apply the applicable industry standards to doing your work and/or hold your experts accountable to do so.
4. Be as systematic as possible.

Program Outline

1. Introduction
2. In the Beginning
3. Inspection & Evaluation
4. Analysis & Estimate
5. Testing
6. Reports and Possible Further Work
7. Conclusion

End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CONSTRUCTION
Services, Inc.

1A. Inspection Notes and Photographs

Pete Fowler
CONSTRUCTION
Services, Inc.

Job Number	06-295
Job Name	[redacted]
Date	11/2/06
Location	[redacted]
ID / Photo	PF 1.1

Photo	Location	Code	Description
1.~~4~~5	INFO		VENICE, CA
.~~5~~6	F.ELEV		NORTH VENICE F.ELEV SHOT. 3 FLOORS (ABV GRADE). FLAT ROOF. WOOD SIDING + STCO WALLS. 4 BALCONY DECKS ON F.ELEV EACH W. 2 SCUPPERS.
~~13~~ N1.1.1			MET ATT SCOTT OLKEN ON-SITE SAYS UNIT 1 BOT R, 2 BOT L 3 = TOP R, 4 = TOP L.
1.~~3~~ 1,2	SITE		BLDG @ CORNER OF N VENICE + SPEEDWAY.
3 ~~5~~	"		N VENICE TOWARD BEACH AND AWAY.
4 ~~7~~ 8	"		SPEEDWAY PAST UNIT (NORTH-ISH) AND AWAY (SOUTH-ISH)
9-10	R-ELEV		ON SPEEDWAY.
11	F-ELEV		ENTRY TO BLDG AT F/R CORNER RECESSED BLW BLDG OH.
12	"		CALL BOX @ ENTRY. UNIT A = HEITZ B = EPSTEIN C = LEVI/CLANCY D = ODELL
13-16	"		SHOTS AT ENTRY.
17	F ELEV.		ADDRESS VERIFICATION

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CONSTRUCTION
Services, Inc.

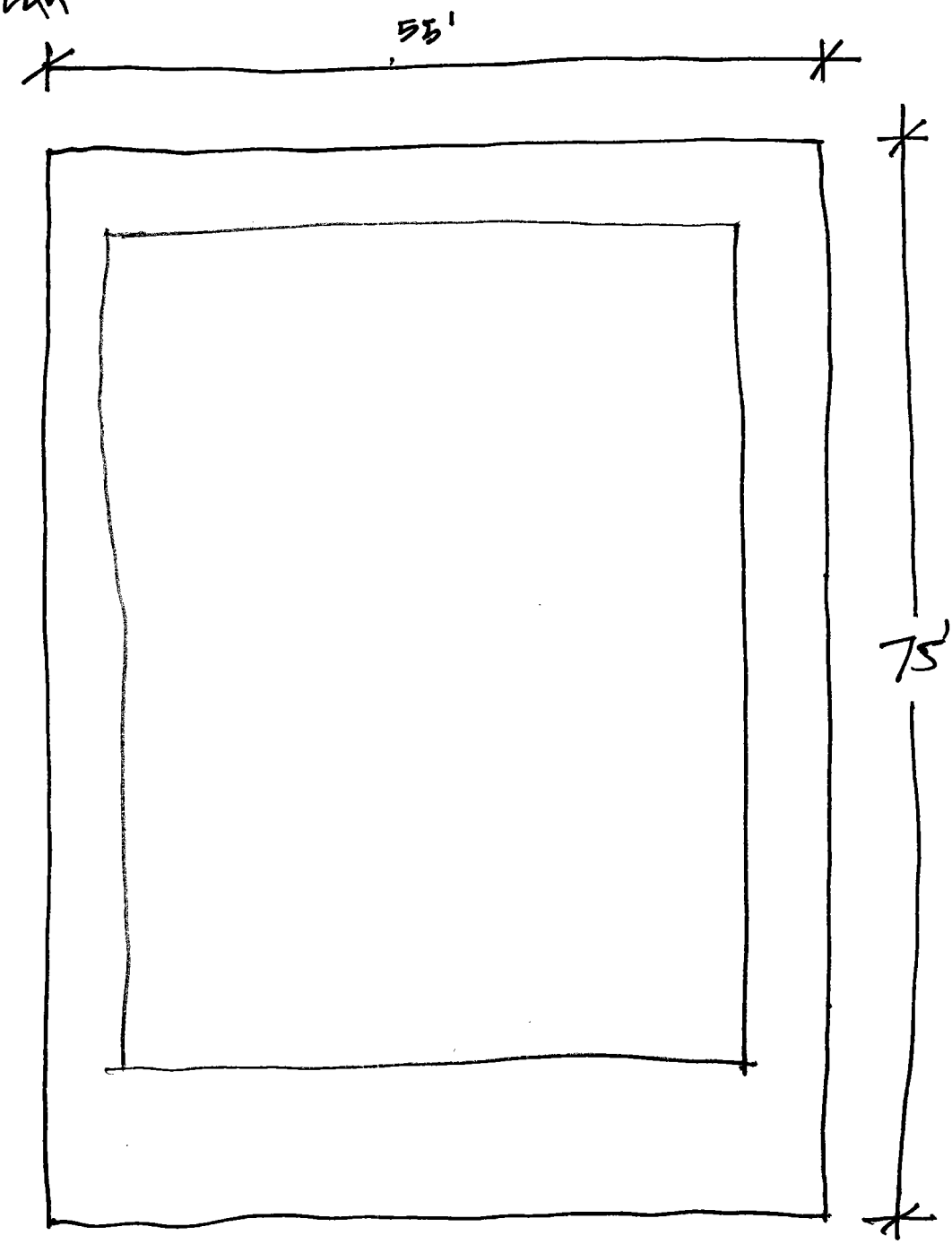
Job Name [redacted] Job # 06.295

Date 11/2/06 By PF Page 2

Photo	Location	Code	Description
N/.2.1			SITE MEASUREMENTS BY PACING. F = 55' & R = 75'. R SETBACK = 5' F SETBACK = 10'

A/2 SITE PLAN

SCALE +/- 1SQ = 3'



F. ELEV

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CONSTRUCTION
Services, Inc.

Job Name [redacted] Job # 06.295

Date 11/2/06 By PF Page 3

Photo	Location	Code	Description
N1.3.1			MEETING ON-SITE W- ATY + Owner · NO LIVING SPACE @ L1. only PARKING + STORAGE. LEVI HAS · A STORAGE unit OUTSIDE ELEVATOR + TO the LEFT. · ACCESS to units A + B ARE on 2ND FLOOR. UNITS ~~B+~~ ~~ACC~~ C + D ACCESS AT 3RD FLOOR. · THEY DISCUSSED VENTS THAT WERE on THE RIGH + LEFT ELEVATION. · OWNER TOOK OVER the BUILDING WHEN IT WAS MOSTLY COMPLETE IN 1988 / 89, THEN CONDO CONVERSION. · WATER DAMAGE @ SGD on F. ELEV IN LR · ALL FURNITURE IS ON WHEELS NOW BECAUSE IT WAS LEAKING SO BADLY. · IT IS STIL LEAKING (LAST TIME IT RAINED). · REPLACEMENT OF APPLIANCES DUE TO WATER FLOWING FROM VENTS INTO them. · ENTRY SWITCH TO LIGHTS DO NOT WORK. · WATER FLOWED OUT OF ALL 4 LIGHT FIXTURES. IN LR · there WAS A RIVER OF WATER flowing OUT OF UNIT + DOWN STAIRS. · CARPET WAS PULLED AS A RESULT OF LEAKAGE.

CONT ON 1.4.2

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Services, Inc.

Job Name [redacted] Job # 06.295

Date 11/2/06 By PF Page 4

Photo	Location	Code	Description
N1.4.1			ROOM SCHEDULE ENTRY LR DR HALL KIT F-DECK LAUNDRY BA 2 @ HALL MBR - HALL MBA MBR B-DECK DR CLOSET B-STAIR (COMMON W ODED) ROOF-DECK (UNIT C) @ B/R CORNER ROOF-DECK - ~~COMMON~~ COMMON B/L CORNER
N1.4.2			OWNER TOUR - CONT FROM 1.3.1 · ~~[illegible]~~ NOV 2004 HAS MOST OF WORST LEAKAGE. · C/G STAINS AT DR. THIS IS WHERE IT LEAKED LAST TIME. THIS WAS THE WORST SPOT. · WATER FALLS DOWN FROM (DRIPS) FROM INSIDE DR CLOSET. THERE IS A HEATER IN DR CLOSET. DEBRIS IN HEATER CLOSET IS NEW. · LAUNDRY ROOM LEAKAGE @ VENT. OWNER KEEPS A ~~BUCKET~~ BUCKET ON DRYER, WHICH HAS BEEN REPLACED. · KIT C/G. DAMAGE. WATER CASCADES DOWN THE BACK WALL. MOLD UNDER CUTTING BD. OVEN DOES NOT WORK. WATER POOLED ON COUNTERS

Pete Fowler
CONSTRUCTION
Services, Inc.

Job Name [redacted] Job # 06-295

Date 11/2/06 By PF Page 5

Photo	Location	Code	Description
N1.5.1			TOUR BY owner cont.
	BA 2		· SKYLIGHT LEAKS PER owner NO BIG LEAKS.
	BR 2		· WDO @ R. ELEV. CLG STAINS
	MBA		· CLG CAVED IN. ~~BEAM~~ FAN/LIGHT ~~FAN~~ Fixture DOES NOT WORK. CLG BEEN REPLACED. only OVER BA / TOILET AREA.
	MBR		SWITCH DOES NOT WORK ALL THE TIME. ROOF DECK IS ABOVE
	MBR-COSET		LEAKAGE IN CLOSET. EMPTY ~~BOXES~~ BOXES FOR CRYSTAL, ETC. WERE RUINED.
	B-DECK		DOES NOT DRAIN.
	~~R-DECK~~ ROOF DECK		→ ~~SEE~~ COMMON @ B/L CORNER
	ROOF		· NEW SKYLIGHTS ABV ODET UNIT ~~WERE~~ ROOFING @ THESE WAS REPLACED BY UNLICENSED ROOFER, SINCE THE SKYLIGHT INSTALLER DID SUCH A BAD JOB. · VENTS USED TO BE IN SIDES (R + L) OF ELEVATOR SHAFT. They ARE NO LONGER HERE.
	ROOF DECK		- UNIT C. GUARD RAIL NOT INSTALLED. 2 COATS OF WP MEMBRANE BY UNLICENCED ROOFER.

Pete Fowler
CONSTRUCTION
Services, Inc.

Job Name [redacted] Job # 06.295

Date 11/2/06 By PF Page 6

Photo	Location	Code	Description
1-18-~~19~~ 21			ELEVATOR @ L3. COMMON FOYER FOR UNIT C (LEVI) ON R AND UNIT D (ODET) ON L. F. ELEV ~~W~~ WDO.
1.22-~~23~~			ACCOUSTIC CLG W- 3 FIXT IN FOYER
1.23-4			UNIT C FROM FOYER. DOOR TO STAIRS @ L.
.25			FLOOR OF FOYER IS PAINTED
.26			STAIRWAY TO L OF UNIT C
.27-8	ENTRY		SOFFIT ABV W- ACCOUSTIC + LIGHT FIXT. SEE DIAGRAMS (LATER) CONC. FLR. 7'D x 4'W
29-33	LR		AT F/R CORNER. ACCOUSTIC CLG W- 4 LIGHT FIXT (CAN LIGHTS). CONC FLOOR. FIREPLACE ON R. ELEV. SGD AT F. ELEV. WDOS AT F AND R ELEV, INCL WDO AT 45-DEG ANGLE CORNER.
34-5	LR		BUILT-IN LOWERS W- FORMED (CONC. LIKE) TOP. 19'D x 17' W
36	LR		SGD FROM LR TO F. DECK. OPERATES W- DIFFICULTY.
37-38	"		SGD MEETS @ TOP, 1/2-INCH GAP AT BOTTOM. WATER DAMAGE AT BOT L OF SGD
39	"		SGD - CR AT TOP IN GWB AND SEP OF TRIM. OWNER SAYS WATER LEAKS FROM TOP.
40.1	F. DECK		4'D x 7' W. CEMENTITOUS TYPE W.P. DECK COATING. 2 SCUPPERS.

Pete Fowler
CONSTRUCTION
Services, Inc.

Job Name [redacted] Job # 06-295

Date 11/2/06 By PF Page 7

Photo	Location	Code	Description
42	F DECK		HL CR Runs F to B +/- @ 3' From R.
43-4	"		DECK SLOPES B/L to F/R
45-6	"		WOOD CAP REQ MAINTENANCE
47-8	F.ELEV		STCO COVERED ELEVATOR SHAFT Shot From unit C DECK.
49	F.DECK		STCO MEETS WOOD Trim @ ELEVATOR.
50	"		SM @ INT DECK PERIMETER IS RUSTED THROUGH
51	"		LIGHT FIXT DOES NOT OPERATE
52	"		Trim ABV PAINT PEELING.
53-7	F.ELEV	08.50	WDOS ARE ALUMINUM. LARGE FRAMES.
58-9	"	"	~~WIRES~~ DRILLED @ INTERIOR ON MANY UNITS
60	F/R.ELEV	"	GUBS ON BTM WINDOWS @ F/R.
61	DR		WDO AT R-ELEV. STAINING AT CLG. ABV R.ELEV WDO. 9' D x 18' W. 1 LIGHT CAN.
62	"		DINING ROOM AND DOORS to DR CLOSET.
63	DR CLOSET		32" W x 7' D Shot from DR
64-65	"		STAINS AT CLG Drop ABV DOOR
66-8	"		HEATER CLOSET INSIDE DR CLOSET NEW DEBRIS ON FLOOR (PER OWNER) SHOT AT CLG.
69-71	DR		CLG STAINS SURROUNDING CLG FAN & ABV SPEAKER. CONC FLR
72	R.ELEV		PLANTER BOX OUT SIDE DR WDO.
73-5	Laundry		VINYL FLR. VENT ABV DRYER LEAKS PER OWNER. 5.5' D x 6' W
76-7	"		STAINED CABINET BLW VENT, ABV R SIDE OF DRYER

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Job Name [redacted] Job # 06.295

Date 11/2/06 By PF Page 8

Photo	Location	Code	Description
1.78	Hall		4' W x 14' D. Conc. Flr. 1 CLG Fixture (CAN). BR 2 on R. BA 2 on L.
79-82	Kit		TILE FLR + COUNTERS. 14' W x 10' D. DAMAGED CLG + SOFFITS. OAK CABINETS STAINED + DAMAGED. TILE Splash 18" H, 30" @ COOK TOP. WDO AT R. ELEV
83-4	"		CLG DAMAGE
85	"		DAMAGED SOFFIT
86-7	"		" CABINET AT B
88-94	BA 2		TILE FLR MATCHES TILE STAIR. SKYLIGHT ABV. WOOD CABINET W- SOLID TOP + UNDERMOUNT SINK. 6' W x 7.5' D STAIR IS 3' D x 3.5 W
95-6	BR 2		OFF Hall W- R ELEV WDO. CARPET FLR. 13 x 14' W INCL. CLOSET.
97-100	"		CLG STAIN @ CAN LIGHT IN Center OF ROOM, AT BACK And FRONT.
101-2	R. ELEV		PLANTER BOX OUTSIDE BR 2 WDO
103-5	BR 2		MIRRORED CLOSET DOORS. BF DOOR TO HALL OP. WELL
106	MBR-Hall		SHOT FROM Hall. CONC. FLR. CAN LIGHT IN CLG. MBA on L. 12' D x 4' W
107-111	MBA		TILE FLR. STAIR AT E. DBL SINK. OAK CABINET. SOLID TOP W- UNDER MOUNT SINKS. SURFACE APPLIED FIXT MIRROR. TILE AT STAIR + TUB + FLR MATCH.

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Job Name [redacted] Job # 06-295

Date 11/2/06 By PF Page 9

Photo	Location	Code	Description
N1-9.1			MET RICHARD POZO, DEFENSE EXP @ 10:15 AM SEGURA, STEVE = ATT FOR OPED PHIL JOHN - ROOFER
112-113	Roof		SEE A/10. DEFENSE EXP WATER TEST LOCATION A.
114-133	"		GENERAL SHOTS, BEGIN @ F/R + MOVE CLOCKWISE. SEE A/10.
134-6	"		TEST A WATER IS PONDING AROUND DRAIN AT B-ELEV NEAR CHIMNEY.
N1-9-2			DISCUSSION W- ROOFER. GOT CAUGHT BY RAIN ON 1st DAY. SYSTEM IS A DOUBLE LAYER TORCH DOWN BY GTA. SPARTAN SUPPLY ON NATIONAL + WASHINGTON IN CULVER CITY.
137-42	"		TEST A CONCLUDED AFTER 15 MIN W- NO LEAKAGE EVIDENT. WATER PONDING > 1" DEEP.
143-4	"		11:40 AM TEST B TOP OF ELEVATOR SHAFT, WHICH WAS THE SITE OF PREVIOUS LEAKAGE.
N1-9-3			ROOFER SAYS PARAPET METAL IS NEW - HE DID IT. HE DID NOT KNOW WHAT W.P. PRODUCT WAS USED AT DECK AREAS. SAYS HE USED ABOUT 4 COATS.
145	"		TEST B: CHANGING POSITION FROM TIME TO TIME (PHOTO @ 10:57)

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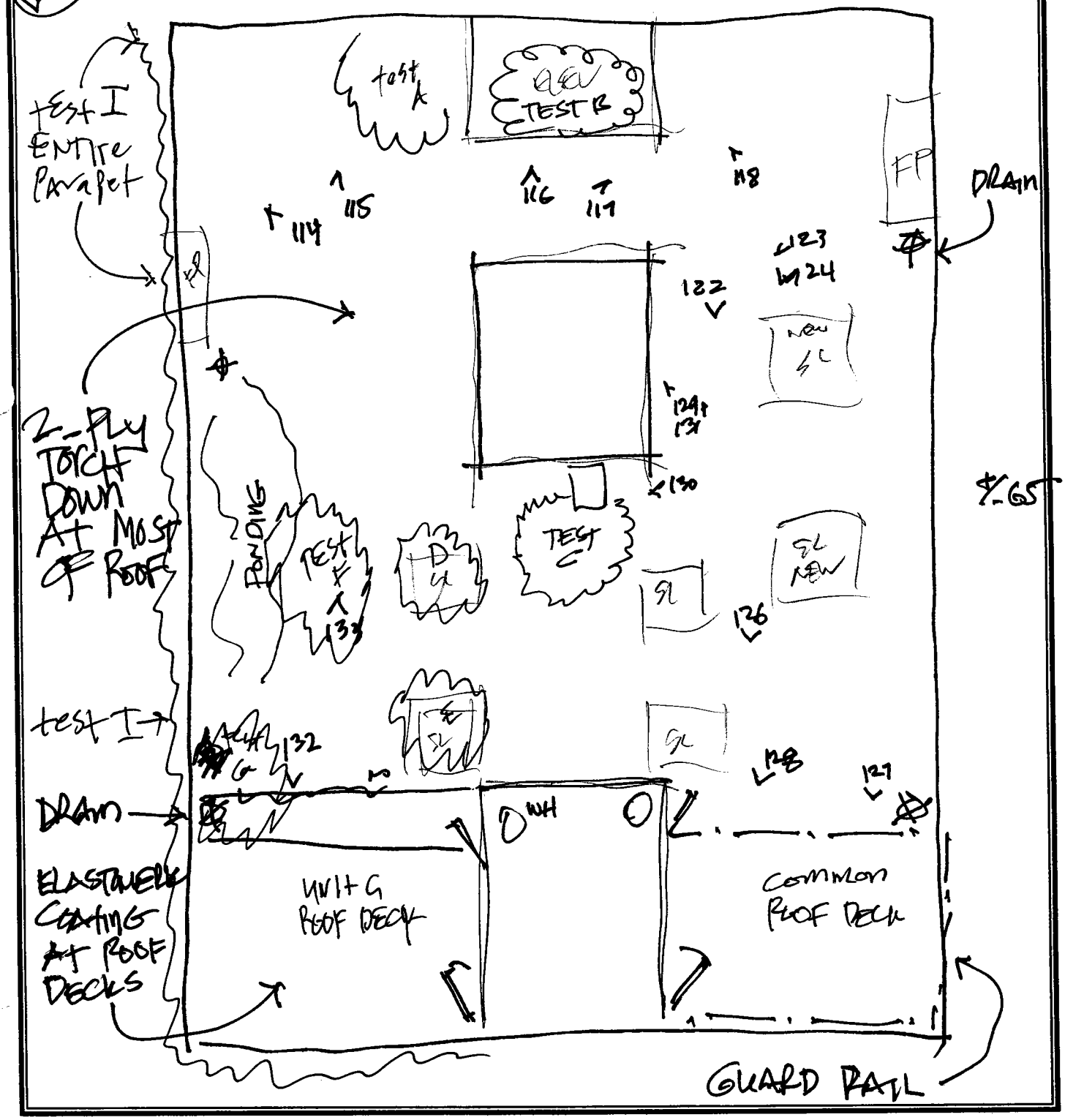
Job Name [redacted] Job # 06-295

Date 11/2/06 By PF Page 10

Photo	Location	Code	Description
A/10	ROOF PLAN - NTS		V F. ELEV

+/- 50



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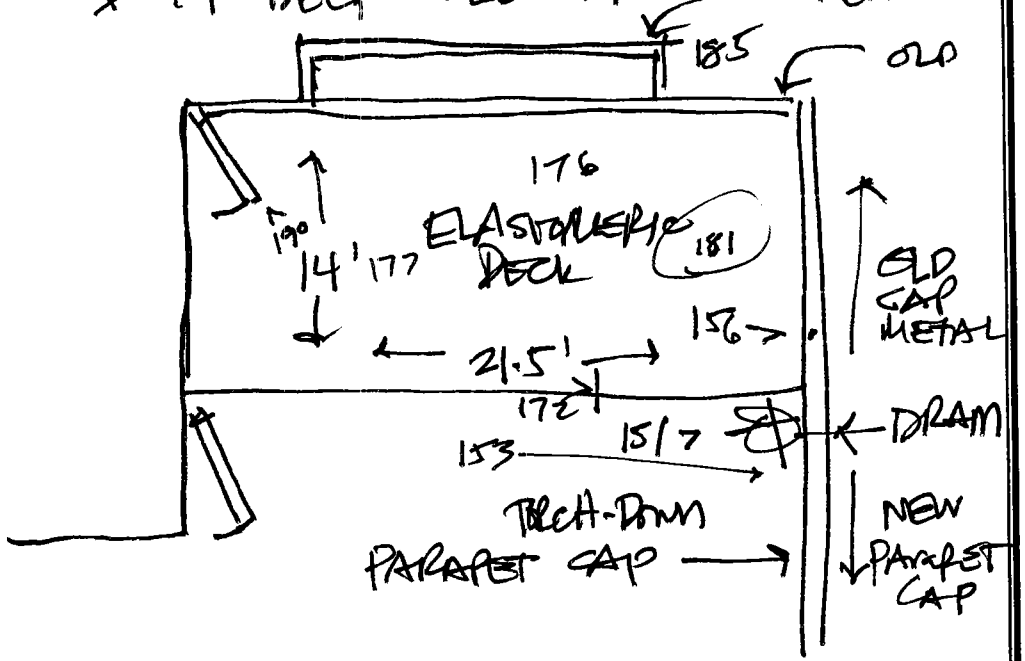
Job Name [redacted] Job # 06.295

Date 11/2/06 By PF Page 11

Photo	Location	Code	Description
1.146-8	~~Roof~~		UNIT C ROOF DECK IS 21.5'W x 14' DEEP. SEE A/11

A/11



149	"	TEST B CONCLUDED @ 10:55
150	"	TEST C BEGIN @ 10:55
151	"	ROOF DECK - UNIT C DETAIL. Drain Shots. SEE A/11.
152		TEST C CHANGE POSITION @ 11:00
153-55		ROOF DECK @ C CONT. A/11 PARAPET CAP NEW TOWARD F. OLD TO B. 3-4" OVER LAP. TOP NAILED. SEALANT APPLIED. TYP.
156-7	"	SEALANT OVER BASE PLATE
158-59	"	TEST C 1/04 LEAKING AT VENT. LEAKING AT VENT ABV DRYER IN LAUNDRY. EXP SAYS 7 min. INTO TEST

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Job Name [redacted] Job # 06.295

Date 11/2/06 By PF Page 12

Photo	Location	Code	Description
1.160-3	Laundry		LEAKS @ INT FROM TEST C
			TEST C WATER FROM VENT, WATER ON FLOOR AND DRYER.
164-7	Roof		VENT ABV. NO OBVIOUS LEAKAGE POINT @ T-TOP VENT.
168-170	"		Intrusion COULD BE AT CORNER. RUSTED ELSG B/W SIDING. LOTS OF MASTIC. ADJ T-TOP VENT ABV LEAK.
171	"		TEST D PICKED UP @ +/- 11:12 Further BACK FROM LOC C, AROUND SKYLIGHT (ABV BA2)
172-5	"		UNIT C - ROOF DECK A/11 transition FROM ROOF to DECK. ELAST. COATING PAINTED OVER EDGE (+/- 3" CURB).
176-80	"		A/11 COATING IS BUBBLING IN ALL AREAS
181-4	"		A/11 COATING DETERIORATING + PEELING IN ~~SEE~~ SEVERAL AREAS
N1.12.1			LEELA IS owner (sp?)
185-9	"		A/11. NEW S.M. AT ROOF EXTENSION OVER DECK @ B. transitions w- SEALANT
190-2	"		W.P. MISAPPLIED ONTO S.M., DOOR THRESHOLD, BOT OF SIDING.
193	"		TEST E 11:25 B SKYLIGHT OVER MBA. HE WAS MOVING BACK + FORTH. ENDED 11:26
194-5			TEST F 11:27 BEGIN

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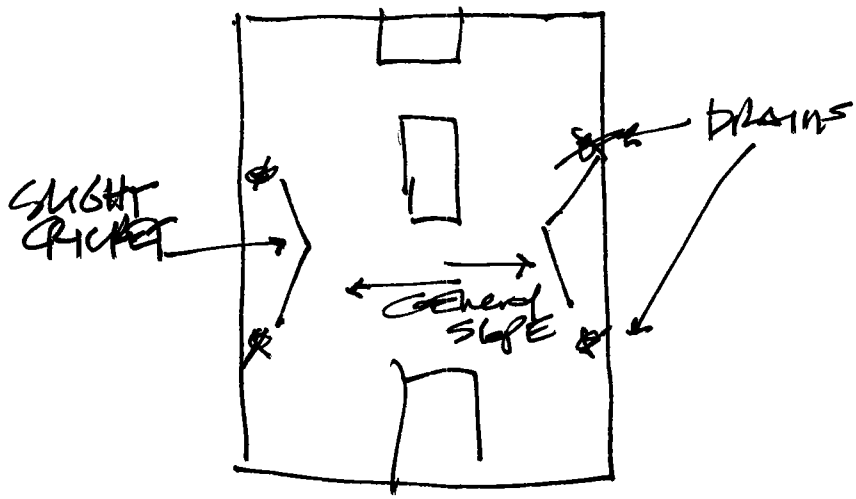
Job Name [redacted] Job # 06.295

Date 11/2/06 By PF Page 13

Photo	Location	Code	Description
A/13			



196-7	Roof	ELEVATOR RISER/HOOD. STCO PATCH AT REM'D VENTS.
198-200	"	CORNER W. DETERIORATED S.M. AND MASTIC.
201-4	"	NEW S.M. AT FRONT OF BLDG. INTERSECTION W- STCO.
205-6	"	11:38 TEST F CONTINUES. LOTS OF STANDING WATER.
207	"	SPIGOT AT DECK AREA UNIT C. ALSO ONE @ COMMON DECK. A/11
208-11	"	CHIMNEY ON R. ELEV NEAR F IS ABV + ADJ DR IN UNIT C. NEW METAL ABV. EXTG. BLW. MASTIC @ VERTICAL TRANSITION.
212-17	"	SIMILAR DETAILING ON B SIDE OF CHIMNEY. TOP OF ROOFING MATERIAL (CAP) SEALED W- MASTIC. VERTICAL JOINT SEALED W- MASTIC.
218		11:43 TEST F ENDS. NO LEAK.

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Job Name [redacted] Job # 06.295

Date 11/2/06 By PF Page 14

Photo	Location	Code	Description
1.219	ROOF		TEST G 11:45 AROUND DRAIN ADJ UNIT C DECK AREA.
1.220	"		PLYS CUT IN AROUND DRAIN ARE REVERSE ~~SLOPE~~ (ADVERSE TO SLOPE).
.221	"		CHIMNEY @ L. ELEV SIMILAR DETAILING AT R.
.222-4	"		SKYLIGHT NEAR F ON L. NEW. THERE ARE 2 SIMILAR. SURFACE NAILING. NO SEALANT. OPEN FASTENER HOLES W-OUT SEALANT
225	"		PEEL & STICK MEMBRANE VISIBLE BLW S.M.
226-9	"		TYPICAL
230-3	"		COMMON ROOF DECK W- GUARD RAILS. DECK SURFACE IS BAD, BUT NOT LIKE UNIT C. RAILS ARE FASTEND THROUGH ROOFING W- W.P. MEMBRANE OVER, OR THROUGH EXTG S.M. CAP W- SEALANT. DETAILS ARE TYP W- UNIT C.
234-7	"		W.H. CLOSET W- DETERIORATED ROOFING MEMBRANE TURNED DOWN AS FLSG OUT OF ROOM. MASTIC AS ONLY SEAL.
238	"		TEST G TO 12:00 NO LEAKAGE BLW
239-241	"		TEST H DECK TEST W- OUT SPRAY NOZZLE. 12:03 WATER RUNNING ON DECK.
242-3	"		PECULIAR STAINING AT METAL DOOR @ UNIT C ROOF DECK
244	Stair		SHOT DN FROM ROOF LEVEL
245	"		" UP " LANDING
246-7	"		" DN " " UNIT D ON L, C=R

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Job Name [redacted] Job # 06-295

Date 11/2/06 By PF Page 15

Photo	Location	Code	Description
1.248	MBR		13.5' D (NOT INCL CLOSET) + 21' W DOOR TO STAIR TO ROOF. SGD AT B. ELEV TO B-DECK. CARPET FLR. ACCOUSTIC CLG. FAN. CLG REGISTER.
249-54	"		CLOCK-WISE SHOTS. 2 SETS OF MIRRORED CLOSET DOORS W- TRIM.
255-9	"		CLOSET AT R-ELEV W- STAINS ON CLG AND B OF CLOSET DROP. RUNS 6 OR 8' FROM R ELEV TOWARD CENTER.
260-1	ROOF		TEST I RUNNING WATER ON ENTIRE PARAPET FOR 15 MINUTES - WALKING BACK + FORTH.
262-8	B-DECK		AT MBR. 1 SGD AND 1 SLIDING WOO R. ELEV. WATER DRIPPING FROM PARAPET TESTING ABV. LOOKS LIKE ELASTOMERIC TYPE WP. PAINT OVERSPRAY FROM SIDING ONTO DECK. CONDITION OF S.M. + TRIM IS MUCH BETTER THAN F-DECK.
268-73	KIT		12:28 8 OR 10 DROPS OF WATER ON KIT FLOOR. POINTED OUT BY OWNER. I COULD NOT FIND THE SOURCE AND DID NOT WANT TO FURTHER DESTROY THE CLG.
274	ROOF		TEST I CONCLUDED @ 12:41
M.15.1			MET KEITH - OCCUPANT OF UNIT D.
275	LR/DR		UNIT C TOWARD F. ELEV

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Job Name [redacted] Job # 06-295

Date 11/2/06 By PF Page 16

Photo	Location	Code	Description
1-278-9	UNIT D		LR/Dr toward kit
1-16-1			3 LEAKS per owner. (KEITH) B. ELEV in MBR MBA ABV TUB.
			All were BAD BEFORE, HAPPENED AGAIN SINCE the NEW ROOF HAS INSTALLED.
1-280-2	MBr - UNIT D		General photos PLUS LEAK LOCATION
283-5			DAMAGED GWB AT CLG - WALL. water RUNS ON WDO. STAINS AT WALL.
286-89	Br 2 - UNIT D		LEAK location IN B-CORNER of ~~UNIT~~ Br 2 IN UNIT D. Line OF DAMAGED CLG RUNS from L. ELEV toward R.
290-4	MBR - UNIT D		Previous leak location BLW DRAIN. CLG DAMAGE INSIDE CLOSET ON B SIDE OF closet DROP. GWB IS BUBBLED. THIS IS JUST BEHIND the POST BETW 2 OPENINGS.
295-8	MBA - UNIT D		BUBBLED PAINT ON CLG ABV TUB.
299/301	Elevator		LEAK Damage @ CLG.

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Job Name [redacted] Job # 06-295

Date 11/2/06 By PF Page 17

Photo	Location	Code	Description
1.302-3	Studio		L1 LOBBY.
304.5	~~Storage~~		L1 Storage to L of Hall on Lobby
306.7	a		WDOS AT F.ELEV OF STUDIO/~~Storage~~
308.9	"		SINK ~~left~~ BACKS of W- VARIOUS STUFF. SPATTERS on CONTENTS of ROOM. NO LEAKAGE IN THIS AREA.
310	Hall L1		STAINS OUTSIDE ~~Her~~ ~~Storage~~ STUDIO UNIT Hard water RUNNING DOWN.
311	Hall L1		DOOR TO F.ELEV TO R OUTSIDE ~~Her~~ ~~Storage~~ STUDIO
312 - 313	Garage		1st Level Hall from LOBBY. UNIT A storage on R. Garage ACCESS TO UNIT C TO END ~~OF~~
314-15	Storage		ADJ TO GARAGE ~~Man~~ DOOR IS ~~Her~~ STORAGE UNIT. NO DAMage
316-7	~~Hall L1~~		SHOT toward L ELEV from UNIT C STORAGE. All other GARAGE ~~Man~~ DOORS.
318-28	Garage		UNIT C GARAGE. ~~Several~~ WATER DAMAGE AT CLG & WALLS. LOTS OF WATER PER owner.
329	R.ELEV		SHOT from B
330-1	B.ELEV		" " B/R. UNIT C IS AT 3RD FLR on L, UNIT D IS " " " R.
332	B/R		B/R CORNER IS Speedway + CONTERCT.
333-5	B.ELEV		FROM B/L
336-9	B/L		DRAIN IS FLOWING, PROBABLY from testing that is CONTINUING OVER L SIDE OF BLDG @ ROOF.

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Job Name [redacted] Job # 06-295

Date 11/2/06 By PF Page 18

Photo #	Location	Code	Description
1.338-4	L-ELEV		Shot From B. +/- 5' SET BACK w- planter.
342-3	R-ELEV		trim @ Planter on L2 w- Deteriorated trim.
344	F-Yard		Low wall. Hedge.
345-7	"		SHOTS inside Gate AT R to L
348-9	F-ELEV		trim on L2 Deck on L in Poor Cond.

[redacted]

06-295

Site Inspection Photographs

PF 01.325 - 01.349
November 02, 2006

PF 01.325 PF 01- 325.jpg Garage: unit C garage - water damage at ceiling and walls. Lots of water per owner.

PF 01.326 PF 01- 326.jpg Garage: unit C garage - water damage at ceiling and walls. Lots of water per owner.

PF 01.327 PF 01- 327.jpg Garage: unit C garage - water damage at ceiling and walls. Lots of water per owner.

PF 01.328 PF 01- 328.jpg Garage: unit C garage - water damage at ceiling and walls. Lots of water per owner.

PF 01.329 PF 01- 329.jpg Right elevation: shot from back.

PF 01.330 PF 01- 330.jpg Back elevation: shot from back/right - unit C is at third floor on left, Unit D is at third floor on right.

PF 01.331 PF 01- 331.jpg Back elevation: shot from back/right - unit C is at third floor on left, Unit D is at third floor on right.

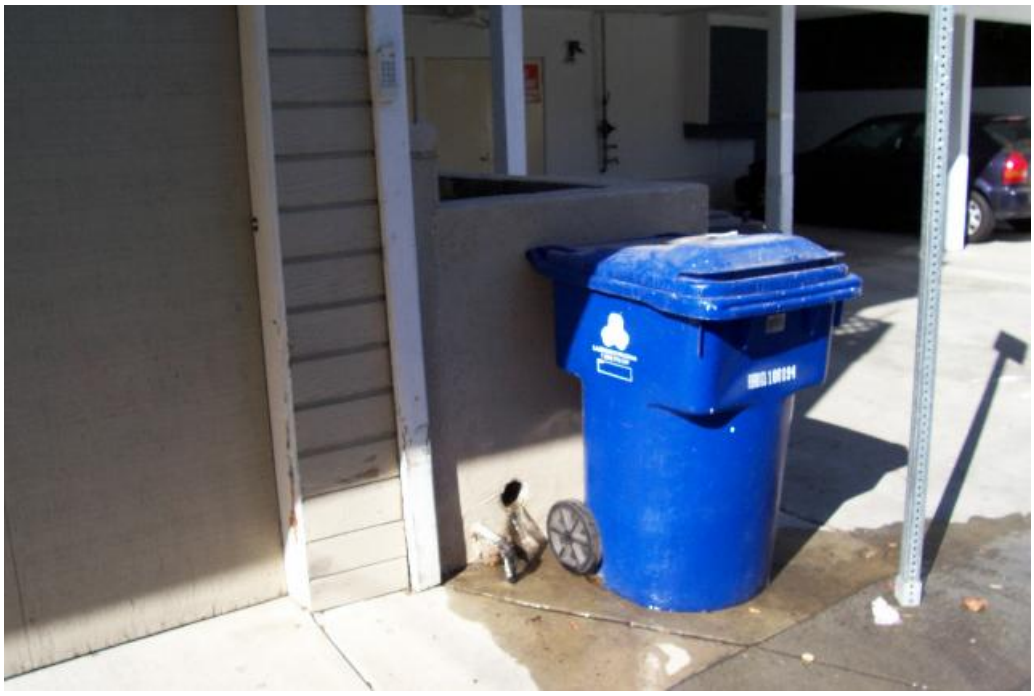
PF 01.332 PF 01- 332.jpg Back/right elevation: back/right corner is Speedway and Center Court.

PF 01.333 PF 01- 333.jpg Back elevation: from back/left.

PF 01.334 PF 01- 334.jpg Back elevation: from back/left.

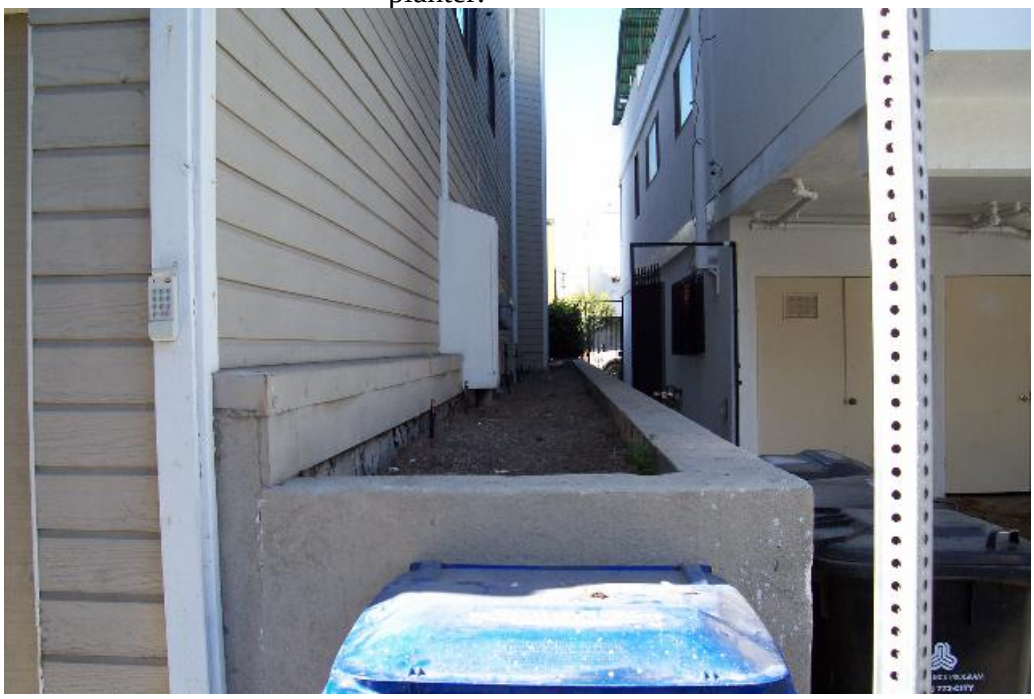
PF 01.335 PF 01- 335.jpg Back elevation: from back/left.

PF 01.336 PF 01- 336.jpg Back left elevation: drain is flowing, probably from testing that is continuing over left side of building and roof.



PF 01.337 PF 01- 337.jpg Back left elevation: drain is flowing, probably from testing that is continuing over left side of building and roof.

PF 01.338 PF 01- 338.jpg Left elevation: shot from back. +/- 5' set back with planter.



PF 01.339 PF 01- 339.jpg Left elevation: shot from back. +/- 5' set back with planter.

PF 01.340 PF 01- 340.jpg Left elevation: shot from back. +/- 5' set back with planter.

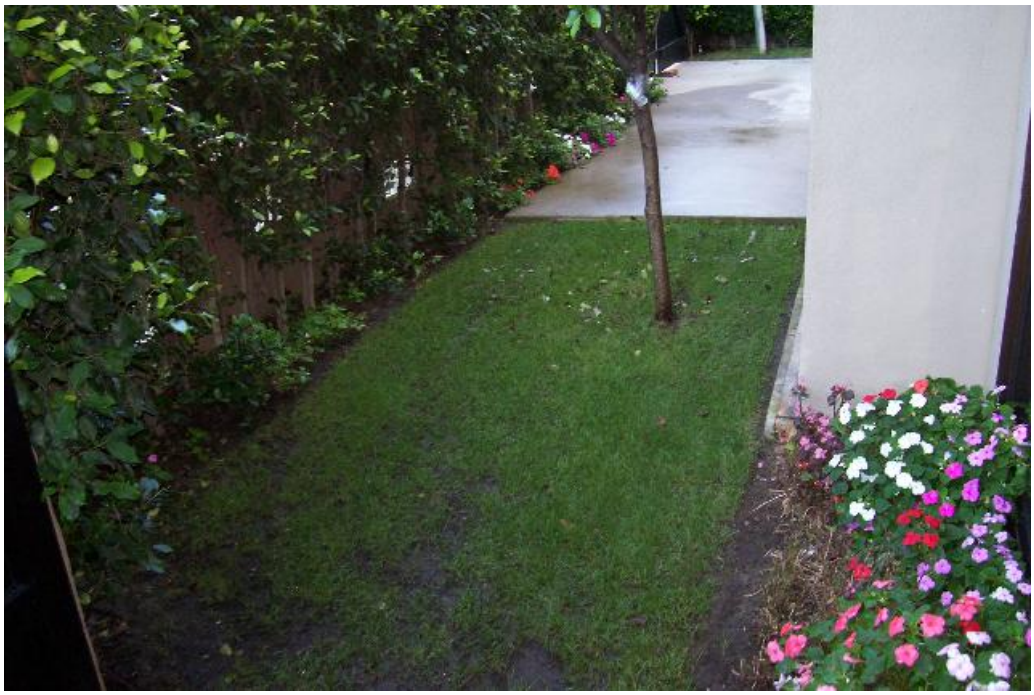
PF 01.341 PF 01- 341.jpg Left elevation: shot from back. +/- 5' set back with planter.

PF 01.342 PF 01- 342.jpg Right elevation: trim at planter on level 2 with deteriorated trim.

PF 01.343 PF 01- 343.jpg Right elevation: trim at planter on level 2 with deteriorated trim.

PF 01.344 PF 01- 344.jpg Front yard: low wall - hedge.

PF 01.345 PF 01- 345.jpg Front yard: shots inside gate at right to left.



PF 01.346 PF 01- 346.jpg Front yard: shots inside gate at right to left.

PF 01.347 PF 01- 347.jpg Front yard: shots inside gate at right to left.

PF 01.348 PF 01- 348.jpg Front elevation: trim on level 2 deck on left in poor condition.

PF 01.349 PF 01- 349.jpg Front elevation: trim on level 2 deck on left in poor condition.

[redacted]

Issues List with Discussion

1B. Issues-Discussion Matrix

#	CSI	Item	Issue / Description	Photo Refer	
1	**01 93**		**Maintenance**		
2		A	ATY Question: Your opinion, based on your inspection, as to whether there are any signs of damage due to roof leakage in any other areas of the building?		Yes: Levi unit on top floor, neighboring unit on top floor, and garage at first floor.
3		B	ATY Question: Your opinion as to the usual and customary frequency, if any, of common area drain clean out needed to avoid drain backup in lower level areas?		Roof maintenance should occur periodically and as problems arise. The frequency should increase as the roof gets closer to the end of it's service life.
4		C	Deck Surfaces Need Maintenance	PF01.041-PF01.51	Private decks require maintenance.
5		D	Paint Needs Maintenance	PF01.040-050,	Repainting of building exterior is required.
6		E	Rusting Sheet Metal	PF01.040-PF01.050	Repainting of building exterior is required and some sheet metal is deteriorated to the point that replacement is required. If maintenance is not performed the rate of deterioration will increase.
7	**07 25**		**Waterproofing - Decks (Roof-Top Decks)**	PF 01.127-128, 132	
8		A	Bubbling Deck Coating	PF01.135-PF01-141	Remove and replace deck coating with new, in strict conformance with manufacturer's recommendations and in conformance with specialty design.
9		B	Peeling Deck Coating	PF 01.182	See 07 25 A
10		C	Deteriorating Deck Coating	PF 01.183	See 07 25 A
11		D	Improper Transitions from Deck to Roof	PF 01.172	See 07 25 A
12		E	Unworkmanlike application (coating material on building walls)	PF 01.190	See 07 25 A
13		F	Improper transitions at doors	PF 01.191	See 07 25 A
14		G	Deck coating not applied with regard to installation instructions. (Note: Roofer stated he did not know what water-proofing product was used at deck areas, says he used about four coats.)		See 07 25 A
15	**07 30**		**Roofing**		
16		A	ATY Question: What risks are inherent in failing to promptly replace a failing flat roof?		Leakage
17		B	ATY Question: What standard of care exists with respect to the selection of a roofing contractor to perform a roof replacement?		Contractor's licensing requires a minimum level of professionalism in contracting and this minimum threshold was not met.
18		C	ATY Question: What is the importance, if any, of whether or not the contractor is licensed?		Unlicensed contracting is against the law (for good reason).
19		D	ATY Question: What is the importance, if any, of whether or not a permit is obtained for the work?		Municipal permits are a minimum standard for the verification of contract performance in significant construction projects.
20		E	ATY Question: What is the importance, if any, of the financial wherewith all of the contractor?		Guarantees from unlicensed, uninsured contractors with no assets who do bad work and/or cause damage are meaningless. If there is nothing to lose, then there is no incentive to perform to the contract / performance requirements.
21		F	ATY Question: What is the standard of care regarding supervision or inspection of a contractor's work by an HOA board?		There needs to be some mechanism for verification that the work conforms with some reasonable standard.
22		G	ATY Question: What is the standard of care, if any, regarding having standby tarps available to protect residents when a roof is removed during the rainy season?		Protection of the property during re-roofing is always the responsibility of the roofer. Damage caused by a lack of protection during rains are the responsibility of the roofer.
23		H	ATY Question: Based on your inspection, was the roof installed in a manner meeting standards in the industry?		No. The roof leaks and there are many variations from the manufacturer's instructions.
24		I	ATY Question: Based on your inspection, does the roof still leak?	PF01.158-PF01.163	Yes.
25		J	Leaks at Levi Unit - 2004-Present		Remove and replace with new in strict conformance with manufacturer's recommendations and in conformance with specialty design.
26		K	Leaks During and After Testing	PF 01.158	Repair interior damage.

For mediation purposes only.
Protected under all applicable evidence codes.

Issues List with Discussion

#	CSI	Item	Issue / Description	Photo Reference	Discussion
27		L	Leaks at Neighboring Unit	PF 01.280	Repair interior damage.
28		M	Leaks at Elevator	PF 01.299	Repair interior damage.
29		N	Deteriorated Sheet Metal	PF 01.170, PF 01.198	See 07 30 J
30		O	Lack of Transition Flashing at Parapet Walls		See 07 30 J
31		P	Membrane: Ponding and end laps are not staggered minimum 3 fee	PF 01.137	See 07 30 J
32		Q	Inside and Outside Corners: Do not conform with manufacturer's instructions	PF 01.198, PF 01.211	See 07 30 J
33		R	Penetrations: Do not conform with roofing manufacturer's instructions		See 07 30 J
34		S	Edge Flashing: Does not conform with roofing manufacturer's instructions		See 07 30 J
35		T	Counter Flashing: Deteriorated and does not conform with manufacturer's instructions		See 07 30 J
36		U	Roof to Wall: Does not conform with manufacturer's instructions	PF 01.166	See 07 30 J
37		V	Parapet Cap: Does not conform with industry or manufacturer's standards	PF 01.154, 153, 188	See 07 30 J
38		W	Parapet Cap: Lack of Integration of Stucco and Siding	PF 01.202, PF 01.209	See 07 30 J
39		X	Deck to Roof Transition: Does not conform with manufacturer's instructions	PF 01.148	See 07 30 J
40		Y	Water Heater Closet transitions Without Flashing	PF 01.234	See 07 30 J
41	**08 50**		**Skylights**	PF01.222-PF01.229	
42		A	ATY Question: Whether or not the skylights installed by Odett above his unit 4 (or D) interfere with the development of that area for roof deck use?		The skylights sit in the middle of the roof section.
43		B	ATY Question: Whether or not the skylights caused to be installed by Odett are improvements that require city permit?		The skylights do require a permit.
44		C	ATY Question: Whether or not engineering consultation should have occurred before the cutting through and removal of ceiling joists to accommodate the skylights?		May have; depending on the condition of the framing and the requirements of the building department.
45		D	ATY Question: Whether or not it would be feasible to remove the skylights installed by Odett and repair the section of the roof through which they were cut and the estimated cost of doing so?		The skylights can be removed, framing repaired, permit procured for repairs etc.
46		E	ATY Question: Whether or not the skylights installed by Odett invade the space reserved to Plaintiff in the First Amendment to the Condominium Plan for roof deck purposes?		Yes, the skylights invade the space reserved to Plaintiff for roof deck purposes.
47	**09 00**		**Interior Finishes**		
48		A	Interior ceiling damage at Levi Unit	PF01.069-71, 083-085, 236-259	Repair interior damage. See estimates by others.
49		B	Cabinet damage	PF01.076-PF01.087	Repair interior damage. See estimates by others
50		C	Unit 'D' drywall damage at ceiling, walls and windows	PF01.284-PF01.289	Repair interior damage. See estimates by others
51		D	Water Damage at Level 1 Unit C Garage	PF01.318-PF01.328	Repair interior damage. See estimates by others
52		E	Damaged Furniture	Per Owner	Repair interior damage. See estimates by others
53		F	Damaged Appliances	Per Owner	Repair interior damage. See estimates by others
54	**50 21**		**Estimating/ Budgeting**		
55		A	ATY Question: Your opinion as to the cost of repair of Plaintiff's Unit 3 necessitated by water damage from roof leakage?		See Repair Estimate Summary document
56	**99 99**		**Other**		
57		A	Vents removed from side wall of elevator shaft at roof level and plastered over	PF 01.196	Investigate issue and repair as necessary.
58		B	Electrical Problems	Per Owner	Included in the interior estimates
59		C	Deteriorating Stucco Patches at Elevator Shaft	PF 01.196	See Issue 99 99 A and Stucco repair in estimate.
60		D	Sliding Glass Door at Front Elevations operates with difficulty	PF 01-036	Included in the interior estimates
61		E	HVAC Closet Requires Cleaning and Service	PF 01-067	Included in the interior estimates
62		F	Plumbing Problems at Level 1 Studio	PF 01.308	Investigate issue and repair as necessary.

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1C. Scope and Estimate

Preliminary Estimate

Pete Fowler Construction Services, Inc.

Project Number: 06-295
Project Name: [redacted]
Address: [redacted] CA

Date: 4/3/2007
Estimator: Pete Fowler/Tim Hewett

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Preliminary Estimate Contents

1 Preliminary Estimate Summary
2 Preliminary Estimate Details
3 Labor Rates
4 Quantity Take Off
5 Calls, Sub-Bids, Materials

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Estimate Summary

#	CSI #	Description	Notes	Qty.	Unit	Direct Cost Total	Project Cost Total
1	01 74 00	Cleaning and Waste Management		1	ls	$ 1,030.58	$ 2,189.72
2	06 10 00	Rough Carpentry		1	ls	$ 4,132.54	$ 8,780.59
3	07 25 00	Waterproofing - Decks		1	ls	$ 3,566.16	$ 7,577.18
4	07 30 00	Roofing		1	ls	$ 10,979.53	$ 23,328.69
5	07 46 00	Siding		1	ls	$ 3,430.16	$ 7,288.22
6	07 61 00	Flashing and Sheet Metal		1	ls	$ 8,789.70	$ 18,675.86
7	08 10 00	Doors and Frames		1	ls	$ 693.58	$ 1,473.68
8	08 50 00	Windows (Skylights)		1	ls	$ 720.58	$ 1,531.05
9	09 24 24	Stucco		1	ls	$ 1,119.97	$ 2,379.65
10	09 90 00	Painting and Coating		1	ls	$ 3,303.19	$ 7,018.44
11	22 00 00	Plumbing		1	ls	$ 2,611.16	$ 5,548.05
12	23 00 00	Heating, Ventilating, and Air-Conditioning (HVAC)		1	ls	$ 2,350.00	$ 4,993.15
13	26 00 00	Electrical		1	ls	$ 2,350.00	$ 4,993.15
14	32 31 00	Fences and Gates		1	ls	$ 12,028.51	$ 25,557.50
15	ALT #1	Investigate vent leaks at elevator shaft		1	ls	$ 2,000.00	$ 4,249.49
16	ALT #2	Reframe two large skylights		1	ls	$ 1,155.22	$ 2,454.54
17	ALT #3	Investigate plumbing at Level 1 studio		1	ls	$ 2,500.00	$ 5,311.86
18							
19		**Direct Cost Total**				$62,760.88	$ 133,350.82
20							
21		General Conditions		8.0%		$5,020.87	
22		Subtotal				$67,781.75	
23							
24		Contractor's Overhead		8%		$5,422.54	
25		Contractor's Profit		10%		$6,778.17	
26		Insurance & Bond		2%		$1,355.63	
27							
28		Subtotal				$81,338.10	
29		Contingency on Construction Costs		10%		$8,133.81	
30		**Total Estimated Construction Costs**				$89,471.91	
31							
32		**Other Project Costs:**					
33		Construction Management		1	ls	$15,000.00	
34		Architectural / Drafting / Design		1	ls	$20,000.00	
35		Engineering Design		1	ls	$0.00	
36		Testing & Inspection		1	ls	$5,000.00	
37		Permits & Fees		2%		$1,789.44	
38		Relocation	Not Included				
39							
40		Subtotal of Other Project Costs				$41,789.44	
41		Contingency on Other Project Costs		5%		$2,089.47	
42		**Total of Other Project Costs**				$43,878.91	
43							
44		**Total Estimated Project Cost**				**$133,350.82**	**$133,350.82**

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Estimate Details

								Unit Cost				Direct Cost				Total	Total
Line	CSI #	Description	Notes / Ref.	Qty	Unit	Crew	Hrs	Labor	Material	Other	Subc.	Labor	Material	Other	Subc.	Cost	Item
1																	
2	01 74 00	Cleaning and Waste Management										-	-	-	-	$0.00	$1,030.58
3		Final Clean Up		1	ea	RC1&3	8	680.58	50.00	300.00		681	50	300	-	$1,030.58	
4												-	-	-	-	$0.00	
5	06 10 00	Rough Carpentry										-	-	-	-	$0.00	$4,132.54
6		Protect surrounding area		1	ea	RC1&3	1	85.07	10.00			85	10	-	-	$95.07	
7		Repair damaged sheathing/framing at roof area	allowance	1	ea	RC1&3	8	680.58	200.00			681	200	-	-	$880.58	
8		Repllace sheathing at deck area		360	sf	RC1&3	16	3.78	2.00			1,361	720	-	-	$2,081.16	
9		Repair damaged framing at wall planes	allowance	1	ea	RC1&3	4	340.29	100.00			340	100	-	-	$440.29	
10		Frame curb at water proof deck		1	ea	RC1&3	5	425.36	100.00			425	100	-	-	$525.36	
11		Clean area		1	ea	RC1&3	1	85.07	25.00			85	25	-	-	$110.07	
12												-	-	-	-	$0.00	
13	07 25 00	Waterproofing - Decks										-	-	-	-	$0.00	$3,566.16
14		Protect surrounding area		1	ea	RC1&3	1	85.07	25.00			85	25	-	-	$110.07	
15		Remove existing decking		360	sf	RC1&3	6	1.42	0.50			510	180	-	-	$690.44	
16		Prepare substrate		360	sf	RC1&3	8	1.89	0.50			681	180	-	-	$860.58	
17		Install new elastomeric deck coating	Pg 155 Sweets 2007	360	sf	SUB	0	0.00			5.00	-	-	-	1,800	$1,800.00	
18		Clean area		1	ea	RC1&3	1	85.07	20.00			85	20	-	-	$105.07	
19												-	-	-	-	$0.00	
20	07 30 00	Roofing										-	-	-	-	$0.00	$10,979.53
21		Protect surrounding area		1	ea	RC1&3	4	340.29	50.00			340	50	-	-	$390.29	
22		Remove HVAC, electrical, plumbing as needed	See Below	1	ea	RC1&3	0	0.00				-	-	-	-	$0.00	
23		Remove existing roofing	O=dump	3,325	ea	RC1&3	16	0.41		0.50		1,361	-	1,663	-	$3,023.66	
24		Repair substrate as needed	See Rough Carpentry	1	ea	RC1&3	0	0.00				-	-	-	-	$0.00	
25		Install flashing as needed	See Sheet Metal	1	ea	RC1&3	0	0.00				-	-	-	-	$0.00	
26		Install mineral fiber cant-strip	allowance-Sweets pg168	500	lf	SUB	4	0.68			1.70	340	-	-	850	$1,190.29	
27		Install new 2-ply roofing	allowance-Sweets pg168	3,325	ea	SUB	0	0.00			1.80	-	-	-	5,985	$5,985.00	
28		Clean area		1	ea	RC1&3	4	340.29	50.00			340	50	-	-	$390.29	
29												-	-	-	-	$0.00	
30	07 46 00	Siding										-	-	-	-	$0.00	$3,430.16
31		Protect surrounding area		1	ea	RC1&3	1	85.07	5.00			85	5	-	-	$90.07	
32		Remove siding		536	sf	RC1&3	3	0.48		0.50		255	-	268	-	$523.22	
33		Install flashing as needed	See Sheet Metal	1	ea	RC1&3	0	0.00				-	-	-	-	$0.00	
34		Install weather resistive barrier	Sweets pg 156	536	sf	SUB	0	0.00			1.80	-	-	-	965	$964.80	
35		Install new siding	RS Means pg 074-3	536	sf	SUB	0	0.00			3.25	-	-	-	1,742	$1,742.00	
36		Clean area		1	ea	RC1&3	1	85.07	25.00			85	25	-	-	$110.07	

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Estimate Details

Line	CSI #	Description	Notes / Ref.	Qty	Unit	Crew	Hrs	Unit Cost Labor	Unit Cost Material	Unit Cost Other	Unit Cost Subc.	Direct Cost Labor	Direct Cost Material	Direct Cost Other	Direct Cost Subc.	Total Cost	Total Item
37												-	-	-	-	$0.00	
38	07 61 00	Flashing and Sheet Metal										-	-	-	-	$0.00	$8,789.70
39		Protect surrounding area		1	ea	RC1&3	1	85.07	20.00			85	20	-	-	$105.07	
40		Install cap		335	lf	RC1&3	5	1.27	3.00			425	1,005	-	-	$1,430.36	
41		Install drip edge		126	lf	SUB	2	1.35	2.00			170	252	-	-	$422.15	
42		Install L-metal		126	lf	SUB	3	2.03	2.00			255	252	-	-	$507.22	
43		Install counter flashing		126	lf	RC1&3	4	2.70	2.00			340	252	-	-	$592.29	
44		Install pitch pockets/fill		30	ea	RC1&3	3	8.51			40.00	255	-	-	1,200	$1,455.22	
45		Re - Install fire place cap		2	ea	RC1&3	2	85.07	10.00			170	20	-	-	$190.15	
46		Install sill pan		4	ea	RC1&3	3	63.80	100.00			255	400	-	-	$655.22	
47		Install miscellaneous flashing	allowance	1	ea	RC1&3	24	2,041.74	1,000.00			2,042	1,000	-	-	$3,041.74	
48		Clean area		1	ea	RC1&3	4	340.29	50.00			340	50	-	-	$390.29	
49												-	-	-	-	$0.00	
50	08 10 00	Doors and Frames										-	-	-	-	$0.00	$693.58
51		Protect surrounding area		1	ea	RC1&3	0.5	42.54	5.00			43	5	-	-	$47.54	
52		Remove existing doors and frames - save		4	ea	RC1&3	3	63.80				255	-	-	-	$255.22	
53		Set sill pan	See Sheet Metal	4	ea	RC1&3	0	0.00				-	-	-	-	$0.00	
54		Re-install doors and frames		4	ea	RC1&3	4	85.07	2.00			340	8	-	-	$348.29	
55		Clean area		1	ea	RC1&3	0.5	42.54				43	-	-	-	$42.54	
56												-	-	-	-	$0.00	
57	08 50 00	Windows (Skylights)										-	-	-	-	$0.00	
58		Protect surrounding area		1	ea	RC1&3	0.5	42.54	5.00			43	5	-	-	$47.54	$720.58
59		Remove existing - save		6	ea	RC1&3	2	28.36				170	-	-	-	$170.15	
60		Install BUR	See Roofing	6	ea	RC1&3	0	0.00				-	-	-	-	$0.00	
61		Reinstall skylights		6	ea	RC1&3	5	70.89	5.00			425	30	-	-	$455.36	
62		Clean area		1	ea	RC1&3	0.5	42.54	5.00			43	5	-	-	$47.54	
63												-	-	-	-	$0.00	
64	09 24 23	Stucco										-	-	-	-	$0.00	$1,119.97
65		Protect surrounding area		1	ea	RC1&3	1	85.07	10.00			85	10	-	-	$95.07	
66		Remove stucco		120	sf	RC1&3	5	3.54		1.00		425	-	120	-	$545.36	
67		Install flashings	See Sheet Metal	1	ea	RC1&3	0	0.00				-	-	-	-	$0.00	
68		Install 3 coat stucco	Sweets pg 211	120	sf	SUB	0	0.00			3.60	-	-	-	432	$432.00	
69		Clean area		1	ea	RC1&3	0.5	42.54	5.00			43	5	-	-	$47.54	
70												-	-	-	-	$0.00	
71	09 90 00	Painting and Coating										-	-	-	-	$0.00	$3,303.19
72		Protect surrounding area		1	ea	RC1&3	4	340.29	25.00			340	25	-	-	$365.29	
73		Prime/Paint siding	Sweets pg 233 & 234	536	sf	SUB	0	0.00			0.64	-	-	-	343	$343.04	

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Estimate Details

								Unit Cost				Direct Cost				Total	Total
Line	CSI #	Description	Notes / Ref.	Qty	Unit	Crew	Hrs	Labor	Material	Other	Subc.	Labor	Material	Other	Subc.	Cost	Item
74		Prime/Paint stucco	Sweets pg 234	1,296	sf	SUB	0	0.00		0.50	0.89	-	-	648	1,153	$1,801.44	
75		Prime/Paint doors	Sweets pg 231 O=Eqp	140	sf	SUB	0	0.00			1.05	-	-	-	147	$147.00	
76		Prime/Paint frames	Sweets pg 231	62	lf	SUB	0	0.00			1.63	-	-	-	101	$101.06	
77		Prime/Paint F.P. cap		2	ea	RC1&3	4	170.15	50.00			340	100	-	-	$440.29	
78		Clean area		1	ea	RC1&3	1	85.07	20.00			85	20	-	-	$105.07	
79												-	-	-	-	$0.00	
80	22 00 00	Plumbing										-	-	-	-	$0.00	$2,611.16
81		Remove/cap existing	allowance	1	dy	RC1&3	0	0.00			500.00	-	-	-	500	$500.00	
82		Reset/repair existing	allowance	1	dy	RC1&3	0	0.00	50.00		500.00	-	50	-	500	$550.00	
83		Install new drains to existing at decks		2	dy	RC1&3	16	680.58	100.00			1,361	200	-	-	$1,561.16	
84												-	-	-	-	$0.00	
85	23 00 00	HVAC										-	-	-	-	$0.00	$2,350.00
86		Remove existing	allowance	1	dy	RC1&3	0	0.00			750.00	-	-	-	750	$750.00	
87		Reset existing	allowance	2	dy	RC1&3	0	0.00	50.00		750.00	-	100	-	1,500	$1,600.00	
88												-	-	-	-	$0.00	
89	26 00 00	Electrical										-	-	-	-	$0.00	$2,350.00
90		Remove/cap existing	allowance	1	dy	RC1&3	0	0.00			750.00	-	-	-	750	$750.00	
91		Reset/repair existing	allowance	2	dy	RC1&3	0	0.00	50.00		750.00	-	100	-	1,500	$1,600.00	
92												-	-	-	-	$0.00	
93	32 31 00	Fences and Gates										-	-	-	-	$0.00	$12,028.51
94		Protect surrounding area		1	ea	RC1&3	0	0.00	13.00			-	13	-	-	$13.00	
95		Remove existing - dispose		38	lf	RC1&3	4	8.96				340	-	-	-	$340.29	
96		Install new curb	See RC/Roofing	1	ea	RC1&3	0	0.00				-	-	-	-	$0.00	
97		Re-install railing		76	lf	SUB	0	0.00	150.00			-	11,400	-	-	$11,400.00	
98		Set/fill pitch pockets	See Sheet Metal	1	ea	RC1&3	0	0.00				-	-	-	-	$0.00	
99		Touch up painting		1	ea	RC1&3	3	255.22	20.00			255	20	-	-	$275.22	
100		Clean area		1	ea	RC1&3	0	0.00				-	-	-	-	$0.00	
101												-	-	-	-	$0.00	
102	ALT #1	Investigate Vent Leaks										-	-	-	-	$0.00	$2,000.00
103		Investigate leaks	allowance	1	ls	SUB	0	0.00			2,000.00	-	-	-	2,000	$2,000.00	
104												-	-	-	-	$0.00	
105	ALT #2	Reframe Skylights										-	-	-	-	$0.00	$1,155.22
106		Structural investigation	allowance	1	ls	SUB	0	0.00			500.00	-	-	-	500	$500.00	
107		Reframe skylights	allowance	2	ea	RC1&3	3	127.61	200.00			255	400	-	-	$655.22	
108												-	-	-	-	$0.00	
109	ALT #3	Investigate Plumbing										-	-	-	-	$0.00	$2,500.00
110		Investigate plumbing	allowance	1	ls	SUB	0	0.00			2,500.00	-	-	-	2,500	$2,500.00	
111																	
112		Total										17,057	17,487	2,999	25,218	$62,760.88	$62,760.88

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Labor Rates - S-CA 2005

	Code	Unit	Rate	Description												Asst.				
				Laborer			Carpenter			Conc. Fin.			Roofer			Project	Project			
				App	Jou	For.	App	Jou	For.	App	Jou	For.	App	Jou	For.	Manager	Manager	Supt.	Average	
																		.		
1	**Cost Unburdened**			12.00	15.00	22.50	15.00	30.00	40.00	15.00	30.00	35.00	15.00	25.00	30.00	25.00	45.00	40.00	26.30	
2	Health Care	$0	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3	Vacation	$0	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	Education	$0.00	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5	**Fica**	7.65%	%	0.92	1.15	1.72	1.15	2.30	3.06	1.15	2.30	2.68	1.15	1.91	2.30	1.91	3.44	3.06	2.01	
6	State	0.00%	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	**Federal Unemp**	0.80%	%	0.10	0.12	0.18	0.12	0.24	0.32	0.12	0.24	0.28	0.12	0.20	0.24	0.20	0.36	0.32	0.21	
8	**Futa**	8.00%	%	0.96	1.20	1.80	1.20	2.40	3.20	1.20	2.40	2.80	1.20	2.00	2.40	2.00	3.60	3.20	2.10	
9	SDI	0.00%	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	**State Unemp**	3.50%	%	0.42	0.53	0.79	0.53	1.05	1.40	0.53	1.05	1.23	0.53	0.88	1.05	0.88	1.58	1.40	0.92	
11	**Workman's Comp BLW $21**	48.00%	%	5.76	7.20		7.20			7.20						1.25	2.25		5.14	
12	**Workman's Comp ABV $21**	16.00%	%			3.60		4.80	6.40		4.80	5.60						6.40		
13	**Roofer BLW $21**	75.00%	%										11.25							
14	**Roofer ABV $21**	50.00%												12.50	15.00					
15	**Vehicle**	$0	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
16	**Liability Insurance**	10.00%	%	1.20	1.50	2.25	1.50	3.00	4.00	1.50	3.00	3.50	22.50	37.50	45.00	2.50	4.50	4.00	9.16	
17																				
18	**Burdened $/Hr.**			**21.35**	**26.69**	**32.84**	**26.69**	**43.79**	**58.38**	**26.69**	**43.79**	**51.08**	**51.74**	**79.99**	**95.99**	**33.74**	**60.73**	**58.38**	**79.10**	
19	Percent Overhead			44%	44%	31%	44%	31%	31%	44%	31%	31%	71%	69%	69%	26%	26%	31%	69.38%	**Crew Cost**
20																				
21																			**Crew Cost**	**per Hour**
22																			**per Hour**	**w/ 20% O&P**
23	**Demolition**																			
24	**D 1**				1														**$26.69**	**$32.03**
25	**D 2**			1	1														**$48.05**	**$57.66**
26	**D 3**				2														**$53.39**	**$64.06**
27	**D 4**			1	2														**$74.74**	**$89.69**
28	**D 5**				2			1											**$97.17**	**$116.60**
29	**D 6**			1	2			1											**$118.52**	**$142.23**
30	**D 7**			2	2														**$96.09**	**$115.31**
31	**D 8**			2	2			2											**$183.66**	**$220.40**
32																				
33	**Site Work**																			
34	**SW 1**			1															**$21.35**	**$25.62**
35	**SW 2**			2															**$42.71**	**$51.25**
36	**SW 3**			1	1														**$48.05**	**$57.66**
37	**SW 4**			2	1														**$69.40**	**$83.28**
38	**SW 5**			0	1			1			1								**$114.26**	**$137.12**

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Labor Rates - S-CA 2005

	Code	Unit	Rate	Description												Asst.				
				Laborer			Carpenter			Conc. Fin.			Roofer			Project	Project			
				App	Jou	For.	App	Jou	For.	App	Jou	For.	App	Jou	For.	Manager	Manager	Supt.	Average	
39	**SW 6**			0	2			2			2								**$228.53**	**$274.23**
40	**SW 7**						1	1											**$70.48**	**$84.57**
41	**SW 8**						1	2											**$114.26**	**$137.12**
42	**SW 9**						2	2											**$140.96**	**$169.15**
43	**SW 10**				1			1											**$70.48**	**$84.57**
44	**Concrete**																			
45	**C 1**										1								**$43.79**	**$52.54**
46	**C 2**									1	1								**$70.48**	**$84.57**
47	**C 3**									1	2	1							**$165.35**	**$198.41**
48	**C 4**							1			3								**$175.14**	**$210.17**
49	**C 5**				1			2			3								**$245.62**	**$294.74**
50	**C 6**			1	1		1	1		1	3								**$276.57**	**$331.89**
51	**C 7**			1	1		1	2		1	2	1							**$327.65**	**$393.18**
52	**Rough Carpentry**																			
53	**RC 1**						1												**$26.69**	**$32.03**
54	**RC 2**							1											**$43.79**	**$52.54**
55	**RC 3**								1										**$58.38**	**$70.06**
56	**RC 4**						1	2											**$114.26**	**$137.12**
57	**RC 5**						2	2											**$140.96**	**$169.15**
58	**RC 6**						3	3	1										**$269.81**	**$323.78**
59	**RC 7**				1		2	2											**$167.65**	**$201.18**
60	**RC 8**				2		2	2	1										**$252.72**	**$303.26**
61	**Finish Carpentry**																			
62	**FC 1**						1												**$26.69**	**$32.03**
63	**FC 2**							1											**$43.79**	**$52.54**
64	**FC 3**								1										**$58.38**	**$70.06**
65	**FC 4**						1	2											**$114.26**	**$137.12**
66	**FC 5**						2	2											**$140.96**	**$169.15**
67	**FC 6**						2	2	1										**$199.34**	**$239.20**
68	**Roofing**																			
69	**RF 1**												1						**$51.74**	**$62.09**
70	**RF 2**													1					**$79.99**	**$95.99**
71	**RF 3**														1				**$95.99**	**$115.18**
72	**RF 4**												1	2					**$211.72**	**$254.06**
73	**RF 5**												2	2					**$263.46**	**$316.15**
74	**RF 6**												2	2	1				**$359.45**	**$431.33**

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Quantity Take Off

Line	CSI	Description	Notes / Ref.	L	Dimensions W	H	Total	Units
1	07 25 00	Waterproofing - Decks		20	18		360	sf
2								
3	07 30 00	Roofing		65	50		3250	
4				5	15		75	
5							3325	sf
6								
7	07 46 00	Siding	Roof Access	18		8	144	
8				18		8	144	
9				10		8	80	
10							0	
11			FP	8		3	24	
12			FP	8		3	24	
13							0	
14			Pop up	12		3	36	
15				12		3	36	
16				8		3	24	
17				8		3	24	
18							536	sf
19								
20	07 61 00	Flashing and Sheet Metal						
21		A.	CAP					
22			roof edge - main				75	
23							75	
24							60	
25							60	
26								
27			roof edge - lower				5	
28							5	
29							15	
30								
31			fence curb				20	
32							20	
33							335	
34								
35		B.	DRIP EDGE					
36			Roof access				18	
37							18	
38							10	
39								
40			pop up - stucco				12	
41							12	
42							8	
43							8	
44								
45			pop up - siding				12	
46							12	
47							8	
48							8	
49							126	lf
50								

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Quantity Take Off

Line	CSI	Description	Notes / Ref.	L	Dimensions W	H	Total	Units
51		C.	L-Metal					
52			Roof access				18	
53							18	
54							10	
55								
56			pop up - stucco				12	
57							12	
58							8	
59							8	
60								
61			pop up - siding				12	
62							12	
63							8	
64							8	
65							126	lf
66								
67		D.	Counter Flashing					
68			Roof access				18	
69							18	
70							10	
71								
72			pop up - stucco				12	
73							12	
74							8	
75							8	
76								
77			pop up - siding				12	
78							12	
79							8	
80							8	
81							126	lf
82								
83		E.	Pitch Pockets for Fence				15	
84							15	
85							30	ea
86								
87		F.	F.P. Cap				2	ea
88								
89								
90		G.	Sill Pan at doors				4	ea
91								
92		H.	Miscellaneous Allowance				200	lf

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Quantity Take Off

Line	CSI	Description	Notes / Ref.	L	Dimensions W	H	Total	Units
93								
94								
95	08 10 00	Doors and Frames						
96			Roof Access Doors				4	doors
97			2'6"x7=17.5 x2 sides =35sf					
98			35sf x 4=140sf				140	sf
99								
100			Frames				15.5	
101							15.5	
102							15.5	
103							15.5	
104							62	
105								
106	08 50 00	Windows	Skylights remove and reset				???	
107								
108	09 24 23	Stucco						
109			pop up	12		3	36	
110				12		3	36	
111				8		3	24	
112				8		3	24	
113							120	sf
114								
115	09 90 00	Painting and Coating						
116			pop up - stucco	12		3	36	
117				12		3	36	
118				8		3	24	
119				8		3	24	
120			elevator shaft to ground	12		32	384	
121				8		32	256	
122								
123			Roof Access - siding	18		8	144	
124				18		8	144	
125				10		8	80	
126							0	
127			FP - siding	8		3	24	
128			FP - siding	8		3	24	
129							0	
130			Pop up - siding	12		3	36	
131				12		3	36	
132				8		3	24	
133				8		3	24	
134							1296	sf
135	32 31 00	Fences and Gates						
136							18	
137							20	
138							18	
139							20	
140							76	lf

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Calls, Sub-Bids, Materials

	1
Date:	
Time:	
Sub-Contractor:	See Attached Sweets and Means References
Material Supplier:	
Contact:	
Street Address:	
Phone #:	
Fax #:	
e-mail	
Bidding Sections:	
Bidding Section #'s:	
Bid Amount:	
With Tax and Delivery:	
With Waste:	
Per Unit (SF, LF, CY, Etc.)	
Inclusions:	

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Pete Fowler
CONSTRUCTION
Services, Inc.

Opinion Letter

1D. Opinion Letter with Recommendations

Date:	April 3, 2007
To:	[redacted] Oxnard, CA 93036 T: 805-[redacted]
From:	Pete Fowler Constructior
Project:	[redacted] PFCS Project # 06-295
Regarding:	Opinion Letter
Note:	Confidential Attorney-Client and Attorney Work Product. Protected under all applicable evidence codes.

Dear Mr. Jones and Mr. Branch:

Pete Fowler Construction Services, Inc. (PFCS) has analyzed documents and information related to roofing, waterproofing and water damage at [redacted], CA. Our findings are summarized in this preliminary report.

I. Project Summary

The project is a 3-level, 4-unit condominium building near the beach in Venice, CA constructed around 1988-89. The building occupies the entire lot except for minimum set-backs (5 to 10-feet) at all four elevations. Level 1 consists of individual parking garages accessed at the back elevation, storage rooms, a studio and an entry foyer to access the elevator to the second floor (Units A and B or 1 and 2) and the third floor (Units C and D or 3 and 4). The building has a low slope roof, roof-top deck areas, wood siding and stucco exterior building walls, and a slab-on-grade foundation. There are four balcony decks on front and four on the back elevations.

Ms. [redacted]i is the owner of the top right unit (Unit C or 3). She purchased the building before completion and sold three of the units as condominiums. Low-slope roof replacement work and replacement of the roof-top deck areas was performed by an unlicensed roofer hired by the HOA during the winter of 2004-05. [redacted] reported dramatic leakage into her unit. There was additional leakage into the neighboring unit and the garage during the winter of 2005. This was due in part to the removal of the old roof and lack of protection during the rains. Although some repairs have been made the roof continues to leak into Units C and D (3 and 4). The owner is suing the HOA due to the leaks. There is interior damage and Ms. Levi has received estimates in the range of approximately $100,000 for the interior repairs.

Summarized Timeline

04/07/89	[redacted] receives title to all units.
03/12/04	[redacted]t has air conditioning installed on roof (over Levi protest) by Continental Refrigeration Heating & Air, Inc.
11/21/04	Roof tear-off begins (per [redacted]). Rain falls. [redacted] video shows torrent of water infiltration.
11/23/04	[redacted] has un-permitted skylights installed in roof by Buzzell Design, an unlicensed contractor, despite violation of roof deck right warnings by Levi.
9/12/06	[redacted] files First Amended Complaint against Odett, et al.

Observations

PFCS attended a visual inspection of building on November 2, 2006. At that time PFCS observed opposing party's expert's (Richard Pozo) water testing on the roof. Our on-site investigation included visual inspection of the building exteriors and the interiors of the two top floor units.

ROOF AND ROOF TOP DECK AREAS: The contractor who performed the work appears to have made no attempt to conform to industry or manufacturer's installation standards (see PFCS Issues List for details). The roof leaked dramatically during the rainy season of 2004 during the roofing work, and continues to leak to this day, as evidenced by the defense expert's testing in November 2006. In addition, the building is not being maintained in a way that will lead to acceptable performance going into the future.

INTERIORS: We observed damage from leakage at both interior units we visited. The Levi unit has not been repaired since the rains of 2004 and shows signs of significant water intrusion. The neighboring unit has been repaired but shows signs of continued leakage.

II. Analysis

Documents Reviewed

1. First Amended Complaint
2. Answer to First Amended Complaint (HOA, Espsteins, Heitz)
3. Repair estimates obtained by Plaintiff
4. First Amendment to the Condominium Plan
5. CD-Rom of roof, water leakage, skylights and air conditions photographs

Issues Summary – See Issues List for more details

1. Maintenance
2. Waterproofing – Decks (Roof-Top Decks)
3. Roofing
4. Skylights
5. Interior Finishes
6. Estimating/Budgeting
7. Other

Conclusions

The owner received proposals from several contractors for the interior repairs which are all approximately $100,000. In addition, we estimate the cost to replace the roofing and roof top decks to be approximately $133,000, including the design and coordination of this complicated work.

Recommendations

1. Hire a construction manager to coordinate all of the work of the various parties (Owners, Designer(s), Bidders, Contractor(s), Inspection, Manufacturer's Warrantee, Third Party Inspection, etc.)
2. Compose initial budgets and coordinate financing.
3. Hire an architect, roof consultant or building consultant to design the repairs.
4. Design and specify repairs. Compose a complete set of project drawings and documents.
5. Update Budget and initial (conceptual) schedule.
6. Pre-Qualify contractors for availability, interest, qualifications, references, etc.
7. Compose RFP documents and put the project out to bid
8. Contract with a single general contractor or multiple prime contractors including scope, costs, schedule, and terms. Coordinate this work with HOA's legal counsel.
9. Procure permits with the local municipality
10. Coordinate work
11. Coordinate third party inspection service or designer to verify the work is being installed in conformance with the design.
12. Coordinate final inspection.
13. Collect all project documentation and package for reference.
14. Compose maintenance program and coordinate.

III. PFCS Documents and Deliverables

1. OB Document Index
2. 5A Inspection Documentation
3. 5C Issues List
4. 5D PFCS Repair Estimate
5. 5E Estimate Summary

Aerial Image

Aerial 01.001 [redacted], CA 90291-8903

PF 01.006 PF 01- 006.jpg Front elevation: North Venice front elevation shot. Three floors (above grade), flat roof, wood siding and stucco walls. There are four balcony decks on front elevation, each with two scuppers.

PF 01.133 PF 01- 133.jpg Roof: General shot.

PF 01.135 PF 01- 135.jpg Roof test A: water is ponding around drain at right elevation near chimney.

PF 01.070 PF 01- 070.jpg Unit C dining room: Ceiling stains surrounding ceiling fan and above speaker. The floor is concrete.

PF 01.083 PF 01- 083.jpg Unit C kitchen: Ceiling damage.

PF 01.162 PF 01- 162.jpg Unit C laundry room: leaks at interior from test C. Test C water from vent - water on floor and dryer.

PF 01.097 PF 01- 097.jpg Unit C bedroom #2: ceiling stain at can light in center of room, at back and front.

2A. Plan and Proposal

[redacted] Residence

[redacted] *OR 97034*

OFFICES

CALIFORNIA

949-240-9971

931 Calle Negocio, Ste J
San Clemente, CA 92673

CA License #713760

OREGON

503-660-8670

9320 SW Barbur Blvd, Ste 170
Portland, OR 97219

OR License #173960

GENERAL INQUIRY

info@petefowler.com
www.petefowler.com

Pete Fowler CONSTRUCTION Services, Inc.

Project #15-165

Pete Fowler
CONSTRUCTION
Services, Inc.

Proposal

Date:	04/10/2015
To:	[redacted] [redacted] [redacted] Portland, OR 97204 T: ([redacted] E: [redacted]
From:	Pete Fowler Construction Services, Inc.
Project:	[redacted] Residence (PFCS 15-165)
Regarding:	Property Inspection, Analysis, Summary and Recommendations

Dear Mr. J[redacted]

Thank you for considering PFCS to assist you with your project.

Attached please find our Consulting Agreement and Fee Schedule for your review, approval and signature.

We propose a fixed price for the Level 1: Property Inspection, Analysis, Summary and Recommendations described in detail on the following page.

For further work, we can establish budgets, fixed price milestones, or charge our time by the hour, in 1/10-hour (6 minute) increments, only for the time incurred on behalf of your project. We can begin work immediately upon receipt of the signed agreement and the retainer check for $1,500. As an alternative, we can take the retainer via credit card via our Client Access site. Please call our office to make arrangements and receive instructions for this.

We look forward to working with you. If you have any questions, please do not hesitate to call us.

Regards,
Pete Fowler
T: (503) 660-8670

Proposal

Level 1: Property Inspection, Analysis, Summary and Recommendations (19.0 hours)

- Document & Information Management (2.0 hours)
- Meetings / Interviews / Telephone Conferences with Key People (2.0 hours)
- Visual Inspection (9.0 hours)
- Analysis (2.0 hours)
- Inspection Summary Memo with Recommendations (4.0 hours)

The total budget for these activities is $2,900.00

Consulting Agreement

This Agreement is effective this ___ day of _____, ____ between Pete Fowler Construction Services, Inc. ("Consultant") and [redacted] ("Client").

1. TERM OF CONTRACT

This Agreement shall become effective upon execution by both parties and shall continue in effect until terminated as provided in this Agreement.

2. SERVICES TO BE PERFORMED BY CONSULTANT

1. Specific Services: Conditional upon receipt of an executed Agreement and receipt of the deposit as specified herein, the Consultant agrees to perform services related to analysis of the condition, construction and development of certain real property as specified in the proposal attached hereto ("Proposal"). The parties agree that the scope and nature of the services will be adjusted from time to time dependent upon initial analysis and testing. The Client specifically acknowledges and agrees that the Consultant services do not include design, construction or building inspector services and that the Consultant shall not be considered an architect, building contractor, engineer or building inspector when providing its services, nor shall the Consultant assume or render on behalf of the Client any duty or responsibility which may otherwise be performed by any of these professionals.
2. Method of Performing Services: The Consultant will determine the method, details, and means of performing the above-described services. The Consultant shall expend its best efforts to meet the objectives of Client and, in doing so, strive to preserve the integrity of Client in its relationships. The Consultant agrees to abide by any policies and procedures established by Client during the term of this Agreement.

3. COMPENSATION

1. Rate: Client agrees to pay Consultant the amount of $1,500.00, payable upon execution of this Agreement ("deposit") and such additional amounts as set forth in the Proposal or schedule of fees and costs attached hereto. The deposit shall be held and applied to the final invoice to the services and costs.
2. Date for Payment of Compensation: Client agrees to pay Consultant in full within thirty (30) days of receipt of an invoice, together with a service charge in the amount of One Percent (1%) per month for any amounts not paid when due.
3. Testimony: Should any employee, independent contractor or party who may have a relationship with Consultant be required to testify in any deposition, mediation, arbitration, judicial proceeding, administrative proceeding or otherwise, arising out of or related to the services provided in this Agreement, Client agrees to pay Consultant its fees and costs based upon its then current schedule of fees.

4. OBLIGATIONS OF CONSULTANT

1. Non-Exclusive Relationship: Consultant may represent, perform services for, and contract with as many additional clients, persons.
2. Limited Liability: Consultant will not be liable to Client, or to anyone who may claim any right due to a relationship with Client, for any acts or omissions in the performance of services under the terms of this Agreement or on the part of the employees or agents of Consultant unless those acts or omissions are due to gross (we can choose to omit "gross") negligence or willful misconduct. Client shall indemnify and hold Consultant free and harmless from any obligations, costs, claims, judgments, attorney's fees, and attachments arising from, growing out of, or in any way connected with the services rendered to Client under the terms of this Agreement, unless Consultant is judged by a court of competent jurisdiction to be guilty of gross negligence or willful misconduct.
3. Assignment: Neither this Agreement nor any duties or obligations under this Agreement may be assigned by Consultant without the prior written consent of Client.

5. OBLIGATIONS OF CLIENT

1. Cooperation of Client: Client agrees to comply with all reasonable requests of Consultant and provide access to all documents and real property reasonably necessary to the performance of Consultant's duties under this Agreement.
2. Release and Indemnity: Client has been specifically advised and understands that the art and profession of forensic consultation is sometimes subjective and interpretive, and that this process may involve the parties in litigation, arbitration or other claims processes relating to the quality or accuracy of such work, both now and in the future. In making this agreement the Client expressly releases independent contractors, and other representatives, including but not limited to Peter D. Fowler, and keep them free and harmless from any and all claims of liability for damages, whether merited or not, of any kind which are related to the performance of their work involving the real property which is the subject of this agreement, whether such claims are based on express or implied contractual liability, negligence, or indemnity of any kind. The Client agrees to defend and indemnify the Consultant, its directors, officers, shareholders and employees, agents, independent contractors, and other representatives from any and all expense, including but not limited to Consultant's attorney fees, costs, expert costs, judgments, or awards, which any may incur in defending, or as a result of any and all claims relating to such work. Notwithstanding such indemnity for all types of actions, in the event of a judgment or award based upon the gross (we can choose to omit "gross") negligence or willful misconduct by any such released party, the Client does not release such party from liability therefore. The Client voluntarily enters into this agreement in order to secure the performance of Pete Fowler Construction Services, Inc. under the terms of this Agreement.
3. Assignment: Neither this Agreement nor any duties or obligations under this Agreement may be assigned by Client without the prior written consent of Consultant.

6. TERMINATION OF AGREEMENT

1. Notwithstanding any other provision of this Agreement, either party may terminate this Agreement at any time by giving five (5) days written notice to the other party. Unless otherwise terminated as provided in this Agreement, this Agreement will continue in force for a period of three (3) years.

7. GENERAL PROVISIONS

1. Notices: Any notices required to be given under this Agreement by either party to the other may be affected by personal delivery in writing or by mail, registered or certified, postage prepaid with return receipt requested. Mailed notices must be addressed to the parties at the addresses appearing in the introductory paragraph of this Agreement, but each party may change the address by giving written notice in accordance with this paragraph. Notices delivered personally will be deemed communicated as of actual receipt; mailed notices will be deemed communicated as of the day of receipt or the fifth day after mailing, whichever occurs first.
2. Entire Agreement of the Parties: This Agreement supersedes any and all agreements, either oral or written, between the parties with respect to the rendering of services by Consultant for Client and contains all of the representations, covenants, and agreements between the parties with respect to the rendering of those services. Each party to this Agreement acknowledges that no representations, inducements, promises, or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which is not contained in this Agreement, and that no agreement, statement, or promise not contained in this Agreement will be valid or binding. Any modification of this Agreement will be effective only if it is in writing signed by the party to be charged.
3. Partial Invalidity: If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions will continue in full force and effect without being impaired or invalidated in any way.
4. Attorney's Fees: If any legal action or arbitration, including an action for declaratory relief, is brought to enforce or interpret the provisions of this Agreement, the prevailing party will be entitled to reasonable attorney's fees, which may be set by the court or arbitrator in the same action or in a separate action brought for that purpose, in addition to any other relief to which that party may be entitled.

Executed at _____, on the date and year first above written.

CONSULTANT:	**CLIENT:**
Pete Fowler Construction Services, Inc.	Tamara Bezmerthey and Garret Slade
Signed: _____	Signed: _____
Printed: _____	Printed: _____
Date: _____	Date: _____

Pete Fowler CONSTRUCTION Services, Inc.

Fee Schedule

Principal	$ 210.00
Expert	$ 195.00
Architect/Engineer	$ 195.00
Senior Consultant	$ 170.00
Construction Analyst	$ 130.00
Assistant Consultant	$ 85.00
Draftsman	$ 125.00
Deposition/Testimony	$ 400.00

We charge our time by the hour, in 1/10-hour (6 minute) increments. There is no minimum daily charge.

TESTIMONY

Expert witness investigation and court preparation time is charged at the applicable hourly rate. Expert witness testimony and / or depositions are charged at $400.00 per hour.

TRAVEL

Travel mileage may be charged at $0.55 per mile for travel from Pete Fowler Construction Services' offices.

OUTSIDE SERVICES AND MATERIALS

Outside services or consultants are charged at cost plus ten (10%) percent. Typical outside services could include: equipment rental, photographs and printing, travel and lodging, long distance communication, and specialty consultants.

INVOICES

Invoices are normally rendered monthly and are payable within 30 days of receipt. A service charge of 1 percent (1%) per month is applied to all past due accounts

We know buildings

EXPERTISE

PROJECT MANAGEMENT

TECHNOLOGY

STANDARDS

RESULTS

Maintaining your property is hard. We can help.

Building Life-Cycle Management Services for Owners, Associations and Managers

EVALUATION

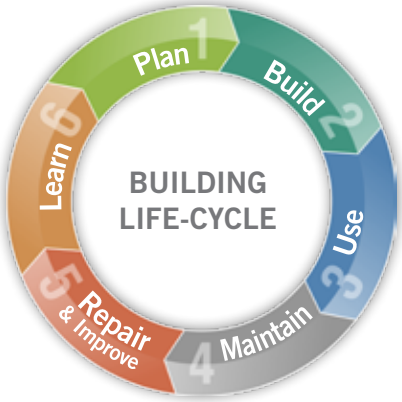
Property Condition Assessment (per ASTM E2018)
Leak Investigation and Testing (per ASTM E2128)
Information Management (Incl. Document Storage and Access per ASTM E2166)

SPECIFICATION

Consultation
Maintenance Plan
Maintenance Manual
Reserve Study (In close coordination with a Reserve Study specialist)
Budget
Life-Cycle Cost Analysis
Specifications for Maintenance, Repair and Improvement

QUALITY MANAGEMENT

Progress Schedule
Request for Proposal
Proposal / Bid Analysis
Contracts
Construction Management including invoice and change order processing
Quality Control Inspections
Warranty Management



Pete Fowler Construction Services (PFCS) specializes in creating REAL PRACTICAL SOLUTIONS for property owners & managers, builders & developers, construction contractors, product manufacturers, lawyers and insurers.

PROJECT MANAGEMENT: To deliver valuable work with measurable return on investment (ROI), we have to manage the Scope, Budget and Schedule of our work and yours.

TECHNOLOGY: We use proprietary technology to create valuable work faster, better and cheaper, to make the information available to all applicable stakeholders, and to create a permanent digital record at no extra cost.

STANDARDS: To help clients manage building lifecycle performance and costs, we compare each project to industry standards and best practices, then apply professional judgement to develop strategies and stepbystep plans for maximizing ROI for maintenance and repair expenditures.

RESULTS: Our work allows our clients to make informed, effective decisions.

Pete Fowler CONSTRUCTION Services, Inc.

www.petefowler.com

Alex knows buildings

Construction is in his roots.

Coming from a family of builders and microbiologists—Alex has followed in the footsteps of his data-driven, complex-problem-solving lineage. His in-depth analytical skill (along with 20 years of professional experience) enables him to carefully examine all facets of a situation and reach the best informed conclusion.

TRUST THE EXPERT

While many consultants develop their skill in a consultancy role, Alex earned his degree in construction management—and honed his expertise working with boots on the ground, directing architecture operations and overseeing housing development. This hands-on experience makes him one of the best experts in the field to consult on complex construction issues.

Alex's successful track record includes master planned-communities, mixed-use facilities, type I and type II construction, single family, condominium projects, and LEED and GCBP buildings. With projects spanning in markets throughout the West Coast, his background covers a wide range of legislature, coding, and construction techniques—with annual budgets over $120 million.

BRIDGING THE GAP BETWEEN THE TECHNICAL AND THE INTELLIGIBLE

As a Senior Consultant with Pete Fowler Construction Services, Inc. (PFCS), Alex works to achieve practical solutions in the most efficient and economical way possible. With a passion for helping clients, Alex knows the importance of clear and transparent communication—and giving options in the face of uncertainty.

EXPERTISE

Construction Consulting

Property Inspection & Testing

Assessment & Analysis

Construction Management

Construction Cost Estimating & Budgeting

EDUCATION

Bachelors of Science in Construction Management Technology
– *East Tennessee State University*

Associates Degree in Architectural Engineering Technology
– *Nashville State Technical Institute*

LICENSES & CERTIFICATIONS

Oregon Contractors License # 173960

California Contractors License # B-815750

LEED Accredited Professional

Certified Green Building Professional

PRESENTATIONS

SB-800 & Construction Business Practices in California

Alex Prokop
Senior Consultant

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Pete Fowler CONSTRUCTION Services, Inc.

EDUCATION

East Tennessee State University

Bachelors of Science in Construction Management Technology

Nashville State Technical Institute

Associates Degree in Architectural Engineering Technology

LICENSES & CERTIFICATIONS

Oregon Contractors License # 173960

Licensed as a Residential General Contractor and Commercial General Contract Level 2 in the state of Oregon.

California Contractors License # B-815750

Licensed as a general building contractor in the state of California.

U.S. Green Building Council

LEED Accredited Professional & Certified Green Building Professional

EXPERIENCE

Senior Consultant | Pete Fowler Construction Services, Inc. *2009 – Present*

PFCS is a general contracting, construction management and expert construction services provider. Specific services include: Construction Consulting; Property Inspection, Testing, Assessment & Analysis; Construction Cost Estimating & Budgeting; Construction Management & General Contracting; Training, Education & System Development; and Expert Witness, Mediation & Testimony.

Director of Operations/Construction | Signature Properties *2005 – 2008*

Responsible for all planning, estimating, oversight, execution, and personnel management from the onset of the design process through the completion and close-out of construction for suburban and urban projects. Director of all aspects of Construction Operations and Architecture Operations for San Francisco, Oakland, greater Bay Area, and Sacramento markets. Initiated a company-wide "Green" program and certification for multiple sites, resulting in better quality building practices, water resource conservation, energy-efficient homes, and higher indoor air quality standards.

Director of Operations/Construction | Dunmore Homes *2003 – 2005*

Managed all construction office operations for Sacramento Area and Central Valley; approximately 900 + units per year. Responsibilities included product development, value engineering, cost control, and field inspections for compliance with drawings, specifications, contract documents, and local code compliance—including NHAB Home Builder Certification Program and SB-800 compliant documentation/coordination.

Operations Manager | Del Webb's Northern CA Communities/Pulte Homes *1999 – 2003*

Responsible for all Housing Operations contract administration, preparation, and review of cost estimates for labor, material, and subcontracts for all residential projects in Northern California. Included review and issuance of all product specifications—ensuring all drawings were in accordance with local building codes and all applicable permits.

Chief Estimator/Project Manager | LWGC *1997 – 1999*

Managed commercial and residential construction projects—including developing estimates and bidding packages ranging from $300,000 to $10 million for custom projects. Negotiated with vendors and subcontractors, and oversaw contract execution on projects.

PRESENTATIONS

SB-800 & Construction Business Practices in California

Vancouver, British Columbia | December 2002, 2003, and 2004 (4 hours each)

Presentations examining the critical components of SB-800 "Right-to-Repair" Act and what Canadian exporters need to know when doing business in California. Examined topics regarding builder responsibilities, sub-contractor responsibilities, functionality standards, statute of limitations, required documentation, and claims procedure timeline.

QUALIFICATIONS & ACHIEVEMENTS

- 15 years of experience in master-planned communities, mixed-use facilities, type I and type II construction, single family, condominium projects, and LEED and CGBP buildings/communities.
- Concurrently managed multiple departments throughout the Northern California region with annual budgets exceeding $120 million.
- Successful track record in regards to design; completion of master-planned communities; suburban and urban residential and mixed-use projects; trade contractor and consultant relationships; estimating; contracting; site management; and cost control.
- Representation on all aspects of construction administration (negotiations, contract documentation, bidding, supervision of consultants, dispute resolution, cost tracking controls, and budget reporting systems) as well as leading teams of professionals.
- Facilitated all design consultant relationships to assure that project budgets were met through design and value engineering—from the perspective of architecture, structural integrity and innovation, mechanical engineering, green construction requirements/certifications, and building envelope acoustical strategies.

- Established architectural and construction protocols and company "Standards of Practice" throughout numerous divisions within Northern California, resulting in construction quality assurance and overall production efficiencies.
- Experience with software such as Timberline Estimating Software, Autodesk CAD, AS400, JD Edwards Construction Management Software, NewStar Construction Software Package, and Hyphen/BuildPro Scheduling Solutions.

Pete knows buildings

Both in the field, and on the stand.

Pete's construction career began with digging ditches over 30 years ago, and since then has included almost every construction role. In 1995, he founded Pete Fowler Construction Services—a team of building experts and project management professionals helping clients make smart, informed decisions about their buildings. PFCS technical experts are often called upon to consult and testify in property-related claims and litigation. Pete has vast experience providing successful expert witness testimony in both state and federal court—including more than 100 depositions, arbitrations, and hearings.

"LET'S BUILD A REAL CONSTRUCTION CONSULTING BUSINESS"

Pete Fowler is passionate about helping people make tough decisions. When founding PFCS 20 years ago, Pete was committed to running a business with unwavering integrity. Today, he has helped countless people navigate the complexity of construction, solve challenging building problems, and get their projects back on track.

ON THE ACADEMIC SIDE

Pete has conducted construction and building related research and published numerous articles—including the first national publication related to construction defects, and one of the earliest on mold management. With a degree in Construction Management and a minor in Information Systems, Pete designed PFCS' world-class proprietary technology system to collect, organize, structure, share, and permanently store documents and building information. He has moderated building science symposia, and been invited to speak by the most prestigious national construction organizations.

EXPERTISE

Construction Management

Construction Defects, Claims & Quality

Inspection & Testing

Building Performance Evaluation

Cost Estimating

Building Codes & Standards

Expert Witness Testimony

EDUCATION

Bachelor of Science in Construction Management, Minor in Management Information Systems
– *California State University, Chico*

Vocational Construction Education
– *Butte College*

Hundreds of Continuing Education Courses, 1994 – Present

LICENSES & CERTIFICATIONS

California Contractors License 1995–Present

Oregon Contractors License 2007–Present

Certified Professional Estimator 2000–2010

Certified Inspector 2000–2010

Certified Window Installer 2003

PUBLICATIONS

The Journal of Light Construction

Window & Door Magazine

The Professional Constructor, Journal of the AIC

ASTM Committee E06.51.11

Peter D. Fowler
President

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Pete Fowler CONSTRUCTION Services, Inc.

[redacted] Residence

Document Summary

#	File Sec.	Date	Author/Party	Description	Summary	Bates Stamp #	Printed?	Received
1	**2**		**PFCS**					
2	2	04/10/2015	PFCS	PFCS Proposal				07/18/2015
3	2	04/10/2015	PFCS	Property Inspection, Analysis, Summary and Recommendations	Level 1 Proposal for $2,900.			04/10/2015
4	2	04/21/2015	PFCS	Inspection Summary	Inspection summary for 4/14/2015 inspection including project overview, general inspection summary, locations summary, issues summary, and representative photographs.			N/A
5	2	04/27/2015	PFCS	Consulting Agreement - Executed				04/27/2015
6	2	05/14/2015	PFCS	Report	Report.			N/A
7	**2F**		**PFCS Backup Information**					
8	2F	08/16/2013	PFCS	Building Lifecycle Management Brochure (BLM) 2013	1 page. Also referred to as PA-CM (Property Analysis / Construction Management) brochure / flyer. PFCS - We Know Buildings Building Lifecycle Management (BLM) brochure 2013 (pfcs.co/pudv)			04/10/2015
9	2F	11/12/2014	PFCS	Fowler Pete Curriculum Vitae (Resume) Cover 2014	1 page. PETE FOWLER is the founder of a construction consultancy serving the Western U.S. Pete has experience with successful expert witness testimony, including Federal Court. In addition to a B.S. in Construction Management, Pete is a general contractor, professional cost estimator, has published articles in national magazines and has been invited to speak by the most important groups in the construction industry (ICC, ASTM, NIBS, RCI, BETEC, etc.). Focusing on construction projects and buildings suffering distress, Pete has analyzed damage, performed testing, specified and overseen repairs, performed repairs as a contractor and testified on a wide variety of construction issues.			04/10/2015
10	2F	12/01/2014	PFCS	Alex Prokop Curriculum Vitae (Resume)	Alex Prokop Curriculum Vitae (Resume) 12/01/14 (pfcs.co/apcv2014). Alex Prokop is a Senior Consultant with over 20 years of experience in residential and commercial construction. Alex has acted as a General Contractor on custom residential projects and Director of Construction on a variety of large-scale residential master plan communities, commercial projects, and urban mixed-use developments.			04/10/2015
11	**3**		**Client / Owners:** [redacted]					
12	3	09/06/2014	Tom Hoffman Construction	Contract	Contract for construction work to be completed for French drain for $7,500.00.			04/10/2015
13	3	09/16/2014	Tom Hoffman Construction	Notice of Procedure	Notice of Procedure regarding residential construction arbitrations and lawsuits and Consumer Protection Notice signed by Tom Hoffman of Tom Hoffman Construction.			04/10/2015
14	3	10/15/2014	Tom Hoffman Construction	Invoice	Invoice for French drain work done under house that includes installation of beam for $2,850.00 and removal of rubber membrane from side of basement with continued pipeing $3,500.00. Original Estimate was $7,500.00. Amount paid was $3,750.00. Balance due so far is $10,100.00.			04/10/2015
15	3	11/28/2014	Tom Hoffman Construction	Estimate	Estimate for repair of floor with large bow and sinking wall for $22,500.00			04/10/2015
16	3	11/28/2014	Tom Hoffman Construction	Estimate	Estimate for repair of siding of house for $4,200.00			04/10/2015
17	3	11/28/2014	Tom Hoffman Construction	Invoice				

2B. Document Summary

For mediation purposes only.
Protected by all applicable evidence codes.

Bezmertney Slade Residence

Document Summary

#	File Sec.	Date	Author/Party	Description	Summary	Bates Stamp #	Printed?	Received
18	3	04/16/2015	[redacted]	Photo of Damaged Floor Joists	Email from Ms. [redacted] regarding attached photo. Hi Paul,We have found more damage to the ends of the floor joists that were behind the wall you looked at. Our contractor says he needs to add that to the scope of your work and he thinks it might be a good idea if you came out and looked at it. I attached a photo so you can see where the damage is.Tamara			04/22/2015
19	3	04/17/2015	Miller Consulting Engineers	Structural Calculations	Structural Calculations for Deterioration Repairs at North Wall at 775 Boca Ratan Drive, Lake Oswego, OR.			04/22/2015
20	3	04/17/2015	Miller Consulting Engineers	Structural Drawings	Structural drawings for deterioration repair at 775 Boca Ratan Drive, Lake Oswego, OR including sheets S0.01 Structural Notes, S0.02 Site Plan, S1.01 Roof Plan, S3.01 Framing Elevation, and S8.01 Details.			04/22/2015
21	3	05/04/2015-05/04/2015	Miller Consulting Engineers	Property Condition Assessment Report - Structural	Structural Property Condition Assessment Report			05/12/2015
22	3	N/A		Image of siding	Image of siding.			04/13/2015
23								
24								

For mediation purposes only.
Protected by all applicable evidence codes.

2C. Property Condition Assessment (Report)

[redacted] Residence

[redacted] *OR 97034*

OFFICES

CALIFORNIA

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San Clemente, CA 92673

CA License #713760

OREGON

503-660-8670

9320 SW Barbur Blvd, Ste 170
Portland, OR 97219

OR License #173960

GENERAL INQUIRY

info@petefowler.com
www.petefowler.com

Pete Fowler CONSTRUCTION Services, Inc.

Project #15-165

Pete Fowler CONSTRUCTION Services, Inc.

Report

Date:	May 14, 2015
To:	[redacted] E: [redacted]
From:	Pete Fowler Construction Services, Inc.
Project:	[redacted] Residence (PFCS 15-165)
Regarding:	Report - Inspection Summary with Recommendations
Note:	For mediation purposes only. Protected under all applicable evidence codes.

This project concerns a 2,727 sq. ft. two story, wood frame single family residence with 4 bedrooms, 3.5 bathrooms and a finished basement located at [redacted], OR 97034. The residence was built in 1975 and is currently owned by Tamara Bezmertney and Garrett Slade. PFCS has performed numerous inspections of the property (04/13/2015 and 04/14/2015) and due to the current project conditions, a structural engineering firm was introduced to assist in the repairs of the structure. Miller Consulting Engineers also performed numerous inspections, structural calculations, and emergency repair drawings in order to minimize future damage to the property.

Property Description, Codes, and Standards

- Original Construction: 1975
- Additions: Back elevation addition in 1981
- Renovation: 2010 (complete interior and building envelope renovation)
- Property Type: Wood frame
- Foundations: Perimeter foundations / concrete piers / beam and post system
- Exterior Cladding: Fiber-cement siding / masonry veneer / masonry brick (chimney assembly)
- Roofing: Asphalt shingle
- Windows: Vinyl windows

- Applicable Building Codes:
    - 2010 Edition of the State of Oregon Structural Specialty Code (2010 OSSC)
    - 2010 Edition of the State of Oregon Energy Efficiency Specialty Code (2010 OEESC)
    - 2010 Edition of the State of Oregon Mechanical Specialty Code (2010 OMSC)
    - 2010 Edition of the State of Oregon Plumbing Specialty Code (2010 OPSC)

- Applicable Industry Standards:
    - AAMA 2400-10 - Standard Practice for Installation of Windows with Mounting Flange in Stud Frame Construction
    - ASTM E2112-10 - Standard Practice for Installation of Exterior Windows. Doors, and Skylights
    - ASTM C36 / C36M-01 - Standard Specification for Gypsum Wallboard
    - ASTM C1280-99 - Standard Specification for Application of Gypsum Sheathing
    - ASTM C920 - Standard Specification for Elastomeric Joint Sealants
    - ASTM C1193-09 - Standard Guide for Use of Joint Sealants
    - ASTM E2128-01 Standard Guide for Evaluating Water Leakage of Building Walls
    - ASTM C1780 - Standard Practice for Installation Methods for Adhered Manufactured Stone Masonry Veneer
    - NRCA 09 - The NRCA Roofing Manual: Steep-Slope Roof Systems, National Roofing Contractors Association
    - SMACNA 03 - Architectural Sheet Metal Manual, 6th Edition
    - James Hardie Installation Manual - HZ10 2010 Installation Guide
    - NAHB Residential Construction Performance Guidelines - 3rd Edition

Summary of PFCS Observations

PFCS and Miller Consulting Engineers performed numerous inspections of the property, including ongoing emergency repairs, exterior envelope, roofing, and crawlspace conditions. The following is a summary of observations that do not meet industry standards and are currently causing damage to the property.

- Failed roof-to-wall interface causing significant property damage at right elevation and interior of structure
- Inadequate roofing installation and details
- Altered roof trusses (isolated)
- Inadequate installation of siding products and details not compliant to code and manufacturer installation guidelines
- Inadequate installation of flashing components and details not compliant to code and manufacturer installation guidelines
- Inadequate installation of masonry veneer products and details not compliant to code and manufacturer installation guidelines
- Improper installation of windows and window flashing components
- Excessive building movement causing interior finish problems
- Improper installation of foundation screw jack supports
- Shower enclosure water intrusion problems
- Settlement of granite counters
- Wood flooring issues due to building movement and improper foundation screw jack supports

- Gypsum wallboard finish issues, and excessive cracks
- Inadequate framing of walls, bowed and out-of-square walls exceeding industry standards
- General Conditions - Home owner expenses for ongoing repairs

ELEMENT LIST

- Substructure
    - A1010 Foundations: Foundation Beams and Leveling Floor Jacks
- Superstructure
    - B1004 Wood Framing & Hardware
    - B1020 Roof Construction & Trusses
    - B2012 Exterior Enclosure: Masonry Veneer
    - B2013 Exterior Enclosure: Siding & Trim
    - B2020 Windows
    - B3001 Sloped Roofs
    - B3004 Roof Flashing & Trim
- Interiors
    - C1031 Shower Enclosure
    - C1032 Counters - Granite
    - C3000 Interior Finishes - Masonry Veneer Fireplace Surrounds
    - C3010 Gypsum Wallboard & Interior Plaster
    - C3021 Floor Finishes: Tile
    - C3022 Floor Finishes: Wood
- Other
    - H2000 General Conditions - Reimbursable Repairs

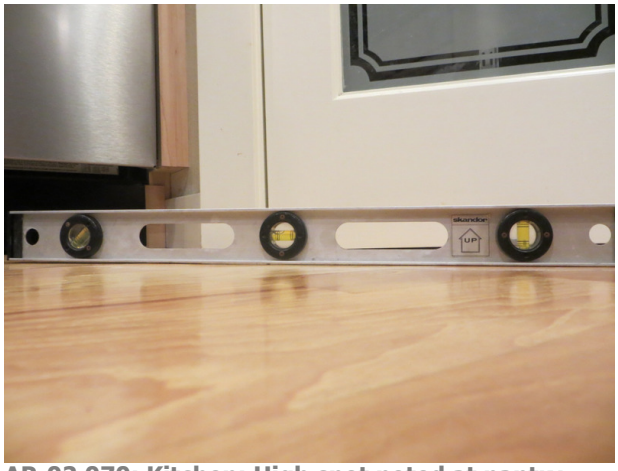
Observations

A. SUBSTRUCTURE

A1010 FOUNDATIONS: FOUNDATION BEAMS AND LEVELING FLOOR JACKS

Issue	Improperly installed foundation building jacks causing uplift in numerous livable areas.
Investigation	• Visual inspection: 04/13/2015 and 04/14/2015 • Miller Engineers investigation and report with recommendations
Analysis	• Improper installation of foundation building jacks causing the structure to have uneven interior planes • Distinctive continuous high points in kitchen and entry • Foundation beams positioned at different elevations due to foundation screw jacks
Conclusion	• Repairs recommended within crawlspace • See Miller Consulting Engineers report for repair recommendations
Costs	NA

AP-02.069; Kitchen; High spot noted at pantry, and continuous from pantry to across kitchen towards refrigerator. High spot is very linear. Floor levelness out of industry tolerances. Slight separation (gaps) at wood flooring.

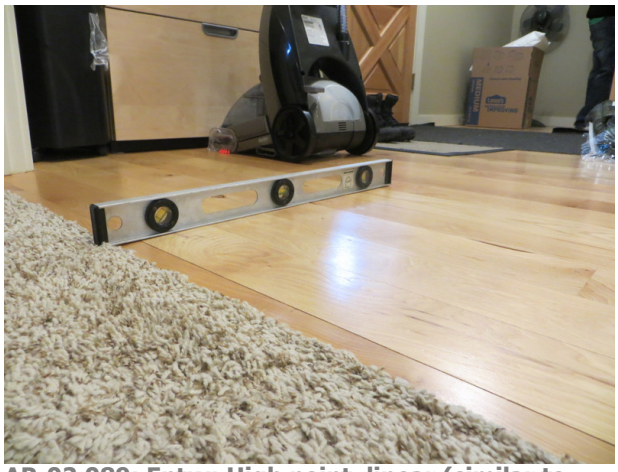


AP-02.070; Kitchen; High spot noted at pantry, and continuous from pantry to across kitchen towards refrigerator. High spot is very linear. Floor levelness out of industry tolerances. Slight separation (gaps) at wood flooring.

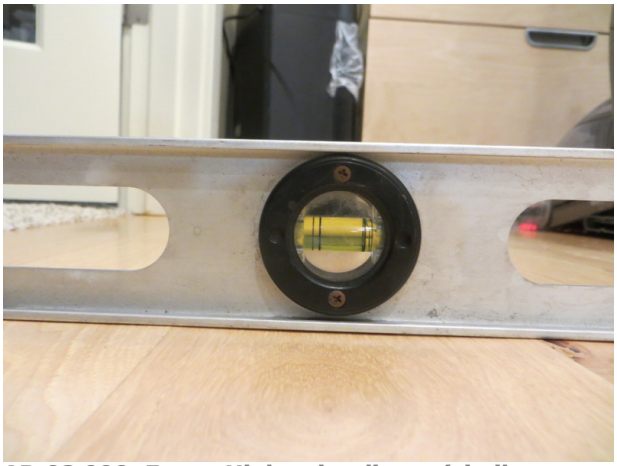
AP-02.071; Kitchen; High spot noted at pantry, and continuous from pantry to across kitchen towards refrigerator. High spot is very linear. Floor levelness out of industry tolerances. Slight separation (gaps) at wood flooring.

AP-02.072; Kitchen

AP-02.073; Kitchen



AP-02.089; Entry; High point, linear (similar to same condition in kitchen). Floor levelness does not conform to industry standards. High point is linear from entry to main living area. Separation noted at wood floors, between planks.



AP-02.090; Entry; High point, linear (similar to same condition in kitchen). Floor levelness does not conform to industry standards. High point is linear from entry to main living area. Separation noted at wood floors, between planks.

AP-02.265; Crawlspace; Deflection at structural beams observed, where supported by foundation screw jacks, especially at longer span beams.

Miller Consulting Engineers-030; Uneven floor support beams. Floor jacks creating uplift, transferring through structure.

Miller Consulting Engineers-031; Uneven floor support beams. Floor jacks creating uplift, transferring through structure.

Miller Consulting Engineers-033; Uneven floor support beams. Floor jacks creating uplift, transferring through structure.

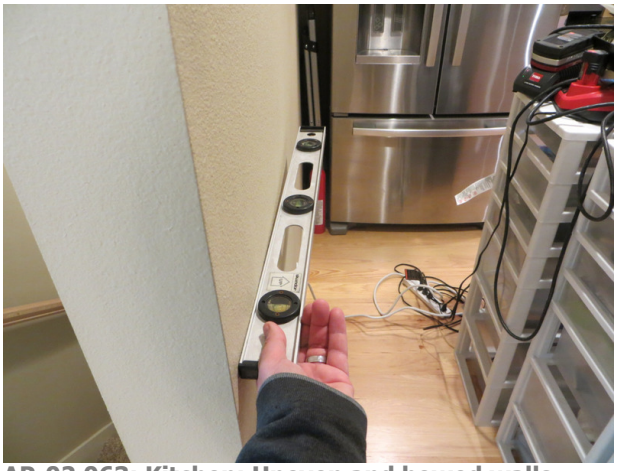
B. SUPERSTRUCTURE

B1004 WOOD FRAMING & HARDWARE

Issue	• Bowed and uneven wall at kitchen • Bowed and uneven wall at hall to garage • Bowed and uneven wall at dining room • Bowed and uneven wall at stairs in entry • Uneven ceiling at office • Uneven ceiling at kitchen • Uneven floors, causing high spots at numerous rooms (Kitchen, Entry, Office, and upstairs Bedrooms) • Uneven gable framing over main entry
Investigation	• Visual inspections: 04/13/2015 and 04/14/2015
Analysis	Walls, ceilings, and floors all exceed allowable industry standards: • NAHB tolerances: Sub floors shall not have any point that is 1/2" higher or lower than any other point on the same surface within 20' in any direction. • NAHB tolerances: Sub floors shall not have ridges or depressions that are more that 1/4" in a 32"x32" area. • NAHB tolerances: Ceilings should not have ridges or depressions larger than 1/4" in a 32"x32" area. No point on the surface should be more than 1" higher or lower than any other point on the same surface within 20'. • NAHB tolerances: Individual studs shall not bow in or out more than 1/4" in a 32" measurement, either horizontal or vertical. • NAHB tolerances: Frame walls shall be plumb within 1/2" in a height of 8' and shall not bow horizontally or vertically more than 1/4" in a distance of 32".
Conclusion	Repairs recommended for all areas that exceed National Association of Home Builders (NAHB) tolerances. Repairs recommended for the following areas: • Crawlspace pump jacks and beam repairs (analysis and repair scope by Miller Engineers) • Office • Entry / Stairs • Hall to Garage • Dining Room • Kitchen
Costs	NA

AP-02.060; Kitchen; Uneven and bowed walls, framing deficiencies exceeding industry standards.

AP-02.062; Kitchen

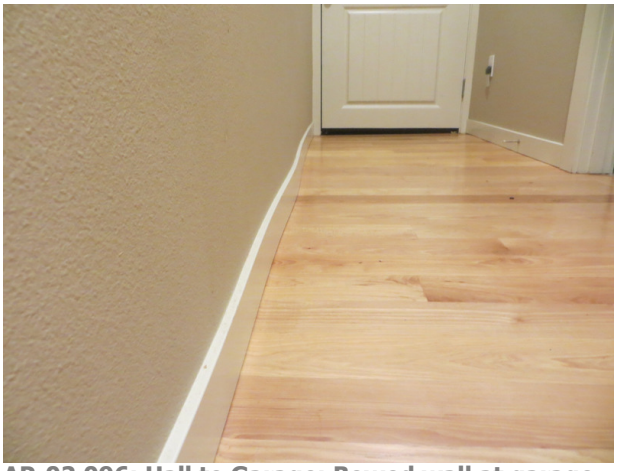


AP-02.063; Kitchen; Uneven and bowed walls, framing deficiencies exceeding industry standards.

AP-02.075; Kitchen; Uneven ceiling at kitchen, exceeding industry tolerances. Cabinets noted to be level.

AP-02.076; Kitchen; Uneven ceiling at kitchen, exceeding industry tolerances. Cabinets noted to be level.

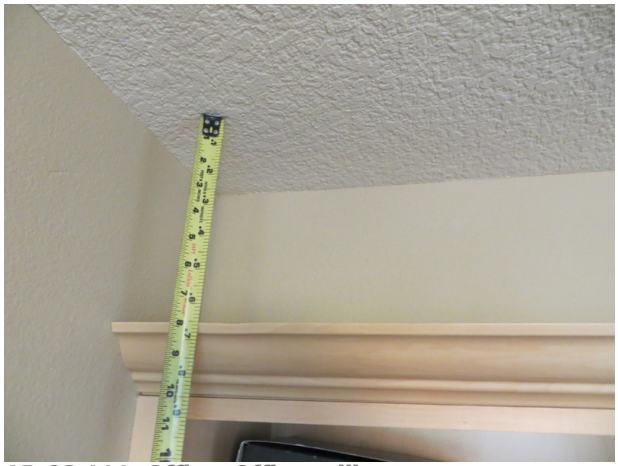
AP-02.078; Kitchen; Uneven ceiling at kitchen, exceeding industry tolerances. Cabinets noted to be level.



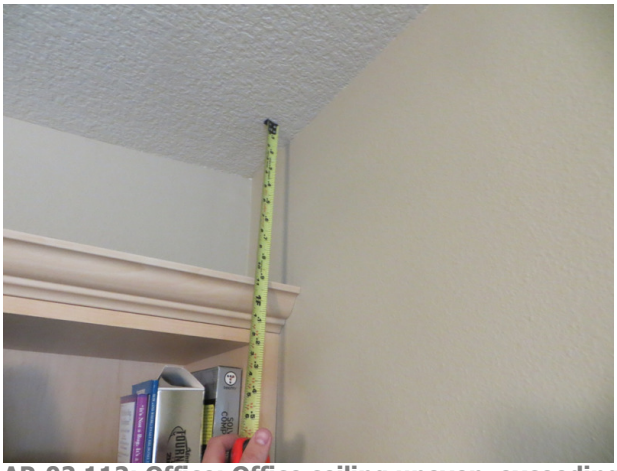
AP-02.096; Hall to Garage; Bowed wall at garage hallway, exceeding industry standards. Very poor quality of finish products.

AP-02.098; Hall to Garage; Bowed wall at garage hallway, exceeding industry standards. Very poor quality of finish products.

AP-02.109; Office; Office ceiling uneven, exceeding industry standards and tolerances. Cabinets noted to be level.

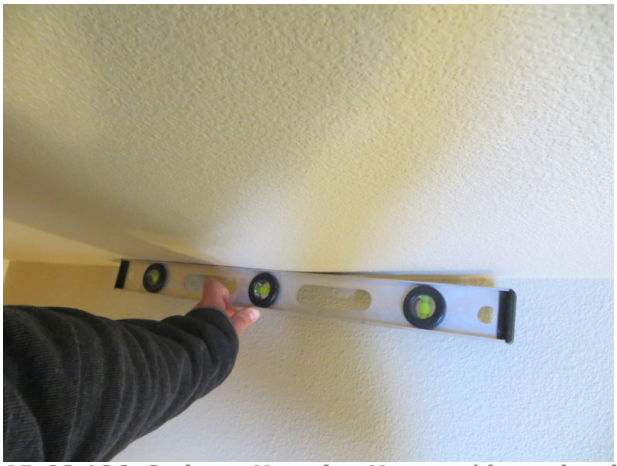


AP-02.111; Office; Office ceiling uneven, exceeding industry standards and tolerances. Cabinets noted to be level.



AP-02.112; Office; Office ceiling uneven, exceeding industry standards and tolerances. Cabinets noted to be level.

AP-02.185; Stairs to Upstairs; Uneven / bowed wall at entry stairs to upstairs.



AP-02.186; Stairs to Upstairs; Uneven / bowed wall at entry stairs to upstairs.

B. SUPERSTRUCTURE

B1020 ROOF CONSTRUCTION & TRUSSES

Issue	Altered truss - removed web and bottom chord of roof truss
Investigation	Visual inspection: 04/13/2015 and 04/14/2015
Analysis	• Altered roof truss - web • Altered roof truss - missing bottom chord
Conclusion	• Repairs recommended • Structural analysis and calculations required, see Miller Consultant Engineers report
Costs	NA

AP-02.286; Attic; Altered webbing of a truss above garage.

AP-02.289; Attic; Missing / cut-out bottom chord of truss (isolated).

AP-02.290; Attic; Altered bottom chord of truss / missing bottom chord.

B. SUPERSTRUCTURE

B2012 EXTERIOR ENCLOSURE: MASONRY VENEER

Issue	• Inadequate clearances at masonry veneer and grade • Damage behind masonry veneer (covered up during previous property remodel) • Efflorescence • Loose masonry veneer (repaired by home owner) • Interior: Fireplace hearth settlement
Investigation	• Visual inspections: 04/13/2015 and 04/14/2015 • Masonry veneer removal at one location (left garage portal at transition to foundation)
Analysis	• Damage present at substrates behind masonry veneer (previous damage) • Loose masonry repaired by home owner • Inadequate clearances at masonry veneer (installation not compliant to manufacturer install guidelines) • Presence of efflorescence • Inadequate support for masonry veneer at fireplace hearth
Conclusion	Targeted repairs recommended: • Further investigation required at base of wall to confirm that damages at substrates are not systemic • Base of veneer to be cut back to accommodate for manufacturer and code required clearances • Demo and reconstruct interior fireplace hearth at base of fireplace • Recommended targeted repair at fiber-cement siding transition to masonry veneer
Costs	NA

AP-02.207; Elevation Front; Garage left portal, removal of masonry at base of wall / interface to concrete footing.

AP-02.220; Elevation Front; Damage present behind masonry. Damage was likely covered up by contractor during 2010 renovation of property (damage is not active / current).

AP-02.233; Elevation Front; Damaged sheathing behind masonry veneer / previous water intrusion, not current. Masonry veneer over lath over WRB system.

AP-02.283; Elevation Front; Overview of transition from fiber-cement siding to masonry veneer. No water table protection provided for wood trim.

B. SUPERSTRUCTURE

B2013 EXTERIOR ENCLOSURE: SIDING & TRIM

Issue	• Damage past exterior cladding system at right elevation • Inadequate integration of roofing materials with siding components at roof-to-wall • Inadequate flashing systems / diverters to control surface drainage • Inadequate z-flashing dimensions and installation (size of flashing and installation) • Inadequate clearances at siding materials • Un-primed wood trim components • Improper installation of WRB system (integration with membrane flashing materials and z-metal flashing components)
Investigation	• Visual inspections: 04/13/2015 and 04/14/2015 • Repairs performed at right elevation
Analysis	• Exterior repairs ongoing at right elevation • Siding and Trim not installed to manufacturer installation guidelines • Siding and Trim not code compliant
Conclusion	Targeted repairs recommended for the following conditions: • WRB interface with window head membrane flashing (see B2020 Windows) • All belly band locations (all elevations) • All z-metal to be replaced with properly dimensioned flashings and properly integrated • All penetrations and utility blocks • Product transitions
Costs	NA

AP-01.032; Bedroom 4; Damage present at floor assembly. Organic growth present at interior of structure.

AP-01.037; Bedroom 4; Damage present at floor assembly. Organic growth present at interior of structure. Active water intrusion event. MC readings at 90% +/-.

AP-01.137; Elevation Right; Severe damage and active water intrusion event. Source of water intrusion at roof-to-wall interface / lack of diverter flashings / failed condition at roof assembly / failed condition at siding components.

AP-01.138; Elevation Right; Active water intrusion event at right elevation of structure. Damaged framing / structural analysis required.

AP-01.139; Elevation Right; Damaged right elevation of structure. Extensive water intrusion into building wall assembly.

AP-01.141; Elevation Right; Damaged right elevation of structure. Extensive water intrusion into building wall assembly.

AP-01.143; Elevation Right; Improper integration of metal flashing components / Fiber cement siding sealed to metal flashing / No weep provisions

AP-02.199; Elevation Right; Improper integration of metal flashing components / Fiber cement siding sealed to metal flashing / No weep provisions

AP-02.214; Elevation Right; Severe damage at rim joist.

AP-02.217; Elevation Right; Severe damage at base of wall / bottom plate.

AP-02.279; Elevation Front; Improper protection of exposed water table at product transition.

AP-02.308; Improper integration of metal flashing components / Fiber cement siding sealed to metal flashing / No weep provisions / Reverse sloped metal flashing / Un-primed end cuts

AP-02.326; Elevation Front; Inadequate clearances at product transition. Wood trim (garage jambs) in contact with concrete.

AP-02.338; Elevation Left; Inadequate and unsealed metal flashing laps.

AP-02.343; Elevation Left; Inadequate diverter flashing components (typical).

B. SUPERSTRUCTURE

B2020 WINDOWS

Issue	• Window head flashing reverse lapped • Window eliminated in master bathroom as window interfered with roof cricket above
Investigation	• Visual inspections: 04/13/2015 and 04/14/2015 • Right elevation windows exposed during repairs
Analysis	• Improper head flashing integration at all windows (global issue) • Sealant present behind window flanges • Window nailing is adequate and performing • PFCS did not note any broken window flanges • Sill flashing properly sequenced • Improper window location at master bathroom
Conclusion	• Repairs recommended at head flashing integration (global) • Reimbursement for ongoing repairs (window at master bath)
Costs	NA

AP-01.116; Elevation Right; Improper z-metal integration at head of window (typical).

AP-01.155; Elevation Right; Un-primed wood trim components at windows - all elevations (typical).

AP-02.191; Elevation Right; Improper head flashing integration at window head (typical).

AP-02.194; Elevation Right; Improper head flashing integration at window head (typical).

AP-02.196; Elevation Right; Improper head flashing integration at window head (typical).

AP-02.199; Elevation Right; Improper integration of metal flashing components / Fiber cement siding sealed to metal flashing / No weep provisions

AP-02.200; Elevation Right; Reverse sloped z-metal flashing (typical).

AP-02.202; Elevation Right; Improper WRB integration / Improper z-metal integration / Un-primed end cuts / reverse slope at z-metal flashing (typical condition at window heads).

B. SUPERSTRUCTURE

B3001 SLOPED ROOFS

Issue	• Roof failure at valley and roof to wall above secondary bedrooms • Damaged asphalt shingles at ridge
Investigation	• Visual Inspections performed on 04/13/2015 and 04/14/2015 • Repairs performed due to significant property damage
Analysis	• Significant damage and failure at roofing area over bedroom #3, bedroom #4, and right elevation • Inadequate installation of roof flashing components and improper use of flashing components • Inadequate roof material installation and integration with roof-to-wall condition • Roof assembly not code compliant, causing property damage • Organic growth throughout right elevation due to failed roofing
Conclusion	• Repairs are ongoing • Reimbursable repairs
Costs	NA

AP-02.317; Roof; Damaged shingles at ridge.

AP-02.393; Roof; Ongoing emergency repairs at roof assembly over right elevation bedrooms.

AP-02.394; Roof; Ongoing emergency repairs at roof assembly over right elevation bedrooms.

AP-02.396; Roof; Ongoing emergency repairs at roof assembly over right elevation bedrooms.

AP-02.399; Roof; Ongoing emergency repairs at roof assembly over right elevation bedrooms.

AP-02.402; Roof; Ongoing emergency repairs at roof assembly over right elevation bedrooms.

AP-02.404; Roof; Ongoing emergency repairs at roof assembly over right elevation bedrooms.

B. SUPERSTRUCTURE

B3004 ROOF FLASHING & TRIM

Issue	• Inadequate roof flashing provisions, causing property damage
Investigation	Visual inspections: 04/13/2015 and 04/14/2015
Analysis	• Significant resultant damage • Ongoing repairs, roof above bedroom #3 replaced • Failed condition at roof-to-wall interface
Conclusion	• Reimbursement for repairs • Also see B3001 Sloped Roofs
Costs	NA

AP-02.394; Roof; Ongoing emergency repairs at roof assembly over right elevation bedrooms.

AP-02.396; Roof; Ongoing emergency repairs at roof assembly over right elevation bedrooms.

AP-02.397; Roof; Installation of metal flashing components / ongoing repairs.

AP-02.404; Roof; Ongoing emergency repairs at roof assembly over right elevation bedrooms.

C. INTERIORS

C1031 SHOWER ENCLOSURE

Issue	Leaking shower enclosure reported by home owners.
Investigation	Visual inspections: 04/13/2015 and 04/14/2015
Analysis	• Shower enclosure reported leaking by owner • Slight staining noted by PFCS, outside of shower enclosure
Conclusion	Adjust shower enclosure door and install gaskets as needed in order to maintain a leak free enclosure
Costs	NA

AP-02.153; Master Bath; Water reported leaking at shower enclosure frame to tile interface / inadequate sealant application and bottom of shower frame installation

AP-02.154; Master Bath; Water reported leaking at shower enclosure frame to tile interface / inadequate sealant application and bottom of shower frame installation

AP-02.164; Master Bath; Water reported leaking at shower enclosure frame to tile interface / inadequate sealant application and bottom of shower frame installation

C. INTERIORS

C1032 COUNTERS - GRANITE

Issue	Counter top settlement at bath #2.
Investigation	Visual inspections: 04/13/205 and 04/14/2015
Analysis	• Excessive movement at granite slab horizontal surface of countertop • Movement likely associated with crawlspace condition
Conclusion	• Repairs recommended: Remove and re-install countertop. Re-shim horizontal surface countertop and install new sealants at interface with backsplash.
Costs	NA

AP-02.170; Bath #2; Excessive settlement at countertop backsplash interface with horizontal surface / missing and voids at sealants

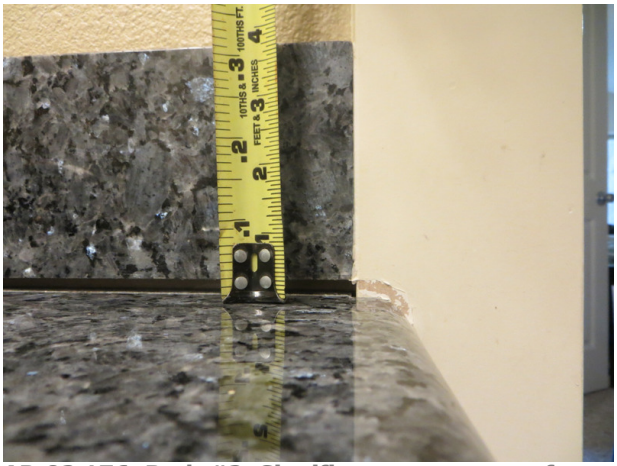
AP-02.171; Bath #2; Excessive settlement at countertop backsplash interface with horizontal surface / missing and voids at sealants

AP-02.172; Bath #2; Excessive settlement at countertop backsplash interface with horizontal surface / missing and voids at sealants

AP-02.173; Bath #2; Excessive settlement at countertop backsplash interface with horizontal surface / missing and voids at sealants

AP-02.174; Bath #2; Significant movement of granite counter-top at upstairs bathroom. Bathroom is located in the proximity of the entry.

AP-02.175; Bath #2; Significant movement of granite counter-top at upstairs bathroom. Bathroom is located in the proximity of the entry.



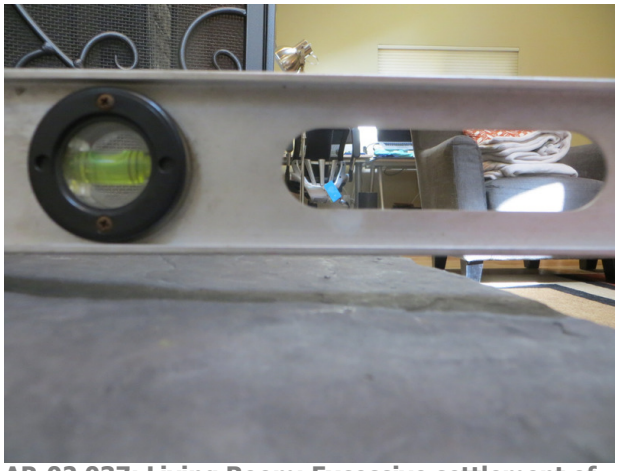
AP-02.176; Bath #2; Significant movement of granite counter-top at upstairs bathroom. Bathroom is located in the proximity of the entry.

C. INTERIORS

C3000 INTERIOR FINISHES - MASONRY VENEER FIREPLACE SURROUNDS

Issue	Settlement of fireplace surrounds.
Investigation	• Visual Inspections performed on 04/13/2015 and 04/14/2015
Analysis	• Excessive settlement at fireplace surrounds • Cracks through masonry veneer surrounds
Conclusion	• Repairs required at fireplace surrounds
Costs	NA

AP-02.035; Living Room; Excessive settlement of fireplace surround / cracks through masonry veneer surround



AP-02.037; Living Room; Excessive settlement of fireplace surround / cracks through masonry veneer surround

AP-02.040; Living Room; Excessive settlement of fireplace surround / cracks through masonry veneer surround

AP-02.041; Living Room; Excessive settlement of fireplace surround / cracks through masonry veneer surround

AP-02.044; Living Room; Excessive settlement of fireplace surround / cracks through masonry veneer surround

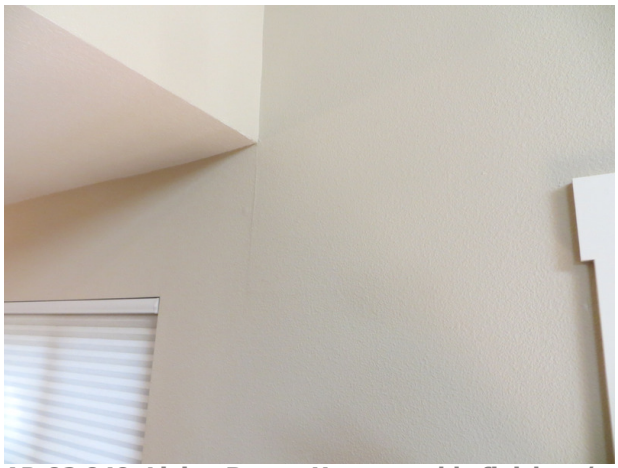
AP-02.045; Living Room; Excessive settlement of fireplace surround / cracks through masonry veneer surround

C. INTERIORS

C3010 GYPSUM WALLBOARD & INTERIOR PLASTER

Issue	Gypsum wallboard imperfections, uneven planes, bowed wallboard, visible corner beads, cracks, and drywall nail pops.
Investigation	Visual inspections: 04/13/2015 and 04/14/2015
Analysis	• Drywall finishes do not meet industry standards • Drywall cracks Drywall nail pops and embedded drywall screws: • NAHB tolerances: Any embedded drywall screws or nail pops that are visible from a distance of 6' under normal light conditions are unacceptable. Corner beads that have cracked or pulled away or tape seams that have pulled away and are visible to the untrained eye at any angle at a distance of 6' under normal lighting are unacceptable. Uneven planes at ceilings and walls: • NAHB tolerances: Drywall crowns in ceilings shall not exceed 1/4" in 32" distance across. Floating and re-texturing are acceptable repair methods. • NAHB tolerances: Drywall bows in walls shall not exceed 3/16" in 32" distance across. Floating and re-texturing are acceptable repair methods.
Conclusion	Targeted repairs recommended, following framing repairs.
Costs	

AP-02.047; Living Room; Unacceptable finishes / visible corner beads / cracks at gypsum wallboard / bowed and uneven walls



AP-02.049; Living Room; Unacceptable finishes / visible corner beads / cracks at gypsum wallboard / bowed and uneven walls / Excessive movement at entry area

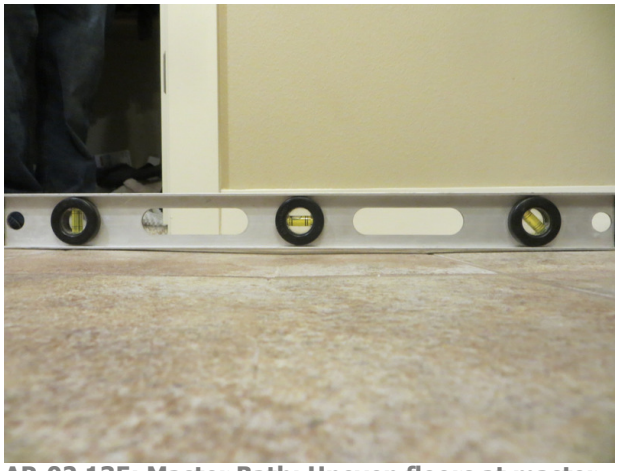
AP-02.050; Living Room; Unacceptable finishes / visible corner beads / cracks at gypsum wallboard / bowed and uneven walls

C. INTERIORS

C3021 FLOOR FINISHES: TILE

Issue	Uneven floor at master bathroom and cracks at master shower floor and shower floor
Investigation	Visual inspections: 04/13/2015 and 04/14/2015
Analysis	Uneven floor at master bath exceeds industry tolerances • NAHB tolerances: Tiles having cracks that are visible to the untrained eye at a distance of 4' under normal light conditions are not acceptable. • NAHB tolerances: Finish floors shall not deviate more than 1/4" in from level in an 8' horizontal distance. No point in the floor shall be 3/16" above or below the plane of the floor. • Cracks visible at 4' at shower floor and master bath floor
Conclusion	• Recommended repairs for shower floor: repair grout crack. • Recommended repairs for master bath floor: Remove and replace flooring
Costs	NA

AP-02.134; Master Bath; Excessive movement and settlement at master bath tile floor



AP-02.135; Master Bath; Uneven floors at master bath, beyond industry standards, significant elevation change in flooring.

AP-02.136; Master Bath; Excessive movement and settlement at master bath tile floor

AP-02.137; Master Bath; Excessive movement and settlement at master bath tile floor

AP-02.141; Master Bath; Cracked / inadequate support for floor tile assembly / settlement

AP-02.143; Master Bath; Cracked / inadequate support for floor tile assembly / settlement

AP-02.148; Master Bath; Cracks at master shower stone flooring

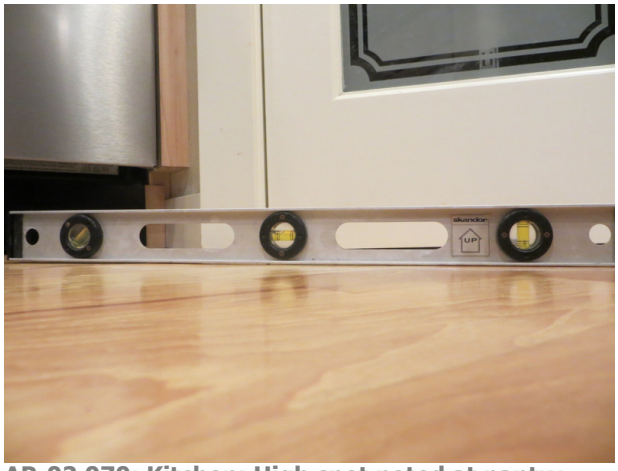
AP-02.149; Master Bath; Cracks at master shower stone flooring

C. INTERIORS

C3022 FLOOR FINISHES: WOOD

Issue	Elevated and opened up joints at hardwood flooring
Investigation	Visual inspections: 04/13/2015 and 04/14/2015
Analysis	Gaps at hardwood flooring: • NAHB tolerances: Gaps shall not occur in more than 5% of the total length of the joints in a wood floor, and no gap shall exceed 1/32" in width for boards in excess of 2 1/4" in width. Floor levelness: • NAHB tolerances: Finish floor shall not be higher or lower than the immediately adjoining board by more than .012" as measured with a feeler gauge. • NAHB tolerances: Finish floors shall not deviate more than 1/4" from level in an 8' horizontal distance. no point in the floor shall be 1/8" above or below the plane of the floor.
Conclusion	• Targeted repairs recommended at throughout the structure • Wood floor issue related to crawlspace problems, causing uplift at numerous locations
Costs	NA

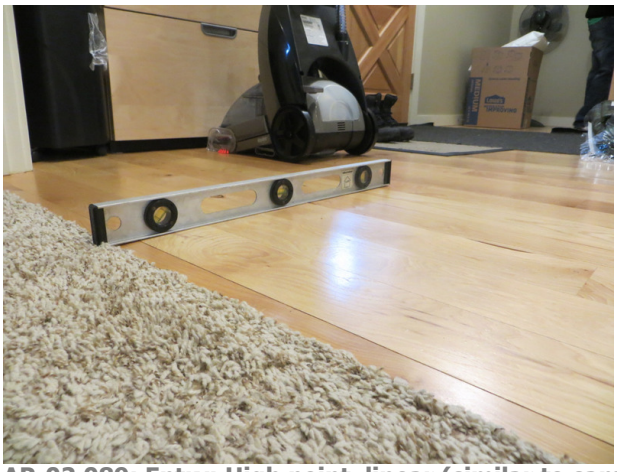
AP-02.069; Kitchen; High spot noted at pantry, and continuous from pantry to across kitchen towards refrigerator. High spot is very linear. Floor levelness out of industry tolerances. Slight separation (gaps) at wood flooring.



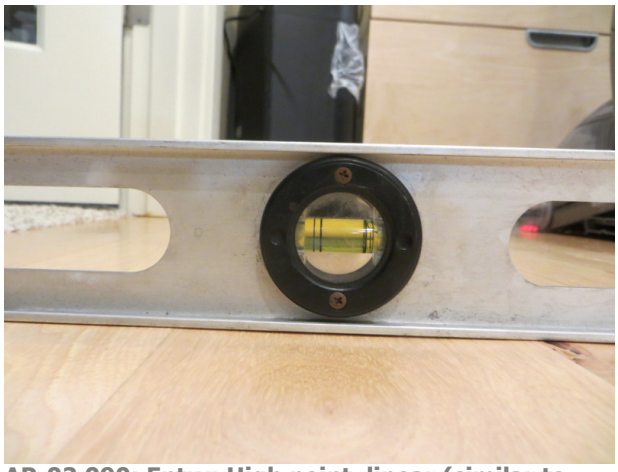
AP-02.070; Kitchen; High spot noted at pantry, and continuous from pantry to across kitchen towards refrigerator. High spot is very linear. Floor levelness out of industry tolerances. Slight separation (gaps) at wood flooring.

AP-02.071; Kitchen; High spot noted at pantry, and continuous from pantry to across kitchen towards refrigerator. High spot is very linear. Floor levelness out of industry tolerances. Slight separation (gaps) at wood flooring.

AP-02.072; Kitchen



AP-02.089; Entry; High point, linear (similar to same condition in kitchen). Floor levelness does not conform to industry standards. High point is linear from entry to main living area. Separation noted at wood floors, between planks.



AP-02.090; Entry; High point, linear (similar to same condition in kitchen). Floor levelness does not conform to industry standards. High point is linear from entry to main living area. Separation noted at wood floors, between planks.

H. OTHER

H2000 GENERAL CONDITIONS - REIMBURSABLE REPAIRS

Issue	Reimbursable emergency repairs.
Investigation	• Visual Inspections performed on 04/13/2015 and 04/14/2015 • Repairs performed due to significant property damage
Analysis	• History of repairs since 2010 renovation • Current ongoing emergency repairs
Conclusion	• Past and current repairs are reimbursable repairs.
Costs	Owner to provide history of costs associated with interior and exterior repairs

AP-01.113; Elevation Right; Overview of emergency repairs at right elevation.

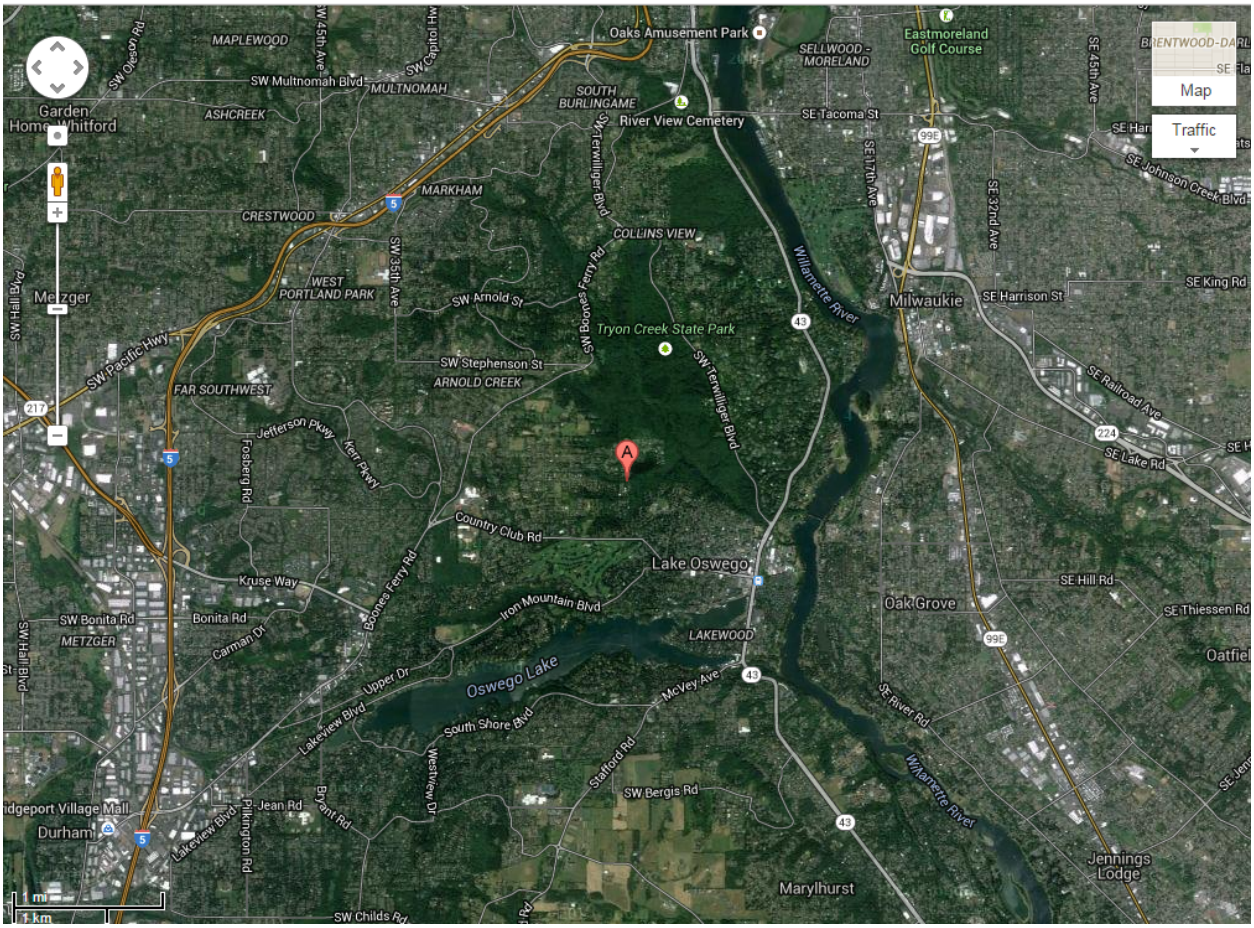
AP-02.389; Roof; Overview of emergency repairs at roof.

AP-02.395; Roof; Overview of emergency repairs at roof.

Exhibits

- 3 Miller Consulting Engineers - Property Condition Assessment Report - Structural 05/04/2015
- 3 Miller Consulting Engineers - Structural Drawings 04/17/2015

Images



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MILLER
CONSULTING
ENGINEERS

May 4, 2015

[redacted]
Lake Oswego, OR 97034

Subject: **Condition Assessment Report**
[redacted]o, Oregon
MCE Project Number: 150411

Dear Ms. [redacted]

As you have requested, Paul Albertine, S.E. of Miller Consulting Engineers, Inc. (MCE) met with you at the above-noted address to perform a structural site observation on April 14, 2015, as well as follow-up inspections on April 16, 2015, and May 1, 2015. The purpose of this site observation was to identify structural deficiencies present. The scope of this report includes visual observations of the deterioration at the north exterior wall, observations of the crawlspace and uneven floors, and review of the roof framing above the garage at the attic access opening.

This is a condition assessment report and is limited to visual observations only; no other means of testing was performed to reach the conclusions in this letter. The professional opinions expressed in this report are based solely on the observed conditions at the time of the site observation and information supplied by the owner. Evaluation of waterproofing, flashing, and related moisture protection is beyond the scope of this report.

BACKGROUND

The residence is a wood-framed structure occupying three levels. The building is L-shaped with a single level garage at the southeast side of the building, and a lower level floor at the northwest side of the building with two levels occupying the north portion of the structure. The garage area at the south end of the building is supported on concrete piers with a beam and post system. The north portion of the building is supported on a perimeter foundation and interior isolated footings. At approximately 25 feet from the front of the building an interior continuous foundation wall and basement retaining wall is present.

At the time of the inspection a portion of the siding had been removed at the north exterior wall for inspection. Siding had been removed for a section approximately 8 feet wide approximately 25 feet from the northeast corner of the building. The stud wall has been exposed for the full height of the residence.

According to information provided by the client, the building was originally constructed in 1975, the west portion of the structure was added in 1981, and a second renovation was done in 2010.

OBSERVATIONS

North Wall Deterioration

At the exposed area of the exterior north wall, wood deterioration was present in the sheathing, wall studs, and framing members. Deterioration was also present at the upper floor rim, the wall plates, studs, and a column supporting a roof level, glue-laminated timber beam. At the second floor the rim was substantially damaged. The support column was damaged at the main and upper level floor. Deterioration was also present at the main level rim and floor joists at the foundation wall. At the roof level, it was apparent that new roof sheathing had been added at the roof overhang and was completed prior to our inspection.

It is recommended to remove and replace all the damaged structural elements. At locations where horizontal wall plates are cut, it is recommended to provide horizontal straps at the wall plates as splices to provide shear wall continuity. At the main level floor it is recommended that deteriorated material be removed and the existing joists be spliced. To minimize shrinkage effects of new wood material, we recommend splicing the floor joists with laminated veneer lumber. Repair drawings for this damage have been provided.

Uneven/Un-level Floors

At the main level foyer and kitchen area the floor was observed to be uneven. At the middle of the foyer, a gap in the floor finish was observed also indicating the floor has a noticeable ridge. In general, this ridge was observed to be following an east/west direction.

In the crawlspace the floor framing below the foyer, den, and kitchen area is constructed of 4 x 8 floor beams spanning in the north/south direction spaced approximately 4 feet on center. The 4 x 8 floor beams are supported at approximately 8 feet on center. At the middle of the crawlspace, the 4 x 8 floor beams span approximately 4 feet between supports. At the crawlspace below the main floor area, adjustable foundation leveling jacks were observed.

Below the foyer area, there is a line of isolated footings each supporting the ends of floor beams. At each of these locations floor jacks have been installed so that they support one of the two floor beams bearing on each footing. The jacks at this area have been raised so that the adjacent floor beam is approximately 5/8 inch lower. As a result, the floor at this area is uneven. It is recommended that both beams are set to the correct elevation to provide a level floor. It is also recommended that the floor supports are adjusted so that the floor remains in a level position.

A review of the main floor framing at the foyer area was performed. Based on the existing construction drawings this review indicates that the existing structural members are structurally adequate to support the existing loads. Furthermore, the footings installed in the crawlspace during the 2010 renovation were found to be adequate. At the time of the inspection, the older existing footings were covered by a moisture barrier/insulation fabric, thus the footings were not visible, or directly accessible. The size of the older interior footings is not indicated in the permit drawings for the 2010 renovation. Thus, a review of those footings was not performed.

Garage Roof Trusses

At the garage attic access opening, the existing truss bottom chord has been cut, and web members have been removed. As a result, the modified roof truss does not function as originally intended. Our office has performed a review to determine if the truss modifications are structurally adequate. The results of this analysis indicate a structural deficiency present. The existing permit drawings do not indicate any structural changes to the attic framing at the garage. However, additional 2 x 6 members have been added to the top of the modified truss as well as new sheathing over the garage area. Since the deficiency in the truss bottom chord was not addressed, the structural deficiency remains. It is recommended to support the modified truss with the adjacent trusses. Repair drawings for the modified roof truss are being developed.

CONCLUSIONS/RECOMMENDATIONS

It is recommended that the north exterior wall be repaired as soon as possible to avoid further damage from occurring. As requested, MCE has prepared structural drawings to address the deterioration repairs.

To level the main floor, it is recommended that the foundation jacks be adjusted. At locations where the jacks are not supporting both beams over a footing, it is recommended that the existing support be adjusted or replaced as necessary so the floor beams are supported in a level position.

The deficiencies observed at the garage attic truss near the attic access opening indicate structural deficiencies present and, if left unrepaired, represent a risk of further damage. Based on our discussions, you have requested that we provide repair drawings for this item.

If you have any questions or concerns in this matter, please feel free to contact me.

Respectfully,

Miller Consulting Engineers, Inc.

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER
16572
OREGON
January 23, 2001
PAUL R. ALBERTINE
EXPIRES: 12 -31 -2015

Paul Albertine, P.E., S.E.
Principal

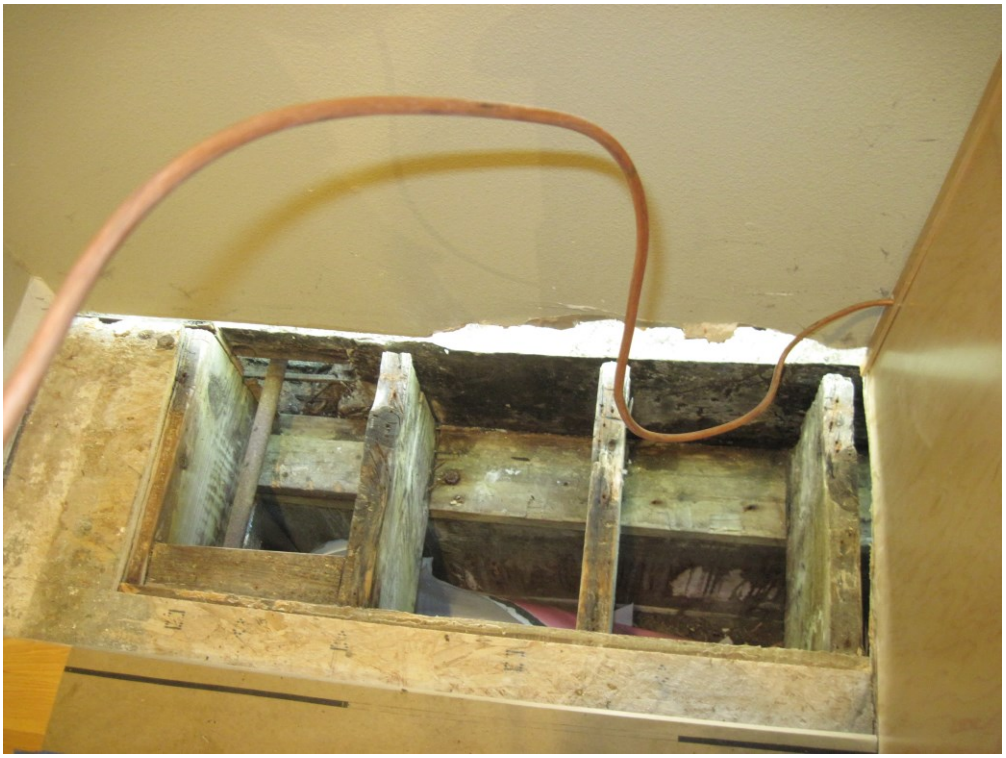
Photograph 1: North wall damage

Photograph 2: North wall upper level damage

Photograph 3: North wall main level wall damage

Photograph 4: North wall damage at upper level floor

Photograph 5: North wall damage at foundation



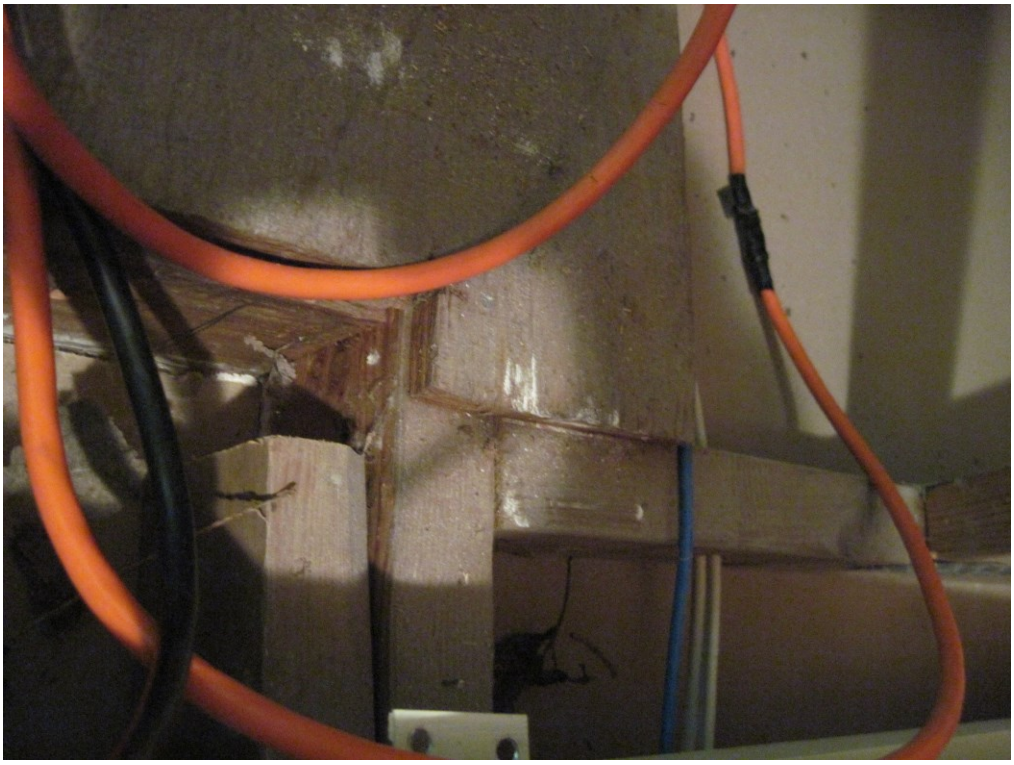
Photograph 6: Deteriorated main floor joists at north exterior wall

Photograph 7: Deteriorated main floor joists at north wall

Photograph 8: Main level floor support at crawlspace below foyer

Photograph 9: Garage attic truss web members removed

Photograph 10: Attic truss with web members removed

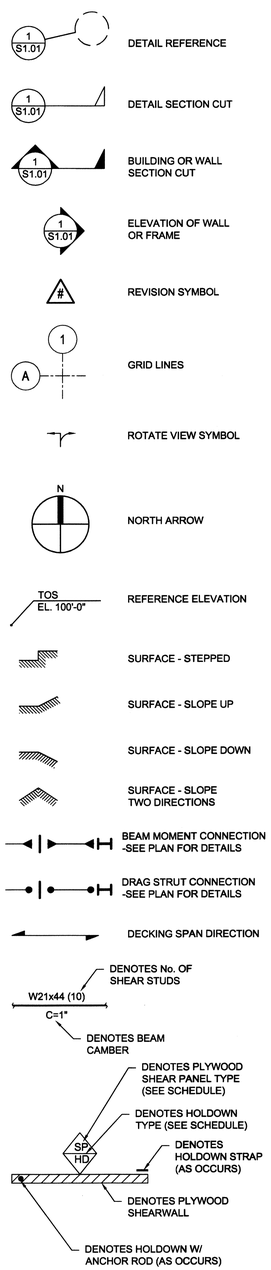


Photograph 11: Attic truss with discontinuous bottom chord

STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT
ADDL	ADDITIONAL
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ARCH	ARCHITECTURAL
ATR	ALL THREAD ROD
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BN	BOUNDARY NAIL
BOF	BOTTOM OF FOOTING
BOT	BOTTOM
BRNG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
C	CAMBER
CIP	CAST IN PLACE
CJ	CONTROL OR CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DBO	DESIGNED BY OTHERS
DF/L	DOUGLAS FIR-LARCH
DIA	DIAMETER
DIAG	DIAGONAL
DIST	DISTANCE
DL	DEAD LOAD
DN	DOWN
DTL	DETAIL
DWG	DRAWING
(E)	EXISTING
EA	EACH
EF	EACH FACE
EL	ELEVATION
EN	EDGE NAIL
EOR	ENGINEER OF RECORD
EQ	EQUAL
EW	EACH WAY
EXT	EXTERIOR
FF	FINISH FLOOR
FN	FIELD NAIL
FLR	FLOOR
FDN	FOUNDATION
FT	FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GLB	GLUE LAMINATED BEAM
GWB	GYPSUM WALL BOARD
HDG	HOT-DIP GALVANIZED
HDR	HEADER
HF	HEM-FIR
HT	HEIGHT
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHOR
HSS	HOLLOW STRUCTURAL SECTION
ID	INSIDE DIAMETER
IN	INCH
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP(S)
KSI	KIPS PER SQUARE INCH
L	ANGLE
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LVL	LAMINATED VENEER LUMBER
LWC	LIGHT WEIGHT CONCRETE
MAX	MAXIMUM
MIN	MINIMUM
MIR	MIRROR
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTE	NOT TO EXCEED
NTS	NOT TO SCALE
(N)	NEW
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
OWJ	OPEN WEB JOIST
PAF	POWDER ACTUATED FASTENER
PERP	PERPENDICULAR
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
PT	PRESSURE TREATED
QTY	QUANTITY
RAD	RADIUS
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
REV	REVISED, REVISION
SC	SLIP CRITICAL
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SMS	SHEET METAL SCREW
SOG	SLAB ON GRADE
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROVE
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TOF	TOP OF FOOTING
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WF	WIDE FLANGE
WP	WORK POINT
WWR	WELDED WIRE REINFORCING

STRUCTURAL DRAWING SYMBOLS



STRUCTURAL NOTES:

GENERAL

THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND CORRELATION OF ALL ITEMS AND WORK NECESSARY FOR COMPLETION OF THE PROJECT AS INDICATED BY THE CONTRACT DOCUMENTS. SHOULD ANY QUESTION ARISE REGARDING THE CONTRACT DOCUMENTS OR SITE CONDITIONS, THE CONTRACTOR SHALL REQUEST INTERPRETATION AND CLARIFICATION FROM THE ENGINEER BEFORE BEGINNING THE PROJECT. THE ABSENCE OF SUCH REQUEST SHALL SIGNIFY THAT THE CONTRACTOR HAS REVIEWED AND FAMILIARIZED HIMSELF WITH ALL ASPECTS OF THE PROJECT AND HAS COMPLETE COMPREHENSION THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE TO ALL SAFETY REGULATIONS DURING CONSTRUCTION.

THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SPECIFICALLY NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION OR CONSTRUCTION LOADS. ONLY THE CONTRACTOR SHALL PROVIDE ALL METHODS, DIRECTION AND RELATED EQUIPMENT NECESSARY TO PROTECT THE STRUCTURE, WORKMEN AND OTHER PERSONS AND PROPERTY DURING CONSTRUCTION. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED AND INSPECT SAME IN THE FIELD. ANY MATERIAL NOT AS SPECIFIED OR IMPROPER MATERIAL INSTALLATION OR WORKMANSHIP SHALL BE REMOVED AND REPLACED WITH SPECIFIED MATERIAL IN A WORKMANLIKE MANNER AT THE CONTRACTOR'S EXPENSE.

THESE PLANS, SPECIFICATIONS, ENGINEERING AND DESIGN WORK ARE INTENDED SOLELY FOR THE PROJECT SPECIFIED HEREIN. MILLER CONSULTING ENGINEERS DISCLAIMS ALL LIABILITY IF THESE PLANS AND SPECIFICATIONS OR THE DESIGN, ADVICE AND INSTRUCTIONS ATTENDANT THERETO ARE USED ON ANY PROJECT OR AT ANY LOCATION OTHER THAN THE PROJECT AND LOCATION SPECIFIED HEREIN. OBSERVATION VISITS TO THE JOB SITE AND SPECIAL INSPECTIONS ARE NOT PART OF THE STRUCTURAL ENGINEER'S RESPONSIBILITY UNLESS THE CONTRACT DOCUMENTS SPECIFY OTHERWISE.

NON STRUCTURAL PORTIONS OF PROJECT, INCLUDING BUT NOT LIMITED TO PLUMBING, FIRE SUPPRESSION, ELECTRICAL, MECHANICAL, LAND USE, SITE PLANNING, EROSION CONTROL FLASHING AND WATER-PROOFING ARE BEYOND THE SCOPE OF THESE DRAWINGS AND ARE PROVIDED BY OTHERS.

TEMPORARY SHORING

WHEREVER SHORING IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SHORING SYSTEM THAT PREVENTS SETTLEMENT AND/OR DAMAGE TO EXISTING FACILITIES AND PROTECTS PERSONNEL, THE PUBLIC, AND THE BUILDING, SUPPORTING STREETS, WALKWAYS, UTILITIES, IMPROVEMENTS AND EXCAVATION AGAINST LOSS OF GROUND OR CAVING OF EMBANKMENTS DURING CONSTRUCTION, AS REQUIRED. THE CONTRACTOR SHALL LOCATE THE SYSTEM CLEAR WITHOUT OBSTRUCTION OF THE PERMANENT STRUCTURE AND TO PERMIT CONSTRUCTION TO PROCEED.

BUILDING CODE

ALL PHASES OF THE WORK SHALL CONFORM TO THE 2014 OREGON STRUCTURAL SPECIALTY CODE, BASED ON THE 2012 INTERNATIONAL BUILDING CODE (IBC), INCLUDING ALL REFERENCE STANDARDS, UNLESS NOTED OTHERWISE.

DESIGN LOADS

LIVE LOAD REDUCTION FOR BEAMS AND COLUMNS WAS NOT USED. DESIGN FOR MECHANICAL LOADS INCLUDES ONLY THOSE INDICATED ON STRUCTURAL DRAWINGS. THE FOLLOWING ARE THE DESIGN REQUIREMENTS:

STRUCTURAL DESIGN CRITERIA	
RISK CATEGORY	II
DESIGN DEAD LOADS	
ROOF	15 PSF
FLOOR	15 PSF
WALLS	8 PSF
FLOOR LIVE LOAD (RESIDENTIAL)	
FLOORS	40 PSF
DECKS	40 PSF
ROOF LIVE LOAD	SNOW LOAD CONTROLS DESIGN
ROOF SNOW LOAD	
DESIGN ROOF SNOW LOAD	20 PSF
SNOW DRIFTING	AS NOTED ON PLANS (IF OCCURS)
IMPORTANCE FACTOR	IS = 1.0
GROUND SNOW LOAD	PG = 15 PSF
EXPOSURE FACTOR	CE = 1.0
THERMAL FACTOR	CT = 1.0
FLAT ROOF SNOW LOAD	PF = 11 PSF
WIND DESIGN DATA	
BASIC WIND SPEED (3 SEC GUST)	120 MPH
EXPOSURE	B
INTERNAL PRESSURE COEFFICIENT	GCPI = +/- 0.18
SEISMIC DESIGN DATA	
IMPORTANCE FACTOR	IE = 1.0
SPECTRAL RESPONSE ACCELERATIONS	SS = 1.66, S1 = 0.68
SITE CLASS	D
SPECTRAL RESPONSE COEFFICIENTS	SDS = 0.984, SD1 = 0.73
SEISMIC DESIGN CATEGORY	D
BASIC SEISMIC FORCE RESISTING SYSTEM	LIGHT FRAMED SHEAR WALLS
DESIGN BASE SHEAR	7562 lbs
SEISMIC RESPONSE COEFFICIENT	CS = 0.112
RESPONSE MODIFICATION FACTOR	R = 6.5
ANALYSIS PROCEDURE USED	ASCE 7-10 EQUIVALENT LATERAL FORCE

WOOD FRAMING

ALL STRUCTURAL WOOD COLUMNS AND BEAMS TO BE DOUGLAS FIR/LARCH (DF/L), #1 UNLESS NOTED OTHERWISE. ALL JOISTS, PURLINS, AND GIRTS TO BE DF/L #2 AND BETTER UNLESS NOTED OTHERWISE. ALL BLOCKING AND NON-STRUCTURAL FRAMING TO BE CONSTRUCTION GRADE AND BETTER. ALL WOOD PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE HEM-FIR #2 PRESSURE TREATED UNLESS NOTED OTHERWISE. ALL COLUMNS SHALL HAVE SOLID BLOCKING FOR THE FULL COLUMN AREA TO SUPPORTING MEMBERS BELOW. COLUMNS SHALL ALIGN THROUGH ALL FLOORS TO THE FOUNDATION.

ALL PREFABRICATED METAL TIMBER CONNECTORS AND HANGERS SHALL BE FULLY BOLTED AND/OR NAILED AS INDICATED BY MANUFACTURER, UNLESS NOTED OTHERWISE. ALL CONNECTORS, HANGERS AND FASTENERS SHALL BE CORROSION PROTECTED PER MANUFACTURER'S RECOMMENDATIONS. SIMPSON PREFABRICATED METAL TIMBER CONNECTORS NOTED. OTHER TYPES OF METAL CONNECTORS REQUIRE PRIOR REVIEW.

ALL SHEATHING SHALL BE APA RATED GROUP 1, EXPOSURE 1 IN COMPLIANCE WITH VOLUNTARY PRODUCT STANDARDS DOCUMENT PS1 AND DOCUMENT PS2.

- 15/32" (1/2" NOMINAL) SHEATHING TO BE C-D WITH SPAN RATING OF 32/16.
- 23/32" (3/4" NOMINAL) SHEATHING TO BE C-D WITH SPAN RATING OF 48/24.

UNLESS OTHERWISE SPECIFIED BY THE PANEL MANUFACTURER, PROVIDE A MINIMUM GAP OF 1/8" BETWEEN ALL SHEATHING PANELS. ALL FLOOR SHEATHING TO BE TONGUE AND GROOVE. GLUE ALL FLOOR SHEATHING WITH STRUCTURAL ADHESIVE, 3M-5200 OR EQUIVALENT, AT ALL SUPPORTS. ALL SHEATHING WALLS AND/OR SHEAR WALLS TO HAVE 2X BLOCKING AT PANEL EDGES UNLESS NOTED OTHERWISE.

ALL NAILS SHALL BE COMMON AND NAILING SHALL BE PER THE NAILING SCHEDULE UNLESS OTHERWISE NOTED ON THE DRAWINGS. THE FOLLOWING NAIL SIZES SHALL BE USED UNLESS NOTED OTHERWISE:

6D NAIL: 0.113 INCH DIA. X 2 INCHES LONG WITH MIN. HEAD DIA. 17/64 IN.
8D NAIL: 0.131 INCH DIA. X 2 ½ INCHES LONG WITH MIN. HEAD DIA. 9/32 IN.
10D NAIL: 0.148 INCH DIA. X 3 INCH LONG WITH MIN. HEAD DIA. 5/16 IN.
12D NAIL: 0.148 INCH DIA. X 3 ¼ INCHES WITH MIN. HEAD DIA. 5/16 IN.
16D NAIL: 0.162 INCH DIA. X 3 ½ INCHES WITH MIN HEAD DIA. 11/32 IN.

PRESSURE TREATED LUMBER

ALL STRUCTURAL WOOD MEMBERS EXPOSED TO WEATHER OR AS NOTED ON DRAWINGS OR AS REQUIRED BY IBC SECTION 2303.1.8, SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH AMERICAN WOOD-PRESERVERS ASSOCIATION USING (ACQ, CA-B, DOT) STANDARD U1 AND M4 FOR SPECIES, PRODUCT, PRESERVATIVE, AND END USE. RETENTION AMOUNTS SHALL BE AS REQUIRED FOR AWPA USE CATEGORY STANDARDS FOR STRUCTURAL APPLICATIONS. FOR ABOVE GROUND APPLICATIONS RETENTION OF 0.25 LBS PER CUBIC FOOT OF ACQ OR 0.10 LBS PER CUBIC FOOT OF CA-B BASED ON AWPA USE CATEGORY STANDARDS UC1, UC2, UC3A, UC3B. FOR GROUND CONTACT, FRESH WATER IMMERSION APPLICATIONS RETENTION OF 0.40 LBS PER CUBIC FOOT OF ACQ OR 0.25 LBS PER CUBIC FOOT OF CA-B BASED ON AWPA USE CATEGORY STANDARDS UC4A, UC4B. FOR IN GROUND STRUCTURAL APPLICATIONS RETENTION OF 0.60 LBS PER CUBIC FOOT OF ACQ OR 0.31 LBS PER CUBIC FOOT OF CA-B BASED ON AWPA USE CATEGORY STANDARD UC4B. FOR ABOVE GROUND, CONTINUOUSLY PROTECTED FROM LIQUID WATER APPLICATIONS (SILL PLATE) RETENTION OF 0.25 LBS PER CUBIC FOOT OF ACQ OR 0.10 LBS PER CUBIC FOOT OF CA-B OR 0.25 LBS PER CUBIC FOOT BASED ON AWPA USE CATEGORY STANDARDS UC1, UC2.

FASTENERS IN CONTACT WITH PRESERVATIVE-TREATED MATERIAL SHALL BE IN ACCORDANCE WITH IBC SECTION 2304.9.5. TIMBER CONNECTORS/FASTENERS INCLUDING NUTS AND WASHERS IN CONTACT WITH PRESERVATIVE-TREATED MATERIAL SHALL HAVE PROTECTIVE COATINGS AS RECOMMENDED BY CONNECTOR/FASTENER MANUFACTURER.

ALL LAMINATED VENEER LUMBER, ORIENTED STRAND LUMBER, GLUE LAMINATED LUMBER EXPOSED TO WEATHER AND SUBJECT TO DECAY, SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR PRESERVATIVE MATERIALS, RETENTION RATES, AND END USE. LAMINATED TIMBERS SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH IBC SECTION 2304.11.3.

ALL TRIMMED SECTIONS, CUTS, DAPS, OR HOLES IN PRESSURE TREATED MATERIALS SHALL BE TREATED WITH COPPER NAPTHENATE, IN ACCORDANCE WITH AWPA STANDARD M4. FOR ADDITIONAL REQUIREMENTS, SEE IBC SECTION 2304.11 FOR PROTECTION AGAINST DECAY AND TERMITES.

ENGINEERED LUMBER

RIGIDLAM LVL TO BE AS MANUFACTURED BY ROSEBURG FOREST PRODUCTS, WITH INTERNATIONAL CODE COUNCIL (ICC) RESEARCH APPROVAL. EQUIVALENT PRODUCTS OF OTHER MANUFACTURERS MAY ONLY BE USED AFTER REVIEW AND DETERMINATION BY ENGINEER OF RECORD THAT PRODUCTS MEET DESIGN REQUIREMENTS.

775 BOCA RATAN DRIVE
LAKE OSWEGO, OREGON

[redacted]

N

1 S0.01 VICINITY MAP

N.T.S.

STRUCTURAL DRAWING INDEX

S0.01:
STRUCTURAL NOTES
VICINITY MAP
S0.02:
SITE PLAN
S1.01:
PLAN
S3.01:
ELEVATION
S8.01:
DETAILS

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER
18272
OREGON
January 23, 2001
PAUL R. ALBERTINE

EXPIRES: 12 31 -2015

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DETERIORATION REPAIR

[redacted]

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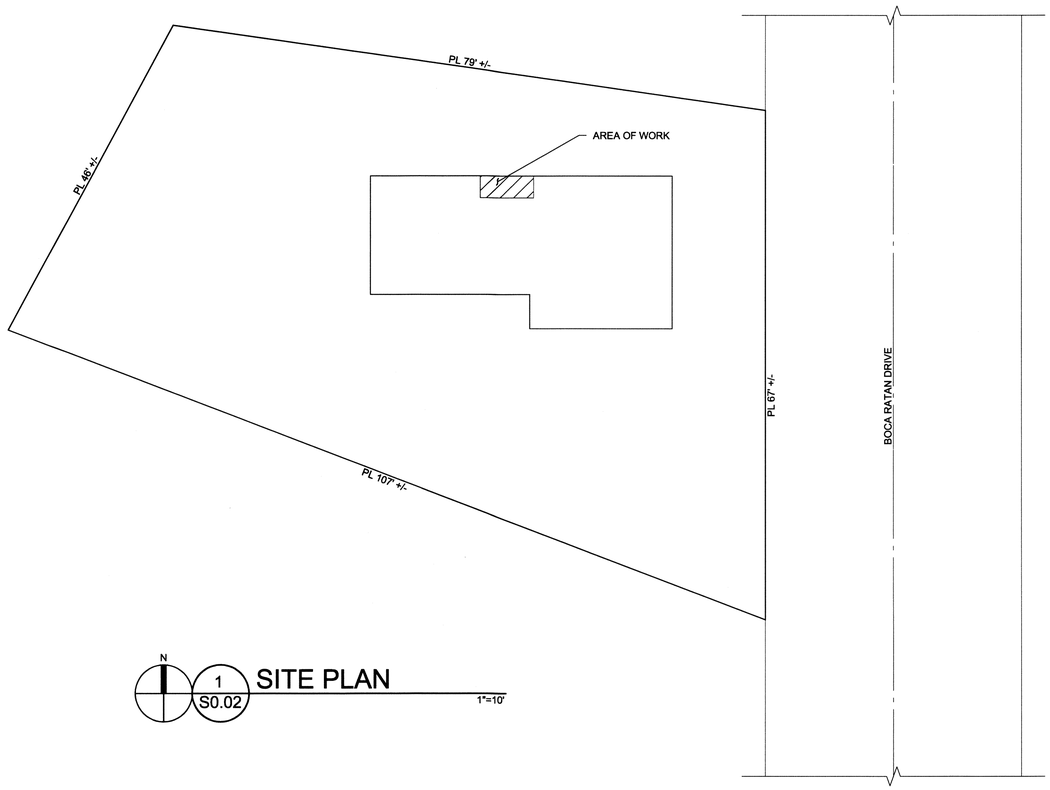
PROJECT NO:	150411
ISSUE DATE:	04.17.15

REV.	DATE	DESCRIPTION

SHEET CONTENT
STRUCTURAL NOTES

SHEET
S0.01



N

1
S0.02

SITE PLAN

1"=10'

LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2" - SCALE ACCORDINGLY)

STRUCTURAL
REGISTERED PROFESSIONAL ENGINEER
16572
OREGON
January 23, 2001
PAUL R. ALBERTINE

EXPIRES: 12 -31 -2015

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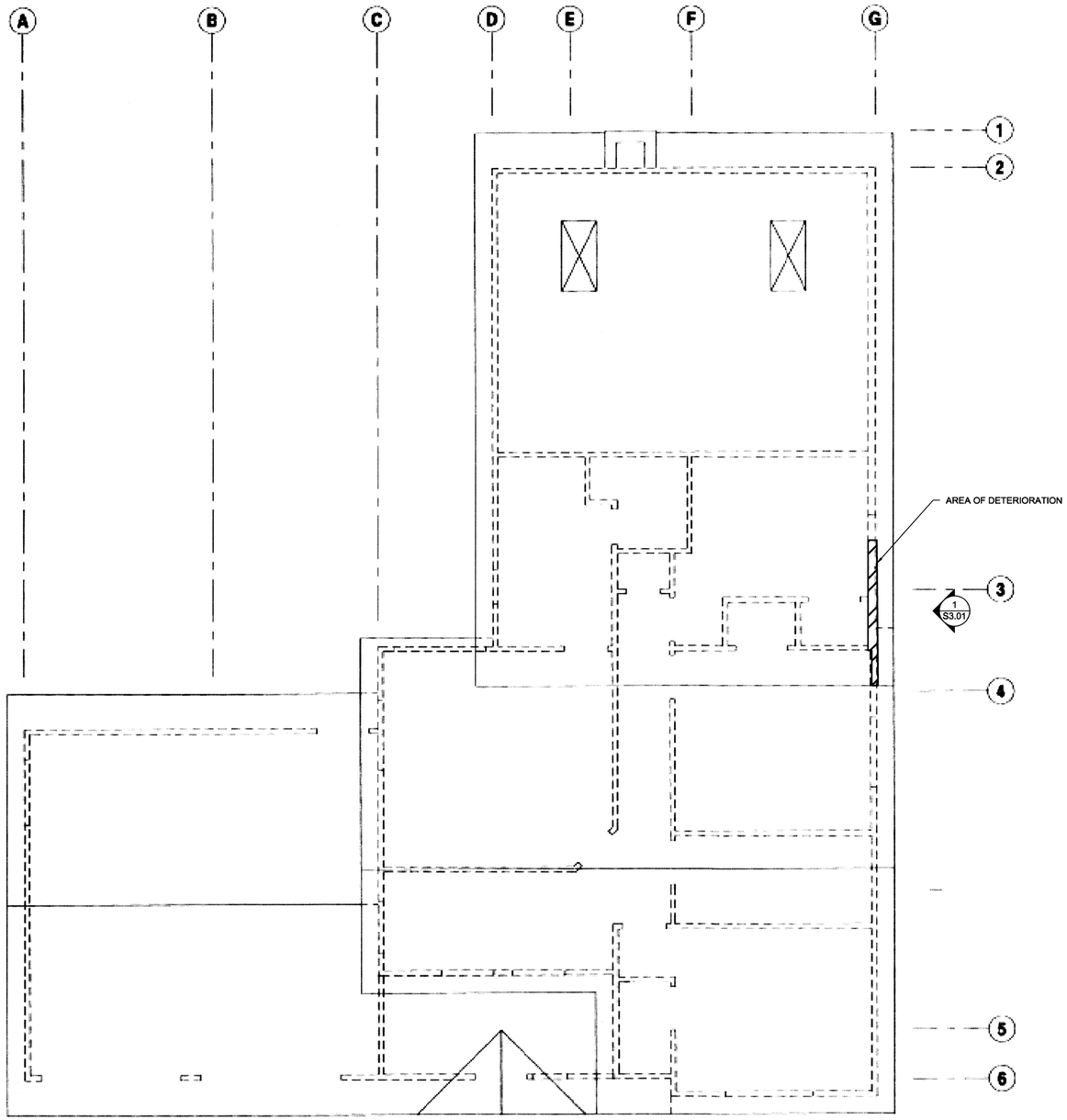
REV.	DATE	DESCRIPTION

SHEET CONTENT
SITE PLAN

SHEET
S0.02



N

1 / S1.01 ROOF PLAN

1/4"=1'-0"

LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2" - SCALE ACCORDINGLY)

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OREGON
PAUL R. ALBERTINE
January 23, 2007

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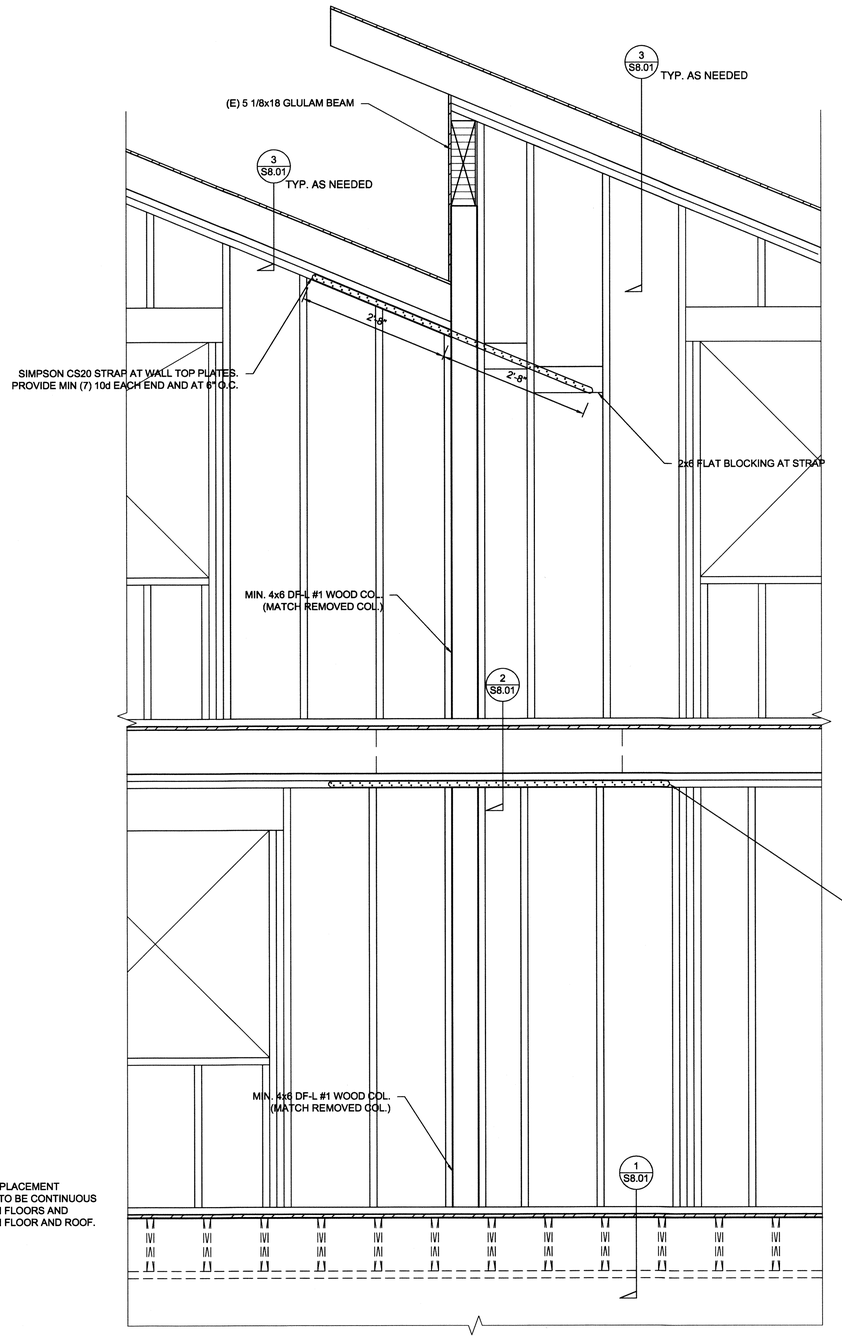
REV.	DATE	DESCRIPTION

SHEET CONTENT

SHEET
S1.01



NOTE: REPLACEMENT COLUMN TO BE CONTINUOUS BETWEEN FLOORS AND BETWEEN FLOOR AND ROOF.

1 S3.01 FRAMING ELEVATION

3/4"=1'-0"

NOTE: CONTRACTOR TO DETERMINE SCOPE OF DETERIORATION. LOCATIONS WHERE DETERIORATION IS BEYOND THE SCOPE OF THESE DRAWING PLEASE NOTIFY ENGINEER.

GENERAL NOTES:

1. REMOVE AND REPLACE ALL DAMAGED MATERIALS. FIELD VERIFY EXTENT OF DAMAGE AND EXISTING CONDITIONS
2. PROVIDE 15/32" APA RATED PLYWOOD SHEATHING (NOT SHOWN). EXTERIOR WALLS REQUIRE MIN. 10d AT 6"O.C. ALL PANEL EDGES AND 12" AT FIELDS.
3. AT WALL SHEATHING PROVIDE BLOCKING AT ALL UNSUPPORTED PANEL EDGES.
4. EXTERIOR SIDING, WATER PROOFING, MOISTURE PROOFING, AND FLASHING TO BE DESIGNED BY OTHERS. CONTRACTOR TO PROVIDE NECESSARY PROFESSIONAL EXPERTISE FOR DESIGN AND CONSTRUCTION OF THESE ELEMENTS.
5. AT LOCATIONS WHERE STUDS ARE MISALIGNED, FURRING MAY BE USED PROVIDED NAILS PENETRATE A MIN. 1 1/2" INTO FRAMING MEMBER.

LINE IS 2 INCHES AT FULL SCALE
(IF NOT 2" - SCALE ACCORDINGLY)

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 16572 OREGON January 23, 2001 PAUL R. ALBERTINE

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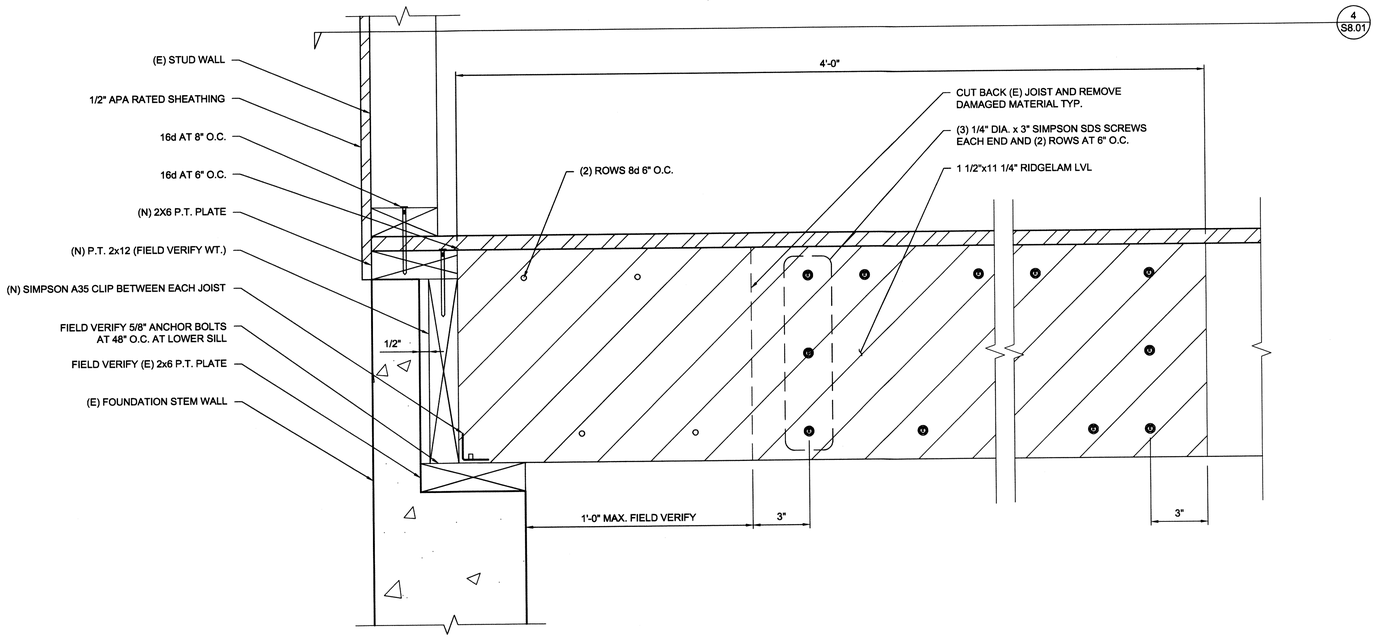
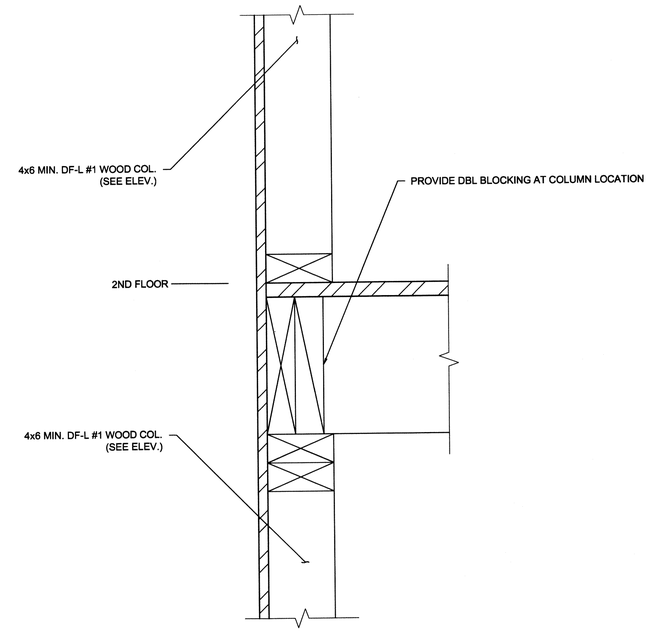
REV.	DATE	DESCRIPTION

SHEET CONTENT
FRAMING ELEVATION

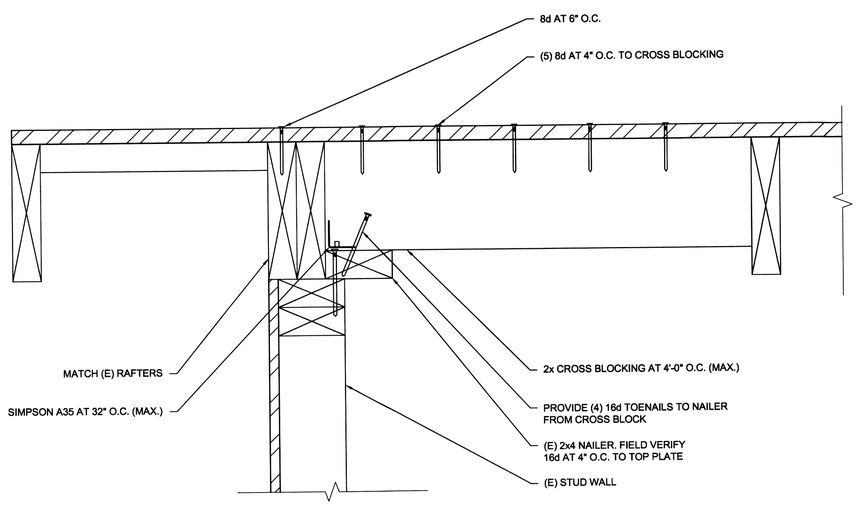
SHEET
S3.01



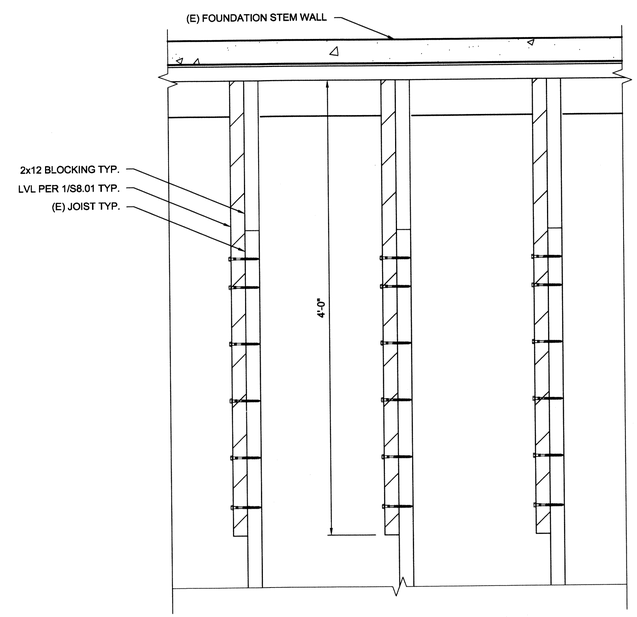
1 S8.01 SECTION AT FOOTING
3"=1'-0"



2 S8.01 SECTION AT FLOOR LINE
3"=1'-0"



3 S8.01 SECTION AT ROOF
3"=1'-0"



4 S8.01 FLOOR JOIST SPLICE PLAN
1 1/2"=1'-0"

LINE IS 2 INCHES AT FULL SCALE
(IF NOT 2" - SCALE ACCORDINGLY)

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER
16572
OREGON
January 23, 2015
PAUL R. ALBERTINE
EXPIRES: 12 -31 -2015

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DETERIORATION REPAIR [redacted]

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REV.	DATE	DESCRIPTION

SHEET CONTENT
DETAILS

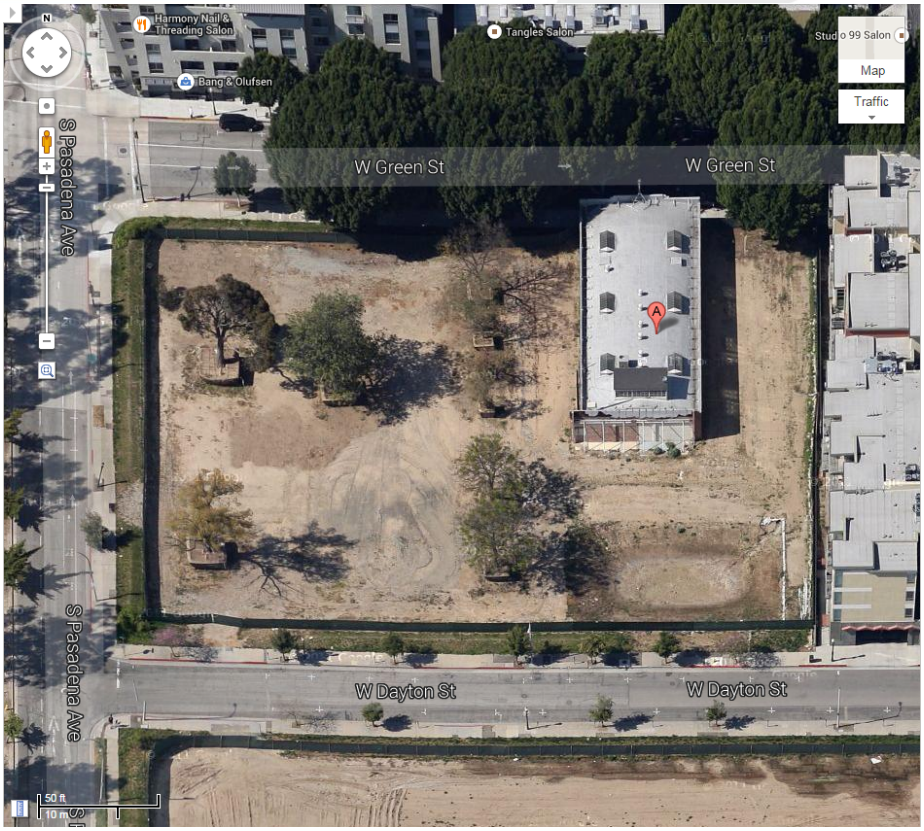
SHEET
S8.01

3A. Proposal

[redacted]

CA

[redacted] *CA 91105*



OFFICES

CALIFORNIA

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San Clemente, CA 92673

CA License #713760

OREGON

503-660-8670

9320 SW Barbur Blvd, Ste 170
Portland, OR 97219

OR License #173960

GENERAL INQUIRY

info@petefowler.com
www.petefowler.com

Pete Fowler CONSTRUCTION Services, Inc.

Project #15-121

Pete Fowler CONSTRUCTION Services, Inc.

Proposal

Date:	03/03/2015
To:	[redacted] [redacted] [redacted] [redacted] CA 91101 [redacted] [redacted]
From:	Pete Fowler Construction Services, Inc.
Project:	[redacted] CA (PFCS 15-121)
Regarding:	Property Assessment

Dear Ms. [redacted]

Thank you for considering PFCS to assist you with your project.

As I currently understand the project, PFCS will be performing a property assessment, specifically regarding the masonry and concrete assemblies at your property located at [redacted], California, 91105.

Attached please find our Consulting Agreement and Fee Schedule for your review, approval and signature. We charge our time by the hour, in 1/10-hour (6 minute) increments, only for the time incurred on behalf of your project. Paul Kushner, our staff Architect will be the lead consultant on your project, and he invoices at the Architect rate. PFCS can begin work immediately upon receipt of the signed agreement and the retainer check for $2,500.

Proposal

An integral component to making good decisions about a building project is to execute a *Building Performance Analysis*. The American Society for Testing and Materials (ASTM International) "Standard Guide for Property Condition Assessment" (E2018-08) is a universally recognized set of practices for professionally collecting and evaluating data regarding the performance of buildings, and this is the standard our company applies.

In short, Building Performance Analysis generally includes:
1. Document & Information Management
2. Meetings/Interviews with Key People
3. Building Information Management: Locations List, Issues List(s), Inspection Photographs,
4. Visual Inspection
5. Analysis: Analyze issues/elements
6. Testing (Only as Necessary, not included in this budget)
7. Estimate (Only as Necessary, not included in this budget)
8. Report

The total budget for these activities is $4,700.

PFCS will not exceed this amount without your prior approval if it is determined additional work or analysis is necessary. Additional analysis may include detailed repair specifications, additional inspection during repairs or other requirements for the project as it progresses.

I look forward to working with you and should you have any questions, please do not hesitate to contact my office.

Regards,
Whitney Woolf
Operations Manager
949-240-9971 | ww@petefowler.com

Consulting Agreement

This Agreement is effective this ___ day of _____, ____ between Pete Fowler Construction Services, Inc. ("Consultant") and [redacted] ("Client").

1. TERM OF CONTRACT

This Agreement shall become effective upon execution by both parties and shall continue in effect until terminated as provided in this Agreement.

2. SERVICES TO BE PERFORMED BY CONSULTANT

1. Specific Services: Conditional upon receipt of an executed Agreement and receipt of the deposit as specified herein, the Consultant agrees to perform services related to analysis of the condition, construction and development of certain real property as specified in the proposal attached hereto ("Proposal"). The parties agree that the scope and nature of the services will be adjusted from time to time dependent upon initial analysis and testing. The Client specifically acknowledges and agrees that the Consultant services do not include design, construction or building inspector services and that the Consultant shall not be considered an architect, building contractor, engineer or building inspector when providing its services, nor shall the Consultant assume or render on behalf of the Client any duty or responsibility which may otherwise be performed by any of these professionals.
2. Method of Performing Services: The Consultant will determine the method, details, and means of performing the above-described services. The Consultant shall expend its best efforts to meet the objectives of Client and, in doing so, strive to preserve the integrity of Client in its relationships. The Consultant agrees to abide by any policies and procedures established by Client during the term of this Agreement.

3. COMPENSATION

1. Rate: Client agrees to pay Consultant the amount of $2,500.00, payable upon execution of this Agreement ("deposit") and such additional amounts as set forth in the Proposal or schedule of fees and costs attached hereto. The deposit shall be held and applied to the final invoice to the services and costs.
2. Date for Payment of Compensation: Client agrees to pay Consultant in full within thirty (30) days of receipt of an invoice, together with a service charge in the amount of One Percent (1%) per month for any amounts not paid when due.
3. Testimony: Should any employee, independent contractor or party who may have a relationship with Consultant be required to testify in any deposition, mediation, arbitration, judicial proceeding, administrative proceeding or otherwise, arising out of or related to the services provided in this Agreement, Client agrees to pay Consultant its fees and costs based upon its then current schedule of fees.

4. OBLIGATIONS OF CONSULTANT

1. Non-Exclusive Relationship: Consultant may represent, perform services for, and contract with as many additional clients, persons.
2. Limited Liability: Consultant will not be liable to Client, or to anyone who may claim any right due to a relationship with Client, for any acts or omissions in the performance of services under the terms of this Agreement or on the part of the employees or agents of Consultant unless those acts or omissions are due to gross (we can choose to omit "gross") negligence or willful misconduct. Client shall indemnify and hold Consultant free and harmless from any obligations, costs, claims, judgments, attorney's fees, and attachments arising from, growing out of, or in any way connected with the services rendered to Client under the terms of this Agreement, unless Consultant is judged by a court of competent jurisdiction to be guilty of gross negligence or willful misconduct.
3. Assignment: Neither this Agreement nor any duties or obligations under this Agreement may be assigned by Consultant without the prior written consent of Client.

5. OBLIGATIONS OF CLIENT

1. Cooperation of Client: Client agrees to comply with all reasonable requests of Consultant and provide access to all documents and real property reasonably necessary to the performance of Consultant's duties under this Agreement.
2. Release and Indemnity: Client has been specifically advised and understands that the art and profession of forensic consultation is sometimes subjective and interpretive, and that this process may involve the parties in litigation, arbitration or other claims processes relating to the quality or accuracy of such work, both now and in the future. In making this agreement the Client expressly releases independent contractors, and other representatives, including but not limited to Peter D. Fowler, and keep them free and harmless from any and all claims of liability for damages, whether merited or not, of any kind which are related to the performance of their work involving the real property which is the subject of this agreement, whether such claims are based on express or implied contractual liability, negligence, or indemnity of any kind. The Client agrees to defend and indemnify the Consultant, its directors, officers, shareholders and employees, agents, independent contractors, and other representatives from any and all expense, including but not limited to Consultant's attorney fees, costs, expert costs, judgments, or awards, which any may incur in defending, or as a result of any and all claims relating to such work. Notwithstanding such indemnity for all types of actions, in the event of a judgment or award based upon the gross (we can choose to omit "gross") negligence or willful misconduct by any such released party, the Client does not release such party from liability therefore. The Client voluntarily enters into this agreement in order to secure the performance of Pete Fowler Construction Services, Inc. under the terms of this Agreement.
3. Assignment: Neither this Agreement nor any duties or obligations under this Agreement may be assigned by Client without the prior written consent of Consultant.

6. TERMINATION OF AGREEMENT

1. Notwithstanding any other provision of this Agreement, either party may terminate this Agreement at any time by giving five (5) days written notice to the other party. Unless otherwise terminated as provided in this Agreement, this Agreement will continue in force for a period of three (3) years.

7. GENERAL PROVISIONS

1. Notices: Any notices required to be given under this Agreement by either party to the other may be affected by personal delivery in writing or by mail, registered or certified, postage prepaid with return receipt requested. Mailed notices must be addressed to the parties at the addresses appearing in the introductory paragraph of this Agreement, but each party may change the address by giving written notice in accordance with this paragraph. Notices delivered personally will be deemed communicated as of actual receipt; mailed notices will be deemed communicated as of the day of receipt or the fifth day after mailing, whichever occurs first.
2. Entire Agreement of the Parties: This Agreement supersedes any and all agreements, either oral or written, between the parties with respect to the rendering of services by Consultant for Client and contains all of the representations, covenants, and agreements between the parties with respect to the rendering of those services. Each party to this Agreement acknowledges that no representations, inducements, promises, or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which is not contained in this Agreement, and that no agreement, statement, or promise not contained in this Agreement will be valid or binding. Any modification of this Agreement will be effective only if it is in writing signed by the party to be charged.
3. Partial Invalidity: If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions will continue in full force and effect without being impaired or invalidated in any way.
4. Attorney's Fees: If any legal action or arbitration, including an action for declaratory relief, is brought to enforce or interpret the provisions of this Agreement, the prevailing party will be entitled to reasonable attorney's fees, which may be set by the court or arbitrator in the same action or in a separate action brought for that purpose, in addition to any other relief to which that party may be entitled.

Executed at _____, on the date and year first above written.

CONSULTANT:	**CLIENT:**
Pete Fowler Construction Services, Inc.	[redacted]
Signed: _____	Signed: _____
Printed: _____	Printed: _____
Date: _____	Date: _____

Pete Fowler CONSTRUCTION Services, Inc.

Fee Schedule

Principal	$ 210.00
Expert	$ 195.00
Architect/Engineer	$ 195.00
Senior Consultant	$ 170.00
Construction Analyst	$ 130.00
Assistant Consultant	$ 85.00
Draftsman	$ 125.00
Deposition/Testimony	$ 400.00

We charge our time by the hour, in 1/10-hour (6 minute) increments. There is no minimum daily charge.

TESTIMONY

Expert witness investigation and court preparation time is charged at the applicable hourly rate. Expert witness testimony and / or depositions are charged at $400.00 per hour.

TRAVEL

Travel mileage may be charged at $0.55 per mile for travel from Pete Fowler Construction Services' offices.

OUTSIDE SERVICES AND MATERIALS

Outside services or consultants are charged at cost plus ten (10%) percent. Typical outside services could include: equipment rental, photographs and printing, travel and lodging, long distance communication, and specialty consultants.

INVOICES

Invoices are normally rendered monthly and are payable within 30 days of receipt. A service charge of 1 percent (1%) per month is applied to all past due accounts

Paul knows buildings

Tackling each project from bottom to top.

At the confluence of his passion for art, interest in mathematics, and aptitude for physics—Paul Kushner was destined for the field of architecture and construction. After earning his degree from Berkeley, Paul began his career framing and digging ditches—making for a unique mix of technical expertise and in-the-field experience.

After working his way up in the industry, he started his own architectural consulting business—where he provided architectural services for post-litigation reconstruction projects and construction defect litigation support.

WHAT YOU MIGHT NOT KNOW ABOUT PAUL

As a respected figure in the community, you're likely already familiar with Paul. However, many don't realize the depth of his practical expertise.

Not only does Paul testify as an expert in the field—but due to his dual position as both an expert witness and architect, he is also often responsible for implementing the conclusions he draws. He has over three decades of experience, including 480-unit buildings and budgets exceeding $12 million—meaning you can expect practical answers in the courtroom, and authentic solutions in the field.

LEAVING NO STONE UNTURNED

As an Architecture Expert with Pete Fowler Construction Services, Inc. (PFCS), Paul conducts research, performs inspections, and his tenacity allows him to produce thorough, consistent results in the face of challenging building problems.

EXPERTISE

Construction Consulting

Property Inspection & Testing

Assessment & Analysis

Construction Cost Estimating & Budgeting

Construction Management
& General Contracting

Training

Education & System Development

Expert Witness, Mediation & Testimony

EDUCATION

Bachelor of Arts in Architecture
– *University of California, Berkeley*

California School of Mechanical Arts,
San Francisco

Clifton College, Bristol, England

Hampstead Heath,
Christopher Trevor-Roberts M.V.O.,
Hampstead, England

LICENSES & CERTIFICATIONS

California Architect License # C-26488

Certified Construction Contract Administrator

Construction Documents Technologist

Paul V. Kushner C.C.C.A., A.I.A
Architecture Expert

CA 949.240.9971
OR 503.246.3744

pk@petefowler.com

www.petefowler.com

Pete Fowler
CONSTRUCTION
Services, Inc.

We know buildings

EXPERTISE

PROJECT MANAGEMENT

TECHNOLOGY

STANDARDS

RESULTS

Maintaining your property is hard. We can help.

Building Life-Cycle Management Services for Owners, Associations and Managers

EVALUATION

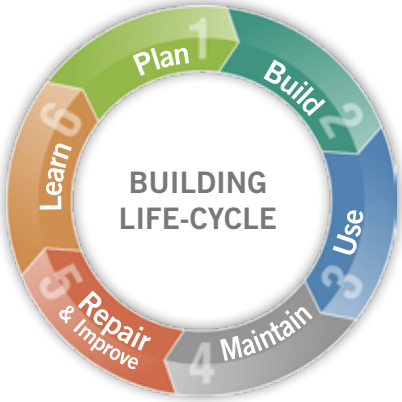
Property Condition Assessment (per ASTM E2018)
Leak Investigation and Testing (per ASTM E2128)
Information Management (Incl. Document Storage and Access per ASTM E2166)

SPECIFICATION

Consultation
Maintenance Plan
Maintenance Manual
Reserve Study (In close coordination with a Reserve Study specialist)
Budget
Life-Cycle Cost Analysis
Specifications for Maintenance, Repair and Improvement

QUALITY MANAGEMENT

Progress Schedule
Request for Proposal
Proposal / Bid Analysis
Contracts
Construction Management including invoice and change order processing
Quality Control Inspections
Warranty Management



Pete Fowler Construction Services (PFCS) specializes in creating REAL PRACTICAL SOLUTIONS for property owners & managers, builders & developers, construction contractors, product manufacturers, lawyers and insurers.

PROJECT MANAGEMENT: To deliver valuable work with measurable return on investment (ROI), we have to manage the Scope, Budget and Schedule of our work and yours.

TECHNOLOGY: We use proprietary technology to create valuable work faster, better and cheaper, to make the information available to all applicable stakeholders, and to create a permanent digital record at no extra cost.

STANDARDS: To help clients manage building lifecycle performance and costs, we compare each project to industry standards and best practices, then apply professional judgement to develop strategies and stepbystep plans for maximizing ROI for maintenance and repair expenditures.

RESULTS: Our work allows our clients to make informed, effective decisions.

Pete Fowler CONSTRUCTION Services, Inc.

www.petefowler.com

Document Summary

#	File Sec.	Date	Author/Party	Description	Summary	Bates Stamp #	Printed?	Received
1	**2**		**PFCS**					
2	2	03/03/2015	PFCS	Consulting Agreement	Proposal / Consulting Agreement Signed by Both Parties			03/03/2015
3	2	03/03/2015	PFCS	Proposal				03/03/2015
4	2	03/12/2015	PFCS	Project Images				03/12/2015
5	2	03/20/2015	PFCS	Report	Includes review of property by assembly and map of crack and repair locations.			03/20/2015
6	**2C**		**Inspection Data**					
7	2C	03/05/2015	Paul Viau	Inspection Sketch				03/10/2015
8	2C	03/18/2015	PFCS	Floor Plan with Concrete and Masonry Wall Crack Locations	including photo id			03/19/2015
9	2C	03/18/2015	PFCS	Floor Plan with Concrete Crack and Repair Locations				03/19/2015
10	2C	03/18/2015	PFCS	Floor Plan with Footing Augmentation and Concrete Overlay				03/19/2015
11	2C	03/18/2015	PFCS	Floor Plan with Masonry Wall Damage and Repair Locations	Floor Plan with Masonry Wall Damage and Repair Locations			03/19/2015
12	**2F**		**PFCS Backup Information**					
13	2F	08/16/2013	PFCS	Building Lifecycle Management Brochure 2013	Also referred to as PA-CM (Property Analysis / Construction Management) brochure.			02/10/2015
14	2F	05/06/2014	PFCS	PFCS Fee Schedule	Short Link: PFCS Fee Schedule 5/26/2014 (pfcs.co/2015fees)			02/10/2015
15	2F	12/23/2014	PFCS	Paul Kushner Curriculum Vitae (Resume) Cover 2014				02/10/2015
16	**4**		**General Contractor**					
17	4	06/22/2012	GC's Consultant	Vibration Monitoring Report				07/18/2015
18	4	12/03/2012	GC's Consultant	Vibration Analysis Matrix	Undated Document			07/18/2015
19	4	09/12/2013	GC's Consultant	Close-Out Report				07/18/2015
20								
21								

3B. Document Summary

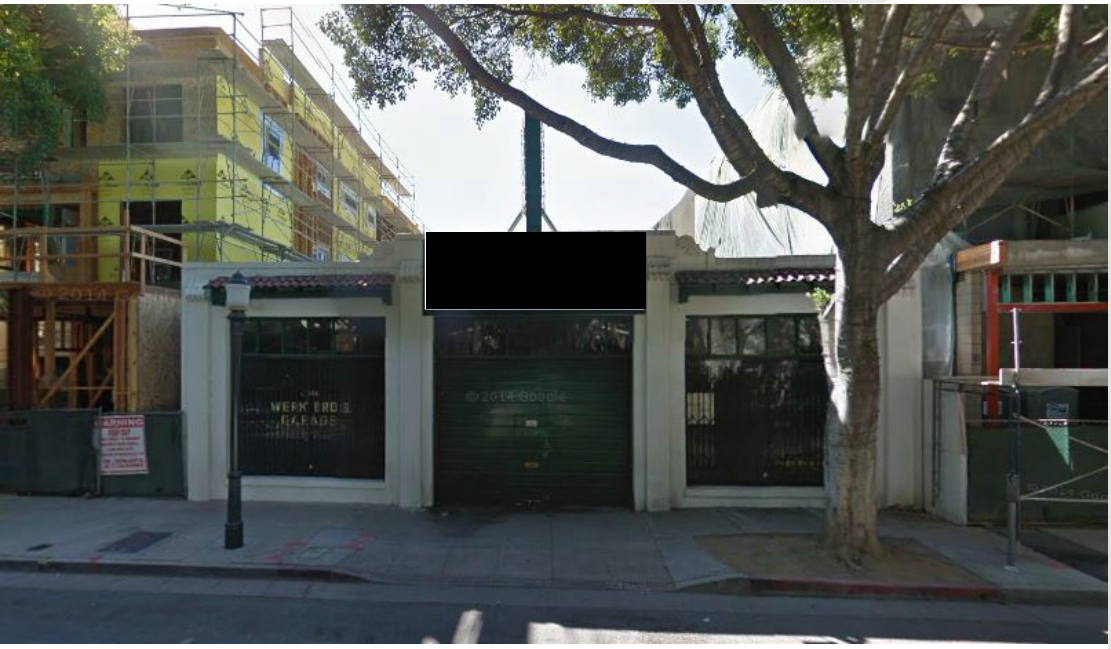
For mediation purposes only.
Protected by all applicable evidence codes.

3C. Property Condition Assessment (Report)

[redacted]

CA

[redacted] *CA 91105*



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GENERAL INQUIRY

info@petefowler.com
www.petefowler.com

Pete Fowler CONSTRUCTION Services, Inc.

Project #15-121

Pete Fowler CONSTRUCTION Services, Inc.

Report

Date:	March 20, 2015
To:	FILE
From:	Pete Fowler Construction Services, Inc.
Project:	[redacted] CA (PFCS 15-121)
Regarding:	Report - Basic
Note:	For mediation purposes only. Protected under all applicable evidence codes.

The subject property is a 90-year old 6,000 square foot un-reinforced masonry building located in [redacted], California.

Equity Residential (adjacent property owner) has hired Regis Contractors to develop the properties on three sides around the Jones' building. The development is a multi-unit project including subterranean garage. Since the start of construction, cracks have formed in the concrete slab floor of the property and the masonry walls at the right, left and back elevations. Regis has offered to make repairs including localized removal of concrete and crack patching. Written repair offers have not been provided. The Jones' have hired PFCS to perform an independent assessment and develop a comprehensive repair strategy.

PFCS has prepared an evaluation of the property conditions by component and provided general repair recommendations. To date, Regis Contractors has not made their monitoring data available for review. The results of the data will influence the type and extent of repairs necessary. Additional evaluation by a Structural Engineer is recommended and will be necessary for implementation of some of the repairs.

ELEMENT LIST

- Substructure
  - A1010 Foundations: Concrete & Reinforcing
  - A1030 Foundations: Concrete Slab-On-Grade
  - A2025 Moisture Protection / Waterproofing
- Superstructure
  - B1002 Masonry Structure
  - B1003 Structural Steel / Metal Framing
  - B2011 Exterior Enclosure: Stucco / Plaster
  - B3002 Low Slope Roofing

Observations

A. SUBSTRUCTURE

A1010 FOUNDATIONS: CONCRETE & REINFORCING

Issue	Movement of the building foundation and walls has occurred as a result of adjacent construction
Investigation	• PFCS has met with the building owner, performed a visual inspection of the roof, exterior and interior elevations and prepared a site plan identifying the areas of distress. • Regis Contractors has retained Jerry Miles, P.E. of Bert L. Howe & Associates, Inc. (BHA) to investigate, document and monitor ongoing conditions at [redacted] through crack gauges, accelerometers. Regis also utilized a surveyor to monitor the building based on markers. PFCS has communicated with Mr. Miles. While he was willing to discuss his observations, he was not able to release the data they had compiled. • According to Mr. Miles, the back elevation wall has exhibited some settlement and possible some rotation.
Analysis	• PFCS documented distress to masonry walls at the right, left and back walls at the exterior and right, back and left walls at the interior. The most significant distress occurred at the back wall at the left and left walls. The left masonry wall exhibits stair step cracking with mortar cracking greater than 1/2" and 1/4" cracking through brick from the top of wall at the back/left corner for 18 feet along the left elevation wall. The back elevation wall exhibits linear cracking approximately 4-5 millimeters in width, 2 feet from the left corner. • At the time of PFCS' inspection, the soil adjacent to the back footing had been excavated and the footing partially exposed but covered with waterproofing and drainage membrane. Soil adjacent to the footing had been previously excavated and multiple improvements made to the adjacent property up against the footing area. • Prior to the construction by Regis, there was a building located at the back elevation that had been demolished and the area prepared for the existing construction. • At the right elevation at the front, trenching was performed and new electrical panels were installed inside the [redacted]. At this location, exterior plaster cracking has occurred that appears to telegraph cracking to the underlying masonry wall. Immediately adjacent to this work, the interior concrete slab on grade has lifted. • Refer to Floor Plan with Concrete Slab and Masonry Wall Crack Locations
Conclusion	

Conclusion (continued)	The building has experienced distress in a number of areas that may be consistent with building movement due to settling soil. Regis' consultant Jerry Miles has indicated that the back elevation has settled. Some soil movement has occurred at the right elevation at the front. PFCS recommends that the owner be provided the monitoring data from Regis. In the absence of the monitoring data, PFCS recommends the following: • Owner to request from Regis the monitoring information from ongoing construction for evaluation by an independent civil engineer • Perform a water level survey of the existing slab on grade and plot the elevations. • Structural Engineer evaluation of building performance and preparation of repair drawings including foundation augmentation and masonry wall repairs. • Install foundation augmentation (deepened footing or helical anchors) at the right elevation wall from the front and extending approximately 16 feet towards the rear. • Install foundation augmentation along the entire back elevation • Refer to Floor Plan - Footing Augmentation and Concrete Overlay Regis' data and/or the water level survey may reveal additional areas of settlement that may require additional repair such as along the left elevation at the rear.
Costs	

PV-01.095; 03/05/2015; Elevation Right

PV-01.097; 03/05/2015; Elevation Right

PV-01.098; 03/05/2015; Elevation Right

PV-01.099; 03/05/2015; Elevation Right

PV-01.132; 03/05/2015; Elevation Back

PV-01.134; 03/05/2015; Elevation Back

PV-01.136; 03/05/2015; Elevation Back

PV-01.138; 03/05/2015; Elevation Back

PV-01.139; 03/05/2015; Elevation Back

PV-01.141; 03/05/2015; Elevation Back

PV-01.142; 03/05/2015; Elevation Back

PV-01.143; 03/05/2015; Elevation Back

PV-01.206; 03/05/2015; Building Interiors

PV-01.207; 03/05/2015; Building Interiors

PV-01.210; 03/05/2015; Building Interiors

A. SUBSTRUCTURE

A1030 FOUNDATIONS: CONCRETE SLAB-ON-GRADE

Issue	The concrete slab on grade has been damaged as a result of the adjacent construction. The concrete slab on grade has cracked at multiple locations throughout the building and localized areas exhibit offsets at the cracking.
Investigation	• PFCS has met with the building owner, performed a visual inspection of the roof, exterior and interior elevations and prepared a site plan identifying the areas of distress. • Regis Contractors has retained Jerry Miles, P.E. of Bert L. Howe & Associates, Inc. (BHA) to investigate, document and monitor ongoing conditions a [redacted] through crack gauges, accelerometers. Regis also utilized a surveyor to monitor the building based on markers. PFCS has communicated with Mr. Miles. While he was willing to discuss his observations, he was not able to release the data they had compiled. • According to Mr. Miles, the back elevation wall has exhibited some settlement and possible some rotation.
Analysis	PFCS documented substantial cracking in the concrete slab on grade throughout the building. PFCS documented more than 175 feet of cracking that has occurred with widths up to 3/8". Areas of concrete cracking with offsets were observed at the right front with an offset in excess of 1" and the back with 1/16" offset . Refer to Concrete Slab Crack and Masonry Wall Crack Locations Floor Plan for locations and lengths.
Conclusion	The building has experienced distress in a number of areas that may be consistent with building movement due to settling soil. Regis' consultant Jerry Miles has indicated that the back elevation has settled. Some soil movement has occurred at the right elevation at the front. PFCS recommends that the owner be provided the monitoring data from Regis. In the absence of the monitoring data, PFCS recommends the following: • Remove and dispose of vinyl composition tile flooring • Perform a water level survey of the existing slab on grade and plot the elevations. • Perform foundation augmentation per Structural Engineers recommendations • Execute interior repairs after foundation augmentation including the following: A. Remove and replace concrete slab on grade at right front along front wall to approximately 22' from right wall and extending approximately 26' from front towards back wall. B. Remove and replace concrete 1' either side of other cracks. See PFCS floor plans with cracks and repair areas C. At concrete crack to wall along right elevation, grout crack and install backer rod and sealant (Vulkem 116 by Tremco or equal) D. Install concrete overlay over entire slab to match existing floor finish.

Conclusion (continued)	A. Refer to Floor Plan - Concrete Repairs B. Refer to Floor Plan - Foundation Augmentation and Concrete Overlay Additional crack repairs may be necessary after removal of flooring and storage of the vehicles. Conduct additional crack repairs as indicated above.
Costs	

PV-01.202; 03/05/2015; Building Interiors

PV-01.206; 03/05/2015; Building Interiors

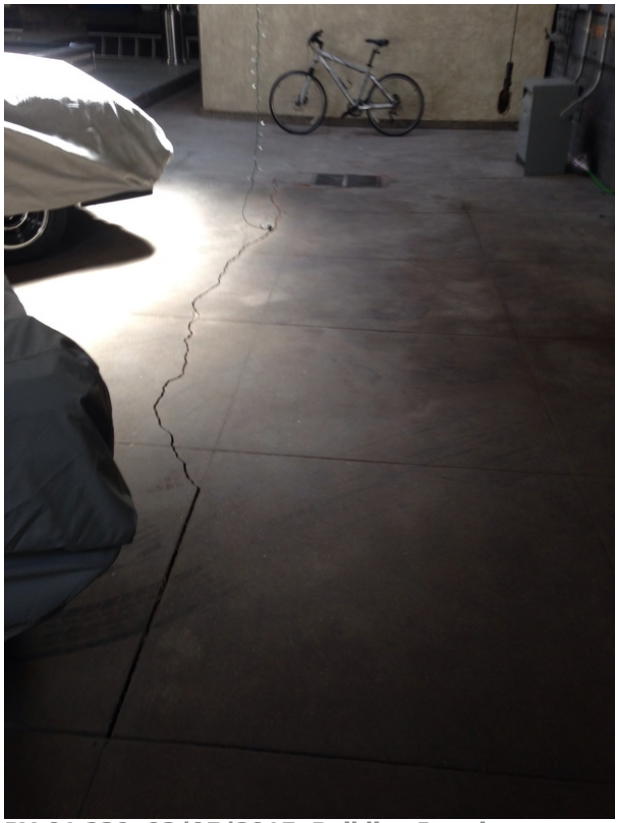
PV-01.207; 03/05/2015; Building Interiors

PV-01.210; 03/05/2015; Building Interiors

PV-01.214; 03/05/2015; Building Interiors

PV-01.226; 03/05/2015; Building Interiors

PV-01.227; 03/05/2015; Building Interiors



PV-01.230; 03/05/2015; Building Interiors

PV-01.231; 03/05/2015; Building Interiors

PV-01.246; 03/05/2015; Building Interiors

PV-01.270; 03/05/2015; Building Interiors

PV-01.283; 03/05/2015; Building Interiors

PV-01.295; 03/05/2015; Building Interiors

PV-01.303; 03/05/2015; Building Interiors

PV-01.304; 03/05/2015; Building Interiors

A. SUBSTRUCTURE

A2025 MOISTURE PROTECTION / WATERPROOFING

Issue	Visual inspection revealed a section of inadequately attached termination bar and separated sealant at the left elevation.
Investigation	• PFCS has met with the building owner, performed a visual inspection of the roof, exterior and interior elevations and prepared a site plan identifying the areas of distress. • Regis Contractors has retained Jerry Miles, P.E. of Bert L. Howe & Associates, Inc. (BHA) to investigate, document and monitor ongoing conditions at [redacted] through crack gauges, accelerometers. Regis also utilized a surveyor to monitor the building based on markers. PFCS has communicated with Mr. Miles. While he was willing to discuss his observations, he was not able to release the data they had compiled. • According to Mr. Miles, the back elevation wall has exhibited some settlement and possible some rotation.
Analysis	• The below grade waterproofing was installed at the time of the inspection. A complete review of the waterproofing application could not be performed at the time except for at the exposed areas above the existing grade. • At one location on the left elevation, the termination bar was inadequately attached to the building and has bowed. The sealant at the termination bar to wall had separated. This area may allow future water intrusion to damage the masonry and footing and may cause movement to the underlying soils.
Conclusion	Add an additional fastener to the termination bar and reseal.
Costs	

PV-01.173; 03/05/2015; Elevation Left

PV-01.174; 03/05/2015; Elevation Left

B. SUPERSTRUCTURE

B1002 MASONRY STRUCTURE

Issue	The exterior masonry walls demonstrate cracking that has occurred and/or widened due to the construction at the adjacent property.
Investigation	• PFCS has met with the building owner, performed a visual inspection of the roof, exterior and interior elevations and prepared a site plan identifying the areas of distress. • Regis Contractors has retained Jerry Miles, P.E. of Bert L. Howe & Associates, Inc. (BHA) to investigate, document and monitor ongoing conditions at [redacted] through crack gauges, accelerometers. Regis also utilized a surveyor to monitor the building based on markers. PFCS has communicated with Mr. Miles. While he was willing to discuss his observations, he was not able to release the data they had compiled. • According to Mr. Miles, the back elevation wall has exhibited some settlement and possible some rotation.
Analysis	• PFCS documented distress to masonry walls at the right, left and back walls at the exterior and right, back and left walls at the interior. The most significant distress occurred at the back wall at the left and left walls. • The left masonry wall exhibits stair step cracking with mortar cracking greater than 1/2" and 1/4" cracking through brick from the top of wall at the back/left corner for 18 feet along the left elevation wall. The back elevation wall exhibits linear cracking approximately 4-5 millimeters in width, 2 feet from the left corner. • At the right elevation at the front, trenching was performed and new electrical panels were installed inside the [redacted] At this location, exterior plaster cracking has occurred that appears to telegraph cracking to the underlying masonry wall. Immediately adjacent to this work, the interior concrete slab on grade has lifted. • Refer to Floor Plan - Concrete and Masonry Wall Cracks
Conclusion	The building has experienced distress in a number of areas that may be consistent with building movement due to settling soil. Regis' consultant Jerry Miles has indicated that the back elevation has settled. Some soil movement has occurred at the right elevation at the front. PFCS recommends that the owner be provided the monitoring data from Regis. In the absence of the monitoring data, PFCS recommends the following: • Owner to request from Regis the monitoring information from ongoing construction for evaluation by an independent civil engineer • Perform a water level survey of the existing slab on grade and plot the elevations.

Conclusion (continued)	• Structural Engineer evaluation of building performance and preparation of repair drawings including foundation augmentation and masonry wall repairs including: A. Repair and reinforce crack masonry and mortar joints at the locations indicated on the plans. B. Perform plaster patching and painting on exterior and interior locations to match existing. C. Work to be performed by contractor with demonstrable experience in repair of un-reinforced masonry structures D. Refer to Floor Plan - Masonry Repairs E. Refer to Floor Plan - Foundation Augmentation and Concrete Overlay Regis' data and/or the water level survey may reveal additional areas of movement that may require additional repair. It is anticipated that foundation augmentation at the right front will result in additional masonry repairs.
Costs	

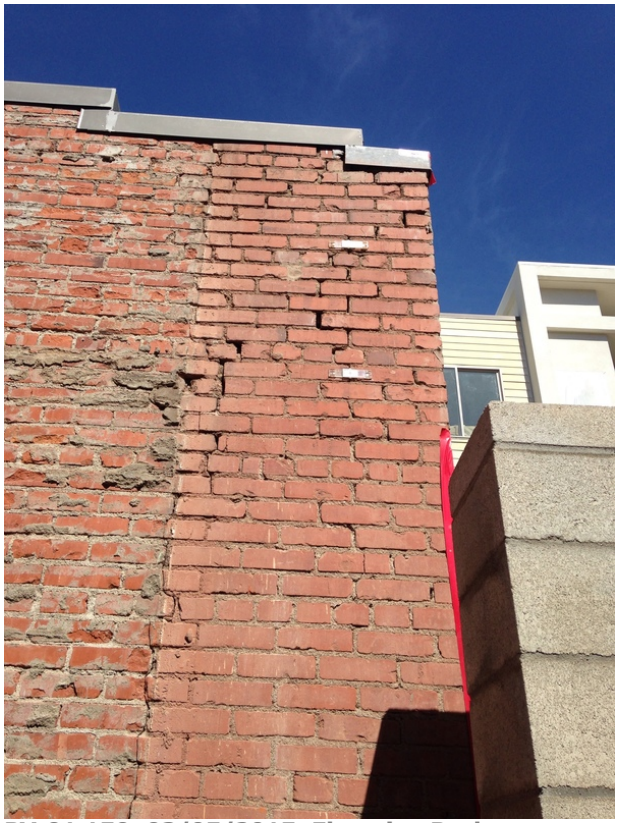
PV-01.097; 03/05/2015; Elevation Right

PV-01.098; 03/05/2015; Elevation Right

PV-01.099; 03/05/2015; Elevation Right

PV-01.144; 03/05/2015; Elevation Back

PV-01.149; 03/05/2015; Elevation Back



PV-01.150; 03/05/2015; Elevation Back

PV-01.152; 03/05/2015; Elevation Back

PV-01.154; 03/05/2015; Elevation Back

PV-01.156; 03/05/2015; Elevation Back

PV-01.158; 03/05/2015; Elevation Left

PV-01.162; 03/05/2015; Elevation Left

PV-01.163; 03/05/2015; Elevation Left

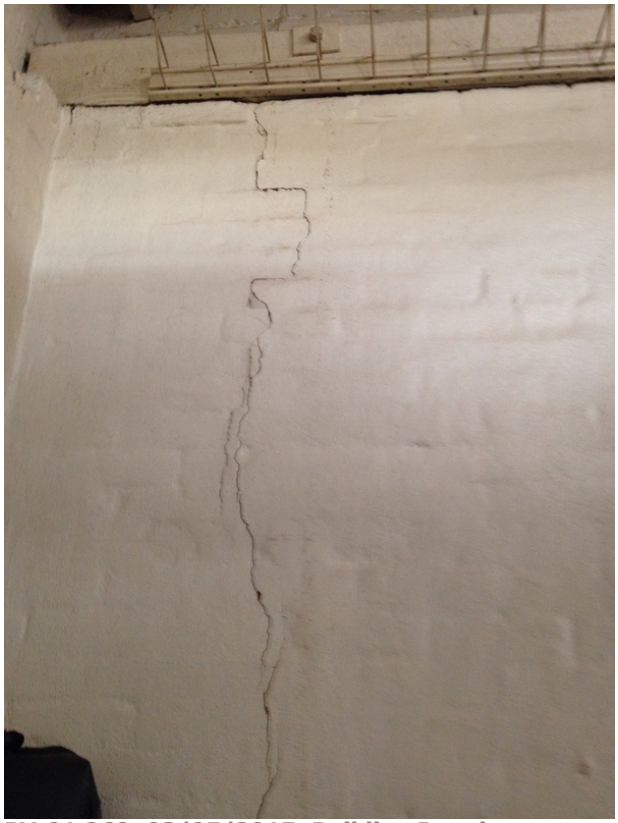
PV-01.166; 03/05/2015; Elevation Left

PV-01.191; 03/05/2015; Elevation Left

PV-01.193; 03/05/2015; Elevation Left

PV-01.194; 03/05/2015; Elevation Left

PV-01.242; 03/05/2015; Building Interiors



PV-01.260; 03/05/2015; Building Interiors

PV-01.262; 03/05/2015; Building Interiors

PV-01.267; 03/05/2015; Building Interiors

PV-01.268; 03/05/2015; Building Interiors

PV-01.269; 03/05/2015; Building Interiors

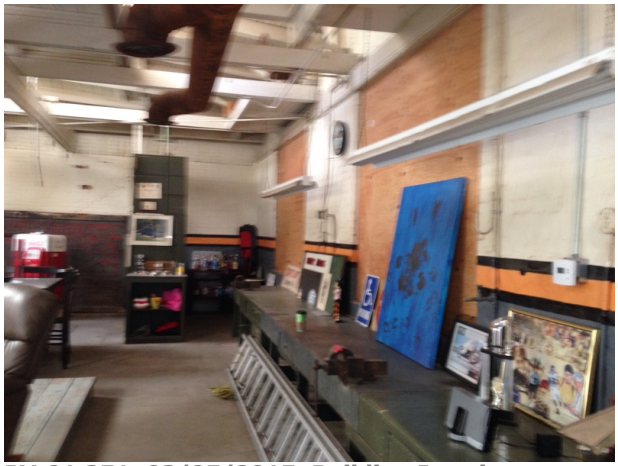
PV-01.292; 03/05/2015; Building Interiors

B. SUPERSTRUCTURE

B1003 STRUCTURAL STEEL / METAL FRAMING

Issue	Structural retrofitting has been performed to this un-reinforced masonry building at multiple locations except along the back elevation. Mr. Jones expressed concern as to whether structural upgrades at the back elevation are required.
Investigation	• PFCS has met with the building owner, performed a visual inspection of the roof, exterior and interior elevations and prepared a site plan identifying the areas of distress. • Regis Contractors has retained Jerry Miles, P.E. of Bert L. Howe & Associates, Inc. (BHA) to investigate, document and monitor ongoing conditions at [redacted] through crack gauges, accelerometers. Regis also utilized a surveyor to monitor the building based on markers. PFCS has communicated with Mr. Miles. While he was willing to discuss his observations, he was not able to release the data they had compiled. • According to Mr. Miles, the back elevation wall has exhibited some settlement and possible some rotation. • The owner, Jeff Jones, indicated that prior structural improvements had been made at various location throughout the building except at the back elevation. At the time of the improvements, a building abutted the back elevation wall and the structural engineer at the time didn't provide any recommendations for upgrading that area.
Analysis	• PFCS documented distress to masonry walls at the front, left and back walls at the exterior and right, back and left walls at the interior. The most significant distress occurred at the back wall at the left and left walls. The left masonry wall exhibits stair step cracking from the top of wall at the back/left corner for 18 feet along the left elevation wall. The back elevation wall exhibits linear cracking approximately 2 feet from the left corner. • At the time of PFCS' inspection, the soil adjacent to the back footing had been excavated and the footing partially exposed but covered with waterproofing and drainage membrane. Soil adjacent to the footing had been previously excavated and multiple improvements made to the adjacent property up against the footing area. • Prior to the construction by Regis, there was a building located at the back elevation that had been demolished and the area prepared for the existing construction.
Conclusion	Evaluation by a Structural Engineer is required to determine the necessity of performing structural upgrades to the back elevation wall. Based on the current conditions, it is PFCS' recommendation that a structural upgrade be performed.
Costs	

PV-01.239; 03/05/2015; Building Interiors



PV-01.251; 03/05/2015; Building Interiors

PV-01.259; 03/05/2015; Building Interiors

B. SUPERSTRUCTURE

B2011 EXTERIOR ENCLOSURE: STUCCO / PLASTER

Issue	Exterior plaster has been damaged from ongoing construction and building movement.
Investigation	• PFCS has met with the building owner, performed a visual inspection of the roof, exterior and interior elevations and prepared a site plan identifying the areas of distress. • Regis Contractors has retained Jerry Miles, P.E. of Bert L. Howe & Associates, Inc. (BHA) to investigate, document and monitor ongoing conditions at [redacted] through crack gauges, accelerometers. Regis also utilized a surveyor to monitor the building based on markers. PFCS has communicated with Mr. Miles. While he was willing to discuss his observations, he was not able to release the data they had compiled. • According to Mr. Miles, the back elevation wall has exhibited some settlement and possible some rotation.
Analysis	Damage to exterior plaster surfaces was observed at the front elevation and along the right elevation plaster band at the base of the wall.
Conclusion	The building has experienced distress in a number of areas that may be consistent with building movement due to settling soil. Regis' consultant Jerry Miles has indicated that the back elevation has settled. Some soil movement has occurred at the right elevation at the front. PFCS recommends that the owner be provided the monitoring data from Regis. In the absence of the monitoring data, PFCS recommends the following: • Repair front elevation plaster cracks in excess of 1/16" • Repair front elevation plaster spalls • Paint front elevation plaster patches to match existing • Repair right elevation plaster band where cracking / separated • Paint right elevation plaster band to match existing Additional exterior plaster repairs may be necessary after conclusion of foundation augmentation, specifically at the right front elevation where masonry wall cracking is telegraphing through the plaster wall finish.
Costs	

PV-01.057; 03/05/2015; Elevation Front

PV-01.058; 03/05/2015; Elevation Front

PV-01.060; 03/05/2015; Elevation Front

PV-01.062; 03/05/2015; Elevation Front

PV-01.063; 03/05/2015; Elevation Front

PV-01.077; 03/05/2015; Elevation Front

PV-01.078; 03/05/2015; Elevation Front

PV-01.086; 03/05/2015; Elevation Front

PV-01.097; 03/05/2015; Elevation Right

PV-01.098; 03/05/2015; Elevation Right

PV-01.099; 03/05/2015; Elevation Right

PV-01.113; 03/05/2015; Elevation Right

PV-01.114; 03/05/2015; Elevation Right

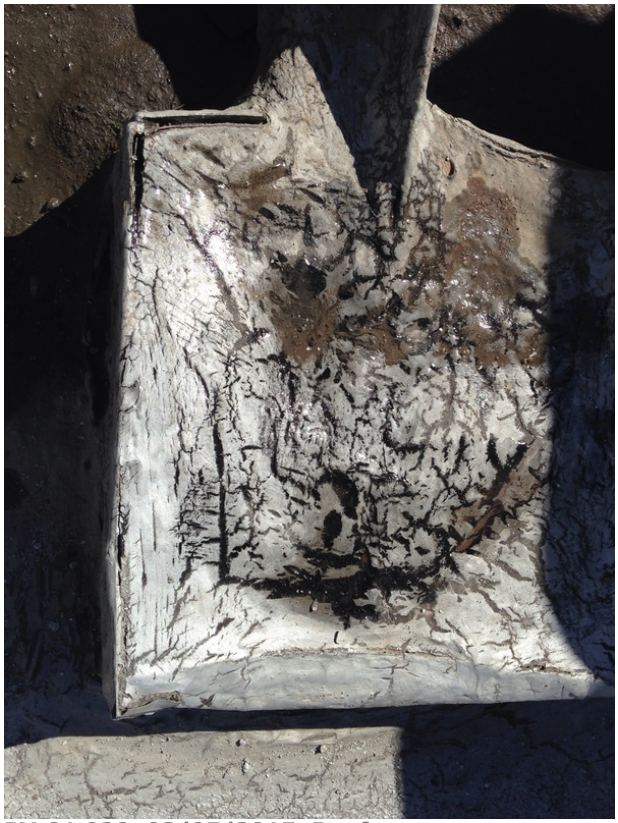
PV-01.118; 03/05/2015; Elevation Right

B. SUPERSTRUCTURE

B3002 LOW SLOPE ROOFING

Issue	The owners at [redacted] have allowed access to the roof to facilitate construction of the adjacent buildings. The building movement appears to have separated the mastic at three roof level structural tie in boxes at the back left.
Investigation	• PFCS has met with the building owner, performed a visual inspection of the roof, exterior and interior elevations and prepared a site plan identifying the areas of distress. • Regis Contractors has retained Jerry Miles, P.E. of Bert L. Howe & Associates, Inc. (BHA) to investigate, document and monitor ongoing conditions a [redacted] through crack gauges, accelerometers. Regis also utilized a surveyor to monitor the building based on markers. PFCS has communicated with Mr. Miles. While he was willing to discuss his observations, he was not able to release the data they had compiled. • According to Mr. Miles, the back elevation wall has exhibited some settlement and possible some rotation.
Analysis	• Overall, the roof is in fair to poor condition, with the valleys on the right and left elevations in poor condition. • Previous to construction, the back elevation abutted another building. Since that buildings removal, Regis has installed a new parapet cap along the back elevation and made miscellaneous repairs at the parapet walls along the right, back and left elevations. • At the time of PFCS inspection, there was ponding water in the valleys at the back portion of the building on the left and right elevations. The ponding and reverse slope conditions appear to have preexisted the current construction but may have been exasperated by the back wall settlement.
Conclusion	• Consideration should be given to re-roofing the building. At a minimum, repair / replacement of the roofing material at the right and left elevation valleys is necessary to prevent any further water intrusion through the roof. • Based on the roof apparent age, prior to any repairs substantial repairs the roof should be investigated for the presence of Asbestos fibers. • To repair damage from the ongoing construction, at the three structural tie in boxes at the back left, remove existing damaged mastic, investigate structural connection for any damage, install new roof mastic and aluminum coating.
Costs	

PV-01.019; 03/05/2015; Roof



PV-01.020; 03/05/2015; Roof

PV-01.021; 03/05/2015; Roof

PV-01.023; 03/05/2015; Roof

PV-01.025; 03/05/2015; Roof

PV-01.026; 03/05/2015; Roof

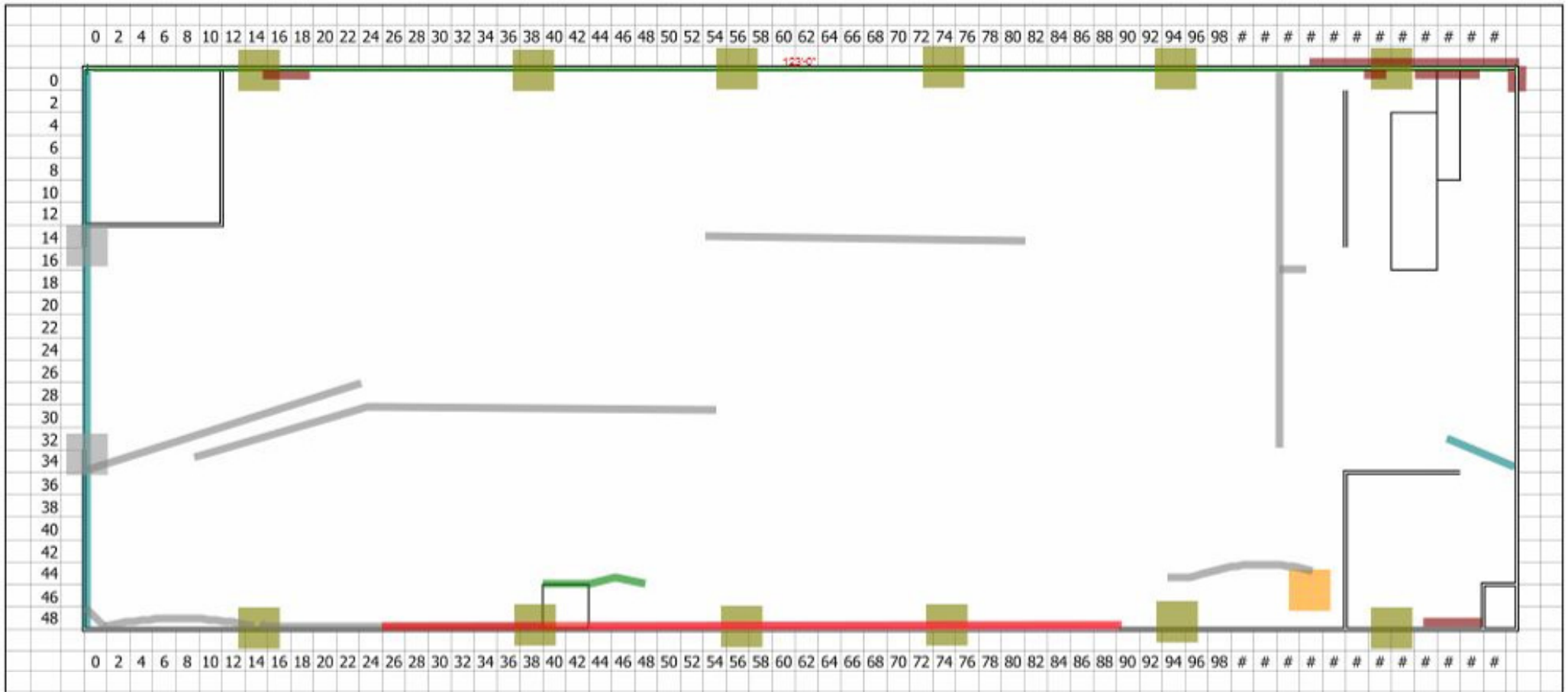
9. Exhibits

- 2C PFCS - Floor Plan with Concrete and Masonry Wall Crack Locations 03/18/2015
- 2E PFCS - Floor Plan with Footing Augmentation and Concrete Overlay 03/18/2015
- 2 E PFCS - Floor Plan with Concrete Crack and Repair Locations 03/18/2015

- 2 E PFCS - Floor Plan with Masonry Wall Damage and Repair Locations 03/18/2015

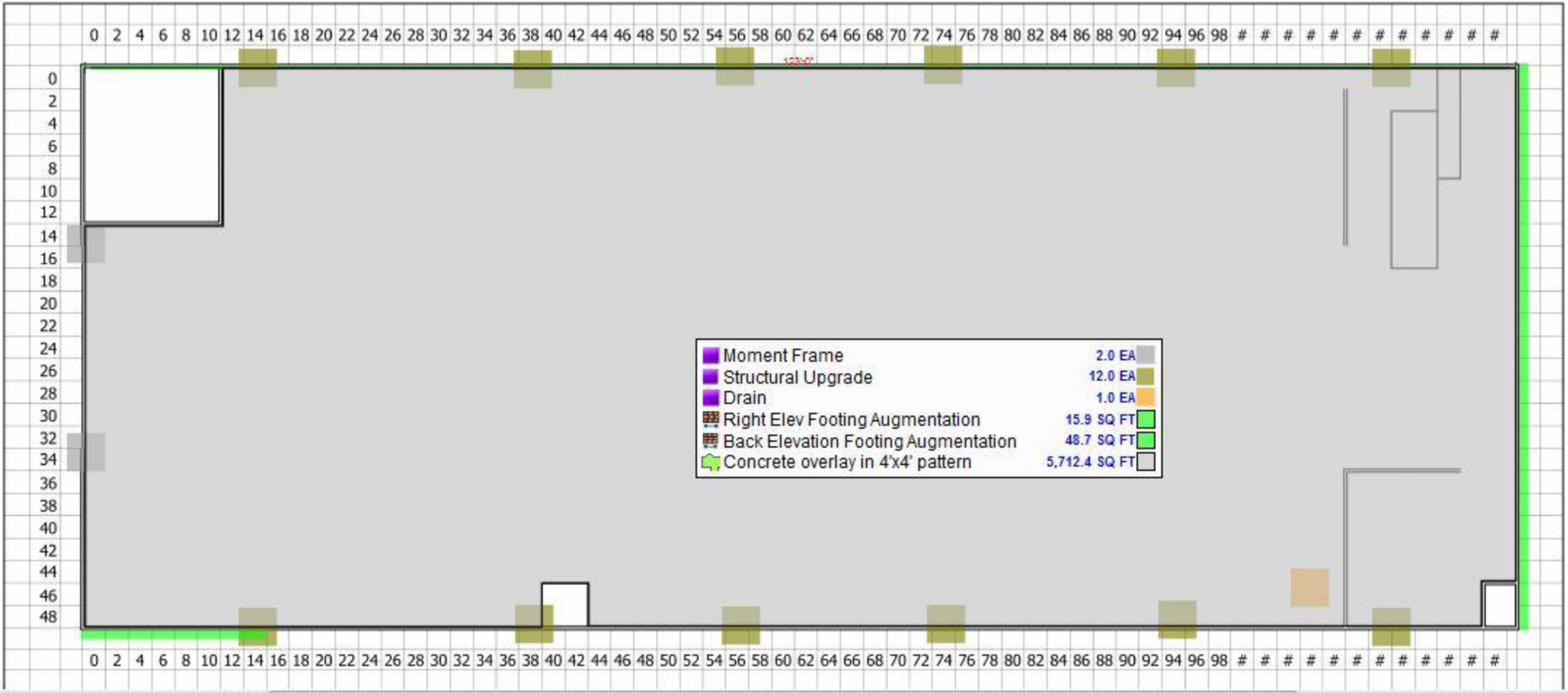
[redacted] CA

Floor Plan



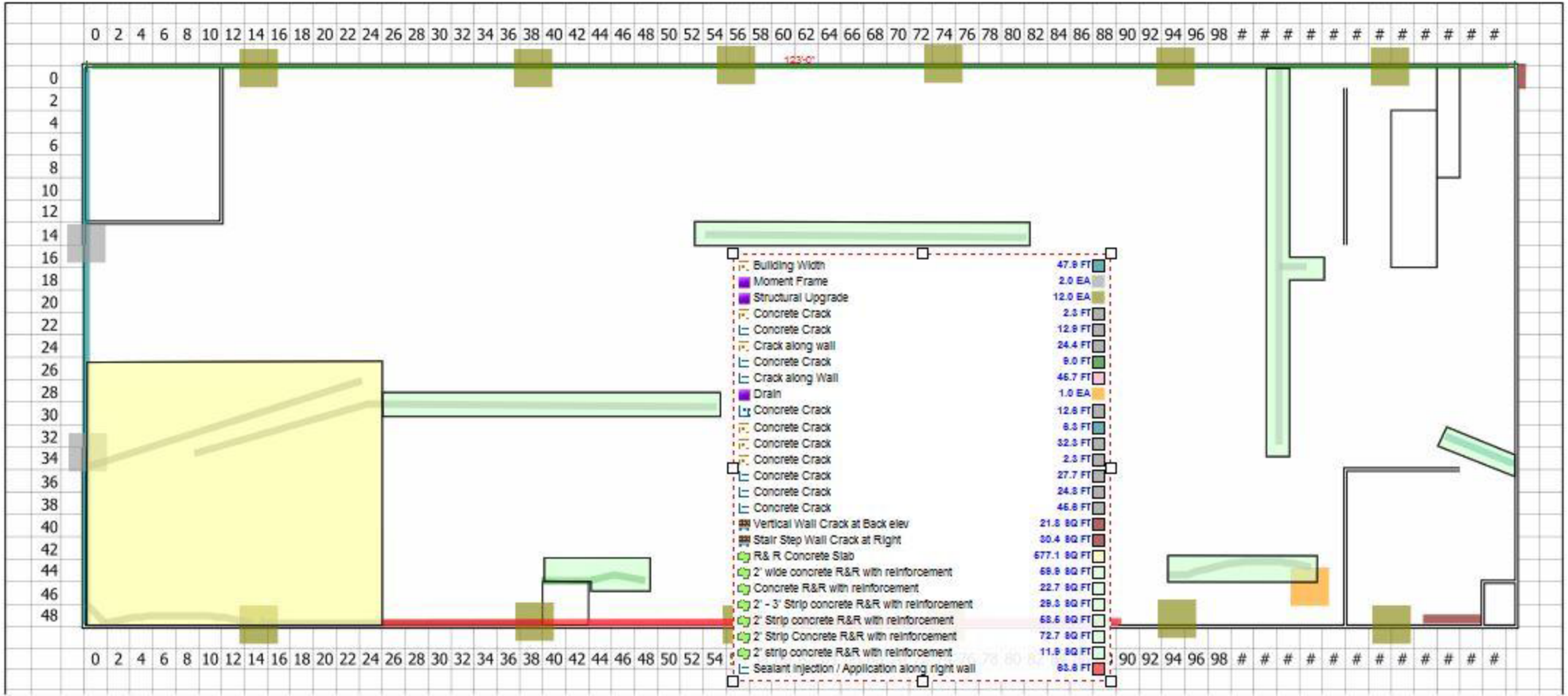
[redacted] CA

Floor Plan



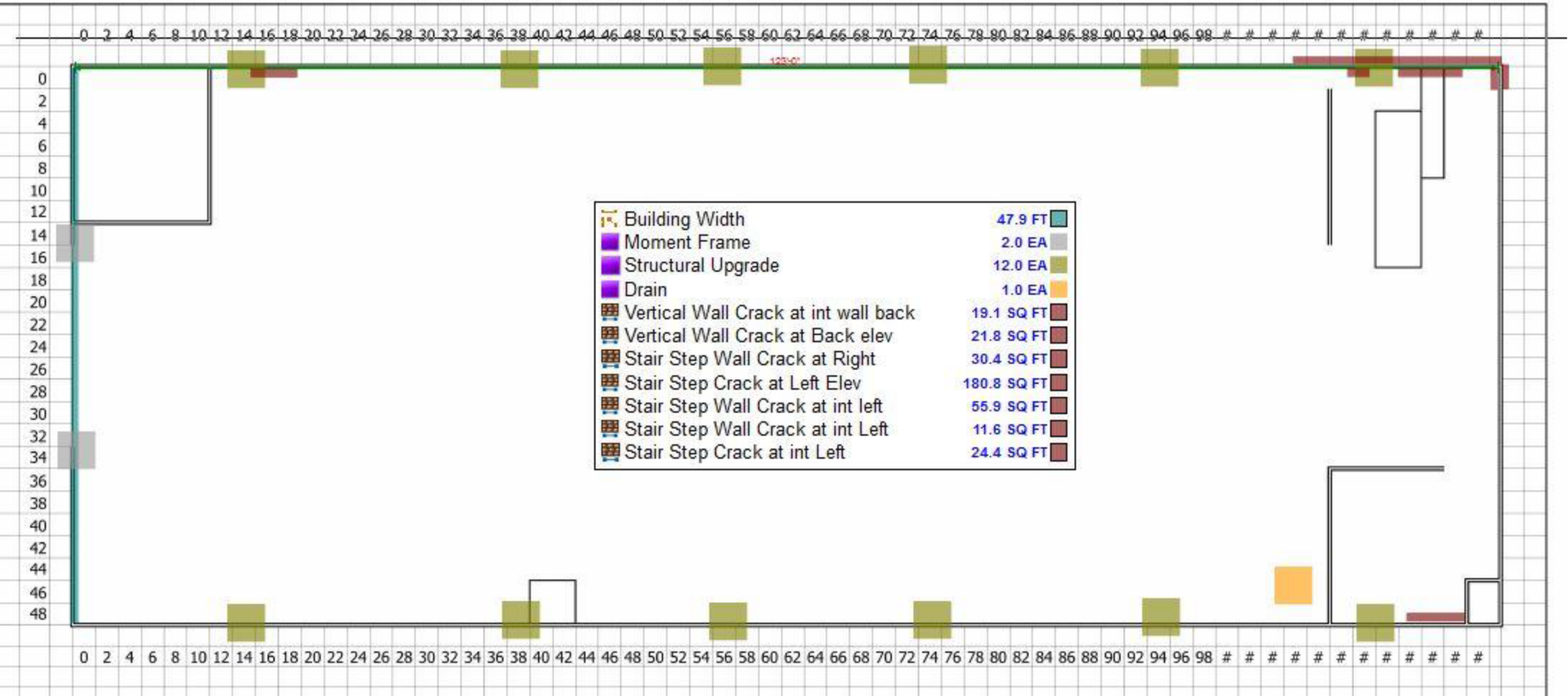
[redacted], CA

Floor Plan



[redacted] CA

Floor Plan

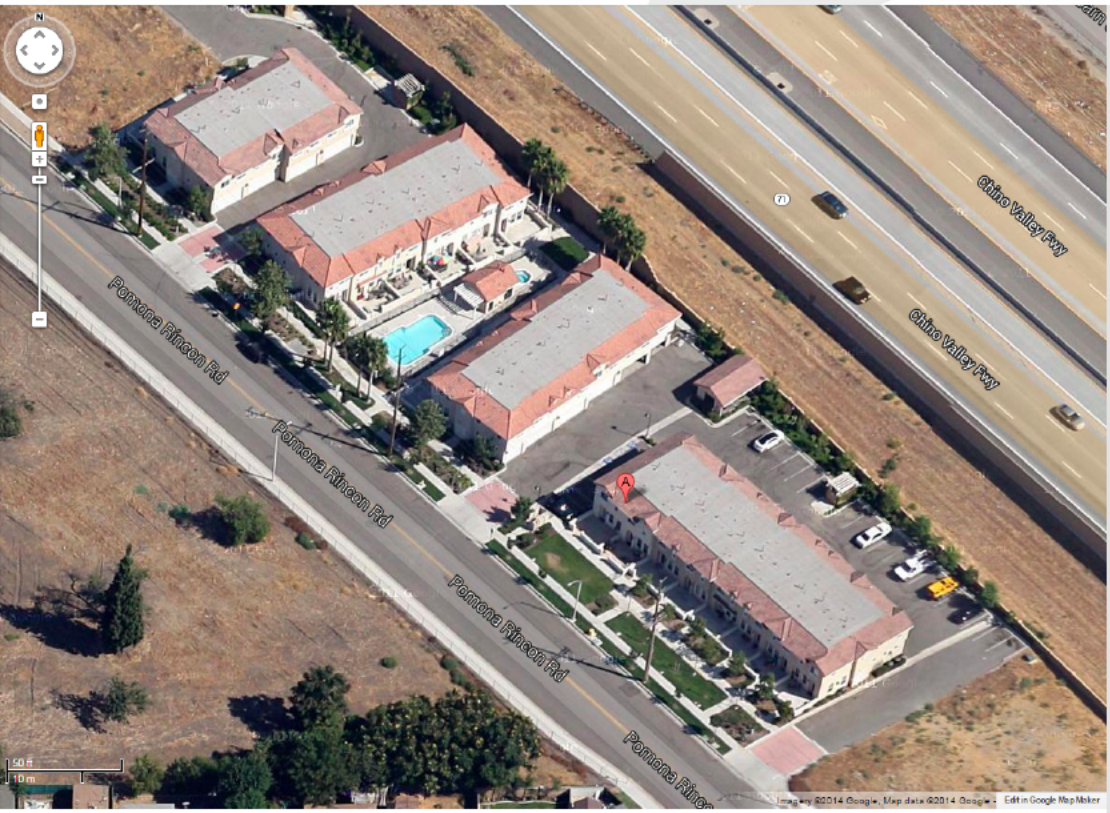


4A. Inspection Summary ready for litigation

[redacted]

CA

[redacted], *CA*



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GENERAL INQUIRY

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www.petefowler.com

Pete Fowler CONSTRUCTION Services, Inc.

Project #14-320

Pete Fowler CONSTRUCTION Services, Inc.

Inspection Summary

Date:	December 29, 2014
To:	[redacted] CA 91784 [redacted]
From:	Pete Fowler Construction Services, Inc.
Project:	[redacted] CA (PFCS 14-320)
Regarding:	Inspection Summary
Note:	Confidential Attorney-Client and Attorney Work Product. Protected under all applicable evidence codes.

Project Overview

[redacted] is located at [redacted], CA and includes twenty-four condominium units in four buildings, made up of three different building types. Common area improvements include landscape, hardscape, parking lots and a pool.

PFCS was asked to perform a visual inspection of the project due to recurring roof leaks.

General Inspection Summary

- Paul Viau of PFCS visually inspected the project on 12/11/2014. Inspection documentation included field notes, diagrams and 200 photographs.
- In attendance at the inspection were [redacted], and a construction crew providing access and pointing out their temporary repair areas.
- PFCS identified additional areas for temporary repairs in preparation for rain that was expected the next day. Those temporary repairs were performed by the contractor on site.
- See the Summary of Issues below for a preliminary list of specific deficiencies, but in general the roofs were not installed in conformance with manufacturer's installation instructions and the applicable industry and trade standards were not conformed to. As a result the roofs are not performing acceptably, the service life of these critical building elements has been shortened, and the lifetime (lifecycle) cost of these assemblies has been increased significantly.

- We recommend that thoughtful repairs should be specified in writing, tendered to several qualified contractors for bids, contracted for (to include the appropriate contractual and insurance protections for the Owners), the work should be executed, and a mechanism for quality control (like third party inspection) should be employed.

Locations Summary

Partial Building Interior Inspections

- 632
- 741

Limited Exterior Visual Inspections

- Building B4
- Building B5
- Building B6
- Building B7

Roof Visual Inspection

- Building B4
- Building B5
- Building B6
- Building B7

Issues Summary

From the limited visual inspections, PFCS has identified the following issues:

B2011 Exterior Enclosure: Stucco / Plaster

- B2011 A.: Excessive stucco cracking
- B2011 B.: Missing cladding on wall
- B2011 C.: Stained stucco due to uncontrolled roof run off

B3001 Sloped Roofs

- B3001 A.: Water intrusion from roof assembly
- B3001 B.: Missing diverter flashing
- B3001 C.: Broken roof tile
- B3001 D.: Inadequate height plumbing vent
- B3001 E.: Loose trim tile used as diverter
- B3001 F.: Nails through exposed flashing
- B3001 G.: Voids at sheet metal flashing to stucco wall assembly

B3002 Low Slope Roofing

- B3002 A.: Water intrusion from roof assembly
- B3002 B.: Membrane not adhered to drip edge flashing
- B3002 C.: Nails through exposed flashing
- B3002 D.: Ponding on roof membrane
- B3002 E.: Storm collars not installed at b-vents
- B3002 F.: Voids at low slope roof membrane to sheet metal

G2030 Pedestrian Paving

- G2030 A.: Excessive concrete cracking

G2041 Fences, Gates and Walls

- G2041 A.: Excessive CMU wall cracking

Representative Photographs

B2011 A.: EXCESSIVE STUCCO CRACKING

PV-01.197; 12/11/2014; B4; Elevation Left; Stucco crack

B2011 B.: MISSING CLADDING ON WALL

PV-01.092; 12/11/2014; B7; Roof; No flashing/ cladding

B2011 C.: STAINED STUCCO DUE TO UNCONTROLLED ROOF RUN OFF

PV-01.095; 12/11/2014; B7; Roof - Sloped; Above wall stain

B3001 A.: WATER INTRUSION FROM ROOF ASSEMBLY

PV-01.014; 12/11/2014; B6/632; Bedroom 2; Overview

PV-01.015; 12/11/2014; B6/632; Bedroom 2; Overview

PV-01.023; 12/11/2014; B6/632; Bedroom 3; Ceiling

PV-01.036; 12/11/2014; B7/741; MBA; stained framing beneath roof

B3001 B.: MISSING DIVERTER FLASHING

PV-01.100; 12/11/2014; B7/736; Elevation Front; Valley drains over entry door

PV-01.193; 12/11/2014; B5/525; Roof - Sloped; No diverter over entry door

B3001 C.: BROKEN ROOF TILE

PV-01.131; 12/11/2014; B4; Roof - Sloped; Cracked tile corners

B3001 D.: INADEQUATE HEIGHT PLUMBING VENT

PV-01.044; 12/11/2014; B6; Roof - Sloped; Short vent

B3001 E.: LOOSE TRIM TILE USED AS DIVERTER

PV-01.045; 12/11/2014; B6; Roof - Sloped; Field fabricated diverter

PV-01.046; 12/11/2014; B6; Roof - Sloped; Field fabricated diverter

B3001 G.: VOIDS AT SHEET METAL FLASHING TO STUCCO WALL ASSEMBLY

PV-01.050; 12/11/2014; B6; Roof; Confined rake

B3002 B.: MEMBRANE NOT ADHERED TO DRIP EDGE FLASHING

PV-01.082; 12/11/2014; B7; Roof; Membrane not sealed to flashing

PV-01.087; 12/11/2014; B7; Roof; Membrane not sealed it drip edge

PV-01.118; 12/11/2014; B4; Roof; Membrane not sealed the drip edge

PV-01.119; 12/11/2014; B4; Roof; Membrane not sealed the drip edge

PV-01.120; 12/11/2014; B4; Roof; Membrane not sealed the drip edge

PV-01.139; 12/11/2014; B4; Roof; Membrane lap unsealed

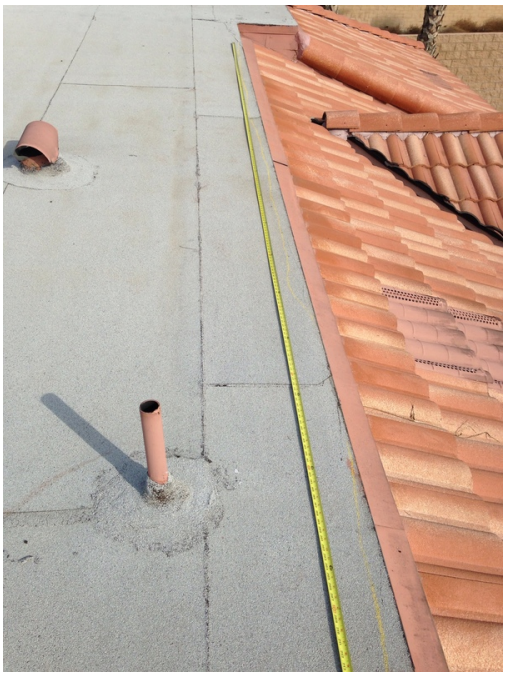
PV-01.140; 12/11/2014; B4; Roof; Membrane not sealed at drip edge

PV-01.143; 12/11/2014; B4; Roof; Membrane not sealed at drip edge

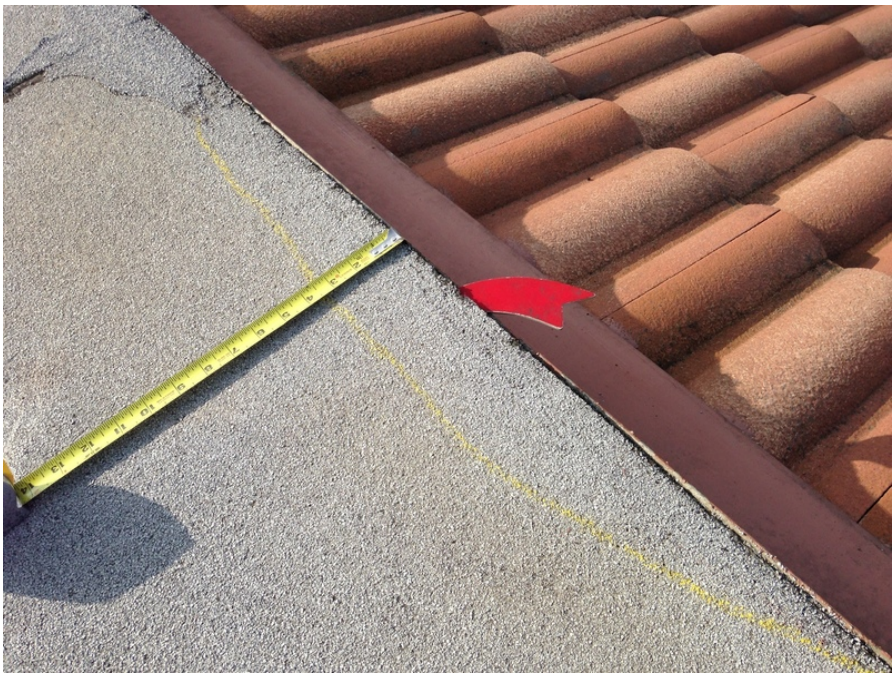
PV-01.144; 12/11/2014; B4; Roof; Membrane not sealed at drip edge

PV-01.171; 12/11/2014; B5; Roof; Membrane not sealed at drip edge

PV-01.172; 12/11/2014; B5; Roof; Membrane not sealed at drip edge



PV-01.173; 12/11/2014; B5; Roof; Membrane not sealed at drip edge



PV-01.186; 12/11/2014; B5; Roof; Membrane not sealed to drip edge at left

PV-01.187; 12/11/2014; B5; Roof; Membrane not sealed to drip edge at left

B3002 D.: PONDING ON ROOF MEMBRANE

PV-01.079; 12/11/2014; B7; Roof; Ponding

B3002 E.: STORM COLLARS NOT INSTALLED AT B-VENTS

PV-01.005; 12/11/2014; B6; Roof; No storm collar at b vent

B3002 F.: VOIDS AT LOW SLOPE ROOF MEMBRANE TO SHEET METAL

PV-01.051; 12/11/2014; B6; Roof; Confined rake

G2030 A.: EXCESSIVE CONCRETE CRACKING

PV-01.199; 12/11/2014; B6; Sidewalk; Concrete crack, at front

PV-01.200; 12/11/2014; B6; Sidewalk; Concrete crack, at front

G2041 A.: EXCESSIVE CMU WALL CRACKING

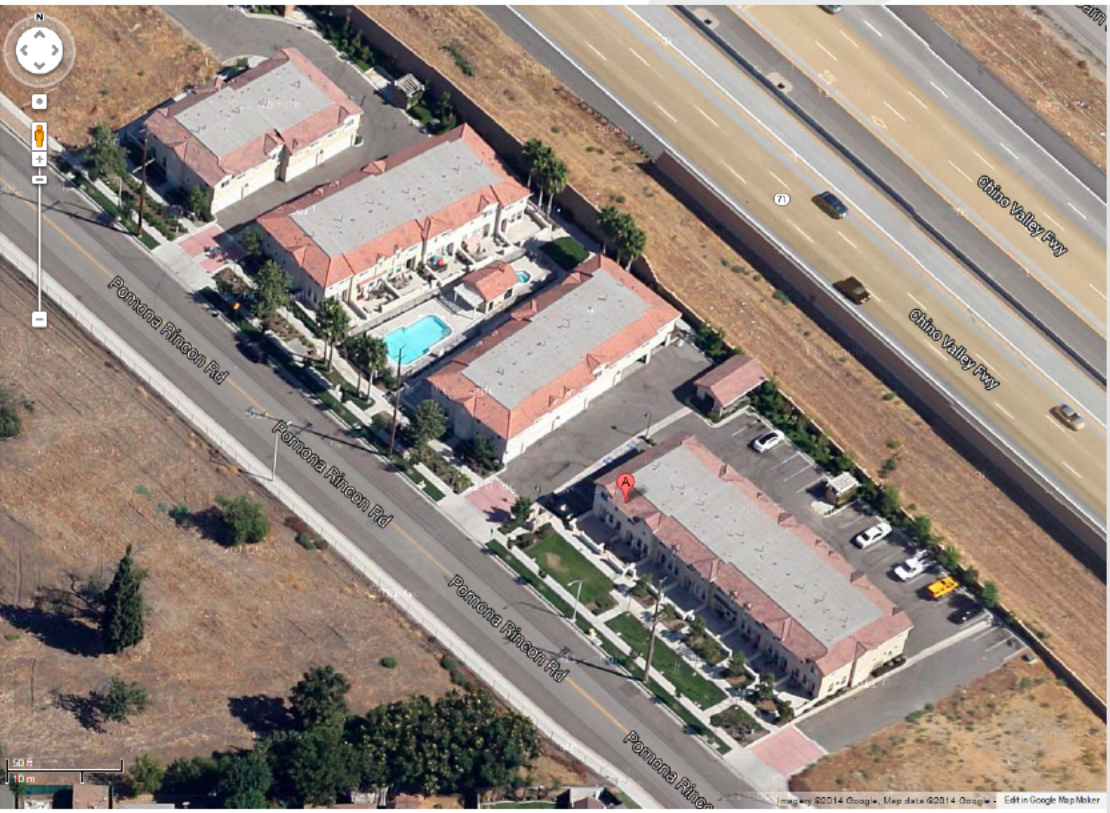
PV-01.191; 12/11/2014; B5/528; B5; Fence wall; Crack

4B. Issues List

[redacted]

CA

[redacted] *CA 91709*



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Pete Fowler
CONSTRUCTION
Services, Inc.

Project #14-320

Pete Fowler CONSTRUCTION Services, Inc.

Issues List

Date:	March 13, 2015
To:	[redacted] CA 91784 [redacted]
From:	Pete Fowler Construction Services, Inc.
Project:	[redacted] CA (PFCS 14-320)
Regarding:	Issues List
Note:	For mediation purposes only. Protected under all applicable evidence codes.

Issues List

1. (Uniformat Code A1030) Foundations: Concrete Slab-On-Grade
    - A.: Water intrusion / ponding at concrete slab on grade at garage door
    - B.: Debris / void in concrete stem wall
2. B1004 Wood Framing & Hardware
    - A.: Improper construction of shear walls / incomplete shear transfer
    - B.: Stained framing from water intrusion
3. B2011 Exterior Enclosure: Stucco / Plaster
    - A.: Excessive stucco cracking
    - B.: Missing cladding on wall
    - C.: Stained stucco due to uncontrolled roof run off
    - D.: Unsealed penetrations
    - E.: Irregular finish at arch
    - F.: Spalled stucco
    - G.: Missing / buried weep screed at garage door
4. B2020 Windows
    - A.: Single Hung windows don't operate properly
5. B2030 Exterior Doors
    - A.: Hardware finish deteriorated
    - B.: Stucco separated from door moulding
6. B3001 Sloped Roofs
    - A.: Water intrusion from roof assembly
    - B.: Missing diverter flashing

- C.: Broken roof tile
- D.: Inadequate height plumbing vent
- E.: Loose trim tile used as diverter
- F.: Nails through exposed flashing
- G.: Voids at sheet metal flashing to stucco wall assembly

7. B3002 Low Slope Roofing
    - A.: Water intrusion from roof assembly
    - B.: Membrane not adhered to drip edge flashing
    - C.: Nails through exposed flashing
    - D.: Ponding on roof membrane
    - E.: Storm collars not installed at b-vents
    - F.: Voids at low slope roof membrane to sheet metal
8. C1020 Interior Doors
    - A.: Uneven reveal at bi-fold doors
    - B.: Fire rated door, self closer inoperable
9. C1031 Toilet & Bath Accessories
    - A.: Shower enclosures leak
10. C1032 Counters
    - A.: Cracked / deteriorated grout in field
    - B.: Cracked / deteriorated grout at backsplash
    - C.: Cracked tile
11. C1035 Finish Carpentry & Architectural Woodwork
    - A.: Loose cabinet panel
    - B.: Door casing separation
12. C3010 Gypsum Wallboard & Interior Plaster
    - A.: Gypsum wallboard cracking
    - B.: Corner bead cracking
    - C.: Nail pops
    - D.: Stained drywall from leaks
    - E.: Excessive gwb separation at windows
13. C3023 Floor Finishes: Resilient
    - A.: Vinyl flooring curled
    - B.: Vinyl flooring cut
14. D2000 Plumbing
    - A.: Loose plumbing penetrations at exterior walls
    - A.: Loose valves and tub spout
15. D3000 HVAC: Heating, Ventilating & Air-conditioning
    - A.: Refrigerant line set not supported
    - B.: Air conditioning condenser units not level
    - C.: Air conditioning line set insulation not protected and has deteriorated
    - D.: A/C line set penetrations not sealed

- E.: No exhaust fan provided at laundry room

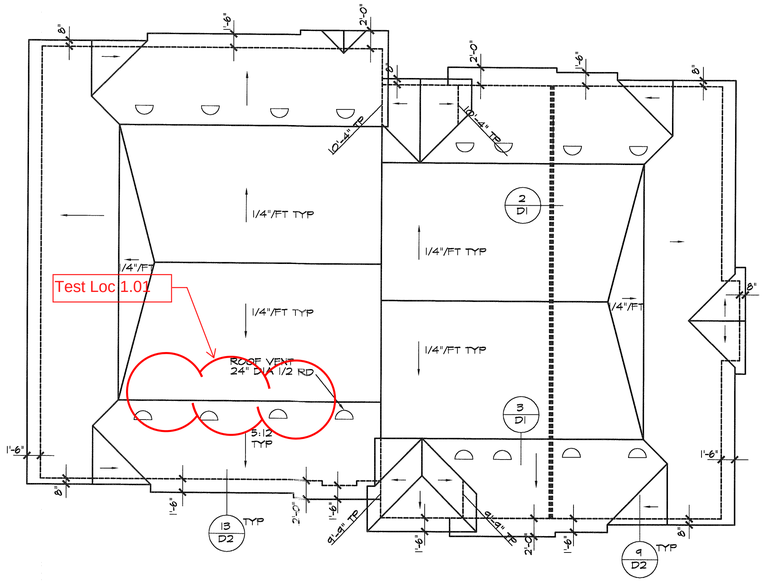
16. D4050 Fire Protection Specialties & Assemblies
    - A.: Holes in fire rated area separation walls
    - B.: Unsealed penetrations of fire rated area separation walls
17. D5000 Electrical
    - A.: Exterior electrical wiring not sealed
    - B.: Light pole base rusted
18. G2030 Pedestrian Paving
    - A.: Excessive concrete cracking
19. G2041 Fences, Gates and Walls
    - A.: Excessive CMU wall cracking
    - B.: CMU fence wall cap separated / missing
20. G2055 Fine Grading & Drainage
    - A.: Trapped planters
    - B.: Soil erosion
    - C.: Soil Subsidence
    - D.: Improper area drainage

Testing Summary

#	Number	Date	Address	Location	Description	SWI	Damage	PFCS Analysis
1	1.01		B4	Roof - Low Slope	At front elevation (facing units) remove section of BUR where loose and investigate condition and substrate. Recommend sending approximate 1'x3' sample to lab for testing of asphalt quantity.			
2	1.02		527	Elevation Front Roof - Sloped	Remove tile at valley/confined rake. Remove stucco where stained below roof.			
3	1.03		B5	Roof - Low Slope	At front elevation (facing units) remove section of BUR where loose and investigate condition and substrate. Recommend sending approximate 1'x3' sample to lab for testing of asphalt quantity			
4	1.04		527	Attic Roof	Investigate party wall, remove BUR and sheathing, measure and inspect party wall (Detail 2, on Sheet D1), check penetrations.			
5	1.05		B6	Roof - Sloped	Valley termination at confined rake against wall above unit 630			
6	1.06		B6	Roof	At front elevation (when facing units) bur and flashing, also sloped roof at confined rake with exposed wood			
7	1.07		B6	Roof - Low Slope	Location to be field selected. Remove section of BUR where loose and investigate condition and substrate. Recommend sending approximate 1'x3' sample to lab for testing of asphalt quantity			
8	1.08		633	Attic Roof - Low Slope	Investigate party wall, remove BUR and sheathing, measure and inspect party wall (Detail 2, on Sheet D1), check penetrations			
9	1.09		B7	Roof - Low Slope	At front elevation (facing units) remove section of BUR where loose and investigate condition and substrate. Recommend sending approximate 1'x3' sample to lab for testing of asphalt quantity			
10	1.1		B7	Roof - Sloped	Confined rake without stucco or cladding, remove tile, investigate tile pan, WRB and substrate.			
11	1.11		738 B7	Elevation Back Roof - Sloped	Remove tile at confined rake transition to open rake. Remove stucco where stained below roof.			
12	1.12		B7	Elevation Back	Remove foam trim at back elevation at garage door jamb. Inspect for weep screed, measure and check for foam installation requirements.			
13	1.13		B4 B5	Elevation Back Elevation Front	Break stucco at foam trim, inspect for weep screed, measure and check for foam installation requirements.			
14	1.14		Each Building	Utility Closets	Access to utility closets for visual inspection and testing as determined in field.			
15								

4C. Testing Plan

For mediation purposes only.
Protected by all applicable evidence codes.



ROOF PLAN

SCALE: 1/8"=1'-0"

CONCRETE TILE ROOF
TO BE MONIER LIFETILE 'GOLD DUST W/ YELLOW MARBLE C/T'
1 VICS 7165 (6610) ICBO ER-2656
OR
TO BE MONIER LIFETILE 'AUTUMN BLEND C/T'
1 VICS 8160 (6825) ICBO ER-2656

THESE TILES WEIGH 7 LB PER SF

BUILT-UP ROOFING-- CELOTEX-- RR 25082 & ICBO ER 4887

INSTALLATION OF ROOFING SHALL IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS

EVERY "A" UNIT IS REQUIRED TO HAVE 630 SI OF ROOF VENT

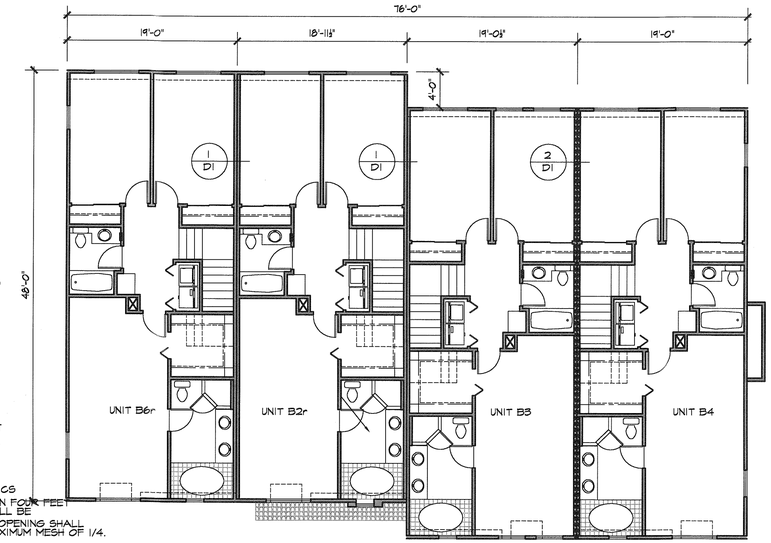
EVERY "B" UNIT IS REQUIRED TO HAVE 875 SI OF ROOF VENT

ALL ROOFS TO BE CLASS A RATED

LOUVERS, VENTILATORS OR OPENINGS IN WALLS, ROOFS ATTICS AND UNDER FLOOR AREAS HAVING HEADROOM OF LESS THAN FOUR FEET IN HEIGHT WHICH ARE NOT FITTED WITH SASH OR DOORS SHALL BE COVERED WITH WIRE SCREEN. THE SCREEN COVERING SUCH OPENING SHALL BE GALVANIZED METAL OR COPPER AND SHALL HAVE A MAXIMUM MESH OF 1/4.

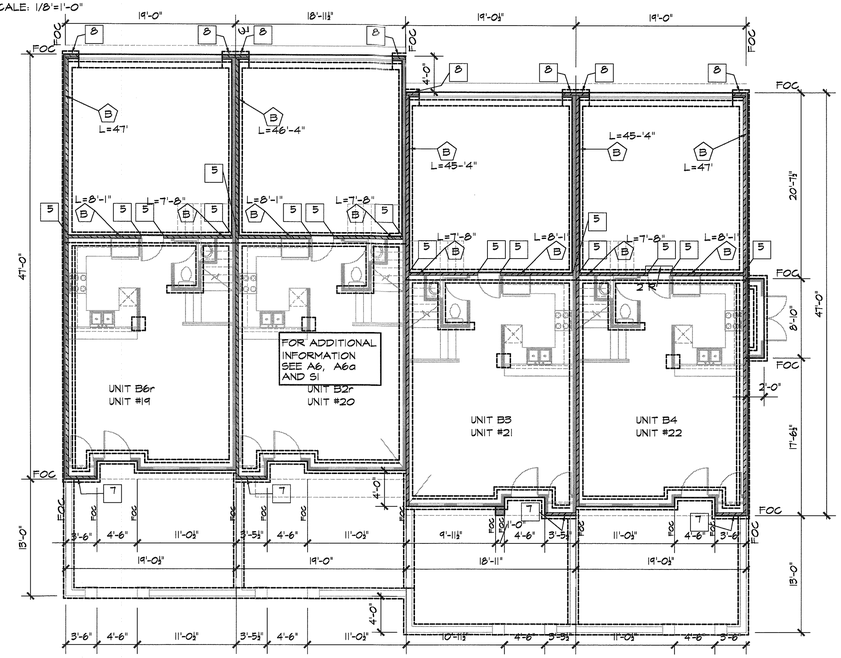
EAVE TYPE VENTILATORS ARE PROHIBITED.

THE SPACE BETWEEN RAFTERS AT EXTERIOR WALLS SHALL BE SOLIDLY FITTED WITH TIGHT FITTING WOOD BLOCKS AT LEAST 1 1/2" THICK



SECOND FLOOR PLAN

SCALE: 1/8"=1'-0"



FOUNDATION PLAN

SCALE: 1/8"=1'-0"

LEGEND

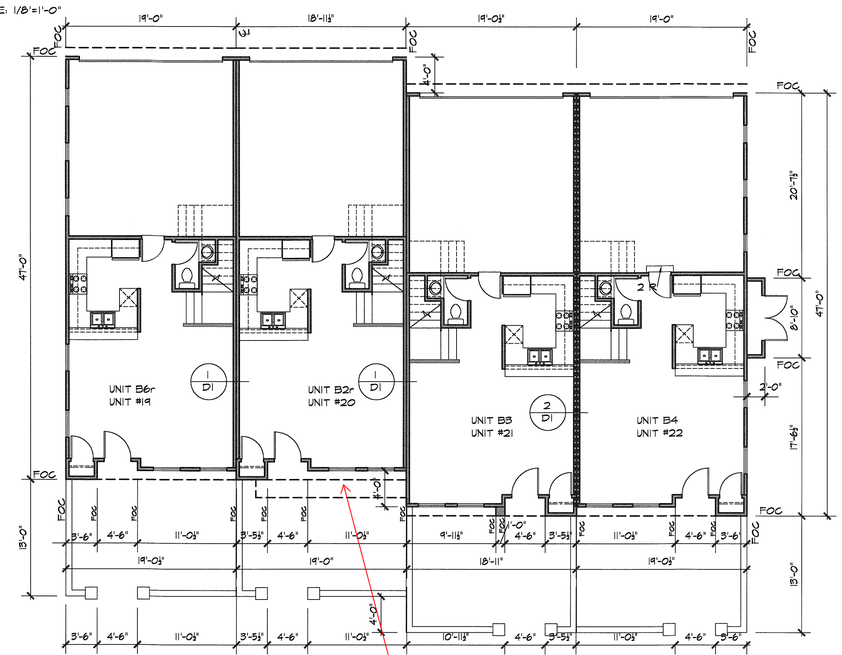
1	2-2x4 POSTS WITH MSTC 48B3 STRAP @	3 / SD2
2	2-2x4 POSTS WITH MSTC 48B3 STRAP @	9 / SD2
3	4x6 POSTS WITH ECC POST CAP	12 / SD2
4	4x4 POSTS WITH PC POST CAP	
5	4x4 POSTS WITH HD 2A	1 / SD1
6	4x4 POSTS WITH HD 5A	1 / SD1
7	SIMPSON SSW 21x9	21 / SD1
8	SIMPSON SSW 12x8	27 / SD1 · 28 / SD1

SHEAR WALL SCHEDULE	
KEY	8
PANEL THK	15/32"
PANEL INDEX	24/0
SIDE	1
EDGE NAIL	10d @ 4" O.C.
FIELD NAIL	10d @ 12" O.C.
TOP PLATE	2 - 2X
SILL PLATE (UPPER)	2 x
SILL PLATE (FOUNDATION)	3 x
PANEL BOUNDARY	3 x
WALL BOUNDARY	4 x
SILL CONN.	16d @ 4" O.C.
ANCH BOLTS U.N.O SEE PLAN	5/8" DIA. @ 30"
FRAMING ANCHOR	A35 @ 14" O.C.
TOP PL CONN.	16d @ 16" O.C.
ALLOWABLE LOAD	380 PLF
NOTES/STAMP	RATED SHTH STRUCT 1
- - APA - -	24/0 15/32"
	EXPOSURE 1

SHEAR WALL NOTES

1. WHERE NAILS ARE SPACED LESS THAN 3" O.C. PROVIDE 3x STUDS, STAGER NAILS AT DOUBLE TOP PLATES .
2. WHERE PLYWOOD IS SPECIFIED ON BOTH SIDES OF THE SHEAR WALL OFFSET PLYWOOD JOINTS.
3. THE LAG BOLTS ARE ⅝ x6" LONG LAGS. LAGS MUST BE ATTACHED TO SOLID BLOCK OR RIM
4. ⅝" DIA ANCHOR BOLTS SHALL HAVE 2.5X2.5X¼" PLATE WASHERS

HD2A MAY BE REPLACED BY PHD-2
HD5A MAY BE REPLACED BY PHD-5



Test Loc 1.13 B4 or B5, front or back foam trim

FIRST FLOOR PLAN

SCALE: 1/8"=1'-0"

BUILDING #4

REVISIONS

7-8-05	PLAN CHECK CORR
7-28-05	CORR
1-18-06	NEW BLDG #1
1-25-06	NEW BLDG #1

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DATE:

SHEET:

A17

OF

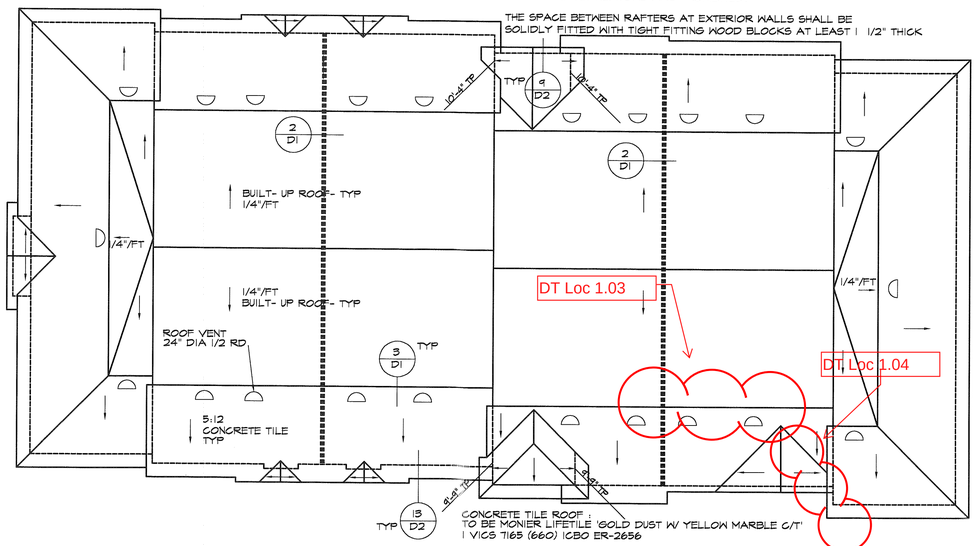
DEV 001026

ALL ROOFS TO BE CLASS A RATED

LOUVERS, VENTILATORS OR OPENINGS IN WALLS, ROOFS ATTICS AND UNDER FLOOR AREAS HAVING HEADROOM OF LESS THAN FOUR FEET IN HEIGHT WHICH ARE NOT FITTED WITH SASH OR DOORS SHALL BE COVERED WITH WIRE SCREEN. THE SCREEN COVERING SUCH OPENING SHALL BE GALVANIZED METAL OR COPPER AND SHALL HAVE A MAXIMUM MESH OF 1/4.

EAVE TYPE VENTILATORS ARE PROHIBITED.

THE SPACE BETWEEN RAFTERS AT EXTERIOR WALLS SHALL BE SOLIDLY FILLED WITH TIGHT FITTING WOOD BLOCKS AT LEAST 1 1/2" THICK



ROOF PLAN

SCALE: 1/8"=1'-0"

CONCRETE TILE ROOF :
TO BE MONIER LIFETILE 'GOLD DUST W/ YELLOW MARBLE C/T'
1 VICS 7165 (660) ICBO ER-2656

TO BE MONIER LIFETILE 'AUTUMN BLEND C/T'
1 VICS 6160 (6825) ICBO ER-2656
OR

THESE TILES WEIGH 7 LB PER SF

BUILT-UP ROOFING-- GELOTEX-- RR 25082 & ICBO ER 4887

INSTALLATION OF ROOFING SHALL IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS

EVERY "A" UNIT IS REQUIRED TO HAVE 630 SI OF ROOF VENT

EVERY "B" UNIT IS REQUIRED TO HAVE 875 SI OF ROOF VENT

LEGEND

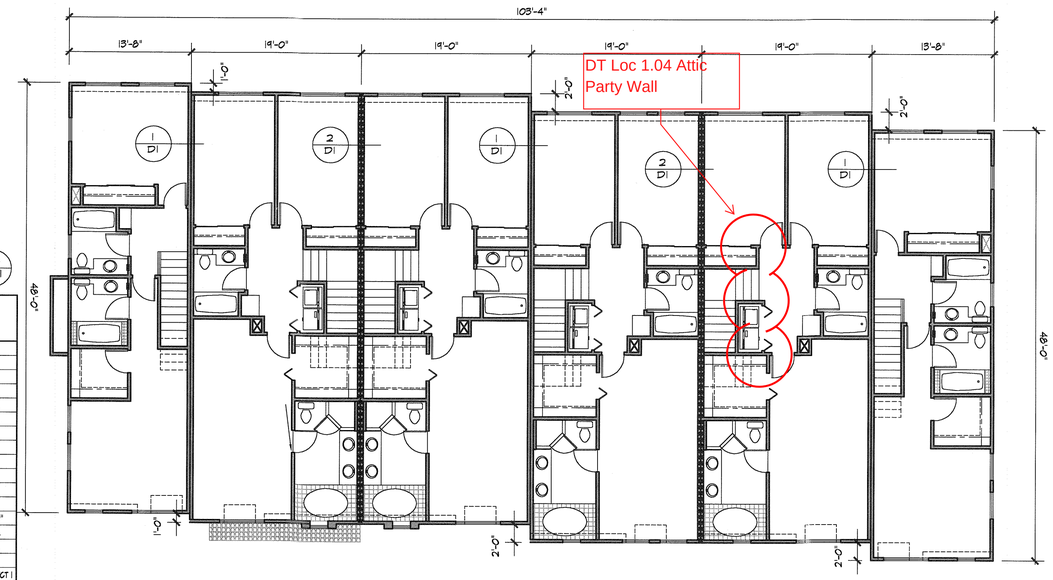
1. 2-2x4 POSTS WITH MSTC 48B3 STRAP @ (3/SD2)
2. 2-2x4 POSTS WITH MSTC 48B3 STRAP @ (9/SD2)
3. 4x6 POSTS WITH ECC POST CAP (12/SD2)
4. 4x4 POSTS WITH PC POST CAP
5. 4x4 POSTS WITH HD 2A (1/SD1)
6. 4x4 POSTS WITH HD 5A (1/SD1)
7. SIMPSON SSW 21x9 (21/SD1)
8. SIMPSON SSW 12x8 (27/SD1) (28/SD1)

SHEAR WALL SCHEDULE

KEY	(B)
PANEL THK	15/32"
PANEL INDEX	24/0
SIDE	1
EDGE NAIL	10d @ 4" OC.
FIELD NAIL	10d @ 12" OC.
TOP PLATE	2 - 2X
SILL PLATE (UPPER)	2 x
SILL PLATE (FND)	3 x
PANEL BOUNDARY	3 x
WALL BOUNDARY	4 x
SILL CONN.	16d @ 4" OC.
ANCH BOLTS	5/8" DIA. @ 30"
FRAMING ANCHOR	A35 @ 14" OC.
TOP PL CONN.	16d @ 16" OC.
ALLOWABLE LOAD	580 PLF
NOTES/STAMP	RATED SHTH STRUCT 1
- - APA - -	24/0 15/32" EXPOSURE 1

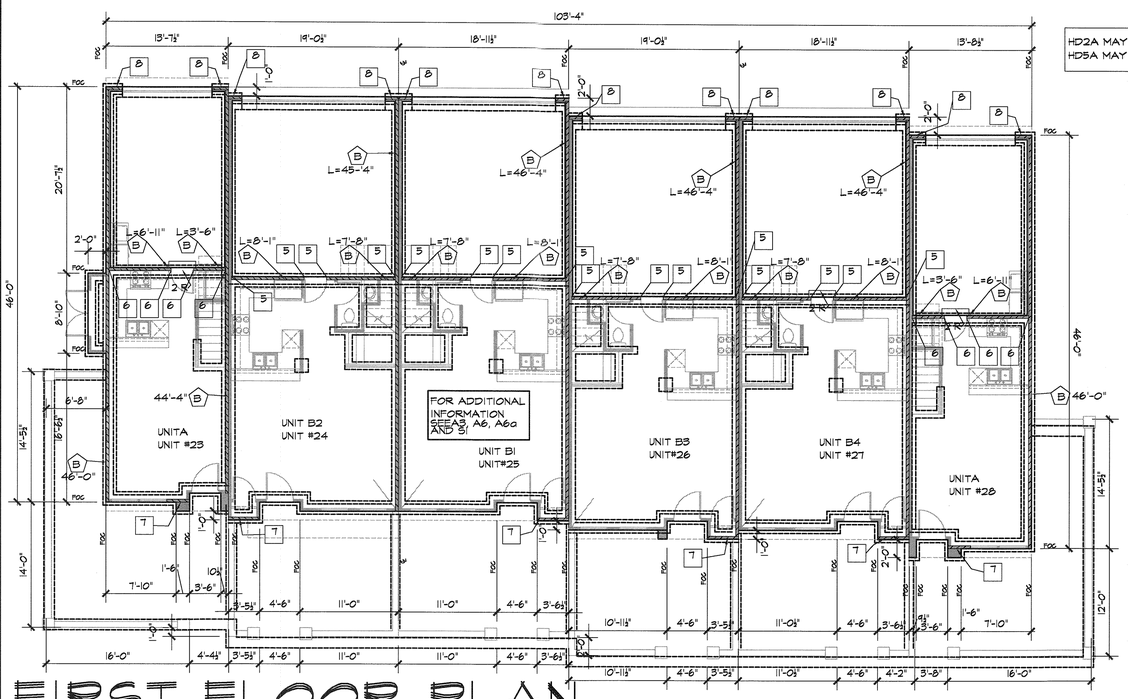
SHEAR WALL NOTES

1. WHERE NAILS ARE SPACED LESS THAN 3" O.C. PROVIDE 3x STUDS, STAGER NAILS AT DOUBLE TOP PLATES.
2. WHERE PLYWOOD IS SPECIFIED ON BOTH SIDES OF THE SHEAR WALL OFFSET PLYWOOD JOINTS.
3. THE LAG BOLTS ARE 3/8" x6" LONG LAGS. LAGS MUST BE ATTACHED TO SOLID BLOCK OR RIM.
4. 5/8"" DIA ANCHOR BOLTS SHALL HAVE 2.5x2.5x1/4"" PLATE WASHERS



SECOND FLOOR PLAN

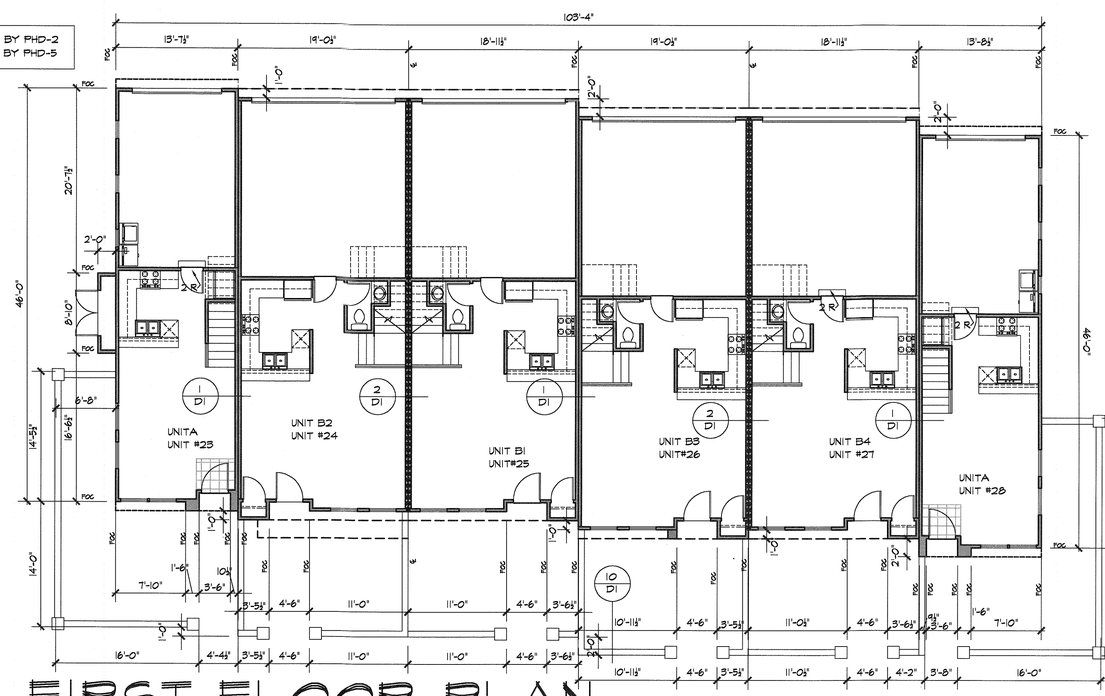
SCALE: 1/8"=1'-0"



FIRST FLOOR PLAN

SCALE: 1/8"=1'-0"

HD2A MAY BE REPLACED BY PHD-2
HD5A MAY BE REPLACED BY PHD-5



FIRST FLOOR PLAN

SCALE: 1/8"=1'-0"

BUILDING #5

REVISIONS

7-8-05	PLAN CHECK CORR
7-28-05	CORR
1-18-06	NEW BLDG #1
1-25-06	NEW BLDG #1

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DATE:

SHEET:

A19

OF

DEV 001028

ALL ROOFS TO BE CLASS A RATED

LOUVERS, VENTILATORS OR OPENINGS IN WALLS, ROOFS ATTICS AND UNDER FLOOR AREAS HAVING HEADROOM OF LESS THAN FOUR FEET IN HEIGHT WHICH ARE NOT FITTED WITH SASH OR DOORS SHALL BE COVERED WITH WIRE SCREEN. THE SCREEN COVERING SUCH OPENING SHALL BE GALVANIZED METAL OR COPPER AND SHALL HAVE A MAXIMUM MESH OF 1/4.

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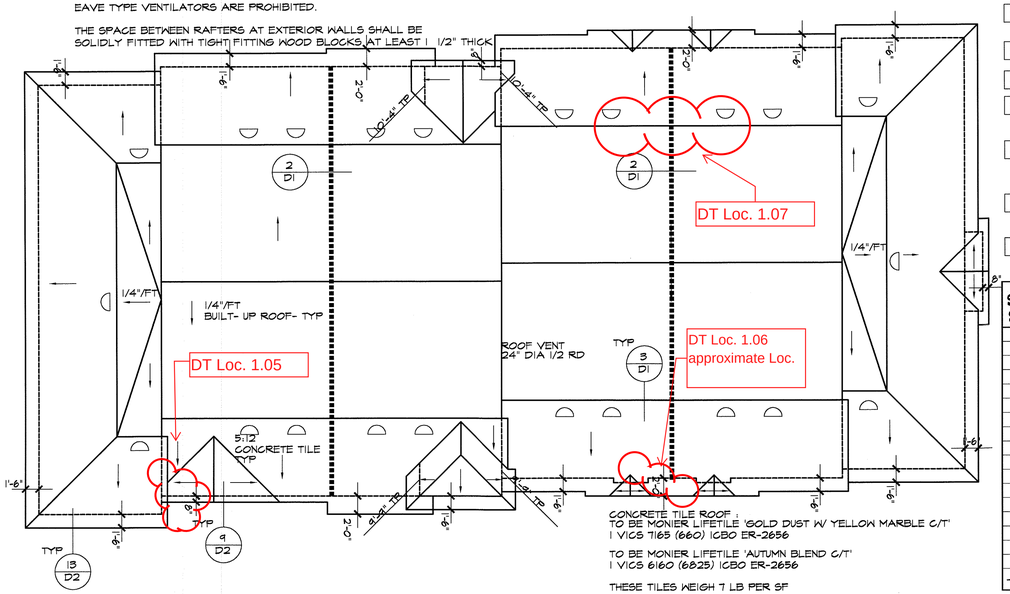

ROOF PLAN

SCALE: 1/8'=1'-0"

CONCRETE TILE ROOF :
TO BE MONIER LIFETILE 'GOLD DUST W/ YELLOW MARBLE C/T'
1 VICS 7165 (660) ICBO ER-2656

TO BE MONIER LIFETILE 'AUTUMN BLEND C/T'
1 VICS 6160 (6825) ICBO ER-2656

THESE TILES WEIGH 7 LB PER SF

BUILT-UP ROOFING-- CELOTEX-- RR 25082 & ICBO ER 4887

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EVERY "A" UNIT IS REQUIRED TO HAVE 630 SI OF ROOF VENT

EVERY "B" UNIT IS REQUIRED TO HAVE 875 SI OF ROOF VENT

LEGEND

1	2-2x4 POSTS WITH MSTC 48B3 STRAP @	3 / SD2
2	2-2x4 POSTS WITH MSTC 48B3 STRAP @	9 / SD2
3	4x6 POSTS WITH ECC POST CAP	12 / SD2
4	4x4 POSTS WITH PC POST CAP	
5	4x4 POSTS WITH HD 2A	1 / SD1
6	4x4 POSTS WITH HD 5A	1 / SD1
7	SIMPSON SSW 2|x9	21 / SD1
8	SIMPSON SSW 12x8	27 / SD1 , 28 / SD1

SHEAR WALL SCHEDULE

KEY	8
PANEL THK	15/32"
PANEL INDEX	24/0
SIDE	1
EDGE NAIL	10d @ 4" O.C.
FIELD NAIL	10d @ 12" O.C.
TOP PLATE	2 - 2X
SILL PLATE (UPPER)	2 x
SILL PLATE (FND)	3 x
PANEL BOUNDARY	3 x
WALL BOUNDARY	4 x
SILL CONN.	16d @ 4" O.C.
ANCH BOLTS	5/8" DIA. @ 30"
FRAMING ANCHOR	A35 @ 14" O.C.
TOP PL CONN.	16d @ 16" O.C.
ALLOWABLE LOAD	380 PLF
NOTES/STAMP	RATED SHTH STRUCT 1
- - APA - -	24/0 15/32" EXPOSURE 1

SHEAR WALL NOTES

1. WHERE NAILS ARE SPACED LESS THAN 3" O.C. PROVIDE 3x STUDS, STAGER NAILS AT DOUBLE TOP PLATES .
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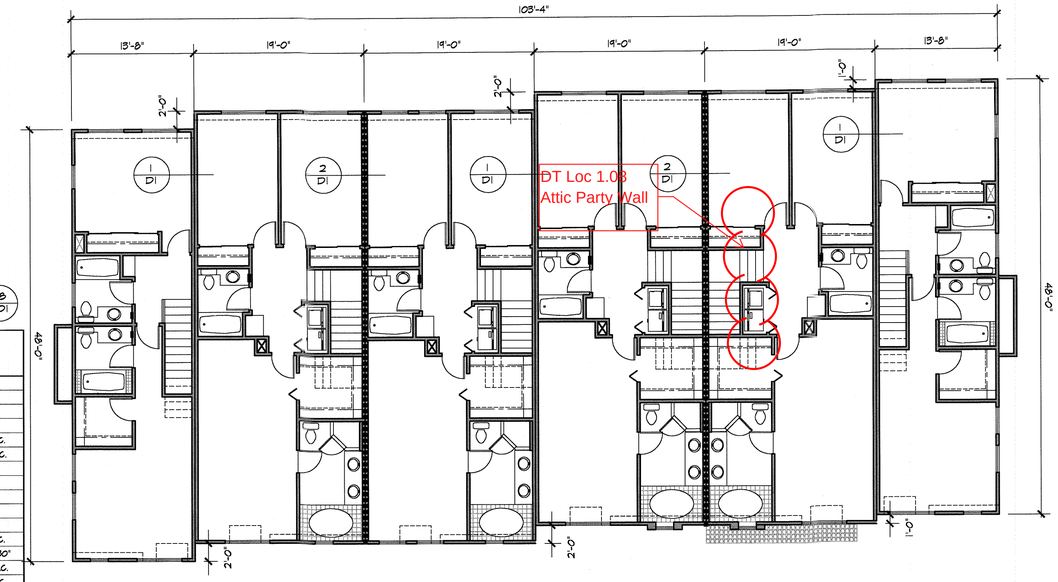
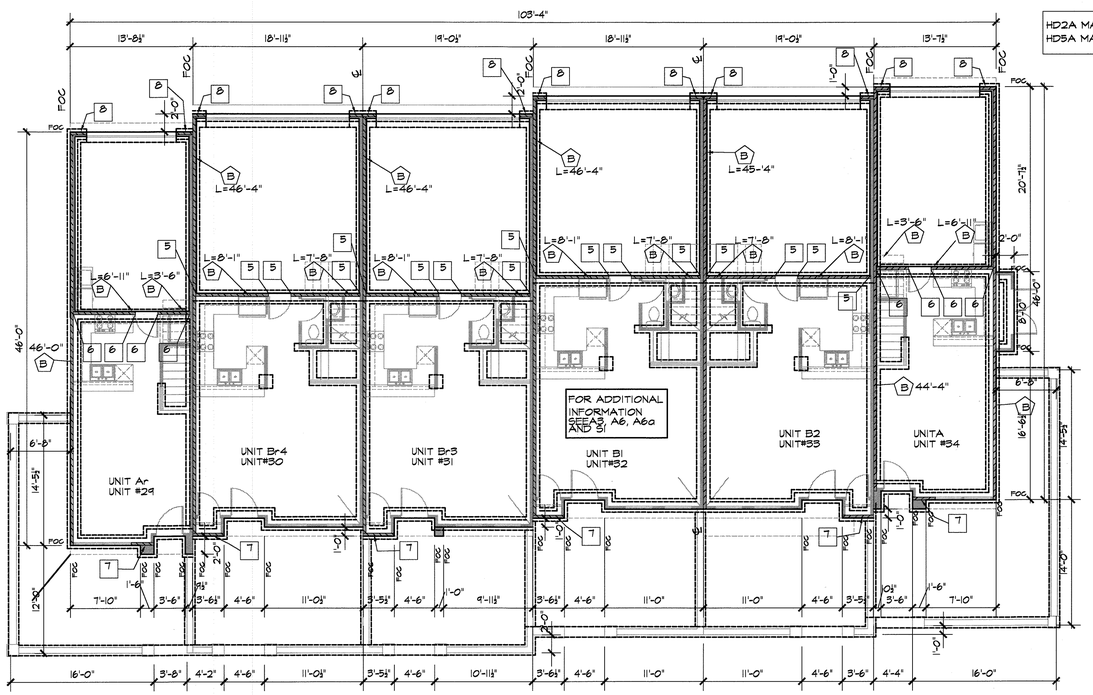
HD2A MAY BE REPLACED BY PHD-2
HD5A MAY BE REPLACED BY PHD-5



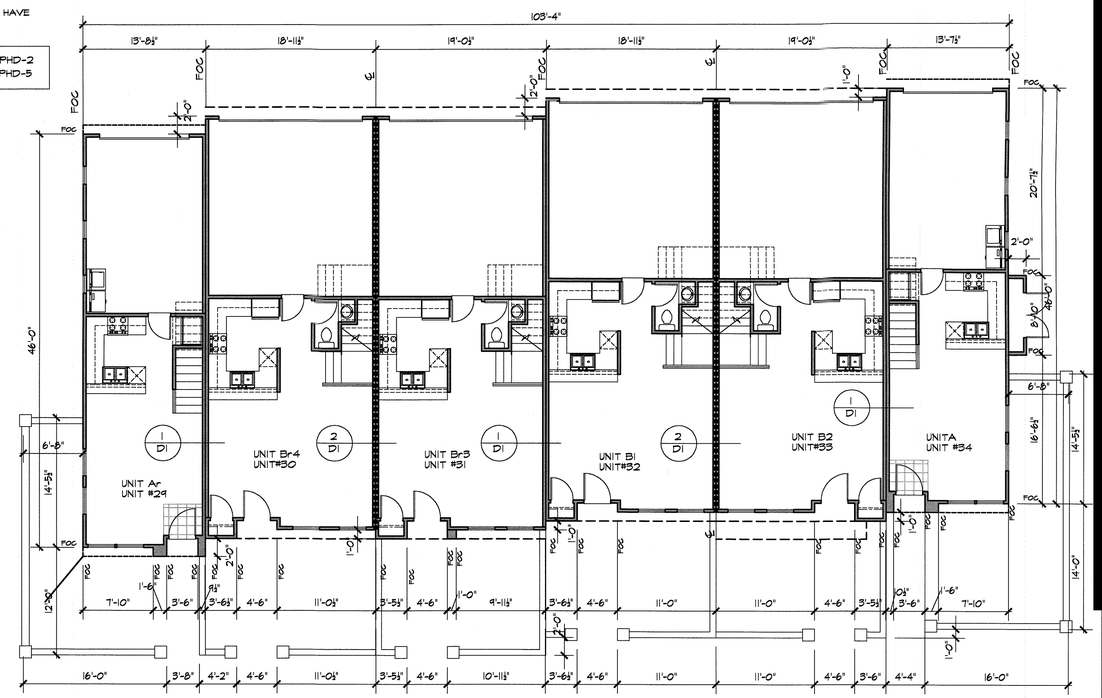
SECOND FLOOR PLAN

SCALE: 1/8'=1'-0"



FOUNDATION PLAN

SCALE: 1/8'=1'-0"



FIRST FLOOR PLAN

SCALE: 1/8'=1'-0"

BUILDING #6

REVISIONS

7-8-05 PLAN CHECK CORR

7-28-05 CORR

1-18-06 NEW BLDG #1

1-25-06 NEW BLDG #1

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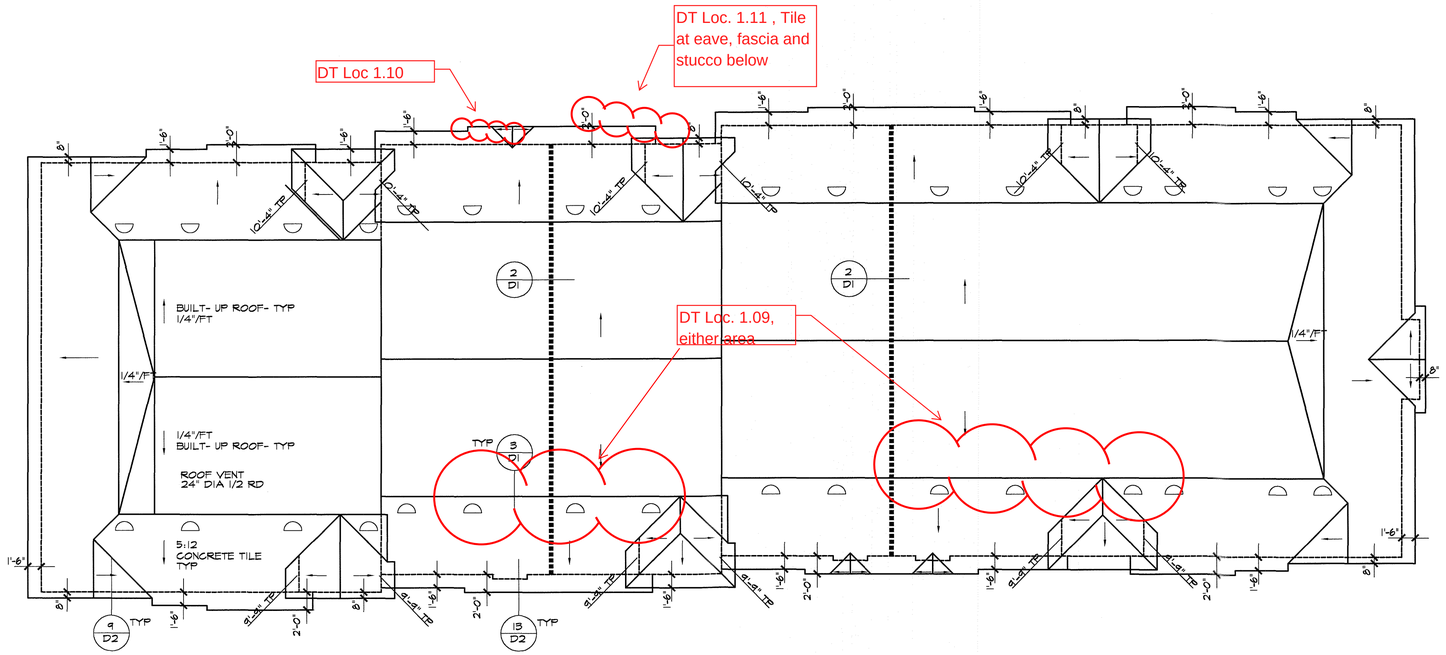
DATE:

SHEET:

A21

OF

DEV 001030



ROOF PLAN

SCALE: 1/8'=1'-0"

CONCRETE TILE ROOF
TO BE MONIER LIFETILE 'GOLD DUST W/ YELLOW MARBLE C/T'
1 VICS 7165 (660) ICBO ER-2656
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ALL ROOFS TO BE CLASS A RATED

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THE SPACE BETWEEN RAFTERS AT EXTERIOR WALLS SHALL BE SOLIDLY FITTED WITH TIGHT FITTING WOOD BLOCKS AT LEAST 1 1/2" THICK

LEGEND

1	2-2x4 POSTS WITH MSTC 48B3 STRAP @	5 / SD2
2	2-2x4 POSTS WITH MSTC 48B3 STRAP @	9 / SD2
3	4x6 POSTS WITH ECC POST CAP	12 / SD2
4	4x4 POSTS WITH PC POST CAP	
5	4x4 POSTS WITH HD 2A	1 / SD1
6	4x4 POSTS WITH HD 5A	1 / SD1
7	SIMPSON SSW 21x9	21 / SD1
8	SIMPSON SSW 12x8	27 / SD1 , 28 / SD1

SHEAR WALL SCHEDULE

KEY	(B)
PANEL THK	15/32"
PANEL INDEX	24/0
SIDE	1
EDGE NAIL	10d @ 4" O.C.
FIELD NAIL	10d @ 12" O.C.
TOP PLATE	2 - 2X
SILL PLATE (UPPER)	2 x
SILL PLATE (FND)	3 x
PANEL BOUNDARY	3 x
WALL BOUNDARY	4 x
SILL CONN.	16d @ 4" O.C.
ANCH BOLTS	5/8" DIA. @ 30"
FRAMING ANCHOR	A35 @ 14" O.C.
TOP PL CONN.	16d @ 16" O.C.
ALLOWABLE LOAD	380 PLF
NOTES/STAMP	RATED SHTH STRUCT 1
- - APA - -	24/0 15/32" EXPOSURE 1

SHEAR WALL NOTES

1. WHERE NAILS ARE SPACED LESS THAN 3" O.C. PROVIDE 3x STUDS, STAGGER NAILS AT DOUBLE TOP PLATES .
2. WHERE PLYWOOD IS SPECIFIED ON BOTH SIDES OF THE SHEAR WALL OFFSET PLYWOOD JOINTS.
3. THE LAG BOLTS ARE 5/8" x6" LONG LAGS. LAGS MUST BE ATTACHED TO SOLID BLOCK OR RIM.
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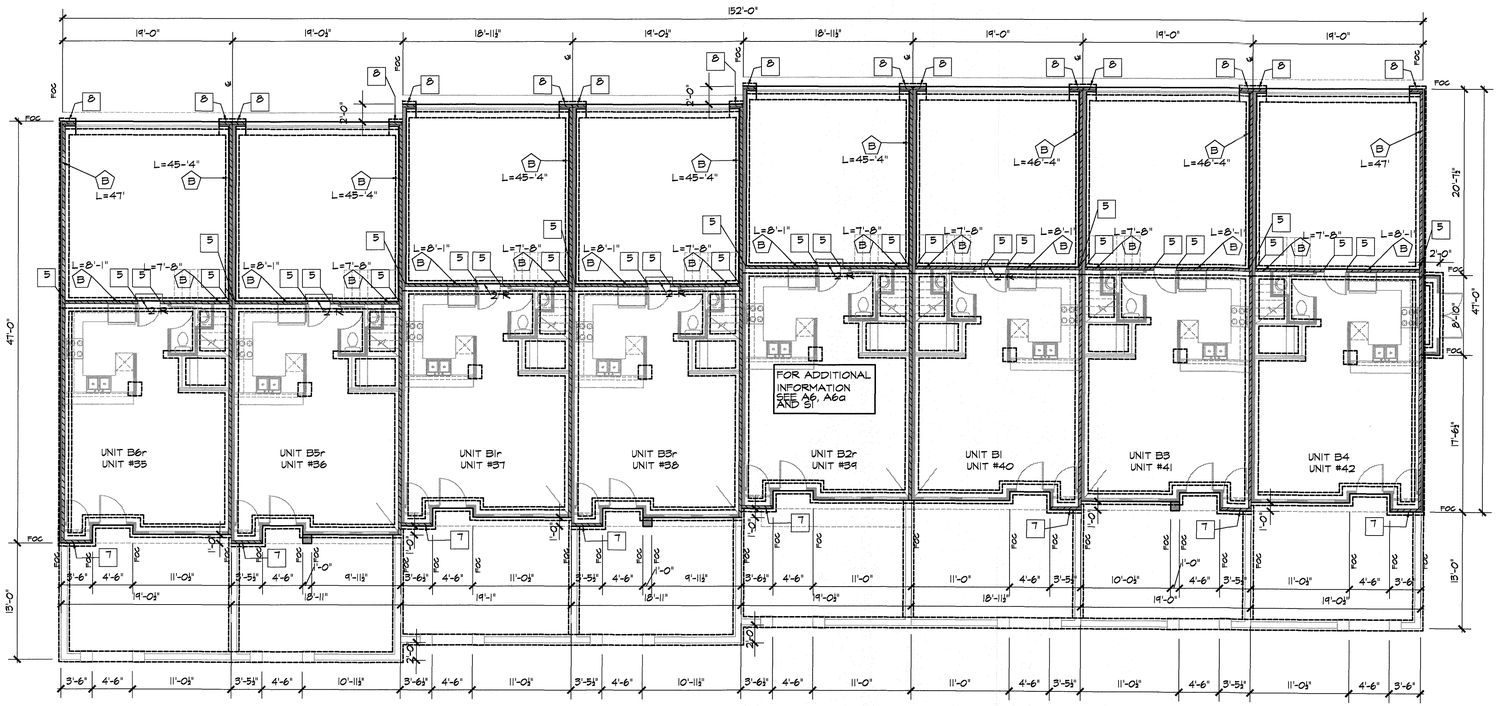
HD2A MAY BE REPLACED BY PHD-2
HD5A MAY BE REPLACED BY PHD-5



FOUNDATION PLAN

SCALE: 1/8'=1'-0"

BUILDING #7

REVISIONS

7-8-05 PLAN CHECK CORR
7-28-05 CORR
1-18-06 NEW BLDG #1
1-25-06 NEW BLDG #1

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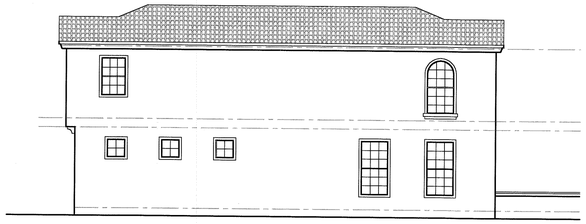
DATE:

SHEET:

A24

OF

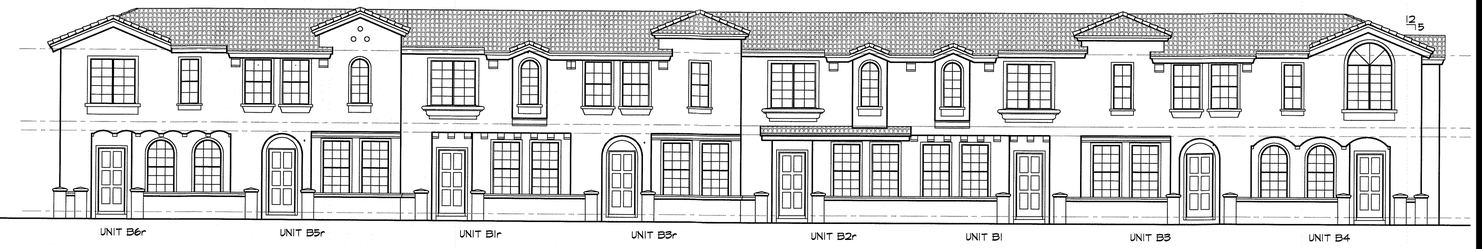
DEV 001033



LEFT ELEVATION

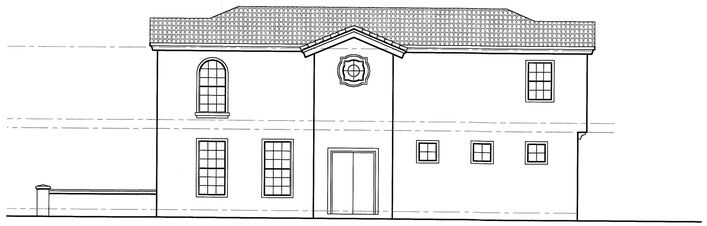
SCALE: 1/8"=1'-0"

SEE DWGS A7, A8 & A9 FOR ADDITIONAL ELEVATION INFORMATION



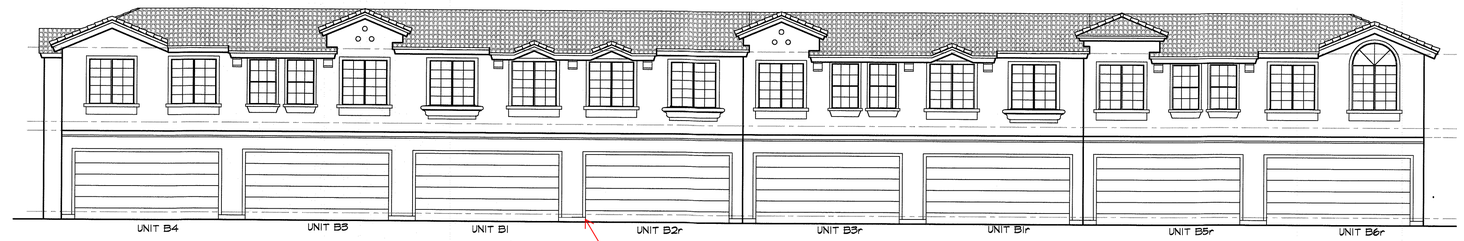
FRONT ELEVATION

SCALE: 1/8"=1'-0"



RIGHT ELEVATION

SCALE: 1/8"=1'-0"



REAR ELEVATION

SCALE: 1/8"=1'-0"

DT Loc 1.12 Back Elevation Foam Trim

BUILDING #7

[redacted]

REVISIONS

7-8-05 PLAN CHECK CORR
7-28-05 CORR
1-18-06 NEW BLDG #1
1-25-06 NEW BLDG #1

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[redacted]

DATE:

SHEET:

A25

OF

5A. Investigation Report and Map

[redacted]

[redacted], CA 92674

OFFICES

CALIFORNIA

949-240-9971

931 Calle Negocio, Ste J
San Clemente, CA 92673

CA License #713760

OREGON

503-660-8670

9320 SW Barbur Blvd, Ste 170
Portland, OR 97219

OR License #173960

GENERAL INQUIRY

info@petefowler.com
www.petefowler.com

Pete Fowler CONSTRUCTION Services, Inc.

Project #15-161

Pete Fowler CONSTRUCTION Services, Inc.

Drain Investigation

Date:	07/15/2015
To:	[redacted] [redacted] [redacted] [redacted], CA 92660 [redacted] [redacted]
From:	Pete Fowler Construction Services, Inc.
Project:	[redacted] (PFCS 15-161)
Regarding:	Drain Investigation
Note:	For mediation purposes only. Protected under all applicable evidence codes.

Project Overview

Executive Summary

In April and May 2015, PFCS investigated drainage elements including (1.) Roof Drains, (2.) Site Private Drainage (PVC), (3.) Site Private Storm Drainage (Concrete), and (4.) City Storm Sewer. See the remainder of this Inspection Summary and the Inspection Map for necessary details. All drains appeared to be performing acceptably except the following:

- 1F. Drain at South - Middle of the building: The connection from the roof drain to the horizontal PVC private drainage trunk line appears to be imperfect and should be further investigated.
- 2B. Site South and Site Southwest - 8-inch PVC Site Drainage Trunk Line. Multiple attempts to jet (clear) the blockages were made but due to the time constraints, we failed to complete the investigation of this line.
- 2C. Site South and Site Southwest - 4-inch PVC Site Drain Lines. The 4" area drain lines were investigated and found to be filled with dirt, rocks, roots and debris at numerous locations. In general, they are irreparably damaged.
- 2D. Site Southwest - 8-inch Vertical PVC Drain to City Storm Drain has water draining from pipe 2B, but the source remains unknown.
- 2E. Site North - North-South Running 10" PVC Line from Inlet Toward Rainbow Building dead-ends into the building with no cap and continues to hold water and mud.
- 3B. Site North and Site Northwest - East-West 10-inch concrete pipe has a section of "running trap" (low spot) and is full of mud/debris that was unable to be cleared in the time allotted for investigation.

General Project Information

[redacted], CA is a two-story, concrete tilt-up and steel frame structure built in 1996, including office and warehouse, paved parking lot areas, outdoor concrete patios, retaining walls and landscaping. The building is approximately 50,000 sf and was constructed on a graded pad approximately 50 feet above Calle Negocio and Avenida Pico [redacted] is the owner who purchased the property in 2004.

In early 2013, [redacted] discovered a large amount of water had been leaking from a fire hydrant, plumbing and irrigation systems, and detected damage to the property including cracked walls, broken windows, uneven floors, etc. The total costs to investigate and repair the property are in excess of $1,000,000.

In April 2015, [redacted] retained PFCS to further investigate.

Note: This report contains references to inspection photographs and videos that are not attached. They are all available via PFCS Client Access (https://access.petefowler.com/), a password protected, internet based electronic file management and viewing tool.

General Inspection Summary

PFCS conducted visual inspections and investigation on three occasions to document damage, meet with the Owner, investigate potential water sources that could have impacted the performance of the building, and to map the existing pipe locations. All investigations were documented with field notes, photographs, diagrams and, on three occasions, video.

Inspection Dates:

- 4/28/2015 Visual inspection of the interior and exterior of the building and site (470 photos)
- 5/11/2015 Drain line inspection by Roto-Rooter using a borescope camera (223 photos, 10 videos)
- 5/13/2015 Further drain line inspection by Pro Pipe using a 4-wheeled robotic camera for lines that were inaccessible by the borescope investigation on 5/11/2015 (349 photos, 6 videos)
- 6/9 and 6/18/2015 Further drain line inspections due to loss of video during 5/11/20145 investigation.

Drain Lines Investigated

See PFCS Inspection Map for locations

- 1. Roof Drains
- 2. Site Private Drainage (PVC)
- 3. Site Private Storm Drainage (Concrete)
- 4. City Storm Sewer

1. ROOF DRAINS

There are 7 sets of roof drains plus one deck drain. Each set of roof drains drain pipes run together from the roof level to curb cut drains onto the parking lot, out the base of the building wall, or together into the subgrade drainage system (See photos RG-02.191 to 02.223).

On 5/11/2015 a borescope type camera was used to scope four of the seven roof drain lines. See video 2C 05/11/2015 Inspection Videos 7 to 9.

Drain 1A. at West Elevation - The drain lines drop vertically from the roof, then turn horizontal to let out at the curb near the top of the ramp near the warehouse door. The drains appear to be in operable condition. See video 2C 05/11/2015 Inspection Video 9 16:28 to 16:32. See photos RG 02.219 to 223 and RG-01.459.

Drains 1B. and 1C. at North Elevation: The drain lines drop vertically from the roof, then let out at the base of the concrete wall near the warehouse doors. The drains appear to be in operable condition. As a time and cost saving measure, these lines were not investigated. Photos: For 1B. see RG-01.206 and 461. For 1C. see RG-01.213 and 263 in front of the SUV.

Drain 1D. at East: The drain lines drop vertically from the roof, then let out at the base of the concrete wall inside of the tool shed. They appear to be in operable condition. As a time and cost saving measure, these lines were not investigated.

Drain 1E. at South - East-most: The drain lines run under the roof for 20-40 feet toward the West, then drop vertically to below grade level and the cast iron roof drain lines turn horizontal and connect to the PVC trunk line. The lines appear to be in operable condition. See video 2C 05/11/2015 Inspection Video 7 15:46 to 15:52. See photos RG 02.191 to 197.

Drain 1F. at South - Middle of the building: The drain lines run under the roof the toward South elevation, turn down to below grade, and then turn horizontal into the PVC trunk line. In general the line appears to be in good working order. The connection from the roof drain to the horizontal PVC private drainage trunk line appears to be imperfect and should be further investigated. See video 2C 05/11/2015 Inspection Video 8 16:04 to 16:15. See photos RG 02.198 to 207.

Drain 1G. at South - West-most: The drain lines drop vertically from the roof, turn down to below grade, and then turn horizontal into the PVC trunk line. The lines appear to be in working order. See video 2C 05/11/2015 Inspection Video 8 16:01-16:04. See photos RG 02.208 - 218.

Drain 1H. at Deck at South-West corner: The deck drain drops vertically and lets out at the base of the wall. As a time and cost saving measure, this line was not Investigated. See photos RG RG-01.074, 125, 152 and 153.

2. SITE PRIVATE DRAINAGE (PVC)

2A. Site East Parking Lot 4-inch PVC Drain Line

We investigated from the inlet basin located near the center of the parking lot. A 4-inch PVC drain line runs toward the Southeast corner drainage basin that has a steel grate. The paving above for the entire length between the two inlets was patched and we were told the line was recently replaced. The drain line was observed to have no damage and no blockages. See video 2C 6/9/2015 Inspection Video and photo RG-02.182.

2B. Site South and Site Southwest - 6 and 8-inch PVC Site Drainage Trunk Line

A 6 and 8-inch (it transitions) private site drainage trunk line runs from the Site South around the building to Site Southwest. The 4-inch surface drainage inlets as well as the Roof Drains (Report sections 1E-1G and map locations Drain E, F and G) are run into this trunk line. This larger trunk line is located approximately 2-feet below the surface. The line is clogged with dirt. Multiple attempts to jet (clear) the blockages were made but due to the time constraints, we did not complete the investigation of this line. See 2C 5/11/2015 Inspection Video 4 12:33:00-12:33:30, 2C 06/18/2015 Inspection Videos 1 and 2, and photos RG 01.098, 02.119, and 02.133.

2C. Site South and Site Southwest - 4-inch PVC Site Drain Lines

4" ABS surface area drain lines tie into the larger private site drainage trunk line. The 4” ABS area drain lines were investigated and found to be filled with dirt, rocks, roots and debris at numerous locations. In general, they are irreparably damaged. See 2C 5/11/2015 Inspection Videos 1 to 5, 2C 06/18/2015 Inspection Videos 1 and 2, and photos RG 01.098, 02.101, 02.119, and 02.133.

2D. Site Southwest - 8-inch Vertical PVC Drain to City Storm Drain

At the site southwest located approximately 15-feet toward the southwest from the west elevation building wall exists a vertically installed 8-inch PVC pipe the pipe is intersected by (A.) one horizontal south to north running- 8-inch PVC pipe, (B.) two 4-inch ABS horizontal area drainage lines, (C.) one horizontal north to south running 8-inch PVC pipe which transitions into a west east running 6-inch PVC pipe on the south elevation (this is line 2B. above) and was observed to have water draining into this vertical pipe. The vertical pipe connects into a 48-inch concrete city storm sewer approximately 15-feet below grade, which was observed to contain running water. There is no damage to this vertical pipe. The running water at the bottom was a concern until we investigated the city sewer, and the drainage from pipe 2B. remains unsolved. See RG-02.041 and 2C 05/11/2015 Inspection Video - 1 10:30:00 to 10:44:19.

2E. Site North - North-South Running 10″ PVC Line from Inlet Toward Rainbow Building

North-south running 10″ PVC line - The line is located approximately 4′ sub-surface at the basin / north end of the drain line and approximately 4′ sub-surface to the south toward the 900 Calle Negocio building where it terminates. The line had been jetted on the first day of scoping. The drain line continued to hold water and mud. Soil is visible at the termination of the line without a cap. The larger robotic camera was inserted at the line and the camera observations were much better. See video 2C 05/13/2015 Inspection Video 5 12:39 - 12:44 and 2C 05/11/2015 Inspection Video 6.

3. SITE PRIVATE STORM DRAINAGE (CONCRETE)

3A. Site East Parking Lot

From the basin at the Southeast corner is a 12″ concrete pipe extending toward the city storm drain line at Calle Negocio and Calle Amanecer. The drain lines were observed to have no damage and no blockages. See video 2C 6/9/2015 Inspection Video.

3B. Site North and Site Northwest - East-West running 240-foot length of 10-inch concrete pipe.

We investigated from the drainage basin located on the North side of the building, near the Northeast corner. The 10-inch concrete pipe runs approximately 240-feet Northwest between the the subject building [redacted] and the City building next door [redacted] to a man hole. On day 1 the private storm drain lines were scoped with the smaller of the 2 cameras (See 2C 5/11/2015 Inspection Video 6). On day 2 the line was scoped with the larger robotic camera (See 2C 05/13/2015 Inspection Video 4). This East-West running line is approximately 4′ sub-surface at the basin (East end) and approximately 15′ sub-surface at the West where it connects to the city storm drain line with an abrupt turn. The line has a "running trap" (low section) at approximately 170′ west of the basin. It was filled with dirt, mud, rocks and debris. The larger robotic camera could not be pushed through the debris at the 170′ section as the robotic tractor could not fit through the line because of the diminishing size of the opening due to the amount of debris. The smaller of the 2 cameras could not be pushed through the debris. See video 2C 05/11/2015 Inspection Video 6. See 2C 05/13/2015 Inspection Video 4 12:16-12:39.

3C. Site North - North-South 1-inch concrete pipe run from inlet away from Rainbow building.

North-south running 10-inch concrete private line - The line is located approximately 4′ sub-surface at the basin / south end and approximately 3′ sub-surface to the north where it connects to the storm drain basin in the parking lot of [redacted]. The 10″ drain line was scoped and visually confirmed to contain some trash and debris. The smaller of the 2 cameras was pushed to the end of the pipe. See video 2C 05/11/2015 Inspection Video 6. The larger camera made it to the end of the pipe (See 2C 05/13/2015 Inspection Video 6 12:48-18:56).

4. CITY STORM SEWER (ASSUME)

4A. Site Northwest to Southwest - 48-inch Concrete Storm Sewer

48-inch concrete storm drainage sewer pipe, assumed to belong to the city, is located approximately 15' below grade was scoped with a motorized robotic camera from the manhole located between [redacted] at the Northwest curb inlet. The scoping process extended approximately 1000' to the north of the manhole and approximately 400' toward the south under Avenida Pico and Calle Amanecer (See 2C 05/13/2015 Inspection Video 1 8:37-9:59).

A PVC pipe penetrating and draining onto the concrete storm drain line was observed approximately 300' to the north from the manhole and near the city building climate control chiller unit. It is presumed that this PVC pipe is a source of the running water in the storm drain. We observed water in the storm drain line beyond the penetration at 300-feet. We we scoped past 1,000 feet and was still some water running, but the source was not determined. See 2C 05/13/2015 Inspection Video 1 8:37-9:59.

4B. Avenida Pico / Amanecer - 12-inch Abandoned Line

An abandoned 12" concrete line was discovered to be extending toward the East and observed to be brick capped near the Southern most manhole. The manhole is located just West of the keystone retaining wall and 200' from the Northwest manhole.

At approximately 200-feet south of the drain inlet, where the storm drain takes a downturn toward Avenida Pico and Calle Amanecer, there are rust stains at a concrete pipe joint. See 2C 5/13/2015 Inspection Video 2 10:19-11:00 & Inspection Video 3 11:26-11:38.

Locations Summary

1. Roof Drains
    - Drain 1A. at West Elevation
    - Drains 1B. and 1C. at North Elevation
    - Drain 1D. at East
    - Drain 1E. at South - East-most
    - Drain 1F. at South - Middle of the building
    - Drain 1G. at South - West-most
    - Drain 1H. at Deck at South-West corner

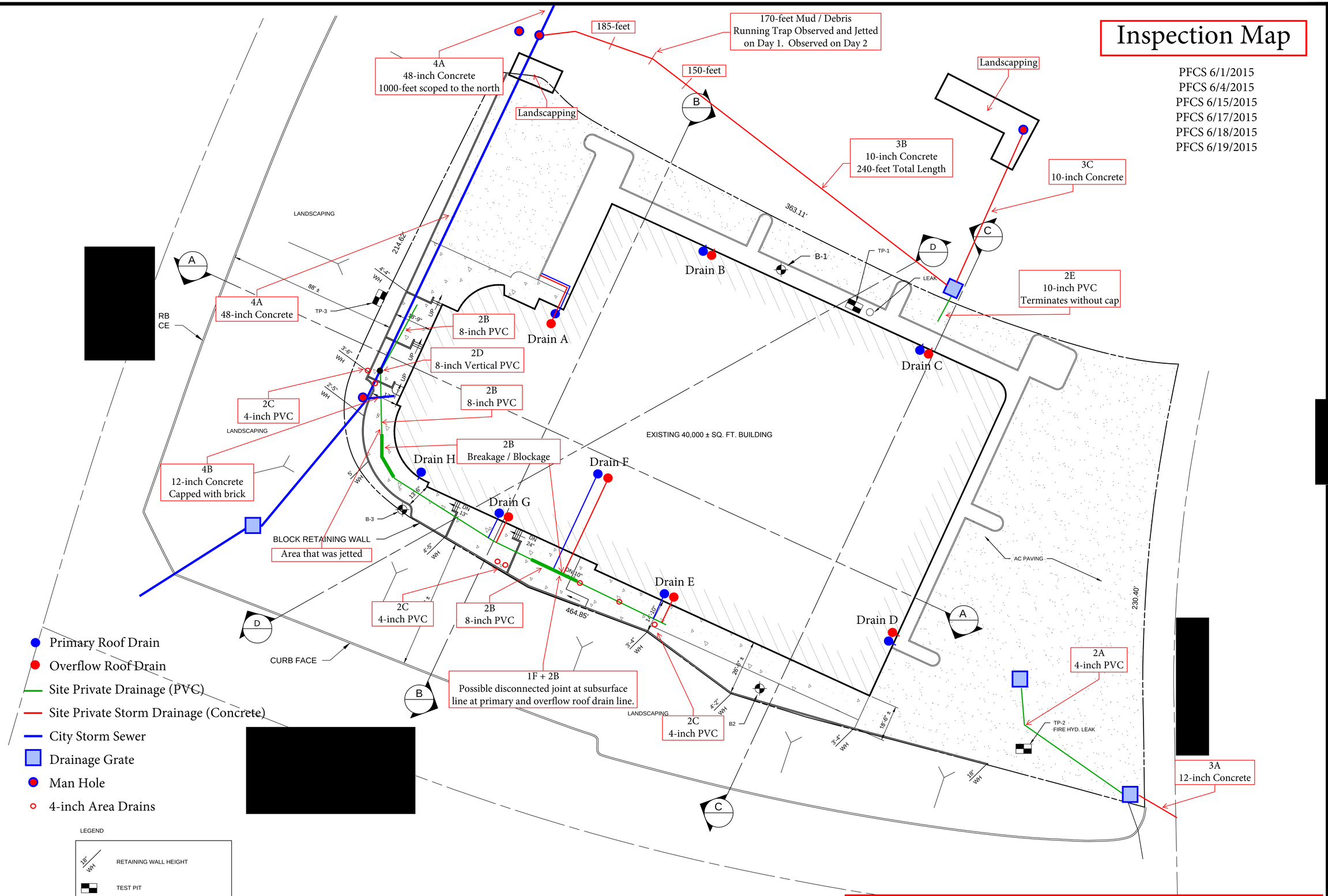
2. Site Private Drainage (PVC)
    - 2A. Site East Parking Lot 4-inch PVC Drain Line
    - 2B. Site South and Site Southwest - 8-inch PVC Site Drainage Trunk Line
    - 2C. Site South and Site Southwest - 4-inch PVC Site Drain Lines
    - 2D. Site Southwest - 8-inch Vertical PVC Drain to City Storm Drain
    - 2E. Site North - North-South Running 10" PVC Line from Inlet Toward Rainbow Building

3. Site Private Storm Drainage (Concrete)
    - 3A. Site East Parking Lot
    - 3B. Site North and Site Northwest - East-West running 240-foot length of 10-inch concrete pipe.
    - 3C. Site North - North-South run from inlet away from Rainbow building.

4. City Storm Sewer (Assume)
    - 4A. Site Northwest to Southwest
    - 4B. Avenida Pico / Amanecer - 12-inch Abandoned Line

Inspection Map

PFCS 6/1/2015
PFCS 6/4/2015
PFCS 6/15/2015
PFCS 6/17/2015
PFCS 6/18/2015
PFCS 6/19/2015



SITE PLAN
SCALE: 1"= 20'

The underlying drawing is by others. These additional notes are by PFCS for the convenience of the owners.

REVISIONS	BY
REV. 2-21-14	MM
REV. 3-17-14	MM

DATE 2-7-14
SCALE
DRAWN BY: MM
SHEET 2
OF

RS 001228

Building Exterior Locations Map

PFCS 5/4/2015

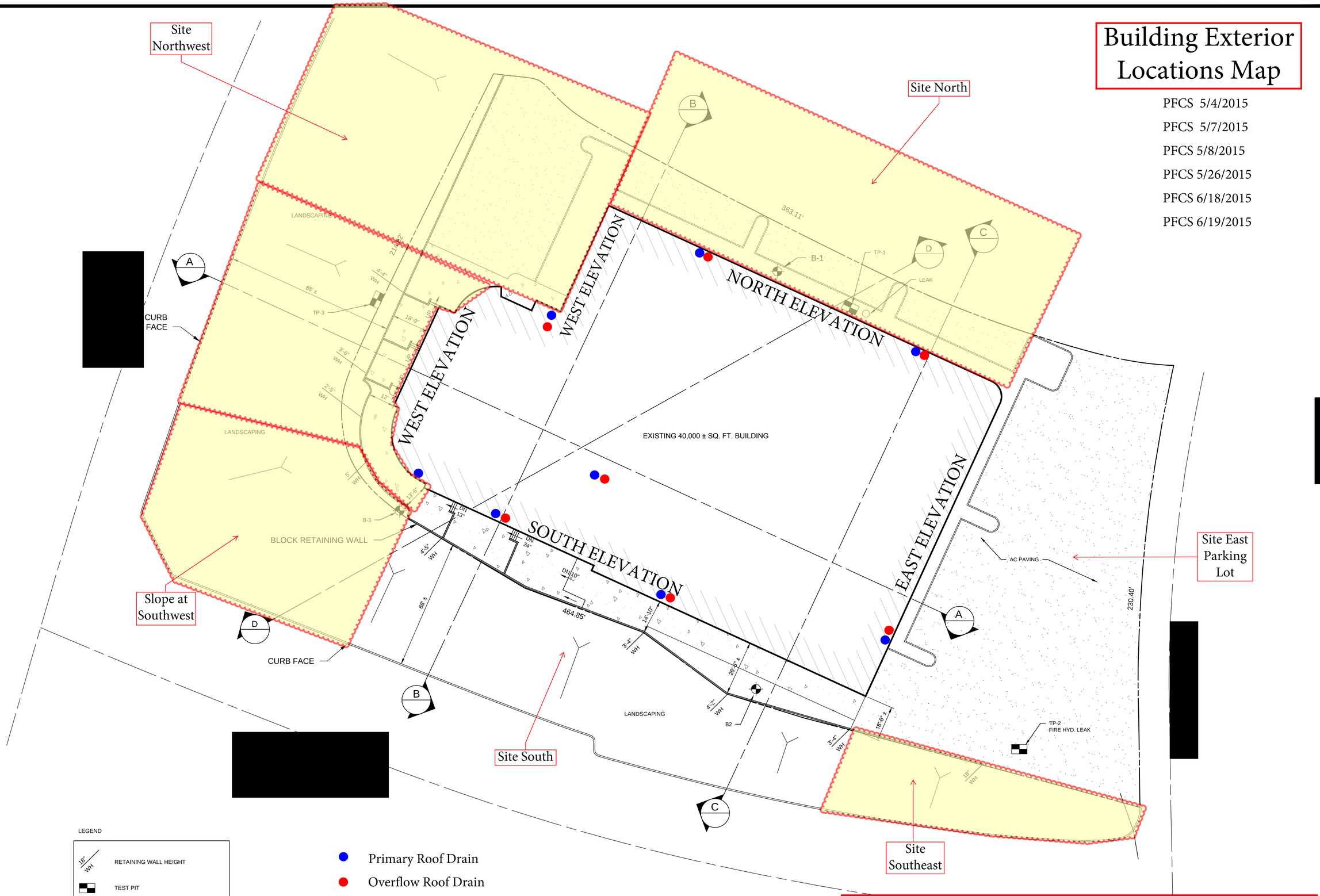
PFCS 5/7/2015

PFCS 5/8/2015

PFCS 5/26/2015

PFCS 6/18/2015

PFCS 6/19/2015



LEGEND

- RETAINING WALL HEIGHT (18" WH)
- TEST PIT
- BORING

Primary Roof Drain

Overflow Roof Drain

SITE PLAN

SCALE: 1"= 20'

The underlying drawing is by others. These additional notes are by PFCS for the convenience of the owners.

REVISIONS	BY
REV. 2-21-14	MM
REV. 3-17-14	MM

DATE 2-7-14

SCALE

DRAWN BY: MM

SHEET 2

OF

RS 001228

Building Interior Elements Map

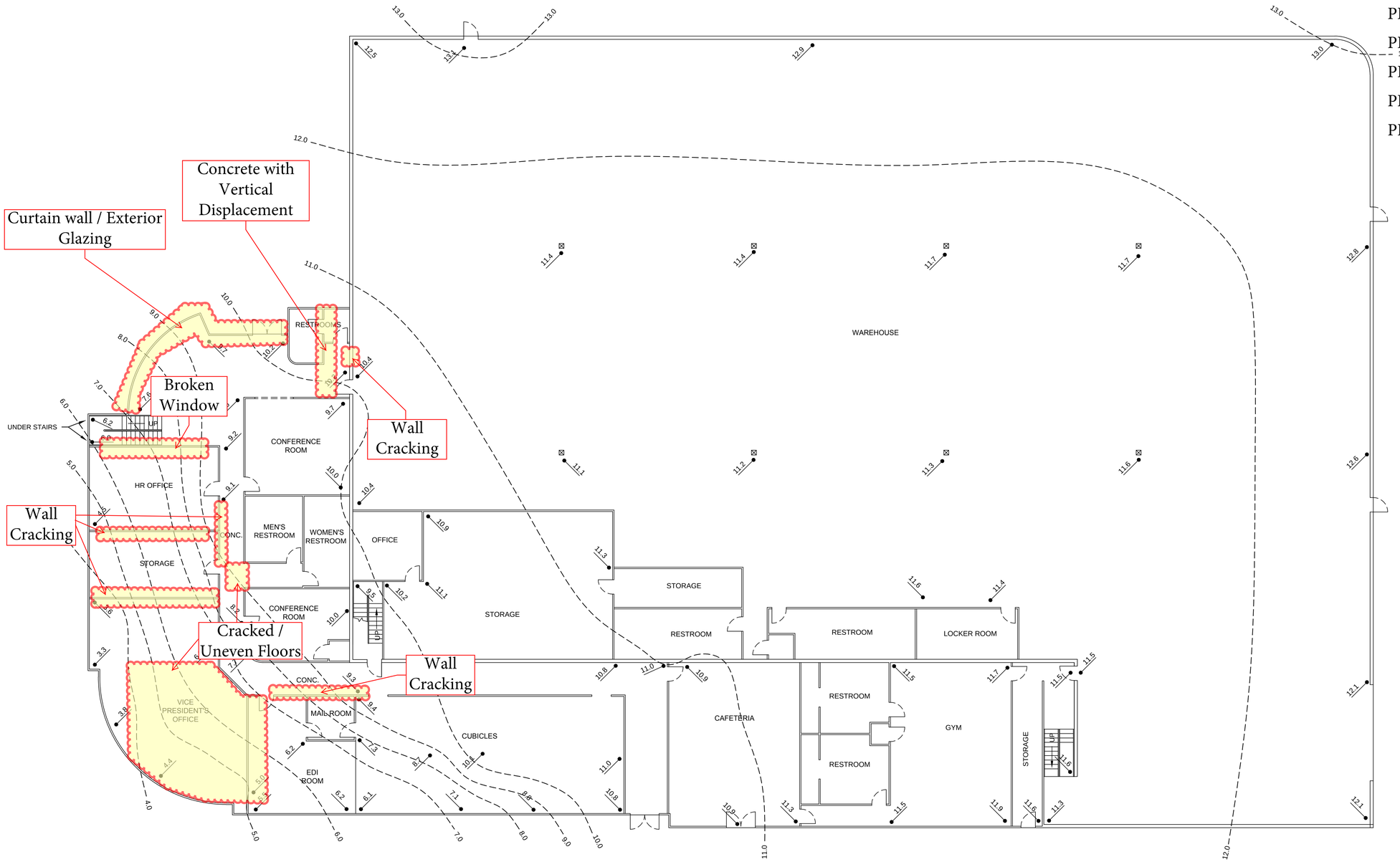
PFCS 5/4/2015

PFCS 5/7/2015

PFCS 5/8/2015

PFCS 5/26/2015

PFCS 6/18/2015



FLOOR SURVEY

SCALE: 3/32" = 1'-0"

Issue

The underlying drawing is by others. These additional notes are by PFCS for the convenience of the owners.

REVISIONS	BY
REV. 2-21-14	MM

[redacted]

[redacted]

DATE 2-7-14

SCALE

DRAWN BY: MM

SHEET 2

OF

RS 001211

Building Exterior Elements Map

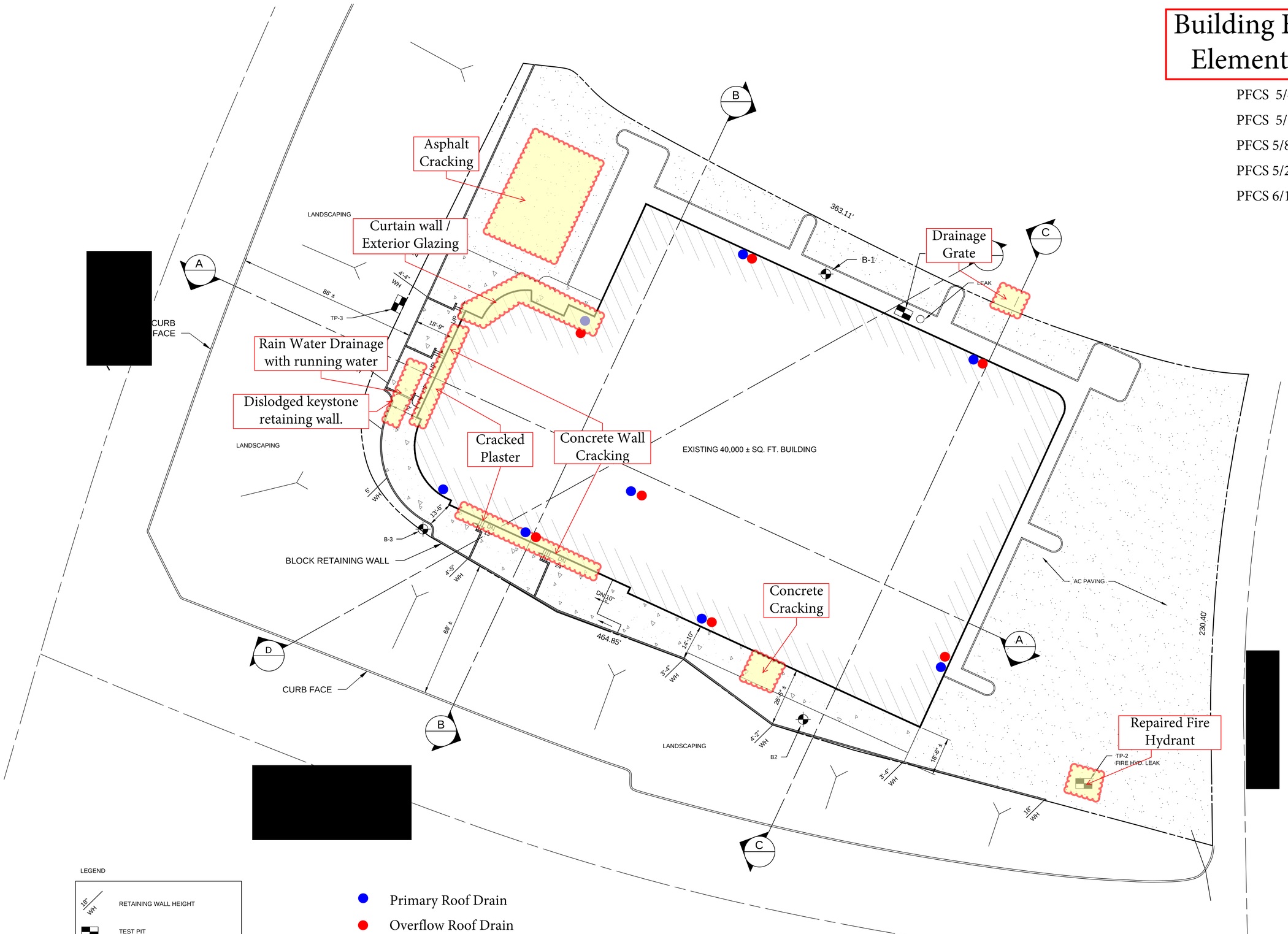
PFCS 5/4/2015

PFCS 5/7/2015

PFCS 5/8/2015

PFCS 5/26/2015

PFCS 6/18/2015



LEGEND

- 18" / WH — RETAINING WALL HEIGHT
- TEST PIT
- BORING

- Primary Roof Drain
- Overflow Roof Drain
- Issue

SITE PLAN

SCALE: 1"= 20'

The underlying drawing is by others. These additional notes are by PFCS for the convenience of the owners.

REVISIONS	BY
REV. 2-21-14	MM
REV. 3-17-14	MM

DATE 2-7-14

SCALE

DRAWN BY: MM

SHEET 2 OF

RS 001228

5B. Report with Maps

[redacted]

[redacted], CA 92674

OFFICES

CALIFORNIA

949-240-9971

931 Calle Negocio, Ste J
San Clemente, CA 92673

CA License #713760

OREGON

503-660-8670

9320 SW Barbur Blvd, Ste 170
Portland, OR 97219

OR License #173960

GENERAL INQUIRY

info@petefowler.com
www.petefowler.com

Pete Fowler
CONSTRUCTION
Services, Inc.

Project #15-161

Pete Fowler CONSTRUCTION Services, Inc.

Report

Date:	07/17/2015
To:	[redacted] CA 92660
From:	Pete Fowler Construction Services, Inc.
Project:	[redacted] (PFCS 15-161)
Regarding:	Report
Note:	For mediation purposes only. Protected under all applicable evidence codes.

Contents

- 1. Project Summary
- 2. Attachments to This Report
- 3. Key Timeline Events
- 4. Players
- 5. Key Information
- 6. PFCS Work
- 7. Costs
- 8. Conclusions

1. Project Summary

This project concerns the [redacted] a 50,000 square foot two-story concrete tilt-up and steel frame structure located in [redacted] California. It consists of office and warehouse space, paved parking lot areas, outdoor concrete patios, retaining wall and landscaping. It was constructed in 1996 on a graded pad that lies about 50 feet above the intersection of Calle Negocio and Avenida Pico.

[redacted]. is the owner who purchased the property in 2004. In early 2013, [redacted]. discovered that water had been leaking for an unknown amount of time into the ground beneath the building and other structures at the property from an adjacent fire hydrant and from plumbing and/or irrigation systems. [redacted] then detected damage to the their building and property such as cracked concrete and walls, broken windows, uneven floors, etc. It appeared that this damage was caused by earth movement that had resulted from the water intrusion.

On 6/20/2013, [redacted] submitted the claim to the Golden Eagle. On 7/31/2013, [redacted] submitted the claim t [redacted] The project was evaluated by various parties from mid-2013 through early-2014. Repairs were designed and then executed. The final aspects of the repair are on-going. The total costs to repair the property are in excess of $1,000,000.

2. Attachments to This Report

- A. PFCS Document Summary
- B. PFCS Locations and Elements Maps

3. Key Timeline Events

- 11/22/1985 Rough Graded Geotechnical Report by Irvine Soils Engineering, Inc.
- 1996 Original Construction
- 2004 [redacted] Purchased Property
- 3/2013 [redacted] discovered that water had been leaking at a fire hydrant
- 3/06/2013 South Coast Fire Protection excavated fire hydrant and repaired underground piping.
- May-June 2013 [redacted] personnel notice new building distress, per Troupe testimony (page 112)
- May-September 2013 Water bills increase
- 6/20/2013 [redacted] submitted the claim to the Golden Eagle
- 7/31/201 [redacted] submitted the claim to the Mitsui
- 8/06/2013 PT&C Forensic Consulting Services (Mitsui / Engle Martin Expert) inspected property to determine the cause of the reported interior and exterior cracking.
- 8/06/2013 Peter & Associates performs a floor level survey
- 8/16/2013 PT&C Forensic performs a floor level survey
- 9/27/2013 Helfrich-Associates, Inc. inspected property
- 10/23/2013 Mitsui denied [redacted] s claim
- 11/2013 Taylor Leak Detection, Inc. discovered a leak in an irrigation pipe on the north side of the building. Repaired by San Clemente Plumbing
- 12/09/2013 Helfrich-Associates, Inc. inspected property a second time
- 12/16/2013 Building permit for repair issued by City of San Clemente
- 1/26/2014 Helfrich-Associates, Inc. subsurface investigation (3 days)
- January-February 2014 Trimesa General and Flooring Contractors inspection and report
- 4/03/2015-Present PFCS Retained and conducts investigation

4. Players

Client:

- [redacted]. (Client / Owner of Property)
- Ahumada, Cliff - Aspen Landtrends (Landscape Designer)
- Lawson, Timothy J. - LGC Geotechnical, Inc. (Co-expert / Geotechnical engineering)
- Fowler, Pete - Pete Fowler Construction Services, Inc. (Building Consultant, General Contractor and Cost Estimator)
- Peter, Stephen B. - Peter and Associates (Design Engineer for Repair)
- Brackmann, Eve - Stuart Kane LLP (Attorneys for Client)
- Peter, Dave (General Contractor for Repair)

Defendant - Liberty Mutual Insurance Group (Golden Eagle):

- Golden Eagle Insurance Corporation (Insurer)
- Helfrich-Associates, Inc. (Engineering and Construction Consultants)
- Liberty Mutual Insurance Company (Insurer / Third Party Administrator for Golden Eagle and Peerless)
- Peerless Insurance Company (Insurer)
- Sedgwick LLP (Attorneys for Golden Eagle Insurance Company)

Defendant - [redacted] Inc.:

- Various [redacted] entities including [redacted] (Insurer), [redacted]. (Insurer), [redacted] (Insurer / Third Party Administrator for [redacted]. (Domicile Corporation for [redacted] and Others), [redacted] (Japanese Corporation, Wholly Owned Subsidiaries are included in group)
- Aioi Nissay Dowa Insurance Company, Limited (Japanese Domicile of MS & AD Insurance Group Holdings, Inc.)
- Engle Martin & Associates (Adjusters and Claim Administrators)
- Hinshaw & Culbertson LLP (Attorney for Mitsui Sumitomo Insurance USA, Inc.)
- PT&C Forensic Consulting Services, P.A. (Inspected Property)

Other Parties:

- Arnette Optics Illusions, Inc. (Previous Owner of Building)
- City of San Clemente
- JTL Inspections / Straz-Lee, LLC (Observed Repairs of Concrete pre Rainbow)
- Lunnen Development (Real Estate Broker)
- Palmer Masonry (Demo'd and Poured Concrete)
- Patrick Conover / Architect (Architect)
- Sladden Engineering (Prepared Soils and Compactions Reports)

5. Key Information

See PFCS Document Summary (attached) for a complete listing

Key PFCS Documents

- Inspection Documentation
- Drainage Investigation
- This Report

Key Documents by Others

- City of San Clemente - [redacted] Water and Sewer Readings
- Building Repair invoices
- Peter and Associates Reports
- Troupe, Carla Testimony
- LGC Geotechnical, Inc. Report
- Trimesa Report
- PT&C Forensic Report
- Helfrich Reports

6. PFCS Work

PFCS Standard Framework for Conducting Building Performance Analysis

1. Document & Information Management:
    - Almost 200 documents
    - Includes thousands of pages from 1990's to today
    - See Key Information section above
    - See PFCS Document Summary for a complete listing
2. Meetings/Interviews with Key People:
    - Met with Owner
    - Met with co-expert
    - Met with Landscape Contractor
    - Analysis of Testimony
3. Building Information Management:
    - See PFCS Project Images collected (may be viewed in PFCS Client Access https://access.petefowler.com/projects/15-161)
    - See PFCS Location and Element Maps (may be viewed in PFCS Client Access https://access.petefowler.com/projects/15-161)
4. Visual Inspection:
    - See Inspection Documentation including 2,100 photographs (may be viewed in PFCS Client Access https://access.petefowler.com/projects/15-161)
5. Analysis:
    - Documents: See Key Information section above and Document Summary for a complete listing
    - Timeline: See Timeline of Key Events section above
    - Players: See Key Players list above
    - Maps: See PFCS Drain Investigation Map and PFCS Location and Elements Maps (attached)
6. Testing:
    - See PFCS Investigation Documentation including 2,100 photographs
    - See Investigation Videos (in sections 2C and 3C of our project file)
    - See PFCS Drainage Investigation summary
7. Estimate (Analysis of Costs Incurred):
    - Analysis of costs already incurred
    - Analysis of cost estimates and proposals yet to be incurred
8. Report: This Document

7. Costs

I have reviewed the owner's documentation of expenses related to the repairs. They have spent approximately $1,000,000 since mid-2013.

In addition, the Owners will incur additional expenses to complete the repairs, including replacement of hardscape, irrigation and landscape. Those estimates and proposals are in the process of being compiled and will be analyzed as they are received.

See the following section for Conclusions.

8. Conclusions

Cause and Origin of Accelerated Building Distress

When we take into account the evidence, including:

- Fire hydrant leak.
- Further leakage, which may have been caused by the accelerated soil movement and building distress.
- High water usage (records), presumably caused by the leakage which was caused by the accelerated soil movement and building distress.
- Observations of new building distress in the time frame described by the building occupants (Rainbow personnel).
- No other significant water source or leakage mechanisms were found during PFCS' drainage investigation.

The only logical conclusion is that the water leakage from the fire hydrant and the subsequent damage, that may have included the irrigation leak, was the cause of the soil movement and accelerated building distress during the time period immediately following that leakage, which led to the requirement to execute repairs.

The work of the investigators who concluded the accelerated building distress in 2013 is NOT related to the 2013 leaks, fail to explain the cause of the accelerated building distress.

Costs

Both the costs incurred to date and the cost estimates for the work to complete the repairs, as well as the decisions made to perform these repairs, have been reasonable.

Document Summary

#	File Sec.	Date	Author/Party	Description	Summary	Bates Stamp #	Printed?	Received
1	**2A**		**PFCS**					
2	2A	04/23/2015	PFCS	Project Images				N/A
3	2A	06/19/2015	PFCS	Drain Investigation Map				N/A
4	2A	06/19/2015	PFCS	PFCS Locations and Elements				N/A
5	2A	07/15/2015	PFCS	Drain Investigation	8 page report and 4 pages of maps.			07/16/2015
6	2A	07/16/2015	PFCS	Report DRAFT	8 page report and 3 maps.			07/16/2015
7	**2C**		**PFCS Inspections**					
8	2C	04/22/2015	PFCS	Meeting Notes	Onsite meeting notes for 04/22/2015 site inspection and map with markedup of locations surrounding the property.			04/22/2015
9	2C	04/28/2015	PFCS	Inspection Notes	Site Inspection Notes from 04/28/2015 site inspection. Includes photos received from Steve Peter on site with business card and marked up inspection maps.			04/28/2015
10	2C	05/08/2015		Site Locations for Video	Site Locations map created to map pipe locations surrounding property.			N/A
11	2C	05/11/2015	PFCS	Inspection Notes	Site Inspection Notes from 05/11/2015 visual inspection. Also contains evaluation, proposal and description of work forms from Roto-Rooter.			05/11/2015
12	2C	05/11/2015	Roto-Rooter	Inspection Video - 1 of 9	Site southwest			05/19/2015
13	2C	05/11/2015	Roto-Rooter	Inspection Video - 2 of 9	Site southwest			05/19/2015
14	2C	05/11/2015	Roto-Rooter	Inspection Video - 3 of 9	Site southwest			05/19/2015
15	2C	05/11/2015	Roto-Rooter	Inspection Video - 4 of 9	Site southwest			05/19/2015
16	2C	05/11/2015	Roto-Rooter	Inspection Video - 5 of 9	Area drains			06/04/2015
17	2C	05/11/2015	Roto-Rooter	Inspection Video - 6 of 9	Site north parking lot			06/04/2015
18	2C	05/11/2015	Roto-Rooter	Inspection Video - 7 of 9	Roof drain 7. South-C (East-most)			06/04/2015
19	2C	05/11/2015	Roto-Rooter	Inspection Video - 8 of 9	Roof drain 5. South-A (West-most) and 6. South-B (Middle of the building)			06/04/2015
20	2C	05/11/2015	Roto-Rooter	Inspection Video - 9 of 9	Roof drain 1. West			06/04/2015
21	2C	05/13/2015	PFCS	Inspection Diagram - Pipe Locations	Inspection diagrams from PFCS investigation, extracted from 05/13/2015 inspection notes.			05/13/2015
22	2C	05/13/2015	PFCS	Inspection Notes	Site Inspection Notes from 05/13/2015 visual inspection. Also contains description of work form from Pro Pipe, readings sheet from pipe inspections and business card from Jim Ralph.			05/13/2015
23	2C	05/13/2015	Pro Pipe	Inspection Video - 1 of 6	Site Inspection Video - 910			05/19/2015
24	2C	05/13/2015	Pro Pipe	Inspection Video - 2 of 6	Site Inspection Video - 900-910			05/19/2015
25	2C	05/13/2015	Pro Pipe	Inspection Video - 3 of 6	Site Inspection Video - 900B			05/19/2015
26	2C	05/13/2015	Pro Pipe	Inspection Video - 4 of 6	Site Inspection Video - Site North MH 1 of 2			05/19/2015
27	2C	05/13/2015	Pro Pipe	Inspection Video - 5 of 6	Site Inspection Video - Rainbow Sandals Building			05/19/2015
28	2C	05/13/2015	Pro Pipe	Inspection Video - 6 of 6	Site Inspection Video - Site North MH 2 of 2			05/19/2015
29	2C	06/01/2015	PFCS	Site Drainage Scoping Map				N/A
30	2C	06/09/2015	Roto-Rooter	Inspection Video - 1 of 1	East Parking Lot			06/09/2015
31	2C	06/15/2015	PFCS	Pipe scoping Video Map				N/A
32	2C	06/18/2015	Roto-Rooter	Inspection Video - 1 of 2	Site south area drain.			06/18/2015
33	2C	06/18/2015	Roto-Rooter	Inspection Video - 2 of 2	Site south area drain.			06/18/2015
34	**2F**		**PFCS Research and Other Information**					
35	2F	05/03/2013	PFCS	Construction Defect Brochure - Inside	This is the inside of the folding construction defect brochure, for use in email.			04/03/2015

For mediation purposes only.
Protected by all applicable evidence codes.

Document Summary

#	File Sec.	Date	Author/Party	Description	Summary	Bates Stamp #	Printed?	Received
170	6 Palmer	08/13/2002	Palmer Masonry	Revised Proposal	Revised Proposal from Palmer Masonry for concrete demo and installation for $37,775.			06/04/2015
171	6 Sladden	03/25/1996	Sladden Engineering	Addendum to Soils Investigation	Addendum to Soils Investigation from Sladden Engineering of the building 'Arnet Optics/Illusions'. Contains letter to Patrick Conover from Sladden Engineering. Contains the marked up addendum and Plans.			06/04/2015
172	6 Sladden	05/28/1996	Sladden Engineering	Compaction Report	Report from Sladden Engineering regarding compaction and recommended bearing values for the reworked on-site soils and compacted fills. Also discusses Keystone retaining wall observations and testing.			06/30/2015
173								
174								

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www.petefowler.com

Building Exterior Locations Map

PFCS 5/4/2015

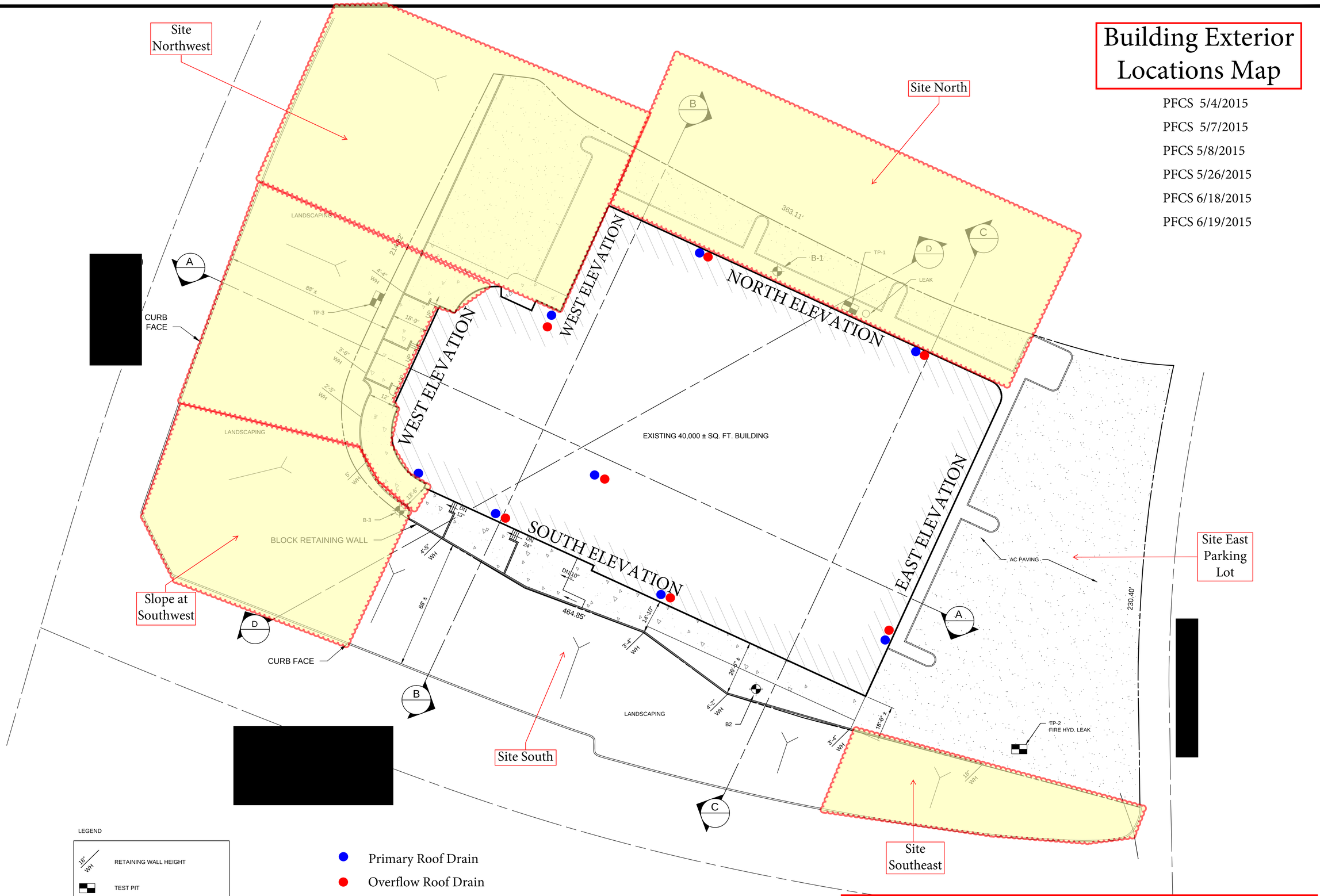
PFCS 5/7/2015

PFCS 5/8/2015

PFCS 5/26/2015

PFCS 6/18/2015

PFCS 6/19/2015



SITE PLAN

SCALE: 1"= 20'

The underlying drawing is by others. These additional notes are by PFCS for the convenience of the owners.

REVISIONS	BY
REV. 2-21-14	MM
REV. 3-17-14	MM

DATE 2-7-14

SCALE

DRAWN BY: MM

SHEET 2

OF

RS 001228

Building Interior Elements Map

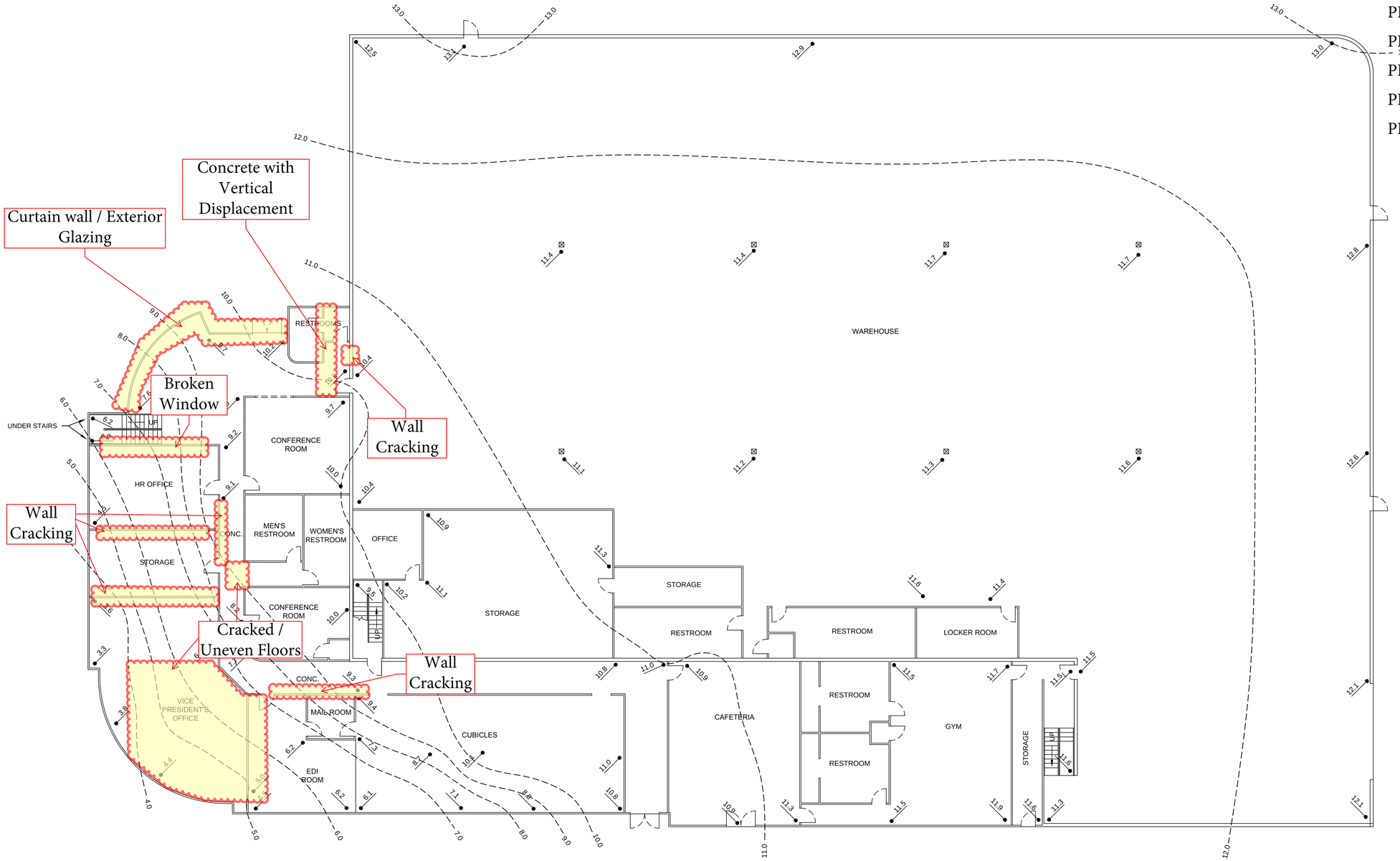
PFCS 5/4/2015

PFCS 5/7/2015

PFCS 5/8/2015

PFCS 5/26/2015

PFCS 6/18/2015



FLOOR SURVEY

SCALE: 3/32" = 1'-0"

Issue

The underlying drawing is by others. These additional notes are by PFCS for the convenience of the owners.

REVISIONS	BY
REV. 2-21-14	MM

DATE 2-7-14

SCALE

DRAWN BY: MM

SHEET 2

OF

RS 001211

Building Exterior Elements Map

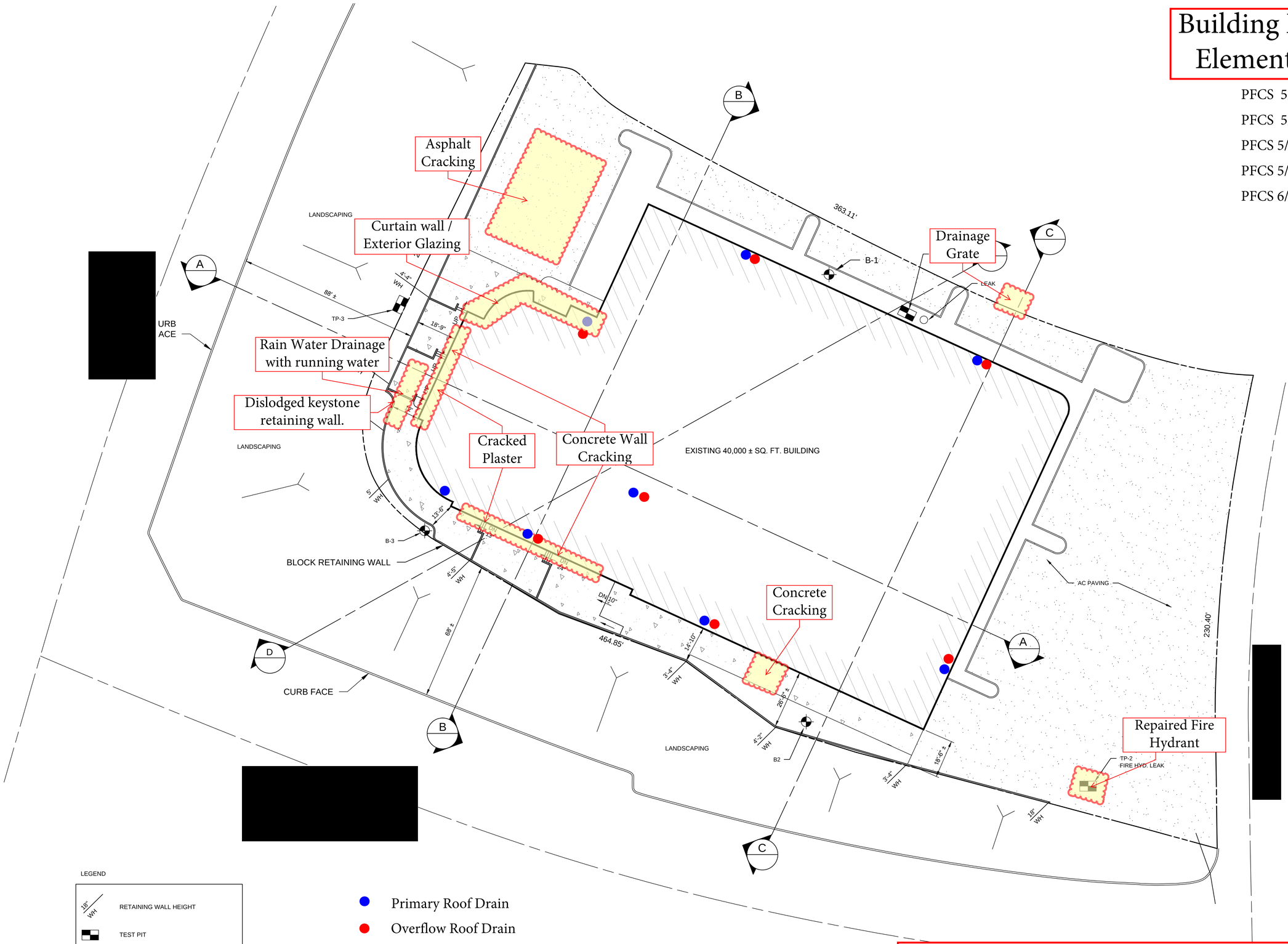
PFCS 5/4/2015

PFCS 5/7/2015

PFCS 5/8/2015

PFCS 5/26/2015

PFCS 6/18/2015



SITE PLAN

SCALE: 1"= 20'

The underlying drawing is by others. These additional notes are by PFCS for the convenience of the owners.

REVISIONS	BY
REV. 2-21-14	MM
REV. 3-17-14	MM

DATE 2-7-14

SCALE

DRAWN BY: MM

SHEET 2

OF

RS 001228

5C. Specifications

Pete Fowler
CONSTRUCTION
Services, Inc.

Project Specifications

Date:	March 12, 2014
To:	Bidders
From:	Pete Fowler Construction Services, Inc.
Project:	[redacted] PFCS Project 12-115
Regarding:	Project Specifications
Notes:	None

General Project Description

This project is a commercial building located at [redacted], OR 97070 that was built in 2006 and occupied by [redacted] in August 2006. The building is a one story concrete tilt-up structure, approximately 35,280 square feet (SF) and approximately 17,000 SF of exterior concrete tilt-up panel wall surface area.

Scope of Work Summary

The structure is exhibiting excessive concrete hairline cracking, most pronounced along the west and south elevations. In general, the scope of repair consists of a building preparation for and application of an elastomeric coating, including all repair of cracks in excess of 1/64-inch, conforming with the Euclid Chemicals “Super Wall-Pro” manufacturer installation instructions. Color selections will be coordinated by Owner’s Representative.

The purpose of this document is to establish specifications for the inspection process, and repairs of isolated sealant joint repair, concrete crack repairs, exterior surface preparation, and application of new elastomeric wall coating. Further this document will also serve as the Request for Proposals in accordance with the guidelines established within.

The contractor is encouraged to get familiar with the site, prior to submitting a bid. Description of logistics of repairs shall be included with the proposal. Access to the site is required can be coordinated through Owner’s Representative.

www.petefowler.com E: info@petefowler.com F: 949.240.9972
931 Calle Negocio, Suite J, San Clemente, CA 92673 T:949.240.9971
9320 SW Barbur Blvd., Suite 170, Portland, OR 97219 T: 503.246.3744
75 Manhattan Dr. Suite 110, Boulder, CO 80303 T: 303.554.0381

Scope of Work – Specifications Sections

1. B1001 Concrete Structure Crack Repairs
2. B2012 Masonry Veneer
3. B2050 Joint Sealants
4. B2060 Exterior Coatings
5. B3002 Low Slope Roofing
6. B3006 Gutters & Downspouts
7. C1000 Interior Repairs (Including exterior soffit damage)

Attachments

1. Euclid Super Wall-Pro: 2 page product specification for Super-Wall Pro High Build Elastomeric Wall Coating. Recommended and owned by Tremco.
2. Eucolastic 2NS: Product specification for a joint sealant material by Euclid Chemical Company (Owned by Tremco).
3. Duralcrete LV Repair: Specification for a crack repair material (Owned by Tremco).
4. Project Images

1. B1001 Concrete Structure Crack Repairs

1. General	The concrete panels are cracked, allowing leakage, damaging the paint, and require repair.
2. Materials	Euclid DURALCRETE LV – Low Viscosity Epoxy Injection Resin and Binder (see attached specifications).
3. Execution	All products shall be applied in strict conformance with manufacturer's application instructions. Allowance to be provided for concrete crack repairs, based on visual inspection of property. Most cracks are located at south and west elevation panels. All crack repairs to utilize Euclid Chemicals products and installation instructions.
4. Quality Assurance	Hold-Point: Owner's Representative and/or product manufacturer's representative shall inspect after material application is complete but before it is covered.

AP 2.484

DURALCRETE® LV

Low Viscosity Epoxy Injection Resin and Binder

Description

DURALCRETE LV is a low viscosity, two part, 100% solids, low odor, 2:1 mix ratio, moisture insensitive epoxy resin compound.

Primary Applications

- Concrete crack injection
- Gravity feed horizontal crack repair
- Vertical anchor bolt grouting
- Binder for horizontal concrete repairs

Features/Benefits

- High strength
- Provides load transfer
- Virtually no odor
- 2:1 mix ratio
- Tenacious bond
- Moisture insensitive
- Deep penetration
- Can contribute to LEED points.

Technical Information

Material Properties 75°F	
Color (mixed)	Clear Amber
Solids, %	100
Mixing ratio (Parts A:B) by volume	2:1
Gel time, mins	40 to 45
Viscosity, cps	300 to 500
Compressive Strength ASTM D 695, psi (MPa)	
1 day (neat resin),	8,600 (59.3)
7 days (neat resin),	11,200 (77.2)
Compressive Modulus ASTM D 695, psi (MPa)	
7 days (neat resin)	265,000 (1827)
Compressive Strength ASTM C 109, psi (MPa)	
7 days (mortar)	10,300 (71.0)

Tensile Properties ASTM D 638 @ 14 days	
Ultimate strength, psi (MPa)	7,125 (49.1)
Elongation at break, %	2.3
Modulus, psi (MPa)	286,000 (1972)
Bond Strength ASTM C 882, psi (MPa)	
Hardened to hardened concrete	
2 days (moist cure)	2,150(14.8)
14 days (moist cure)	2,550 (17.6)
14 days (dry cure)	2,825 (19.5)
Heat Deflection Temp. ASTM D 648	126°F (52°C)
Water Absorption ASTM D 570	
7 day, 24 hour immersion, %	0.34

Data presented are typical laboratory values.

Packaging

DURALCRETE LV is packaged in 15 gal (56.78 L) unit and 3 gal (11.36 L) case.

Shelf Life

2 years in original, unopened package.

Specifications/Compliances

ASTM C 881, Type I & IV Grade 1, Class B & C

Coverage

For anchoring, 1 neat gal yields 231 in³ of grout. One gallon of DURALCRETE LV mixed with 4 gal (15.14 L) of dry 20/40 mesh silica sand will yield approximately 0.45 ft³ (.01 m³) of mortar. Coverage will vary depending on surface texture, porosity and temperature.

Directions for Use

Surface Preparation: Concrete: The surface must be structurally sound, dry, free of grease, oils, coatings, dust, curing compounds and other contaminants. Surface laitance must be removed. The preferred method of surface preparation is abrasive blasting or other mechanical means. Oil contaminated surfaces should be degreased. Remove defective concrete, honeycombs, cavities, joint cracks, voids and other defects by routing to sound material.

DURALCRETE® LV
Low Viscosity Epoxy Injection Resin and Binder

Master Format #: 03 3000

Revised: 12.07

Following surface preparation, the cleaned surface should pull concrete when tested with a pull tester, or an elcometer (ASTM D 4541). **Steel:** All oils, greases, dirt, old coatings and chemical contaminants must be removed. The surface should be blasted to a near white metal finish (SSPC SP10) using clean dry aggregate.

Mixing: Premix Part A and B with a slow speed motor and "Jiffy" mixer. Pour two parts by volume of Part A and one part by volume of Part B into a clean, dry container and mechanically mix for 3 to 5 minutes. Scrape the sides and bottom of mixing container while mixing. Do not whip or aerate while mixing. DURALCRETE LV Mortar: Gradually add clean, dry 20/40 mesh silica sand to mixed binder. Blend thoroughly. The mix ratio of aggregate to binder is approximately 4:1 by volume but may vary depending upon the desired consistency of the mortar.

Application: Application and surface temperatures should be at least 45°F (7°C) and rising. **Horizontal Patching:** Prime surface with neat DURALCRETE LV. Trowel the DURALCRETE LV mortar into the prepared surface before the prime coat becomes tack free. **Bonding anchor bolts, dowels, pins:** DURALCRETE LV can be used neat or with an aggregate to anchor vertical bolts. The anchor bolt hole should be free of all debris before grouting. The optimum hole size is 1/8" (3.2 mm) annular space or 1/4" (6.4 mm) larger diameter than bar diameter. Depth of embedment is typically 10 to 15 times bolt diameter. **Pressure Grouting: Vertical Cracks:** Install injection ports at appropriate intervals using DURALCRETE GEL or DURAL FAST SET EPOXY. Seal the surface of the crack with DURALCRETE GEL or DURAL FAST SET EPOXY. Pump DURALCRETE LV into the crack with two component pressure injection equipment, starting at the bottom of the crack and working up. Cracks should be clean and dry prior to injection. **Horizontal Cracks**: "Vee-cut" cracks and ensure that prepared crack is dry and free of all debris. Pressure injection technique is the same as for Vertical Cracks. If gravity feeding, pump DURALCRETE LV until cracks are filled.

CLEAN-UP

Clean tools and application equipment immediately after use with methyl ethyl ketone, or xylene. Clean overspray or drips while still wet with solvent. Dried DURALCRETE LV will require mechanical abrasion for removal.

PRECAUTIONS/LIMITATIONS

- Not intended for use on moving (active) cracks.
- Do not use on cracks greater than 1/4" (6.4 mm) width.
- This product is not intended for use on cracks subjected to water under hydrostatic pressure at time of injection.
- Do not thin with solvents.
- Concrete should be cured for 28 days.
- Store at tempatures between 50°F to 90°F (10°C to 32°C).
- Protect from moisture.
- In all cases, consult the Material Safety Data Sheet before use.

2. B2012 Masonry Veneer

1. General	Open joints at masonry and loose stones.
2. Materials	Investigate the manufacturer of the cultured masonry. Install / repair in strict conformance with their installation recommendations. Euclid Chemicals Eucolastic 2NS sealant.
3. Execution	All products shall be applied in strict conformance with manufacturer's application instructions. Repair / reset all loose masonry. Fill open gaps with sealant. NOTE: The open joints are in line with a panel joint, which is subject to movement and should be installed with a flexible sealant with a matched color.
4. Quality Assurance	Hold-Point: Owner's Representative and/or product manufacturer's representative shall inspect and document after material application is complete.

AP 01-123

AP 01.124

AP 01-141

3. B2050 Joint Sealants

1. General	A. Isolated Repair at East / Right Elevation B. Isolated Repair at C. Maintain & replace during repainting
2. Materials	Euclid Chemicals Eucolastic 2NS
3. Execution	All products shall be applied in strict conformance with manufacturer's application instructions. A. Isolated repair required at East / Right elevation at parapet transition. Remove old sealant joint. Clean and prepare area. Install new sealant joint at parapet transition. B. Isolated repair required behind NW scupper and downspout. Remove existing saturated sealant joint from in between concrete panels. Approximately 20LF. Install new sealant joint. C. Maintain & replace during repainting as necessary.
4. Quality Assurance	Hold-Point: Owner's Representative and/or product manufacturer's representative shall inspect after material application is complete but before it is covered.

AP 02-208

AP02.209

EUCOLASTIC 2NS

Multi-Component, High Performance Polyurethane Sealant

Joint Sealants

Description

EUCOLASTIC 2NS is a multi-component, solvent-free, chemically-cured, non-sag polyurethane joint sealant. Eucolastic 2NS is formulated to be lightweight for ease in mixing, even in lower temperatures. Eucolastic 2NS is an extremely durable sealant in dynamic joints, offering persistent adhesion once fully cured. It is provided in a Neutral Base, that is colored with the addition of a EUCLID UNIVERSAL COLOR PACK, which is available in 33 standard colors.

Primary Applications

- Concrete control & expansion joints
- Precast concrete panels
- EIFS
- Window & door perimeters
- Masonry
- Used underneath polyurethane deck coatings

Features/Benefits

- Skins rapidly 3 hours @ 72° F (22° C)
- Remains adhesively and cohesively bonded during temperature cyclic movement
- Extraordinary movement capability of +/- 50%
- Lightweight formulation for ease of mixing in colder temperatures

Technical Information

Typical Engineering Data

The following results were developed under laboratory conditions @ 72° F (22° C):

Property	Results
Rheology ASTM C 639	Non-sag (NS)
Hardness, Shore A ASTM C 661	30
Movement Capability ASTM C 719M	+/- 50%
Low Temperature Flexibility ASTM C 793	Passes at -65°F (-54°C)
Skin Time	3 hr.
Tack Free Time ASTM C 679	19 hr.
Pot Life After addition of curing agent	3.0-3.5 hr. @ 77°F (25°C) 1.5-2.0 hr. @ 95°F (35°C)
Adhesion-in-Peel ASTM C 794	Concrete: >10 Pli (>17.5 N/cm)
Stain & Color Change ASTM C 510	No stain/No visible color change
Effects of Accelerated Aging ASTM C 793	Pass

Appearance: Eucolastic 2NS is provided in a Neutral Base that is colored with a EUCLID UNIVERSAL COLOR PACK, which are available in 33 standard colors. See the EUCLID UNIVERSAL COLOR CHART for available colors.

Packaging/Yield

EUCOLASTIC 2NS is available in 1.5 gal (5.7 L) pails. The pail contains a neutral base and one pouch of curing agent. The two must be mixed together with the addition of a Euclid Universal Color Pack (EUCO Pack). One unit will fill 462 linear feet (140 m) in a 1/4" x 1/4" (6 mm x 6 mm) joint.

Shelf Life

1 year in original, unopened pail

EUCOLASTIC 2NS

Master Format #: 07 92 13

SPECIFICATIONS/COMPLIANCES

- ASTM C 920-02, Type M, Grade NS, Class 50, Use I (Class 2), T, NT, M, A and O (granite)
- U.S. Federal Specification TT-S-00227E, Class A, Type II
- CAN/CGSB 19.24-M90, Class B, Type II

DIRECTIONS FOR USE

Joint Dimensions: Joint width should be 4 times the expected joint movement, but not less than 1/4" (6 mm). Width to depth ratios should be equal for joints that are 1/4" (6 mm) to 1/2" (13 mm) in width. If joint width is 1/2" (13 mm) to 1" (25 mm), the depth of Eucolastic 2NS should be 1/2 the width, with 1/2" (13 mm) being the maximum allowable depth of Eucolastic 2NS. Use backer rod or bond breaker tape to limit the depth of application and to prevent three-sided adhesion. **Applications of Eucolastic 2NS that are deeper than what is recommended can cause bubbling or incomplete curing of the material.**

Surface Preparation: New concrete must be minimum of 28 days old. The joint must be clean and sound. All oil, dirt, debris, paint and any other foreign material must be removed. The final step in cleaning should be the complete removal of all residue by solvent wiping the joint. Substrates must be dry at time of application. Wet or damp joints will cause bubbling of the sealant.

Priming: EUCOLASTIC PRIMER is required to prime the joint facing when the product will be used on non-porous surfaces (metal, granite, etc.) or when the sealant will be underwater. See Eucolastic Primer technical data sheet for use instructions.

Mixing: Remove the lid from the Eucolastic 2NS pail and remove the curing agent container. Pull the plastic separator out of the pail that lays on top of the base material. Using a slow speed drill and a catalyst mixer (Albion Engineering model 381-G04 or Newborn Brothers model MX-02), slowly mix the base material while adding the entire contents of the pouch of curing agent followed by the desired Euclid Universal Color Pack. Mix thoroughly for 6 minutes. Midway through mixing, stop the mixing operation and scrape the sides of the pail with a metal spatula or margin trowel. Resume mixing until the sealant is completely uniform in color.

Placement: Ensure that all the necessary preparation work is completed. Place backer rod or bond breaker tape into the joints and make sure they are secured in place. Use a spatula, loading sleeve or follower plate to transfer the Eucolastic 2NS from the pail into a bulk caulking gun. Make sure the nozzle for the end of the bulk gun is appropriate for the joint width and attach it to the bulk gun. Dispense the sealant directly from the gun into the joint. Once the joint is full, tool the sealant using a rounded spatula to create a concave surface. The concave shape will help the sealant stretch properly as the joint moves. Tooling will also put a little pressure on the sealant to aid with initial adhesion.

Curing: Eucolastic 2NS requires no special curing. A skin will form on the surface in about 3 hours at 72°F (22°C) and 50% relative humidity. Eucolastic 2NS will fully cure in about 48 hours. The cure time will increase or decrease as temperatures and humidity levels fluctuate.

CLEAN-UP

Tools, equipment and general clean-up can be done with EUCO SOLVENT or xylene before the material dries. Removal of dried Eucolastic 2NS can only be done by mechanical means.

PRECAUTIONS/LIMITATIONS

- Use only at temperatures above 40°F (4°C).
- For best results, always use 1 Euclid Universal Color Pack (EUCO Pack) per unit.
- Contact surfaces must be clean and dry.
- In all cases, consult the Material Safety Data Sheet before use.

4. B2060 Exterior Coatings

1. General	In general, the scope of repair consists of a building preparation for and application of an elastomeric coating, including all repair of cracks in excess of 1/64-inch, conforming with the Euclid Chemicals “Super Wall-Pro” manufacturer installation instructions. Color selections will be coordinated by Owner’s Representative with owner.
2. Materials	Euclid Chemicals “Super Wall-Pro” elastomeric coating. (See attached specifications)
3. Execution	All products shall be applied in strict conformance with manufacturer’s application instructions. All walls to be washed and prepared, per manufacturer installation instructions. Final coverage thickness: 15-20 dry mils, 24-32 wet mils.
4. Quality Assurance	Hold-Point: Owner’s Representative and/or product manufacturer’s representative shall inspect after material application is complete but before it is covered.

SUPER WALL-PRO

High Build Elastomeric Wall Coating

Description

SUPER WALL-PRO is a fiber reinforced, water based acrylic coating that weatherproofs, protects and beautifies a variety of wall surfaces and other building materials. SUPER WALL-PRO is a non-toxic, non-fading, tintable coating which provides a tough, extremely flexible high build film. SUPER WALL-PRO contains no asbestos, glass or ceramic fibers.

Primary Applications

- Masonry
- Stone
- Concrete
- Plaster
- Stucco
- Metal
- Exterior wall surfaces
- Above grade exterior insulating finishing systems

Features/Benefits

- Beautifies and protects walls of all types
- Elastomeric for excellent resistance to movement
- UV stable under severe exterior exposure
- Internally reinforced with high strength fibers
- Provides a completely waterproof veneer
- Gives complete coverage in one coat
- Excellent weathering resistance against heat, cold, wind, snow and rain
- VOC compliant water based system
- Tintable in over forty custom colors

Technical Information

Typical Engineering Data
The following results were developed under laboratory conditions:

% Solids by weight ..... 63±1%
% Solids by volume ..... 52±1%
% Elongation @77°F (25°C) (ASTM D 2370) ..... 215±25%
Flexibility @ -15°F (-26°C) (ASTM D522) 1/2" (1.3 cm) ..... passes
Tensile Strength @77°F (25°C) (ASTM D 2370) ..... 375 psi (2.6 MPa)
Permeance Rating 12
Dry to Touch ..... 1 hour
Flow of used film ..... none up to 180°F (82°C)
Viscosity @ 77°F (25°C) (ASTM D 562) ..... 12 KU
Weight per gallon (ASTM D 1475) ..11.0 ±0.2 lb/gal (1.3 ±.02 kg/L)
Flashpoint ..... none
Specific Gravity ..... 1.33±0.2
VOC Content ..... < 50 g/L

Appearance: SUPER WALL-PRO provides a lightly textured finish with a flat, non-glossy appearance. SUPER WALL-PRO is available in over 40 colors. Contact your local Euclid Chemical representative for a color selection guide.

Specifications/Compliances

Canadian MTQ

Coatings - Architectural Wall
SUPER WALL-PRO
Master Format #: 09 96 53

PACKAGING

SUPER WALL-PRO is packaged in 55 gal (208 L) drums and 5 gal (18.9 L) pails.

SHELF LIFE

1 year in original unopened package.

COVERAGE

Porosity, texture of surface, and specified dry-film thickness will dictate exact coverage.
Suggested coverage rates are as follows:

Coverage Rate	Film Thickness
67 ft^2/gal (1.6m^2/L)	24 wet mils, 15 dry mils
50 ft^2/gal (1.2m^2/L)	32 wet mils, 20 dry mils
33 ft^2/gal (0.8m^2/L)*	48 wet mils, 30 dry mils*

*2 coats required; each coat 24 wet mils

DIRECTIONS FOR USE

Surface Preparation: All surfaces must be free of loose mortar, dirt, grease, oil, loose paint, rust and other foreign matter which could prevent proper adhesion. Previously painted surfaces shall be water blasted to remove loose paint or excessive chalking.

Surface repairs can be made as follows:

Hairline cracks: Less than the thickness of a credit card (30 mils/ 0.8mm): detail with SUPER WALL-PRO.

Large cracks: Spalled or deteriorated concrete; use VERTICOAT, EUCOPATCH or SPEED CRETE RED LINE patching and resurfacing compounds available from The Euclid Chemical Company.

Mixing: SUPER WALL-PRO is a one component, pigmented product that should be stirred prior to application. Do not think with water or other solvents.

Placement: SUPER WALL-PRO dries in one hour to a flat finish and produces a light texture. On extremely hot days it may be necessary to dampen the surface before application. SUPER WALL-PRO can be applied by brush, roller or spray gun to specified coverage rate. Spray application requires heavy-duty equipment such as Graco King 45:1 or Graco Bulldog 30:1.

CLEAN-UP

Use warm, soapy water to clean tools and equipment.

PRECAUTIONS/LIMITATIONS

- Do not apply at temperatures below 50°F (10°C).
- Not suitable for below grade, exterior waterproofing.
- Keep product from freezing.
- Protect coating application from freezing for a minimum of 48 hours after placement.
- Not suitable for underwater applications
- Do not thin.
- In all cases, consult the Material Safety Data Sheet before use.

5. B3002 Low Slope Roofing

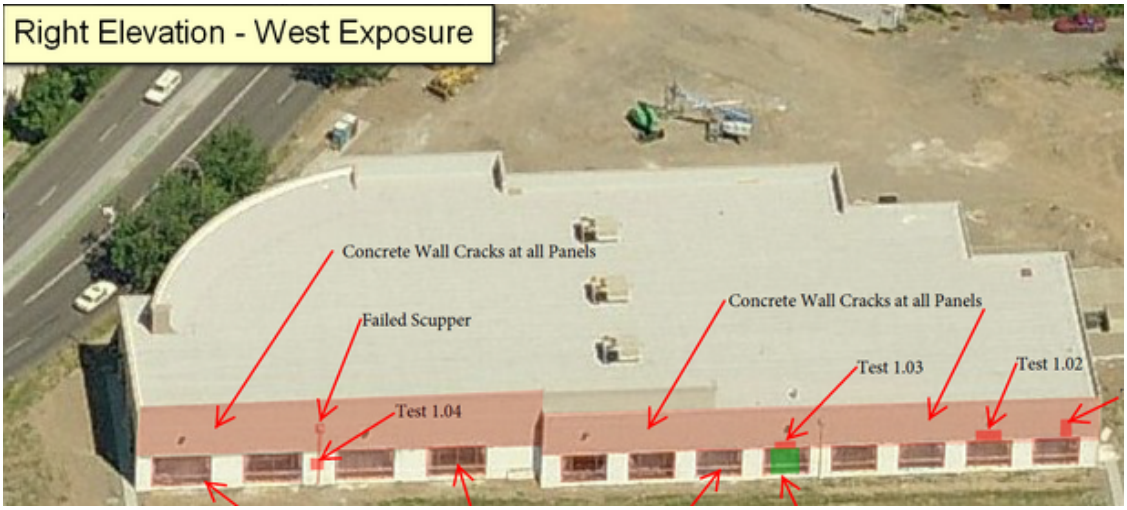
1. General	Isolated roof repair at complex intersection
2. Materials	Identify product manufacturer and use only approved, compatible materials.
3. Execution	Identify an applicable detail from the manufacturer's installation instructions and make repair in strict conformance. All products shall be applied in strict conformance with manufacturer's application instructions.
4. Quality Assurance	Prior to beginning work the trade contractor who is performing the work shall submit in writing to the Owner's Representative a description of the materials and summary of their steps in executing the this repair. <u>Hold-Point</u>: Owner's Representative and/or product manufacturer's representative shall inspect after material application is complete but before it is covered.

AP 02.181

AP 02.182

6. B3006 Gutters & Downspouts

1. General	Failed scupper and downspout causing damage
2. Materials	Identify product manufacturer and use only approved, compatible materials. Downspout and scupper box shall conform with SMACNA or approved alternative. New scupper box required.
3. Execution	Identify an applicable detail from manufacturer's installation instructions and SMACNA or approved alternative authority, and make repair in strict conformance. Installation details to match original drawings. All products shall be applied in strict conformance with manufacturer's application instructions.
4. Quality Assurance	Prior to beginning work the trade contractor who is performing the work shall submit in writing to the Owner's Representative a description of the materials and summary of their steps in executing the this repair. <u>Hold-Point</u>: Owner's Representative and/or product manufacturer's representative shall inspect after material application is complete but before it is covered.



AP 01-086

AP 02-154

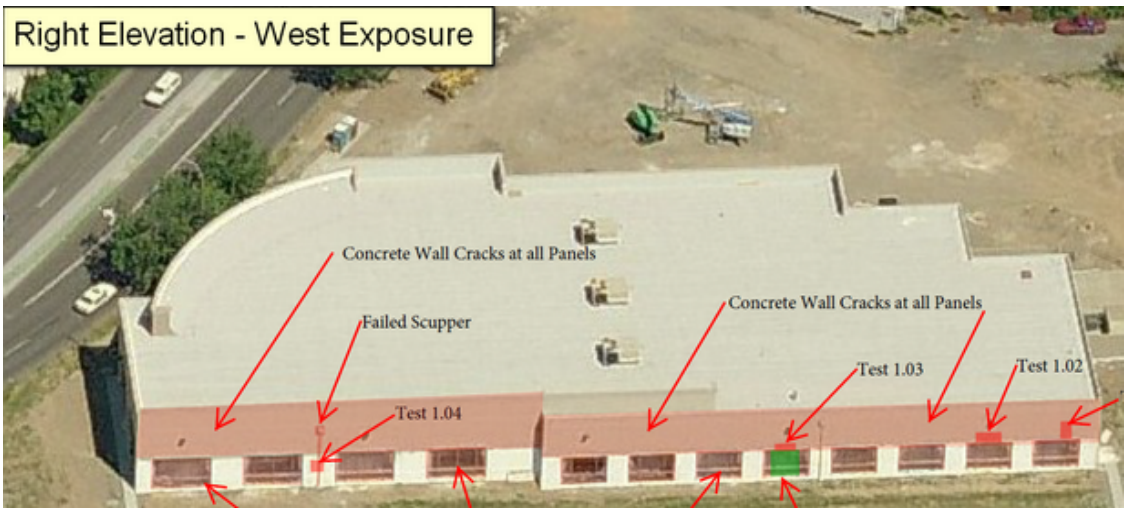
AP 02.188

AP 02-136

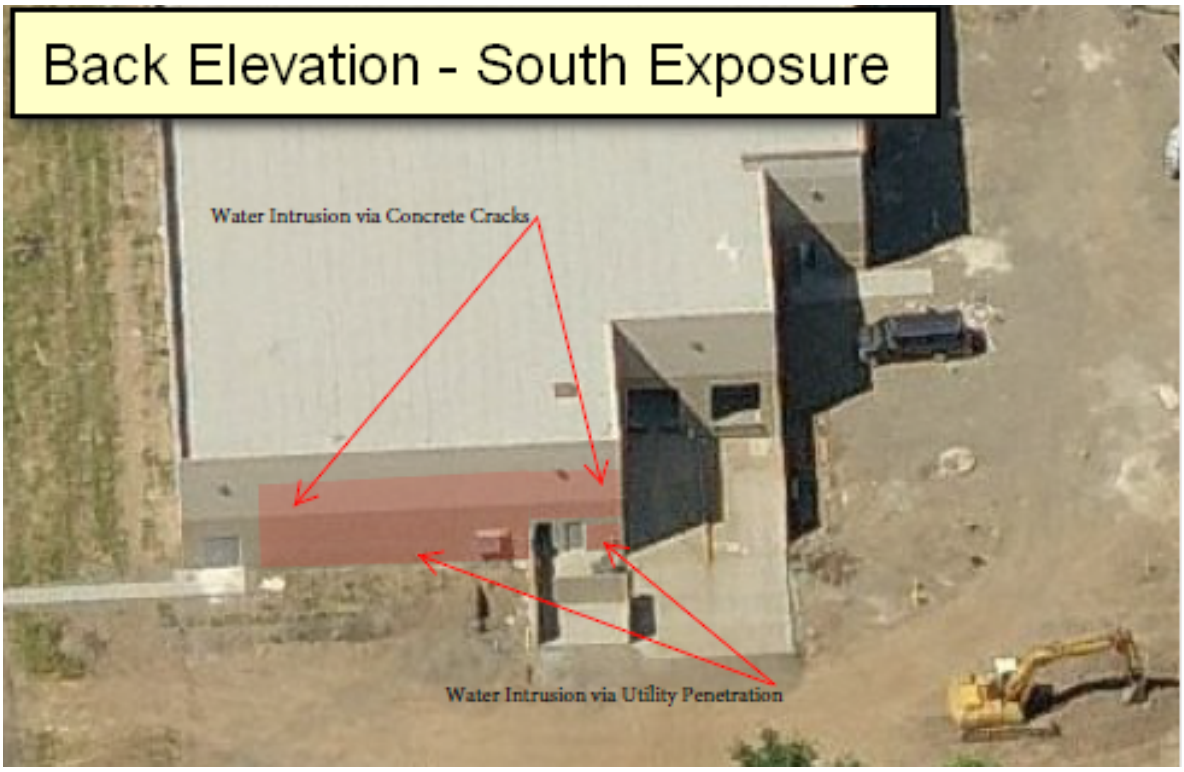
7. C1000 Interior Repairs

1. General	Interior damage due to water intrusion, and exterior soffit damage
2. Materials	Drywall and paint to match all areas with water damage.
3. Execution	Repair drywall and paint to match all areas with water damage. Also repair exterior soffit with water damage, to match. Replace damaged insulation. In some locations entire wall planes will require repainting to match.
4. Quality Assurance	Hold-Point: Owner's Representative shall inspect and document repairs.

PFCS Leakage and Testing Map



PFCS Leakage and Testing Map



PFCS Leakage and Testing Map

AP 02-011

AP 02-230

AP 02-372

6A. Defect List

[redacted]

Preliminary Defect List

[redacted] Pine Road

[redacted]ge, California 91011

Revised July 30, 2003

Prepared for:

[redacted]

Encino, California 91436-1796

[redacted] F: 818-986-2728

Preliminary Summary of Defects

1. Property Line Issues
2. 00-164 Geotechnical Issues
3. 02-552 Septic Issues
4. 02-600 Drainage Issues
5. 02-850 Fencing Issues
6. 02-900 Landscaping & Irrigation Issues
7. 04-000 Masonry Issues
8. 06-170 Trim and Molding Issues
9. 06-190 Exterior Siding Issues
10. 06-410 Cabinetry Issues
11. 07-300 Roofing Issues
12. 07-620 Sheet Metal/Flashing Issues
13. 07-715 Soffit Issues
14. 07-750 Rain Gutter Issues
15. 08-200 Door and Installation Issues
16. 08-500 Window and Installation Issues
17. 09-200 Stucco Issues
18. 09-640 Flooring Issues
19. 09-900 Painting Issues
20. 15-100 Plumbing Issues
21. 15-700 Mechanical Issues
22. 16-000 Electrical Issues
23. 13-280 Hazardous Material Remediation (Microbial)

This document is for mediation purposes only and is protected by all applicable evidence codes.

1. *Property Line Issues*
   1.1. Property line has been located incorrectly at the right (North) and left (South) elevation.

2. *00-164 Geotechnical Issues*
   2.1. Related to issues 4.2 and 4.3.

3. *02-552 Septic Issues*
   3.1. Septic System is in a state of "premature failure". As a result, pumping of the system is required regularly, and system generating fumes/ odors.
   Location: Front yard

4. *02-600 Drainage Issues*
   4.1. V-ditch at retaining wall was not installed per geologic recommendations.
   Location: Along length of retaining wall at right elevation
   4.2. Inadequate lot drainage (not per geologic recommendations)
   Description: Back yard slopes toward house, water accumulates in low lying areas, inadequate drainage from backyard and away from house.
   4.3. Indications of excessive moisture transmission through concrete slab on grade (see analysis by Hollingsworth, and vapor transmission test reports by various entities).
   Location: First floor
   4.4. The sub-drain at the back of the retaining wall was installed without a geo-fabric sock at the pipe or the surrounding gravel.
   Location: Along length of retaining wall at right elevation.

5. *02-850 Fencing Issues*
   5.1. Deteriorated and improperly located wood fence.
   Description: Entire length of fence at left elevation undulates and is falling over.

6. *02-900 Landscaping and Irrigation Issues*
   6.1. Improper installation of irrigation. See also Property Line, Geotechnical and Drainage Issues.
   Description: Sprinklers in side yard at right are controlled by adjoining landowner.

7. *04-000 Masonry Issues*
   7.1. Improperly installed masonry cap at masonry wainscot.
   Description: Mortar covered CMU cap buries shingles and wood trim for doors and windows at all areas of stone veneer.
   7.2. Missing or buried weep mechanism at masonry wainscot.
   Description: Weep mechanism at stone veneer missing, stone veneer buried, these conditions occur at all areas of stone veneer.

7.3. Lack of integration of weather resistive barrier at wainscot.
Description: There is not proper integration between the weather resistive barrier and flashing above the masonry wainscot at the exterior and the weather resistive barrier of the siding above.

7.4. Cracks in masonry wall at backyard.
Description: The back wall is exhibiting cracking in the grout joints.

8. 06-170 Trim and Molding Issues

8.1. Poor workmanship at casing installation at exterior openings
Description: Wood trim is installed in a un-workman like manner and prematurely deteriorating at all exterior locations.

8.2. Paint loss at window trim.
Description: Paint flaking and peeling off exterior wood trim.

9. 06-190 Exterior Siding Issues

9.1. Improper installation and premature deterioration of siding.
Description: Over-driven nails, stains from corrosive nails, cracked/split shingles, exposed underlayment, loss of shingles at various locations; siding not properly integrated at building corners, under-driven nails, conditions exist through out exterior of residence at siding.

10. 06-410 Cabinetry Issues

10.1. Inadequate attachment of cabinet doors
Description: Kitchen cabinet doors are loose.

11. 07-300 Roofing Issues

11.1. Inadequate attachment of asphalt roofing shingles
Description: Asphalt roof shingles inadequately attached causing shingles to slip. This condition was seen at two locations on the roof.

12. 07-620 Sheet Metal/Flashing Issues

12.1. Inadequate flashing at siding to veneer transitions
Description: Sheet metal flashing missing or short at siding to stone veneer transition through out exterior of residence.

12.2. Inadequate installation of head flashing
Description: Head flashing at windows and doors has been cut short at ends.

12.3. Missing head flashing
Description: Head flashing missing at decorative vent at front elevation

12.4. Missing ledger flashing
Description: Ledgers for trellises has been installed without adequate flashing at two ledgers at back elevation.

13. 07-715 Soffit Issues

13.1. Plywood soffit improperly installed.

Description: The plywood soffit at the rear elevation at the Family Room is installed in a un-workman like manner, causing loosening nails and joist to joist undulation.

13.2. Improper integration of weather resistive barrier.

Description: The weather resistive barrier does not meet top of wall at soffit, with exposed framing materials below. This condition was seen at the left (South) elevation.

14. 07-750 Rain Gutter Issues

14.1. Rain Gutters are inadequately sized for this steep sloped roof.

Description: At locations around exterior of residence the rain gutters are being overshot and show evidence of staining on the soffit.

15. 08-200 Door and Installation Issues

15.1. Entry door deteriorating

Description: Stiles and rails of entry door and sidelights and trim are separating, end grain is cracking/splitting.

15.2. Damaged and deteriorating French doors

Description: Premature deterioration is occurring at the painted wood doors, the weather-stripping and painting is inadequate.

15.3. Damaged and deteriorating hardboard doors

Description: Premature deterioration is occurring at the painted wood doors; the weather-stripping and painting are inadequate. This condition occurs at the utility closet at the right elevation.

15.4. Damaged and deteriorating garage man door

Description: Raised panel door with cracks, splits and separation at exterior.

15.5. Water intrusion at French doors.

Description: Weather-stripping is inadequate, the installation was out of sequence and the flashing is improper. Doors leak.

16. 08-500 Window and Installation Issues

16.1. Damage at interior.

Description: Interior finishes including drywall, finish carpentry and framing have been damaged by water intrusion at windows and French doors.

16.2. Improper installation of security system

Description: Alarm contacts drilled into window sill causing leaks at all first story operable windows

16.3. Leaking windows due to improper installation.

Description: Windows throughout have not been installed and integrated properly with the wall system allowing water intrusion. Flexible flashing is improperly integrated with other flashing and the weather-resistive barrier. Flexible flashing and weather resistive barrier were installed with cuts and tears and in a generally un-workmanlike manner.

16.4. Leak at Mullion

Description: Vertical mullion at living room window is not completely sealed, allowing moisture intrusion.

16.5. Trim at interior is separation at back elevation, arch top window at landing.

17. 09-200 Stucco Issues

17.1. Spalling stucco and efflorescence.

Description: Spalling and deterioration of stucco is occurring at the base of the retaining wall at the right yard.

18. 09-640 Flooring Issues

18.1. Wood flooring is cupped.

Description: Wood flooring cupping at all downstairs locations where installed except at entry.

18.2. Inadequate installation of vapor retarding system.

Description: Installed vapor retarding system does not conform to industry standards for installation of wood floor over concrete slab.

18.3. Un-workmanlike finish on wood floors.

Description: Evidence of sanding and finishing flaws and imperfections on surface of wood floor. Conditions including sanding scratches, machine marks, light hand prints etc. exist through out the surface of the wood floor.

19. 09-900 Painting Issues

19.1. Doors not painted on all six sides.

Description: The painting is not complete to protect wood doors and has deteriorated prematurely.

19.2. Premature deterioration of paint at exterior trim.

Description: The painting is not complete to protect exterior trim and has deteriorated prematurely.

20. 15-100 Plumbing Issues

20.1. Water heater vent connector too close to combustible construction.
Description: One location, at the exterior water heater closet on the left elevation, the single wall vent connector is too close to combustible materials.

20.2. Water heater B-vent penetration at garage ceiling improper.
Description: One location, at the exterior water heater closet on the left elevation, the B-vent collar for water heater too small for drywall opening.

20.3. Shut-off valves are corroded.
Description: The main building shut off valve at the front elevation and the ½" shut off and check valves for the recirculation system, which are located in the water heater closet, are corroded.

20.4. Fireplace gas line penetrations unsealed.
Description: At two downstairs fireplaces, the gas line penetration is not sealed.

20.5. Water heater combustion air openings improper.
Description: At the water heater closet on the left elevation, the upper combustion air opening is too low.

20.6. Water hammer
Description: Found at the master bathroom. Water hammer is occurring at lavatories sinks and tub/shower assemblies due to loose pipes in wall.

20.7. Water closet loose
Description: One location at downstairs hall bathroom, poor installation of water closet caused it to loosen and leak damaging flooring.

20.8. Kitchen sink clean out missing
Description: One location at kitchen, the clean out for servicing kitchen sink is missing.

20.9. Whirlpool tub motor missing access door
Description: One location at master bathroom, the access door for servicing the motor and GFI outlet for the whirlpool tub is missing.

20.10. Plumbing leaks and poor workmanship
Description: Leaks have manifested at pantry, downstairs near guest bedroom, water heater and at main supply inlet. Water stains have manifested on kitchen ceiling below upstairs bathroom. Pipe expansion noise heard in bedroom above water heater closet.

20.11. Septic system lacks capacity
Description: See issue 3.1 in Section 3 "02-225 Septic Issues".

20.12. Improper installation of hot water recirculation pipes and pump
Description: Pipes have not been reamed and recirculation pump is oversized causing accelerated wear to system.

21. 15-700 Mechanical Issues

21.1. Refrigerant line insulation unprotected.

Description: At 2 A/C condensing units on left elevation with deteriorated insulation.

21.2. Refrigerant line wall penetration unsealed

Description: At 2 A/C condensing units on left elevation with unsealed wall penetrations.

21.3. Return air plenum unsealed.

Description: At one unit in attic that serves downstairs, the return air inlet for the forced air unit is not sealed properly.

21.4. Condensate drain runs with improper slope.

Description: At one unit in attic that serves downstairs, the primary condensate drain has flat or negative slope.

21.5. Premature failure of equipment.

Description: One A/C condensing unit at left elevation has failed prematurely and was repaired by homeowner.

22. 16-000 Electrical Issues

22.1. Wire undersized for circuits.

Description: 20 amp circuits wired with 14-gauge wire at 17 locations.

22.2. Excessive voltage drops at duplex receptacles.

Description: Long wire runs, inadequate wire size and poor contact with push in duplex receptacles causes unacceptable voltage drops for 20 amp circuit at 58 locations throughout home.

22.3. Unsealed openings in main electrical panel.

Description: Knock out has been removed and remains unsealed at main electrical panel.

22.4. Unsealed electrical penetrations

Description: All exterior light fixtures installed without gaskets or sealant.

22.5 Defective GFCI Receptacle

Description: Master Bath GFCI wired with 14-gauge wire on 20-amp breaker. Supply wire and receptacle damaged by heat build up.

23. 13-280 Hazardous Material Remediation (Microbial)

23.1 Some remediation and abatement has already occurred due to sub-slab pipe burst near the guest bedroom downstairs. See Reliance Environmental Consulting report.

Description: In 2003 a sub-slab pipe break caused extensive damage to the first floor guest bedroom, hall and adjacent areas.

6B. Estimate

Construction Cost Estimate

Pete Fowler Construction Services, Inc.

Project Number: A2-124
Project Name: [redacted] Residence
Address: [redacted] Pine Lane
[redacted], CA

Date: 10/11/2004
Estimator: Pete Fowler / Tim Hewett

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Protected under all applicable evidence codes.

Construction Cost Estimate Contents

Pete Fowler Construction Services, Inc.

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[redacted] Residence
Summary

Issue	CSI	Description	Notes:	Qty.	Unit	Direct Cost Unit	Direct Cost Total	Project Cost Total
1		Property Line Survey	B+R-Yard Fence	194	lf	$27.09	$5,256	$8,050
2	00-164	Geotechnical	See drainage	0	ls	$0	$0	$0
3	02-552	Septic System	See Slutzky RPT	1	ls	$0	$0	$0
4	02-600	Drainage		3,408	sf	$3.14	$10,705	$16,394
5	02-850	Fencing	L-Yard Fence	170	lf	$27	$4,522	$6,926
6	02-900	Landscape Irrigation	Sprinklers @ R-Yard	752	sf	$2.05	$1,539	$2,357
7	02-900	Landscaping	for general repairs	810	sf	$10.26	$8,315	$12,734
8	04-000	Masonry	Wainscot	600	sf	$64	$38,408	$58,822
9	04-000	Masonry	B-Yard Wall	66	lf	$24	$1,584	$2,426
10	06-170	Trim and Molding		1	ls	$11,295	$11,295	$17,298
11	06-190	Exterior Siding		3,700	sf	$9.17	$33,943	$51,983
12	06-410	Cabinetry		1	ls	$1,408	$1,408	$2,157
13	07-300	Roofing		1	ls	$1,500	$1,500	$2,297
14	07-620	Sheet Metal / Flashing		1	ls	$2,949	$2,949	$4,516
15	07-715	Soffit		1	ls	$1,918	$1,918	$2,937
16	07-750	Rain Gutters		305	lf	$8.60	$2,623	$4,016
17	08-200	Doors		3	set	$698	$2,095	$3,209
18	08-500	Windows		1	ls	$17,386	$17,386	$26,627
19	09-200	Stucco		800	sf	$3.16	$2,528	$3,872
20	09-640	Flooring		1,558	sf	$27.03	$42,115	$64,499
21	09-900	Painting		5,000	sf	$3.39	$16,950	$25,959
22	15-100	Plumbing		1	ls	$14,025	$14,025	$21,480
23	15-700	Mechanical		1	ls	$1,369	$1,369	$2,096
24	16-100	Electrical		1	ls	$10,937	$10,937	$16,749
25	13-280	Hazardous Material Remedation (Microbial)	Not INCL	1	ls	$0	$0	$0
26		**Direct Cost Total**					$233,370	$357,403
27								
28		General Conditions		11.7%			$27,201	
29		Subtotal					$260,571	
30								
31		Contractor's Overhead		8%			$20,846	
32		Contractor's Profit		10%			$26,057	
33		Insurance & Bond		2%			$5,211	
34								
35		Subtotal					$312,685	
36		Contingency on Estimated Construction Costs		5%			$15,634	
37		**Total Estimated Construction Costs**					$328,319	
38								
39		**Other Project Costs:**						
40		Construction Management		5%			$16,416	
41		Architecture/Design		0%			$0	
42		Engineering		0%			$0	
43		Civil / Geotechnical		1	LS		$5,000	
44								
45		Testing & Inspection		1	ls		$3,000	
46		Permits & Fees		1%			$3,283	
47		Relocation	Not INCL	0	Units	$0	$0	
48								
49		Subtotal of Other Project Costs					$27,699	
50		Contingency on Other Project Costs		5%			$1,385	
51		**Total of Other Project Costs**					$29,084	
52								
53		**Total Estimated Project Cost**					**$357,403**	**$357,403**

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#	CSI	Issue	Description	Notes / Ref.	Qty	Unit	Crew	Hrs	Unit Cost Labor	Unit Cost Material	Unit Cost Other	Unit Cost Subc.	Total Cost Labor	Total Cost Material	Total Cost Other	Total Cost Subc.	TOTAL
1	02-200		Property Line										-	-	-	-	$0.00
2			Survey / Staking		1	ls						600.00	-	-	-	600	$600.00
3			Install new fence along back property line	See Calls-Sub-Bids	194	LF	SUB					24.00	-	-	-	4,656	$4,656.00
4	00-164		Geotechnical	See Drainage									-	-	-	-	$0.00
5	02-552		Septic system										-	-	-	-	$0.00
6			Remove Driveway for septic repair	O= Bobcat Rental		SF	D7	8					-	-	-	-	$0.00
7		3.1	Geological work-up of test area	See Slutske RPT 6/10/03		LS	SUB					7,000.00	-	-	-	-	$0.00
8													-	-	-	-	$0.00
9			Irrepairable per Experts Hollingsworth and Slutske - no percolation - see plaintiff's claim for costs for geological and septic inspection, investigation and testing.										-	-	-	-	$0.00
10													-	-	-	-	$0.00
11													-	-	-	-	$0.00
12			Protect surrounding area										-	-	-	-	$0.00
13			Set-up Drill rig										-	-	-	-	$0.00
14			Bore test holes										-	-	-	-	$0.00
15			Standard boring percolation testing and report	See Slutske RPT 6/10/03		LS	SUB					2,100.00	-	-	-	-	$0.00
16			Alterative testing	See Slutske RPT 6/10/03		LS	SUB					2,500.00	-	-	-	-	$0.00
17			Standard system replacement	See Slutske RPT 6/10/03		LS	SUB					6,500.00	-	-	-	-	$0.00
18			Wastewater treatment unit installation	See Slutske RPT 6/10/03		LS	SUB					31,000.00	-	-	-	-	$0.00
19			Alternate subsurface drip system	See Slutske RPT 6/10/03								30,000.00	-	-	-	-	$0.00
20			Replace Driveway	Sub		SF						4.50	-	-	-	-	$0.00
21	02-600		Drainage										-	-	-	-	$0.00
22		4.1	V-ditch at retaining wall not installed per geotechnical recommendations	Assume LF/ Right yard	150	LF							-	-	-	-	$0.00
23			Provide access to backyard (42" minimum)										-	-	-	-	$0.00
24			Remove existing fencing (Left elevation)		168	LF	D7	5	2.49				418	-	-	-	$418.18
25			Remove, store and protect HVAC equipment	See Mechanical								500.00	-	-	-	-	$0.00
26			Remove or protect landscaping as necessary		1	LS	D7	6	501.82				502	-	-	-	$501.82
27			Remove cap at retaining wall		1	LS	D7	3	250.91				251	-	-	-	$250.91
28			Excavate soil behind wall		1	LS	D7	16	1,338.18				1,338	-	-	-	$1,338.18
29			Install supplemental drainage pipe		1	LS	D7	4	334.55	100.00			335	100	-	-	$434.55
30			Add course to wall to achieve proper drainage according to geotechnical recommendations		1	LS	C3	8	1,170.97	150.00			1,171	150	-	-	$1,320.97
31			Form v-ditch		150	LF	C3	5	4.88				732	-	-	-	$731.86
32			Place concrete for v-ditch		150	LF	C3	6	5.85	3.33			878	500	-	-	$1,378.23
33		4.2	Inadequate Lot Drainage										-	-	-	-	$0.00
34			Remove or protect landscaping as necessary	O= Bobcat Rental	1	LS	D7	8	669.09		150.00		669	-	150	-	$819.09
35			Locate and protect or remove all irrigation		1	LS	D7	7	585.46				585	-	-	-	$585.46
36			Locate and protect or remove all drainage		1	LS	D7	8	669.09				669	-	-	-	$669.09
37			Fine grade yard according to plan	O= Bobcat Rental	1	LS	D7	6	501.82		150.00		502	-	150	-	$651.82
38			Remove all excess dirt	O= Bobcat Rental	1	LS	D7	4	334.55		150.00		335	-	150	-	$484.55
39			Install drainage according to plan		1	LS	D7	8	669.09	200.00			669	200	-	-	$869.09
40			Test installation		1	LS	D7	1	83.64				84	-	-	-	$83.64
41			Backfill		1	LS	D7	2	167.27				167	-	-	-	$167.27
42	02-850		Fencing	Property line issues per attorney									-	-	-	-	$0.00
43		5.1	Deteriorated wood fence														
44			Trim trees as necessary		1	LS	D7	2	167.27				167	-	-	-	$167.27

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[redacted] Residence
Estimate Details

									Unit Cost				Total Cost				
#	CSI	Issue	Description	Notes / Ref.	Qty	Unit	Crew	Hrs	Labor	Material	Other	Subc.	Labor	Material	Other	Subc.	TOTAL
45			Install new fence along left property line	See Calls-Sub-Bids	170	LF	SUB					24.00	-	-	-	4,080	$4,080.00
46			Install gate	See Calls-Sub-Bids	1	LS	SUB					275.00	-	-	-	275	$275.00

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#	CSI	Issue	Description	Notes / Ref.	Qty	Unit	Crew	Hrs	Unit Cost Labor	Unit Cost Material	Unit Cost Other	Unit Cost Subc.	Total Cost Labor	Total Cost Material	Total Cost Other	Total Cost Subc.	TOTAL
47	02-900		Landscape Irrigation										-	-	-	-	$0.00
48			Excavate for installation of sprinkler system	O= Trencher rental	1	LS	D7	5	418.18		100.00		418	-	100	-	$518.18
49			Install two automatic sprinkler control valves		1	LS	D7	2	167.27	145.00			167	145	-	-	$312.27
50			Install two new 18 gauge electrical control lines from sprinkler controller to control valves in 1" pvc at 18"		1	LS	D7	0.5	41.82	30.00			42	30	-	-	$71.82
51			Install backflow preventer per code		1	LS	D7	0.5	41.82				42	-	-	-	$41.82
52		6.1	Install two new 3/4"supply lines to existing sprinklers on property		1	LS	D7	1	83.64	90.00			84	90	-	-	$173.64
53			Cap off supply lines from neighbors property		1	LS	D7	0.5	41.82	3.00			42	3	-	-	$44.82
54			Test sprinkler system		1	LS	D7	0.5	41.82				42	-	-	-	$41.82
55			Backfill		1	LS	D7	4	334.55				335	-	-	-	$334.55
56	02-900		Landscaping										-	-	-	-	$0.00
57			Restore all landscaping to original condition		1	LS	D7	24	2,007.28	2,500.00			2,007	4,000	-	-	$6,007.28
58			Remove all debris		1	LS	D7	6	501.82				502	-	-	-	$501.82
59			Clean all surrounding areas		1	LS	D7	6	501.82	100.00			502	100	-	-	$601.82
60			Maintain new landscaping until established	2 hours a week for 6 weeks	1	LS	D7	12	1,003.64	200.00			1,004	200	-	-	$1,203.64
61	04-000		Masonry	600 SF of Wainscot @ EXT									-	-	-	-	$0.00
62		7.1	Improperly installed masonry cap	Included in 7.2													
63		7.2	Missing or buried weep mechanism														
64			Coordinate with Siding and Weather Resistive Barrier repairs										-	-	-	-	$0.00
65			Protect/remove and store adjacent surfaces		1	LS	D7	2	167.27				167	-	-	-	$167.27
66			Remove stone veneer and concrete ledge		600	SF	D7	14	1.95				1,171	-	-	-	$1,170.91
67			Dispose of all debris	0=dump	1	LS	D7	2	167.27		100.00						
68			Remove Weather Resistive Barrier	INCL in siding	1	LS	D7	2	167.27				167	-	-	-	$167.27
69			Install sheet metal FLSG at plate, clearance to be 2" from hardscape and 4" from finish grade	INCL in Sheet Metal	1	LS	RC2	4	145.95				146	-	-	-	$145.95
70			Install WRB	INCL in siding	1	LS	RC2	8	291.90				292	-	-	-	$291.90
71			Install WRB as bib and sheet metal L-FLSG for veneer cap	INCL in Sheet Metal	2	LS	RC3	2	72.98				146	-	-	-	$145.95
72			Install masonry cap, cap to be installed w/ corrosion resistant bracket	250 LF	250	LF	FC1&3	45	13.21	7.26			3,303	1,815	-	-	$5,117.84
73			Install lath	600 SF, 18 SF/sheet, 35 shts	35	shts	FC1&3	15	31.46	5.36			1,101	188	-	-	$1,288.55
74			Install scratch coat		30	SY	FC1&3	4	9.79	1.33	0.50		294	40	15	-	$348.59
75			Install stone veneer	approximately 18 sf/day	600	SF	FC1&3	200	24.47	6.00	0.33		14,679	3,600	200	-	$18,479.30
76			Grout joints	INCL in ABV	1	LS	FC1&3	20	1,467.93	100.00			1,468	100	-	-	$1,567.93
77			Clean surrounding areas		1	LS	D7	2	167.27				167	-	-	-	$167.27
78			Masonry at Columns	11 columns									-	-	-	-	$0.00
79			Protect/remove and store adjacent surfaces		1	ls	D2	3	72.07	15.00			72	15	-	-	$87.07
80			Remove stone veneer and ledge		11	EA	D2	11	41.82				460	-	-	-	$460.00
81			Install sheet metal FLSG at plate, clearance to be 2" from hardscape and 4" from finish grade	INCL in Sheet Metal	1	LS	RC2	0	0.00				-	-	-	-	$0.00
82			Install WRB		11	EA	FC2	6	19.90	1.00			219	11	-	-	$229.93
83			Install WRB as bib and sheet metal L-FLSG for veneer cap	INCL in Sheet Metal	1	LS	RC2	0	0.00				-	-	-	-	$0.00
84			Install masonry cap, cap to be installed w/ corrosion resistant bracket		11	EA	FC1&3	22	146.79	58.08			1,615	639	-	-	$2,253.60
85			Install lath		11	EA	FC1&3	9	60.05	5.36			661	59	-	-	$719.53
86			Install scratch coat	material incl. ABV	11	EA	FC1&3	7	46.71		0.45		514	-	5	-	$518.78
87			Install stone veneer		11	EA	FC1&3	44	293.59	6.00	4.55		3,229	66	50	-	$3,345.45
88			Grout joints	INCL in ABV	1	LS	FC1&3	20	1,467.93	100.00			1,468	100	-	-	$1,567.93
89			Clean surrounding areas		1	LS	D7	2	167.27				167	-	-	-	$167.27

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90	04-000		Masonry (backyard)	Wall at B-Yard									-	-	-	-	$0.00
91			Install concrete V-Ditch with drains		66	lf	SUB					15.00	-	-	-	990	$990.00
92			Stucco wall to match		198	sf	UB					3.00	-	-	-	594	$594.00
93	06-170		Trim and molding	AVE per LOC 30 WDOS, 5 Vents 9 DRS									-	-	-	-	$0.00
94		8.1	Poor workmanship at casing installation at exterior openings										-	-	-	-	$0.00
95		8.2	Paint loss at window trim										-	-	-	-	$0.00
96			*Exterior*										-	-	-	-	$0.00
97			Remove and discard all trim covering siding		1	LS	D6	8	818.63				819	-	-	-	$818.63
98			Pre-prime trim all sides		1	LS	FC1&3	10	733.97	100.00			734	100	-	-	$833.97
99			Install sill trim - custom milled		30	EA	FC1&3	20	48.93	49.01			1,468	1,470	-	-	$2,938.24
100			Install jamb and head trim - brick mold		44	EA	FC1&3	40	66.72	19.50			2,936	858	-	-	$3,793.86
101			*Interior*										-	-	-	-	$0.00
102			Remove wood stool and casing at interior	AVE per LOC 30 WDOS, 9 DRS	1	LS	D6	8	818.63				819	-	-	-	$818.63
103			Pre-prime stool and casing all sides	See ABV priming	30	EA	FC1&3	0	0.00				-	-	-	-	$0.00
104			Install wood stool and window casing		30	EA	FC1&3	24	58.72				1,762	-	-	-	$1,761.52
105			Pre-prime door trim	See ABV priming	9	EA	FC1&3	0	0.00				-	-	-	-	$0.00
106			Install door trim		9	EA	FC1&3	4.5	36.70				330	-	-	-	$330.28
107	06-190		Exterior Siding	3700 SF									-	-	-	-	$0.00
108		9.1	Improper installation and premature deterioration of siding										-	-	-	-	$0.00
109			Gain access and identify areas of repair		1	LS	D7	2	167.27				167	-	-	-	$167.27
110			Cover and protect adjacent surfaces		1	LS	D7	4	334.55				335	-	-	-	$334.55
111			Remove and discard all trim covering siding	INCL in Trim and Molding	1	LS	D7	6	501.82				502	-	-	-	$501.82
112			Remove and store trellis and ledger at back locations		1	LS	D7	6	501.82				502	-	-	-	$501.82
113			Remove and discard exterior siding and WRB	3700 SF	3,700	SF	D6	30	0.83				3,070	-	-	-	$3,069.87
114			Inspect and remove damaged insulation		1	LS	D7	2	167.27				167	-	-	-	$167.27
115			Inspect for damaged framing, repair as necessary		1	LS	RC2	4	145.95				146	-	-	-	$145.95
116			Install new insulation as necessary		1	LS	D7	4	334.55	100.00			335	100	-	-	$434.55
117			Install new Weather Resistive Barrier - 60 min Jumbo Tex in weatherboard fashion		1	LS	FC6	8	1,384.51	330.00			1,385	330	-	-	$1,714.51
118			Install Sheet Metal drip cap at vents maintaining weatherboard installation	INCL in Sheet Metal	1	LS	RC2	0	0.00				-	-	-	-	$0.00
119			Install 3 layers of 3/4" Marine grade plywood w/ 5/8" corrosion resistant lag bolts for radius ledger at living room. Pre-prime ledger all 6 sides, Ledger and wall to be predrilled 1/2" in diameter and filled with sealant. Lags to be countersunk for installation of hangers		1	LS	RC2	4	145.95	600.00			146	600	-	-	$745.95
120			Install SM drip cap for ledger bibbed w/ WRB	INCL in Sheet Metal	1	LS	RC2	0	0.00				-	-	-	-	$0.00
121			Install 24" bituthene at corners where siding butts		1	LS	RC2	4	145.95	141.22			146	141	-	-	$287.17
122			*First Floor*										-	-	-	-	$0.00
123			Install Cedar Valley Siding panels according to manufacturers recommendations with 6D ring shank stainless steel nails. All vertical joints must end on a framing member. Subsequent panels must be placed as to ensure a shiplap weather tight joint. Approved caulking must be used at all cut ends. Panels to be butted to trim and ledgers.	2000 SF	2,000	SF	FC6	16	1.38	4.57			2,769	9,132	-	-	$11,900.60

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124			*Second Floor*										-	-	-	-	$0.00
125			Install Cedar Valley Siding panels according to manufacturers recommendations with 6D ring shank stainless steel nails. All vertical joints must end on a framing member. Subsequent panels must be placed as to ensure a shiplap weather tight joint. Approved caulking must be used at all cut ends	1700 SF	1,700	SF	FC6	18	1.83	4.57			3,115	7,762	-	-	$10,876.99
126			Install trellis		1	LS	FC4	16	1,594.68	1,500.00			1,595	1,500	-	-	$3,094.68
127	06-200		Cabinetry Issues										-	-	-	-	$0.00
128		10.1	Inadequate attachment of cabinet doors										-	-	-	-	$0.00
129			Re-attach cabinet doors properly		1	LS	FC1&3	8	587.17	50.00			587	300	-	-	$887.17
130			Vent bottom of cabinets		1	LS	FC1&3	3	220.19				220	301	-	-	$521.19
131	07-300		Roofing										-	-	-	-	$0.00
132		11.1	Inadequate attachment of asphalt shingles	Service Call	1	LS	SUB					1,500.00	-	-	-	1,500	$1,500.00
133	07-620		Sheet Metal/Flashing										-	-	-	-	$0.00
134		12.1	Inadequate flashing at siding to veneer transitions														
135		12.2	Inadequate installation of head flashing														
136		12.3	Missing head flashing														
137		12.4	Missing ledger flashing														
138			Install 26 gauge sheet metal water table over trellis ledgers		1	LS	FC1&3	4	293.59	14.42			294	14	-	-	$308.01
139			Install 26 gauge sheet metal water table over top half of decorative vents	5 vents	1	LS	FC1&3	3	220.19	7.21			220	7	-	-	$227.40
140			Install 26 gauge sheet metal L-flashing at base of stone veneer, clearance to be 2" from hardscape and 4" from finish grade		330	LF	FC1&3	8	1.78	0.72			587	239	-	-	$825.95
141			Install 26 gauge sheet metal L-FLSG for veneer cap		330	LF	FC1&3	6	1.33	0.60			440	199	-	-	$639.23
142			Install 26 gauge sheet metal water table for windows and doors	39 WDOS and DRS	39	EA	FC1&3	11	20.70	3.61			807	141	-	-	$947.99
143	07-715		Soffit Issues										-	-	-	-	$0.00
144		13.1	Plywood soffit improperly installed														
145		13.2	Improper integration of weather resistive barrier														
146			Remove rain gutter, soffit and fascia board to determine location of water leakage causing stains		1	LS	RC2	8	291.90				292	-	-	-	$291.90
147			Replace water damaged materials		1	LS	RC2	8	291.90	270.00			292	270	-	-	$561.90
148			Install flashing to prevent water intrusion		1	LS	RC2	4	145.95	100.00			146	100	-	-	$245.95
149			Install new soffit and fascia (prime all sides pre installation)		1	LS	RC2	8	291.90	200.00			292	200	-	-	$491.90
150			Discard all debris	O = dump	1	LS	D7	2	167.27		75.00		167	-	75	-	$242.27
151			Clean surrounding area		1	LS	D7	1	83.64				84	-	-	-	$83.64
152	07-750		Rain Gutters										-	-	-	-	$0.00
153		14.1	Rain gutter not integrated with steeply sloped roof										-	-	-	-	$0.00
154			Remove and discard rain gutters and downspouts		305	lf	D7	4	1.10				335	-	-	-	$334.55
155			Install new seamless rain gutters w/ 4" min. width opening, Installation to be outside of drip edge and slope to be min. of 1/16" per foot.		305	lf	SUB					7.50	-	-	-	2,288	$2,288.00
156			Install new sized downspouts.	Included above									-	-	-	-	$0.00
157			Connect downspouts to area drainage system	Included above									-	-	-	-	$0.00
158	08-200		Doors										-	-	-	-	$0.00
159		15.1	Entry door deteriorating										-	-	-	-	$0.00
160		15.2	Damaged and deteriorating french doors										-	-	-	-	$0.00
161		15.3	Damaged and deteriorating hardboard doors										-	-	-	-	$0.00
162		15.4	Damaged and deteriorating garage man door										-	-	-	-	$0.00

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163		15.5	Water intrusion at french doors										-	-	-	-	$0.00
164			Remove wood trim	See Siding Repairs									-	-	-	-	$0.00
165			Pull doors and store for reinstallation		1	LS	FC1&3	0.5	36.70				37	-	-	-	$36.70
166			Pull frames and discard		1	LS	FC1&3	0.5	36.70				37	-	-	-	$36.70
167			Inspect for framing damage and repair as necessary		1	LS	FC1&3	0	0.00				-	-	-	-	$0.00
168			Install Jamb sill tray		1	LS	FC1&3	1	73.40	40.00			73	40	-	-	$113.40
169			Install 9" moistop at sides and lapped at top		1	LS	FC1&3	0.8	58.72	5.00			59	5	-	-	$63.72
170			Pre-prime all new jambs		1	LS	FC1&3	0.5	36.70	5.00			37	5	-	-	$41.70
171			Install new wood jambs, shimmed, squared and fit to door		1	LS	FC1&3	1	73.40	96.80			73	97	-	-	$170.20
172			Install wood trim	See Exterior Trim	1	LS	FC1&3		0.00				-	-	-	-	$0.00
173			Install 26 gauge sheet metal water table at head, water table to provide full coverage of top of trim	See Sheet Metal									-	-	-	-	$0.00
174			Install WRB in weather board fashion	See Siding Repairs									-	-	-	-	$0.00
175			Install new threshold and weather-stripping		1	LS	FC1&3	1	73.40				73	-	-	-	$73.40
176			Reinstall doors		1	LS	FC1&3	1.5	110.09				110	-	-	-	$110.09
177			Install new weather-stripping at doors		1	LS	FC1&3	0.5	36.70	15.70			37	16	-	-	$52.40
178			Remove interior trim	See Interior Trim									-	-	-	-	$0.00
179			Remove damaged GWB		1	LS	FC1&3	0.5	36.70				37	-	-	-	$36.70
180			Install GWB, tape and texture to match		1	LS	FC1&3	1	73.40	10.00			73	10	-	-	$83.40
181			Pre-prime trim all sides	See Interior Trim									-	-	-	-	$0.00
182			Install trim	See Interior Trim									-	-	-	-	$0.00
183			Paint trim with two coats of premium paint	See Painting									-	-	-	-	$0.00
184			Paint entire wall surface to match, see room schedule	See Painting									-	-	-	-	$0.00
185			Remove Garage man and Utility Closet doors	1 -2 door set at closet									-	-	-	-	$0.00
186			Remove EXTG door sets and discard		1	LS	FC1&3	1	73.40				73	-	-	-	$73.40
187			Install new prehung fiberglass doors		1	LS	FC1&3	4	293.59	910.00			294	910	-	-	$1,203.59
188	08-500		Windows										-	-	-	-	$0.00
189		16.1	Damage at interior										-	-	-	-	$0.00
190		16.2	Improper installation of security system										-	-	-	-	$0.00
191		16.3	Leaking windows due to improper installation										-	-	-	-	$0.00
192		16.4	Leak at mullion										-	-	-	-	$0.00
193			Remove damaged windows and discard		10	EA	FC1&3	6	44.04				440	-	-	-	$440.38
194			Install new Milgard Vinyl windows according to manufacturers recommendations and in conjunction with siding, wood trim and veneer installation.		10	EA	FC1&3	10	73.40	6.56			734	66	-	-	$799.53
195			Nook	1 window	1	LS	FC1&3	1		627.00			-	627	-	-	$627.00
196			Bedroom 5	1 window	1	LS	FC1&3	1		243.10			-	243	-	-	$243.10
197			Bathroom 4	1 window	1	LS	FC1&3	1		160.60			-	161	-	-	$160.60
198			Dining Room	1 windows	1	LS	FC1&3	1		679.80			-	680	-	-	$679.80
199			Living Room	1 windows	1	LS	FC1&3	1		779.90			-	780	-	-	$779.90
200			Kitchen	2 windows	1	LS	FC1&3	2		448.80			-	449	-	-	$448.80
201			Family Room	3 windows	1	LS	FC1&3	3		1,567.50			-	1,568	-	-	$1,567.50

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202			Interior trim										-	-	-	-	$0.00
203			Remove wood stool and casing at interior	See Interior Trim									-	-	-	-	$0.00
204			Remove damaged GWB		1	LS	FC1&3	0.5	36.70				37	-	-	-	$36.70
205			Inspect and treat damaged framing		1	LS	FC1&3	1	73.40				73	-	-	-	$73.40
206			Remove and replace damaged insulation		1	LS	FC1&3	3	220.19	30.00			220	30	-	-	$250.19
207			Install GWB, tape and texture to match		1	LS	FC1&3	0.5	36.70	10.00			37	10	-	-	$46.70
208			Remove and replace water damaged flooring per room schedule	See Flooring Repairs									-	-	-	-	$0.00
209			Pre-prime stool and casing all sides	See Interior Trim									-	-	-	-	$0.00
210			Install wood stool and window casing	See Interior Trim									-	-	-	-	$0.00
211			Paint trim with two coats of premium paint	See Painting									-	-	-	-	$0.00
212			Paint entire wall surface to match, see room schedule	See Painting									-	-	-	-	$0.00
213			Remaining Locations		19	Locs						406.98	-	-	-	7,733	$7,732.67
214			Alarm reinstallation		1	LS	SUB					3,500.00	-	-	-	3,500	$3,500.00
215	09-200		Stucco Issues at retaining wall	160' x 5' tall = 800 SF									-	-	-	-	$0.00
216		17.1	Spalling stucco and efflorescence										-	-	-	-	$0.00
217			Remove existing stucco		800	sf	RC4	6	0.75				598	-	-	-	$598.01
218			Seal wall surface with Zypex waterproof sealer		800	sf	RC2	5	0.23	0.25			182	200	-	-	$382.44
219			Apply appropriate liquid-applied bonding agent		800	sf	RC2	5	0.23	0.25			182	200	-	-	$382.44
220			Stucco wall texture to match		800	sf	RC4	6	0.75	0.50			598	400	-	-	$998.01
221			Discard all debris		1	LS	D7	1	83.64				84	-	-	-	$83.64
222			Clean area		160	lf	D7	1	0.52				84	-	-	-	$83.64
223	09-640		Flooring Issues										-	-	-	-	$0.00
224		18.1	Wood flooring cupped										-	-	-	-	$0.00
225		18.2	Inadequate installation of vapor retarding system										-	-	-	-	$0.00
226		18.3	Un-workmanlike finish on wood floors										-	-	-	-	$0.00
227			Remove baseboard		1	LS	RC2	5	182.44								
228			Remove water damaged flooring		1,305	SF	D4	8	0.40		0.10		527	-	131	-	$657.23
229			Remove plywood subfloor		1,305	SF	D4	8	0.40		0.10		527	-	131	-	$657.23
230			Install Vapor Emission Control System	per Donnely specification	1,305	SF	SUB					8.00	-	-	-	10,440	$10,440.00
231			Install new plywood sub-floor		1,305	SF	SUB			0.55		1.00	-	718	-	1,305	$2,022.75
232			Install new wood flooring		1,305	SF	SUB					17.00	-	-	-	22,185	$22,185.00
233			Sand and Finish		1,305	SF	SUB					4.00	-	-	-	5,220	$5,220.00
234			Re-install carpet with new pad	material = new pad	375	SF	SUB			0.50		1.50	-	188	-	563	$750.00
235			Re-install baseboard		1	LS	RC2	5	182.44	0.50			182	1	-	-	$182.94
236			Alternate repair with Granite floors										-	-	-	-	$0.00
237			Install new Granite Flooring	Mortar bed installation	1,305	SF	SUB			5.00	0.80	14.00	-	6,525	1,044	18,270	$25,839.00
238			Re-install carpet with new pad after waterproof membrane	Includes Bead Blasting	375	SF	SUB			0.50		1.50	-	188	-	563	$750.00
239			Re-install baseboard		1	LS	RC2	5	182.44				182	-	-	-	$182.44

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240	09-900		Painting Issues										-	-	-	-	$0.00
241		19.1	Doors not painted on all six sides										-	-	-	-	$0.00
242		19.2	Premature deterioration of paint at exterior trim										-	-	-	-	$0.00
243			Interior Finishes		1	LS	SUB					16,950.00	-	-	-	16,950	$16,950.00
244			Faux	3 rooms, see schedule									-	-	-	-	$0.00
245			Wall Paper	5 rooms, see schedule									-	-	-	-	$0.00
246			Faux/Paper	1 room, see schedule									-	-	-	-	$0.00
247			Red	1 room, see schedule									-	-	-	-	$0.00
248			All other rooms painted white										-	-	-	-	$0.00
249			Exterior Paint										-	-	-	-	$0.00
250			See door and window schedule for requirements										-	-	-	-	$0.00
251	15-100		Plumbing Issues										-	-	-	-	$0.00
252		20.1	Water heater connector too close to combustible construction										-	-	-	-	$0.00
253			Remove and replace single wall vent connector with type “B” vent. Approximately 2 feet requires replacement.		1	LS	FC1	1	26.69	15.00			27	15	-	-	$41.69
254		20.2	Water heater B-vent penetration at garage ceiling improper										-	-	-	-	$0.00
255			Provide and install a larger sheet metal collar at the penetration		1	LS	FC1	0.5	26.69	5.00			27	5	-	-	$31.69
256		20.3	Shut-off valves are corroded										-	-	-	-	$0.00
257			Remove and replace valves with ball valves										-	-	-	-	$0.00
258			Main building shut off valve 1/12"		1	EA	SUB	1		13.00		75.00	-	13	-	75	$88.00
259			Shut off valve and check valve for recirculation system		2	EA	SUB	1		6.00		75.00	-	12	-	150	$162.00
260		20.4	Fireplace gas line penetrations unsealed										-	-	-	-	$0.00
261			Caulk the penetration with fire resistant caulk		1	LS	FC1	0.5	26.69	5.00			27	5	-	-	$31.69
262		20.5	Water heater combustion air openings improper										-	-	-	-	$0.00
263			Create opening in wall for installation of grill 100 sq. in. grill		1	LS	FC1	1	26.69				27	-	-	-	$26.69
264			Install grill patch and paint		1	LS	FC1&3	2	146.79	25.00			147	25	-	-	$171.79
265		20.6	Water hammer										-	-	-	-	$0.00
266			Install water hammer arrestors at the stop valves below the lavatory		1	LS	FC1	3	26.69	35.00			27	35	-	-	$61.69
267		20.7	Water closet loose										-	-	-	-	$0.00
268			Install corrosion resistant screws in the closet flange,		1	LS	FC1	1	26.69	5.00			27	5	-	-	$31.69
269			Re-install toilet; shim as required for level installation		1	LS	FC1	1	26.69				27	-	-	-	$26.69
270		20.8	Kitchen sink clean out missing										-	-	-	-	$0.00
271			Disconnect existing trap arm below kitchen sink.		1	LS	FC1	1	26.69				27	-	-	-	$26.69
272			Provide a “Y” fitting on the trap arm and reconnect the drain line		1	LS	FC1	1	26.69	25.00			27	25	-	-	$51.69
273			Install a clean out plug on the “Y” fitting		1	LS	FC1	1	26.69	15.00			27	15	-	-	$41.69
274		20.9	Whirlpool tub motor missing access door										-	-	-	-	$0.00
275			Remove master bathtub or remove the marble on the tubs entry side.		1	LS	FC1&3	2	146.79				147	-	-	-	$146.79
276			Relocate tub motor and GFI electrical outlet to the back side of the tub.		1	LS	FC1&3	2	146.79				147	-	-	-	$146.79
277			Provide access door in the corridor wall		1	LS	FC1&3	2	146.79	25.00			147	25	-	-	$171.79
278			Provide a surface finish to hide access door (coordinate with owners)		1	LS	FC1&3	3	220.19				220	-	-	-	$220.19
279			Patch and paint.		1	LS	FC1&3	3	220.19				220	-	-	-	$220.19

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#	CSI	Issue	Description	Notes / Ref.	Qty	Unit	Crew	Hrs	Unit Cost Labor	Unit Cost Material	Unit Cost Other	Unit Cost Subc.	Total Cost Labor	Total Cost Material	Total Cost Other	Total Cost Subc.	TOTAL
280		20.10	Plumbing leaks and poor workmanship										-	-	-	-	$0.00
281			Reimburse homeowner for all repairs performed to date										-	-	-	-	$0.00
282			Wayne's Plumbing Invoice		1	LS	SUB					428.00	-	-	-	428	$428.00
283			For pipe expansion noise – cut drywall 2' wide x 8' tall	16 sf	1	LS							-	-	-	-	$0.00
284			Disconnect hot water line		1	LS							-	-	-	-	$0.00
285			Isolate plumbing in contact with framing or drywall		1	LS							-	-	-	-	$0.00
286			Reconnect hot water line		1	LS											
287			Reinstall drywall, tape texture and finish to match existing		1	LS											
288			Paint wall plane	See painting									-	-	-	-	$0.00
289		20.11	Septic system lacks capacity	See 3.1									-	-	-	-	$0.00
290		20.12	Improper installation of hot water recirculation pipes and pump										-	-	-	-	$0.00
291			Remove drywall at areas to be re-piped		20	EA	D2	0.5	20.91				418	-	-	-	$418.18
292			Remove insulation		20	EA	D2	0.5	20.91				418	-	-	-	$418.18
293			Remove and re-pipe recirculation system		20	EA	SUB					450.00	-	-	-	9,000	$9,000.00
294			Drywall repair for plumbing repairs		1	LS	FC1&3	24	1,761.52	200.00	100.00		1,762	200	100	-	$2,061.52
295	15-700		Mechanical										-	-	-	-	$0.00
296		21.1	Refrigerant line insulation unprotected.										-	-	-	-	$0.00
297			Remove deteriorated and unprotected insulation		1	LS	FC1&3	1	73.40				73	-	-	-	$73.40
298			Install Rubatex insulation		1	LS	FC1&3	1	73.40	25.00			73	25	-	-	$98.40
299			Paint insulation to protect from sunlight		1	LS	FC1&3	1	73.40	5.00			73	5	-	-	$78.40
300		21.2	Refrigerant line wall penetration unsealed										-	-	-	-	$0.00
301			Spray polyurethane or latex foam to seal		1	LS	FC2	0.5	18.24	5.00			18	5	-	-	$23.24
302		21.3	Return air plenum unsealed										-	-	-	-	$0.00
303			Seal return air duct with mastic or foil backed duct tape.		1	LS	FC2	1.2	43.79	15.00			44	15	-	-	$58.79
304		21.4	Condensate drain runs with improper slope										-	-	-	-	$0.00
305			Notch attic OSB to allow for proper slope		1	LS	FC2	1	36.49				36	-	-	-	$36.49
306		21.5	Premature failure of equipment										-	-	-	-	$0.00
307			Reimburse homeowner for repair cost										-	-	-	-	$0.00
308			Pump down both compressors to remove freon and cap off system		1	LS	SUB					1,000.00	-	-	-	1,000	$1,000.00
309			Remove two units to storage	See Above									-	-	-	-	$0.00
310			Reinstall two compressor units	See Above									-	-	-	-	$0.00
311			Fill systems with freon and test function	See Above									-	-	-	-	$0.00
312			Install new insulation and paint to prevent deterioration	See Above									-	-	-	-	$0.00
313	16-100		Electrical										-	-	-	-	$0.00
314		22.1	Wire undersized for circuits.	30% of circuits									-	-	-	-	$0.00
315			Remove drywall for access to wiring	Estimated SF	800	SF	D2	12	0.63				502	-	-	-	$501.82
316			Remove inadequate wiring		5	EA	FC2&3	10	166.38				832	-	-	-	$831.92
317			Replace 14 gauge wiring with 10 gauge	10/2 romex due to long runs	5	EA	FC2&3	15	249.57	60.00			1,248	300	-	-	$1,547.87
318			Replace previously repaired breakers with 20 amp breakers		5	EA	FC2&3	5	83.19	8.00			416	40	-	-	$455.96
319			Replace drywall taped textured and ready for paint	Estimated SF	800	SF	FC1&3	18	1.65	0.06			1,321	50	-	-	$1,371.14
320			Paint affected wall plane	See painting									-	-	-	-	$0.00

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#	CSI	Issue	Description	Notes / Ref.	Qty	Unit	Crew	Hrs	Unit Cost Labor	Unit Cost Material	Unit Cost Other	Unit Cost Subc.	Total Cost Labor	Total Cost Material	Total Cost Other	Total Cost Subc.	TOTAL
321		22.2	Excessive voltage drops at duplex receptacles										-	-	-	-	$0.00
322			Remove existing push-in receptacles		64	EA	FC2	12.8	7.30				467	-	-	-	$467.04
323			Replace receptacles with HD back wire type		64	EA	FC2	25.6	14.60	1.50			934	96	-	-	$1,030.08
324		22.3	Unsealed openings in main electrical panel.										-	-	-	-	$0.00
325			Install substitute knock out and seal in place		1	EA	FC2	0.4	14.60	3.00			15	3	-	-	$17.60
326		22.4	Unsealed electrical penetrations										-	-	-	-	$0.00
327			Install gasket when reinstalling fixtures.		7	EA	FC2	0.1	0.52	1.00			4	7	-	-	$10.65
328			Remove duplex cover, receptacle, and in wall box		1	LS	FC3	3	140.11				140	-	-	-	$140.11
329			Install old work style box 1" higher than existing	INCL below									-	-	-	-	$0.00
330			Reinstall duplex receptacle		1	LS	FC3	2	93.41	10.00			93	10	-	-	$103.41
331			Repair drywall and wallpaper		1	LS	FC3	6	280.22	50.00			280	50	-	-	$330.22
332			Install new duplex receptacle cover		1	LS	FC3	0.2	9.34	5.00			9	5	-	-	$14.34
333			Previous Repairs										-	-	-	-	$0.00
334			Replace 15 amp circuits with 20 amp circuits in Master Bathroom		1	LS	SUB					825.00	-	-	-	825	$825.00
335			Replace oversized circuit breakers		1	LS	SUB					928.00	-	-	-	928	$928.00
336			Drywall repair for electrical repairs		1	LS	FC1&3	24	1,761.52	500.00	100.00		1,762	500	100	-	$2,361.52
337																	
338	13-280		Hazardous Material Remediation (Microbial)	Scope not established													
339			Set up containment														
340			Remove all visible mold														
341			Dispose of all debris														
342			Clean area inside containment														
343			Mod testing for clearance														
344													92,106	51,518	2,400	114,117	$260,141.01

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Roddy Residence
Labor Rates

1	Code	Unit	Rate	Description									Asst.				
2				Laborer			Carpenter			Conc. Fin.			Project	Project			
3				App	Jou	For.	App	Jou	For.	App	Jou	For.	Manager	Manager	Supt.	Average	
4															.		
5	**Cost Unburdened**			10.00	13.50	21.00	15.00	25.00	32.00	15.00	25.00	32.00	20.00	40.00	35.00	31.50	
6	Health Care	$0	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	Vacation	$0	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	Education	$0.00	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9	**Fica**	7.65%	%	0.77	1.03	1.61	1.15	1.91	2.45	1.15	1.91	2.45	1.53	3.06	2.68	2.41	
10	State	0.00%	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11	**Federal Unemp**	0.80%	%	0.08	0.11	0.17	0.12	0.20	0.26	0.12	0.20	0.26	0.16	0.32	0.28	0.25	
12	**Futa**	8.00%	%	0.80	1.08	1.68	1.20	2.00	2.56	1.20	2.00	2.56	1.60	3.20	2.80	2.52	
13	SDI	0.00%	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14	**State Unemp**	3.50%	%	0.35	0.47	0.74	0.53	0.88	1.12	0.53	0.88	1.12	0.70	1.40	1.23	1.10	
15	**Workmans Comp BLW $21**	48.00%	%	4.80	6.48		7.20			7.20			1.00	2.00		4.78	
16	**Workmans Comp ABV $21**	16.00%	%			3.36		4.00	5.12		4.00	5.12			5.60		
17	**Vehicle**	$0	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	**Liability Insurance**	10.00%	%	1.00	1.35	2.10	1.50	2.50	3.20	1.50	2.50	3.20	2.00	4.00	3.50	3.15	
19																0.00	
20	**Burdened $/Hr.**			**17.80**	**24.02**	**30.65**	**26.69**	**36.49**	**46.70**	**26.69**	**36.49**	**46.70**	**26.99**	**53.98**	**51.08**	**47.14**	
21	Percent Overhead			44%	44%	31%	44%	31%	31%	44%	31%	31%	26%	26%	31%	46.21%	**Crew Cost**
22																**Crew Cost**	**per Hour**
23	**Demolition**															**per Hour**	**w/ 20% O&P**
24	**D 1**				1											**$24.02**	**$28.83**
25	**D 2**			1	1											**$41.82**	**$50.18**
26	**D 3**				2											**$48.05**	**$57.66**
27	**D 4**			1	2											**$65.84**	**$79.01**
28	**D 5**				2			1								**$84.53**	**$101.44**
29	**D 6**			1	2			1								**$102.33**	**$122.79**
30	**D 7**			2	2											**$83.64**	**$100.36**
31	**D 8**			2	2			2								**$156.61**	**$187.93**
32	**Site Work**																
33	**SW 1**			1												**$17.80**	**$21.35**
34	**SW 2**			2												**$35.59**	**$42.71**
35	**SW 3**			1	1											**$41.82**	**$50.18**
36	**SW 4**			2	1											**$59.61**	**$71.54**
37	**SW 5**			0	1			1			1					**$97.00**	**$116.40**

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[redacted] Residence
Labor Rates

1	Code	Unit	Rate	Description									Asst.				
2				Laborer			Carpenter			Conc. Fin.			Project	Project			
3				App	Jou	For.	App	Jou	For.	App	Jou	For.	Manager	Manager	Supt.	Average	
4															.		
5	**Cost Unburdened**			10.00	13.50	21.00	15.00	25.00	32.00	15.00	25.00	32.00	20.00	40.00	35.00	31.50	
6	Health Care	$0	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	Vacation	$0	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	Education	$0.00	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9	**Fica**	7.65%	%	0.77	1.03	1.61	1.15	1.91	2.45	1.15	1.91	2.45	1.53	3.06	2.68	2.41	
10	State	0.00%	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11	**Federal Unemp**	0.80%	%	0.08	0.11	0.17	0.12	0.20	0.26	0.12	0.20	0.26	0.16	0.32	0.28	0.25	
12	**Futa**	8.00%	%	0.80	1.08	1.68	1.20	2.00	2.56	1.20	2.00	2.56	1.60	3.20	2.80	2.52	
13	SDI	0.00%	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14	**State Unemp**	3.50%	%	0.35	0.47	0.74	0.53	0.88	1.12	0.53	0.88	1.12	0.70	1.40	1.23	1.10	
15	**Workmans Comp BLW $21**	48.00%	%	4.80	6.48		7.20			7.20			1.00	2.00		4.78	
16	**Workmans Comp ABV $21**	16.00%	%			3.36		4.00	5.12		4.00	5.12			5.60		
17	**Vehicle**	$0	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	**Liability Insurance**	10.00%	%	1.00	1.35	2.10	1.50	2.50	3.20	1.50	2.50	3.20	2.00	4.00	3.50	3.15	
19																0.00	
20	**Burdened $/Hr.**			**17.80**	**24.02**	**30.65**	**26.69**	**36.49**	**46.70**	**26.69**	**36.49**	**46.70**	**26.99**	**53.98**	**51.08**	**47.14**	
21	Percent Overhead			44%	44%	31%	44%	31%	31%	44%	31%	31%	26%	26%	31%	46.21%	**Crew Cost**
38	**SW 6**			0	2			2			2					**$194.00**	**$232.80**
39	**SW 7**						1	1								**$63.18**	**$75.82**
40	**SW 8**						1	2								**$99.67**	**$119.60**
41	**SW 9**						4	2								**$179.75**	**$215.69**
42	**SW 10**				1			1								**$60.51**	**$72.61**
43	**Concrete**																
44	**C 1**										1					**$36.49**	**$43.79**
45	**C 2**									1	1					**$63.18**	**$75.82**
46	**C 3**									1	2	1				**$146.37**	**$175.65**
47	**C 4**							1			3					**$145.95**	**$175.14**
48	**C 5**				1			2			3					**$206.46**	**$247.75**
49	**C 6**			1	1		1	1		1	3					**$241.15**	**$289.38**
50	**C 7**			1	1		1	2		1	2	1				**$287.86**	**$345.43**
51	**Rough Carpentry**																
52	**RC 1**						1									**$26.69**	**$32.03**
53	**RC 2**							1								**$36.49**	**$43.79**

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[redacted] Residence
Labor Rates

1	Code	Unit	Rate	Description									Asst.				
2				Laborer			Carpenter			Conc. Fin.			Project	Project			
3				App	Jou	For.	App	Jou	For.	App	Jou	For.	Manager	Manager	Supt.	Average	
4															.		
5	**Cost Unburdened**			10.00	13.50	21.00	15.00	25.00	32.00	15.00	25.00	32.00	20.00	40.00	35.00	31.50	
6	Health Care	$0	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	Vacation	$0	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	Education	$0.00	/Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9	**Fica**	7.65%	%	0.77	1.03	1.61	1.15	1.91	2.45	1.15	1.91	2.45	1.53	3.06	2.68	2.41	
10	State	0.00%	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11	**Federal Unemp**	0.80%	%	0.08	0.11	0.17	0.12	0.20	0.26	0.12	0.20	0.26	0.16	0.32	0.28	0.25	
12	**Futa**	8.00%	%	0.80	1.08	1.68	1.20	2.00	2.56	1.20	2.00	2.56	1.60	3.20	2.80	2.52	
13	SDI	0.00%	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14	**State Unemp**	3.50%	%	0.35	0.47	0.74	0.53	0.88	1.12	0.53	0.88	1.12	0.70	1.40	1.23	1.10	
15	**Workmans Comp BLW $21**	48.00%	%	4.80	6.48		7.20			7.20			1.00	2.00		4.78	
16	**Workmans Comp ABV $21**	16.00%	%			3.36		4.00	5.12		4.00	5.12			5.60		
17	**Vehicle**	$0	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	**Liability Insurance**	10.00%	%	1.00	1.35	2.10	1.50	2.50	3.20	1.50	2.50	3.20	2.00	4.00	3.50	3.15	
19																0.00	
20	**Burdened $/Hr.**			**17.80**	**24.02**	**30.65**	**26.69**	**36.49**	**46.70**	**26.69**	**36.49**	**46.70**	**26.99**	**53.98**	**51.08**	**47.14**	
21	Percent Overhead			44%	44%	31%	44%	31%	31%	44%	31%	31%	26%	26%	31%	46.21%	**Crew Cost**
54	**RC 3**								1							**$46.70**	**$56.04**
55	**RC 4**						1	2								**$99.67**	**$119.60**
56	**RC 5**						2	2								**$126.36**	**$151.63**
57	**RC 6**						3	3	1							**$236.24**	**$283.49**
58	**RC 7**				1		2	2								**$150.38**	**$180.46**
59	**RC 8**				2		2	2	1							**$221.11**	**$265.33**
60	**Finish Carpentry**																
61	**FC 1**						1									**$26.69**	**$32.03**
62	**FC 2**							1								**$36.49**	**$43.79**
63	**FC 3**								1							**$46.70**	**$56.04**
64	**FC 4**						1	2								**$99.67**	**$119.60**
65	**FC 5**						2	2								**$126.36**	**$151.63**
66	**FC 6**						2	2	1							**$173.06**	**$207.68**

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[redacted] Residence
Calls, Sub-Bids, Materials

	1	2	3	4	5
Date:	2/19/2001	2/19/2001	2/19/2001	2/19/2001	2/19/2001
Time:					
Sub-Contractor:					
Material Supplier:	Home Depot - Oceanside	Home Depot - Oceanside	Home Depot - Oceanside	White Cap	Home Depot - Oceanside
Contact:	Store visit	Store visit	Store visit		Store visit
Street Address:					
Phone #:				949-493-9448	
Fax #:					
Bidding Sections:	Line Wire - Roll	Building Paper	Stucco Patch - 25 LB bag	Moist Stop 9" x 300'	Moist Stop- EZ Seal 12" x 75'
Bidding Section #'s:			by Custom Building Products		
Amount:	$2.99	$10.95	$11.99	$34.88	$3,800.00
Tax and Delivery:	$0.30	$1.10	$1.20	$3.49	$380.00
Bid Amount:	$3.29	$12.05	$13.19	$38.37	$4,180.00
With Waste:					
Inclusions:					

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[redacted] Residence
Calls, Sub-Bids, Materials

	6	7	8	9	10
Date:	2/19/2001	2/19/2001	2/19/2001	2/19/2001	2/19/2001
Time:					
Sub-Contractor:					
Material Supplier:	White Cap	Lowes	Lowes	Home Depot - Oceanside	Home Depot - Oceanside
Contact:				Store visit	Store visit
Street Address:		San Clemente	San Clemente		
Phone #:	949-493-9448			949-493-9448	
Fax #:					
Bidding Sections:	Ice & Water Shield 12" x 75'	Poly Sheeting - 4 MIL 10'x100'	Poly Sheeting - 2 MIL 10'x200'	Silka-Flex 1A Construction Sealant - Tube	Moist Stop Sealant - Tube
Bidding Section #'s:					
Amount:	$51.84	$18.97	$18.52	$4.47	$5.96
Tax and Delivery:	$5.18	$1.90	$1.85	$0.45	$0.60
Bid Amount:	$57.02	$20.87	$20.37	$4.92	$6.56
With Waste:					
Inclusions:					

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Calls, Sub-Bids, Materials

	11	12	13	14	15	16
Date:	10/9/2002	10/9/2002	2/20/2001	9/16/2002	9/16/2002	9/30/2002
Time:						
Sub-Contractor:						
Material Supplier:	Home Depot	Home Depot - Oceanside	Home Depot	Ganahl Lumber	Ganahl Lumber	Home Depot - Oceanside
Contact:		Store visit		George	George	Store visit
Street Address:				Orange, Lake Forest	Orange, Lake Forest	
Phone #:	949-364-1900		949-364-1900	949-830-3600	949-830-3600	
Fax #:						
Bidding Sections:	Mortar Type -S	Diamond Lath	Building Paper	Siding	Siding	10' 2" ABS
Bidding Section #'s:		27"x96" approximately 18 sf	60 MIN Jumbo-Tex (240 SF/Roll)	Cedar Valley siding panels, 14.25 sf	Shaker town siding panels 3.75/sf	
Amount:	$3.99	$5.36	$9.74	$45.00	$3.75	$3.98
Tax and Delivery:	$0.40	$0.54	$0.97	$4.50	$0.38	$0.40
Bid Amount:	$4.39	$5.90	$10.71	$49.50	$4.13	$4.38
With Waste:			$12.54	$64.35		
Inclusions:				Minimum delivery $100, ave. $300		

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[redacted] Residence
Calls, Sub-Bids, Materials

	17	18	19	20	21	22
Date:	8/8/2002	8/8/2002	8/8/2002	8/8/2002	8/8/2002	8/8/2002
Time:						
Sub-Contractor:						
Material Supplier:	Home Depot - Oceanside	Home Depot - Oceanside	Lowes	Home Depot - Oceanside	Lowes	Home Depot - Oceanside
Contact:	Store visit	Store visit		Store visit		Store visit
Street Address:			San Clemente		San Clemente	
Phone #:						
Fax #:						
Bidding Sections:	Plastic Safety Fence	Lumber	Sheet Metal	Roofing	Insulation	Sheet Metal
Bidding Section #'s:	4 x 100	2"x 4" x 8'	3' x 4' Galvanized Sheet	Roof to wall flashing 2x3	8 1/4"x15"x22' R-25	Z-bar 1"
Amount:	$19.98	$3.34	$7.99	$3.98	$25.68	$5.98
Tax and Delivery:	$2.00	$0.33	$0.80	$0.40	$2.57	$0.60
Bid Amount:	$21.98	$3.67	$8.79	$4.38	$28.25	$6.58
With Waste:						
Inclusions:						

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[redacted] Residence
Calls, Sub-Bids, Materials

	23	24	25	26	27	28	29
Date:	8/12/2002	8/26/2002	8/27/2002	8/28/2002	9/3/2002	9/4/2002	9/4/2002
Time:							
Sub-Contractor:							
Material Supplier:	Home Depot - Oceanside	Orange County Scaffold	Paramount Scaffold	Home Depot	Home Depot	James Hardware	James Hardware
Contact:	Store visit	Burt	Travis	Pro Book	CD/Online	Martin	Martin
Street Address:		Orange	Orange				
Phone #:		714.637.6010	714.921.2101			562.391.	562.691.1711
Fax #:		714.637.7960	714.921.1298				
Bidding Sections:	Lumber	Scaffolding	Scaffolding	Sheet Metal	Roofing	Doors and windows	Weather stripping
Bidding Section #'s:	3/8 OSB sheathing			Weep Screed	30 lb. felt	French Door Jambs solid 5 1/4" per foot	compression type 7' lengths
Amount:	$11.39	$1,000.00	$900.00	$2.74	$15.99	$4.00	$7.00
Tax and Delivery:	$1.14	$100.00	$90.00	$0.27	$1.60	$0.40	$0.70
Bid Amount:	$12.53	$1,100.00	$990.00	$3.01	$17.59	$4.40	$7.70
With Waste:							
Inclusions:							

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[redacted] Residence
Calls, Sub-Bids, Materials

	30	31	32	33	34	35
Date:	10/16/2002		9/30/2002	9/30/2002	9/30/2002	9/30/2002
Time:						
Sub-Contractor:						
Material Supplier:	White Cap Direct		Lowes	Lowes	Home Depot - Oceanside	Home Depot - Oceanside
Contact:	Online				Store visit	Store visit
Street Address:			San Clemente	San Clemente		
Phone #:						
Fax #:						
Bidding Sections:	Waterproofing	Paint	Tile	Tile	Plumbing	Plumbing
Bidding Section #'s:	MFM Products Bituthene 18" Wide 75'	AMT per SF assume 400 SF coverage for EA coat with 2 coat interior paint	Dal Tile 4 1/4 x 4 1/4 colored	Dal Tile 4 1/4 x 4 1/4 colored bullnose	2" ABS 90 elbow	2" ABS Sanitary Tee
Amount:	$49.12	$20.00	$0.36	$1.32	$1.53	$2.44
Tax and Delivery:	$4.91	$2.00	$0.04	$0.13	$0.15	$0.24
Bid Amount:	$54.03	$22.00	$0.40	$1.45	$1.68	$2.68
With Waste:			$0.44	$1.60		
Inclusions:						

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[redacted] Residence
Calls, Sub-Bids, Materials

	36	37	38	39	40	41	42
Date:	9/30/2002	9/30/2002	9/30/2002	9/30/2002	9/30/2002	9/30/2002	9/30/2002
Time:							
Sub-Contractor:							
Material Supplier:	Home Depot	Home Depot - Oceanside	Home Depot	Home Depot	Home Depot - Oceanside	Lowes	Home Depot - Oceanside
Contact:	Probook CD	Store visit	Probook CD	Probook CD	Store visit	Commercial Catalog vol. 3	Store visit
Street Address:							
Phone #:							
Fax #:							
Bidding Sections:	Plumbing	Drainage	Drainage	Drainage	Drainage	Drainage	Drywall
Bidding Section #'s:	RectorSeal 4 oz	Perf Pipe 4"x100'	3" round grate	Pipe to downspout adapter	Couplers 4"	Tee	1/2" 4x8
Amount:	$4.29	$44.90		$2.95	$2.90		$6.88
Tax and Delivery:	$0.43	$4.49		$0.30	$0.29		$0.69
Bid Amount:	$4.72	$49.39		$3.25	$3.19		$7.57
With Waste:							
Inclusions:							

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[redacted] Residence
Calls, Sub-Bids, Materials

	43	44	45	46	47	48
Date:	9/30/2002	9/30/2002	10/3/2002	10/3/2002	10/3/2002	10/3/2002
Time:						
Sub-Contractor:						
Material Supplier:	Home Depot - Oceanside	Home Depot - Oceanside	Home Depot - Oceanside	Home Depot - Oceanside	Home Depot - Oceanside	Home Depot - Oceanside
Contact:	Store visit	Store visit	Store visit	Store visit	Store visit	Store visit
Street Address:						
Phone #:						
Fax #:						
Bidding Sections:	Lumber	Lumber				
Bidding Section #'s:	2"x6"x12'	CDX 3/8"x4'x8'	2"x3" White Downspout	White Downspout Band	White Down Spout Elbow	Gutter End w/ Drop
Amount:	$4.99	$14.75	$7.68	$0.98	$2.29	$3.38
Tax and Delivery:	$0.50	$1.48	$0.77	$0.10	$0.23	$0.34
Bid Amount:	$5.49	$16.23	$8.45	$1.08	$2.52	$3.72
With Waste:						
Inclusions:						

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[redacted] Residence
Calls, Sub-Bids, Materials

	49	50	51	52	53	54
Date:	10/3/2002	10/9/2002	10/9/2002	10/9/2002	10/9/2002	10/9/2002
Time:						
Sub-Contractor:						
Material Supplier:	Home Depot - Oceanside	Ganahl Lumber	Decorative Woods	Ganahl Lumber	Home Depot - Oceanside	City of LA
Contact:	Store visit	Alicia	Scott	George	Store visit	Maria
Street Address:		Anaheim	Lake Forest	Lake Forest		
Phone #:			949-837-5904	949-830-3600		818-756-8460
Fax #:						
Bidding Sections:		Milled Window Sill Ledger	Doors	Trellis Ledger	Trellis Wall	Waste Disposal
Bidding Section #'s:	Gutter	Custom milled clear doug fir	Jamsill Tray	3/4" Marine Plywood 4x8	1/2" CDX Strct #1 4x8	City permit for dumpster Good for 60 days Permit may be denied based on access and street width
Amount:	$3.99	$7.29		$64.37	$17.34	$66.30
Tax and Delivery:	$0.40	$0.73		$6.44	$1.73	$6.63
Bid Amount:	$4.39	$8.02		$70.81	$19.07	$72.93
With Waste:						
Inclusions:		$75 set up charge				

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[redacted] Residence
Calls, Sub-Bids, Materials

	55	56	57	58
Date:	10/9/2002	10/9/2002	10/9/2002	10/9/2002
Time:				
Sub-Contractor:				
Material Supplier:	Waste Management	Sepulveda Building Materials	Sepulveda Building Materials	Sepulveda Building Materials
Contact:	Lisa	Hector	Hector	Hector
Street Address:	LA Metro	Laguna Niguel	Laguna Niguel	Laguna Niguel
Phone #:	310-605-6006	949-347-2100	949-347-2100	949-347-2100
Fax #:				
Bidding Sections:	Waste Disposal	Coronado Stone	Coronado Stone	Eldorado Material
Bidding Section #'s:	20 yd dumpster - 7 day rental	White Granite River Rock - Field 4.58/SF 100 SF/box	Ledger w/ drip edge per LF	Ledger w/ drip edge per LF
Amount:	$418.32	$458.00	$6.00	$6.25
Tax and Delivery:	$41.83	$45.80	$0.60	$0.63
Bid Amount:	$460.15	$503.80	$6.60	$6.88
With Waste:			$7.26	
Inclusions:				

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[redacted] Residence
Calls, Sub-Bids, Materials

	59	60	61	62	63	64
Date:	10/9/2002	10/9/2002	10/11/2002	10/11/2002	10/11/2002	10/11/2002
Time:						
Sub-Contractor:						
Material Supplier:	Sepulveda Building Materials	Prime Source BLDG Products	Ganahl Lumber	Ganahl Lumber	Ganahl Lumber	Ganahl Lumber
Contact:	Hector	Maureen	Brian Hicks	Brian Hicks	Brian Hicks	Brian Hicks
Street Address:	Laguna Niguel	Anaheim	Lake Forest	Lake Forest	Lake Forest	Lake Forest
Phone #:	949-347-2101	714-780-1255	949-830-3600	949-830-3600	949-830-3600	949-830-3600
Fax #:						
Bidding Sections:	Eldorado Material	Fasteners	Windows	Windows	Windows	Windows
Bidding Section #'s:	American Blend Field 4.76/SF 100 SF/BOX	Maze nails Stainless steel 6d 2" ring shank 50# box	8060 Double single hung	4036 Horizontal Slider	7040 Double single hung	8020 XOX
Amount:	$476.00		$709.00	$204.00	$570.00	$285.00
Tax and Delivery:	$47.60		$70.90	$20.40	$57.00	$28.50
Bid Amount:	$523.60		$779.90	$224.40	$627.00	$313.50
With Waste:						
Inclusions:						

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[redacted] Residence
Calls, Sub-Bids, Materials

	65	66	67	68		
Date:	10/11/2002	10/11/2002	10/11/2002	10/11/2002	10/11/2002	10/14/2002
Time:						
Sub-Contractor:						
Material Supplier:	Ganahl Lumber	Ganahl Lumber	Ganahl Lumber	Ganahl Lumber	Ganahl Lumber	Orange Coast Fence Co.
Contact:	Brian Hicks	Brian Hicks	Brian Hicks	Brian Hicks	Brian Hicks	
Street Address:	Lake Forest	Lake Forest	Lake Forest	Lake Forest	Lake Forest	
Phone #:	949-830-3600	949-830-3600	949-830-3600	949-830-3600	949-830-3600	800-479-8690
Fax #:						
Bidding Sections:	Windows	Windows	Windows	Doors	Doors	Fence - 6' redwood
Bidding Section #'s:	4040 Horizontal Slider	2626 Single Hung	6060 Double single hung	Fiberglass Prehung 2668 2 w/ threshold and weatherstripping	2868 Fiberglass Prehung with threshold and weatherstripping	Removal and disposal $3-4 Gate $55 Fence installed $36/lf for 170lf of fence
Amount:	$221.00	$146.00	$618.00	$606.00	$210.00	$6,770.00
Tax and Delivery:	$22.10	$14.60	$61.80	$60.60	$21.00	
Bid Amount:	$243.10	$160.60	$679.80	$666.60	$231.00	
With Waste:						
Inclusions:						

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[redacted] Residence
Calls, Sub-Bids, Materials

Date:	10/14/2002	10/14/2002	10/14/2002	10/16/2002	10/14/2002	10/14/2002
Time:						
Sub-Contractor:						
Material Supplier:	Five Bros. Fence Co.	Pyramid Fence Co.	Home Depot Pro Book	White Cap Direct	White Cap Direct	Home Depot - Oceanside
Contact:			CD Online	Online	Online	Store visit
Street Address:	Mission Viejo	Costa Mesa				
Phone #:	949-458-0171	949-548-4422				
Fax #:						
Bidding Sections:	Fence - 6' redwood	Fence - 6' redwood	Brick Molding	Waterproofing	Drainage	Drainage
Bidding Section #'s:	Removal and disposal $2 Gate $275 Fence installed $21/lf for 170lf of fence	Removal and disposal $2.50 Gate $55+lf Fence installed $20/lf for 170lf of fence	1 1/4"x2"	MFM Products Bituthene 24" Wide 75'	6" rnd drain basin	6" rnd drain basin grate
Amount:	$4,185.00	$3,890.00	$1.16	$64.19	$8.92	$4.94
Tax and Delivery:			$0.12	$6.42	$0.89	$0.49
Bid Amount:			$1.28	$70.61	$9.81	$5.43
With Waste:						
Inclusions:						

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[redacted] Residence
Calls, Sub-Bids, Materials

Date:	10/22/2002	10/22/2002	10/22/2002	10/22/2002	6/20/2003	7/7/2003
Time:						
Sub-Contractor:					Road Plumbing	
Material Supplier:	Home Depot CD	Home Depot CD	Home Depot CD	Home Depot CD		Home Depot - Oceanside
Contact:	Online	Online	Online	Online	Bob	Store visit
Street Address:						
Phone #:						
Fax #:						
Bidding Sections:	Sheet Metal	Sheet Metal	Sheet Metal	Sheet Metal	Plumbing	Electrical
Bidding Section #'s:	L-FLSG for base of veneer 4x4 galv 28 guage	L-FLSG for veneer cap 3x3 bonderized 28 guage	1.5x4 26 guage drip edge for wdos and doors		Repipe of plumbing fixtures	Gasket
Amount:	$5.98	$4.98	$2.98		$450.00	$0.80
Tax and Delivery:	$0.60	$0.50	$0.30			$0.08
Bid Amount:	$6.58	$5.48	$3.28			$0.88
With Waste:	$7.24	$6.03	$3.61			
Inclusions:						

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[redacted] Residence
Calls, Sub-Bids, Materials

Date:	7/7/2003	7/7/2003	7/7/2003	7/7/2003	7/7/2003	7/14/2003
Time:						
Sub-Contractor:						JJJ Floor covering
Material Supplier:	Home Depot - Oceanside	Home Depot - Oceanside	Home Depot - Oceanside	Home Depot - Oceanside	Home Depot CD	
Contact:	Store visit	Store visit	Store visit	Store visit	Online	Bob
Street Address:					Mission Viejo	Poway
Phone #:						
Fax #:						
Bidding Sections:	Electrical	Electrical	Electrical	Plumbing	Plumbing	Slab Sealing
Bidding Section #'s:	Duplex Receptecle, 20amp	250 lf 12-2AWG 20amp Romex	Single Pole 20 amp circuit breaker	1/2" ball valve	1 1/2" ball valve	
Amount:	$8.97	$28.50	$9.60	$8.98	$8.98	
Tax and Delivery:	$0.90	$2.85	$0.96	$0.90	$0.90	
Bid Amount:	$9.87	$31.35	$10.56	$9.88	$9.88	$6.00 for 2 coat
With Waste:						$8.00 For 4 Coat
		Need 2				
Inclusions:		$62.70				Bead Blasting

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[redacted] Residence
Calls, Sub-Bids, Materials

Date:	7/14/2003	7/18/2003	7/28/2003	7/28/2003
Time:				
Sub-Contractor:	Coast Painting	Gutter Master		
Material Supplier:			Nations Rents	Nations Rents
Contact:	Garrett		Phil	Phil
Street Address:	Calsbad			
Phone #:		800-464-5136		
Fax #:				
Bidding Sections:	Painting		Bobcat rental	Trencher rental
Bidding Section #'s:				
Amount:		$2,080.00	$150.00	$100.00
Tax and Delivery:				
Bid Amount:	$16,950.00	$2,288.00		
With Waste:				
Inclusions:			Per Day	Per Day

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[redacted] Residence
General Conditions

							Unit Cost				Total Cost				
Line	DESCRIPTION:	NOTES:	QTY.	UNIT	CREW	HRS.	Labor	Material	Other	Subc.	Labor	Material	Other	Subc.	TOTAL
1															
2	General Conditions														
3															
4	Superintendent		3	mo			$6,500				19,500	-	-	-	19,500
5	Move On/Off		0	ls					$300.00		-	-	-	-	-
6	Temporary Facilities - Set Up		0	ls					$300.00		-	-	-	-	-
7	Temporary Facilities - Monthly:		0								-	-	-	-	-
8	Electrical		0	mo					$100.00		-	-	-	-	-
9	Phone		3	mo					$100.00		-	-	300	-	300
10	Toilets		3	mo					$95.00		-	-	285	-	285
11	Office Trailer/Supplies		0	mo							-	-	-	-	-
12	Storage Containers		0	mo							-	-	-	-	-
13	General Clean Up - Daily		3	mo			$600	$50.00			1,800	150	-	-	1,950
14	General Clean Up - Final		1	ls			$500				500	-	-	-	500
15	Temporary Fencing		0	lf						$3.00	-	-	-	-	-
16	Scaffolding		1	LS						$990.00	-	-	-	990	990
17	Dumpsters	Waste Management	6	LS						418.32	-	-	-	2,510	2,510
18	Tools		0	mo					$100.00		-	-	-	-	-
19	Equipment		0	mo							-	-	-	-	-
20	Safety		0	mo					$100.00		-	-	-	-	-
21	Project Documentation, Job Photo Log		3	mo			$100.00	$100.00			300	300	-	-	600
22	Job Closeout		1	ls					$500.00		-	-	500	-	500
23	Storage Rental		0	mo							-	-	-	-	-
24	City Permit for Dumpster 60 days	Los Angeles	1	ls					66.30		-	-	66	-	66
24	**Total General Conditions**										-	-	-	-	27,201
25															

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[redacted] Residence
Conceptual Construction Schedule

		G.C./Subcontractors												Week Number															
#	Item	GC	FENCE	MASN	HVAC	PLUM.	ELEC	FLR	RNGTR	S.M.	ROOF	STUCCO	ALRM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Demolition	X																											
2	Septic System					X																							
3	Lanscape Irrigation					X																							
4	Grading	X																											
5	Rough Carpentry	X																											
6	Masonry			X																									
7	Sheet Metal									X																			
8	Lathing	X																											
9	Doors & Windows	X																											
10	Exterior Siding & Trim	X																											
11	Plumbing					X																							
12	Mechanical				X																								
13	Electrical						X																						
14	Stucco											X																	
15	GWB	X																											
16	Flooring																												
17	Painting	X																											
18	Alarm												X																
19	Cabinetry Issues	X																											
20	Roofing										X																		
21	Rain Gutters								X																				
22	Fencing		X																										
23	Landscaping	X																											

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[redacted] Residence
Room Schedule

Line	Photos	Rooms per PF's photos	Rooms per plans	Flooring	Walls	WDOS	EXT DRS	Replace Windows	Replace Doors	Approx.Sq. Ft.	H	Notes	Floor
1	4.21	Nook	Nook	Wood	Faux	1		1		80			1
2	4.8	G-BR	Bedroom 5	Carpet	Paint	1		1		150			1
3	4.11-4.12	G-BA	Bathroom 4	Tile	Paint	1		1		40			1
4	3.23-3.24	Dining Room	Dining Room	Wood	Paper	2		1		250			1
5	3.20-3.21	Living Room	Living Room	Carpet	Red	3	1	1		225			1
6	4.15	Kitchen	Kitchen	Wood	Faux	2		2		225			1
7	4.19-4.20	Family Room	Family Room	Wood	Faux	3	1	3		400			1
8		Laundry	Laundry	Tile	Paint					72			1
9	4.13	Garage	Garage	Concrete	Paint	3	1		1				1
10	3.19	Entry	Entry	Wood	Paint		1			150			1
11	4.16	Pantry	Butlers Pantry	Wood	Paint					60			1
12	4.22	Stairs at Entry	Stairs	Carpet	Paint	2							1 1/2
13	5.2-5.4	MBR	Master Bedroom	Carpet	Paint	3	1						2
14	5.10-5.11	MBA	Master Bathroom	Stone	Paint	2							2
15	4.23	Landing	Landing	Carpet	Paint	1							2
16	5.21	Office	Bedroom 4	Carpet	Paint	4							2
17	5.19-5.20	BA3	Bathroom 3	Tile	Paint								2
18	5.9	MB Closet	Master Closet	Carpet	Paint	1							2
19	4.24	Hall 2	Hall 2	Carpet	Paint								
20	5.24	Office Bath	NA	Carpet	Paint								
21	4.7	Lavatory	Powder Room	Wood	Paper					80			1
22	3.20,4.8	Hall	Hall	Wood	Paper					60			1
23	5.18	BR3	Bedroom 3	Carpet	Paper	1							2
24	5.15	BA2	Bathroom 2	Tile	Paper								2
25	5.13-5.14	BR2	Bedroom 2	Carpet	Paper/Faux	2							2
26			Utility Closet	Concrete			1		1				1
27										1792			

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Pete Fowler
CONSTRUCTION
Services, Inc.

6C. Report

[redacted]

A2-124

Preliminary Report

Prepared for:

[redacted].
[redacted]
Encino, California 91436-1796
[redacted]

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Pete Fowler
CONSTRUCTION
Services, Inc.

Issue Discussion

Date:	July 30, 2003
To:	[redacted]
From:	Peter D. Fowler
Regarding:	[redacted]
Project Address:	[redacted]alifornia 91011
Inspection By:	Pete Fowler, Paul Viau, Matthew Philippe, Stan Bruce
Inspection Dates:	2/26/02 and 03/19/02

The property in question is a two story single family home located at the address noted above. The construction is wood frame over slab-on-grade. The exterior walls are siding panels, manufactured to look like individual shingles. The residence has a high-pitched roof, small eave condition, and rain gutters installed at most of the perimeter of the building. The rain gutters tie into a sub-surface drainage system that exits to the street near the driveway. The roofing is asphalt composition shingle. The residence has a 3 car garage with 3 individual 1-car garage doors. The home consists of 5 bedrooms, 5 1/2 bathrooms, and several public rooms, totaling approximately 5,300 square feet of living space.

At the time of inspection, the Owners occupied the property.

This summary of issues was prepared using the degree of care normally exhibited by a professional acting in this capacity. This is not meant to be a complete evaluation of every component in the structure and surrounding property.

If there are any questions, after your review of the issues, please do not hesitate to call.

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Summary of Issues

The Applicable Issues, and more detailed discussion sections that follow, include:

1. Property Line Issues
2. 00-164 Geotechnical Issues
3. 02-552 Septic Issues
4. 02-600 Drainage Issues
5. 02-850 Fencing Issues
6. 02-900 Landscaping and Irrigation Issues
7. 04-000 Masonry Issues
8. 06-170 Trim and Molding Issues
9. 06-190 Exterior Siding Issues
10. 06-410 Cabinetry Issues
11. 07-300 Roofing Issues
12. 07-620 Sheet Metal / Flashing Issues
13. 07-715 Soffit Issues
14. 07-750 Rain Gutter Issues
15. 08-200 Door and Installation Issues
16. 08-500 Window and Installation Issues
17. 09-200 Stucco Issues
18. 09-640 Flooring Issues
19. 09-900 Painting Issues
20. 15-100 Plumbing Issues
21. 15-700 Mechanical Issues
22. 16-000 Electrical Issues
23. 13-280 Hazardous Material Remediation (Microbial)

Note: the following sections contain exemplar photographs and also refer to numerous others, which are accessible electronically on the CD-ROM delivered with this report.

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Observations

1. Property Line Issues

Analysis

Issue Description:	1.1 Property fence line has been located incorrectly
Issue Locations:	**Issue** / **Location** 1.1 / Right Elevation and Left Elevation
Analysis:	The property lines have now been established by a licensed surveyor and the fences are not located on the correct property lines at the right, left and rear. Also see Section 5 “02-850 Fencing Issues”.
Possible Repairs:	Hire surveyor to re-identify property lines. Demolish existing fences and re-construct fences on property lines at the right, back and left property lines. Coordinate this work with the property owners on the right and at the back, as this will impact improvements they have made to the property (under the assumption the fence was sitting on the property line).
PFCS Photos:	**Issue** / **Photo #** 1.1 / MP 01.13
Industry Standard:	Standard of care for a developer / seller to identify location of property lines to purchaser.

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Observations – *[CONTINUED]*

2. 00-164 Geotechnical Issues

Analysis

Issue Description:	2.1 Related to issues 4.2 and 4.3
Issue Locations:	**Issue** / **Location** 2.1 / Site
Analysis:	Investigation by Geotechnical Engineer. See information provided by Robert Hollingsworth. Also see Section 3 "02-552 Septic Issues." • Hard Crystal Granitic Rock • Insufficient permeability • High variability risk • Insufficient percolation testing with 6" cap • Percolation test results unpredictable • No determination of depth to groundwater • Violation of the Los Angeles County Department of Health Services Policy & Operations Manual section 6.10.09 effective May 17, 1990 • Clear water testing vs. residential waste • No likely expansion area • No percolation of actual pits, in violation of recommendations by geologist MEC. • Pits are mislocated compared to permit • Pits are undersized – too shallow and too narrow in diameter per recommendations from geologist MEC
Possible Repairs:	See Repairs for Section 3 "02-552 Septic Issues", Section 4"02-600 Drainage Issues" and Section 18 "09-640 Flooring Issues" in PFCS Construction Cost Estimate for scope of potential repairs developed by the Geotechnical Engineer Robert Hollingsworth and Septic expert Barton Slutske.
PFCS Photos:	**Issue** / **Photo #** 2.1 / Homeowner Video 2-17-03,
Industry Standard:	Analysis by Robert Hollingsworth.

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Observations – *[CONTINUED]*

3. 02-552 Septic Issues

Analysis

Issue Description:	3.1 Septic System is in a state of "premature failure". As a result, pumping of the system is required regularly, and system generating fumes/ odors.
Issue Locations:	**Issue** / **Location** 3.1 / Below grade at driveway
Analysis:	Analysis by Barton Slutske, Registered Environmental Health Specialist. The system is in a state of "premature failure" and requires corrective action. Also, investigation by Geotechnical Engineer Robert Hollingsworth. • Hard Crystal Granitic Rock • Insufficient permeability • High variability risk • Insufficient percolation testing with 6" cap • Percolation test results unpredictable • No determination of depth to groundwater • Violation of the Los Angeles County Department of Health Services Policy & Operations Manual section 6.10.09 effective May 17, 1990 • Clear water testing vs. residential waste • No likely expansion area • No percolation of actual pits, in violation of recommendations by geologist MEC. • Pits are mis-located compared to permit • Pits are undersized – too shallow and too narrow in diameter per recommendations from geologist MEC
Possible Repairs:	Potential for no repair. Subject to further testing and investigation.
PFCS Photos:	**Issue** / **Photo #** 3.1 / PF 01-07, 5A Video PF 02-11-20M.MOV, Homeowner Video 2-17-03
Industry Standard:	Los Angeles County Department of Health Services Policy and Operations Manual. Analysis by Barton Slutske and Robert Hollingsworth.

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Observations – *[CONTINUED]*

3. 02-552 Septic Issues - photos

PF 01-07-007 jpg Driveway at front entry door and 3-car garage with septic system below.

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Observations – *[CONTINUED]*

4. 02-600 Drainage Issues

Analysis

Issue Description:	4.1 V-ditch at retaining wall not installed per geologic recommendations. 4.2 Inadequate lot drainage (not per geologic recommendations) 4.3 Indications of excessive moisture transmission through concrete slab on grade (see analysis by Hollingsworth, and vapor transmission test reports by various entities). 4.4 The sub-drain at the back of the retaining wall was installed without a geo-fabric sock at the pipe or the surrounding gravel.
Issue Locations:	**Issue** / **Location** 4.1 – Along length of retaining wall at right elevation 4.2 – Back yard 4.3 – First floor 4.4 – Along length of retaining wall at right elevation
Analysis:	See Section 2 "00-164 Geotechnical Issues" and Section 3 "02-552 Septic Issues." 4.1 V-ditch at retaining wall not installed. This feature was specified in the Geologic and Soils Engineering Exploration report by The J. Byer Group, Inc. The run-off from the slope above the wall spills over the wall, causing staining, maintenance burden, and premature deterioration. 4.2 Backyard slopes toward house, water is directed toward, and accumulates in low-lying areas across the entire back elevation of the residence. There is inadequate drainage from backyard and away from house, which is not in conformance with specific recommendations in Geologic and Soils Engineering Exploration report by The J. Byer Group, Inc. See topographic survey. Analysis also by Hollingsworth. 4.3 Cupping and deteriorating wood flooring due to moisture intrusion. See issue Section 18 "09-640 Flooring Issues". 4.4 Geo-fabric serves to protect the clogging of the drain-pipe and system with silt and plant matter. Upon inspection, the pipe is partially filled with plant matter and soil particles, hindering its ability to drain properly.

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Observations – *[CONTINUED]*

4. 02-600 Drainage Issues - CONTINUED

Possible Repairs:	4.1 Remove existing soil at top of wall, add course to wall to achieve proper drainage according to original Geotechnical recommendations, and in such a way that the run-off will not spill over and stain the stucco wall. Install concrete v-ditch. 4.2 Re-grade yard and install proper drainage per the requirements of the UBC, and recommendations of expert Hollingsworth. 4.3 See Section 18 "09-640 Flooring Issues" for repair. 4.4 Installation of a clean-out in the front yard to allow access to the sub-drain for maintenance by the property owner. At this time the pipe from the back of the wall will be connected to a yard area drain-pipe, which will drain to the street.
PFCS Photos:	

Issue	Photo #
4.1	MP 01.11, PF 03-04, PF 10-36
4.2	Homeowner video – Pumping Rain-Back Patio/Planter, MP 1-25-28
4.3	PF 04-18, PF 10-32 to 34
4.4	MP Roll 1

Industry Standard:	4.1 Industry standard of care to construct assemblies based on the requirements specified by registered design professionals and approved by the municipality, or approved alternative methods. 4.2 1994 Uniform Building Code: Sections 1804.7, 1806.4.5 4.3 1994 Uniform Building Code: Sections 1804.7, 1806.4.5 See Section 18 "09-640 Flooring Issues". 4.4 Industry Standard of Care

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Observations – *[CONTINUED]*

4. 02-600 Drainage Issues – photos

PF Digital Photos from 11/20/02

PF 10-36 -36 jpg Retaining wall at right elevation +/- 20' from front elevation. Has wet spots and vertical hair line crack +/- 4".

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Observations – *[CONTINUED]*

4. 02-600 Drainage Issues – photos

MP 01.27 027 jpg Rear yard retaining wall. One area drain behind wall at orange tape measure.

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Observations – *[CONTINUED]*

5. 02-850 Fencing Issues

Analysis

Issue Description:	5.1 Deteriorated and improperly located wood fence.
Issue Locations:	**Issue** / **Location** 5.1 / Left elevation side yard
Analysis:	The fence is in poor condition and has prematurely failed.
Possible Repairs:	Remove and replace deteriorated wood fence. The fence also requires relocation for the purpose of aligning with the property line.
PFCS Photos:	**Issue** / **Photo #** 5.1 / PF 03-05
Industry Standard:	Industry Standard of Care

5. 02-850 Fencing Issues - photos

PF 03-05-053 jpg Fence undulates and is falling over.

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Observations – *[CONTINUED]*

6. 02-900 Landscaping and Irrigation Issues
Analysis

Issue Description:	6.1 Improper installation of irrigation. See also Property Line, Geotechnical and Drainage Issues.
Issue Locations:	**Issue** / **Location** 6.1 / Slope above five to six foot retaining wall at right yard.
Analysis:	See Section 1 Property Line, and Section 2 "00-164 Geotechnical Issues" and Section 4 "02-600 Drainage Issues". The sprinklers on the right side of the property above the retaining wall yard are controlled by the neighbor's irrigation system.
Possible Repairs:	Re-route sprinkler system such that control of the irrigation system for all of the property is controlled by the main irrigation system.
PFCS Photos:	**Issue** / **Photo #** 6.1 / PF 01-23, PF 01-24
Industry Standard:	Industry Standard of Care

PF 01-23 -023 jpg Five to six foot retaining wall at right yard. Sprinklers on this side of wood fence are controlled by owner up hill. Sprinklers by developer.

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Observations – *[CONTINUED]*

7. 04-000 Masonry Issues

Analysis

Issue Description:	7.1 Improperly installed masonry cap at masonry wainscot. 7.2 Missing or buried weep mechanism at masonry wainscot. 7.3 Lack of integration of weather resistive barrier at wainscot. 7.4 Cracks in masonry wall at backyard.
Issue Locations:	

Issue	Location
7.1	Front elevation of garage, right elevation at chimney, back elevation at living room
7.2	Front elevation of garage, back elevation at living room
7.3	Observed during Destructive Testing at front elevation
7.4	Short CMU wall in back yard, retains slope above

Analysis:	7.1 The integration of this detail was improperly sequenced, resulting in buried un-treated wood trim and siding. This has cause premature deterioration of the untreated wood and does not allow for maintenance by the owner. 7.2 The inability for water to escape the building envelope causes water intrusion, deterioration of the structural members and the weather resistive barrier, and damages finishes. 7.3 There is not proper integration between the weather resistive barrier (WRB) and flashing above the masonry wainscot at the exterior and the WRB of the siding above. 7.4 The back wall is exhibiting cracking in the grout joints

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Possible Repairs:	7.1 Repair in conjunction with the following: Section 8 "06-170 Trim and Molding Issues", Section 9"06-190 Exterior Siding Issues" Section 12 "07-620 Sheet Metal/Flashing Issues", Section 15 "08-200 Door and Installation Issues", Section 16 "08-500 Window and Installation Issues" and Section 19 "09-900 Painting Issues". Remove all stucco covered CMU masonry cap, removing adjacent materials as necessary (those which were buried). Replace with a masonry cap designed and detailed by an architect or building consultant, which will include details of all locations that are now problematic. This occurs at top of all masonry veneer and in conjunction with Repair for 7.2. 7.2 Repair in conjunction with the following: Section 8 "06-170 Trim and Molding Issues", Section 9"06-190 Exterior Siding Issues" Section 12 "07-620 Sheet Metal/Flashing Issues", Section 15 "08-200 Door and Installation Issues", Section 16 "08-500 Window and Installation Issues" and Section 19 "09-900 Painting Issues". Remove stone veneer and concrete ledge, install weep mechanism, install weather resistive barrier and replace stone veneer over plaster scratch and brown coat detailed by an architect or building consultant. 7.3 Included in 7.2 7.4 Install concrete v-ditch behind wall with additional drains to prevent water build up behind wall. Re-stucco wall in coordination with repairs at exterior.
PFCS Photos:	

Issue	Photo #
7.1	PF 02-16, PF 01-10
7.2	PF 01-12
7.3	PF 09-05
7.4	PF 10-37

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Observations – *[CONTINUED]*

7. 04-000 Masonry Issues - CONTINUED

Industry Standard:	7.1 UBC Chapter 14 Exterior Wall Coverings, Section 1402 Weather Protection, Sections 1401.1, 1402.1, 1402.2, Industry Standard of Care calls to allow for regular maintenance of painted wood members, and not to bury exposed wood members. 7.2 UBC Sections 2506, 2506.4, 2506.5 7.3 UBC Chapter 14 Exterior Wall Coverings, Section 1402 Weather Protection, Sections 1401.1, 1402.1, 1402.2, Industry Standard of Care 7.4 Industry Standard of Care. 1994 UBC Sections 1804.7, 1806.4.5.

PF 01-10 -010 jpg Formed concrete cap between siding and veneer below buries window trim at sill.

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Observations – *[CONTINUED]*

7. 04-000 Masonry Issues – photos

PF 02-16-040 jpg Masonry buries wood trim.

PF 01-12–012 jpg Veneer below siding meets grade / flatwork – typical.

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Observations – *[CONTINUED]*

7. 04-000 Masonry Issues – photos

PF 09-05 077 .jpg Below window with exterior sill removed. See diagrams A/7 and B/7. Bent, rusted nails at nail fin penetrate sisal flashing. Building paper over sisal / reverse lap. Exposed framing below mullion between two nail fins. Also see digital video.

PF 10-37 -37 jpg Backyard low retaining wall has cracks at block joint in 8 locations in +/- 40'.

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Observations – *[CONTINUED]*

8. 06-170 Trim and Molding Issues

Analysis

Issue Description:	8.1 Poor workmanship of casing installation at exterior openings 8.2 Paint loss at window trim
Issue Locations:	**Issue** / **Location** 8.1 / 8.2 – Garage doors 8.1 / 8.2 – Front elevation between garage and entry. 8.1 / 8.2 – Left elevation 8.1 / 8.2 – Roof
Analysis:	8.1 Wood trim is installed in an un-workman like manner and is prematurely deteriorating at all exterior locations. 8.2 Paint flaking and peeling off exterior wood trim
Possible Repairs:	All wood trim shall be removed in conjunction with the siding, door and window repairs. See Section 9 “06-190 Exterior Siding Issues”, Section 15 “08-200 Door and Installation Issues” and Section 16 “08-500 Window and Installation Issues”. If similar wood trim details are used, they should be specified and detailed by an architect or building consultant familiar with building envelope and mill-work details for wood frame construction to assure water shed, weather resistance and durability.
PFCS Photos:	**Issue** / **Photo #** 8.1 – PF 01-17, PF 01-19 8.2 – PV 01-05, PF 03-18
Industry Standard:	8.1 Industry Standard of Care, Woodworkers Institute of California, Architectural Woodwork Institute 8.2 Industry Standard of Care

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Observations – *[CONTINUED]*

8. 06-170 Trim and Molding Issues – photos

PF 01-17 -017 jpg Poor workmanship at casing installation at garage doors. Sheet metal head flashing does not completely cover. Common defect at multiple locations.

PF 01-19 -019 jpg Window trim with poor workmanship at miter joint and sheet metal flashing is greater than one inch too short. Sill trim below is buried by concrete trim above veneer.

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Observations – *[CONTINUED]*

8. 06-170 Trim and Molding Issues – photos

PF 09-16 088 .jpg Wood (Douglas Fir) from exterior window sill. All surfaces not primed before installation.

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Observations – *[CONTINUED]*

9. 06-190 Exterior Siding Issues

Analysis

Issue Description:	9.1 Improper installation and premature deterioration of siding.
Issue Locations:	**Location** a. Front elevation of garage, left elevation at guest bedroom/bathroom b. Right elevation at chimney c. Back/right elevation at kitchen, over garage man door d. Back/right elevation at kitchen e. Left elevation at guest bedroom/bathroom. f. Flat roof at boy's room window, exterior of living room window facing front elevation.
Analysis:	Siding was improperly installed, in a un-workman-like manner, causing damage to the siding, staining the siding with corrosion, and exposing the weather resistive barrier. Over-driven nails, stains from corrosive nails, cracked / split shingles, exposed underlayment, loss of shingles at various locations; siding not properly integrated at building corners, under-driven nails. These conditions exist throughout exterior of residence at siding.
Possible Repairs:	Remove and replace all siding with new.
PFCS Photos:	**Photo Ref.** / **Photo #** (a) PF 01-09, PF 06-19, PF 06-21, PF 06-22 (b) PF 02-03 (c) PF 02-21, PF 06-20, PF 10-03 (d) PF 02-23 (e) PF 06-18 (f) PF 07-21, PF 08-05
Industry Standard:	Manufacturers installation instructions, Uniform Building Code Section 2320 – Exterior Wall Coverings, UBC 2320.4, UBC 2320.7, Industry Standard of Care

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Observations – *[CONTINUED]*

9. 06-190 Exterior Siding Issues – photos

PF 01-09 -009 jpg Typical siding detail with over driven nails, stains from rusted fasteners, cracked shingles, exposed underlayment.

PF 06-21 021 .jpg Cracked shingle at fastener (12 each)

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Observations – *[CONTINUED]*

9. 06-190 Exterior Siding Issues – photos

PF 10-03-03 jpg Siding is cracked and separating from window trim. Head flashing short at master bedroom – closet window.

PF 10-35 -35 jpg Overall at front elevation in general the residence appears to be significantly worse condition then when we first observed it. Siding looks worse, trim has deteriorated, gutters are more stained, flashing more rusted.

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Observations – *[CONTINUED]*

9. 06-190 Exterior Siding Issues – photos

PF 02-21–045 jpg Line of siding at corner has a separation. Typical throughout.

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Observations – *[CONTINUED]*

10. 06-410 Cabinetry Issues

Analysis

Issue Description:	10.1 Inadequate attachment of cabinet doors
Issue Locations:	**Issue** / **Location** 10.1 / Kitchen cabinets
Analysis:	Kitchen cabinet doors are loose due to improper use of European style hinge brackets with cabinets of face frame construction. The contact area / attachment mechanism for the hinge is inadequate.
Possible Repairs:	Complete replacement and adjustment of hinges at upper and lower cabinets in kitchen.
PFCS Photos:	**Issue** / **Photo #** 10.1 / 5A PF Video G 5A PF Video H 5A PF Video I
Industry Standard:	Woodworkers Institute of California (WIC), Kitchen Cabinet Manufacturers Association, and Hardware Manufacturers (Blum) installation instructions.

PF 04-15 -087 jpg Kitchen with wood floors and faux paint. Windows facing back and right elevations.

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Observations – *[CONTINUED]*

11. *07-300 Roofing Issues*

Analysis

Issue Description:	11.1 Inadequate attachment of asphalt roofing shingles
Issue Locations:	**Issue** / **Location** 11.1 / Roof at left elevation.
Analysis:	Asphalt roof shingles are inadequately attached resulting in shingles slipping. This condition was observed at two locations on the roof.
Possible Repairs:	Complete inspection of entire roof to ensure proper attachment and placement of shingles. Repair as needed.
PFCS Photos:	**Issue** / **Photo #** 11.1 / PF 07-11, PF 07-12, PF 07-13
Industry Standard:	Uniform Building Code Chapter 15, Manufacturers Recommendations, Industry Standard of Care, Asphalt Roofing Manufacturers Association, National Roofing Contractors Association

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Observations – *[CONTINUED]*

11. 07-300 Roofing Issues – photos

PF 07-12–036 jpg Three loose shingles at roof from left elevation.

PF 07-13-037 jpg Three loose shingles at roof from left elevation.

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Observations – *[CONTINUED]*

12. 07-620 Sheet Metal / Flashing Issues

Analysis

Issue Description:	12.1 Inadequate flashing at siding to veneer transitions 12.2 Inadequate installation of head flashing 12.3 Missing head flashing 12.4 Missing ledger flashing
Issue Locations:	

Photo Ref.	Location
A	Front elevation at garage.
B	Garage doors, left elevation at first floor, left elevation at guest bathroom.
C	Front elevation
D	All locations with masonry veneer & cap
E	Front elevation at entry and living room (to right of entry)
F	Rear elevation at living room.
G	Rear elevation at living room and at family room.

Analysis:	12.1 Sheet metal flashing missing or short at siding to stone veneer transition on exterior of residence. 12.2 Head flashing at windows and doors has been cut short at ends. 12.3 Head flashing missing at decorative vent at front elevation 12.4 Ledgers for trellises has been installed without adequate flashing at 2 ledgers at back elevation.
Possible Repairs:	The repair scope will be in context with other issues, including windows, siding, and masonry. See Section 9 “06-190 Exterior Siding Issues”, Section 16 “08-500 Window and Installation Issues” and Section 7 “04-000 Masonry Issues”. The trellis will require removal in conjunction with the siding removal. The trellis will then be reinstalled with sheet metal flashing, integrated with weather resistive barrier and siding.
PFCS Photos:	

Photo Ref.	Photo #
A	PF 01-13
B	PF 01-17, PF 03-07, PF 06-24
C	PF 02-04
D	PF 01-19
E	PF 01-20
F	PF 02-12
G	PF 02-12, PF 03-02

Industry Standard:	UBC Chapter 14 Exterior Wall Coverings, Section 1402 Weather Protection, Sections 1401.1, 1402.1, 1402.3, 1402.3, Industry Standard of Care, Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) Architectural Sheet Metal Manual, and Wood Workers Institute of California (WIC).

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Observations – *[CONTINUED]*

12. 07-620 Sheet Metal / Flashing Issues – photos

PF 02-12-036 jpg Trellis without flashing. Curved plywood ledger applied over shingles. No flashing at decorative vent above.

PF 03-07-055 jpg Head flashing does not cover door trim.

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Observations – *[CONTINUED]*

13. 07-715 Soffit Issues

Analysis

Issue Description:	13.1 Plywood soffit improperly installed 13.2 Improper integration of weather resistive barrier
Issue Locations:	**Issue** / **Location** 13.1 / Back elevation at family room / kitchen 13.2 / Destructive Testing location at left elevation
Analysis:	13.1 The plywood soffit at the rear elevation of the Family Room is installed in a un-workman like manner, causing loosening nails and joist-to-joist undulation. 13.2 It was observed during destructive testing that the Weather Resistive Barrier does not extend to the top of the wall at the soffit exposing framing materials below.
Possible Repairs:	13.1 Remove and replace plywood soffit. 13.2 Install new Weather Resistive Barrier during siding installation. See section 9 “06-190 Exterior Siding Issues.”
PFCS Photos:	**Issue** / **Photo #** 13.1 / PF 02-24, PF 02-22 13.2 / PV 03-09
Industry Standard:	13.1 Industry Standard of Care 13.2 UBC Chapter 14 Exterior Wall Coverings, Section 1402 Weather Protection, Sections 1401.1, 1402.1, 1402.3, 1402.3, Industry Standard of Care

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Observations – *[CONTINUED]*

13. 07-715 Soffit Issues – photos

PV 03-09–147 jpg Building paper short at top of wall at eave.

PF 03-17-065 jpg Stains at soffit. Presumably from over-shooting roof run-off.

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Observations – *[CONTINUED]*

13. 07-715 Soffit Issues – photos

PF 02-24-048 jpg Over driven and loose finish nails - typical.

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Observations – *[CONTINUED]*

14. 07-750 Rain Gutter Issues

Analysis

Issue Description:	14.1 Rain gutters are inadequately sized for this steep sloped roof
Issue Locations:	**Photo Ref.** / **Location** A: Front elevation, left elevation, rear elevation at kitchen B: Rear elevation at family room, left elevation, front elevation
Analysis:	At locations around exterior of residence the rain gutters are being overshot due to the pitch of the roof. The soffits show evidence of staining due to the overshooting of the rain gutters. This issue is contributing to the Section 9 “06-190 Exterior Siding Issues”, Section 8 “06-170 Trim & Molding Issues” and Section 16 “08-500 Window and Installation Issues”.
Possible Repairs:	Remove and discard existing rain gutters. Install larger rain gutters to match.
PFCS Photos:	**Photo Ref** / **Photo #** A: PF 01-15, PF 01-14, PF 02-20, PF 03-16, PF 03-17, PF 07-07, PF 07-08, PF 07-09 B: PF 02-23, PF 03-16, PF 03-17, PF 01-16
Industry Standard:	Industry Standard of Care, SMACNA Architectural Sheet Metal Manual

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Observations – *[CONTINUED]*

14. 07-750 Rain Gutter Issues – photos

PF 01-15-015 jpg Standard gutters are being over-shot by steep sloped roof.

PF 10-29 -29 jpg Rain gutters above drop a lot of water into this area.

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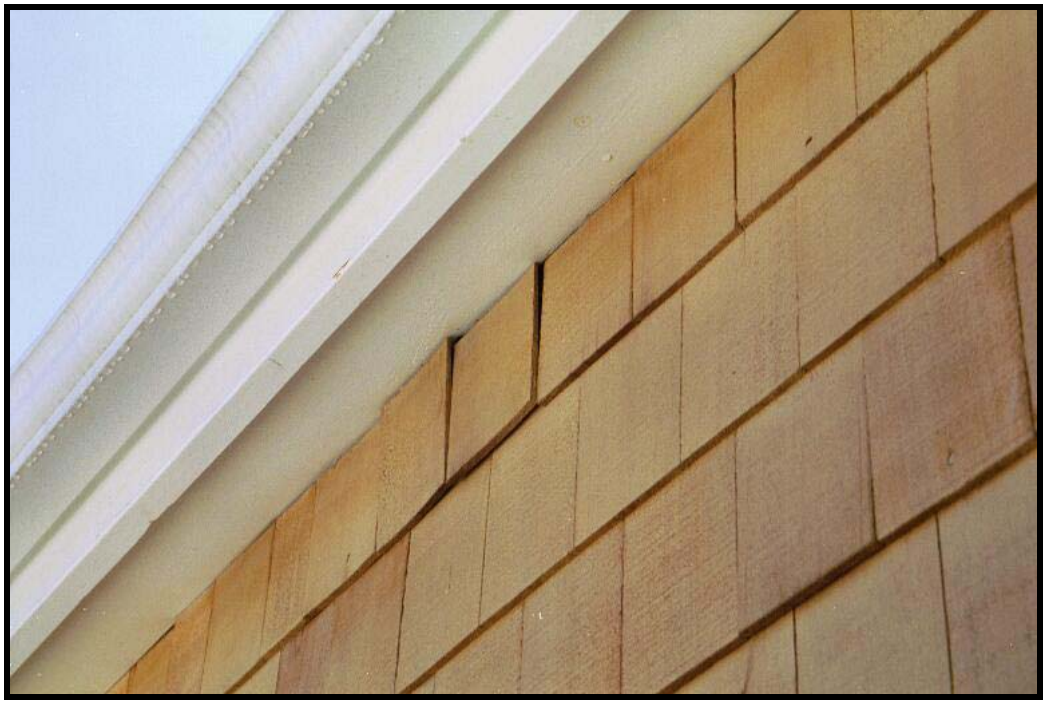
Observations – *[CONTINUED]*

14. 07-750 Rain Gutter Issues – photos



PF 07-09-033 jpg Siding installed in an un-workmanlike manner at garage nearest front elevation.

PF 03-17-065 jpg Stains at soffit. Presumably from over-shooting roof run-off.

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Observations – *[CONTINUED]*

15. 08-200 Door and Installation Issues

Analysis

Issue Description:	15.1 Entry door deteriorating 15.2 Damaged and deteriorating French doors 15.3 Damaged and deteriorating hardboard doors 15.4 Damaged and deteriorating garage man door 15.5 Water intrusion at French doors
Issue Locations:	

Issue	Location
15.1	Entry door
15.2	Rear elevation at family room, living room and master bedroom
15.3	Left elevation at water heater closet.
15.4	Left elevation at garage
15.5	French doors at master bedroom (rear elevation), French doors at living room (rear elevation).

Analysis:	Doors are not performing adequately. Premature deterioration is occurring at the painted wood doors. The weather-stripping is inadequate. The painting is inadequate. The installation was out of sequence. Doors leak. Testing was conducted at one set of French doors. We were forced to halt the testing early due to the excessive intrusion and the possibility for further damage to the residence interior. The failure mechanisms included installation (at sill), weather-stripping and product failure (at glazing).

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Observations – *[CONTINUED]*

15. 08-200 Door and Installation Issues- (Continued)

Analysis

Possible Repairs:	Re-flash all doors in the context of the siding replacement in Section 9 "06-190 Exterior Siding Issues". This will involve removing the factory-installed stops, installation of flexible flashings and installation of new (pre-primed) stops. Install properly integrated sheet metal flashings at all doors. Those most susceptible to weather should have Jamb-Sill Guard sill pan installed between the foundation and the sill (this would require removal of entire unit and re-installation). Replace doors which are damaged with cracks and splits, or which leaked through product during testing (Living Room doors at back elevation). Install weather-stripping at all doors to create weather resistance. Coordinate with painting, as any cuts will require complete re-treatment of painting as described below. Re-paint all wood doors and components on all wood surfaces (1 coat of primer before installation (i.e. back-prime) – no bare wood shall be installed, including all 6 sides of doors with 1-coat latex acrylic primer and 2 latex acrylic top coats of premium primer and paint.
PFCS Photos:	

Issue	Photo #
15.1	PF 01-22, PF 02-13, PF 02-14, PF 06-13, PF 06-14, PF 06-15
15.2	PF 02-15
15.3	PF 03-08
15.4	PF 03-13, PF 03-14, PF 03-15
15.5	PF 05-05, PF 05-06, PF 05-07, PF 05-08, PF 06-10, PF 06-11, PF 06-12, PV 04-09

Industry Standard:	UBC Chapter 14 Exterior Wall Coverings, Section 1402 Weather Protection, Sections 1401.1, 1402.1, 1402.3, 1402.3, Industry Standard of Care, Door and Hardware Institute, ASTM E1105 Standard Test Method, CAWM Installation Standard, Builders Hardware Manufacturers Association (BHMA), Window and Door Manufacturers Association (WDMA).

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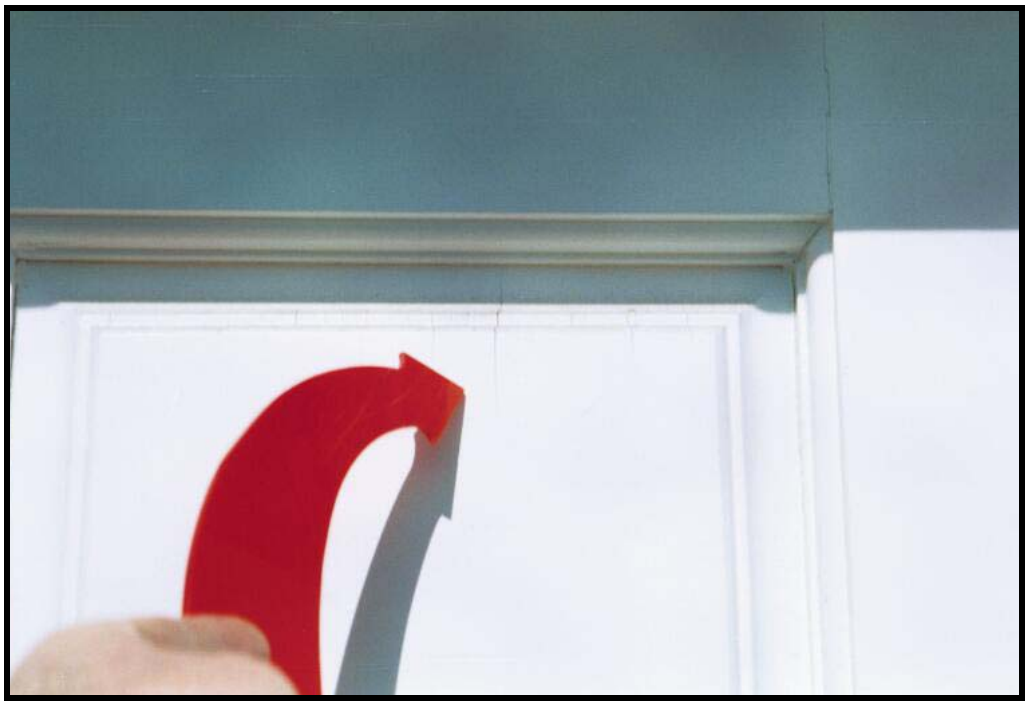
Observations – *[CONTINUED]*

15. 08-200 Door and Installation Issues – photos



PF 03-14-062 jpg Raised panel door with cracks, splits and separation.

PF 02-14-038 jpg Stiles and rails are splitting at family room doors and lights.

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Observations – *[CONTINUED]*

15. 08-200 Door and Installation Issues – photos

PV 04-10-173 jpg Carpet after four-minute spray test.

PV 04-09 -172 jpg Sidelite at right water leak at lower pane at point of arrow.

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Observations – *[CONTINUED]*

15. 08-200 Door and Installation Issues – photos

PF 05-07 -103 jpg Stains at back elevation French doors.

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Observations – *[CONTINUED]*

16. 08-500 Window and Installation Issues

Analysis

Issue Description:	16.1 Damage at interior 16.2 Improper installation of security system 16.3 Leaking windows due to improper installation. 16.4 Leak at mullion 16.5 Trim at interior is separating on back elevation, arch top window at landing
Issue Locations:	

Photo Ref.	Location
A	Front elevation
B	Left elevation
C	Living room window at front elevation
D	Living room window at front elevation
E	Left elevation fixed window at garage
F	Living room window at front elevation, guest bathroom window.
G	Living room window at front elevation
H	Living room window at front elevation
I	Living room window at front elevation
J	Living room window at front elevation, guest bathroom window.
K	Testing conducted at Front Elevation and Left Elevation windows.
L	Interior Window at Back Elevation

Analysis:	16.1 Interior finishes and framing have been damaged by water intrusion at windows and French doors. 16.2 Alarm contacts drilled in windowsill are leaking at all first floor operable windows. These Millguard windows are designed to allow water / moisture that naturally accumulates in the product to escape though a weep in the sill extrusion. The alarm contact was installed by drilling through the top and bottom of the vinyl extrusion. The site-modified holes in this engineered product allow water into the window product, and then directly inside the building envelope. 16.3 Windows throughout have not been installed and integrated properly with the wall system, allowing for water intrusion. Flexible flashing is improperly integrated with other flashing and the weather-resistive barrier. Flexible flashing and weather resistive barrier were installed with cuts and tears and in a generally un-workmanlike manner, allowing moisture penetration and damage. 16.4 Vertical mullion at living room window is not completely sealed, allowing for moisture intrusion. 16.5 Trim is separating and requires repair at arch top window

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Observations – *[CONTINUED]*

16. 08-500 Window and Installation Issues – (Continued)

Analysis

Analysis: CONTINUED	Testing was conducted at two windows. Both locations failed based on the alarm contact installation through the sill / sill-jamb (modified product), and due to the installation and integration issues.
Possible Repairs:	Remove all applied window trim at exterior and discard. Remove all first floor operable vinyl windows and discard. As an alternate – alarm contact holes can be sealed and windows re-installed if a guarantee can be obtained which is equal to or greater than the original guarantee by the manufacturer of the windows (Millguard). In conjunction with siding and weather resistive barrier repairs, reflash all windows not included above that is at the second floor. Install windows and a Moist-Stop or similar flexible flashing material with polyurethane sealant per AAMA or CAWM standards for window installation where the product has an integral nailing flange. Continue with the installation of the weather resistive barrier, also per standards by AAMA / CAWM, the siding manufacturer and all applicable building codes. If similar wood trim details are applied, they shall be specified and detailed by an architect or building consultant familiar with building envelope and mill-work details for wood frame construction to assure water shed, weather resistance and durability. Coordinate painting of all wood trim and components on all wood surfaces (1 coat primer before installation (i.e. back-prime), including priming of all cut ends. No bare wood shall be installed. Painting shall include 1-coat latex acrylic primer and 2 latex acrylic top coats of premium primer and paint.

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Observations – *[CONTINUED]*

16. 08-500 Window and Installation Issues – (Continued)

Analysis

PFCS Photos:

Photo Ref.	Photo #
A	PF 01-19
B	PF 03-11, PF 03-12
C	PF 04-02, PF 04-03, PF 04-04
D	PF 04-06, PV 01-10
E	PF 04-14
F	PF 06-04, PF 06-05, PF 06-06, PV 02-21, PV 02-22, PV 02-23, PV 02-24, PV 02-25
G	PF 07-15, PF 07-16, PF 08-18, PF 08-19, PF 08-20, PF 08-21, PF 08-22, PF 08-23, PF 08-24
H	PF 08-13, PF 08-14, PF 08-15, PF 08-16, PF 08-17
I	PV 01-06
J	PV 01-08, PV 01-11, PV 01-12, PV 01-13, PV 02-10,
K	PV Roll 01, 02 & 03
L	PF 10-11

Industry Standard:

16.1 UBC Chapter 14 Exterior Wall Coverings, Section 1402 Weather Protection, Sections 1401.1, 1402.1, 1402.3, 1402.3, Industry Standard of Care
16.2 UBC Sections 1401.1, 1402.1, 1402.2, Manufacturers Instructions, Industry Standard of Care
16.3 UBC Sections 1401.1, 1402.1, 1402.2, California Association of Window Manufacturers (CAWM) Installation Standards, Industry Standard of Care
16.4 UBC Sections 1401.1, 1402.1, 1402.2, Industry Standard of Care
16.6 UBC Chapter 14, Industry Standard of Care

ASTM E1105 Standard Test Method, CAWM Installation Standards, Window and Door Manufacturers Association (WDMA) standards, American Architectural Manufacturers Association (AAMA) standards

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Observations – *[CONTINUED]*

16. 08-500 Window and Installation Issues – photos

PF 03-12-060 jpg Window casing with popping nail and separation at sill.

PF 04-03-075 jpg Damaged interior at living room window at front elevation.

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Observations – *[CONTINUED]*

16. 08-500 Window and Installation Issues – photos

PF 07-23-047 jpg Left mullion - worst intrusion. Center of thirty-two inch wide completely soaked spot on rough sill.

PV 03-12-150 jpg Staining at sisal kraft. Sisal kraft cut through to shear panel.

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Observations – *[CONTINUED]*

16. 08-500 Window and Installation Issues – photos

PV 03-14-152. jpg Guest bedroom window building paper cut for drip cap; sisal kraft cut clean through.

PV 03-19-157 jpg Sisal kraft cut short at head / jamb, slice through both head and jamb sisal kraft to shear panel. Sisal kraft is deteriorated.

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Observations – *[CONTINUED]*

16. 08-500 Window and Installation Issues – photos

PV 03-17-155 jpg. Open joint at wood trim allows unimpeded awl penetration.

PV 03-20 158 .jpg Rusted nails and staining at shear panel.

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Protected under all applicable evidence codes.

Observations – *[CONTINUED]*

17. 09-200 Stucco Issues

Analysis

Issue Description:	17.1 Spalling stucco and efflorescence
Issue Locations:	**Issue** / **Location** 17.1 / Five to six foot retaining wall at right yard
Analysis:	Spalling and deterioration of stucco is occurring at the base of the retaining wall at the right yard. No mechanism for weep was visible.
Possible Repairs:	See repairs for Section 02-600 "Drainage Issues". Remove existing stucco color coat from corner to corner at effected areas. Re-install after application of appropriate liquid-applied bonding agent. Stucco wall texture to match.
PFCS Photos:	**Issue** / **Photo #** 17.1 / PF 02-07
Industry Standard:	

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Observations – *[CONTINUED]*

17. 09-200 Stucco Issues – photos

PF 02-07-031 jpg Spalling stucco and efflorescence approximately four feet wide by two feet high.

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Protected under all applicable evidence codes.

Observations – *[CONTINUED]*

18. 09-640 Flooring Issues

Analysis

Issue Description:	18.1 Wood flooring is cupped. 18.2 Inadequate installation of vapor retarding system. 18.3 Un-workmanlike finish on wood floors.
Issue Locations:	**Issue** / **Location** 18.1-3 / Throughout kitchen – especially between kitchen and pantry.
Analysis:	18.1 Wood flooring cupping at all downstairs locations where installed except at entry, due to elevated moisture. 18.2 Installed vapor retarding system does not conform to industry standards for installation of wood floor over concrete slab. 18.3 Evidence of sanding and finishing flaws and imperfections on surface of wood floor. Conditions including sanding scratches, machine marks, light hand prints, etc. exist throughout the surface of the wood floor.
Possible Repairs:	Coordinate with repairs for Section 2 "00-164 Geotechnical Issues" and Section 4 "02-600 Drainage Issues". Repair Options: 1. Remove existing hardwood floor and install new hardwood floor over guaranteed vapor emission control system as specified by Donnelly. Replace all base boards. 2. Remove existing hardwood floor and install new flooring system less susceptible to damage by moisture (Granite tile, Tumbled limestone tile, etc.). In the context of these repairs the cabinets will need venting for the confined spaces at the toe kick level.
PFCS Photos:	**Issue** / **Photo #** 18.1 / PF 04-17, PF 04-18
Industry Standard:	National Wood Flooring Association (NWFA), National Wood Flooring Manufacturers Association (NWFMA)

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Protected under all applicable evidence codes.

Observations – *[CONTINUED]*

18. 09-640 Flooring Issues - photos

PF 04-17-089 jpg Flooring is cupped / lifting at edges across width of planks, especially between kitchen and pantry.

PF 04-18-090 jpg Flooring is cupped / lifting at edges across width of planks, especially between kitchen and pantry.

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Observations – *[CONTINUED]*

19. 09-900 Painting Issues

Analysis

Issue Description:	19.1 Doors not painted on all six sides 19.2 Premature deterioration of paint at exterior trim
Issue Locations:	**Issue** / **Location** 19.1 / French doors at living room and master bedroom 19.2 / Exterior trim at windows & doors
Analysis:	19.1 The painting is not complete to protect French doors and has deteriorated prematurely. 19.2 The painting is not complete to protect exterior trim and has deteriorated prematurely.
Possible Repairs:	19.1-2 Repaint all exterior wood components in the context of other repairs described in this report. See Section 15 "08-200 Door and Installation Issues" and Section 16 "08-500 Window and Installation Issues". Re-paint all wood doors and components on all wood surfaces (1 coat of primer before installation (i.e. back-prime) – no bare wood shall be installed, including all 6 sides of doors with 1-coat latex acrylic primer and 2 latex acrylic top coats of premium primer and paint.
PFCS Photos:	**Issue** / **Photo #** 19.1 / PF Video 38 & 39 19.2 / See exterior trim issue
Industry Standard:	19.1 Industry Standard of Care 19.2 Industry Standard of Care

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Observations – *[CONTINUED]*

19. 09-900 Painting Issues - photos

PF 06-14-014.jpg Exterior at French doors. Casing buried by masonry. Doors splitting.

PF 01-22 -022 jpg Styles and rails of entry door, sidelites and trim are separating (typical), end grain cracking/splitting at trim. Note there is approximately eight feet of protective overhang.

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Observations – *[CONTINUED]*

20. 15-100 Plumbing Issues

Analysis

Issue Description:	See report by Dan Daderian. 20.1 Water heater vent connector too close to combustible construction. 20.2 Water heater B-vent penetration at garage ceiling improper 20.3 Shut-off valves are corroded 20.4 Fireplace gas line penetrations unsealed 20.5 Water heater combustion air openings improper 20.6 Water hammer 20.7 Water closet loose 20.8 Kitchen sink clean out missing 20.9 Whirlpool tub motor missing access door 20.10 Plumbing leaks and poor workmanship 20.11 Septic system lacks capacity 20.12 Improper installation of hot water recirculation pipes and pump
Issue Locations:	

Issue	Location
20.1	Exterior water closet on left elevation
20.2	Exterior water closet on left elevation
20.3	Main building shut off valve at front elevation, ½ shut off and check valves for recirculation systems in the water heater closet
20.4	Two downstairs fireplaces
20.5	Upper combustion air opening at water heater closet on left elevation
20.6	Master bathroom sinks and tub / shower
20.7	Downstairs hall bathroom water closet
20.8	Kitchen sink
20.9	Master bathroom whirlpool tub
20.10	Pantry, downstairs near guest bedroom, water heater, main supply inlet, kitchen ceiling
20.11	See issue 3.1 in section 3 Septic Issues
20.12	Pipes and recirculation pump

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Observations – *[CONTINUED]*

20. 15-100 Plumbing Issues – (Continued)

Analysis

Analysis:	20.1 The single wall vent connector is too close to combustible materials. 20.2 The B-vent collar for water heater too small for drywall opening. 20.3 The main building shut off valve at the front elevation and the ½" shut off and check valves for the recirculation system, which are located in the water heater closet, are corroded. 20.4 The gas line penetration is not sealed. 20.5 The upper combustion air opening is too low. 20.6 Water hammer is occurring at lavatories sinks and tub/shower assemblies due to loose pipes in wall. 20.7 Poor installation of water closet caused it to loosen and leak damaging flooring. 20.8 The clean out for servicing kitchen sink is missing. 20.9 The access door for servicing the motor and GFI outlet for the whirlpool tub is missing. 20.10 Leaks have manifested at pantry, downstairs near guest bedroom, water heater and at main supply inlet. Water stains have manifested on kitchen ceiling below upstairs bathroom. Pipe expansion noise heard in bedroom above water heater closet. 20.11 See issue 3.1 in Section 3 "02-552 Septic Issues" 20.12 Pipes have not been reamed and recirculation pump is oversized causing accelerated wear to system.

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Observations – *[CONTINUED]*

20. 15-100 Plumbing Issues – (Continued)

Analysis – *(Continued)*

Possible Repairs:	20.1 Remove and replace single wall vent connector with type "B" vent. Approximately 2 feet requires replacement. 20.2 Provide and install a larger sheet metal collar at the penetration of the B-vent into the garage ceiling. Provide a 1" clearance to all combustible construction. 20.3 Remove and replace valves with ball valves 20.4 Caulk the penetration with fire resistant caulk 20.5 Create opening in wall for installation of grill 100 sq. in. grill, install grill patch and paint 20.6 Install water hammer arrestors at the stop valves below the lavatory where water hammer is occurring. 20.7 Install corrosion resistant screws in the closet flange, reinstall toilet; shim as required for level installation, see issue 18 for flooring repairs 20.8 Disconnect existing trap arm below kitchen sink. Provide a "Y" fitting on the trap arm and reconnect the drain line. Install a clean out plug on the "Y" fitting for access to the sewer drain line. 20.9 Remove master bathtub or remove the marble on the tubs entry side. Relocate tub motor and electrical outlet to the back side of the tub. Provide access door in the corridor wall for access to the GFI outlet and tub motor. Provide a surface finish to hide access door (coordinate with owners) Patch and paint. 20.10 Reimburse homeowner for all repairs performed to date. For pipe expansion noise – cut drywall 2' wide x 8' tall, isolate plumbing in contact with framing or drywall. Disconnect and reconnect hot water line. Patch and paint. 20.11 Subject to further investigation 20.12 In conjunction with other repairs, re-pipe recirculation system.
PFCS Photos:	See report by Dan Daderian.
Industry Standard:	See report by Dan Daderian

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Observations – *[CONTINUED]*

21. 15-700 Mechanical Issues

Analysis

Issue Description:	21.1 Refrigerant line insulation unprotected. 21.2 Refrigerant line wall penetration unsealed 21.3 Return air plenum unsealed 21.4 Condensate drain runs with improper slope 21.5 Premature failure of equipment
Issue Locations:	**Issue** / **Location** 21.1 / Two A/C condensing units on left elevation 21.2 / Two A/C condensing units on left elevation 21.3 / Unit in attic that serves downstairs areas 21.4 / Unit in attic that serves downstairs areas 21.5 / A/C condensing unit at left elevation
Analysis:	21.1 At 2 A/C condensing units on left elevation with deteriorated insulation. 21.2 At 2 A/C condensing units on left elevation with unsealed wall penetrations. 21.3 At one unit in attic that serves downstairs, the return air inlet for the forced air unit is not sealed properly. 21.4 At one unit in attic that serves downstairs, the primary condensate drain has flat or negative slope. 21.5 One A/C condensing unit at left elevation has failed prematurely and was repaired by homeowner.
Possible Repairs:	21.1 Install new Rubatex insulation at each unit. Paint to protect from sunlight. 21.2 Seal with polyurethane or latex foam 21.3 Seal return air duct with mastic or foil backed duct tape. 21.4 Notch section of OSB in attic to allow condensate drain to slope properly. 21.5 Reimburse owner for expense of repair. Approximate cost to owner of $500.00
PFCS Photos:	**Issue** / **Photo #** 21.1 / PF 03-09 21.2 / PF 03-10
Industry Standard:	See report by Dan Daderian.

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Observations – *[CONTINUED]*

21. 15-700 Mechanical Issues – photos

PF 03-10-058 jpg Condenser units ten inches from residence and sixteen inches from fence. Deteriorated insulation.

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Observations – *[CONTINUED]*

22. 16-000 Electrical Issues

Analysis

Issue Description:	22.1 Wire undersized for circuits. 22.2 Excessive voltage drops at duplex receptacles 22.3 Unsealed openings in main electrical panel. 22.4 Unsealed electrical penetrations 22.5 Defective GFCI receptacle
Issue Locations:	**Issue** / **Location** 22.1 — 17 locations throughout house 22.2 — 58 locations throughout house 22.3 — Main electrical panel 22.4 — All exterior light fixtures 22.5 — Master bath
Analysis:	22.1 20 amp circuits wired with 14-gauge wire. 22.2 Long wire runs, inadequate wire size and poor contact with push in duplex receptacles causes unacceptable voltage drops for 15/20-amp circuits. 22.3 Knock out has been removed and remains unsealed. 22.4 All exterior light fixtures installed without gaskets or sealant. 22.5 Master BA GFCI wired with 14-gauge wire on 20-amp breaker. Supply wire & receptacle damaged by heat build up.
Possible Repairs:	22.1 Temporary repair by replacing 20 amp breakers with 15 amp breakers has been done. In conjunction with other repairs rewire house with 10-gauge wire, replace duplex receptacles with heavy duty back wire type. Remove drywall as necessary, patch and paint all damaged areas. 22.2 Repair included in 22.1 22.3 Install substitute knock out and seal in place 22.4 In conjunction with exterior siding repairs, install new gasket when reinstalling fixtures and check for deterioration and repair as needed. 22.5 GFCI supply wiring to be 10-gauge with 20-amp breakers.
PFCS Photos:	**Issue** / **Photo #** 22.3 — MP 1.35 22.4 — MP 2.09-10, 2.20
Industry Standard:	22.1 NEC 310-16, 240-3 and 210-24 22.2 NEC 210-19, FPN #4 22.3 NEC 230-62 (a) 22.4 NEC 410-4(a) 22.5 NEC 310-16, 240-3 and 210-24

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Observations – *[CONTINUED]*

22. 16-000 Electrical Issues - photos

PF 05-16-112 jpg Electrical outlet at bathroom 2 is loose at sink. Requires repair.

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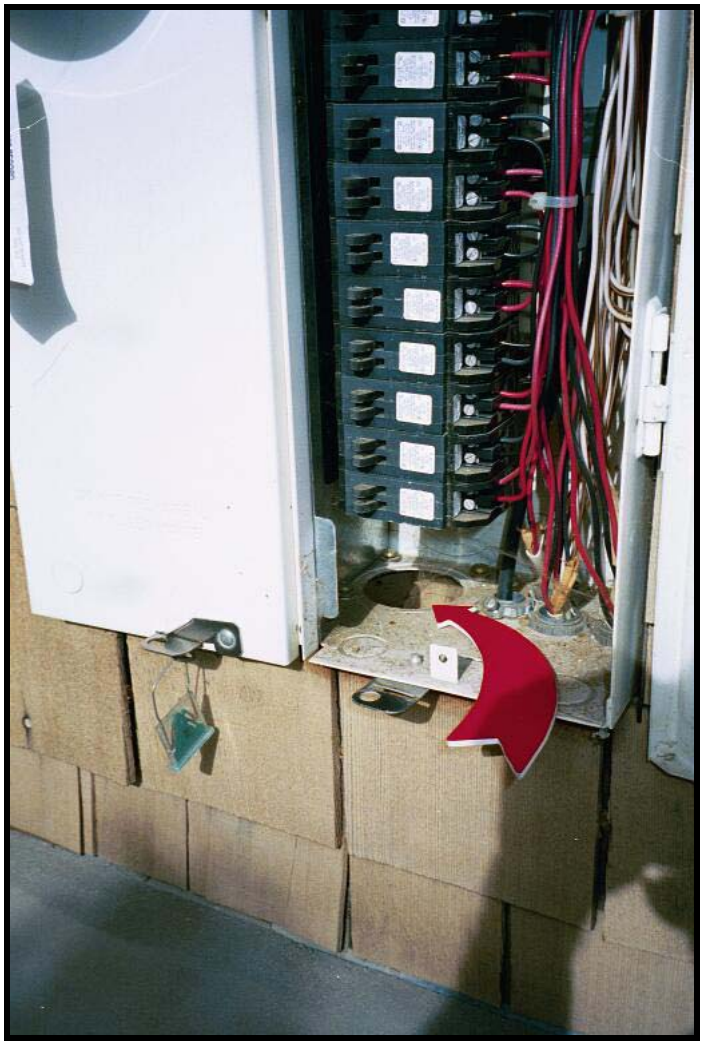
Observations – *[CONTINUED]*

22. 16-000 Electrical Issues – photos



MP 01.35-035 jpg Bottom opening in panel not enclosed.

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Observations – *[CONTINUED]*

22. 16-000 Electrical Issues – photos

MP 02.09-045 jpg Garage exterior light fixture. No gasket or sealant. Typical all four.

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Observations – *[CONTINUED]*

23. 13-280 Hazardous Material Remediation (Microbial)

Analysis

Issue Description:	23.1 Some remediation and abatement has already occurred due to sub-slab pipe burst near the guest bedroom downstairs.
Issue Locations:	**Issue** / **Location** 23.1 / Down stairs in the hall, guest bedroom and adjoining areas.
Analysis:	See Reliance Environmental Consulting report. The remediation has been completed for the pipe burst. The testing performed by PFCS showed only small amounts of fungal growth, so we do not believe the majority of the repairs as conceptualized will have a major component for remediation of mold.
Possible Repairs:	Performed already, in the course of sub-slab pipe break.
PFCS Photos:	**Issue** / **Photo #** 23.1 / SB Roll 1, 2 & 3
Industry Standard:	US Environmental Protection Agency, US Centers for Disease Control and Prevention, New York City Department of Health and Mental Hygiene, American Conference of Governmental Industrial Hygiene, American Industrial Hygiene Association

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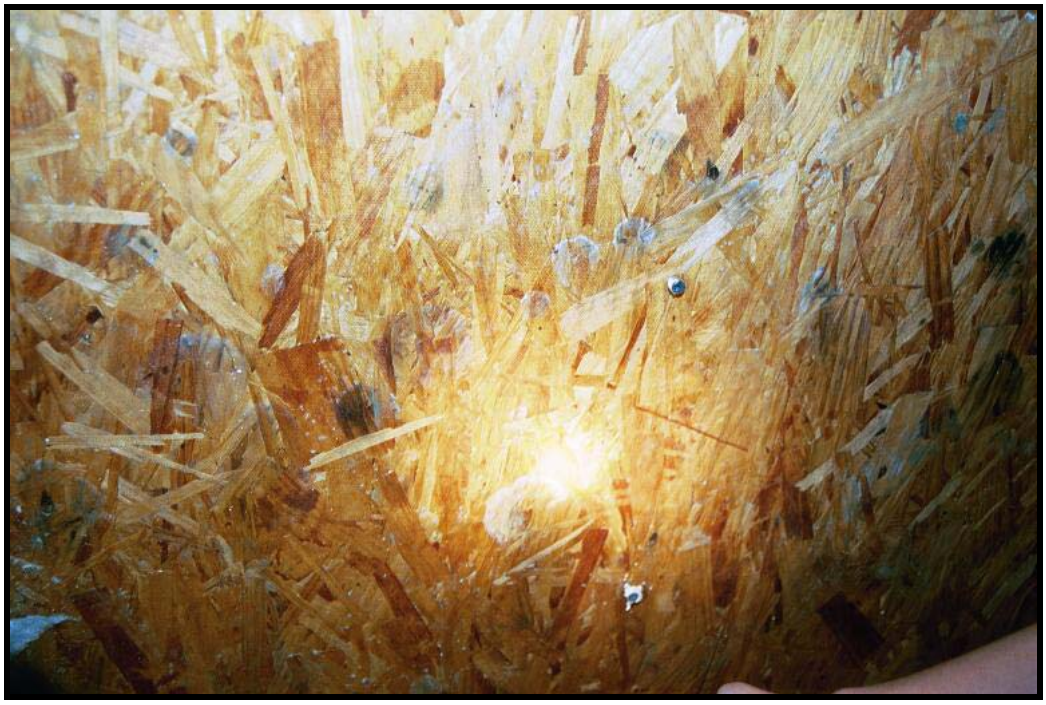
Observations – *[CONTINUED]*

23. 13-280 Hazardous Material Remediation (Microbial) - photos

SB 03.24 JPG-95 Spots on OSB sheer panel in hall – hygienist Bancrof
Thinks it maybe mold.



SB 03.25 JPG-96 Spots on OSB sheer panel in hall – hygienist Bancrof and
Thinks it maybe mold.

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Protected under all applicable evidence codes.

Observations – *[CONTINUED]*

23. 13-280 Hazardous Material Remediation (Microbial) - photos

SB 03.16 JPG-87 Moisture in hall, >20% - off scale.

SB 03.17 JPG-88 Moisture in hall, >20% - off scale.

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7A. Report (Not CD)

[redacted]

[redacted] *CA 92637*

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GENERAL INQUIRY

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Pete Fowler CONSTRUCTION Services, Inc.

Project #12-281

Pete Fowler CONSTRUCTION Services, Inc.

Report

Date: December 02, 2014

To: [redacted]

[redacted], CA 92653

[redacted]

From: Pete Fowler Construction Services, Inc.

Project: [redacted] (PFCS 12-281)

Regarding: [redacted] CA 92637

Note: Confidential Attorney-Client and Attorney Work Product. Protected under all applicable evidence codes.

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1. Project Overview

A. Project Summary

This project involves the [redacted] One condominium complex located at [redacted] & [redacted] in [redacted] CA. The complex was built in the early 1970's.

Our report addresses the slope and retaining wall that runs generally North-South on the East side of the property, which is within the boundaries of the City of [redacted] The wall is approximately 950-feet long. The sidewalk, curb and street east of the wall is within the boundaries of the City of [redacted]

Tierra Verde Landscape, the landscape contractor retained by the Association in June of 2010, installed upgraded irrigation on the slope in October 2010. During a heavy rainstorm on December 22, 2010, an approximately 50-feet wide section of the slope behind the retaining wall at [redacted] failed, resulting in a mud flow which overtopped the wall and spilled onto [redacted] This mud flow occurred approximately 100-feet south of the property line between the HOA property and Grace Hills Church on [redacted] and destabilized a portion of the slope.

The Association's property manager authorized Hillside Repair & Drilling to perform emergency repairs consisting of removal of debris behind the retaining wall and anchoring plastic sheathing over the failed area immediately after the slope failure.

Subsequently, the Association commissioned T.H.E. Soils Co., Inc. ("T.H.E.") to provide a Preliminary Geotechnical Investigation to determine the causative reasons for the slope failure and provide recommendations for reconstruction of the failed slope. The T.H.E. May 3, 2011 report concluded that the slope failure resulted from a plugged or inoperable down drain and heavy precipitation. Moreover, the slope failure resulted from either the drain overflowing and washing out the slope or saturation of the slope from the inoperable drain. The report also provided general recommendations for reconstruction of the failed slope portions including general earthwork, slope construction, fill placement and provision for a down drain as depicted on the original site grading plans.

On November 8, 2011, T.H.E. Soils Co. issued a "Retaining Wall Parameters" report which evaluated the onsite conditions and provided recommendations for removal and replacement of the existing retaining wall in the area of the slope failure. Collins Builders Inc. prepared retaining wall repair plans dated 12/22/2011 for removal and replacement of the retaining wall. These plans were reviewed and approved by the City of [redacted] CA. The Association and Collins executed a contract for Slope and Retaining Wall Repair in the amount of $160,000.00 on April 13, 2012. The repair work commenced on May 1, 2012.

On January 7, 2013, Pete Fowler Construction Services (PFCS) was retained by the [redacted] One Homeowners Association.

B. Documents Reviewed

- Toups Engineering Grading Plans, 1970
- Tierra Verde Landscape Contract for Landscape Maintenance, 6/24/10
- Hillside Repair & Drilling Estimate, December 2010
- Site Map, dated 1970
- T.H.E. Soils Co. Preliminary Geotechnical Investigation, and Retaining Wall Parameters
- Collins Builders Contract for Slope & Retaining Wall Repair, Replacement Retaining Wall Drawings, Photographs of Existing Conditions before Repairs, and Photographs during Course of Construction
- Hunsaker Land Surveying, Inc., Report of Survey
- [redacted] HOA Background Report
- Tierra Verde Job File
- W. B. Starr Job File

See PFCS Document Index for complete listing of documents received.

C. Parties Involved

- [redacted] One HOA – Association for condominium complex
- Toups Engineering – Prepared original 1970 grading plans
- Feldsott & Lee – Attorneys representing HOA
- AMR Management – Property Managers for HOA
- Hillside Repair & Drilling – Performed emergency repairs on the failed slope section, December 2010
- Hunsaker Land Surveying Inc. – Prepared land survey report
- T.H.E. Soils Company – Prepared Geological Evaluation
- Collins Builders – Performed slope and retaining wall repairs
- W. B. Starr – Landscape contractor prior to Tierra Verde
- Tierra Verde Landscape – Landscape maintenance for HOA when slope failure occurred
- Cornerstone Landscape – Landscape maintenance for HOA from 3/2011 to present
- Hillside Repair & Drilling - Storm Drain Investigation and Repair Contractor, November 2014

D. Timeline of Events

- 1970s: Project development / construction
- 1980s: [redacted] widened from two to three lanes in each direction
- 1990-2010: W. B. Starr Landscape Contractor for HOA, prior to Tierra Verde
- 6/24/2010: HOA contracted with Tierra Verde Landscape for landscape maintenance
- October 2010: Tierra Verde Landscape installed upgarded sprinkler system on the slope
- 12/22/2010: Slope failure occurred on the slope near the Church on [redacted]

- 12/22/2010: Hillside Repair conducts emergency stabilization repairs
- 3/2011: Neives Landscaping hired to replace Tierra Verde Landscape
- 5/3/2011: T.H.E. Soils prepared Preliminary Geological Investigation Report
- 11/8/2012: T.H.E. Soils prepared Retaining Wall Parameters Report
- 4/12/2012: HOA contracted with Collins Builders for slope and retaining wall repairs
- 4/18/2012: Hunsaker Land Surveying prepared land survey report
- 4/13/2012: Collins Builders contract with HOA for Slope and Retaining Wall Repair
- 5/1/2012: Collins Builders commence repair work
- 1/7/2013: PFCS Retained by [redacted] One Homeowners Association
- 10/27/14 PFCS investigation into drain performance and repair of drain on slope behind retaining wall
- 12/1/14 Hillside Repair & Drilling, planned repair of upslope storm drain B.

2. PFCS Investigation

A. Observations

PFCS conducted an initial visual inspection of the property on March 28, 2013 and documented our observations with photographs and field notes. PFCS has visited the site and documented our inspections with field notes and photographs on six occasions:

- March 28, 2013
- November 21, 2013
- September 15, 2014
- October 27, 2014
- October 30, 2014
- November 18, 2014

SLOPE FAILURES

The area behind the retaining wall on [redacted] has three areas where the slope has failed and soil from the slope has accumulated 8-16 inches above the concrete swale at the back of the retaining wall. The concrete swale itself has been shoveled clear of debris. There are four areas on the slope above [redacted] where dirt and silt has been transported beyond the swale at the top of the slope and down towards the back of the wall. These "notches" appear to have been intentionally created to relieve ponding that accumulates behind the swale in the areas where the performance of area drains and/or storm drains has been questionable.

When we interviewed AMR Management property manager for the HOA [redacted] during our March 28, 2013 site inspection, she indicated that she visited the site just after the mud flow onto [redacted] on 12/22/2010, and there was standing water behind the wall approximately 2-3-feet deep and the water was flowing over the wall at each location where the block wall stepped down.

DRAINAGE BEHIND THE RETAINING WALL

The area immediately behind the wall on [redacted] has only one visible drain on the uphill side of the wall alongside the 950-foot run along [redacted] The drain, which is located approximately 250 feet north of the corner of [redacted] and [redacted] is the low point on the area behind the wall. The 6-inch drain at this location is clogged with dirt and does not function. The swale behind the wall actually slopes uphill from the clogged drain for 90 feet as it continues south along [redacted] to the intersection at [redacted]

The drainage for the entire complex (approximately 13.5 acres) was divided into two drainage areas. At the south end of [redacted] the water is directed to a storm drain at the end of the street. The storm drain then crosses under [redacted] and enters the storm drain system at the south west corner of [redacted] and [redacted] East of the north/south curb on [redacted] the area drainage was directed east to a swale above the slope, where a series five 20" diameter concrete storm drains are located, A, B, C, D & E. The five storm drains direct water below the slope, retaining wall, sidewalk and discharge into the gutter running north/south along [redacted] The storm drains behind the swale direct water out into the gutter along [redacted] (see attached Toups grading plan sheet 1). The 20" vertical storm drain collectors have 10" concrete drain lines that angle downward from these collection locations to the curb.

The current drainage for the area east of [redacted] has evolved into a series of notches cut into the earthen swale at the top of the slope in addition to plastic area drains with drain pipes that direct the water to the nearest 20" diameter storm water collector. In addition, there are two plastic area drains west of the swale that direct water directly onto the slope behind the retaining wall at the bottom of the slope, one is a 6" black drain and the other is 6" white drain (see attached Locations Summary). This configuration allows a significant portion of the water flow that should be directed into the five 20-inch storm drain collectors at the top of the slope to flow onto the downhill side of the fence wall, where there is no functioning drain.

The five observed storm drains at the top of the slope along [redacted] appear to have dirt and debris near the entrance to the discharge pipe. While standing water was observed in all four storm drains, we were unable to verify water flow out onto [redacted] There are four 4 slot drains in the curb along [redacted] which appeared to align with the storm drains on the top of the slope.

The only storm drain that appeared to be functioning properly was the fifth (E) at the south east corner of the complex, [redacted] and [redacted]

B. Research at Cities of [redacted] and [redacted]

When the complex was constructed in the early 1970's, the County of Orange was responsible for issuing building and grading permits.The City of [redacted] was incorporated on July 1, 2001 and now has jurisdiction for the retaining wall and the areas to the west, which includes all of the HOA property. The City of [redacted] issued a building permit to Collins Builders for the replacement of a portion of the

retaining wall.

The City of [redacted] was incorporated March 1,1999 and has jurisdiction for the sidewalk to the east of the retaining wall, including the curb and [redacted]

C. Review of Course of Construction (Wall Replacement) Photographs

PFCS reviewed the course of construction drawings provided by Collins Builders and had a brief conversation with Joel Yorba, construction superintendent for Collins Builders. The photographs show that the 6-inch drain line from the 20-inch storm drain at the northeast corner of the complex was routed down the slope towards [redacted] and entered a T-fitting where one leg directed the water into a 6-inch drain line that runs parallel to [redacted] approximately 2-feet below the concrete swale. The down-hill slope after the T-fitting was capped off. It is unknown why and when the T-fitting was capped off.

Joel informed us that the footing below the wall was 12-inches x 12-inches and that every third cell of the block wall was filled with grout. When Collins completed the retaining wall, they uncovered a six inch downhill drain pipe. When they rebuilt the slope, they connected the uncovered six inch drain pipe to the existing drain pipe from the north-east corner of the complex to the footing drain line behind the wall. The discharge point of the original drain line remains unknown.

D. Review of Public Documents

The 1970 grading plans from Toups Engineering were printed in large format, 24-inch x 48-inch sheets and carefully reviewed. Sheet 1 provides information regarding the site and drainage:

- All of the drainage from the site is directed to the east and south onto [redacted]
- The major portion of the drainage was directed towards a storm drain at the south end of [redacted] which travels through a storm drain below [redacted] to the south west corner of [redacted] and [redacted]
- There were six planned drains behind the berm at the top of the slope, draining to [redacted] and [redacted]
    - There were four storm drains that drain onto [redacted] A, B, C & D.
    - One storm drain at the north west corner of [redacted] and [redacted] E.
    - One drain on [redacted] approximately 70-feet east of the corner of [redacted] F.
- The retaining wall on [redacted] was designed as a fence, with a swale uphill.
    - See section B-B on the right edge of the drawing.
    - At the time, a wall/fence retaining soil only 3-feet high was not considered a retaining wall and did not require a footing in 1970.
    - In 2013, such a wall would be classified as a retaining wall and require a larger footing.

- The wall on [redacted] at the entry to the complex, was designed as a retaining wall and is performing acceptably.

E. Review of Contractual Documents

W. B. STARR

- Contract for landscape services signed 10/18/2004.
- Deposited documents show that contractor performed work on drainage system on the following invoice dates:
    - 6/24/05: Invoice 8401, WBS-0158
    - 2/13/06: Invoice, WBS-0375
    - 1/30/06: Invoice # 8892, WBS-0405
    - 2/4/08: Invoice, WBS-0777

TIERRA VERDE

- Contract for landscape services signed 6/24/10.
- Original job walk document stated that property has a water run off problem, TVL-0039.
- Irrigation upgrade on slope completed, TVL-0030.
- Deposited documents show that contractor performed work on drainage system on the following dates:
    - 10/22/10: Proposal for drains 23477 & 23483, TVL-0048
    - 10/26/10: Invoice for 50' of 4" drain, TVL-0052
    - 10/26/10: Extend drain to main drain, TVL-0055
    - 3/4/11: Contract terminated, TVL-0067

F. Destructive Testing and Repairs

PFCS prepared a request for proposal for repair of the clogged storm drain behind the wall and testing of the four storm drains at the top of the slope behind the swale in September 2014 (see attached RFP and drain sketch). On PFCS' recommendation, the HOA Board approved a contract with Hillside Repair and Drilling for the work. Building Permits were obtained from the Cities of [redacted] and [redacted] Repair and testing was scheduled for October of 2014.

Excavation of the clogged drain was started on October 27, 2014. The vertical 6" drain pipe was found to turn north behind the wall and was clogged with roots from the top of the pipe, through the 90 degree bend and running north, parallel to [redacted] The drain pipe was sloped 1/8"/foot north towards storm drain C. The area below the drain pipe was excavated down to the footing and a section of the sidewalk along [redacted] was removed. The curb was cored for four 4" drain pipes and four drain pipes were installed through the block wall. The pipes were inspected by the City of [redacted] and then

the pit was back filled. The concrete sidewalk and the swale behind the wall were then poured.

Testing of the four storm drains was conducted on October 30 utilizing a portable water tank, pump and fire hose (see attached photo MP-05.018 - 10/30/2014). The fire hose was attached to a 10' section of 1 1/2" PVC pipe, which was inserted into the concrete drain pipe, which ran diagonally downhill from the storm drains. Storm drains A, C & D discharged water through the slot drains in the curb along [redacted] Storm drain B was clogged with debris approximately 14' downhill from the inlet, approximately half way to the slot drain in the curb. A change order for repair of storm drain B was approved by the HOA board and repairs to storm drain B were scheduled to begin the week of December 1, 2014.

3. Conclusions

1. The site drainage to the west of the swale at the top of the slope remains the biggest concern and should be addressed as soon as possible.
2. The wall on [redacted] is performing surprisingly well, considering the age of the wall and the drainage that is being directed onto the slope behind it.
3. The drainage from the east side of [redacted] has been compromised and has directed water onto the slope behind the wall on [redacted]
4. There are multiple contributing factors to the mud flow on the slope along [redacted]
    A. Clogging of one of the four storm drains at the top of the slope.
    B. Addition of upgraded irrigation to the slope. When the irrigation lines were installed on the slope 30’ apart, we believe the landscape contractor should have noticed the one clogged drain pipe behind the wall.
    C. Modification to the swale at the top of the slope, directing water to flow down the slope. This was probably done to minimize standing water near the four storm drains.
    D. Dirt clogging the only drain at the toe of the slope behind the wall on [redacted]
5. The landscape contractors were aware of drainage problems at the top of the slope and this is shown by the following actions:
    A. The addition of area drains at the top of the hill that are connected to two 6" drain pipes (one black and one white), which direct water behind the wall.
    B. The additions of area drains by W.B. Starr and Tierra Verde Landscape (see attached address plot plan - drainage work locations).
    C. The cutting of notches in the swale at the top of the hill, which direct water down onto the slope.
    D. Dirt from prior slope slippage removed from the concrete swale leaving a dirt berm above the swale behind the wall.

4. Recommendations

Slope performance along [redacted] can be significantly improved by:

1. Replacing the existing drain behind the wall to drain through the curb and increasing the size of the discharge pipe. Work has been completed and is pending final City inspection by City of [redacted]
2. Repair of clogged storm drain B. Change order approved by HOA Board. Repair pending.
3. Annual maintenance of the five uphill storm drains and the storm drain behind the wall.
4. Annual maintenance of the swale behind the wall to minimize the build-up of dirt and debris and to prevent water from flowing onto the slope.
5. Removal of the two down slope drain pipes and redirection of the area drain pipes to the four existing storm drains.

5. Attachments

[redacted]

NOTE:
GRADING QUANTITIES SHOWN HEREON DO NOT INCLUDE EARTH THAT MAY BE MOVED DURING THE COURSE OF GRADING DUE TO UNKNOWN GEOLOGIC OR SOIL CONDITIONS.

SCALE

34' WIDE DRIVEWAY
NO SCALE

SECTION A-A
NO SCALE

SECTION B-B
NO SCALE

STORM DRAIN 'A'
STORM DRAIN 'B'
STORM DRAIN 'C'
STORM DRAIN 'D'
STORM DRAIN 'E'

VIA IGLESIA

[redacted]

[redacted]

[redacted]

[redacted]

QUANTITIES FOR LOT ONLY		
	DESCRIPTION	QUANTITY
	EXCAVATION	39,670 C.Y.
	EMBANKMENT	111,931 C.Y.
	NET (EXPORT)	71,885 C.Y.
	FINISH GRADING	49,488 C.Y.
1	6" CONCRETE CURB & GUTTER, DEPRESSED IN FRONT	288 L.F.
2	8" THICK STRIPE CONC. DRIVEWAY GUTTER	1,314 S.F.
	UNFORMED PITC 4" DEEP	
3	18" CONC GUTTER ALONG PERIMETER WALL (1' THICK)	1,179 S.F.
4	DIRT CURB (8" WIDE x 4" DEEP)	75 L.F.
5	6" CURB ONLY	24 L.F.
6	P.C.C. PAVEMENT & W&C & P.C.	19,498 S.F.
7	P.C.C. WALL TYPE S-1 (SEE STREET PLAN)	
8	P.C.C. WALL TYPE S-2	5,150 S.F.
9	P.C.C. WALL TYPE S-3	15,654 S.F.
10	P.C.C. STEPS WIDE	14 EA.
11	3" WIDE CONC. DOWNDRAIN (3" THICK)	492 S.F.
12	HANDRAIL @ STEPS & POINTS	201 L.F.
	CONCRETE BLOCK RETAINING WALL (6' HIGH) HOLDING 2362 SQ. FT. RETAINING PORTION	1179 L.F.
	STAC BLOCK RETAINING WALLS	2,822 S.F.
	STORM DRAIN QUANTITIES	
	8" R.C.P.	105 S.F.
	DRAINAGE STRUCTURE No. 3	8 EA.
	8" R.C.P.	104 L.F.
	PITCH BASIN NO.1	4 EA.
4	CURB OUTLET STRUCTURE	2 EA.
	1" R.C.P. CLEANOUT (CAST W/ W/ VALVE COVER)	1 EA.
	1" R.C.P. DRAIN & GRATE	1 EA.
	REINFORCED CONCRETE COLLAR	17
	PITCH BASIN PER D.C.S. 302 (10 FOOT)	

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GRADING PLAN

TRACT Nº 7216

DATE
DEC. 1978
REV. SEPT. 1979 - PLACE VER. CURB
REV. JULY 17 1980 - TURN AND P.C.
REV. 8 Revised Grading 5 AUG 81 5-18-82

SHEET
1 of 2

Locations of Items on Curb

#	Distance from Corner	Description
1	0.0'	North East Corner
2	85.5'	Start of new wall
3	185'	Drain for new wall throu_h curb
4	186'	End of new wall
5	122.6'	6" white drain ¸ i¸ e onto hillside
6	215'	Edison electrical vault cover
7	237.5'	6" black drain pipe onto hillside
8	340'	Storm drain A from above swale
9	539'	Storm drain B from above swale
10	651'	Storm drain C from above swale
11	713.4	Survey marker
12	720.5'	Clogged drain behind wall
13	750.5	Low point behind wall
14	817'	High point behind wall; south drains to storm drain E, north drains to low point behind wall @ 750'
15	858.5	Storm drain D from above swale
16	972.5'	Storm drain E from corner of [redacted] and [redacted]

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www.petefowler.com

[redacted]

[redacted] *CA 92637*

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CA License #713760

OREGON

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Portland, OR 97219

OR License #173960

GENERAL INQUIRY

info@petefowler.com
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Pete Fowler
CONSTRUCTION
Services, Inc.

Project #12-281

Pete Fowler CONSTRUCTION Services, Inc.

Request for Proposal

Date:	September 24, 2014
To:	[redacted]m
From:	Pete Fowler Construction Services, Inc.
Project:	[redacted] (PFCS 12-281)
Regarding:	Request for Proposal for Storm Drain Investigation & Repair
Note:	Confidential Attorney-Client and Attorney Work Product. Protected under all applicable evidence codes.

Dear Contractor:

We are requesting bids to perform repairs to the storm drain behind the retaining wall on [redacted] north of the corner at [redacted] in [redacted] CA.

WORK TO BE PERFORMED: The documentation for the scope of work is contained in this memo and the attached photographs.

1. Cut the concrete around the drain approximately 6′ x 6′.
2. Dig a pit around the clogged drain pipe approximately 6′ x 6′ and down approximately 6′ to expose the transition from the vertical pipe to the horizontal pipe under the footing at the base of the wall.
3. Provide a trailer mounted water tank and pump to supply 200 gpm minimum through a 2″ hose. See United Rental Item 920-7005.
4. Provide traffic control on one lane of [redacted]
5. Remove the vertical pipe and the horizontal sidewalk, leave curb in place.
6. Curb core cut through the curb with four 3" holes.
7. Replace the vertical pipe with four 3" drain pipes attached to four 3" horizontal pipes through curb..
8. Replace the sidewalk with concrete.
9. Back fill bottom 24" behind wall with 3/4" rock.
10. Fill and compact pit behind wall to existing grade.
11. Pour new concrete swale behind wall to match existing.
12. Install four 3" atrium grates on top of vertical drain pipes.
13. Clean out the bottom of four 24″ storm drains at the top of the slope.
14. Flush out the horizontal drain lines in four locations to determine if drains under the sidewalk perform satisfactorily and where they discharge to curb.

BID SELECTION PROCESS: The Owner and/or its representative will select one general contractor to perform most of the restoration work indicated in the scope of repair. A general contractor will be selected

on the basis of the following:

- The completeness of the contractor's written proposal.
- The contractor's demonstrated ability to complete the restoration work within the budget and with as few extras/change orders as possible.
- The contractor's demonstrated ability to adhere to an agreed upon construction schedule.
- The total cost of the project.
- Interviews conducted by the Owner or Owner's Representative.

MINIMUM QUALIFICATIONS: Each contractor must demonstrate the following qualifications:

- Contractor's license: A general building contractor (B) license in good standing. The contractors' bonds must be in good standing.
- Workers Compensation Insurance: Current active worker's compensation insurance. The Contractor selected for this project should be prepared to provide the homeowner with a Certificate of Insurance confirming coverage prior to commencement of any work.
- General Liability Insurance: A policy of liability insurance issued by a carrier authorized to write primary lines of insurance in the State of California with minimum coverage of $1,000,000 per occurrence for General Contractors and minimum coverage of $1,000,000 per occurrence for Specialty Contractors. The insurance must provide completed operations coverage, and must include the Owner and their Consultant as additional insured. The Contractor will be required to provide the Owner and their Consultant with Certificates of Insurance prior to the commencement of any work.

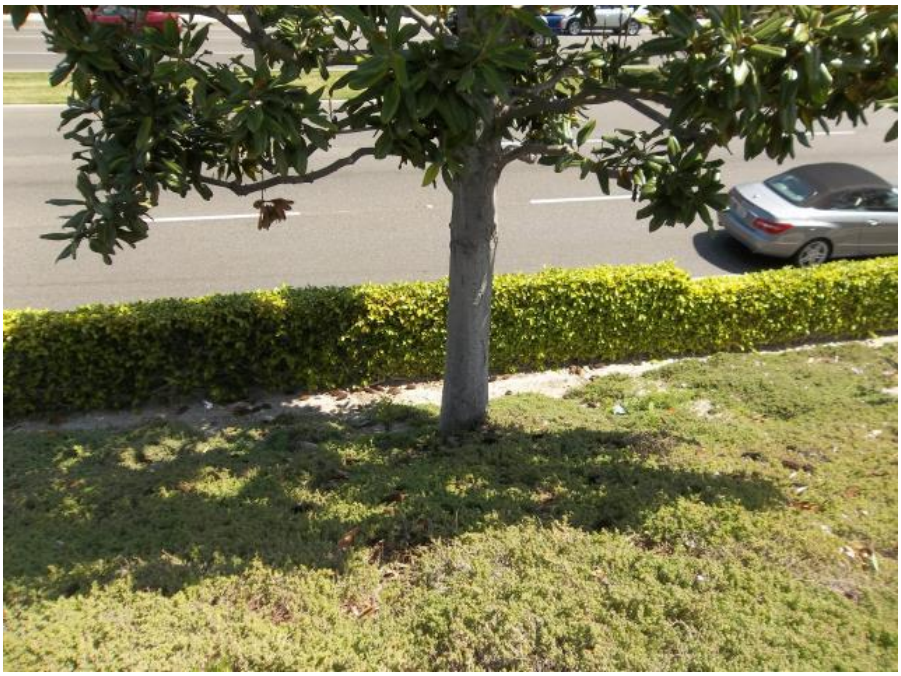
TIMELINE: Please call [redacted] to schedule a job walk.

Representative Photographs

MP-01.035; 03/28/2013; Dirt filled drain at 100' from South end, at lowest point behind wall.

MP-01.040; 03/28/2013; Look around curved wall, storm drain.

MP-01.045; 03/28/2013; Storm drain east of palm tree, drain pipe shown above.



MP-01.050; 03/28/2013; Looking down slope from storm drain.

MP-01.052; 03/28/2013; Metal topped storm drain.

MP-01.057; 03/28/2013; Third metal drain cover.

MP-01.084; 03/28/2013; Storm drain by 23463.

MP-01.103; 03/28/2013; 1rst slot drain to north, dry.

MP-01.110; 03/28/2013; North 2nd slot drain tree behind.

MP-01.111; 03/28/2013; 3rd slot drain with sediment behind.

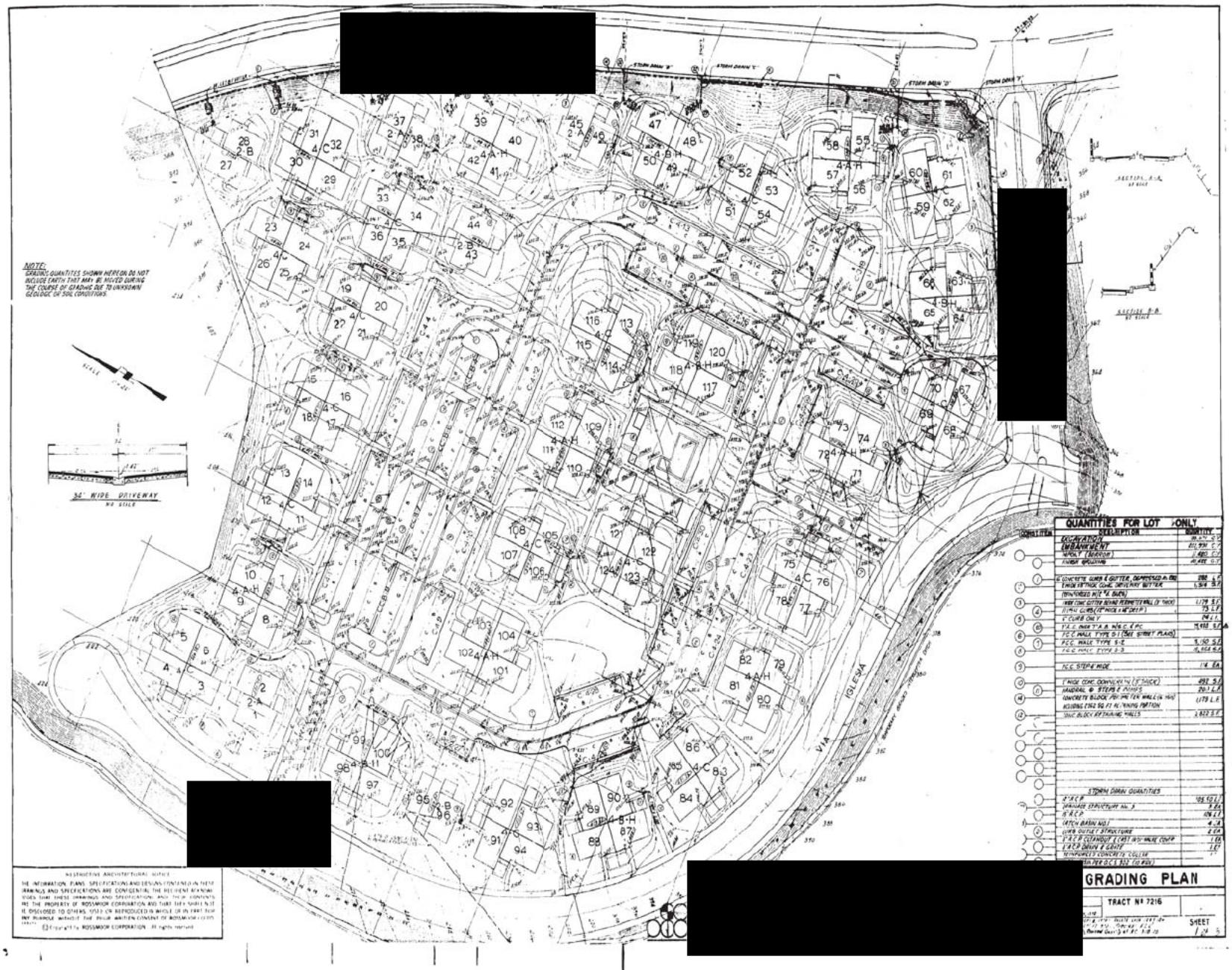
MP-01.118; 03/28/2013; Down 4th slot drain farthest north.

MP-02.011; 11/21/2013; Drain at low point on [redacted] Pipe filled with mud. Looking north, [redacted] on right.

MP-02.012; 11/21/2013; Drain at low point on [redacted] Pipe filled with mud. Looking south, [redacted] on left.

Images

Site - Cover



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CHURCH SITE
QUANTITIES FOR LOT ONLY
CONST. ITEM
DESCRIPTION
QUANTITY
EXCAVATION
EMBANKMENT
IMPORT (BORROW)
EXPORT (SPOILS)
LEGEND
ESTIMATED LOCATION OF FIELD DENSITY TEST
ESTIMATED LIMITS OF COMPACTED FILL
ESTIMATED LIMITS OF OVER EXCAVATION AND REPLACEMENT AS COMPACTED FILL
FINAL
DONALD R. WARREN CO.
ENGINEERS
LOS ANGELES
CALIFORNIA
TRACT 7216 - PHASE II
POSSMOOR
SHEET

GRADING NOTES FOR DEVELOPMENTS
IN THE COUNTY OF ORANGE

1. All work shall be in accordance with the Excavation and Grading Code of the County of Orange and any special requirements of the permit. Any violation will result in the stopping of all work until the violation is corrected.
2. No work whatsoever shall be started without first notifying the Grading Inspector.
3. Earthwork volume: Cut 155,270 C.Y., Fill 74,840 C.Y., Import 71,430 C.Y.
4. Cut slopes shall be no steeper than 1½ horizontal to 1 vertical.
5. Fill slopes shall be no steeper than 1½ horizontal to 1 vertical and shall not have less than 90% compaction at the finished surface.
6. Fills shall be compacted throughout to 90% density as determined by the ASTM D-1557-70 (Modified Compaction Density Test)
7. All slopes shall be planted with approved planting.
8. Planted slopes shall be watered and maintained.
9. Fill areas shall be cleaned of all vegetation and debris, scarified and inspected by the Grading Inspector and approved soil testing agency prior to placing fill.
10. Prior to placing fills, the bowing of by pulling trees shall be inspected and approved by the Grading Inspector and the Soil Engineer.
11. Fills shall be benched into competent material. Benching shall be a minimum of 5' width, 15' in width at the toe with 5' in depth.
12. As fills are placed, slope benching (8 foot minimum width) shall be provided if natural grade is over 5 horizontal to 1 vertical.
13. All existing fills shall be approved by the Grading Inspector or removed before any additional fills are added.
14. Fill slopes shall be compacted at the finish surface, planted, and drains paved on completion of every sixty (60) feet of vertical height or on completion of fill slopes less than sixty (60) feet of vertical height. (Drains are located at 30' vertical intervals.)
15. The location of dumping areas will shall be approved by the Grading Inspector prior to starting excavation.
16. Dust shall be controlled by watering.
17. The existing irrigation lines and cisterns shall be removed, or crushed in place and backfilled, and approved by the Grading Inspector and Soil Engineer.
18. Approved protective measures and temporary drainage provisions must be used to protect adjoining properties during the grading project.
19. Approved erosion protection devices shall be provided and maintained during the rainy season and shall be in place at the end of each day's work.
20. All concrete and grouts shall be treated with a moisture loss retardant for curing.
21. Sanitary facilities shall be maintained on the site from beginning to completion of grading operations per Orange County regulations on construction Sanitation Facility.
22. The location and protection of all utilities is the responsibility of the permittee.
23. The permittee shall notify the Department of Building and Safety when the grading operation is ready for rough grade inspection. When all work including installation of all drainage structures and protective devices have been completed and required reports have been submitted.
24. Grading inspection during installation is required for all drain devices. Fill terrace benches and fill slopes must be approved by the Soil Engineer and Design Engineer prior to terrace paving.
25. The water wells shall be abandoned in compliance with the specifications approved by the Director of Building and Safety on September 5, 1951, and approved by the Land Use Division of the Building and Safety Department.
26. The oil wells shall be abandoned in compliance with the Orange County Oil Code to the approval of the Land Use Division of the Building and Safety Department.
27. The existing cesspools and septic tanks shall be abandoned in compliance with the Uniform Building Code to the approval of the Plumbing Section of the Building and Safety Department.
28. Drainage pipe that will underlay structures must be reinforced concrete or cast iron and the structure foundation must be engineered by a foundation engineer.
29. The design engineer shall be responsible for deputy inspection during construction of the pipe and will certify to the stability and that the work was done to his satisfaction.
30. Submission of professional opinion that the subdivision have sufficient stability to hold the additional weight of the proposed fills without settlement that will cause damage to proposed improvements must be submitted to the Director of Building and Safety prior to placement of fill.
31. All trench backfills in slopes or level areas of private property shall be tested and certified by the site soil testing firm. The soil certification shall include the stability of the backfill and that the compaction is 90% of the maximum dry density using the ASTM D-1557-70 (5 Layer Curve)
32. All trench backfills in public property where private property structures or slopes bear on them for support shall be certified by the soil testing firm, per Soil Engineers recommendations
33. The above trench backfills which the Road Department is involved with pipeline construction, the private soil testing firm will make their certification from the top of pipe to the top of finish grade, per Soil Engineers recommendations
34. All storm drain construction in private property not supervised by Orange County Flood Control or Road Departments shall be supervised by the Designing Civil Engineer. The Civil Engineer shall provide deputy inspection; shall insure soil certification by the site soil testing firm; and shall certify that the construction and backfill placement has been completed according to the approved plans and will function satisfactorily for its intended purpose, prior to final approval.
35. The Engineering Geologist and Soil Engineer shall, after cleaning and prior to the placement of all fill in canyons, inspect each canyon for areas of adverse stability and to determine the presence or absence of subsurface water or spring flow. If needed, drains will be designed and constructed prior to the placement of fill in each respective canyon.
36. The exact location of the subdrains shall be surveyed in the field.
37. Subdrains shall be a minimum of 1 sq. ft. area and composed of gravel or perforated Hvl Cor type pipe, or both, as determined in the field.
38. Subdrain outlets to be completed at the beginning of the subdrain construction.
39. The Engineering Geologist shall maintain periodic inspections and submit a complete report and map upon completion of the rough grading.
40. All cut slopes shall be investigated both during and after grading by an Engineering Geologist to determine if any slope stability problem exists. Should excavation disclose any geological hazards or potential geological hazards, the Engineering Geologist shall recommend necessary treatment to the Director of Building and Safety for approval.
41. Where support or buttressing of cut and natural slopes is determined to be necessary by the Engineering Geologist and Soil Engineer, the Soil Engineer will submit design, location and calculations to the Director of Building and Safety prior to construction. The Engineering Geologist and Soil Engineer will inspect and control the construction of the buttressing and certify to the stability of the slope and adjacent structures upon completion.
42. When cut pads are brought to near grade the Engineering Geologist shall determine if the bedrock is extensively fractured or faulted and will require inspection. If considered necessary by the Engineering Geologist and Soil Engineer, a compacted fill blanket will be placed.
43. The design engineer shall exercise sufficient supervisory control during grading and construction to insure compliance with the approved plans.
44. All private streets, parking lot, alleys, or access road construction shall be supervised by the design Civil Engineer. The Civil Engineer shall provide deputy inspection, shall insure soil certification by the site soil testing firm; and shall certify that the construction has been completed according to the approved plans and will function satisfactorily for its intended purposes prior to final approval.
45. The tract engineers must certify that all terrace debris and lot drainage and grading is according to the approved plan previous to lot development and prior to final approval.
46. The supervising engineer shall provide a minimum of one blue top, set at the highest point in the finish drainage swale. The elevation of the floor shall also be provided to insure proper clearance and fall to drainage swale. These elevations shall be noted on the building plans.
47. All retaining walls, and/or grading devices, either proposed by the applicant or requested by the Grading Section shall be shown and approved upon the building plans prior to issuance of the building permits, should building locations, after issuance of permit, conflict with Grading Standard Sheet G4 or G5, additional walls or devices may be required.
48. Such retaining walls or devices shall be constructed and backfilled prior to slab or underpinning clearance.
49. Replace or repair all damaged berms, slopes and grading devices inspected and approved in the Rough Grading Inspection, remove excess dirt accumulated upon the building pad, and grade all pad drainage swales, prior to slab and underpinning clearance.
50. Any additional damage caused during progress of building construction must be corrected prior to the final approval of the building construction.
51. All Grading operations will be accomplished in accordance with the recommendations of the Engineering Geological report by F. Beach Leighton dated May 1970 and Soils Engineer Donald R Warren Co. report dated Dec 17, 1970
52. Highly expansive soils should be buried beneath the deeper fills
53. Grading Specifications Pertaining to this Job Shall Comply With All Requirements of F.H.A. Data Sheet 79-D.

Donald L Van Bogart
DONALD L VAN BOGART R.C.E. 10605

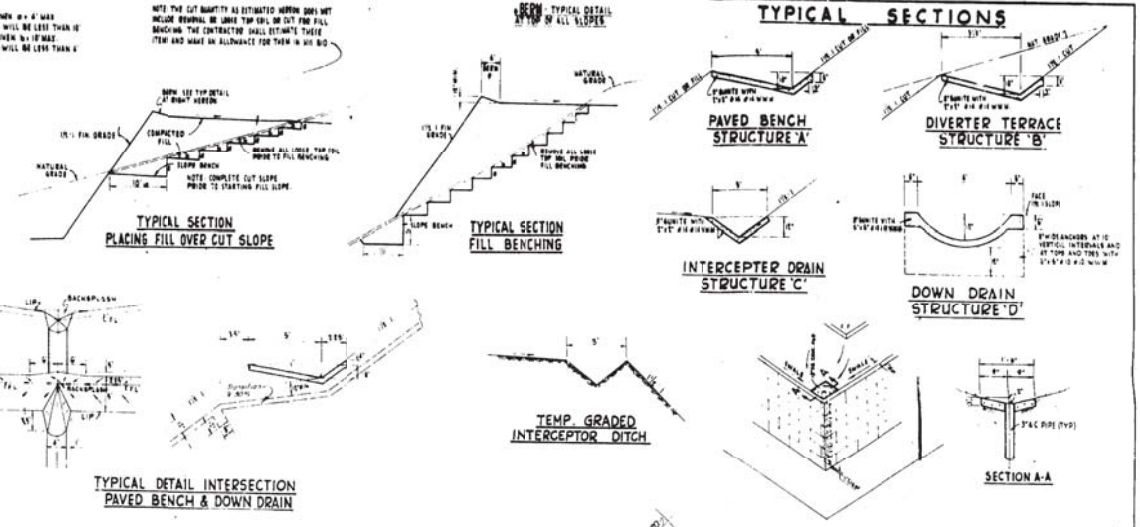
GEOLOGIC INSPECTIONS DURING GRADING WILL BE NECESSARY TO PROVIDE ADDITIONAL GEOLOGIC DATA AND TO DELINEATE ANY UNANTICIPATED ADVERSE GEOLOGIC CONDITIONS. IF GEOLOGIC INSPECTIONS DURING THE GRADING OPERATION SHOW THAT STABILIZATION FILLS AND/OR BUTTRESSES WILL BE REQUIRED TO REPLACE OR SUPPORT LOCAL SECTIONS OF ADVERSE GEOLOGIC STRUCTURE AND TO REPLACE SECTIONS OF WEAK SURFICIAL MATERIAL WHICH WERE NOTED IN OUR PAGES, FEASIBILITY ANALYSES AND EVALUATIONS BY THE SOILS ENGINEER FOR THE BUTTRESS FILL (OR STABILITY FILLS) WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOR REVIEW AND APPROVAL.

NOTE: THE CUT QUANTITY AS ESTIMATED HEREON DOES NOT INCLUDE REMOVAL OF LOOSE TOP SOIL OR CUT FOR FILL BENCHING. THE CONTRACTOR SHALL ESTIMATE THESE ITEMS AND MAKE AN ALLOWANCE FOR THEM IN HIS BID.

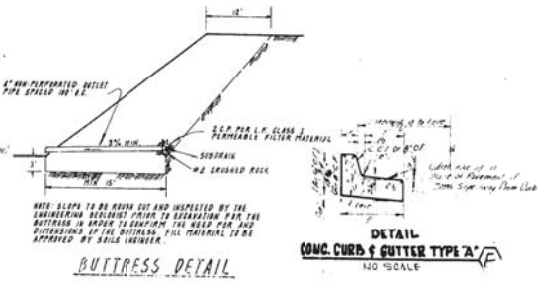
a. WHEN H = 4' MAX b WILL BE LESS THAN 18'
b. WHEN H = 18' MAX a WILL BE LESS THAN 6'

BERM - TYPICAL DETAIL AT TOP OF ALL SLOPES

TYPICAL SECTIONS



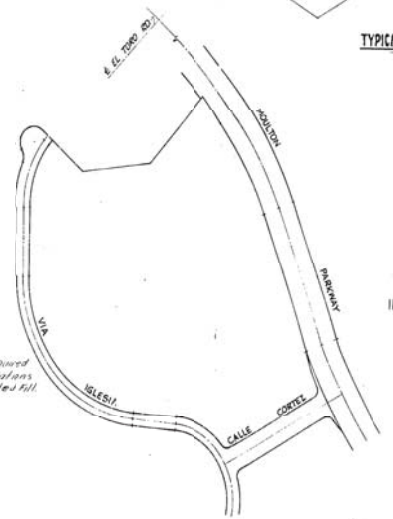
TYPICAL DRAINAGE BEHIND BLOCKWALL (W)
NO SCALE



NOTE: SLOPE TO BE KEYED OUT AND INSPECTED BY THE ENGINEERING GEOLOGIST PRIOR TO EXCAVATION FOR THE BUTTRESS IN ORDER TO CONFIRM THE NEED FOR AND DETERMINE OF THE BUTTRESS FILL MATERIAL TO BE APPROVED BY SOILS ENGINEER.

BUTTRESS DETAIL

DETAIL
CONC. CURB & GUTTER TYPE 'A' (F)
NO SCALE

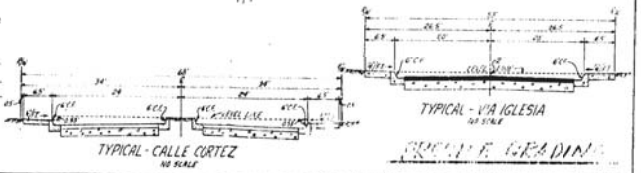


INDEX MAP

* Since Both Cut and Fill Operations Are Required on this Site it is to be noted that Foundations Shall Rest on Either Cut or Compacted Fill.

LEGEND
EXISTING CONTOUR LINE
FINISHED CONTOUR LINE
DAYLIGHT LINE

OWNER:
OAKLAWN HOMES INC.
24342 CALLE ARAGON
LAGUNA HILLS, CALIF 92653
(714) 831-8140



GRADING PLAN

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LAGUNA HILLS

SOILS ENGINEER
DONALD R. WARREN CO.
815 W. SUNSET BLVD.
LOS ANGELES, CALIF.
MA 9-0101
R.C.E. [illegible]

GEOLOGIST
[illegible]
[illegible]
[illegible]

JOB ADDRESS
24701 MOULTON PKY
LAGUNA HILLS, CALIF.
837-0860

TOUPS ENGINEERING, INC.
CONSULTING CIVIL ENGINEERS
SANTA ANA 547-6785 • VENTURA 643-6138 • LAGUNA HILLS 837-0360
LAND PLANNING CONSULTANTS

GRADING SPECIFICATIONS & TYPICAL DETAILS

DATE [illegible] TRACT [illegible] SHEET 3 OF [illegible]

[redacted]

NOTE:
GRADING QUANTITIES SHOWN HEREON DO NOT INCLUDE EARTH THAT MAY BE MOVED DURING THE COURSE OF GRADING DUE TO UNKNOWN GEOLOGIC OR SOIL CONDITIONS.

33' WIDE DRIVEWAY
N.T. SCALE

VIA IGLESIA

QUANTITIES FOR LOT ONLY

CONTRACT ITEM		DESCRIPTION	QUANTITY
		EXCAVATION	138,571 C.Y.
		EMBANKMENT	204,931 C.Y.
		IMPORT (BORROW)	71,481 C.Y.
		FINISH GRADING	89,825 C.Y.
1		CONCRETE CURB & GUTTER, DEPRESSED ON 8" WIDE 6" THICK CONC. DRIVEWAY GUTTER	280 L.F. / 8,914 S.F.
		(REINFORCED W/ #4 BARS)	
3		4" WIDE CONC. GUTTER BEHIND TERMINATE WALL (3" THICK)	1,179 L.F.
4		FLUSH CURB (12" WIDE x 6" DEEP)	75 L.F.
5		6" CURB ONLY	20 L.F.
6	10	P.A.C. OVER "A" & B" N/S.C. & F.C.	75,930 S.F.
		P.C.C. WALK TYPE S-1 (SEE STREET PLANS)	
8	7	P.C.C. WALK, TYPE S-2	13,150 S.F.
8		P.C.C. WALK, TYPE S-3	45,594 S.F.
9		P.C.C. STEPS & WIDE	114 EA.
10		8" WIDE CONC. DOWN DRAIN (3" THICK)	491 S.F.
14	11	HANDRAIL @ STEPS & RAMPS	200 L.F.
		CONCRETE BLOCK (MEDIUM) TER WALL (6'-10") INCLUDING 2962.92 S.F. RETAINING PORTION	1,173 L.F.
12		TOLC BLOCK RETAINING WALLS	2,821 S.F.
		STORM DRAIN QUANTITIES	
		12" A.C.P.	106.10 L.F.
15		DRAINAGE STRUCTURE No. 3	1 EA.
		18" A.C.P.	106 L.F.
23		CATCH BASIN NO. 1	1 EA.
	14	CURB OUTLET STRUCTURE	1 EA.
		8" A.C.P. CLEANOUT & CAST IRON VALVE COVER	1 EA.
		8" A.C.P. DRAIN & GRATE	1 EA.
		REINFORCED CONCRETE CO. (1.8')	1 L.F.
		[illegible] (S.B.C.S. 331 (6.400))	1 EA.

[redacted]

[redacted]

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GRADING PLAN

TRACT Nº 7216

SHEET

[redacted] RETAINING WALL BACKFILL

CHURCH SITE

[redacted]

SLOPE DRAINS, MINOR SLOPE REPAIRS AND RETAINING WALL BACKFILL (2-15-71)

[redacted]

[redacted]

QUANTITIES FOR LOT ONLY		
DWG. ITEM	DESCRIPTION	QUANTITY
	EXCAVATION	138,171 C.Y.
	EMBANKMENT	204,191 C.Y.
	IMPORT (BORROW)	71,020 C.Y.
	FINISH GRADING	49,488 S.Y.
1	CONCRETE CURB & GUTTER, DEPRESSED FOR DRIVEWAYS	188 L.F.
2	2" ASPHALT CONC. DRIVEWAY GUTTER (REQUIRED PER ZONING)	6,552 S.F.
3	CONC. DR. DRAIN APPROACH APRON	540 S.F.
4	FLOW LINE (FOR DR. 1'-0" DEEP)	75 L.F.
5	R.C.P. 18" D.B.B. W/ W.L. & P.C.	41,137 S.F.
	"B" INLET, TYPE 5-1 (SEE STREET PLANS)	
6	WELL INLET W/ TRASH R.R.	2,470 L.F.
8	WELL INLET, TYPE 5-B	20,103 S.F.
9	RIP RAP FLOW LINE	158 S.F.
10	2" ASPHALT CONC. DRIVEWAY (ON FILL)	350 S.F.

LEGEND

ESTIMATED LOCATION OF FIELD DENSITY TEST

ESTIMATED LIMITS OF COMPACTED FILL

ESTIMATED LIMITS OF OVER EXCAVATION AND REPLACEMENT AS COMPACTED FILL

FINAL

ADDENDUM TO THE FINAL SUBGRADE (STREETS)

TESTS 381 - 389 (9-29-70)

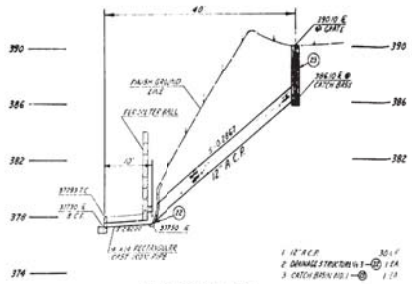
1"=40'	DONALD R. WARREI CO. ENGINEERS	70-84
DESIGN RH / DRAWN / CHECKED	LOS ANGELES CALIFORNIA	1
	9-16-70 DATE	DRAWING NO.

RLT

TRACT 7216 - PHASE V

ROSSMOOR

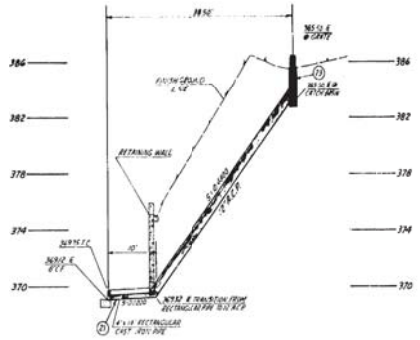
SHEET



STORM DRAIN "A"

LOCATED BETWEEN BUILDINGS 38 & 39

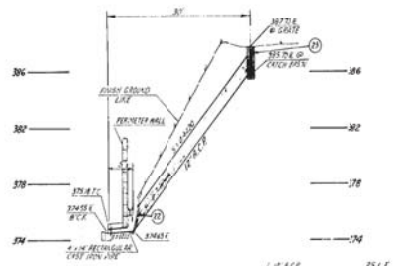
1. 12" R.C.P. 30 L.F.
2. DRAINAGE STRUCTURE No. 1 — (D1) 1 EA.
3. CATCH BASIN No. 1 — (B) 1 EA.



STORM DRAIN "D"

LOCATED SOUTHERLY OF BUILDING 35

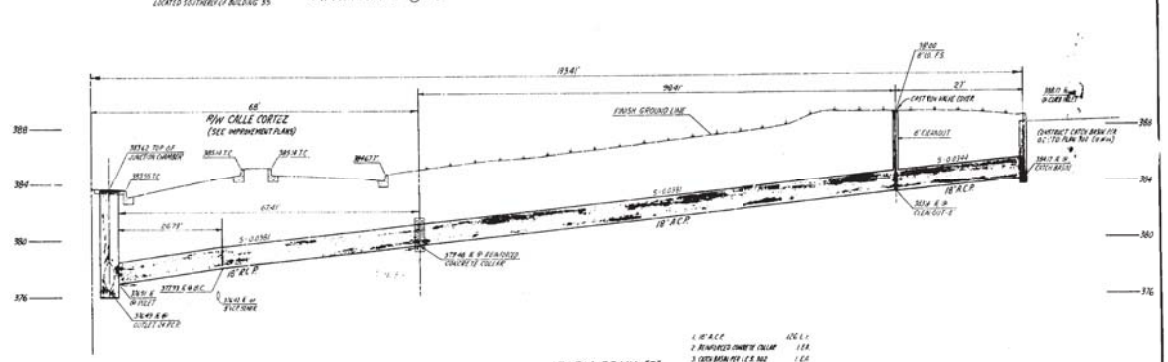
1. 12" R.C.P. 261 L.F.
2. CATCH BASIN No. 1 — (B) 1 EA.
3. CURB OUTLET STRUCTURE — (D) 1 EA.



STORM DRAIN "B"

LOCATED BETWEEN BUILDINGS 46 & 47

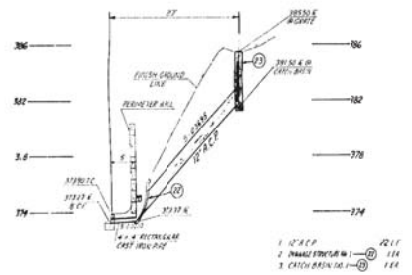
1. 12" R.C.P. 25 L.F.
2. DRAINAGE STRUCTURE No. 3 — (D1) 1 EA.
3. CATCH BASIN No. 1 — (B) 1 EA.



STORM DRAIN "E"

LOCATED BETWEEN BUILDINGS 33 & 70

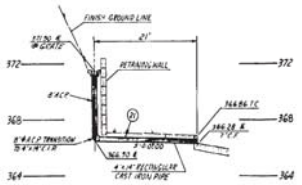
1. 18" R.C.P. 406 L.F.
2. REINFORCED CONCRETE COLLAR 1 EA.
3. CATCH BASIN PER I.C.B. 1102 1 EA.
4. 6" R.C.P. CLEANOUT AND CAST IRON VALVE COVER 1 EA.



STORM DRAIN "C"

LOCATED EASTERLY OF BUILDING 48

1. 12" R.C.P. 72 L.F.
2. DRAINAGE STRUCTURE No. 1 — (D1) 1 EA.
3. CATCH BASIN No. 1 — (B) 1 EA.



STORM DRAIN "F"

LOCATED EAST OF BUILDING 61

1. 8" R.C.P. / GRATE 1 EA.
2. CURB OUTLET STRUCTURE — (D) 1 EA.

SCALE	
HORIZ.	1" = 10'
VERT.	1" = 4'

* SEE GRADING PLAN FOR PLAN VIEW

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TOUPS ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS — LAND PLANNING CONSULTANTS

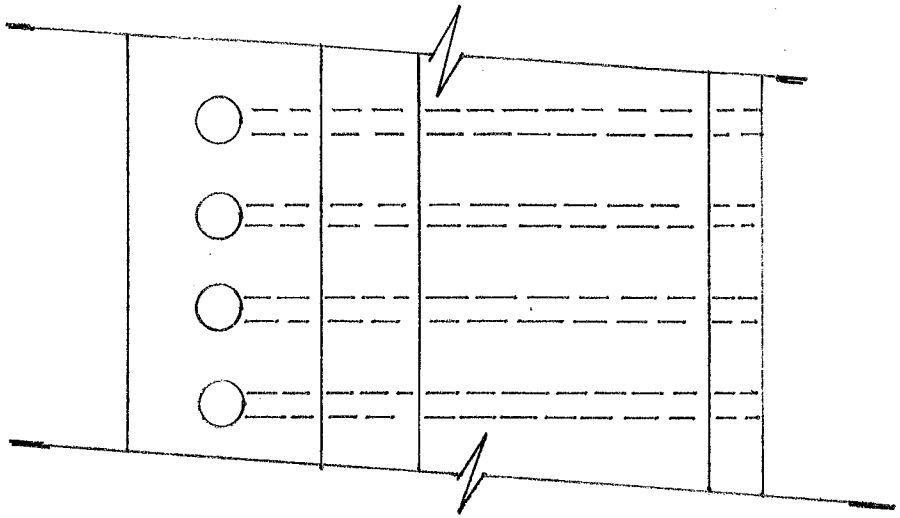
SANTA ANA 541-1431 • VENTURA • LAGUNA HILLS 837-0560

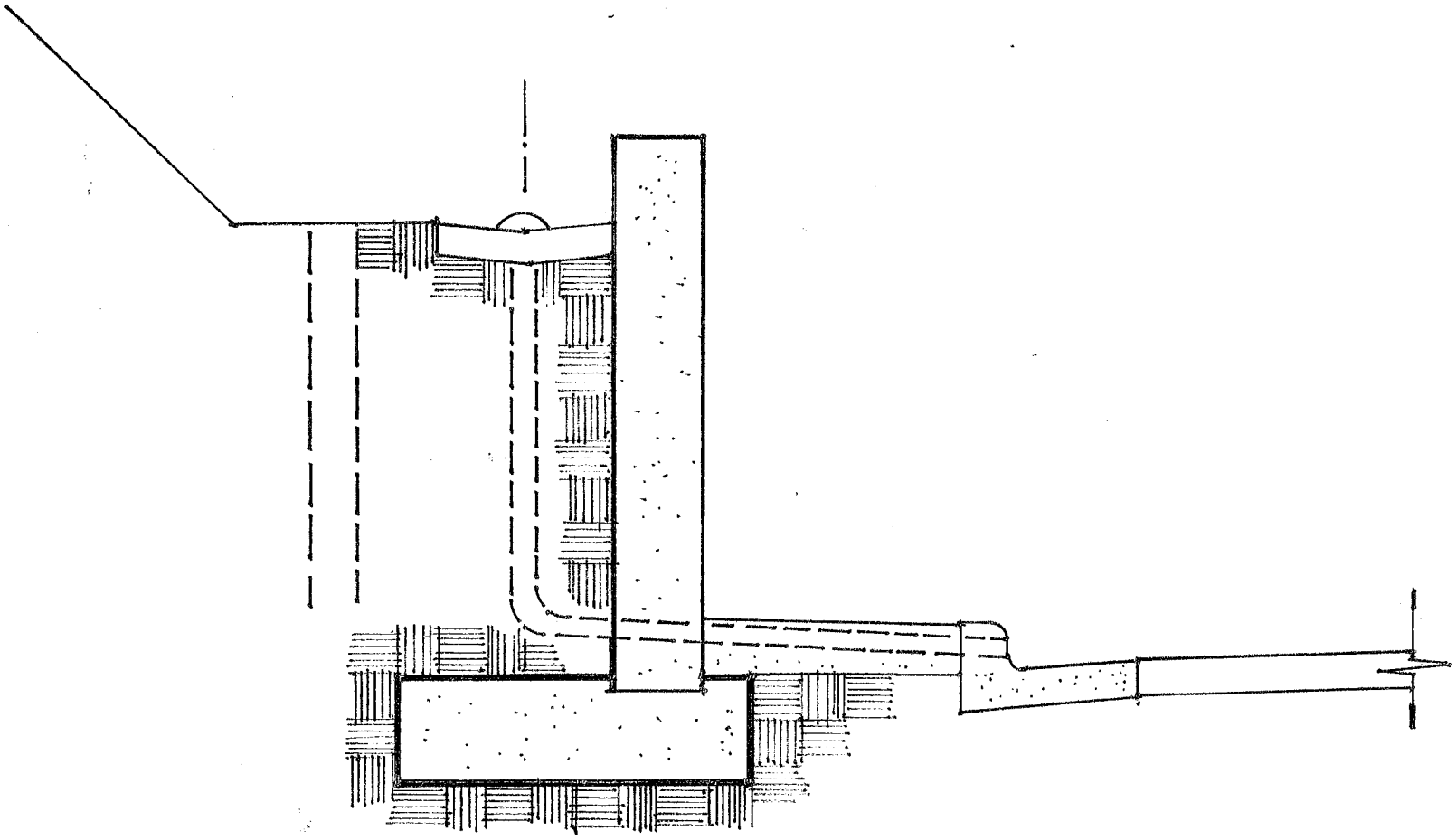
TRACT NO. 7216

ON-LOT STORM DRAIN

9 of 3

11

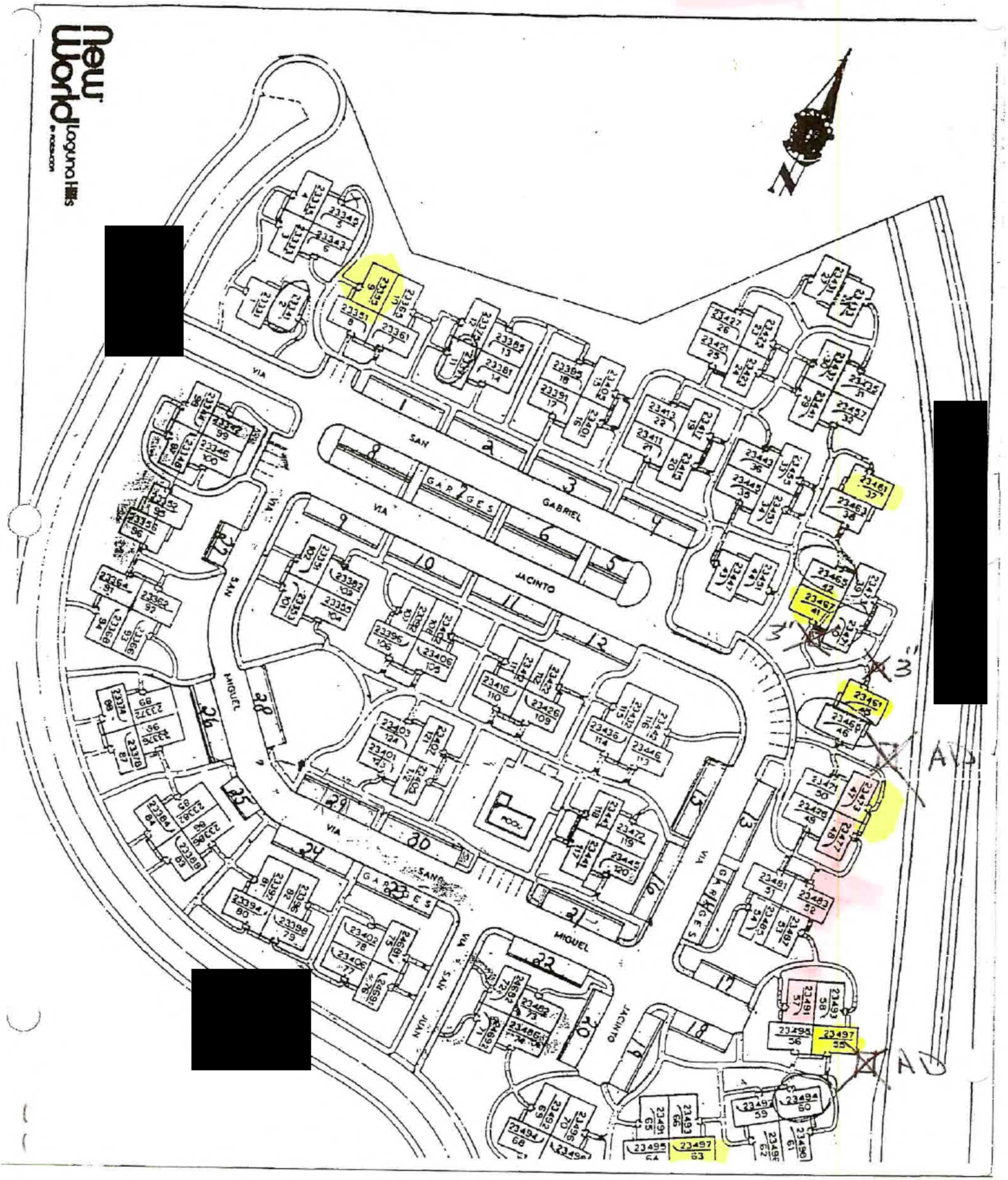




WBS0400

Starr

TVL



7B. RFP to Contractors

[redacted]

[redacted] *CA 92637*

OFFICES

CALIFORNIA

949-240-9971

931 Calle Negocio, Ste J
San Clemente, CA 92673

CA License #713760

OREGON

503-246-3744

9320 SW Barbur Blvd, Ste 170
Portland, OR 97219

OR License #173960

GENERAL INQUIRY

info@petefowler.com
www.petefowler.com

Pete Fowler
CONSTRUCTION
Services, Inc.

Project #12-281

Pete Fowler CONSTRUCTION Services, Inc.

Request for Proposal

7B. RFP to Contractors

Date: September 24, 2014
To: [redacted]
From: Pete Fowler Construction Services
Project: [redacted] (PFCS 12-281)
Regarding: Request for Proposal for Storm D
Note: Confidential Attorney-Client and Attorney Work Product. Protected under all applicable evidence codes.

Dear Contractor:

We are requesting bids to perform repairs to the storm drain behind the retaining wall on [redacted] north of the corner at [redacted] in [redacted] CA.

WORK TO BE PERFORMED: The documentation for the scope of work is contained in this memo and the attached photographs.

1. Cut the concrete around the drain approximately 6′ x 6′.
2. Dig a pit around the clogged drain pipe approximately 6′ x 6′ and down approximately 6′ to expose the transition from the vertical pipe to the horizontal pipe under the footing at the base of the wall.
3. Provide a trailer mounted water tank and pump to supply 200 gpm minimum through a 2″ hose. See United Rental Item 920-7005.
4. Provide traffic control on one lane of [redacted]
5. Remove the vertical pipe and the horizontal sidewalk, leave curb in place.
6. Curb core cut through the curb with four 3" holes.
7. Replace the vertical pipe with four 3" drain pipes attached to four 3" horizontal pipes through curb..
8. Replace the sidewalk with concrete.
9. Back fill bottom 24" behind wall with 3/4" rock.
10. Fill and compact pit behind wall to existing grade.
11. Pour new concrete swale behind wall to match existing.
12. Install four 3" atrium grates on top of vertical drain pipes.
13. Clean out the bottom of four 24″ storm drains at the top of the slope.
14. Flush out the horizontal drain lines in four locations to determine if drains under the sidewalk perform satisfactorily and where they discharge to curb.

BID SELECTION PROCESS: The Owner and/or its representative will select one general contractor to perform most of the restoration work indicated in the scope of repair. A general contractor will be selected

on the basis of the following:

- The completeness of the contractor's written proposal.
- The contractor's demonstrated ability to complete the restoration work within the budget and with as few extras/change orders as possible.
- The contractor's demonstrated ability to adhere to an agreed upon construction schedule.
- The total cost of the project.
- Interviews conducted by the Owner or Owner's Representative.

MINIMUM QUALIFICATIONS: Each contractor must demonstrate the following qualifications:

- Contractor's license: A general building contractor (B) license in good standing. The contractors' bonds must be in good standing.
- Workers Compensation Insurance: Current active worker's compensation insurance. The Contractor selected for this project should be prepared to provide the homeowner with a Certificate of Insurance confirming coverage prior to commencement of any work.
- General Liability Insurance: A policy of liability insurance issued by a carrier authorized to write primary lines of insurance in the State of California with minimum coverage of $1,000,000 per occurrence for General Contractors and minimum coverage of $1,000,000 per occurrence for Specialty Contractors. The insurance must provide completed operations coverage, and must include the Owner and their Consultant as additional insured. The Contractor will be required to provide the Owner and their Consultant with Certificates of Insurance prior to the commencement of any work.

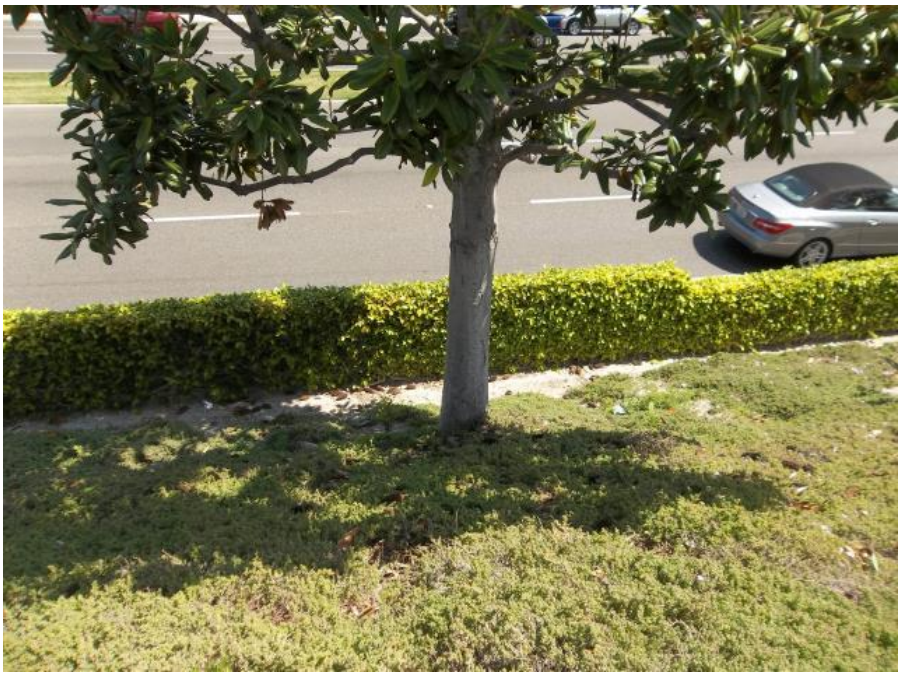
TIMELINE: Please call [redacted] to schedule a job walk.

Representative Photographs

MP-01.035; 03/28/2013; Dirt filled drain at 100' from South end, at lowest point behind wall.

MP-01.040; 03/28/2013; Look around curved wall, storm drain.

MP-01.045; 03/28/2013; Storm drain east of palm tree, drain pipe shown above.



MP-01.050; 03/28/2013; Looking down slope from storm drain.

MP-01.052; 03/28/2013; Metal topped storm drain.

MP-01.057; 03/28/2013; Third metal drain cover.

MP-01.084; 03/28/2013; Storm drain by 23463.

MP-01.103; 03/28/2013; 1rst slot drain to north, dry.

MP-01.110; 03/28/2013; North 2nd slot drain tree behind.

MP-01.111; 03/28/2013; 3rd slot drain with sediment behind.

MP-01.118; 03/28/2013; Down 4th slot drain farthest north.

MP-02.011; 11/21/2013; Drain at low point on [redacted] Pipe filled with mud. Looking north, [redacted] on right.

MP-02.012; 11/21/2013; Drain at low point on [redacted] Pipe filled with mud. Looking south, [redacted] on left.

Images

Site - Cover

[redacted]

NOTE:
GRADING QUANTITIES SHOWN HEREON DO NOT INCLUDE EARTH THAT MAY BE MOVED DURING THE COURSE OF GRADING DUE TO UNKNOWN GEOLOGIC OR SOIL CONDITIONS.

34' WIDE DRIVEWAY
NO SCALE

SECTION A-A
NO SCALE

SECTION B-B
NO SCALE

VIA IGLESIA

[redacted]

[redacted]

[redacted]

QUANTITIES FOR LOT ONLY		
	DESCRIPTION	QUANTITY
	EXCAVATION	39,670 C.Y.
	EMBANKMENT	111,934 C.Y.
	NET (EXPORT)	72,265 C.Y.
	FINISH GRADING	49,488 C.Y.
1	6" CONCRETE CURB & GUTTER, DEPRESSED IN FRONT	288 L.F.
2	8"x8"x18" CONC. DRIVEWAY GUTTER	1,314 S.F.
3	18" CONCRETE PIPE (4" SLAB)	
3	18" CONC. GUTTER ALONG PERIMETER WALL (1' THICK)	1,179 S.F.
4	8" MIN. CURB (8" WIDE x 16" DEEP)	75 L.F.
5	6" CURB ONLY	24 L.F.
6	4" P.C.C. PARK'G & WALK, & P.C.	19,492 S.F.
7	P.C.C. WALL TYPE S-1 (SEE STREET PLAN)	
1	P.C.C. WALL TYPE S-2	5,150 S.F.
2	P.C.C. WALL TYPE S-3	15,654 S.F.
3	P.C.C. STEPS 4' WIDE	14 EA.
9	3" WIDE CONC. DOWNCURB (3" THICK)	492 S.F.
10	HANDRAIL @ STEPS & PATIOS	201 L.F.
11	CONCRETE BLOCK RETAINING WALL (6' HIGH) HOLDING 2362 SQ. FT. RETAINING PORTION	1179 L.F.
12	STAC BLOCK RETAINING WALLS	2,822 S.F.
	STORM DRAIN QUANTITIES	
	8" R.C.P.	105 S.F.
	DRAINAGE STRUCTURE No. 3	3 EA.
	8" R.C.P.	104 L.F.
	INTCH BASIN No.1	4 EA.
4	CURB OUTLET STRUCTURE	2 EA.
	4" R.C.P. CLEANOUT & CAP, W/V VALVE COMP.	1 EA.
	3" R.C.P. DRAIN & GRATE	1 EA.
	REINFORCED CONCRETE COLLAR	1
	INTCH BASIN PER D.C.S. 302 (SEE PLAN)	

RESTRICTIVE ARCHITECTURAL NOTICE

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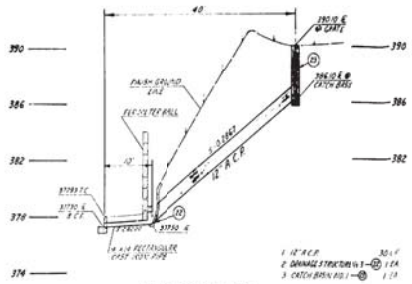
GRADING PLAN

TRACT Nº 7216

DATE

SHEET 1 of 2

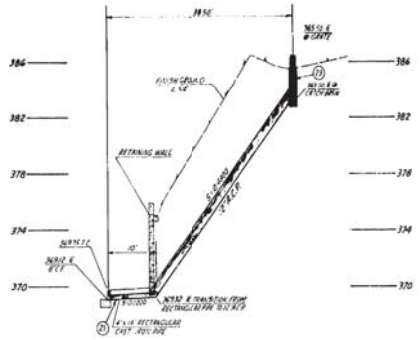
[redacted]



STORM DRAIN "A"

LOCATED BETWEEN BUILDINGS 38 & 39

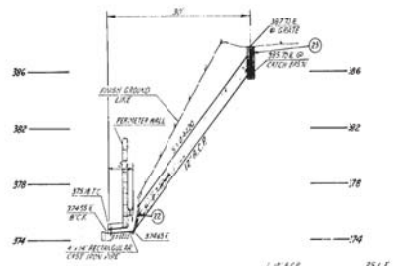
1. 12" R.C.P. 30 L.F.
2. DRAINAGE STRUCTURE No. 1 — (D1) 1 EA.
3. CATCH BASIN No. 1 — (B) 1 EA.



STORM DRAIN "D"

LOCATED SOUTHERLY OF BUILDING 35

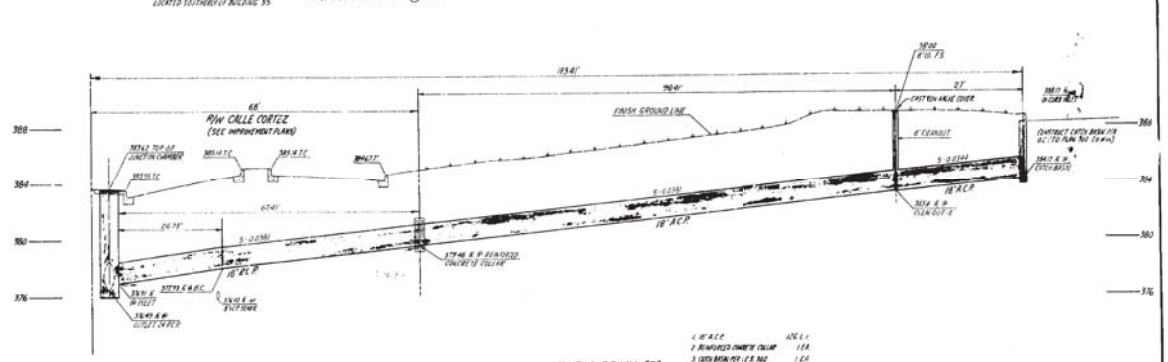
1. 12" R.C.P. 261 L.F.
2. CATCH BASIN No. 1 — (B) 1 EA.
3. CURB OUTLET STRUCTURE — (D) 1 EA.



STORM DRAIN "B"

LOCATED BETWEEN BUILDINGS 46 & 47

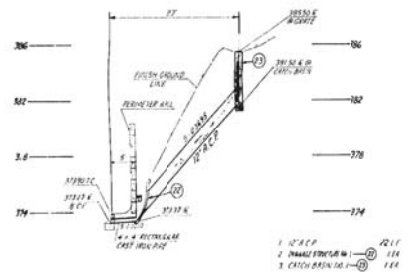
1. 12" R.C.P. 25 L.F.
2. DRAINAGE STRUCTURE No. 3 — (D1) 1 EA.
3. CATCH BASIN No. 1 — (B) 1 EA.



STORM DRAIN "E"

LOCATED BETWEEN BUILDINGS 33 & 70

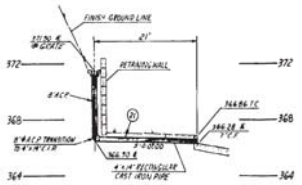
1. 18" R.C.P. 406 L.F.
2. REINFORCED CONCRETE COLLAR 1 EA.
3. CATCH BASIN PER I.C.B. 1102 1 EA.
4. 6" R.C.P. CLEANOUT AND CAST IRON VALVE COVER 1 EA.



STORM DRAIN "C"

LOCATED EASTERLY OF BUILDING 48

1. 12" R.C.P. 72 L.F.
2. DRAINAGE STRUCTURE No. 1 — (D1) 1 EA.
3. CATCH BASIN No. 1 — (B) 1 EA.



STORM DRAIN "F"

LOCATED EAST OF BUILDING 61

1. 8" R.C.P. / GRATE 1 EA.
2. CURB OUTLET STRUCTURE — (D) 1 EA.

SCALE	
HORIZ.	1" = 10'
VERT.	1" = 4'

* SEE GRADING PLAN FOR PLAN VIEW

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TOUPS ENGINEERING, INC.

CONSULTING CIVIL ENGINEERS — LAND PLANNING CONSULTANTS

SANTA ANA 541-1431 • VENTURA • LAGUNA HILLS 837-0560

TRACT NO. 7216

ON-LOT STORM DRAIN

9 of 3

Pete Fowler
CONSTRUCTION
Services, Inc.

Project Note

8A. Contracting Requirements

Date: December 17, 2014
To: FILE
From: Pete Fowler
Project: [redacted], CA (PFCS 14-301)
Regarding: Project Note

Kirk,

As we have discussed on the telephone, I would like to see the Owners avoid entering into an agreement that has any economic incentive to the contractor for increases in cost. I think we can craft an agreement and project delivery scheme that includes incentives for cost savings, and makes the contractor and the Owners partners in the creation of a beautiful home that balances the scope, costs, and schedule.

I believe the following will help lead you in that direction:

- The contract with the general contractor should be in at least two phases: Before the plans and specifications are complete, and after.
- There should be an incentive to get the plans and specifications complete. Possibly hold back some portion of the payment until that point, or even offer a bonus.
- The contract should require multiple bidders for each trade or discrete scope of work.
- There should be incentives to get as many of these contracts in place as early as possible, when possible. The term for having all of the subcontracts executed for a complete project is to have the "bought out." Until the project buyout is complete, a budget is just that. The costs are not locked in until all the contracts are signed.
- The contractor should be required to create and maintain a Progress Schedule that compares his original schedule to the current schedule, in a format simple enough for key stakeholders to understand and use. This schedule should be coordinated with the numbering and naming scheme from the Schedule of Values.
- The contracts should be clear that the contractor is agreeing to a partnership that fairly compensates him while removing economic incentive for cost or schedule inflation. And that he is agreeing to choose contractors and execute the work using his best professional judgment with the intent of delivering the project the Owner's want as quickly and inexpensively and possible.

POSSIBLE ACTION STEPS

1. Compose and sign a contract with the general contractor for "Phase 1 Work Before Scope Definition," which will include

- Protection of the existing work that is usable
- Evaluation of the existing work by the original engineers (structural, civil, landscape, etc.)
- Evaluation of the scope of work required to move forward including composition of a comprehensive set of "construction documents" that include
- Plans for all design disciplines, preferably integrated by a single entity like an architect
- "Specifications" for all major building elements: The numbering and naming should be coordinated with the Schedule of Values items. This could be as simple as a set of 3-ring notebooks with dividing tabs for each of the sections, where information related to the scope, quantity, materials, execution and quality assurance information will be organized and shared. I prefer the information electronically, but "simple gets done," so whatever is easiest for everyone to agree upon is best.
- Contract Scopes of Work for all trades, with references to the applicable plans and specifications. Again, this could be as simple as a one page numbered list for most of the contracts / contractors.
- Budget for Project Completion in the Schedule of Values format that we inherited from the previous general contractor. NOTE: This is important to make the process of executing a claim against the former contractor easier and less expensive to analyze.

2. Payment for completion of Phase 1 should be made.

3. For the sake of getting done, some work will need to progress while Phase 1 is under way.

4. Lock the fee for the completion of the project based on the Budget for Project Completion and a Progress Schedule that everyone agrees upon.

5. Contract for "Phase 2 Work After Scope Definition" could include:

- A fixed fee for the contractor and agreement that the ONLY way he, his company or his employees derive income or benefit from this project is by the contract specified amount and means. For example: contractor discounts would be credited to the Owner.
- Any change or additional compensation will be agreed to by written change order. For example: If the Owner changes the project, and the schedule is significantly elongated, the contractor would be entitled to additional compensation for the increased duration.
- There should be NO economic incentive for the project cost to increase.
- There SHOULD be economic incentive for the costs to decrease. Enter some form savings sharing agreement with the contractor, where decreases in cost will be paid partially to him. You will need to be careful with this, because a contractor could unethically manipulate and inflate the Phase 1 contracts so that they could then be negotiated down during Phase 2 to benefit the contractor.
- The contractor should be responsible for the scope, budget and schedule of the project, just as if he were working under his time and materials contracting scheme. There will simply be incentive for him to get the project done on-time and under budget.

Pete Fowler CONSTRUCTION Services, Inc.

Project Note

8B. Architectural Expert Memo in response to RFP

Date:	January 26, 201
To:	FILE
From:	Pete Fowler
Project:	[redacted]
Regarding:	Project Note

Telephone conferences with architectural experts

[redacted] Architects,

- [redacted], CA 90064 T: [redacted] E: [redacted] ([redacted])
- 40-50% litigation
- Super high end residential.
- [redacted]
- Seems like a great candidate

[redacted] ([redacted])

- He has a full architecture practice going on, including a $1.something million dollar remodel
- He also does commercial and institutional work
- He has a very low-key demeanor. The opposite of flamboyant.
- He also has LOTS of litigation experience
- He seems like a great candidate

[redacted] Architecture

- [redacted] Los Angeles, CA 90025 T: [redacted] E: [redacted] W: [redacted]
- He was referred only today, but I have seen this guy as a plaintiff expert and he's very good. I sent an email and will call later this week, if you don't get to him first.
- He seems like a great candidate

[redacted] ([redacted])

- Never served as an expert witness
- Does have on-topic experience
- 13,000 SF SFR ini Bel Air re-design after the not-local architect was fired
- Approximately $500K is a typical project for him, and he does the construction administration

[redacted] ([redacted])

- [redacted] CA 91301 T: [redacted] F: [redacted] E: [redacted]

- His "resume" makes me want to hit myself in the head. It's a list of attorneys and mediators (10 pages), exemplar testimonials (8 pages), list of exemplar projects (11 pages) and finally a 2-page article like written summary of his background and a 1-page CV like document. I reorganized the PDF file so it's not nearly as horrible.
- He is a very experienced guy who has been consulting for a long time.

[redacted]

- [redacted] San Diego, CA 92103 T: ([redacted] F: [redacted] E: [redacted]
- He has a current architectural practice with projects in design and under construction. His go from small to as much as $500K.

Other Possible Experts

[redacted] Group Architects, Inc.

- [redacted] San Diego, CA 92130 T: [redacted] F: ([redacted] E: [redacted]
- Lots of litigation experience
- I have no idea if he ever had a residential practice

Pete Fowler CONSTRUCTION Services, Inc.

Meeting

8C. Owners, Attorney, and Expert Meeting Agenda

Date:	07/14/2015
To:	FILE
From:	Pete Fowler Construction Se
Project:	Marketing (PFCS 00-020)
Regarding:	Sample Project Meeting

MEETING INFORMATION

- Who: Owners, Attorney, PFCS (Pete Fowler and [redacted]
- When: 07/14/15 10:00am
- Where: [redacted] CA 91105 T: [redacted]

OBJECTIVE

- Issues List Completion
- Where are we?
- Where are we going?
- Action Plan
- Do we have everything?
- Refer to CSI Masterformat list by PFCS taken from BCG Budget and attached at end of agenda
- For each attendee, please focus your efforts on the CSI Masterformat items within your purview

NEW BUSINESS

10:00 Owners, Attorney, and PFCS

- Attorney 5-10 min overview: What we have. What we have done. What we think. What we still need to do.
- PFCS present 5-10 min overview. What we have. What we have done. What we think. What we still need to do. What additional information is needed to complete analysis

11:00 All of above meet with Structural and Architectural Experts. Each present a 5-minute overview: What we have. What we have done. What we think. What we still need to do.

1:00 Owners with New Designers and Contractor. What we have. What we have done. What we think. What we still need to do.

MINUTES

1.
2.
3.

ACTION STEPS

1.
2.
3.