# AGENDA

**STATE BUILDING CODE TECHNICAL REVIEW BOARD**
**Friday, September 20, 2013 – 10:00 a.m.**
**Virginia Department of Professional**
**and Occupational Regulation**
**9960 Mayland Drive**
**Richmond, Virginia**

I. Roll Call and Introduction of New Member **(Tab 1)**

II. Approval of May 17, 2013 Minutes **(Tab 2)**

III. Public Comment

IV. Approval of Final Order **(Tab 3)**

In Re: Appeal of Fairfax County
Appeal No. 12-7

V. Appeal Hearing **(Tab 4)**

In Re: Appeal of STNP, LLC
Appeal No. 12-1

VI. Appeal Hearing **(Tab 5)**

In Re: Appeal of Keith Kurtz
Appeal No. 13-2

VII. Secretary's Report

**Updated July 2013**

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# DRAFT MINUTES

STATE BUILDING CODE TECHNICAL REVIEW BOARD

MEETING
May 17, 2013

GLEN ALLEN, VIRGINIA

| Members Present | Members Absent |
|---|---|
| Mr. J. Robert Allen, Chairman | Mr. Matthew Arnold |
| Mr. R. Schaefer Oglesby, Vice-Chairman | Mr. J. Daniel Crigler |
| Mr. W. Keith Brower, Jr. | Mr. James R. Dawson |
| Mr. Joseph A. Kessler, III | Mr. John H. Epperson |
| Mr. John A. Knepper, Jr. | Mr. Eric Mays |
| Mr. James N. Lowe | |
| Ms. Joanne D. Monday | |
| Ms. Patricia S. O'Bannon | |

**Call to Order**

The meeting of the State Building Code Technical Review Board (Review Board) was called to order by the Chairman at approximately 10:30 a.m.

**Roll Call**

The attendance was established by Mr. Vernon W. Hodge, Secretary, and constituted a quorum. Mr. Steven Jack, Assistant Attorney General in the Office of the Attorney General, was present and serving as the Board's legal counsel.

**Election of Officers**

The Secretary advised the Board members that the terms of the officers of the Board had expired and at the last meeting there was an approved motion to continue the current officers to the present meeting to assure that the election of officers was properly noticed and on the agenda.

The floor was opened for nominations. After discussion, Mr. Lowe moved to elect the current officers for another term by acclamation. Ms. O'Bannon moved to close the nominations. The motion was seconded by Mr. Knepper and passed unanimously.

**Approval of Minutes**

After consideration, Mr. Oglesby moved to approve the minutes of the March 15, 2013 meeting as presented in the Review Board members' agenda package. The motion was seconded by Mr. Lowe and passed unanimously with Mr. Knepper abstaining from the vote.

Public Comment

The Chairman opened the floor for public comment. The Secretary reported that no one was preregistered. The Chairman closed the public comment period.

Secretary's Report

The Secretary informed the Board members that there had been traffic problems which were delaying the arrival of the parties for the appeal hearing scheduled, so with the Chairman's permission, the order of the agenda would be changed to move the appeal hearing after the Secretary's report. The Chairman approved the change in the agenda.

The Secretary requested that the Board members consider two issues which had surfaced in the Department's updating of its building and fire regulations and for which the Review Board members and staff had been involved with through interpretation requests.

The Board members then discussed the definition of "nightclub" in both the Virginia Construction Code and the Virginia Statewide Fire Prevention Code. After discussion, staff was directed to circulate additional correspondence and any proposals developed or received; however, there was no agreement to submit a proposal to change the codes from the Review Board.

The second issue considered was relative to whether guardrails are required on the open side of walking surfaces next to retaining walls. In the discussion, it became apparent that a general rule would be difficult to develop due to the variations in installations. There was some discussion that the code needed improvement and there was no agreement on language which could be put forward. It was noted that staff would keep the Review Board members informed of any developments relating to the issue as the Department continued through the process of updating its regulations.

New Business

Appeal of Fairfax County; Appeal No. 12-7:

A hearing convened with the Chairman serving as the presiding officer. The appeal concerned the construction of a home at 6061 River Drive in the Lorton area of Fairfax County by Metropolitan Investment Group, LLC (Metropolitan) for Mehdi and Marylynn Aminrazavi.

New Business

Appeal of Fairfax County; Appeal No. 12-7 (continued):

Metropolitan had appealed citations issued by the Fairfax County Department of Public Works and Environmental Services (County building official's office) to the Fairfax County Board of Building Code Appeals (County appeals board), which ruled that Metropolitan was not responsible for the violations. The County building official's office then appealed the County appeals board's decision to the Review Board.

The following persons were sworn in and given an opportunity to present testimony:

Melissa Smarr, for the County building official's office
Brian Foley, for the County building official's office
Paul Shivey, for the County building official's office
James Makely, for the County building official's office
David Guglielmi, President of Metropolitan
Mehdi and Marylynn Aminrazavi

Also present was:

Paul Emerick, Esq., Fairfax County Attorney's Office

The Chairman informed the parties that testimony and arguments would be heard preliminarily concerning whether Metropolitan was responsible for the cited violations and on whether to remand the appeal back to the County appeals board for determinations on the merits of each cited violation if it was determined that Metropolitan was the responsible party.

The following exhibit was submitted by Metropolitan to supplement the documents in the Review Board members' agenda package:

Exhibit A – Fairfax County affidavit form

After testimony concerning the preliminary issues concluded, the Chairman closed the hearing. After deliberation on the responsibility issue, Ms. Monday moved to overturn the decision of the County appeals board and find that Metropolitan was determined to be the responsible party for any violations present.

New business

Appeal of Fairfax County; Appeal No. 12-7 (continued):

The motion was seconded by Lowe and passed with Mr. Oglesby voting in opposition. After deliberation on whether to remand the appeal, Ms. O'Bannon moved to hear all the issues in the appeal. The motion was seconded by Ms. Monday and the motion passed with four members voting to approve the motion and three members voting in opposition.

The Chairman then re-opened the hearing for testimony and arguments on each cited violation.

The following exhibits were submitted by the County building official's office to supplement the documents in the Review Board members' agenda package:

Exhibit A – Enlarged picture of dumbwaiter chase
Exhibit B – Enlarged picture of electrical box in attic
Exhibit C – Nails extracted from deck

During testimony, Metropolitan stipulated to there being a violation for an electrical box in the attic not having a cover and for the exposed paper facing on the insulation in the lower level utility room.

Also during testimony, the County building official withdrew the cited violation for the orientation of the wood structural panel subflooring.

After testimony concluded, the Chairman closed the hearing and stated a decision from the Review Board members would be forthcoming and the deliberations would be conducted in open session. It was further noted that a final order reflecting the decision would be considered at a subsequent meeting and, when approved, would be distributed to the parties and would contain a statement of further right of appeal.

Decision – Appeal of Fairfax County; Appeal No. 12-7:

After deliberation, Mr. Kessler moved to uphold the violations cited by the County building official which had not been dispensed with during testimony. The motion was seconded by Mr. Lowe and passed unanimously.

Adjournment

There being no further business, the meeting was adjourned by motion of Mr. Lowe at approximately 3:30 p.m.

Approved: August 16, 2013

_____

Chairman, State Building Code Technical Review Board

_____

Secretary, State Building Code Technical Review Board

VIRGINIA:

BEFORE THE
STATE BUILDING CODE TECHNICAL REVIEW BOARD (REVIEW BOARD)

IN RE: Appeal of Fairfax County
Appeal No. 12-7

Hearing Date: May 17, 2013

## DECISION OF THE REVIEW BOARD

### I. PROCEDURAL BACKGROUND

The State Building Code Technical Review Board (Review Board) is a Governor-appointed board established to rule on disputes arising from application of regulations of the Department of Housing and Community Development. See §§ 36-108 and 36-114 of the Code of Virginia. The Review Board's proceedings are governed by the Virginia Administrative Process Act. See § 36-114 of the Code of Virginia.

### II. CASE HISTORY

In September of 2008, Mehdi and Marylynn Aminrazavi, owners of property in Lorton, Virginia, in Fairfax County, contracted with Metropolitan Investment Group, LLC and its president, David Guglielmi, to construct a new house for the Aminrazavis at 6061 River Drive.

The contract required the Aminrazavis to obtain the building permit to construct the house from the Fairfax County Department of Public Works and Environmental Services (County building department), which they did in April of 2009.

Guglielmi then had the house constructed utilizing various subcontractors and the final inspection and certificate of occupancy approved by the County building department under the 2006 edition of Part I of the Virginia Uniform Statewide Building Code, known as the Virginia Construction Code, or VCC, in May of 2010.

In November of 2011, in response to a complaint from the Aminrazavis, a representative of the County building department re-inspected the house and discovered a number of violations of the VCC. A corrective work order under the VCC was issued to Guglielmi in December of 2011 and after the time period for correcting the violations had expired, a notice of violation under the VCC was issued to Guglielmi in April of 2012.

Guglielmi appealed the notice of violation to the County of Fairfax Board of Building Code Appeals (County appeals board), which heard his appeal in August of 2012 and ruled that Guglielmi was not responsible for the VCC violations since the

Aminrazavis obtained the VCC building permit and Guglielmi was not qualified to obtain the permit[1].

The County building department then appealed the decision of the County appeals board to the Review Board.

Review Board staff conducted an informal fact-finding conference in November of 2012, attended by the Aminrazavis, Guglielmi and representatives of the County building department. The facts and issues in the appeal were summarized in a document drafted by Review Board staff and distributed to the parties. Opportunity was given for the submittal of corrections, additions or objections to the staff document and the submittal of additional documents and written arguments and a hearing before the Review Board was scheduled.

## III. FINDINGS OF THE REVIEW BOARD

With respect to the issue of whether the County appeals erred in overturning the County building department's decision to issue the VCC notice of violation to Guglielmi, the Review Board finds that Guglielmi would be the responsible party under the VCC for any cited violations determined to be valid citations and that the County building department was correct in

[1] While the County appeals board did not specify why Guglielmi was not qualified to obtain the permit, testimony at the hearing before the Review Board indicated that Guglielmi was only licensed as a Class C contractor at the time the contract was signed. At the time of the hearing before the Review Board, Guglielmi had obtained a Class A contractor's license.

issuing the notice of violation to Guglielmi, for the following reasons.

VCC Section 115.1[2] establishes that it is unlawful for any owner or any other person, firm or corporation, to violate any provision of the VCC. Section 115.2 requires a VCC notice of violation to be issued to the party responsible for the violation.

The violations cited by the County building department are for what the County building department determined to be incorrect construction of various parts of the Aminrazavis' house. Guglielmi contracted with the Aminrazavis to construct the house and did so through the use of subcontractors. The Aminrazavis obtained the VCC building permit in their name only due to a provision in the contract with Guglielmi. There was no evidence that the Aminrazavis were, or were ever intended to be, involved in the actual construction of the house. Therefore, it is Guglielmi, rather than the Aminrazavis, that would be responsible for any violations of the VCC relating to how the house was constructed.

[2] While the Aminrazavis' house was constructed under the 2006 edition of the VCC, the Review Board has previously ruled that administrative actions are subject to edition of the VCC in effect when such administrative actions take place. In this case, the administrative provisions of the 2009 edition of the VCC are applicable.

With respect to the merits of each cited violation issued by the County building department[3], the Review Board finds as follows:

**Violation 1: Fireblocking** - The house was constructed with a large vertical chase allegedly for the future installation of a dumbwaiter. However, as constructed, it creates a violation of Section R602.8 of the International Residential Code (IRC), the nationally recognized model code incorporated by reference in the VCC to provide the technical requirements for the construction of houses. Section R602.8 prohibits concealed draft openings between stories and between the top story and the roof space.

**Violation 2: Mounting of Electrical Equipment** - There was at least one electrical outlet box in the attic which was not fastened to any support. This is a violation of Section E3304.7 of the IRC which requires electrical equipment to be firmly secured to the surface on which it is mounted.

**Violation 3: Support Spacing** - There were electrical wires in the attic without proper support in violation of Table 3702.1 of the IRC.

**Violation 4: Corrugated Stainless Steel Tubing (CSST) Support** - The gas piping in the attic connecting to the furnace was unsupported in violation of Section G2418.2 of the IRC.

**Violation 5: Covers and Canopies** - Guglielmi stipulated agreement during the hearing that electrical outlet boxes in the attic did not have cover plates in violation of Section E3806.9 of the IRC.

**Violation 6: Continuity of Handrails (interior)** - The handrail on the stairs from the front door area to the great room did not extend to a point above the top riser of the stairs creating a violation of Section R311.5.6.2 of the IRC.

**Violation 7: Handrails (exterior)** - There was no handrail on the exterior main entrance stairs in violation of Section R311.5.6 of the IRC.

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[3] The cited violations are enumerated in accordance with the April 27, 2012 notice of violation issued by the County building department, as revised February 4, 2013.

**Violation 8: Exposed Installation Facing** - The title of this violation on the County building department's notice of violation was incorrectly worded as "Installation" rather than "Insulation;" however, the description of the violation provided in the notice of violation was sufficiently clear. Guglielmi stipulated agreement during the hearing that the paper facing on the insulation in the lower level utility room was exposed in violation of Section R316.1 of the IRC.

**Violation 9: Improper Fasteners in Deck** - The testimony and evidence submitted was conclusive that the fasteners used on the exterior deck and stairs were not corrosion-resistant as required by Section R319.3 of the IRC.

**Violation 10: Deck Beam Bearing** - The deck beams were not properly supported and anchored as required by Sections R501.2 and R404.1.5.1(5) of the IRC.

**Violations 11, 12 and 13** - These violations were withdrawn by the County building department prior to or during the hearing; therefore, no ruling is necessary concerning them.

## IV. FINAL ORDER

The appeal having been given due regard, and for the reasons set out herein, the Review Board orders the decision of the County appeal board to be, and hereby is, overturned and the notice of violation issued by the County building department for violations numbered one through ten to be, and hereby is, upheld.

Chairman, State Technical Review Board

Date Entered

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty (30) days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a Notice of Appeal with Vernon W. Hodge, Secretary of the Review Board. In the event that this decision is served on you by mail, three (3) days are added to that period.

VIRGINIA:

BEFORE THE
STATE BUILDING CODE TECHNICAL REVIEW BOARD

IN RE: Appeal of STNP, LLC
Appeal No. 12-1

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VIRGINIA:

BEFORE THE
STATE BUILDING CODE TECHNICAL REVIEW BOARD

IN RE: Appeal of STNP, LLC
Appeal No. 11-1

REVIEW BOARD STAFF DOCUMENT

Suggested Statement of Case History and Pertinent Facts

1. In November of 2011, the Town of Pulaski Building Inspection Office (Town code official) issued a notice of condemnation under Part III of the Virginia Uniform Statewide Building Code (Virginia Maintenance Code) to STNP, LLC (STNP), the current owner of a former factory site in the town, concerning buildings and structures at the site. The property is known as the West Commerce Street Plant property (Tax Number: 072-008-0000-013A) and was the former Magnox/Nanochemonics Holdings facility. The notice required all of the buildings and structures to be brought into compliance with the Virginia Maintenance Code or removed from the site.

2. STNP filed an appeal of the notice to the Pulaski County appeals board, but after additional correspondence with the town, an appeal was made to the Town of Pulaski's Housing Board of Adjustments and Appeals (Town appeals board), the correct board to hear appeals of decisions of the Town code official. Between the filing of the appeal and the hearing of the appeal by the Town appeals board, the Town code official, in December of 2011, issued a new notice under the Virginia Maintenance Code which required all of the buildings and structures to be demolished.

3. In January of 2012, the Town appeals board heard STNP's appeal and ruled to uphold the decision of the Town code official. STNP then filed an appeal to the Review Board.

4. Review Board staff conducted an informal fact-finding conference in June of 2012 and after discussion, the parties agreed to continue the appeal to work towards a mutually agreeable solution. Part of the problem in finding a solution was that the clean-up of the plant needed to be done in accordance with an order from the federal Environmental Protection Agency.

5. In May of 2013, the Town code official informed Review Board staff that the appeal needed to move forward as no resolution of the violations had occurred. Review Board staff conducted an additional informal fact-finding conference in June of 2013 to clarify the issues in the appeal. The parties agreed that the dispute now only concerned three buildings, described below:

> Building 1 – Administration building. This building had been partially demolished but had some original portions. The parties agreed that the building would be demolished. The dispute only concerned the time frame for demolition. The Town code official's position was that the building needed to be demolished in 60 days.
>
> Building 2 – Shop building. This building is a metal clad building with wooden doors and windows. The parties agreed that the building did not need to be demolished and further agreed that it was not secured from entry and was not being maintained to keep the weather out. The dispute only concerned the time frame for securing the building and making it weather-tight. The Town code official's position was that 90 days was sufficient to achieve compliance with the Virginia Maintenance Code.
>
> Building 6 – Shed. This building is a large shed-type building open on one side. The Town code official's decision is the same on this building as for Building 2, with the acknowledgement that the open side of the shed may remain open.

## Suggested Issue for Resolution by the Review Board

1. Whether to overturn the decisions of the Town code official concerning the time frames for demolition of Building 1 and securing and weather-proofing Buildings 2 and 6.

# BASIC DOCUMENTS

·Pulaski·

V I R G I N I A

Date: 11/16/2011

TO: STNP LLC
300 N GREENE ST. SUITE 2190
GREENSBORO, NC 27401

SUBJECT: Violation of Virginia Uniform Statewide Building Code

PROPERTY ADDRESS AND TAX MAP NUMBER: Former West Commerce Street Plant. Brick Offices, Old wood and metal building and all tanks. Tax Number: 072-008-0000-013A (PICTURES OF VIOLATIONS ARE ENCLOSED WITH LETTER)

REQUIRED REPAIR IMPROVEMENT OR ABATEMENT: Bring structure up to USBC Code Or Remove from site.

DESCRIPTION OF UNSAFE CONDITIONS AND SUMMARY OF VIOLATION: open to vandals and to the public, and structurally deteriorated so that it is unsafe for human habitation.

CORRECTION ORDER AND NOTICE: The Town Building Inspector has determined the premises have deteriorated to such an unsafe condition that the cost of repair would far exceed the value of the property. He has further determined that a clear and present danger and public nuisance exists. Accordingly, the only practical way to bring this property into compliance is to raze and remove all existing structures and to clear the premises of all debris. The condition cited herein constitutes a nuisance such that unless it is obviated or removed within 30 days from the date of service of this notice upon you, then the Town of Pulaski will proceed to remove or obviate the nuisance without further notice. Moreover, the Town shall take such action as allowed by law and to protect the public safety and all costs attendant thereto will be charged to the owner of the property and a lien will be placed against the subject property.

RIGHT TO APPEAL UNDER THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE: The owner of the property has the right to file an appeal, modification, or withdrawal of this notice by petitioning the Board of Housing Adjustments and Appeals within 21 days of the receipt and/or publication of this notice.

You may appeal under the Virginia Uniform Statewide Building Code.

John J. Hawley, P.E., Town Manager

Tom Compton, Code Compliance Officer

Copy posted on premises



TOWN OF PULASKI • BUILDING INSPECTION OFFICE • P.O. BOX 660 • PULASKI, VA 24301 • TEL. 540 994-8619 • FAX 540 994-8607

WILLIAMS MULLEN

Direct Dial: 804.420.6481
aburnett@williamsmullen.com

**REQUEST FOR APPEAL**

November 29, 2011

BY FEDERAL EXPRESS

Pulaski County Housing
Board of Adjustment and Appeals
143 3rd St NW, Suite 1
Pulaski, VA 24301

Re: Former West Commerce Street Plant. Brick Offices, Old wood and metal building and all tanks, Tax Number 072-008-0000-013A

Owner/Applicant: STNP, LLC
Owner's Address: 300 N. Greene Street, Suite 2190
Greensboro, NC 27401

To Whom It May Concern:

This firm represents STNP, LLC ("STNP"), the owner of the real property and all buildings and structures thereon with the Tax Map Number 072-008-0000-013A (the "Property"). I am in receipt of a letter dated November 16, 2011 from the County of Pulaski (the "Notice Letter") which states that the Property is not in compliance with Virginia's Uniform Statewide Building Code (the "Building Code").

Please accept this letter as STNP's application for appeal, modification or withdrawal of the decision in the Notice Letter, pursuant to Section 106.5 of the Virginia Maintenance Code (13 VAC § 5-63-500). As required by Section 106.5 of the Virginia Maintenance Code, a copy of the Notice Letter is enclosed for your reference.

Among other grounds,[1] STNP believes the County's November 16, 2011 notice fails to meet the requirements of Section 105 of the Virginia Maintenance Code (13 VAC § 5-63-450, *et*

[1] STNP's investigating of the allegations in the Notice Letter is ongoing and STNP reserves the right to assert additional grounds for appeal at the conclusion of its investigation.

*seq.*). The County has failed to provide STNP with a written report that includes a description of the nature and extent of the conditions found, which would provide STNP sufficient notice of any alleged violations. Moreover, the County has failed to specify the corrections necessary to comply with the Building Code. Furthermore, STNP disputes and/or does not have sufficient information about the alleged Building Code violations to confirm or deny many of the allegations in the Notice Letter, including but not limited to statements that "the cost of repair would far exceed the value of the property" and that "the only practical way to bring this property into compliance is to raze and remove all existing structures." STNP respectfully requests a report that complies with the Building Code and states with particularity the corrections necessary to bring the Property into compliance with the Building Code.

As counsel of record for STNP, I request that you copy me on all future notices and correspondence regarding this matter, including the notice of hearing for the appeal and any resolutions or decisions made in this matter by the Board of Housing Adjustments and Appeals. Please contact me should you have any questions or to schedule a hearing on this matter. I look forward to hearing from you.

Sincerely,

W. Alexander Burnett

WAB/dad
Enclosure

cc: John J. Hawley, P.E. (w/Enclosure)
Tom Compton (w/Enclosure)
STNP, LLC (w/Enclosure)

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•Pulaski•
VIRGINIA

December 6, 2011

W. Alexander Burnett, Esq.
Williams Mullen
P.O. Box 1320
Richmond, VA 23218-1320

Re: 11-16-2011 Violation of the Va. Uniform Statewide Building Code
Tax Map # 072-008-13A Various buildings and tanks

Dear Mr. Burnett:

Pulaski County officials forwarded to me a copy of your request dated 11-29-2011, that apparently attempts to appeal the above violation. Your notice was sent to and received by the Pulaski *County* Housing Board of Adjustments and Appeals. My correspondence is to inform you that the County's Board has no jurisdiction in the Town for this violation. Therefore, the Town will proceed with the enforcement of our 11-06-2011 notice.

If you have any questions, do not hesitate to contact me.

Sincerely,

John J. Hawley, P.E.
Town Manager

C: Bill Pedigo, Town Engineer
Tom Compton, Building Inspector
Todd Garwood, Fire Marshal
David Quesenberry, Asst. to the Town Manager
R. D. Warburton, Town Attorney
Mayor Worrell and Town Council
STNP, LLC, 300 N. Greene Street, Suite 2190, Greensboro, NC 27401

Tc/ltr/mgr/building code violation tax map # 072-008-13A 12-6-11



TOWN OF PULASKI • OFFICE OF THE TOWN MANAGER • P.O. BOX 660 • PULASKI, VA 24301 • TEL. 540 994-8600 • FAX 540 994-8607

WILLIAMS MULLEN

Direct Dial: 804.420.6481
aburnett@williamsmullen.com

**REQUEST FOR APPEAL**

December 7, 2011

BY FACSIMILE and FEDERAL EXPRESS

Town of Pulaski
Board of Housing Adjustment and Appeals
42 1st Street, NW
Pulaski, Virginia 24301
FAX: 540-994-8607

Re: Former West Commerce Street Plant. Brick Offices, Old wood and metal building and all tanks, Tax Number 072-008-0000-013A

Owner/Applicant: STNP, LLC
Owner's Address: 300 N. Greene Street, Suite 2190
Greensboro, NC 27401

To Whom It May Concern:

This firm represents STNP, LLC ("STNP"), the owner of the real property and all buildings and structures thereon with the Tax Map Number 072-008-0000-013A (the "Property"). On November 29, 2011, I sent a letter to the Board with copies to John Hawley and Tom Compton giving notice of STNP's appeal of the letter dated November 16, 2011 from the Town of Pulaski (the "Notice Letter"). Copies of the Notice Letter and my November 29 letter are enclosed for your review.

My November 29 letter was inadvertently sent to the County of Pulaski instead of the Town of Pulaski.[1] As shown in the enclosed letter from Mr. Hawley dated December 6, 2011, however, Mr. Hawley received my November 29 letter within the time period allowed for appeals. Accordingly, because Mr. Hawley timely received a copy of the November 29 letter both from me and from Pulaski County, STNP believes that it timely gave notice of its appeal.

[1] The Notice Letter failed to give an address or any instructions about where to send the appeal.

To be clear, STNP requests an appeal, modification or withdrawal of the decision in the Notice Letter, pursuant to Section 106.5 of the Virginia Maintenance Code (13 VAC § 5-63-500). Among other grounds,[2] STNP believes the County's November 16, 2011 notice fails to meet the requirements of Section 105 of the Virginia Maintenance Code (13 VAC § 5-63-450, *et seq.*). The County has failed to provide STNP with a written report that includes a description of the nature and extent of the conditions found, which would provide STNP sufficient notice of any alleged violations. Moreover, the County has failed to specify the corrections necessary to comply with the Building Code. Furthermore, STNP disputes and/or does not have sufficient information about the alleged Building Code violations to confirm or deny many of the allegations in the Notice Letter, including but not limited to statements that "the cost of repair would far exceed the value of the property" and that "the only practical way to bring this property into compliance is to raze and remove all existing structures." STNP respectfully requests a report that complies with the Building Code and states with particularity the corrections necessary to bring the Property into compliance with the Building Code.

As counsel of record for STNP, I request that you copy me on all future notices and correspondence regarding this matter, including the notice of hearing for the appeal and any resolutions or decisions made in this matter by the Board of Housing Adjustments and Appeals. Please contact me should you have any questions or to schedule a hearing on this matter. I look forward to hearing from you.

Sincerely,

W. Alexander Burnett

WAB/dad
Enclosures
cc: John J. Hawley, P.E. (w/Enclosure)
Tom Compton (w/Enclosure)
16455668_1.DOC

[2] STNP's investigating of the allegations in the Notice Letter is ongoing and STNP reserves the right to assert additional grounds for appeal at the conclusion of its investigation.

DR

Pulaski

REGINA

December 22, 2011

S.T.N.P. LLC
300 N. Greene Street
Suite 2190
Greensboro, NC 27401

Re: Notice of Unsafe Structure

To Whom It May Concern:

The buildings at the old NanoChemonics formally Magnox site have been partially demolished for scrap, steel and copper by your contractor and have been left in an unsafe state, pursuant to section 105.4 Virginia Maintenance Code, Notice of Unsafe Structure or Structure Unfit For Human Occupancy. This is your notice from the building official on my findings of the property. These buildings cannot be repaired due to the fact they have been partially razed with a track hoe or left in a dilapidated and or unsafe condition.

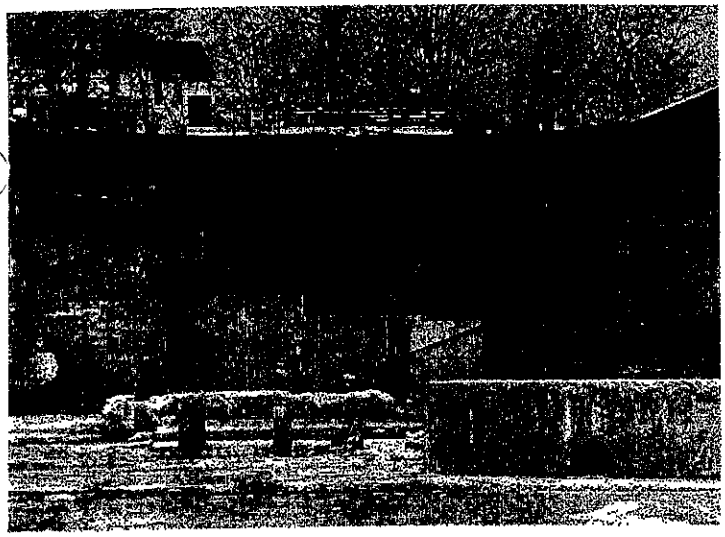
I have provided several pictures of these buildings so that you may understand what we are left with. Due to the fact that these structures have been left in such an unsafe condition, they must be completely torn down, immediately.

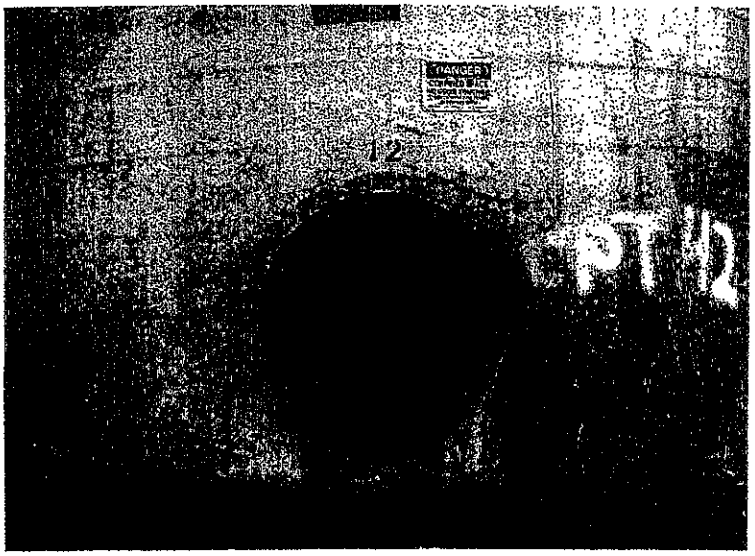
Sincerely,

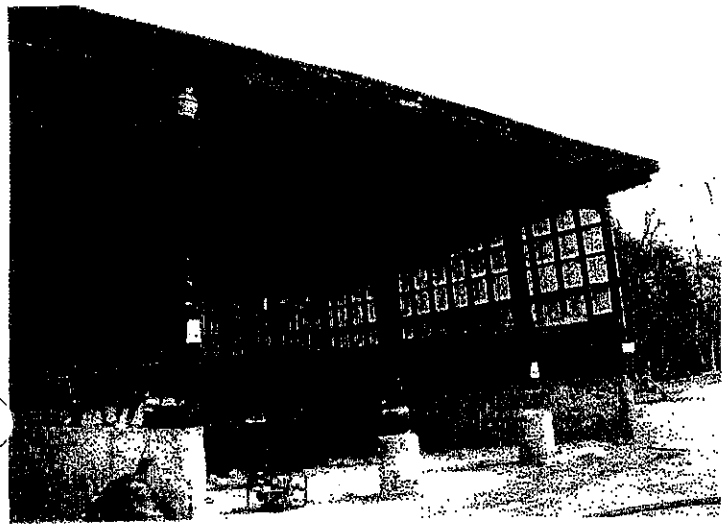
Tom Compton

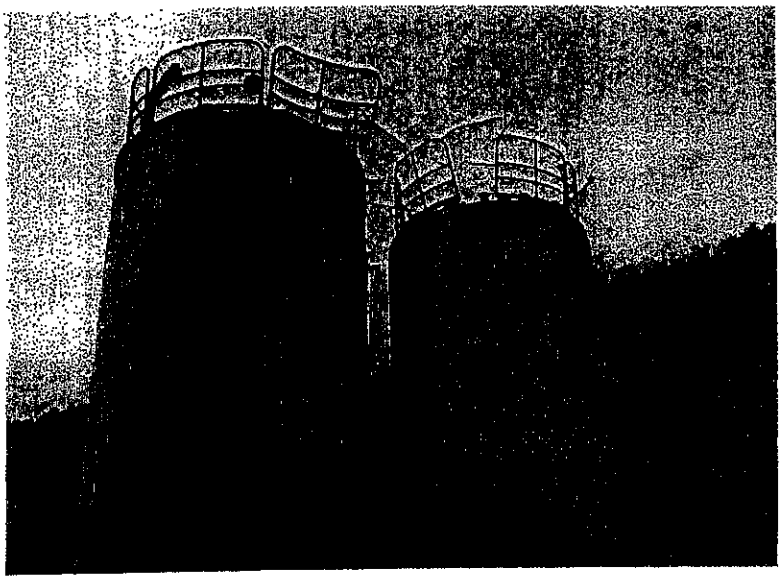
Tom Compton
Building Inspector

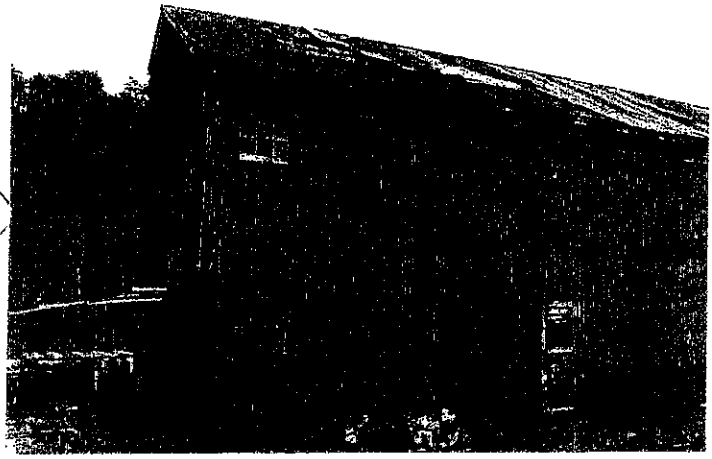
C: John Hawley, Town Manager
Mayor
Town Council
David Warburton, Town Attorney

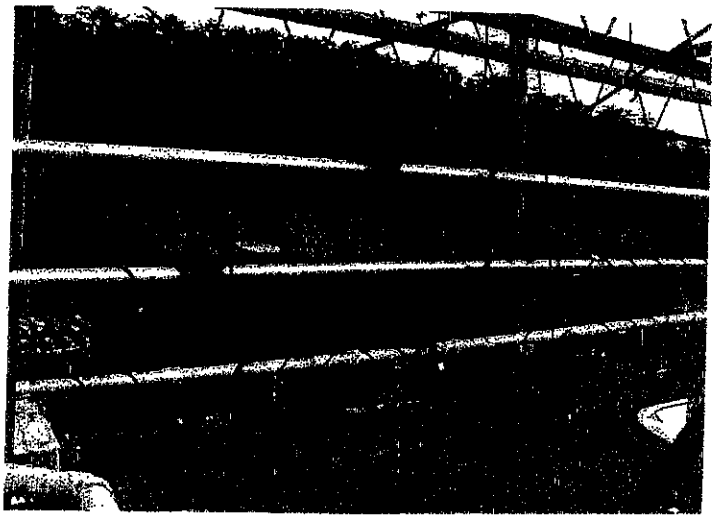


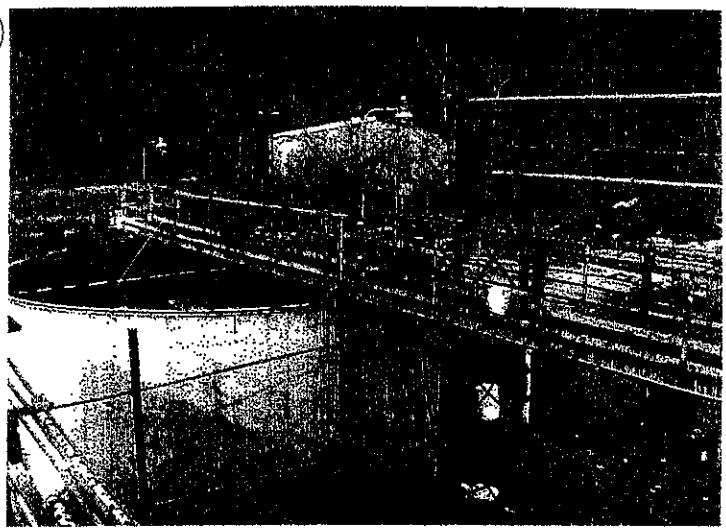


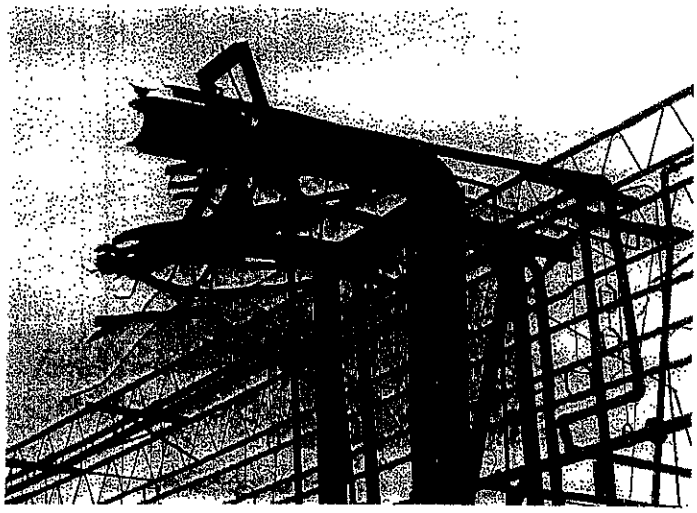


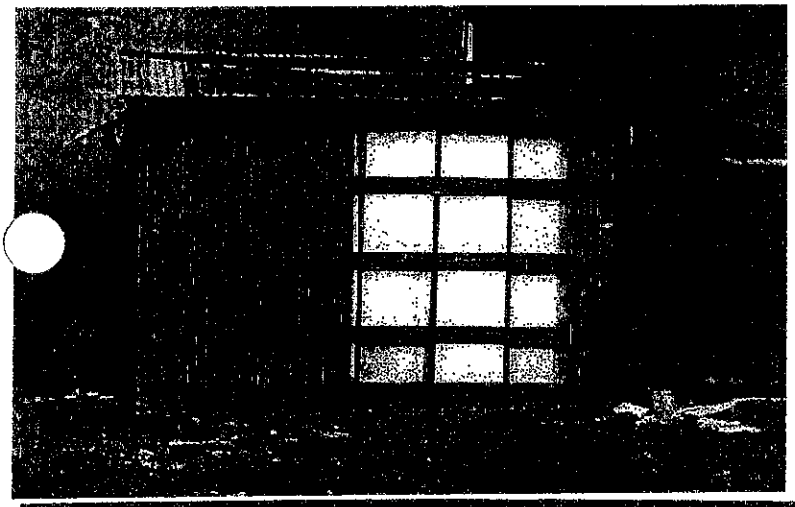


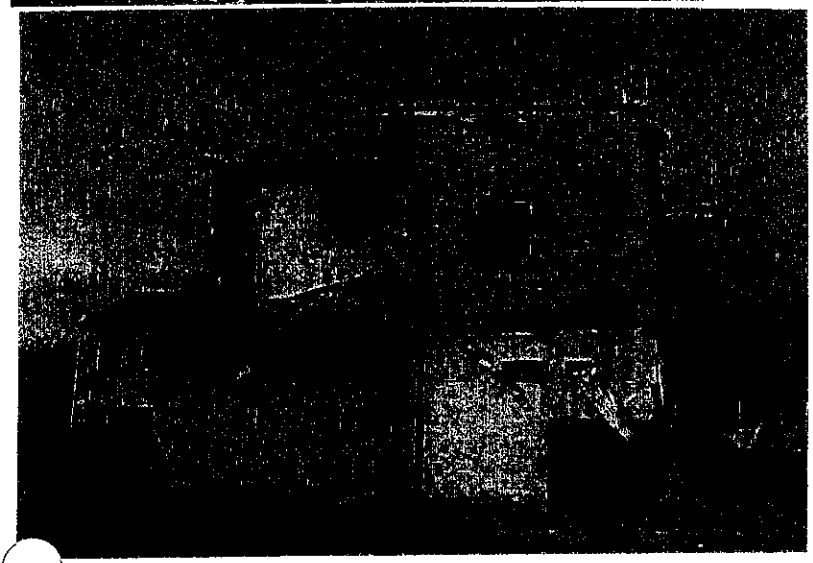


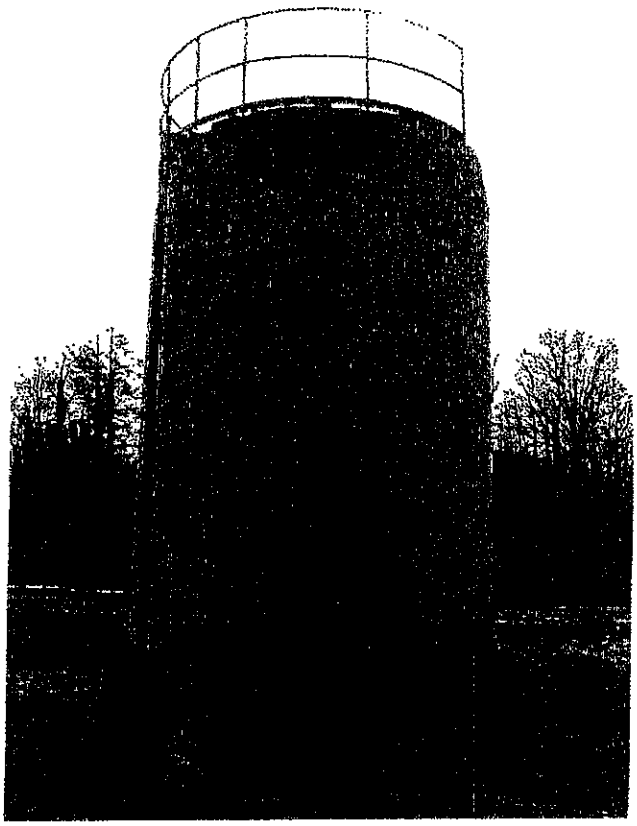


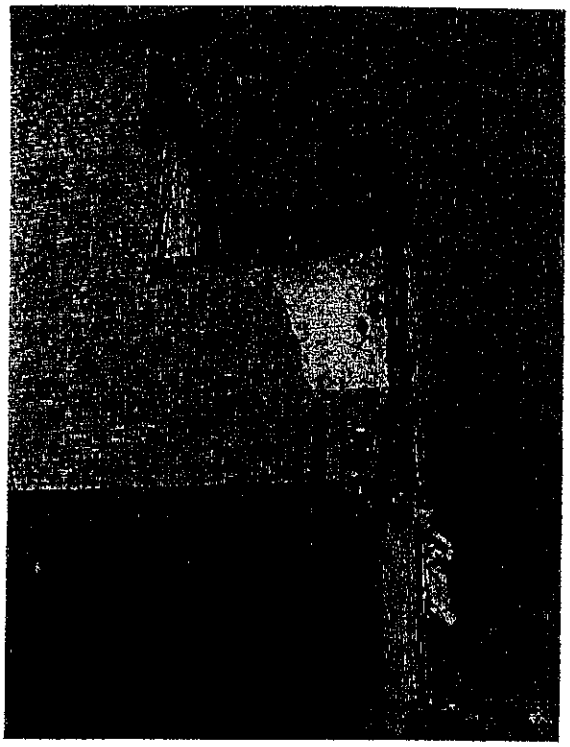


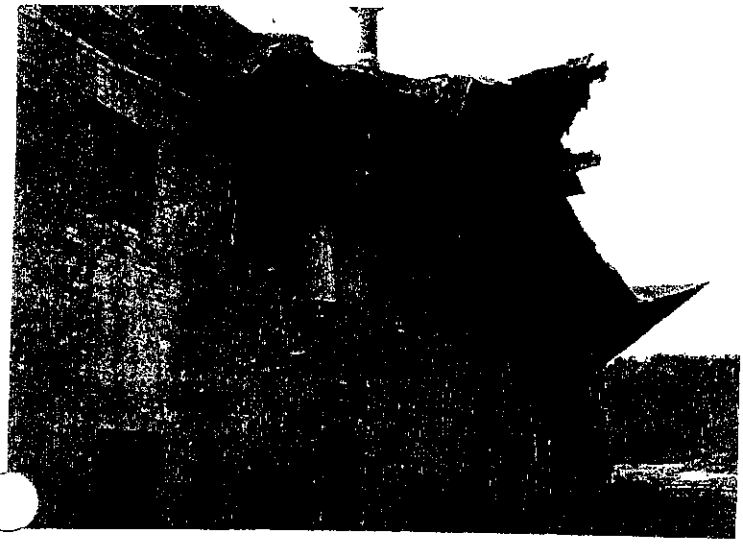












Pulaski

VIRGINIA

RECEIVED
JAN 04 REC'D
WILLIAMS MULLEN

December 30, 2011

Williams Mullen
Attn: W. Alexander Burnett, Esq.
P.O. Box 1320
200 South 10th Street, Suite 1600
Richmond, Virginia 23218-1320

Re: Packet for STNP, L.L.C. Appeal

Dear Sir:

Enclosed with this letter is a copy of the packet for the hearing of the appeal of STNP, L.L.C. to the Town of Pulaski Housing Board of Adjustment and Appeals scheduled at 7:00 p.m., Wednesday, January 4, 2012 in the Council Chambers of the Pulaski Municipal Building, located at 42 First Street, N.W.

Thank you for your assistance regarding this issue.

Sincerely,

David N. Quesenberry
Assistant to the Town Manager



TOWN OF PULASKI • POST OFFICE BOX 660 • PULASKI, VIRGINIA 24301 • TELEPHONE 540 994-8696 • FAX 540 994-8607

Housing Board of Adjustment and Appeals

January 4, 2012

7:00 p.m.
Council Chambers

---

I. Call to Order.

II. Roll Call.

III. Review and Approval of the Minutes for October 27, 2011.

IV. *Housing Board of Adjustment and Appeals Case No. 2012-01*—an appeal by STNP, L.L.C., owner; W. Alexander Burnett, Esq., agent; of a Notice of Violation for industrial structures at the former site of Magnox/Nanochemonics, Tax Map No. 072-008-0000-013A.

A. Staff Presentation. (*Limited to ten (10) minutes.)*
B. Appellant Presentation. (*Limited to ten (10) minutes.)*
C. Board Discussion and Action. (*Limited to ten (10) minutes.)*

V. Other Business.
A. Review of HBAA Annual Report for 2011.

VI. Adjournment.

The Minutes of the Housing Board of Adjustments and Appeals held on Thursday, October 27, 2011 at 7:00 p.m. in the Council Chambers at the Municipal Building.

Members present: James Chitwood, Vice Chairperson
Alan Palmore
James Radcliffe
Bill Warden

Dr. John Knarr, Chairman - Absent

Staff present: David Quesenberry, Assistant to the Town Manager
Tom Compton, Building Official
Todd Garwood, Fire Marshall
Brenda Shelton, Administrative Secretary

Others present: Charles Bird

Mr. Chitwood called the meeting to order and the roll was called.

Mr. Radcliffe moved to approve the minutes of the September 15, 2011 meeting, seconded by Mr. Palmore and carried by unanimous voice vote.

The next item on the agenda was Housing Board of Adjustments and Appeals Case No. 2011-05 – an appeal by Charles Bird of a ruling by the Building Inspector on fence requirements for an above ground swimming pool located at 1975 Peppers Ferry Road.

Mr. Quesenberry stated that Mr. Bird was appealing the decision of the Building Inspector under Section 119.5, of the VUSBC, which allowed persons to ". . . appeal a decision of the building official concerning the application of the USBC to such building or structure. . . "

Mr. Quesenberry advised that the Building Inspector ruled that Mr. Bird's swimming pool is required under Section 3109.4.1 (Virginia Construction Code 2006, Part I Virginia Uniform Statewide Building Code) to have a barrier around it at least 48 inches above ground level. Mr. Bird contends that the above ground pool structure (52 inches in height), serves as the barrier itself, making an additional barrier of 48 inches unnecessary.

Mr. Compton stated that for many years the policy of the Town had been that regardless of whether a pool was 48" or 68" in height, a fence was needed around the pool or yard to keep neighbors or children out. He added that Mr. Bird's pool was 52' and on the side where the pump is located a person could step upon the pump and get onto the pool and on the upper side where the hill is sloped a person could step up onto the pool.

Mr. Bird stated that it was his contention that the above-ground pool structure itself (52 inches from the ground) served as the barrier and an additional barrier of a lesser height of 48 inches was not necessary. He added that the requirements of the Uniform State (or Political Subdivision) Pool and Spa Safety Bill) ASTM requirements stated that:

Pool structure as barrier: for above-ground or on-ground pools, the pool structure itself may serve as a ground level barrier only if it is a least 48" high.

Mr. Warden stated that under Section 4 - Minimum Requirements - of the (Model Uniform State (or Political Subdivision) Pool and Spa Safety Bill) under "Barriers" it states:

"All Barriers All barriers shall be located so as to prohibit permanent structures, equipment, or similar objects from being used to climb the barriers."

Mr. Warden continued that the filter pump located outside the pool could be easy access to the pool.

Mr. Compton stated that the portion of the Safety Act that Mr. Bird referred to states that "the pool structure itself may serve as a ground level barrier" not shall. He continued that may is subject to the interpretation.

Mr. Chitwood asked Mr. Bird what his insurance company's position was on the safety of the pool.

Mr. Bird replied that his insurance agent advised that he should comply with the Town's Ordinance. He added that he believes that he has complied with the regulations.

Mr. Bird asked Mr. Compton if there were other pools in the Town that were not fenced in and did not meet the regulations for swimming pools.

Mr. Compton replied that there were probably others that did not comply with the swimming pool regulations and the he was in the process of seeking those out. He added that usually the pools were behind the house and not in clear view from the road.

Mr. Chitwood asked Mr. Bird what the contractors view was on the issue.

Mr. Bird replied that according to the contractor the same pool had been installed in other localities and that in every instance the pool wall served as the barrier.

Mr. Compton advised that all of the pools that had been installed in the Town by this contractor have all been enclosed by fences.

Mr. Warden advised that as previously discussed, the pool may serve as the barrier if the pool was level all the way around it. However, in this case there was a portion of the pool that was on a hill which allowed the pool to be accessed by stepping onto the pool from the ground. He continued that the location of the filter pump also provided easy access to the pool by stepping upon the pump and onto the pool.

Following extensive discussion, Mr. Radcliffe moved to uphold the decision of the building inspector, seconded by Mr. Chitwood.

Following further discussion, the motion carried by the following recorded vote:

| | |
|---|---|
| Dr. Knarr - Absent | Mr. Palmore - Nay |
| Mr. Chitwood - Aye | Mr. Radcliffe - Aye |
| Mr. Warden - Aye | |

There being no further business the meeting adjourned.



Mr. Chitwood, Vice Chairperson

January 4, 2012

To the Chairman and Members of the Housing Board of Adjustment & Appeals:

This evening the Board will consider an appeal from STNP, L.L.C., owner; W. Alexander Burnett, Esq., agent; of a Notice of Condemnation, dated November 16, 2011 for the former *Magnox/Nanochemonics* facility. This appeal has been designated as *Housing Board of Adjustment and Appeals Case No. 2012-01.*

The property is known as the West Commerce Street Plant and is identified as Tax Map No. 072-008-0000-013A.

## I. Background

Since the closure of *Magnox/Nanochemonics*, the owner *STNP, L.L.C.* has been involved in the demolition, salvage and removal of the former West Commerce Street Plant. The work has been subject to monitoring and supervision by EPA and DEQ. A large portion of the facility has been demolished, but there is a portion of the main plant offices, as well as several wooden structures, metal structures and several storage tanks which remain standing at the former plant's location.

On or about November 15, 2011, the Town was informed by the contractor working on the site that there would be no further demolitions performed despite that a portion of the plant office, and other structures remained. In response to this information and the determination of the Building Inspector that the remaining structures were unstable and unsafe, a Notice of Violation (NOV) condemning the structures was issued under the *Virginia Uniform Statewide Building Code* to *STNP, L.L.C.* on November 16, 2011.

## II. Notice of Violation-November 16, 2011

The notice, in describing the unsafe conditions and summarizing the violations, notes that the structures are ". . .open to vandals and to the public and structurally deteriorated so that it is unsafe for human habitation."

The notice states the Building Inspector determinations that:

- ". . . the premises have deteriorated to such an unsafe condition that the cost of repair would far exceed the value of the property . . "
- ". . .a clear and present danger and public nuisance exists"; and
- ". . the only practical way to bring this property into compliance is to raze and remove all existing structures and to clear the premises of all debris."

## III. Appeal—December 7, 2011

An amended letter of appeal from W. Alexander Burnett, legal counsel for STNP, was received by the Town dated December 7, 2011 contests the notice of violation stating that the notice fails to meet the requirements of Section 105 of the Virginia Uniform Statewide Building Code in that:

- The Town did not provide a written report describing the nature and extent of the conditions found.
- The Town did not specify the corrections necessary to comply with the code.
- STNP does not have sufficient information to confirm or deny the allegations in the notice.

## IV. Building Officials Response

The Building Official, Mr. Compton, responded to STNP, L.L.C. in a letter dated December 22, 2011.

In the letter Mr. Compton noted that the structures at the Nanochemonics/Magnox site had been partially demolished for scrap steel and copper and had been left in an unsafe state, pursuant to Section 105.4 *Virginia Maintenance Code, Notice of Unsafe Structure or Structure Unfit for Human Occupancy.*

His finding was that the buildings could not be repaired "due to the fact that they have been partially razed with a track hoe or left in a dilapidated and or unsafe condition." He ordered that since the structures ". . . have been left in such an unsafe condition, they must be completely torn down, immediately."

A copy of the letter and photographs are included in this packet for your review.

## V. Additional Comments

The Town received an email (12/09/11) from Michael Towle of EPA regarding issues at the site. Those issues were listed as:

1) There are still contaminated waters undergoing treatment stored in some of the tanks.
2) There is still waste located in one tank.
3) There are residuals in the copperas shed.
4) There are sample containers in the storage building.
5) Wastes are staged in the MO building.
6) The MO building still contains residuals.

The MO building refers to a structure where magnetic oxides were stored, while the copper shed was used to store copper sulfate. All of these structures were condemned in the Notice of Violation. Mr. Towle also wrote that the ". . . condemnation action is appropriate." The email is included for your review.

## VI. Review by the HBAA

The appeal is submitted under *Section 106.5* of the *USBC, Part III (2006 Virginia Maintenance Code)* which lists as grounds for appeal:

- The application of the code to such building or structure, and
- A refusal by the building official to grant a modification to the provisions of the *USBC* pertaining to such building or structure.

*Section 106.7* of the *USBC, Part III (2006 Virginia Maintenance Code)* gives the power to the Board to ". . . uphold, reverse or modify the decision of the official by a concurring vote of a majority of those present."

*Section 106.7* says that decision of the Board ". . . shall be by resolution signed by the chairman and retained as part of the record of appeal. Copies of the resolution shall be sent to all parties by certified mail." A paragraph noting where an appeal of the decision of the Board is to be directed must also be included in the resolution. A template of the resolution is included with this packet.

*Form of Motion*

To ensure that all procedural requirements are followed in the preparation of the required resolution of the findings of the Board, the motion stating the decision of the Board should mention preparation of a resolution as required by the Code as shown below:

*"Mr. Chairman, I move that in the matter of the appeal of STNP, L.L.C. of a Notice of Condemnation issued November 16, 2011 (HBAA Case No. 2012-01), that the Board* ***(insert Board action here)*** *and that a resolution to this effect be prepared and distributed in compliance with the Uniform Statewide Building Code."*

**VII. Summary**

*STNP, L.L.C.* is appealing a notice issued by the Town Building Official condemning structures on the former site of *Magnox/Nanochemonics. STNP's* appeal is based on its contentions that

- The Town did not provide a written report describing the nature and extent of the conditions found.
- The Town did not specify the corrections necessary to comply with the code.
- STNP does not have sufficient information to confirm or deny the allegations in the notice.

In reply, the Town Building Official reported his findings that the buildings could not be repaired "due to the fact that they have been partially razed with a track hoe or left in a dilapidated and or unsafe condition." He ordered that since the structures ". . . have been left in such an unsafe condition, they must be completely torn down, immediately."

The Board has the authority to ". . . uphold, reverse or modify the decision of the official by a concurring vote of a majority of those present."

Sincerely,

David N. Quesenberry

David N. Quesenberry
Assistant to the Town Manager

· Pulaski ·

V I R G I N I A

January 4, 2012

RECEIVED
JAN 10 2012
BY:_____

Williams Mullen
Attn: Mr. W. Alexander Burnett, Esq.
P.O. Box 1320
Richmond, Virginia 23218-1320

Re: Resolution of the HBAA Regarding Case No. 2012-01

Dear Sir:

Enclosed with this letter is a copy of the resolution of the Town of Pulaski Housing Board of Adjustment and Appeals, dated January 4, 2012 regarding Housing Board of Adjustment and Appeals Case No. 2012-01, the appeal of STNP, L.L.C, regarding a Notice of Condemnation issued by the Building Official on November 16, 2012.

Sincerely,

David N. Quesenberry
Zoning Administrator

cc: File Copy



TOWN OF PULASKI • POST OFFICE BOX 660 • PULASKI, VIRGINIA 24301 • TELEPHONE 540 994-8696 • FAX 540 994-8607

**Resolution of the Housing Board of Adjustment and Appeals Regarding Appeal by**

**STNP, L.L.C.**

**Housing Board of Adjustment and Appeals Case No. 2012-01**

**January 4, 2012**

**WHEREAS,** the Housing Board of Adjustment and Appeals of the Town of Pulaski, Virginia conducted a hearing regarding the appeal of STNP, L.L.C, owner; of a Notice of Condemnation issued November 16, 2011 and,

**WHEREAS,** the Board considered the comments from the appellant, the appellant's representative, the locality's representatives, and other persons in attendance whose interests were affected by the decision in question;

**NOW, THEREFORE** be it **RESOLVED** that in the matter of STNP, L.L.C., regarding the Notice of Condemnation issued by the Building Official on November 16, 2011, that the Housing Board of Adjustment and Appeals of the Town of Pulaski, Virginia hereby upholds the Notice of Condemnation issued by the Building Official on November 16, 2011 by the duly recorded vote of the Board as follows:

| | | | |
|---|---|---|---|
| Alan Palmore | -Yes | Bill Warden | -Yes |
| James Chitwood | -Yes | Jamie Radcliffe | -Yes |
| | Dr. John Knarr | -Yes | |

Any person who was a party to the appeal may appeal to the State Review Board by submitting an application to such Board within 21 calendar days upon receipt by certified mail of this resolution. Application forms are available from the Office of the State Review Board; 501 North Second Street, Richmond, Virginia 23219, (804) 371-7150.

Dr. John Knarr
Chairman

ATTEST:

Trish Cruise
Acting Secretary

WILLIAMS MULLEN

Direct Dial: 804.420.6481
aburnett@williamsmullen.com

January 27, 2012

BY FEDERAL EXPRESS

Office of the State Technical Review Board
600 E. Main Street, Suite 300
Main Street Centre
Richmond, VA 23219

Re: Administrative Appeal

Dear Sir or Madam:

As counsel of record for STNP, LLC, I enclose STNP's Application for Administrative Appeal for consideration by the State Technical Review Board.

Please contact me if you have any questions. Thank you.

Sincerely,

W. Alexander Burnett

WAB/dad
Enclosure

cc: Roy David Warburton, Esq. (w/Encl - By Email/Fed Ex)
Tom Compton (w/Encl – By Fed Ex)
John J. Hawley (w/Encl – By Fed Ex)

17014220_1.DOC

**COMMONWEALTH OF VIRGINIA**
**DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT**
**Technical Assistance Services Office (TASO) and Office of the State Technical Review Board**
**Main Street Centre, 600 E. Main Street, Suite 300, Richmond, Virginia 23219**
**Tel: (804) 371-7150, Fax: (804) 371-7092, Email: TASO@dhcd.virginia.gov**

APPLICATION FOR ADMINISTRATATIVE APPEAL

Regulation Serving as Basis of Appeal (check one):

__X__ Uniform Statewide Building Code

_____ Statewide Fire Prevention Code

_____ Industrialized Building Safety Regulations

_____ Amusement Device Regulations

Appealing Party Information (name, address, telephone number and email address):

STNP, LLC, c/o W. Alexander Burnett, Esq., Williams Mullen, P.O. Box 1320, Richmond, Virginia 23218-1320, (804) 420-6481, aburnett@williamsmullen.com

Opposing Party Information (name, address, telephone number and email address of all other parties):

Town of Pulaski Housing Board of Adjustment and Appeals *and* the Town of Pulaski Town Manager and Code Compliance Officer, c/o Roy David Warburton, Esq., Town Attorney for the Town of Pulaski, Warburton Law Offices, 80 East Main Street, Pulaski, VA 24301, (540) 980-8970, warburton@warburtonlaw.com

Additional Information (to be submitted with this application)
- Copy of enforcement decision being appealed
- Copy of record and decision of local government appeals board (if applicable and available)
- Statement of specific relief sought

CERTIFICATE OF SERVICE

I hereby certify that on the 27th day of January, 2012, a completed copy of this application, including the additional information required above, was sent by federal express to the Office of the State Technical Review Board and to all opposing parties listed.

**Note:** This application must be received by the Office of the State Technical Review Board within three (3) working days of the date on the above certificate of service for that date to be considered as the filing date of the appeal. If not received within three (3) working days, the date this application is actually received by the Office of the Review Board will be considered to be the filing date.

Signature of Applicant: W. Alexander Burnett

Name of Applicant: STNP, LLC, by W. Alexander Burnett, Esq. attorney and authorized agent
(please print or type)

**STNP, LLC v. THE TOWN OF PULASKI HOUSING BOARD OF ADJUSTMENT AND APPEALS AND THE TOWN OF PULASKI TOWN MANAGER AND CODE COMPLIANCE OFFICER**

**APPEAL TO THE COMMONWEALTH OF VIRGINIA STATE REVIEW BOARD**

**STATEMENT OF SPECIFIC RELIEF SOUGHT**

## I. Background

STNP, LLC ("STNP"), is the current owner of the former Magnox/Nanochemonics West Commerce Street Plant located at One Magnox Drive in Pulaski, Virginia (the "Site"). STNP acquired the Site in January 2011 and entered into an Administrative Order on Consent (the "AOC") with the United States Environmental Protection Agency ("EPA") on April 8, 2011. The AOC requires STNP to abate the presence of certain hazardous substances at the Site related to previous owners' operations there. In addition, STNP has retained contractors to salvage valuable equipment and materials and to demolish and remove a number of the structures on the Site. This work has been subject to monitoring and supervision by EPA and the Virginia Department of Environmental Quality (the "DEQ"). STNP expects AOC-related work to continue at the Site until mid-2012 at a minimum.

On November 16, 2011, the Town of Pulaski (the "Town") sent STNP a letter stating that the Site is not in compliance with Virginia's Uniform Statewide Building Code (the "Building Code"), and therefore STNP was required to "raze and remove all existing structures and to clear the premises of all debris" (the "Notice of Condemnation"). A copy of the Notice of Condemnation is attached as Exhibit A.

In response to the Notice of Condemnation, STNP sent the Town two letters, dated November 29, 2011 and December 7, 2011, requesting an appeal to the Town's Housing Board of Adjustments and Appeals (the "Board"). Copies of STNP's letters are attached as Exhibit B

and Exhibit C respectively. The Board granted STNP's request for an appeal and a hearing was set for January 4, 2012. Additionally, in a letter dated December 22, 2011, the Town attempted to clarify its position regarding the Site, including several photographs (the "December 22, 2011 Letter"). The December 22, 2011 Letter is attached as Exhibit D.

A hearing was held on January 4, 2012, at which the Board upheld the Town's Notice of Condemnation. The Board issued a Resolution upholding the Notice of Condemnation (the "Resolution"). STNP's attorney received the Resolution on January 10, 2011.[1]

## II. Argument

STNP appeals the Resolution on two separate grounds. First, the Notice of Condemnation does not satisfy the requirements of Section 105 of the Virginia Maintenance Code (13 V.A.C. 5-63-450, *et seq.*) Additionally, any attempt by the Town to require STNP to remove certain structures from the Site is preempted by the Comprehensive Environmental Response Compensation and Liability Act ("CERCLA"). As such, the Board's Resolution and the Town's Notice of Condemnation should be overturned.

### A. The Town's Notice of Condemnation is insufficient.

STNP believes the Town's November 16, 2011 notice fails to meet the requirements of Section 105 of the Virginia Maintenance Code. The Town failed to provide STNP with a written report that includes a description of the *nature* and *extent* of the conditions found, which would provide STNP sufficient notice of any alleged violations. Moreover, the Town has failed to specify the corrections necessary to comply with the Building Code. Accordingly, STNP disputes and/or does not have sufficient information about the alleged Building Code violations to confirm or deny many of the allegations in the Notice of Condemnation, including but not

[1] Counsel for STNP received the Resolution on January 10, 2012. The U.S. Postal Service website, however, shows the Resolution was delivered on January 9, 2012. In an abundance of caution, STNP assumed earlier date was correct in filing this appeal.

limited to statements that "the cost of repair would far exceed the value of the property" and that "the only practical way to bring this property into compliance is to raze and remove all existing structures."

Although the Town attempted to remedy the notice's inadequacy by supplementing its Notice of Condemnation with its December 22, 2011 Letter, this letter is also insufficient to satisfy the Town's obligations in this regard. The December 22, 2011 Letter states that:

> These buildings cannot be repaired due to the fact that they have been partially razed with a track hoe or left in a dilapidated and or [sic] unsafe condition.
>
> ***
>
> Due to the fact that these structures have been left in such an unsafe condition, *they must be completely torn down, immediately.*

(emphasis added).

Although the letter includes twenty photographs of various structures at the Site in support of this assertion, it provides no other basis for the conclusion that any of the improvements are beyond repair. Indeed, a number of the photographs depict buildings or improvements with no structural damage whatsoever. The lack of detail in the Town's correspondence to date has effectively prevented STNP from responding with more specific information, and prevented STNP from being able to act on the Town's request with a reasonable understanding of the Town's complaints. This is the very reason behind Section 105 of the Virginia Maintenance Code's requirement that the Town provide STNP with a written report.

Furthermore, while STNP does not know the exact nature of the alleged building code violations, it is STNP's position that even if the structures shown in the photographs are not in compliance with the building code, most of them can be reasonably repaired and brought into compliance; therefore, STNP disputes the assertion in the December 22, 2011 Letter that those

structures need to be torn down. Moreover, STNP believes that some of the structures may have market value should STNP decide to sell some or part of the Site in the future. Because the Town has failed to comply with the requirements of the Virginia Maintenance Code, the Town's Notice of Condemnation and the Board's Resolution should be overturned.

B. The Notice of Condemnation is preempted by CERCLA.

Furthermore, compliance with the Notice of Condemnation is preempted by STNP's responsibilities under the AOC and CERLA. The photographs included in the Town's December 22, 2011 Letter include images of several above-ground storage tanks ("AST") at the Site and above-ground piping in the immediate vicinity of these ASTs. STNP's AOC requires STNP to maintain several of these ASTs for the collection and treatment of storm water from the Site for at least another sixty (60) days.

In addition, demolition of above-ground piping in the vicinity of the ASTs would pose a risk of damage to the tanks and risk the release of hazardous substances to the environment. As such, any attempt by the Town to require STNP to remove the ASTs containing storm water or the above-ground piping in the vicinity of these ASTs is preempted by CERCLA. *See United States v. City of Denver*, 100 F.3d 1509, 1512-13 (10th Cir. 1996) (holding local zoning ordinances that conflict with CERCLA-based cleanup are preempted by federal law).

Additionally, because the work required at the Site under the AOC is not yet complete, the Town's generalized demand that all of the buildings at the Site "be completely torn down, immediately" is also preempted. To be sure, if STNP were to accede to the Town's demand immediately, it would be in violation of the AOC and CERCLA.

## III. Specific Relief Sought

For the reasons set for herein, STNP requests the Board's Resolution and the Town's Notice of Condemnation be overturned. In the alternative, STNP requests any action taken on the Town's Notice of Condemnation be stayed until such time as STNP is able to complete its responsibilities to the EPA and the DEQ.

16937820_3.DOC

Pulaski

VIRGINIA

Town of Pulaski – Fire Marshal's Office

January 25, 2013

W. Alexander Burnett
200 South 10th Street, Suite 1600
PO BOX 1320
Richmond, VA 23218-1320

Mr. Burnett,
This letter is in regard to the property known as STNP, (Former West Commerce Plant) tax map number: 072-008-0000-013A. Located in Pulaski Virginia.

The demolition and clean up at this site has not been completed as discussed.
The Town of Pulaski is requiring a Written Plan of Action, within 15 days of the date on this letter, detailing the name of the contractor that will be completing the demo and clean up of all debris, materials and waste that are still on site. The plan of action also needs to include a time line of when this site will be completely abated and has met the requirements of all code violations that were previously sited.
It is also required that any or all permits are up to date / obtained prior to any work being performed on this site.

Should you have any questions regarding the written plan of action, any site violations or what is required to abate the site, please feel free to call my office.

Thank you for your attention in this matter as the Town strives to make Pulaski a cleaner, healthier and safer place to live.

Sincerely,

Todd Garwood

CC: John Hawley
Bill Pedigo
Mayor J. Worrell
Town Council
Allen McMahan
DHCD

47

# COMBINED DOCUMENTS

# Revised Post Response Action
# Sampling and Analysis Plan

**Former Nanochemonics Holdings, LLC Facility**
**4 Magnox Drive**
**Pulaski, Virginia**

*Prepared for*

**STNP, LLC**
**Richmond, Virginia**

*Prepared by*

**Duncklee & Dunham, P.C.**
**Cary, North Carolina**

**February 9, 2012**

D DUNCKLEE & DUNHAM

ENVIRONMENTAL CONSULTING & ENGINEERING
511 KEISLER DRIVE – SUITE 102
CARY, NORTH CAROLINA 27518
OFFICE: (919) 858-9898
WWW.DUNCKLEEDUNHAM.COM

February 8, 2012

Mr. Michael Towle (3HS31)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Reference: Revised **Post Response Action Closure Plan**
**Former Nanochemonics Holdings, LLC**
**Pulaski, Virginia**

Dear Mr. Towle:

Duncklee & Dunham, P.C. (Duncklee & Dunham), on behalf of STNP, LLC (STNP), submits this revised Post Response Action Sampling and Analysis Plan (the "Plan") for the former Nanochemonics Holdings, LLC (Nanochemonics) facility (the "Facility"). Duncklee & Dunham is serving as Environmental Consultant and On-Site Project Manager during the execution of the Response Action Plan.

The Plan describes sampling of environmental media potentially impacted by site-related hazardous substances resulting from response action and demolition activities. It has been prepared to address EPA comments received on January 19, 2012 following review of the original Plan submitted on February 8, 2012, The revised Plan contains elements of the Plan submitted on February 8 that were approved by EPA, as well as modifications to elements that were disapproved or required additional information. Please contact Andy Rodak at (919) 858-9898 or andy@dunckleedunham.com if you have any questions.

Sincerely,

**Duncklee & Dunham, P.C.**

Andrew M. Rodak, P.E.
Senior Engineer
VA PE No. 37287

David L. Duncklee, P.G.
President

ec: Mr. Sean Sullivan, Williams Mullen
Mr. Chris Andrews, STNP

Attachments

P:\Williams Mullen Law Firm\Nanochemonics-201048\Reports - Proposals\Post Response Sampling\Sampling Plan-12013.docx

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**Post Response Sampling and Analysis Plan**
**Former Nanochemonics Holdings, LLC**
**4 Magnox Drive**
**Pulaski, VA**
**February 9, 2012**

## I Purpose

The Designated Contacts for this phase of the project are:

| | |
|---|---|
| Christopher Andrews | Program Manager |
| David Duncklee | Duncklee & Dunham, Project Coordinator |
| Andrew Rodak | Duncklee & Dunham, On-site Project Manager, On Scene Coordinator (OSC), Site Safety Officer (SSO) |
| Jerry King | Wastewater Treatment Operator |

This Post Response Sampling and Analysis Plan (Plan) details procedures and protocols for assessment of areas where response action activities and/or demolition activities were conducted to verify removal of residual hazardous substances to the extent that stormwater runoff from these areas will not be adversely impacted. The Plan has been prepared pursuant to the requirements listed in paragraph 8.3 of the Administrative Order of Consent ("AOC") issued by the Environmental Protection Agency ("EPA") to STNP, LLC ("STNP") on April 1, 2011. It includes actions to address additional comments received by STNP from EPA on October 14, November 22, 2011, and January 19, 2012.

This Plan provides a sampling and analysis protocol that will serve to verify that the response action activities described in the Response Action Plan (RAP) approved by EPA on January 4, 2011 have been successfully completed. The RAP provided background information on the site and described actions taken by STNP to abate potential threats to human health and the environment associated with closure of its facility located at 4 Magnox Drive in Pulaski, Virginia (the "Facility"). These actions are being performed in accordance with an Administrative Order for Removal Response Action (Order) issued by Environmental Protection Agency Region III (EPA) on September 20, 2010, as amended by Modification No. 1 on October 15, 2010. This Plan specifically deals with items referenced Items c, d, e. n and o listed in Section VIII, Paragraph 8.3 of the AOC.

The Plan will be executed in two phases; the first phase will be implemented following removal of all demolition debris, and cleaning to the extent practical of all interior and exterior stormwater/wastewater drainage trenches and impervious surfaces on the creek side of the site. The second phase will be implemented following completion of these same activities on the MO Building.

The provisions for meeting the sampling, analyses, quality assurance, and Health and Safety requirements listed in the AOC in the implementation of this Plan will be followed consistent with those presented in the RAP. Therefore, these requirements are not repeated in this Plan.

## II Post Response Sampling and Analysis Plan

### *A. Soil Sampling in Response Action Demolition Areas*

STNP will inspect each building and area in which response action activities were conducted and buildings/structures were demolished to assess the area for the presence of residual demolition debris or hazardous substances. The inspection will focus on the following:

- Building floor pads
- Tank pedestals and concrete support structures
- Exterior concrete and asphalt surfaces (i.e. parking areas, doorways, vehicle ingress/egress ramps
- Interior floor trenches
- Exterior trenches, pits, and sumps
- Pervious areas where demolition debris was staged, operations were conducted, heavy equipment was parked, and transport vehicles were loaded and driven, and
- Areas in the sludge drying bed where sludge generated from response actions was placed.

The areas will be inspected following removal of demolition debris and residuals, and cleaning of the area to the maximum extent practical. The inspection will focus on the visual presence of residual hazardous substances (as identified in the Facility Hazardous Substance Inventory List developed during Phase I activities), and the area will be characterized as follows.

In areas where response actions and/or demolitionactivities were conducted and demolition debris was staged,, STNP contractors will inspect both pervious and impervious surfaces. Each of these areas will then be characterized as either sufficiently cleaned and not requiring further evaluation, or requiring further cleaning and/or assessment to verify removal of residual hazardous substances. In areas where additional cleaning is not practical and further assessment is deemed necessary, STNP contractors will collect up to four (4) composite samples of representative surficial soil. Each composite sample will consist of up to four (4) grab samples of surficial soil collected from the representative area of concern.

The number of grab and composite samples collected from each area will be determined in the field, and will be dependent on the size of the area and the amount of area not comprised of water-washed concrete surface(s). In areas where debris was staged or operations conducted on both impervious and pervious surfaces, the sampling plan will depend on the percentage of pervious surface where the residual material was observed. STNP contractors will schedule an on-site meeting with EPA prior to execution of this Plan to confirm sample locations, sample type, and number of samples taken from each representative area of assessment

For collection of samples of sludge generated from wastewater and stormwater treatment activities conducted during the response action and transported into the sludge drying bed, up to four grab samples will be collected in the area in the bed where wastewater sludge generated from the response action activities was off-loaded into the drying bed. These samples will be composited into one (1) sample for laboratory testing.

Figure 1 depicts the proposed target areas to be inspected and sampled and is included with this Plan. The number of target areas may be different during implementation of the Plan, and STNP will request an on-site meeting with EPA to modify the number of locations and samples taken as necessary to meet the intent of the Plan. These areas include:

- Northwest of the Copperas area where the AST containing residual materials was cut up and containerized in a roll-off;
- The area northwest of the former Fuel Oil AST where a small petroleum release occurred from piping during demolition of the AST;
- The pervious area along the north side of the Small Particulate building and exterior AST area where demolition debris was staged and loaded;
- The area north and west of the Boiler House where demolition debris was staged prior to removal;The area north of Building 9300, where scrap processing activities were conducted during demolition activities, and formerly containing ASTs; and
- The area north of ASTs 326, 327, 326 and 404 where demolition debris was staged prior to disposal.

STNP contractors will collect up to four (4) grab samples of surficial soil in these areas and composite the grab samples in up to four samples to verify that remaining residual material will not pose a threat to water quality in Peak Creek. The soil will be laboratory tested for the presence of those hazardous materials identified by Tech Law and Duncklee and Dunham during site characterizations conducted prior to and during the response action, identified in the Hazardous Material Inventory, and presented in Section D of this Plan.

Since the sampling protocol for the Cobalt Adsorption Building will be different than protocol for the other areas based on the documented presence of PCBs in this area, it will be discussed in a separate section of this Plan.

### *B. Soil Sampling in Areas Where Response Actions and Demolition were not Conducted*

STNP will collect composite samples of surficial soil in the following areas where hazardus substances were visually observed or over which stormwater flows downstream of response action/demolition areas:

- The roadway along the south side of the Magnetite building where residual hazardous substances were observed following a storm event in July;
- The area downgradient of the roadway along the creek bank where these residual hazardous substances were observed to have migrated
- Areas on the north and south sides of the Cobalt Building where hazardous substances (metal oxides) have been observed. and
- The pervious (grassed) areas on the west side of the MO Building where stormwater runoff flows into Peak Creak

These sample locations are depicted in Figure 1 of this Plan. The number of target areas may be different during implementation of the Plan, and STNP will request approval from EPA to modify the number of locations as necessary to meet the intent of the Plan.

### *C. Stormwater Pathways*

Samples of sediments or soil along or within stormwater pathways from each area downgradient of where demolition debris was staged or operations were conducted will be collected for laboratory analysis. In many cases, the samples collected in areas described in Sections A and B will be representative of stormwater pathway samples. Additional areas of sample collection will include:

- Residual sediments/sludge within the main stormwater trench, former wastewater treatment pit east of the Cobalt building, and main stormwater sump following removal of materials within these areas to the maximum extent practical;
- Residual sediments or materials located on the floor of the Copperas area shed and paved sump area east of the shed following removal of materials to the maximum extent practical ;
- Surficial soil in the area north and west of the Cobalt Adsorption Building;
- Surficial soil in the area between the Copperas area and north of Building 9300.

STNP will collect grab samples of sediments and surficial soil within the stormwater pathways to assess the potential impact to stormwater runoff from the site with respect to Peak Creek. Proposed sample locations are depicted in Figure 1 included with this Plan. The final number and location of samples will be determined during the on-site meeting with EPA prior to sampling..

### *D. Analytical Parameters*

STNP will review the Phase I Facility Hazardous Substance Inventory list prepared by EPA Contractors, as well as developed by STNP Contractors during execution of Phase II Response Action activities, to develop the list of hazardous constituents used for this plan. Because many of these materials were containerized as waste materials during Phase II activities for off-site disposal, or will have been washed off as residuals during building decontamination and collected in wastewater sludge, they will be excluded from additional assessment. These include:

- Boiler chemicals
- Metal Chlorides
- Sodium Borohydride, and
- Total Petroleum Hydrocarbons-Gasoline Range Organics.

The samples of, surficial soil, sediments, and wastewater sludge will be submitted for laboratory analysis of hazardous materials identified by Tech Law and Duncklee and Dunham during site characterizations conducted prior to and during Phase I of the response action and identified in the site Hazardous Material Inventory. These hazardous materials will include:

- Metals (aluminum, cobalt, cadmium, chromium, copper, iron, manganese, lead, nickel, and zinc);

- Total Petroleum Hydrocarbons Gasoline and Diesel Range Organics (in samples collected in the vicinity of the former fuel oil AST location)
- PCBs by 8082 (with additional extraction by Method 3540C for samples collected from pervious surfaces in and within the stormwater drainage pathway of the Cobalt Adsorption Building where previous analyses revealed PCBs at concentrations exceeding 50 mg/kg);
- Asbestos containing materials (in samples collected from areas where ACMs were not completely abated and identified in non-scrap debris piles; i.e. the former maintenance shop); and
- Certain chlorinated hydrocarbons (i.e. methylene chloride) based on the identification of sealants in Building 9302.

Sampling and analytical protocols will be consistent with those described in the Sample Analysis and Quality Assurance Plans included in the approved RAP.

The analytical data will be evaluated to determine if the response activities have sufficiently removed hazardous materials from impervious surfaces, environmental media, and wastewater sludge to the extent that they will not pose a risk to stormwater runoff. Limits in stormwater discharges from the site are listed in Item IV of Attachment A of the AOC of the VDEQ water quality criteria (for PCBs).

Based on the results of the post response sampling, STNP will use this data as the basis for determining the suitability of stormwater runoff on the creek side of the site for discharge to the lagoon system without additional capture and treatment.

The stormwater flow path through the lagoon system will be from Lagoon 4 to Lagoon 2 to Lagoon 1, as Lagoon 3 is currently isolated from the system. Once analytical results (including PCBs) from water stored in Lagoon 3 indicate that discharge from Lagoon 3 complies with the discharge limits listed in Attachment A of the AOC, and following EPA approval, Lagoon 3 will be brought back on line and used as part of the treatment train for stormwater runoff from the site prior to lagoon closure

### *E. Cobalt Adsorption Building*

The sampling and analysis methodology for evaluation of the response action performed on the Cobalt Adsorption Building (CAB) will be consistent with that described in Sections A to D of this Plan, with the following exceptions. PCBs have been documented by EPA and STNP in concentrations greater than 1 part per million on areas of the floor pad within the building's floor trench system, and in demolition debris piles staged on the pad. Following the removal of sediments containing greater than 1 ppm PCBs in the building floor and main stormwater trenches, the following areas will be characterized following washing cleaning protocol described in Section 2.3 of the RAP Addendum to verify PCBs have been removed to levels compliant with applicable standards:

- Residual debris within a pitted area of concrete on the eastern side of the pad where residuals exhibited PCBs over 100 ppm, and
- Demolition debris storage areas on the building pad.

Since there will be no impermeable (non-porous) surfaces on which PCB contaminants in excess of 1 ppm remaining on the CAB pad or surrounding area following removal of the demolition debris piles, STNP contractors will not conduct wipe sampling as part of the post response sampling protocol for the CAB.

Porous areas (i.e. concrete, gravel, soil) where demolition debris was staged, residual materials were removed, and where PCBs were documented in excess of 50 mg/kg will be sampled pursuant to the requirements listed in 40 CFR Part 761, Subpart O, *Sampling to Verify Completion of Self-Implementing Cleanup and On-Site Disposal of Bulk PCB Remediation Waste and Porous Surfaces*, using the following protocol:

- For porous areas on and off the building pad where residual materials and/or demolition debris documented as containing PCBs in excess of 50 mg/kg, a square-based grid system will be overlain across the areas to be sampled. The grid axes will be oriented on a magnetic north-south line centered in each area and an east-west-line perpendicular to the north-south line. The location, size, and orientation of the grid axes are depicted on Figure 2 of this Plan;
- Sampling points will be marked at five-foot (1.5 meter) intervals in every direction along the axes to the extent sufficient to create a two-dimensional grid that covers the sampling area (40 CFR 761.283);
- A minimum of three sampling points will be established within each area;
- Separate samples will be collected for each type of porous media (i.e. concrete, soil, sediment) within the grid area;
- Samples will be collected using a core sampler with a diameter of 1-2 inches, advanced to a maximum depth of three inches (40 CFR 761.286);
- The samples will be composited following the protocol for compositing samples from a single point source of contamination (40 CFR 761.289):
    - Composite samples will be prepared in two stages:

        1) an initial compositing area consisting of a square containing nine grid points centered on the grid origin, with sides two grid intervals (10 feet) long. The area from which the samples will be composited has the same center as this square with sides on half a grid interval (approximately 2.5 feet) more distant from the center than the square. The initial compositing area has sides three grid intervals (approximately 15 feet) long

        2) subsequent compositing areas will be developed in concentric square zones one grid interval(approximately 5 ft) wide around the initial compositing area. The inner boundary of the first subsequent compositing area will be the outer boundary of the initial compositing area. The outer boundary of the first subsequent compositing area will be centered on the grid origin, have sides one grid interval (approximately five feet) more distant from the grid origin than the inner boundary, and will be two grid intervals longer on a side than the inner boundary. The inner boundary of each further subsequent compositing area will be the outer boundary of the previous subsequent compositing area. The outer boundary of each further subsequent compositing area will be centered on the

grid origin, have sides one grid interval more distant from the grid origin than the inner boundary, and will be two grid intervals longer on a side than the inner boundary.

- Composite samples will be prepared using equal volumes of samples collected from the initial and subsequent compositing areas, and will be segregated based on the type of porous surface (i.e. concrete, gravel, soil)
- Composite samples from each area and media will be mixed thoroughly, and transferred to four-ounce jars for laboratory analysis

For pervious surfaces located in other areas of the CAB pad that have documentation of PCBs less than 50 mg/kg (i.e. where the larger non-scrap demolition debris pile was staged and areas around the building pad), the sampling protocol will be similar to that described in Sections A and B. Environmental media samples collected from the CAB grid and other areas will be submitted to a laboratory for confirmation evaluation of sufficient removal of residual hazardous material via the protocol described in Section D, including total PCBs by EPA Method 8082.

During cleaning of the porous surfaces prior to sampling, samples of sediments and environmental media will be collected and tested via field (immunoassay) method SW-846 (4020). The results of the immunoassay testing will be used to direct the removal of additional environmental media to achieve compliance with the EPA standard of 1 ppm for the CAB area.

The lab results will be compared to the EPA standard of 25 mg/kg (parts per million (ppm))for removal/decontamination of soil or porous surfaces in "low occupancy" areas for samples collected from surfaces not within a drainage area to Peak Creek and under an institutional control (i.e deed restriction). A remediation standard of 1 ppm will be used for any sample collected from a drainage trench or pervious pathway to Peak Creek.

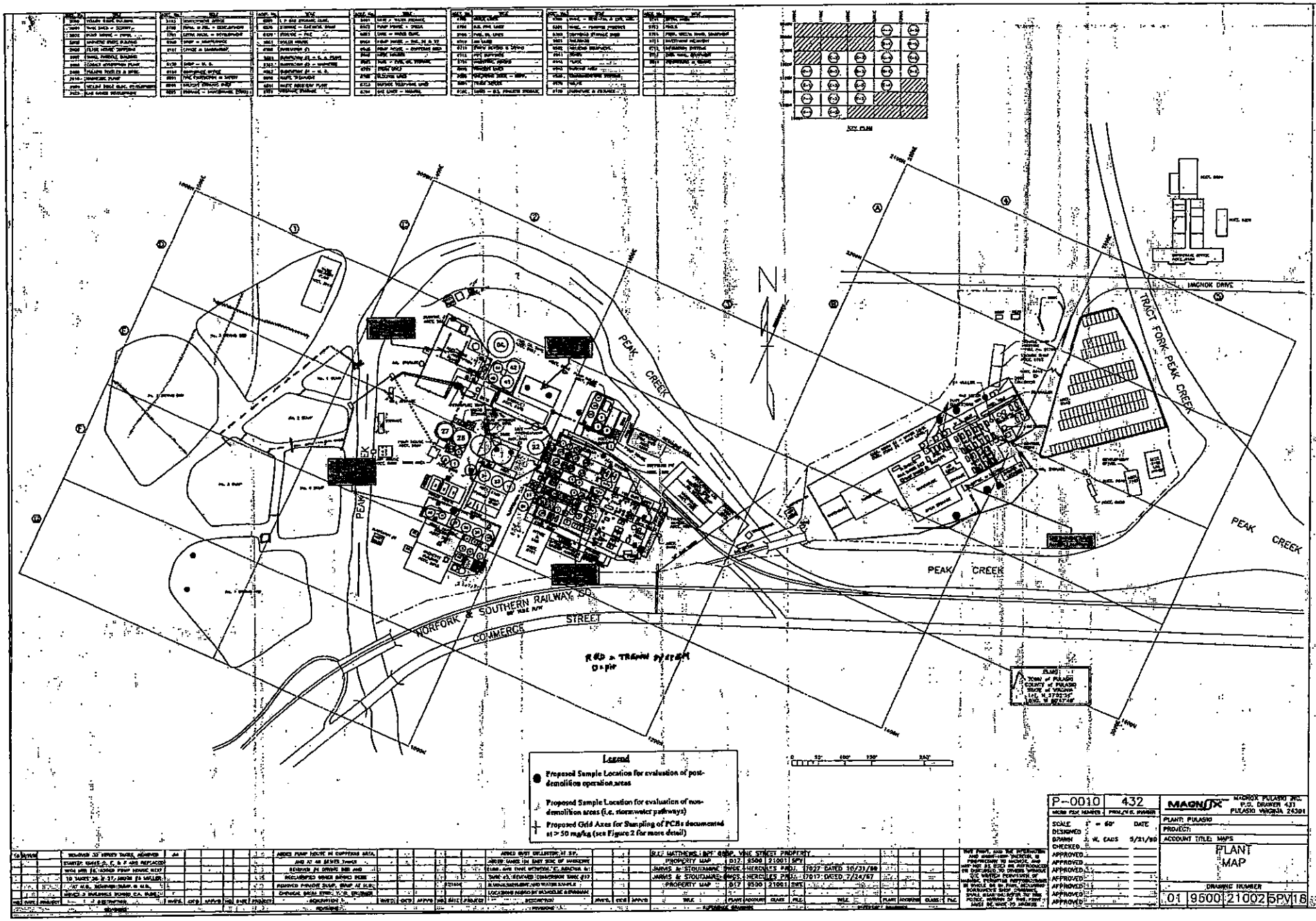
The locations of the proposed sample locations for PCBs on the CAB pad are depicted on Figure2 included with this Plan. The number of target areas may be different during implementation of the Plan, and STNP will request approval from EPA to modify the number of locations as necessary to meet the intent of the Plan.

### *F. Stormwater Runoff*

During implementation of the Post Response Sampling activities, stormwater will continue to be collected in dedicated storage vessels in accordance with the RAP Addendum. Following completion of the Post Response Sampling and Analysis activities and verification that hazardous materials have been removed to the extent they will not adversely impact stormwater runoff, STNP will conduct stormwater monitoring of runoff that collects in the main stormwater sump (Phase I post response) and discharges from outfalls 2, 3, and 4 (Phase II of post response). A sample of runoff from a storm event that produces a noticeable discharge will be collected at each location.

The samples will be submitted for laboratory analysis of parameters listed in Section IV of Attachment A of the AOC. If laboratory results indicate that all parameters are compliant with the limits listed in the AOC, STNP will petition EPA to allow stormwater to flow to the lagoon system or through the outfalls without additional collection, treatment, or monitoring. If any parameters are not compliant with AOC limits, stormwater sampling will continue during additional representative events until all hazardous

materials are removed from the site to the extent that the stormwater runoff parameters are compliant with the limits listed in the AOC.




Post Response Action Sampling Plan
Former Nanochemonics Site
Pulaski, Virginia

| Drawn By: | Checked By: | Project Number: | Date: | Reference: | Scale: | Size: | Layers: |
|---|---|---|---|---|---|---|---|
| vmf | smr | 20104B | February 2012 | | 1" = 80' | 22" x 34" | 0, 1004 |

P:\William Allen Law Firm\Nanochemonics - 20104B\Projects\CAD\Fig1-Sampling Plan.dwg

DUNCKLEE & DUNHAM
ENVIRONMENTAL CONSULTING & ENGINEERING
511 Keisler Drive Suite 102, Cary, North Carolina 27518, (919) 851-9958, www.dunckleedunham.com, NC Eng. License No. C-2359, NC Geo. License No. C-281

Figure 1

P-0010 | 432

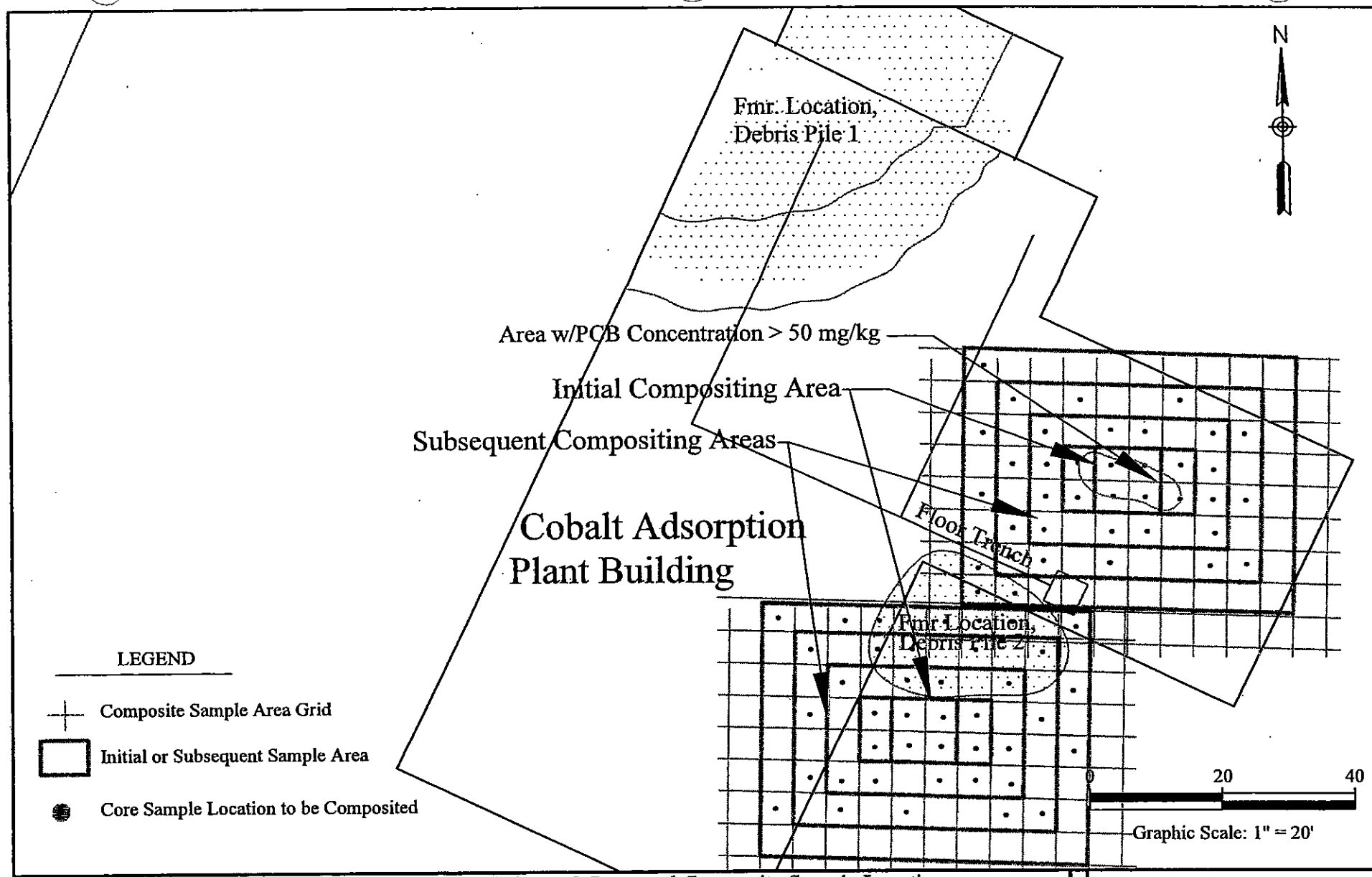
MAGNOX PULASKI INC.
P.O. DRAWER 431
PULASKI VIRGINIA 24301

SCALE: 1" = 80' | DATE: 5/21/80
DESIGNED:
DRAWN: W. EADS
CHECKED:
APPROVED:

PLANT: PULASKI
PROJECT:
ACCOUNT TITLE: MAPS

PLANT MAP

DRAWING NUMBER: 01 9500 21002 SPV 18




# 40 CFR Subpart O Proposed Composite Sample Locations

Former Nanochemonics Site
Pulaski, Virginia

| Drawn By: | Checked By: | Project Number: | Date: | Reference: |
|---|---|---|---|---|
| jak | amr | 201048 | 11-2011 | Magnox 1990 plant map, field notes |
| **Scale:** | **Size:** | **Layers:** | **Filename:** | |
| 1" = 20' | 8.5" x 11" | 0,1,2,3,4 | P:\Williams Mullen Law Firm\Nanochemonics-201048\Figures\CAD\Former Cobalt Adsorption Plant | |

Figure 2

DUNCKLEE & DUNHAM
ENVIRONMENTAL CONSULTING & ENGINEERING
511 Keisler Drive Suite 102
Cary, North Carolina 27518
NC Eng. License No. C-3559
(919) 858-9898
www.dunckleedunham.com
NC Geo. License No. C-261

**Response Action Plan Addendum**
**Former Nanochemonics Holdings, LLC Facility**
**4 Magnox Drive**
**Pulaski, Virginia**
**February 9, 2012**

This addendum to the Response Action Plan (RAP) describes procedures planned and performed to manage residual hazardous substances generated during demolition activities at the former Nanochemonics Holdings, LLC (Nanochemonics) facility in Pulaski, Virginia. This addendum is prepared in response to a request from EPA in a letter dated November 22, 2011 to replace the previous addendum dated July 22, 2011, updated on August 26 and October 14, 2011, and incorporates additional comments received .from EPA on January 19, 2012. It includes all EPA-approved response activities either completed or proposed as being necessary to complete the response actions at the site, as well as include additional items of concern posed by EPA. The procedures are designed to manage residual hazardous substances, defined as various heavy-metal constituents in metal oxides, acidic/alkaline residues, polychlorinated biphenyls (PCBs) and asbestos-containing materials (ACMs) on surfaces that are not being removed from the facility as scrap material and demolition debris.

This addendum also provides a schedule to manage and dispose of waste materials removed from the on-site buildings during the Response Action and currently stored in the Magnesium Oxide (MO) warehouse. A description of Response Action activities related to demolition of the MO building and a Final Lagoon Closure Plan, also requested in the EPA letter, will be prepared and submitted as separate documents by January 4, 2012.

## 1 Purpose

The procedures described in this RAP Addendum are designed to accomplish the following general objectives:

1. Remove debris piles that contain hazardous substances from operational areas and manage these piles until removed by properly locating, shaping and covering the piles to prevent contact with stormwater during rain events, in accordance with the Administrative Order on Consent (AOC).
2. Allow unimpeded flow of stormwater through the facility's existing trench system to the lagoon.
3. Remove, through water washing, residual hazardous substances on building floor pads and within trenches that are exposed to stormwater as a result of the demolition activities such that water that migrates through the trench system has a pH between 6 and 9.
4. Manage wastewater generated from pad- and trench-washing activities such that this water can be treated and discharged in accordance with the requirements of the AOC. Wastewater treatment will consist of solids settlement and pH adjustment to between 6 and 9 prior to discharge to the lagoon system.
5. Prevent uncontrolled discharges of wastewater or stormwater impacted by hazardous substances to Peak Creek by maintaining the plug inserted in the drainage-ditch concrete sump, and provide equipment such as pumps, power source, and hoses that can remove water from a 10-year storm event from the sump without release to the lagoon system. Assign responsibilities to the workforce for maintaining this response condition during all such possible events.

6. Provide and maintain dust control for the duration of demolition activities. Minimize the use of wastewater for dust suppression or other purposes such that use is restricted to locations from which sprayed water could migrate back to the drainage system for collection.
7. Dispose of waste materials generated during response action activities.

## 2 Proposed Actions

In order to accomplish the seven objectives listed above, STNP's contractors have and will continue to execute the following protocols during and after demolition activities:

### *2.1 Manage and Remove Debris Piles that Contain Hazardous Substances*

STNP contractors began covering non-scrap demolition debris piles on July 25, 2011, following submittal of the initial RAP Addendum. Demolition-debris piles on the pads of the Cobalt and Magnetite buildings were covered initially, with additional piles covered where practical.

Beginning September 28, 2011, STNP mobilized equipment and contractors to the site to commence removal of non-scrap demolition debris. Removal of demolition debris began at the NTR/YO/Pilot plant area, and included removal of demolition-debris piles in the NTR/YO/Pilot Plant, Magnetite/Small Particulate building, Boiler House, Copperas area, Building 9302, and the Maintenance Shop. Debris-hauling activities were completed in these areas on November 16, 2011.

Approximately 3,200 tons of demolition debris were removed from the site and transported to the New River Resource Authority Landfill. A more-detailed description of the activities performed to minimize contact between hazardous substances and stormwater on each building pad after demolition is described below.

#### *2.1.1 Cobalt Building*

STNP contractors consolidated non-scrap debris generated during demolition of the Cobalt building into two manageable piles, covered these piles with multiple layers of 6-mil thick poly sheeting, and anchored the coverings with heavy materials placed along the toe perimeters of the piles. The coverings were inspected daily for the presence or rips, tears, or unsecured areas susceptible to wind displacement, and repaired or secured as needed. Jerry King is the primary designated official responsible for these daily inspections, and STNP contractors are responsible for inspecting the piles while on-site. All items of concern are reported to Duncklee & Dunham and corrected as soon as possible. Duncklee & Dunham inspects the piles when on-site. The non-scrap debris piles that contain hazardous substances will be covered as long as the piles are on the site.

During waste-characterization/composite-sampling activities performed by EPA contractors on the two debris piles at the Cobalt building on September 22, 2011, PCBs were identified at a maximum concentration of approximately 66 mg/kg. STNP prepared composite samples of debris from the two piles on October 11, 2011, following procedures described in 40 CFR 761 and 762, Subpart R, and identified PCBs at a concentration of approximately 31 mg/kg.

EPA and STNP collected additional samples of residual material on the pad for the Cobalt building and within stormwater-runoff pathways on October 19 and November 1, 2011, respectively. EPA submitted samples from residuals obtained from the pad and stormwater pathway for testing for total PCBs according to SW-846 Method 8082, while STNP screened samples from media along the stormwater-runoff pathways for Immunoassay (IA) testing according to SW-846 Method 4020. The results of the IA testing, submitted to EPA on November 15, 2011, showed PCB concentrations were less than 10 mg/kg in the sediment and surficial soil samples collected in the stormwater-runoff pathways. The results of analyses of residual materials collected by EPA showed a maximum PCB concentration of approximately 160 mg/kg in a sample collected from a depressed area of the pad for the Cobalt building.

Following discussions with EPA regarding the test results, STNP collected additional samples of debris from the two piles on the Cobalt pad on November 17, 2011 to further aid in identifying/locating the source of the PCBs previously detected by EPA and STNP, and to use in waste characterization. Prior to this sampling, STNP directed their contractor to remove oversized items in the Cobalt building debris piles that they observed to be reasonably clean and unlikely be the source of PCBs, such as pieces of furniture or equipment unrelated to PCBs. These materials were staged at a location on the pad proximal to the main debris pile and covered with poly sheeting for further consideration. STNP then collected 37 grab samples of fine debris at 26 locations in the piles using a gridded matrix, at depth intervals of 6 inches, 1 foot, and 2 feet. These samples were submitted to a laboratory for IA testing of PCBs according to SW-846 Method 4020. Results from the laboratory testing were submitted to EPA on November 24, 2011, and clearly indicated that the source location for the high level of PCBs previously detected is confined to the debris pile on the southeastern side of the Cobalt pad. This conclusion is further supported by the location of the sample collected by EPA at the depressed area on the northeastern portion of the Cobalt pad, which is proximal to the southeastern debris pile.

Using the data obtained from testing media in the stormwater-drainage pathways and debris piles, STNP proposes to minimize contact between hazardous materials and stormwater runoff from the Cobalt pad as follows:

- Remove sediment from the main stormwater trench that runs through the Cobalt pad with a vacuum or by hand. Transfer the removed sediments to the southeastern debris pile and cover the pile.
- Remove visible residual hazardous materials on the Cobalt building pad, specifically in areas identified by EPA as having high concentrations of PCBs (i.e., within the depressed area on the northeastern portion of the pad), with a vacuum or by hand. Transfer the removed sediments to the southeastern debris pile and cover the pile.
- Since the debris in the large pile on the northwestern corner of the building floor pad has been characterized through previous testing as non-PCB waste (concentrations of all samples below 50 mg/kg), transport this debris to the New River Resource Authority (NRRA) landfill pursuant to their approval of previously-submitted profile information and the Virginia Solid Waste Management Rules (VSWMR 9 VAC 20-81-630) that allow for the disposal of soils containing between 1 and 50 ppm PCBs at Subtitle D landfills. Following debris removal, residual materials will be removed from areas where the debris was staged to the maximum extent possible, containerized, and transported to the landfill.
- Remove oversized items (i.e. poly tank, building materials) deemed unlikely to be the source of PCB contamination from the debris pile on the southeastern side of the building floor pad and transfer these items to the northwestern debris pile for transport to the NRRA landfill;

- Since previous analyses of fine debris within the southeastern debris pile indicates total PCB concentrations close to the regulatory standard of 50 mg/kg pursuant to 40 CFR 761.61, and a PCB source area has been identified proximal to this debris pile, the entirety of this pile will be characterized as Bulk PCBs Remediation Waste and will be transported to an approved facility for disposal in accordance with Toxic Substances Control Act (TSCA)

, Disposal of non-PCB debris will commence in accordance with the schedule presented in Section 4, pending EPA approval. Disposal of any PCB debris from the Cobalt pad is expected to take two-to-three weeks to accomplish due to the time required to identify a TSCA treatment or disposal facility, have the facility accept the debris profile, and schedule the transportation.

### *2.1.2 Small Particulate/Magnetite Buildings*

STNP contractors consolidated non-scrap debris piles that contain evidence of hazardous materials generated during the demolition of these buildings to the extent practical to facilitate management. STNP covered these piles in place with multiple layers of 6-mil-thick poly sheeting, and anchored the covering(s) with heavy materials placed along the toe perimeters of the piles at a location on the north side of the Magnetite building floor pad and in the exterior AST containment basin. The coverings were inspected daily for the presence or rips, tears, or unsecured areas susceptible to wind displacement, and repaired or secured as needed. Jerry King was the primary designated official responsible for the inspections of these piles, and STNP contractors were responsible for inspecting the piles while on-site. The non-scrap debris piles that contained hazardous substances were covered until the debris piles were removed in November

### *2.1.3 Boiler House/Maintenance Shop*

STNP contractors segregated non-scrap demolition debris to the maximum extent practical to separate the brick and mortar materials, which have potential for re-use, from the materials such as fiberglass, plastic, glass and wood. Mixed inert debris deemed unsuitable for re-use as fill was removed from the site in October/November. The brick and mortar-block debris deemed suitable for re-use is currently staged uncovered in an area where stormwater runoff is directed into the trench system and captured as needed for monitoring and treatment by the on-site collection system. Following approval by EPA of this material for re-use as fill, the inert debris will be used on site to fill in low areas and moved and staged in an area proximal to the lagoons where it can be accessed for beneficial re-use, as described in the Final Lagoon Closure Plan.

### *2.1.4 Pilot Plant/Yellow Oxide/NTR Buildings*

STNP contractors segregated non-scrap demolition debris into several piles and staged the piles on the contiguous building pad. These piles were too difficult to cover due to their height and accessibility issues. Therefore, commencement of disposal activities for demolition debris was focused on these piles to facilitate removal from the site as quickly as possible. Removal of this debris commenced in September and was completed in November.

### *2.1.5 Applications Lab/Warehouse (Building 9302) and Copperas Area*

STNP and EPA contractors consolidated all non-scrap materials (e.g., wood, plastic, fiberglass and glass) on the Building 9302 pad and Copperas area into two debris piles, and staged these piles for management and stormwater control. After the piles were completed, EPA contractors covered the pile on the building 9302 pad with 6-mil-thick poly sheeting and anchored the sheeting with heavy materials placed along the toe perimeters of the piles. The covering was inspected daily for the presence or rips, tears, or unsecured areas susceptible to wind displacement, and repaired or secured as needed. Jerry King was the primary designated official responsible for the daily inspections of the piles, and STNP contractors were responsible for inspecting the piles while on-site. The non-scrap debris pile remained covered until both debris piles were removed from the site in October.

### *2.1.6 Beneficial Re-Use of Non-Scrap Debris*

As referenced in Sections 2.1.3 to 2.1.5, some non-scrap debris will be used as fill during closure of the on-site lagoon system. During removal of this debris, STNP contractors visually inspected the inert debris in piles staged on the NTR/YO/Pilot Plant building pads, Small Particulate/Magnetite building pads, Copperas area pad, Building 9302 pad, and Boiler House/Maintenance Shop pads to evaluate its potential for use as fill material. Based on these inspections, inert material was segregated into two categories: (1) material that contained too much foreign (non-inert) material (e.g., wood, plastic, iron oxide) or that was too large to be considered useful as fill for the lagoons; this debris was transported to the NRRA landfill as C&D debris, and (2) material that did not contain a significant quantity of foreign or fine material and was small enough to be useful as fill, which was segregated into a separate pile for further inspection.

As a result of these inspections, the inert debris from the demolition of an exterior brick wall on the north side of the Maintenance Shop was deemed potentially suitable for use as on-site fill material. EPA contractors removed known ACMs from this pile, and the remaining pile was consolidated and staged by STNP contractors in an area that drains into the stormwater-trench collection system. A preliminary inspection of this material did not reveal the presence of a large quantity of foreign material. Because this debris was generated from demolition of an area with no known presence of hazardous materials, the material remains uncovered until further use.

Virginia Solid Waste Management Guidance memorandum No. 05-2005 (*Procedures for Closure or Abandonment of Lagoons*) provides that stabilized solids (e.g., inert debris such as concrete, cinder block, broken pavement, etc.), can be used as general fill in lagoon closures provided 1) it doesn't create a hazard or public nuisance, 2) a significant quantity of other debris is not mixed in with the fill, and 3) the materials will be screened to remove foreign debris to the extent practical to comply with the conditional exemption criteria in the guidance memorandum. The following protocol will be followed for processing of inert debris as fill material:

1. All debris material from the pile will be moved with a track hoe to another location on the facility side of Peak Creek for visual inspection and screening of foreign materials.
2. Inert debris material that exhibits visible evidence of hazardous substances (e.g., stains from metal oxides or corrosive materials) will be segregated into a separate pile for off-site disposal at the NRRA landfill.

3. Foreign materials such as large pieces of wood, plastic, fiberglass, metal, electronics, glass, circuit boards, capacitors, light ballasts, batteries, and potential ACMs similar to what was previously removed from the pile will be removed and transferred properly into a separate pile for off-site disposal at the NRRA landfill. ACMs will be handled in accordance with OSHA requirements and in a manner consistent with the protocol followed for handling all ACMs at the site;
4. The remaining concrete block, mortar, and brick will be crushed to the extent possible using the track hoe or other heavy equipment. The crushed material will be inspected for the following: 1) asbestos containing materials (ACMs); and 2) PCBs, if capacitors or light ballasts are detected during material screening activities. Following inspection , the material will be moved and staged in an area proximal to the lagoons for access during lagoon closure.
5. Following final inspection, demolition debris deemed suitable for re-use as fill material, as well as other materials that will be used as fill materials during lagoon closure (e.g., hydrated lime), will be removed and staged proximal to the lagoons, covered and managed as required by EPA consistent with the management of all demolition debris left on-site.
6. Inert material designated for fill during lagoon closure will be placed into the lagoons following the protocol outlined in the Final Lagoon Closure Plan.

The Virginia Department of Environmental Quality (VDEQ) does not provide guidance related to suitable particle size of the material used as fill. Based on discussions with VDEQ, the suitable size of material is based on the proposed end use of the lagoon area after it is closed. Since the lagoons will not be built upon following closure, and will be subject to deed restrictions, the inert debris does not have to meet requirements for structural fill, and a smaller particle size than that suitable for general fill is not necessary. STNP will provide a protocol for use of the inert debris during the landfill closure in the Final Lagoon Closure Plan.

### *2.2 Allow Unimpeded Stormwater Flow Through the Trench System to the Lagoons*

The trenches in the buildings being demolished and the main stormwater trench will be cleaned out following removal of the non-scrap debris piles.

Stormwater runoff from the pad for Building 9302 and the area east of the Copperas Area shed and NTR building is directed by existing grade to the sump area east of the Copperas Area shed. Stormwater from this sump is pumped into the main stormwater trench system, from which it can be pumped to the stormwater-collection system referenced in Section 2.4. Stormwater runoff from the Copperas Area drains via gravity into the collection trench, from which it flows under the access road through a 6-inch pipe and into the main stormwater trench, where it is collected within the sump and pumped to the stormwater-collection system.

Materials removed from building interior and exterior trenches will be placed on the non-scrap debris piles and managed as referenced in Section 2.1. For control of stormwater flow on the western side of the property, a plug was placed in the entrance to the line that discharges from the collection sump to the lagoons to prevent discharge of untreated wash water from entering the lagoon system. Following removal of bulk materials from the trenches, the trenches will be flushed with municipal water. The wash-down water will be collected in the existing stormwater collection sump and pumped to the stormwater-collection system for treatment as necessary to achieve compliance with the limits listed in the AOC.

After the trench is cleaned out, a sample of residual liquid will be collected from the trench and field-tested for pH. Provisions for collection of stormwater from the facility side of the creek prior to discharge to the lagoon system will be removed to allow unimpeded flow of stormwater into the lagoons if 1) the pH is between 6 and 9, as required by the AOC, 2) other visible evidence of hazardous substances is not observed in the trenches, building floor pads, or other areas draining to Peak Creek and 3) Lagoon 3 is sufficiently isolated from the remainder of the lagoon system as described in the Final lagoon Closure Plan. If the pH is outside of the regulatory range, the trenches will continue to be flushed out and the water collected for treatment until residual materials are removed to the extent that that desired pH range is achieved.

As indicated in the preceding paragraph, Lagoon 3 has been isolated from the lagoon system as a supplemental measure for storage of stormwater runoff from a 10-year storm event. The isolation measures consisted on construction of sealed weir structures between Lagoons 4 and 3, as well as between 3 and 2, and insertion of a plug in the overflow line from lagoon 3 to lagoon 1. Through placement of a diversion gate in the influent trench to the lagoon system, stormwater runoff from the facility side of the creek is diverted into Lagoon 3 through removal of the plug in the main collection sump. EPA considers the contents of Lagoon 3 to be wash water and potentially contaminated stormwater requiring proper management.

Based on observations made by EPA and their contractor, visible evidence of flow from Lagoon 3 to Lagoons 2, 4 and 1 was observed on several occasions. EPA considers that all lagoons may potentially contain contaminated stormwater which may require management prior to discharge to Peak Creek. In response to EPA's observations, Jerry King constructed a bentonite seal around the outlet weir structure from Lagoon 4 to Lagoon 3, and STNP contractors constructed a bentonite seal within the outlet weir structure from Lagoon 3 to Lagoon 2. Additionally, Jerry King monitors the plug in the overflow pipe from lagoon 3 to Lagoon 1 and re-inflates the pump as needed to maintain a sufficient seal.

To evaluate the potential impact to the surrounding lagoons resulting from breaches in the outlet conveyances from lagoon 3, STNP contractors will perform the following:

- Collect a composite sample of the contents of Lagoon 3 for analysis of parameters listed in Attachment A of the AOC and PCB congeners (Method 1668A). The protocol for sample collection will be as described in the Final Lagoon Closure Plan;
- Compare the PCB congener results from Lagoon 3 to results obtained by EPA during a sampling event conducted in September 2011. If the PCB congener results are significantly (> 50%) higher than the results obtained in September 2011, collect composite samples from Lagoons 1 and 2 for PCB congener analysis to evaluate the ability to discharge the contents of these lagoons prior to lagoon closure.
- Inspect the outfall weir structure in Lagoon 1 and ensure that discharge of water from this lagoon to the outfall is prevented to a level no less than 12 inches from the top of the berm

## *2.3 Wash Residual Hazardous Substances from Building Floor Pads and Trenches Exposed to Stormwater so Water has a pH Between 6 and 9*

### *2.3.1 Cobalt Building*

Following removal of scrap material and non-scrap debris from the Cobalt building, the building floor pad and trenches will be cleaned as follows:

A. Remove residual solid debris from the pad and trenches using a front end loader, skid steer or by hand.

B. Place bulk solid materials into the pile on the southeastern side of the pad for characterization and disposal at either the NRRA landfill (non-PCB) or a TSCA landfill (PCB), as described in Section 2.1.

C. Clean the pad via broom-sweep.

D. Wash surfaces with PCBs as identified through previous testing (i.e. concrete surfaces on which PCB –contaminated media was detected at a concentration > 1 ppm and where the debris piles were staged) with a corncob/orange citrus-based abrasive cleaning substance.

E. Collect the wash water from these surfaces into the floor trench and sump and transfer into 55-gallon drums or the FRP tank designated for storage of PCB-contaminated water for characterization and proper disposal ;

F. Decontamination wash water collected from the southeastern portion of the building floor pad on which the PCB-contaminated debris pile was staged will be collected into a separate container (such as a drum or tote) and characterized as originating from a source of PCBs greater than 50 mg/kg for disposal purposes ;

G. Use Immunoassay real-time field screening (Methods SW-846, 4020) to iteratively check PCB concentrations on surfaces during the cleaning operations

H. For areas on the pad in which PCBs were not detected, wash the areas with municipal water direct the wash-down water into the floor trench and sump in the contained area on the building pad that has been diked to prevent flow into the main stormwater trench, and direct the wash water to the main stormwater-collection sump for transfer into the stormwater-collection system.

I. Pump accumulated water within the diked collection sump into one of the two 15,000-gallon ASTs designated for storage of water from the Cobalt building pad, and treat this water, if necessary, prior to release to the lagoon system. This water may require additional treatment for PCBs as necessary to meet the VDEQ's Water Quality Criteria.

J. Sample the accumulated water in the fiberglass tank and test the water for the parameters listed in the AOC, and for PCB congeners according to EPA Method 1668A.

K. Treated or untreated water collected from the Cobalt pad will not be discharged to the lagoon system, Peak Creek, or an alternate off-site disposal facility, if necessary, without specific EPA approval;

L. Once all debris is removed from the Cobalt pad and the areas upon which the debris piles were staged has been cleaned, these areas and all areas where debris-removal operations and response-action activities were conducted will be characterized to verify that hazardous substances and PCBs have been removed. STNP will conduct verification testing consistent with the sampling protocol as described in the Post Response Action Sampling and Analysis Plan. The comparison standards for removal and/or decontamination of surfaces will be those established for "low occupancy" areas for any surface not within the drainage pathway, and as 1 mg/kg for any drainage trench or for soil in a drainage pathway to Peak Creek. STNP will provide EPA with a sampling plan and figure that depicts the sample locations prior to the confirmation sampling.

### *2.3.2 All Other Demolished Buildings*

After scrap material and non-scrap debris have been removed from the other demolished buildings, the building floor pads and trenches will be cleaned as follows:

A. Removed residual solid debris from the building pads and trenches with a front end loader, skid steer or by hand.

B. Place bulk solid materials into piles for disposal at the NRRA landfill.

C. Wash down the pads and trenches with municipal water.

D. Direct the wash-down water into floor trenches for transfer to the stormwater-collection system and diked sump;

E. Pump the accumulated water in the diked collection sump to one of the five tanks or Lagoon 3, provided for stormwater storage as referenced in Section 2.4. These tanks provide 160,000 gallons of storage capacity for stormwater, and Lagoon 3 provides another 200,000 to 300,000 gallons of storage capacity, which together provide sufficient volume to contain the runoff volume from 1½ times a 10-year storm event.

F. Sample the accumulated water in the fiberglass tank and test the sample(s) for the parameters listed in the AOC.

G. Treated or untreated water collected from the other building pads will not be discharged to the lagoon system or Peak Creek without specific EPA approval.

Once demolition debris has been removed from the building pads and the pads upon which the debris piles were staged have been cleaned, these areas and all areas where debris-management and response-action activities were conducted will be visually inspected and/or sampled to verify that residual hazardous substances have been removed. The sampling methodology and protocol will follow that described in the Post Response Action Sampling and Analysis Plan. The comparison standards for removal and/or decontamination of surfaces will be those established in the AOC and based on typical industrial standards or standards that are protective of surface water quality, and may include other parameters (e.g., diesel or gasoline range organics, ACMs, PCBs) as needed, based on visual observations of the targeted areas. STNP will provide EPA with verbal results of the inspections and petition for rescission of the requirement to collect stormwater runoff flow from the creek side of the site prior to release to the lagoon system, if applicable.

### 2.4 *Manage Wastewater Generated from Pad- and Trench-washing Activities so it can be Treated and Discharged in Accordance with the AOC. Treat Wastewater to Maximize Settlement of Solids and Adjust the pH of Wastewater to Between 6 and 9 Prior to Discharge to the Lagoon System*

STNP contractors constructed a sand berm around the perimeter of the area on the Cobalt pad where the debris piles are staged. Existing aboveground storage Tanks 327 (100,000 gallon capacity), 404 (80,000 gallon capacity), 9 and 10 (15,000 gallons each) are being utilized for storage of wash water and stormwater runoff on the facility side of the creek. Additionally, STNP contractors mobilized three Frac tanks (1, 2 and 3) with a combined storage capacity of 60,000 gallons to the site for stormwater collection.

Wash water generated from the cleaning of the Cobalt pad is collected in the trench and sump installed in this contained area of the building floor pad and pumped to either Tank 327 or Tank 9(the easternmost of the two tanks). These tanks are dedicated to wash water and stormwater runoff from the Cobalt pad. Wash water and stormwater is pumped into the tanks from the closed sump in the Cobalt pad with a dedicated trash pump and hosing. Wash water that accumulates in the tanks will be treated with pH adjustment and flocculent addition, and tested to confirm compliance with the discharge limits listed in the AOC. This water will also be tested for PCB congeners according to Method 1668A. A portion of accumulated water in Tank 327 was pumped into one of the Frac tanks (Tank 1) and treated under this protocol.

Wash water collected from cleaning of the Copperas area, NTR/YO/Pilot Plant, and Small Particulate/Magnetite building pads after removal of demolition debris piles from those locations, as well as stormwater runoff from the other portions of the site that flows into the main stormwater trench system, will collect in the main collection sump. From this sump, the water will be pumped into Tank 404, Tank 10 (the other 15,000-gallon fiberglass tank), two of the three Frac tanks brought to the site as temporary storage measures, and/or Lagoon 3. This lagoon has been isolated from the remainder of the lagoon system to serve as a treatment "tank" for additional capacity.

Stormwater that collects in these vessels will be treated using pH adjustment and flocculent addition, and tested to evaluate compliance with the discharge limits in the AOC. Since we do not have evidence of elevated PCB concentrations in areas of the site other than the Cobalt pad, testing of the stormwater runoff collected from these areas will be limited to the parameters in the AOC, with the exception of Lagoon 3, where PCB congeners will be tested in samples obtained from this vessel due to the potential presence of PCBs in stormwater runoff previously collected in Tank 404 and discharged to the lagoon prior to the installation of additional storage capacity at the site. If test results show compliance with the parameters of the AOC and the Virginia Water Quality Criteria (WQC) for PCBs, the water will be discharged through the lagoon system for discharge to Peak Creak following EPA approval.

An inventory of current on-site wash water and stormwater storage vessels at the site is as follows:

| Tank ID | Storage Capacity (gal.) | Available Capacity (gal.) | Contents |
|---|---|---|---|
| 327 | 100,000 | 5,000-10,000 | Treated wash water and stormwater from entire facility creek side drainage area, contains PCBs > VWQC levels |
| 404 | 80,000 | 60,000 | Untreated wash water and stormwater from entire facility creek side drainage area, no known PCBs |
| 9 | 15,000 | 2,000 | Untreated stormwater from CAB drainage area, contains PCBs > VWQC levels |
| 10 | 15,000 | 15,000 | Empty |
| Frac Tank #1 | 21,000 | 4,000 | Treated wash water and stormwater from entire facility creek side drainage area, contains PCBs > VWQC levels |
| Frac Tank #2 | 21,000 | 1,000 | Treated wash water and stormwater from entire facility creek side drainage area, no known PCBs |
| Frac Tank #3 | 21,000 | 0 | Treated wash water and stormwater from entire facility creek side drainage area, no known PCBs |
| Lagoon 3 | 500,000 | Approx.. 250,000 | Treated and untreated wash water and stormwater from entire facility creek side drainage area, may contains PCBs > VWQC levels |

Any residual sludge in the stormwater/wash water collection tank(s) will be transferred to the sludge drying bed pursuant to approval by the VDEQ. Stormwater previously collected in Tank 327, Tank 1, and Tank 9 will be treated following the same protocol as the other stormwater for the removal of metals and suspended solids. The treated water will be tested for the parameters listed in the AOC, and for PCB congeners according to Method 1668A. If test results indicate compliance with the parameters of the AOC and with the WQC, the water will be discharged to Lagoon 2 for flow through the lagoon system following EPA approval. If the water does not meet either the parameters of the AOC or the WQC, the water will be handled with one of the following strategies:

- additional treatment for metals removal, utilizing current methodologies (i.e., pH adjustment and flocculent addition) and additional methodologies including physical (bag) filtration.
- additional treatment for PCB removal. Methodologies for this treatment will be evaluated through bench scale testing, and include, but are not limited to, granular activated carbon, sand filters, and cartridge/bag filters. Approval from EPA of an acceptable method will be requested prior to implementation. Evaluation of these treatment methodologies is currently being conducted. A decision will be made and implementation of a selected method will commence in accordance with the schedule outlined in Section 4.

If no available treatment technologies are identified, the water will be transported to a licensed publicly owned treatment works (POTW) under agreement or permit

### *2.5 Prevent Uncontrolled Discharges of Wastewater or Stormwater Impacted by Hazardous Substances into Peak Creek, Prevent such Storm Flows from Entering the Lagoon System, and Provide Equipment that can Remove a 10-year Storm Event from the Sump without Release to the Lagoon System*

STNP contractors repaired sections of silt fence that were damaged and constructed a stormwater ditch along the western perimeter of the response-action area to prevent uncontrolled discharges of stormwater from areas where debris piles are staged. As referenced in Section 2.2, provisions for collection of stormwater runoff from the creek side of the facility will remain in place until the non-scrap debris piles have been removed or managed to minimize the impact on stormwater from hazardous substances, as described in Sections 2.1 and 2.2 and verified through visual confirmation and/or sampling.. Water used during demolition activities to clean pads and the trench on the western side of the property will be collected in the plugged sump and then pumped into one of the treatment tanks to allow solids to settle and to adjust the pH, as referenced in Section 2.4.

Jerry King or STNP contractors will inspect the stormwater-collection sump on a weekly basis when they are on-site or prior to an anticipated rain event, and they will clean out the sump as needed. Jerry King will also inspect the non-scrap debris piles daily. Following removal of all non-scrap debris piles from the creek side of facility, the areas will be inspected and tested to verify removal of residual hazardous substances. If these inspections confirm that the parameters of the residual stormwater or materials contained within the trench system, sump and storage tanks are compliant with the discharge limits referenced in the AOC; provisions for collection of stormwater will be rescinded and unimpeded flow of stormwater to the lagoon system will be initiated following EPA approval.

For the western or creek side portion of the property, STNP contractors installed a centrifugal pump with a capacity of approximately 500 gallons per minute (gpm) on October 19, 2011. This pump supplements two other pumps in the contained sump in the Cobalt pad and sump area east of the Copperas Area shed, which have a combined capacity of approximately 200 gpm. Since a 10-year storm would likely be a predictable event such as a hurricane or tropical storm, another 500-gpm centrifugal pump could be quickly mobilized to the site, if needed.

Section 2.4 indicates the current available storage capacity of the temporary storage vessels. The available storage capacity will be increased through treatment and discharge of the contents of the vessels following the schedule outlined in Section 4. Additional storage capacity will be provided as needed with Frac tanks in the event a 10-year storm is forecast with a high degree of certainty. This capability, along with the ability to divert flow to Lagoon 3 in a worst-case scenario, is sufficient to handle a 10-year storm event. The gate on the discharge line to the lagoons can be raised to allow flow to enter Lagoon 3, bypassing Lagoon 4. Jerry King is assigned daily responsibilities for operation of the pump system as required during a storm event. Additional support is provided by STNP contractors when they are on-site.

### *2.6 Provide Dust Control During Demolition Activities*

Dust-suppression activities will be undertaken as part of the building demolition process and during salvage pile load-out. These activities will use either wastewater generated from pre-demolition response action activities, stormwater runoff collected during and post-demolition activities, or municipal water. Use of wastewater or stormwater for dust suppression purposes will only be performed under the following provisions:

- wastewater or stormwater used for pad cleaning or dust suppression will only be sprayed in an area that drains to a constructed collection point (e.g. sump) from which collected water can be pumped to a vessel for monitoring and treatment, if necessary;
- wastewater or stormwater may only be used for dust suppression when operational conditions (e.g. active demolition, debris loading, vehicle travel over dry roads) requiring dust suppression are present;
- personnel applying wastewater or stormwater to the target dust suppression area are made aware of the potential presence of hazardous substances within the water, specifically PCBs, through an amendment of the Health and Safety Plan and daily briefings

Application of water during dust –suppression activities will be in a wide, fan-like pattern over the area of demolition activity to minimize surface pooling. The spray area will be moved if accumulation of water in any area is observed. Every attempt will be made to prevent concentrated or sheet-flow runoff from dust suppression from flowing toward Peak Creek or outside of the trench system.

Previous dust suppression of areas where demolition activities were conducted was through the use of treated wastewater from Tanks 404 and 326. Given that demolition activities on the creek side and MO portion of the site have been temporarily suspended, recycled wastewater and stormwater may not be available or impractical to utilize when these activities resume. Therefore, municipal water will be used as needed for dust suppression for future demolition activities. Wastewater collected during additional

dust suppression on the creek side of the site will be collected in the existing stormwater-trench system and pumped to the on-site collection system for treatment prior to disposal. Dust suppression during demolition activities on the MO Building will be described in the MO Building Area Response Plan.

### *2.7 Disposal of Waste Materials Generated During Response Action Activities*

The metal oxide solids currently stored 1) in four roll-off boxes, 2) in the MO warehouse in bags, drums, and Super Sacks, 3) in metal drums and totes in the MO warehouse and outside of the MO building under a lean-to, and 4) in pint- and quart-size cans in Building 9300 were sampled for profiling purposes on June 21, 2011. A description of these metal oxide solids is as follows:

- material in roll-off boxes: waste material removed from building interior floors, walls and inside bulk containers during response action activities;
- material in bags, fiber drums, Super Sacks: finished, unsold product or raw (virgin) material used in the manufacturing or waste treatment processes;
- material stored in drums and metal totes in the MO warehouse and beneath the lean-to: potential waste material from the manufacturing process recovered from the process equipment, dust collection equipment, or material removed from the floor;
- material in pint and quart size cans in Building 9300: material sampled from the production processes as part of the facility's Quality Control/Assurance program

Composite samples were prepared from samples collected from the roll off boxes, drums, totes, bags, Super Sacks and pint- and quart-size containers of metal-oxide material removed from the buildings as part of the pre-demolition response action activities. Laboratory test results showed the samples from the metal-oxide solid-waste stream did not exhibit the toxicity hazardous waste characteristic pursuant to 40 CFR Part 261 for RCRA metals, and the material can be treated as non-hazardous waste.

This data was sent on July 1, 2011 to the New River Resource Authority Landfill (NRRALF) as part of the profile for the waste stream. This profile received approval from the NRRALF. The material will be transported to the landfill either in roll-offs or dump trucks (if transferred from current containers) or loaded onto a walking bed trailer (if transported within current containers). Dust suppression (i.e. water mist) will be performed if this material is transferred from current storage containers to roll-offs or vehicles for transport to the landfill.

STNP has identified potential parties who may have interest in obtaining some or all of the bulk metal-oxide material (i.e., raw material and finished product generated for use in commerce) stored in bags and Super Sacks in the MO warehouse. One end-user is a pigment manufacturer who may be able to use this material in their manufacturing process. For the metal oxide material stored in metal totes, drums, and pint and quart cans, STNP will determine how Nanochemonics viewed these different classes of materials, (i.e., ingredient, product or waste), and based on this information, determine whether the material is suitable for reuse. STNP will demonstrate, through verification of acceptance by an end-user, that the material identified as finished product will be used in commerce and not disposed of as a waste prior to off-site transfer of the material.

Other waste streams within the MO Building warehouse that will be profiled and disposed off-site include 1) solid acid and alkaline materials, liquid ferrous sulfate, lab packs, flammables, waste oil, small containers of paint, aerosols, universal wastes, and other miscellaneous, non-hazardous wastes, 2) un-used

raw materials such as urea, Epsom salts, and ion exchange resin beads stored in palletized bags; and 3) materials in drums under the lean-to east of the MO building. STNP will attempt to identify a market of end-users for beneficial re-use of raw materials; otherwise, these materials, along with the waste generated from the response action conducted on the creek side of the property will be profiled based on generator knowledge (i.e. Material Safety Data Sheets) and per 40 CFR 261 (corrosivity, flammability, toxicity). The waste streams are expected to be classified as non-hazardous with the exception of some lab-pack materials, drums containing flammable liquids (i.e. kerosene), and a drum labeled as "Hazardous Waste" that is beneath the lean-to shed east of the MO building.

The schedule for waste profiling, verification of recycled product re-use, waste profiling, approval of disposal, and off-site transport of waste and recycled materials is provided in Section 4.

## 3 Responsible Parties

The following personnel are responsible for conducting the tasks described in Section 2:

| Tasks | Responsible Party |
|---|---|
| Waste and Recyclable Material Removal | GARCO and A&D Environmental |
| Non-Scrap Debris Pile Creation and Staging | Demolition Contractor |
| Non-Scrap Debris Pile Covering | A&D Environmental, and Jerry King of STNP |
| Trench Cleanout | A&D Environmental |
| Pad Cleaning | A&D Environmental |
| Management of Stormwater Runoff | Jerry King and A&D Environmental |
| Sump Control (plugging, inspection, evacuating) | Jerry King and A&D Environmental |
| Dust Suppression | Demo Contractor or A&D Environmental, if necessary |
| Oversight/management | Duncklee & Dunham |

## 4 Schedule

Many of the actions described in Section 2 have been initiated prior to the date of this addendum. The following table summarizes the objectives of the RAP adc

| Task | |
|---|---|
| Remove residual hazardous materials, creek side of facility | In |
| Dispose of waste materials generated during response-action activities: | |
| *MO Building* | |
| • Profiling/Demonstration of Acceptance: | |
| • Waste in other Containers (non-recyclable) | To |
| • Universal Waste | To |
| • Finished Product for recycle or disposal | To |
| • Disposal: | |
| • Waste in other Containers (non-recyclable) | To |
| • Universal Waste | To |
| • Finished Product for recycle or disposal | To |
| Prep for stormwater containment and collection, MO building demolition | To |
| Environmental Support, MO building demolition (treatment, stormwater monitoring) | To |
| Dispose of remaining C&D Debris: | |
| *Facility/Creek Side*: | |
| • Non-PCB debris, Cobalt Adsorption Building Pad | To |
| • PCB Debris, Cobalt Adsorption Building Pad | To |
| • C&D Debris, other areas (Copperas shed, behind 9300, north of Boiler House; 4-5 piles) | To |
| • Inert debris (1 pile)- screen and use in low areas around the site | To |
| Manage Wastewater and stormwater runoff from areas of response activity; provide sufficient storage capacity through treatment or alternate disposal: | |
| • Treatment/lagoon disposal of non-PCB water stored in two Frac tanks (40,000 gallons) | To |
| • Removal or treatment of PCB-contaminated Stormwater/wastewater stored in Tank 327 (90,000 gallons), Tank 9 (13,000 gallons), Frac tank (17,000 gals) | To |
| • Treatment/lagoon disposal of non-PCB water stored in Tank 404 (40,000 gallons) and Tank 10 (currently empty) | To |
| Dispose of remaining waste, creek side of site: | |
| • Profiling/Demonstration of Acceptance: | |
| • Metal Oxide Waste in Rolloff Containers | Dc |
| • ACMs in rolloff containers | Dc |
| • Waste ferrous sulfate in rolloff and AST | To |
| • Waste in 9300 and outlying shed east of MO Building | Pa |
| • Disposal: | |
| • Metal Oxide Waste in Rolloff Containers | To |
| • ACMs in rolloff containers | To |
| • Waste ferrous sulfate in rolloff and AST | To |
| • Waste in 9300 and outlying shed east of MO Building | To |
| *MO Building* | |

## 5 Stormwater Monitoring

This RAP Addendum does not modify the stormwater-monitoring requirements of the AOC. Stormwater monitoring during and post-demolition will continue to be conducted consistent with the requirements of the AOC. Monitoring of stormwater outfalls and collecting runoff from demolition areas and managed piles will be conducted in accordance with the approved Post Response Sampling and Analysis Plan..

## 6 Additional Items

In addition to the response actions described above, this Addendum includes and specifies actions, if any, and an expeditious schedule for the following additional areas:

1. *The Copperas shed which contains residual materials*

Residual materials in the Copperas shed are ferrous-sulfate coatings on the support posts and floor. STNP contractors will perform the following activities:

- remove, to the maximum extent possible, all visible residual hazardous materials on floor surfaces, walls, and other areas of accumulation;
- collect stormwater accumulating in the shed and adjacent exterior sump and transfer this stormwater to the stormwater collection system
- monitor the pH of stormwater that accumulates in this area to evaluate the impact, if any, of residual materials on stormwater runoff. If the stormwater in this area exhibits characteristics within the allowable parameters outlined in the AOC (i.e., pH between 6 and 9), we propose no additional response action for this area. .

2. *The pit near the copperas shed which contains residual ferrous sulfate liquids*

STNP contractors will transfer residual solid and liquid hazardous substances into containers for proper characterization and off-site disposal. Following removal of residual materials, STNP will request an inspection of the pit by EPA to verify removal. Following EPA approval, the pit will be filled with screened inert debris.

3. *The storage building between Copperas and Cobalt areas that contains samples and other containers*

STNP contractors will remove these materials along with other wastes at the site in late-February 2012.

4. *Old pads and trench systems behind the storage building*

According to Jerry King, four ASTs that stored iron-oxide slurry were formerly located on concrete pads in this area. The trench system was designed to drain stormwater from the containment basins in which the ASTs were stored. Following removal of the ASTs by Nanochemonics, the pads, containment basin and trench were covered over with dirt and stone. This area was used as a laydown area for the demolition contractor during demolition activities, and as an area to cut up steel for loading onto trucks.

EPA contractors cleaned this area following use by the demolition contractor scraped up the overlying soil and stone, which exposed the concrete pad and trench. However, the contractor did not clean out the stormwater trench. STNP contractors will assess the need to clean out this trench, and clean it out if the presence of residual hazardous materials is confirmed. STNP contractors will also transport to the NRRA landfill the debris generated by EPA contractors. This debris will be removed subsequent to removal of the debris piles on the Cobalt pad, and is expected to be conducted in mid-March 2012 per the schedule in Section 4.

5. *Tank 5 that contains ferrous-sulfate residuals*

STNP contractors will demolish the tank, located east of the Cobalt building, during demolition of the steel tanks on the creek side of the site. The contents of this tank will be placed into a rolloff box for off-site disposal at a Subtitle D facility. The schedule for demolition of this tank depends on the demolition schedule of the demolition contractor; an estimated commencement data is presented in the schedule in Section 4.

6. *Remaining pump houses, tanks, and pipe structures near wastewater storage tanks*

These items will be demolished and the scrap metal removed by a demolition contractor when demolition activities resume at the site. The demolition contractor will attempt to preserve all non-scrap structures (i.e., the pump houses) during demolition activities, but if these structures are demolished in the process, they will be evaluated for re-use as fill material, and handled in accordance with the procedures described in this Addendum. The schedule for demolition of these items depends on the demolition schedule of the demolition contractor; an estimated commencement data is presented in the schedule in Section 4..

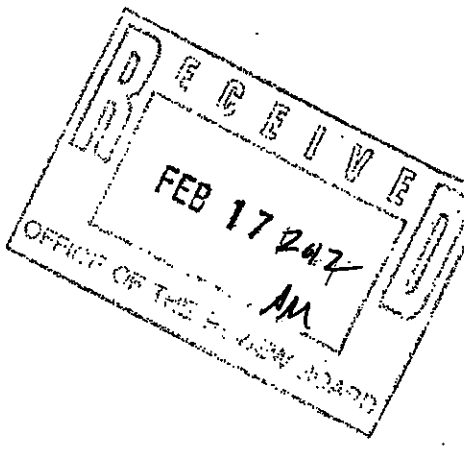
7. *Debris that has been used as fill on the ground during the response action*

Some of this material, located north of the Boiler House, was removed by STNP contractors while hauling demolition debris. The remainder of this debris will be removed subsequent to the removal of the debris on the Cobalt pad, and is expected to be conducted in mid/late-March 2012 per the schedule in Section 4.

8. *Residual materials/fines relating to the response action now located on roadways*

STNP contractors will remove, to the maximum extent practical, visible evidence of hazardous materials from roadways on the site that were utilized during response action and demolition activities. Additionally, visible evidence of hazardous materials will be removed from adjacent drainage areas. Following removal of these materials, the roadways and drainage areas will be evaluated as described in the Post Response Sampling and Analysis Plan.

WILLIAMS MULLEN




Direct Dial: 804.420.6416
amathews@williamsmullen.com

February 17, 2012

BY HAND DELIVERY

Office of the State Technical Review Board
600 E. Main Street, Suite 300
Main Street Centre
Richmond, VA 23219

Re: Appeal of STNP, LLC to the Review Board (Appeal No. 12-1)

Dear Mr. McMahan:

Pursuant to your letter dated January 30, 2012, which was received on February 3, 2012, I have enclosed some additional documents that may be helpful for the Review Board to consider in this appeal. Enclosed are STNP, LLC's ("STNP") action plans, which were recently submitted to the United States Environmental Protection Agency (the "EPA"). These documents further support STNP's position that, if STNP were to accede to the Town of Pulaski's demand to immediately demolish all of the buildings on the site, it would be in violation of the Administrative Order on Consent with the EPA and the Comprehensive Environmental Response Compensation and Liability Act.

Please contact me if you have any questions. Thank you.

Sincerely,

Andrew O. Mathews

Enclosure

cc: Roy David Warburton, Esq. (w/Encl - By Email and U.S. Mail)
W. Alexander Burnett, Esq. (w/Encl - By Email)

17195811_1.DOC

# Revised Response Action Plan
# Magnesium Oxide Building

**Former Nanochemonics Holdings, LLC Facility**
**4 Magnox Drive**
**Pulaski, Virginia**

*Prepared for*

**STNP, LLC**
**Richmond, Virginia**

*Prepared by*

**Duncklee & Dunham, P.C.**
**Cary, North Carolina**

**February 9, 2012**

D DUNCKLEE & DUNHAM

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February 9, 2012

Mr. Michael Towle (3HS31)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Reference: **Revised Response Action Plan - Magnesium Oxide Building**
**Former Nanochemonics Holdings, LLC**
**Pulaski, Virginia**

Dear Mr. Towle:

Duncklee & Dunham, P.C. (Duncklee & Dunham), on behalf of STNP, LLC (STNP), submits this revised Magnesium Oxide (MO) Building Response Action Plan (the "Plan") for the former Nanochemonics Holdings, LLC (Nanochemonics) facility (the "Facility"). Duncklee & Dunham is serving as Environmental Consultant and On-Site Project Manager during the execution of the Response Action Plan.

The revised Plan describes procedures planned to manage residual hazardous substances generated during demolition activities at the MO Building and attached structures, and was prepared to address EPA comments received on January 19, 2012 following review of the original Plan submitted on January 9, 2012. Please contact Andy Rodak at (919) 858-9898 or via e-mail at andy@dunckleedunham.com if you have any questions or comments.

Sincerely,

**Duncklee & Dunham, P.C.**

Andrew M. Rodak, P.E.
Senior Engineer
VA PE No. 37287

David L. Duncklee, P.G.
President

ec: Mr. Sean Sullivan, Williams Mullen
Mr. Chris Andrews, STNP

Attachments

P:\Williams Mullen Law Firm\Nanochemonics-201048\Reports - Proposals\MO Building Response\MO Building RAP.docx

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## Figures


1 MO Building Response Action Plan

**Magnesium Oxide Building Response Action Plan**
**Former Nanochemonics Holdings, LLC**
**4 Magnox Drive**
**Pulaski, Virginia**
**February 8, 2012**

## I Purpose

The Designated Contacts for this phase of the project are:

| | |
|---|---|
| Christopher Andrews | Program Manager |
| David Duncklee | Duncklee & Dunham, Project Coordinator |
| Andrew Rodak | Duncklee & Dunham, On-site Project Manager, On Scene Coordinator (OSC), Site Safety Officer (SSO) |
| Cycle Systems | Demolition Contractor |
| Jerry King | Wastewater Treatment Operator |

This Magnesium Oxide (MO) Building Response Action Plan (Plan) details procedures and protocols for use during demolition and salvage operations limiting the potential for releases of hazardous substances. The Plan has been prepared pursuant to the requirements listed in paragraph 8.3 of the Administrative Order of Consent ("AOC") issued by the Environmental Protection Agency ("EPA") to STNP, LLC ("STNP") on April 1, 2011. It includes actions to address additional comments received by STNP from EPA on October 14 and November 22, 2011, as well as January 19, 2012.

The procedures described in this Plan are designed to accomplish the following general objectives:

1. Dispose of waste materials generated during response action activities;
2. Provide and maintain dust control for the duration of demolition activities. Manage the use of wastewater for dust suppression, if feasible, or other purposes such that use is restricted to locations from which sprayed water will evaporate or migrate back to the drainage system for collection;
3. Timely removal of debris piles that contain hazardous substances from the Site and management of these piles prior to disposal, including locating, shaping and covering the piles to prevent contact with stormwater during rain events, in accordance with the AOC;
4. At the conclusion of demolition and salvage operations, remove, through water washing, residual hazardous substances on building floor pads and within trenches that will be exposed to stormwater such that water that migrates through the trench system has a pH between 6 and 9;
5. Allow unimpeded flow of stormwater through the MO building's stormwater collection system to the collection sump and tanks while response actions at the MO building are ongoing, and, to the MO building's stormwater outfalls at the conclusion of response actions for this portion of the Site;
6. Manage wastewater generated from pad- and trench-washing activities such that this water can be treated and discharged in accordance with the requirements of the AOC. Wastewater treatment will consist of solids settlement and pH adjustment to between 6 and 9 prior to discharge to the stormwater outfalls south of the building; and

7. Prevent uncontrolled discharges of wastewater or stormwater impacted by hazardous substances related to the MO building to Peak Creek by: (a) maintaining the water level within collection sumps and storage tanks; and (b) providing equipment such as pumps, power source, and hoses that can remove stormwater runoff, from a 10-year storm event from the sump without release to the stormwater outfalls. Assign responsibilities to the workforce for maintaining this response condition during all such possible events.

For purposes of this Plan, the MO building will be divided into two sections: a production area on the eastern half of the building, and a warehouse area on the western half. Also, the term "hazardous substances" refers to substances identified in the MO building by the Hazardous Material Inventory developed in the RAP, and includes heavy metals (aluminum, copper, chromium, cadmium, cobalt, iron, lead, manganese, and zinc), corrosive and flammable materials, asbestos-containing materials (ACMs), and, possibly, PCBs. A survey of ACMs was conducted by STNP contractors in the MO building in September 2011. Some ACMs identified during the survey were abated in October 2011.

Remaining ACMs in the building consist of:

- Flashing on a roof section above the production area of the building;
- Pitch points on a roof section above the production area of the building;
- Covering on vent structure on a roof section above the production area; and
- A chemical vent hood within the Control Room on the eastern side of the building

STNP contractors will abate these ACMs and perform a clearance assessment following the abatement and prior to initiating structural demolition.

An inspection of the building for PCB articles and equipment was conducted by STNP contractors in November 2011. Potential PCB items/equipment identified during this inspection consists of the following:

- A portion of light ballasts within the building warehouse and men's locker room not specifically identified as non-PCB;
- An air handler/heating system for office areas within the building installed in 1968;
- A transformer in the MO shop area installed in the early 80's

STNP will direct the demolition contractor to remove these items during extraction of metal from the building to prevent a release of fluids potentially containing PCBs during demolition. These items will be segregated for investigation/analysis during the demolition activities, and handled in accordance with 40 CFR 761 based on final classifications as PCB or non-PCB items.

STNP will satisfy the requirements for sampling, analyses, quality assurance, and Health and Safety listed in the AOC by following the procedures documented in the RAP. Therefore, these requirements are not repeated in this Plan.

## II Proposed Actions

Prior to commencement of demolition activities, waste generated during the response action activities as well as materials deemed suitable for re-use in commerce will be profiled, removed from the building, and disposed of following the protocol described in the Response Action Plan Addendum. The demolition of the MO Building will be a complete removal, with all building structures intended for demolition. The proposed demolition schedule is as follows:

- Extraction of non-structural metal (i.e. production equipment, light fixtures, lockers) from inside the main production building (Kiln Room);
- Extraction of non-structural metal from the Blender/Bulk Bagging room (west of the Kiln Room)
- Extraction of non-structural metal (i.e. light fixtures) from the warehouse and shipping areas (west side of building)
- Following removal of non-structural steel from the main production building, demolition of the building structures starting with the Kiln Room and moving to the west

In order to accomplish the objectives listed above, STNP's contractors will execute the following protocols during and after demolition activities.

### *2.1 Provide Dust Control During Demolition Activities*

Dust-suppression activities will be undertaken as part of the building demolition process and during salvage pile load-out. These activities will use either wastewater generated from pre-demolition response action activities, stormwater runoff collected during and post-demolition activities, or municipal water. Use of re-claimed wastewater or stormwater for dust suppression purposes will only be performed under the following provisions:

- wastewater or stormwater used for pad cleaning or dust suppression will only be sprayed in an area that drains to a constructed collection point (e.g. sump) from which collected water can be pumped to a vessel for monitoring and treatment, if necessary;
- wastewater or stormwater will only be used for dust suppression when operational conditions (e.g. active demolition, debris loading, vehicle travel over dry roads) requiring dust suppression are present;
- personnel applying wastewater or stormwater to the target dust suppression area are made aware of the potential presence of hazardous substances within the water; specifically PCBs, through an amendment of the Health and Safety Plan and daily briefings.

The demolition contractor will conduct dust suppression activities as follows:

- Access to the building will be through removal of the eastern exterior wall of the Kiln Room;
- The contractor will enter the building through the opening, and work throughout the inside of the building to the west, ending in the warehouse sections;

- The contractor will apply water to metal structures and equipment as a dust suppression measure prior to cutting the metal for extraction;
- The contractor will cut non-load bearing metal supports and sections of equipment within each section of the building for removal;
- Prior to extrication of metal structures and equipment from the building, the demolition contractor will wash down the metal to remove as much residual material as possible and potentially minimize the need for additional washing prior to transport;
- Following removal of metal structures and equipment from inside the building, the building structure will be demolished;
- Dust suppression will be provided during building demolition in a manner consistent with other building demolitions on the property;
- Runoff from pre-wetting and washing activities conducted within the building during material cutting and removal, as well as that generated during dust suppression activities conducted during building demolition will be collected within the building's existing floor trench system and directed into the existing collection sump on the south side of the building for transfer to the collection tanks as described in Section 2.5;
- Water used for dust suppression will be sprayed in a wide, fan-like pattern over the target area to minimize surface pooling Every attempt will be made to prevent concentrated or sheet-flow runoff from dust suppression activities from flowing away from the trench system and/or building perimeter;
- Given that recycled wastewater and stormwater may not be available or impractical to utilize as dust suppression and wash water during demolition of the MO building, municipal water will be used as needed for dust suppression/washing activities.

Air monitoring will be performed by Duncklee & Dunham along the property fence line at locations upwind and downwind of the MO building demolition activities. The monitoring protocol will be consistent with that described in the RAP and performed during other building demolitions on the property. The objective of the monitoring program will be to ensure that off-site levels of particulate material liberated during demolition activities do not exceed one (1) part per million through engineering controls or dust suppression measures. Since air sampling has already been performed for constituents of concern (cobalt) at this site during demolition of the Cobalt Adsorption Building and results have indicated that levels of these constituents are below EPA Regional Screening Levels, additional air sampling will not be performed during demolition of the MO Building.

### *2.2 Manage and Remove Debris Piles that Contain Hazardous Substances*

During demolition activities on each area of the MO building, the demolition contractor will segregate, to the extent practical, non-scrap debris by characteristic (inert debris, wood, plastic, etc.) in accordance with the protocol outlined in the RAP Addendum. Following demolition of each area of the MO building, STNP contractors will cover the staged non-scrap demolition debris piles with 6 mil poly sheeting to minimize impacts to stormwater. Non-scrap debris piles that are deemed unsuitable for re-use on the site will be removed by STNP contractors for disposal at the NRRA landfill.

STNP contractors will collect samples of fine residual non-scrap debris for testing of PCBs to verify potential sources of PCBs have been removed from the building such that the non-scrap debris can be

characterized as non-PCB pursuant to 40 CFR 761. The samples will be analyzed for PCBs by EPA Method SW-846 (4020), consistent with testing protocols performed on other non-scrap debris piles. The number and location of the samples will be determined based on the size of the non-scrap debris piles, and will be submitted to EPA in a sampling plan for approval prior to conducting the sampling activities.

Inert (brick and mortar-block) debris deemed suitable for re-use will be crushed by the demolition contractor to the maximum extent practical and staged in uncovered piles on the building pad in an area where stormwater runoff is directed into the trench system and captured as needed for monitoring and treatment by the on-site collection system. The inert debris will be screened following the protocol described in the RAP Addendum. Following approval by EPA of this material for re-use as fill, the inert debris will be used on site to fill in low areas around the site (i.e. pits, holes, depressions) or moved and staged in an area proximal to the lagoons where it can be accessed for beneficial re-use, as described in the Final Lagoon Closure Plan.

### *2.3 Residual Hazardous Substances Removal*

As described in Section 2.1, the demolition contractor will wash metal structures prior to removal from the building as a preliminary residual removal measure. Following removal of scrap material from the production section of the building interior, and if deemed safe to do so via a structural evaluation of the building shell, STNP contractors will enter the building and wash down interior floor and wall surfaces to remove as much residual hazardous material as possible from these surfaces prior to building demolition. If access to the building interior is deemed unsafe prior to building demolition, STNP contractors will perform removal of hazardous substances from the building floor pads and trench following building demolition following protocols similar to other buildings as described in the Response Plan Addendum. The wash water will be directed into the building floor trench system and collection sump for transfer to holding tanks as described in Section 2.5. STNP contractors will also wash down interior floors and walls of the warehouse areas following waste/recycle material prior to demolition of these areas, and collect the wash water for transfer into the holding tanks.

Following building demolition and removal of scrap material and non-scrap debris from the building floor pads, the building floor pads and trenches will be cleaned as follows:

A. Remove accumulated areas of residual solid debris from the building pads and trenches with a front end loader, skid steer or by hand;

B. Place bulk solid materials into piles for disposal at the NRRA landfill;

C. Wash down the pads and trenches with municipal water;

D. Direct the wash-down water into floor trenches and collection sumps for transfer to the stormwater-collection system; and

E. Pump the accumulated water in the diked collection sump(s) to one of two Frac tanks provided for wash water and stormwater storage as described in Section 2.5. These two tanks will provide 40,000 gallons of storage capacity for wastewater/stormwater, which is sufficient volume to contain the runoff volume from 1½ times a 10-year storm event.

In order to maintain the required storage capacity volume of 1 ½ times a 10-year storm event runoff volume, STNP contractors will perform the following:

- If a 10-year storm event (defined by NOAA as an event producing > 2 inches of rainfall over a 24-hour interval or > 1inch/hour intensity ) is forecast for the Pulaski area, STNP contractors will mobilize a vacuum truck to the site to pump out the contents of one or both of the Frac tanks, depending on the available capacity in each, in advance of the rain event;
- Water removed from the Frac tank(s) will be transported to either Tank 327 (if empty), Tank 404, or Tank 10 (the non-CAB-dedicated FRP tank) on the creek side of the site for treatment, monitoring, and disposal;
- Any time one of the Frac tanks reaches full capacity, the accumulated wash water/stormwater within the tank will be pumped into a vacuum truck and transported to the creek side of the site for storage in Tank 327 (if empty), 404, or 10;
- In the event that a vacuum truck cannot be mobilized to the site to pump out a Frac tank or tanks prior to a 10-year storm event or when a tank is full, an additional Frac tank will be brought to the site to provide supplemental storage until the other tank(s) can be evacuated.

Duncklee & Dunham will sample and test the accumulated water in the Frac tanks for the parameters listed in the AOC. Treatment of accumulated water in the Frac tanks, if necessary to meet parameter limits listed in Attachment A of the AOC, will be performed consistent with the protocol described in the RAP. Treated or untreated water collected from the building pads will not be discharged to the three existing outfalls located south of the MO building that discharge into Peak Creek without specific EPA approval. If sample results for the demolition debris do not indicate the potential for PCBs to be present in stormwater or wash water in this area, STNP proposes not to sample such water for its PCB content.

Following pad and trench cleaning activities, Duncklee & Dunham will perform post response sampling of areas where residual materials were removed or non-scrap debris piles were stored following the protocol described in the Post Response Sampling and Analysis Plan.

### *2.4 Unimpeded Stormwater Flow through Trenches*

Following demolition activities on each area of the building, the demolition contractor will move and stage non-scrap debris piles on the building such that stormwater associated with such piles will flow into the trench system for monitoring and treatment. STNP contractors will ensure that stormwater flows through the trenches unimpeded by: (a) staging debris piles in locations that limit the potential for debris to enter the trenches; and (b) cleaning out the floor trenches in the production building area following pile staging.

Residual materials removed from the building floor pad and trench system will be placed on the non-scrap debris piles and managed as referenced in Section 2.2. Following removal of residual materials from the floor pad and trench system, the pad and trench will be flushed with municipal water. The wash-down water will be collected in the existing stormwater collection sump and pumped to the stormwater-collection system for treatment as necessary to achieve compliance with the limits listed in the AOC.

After the trench system is cleaned out, a sample of residual liquid will be collected from the trenches, field-tested for pH, and lab- tested for discharge parameters listed in the AOC. The stormwater collection system will be removed to allow unimpeded flow of stormwater off of the pad and directly to the three outfalls located south of the building if: 1) the pH is between 6 and 9, as required by the AOC, 2) other visible evidence of hazardous substances is not observed on the building floor pad and in the trenches,

and 3) non-scrap debris piles have been removed from the pad. If the pH or other relevant parameters are non-compliant with the limits listed in Attachment A of the AOC, the floor pad and trenches will continue to be flushed out and the water collected for treatment until residual materials are removed to the extent that compliance with the limits in the AOC is achieved.

### *2.5 Wastewater/Stormwater Management*

STNP contractors will construct a containment berm consisting of sand bags wrapped in poly sheeting and filter fabric around the perimeter of the MO building demolition area, with sufficient contained area for conducting demolition and salvage work, parking equipment and staging debris piles. The location of the containment berm is shown in the attached Figure 1 of this Plan. Vehicle ingress and egress areas will be established as shown, and provisions will be made to allow for vehicle traffic into and out of the contained area. Following demolition of each building section, STNP contractors will construct an additional containment berm around the perimeter of each building section floor pad to contain stormwater and wash water runoff on the building pad and direct it into a constructed collection point for transfer to the temporary collection system. The proposed layout of the containment berm is depicted in Figure 1, attached to this Plan.

Duncklee & Dunham performed a calculation of the peak flow rate and stormwater runoff volume from the MO building area during a 10-year storm event. The peak flow rate was calculated to be 0.5 cubic feet per second (205 gallons per minute, gpm), and the stormwater runoff volume was calculated at 26,180 gallons. Wash water generated from the cleaning of the building pad prior to and after demolition activities, and stormwater runoff from the floor pad on the production area (east side) of the MO building following demolition of the building will be collected in the existing trench and sump installed in the south side of the building. The water will then be pumped into two, 20,000-gallon Frac tanks placed in a location proximal to the sump.

Wash water and stormwater runoff from the floor pads in the warehouse areas following building demolition will be directed by the containment berm and surface gradient into a lined man-made sump constructed in the paved area as shown in Figure 1. Water from the sump will be pumped into the Frac tanks with a dedicated diesel pump and hosing.

The stormwater collection system is designed to transfer stormwater runoff from the MO building areas via a pump design flow rate of up to 500 gpm into two, 20,000 gallon Frac tanks. The pump flow rate and total storage capacity meet the EPA requirement of 1.5 times the 10-year storm event peak flow rate and runoff volume. Provisions for meeting the required storage capacity prior to a 10-year storm event are described in Section 2.3.

Wash and storm water that accumulates in the Frac tanks will be treated with pH adjustment and flocculent addition following the completion of the demolition response action activities, and tested to confirm compliance with the discharge limits listed in the AOC. If PCB testing results from non-scrap debris piles reveal PCBs at concentrations sufficient to affect water quality in Peak Creek, water collected in the Frac tanks will also be tested for PCB congeners according to Method 1668A. If test results show compliance with the parameters of the AOC and the Virginia Water Quality Criteria (WQC) for PCBs, the water will be discharged to Peak Creek through the stormwater outfalls following EPA approval.

Stormwater that collects in the tanks will be treated using pH adjustment and flocculent addition, and tested to evaluate compliance with the discharge limits. If test results show compliance with the

parameters of the AOC and the WQC for PCBs (if applicable), the water will be discharged to Peak Creek through the stormwater outfalls following EPA approval.

If parameters are detected in the wash and storm water collected from the MO building at concentrations that exceed AOC limits or VAWQC, other considerations for the water include:

- restricted use of the water on site for irrigation or dust control pursuant to 40 CFR 761.79, the requirements of the AOC, the provisions listed in Section 2.6 of the Response Action Plan Addendum , and following approval from EPA;
- Additional treatment of the water through physical filtration (i.e. bag filters); or
- transport to a licensed publicly owned treatment works (POTW) under agreement or permit.

STNP will evaluate these options using criteria such as practicality of implementation, ability to meet the requirements of the AOC, and cost, and present the recommended option to EPA for approval prior to implementation. Residual sludge in the stormwater/wash water collection tank(s) will be transferred to the sludge drying bed pursuant to approval by the VDEQ.

### *2.6 Prevention of Uncontrolled Discharges*

As referenced in Section 2.5, during extraction of metal from the building prior to demolition, wash water will be collected in the existing floor trench (Kiln Room) and in constructed floor sumps (Bulk Bagger room, warehouse) for transfer to the collection system. STNP contractors will identify and plug drain lines in and around the MO building draining to the plant creek side. This includes the line from the boiler room sump that routed wastewater to Tank 404 through the Cobalt Adsorption Building.

Following demolition of the building sections, a temporary containment berm will be constructed around each building floor pad. Wash water and stormwater flow from this area will be directed into a constructed collection point from where it can be pumped to the collection system. These containment and collection systems w ill remain in place until the non-scrap debris piles have been removed or managed to prevent impacts to stormwater from hazardous substances as described in Sections 2.2 and 2.3 and verified through visual confirmation and/or sampling..

Water used during demolition activities to clean pads and the trenches and stormwater runoff in the production area of the building will be collected in the existing sump and then pumped into one of the treatment tanks to allow solids to settle and to adjust the pH, as referenced in Section 2.5. Water used to wash the pad and stormwater runoff on the western (warehouse) side of the building will be collected in a lined man-made sump and pumped into the Frac tanks for treatment.

Jerry King or STNP contractors will inspect the stormwater-collection sumps on a daily basis and prior to an anticipated storm event, and they will clean out the sumps as needed. Jerry King will also inspect the pump system and Frac tank capacities weekly to ensure that they are available and functional, as needed, to evacuate the sump and have sufficient storage capacity during a storm event. Following final cleaning and verification through inspection and/or sampling of the building pads and trenches for the presence of residual hazardous substances, the containment berm will be removed and sumps filled in following EPA approval to allow unimpeded stormwater flow to Peak Creek through the stormwater outfalls.

## III Responsible Parties

The following personnel are responsible for conducting the tasks described in Section 2:

| Task | Responsible Party |
|---|---|
| | |
| Non-Scrap Debris Pile Creation and Staging | Cycle Systems |
| Non-Scrap Debris Pile Inspection | A&D Environmental and Jerry King of STNP |
| Trench Cleanout | Cycle Systems and A&D Environmental |
| Pad Cleaning | Cycle Systems and A&D Environmental |
| Management of Stormwater Runoff | Jerry King and A&D Environmental |
| Sump Control (creation, inspection, evacuating) | Jerry King and A&D Environmental |
| Dust Suppression | Cycle Systems or A&D Environmenta(if necessary) |
| Oversight/management | Duncklee & Dunham |

## IV Schedule

The following table summarizes the elements of the MO Building Response Plan and planned schedule for completion.

| Objective | Status | Schedule for Completion |
|---|---|---|
| Provide and maintain dust control during the entire duration of demolition activities. | To be done. | Commencement of demolition activities anticipated to be by February 20, 2012<br>On-going as needed; entire demolition process estimated to be a three-four month duration |
| Remove debris piles that contain hazardous substances from operational areas and manage this debris, through properly locating, shaping, and covering, to prevent contact with stormwater during rain events in accordance with the AOC until removal from the site | To be done following demolition of the building | Projected commencement date May 14, 2012.<br>On-going as needed; entire demolition process estimated to be a three-four month duration<br>Non-scrap debris piles will be covered immediately following staging<br>Non-scrap , non-inert debris removal estimated to take up to two weeks to complete |
| Allow unimpeded flow of stormwater through the facility's existing trench system to the stormwater collection/treatment system | To be done following demolition of the building | Set-up stormwater/wastewater collection tanks and transfer pump by February 20, 2012 prior to commencement of demolition activities<br>Trench cleanout of bulk debris completed within one week after non-scrap debris pile creation and staging |
| Manage wastewater generated from pad- and trench-washing activities such that this wastewater can be treated and discharged in accordance with the requirements of the AOC. | To be done as needed prior to, during, and following demolition of the building | Demolition activities commence by February 20, 2012.<br>Monitoring and treatment of waste and storm water runoff collected from the building will be completed as needed; final treatment and disposal within 4 weeks after completion of demolition activities |
| Prevent uncontrolled discharges of wastewater or stormwater impacted by hazardous substances into Peak Creek. | Containment berm will be constructed prior to demolition activities<br>Pump already on-site, will be moved from creek side of site to MO building prior to commencement of demolition activities<br>Frac tanks will be delivered to site prior to commencement of demolition activities | Will commence , prior to building shell demolition activities (TBD);<br>Containment berm construction will take up to three days to complete<br>Pump and tank placement will take one day to complete |

## V Stormwater Monitoring

Stormwater monitoring will be conducted during the duration of the MO building demolition activities in accordance with stormwater-monitoring requirements of the AOC. Stormwater monitoring during and post-demolition will be conducted consistent with the requirements of the AOC. Parameters that will be monitored will be those listed in Item III of AO Attachment A.

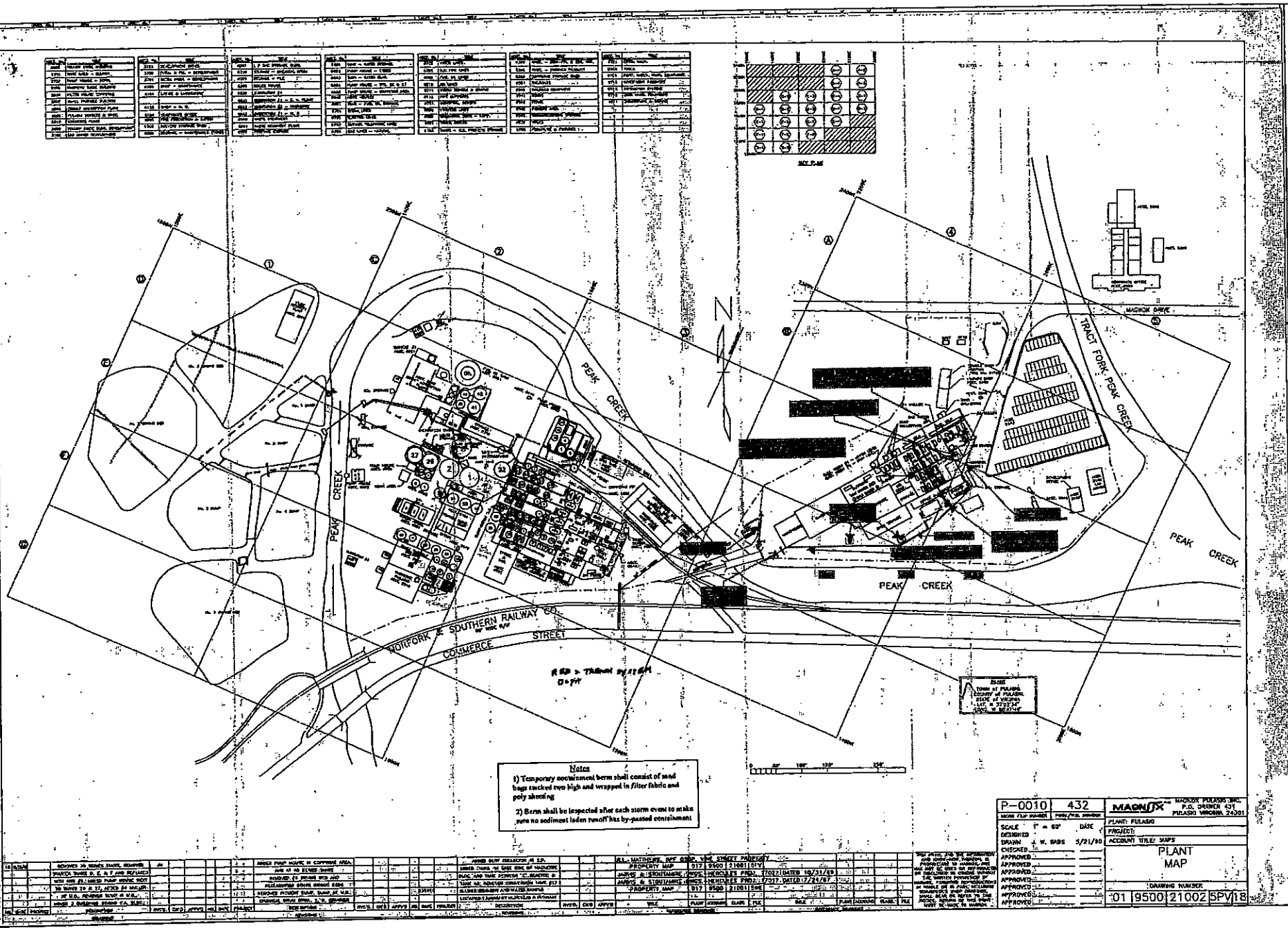
Monitoring of stormwater outfalls will be conducted during each representative storm event that occurs during building demolition activities and produces a noticeable discharge from the outfalls. Even if stormwater is not observed to discharge from an outfall during a storm event, a verbal report will be provided to EPA that documents this condition.

The monitoring will be performed as verification that:

- the temporary containment berm is intact and providing sufficient containment of stormwater runoff from the area within which the demolition activities are being performed;
- the stormwater collection system is functioning properly in the segregation of runoff from the area undergoing demolition from the remainder of the drainage area

If analytical results from two consecutive monitoring events indicate that the stormwater runoff containment measures are working properly, as evidenced by compliance with the discharge limits listed in the AOC, STNP will petition EPA to terminate eth sampling requirement until the demolition activities are completed and post response action monitoring will be performed.

Following removal of non-scrap debris piles from the site and final cleaning of the building pad and trench system, stormwater sampling will be conducted during representative storm events until confirmation that sufficient removal of hazardous materials the site has been made, as required by the AOC.




MO Building Response Plan
Former Nanochemonics Site
Pulaski, Virginia

Drawn By: wmf | Checked By: | Project Number: 201048 | Date: February 2012 | References: | Scale: 1" = 80' | Size: 22" x 34" | Layers: 0, 004

DUNCKLEE & DUNHAM
ENVIRONMENTAL CONSULTING & ENGINEERING
511 Keisler Drive Suite 102, Cary, North Carolina 27518 (919) 481-5986 www.dunckleedunham.com NC Reg. License No. C-2631 NC Gen. License No. C-3559

Figure 1

P-0010 | 432
SCALE: 1" = 60' | DATE:
DESIGNED:
DRAWN: J. W. SIBS 5/21/90
CHECKED:
APPROVED:
APPROVED:
APPROVED:
APPROVED:
APPROVED:

MAGNOX PULASKI INC.
P.O. DRAWER 431
PULASKI VIRGINIA 24301

PLANT: PULASKI
PROJECT:
ACCOUNT TITLE/ MAPS

PLANT MAP

DRAWING NUMBER
01 | 9500 | 21002 | SPV | 18

PROPERTY MAP 017 9500 21001 SPV
HERCULES PROJ. 17027 DATED 10/31/89
HERCULES PROJ. 17027 DATED 12/21/87
PROPERTY MAP 017 9500 21001 SHT

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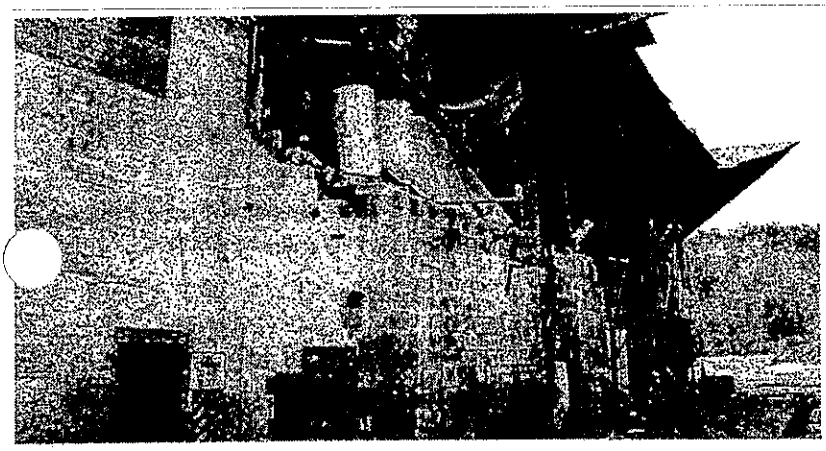

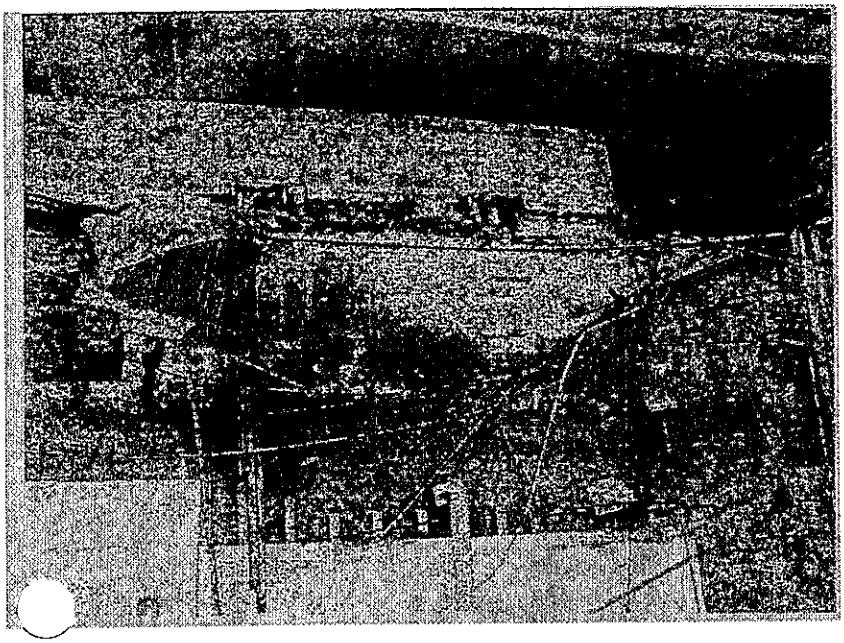

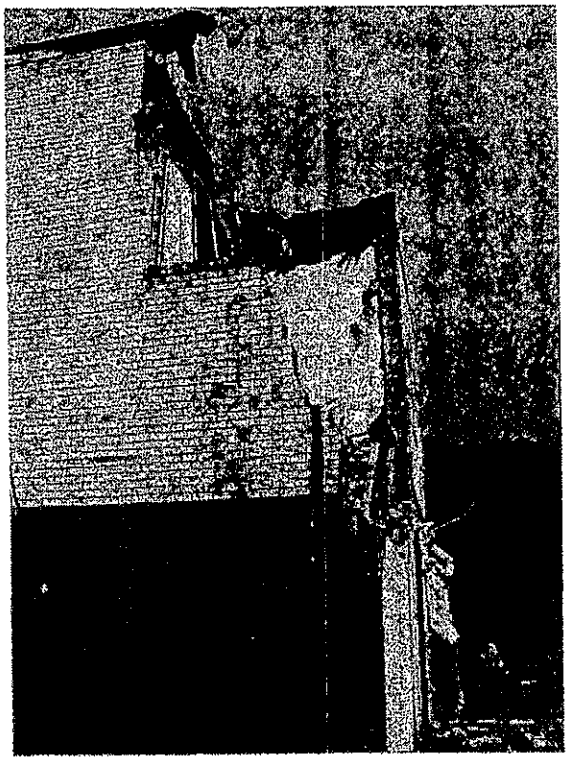

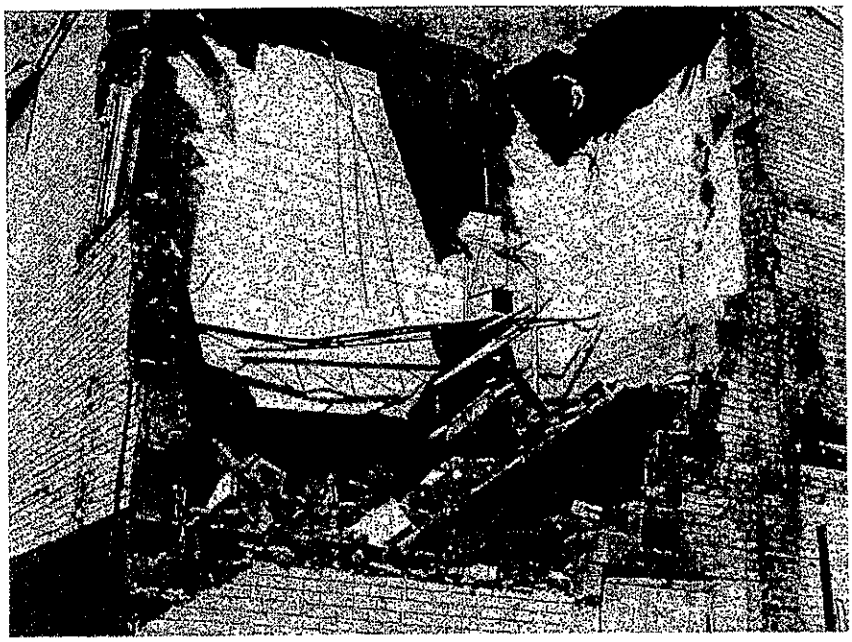

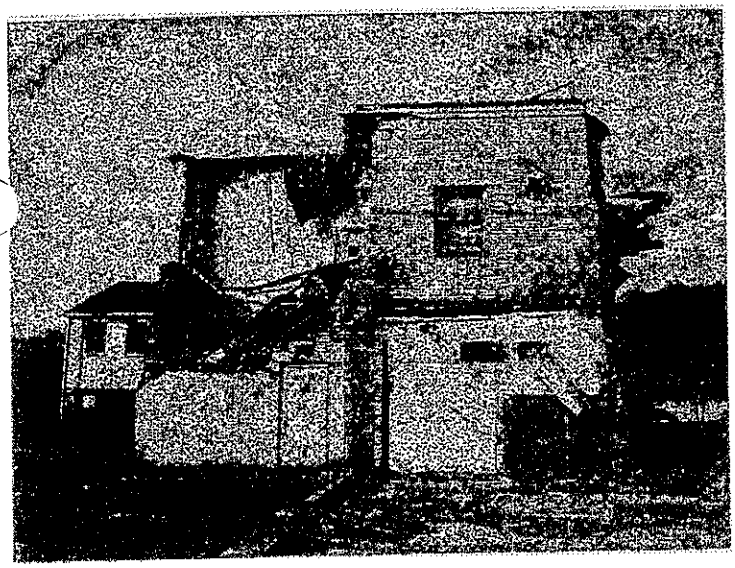

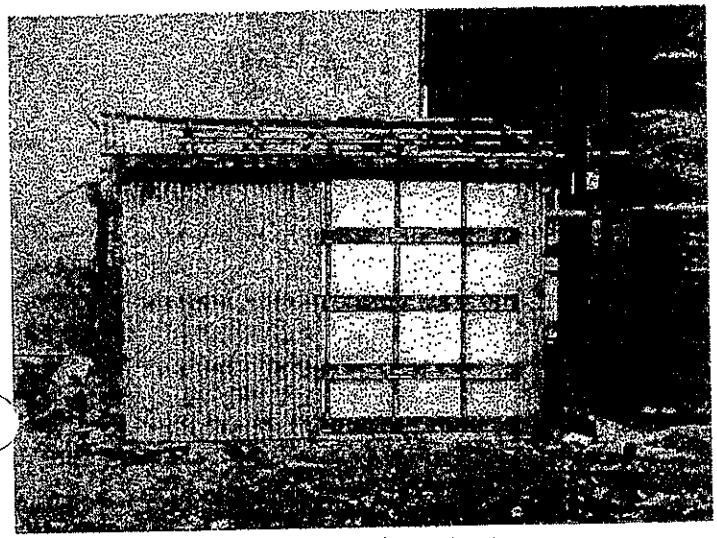

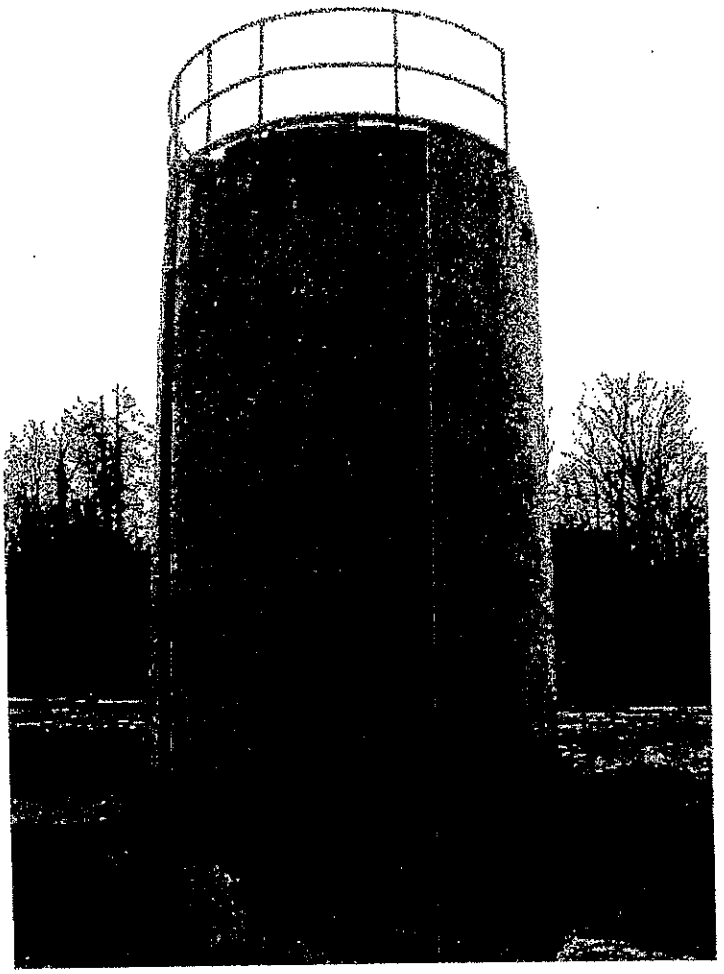

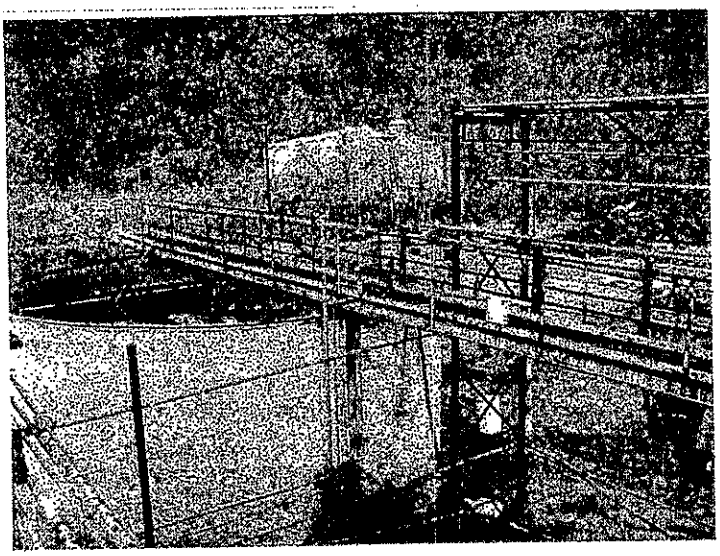

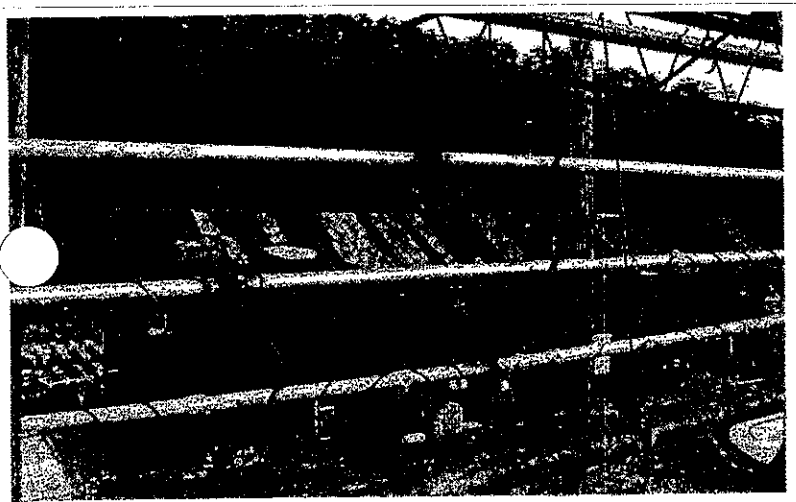

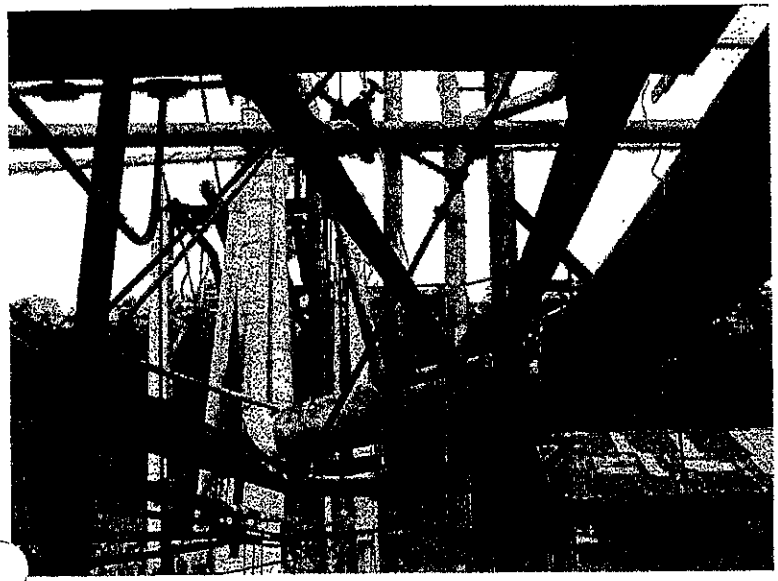

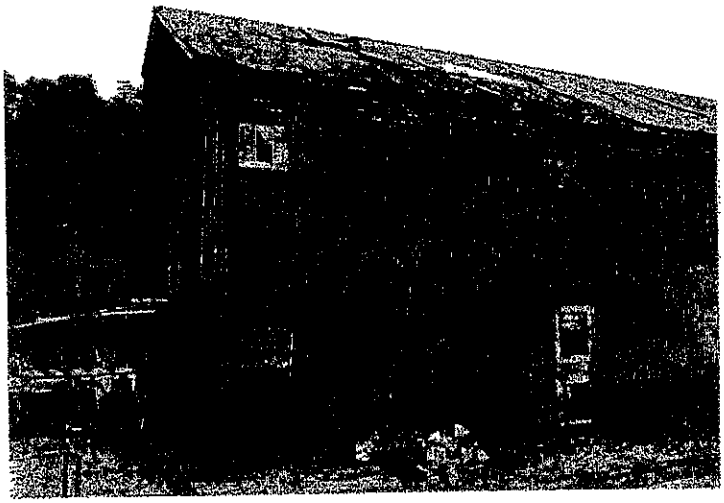

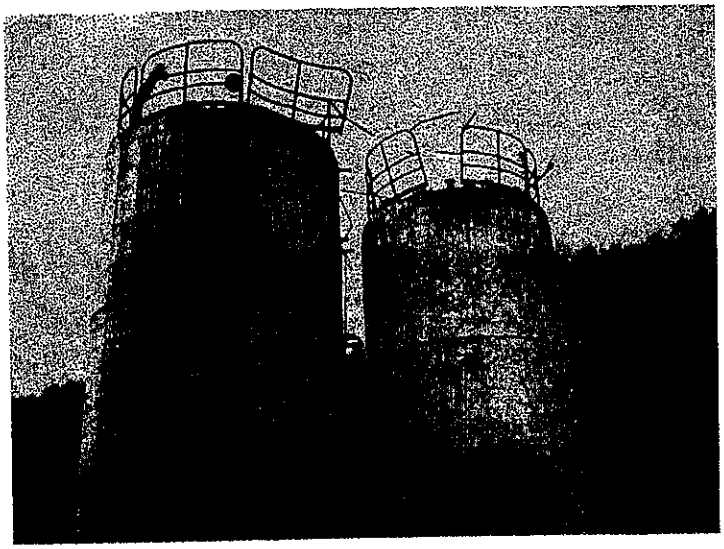

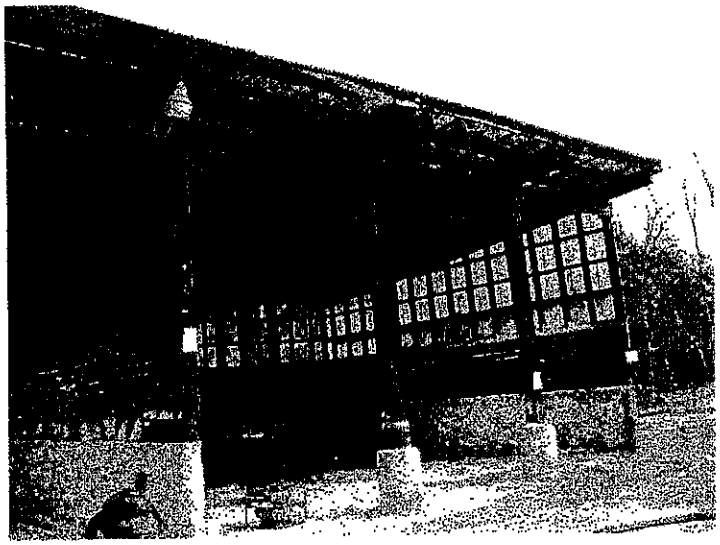

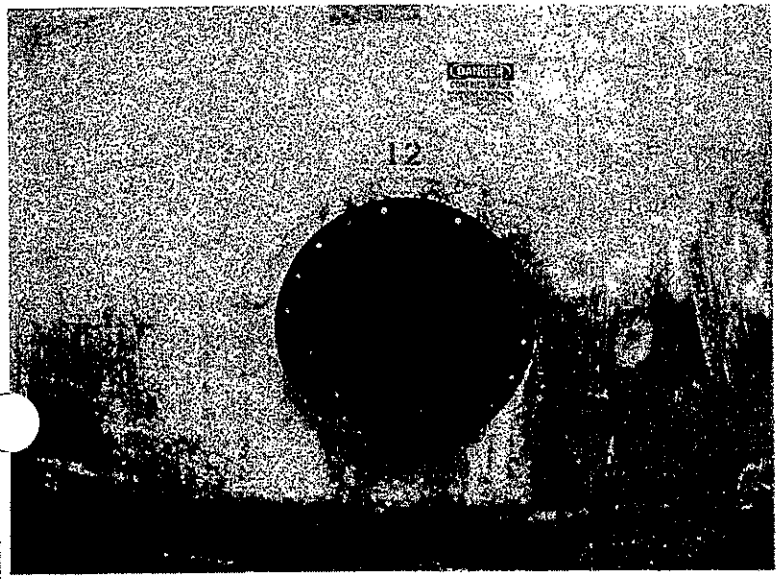
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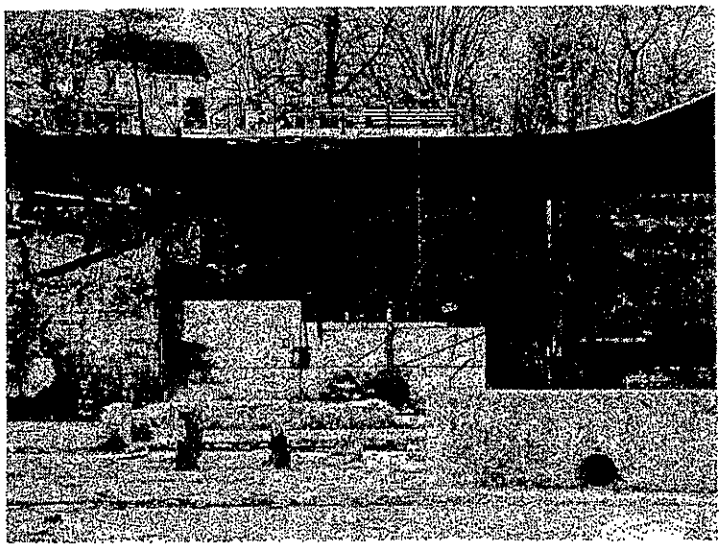

## McMahan, Alan (DHCD)

**From:** Towle, Michael [Towle.Michael@epa.gov]
**Sent:** Tuesday, March 12, 2013 11:49 PM
**To:** Lohman, Elizabeth (DEQ); Tolbert, Jack (VDEM); Bill Pedigo; Thurman, Brian (VDEM); Gary Roche; jdavis@sheriffsoffice.org; John Hawley; Jeff S. Worrell; John White; Huber, Peter [DHCD-CLG] (DHCD); Weld, Robert (DEQ); Todd Garwood
**Subject:** STATUS 3/12/12

The storm water sampling has shown that cleanup activities have resulted in reduction of all paramaters to ordered standards - the exception is low levels of PCBs. The PCBs are declining in the creekside of the facility, but holding steady in the former MO Building area. As such, additional sampling should occur shortly. Hopefully, the sampling will show the source of PCBs and then they can finally complete the cleanup phase of the facility.

The STNP contractor began the discharge of the lagoon waters. Lagoon #3 is first. The treated water is run through a filter system and discharged through Outfall #1 into the Creek - and as such may be visible. The flow should be about 10 gpm continuously. We estimate about 100 days unless they double up on the filters (which we are encouraging). Jerry King, among others, is checking up on the system.

Once the water is discharged, then lagoon sludge removal should (FINALLY) begin.

The inert debris piles are supposed to be disposed. STNP was reminded.

I noticed that some of the holes were being covered over and that fencing was installed by the half-way-down-and half-way-up building.

## McMahan, Alan (DHCD)

**From:** John Hawley [jhawley@pulaskitown.org]
**Sent:** Monday, March 18, 2013 11:26 AM
**To:** McMahan, Alan (DHCD)
**Subject:** FW: building stabilzation at STNP
**Attachments:** STATUS 3/12/12

As we discussed

---

**From:** John Hawley
**Sent:** Thursday, March 14, 2013 11:14 AM
**To:** Burnett, W. Alexander
**Cc:** Bill Pedigo; Todd Garwood; warburton@warburtonlaw.com; Mayor Worrell (jsworrell@pulaskitown.org); Gary Roche; Bill Webb
**Subject:** building stabilzation at STNP

Attached is update from EPA. We have not received any written response from you since our call from Fire Marshall Garwood(pursuant to his letter of 1/25/13) about the future of the building that was admin/office/lab(building 1 ). From EPA update fencing has been installed around this building. The Town does not agree that this negates the nuisance or provides the proper safety to the community. Therefore the Town intends to request the Office of the State Technical Review Board to rule on your 1/27/12 appeal so this issue can be resolved. Please contact me if you have any questions.

John Hawley, P. E.
Town Manager
540-440-0584
540-994-8601

**From:** John Hawley [mailto:jhawley@pulaskitown.org]
**Sent:** Tuesday, March 19, 2013 11:11 AM
**To:** McMahan, Alan (DHCD)
**Cc:** Bill Pedigo; Todd Garwood; Tom Compton; Bill Webb; Gary Roche; warburton@warburtonlaw.com
**Subject:** FW: building stabilzation at STNP

Our Fire Marshall has provided info on some other structures that are not in compliance and our Town Engineer agreed so these are structures that still need to be addressed.
John H.

**From:** Todd Garwood
**Sent:** Monday, March 18, 2013 6:54 PM
**To:** John Hawley; Bill Pedigo; Tom Compton; Craig Quinn
**Cc:** Jeff S. Worrell
**Subject:** RE: building stabilzation at STNP

I previously explained to Alexander Burnett that building **#1** (admin), **#2** (long metal / shop building in rear) and the dilapidated shed **#6** are still in violation of the PMC.
Tanks could be secured if openings closed, but, some tanks on site have no top. Those would need to be removed or stop all access to those tanks (remove steps, ladders, etc...) and have a way to control rain etc that will fill these open top tanks. Also a way to control access to the site (security).

Todd G.

**From:** John Hawley
**Sent:** Monday, March 18, 2013 2:19 PM
**To:** Bill Pedigo; Tom Compton; Todd Garwood; Craig Quinn
**Cc:** Jeff S. Worrell
**Subject:** FW: building stabilzation at STNP

Are we ok with concentrating on this one building ? we can say tanks need to be secured.

# ADDITIONAL DOCUMENTS SUBMITTED BY STNP, LLC

Direct Dial: 804.420.6481
aburnett@williamsmullen.com

April 3, 2013

BY EMAIL AND US MAIL
(Alan.McMahan@dhcd.virginia.gov)

Alan McMahan, CBO
Senior Construction Inspector II and
Staff - State Building Code Technical Review Board
State Building Code Office
Division of Building & Fire Regulation
Department of Housing & Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

Re: STNP Appeal to the Review Board (Appeal No. 12-1)

Dear Mr. McMahan:

STNP, LLC ("STNP") respectfully disagrees with the Town's assessment of STNP's compliance with the Maintenance Code. In fact, since our informal fact finding meeting last year, STNP has taken numerous affirmative steps to ensure compliance with the Maintenance Code and to alleviate concerns from the Town officials. To date, STNP's buildings are in compliance with the Maintenance Code. While the Town may not be happy with STNP's progress to date, it seems that the Town's goal is to have all of the buildings in question demolished. STNP is willing to listen and continue working with the Town to make further progress; however, STNP is not in a position at this time to demolish these buildings.

In one of the attached emails, the Fire Marshall (Mr. Garwood), explained why the Town believes that Buildings 1, 2, and 6 as well as the Tanks violate the Maintenance Code. With regard to Building 1, STNP has vacated the building and erected a fence around the building to secure the vacant building against public entry. *See* Code Section 105.1. If the Board or the Town believes that more should be done to comply with the Maintenance Code, short of demolishing the building, we would like to hear those suggestions and would be open to further discussion.

With regard to Building 2, STNP has vacated the building and STNP's independent contractor has secured all windows and doors to the outside of the building to secure the vacant building against public entry. *See* Code Section 105.1. I have enclosed photographs showing locks on all doors and boards on open windows.

Building 6 is a three sided open shed. STNP does not believe this building is in violation of the maintenance Code. Furthermore, to date, the Town has not provided any notice or explanation to STNP of why it violates the Code or what steps can be taken, short of demolition, to comply with the Code.

The Tanks mentioned in Mr. Garwood's email are currently being used for storage of storm water runoff as required by the EPA's Administrative Order. As such, they need to be open at the top to help collect storm water. Moreover, they are a required part of the EPA response action; accordingly, the enforcement of the Maintenance Code is preempted by federal law. More importantly, STNP has removed all steps and ladders giving access to the Tanks to prevent public entry. The Tanks, therefore, are currently in compliance with the Maintenance Code.

I hope this response addresses each of the concerns described by the Town officials. As discussed above, STNP remains open to further discussion of any steps that need to be taken to comply with the Maintenance Code and looks forward to hearing back from the Board and/or the Town in that regard.

Sincerely,

W. Alexander Burnett

WAB/dad
Enclosures

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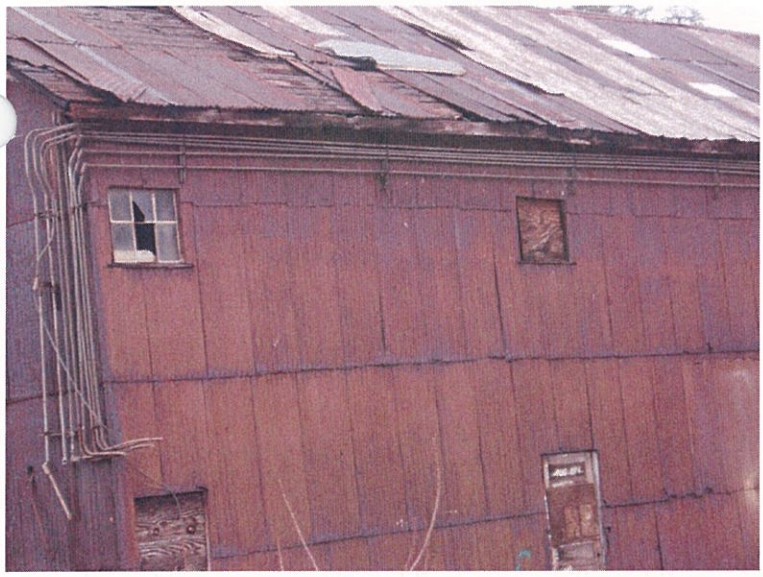



Master


Master

Direct Dial: 804.420.6481
aburnett@williamsmullen.com

August 5, 2013

BY EMAIL AND US MAIL
(Alan.McMahan@dhcd.virginia.gov)

Alan McMahan, CBO
Senior Construction Inspector II and
Staff - State Building Code Technical Review Board
State Building Code Office
Division of Building & Fire Regulation
Department of Housing & Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

Re: STNP Appeal to the Review Board (Appeal No. 12-1)

Dear Alan:

Pursuant to your letter dated July 16, 2013, I have enclosed corrections and additions to the Staff document which sets forth more precisely the position of STNP, LLC ("STNP") for the August 16, 2013 hearing. Hopefully these corrections and additions are self-explanatory and set forth STNP's position clearly. However, if you have questions or would like to discuss this further, please do not hesitate to contact me.

Please note that STNP is not committing to perform the work on these three buildings; however, to the extent the Review Board finds that the three buildings at issue fail to comply with the Maintenance Code then STNP requests an opportunity to address those issues within the timeframes set forth by the Review Board.

Sincerely,

W. Alexander Burnett

WAB/dad
Enclosures

cc: Roy David Warburton, Esquire (by U.S. Mail w/Encls)

20943920_2.DOCX

VIRGINIA:

BEFORE THE
STATE BUILDING CODE TECHNICAL REVIEW BOARD

IN RE: Appeal of STNP, LLC
Appeal No. 11-1

REVIEW BOARD STAFF DOCUMENT

Suggested Statement of Case History and Pertinent Facts

1. In November of 2011, the Town of Pulaski Building Inspection Office (Town code official) issued a notice of condemnation under Part III of the Virginia Uniform Statewide Building Code (Virginia Maintenance Code) to STNP, LLC (STNP), the current owner of a former factory site in the town, concerning buildings and structures at the site. The property is known as the West Commerce Street Plant property (Tax Number: 072-008-0000-013A) and was the former Magnox/Nanochemonics Holdings facility. The notice required all of the buildings and structures to be brought into compliance with the Virginia Maintenance Code or removed from the site.

2. STNP filed an appeal of the notice to the Pulaski County appeals board, but after additional correspondence with the town, an appeal was made to the Town of Pulaski's Housing Board of Adjustments and Appeals (Town appeals board), the correct board to hear appeals of decisions of the Town code official. Between the filing of the appeal and the hearing of the appeal by the Town appeals board, the Town code official, in December of 2011, issued a new notice under the Virginia Maintenance Code which required all of the buildings and structures to be demolished.

3. In January of 2012, the Town appeals board heard STNP's appeal and ruled to uphold the decision of the Town code official. STNP then filed an appeal to the Review Board.

4. Review Board staff conducted an informal fact-finding conference in June of 2012 and after discussion, the parties agreed to continue the appeal to work towards a mutually agreeable solution. Part of the problem in finding a solution was that the clean-up of the plant needed to be done in accordance with an order from the federal Environmental Protection Agency. After meeting with Town officials, STNP performed some work on the Property and eliminated some of the issues that were subject to the condemnation notice.

5. In May of 2013, the Town code official informed Review Board staff that the appeal needed to move forward as no resolution of the remaining violations had occurred. Review Board staff conducted an additional informal fact-finding conference in June of 2013 to clarify the issues in the appeal. The parties agreed that the dispute now only concerned three buildings, described below~~:~~. Note that STNP does not commit to demolish or perform work on these buildings, but simply seeks to reserve its right to demolish or perform such work within the timeframes set forth by the Review Board. Additionally, as set forth in STNP's Appeal documents, it is STNP's position that the Notice of Condemnation is preempted by CERCLA and the EPA's AOC and that demolition or repair work in the buildings could pose a risk of damage and/or release of hazardous substances.

Building 1 – Administration building. This building had been partially demolished but had some original portions. The parties agreed that the building ~~would be demolished. The dispute only concerned the time frame for demolition~~is in violation of the Maintenance Code. The Town code official's position was that the building needed to be demolished in 60 days. STNP does not believe the building can be demolished within 60 days and requests a minimum of 120 days to be able to demolish the building, bring the building into compliance with the Maintenance Code, or to allow the condemnation of the building to proceed.

Building 2 – Shop building. This building is a metal clad building with wooden doors and windows. The parties agreed that the building did not need to be demolished ~~and further agreed that~~if it ~~was not~~could be secured from entry and ~~was not being maintained to keep the weather out~~maintained. The parties disagree as to whether it was secured from entry and otherwise complies with the Maintenance Code. The dispute ~~only~~also concerned the time frame for securing the building and making it weather-tight. The Town code official's position was that 90 days was sufficient to achieve compliance with the Virginia Maintenance Code. While STNP believes this building complies with the Maintenance Code, to the extent the Review Board finds otherwise, STNP requests at least 120 days to bring the building into compliance with the Maintenance Code, or to allow the condemnation of the building to proceed

Building 6 – Shed. This building is a large shed-type building open on one side. ~~The Town code official's decision is the same on this building as for Building 2, with the acknowledgement that the open side of the shed may remain open.~~ The parties agreed that the building did not need to be demolished and further agreed that the open side could remain open. The dispute only concerned the time frame for making the roof of the building weather-tight. The Town code official's position was that 90 days was sufficient to achieve compliance with the Virginia Maintenance Code. STNP requests a minimum of 120 days to be able to demolish the building, bring the building into compliance with the Maintenance Code, or to allow the condemnation of the building to proceed.

Suggested ~~Issue~~Issues for Resolution by the Review Board

1. Whether to overturn the decisions of the Town code official concerning the time ~~frames~~frame for demolition of Building 1 ~~and~~; whether Building 2 complies with the Maintenance Code and, if not, the time frame for securing and/or weather-proofing ~~Buildings 2 and~~Building 2; and the time frame for weather-proofing Building 6.

## McMahan, Alan (DHCD)

**From:** John Hawley [jhawley@pulaskitown.org]
**Sent:** Monday, March 18, 2013 12:24 PM
**To:** McMahan, Alan (DHCD)
**Cc:** Bill Pedigo; Tom Compton; Todd Garwood
**Subject:** FW: Magnox
**Attachments:** magnox 019.JPG; magnox 018.JPG

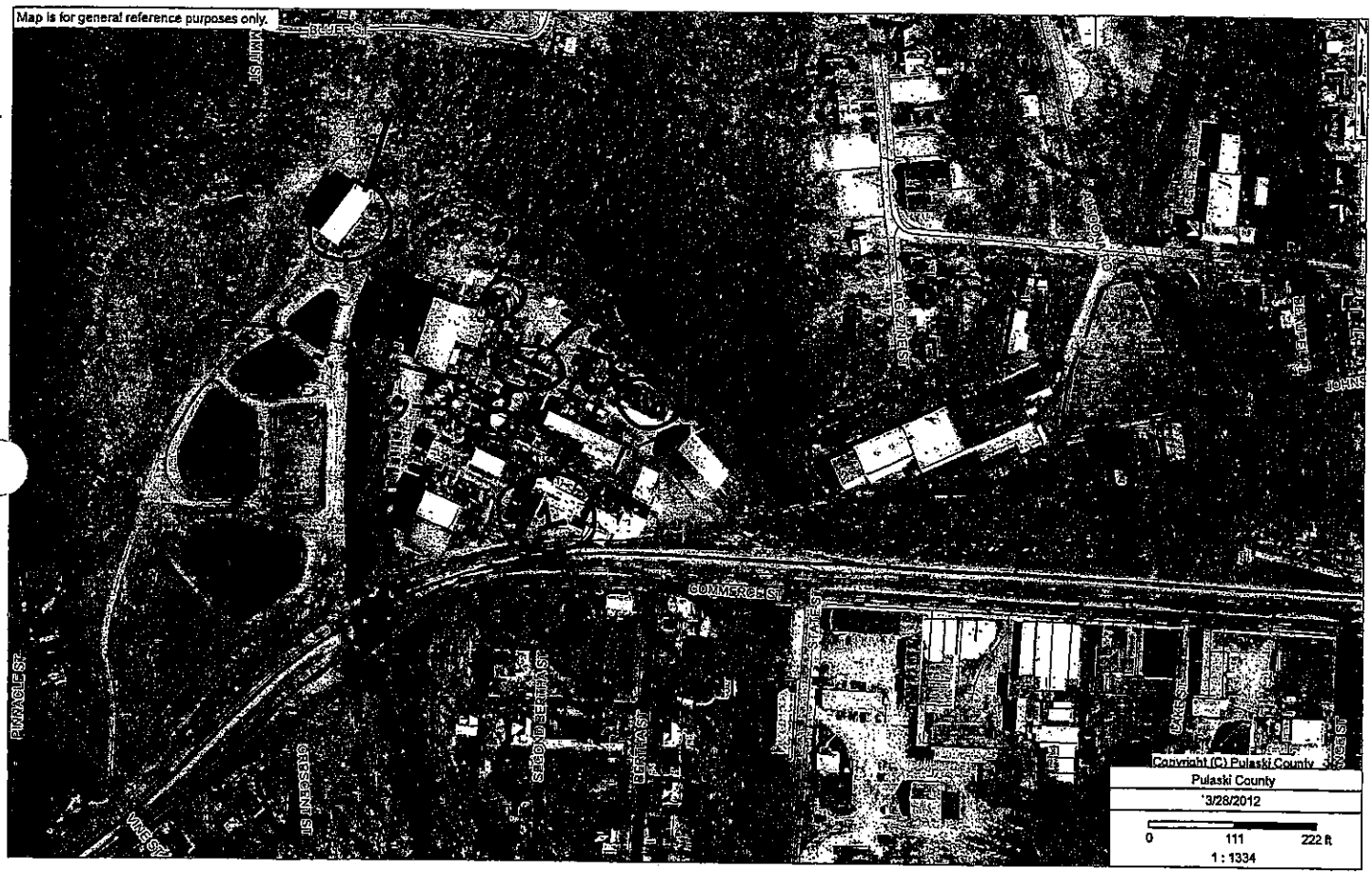
Pictures taken last week.
John

---

**From:** Brenda Shelton
**Sent:** Monday, March 18, 2013 12:16 PM
**To:** John Hawley
**Subject:** Magnox

*Brenda Shelton*
*Administrative Secretary*
*Town of Pulaski*
*42 First Street, NW*
*Pulaski, Va 24301*
*994-8696 "0" or 994-8619*

111


Map is for general reference purposes only.
RIVER ST
COMMERCE ST
PINNACLE ST
STOSSENT ST
VINE ST
Copyright (C) Pulaski County
Pulaski County
3/28/2012
0
111
222 ft
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# ADDITIONAL DOCUMENTS SUBMITTED BY THE TOWN OF PULASKI

## McMahan, Alan (DHCD)

**From:** John Hawley [jhawley@pulaskitown.org]
**Sent:** Thursday, August 01, 2013 4:20 PM
**To:** McMahan, Alan (DHCD)
**Cc:** warburton@warburtonlaw.com; Bill Pedigo; Todd Garwood
**Subject:** FW: STNP photos
**Attachments:** STNP 7-31-13a.pub; STNP 7-31-13b.pub; STNP 7-31-13c.pub

Good afternoon Alan:
Pursuant to your letter dated 7/16/13 the Town of Pulaski is submitting these additional photos that illustrate the need to remove/secure the buildings in a timely manner. This is email 1 of 2.
I you have any questions do not hesitate to contact me.
John Hawley, P.E.
Town Manager

---

**From:** Todd Garwood
**Sent:** Thursday, August 01, 2013 4:03 PM
**To:** John Hawley
**Subject:** STNP photos

Pics with comments

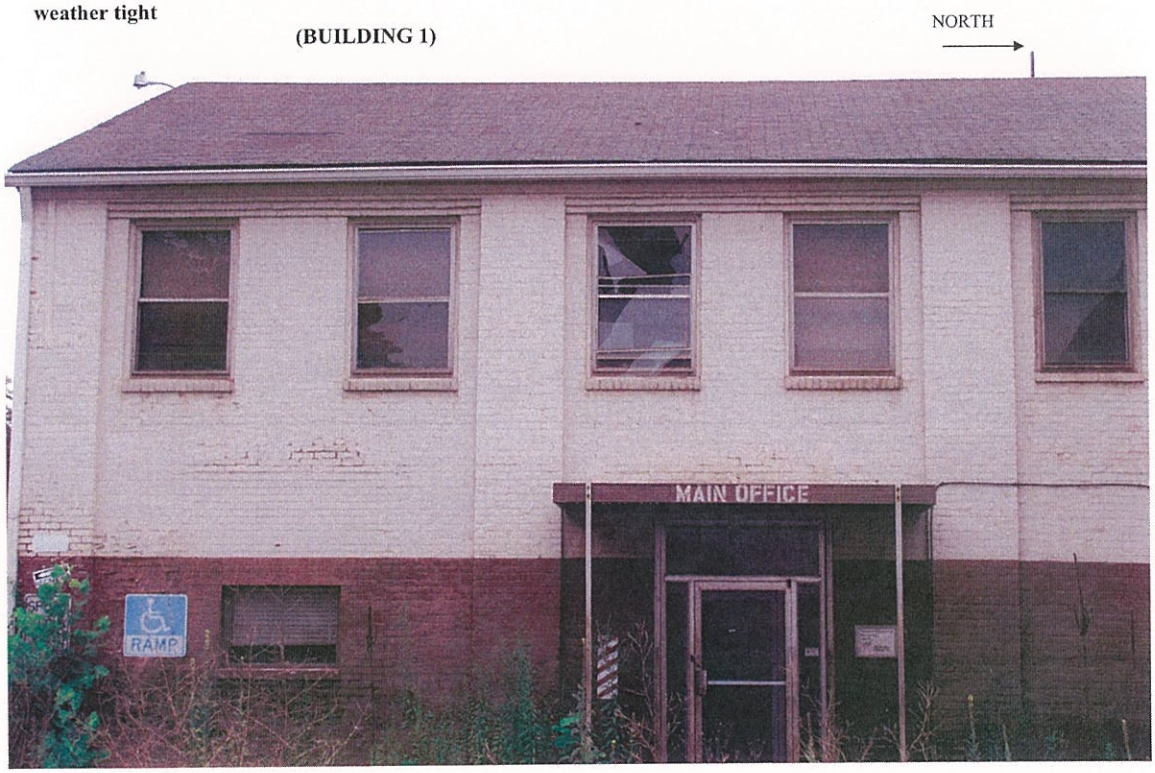
Todd Garwood
Fire Marshal - Town of Pulaski
PO Box 660
Pulaski, VA 24301
540-994-8664
tgarwood@pulaskitown.org
**Veritas Ex Cineribus** - *Truth out of Ashes*

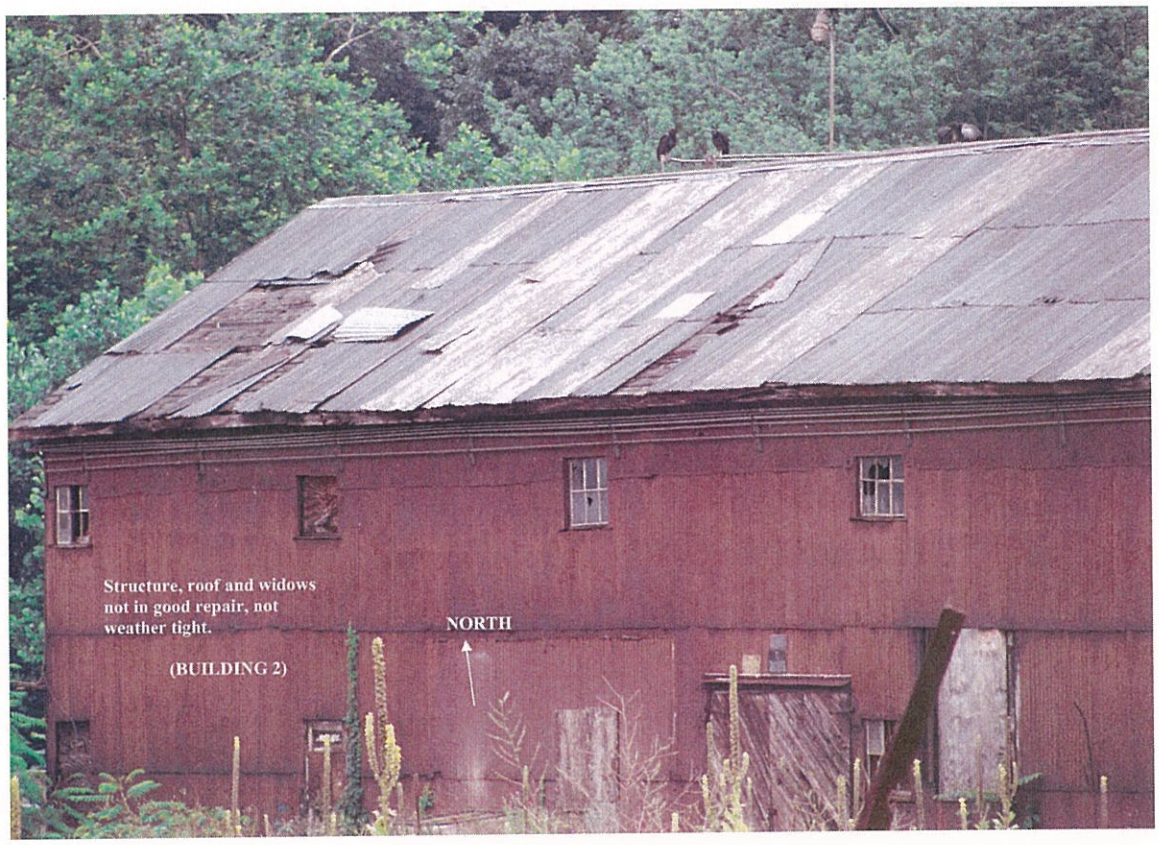
**Structure is unsafe and unsecured. Roof and walls collapsing, structure not protected from the elements**

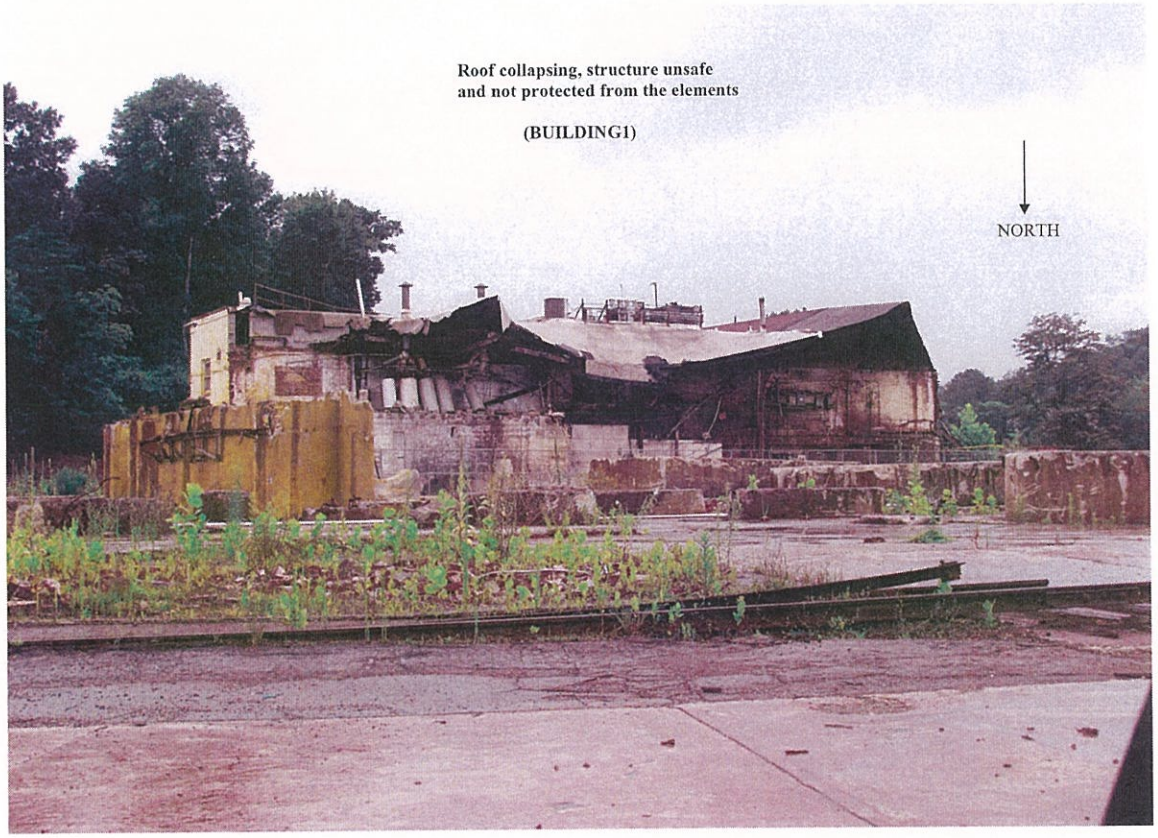
**(BUILDING 1)**


**Structure open to elements and not weather tight**

**(BUILDING 1)**




Structure, roof and widows
not in good repair, not
weather tight.
(BUILDING 2)
NORTH


Roof collapsing, structure unsafe
and not protected from the elements
(BUILDING1)
NORTH

VIRGINIA:

BEFORE THE
STATE BUILDING CODE TECHNICAL REVIEW BOARD

IN RE: Appeal of Keith Kurtz
Appeal No. 13-2

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VIRGINIA:

BEFORE THE
STATE BUILDING CODE TECHNICAL REVIEW BOARD

IN RE: Appeal of Keith Kurtz
Appeal No. 13-2

REVIEW BOARD STAFF DOCUMENT

Suggested Statement of Case History and Pertinent Facts

1. During 2010, R-1 Construction, LLC (R-1), a building contractor, constructed a home for Keith and Carol Kurtz (the Kurtz') at 4087 35th Street North, in Arlington County. After occupying the home in late 2010, the Kurtz' identified a number of issues with the construction and, after consultation with others, contacted the Inspection Services Division of the Arlington County government (County building department) to determine whether there were violations of the Virginia Construction Code (VCC), Part I of the Virginia Uniform Statewide Building Code. The Kurtz' home was subject to the 2006 edition of the VCC.

2. After visits to the home and the review of relevant documents, in March of 2012, the County building department issued a notice of violation to R-1 identifying 25 violations of the VCC. In April of 2012, the Kurtz' filed an appeal to the Arlington County Local Board of Building Code Appeals (County appeals board), asking the County appeals board to rule that there were a number of additional VCC violations present which were not cited by the County building department.

3. The County appeals board heard the Kurtz' appeal and issued a ruling in June of 2012 finding that there were no additional violations. The Kurtz' appealed the County appeals

board's decision to the Review Board. That appeal to the Review Board was designated as Appeal No. 12-4.

4. Review Board staff conducted an informal fact-finding conference in processing Appeal No. 12-4, attended by the Kurtz' and R-1, counsel for both, and the County building department. At the conference it was determined that the County building department had not made final decisions concerning any additional violations since more information was needed. The parties agreed to continue the appeal while the County building department finished its investigation and made final determinations and that any final determinations would have to be appealed to the County appeals board. Appeal No. 12-4 was eventually withdrawn by the Kurtz'.

5. In December of 2012, the County building department issued another notice of violation to R-1, identifying an additional eight VCC violations. In January of 2013, the Kurtz' filed a new appeal to the County appeals board asking the County appeals board to rule that there were still additional violations which had been identified but that the County building department had not cited.

6. The County appeals board heard the Kurtz' second appeal and issued a ruling in March of 2013 finding that no additional violations were present. The County appeals board did modify one of the violations cited by the County building department and gave additional time for that violation to be corrected.

7. In April of 2013, the Kurtz' appealed the second ruling of the County appeals board to the Review Board. That appeal was designated as Appeal No. 13-2 and it is the current appeal to the Review Board by the Kurtz'.

8. Review Board staff conducted a informal fact-finding conference pursuant to the current appeal in June of 2013, attended by all parties, to clarify the issues in the appeal. In the appeal to the Review Board, the Kurtz' provided a detailed statement of relief sought, outlining 14 alleged VCC violations. Review Board staff discussed those issues in detail with the parties at the conference to clarify the nature of the alleged violations and to determine whether the County building department had made a decision on each issue and that the County appeals board had reviewed and upheld the County building department's decisions that they were not VCC violations. Rather than restating the issues in this staff document, reference is made to the statement of relief sought submitted by the Kurtz' and the following clarifications and modification to that statement of relief sought resulting from the informal fact-finding conference are set out below.

> Issues 1A and 1B – The wood in question is multiple LVL band boards which are part of the rear screen porch floor framing system and whether they are in violation of Section R319.1(6) or Section R319.1.5 of the 2006 International Residential Code (IRC) since the LVLs are not pressure treated wood.
>
> Issues 1C and 1D – Whether the same LVLs are in violation of the code due to resting on masonry piers or due to not having enough bearing on the masonry piers.
>
> Issue 1E – Whether the posts for the porch railing where notched to be fastened to the LVLs causes the posts to be too weak to meet the guardrail load requirements.
>
> Issue 1F – Whether the rear porch outer column on the corner of the porch on the side of the house with the chimney is insufficient for carrying the roof loads.
>
> Issues 2A through 2D – These issues involve the use of LVLs as ridge beams instead of a conventional ridge board. However, the roof framing appears to deviate from the plans in that no cathedral ceilings were used and there appears to be ceiling joists which tie the walls together. The County building department was asked to review the as-built condition to determine whether the supports for the ridge beams were necessary or whether they only needed to support the dead load of the ridge beams and not the live loads of the roof as those appear to be transferred to the wall framing which are tied together by ceiling joists.

Issue 2A – Notwithstanding the above, it was suggested at the conference that you could view the wall framing in the utility room in the hall on the first floor and clearly see that a post was missing to carry the load from the ridge beam to the wall of the mechanical room in the basement which was below the dining room entrance. It was decided that this issue would not need to be part of the appeal unless the County building department did not issue a citation for the lack of a post.

Issue 2B – Again, notwithstanding whether the changes in the framing plan alleviate the need for additional support, this issue is whether there needs to be a 4x6 post in the first floor wall above the basement office closet wall.

Issue 2C – The issue is whether additional support is necessary in the exterior wall of the master bedroom for the ridge beam load. However, there is a question of whether the County building department's decision was appealed within the timeframe required. It was decided that this issue would not be part of the appeal unless the Kurtz' indicated it was still under dispute and if so, the issue of timeliness would need to be addressed.

Issue 2D – The area of concern is the floor joist space above an interior wall of the basement office by the stairs and whether the load from the first floor wall framing is carried through the floor joist space to the basement office wall.

Issue 3A – Whether the uncovered foam insulation in the ceiling of the basement closet is a violation of the code.

Issue 3B – This issue was whether the uncovered foam insulation in an attic closet was a violation. The County building department indicated at the conference that this violation had bee cited, so the Kurtz' withdrew the issue from the appeal.

Issues 4A and 4B – These issues involve the construction of a detached garage where the concrete garage floor is a structural slab above a fairly tall area enclosed by walls. Issue 4A is whether the lack of a access opening to area under the garage floor is required and whether ventilation openings in that area are required. Issue 4B is whether the lack of hurricane straps from the roof trusses to the walls of the garage is a violation of the code.

## Suggested Issue for Resolution by the Review Board

1. Whether to overturn the decisions of the County building department and the County appeals board that no further violations exist.

# BASIC DOCUMENTS

ARLINGTON
VIRGINIA

**INSPECTION SERVICES DIVISION**
**2100 Clarendon Boulevard, Suite 1000**
**Arlington, Virginia 22201**

# NOTICE OF VIOLATION

**Premises Address in Violation:** 4087 35th Street North

**Responsible Party's Name:** R-1 Construction, LLC – Byron Ramirez President

**Responsible Party's Address:** 9415 Braymore Circle, Fairfax Station, VA 22039

**Permit No/ Complaint Case No:** B0901166

**Date of Violation:** 3/20/2012 **Compliance Deadline:** 5/25/2012

An inspection of the above premises has disclosed violations of Virginia Uniform Statewide Building Code/Arlington County code as shown below. You are directed to correct these violations by the compliance deadline indicated. A re-inspection will be made at that time. If correction has not been made; further action will be taken as provided by the applicable law(s).You may obtain additional information by calling the office at (703)-228-3800 between 8:00 A.M. and 4:30 P.M.

**The violation is described as (Identify Code and Code Section):**

1) Flashing is not installed above the lintels in the exterior stone veneer on the lowest level. This condition is in violation of 2006 VUSBC, section R703.7.5.
2) A short ledger section that is part of the rear deck framing is lacking adequate fasteners per 2006 VUSBC, table R502.2.2.1.
3) A few short joist members that are part of the rear deck framing lack adequate bearing per 2006 VUSBC, section R502.6.
4) In the basement mechanical room, copper water piping is in contact with adjacent dissimilar metals. This condition is in violation of 2006 VUSBC, section P2605.
5) Two areas were identified that require fire blocking. 1) The cavity created above the horizontal soffit in the basement office directly communicates to the vertical wall cavity framing the main level and 2) the hallway bathroom on level 2 has a pipe penetration that is not blocked. Refer to 2006 VUSBC, section R602.8.
6) Per 2006 VUSBC, section P2709.1 showers require a min. 1" curb. Several showers in this dwelling unit violate this condition.
7) The windows were not installed and flashed per the manufacturer's installation instructions. This condition is in violation of 2006 VUSBC, sections R703.8 and R613.1.
8) The exposed foam insulation in the attic and basement utility room is not installed per 2006 VUSBC, sections R112.3.1, R314.4 and R314.5.3.
9) Per 2006 VUSBC, section R308.4, Item 11; the dining room windows adjacent to the exterior ramp are considered a hazardous location and require safety glazing.
10) There is an unattached electrical box in the master bathroom. Per 2006VUSBC, section E3806.8 all boxes shall be securely fastened in place.
11) The underside of the porch is considered a damp location and requires appropriate wiring and boxes per 2006 VUSBC, table E3701.4 and E3805.11.

12) Attic access required in master bedroom. Refer to 2006 VUSBC, section R807.1

13) The retaining wall adjacent to the driveway was built without permits and inspections. This is in violation of 2006 VUSBC, section 108.1

14) The rear exterior concrete treads exceed the maximum slope for a walking surface. Refer to 2006 VUSBC Section R311.5.5

15) One TJI in the mechanical room is over bored and requires patching per the manufacturer's literature per 2006 VUSBC, section R112.3.1

16) The front porch roof does not have adequate tie-downs per 2006 VUSBC, section 802.11.1.

17) The wall in the mechanical room is not completely insulated as required by 2006 VUSBC, section N1102.1.

18) Refer to 2006 VUSBC, section N1102.4.1. Various gaps exist between the siding and masonry wall that are not properly sealed.

19) The 2nd level bathroom is not lined per 2006 VUSBC; section P2709.2, which is causing leaking into the dining room below.

20) The minimum insulation required in the basement is R-13 per 2006 VUSBC, table N1102.1. R-11 is provided for part of this area.

21) The handrail from the main level to the 2nd floor does not meet load requirements per 2006 VUSBC, table R301.5

22) In the mechanical room, the header for the framed opening is over bored to accommodate a water line. Refer to 2006 VUSBC, section R602.6.

23) In the dining room, the switch exceeds the maximum permitted gap per 2006 VUSBC, section E3806.6.

24) The required wiring and over current protection is not provided for the secondary unit heater as required by the 2006 VUSBC, sections E4001.4 and E3601.2.

25) The roof beam (three LVL's) over the master bedroom is lacking adequate bearing per 2006 VUSBC, section R802.6.

**The following corrective action(s) must be performed immediately as directed,**

Please correct the violations identified above and call for inspection

☐ **A STOP WORK ORDER is** also issued this date at the above referenced project. All construction activities on these premises must cease immediately. Only those activities required to correct violations may continue. Permission is required to resume construction.

**By:** Shabriar Amiri, Chief Building Official **Signature:**

**Name** **Title**

**Phone Number:** (703) 228-3848

**RECEIVED BY:** _____

**Printed Name** **Signature** **Date**

**Phone Number:** _____ **Sent by Registered Mail/Return Receipt On:** _____

In accordance with Section 119.5 of the Virginia Construction Code of Virginia Uniform Statewide Building Code (VUSBC); (Section 106.5 of the Virginia Maintenance Code) the owner of a building or structure, the owner's agent or any other person involved in the design or construction of a building or structure may appeal a decision of the building official concerning the application of the VUSBC to such building or structure. The applicant shall submit a written request for appeal to the **Local Board of Building Code Appeals** within 30 calendar days (14 Calendar days for appeals of Virginia Maintenance Code) of the receipt of the decision being appealed. For more information, please call **(703) 228-3566.**

ARLINGTON
VIRGINIA

DEPARTMENT OFCOMMUNITY PLANNING HOUSING AND DEVELOPMENT
Inspection Services Division
One Courthouse Plaza 2100 Clarendon Blvd, Suite 1000 Arlington, VA 22201
TEL 703.228.3800 FAX 703.228.7046 www.arlingtonva.us

March 20, 2012

Byron Ramirez, President
R-1 Construction, LLC
9415 Braymore Circle
Fairfax Station, VA 22039

Subject: 4087 35th Street North, Arlington, Virginia

Reference: Notice of Violation and Request for Information

Dear Mr. Ramirez:

Arlington County Inspection Services has investigated potential violations for the subject property and has determined that various violations of the Virginia Uniform Statewide Building Code exist. Attached Please find the notice of violation for the subject property and instruction for compliance.

Additionally we observed several deviations from the approved construction documents. We would like you the provide substantiation that those deviation conform to the State Building Code. They are:

1. The first floor beam supporting the main bearing wall between the hallway and game room is shown on the drawings as 2 - 1-3/4" × 11 – 7/8" LVL's approximately 12' long with an intermediate steel pipe column approximately 5' from one end creating spans of 5' and 7' respectively. In lieu of the steel column shown, a wood column consisting of 3 – 2 × 4 studs was installed.

2. The roof beam over the master bedroom consisting of three LVL's is shown supported on 3 – 2 × 12's per drawing CM 1.1 dated 3/25/10 issued by Moore Architects. Submit calculation to show that the attachment to the roof rafter is capable of supporting the superimposed loads.

3. The solid 4x6 post that supports the front end of the Master Bedroom Ridge beam is missing, and instead the beam is supported by a triple 2x on the wrong floor beam.

Please respond to these conditions within 30 days of the date of this letter. If you have any questions, please contact me at (703) 228-3848.

Sincerely,

Shahriar Amiri
Chief Building Official

cc: Charles Moore, AIA

Attachment

ARLINGTON
VIRGINIA

**INSPECTION SERVICES DIVISION**
**2100 Clarendon Boulevard, Suite 1000**
**Arlington, Virginia 22201**

# NOTICE OF VIOLATION

**Premises Address in Violation:** 4087 35th Street North

**Responsible Party's Name:** R-1 Construction, LLC – Byron Ramirez President

**Responsible Party's Address:** 9415 Braymore Circle, Fairfax Station, VA 22039

**Permit No/ Complaint Case No:** B0901166

**Date of Violation:** 12/12/2012 **Compliance Deadline:** 1/31/2013

An inspection of the above premises has disclosed violations of Virginia Uniform Statewide Building Code/Arlington County code as shown below. You are directed to correct these violations by the compliance deadline indicated. A re-inspection will be made at that time. If correction has not been made; further action will be taken as provided by the applicable law(s).You may obtain additional information by calling the office at (703)-228-3800 between 8:00 A.M. and 4:00 P.M.

**The violation is described as (Identify Code and Code Section):**

1) *The "front" LVL under the rear porch enters a stone veneer wall without the proper separation (1/2" on top and sides) a required per VUSBC Section R319.1, item 4.*
2) *After partially exposing walls in several locations on all floor levels, it is evident that the existing framing deviates from the permit documents and the project's load path is discontinuous. Refer to VUSBC, Section R601.2 for continuous load path requirements. Refer to attached letter from SDS (the structural engineer of record), dated 10/15/2012 for the remediation requirements.*
3) *After partially opening the wall in the basement office closet, a 4x4 post was missing and shall be installed per the permit documents or as prescribed by the project's engineer of record. . Refer to VUSBC, Section R601.2.*
4) *After partially opening the wall in the basement mechanical room/ hallway, a 4x6 post was missing and shall be installed per the permit documents or as prescribed by the project's engineer of record. . Refer to VUSBC, Section R601.2.*
5) *The door/ door jamb to the space under the front porch (in the basement) is not properly sealed for air infiltration per VUSBC Section N1102.4.1*
6) *The door/ door jamb to the space under the rear porch (in the basement) is not properly sealed for air infiltration per VUSBC Section N1102.4.1*
7) *In the mechanical room in the basement, an I-joist has a hole in its' webbing that exceeds the manufacturer's maximum. A repair certified by the manufacturer is required.*
8) *No flashing has been installed above the openings located in the stone veneer. This condition is in violation of VUSBC Section R703.7.5 and requires remediation.*

**The following corrective action(s) must be performed immediately as directed,**

**Remedy all violations described above and call for inspection**

☐ **A STOP WORK ORDER** is also issued this date at the above referenced project. All construction activities on these premises must cease immediately. Only those activities required to correct violations may continue. Permission is required to resume construction.

**By:** Shahriar Amiri (**Name**) Chief Building Official (**Title**) **Signature:** _____

**Phone Number:** 703-228-3848

**RECEIVED BY:** _____
**Printed Name** **Signature** **Date**

**Phone Number:** _____ **Sent by Registered Mail/Return Receipt On:** _____

In accordance with Section 119.5 of the Virginia Construction Code of Virginia Uniform Statewide Building Code (VUSBC); (Section 106.5 of the Virginia Maintenance Code) the owner of a building or structure, the owner's agent or any other person involved in the design or construction of a building or structure may appeal a decision of the building official concerning the application of the VUSBC to such building or structure. The applicant shall submit a written request for appeal to the **Local Board of Building Code Appeals** within 30 calendar days (14 Calendar days for appeals of Virginia Maintenance Code) of the receipt of the decision being appealed. For more information, please call **(703) 228-3666.**

**WHITE COPY: RESPONSIBLE PARTY** **PINK COPY: OFFICE** **YELLOW COPY: INSPECTOR**

ARLINGTON
VIRGINIA

**ARLINGTON COUNTY BOARD OF BUILDING CODE APPEALS**
**Please mail to:**
2100 Clarendon Blvd., Suite1000, Arlington, VA. 22201
**Attention: Board of Building Code Appeals**

# APPLICATION FOR APPEAL

Name of Building Owner Keith Kurtz
Address of Building Owner: 4087 35th ST North, Arlington, VA 22207
Name of Applicant: Keith Kurtz
Address of Applicant: 4087 35th ST North, Arlington, VA 22207
Applicant's Daytime Phone No.: 703-276-0365 E-mail Address: KeithKurtz@Verizon.net
Applicant's relationship to the property:

☒ Owner ☐ Contractor ☐ Design Professional ☐ Attorney
☐ Other (explain):

Code Modification/Violation Case Number: B0901166

Reason for the Appeal (indicate clearly why you think the code official's interpretation of the VUSBC is in error or the alternatives meet the intent and spirit of the code):

(See attached Continuation Sheet for details)
The Inspection Services Division of Arlington County has failed to cite numerous building code violations as reported by the owners and verified by competent professionals
Item number 2 unnecessarily mandates a specific plan for remediation, is based on an inaccurate drawing and the compliance deadline is unreasonable.
Item 6 incorrectly identifies the code violation present.

Relief sought:
(See attached sheet for details) Relief sought is that item 2 wording be modified to address deficiencies, compliance deadline extended, item 6 be modified to cite correct violation and remaining violations be cited

- **ATTACH A COPY OF CODE OFFICIAL'S DECISION AND ANY PERTINENT DOCUMENTS.**

Applicant's Signature: Keith O Kurtz Date: 31 January 2013

**For Office use Only**

Date Received: Appeal number: 131

**Continuation Sheet**
**Application for Appeal dated 01/31/2013**
Notice of Violation B0901166 dated 12/12/12
Keith and Carol Kurtz
Kurtz Residence, 4087 35th Street North
Arlington, Virginia

Despite requesting a status update on a regular basis and requesting from the Inspection Services Division for Arlington County a copy of any notice of violation issued with regard to our home, we did not, and have yet to, receive any notice of violation from the Inspection Services Division. On January 3, 2013, counsel for the contractor provided us, through counsel, the notice of violation for the first time. As such, this appeal is timely, as it is filed within thirty days of our receipt of the notice of violation, albeit from the contractor's counsel rather than the Inspection Services Division. We are appealing the notice of violation dated December 12, 2012 as follows:

I. Notice of Violation No. 1 (LVL Beam Issue). Reason for Appeal is failure of the County to cite the following issues:

   A. Non-treated engineered wood has been installed in a wet location in contravention to R319.1 5. No notice has been issued regarding this violation.
   B. The non-treated LVL beams are beneath a permeable floor in contravention to R319.1 6. No notice has been issued regarding this violation.
   C. The LVL beams are resting on masonry in contravention of R319.1. The Inspection Services Division previously indicated that the contractor should add a separation sheet to alleviate issues regarding the LVL beam resting directly on masonry. This remediation has not occurred and the Inspection Services Division has failed to address this issue in either the current Notice of Violation or the March 2012 Notice of Violation related to the premises.
   D. The front LVL has insufficient bearing, barely resting on the boards below. This was not addressed in the violation.
   E. Railing posts are insufficient for the load. The drawing provided by Mr. Moore (sketch 4.1) and evaluated by a Structural Design Services (SDS) engineer (who has not been to the house to evaluate the structural details) does not represent the actual posts, which are smaller, shorter, not flush, and not attached as shown in the drawing. The posts are also made of untreated wood in an area where treated wood is required, and are exposed to rain water.
   F. The field cuts to treated wood are not treated in contravention of R319.1.1.
   G. The County provided evaluation by SDS structural engineering (sketches 3.1 and 3.2) show a load of 4577 lbs on a support post transferred to the triple LVL beam at the front of the rear porch. The split 4x4 connection has been identified in the past as an insufficient connection, and County representatives justified it on the grounds that the post did not carry significant load. The SDS analysis contradicts that and there has been no analysis presented to justify this deviation from industry deck guidelines.

Relief sought is that the Inspection Services Division of Arlington County cite violations in the above areas.

II. Notice of Violation No. 2 (Load Path Issue). Reason for appeal is that the violation is written so as to require a remediation that is in conflict with the contract requirements, and in a way that endorses the remediation plan submitted by Moore Architects which was evaluated using inaccurate drawings, and that ignores the similar previously identified instance of discontinuous load path.

A. Despite assurances to the contrary, the notice of violation is worded in such a way as to direct the contractor to perform according to the Moore Architects supplied drawing as a "remediation requirement." While the Inspection Services Division has assured us that the drawing attached to the Notice of Violation is merely advisory, the Notice of Violation is not worded as such and should be modified to capture the true meaning and intent of the Inspection Services Division.

B. The plan endorsed by the Inspection Services Division contains inaccuracies that have been overlooked, as the SDS engineer that evaluated the remediation plan has never actually visited the site. In the event that this proposed solution actually is a "remediation requirement," we object to the use of this plan because: 1) it deviates from the contracted-for performance of the contractor; and 2) it inaccurately depicts the actual condition at the home and, therefore does not do what it intends to do – namely address the discontinuous load path issue as it exists at the residence.

C. The single central load path that R-One did complete (located along the right hand side of the stairway as facing the house) was shown to be not continuous. The lower post of this path is visible from a wall which was opened to identify a fire-blocking violation. This section of the load path has been shown to not be continuous because of an unevenly cut post, poorly cut and totally ineffective squash blocks and the lack of web stiffening, and thus does not carry the load through the floor to the basement. This contravenes VUSBC R601.2 for continuous load paths.

D. The Inspection Services Division has been on notice of the discontinuous load path issue for over one year and failed to cite the issue until December 12, 2012. In September 2011 we opened up the drywall and showed the County representatives that the Moore-produced drawing they were evaluating as an alternative to the contractual plan was grossly inaccurate. Given the lack of urgency by the County up to this point, we ask for a reasonable extension of the completion deadline. This will give the homeowner sufficient time to evaluate the possibility of having another builder fix the load path according to the original contract if R-One declines to do so.

Relief sought is that the Inspection Services Division of Arlington County revise the wording of the violation to be contract neutral, remove any endorsement of the inaccurate structural analysis, cite the load path violation on the existing load path identified, and provide relief of three months on the compliance deadline.

III. Notice of Violation Item No. 3 (mechanical room load path). Reason for appeal is that the County Notice of Violation did not address the entire load path.

Currently this violation only addresses half of the load path starting in the mechanical room and working up to the first floor. As discussed on County site visits, the load path must continue up through the next floor. Addressing only the basement level will not correct the violation of VUSBC R601.2.

Relief sought is that the Inspection Services Division of Arlington County cite entire load path violation above.

IV. Notice of Violation Item No. 4 (basement office/closet load path). Reason for appeal is that the County Notice of Violation did not address the entire load path.

Currently this violation only addresses the lower section of the load path starting in the office closet and working up to the first floor. As noted by a JGK structural engineer, who has been to the house and evaluated the construction, the first floor does not match the drawings and does not sufficiently carry the load, contravening VUSBC R601.2. This discontinuity is referred to in item 7 of the JGK report dated 22 September 2011.

Relief sought is that the Inspection Services Division of Arlington County cite entire load path violation above.

V. Missing from Notice of Violation. Reason for appeal is that the County did not cite a violation where the builder substituted a weaker load path element than approved without providing evidence of its suitability.

The builder substituted a weaker post in supporting the main roof beam in the rear of the Master bedroom, contravening VUSBC R601.2. This departure from the approved drawings is visible and not hidden by any wall, and the builder has offered no evidence that the substitute is sufficient. This deviation was first reported to the County in June 2011.

Relief sought is that the Inspection Services Division of Arlington County cite the insufficient load path violation identified above.

VI. Notice of Violation Item No. 5. (Closet Insulation) Reason for appeal is the failure of the County to cite the correct violation, a failure to cover foam insulation in the interior of the house, and instead citing a non-applicable one and a failure to provide a clarification of areas covered by previous citation.

A. The basement closet under the front porch contains uncovered foam insulation in the interior of the house contravening Section R314 of the 2006 code. This cited violation of improperly sealed door (N1102.4.1) is not the correct violation. It is an attempt to create a case for the position that the spray foam insulation does not need to be covered because the foam is exterior to the house. As the County building department knows, this closet area is completely closed off and there is no exterior air infiltration. The only place any fumes generated by this insulation could go in case of fire is into the interior of the house. Installing this interior door counter to manufacturer's directions by adding weather-stripping does not change the fact that this is an interior space.

B. We ask that the County give clarification of the previous Notice of Violation from March 2012 of code section R314. While the violation clearly applies to closet spaces that are accessed and used for storage, County representatives will not put this in writing for the third floor closets. There is no ambiguity to the requirement for an ignition barrier in these areas.

Relief sought is that the Inspection Services Division of Arlington County rescind the violation for air infiltration and cite the correct violation for uncovered foam insulation.

VII. Missing from Notice of Violation. Reason for appeal is the failure of the County to cite the lack of ventilation and under-floor access in the garage as a violation of 2006 building code (R408.1, R08.2, and R408.4) or lack of hurricane ties in the garage.

A. The lack of ventilation and under-floor access in the garage is a violation of the applicable 2006 building code (R408.1, R408.2 and R408.4), and the clear instructions from the County plan reviewers to include ventilation and access (as seen in red-lines to the approved drawings). County preliminary findings from November 2, 2011, suggest that this lack of ventilation is not a problem because of the construction details of the garage, i.e., the garage floor is simply an elevated concrete slab. To the contrary, the bottom of the garage floor, which is exposed to the unventilated cavity, is metal. The County was also working from an incorrect understanding that the ventilation and access details had been rejected by the County zoning officials.

B. The hurricane ties are an important element of the design's ability to meet the wind load requirements of R301.1. The garage design was approved with these elements in, and no analysis has been done to show the design is still acceptable without the ties.

Relief sought is that the Inspection Services Division of Arlington County cite the garage violations including lack of ventilation and access and leaving out the hurricane ties.

VIII. Missing from Notice of Violation. Reason for appeal is the failure of the County to cite as a violation the improperly lined attic bathroom shower, contravening VUSBC P2709.2, and failing as a result.

In a November 2, 2011 preliminary findings the County stated that the builder had agreed to remove the tile in the bathroom areas and re-line the shower thresholds. The builder no longer agrees to this informal resolution, which the County pursued as an alternative to issuing citations.

Relief sought is that the Inspection Services Division of Arlington County cite the code violation for the improperly lined shower.

ARLINGTON
VIRGINIA

# LOCAL BOARD OF BUILDING CODE APPEALS

## Resolution

WHEREAS, the Arlington County Local Board of Building Code Appeals is duly appointed to resolve disputes arising out of the enforcement of the Virginia Uniform Statewide Building Code.

WHEREAS, an appeal has been filed and brought to the attention of the board; and

WHEREAS, a hearing has been held to consider the aforementioned appeal; and

WHEREAS, the board has fully deliberated this matter; now, therefore, be it

RESOLVED, that in the matter of

Appeal No. APP130001

In RE: Keith Kurtz V Arlington County, VA

The decision of the county is hereby UPHELD, as per conditions set out below:

With the exception of violation number two (#2) to suggest modification of language not to mandate other equivalent remedy in accordance with the building code and to extend compliance deadline for ninety (90) days

Date: 3/21/13

Signature: Brian Foley

Brian Foley
Acting Chairman of Arlington County Local Board of Building Code of Appeals

Any person who was a party to the appeal may appeal to the State Review Board by submitting an application to such Board within 21 calendar days upon receipt by certified mail of this resolution. Application forms are available from the Office of the State Review Board, 600 East Main Street, Richmond, Virginia 23219, (804) 371-7150.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
Technical Assistance Services Office (TASO) and Office of the State Technical Review Board
Main Street Centre, 600 E. Main Street, Suite 300, Richmond, Virginia 23219
Tel: (804) 371-7150, Fax: (804) 371-7092, Email: TASO@dhcd.virginia.gov

# APPLICATION FOR ADMINISTRATATIVE APPEAL

Regulation Serving as Basis of Appeal (check one):

✓ Uniform Statewide Building Code

____ Statewide Fire Prevention Code

____ Industrialized Building Safety Regulations

____ Amusement Device Regulations

Appealing Party Information (name, address, telephone number and email address):

Keith Kurtz
4087 35th ST North, Arlington, VA 22207
703-276-0365, KeithKurtz@verizon.net

Opposing Party Information (name, address, telephone number and email address of all other parties):

Shariar Amiri, Building Official (CBO)
Inspection Services Division, 2100 Clarendon Blvd, 10th FLR
Arlington, VA 22201, 703-228-3848, samiri@arlingtonva.us

Additional Information (to be submitted with this application)

- Copy of enforcement decision being appealed
- Copy of record and decision of local government appeals board (if applicable and available)
- Statement of specific relief sought

## CERTIFICATE OF SERVICE

I hereby certify that on the 17th day of April, 2013 a completed copy of this application, including the additional information required above, was either mailed, hand delivered, emailed or sent by facsimile to the Office of the State Technical Review Board and to all opposing parties listed.

**Note:** This application must be received by the Office of the State Technical Review Board within five (5) working days of the date on the above certificate of service for that date to be considered as the filing date of the appeal. If not received within five (5) working days, the date this application is actually received by the Office of the Review Board will be considered to be the filing date.

Signature of Applicant: Keith O Kurtz

Name of Applicant: Keith O. Kurtz
(please print or type)

# Relief Sought

Statement of Specific Relief Sought
16 April 2012
Appeal of Keith Kurtz
Attachment #3

1. Relief sought is that the VUSBC violations in the following areas (Notice of Violation No. 1: LVL Beam Issue) be cited:

A. Non-treated engineered wood has been installed in a wet location in contravention to R319.1 5.
B. The non-treated LVL beams are beneath a permeable floor in contravention to R319.1 6.
C. The LVL beams are resting on masonry in contravention of R319.1. The Inspection Services Division previously indicated that the contractor should add a separation sheet to alleviate issues regarding the LVL beam resting directly on masonry. This remediation has not occurred and the Inspection Services Division has failed to address this issue in either the December 2012 Notice of Violation or the March 2012 Notice of Violation related to the premises.
D. The front LVL has insufficient bearing, barely resting on the boards below.
E. Railing posts are insufficient for the load. The drawing used by the County which was provided by Mr. Moore of Moore Architects and evaluated by a Structural Design Services (SDS) engineer (who has not been to the house to evaluate the structural details) does not represent the actual posts, which are smaller, shorter, not flush, and not attached as shown in the drawing. The posts are also made of untreated wood in an area where treated wood is required, and are exposed to rain water.
F. The County provided evaluation by SDS structural engineering show a load of 4577 lbs on a support post transferred to the triple LVL beam at the front of the rear porch. We identified the split 4x4 connection to County representatives as an insufficient connection, and they justified it on the grounds that the post did not carry significant load. The SDS analysis contradicts that and there has been no analysis presented to justify this deviation from industry deck guidelines.

2. Relief sought is that all the VUSBC violations concerning load paths be cited:

A. The Notice of Violation Item No. 3 (mechanical room load path) did not address the entire load path. Currently this violation only addresses half of the load path starting in the mechanical room and working up to the first floor. As discussed on County site visits, the load path must continue up through the next level. Addressing only the basement level will not correct the violation of VUSBC R601.2.

B. Notice of Violation Item No. 4 (basement office/closet load path). Reason for appeal is that the County Notice of Violation did not address the entire load path. Currently this violation only addresses the lower section of the load path starting in the office closet and working up to the first floor. As noted by a JGK structural engineer hired by the homeowners, who has been to the house and evaluated the construction, the first floor does not match the drawings and does not sufficiently carry the load, contravening VUSBC R601.2.

C. Missing from the Notice of Violation. Reason for appeal is that the County did not cite a violation where the builder substituted a weaker load path element than approved without providing evidence of its suitability. The builder substituted a weaker post in supporting the main roof beam in the rear of the Master bedroom, contravening VUSBC R601.2. This departure from the approved drawings is visible and not hidden by any wall, and the builder has offered no evidence that the substitute is sufficient. This deviation was first reported to the County in June 2011.

D. The single central load path that the builder did install (located along the right hand side of the stairway as facing the house) was shown to be not continuous. The lower post of this path is visible from a wall opening used to identify a fire-blocking violation. This section of the load path has been shown to not be continuous because of an unevenly cut post, poorly cut and totally ineffective squash blocks and the lack of web stiffening, and thus does not carry the load through the floor to the basement. This contravenes VUSBC R601.2 for continuous load paths

3. Relief sought is that the VUSBC violations concerning the requirement for a thermal barrier over spray foam insulation be cited:

A. Notice of Violation Item No. 5. (Closet Insulation) Reason for appeal is the failure of the County to cite uncovered spray foam insulation in the interior of the house. The basement closet under the front porch contains uncovered spray foam insulation in the interior of the house, contravening Section R314 of the 2006 code. This is an interior space, opening only into the basement, and there was no thermal or ignition barrier installed. Both the code and the manufacturer's instructions require a thermal barrier at this location. In case of fire, the only place the fumes could go is into the basement.

B. Uncovered spray foam insulation in the attic closet is a code violation and should be cited. While the requirement for a thermal barrier in closet spaces that are accessed and used for storage is clear and unambiguous, County representatives have been unwilling to put this violation in writing for the third floor closets, and have been unwilling to give any explanation for their failure to cite the violation.

4. Relief sought is that the VUSBC requirement for ventilation and access for the area under the garage be enforced, and the builder be cited for not installing the hurricane ties specified in the County-approved drawings.

A. Missing from Notice of Violation. Lack of ventilation and under-floor access in the garage is a violation of the applicable 2006 building code (R408.1, R408.2 and R408.4), and the clear instructions from the County plan reviewers to include ventilation and access (as seen in red-lines to the approved drawings). County preliminary findings from November 2, 2011, suggest that this lack of ventilation is not a problem because of the construction details of the garage, i.e., the garage floor is simply an elevated concrete slab. To the contrary, the bottom of the garage floor, which is exposed to the unventilated cavity, is metal. The County was also working from an incorrect understanding that the ventilation and access details had been rejected by the County zoning officials.

B. Missing from Notice of Violation. The hurricane ties are an important element of the design's ability to meet the wind load requirements of R301.1. The garage design was approved with these elements in, and no analysis has been done to show the design is still acceptable without the ties.

# DOCUMENTS SUBMITTED BY KURTZ

# Appeal Item 1

**State Appeal Item 1.**
County Appeal Item I. Porch Issues

I. Reason for Appeal is failure of the County Building Department to cite the numerous problems with the porch that contravene the state VUSBC:

**State Appeal Item 1 A. Non-treated engineered wood has been installed in a wet location.**
County Appeal Item 1 A. Untreated LVL

*R319.1.5 Exposed glued-laminated timbers. The portions of glued-laminated timbers that form the structural supports of a building or other structure and are exposed to weather and not properly protected by a roof, eave or similar covering shall be pressure treated with preservative, or be manufactured from naturally durable or preservative-treated wood.*

Manufacturer's instructions (Georgia Pacific , "Re: General Concerns and G-P Engineered Wood Products"):

"With regard to moisture, the key for our engineered wood products, and any wood product that is not naturally decay-resistant or preservative treated, is that it be protected per code and be used in covered, dry use conditions only (moisture less than 16%). If the system to be used in a given project ensures these conditions are met, then this is a proper application of our products with respect to moisture. **If the system allows direct contact with moisture, or if the system fails to ensure the dry use conditions noted, than this is an improper use of our products.** "

From attached photos, it is clear that the GP LVLs do come in direct contract with moisture.

In a meeting in July 2010 the County building official, explaining his unwillingness to cite this violation, stated that the fact that the LVL beams could get wet in storms with 40 or 45 mph winds did not concern him. This observation was not related to the actual conditions needed for the water to reach their location. One of the photos shows the overhang over the porch. Water only needs to come a few inches over the edge of the porch to reach the location where the outer floor board meets the others, and water leaks through to the LVLs. The rainwater can seep under the porch and reach the LVL beams in moderate rainstorms.

According to GP literature, even interior uses have to be protected from periodic water intrusion. In this installation, the problem is far worse with repeated direct exposure.

The dry location requirement for the LVL beams is the same as that for conventional lumber. If a location requires pressure-treated lumber, it is not appropriate to use these dry-use LVLs in that location.

We have taken numerous readings with a moisture meter that have resulted in readings higher than 16%, into the high 20's (including a reading of 28% witnessed by our structural engineer).

In the previous County appeal hearing the County said that determination of whether this was a dry-use location should be based on ambient air and equilibrium moisture content calculations, using temperature and humidity data for the region for various months. That approach does not take into account our specific location at the edge of a valley leading directly to the Potomac (a little more than half a mile away). At this location condensation in the form of dew and fog is common much of the year, reflecting 100% relative humidity. The approach treats the Washington, DC area as an homogenous area for humidity. Most importantly, this method is wrong, as the predicted moisture content does not match the actual measurements.

In our experience, living 25 years at this location, outside areas, even areas protected from the rain, can be damp enough to cause damage.
The location under the porch is extremely damp. Even walls that are out of reach of rain get soaked with condensation at times. Photos show corners of the under-porch area furthest from the front opening wet from condensation.

Finally, the Notice of Violation dated 20 March 2012, includes the following statement from the County Inspections Services Division: "11) The underside of the porch is considered a damp location and requires appropriate wiring and boxes per 2006 VUSBC ...." If the County considers the electrical wiring and boxes to be in a damp location, then the LVL beams, in even more exposed areas under the porch, are also in an damp area.

**State Appeal Item 1 B. Non-treated LVL beams beneath a permeable floor.**
County Appeal Item I. B. The non-treated LVL beams are beneath a permeable floor in contravention to R319.1 6

*R319.1 6. Wood structural members supporting moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier.*

Arlington County Inspection Services Division has not cited this violation. See photos showing water leaking through floor onto LVLs, discussed above.

Georgia-Pacific Wood Products LLC
19953 US Highway 31
Thorsby, AL 35171
TOLL FREE: 877 822 4585
TECH FAX: 404 749 2373

Re: General Moisture Concerns and G-P Engineered Wood Products

With regard to moisture, the key for our engineered wood products, and any wood product that is not naturally decay-resistant or preservative treated, is that it be protected per code and be used in covered, dry use conditions only (moisture content less than 16%). If the system to be used in a given project ensures these conditions are met, then this is a proper application for our products with respect to moisture. If the system allows direct contact with moisture or the system fails to ensure the dry use conditions noted, then this is an improper application for our products.

This 16% limit is comparable to that commonly required for glue-laminated timber and wood-based panel products. Section 2.3.3 of the *1997 Commentary on the National Design Specification for Wood Construction (NDS)* states: "A moisture content of 19 percent has long been recognized as an appropriate upper limit for a dry condition of service for lumber used in wood structures. This maximum level coincides with the moisture content requirement for dry dimension lumber given in the American Softwood Lumber Standard PS20-70. Uses involving maximum moisture contents of 19 percent are traditionally considered to average 15 percent or less." Always consult local codes for requirements.

Here are some general guidelines to consider for moisture:

- Provide positive drainage off and away from the structure and do not allow water ponding.
- Provide proper ventilation and/or de-humidification of all framed areas.
- Low or no maintenance systems are best for the structure and its owner(s).
- Prevent sources of water intrusion. Pay close attention to waterproofing at framing transitions and interfaces with other parts of the structure (walls, decks, foundations, supports, etc.). Consider the affect of attachments to and penetrations through the waterproofing materials and membranes.
- Consider specification of higher durability components.
- Consider expansion, contraction, and durability of the waterproofing materials and the affect of the movement on any materials, around fasteners, and with respect to water intrusion.
- Prevent the entry of water into the structure, but also don't prevent the escape of any water that may enter the structure due to failed waterproofing.

GP warrants the products we manufacture when properly stored, handled, and installed in applications that will ensure their durability. GP does not warrant the design and construction of any finished structure or system into which our engineered lumber products are incorporated. Nor does it approve the waterproofing, ventilation, or insulation systems for those structures. The current warranty (downloaded from our website www.gp.com/build) and the back cover from our Engineered Lumber Residential Guide that details terms and use are attached for additional information.

Please feel free to contact us should you have further questions.

Attach: Warranty

# GP Lam® LVL Architectural Specifications

## Part 1—General

### 1.0—Description

A. Work in this section includes, but is not limited to:
Laminated Veneer Lumber (LVL) beams and headers.

B. Related work specified elsewhere:
Rough carpentry.

### 1.1—Submittals:

A. Product data:
Submit manufacturer's descriptive literature indicating material composition, thicknesses, dimensions, loading and fabrication details.

B. Shop drawings:
Submit manufacturer's literature indicating installation details. Include locations and details of bearing, blocking, bridging and cutting for work by others.

### 1.2—Quality Assurance:

A. Certification:
All GP Lam® LVL has been qualified to ASTM D 5456 by APA-The Engineered Wood Association.

### 1.3—Delivery, Storage and Handling:

A. Delivery:
Deliver materials to the job site in manufacturer's original packaging, containers and bundles with manufacturer's identification intact and legible.

B. Storage and handling:
Store and handle materials to protect against contact with damp and wet surfaces, exposure to weather, breakage and damage. Provide air circulation under covering and around stacks of materials.

### 1.4—Limitations:

A. Cutting:
Except for cutting to length, GP Lam LVL beams and headers shall not be cut, drilled or notched, except as noted in manufacturer's literature.

B. Moisture conditions:
GP Lam LVL is for use in covered, dry use conditions only (moisture content less than 16%).

## Part 2—Products

### 2.0—Prefabricated wood beams and headers:

A. Acceptable products: 2.0E, 1.5E
1. Georgia-Pacific, GP Lam LVL floor and roof beams.
2. Georgia-Pacific, GP Lam LVL window and door headers.

B. Characteristics:
1. Construction:
1¾" and 3½" thick pressure bonded, lap-jointed wood veneers, with grain of veneers running parallel in the long direction.
2. Standard beam depths:
2.0E–1¾" and 3½" thickness: 7¼", 9¼", 9½", 11¼", 11⅞", 14", 16", 18", 24" (20" and 22" by special order)
1.5E–1¾" thickness: 7¼", 9¼", 9½", 11¼", 11⅞", 14", 16"
1.5E–3½" thickness: 4⅝", 5½", 7¼", 9¼", 9½", 11¼", 11⅞", 14", 16"
As required for loading, deflection and span.
3. Beam length:
As required for span and bearing.

### 2.1—Accessories:

A. Fasteners:
16d common nails, approved structural screws or ½" bolts.

B. Hangers:
1. Contact BlueLinx or an engineer for acceptable connectors.

## Part 3—Execution

### 3.0—General:

A. Provide GP Lam LVL beams and headers where indicated on drawings using hangers and accessories specified.

B. Install GP Lam LVL beams and headers in accordance with manufacturer's recommendations.

### 3.1—Accessories:

Install accessories where indicated and in accordance with beam and header manufacturer's instructions.

"McCraw, Mike" <Mike.McCraw@gapac.com>
To: <constructionbydesign@embarqmail.com>
Cc: "Lewis, Aubrey" <Aubrey.Lewis@gapac.com>
RE: Report

May 15, 2012 8:23 AM

1 Attachment, 9 KB

Thomas,

Georgia Pacific's Warranty covers the product for manufacturing defects, not application. The application for LVL should be considered, by the design professional, just like any other untreated wood product. It should be protected from the weather and moisture and not be in an environment with a moisture content over 16%. If all the other lumber around the LVL is treated and the hangers are hot dipped galvanized(for exterior use), that would be a good indication that it might be an inappropriate application.

To address the connection of the beam to the foundation, I would need more information or it should be addressed by the engineer inspecting the structure.

Mike McCraw PE

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**From:** Lewis, Aubrey
**Sent:** Monday, May 14, 2012 1:24 PM
**To:** McCraw, Mike
**Subject:** FW:

Aubrey Lewis
Georgia-Pacific Engineered Lumber Division
133 Peachtree St., NE
Atlanta, GA 30303
404-652-6927
Aubrey.lewis@gapac.com

Georgia-Pacific

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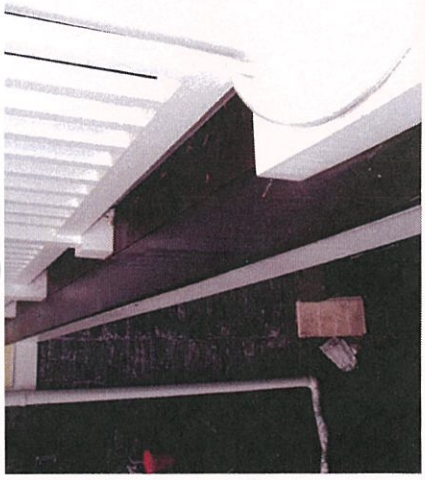
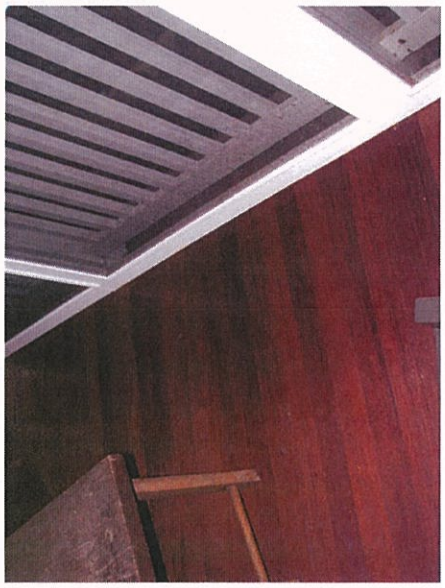
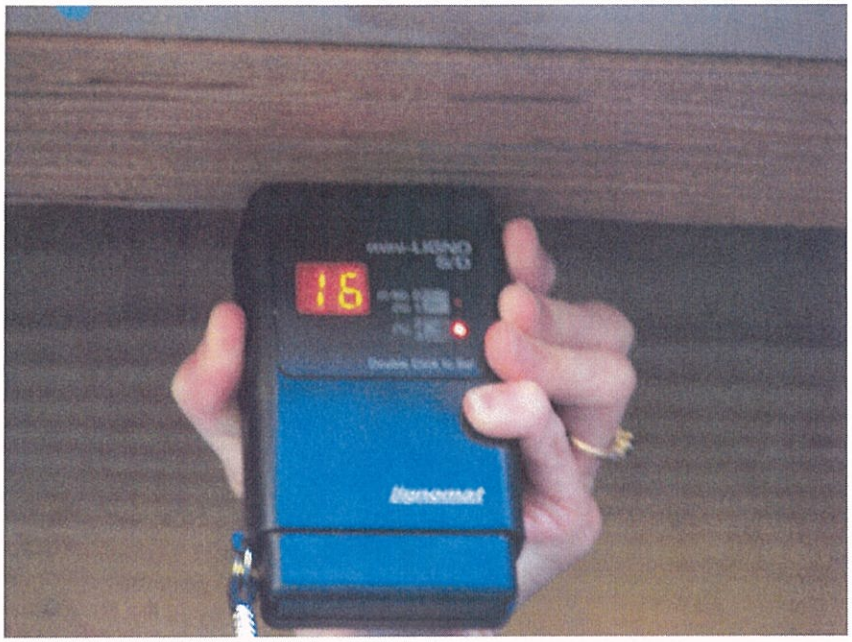
**From:** Construction By Design @embarqmail.com [mailto:constructionbydesign@embarqmail.com]
**Sent:** Monday, May 14, 2012 12:46 PM
**To:** Lewis, Aubrey
**Subject:**





August 30, 2011




Sept 9, 2011

Sep 21 2011

Sep 27, 2011

**State Appeal Item 1 C. Beams resting on masonry.**
County Appeal Item I. C. The LVL beams are resting on masonry in contravention of R319.1. The Inspection Services Division previously indicated that the contractor should add a separation sheet to alleviate issues regarding the LVL beam resting directly on masonry.

We have in writing from the manufacturer's representative who examined the LVLs that "**... the beams were in direct contact with the masonry columns. Engineered lumber is manufactured for dry use and per code can not be in contact with masonry construction.**"

In item 8 c. of the informal findings the County provided us on Nov 2, 2011, (attached) the County noted that a separation sheet was needed between the beams and the masonry and that the builder had agreed to provide one. No separation sheet has been provided, but no violation was ever issued.

Also see photos of beams resting on masonry.

**State Appeal Item 1 D. Insufficient bearing.**
D. The front LVL supporting the porch has insufficient bearing as seen in the photo, with the beam barely resting on the edge of the treated lumber beneath.

Drawing 3.2 submitted to the County by Moore Architects and SDS addresses the insufficient bearing problem by listing the Simpson hangers that would provide sufficient bearing. These hangers are not in place, so there is currently insufficient bearing. The County has not cited this violation.

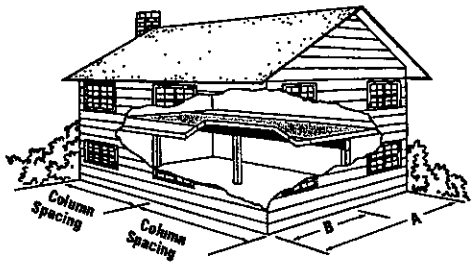
# GP Lam® LVL Handling & Installation

- GP Lam® LVL shall not be stored in direct contact with the ground and must be protected from weather. Provide air circulation under covering and around stacks of materials.
- Bundles must be stored level and must not be opened until time of installation.
- Stack and handle GP Lam LVL flatwise.
- Handlers and installers should use appropriate personal protective equipment such as gloves and goggles. An MSDS is available at www.gp.com/build.
- Engineered lumber must not be installed in direct contact with concrete or masonry construction or shall be protected per code and shall be used in covered, dry use conditions only (moisture content is less than 16%).
- Minimum bearing length for GP Lam LVL beams and headers: end bearing 1½", intermediate bearing 3". Size for applied loads.
- GP Lam LVL beams and headers must be restrained against rotation at ends and supports and the top (or compression edge) must be laterally supported by perpendicular framing or bracing at 24" on-center or closer.
- 1¾" GP Lam LVL beams deeper than 14" must only be used in multiple-piece members.
- Nails installed in the narrow face of GP Lam LVL shall not be spaced closer than 4" (10d common nails) or 3" (8d common nails).
- Multiple piece GP Lam LVL may not be stagger-spliced as is commonly done with dimension lumber. If the required length of a multiple-span beam exceeds the available length of the LVL, the LVL beams must be installed so as to butt together over a common bearing.
- GP Lam LVL is manufactured without camber or specific vertical orientation. It may be installed with the identifying stamps on the side faces reading right side up or upside down.
- Strength and stiffness properties of GP Lam LVL exceed those of typical dimension lumber. It may be possible to substitute GP Lam LVL for dimension lumber roof members in code-prescribed conventional light-frame construction, but design of conventional construction is beyond the scope of this product guide and of Georgia-Pacific Engineered Lumber Technical Services.
- When nail type is not specified in this guide, use common, box or sinker.
- To help safeguard the structural integrity of connections with preservative or fire-retardant treated wood, use only hot-dipped galvanized or stainless steel fasteners, connectors and hardware as required by code and type of treatment.

  As a minimum requirement, hot-dipped galvanized coated fasteners should conform to ASTM Standard A 153 and hot-dipped galvanized coated connectors should conform to ASTM Standard A 653 (Class G-185). In demanding applications, or in highly corrosive environments, stainless steel fasteners and connectors should be utilized and may, in fact, be required by building codes.

  **Most commonly available electroplated galvanized fasteners do not have a sufficient coating of zinc and are not recommended. Aluminum should not be used in direct contact with preservative treated wood. Never mix galvanized steel with stainless steel in the same connection.**

# 2.0E GP Lam LVL Floor Beams




This table shows the size (e.g.: 2–11¼" = 2 plies of 1¾"x11¼") of beams needed to support loads of one floor only, i.e., a second story floor or one story floor over a basement. (See drawing at right.)

When floor joists span continuously from wall to wall (not cut at beam) this table requires that "B" be not less than 45%, or greater than 55% of "A".

Example: If "A" = 32', "B" must be between 14.4' (32×.45) and 17.6' (32×.55)

For non-conforming situations, use FASTBeam® analysis and selection software or contact Georgia-Pacific.

| | | Column or Support Spacing (center-to-center) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11' | 12' | 13' | 14' | 15' | 16' | 17' | 18' | 19' | 20' |
| Total Floor Joist Span "A" | 24' | 2-11¼" 3-9¼" | 2-11¼" 3-9¼" | 2-11⅞" 3-11¼" | 2-14" 3-11¼" | 2-14" 3-11⅞" | 2-16"+ 3-14" | 2-16"+ 3-14" | 2-18"+ 3-16" | 2-18"+ 3-16" | 2-18"+ 3-16" |
| | 28' | 2-11¼" 3-9¼" | 2-11⅞" 3-11¼" | 2-14"+ 3-11¼" | 2-14"+ 3-11⅞" | 2-16"+ 3-14" | 2-16"+ 3-14" | 2-16"+ 3-14" | 2-18"+ 3-16" | 2-18"+ 3-16" | 3-16" |
| | 32' | 2-11¼" | 2-14"+ 3-11¼" | 2-14"+ 3-11⅞" | 2-14"+ | 2-16"+ 3-14" | 2-16"+ 3-14" | 2-18"+ 3-16" | 2-18"+ 3-16" | 3-16"+ | 3-18"+ |
| | 36' | 2-11⅞"+ 3-11¼" | 2-14"+ 3-11¼" | 2-14"+ 3-11⅞" | 2-16"+ 3-14" | 2-16"+ 3-14" | 2-18"+ 3-14" | 3-16"+ | 3-16"+ | 3-18"+ | 3-18"+ |
| | 40' | 2-11⅞"+ 3-11¼" | 2-14"+ 3-11¼" | 2-14"+ | 2-16"+ 3-14" | 2-16"+ 3-14" | 3-16"+ | 3-16"+ | 3-16"+ | 3-18"+ | 3-18"+ |

+ See note 2.

NOTES:

1. Table is based on continuous floor joist span and simple or continuous beam span conditions. If floor joists are not continuous above the beam, take the sum of the joist spans then multiply by 0.8. This is the total floor joist span to consider.
2. Required end bearing length (based on 565 psi) is 3.0" unless the subscript + is shown. In that case, 4.5" is required.
3. At intermediate supports of continuous spans, use the following guidelines or refer to page 40.
   - 7½" bearing length for beams requiring 3" bearing at the beam ends
   - 10½" bearing length for beams requiring 4½" bearing at the beam ends
4. All headers require full-width bearing support, e.g., 2x6 for 5¼", 3-ply members. The adequacy of supporting columns to be verified by others.
5. Table is based on residential floor loading of 40 psf live load and 12 psf dead load.
6. Live load reductions have been applied per IBC section 1607.9.1.
7. Deflection is limited to L/360 at live load and L/240 at total load.
8. For other uniform load conditions refer to pages 42-43.
9. A single 3½" thick ply can be substituted for any two 1¾" thick plies.
10. For multiple ply fasteners, see pages 51-53.

BlueLinx

4300 Wildwood Parkway
1st Floor
Atlanta, GA 30339-8401

## Engineered Lumber Technical Services

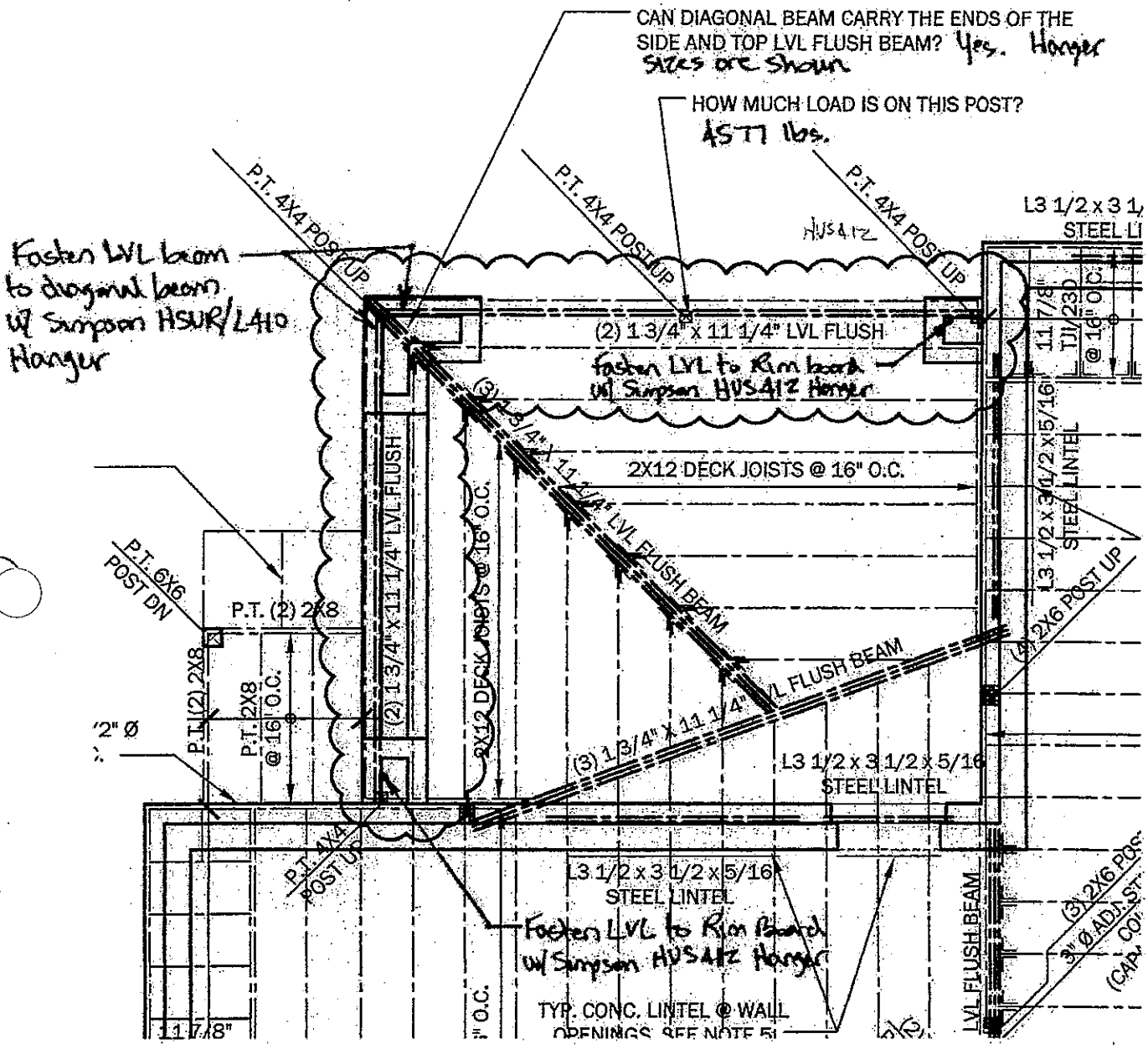
**Keith Kurtz**
**4087 35th Street North**
**Arlington, Va. 22207**

**Dear Mr. Kurtz,**

**This letter is in response to my visit to your residence on August 9, 2011. You have concerns about the Georgia Pacific GP Lam, Laminated Veneer Lumber (LVL) that was installed as support beams under the screened-in porch at your residence. I observed no structural defects (delamination) in the LVL, there was some superficial surface checking of the face veneers on several pieces but nothing that would affect the structural integrity of the beams. However the beams were in direct contact with the masonry columns. Engineered lumber is manufactured for dry use and per code can not be in contact with masonry construction, the same would hold true for untreated dimension lumber. The beams appeared to be in a covered, dry use condition (moisture content less than 16%). But if they are not in a covered, dry use condition they would not be covered under the Georgia Pacific Engineered Lumber Lifetime Limited Warranty.**

**Please feel free to contact me if you have any further questions.**

**Joe Cicotello**
**Engineered Lumber Market Manager**
**BlueLinx Corporation**




1 / 2.1 SCREEN PORCH FRAMING PLAN

SCALE 1/4" = 1'-0" (PL02)

MOORE ARCHITECTS
MOORE ARCHITECTS, PC
603 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
t 703.837.0080
f 703.837.0088

# KURTZ RESIDENCE

4087 N. 35TH STREET
ARLINGTON, VA 22207

10.09.12

SCALE: 1/4" = 1'-0"

3.2157

**State Appeal Item 1 E. Railing posts insufficient for load.**
County Appeal Item I. E. Railings are insufficient for the load.

Posts used to support the porch railing fall short of the requirements specified in the Deck guides used by various counties, including Arlington.

In an attempt to show that rails used were adequate, Moore Architects provided a drawing for these hand rail posts for Structural Design Services SDS to evaluate (4.1)

- The drawing shows a post of approximately 4 inches in depth. The actual post is 3" by 2½".
- The drawing shows a post extending to the bottom of the attached boards. The actual posts stop almost two inches from the bottom.
- The drawing calls for ½" lag screws to be used. Much smaller screws are used, installed at angles rather than straight into the posts as shown in the drawings.
- The post in the drawing is flush with the attached boards. The actual posts are not, with at least the front two shimmed at the bottom.

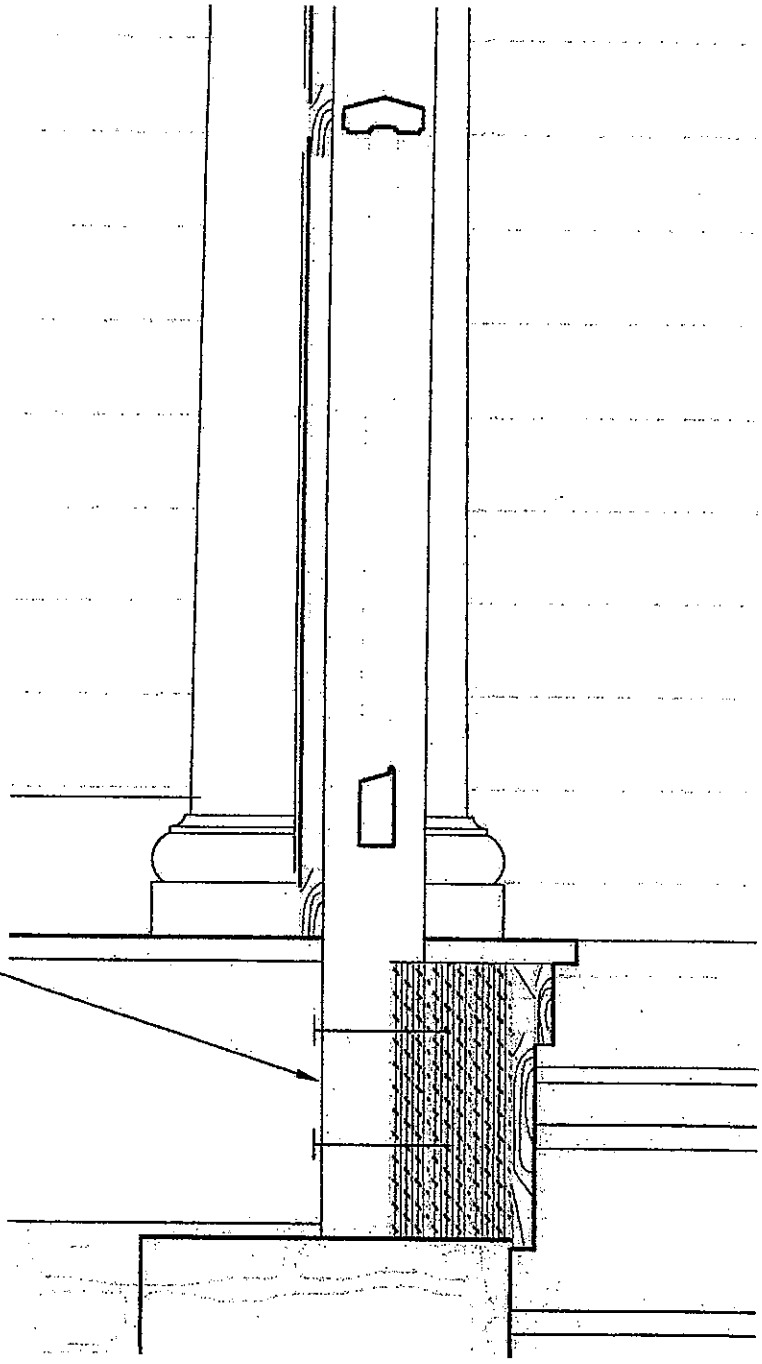
These differences would be relevant to the engineering analysis – if there was any analysis performed. The SDS report simply states:

"The post connection can withstand the 200lb. lateral force from the railing. ... The notch in the side of the base of the post is adequate. This type of connection is common in deck construction. ..."

There has been engineering work actually done in this field, including that by Loferski and Woeste at Virginia Tech. Their work is behind the various County deck codes like Arlington's, which is published as the American Forest and Paper Association Deck Construction guide. The requirements in these Deck Guides were determined by testing and analysis. Their results included:

> In one article in a Virginia Tech publication they make the point relevant to this installation:
> "Notched guardrail posts are not safe and can break at the notch with little warning. Surprisingly, notched posts are very common and are found on many decks, but they are very weak when horizontal loads are applied to the top of the rail."
>
> Because of leverage, 200 lbs. of moment on the top of a 36-inch rail can result in 1700 lbs of force at the connection for some configurations.
>
> When tested, a rail post using full 4x4s and ½ lag screws failed to meet code requirements.

While the tested configuration differed from that used on our porch, it should be noted that as currently built, our posts are significantly smaller than 4x4s, they are notched, and they are not connected as well as the configuration tested by Loferski and Woeste . There has been no actual engineering evaluation of the as-built construction. The as-built railing post configuration does not meet the County and industry Deck guidelines, and there is no evidence that the departure from these guidelines provides sufficient strength.



CAN THIS POST CONNECTION WITHSTAND 200 LBS OF LATERAL FORCH? Yes.

Provide (2) 1/2" ϕ lag screws, galvanized.

1 / 1.1 CENTRAL LOAD PATH DIAGRAM

SCALE 3/16" = 1'-0"

(PL02)

MOORE ARCHITECTS

MOORE ARCHITECTS, PC
603 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
t 703.837.0080
f 703.837.0088

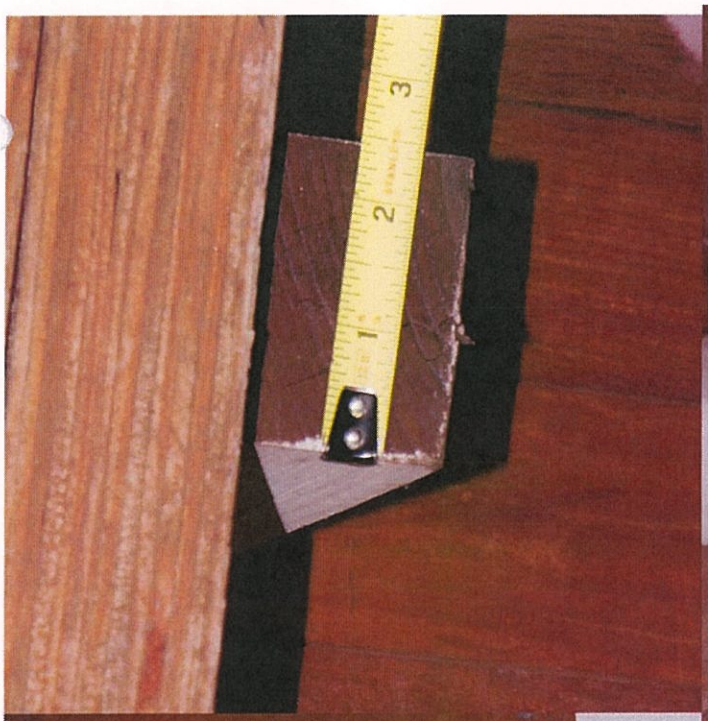
# KURTZ RESIDENCE

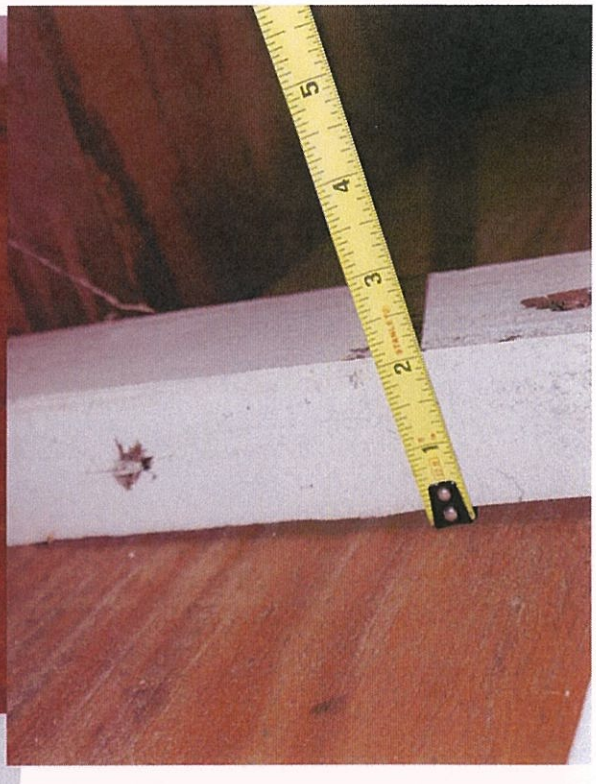
4087 N. 35TH STREET
ARLINGTON, VA 22207

10.09.12

SCALE:
1 1/2" = 1'-0"

4.1





SDS
STRUCTURAL DESIGN SERVICES, PLLC

October 15, 2012

Mr. Shamual Choudhury
Moore Architects, PC
603 King Street, 3rd Floor
Alexandria, VA 22314

RE: Kurtz Residence Project No.: 09007

Dear Shamual:

This letter is to respond to the comments from the site meeting on 10/5/12 for the Kurtz Residence. My responses to the structural comments are indicated below.

Sketch 1.1: The (2)2x8 header over the duct register in the first floor hall wall is sufficient. See the calculation on page 1 of the calculations attached to this letter

Sketch 2.1: The beam supporting the front dormer has been checked for 9 ½" depth due to a hole drilled at the bottom of the beam. The member is sufficient for 9 ½" depth. See calculation on page 1 and 2 of the calculations attached to this letter.

Sketch 3.1: The beam indicated in the sketch does support most of the load from the porch roof post above. The load is transferred to the edge beam from the triple LVL.

Sketch 3.2: The diagonal beam can support the ends of the side and top LVL beams. Hanger sizes are indicated on the sketch attached to this lettet.

Sketch 4.1: The post connection can withstand the 200 lb. lateral force from the railing. Provide (2) ½" diameter lag screws through the post into the edge beam. The notch in the side of the base of the post is adequate. This type of connection is common in deck construction. The load from the post is taken by the edge beam in compression.

Please contact my office should you have any further questions concerning this matter.

Sincerely,

Robin H. Simmons, PE
Principal/Structural Engineer

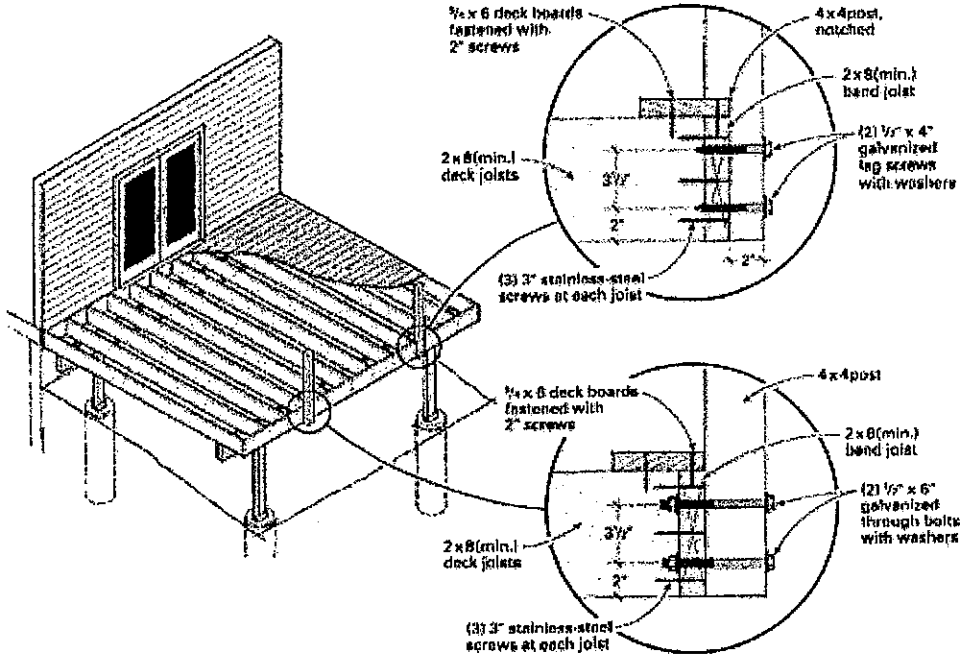
COMMONWEALTH OF VIRGINIA
ROBIN H. SIMMONS
No. 022866
10/15/12
PROFESSIONAL ENGINEER

C:\...\STRUCTURAL DESIGN SERVICES PLLC\Project Files\PRO-2009\09007\State Appeal\09007 Response to Meeting Comments.doc

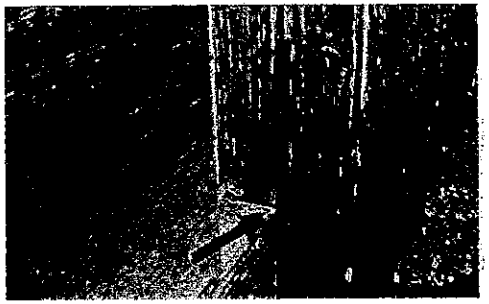


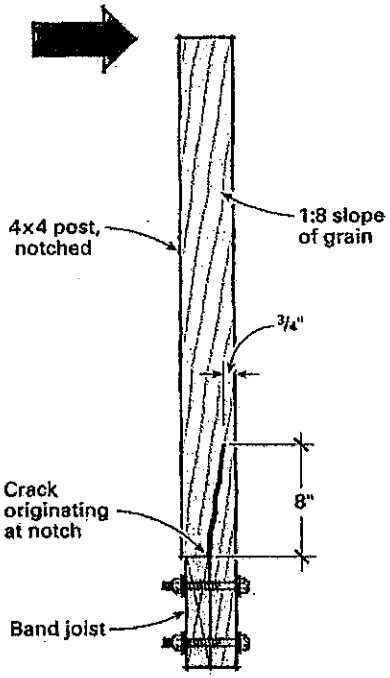
Structural Design Services, PLLC | 3551 White Oak Drive; Harrisonburg, VA 22801-5336| Phone: 540-433-6135 | Fax: 540-433-6136

## Tested Post Connections That Failed




Cracks will typically develop from the corner of a notch (left). As a crack develops, a steep "slope of grain" can critically reduce the section of the post, as the drawing (right) shows.





**State Appeal Item 1 F. Connection of Support post carrying 4577 lbs load.**

County Appeal item I. G. Sketch 3.2 shows a notched 4x4 post with 4577 lbs. load on the front LVLs. We questioned this previously. At our November 2011 meeting [*with Arlington County Building Official, Mr. Amiri*] one of the County staff said that this was not a problem because the post did not carry a significant load. Mr. Amiri asked that they verify that.

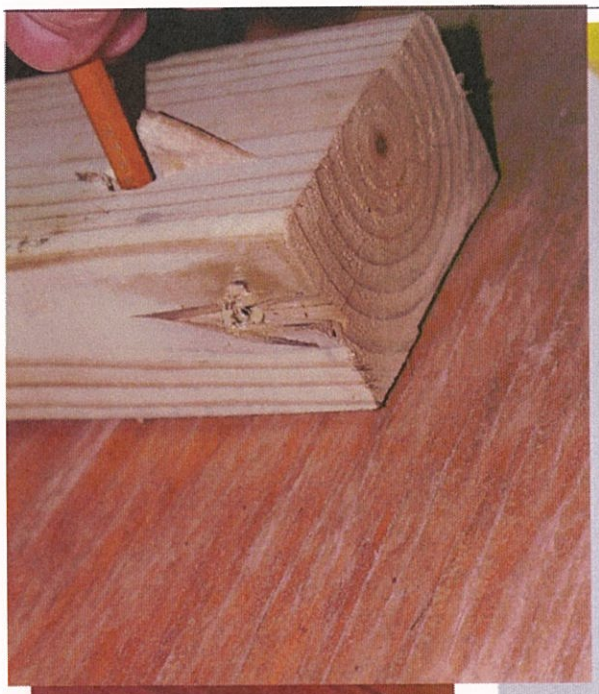
The SDS engineer did calculate this load, contradicting the original County claim of no significant load.

Now that it is known that this post carries a significant load, neither SDS nor Arlington County has addressed the connection of the post to the LVL.
The post is notched (with problems as noted above), and if 3.5" deep (a standard 4x4), has less than 1.5 " bearing on the LVLs at the notch.

It appears that the builder may have originally planned for a stronger connection. As seen in the photos, two holes were drilled in the post that could have accommodated larger bolts, but were not used. The location does not provide visibility into the holes, and we originally assumed there was a stronger bolt recessed into the post. When we measured the depth of the hole, versus the thickness of the post, we discovered that the holes went the whole way through the post (see photos with pencil).

The only attachment of this notched 4x4 carrying over 4500 lbs. load appears to be two lag screws installed at angles on left side of the post.

We believe the combination of the questionable use of a notched 4x4 and inadequate attachment results in a structural element that could fail to carry the identified load over time.




DIXON®
ORIOLE
STANLEY®
HB
12 ft

# Appeal Item 2

**State Appeal Item 2 A. Mechanical Room Load Path**
County Appeal Item III. Notice of Violation Item No. 3 (mechanical room load path). Reason for appeal is that the County Notice of Violation did not address the entire load path.

"Currently this violation only addresses half of the load path starting in the mechanical room and working up to the first floor. As discussed on County site visits, the load path must continue up through the next floor. The County did not pursue this."

In writing, and during the visits by County employees to the house, we asked that they address all missing elements and deviations for this load path. In June 2011 we informed the County in writing that a required 4x4 post was missing at the basement level in the mechanical room. In September 2011, we showed County personnel that there was no 4x4 post in the required location. In fact, there was no post at all carrying the load through the floor. After additional visits, and after our original appeal to the State, the County finally cited the missing post as a violation in December 2012. The violation only covered one of the missing elements in the load path, ignoring another and ignoring the elements not provided according to the approved drawings.

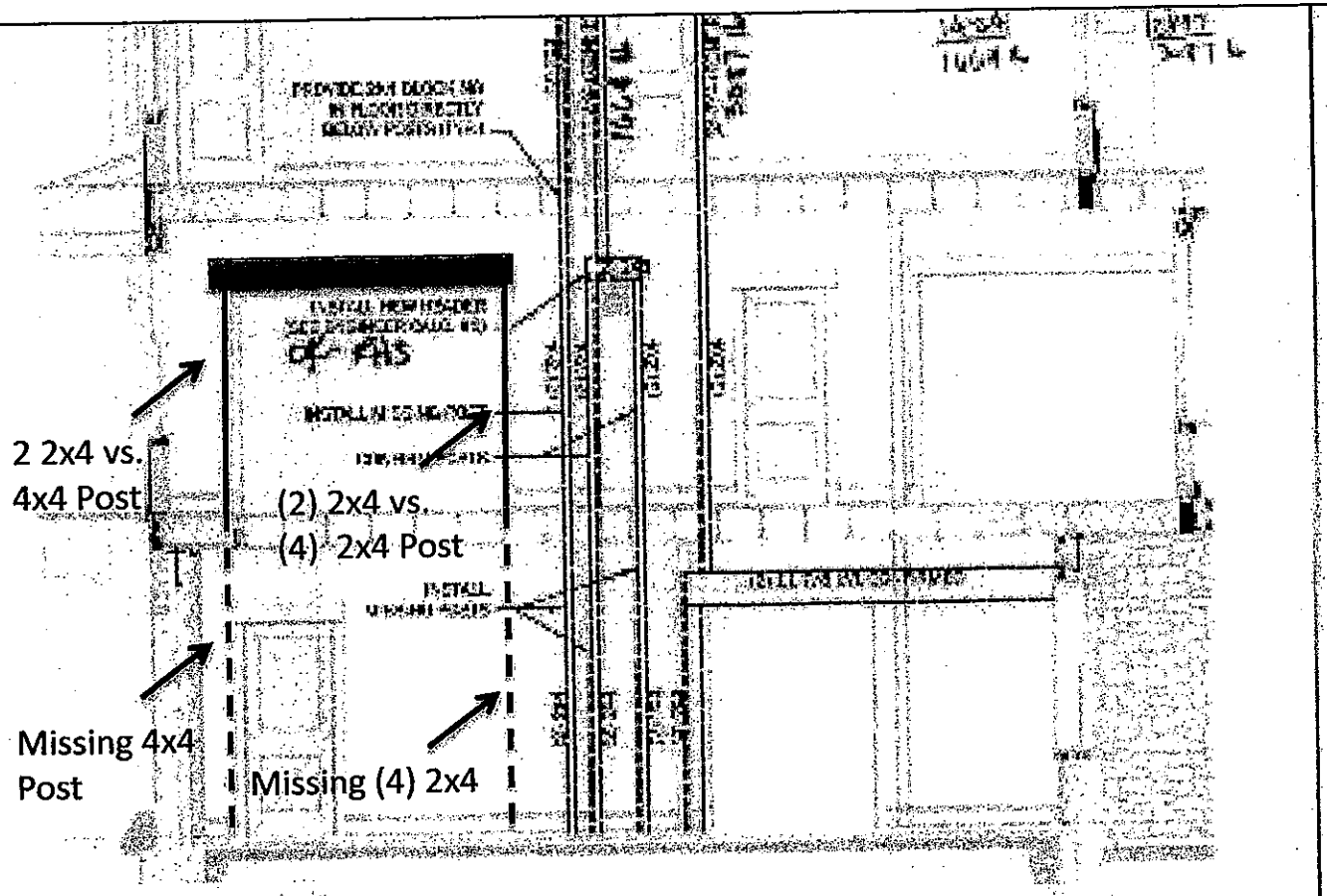
The attached diagram shows this entire load path, according to the drawings.

Currently both support posts for this path in the basement level are missing, a 4x4 post on one side and a quadruple 2x4 on the other. On the first floor, the LVL over the opening is supported by double 2x4s on each side instead of the specified 4x4 on one side and quadruple 2x4 on the other.

Correcting the violation cited by the County would provide support on one side by replacing the missing 4x4, but leave the other side unsupported.

The photo taken before the drywall was installed shows some of the detail on the load being supported (Image 1406), with the floor joists resting on the beam above the opening.

We believe that it is reasonable to ask that the County cite the entire discontinuous load path and plan deviation and not just one side, or just one of the two levels, as that is the remedy required to correct the contravention of R601.2.




1/1.1 CENTRAL LOAD PATH DIAGRAM

KUFTZ RESIDENCE
4087 N. 29TH STREET
ARLINGTON, VA 22207

10.09.12
SCALE: 3/16" = 1'-0"
1.1

Dining Room Entrance Support
Image 1406

**State Appeal Item 2 B. Basement Office Load Path**

County Appeal Item IV. Notice of Violation Item No. 4 (basement office/closet load path). Reason for appeal is that the County Notice of Violation did not address the entire load path.

This load path in question is intended to extend from the foundation to the second floor. The County was informed in writing in June 2011 that the 4x6 basement post that was shown in the drawing was missing, and the first floor path deviated significantly from the approved drawings. In September 2011 we removed portions of the drywall and showed the County the deviations. As with other load path deviations, Arlington County took no action on citing this load path violation until after we appealed to the State Technical Review Board. On December 12, 2012, a year and a half after we told the County that this 4x6 post was missing – with nothing in it's place – and 14 months after we opened the wall to show them, Arlington County cited this load path, but only for the missing 4x6 in the basement.

The photos of the load path area on the first floor show a pair of 2x4s carrying the load. They appear to us to have been an afterthought, cut to fit in a location where blocking had already been installed. Instead of removing the lower blocking to install the 2x4s, R-One notched the studs. They did not make the necessary effort to measure and cut evenly, so these notched studs don't bear on the blocking. The load is carried by the small un-notched section at the bottom of the studs.

This is addressed in the report by JGK Structural Engineer (Sep 22, 2011):
"7. Post condition at first level study indicates a notched stud with inadequate bearing (See Figure 7). Also it appears that the post does not track down to foundation below level 1. " (Then JKG provides potential corrective action).

JGK issued the follow-on July 25, 2012, after the County building official claimed he could do nothing with the report because it used the word "appear":
"3. Regarding item #7 in my report, the post is discontinuous from the point of load application to the foundation." (Note that the original report identifies a "notched stud with inadequate bearing" and not "a notched stud with the *appearance* of inadequate bearing.")

While the violation for the missing basement 4x6 post was finally cited, the deviation and the inadequate bearing on the first floor, reported by the JGK structural engineer and shown to the County was not cited.


LAFARGE

**State Appeal Item 2 C. Substitution of Weaker Load Path in MBR**

County Appeal Item V. Missing from Notice of Violation. Reason for appeal is that the County did not cite a violation where the builder substituted a weaker load path element than approved without providing evidence of its suitability.

"The builder substituted a weaker post in supporting the main roof beam in the rear of the Master bedroom, contravening VUSBC R601.2. This departure from the approved drawings is visible and not hidden by any wall at attic level."

The first load path element found to be missing in the house was a 4x6 solid wood post approximately 14 feet long on supporting the ridge beam in the Master BR from a beam on the second floor. Instead, the ridge beam was supported by a short triple 2x6 resting on a beam in the third floor. As far as we know there are no other wood posts of this size in the house, so it's difficult to see how the builder could accidentally miss this one. Neither Moore architects nor the building inspectors noticed that it was missing during construction. As this area was still visible from the attic we were able to show this construction error to a County delegation in April 2011. While the architect acknowledged the problem, the County never cited the violation. Instead, nearly 11 months later the County asked, with respect to this and two other construction issues, that the builder "provide substantiation that those deviation conform to State Building Code." Eventually, the builder installed the required 4x6 column.

The approved plans called for a triple 2x6 at the other end of the ridge beam. The builder used a double 2x6 instead. This was confirmed by direct observation in the attic, and by photos and a stud finder in the MBR. We asked that the County rule on the deviation at that end of the ridge beam.

In uncovered areas of the framing, we have found the required nailing pattern absent along the built up posts/columns. Consistent with this finding, in the MBR photos of the load path, the nailing required along the post is not visible. If it's not nailed properly, then it is simply two adjacent 2x6s rather than a double 2x6, further reducing the capacity.

The builder has provided no evidence that the deviation from a properly constructed triple 2x6 post, as specified in the approved drawings, is acceptable for this location.

The County has been told of the problem and has not cited it as a violation of VUSBC R601.2.

Master BR rear wall after insulation
About 2 weeks after framing inspection
Image 1612

C15.2.3.5 The actual compression stress parallel to grain, $f_c$, in spaced columns also is to be checked in all cases against the adjusted compression design value parallel to grain, $F_c'$, based on the slenderness ratio $\ell_2/d_2$ and a $C_P$ factor calculated in accordance with the provisions of NDS 3.7 without use of the spaced column fixity coefficient, $K_x$. Use of connectors to join individual compression members through end blocks is assumed to only increase the load-carrying capacity of spaced columns in a direction perpendicular to the wide face of the members. When the ratio of the width to thickness of the individual compression members is less than the square root of the spaced column fixity coefficient, $K_x$, the adjusted compression stress parallel to grain, $F_c'$, based on the slenderness ratio $\ell_2/d_2$ may control.

C15.2.3.6 See C3.7.1.6.

C15.2.3.7 Design provisions for spaced beams joined by end blocks and connectors are not included in the Specification. The beam-column equations of NDS 3.9 therefore apply only to those spaced columns that are subject to loads on the narrow edges of the members that cause bending in a plane parallel to their wide face.

C

COMMENTARY: SPECIAL LOADING CONDITIONS

## C15.3 Built-Up Columns

As with spaced columns, built-up columns obtain their efficiency by increasing the buckling resistance of the individual laminations. The smaller the amount of slip occurring between laminations under compressive load, the greater the relative capacity of that column compared to a solid column of the same slenderness ratio made with the same quality of material. Based on tests of columns of various lengths (114, 116), the capacity of two equivalent column types can be expressed as a percentage of the strength of a solid column made with material of the same grade and species. For mechanically connected built-up columns, efficiencies ranged from a value of 82 percent at an $\ell/d$ ratio of 6, decreasing to a low of 65 percent at an $\ell/d$ of 18, and then increasing to 82 percent at an $\ell/d$ of 26.

The NDS design provisions for built-up columns made with various types of mechanical fasteners are based on more recent modeling and testing (82, 83). This model can be used to determine the strength of any built-up column on the basis of the slip between members of the column in both the elastic and inelastic ranges. The theoretical formulas were verified through extensive testing including 400 column tests and evaluation of the load-slip properties of 250 different types of connections. The formulas are entered with fastener load-slip values based on beam-on-elastic-foundation principles (71).

### C15.3.1 General

The provisions of NDS 15.3 apply only to multi-ply columns in which the laminations are of the same width and are continuous along the length. The limitations on number of laminations are based on the range of columns that were tested (83) that met the connection requirements of NDS 15.3.3 and 15.3.4. The minimum lamination thickness requirement assures use of lumber for which reference design values are available in the Specification.

### C15.3.2 Column Stability Factor, $C_P$

Provisions in NDS 15.3.2 are the same as those applicable to solid columns in NDS 3.7.1 except for the addition of the column stability coefficients, $K_f$, in NDS Equation 15.3-1.

When nailed in accordance with the provisions of NDS 15.3.3, the capacity of built-up columns has been shown to be more than 60 percent of that of an equivalent solid column at all $\ell/d$ ratios (82). Efficiencies are higher for columns in the shorter ($\ell/d < 15$) and longer ($\ell/d > 30$) slenderness ratio ranges than those for columns in the intermediate range.

The efficiency of bolted built-up columns conforming to the connection requirements of NDS 15.3.4 is more than 75 percent for all $\ell/d$ ratios (82). As with nailed columns, efficiencies of short and long bolted built-up columns are higher than those for intermediate ones. The greater efficiency of bolted compared to nailed columns is reflective of the higher load-slip moduli obtainable with bolted connections.

In accordance with NDS 3.7.1.3, NDS Equation 15.3-1 is entered with a value of $F_{cE}$ based on the larger of $\ell_{e1}/d_1$ or $\ell_{e2}/d_2$, where $d_2$ is the dimension of the built-up member across the weak axis of the individual laminations (sum of the thicknesses of individual laminations). Research (82) has shown that buckling about the weak axis of the individual laminations is a function of the amount of slip and load transfer that occurs at fasteners between laminations.

**State Appeal Item 2 D.**
County Appeal Issue II. C. Notice of Violation No. 2 (Load Path Issue).

R-One did complete one of the major load paths in the central part of the house, a foundation to roof path consisting of 4x6 posts. It appears that County inspectors noticed this missing load path on the May 21, 2010 framing inspection (see photo of inspection notice). These posts are missing in photos taken on May 22, 23 but appear in early June photos.

Unfortunately the path is still not continuous, as some of the squash blocks are not cut long enough to span the height of the floor joists and thus support no weight.
The inadequate squash blocks were noted on our original engineer's report (JGK), and on his follow-on report. (Items 10. and 5.)
Both the relevant ESR report and the manufacturer's instructions require full length blocking. Without them there is no continuous load path, in contravention of VUSBC R601.2.

In addition, the post itself was not cut evenly and there is less than 50% bearing of the plate on the post (as shown by photo of card between post and top plate.

County building department officials examined this clear violation of the requirement for a continuous load path at least twice, but chose not to cite the violation.

ARLINGTON COUNTY, VIRGINIA
TMENT OF COMMUNITY PLANNING, HOUSING AND DEVELOPMENT
INSPECTION SERVICES DIVISION • PHONE (703) 228-3800

Building
Electrical
Elevator
Fire
Mechanical
Plumbing

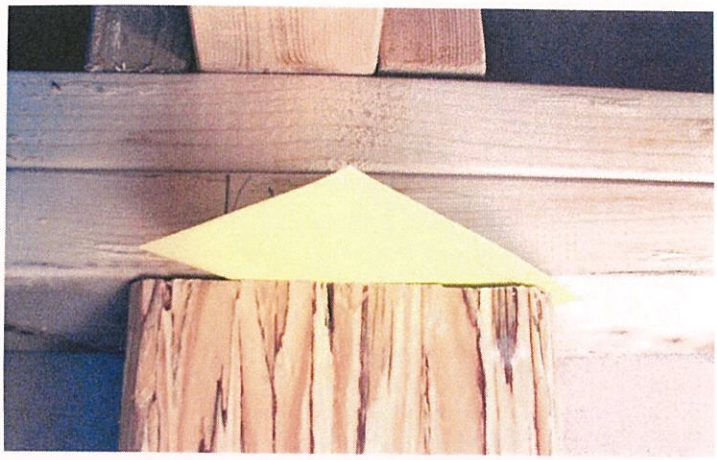
**TYPE OF INSPECTION**

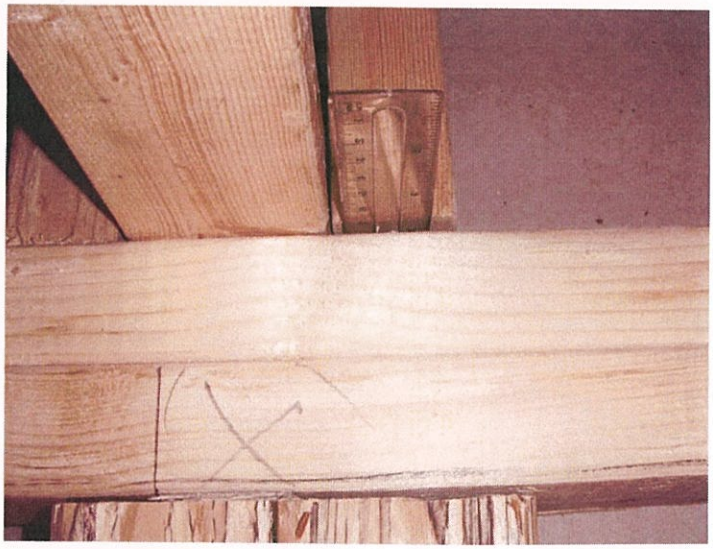
ROUGH
ADI - FRAMING

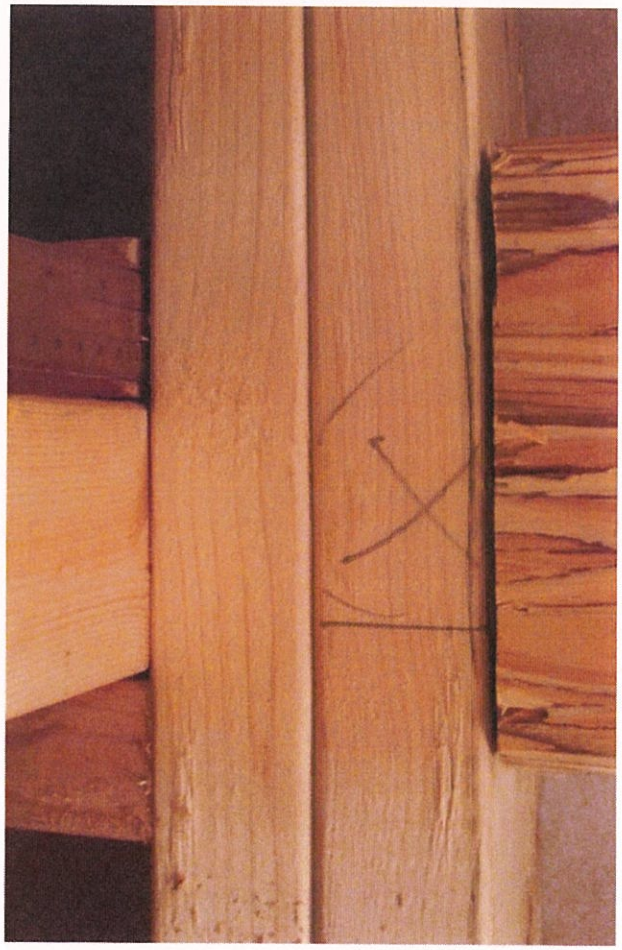
APPROVED
REJECTED

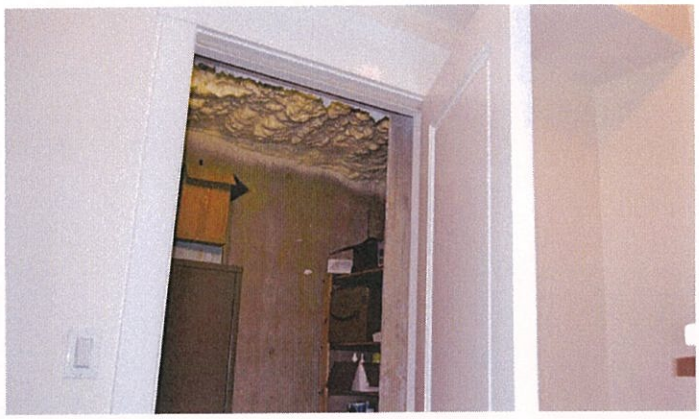
ress 4027 35TH ST N Date 5/21/10
actor R&D Permit No. B0901165
BEARING
ments MISSING 4 X 4 SOLID POST BLOCKS
ENG'S COMMENT MET
PENDING ENG'S REPORT
OK TO INSULATE Re-inspection Fee? Yes No
MECH OK M1000440

ARLINGTON COUNTY, VIRGINIA
COMMUNITY PLANNING, HOUSING AND DEVELOPMENT









Attic Closet

# ICC-ES Evaluation Report

**ESR-1826**

*Reissued May 1, 2009*

*This report is subject to re-examination in one year.*

www.icc-es.org | (800) 423-6587 | (562) 699-0543 *A Subsidiary of the International Code Council®*

**DIVISION: 07—THERMAL AND MOISTURE PROTECTION**
**Section: 07210—Building Insulation**

**REPORT HOLDER:**

**ICYNENE, INC.**
**6747 CAMPOBELLO ROAD**
**MISSISSAUGA, ONTARIO L5N 2L7**
**CANADA**
**(905) 363-4040**
**www.icynene.com**

**EVALUATION SUBJECT:**

**ICYNENE LD-C-50™ (formerly known as The Icynene Insulation System®)**

## 1.0 EVALUATION SCOPE

**Compliance with the following codes:**

- 2006 *International Building Code®* (IBC)
- 2006 *International Residential Code®* (IRC)
- 2006 *International Energy Conservation Code®* (IECC)
- Other Codes (see Section 8.0)

**Properties evaluated:**

- Surface burning characteristics
- Physical properties
- Thermal performance (R-values)
- Attic and crawl space installation
- Fire resistance
- Air permeability

## 2.0 USES

Icynene LD-C-50™ is used to provide thermal insulation in buildings and to seal areas such as plumbing and wiring penetrations against air infiltration, in Type III and Type V construction (IBC) and dwellings under the IRC. The Icynene Insulation System may be used in fire-resistance-rated construction when installed in accordance with Section 4.5.

## 3.0 DESCRIPTION

### 3.1 General:

Icynene LD-C-50™ is a low-density, open-cell, polyurethane foam plastic insulation and air barrier system that is 100 percent water-blown with an installed nominal density of 0.5 pcf (8 kg/m$^3$). Icynene LD-C-50 is a two-component, spray-applied product. The two components of the insulation are Base Seal®, a polyisocyanate, and Gold Seal®, a resin. Base Seal® must be stored at a temperature of 50°F (10°C) or greater, and has a shelf life of six months. Gold Seal® must be stored at temperatures below 100°F (37.8°C), and has a shelf life of six months.

### 3.2 Surface Burning Characteristics:

When tested in accordance with ASTM E 84, at a thickness of 5.5 inches (140 mm) and a nominal density of 0.5 pcf (8 kg/m$^3$), Icynene LD-C-50 has a flame spread index of 25 or less and a smoke-developed index of 450 or less.

### 3.3 Thermal Resistance:

Icynene LD-C-50 has thermal resistance (R-values) at a mean temperature of 75°F (24°C) as shown in Table 1.

### 3.4 Air Permeability:

Based on testing in accordance with ASTM E 283, Icynene LD-C-50 is considered air-impermeable.

### 3.5 Intumescent Coatings:

**3.5.1 FireFree 88:** FireFree 88 is a water-based intumescent coating manufactured by International Fire Resistant Systems, Inc. FireFree 88 is supplied in 5-gallon (19 L) buckets and has a shelf life of one year when stored in a factory-sealed container at temperatures between 35°F (1.7°C) and 85°F (29°C).

**3.5.2 SafeCoat Latex:** SafeCoat Latex Fire Retardant Coating is a latex-based intumescent coating manufactured by Magna Coatings Technology Inc. SafeCoat Latex is supplied in 1-gallon (3.8 L), 5-gallon (19 L) and 50-gallon (189 L) quantities and has a shelf life of 24 months when stored in a factory-sealed container at temperatures above 50°F (10°C).

**3.5.3 Aldocoat 757:** Aldocoat 757 intumescent ignition barrier coating is a water-based acrylic coating manufactured by Aldo Products Company, Inc. Aldocoat 757 is supplied in 5-gallon (19 L) pails and 55-gallon (208 L) drums and has a shelf life of six months when stored in a factory-sealed container at temperatures between 40°F (4.5°C) and 90°F (32°C).

## 4.0 DESIGN AND INSTALLATION

### 4.1 General:

The manufacturer's published installation instructions and this report must be strictly adhered to and a copy of these instructions and this evaluation report must be available on the jobsite at all times during installation.

- 1,805 pounds (8029 N) per stud.
- Design stress of 0.78 $F'_c$.
- Design stress of 0.78 $F'_c$ at a maximum $l_e/d$ of 33.

**4.5.3 Assembly 3 (Floor/Ceiling):** Minimum nominally 2-by-10 [$1^1/_2$ by $9^1/_4$ inches (38 mm by 235 mm)] Douglas fir, No. 2 grade wood joists spaced 24 inches (610 mm) on center, with minimum 1-by-3 [$^3/_4$ by $2^1/_2$ inches (19.1 by 64 mm)] spruce bridging at mid-span. Floor decking must be minimum $^1/_2$-inch-thick (12.7 mm) exterior grade plywood installed perpendicular to joists and fastened with 2-inch-long (51 mm) ring shank nails 6 inches (152 mm) on center at the joints and 12 inches (305 mm) on center at the intermediate joists. Plywood joints must occur over joists. Icynene insulation must be applied to the underside of the plywood deck between the joists to a depth of 5 inches (127 mm). Two layers of minimum $^5/_8$-inch-thick (15.9 mm), Type X gypsum wallboard must be attached perpendicular to the joists on the ceiling side of the assembly. The first layer must be attached with $1^1/_4$-inch-long (32 mm), Type W drywall screws, spaced 24 inches (610 mm) on center. The second layer must be applied perpendicular to the joists, offset 24 inches (610 mm) from the base layer. The second layer must be attached with 2-inch-long (51 mm), Type S drywall screws spaced 12 inches (305 mm) on center. Additional fasteners must be installed along the butt joints of the second layer, securing the two layers together. These fasteners must be $1^1/_2$-inch-long (38 mm), Type G drywall screws placed 2 inches (51 mm) back from each end of the butt joint and spaced 12 inches (305 mm) on center. The wallboard joints on the exposed side must be treated with paper tape embedded in joint compound and topped with an added coat of compound, and the fastener heads must be coated with joint compound in accordance with ASTM C 840 or GA-216.

## 5.0 CONDITIONS OF USE

Icynene LD-C-50 described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

**5.1** This evaluation report and the manufacturer's published installation instructions, when required by the code official, must be submitted at the time of permit application.

**5.2** Icynene LD-C-50 must be installed in accordance with the manufacturer's published installation instructions, this evaluation report and the applicable code. If there is a conflict between the installation instructions and this report, this report governs.

**5.3** Icynene LD-C-50 must be separated from the interior of the building by an approved 15-minute thermal barrier. When installation is in attics and crawl spaces in accordance with Section 4.4, a thermal barrier is not required on the attic or crawl space face of the insulation.

**5.4** Icynene LD-C-50 must not exceed the thickness and density noted in Section 3.2 of this report, except as permitted for attics and crawl spaces as described in Section 4.4.

**5.5** Icynene LD-C-50 must be protected from the weather during and after application.

**5.6** Icynene LD-C-50 must be applied by installers certified by Icynene, Inc.

**5.7** Use of Icynene LD-C-50 in areas where the probability of termite infestation is "very heavy" must be in accordance with IRC Section R320.5 or IBC Section 2603.8, as applicable.

**5.8** Jobsite certification and labeling of the insulation must comply with IRC Sections N1101.4 and N1101.4.1 and IECC Sections 102.1.1 and 102.1.11, as applicable.

**5.9** A vapor retarder must be installed in accordance with the applicable code.

**5.10** Icynene LD-C-50 is manufactured in Mississauga, Ontario, Canada, under a quality control program with inspections by Intertek Testing Services (AA-691).

## 6.0 EVIDENCE SUBMITTED

**6.1** Data in accordance with the ICC-ES Acceptance Criteria for Spray-applied Foam Plastic Insulation (AC377), dated May 2008.

**6.2** Test report on air leakage rate in accordance with ASTM E 283.

**6.3** Comparative crawl space tests and related analysis, to justify attic and crawl space assemblies.

**6.4** Test reports in accordance with ASTM E 119.

## 7.0 IDENTIFICATION

All packages and containers of Icynene LD-C-50 must be labeled with the Icynene, Inc., name and address; the product name; the flame spread index and the smoke-developed index; the shelf life expiration date; the label of the inspection agency (Intertek Testing Services); and the evaluation report number (ESR-1826).

## 8.0 OTHER CODES

**8.1 Scope:**

The products recognized in this report have also been evaluated for compliance with the following codes:

- 2003 *International Building Code®* (2003 IBC)
- 2003 *International Residential Code®* (2003 IRC)
- 2003 *International Energy Conservation Code®* (2003 IECC)

**8.2 Uses:**

See Section 2.0.

**8.3 Description:**

See Section 3.0.

**8.4 Installation:**

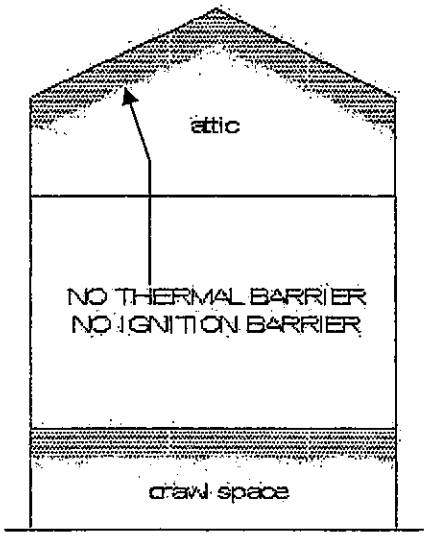
**8.4.1 General:** See Section 4.1.

**8.4.2 Application:** See Section 4.2.

**8.4.3 Thermal Barrier:** Icynene LD-C-50 must be separated from the interior of the building by an approved thermal barrier, such as 0.5-inch (12.7 mm) gypsum wallboard installed using mechanical fasteners in accordance with the applicable code, or an equivalent 15-minute thermal barrier complying with the applicable code, except where installation is within an attic or crawl space as described in Section 8.4.4.

**8.4.4 Attics and Crawl Spaces:**

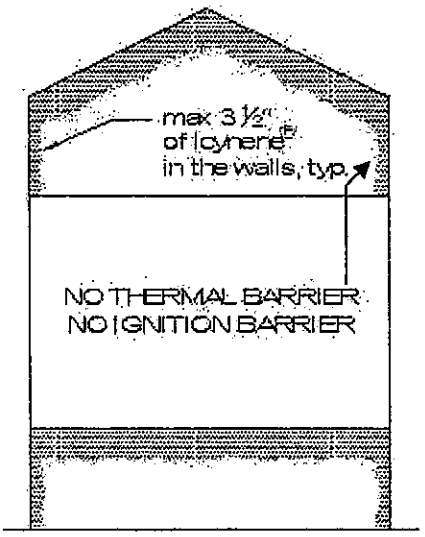
**8.4.4.1 Application with a Prescriptive Ignition Barrier:** When Icynene LD-C-50 is installed within attics or crawl spaces where entry is made only for service of




Icynene® installed without a thermal or ignition barrier:

- under the roof sheathing.
- under the floor sheathing.
- no insulation on vertical walls.

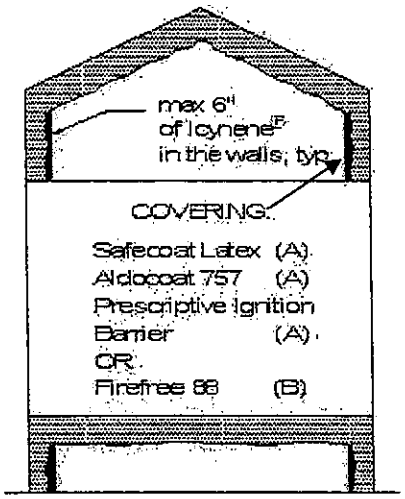
**Assembly No. 1**




Icynene® installed without a thermal or ignition barrier:

- under the roof sheathing.
- under the floor sheathing.
- on vertical walls.

**Assembly No. 2**

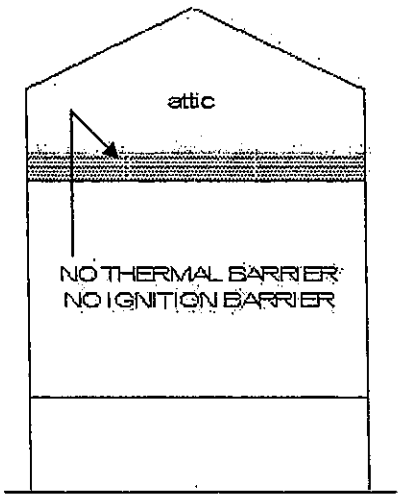



Icynene® installed:
- under the roof sheathing.
- under the floor sheathing.
- on vertical walls.

(A) Only Icynene on the walls needs to be covered, or

(B) Firefree 88 needs to cover all foam surfaces.

**Assembly No. 3**




Icynene® installed without a thermal or ignition barrier:

- on the floor of the attic space.

**Assembly No. 4**

**See Section 4.4.2 for general requirements**

**FIGURE 1—ATTIC AND CRAWL SPACE INSTALLATION WITHOUT A PRESCRIPTIVE IGNITION BARRIER**


# DC315 Intumescent Coating

Your one step solution for Polyurethane Foam **"15 Minute Thermal Barrier"** and **"Ignition Barrier"** ratings.

DC315 is a Certified Warnock Hersey listed and rated product which has passed certified testing for both the (UL-1715) 15 minute Thermal Barrier and the NFPA 286 (AC-377 standards) as an Ignition Barrier.

DC315 applies as easily as regular latex paint and being a water base cleans up in a snap. Using DC315 will satisfy code compliance on"15 Minute Thermal Barriers" and "Ignition Barriers" on your next foam job means:

- **Large single coat spread rate**
- **UL 1715 Thermal Barrier**
  - (88.88 sq. ft./gal @ 18 mils wet and 12 mils dry) coverage rate of 1.136 gallons (4.3 L) per 100 square feet (9.3 $m^2$)
- **NFPA 286 (AC377) Attic Crawl Space Ignition Barrier**
  - (130 sq. ft./gal @ 12 mils wet 8 mils dry) coverage rate of .77 gallons (2.9 L) per 100 square feet (9.3 $m^2$)
- **Reduced labor cost, reduced material cost and higher profits**
- **Fast turnaround time**
- **Easily applied with a sprayer, brush or roller**
- **No complicated mixing- just stir the paint before application**
- **No waste**
- **Fast and easy clean up of our water based latex product, tools & equipment**
- **Will not gum up or block spray equipment**
- **Passed strict EPA – VOC and AMQD tests**
- **No formaldehyde**
- **Non Toxic, Low Vapors, Low VOCs less than 50 making DC-315 a Green Product**
- **Earn 2 LEED points for using DC-315**
- **Two year shelf life**
- **Certified Code Compliant Coating**


---

**RECOMMENDED USES:** This product is designed for use on interior polyurethane foam surfaces.

**USED BY:** Schools, Colleges, Nursing Homes, Child Care Centers, Hospitals, Penal Institutions, Apartments, Hotels, Factories, Warehouses, Retail Stores, Restaurants, Utilities, Railroad and other Transportation Companies, Oil and Chemical Installations, Military Installations, and other facilities where fire retardant coatings are required.

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**PRECAUTIONS:** Adequate ventilation must be provided during and after application until the coating has dried. Avoid breathing vapors or spray mist. Close container after use. **Read MSDS before opening containers.**

# Appeal Item 4

**State Appeal Item 4. Garage**

**State Appeal Item 4 A. Lack of ventilation and under-floor access**
County Appeal Item VII. "Missing from Notice of Violation. Reason for appeal is the failure of the County to cite the lack of ventilation and under-floor access in the garage or lack of hurricane ties in the garage.

A. The lack of ventilation and under-floor access in the garage is a violation of the applicable 2006 building code (R408.1, R408.2 and R408.4), and the clear instructions from the County plan reviewers to include ventilation and access (as seen in red-lines to the approved drawings). County preliminary findings from November 2, 2011, suggest that this lack of ventilation is not a problem because of the construction details of the garage, i.e., the garage floor is simply an elevated concrete slab. To the contrary, the bottom of the garage floor, which is exposed to the unventilated cavity, is metal."

***R408.1 Ventilation***

*The under-floor space between the bottom of the floor joists and the earth under any building (except such space occupied by a basement) shall have ventilation openings through foundation walls or exterior walls. The minimum net area of ventilation openings shall not be less than 1 square foot for each 150 square feet of crawl space area, unless the ground surface is covered by a class 1 vapor retarder material (with approved retarder, the minimum ventilation shall be 1 square foot of ventilation per 1500 square feet of under floor space area). One such ventilating opening shall be within 3 feet of each corner of the building.*

***R408.2 Openings for under-floor ventilation.*** *The minimum net area of ventilation openings shall not be less than 1 square foot (0.0929 m2) for each 150 square feet (14 m2) of under-floor area. One ventilating opening shall be within 3 feet (914 mm) of each corner of the building.*

***R408.4 Access.***
*Access shall be provided to all under-floor spaces. Access openings through the floor shall be a minimum of 18 inches by 24 inches (457 mm by 610 mm). Openings through a perimeter wall shall be not less than 16 inches by 24 inches (407 mm x 610 mm). When any portion of the through-wall access is below grade, an areaway not less than 16 inches by 24 inches (407 mm x 610 mm) shall be provided. The bottom of the areaway shall be below the threshold of the access opening. Through wall access openings shall not be located under a door to the residence.*

County informal ruling November 2011:

*"No access is provided to the under floor "vault" area beneath the garage. While Section R408.4 requires access and ventilation to under floor spaces it is our interpretation that this code section does not apply to this cavity. The intent of this section is to prevent moisture accumulation that affect structural floor members. The garage floor is an elevated concrete slab. The void below has no access and no equipment or penetrations. The walls and floor are concrete and completely non-combustible. As a result, no violation is noted. "*

The exception to the code requirement given by the County does not exist in the code book.
As the photo shows, the floor is not simply an "elevated concrete slab." The photos and the architectural plans both show concrete fill on a composite metal deck.

The County reviewers were clearly aware of the code requirements, and marked up the garage drawings accordingly, to require the ventilation and access of specific sizes and at specific locations, and those requirements match the written code requirements. At the time of plan review, the County's interpretation was that the code should be implemented as written. The builder ignored the VUSBC and the instructions on the approved drawings.

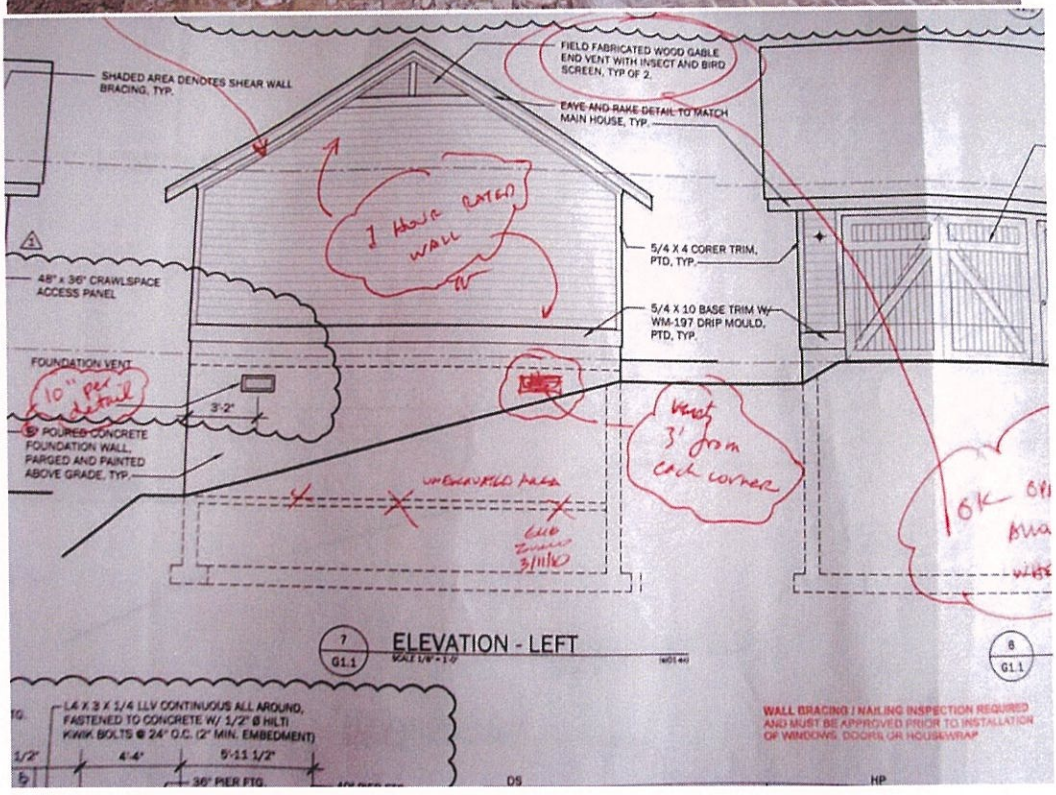
The requirements of the VUSBC R408 are clear, and the builder ignored the clear intention of the plan approvers in violating this code requirement. The violation should be cited.

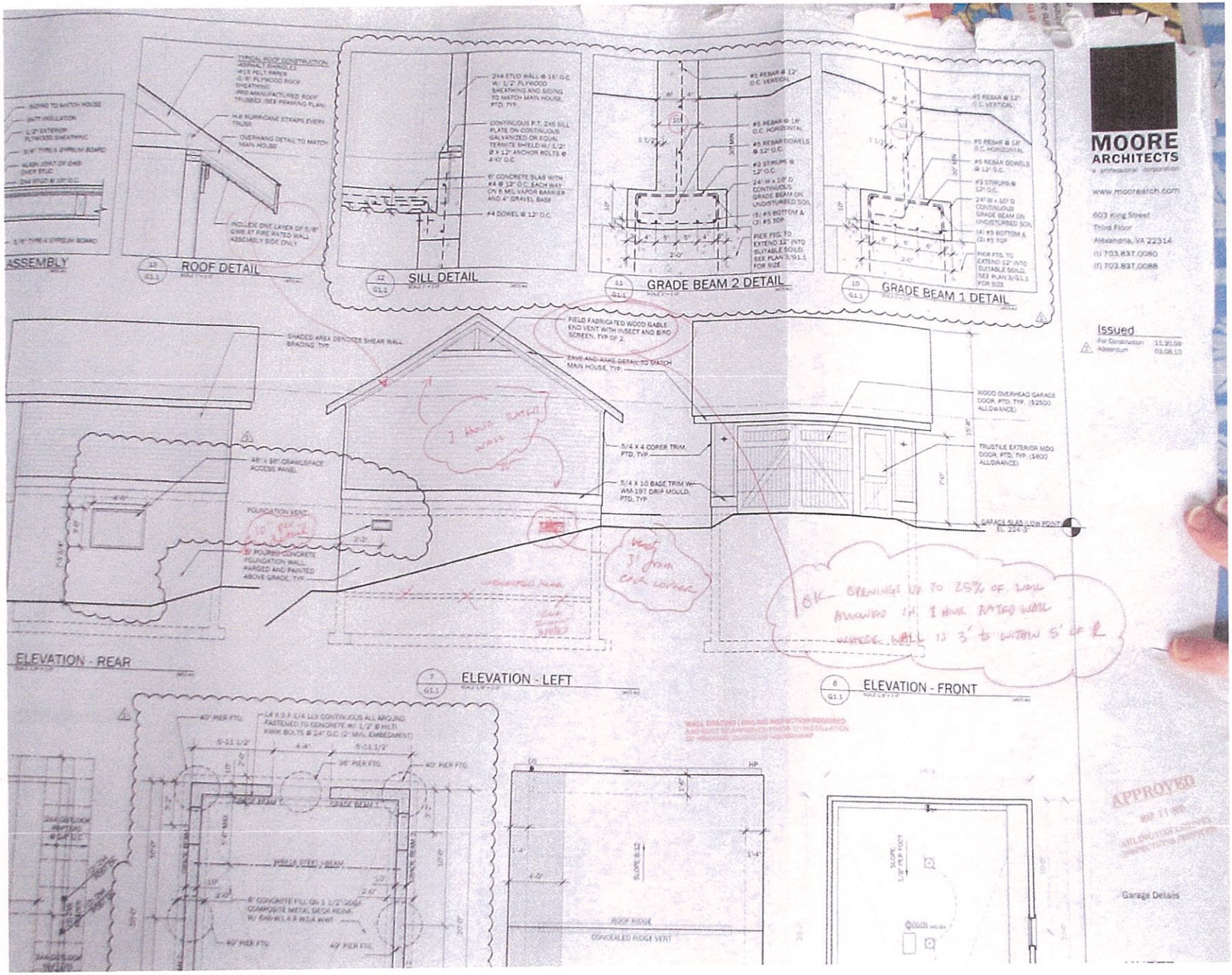
**State Appeal Item 4B.**
County Appeal Item VII B. Missing Hurricane Ties.

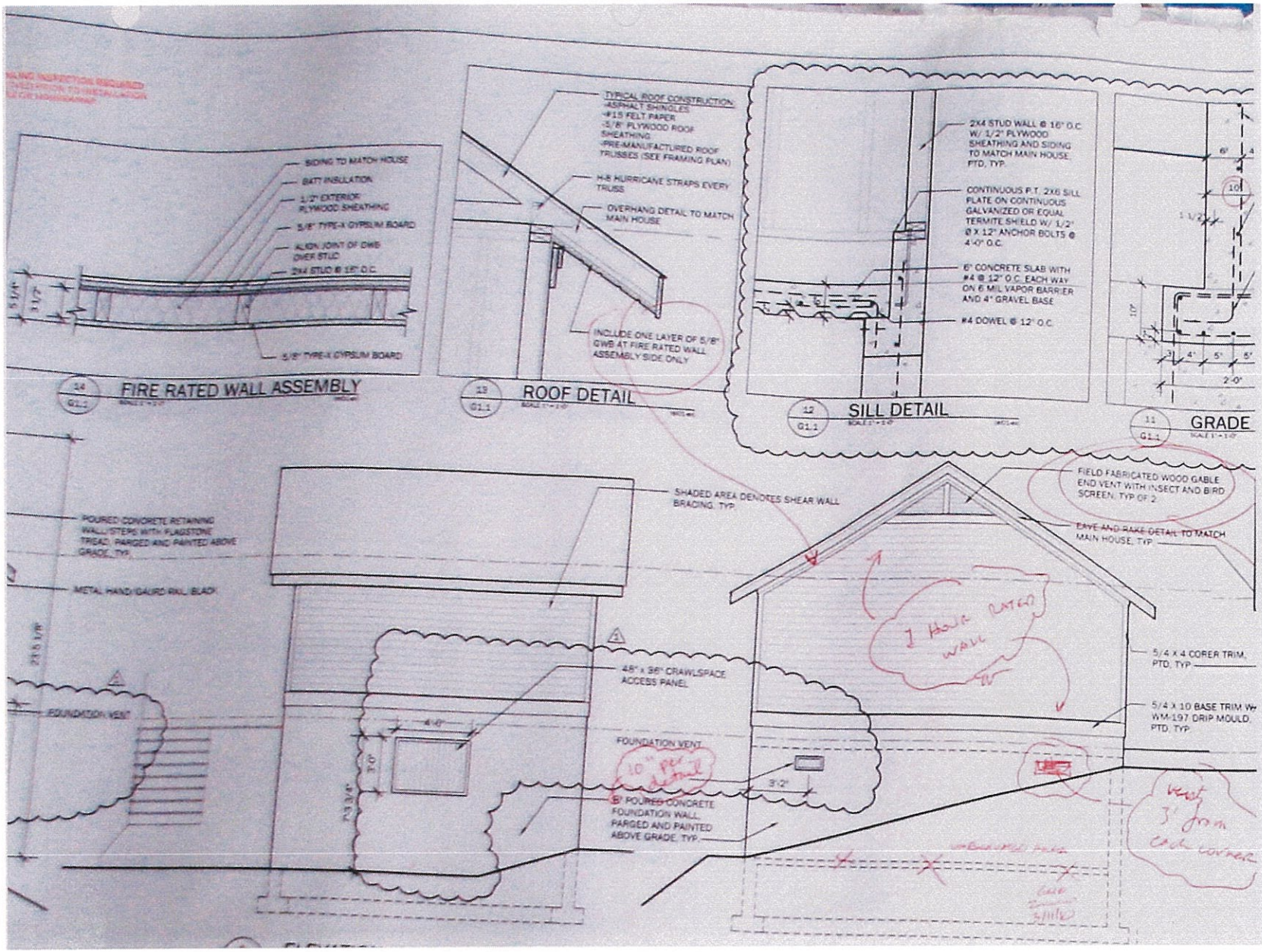
The garage drawings approved by Arlington County required Hurricane Ties (Simpson H-8).
The builder did not install them.
Neither the builder nor the County has offered any analysis or evidence that the construction can still meet the uplift requirements of the 2006 VUSBC 802.11 without them.

Photos that follow include the requirement from the approved drawings, the required ties, and photos of the two sides of one of the rafters. There are no hurricane ties on any of the rafters.

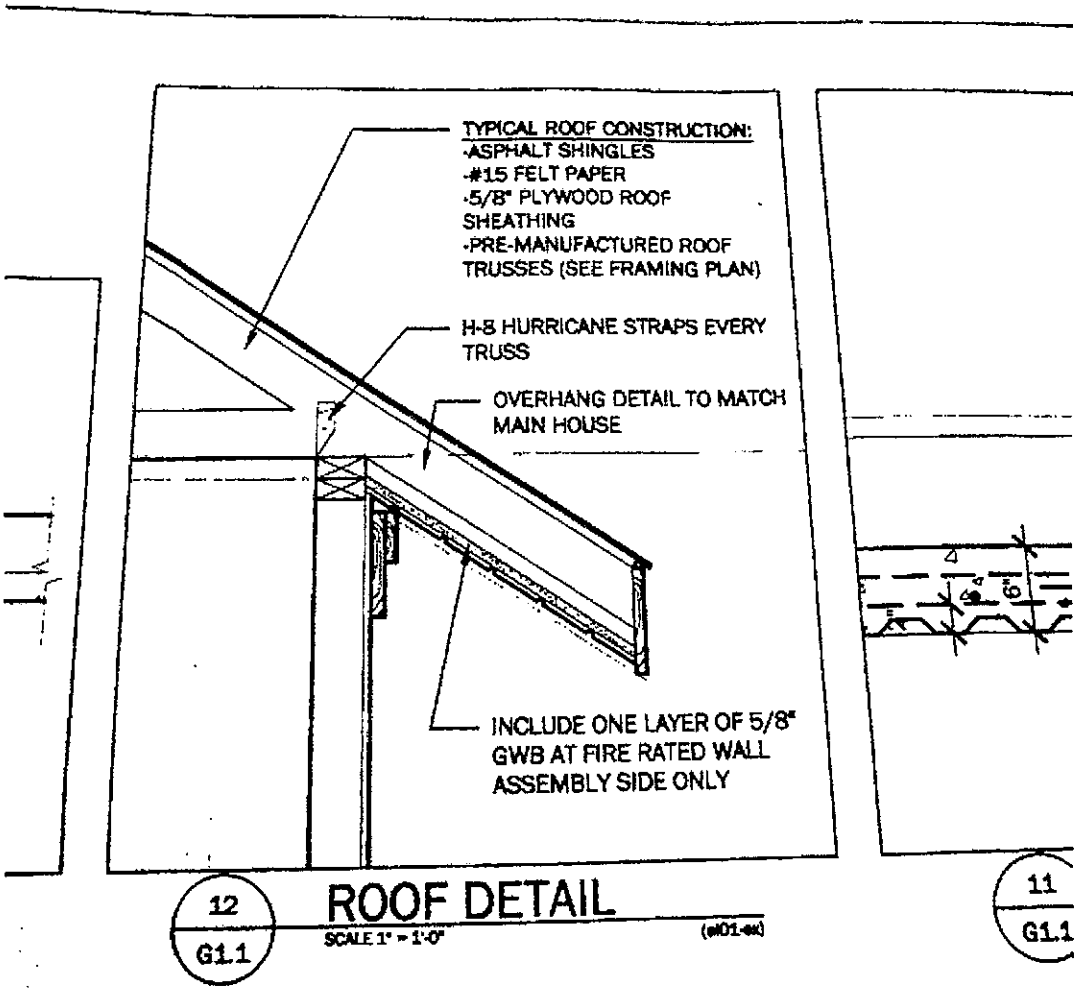
The County building department was shown that the ties were missing, issued no violation, and provided no explanation.

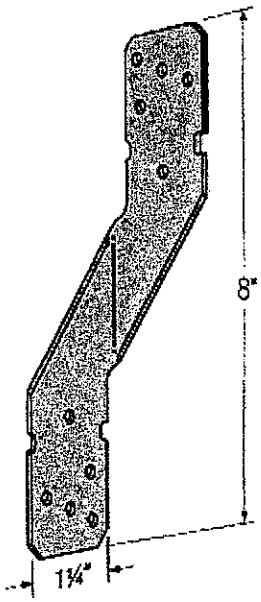

SHADED AREA DENOTES SHEAR WALL BRACING, TYP.
FIELD FABRICATED WOOD GABLE END VENT WITH INSECT AND BIRD SCREEN, TYP OF 2.
EAVE AND RAKE DETAIL TO MATCH MAIN HOUSE, TYP.
1 HOUR RATED WALL
5/4 X 4 CORER TRIM, PTD, TYP.
5/4 X 10 BASE TRIM W/ WM-197 DRIP MOULD, PTD, TYP.
48" x 36" CRAWLSPACE ACCESS PANEL
FOUNDATION VENT
10" per detail
3'-2"
8" POURED CONCRETE FOUNDATION WALL, PARGED AND PAINTED ABOVE GRADE, TYP.
UNEXCAVATED AREA
Vent 3' from each corner
7 G1.1 ELEVATION - LEFT
8 G1.1
L4 X 3 X 1/4 LLV CONTINUOUS ALL AROUND, FASTENED TO CONCRETE W/ 1/2" Ø HILTI KWIK BOLTS @ 24" O.C. (2" MIN. EMBEDMENT)
4'-4"
5'-11 1/2"
36" PIER FTG.
WALL BRACING / NAILING INSPECTION REQUIRED AND MUST BE APPROVED PRIOR TO INSTALLATION OF WINDOWS, DOORS, OR HOUSEWRAP


ROOF DETAIL
SILL DETAIL
GRADE BEAM 2 DETAIL
GRADE BEAM 1 DETAIL
ELEVATION - REAR
ELEVATION - LEFT
ELEVATION - FRONT
MOORE ARCHITECTS
www.moorearch.com
603 King Street
Third Floor
Alexandria, VA 22314
(t) 703.837.0080
(f) 703.837.0088
Issued
Garage Details
APPROVED


SIDING TO MATCH HOUSE
BATT INSULATION
1/2" EXTERIOR PLYWOOD SHEATHING
5/8" TYPE-X GYPSUM BOARD
ALIGN JOINT OF DWB OVER STUD
2x4 STUD @ 16" O.C.
5/8" TYPE-X GYPSUM BOARD
14 G1.1
FIRE RATED WALL ASSEMBLY
TYPICAL ROOF CONSTRUCTION:
-ASPHALT SHINGLES
-#15 FELT PAPER
-5/8" PLYWOOD ROOF SHEATHING
-PRE-MANUFACTURED ROOF TRUSSES (SEE FRAMING PLAN)
H-8 HURRICANE STRAPS EVERY TRUSS
OVERHANG DETAIL TO MATCH MAIN HOUSE
INCLUDE ONE LAYER OF 5/8" GWB AT FIRE RATED WALL ASSEMBLY SIDE ONLY
13 G1.1
ROOF DETAIL
2X4 STUD WALL @ 16" O.C. W/ 1/2" PLYWOOD SHEATHING AND SIDING TO MATCH MAIN HOUSE, PTD, TYP.
CONTINUOUS P.T. 2X6 SILL PLATE ON CONTINUOUS GALVANIZED OR EQUAL TERMITE SHIELD W/ 1/2" Ø X 12" ANCHOR BOLTS @ 4'-0" O.C.
6" CONCRETE SLAB WITH #4 @ 12" O.C. EACH WAY ON 6 MIL VAPOR BARRIER AND 4" GRAVEL BASE
#4 DOWEL @ 12" O.C.
12 G1.1
SILL DETAIL
11 G1.1
GRADE
POURED CONCRETE RETAINING WALL STEPS WITH FLAGSTONE TREAD, PARGED AND PAINTED ABOVE GRADE, TYP.
METAL HAND/GAURD RAIL, BLACK
FOUNDATION VENT
SHADED AREA DENOTES SHEAR WALL BRACING, TYP.
18" x 36" CRAWLSPACE ACCESS PANEL
FOUNDATION VENT
8" POURED CONCRETE FOUNDATION WALL, PARGED AND PAINTED ABOVE GRADE, TYP.
FIELD FABRICATED WOOD GABLE END VENT WITH INSECT AND BIRD SCREEN, TYP OF 2
EAVE AND RAKE DETAIL TO MATCH MAIN HOUSE, TYP
5/4 x 4 CORER TRIM, PTD, TYP
5/4 x 10 BASE TRIM W/ WM-197 DRIP MOULD, PTD, TYP

Item 4 B. Approved plans call for a Hurricane Tie (shown below)




Simpson H8 Hurricane Tie

Photo shows left and right side of rafter without the ties.
All rafters in the Garage lacked these ties.

Left Side

Right Side

Neither the builder not the architect have presented any evidence that the ties in the approved drawings are not required to meet the Wind load requirements of R301.1

# Chronology

Chronology

October 01, 2010 – We Move into house.

April 14, 2011 (approx) – Called Arlington County and asked for Inspectors to examine issues with our house. County set date for September 23.

April 21, 2011 (approx) – County calls and asks if it's OK to send employees other than inspectors

April 27, 2011 – County delegation comes to house. Included one inspector and several other persons.

April 29, 2011 – Follow-on meeting with County Engineer and Chief Inspector to evaluate visible structural issues

May 11, 2011 – Moore Architects submits Construction Memo 5 to R-One, including a new load pat design and asking R-One to "Confirm that the post supporting the mid-point of the ridge has a continuous load path down from the ridge to the masonry foundation at the basement level."

June 15, 2011 - We submit full list of suspected code violations to the County, including the numerous missing load path elements identified through photos and additional investigation.

September 23, 2011 – County employees again visit house to review problems. This time, drywall has been removed to expose missing load path elements. We also provide the County with a copy of the Structural Engineer's Report we received that morning.

November 2, 2011 – We meet with County employees, including Mr. Amiri, to discuss our issues

January 9, 2012 – Additional site visit at house to look at range of issues

March 20, 2012 – First Notice of Violation issued

April 2012 – We file initial County appeal

May 16, 2012 – Arlington County Board of Building Code Appeals hearing

June 4, 2012 – Post Appeal Meeting with County officials

June 22, 2012 – State Appeal Filed

July 26, 2012 – State Appeal information gathering session. We agree to provide a consolidated list of issues to the County, and they agree to make a determination on them

August 19, 2012 – We submit the consolidated list to the County

October 4, 2012 – County site visit to house to look at specific issues related to August submission

December 12, 2012 – County issues second Notice of Violation

January 4, 2013, We receive a copy of the new Notice of Violation through builder's counsel

February 1, 2013 – Current appeal filed

February 19, 2013 – Second State appeal information hearing.

JGK Structural Engineer

**JGK**

STRUCTURAL ENGINEERS, P.C.

JAMES G. KONNICK, P.E.

September 22, 2011

Mr. & Mrs. Keith Kurtz
4087 N. 35th Street
Arlington, VA. 22207-4460

RE: 4087 N. 35th Street
Arlington, VA.
JGK NO: 11161

Dear Mr. & Mrs. Kurtz,

At your request, I visited the site of the above referenced project on Wednesday, August 3, 2011 and again on Friday, September 9, 2011. The purpose of my visit was to perform a structural assessment of selected structural items cited in a report dated 4/12/11 prepared by Mr. Thomas Gannon, president of Construction by Design, Inc. No attempt is made here to review or comment on the findings of Mr. Gannon but rather to address only those items that are of structural concern regarding load carrying capacity or long term structural serviceability. Further, although the contract structural drawings were made available to me during my visit, no attempt was made at a comprehensive review of those documents. Also, many of the items cited were observed from partial removal of existing finishes or construction photographs. Actual conditions may differ from those cited in this report and therefore should be confirmed by the removal of all obstructing finishes prior to implementing any and all repairs.

The structure in question is a custom single-family detached private residence completed and occupied in October 2010 consisting of a basement and three levels above grade. The roof and floors are conventionally wood framed.

The following structural issues were identified:

2338 WALNUT STREET FALLS CHURCH, VIRGINIA 22046 TEL. (703)536-2033 FAX (703)237-8361

1. The first floor beam supporting the main bearing wall between the hallway and game room is shown on the drawings as 2 – 1-3/4" X 11-7/8" LVL's approximately 12' long with an intermediate steel pipe column approximately 5' from one end creating spans of 5' and 7' respectively. In lieu of the steel column shown, a wood column consisting of 3 – 2 X 4 studs was installed per the detail shown in Figure 1 attached. This condition is structurally inadequate and needs to be corrected per the attached detail shown in Figure 2. In addition, other areas using this column detail were noted (see Figure 3). These conditions should also be corrected per detail shown in Figure 2.
2. The roof beam over the master bedroom consisting of three LVL's is shown supported on 3 – 2 X 12's per CM 1.1 dated 3/25/10 issued by Moore Architects. The attachment of the LVL's to the rafters is inadequate for the approximate 1,350 pound load needed to be transferred (see Figure 4). A new light gauge metal hanger should be installed capable of supporting this load.
3. The first floor corridor bearing wall has a condition where a post load of approximately 3,700 pounds is transferred through the floor system consisting of 11-7/8" – 230 series engineered I-joists. The joists have 2 X 4 squash blocks on each side but no web reinforcement. The joists require web reinforcement for the magnitude of this load and should be modified per the detail shown in Figure 5 attached.
4. The post in the hallway bearing wall from level 3 to level 2 supporting the main roof ridge beam appears to be discontinuous. All posts should a have continuous load path to the foundation.
5. The dormer wall at the master bedroom (see CM1.1 dated 3/25/11) was constructed off center (inboard) of the 3 – 2 X 12 rafters at the dormer (see Figure 6). This condition should be corrected by bolting 2 – 2 X 12's to the existing 3 – 2 X 12's and under the dormer wall for the entire wall length.
6. Posts located in the hallway main bearing wall appear to track through an existing duct opening at level one. This condition needs to be completed exposed and corrected.
7. Post condition at first level study indicates a notched stud with inadequate bearing (see Figure 7). Also, it appears that this post does not track down to foundation below level 1. This condition needs to be corrected by installing 3 – 2 X 4 studs notched as indicated but having complete bearing on the let-in 2 X 8 joist. In addition, this post shall track down below level 1 to foundation.
8. The second level header between the dining room and hallway appears to have a post that is discontinuous (see item 4.). Also, the header post does not appear to track down to foundation in wall separating the hallway and mechanical room in the basement.
9. The first level rear deck was constructed with an exposed LVL beam (see Figure 8). The moisture content was measured as 27% at the time of my visit. These beams are generally not used unprotected under these conditions. The manufacturer should be consulted to insure their warranty for this product has not been voided by this use. To the extent that the manufacturer deems this condition unacceptable, the beam shall be replaced.

10. Short squash blocks were observed in the basement office for a post tracking down to the foundation through the engineered I-joists. This condition should be corrected per detail shown in Figure 5.

Please contact my office if you have any questions.

Sincerely,

James G. Konnick, P.E.
President

COMMONWEALTH OF VIRGINIA
JAMES GEORGE KONNICK
No. 11489
9/22/11
PROFESSIONAL ENGINEER

JGK
STRUCTURAL ENGINEERS, P.C.

PROJECT KURTZ SHEET 2 OF 2

PROJECT NO. 11161 DATE 9/22/14

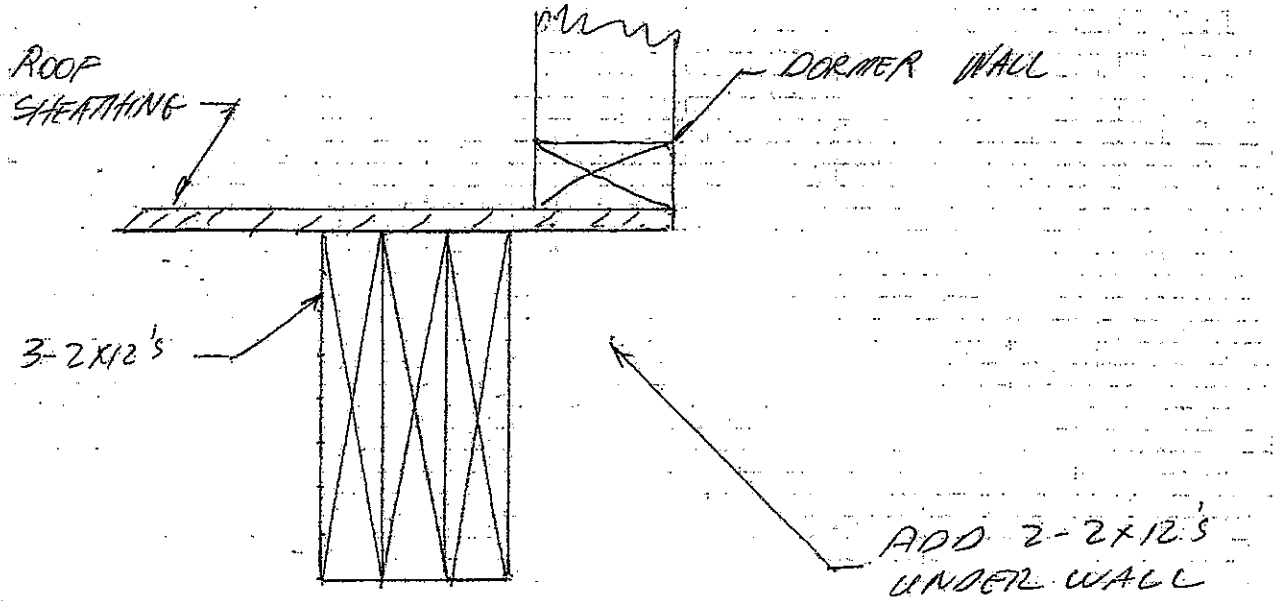



FIGURE 6

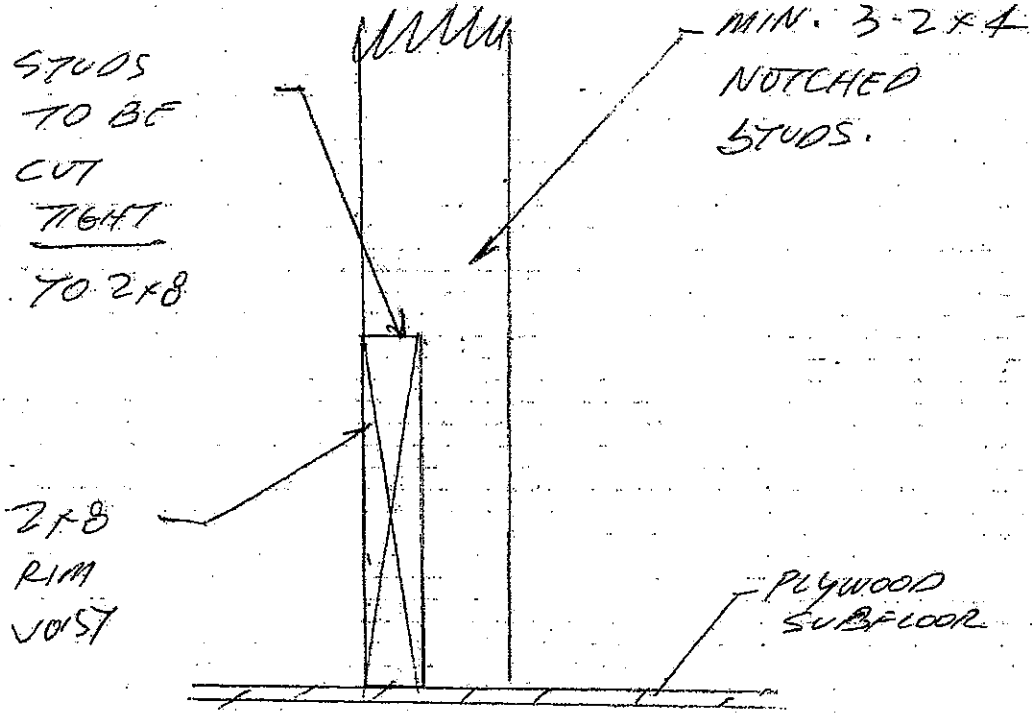



FIGURE 7

JGK
STRUCTURAL ENGINEERS, P.C.
JAMES G. KONNICK, P.E.

July 25, 2012

Mr. & Mrs. Keith Kurtz
4087 N. 35th Street
Arlington, VA. 22207-4460

RE: 4087 N. 35th Street
Arlington, VA.
JGK NO: 11161

Dear Mr. & Mrs. Kurtz,

This is an addendum to my report dated 9/22/11 and reflects observations of the structure made today at the site at which time existing finishes had been partially removed.

With respect to my report dated 9/22/11 and my observations made today, I wish to state the following:

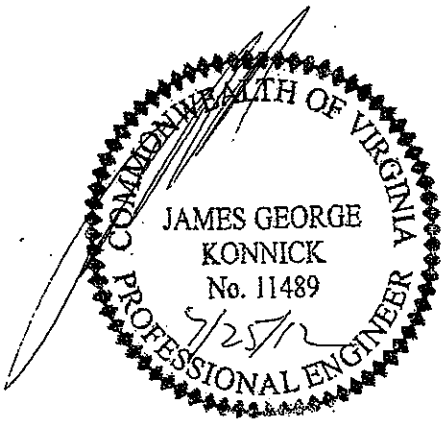
1. Regarding item #4 in my report and in reference to architect's drawing CM5.1 dated 5/11/11, the load path from the ridge beam to the foundation is discontinuous;
2. Regarding item #3 in my report, there is partial bearing and thus partial load transfer of the post above through the floor joist;
3. Regarding item #7 in my report, the post is discontinuous from the point of load application to the foundation;
4. Regarding item #8 in my report, the post closest to the rear wall is discontinuous from the point of load application to the foundation;
5. The squash block installations exposed and observed were inadequate. Refer to Figure 5 of my 9/22/11 report;
6. The attachment of multiple studs to form a post was inadequate of the sample exposed and observed at the first floor corridor. Refer to Figure 2 of my 9/22/11 report.

2338 WALNUT STREET FALLS CHURCH, VIRGINIA 22046 TEL. (703)536-2033 FAX (703)237-8361

Please contact my office if you have any questions.

Sincerely,

James G. Konnick, P.E.
President



# Appeal to County

**MOORE**
**ARCHITECTS**

**memo**

to: Arlington County
Department of Community Planning, Housing and Development
Inspection Services Division

attn: Mr. Shahriar Amiri; Chief Building Official
Carolyn Majowka

from: Charles Moore, AIA / Shamual Choudhury

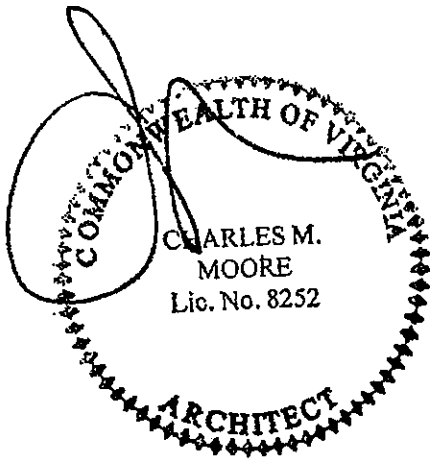
date: 10.15.12

re: Kurtz Residence
4087 35th Street North, Arlington, Virginia

via: email/mail/fax

Per your request during our meeting on October 5, 2012, attached please find the attached details and calculations for structural conditions we reviewed at the Kurtz Residence. We have consulted with the structural engineer of record, Robin Simmons, PE of SDS, PLLC. P

end of memo




A Professional Corporation
603 King Street
Third Floor
Alexandria, VA 22314
(t) 703.837.0080
(f) 703.837.0088

www.moorearch.com

SDS
STRUCTURAL DESIGN SERVICES, PLLC

October 15, 2012

Mr. Shamual Choudhury
Moore Architects, PC
603 King Street, 3rd Floor
Alexandria, VA 22314

RE: Kurtz Residence

Project No.: 09007

Dear Shamual:

This letter is to respond to the comments from the site meeting on 10/5/12 for the Kurtz Residence. My responses to the structural comments are indicated below.

Sketch 1.1: The (2)2x8 header over the duct register in the first floor hall wall is sufficient. See the calculation on page 1 of the calculations attached to this letter

Sketch 2.1: The beam supporting the front dormer has been checked for 9 ½" depth due to a hole drilled at the bottom of the beam. The member is sufficient for 9 ½" depth. See calculation on page 1 and 2 of the calculations attached to this letter.

Sketch 3.1: The beam indicated in the sketch does support most of the load from the porch roof post above. The load is transferred to the edge beam from the triple LVL.

Sketch 3.2: The diagonal beam can support the ends of the side and top LVL beams. Hanger sizes are indicated on the sketch attached to this letter.

Sketch 4.1: The post connection can withstand the 200 lb. lateral force from the railing. Provide (2) ½" diameter lag screws through the post into the edge beam. The notch in the side of the base of the post is adequate. This type of connection is common in deck construction. The load from the post is taken by the edge beam in compression.

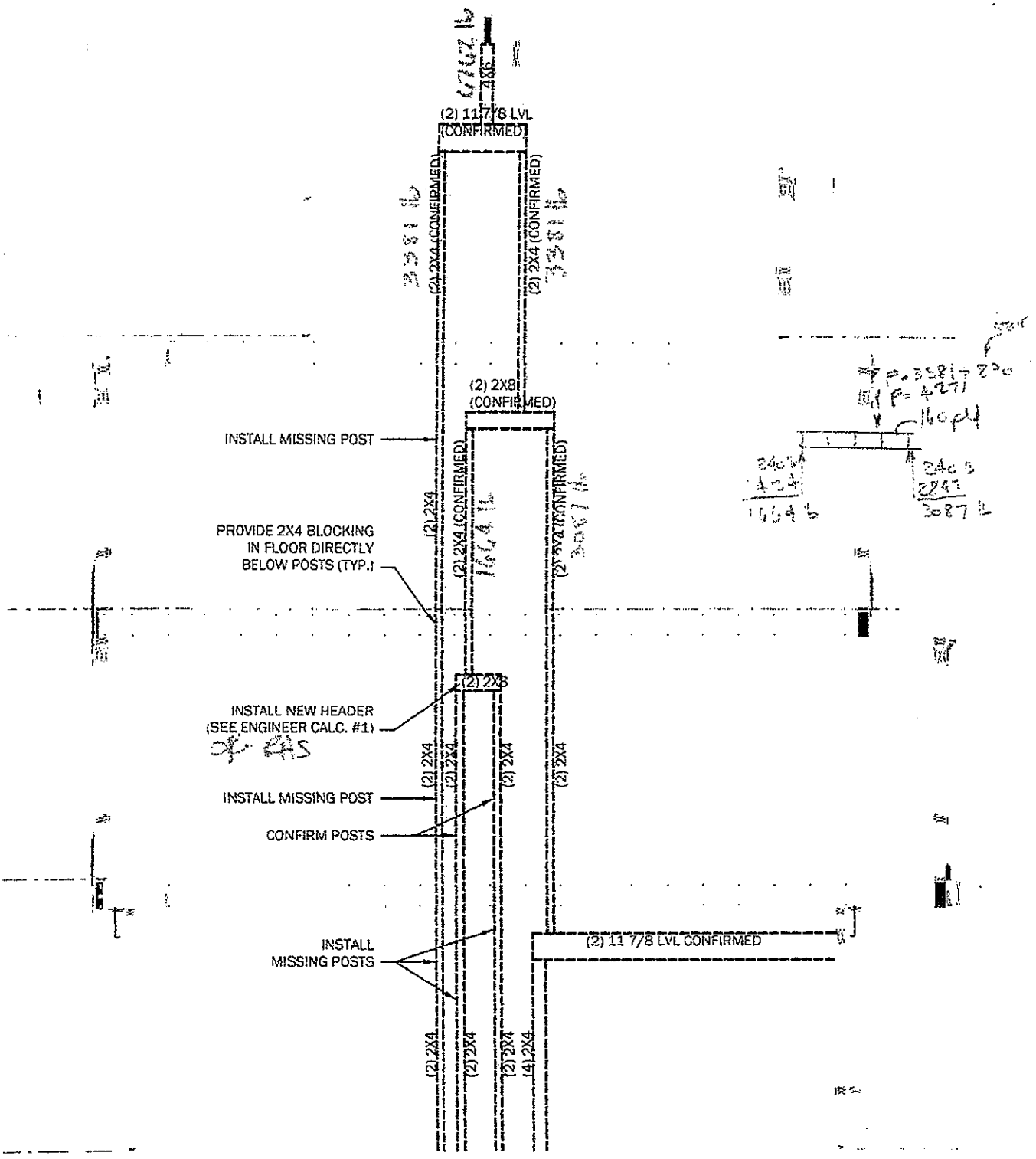
Please contact my office should you have any further questions concerning this matter.

Sincerely,

Robin H. Simmons, PE
Principal/Structural Engineer

10/15/12

C:\...\STRUCTURAL DESIGN SERVICES PLLC\Project Files\PRO-2009\09007\State Appeal\09007 Response to Meeting Comments.doc




1
1.1

# CENTRAL LOAD PATH DIAGRAM

SCALE 3/16" = 1'-0"

(PL02)

MOORE ARCHITECTS

MOORE ARCHITECTS, PC
603 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
t 703.837.0060
f 703.837.0088

# KURTZ RESIDENCE

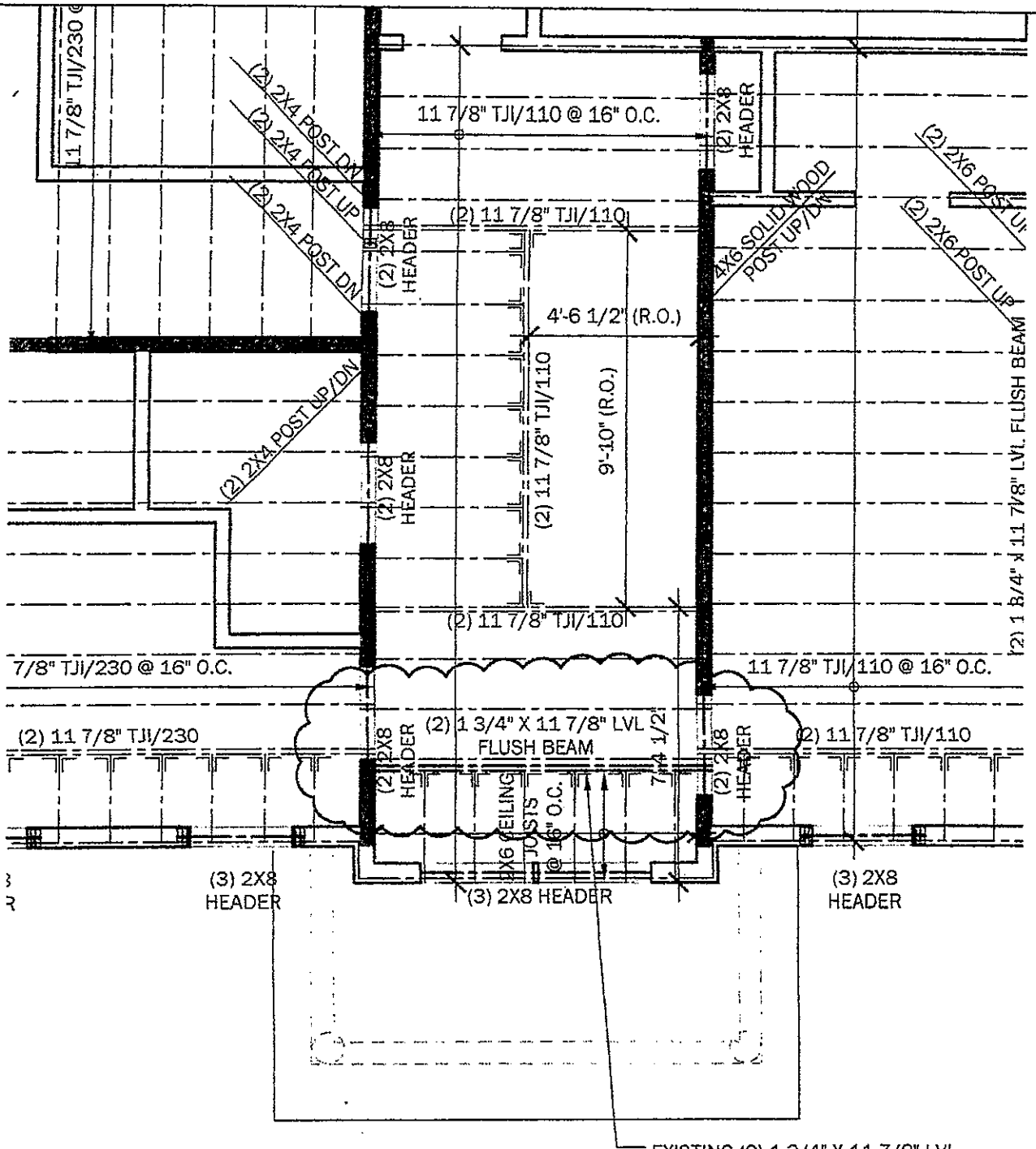
4087 N. 35TH STREET
ARLINGTON, VA 22207

10.09.12

SCALE:
3/16" = 1'-0"

1.1

208




1 / 2.1 ATTIC FLOOR/ ROOF FRAMING PLAN

SCALE 1/4" = 1'-0" (PL02)

MOORE ARCHITECTS

MOORE ARCHITECTS, PC
603 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
t 703.837.0080
f 703.837.0088

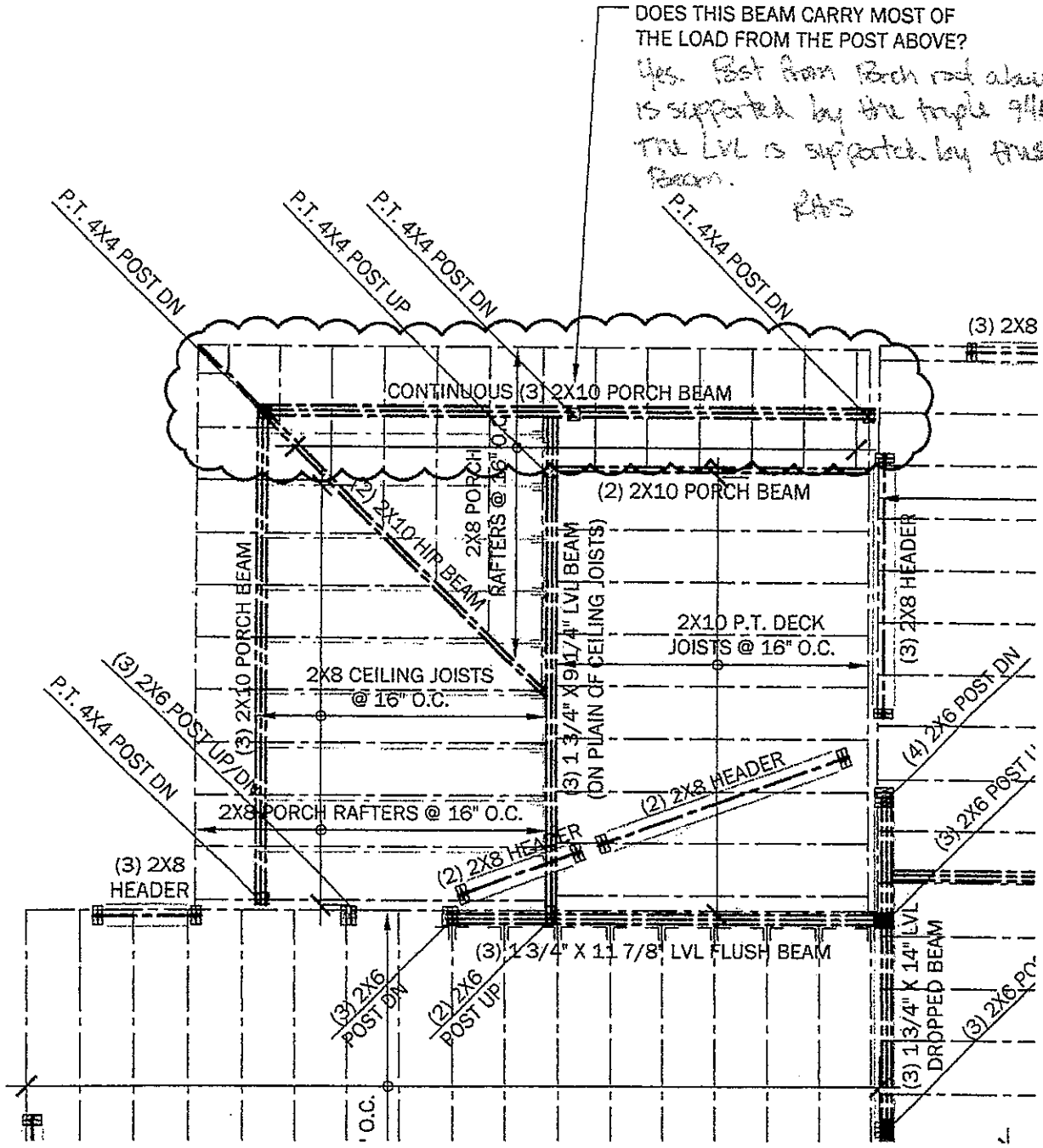
# KURTZ RESIDENCE

4087 N. 35TH STREET
ARLINGTON, VA 22207

10.09.12

SCALE: 1/4" = 1'-0"

2.1




1 / 2.1

# SCREENED PORCH ROOF FRAMING PLAN

SCALE 1/4" = 1'-0"

(PLQ2)

MOORE ARCHITECTS

MOORE ARCHITECTS, PC
603 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
t 703.637.0080
f 703.637.0088

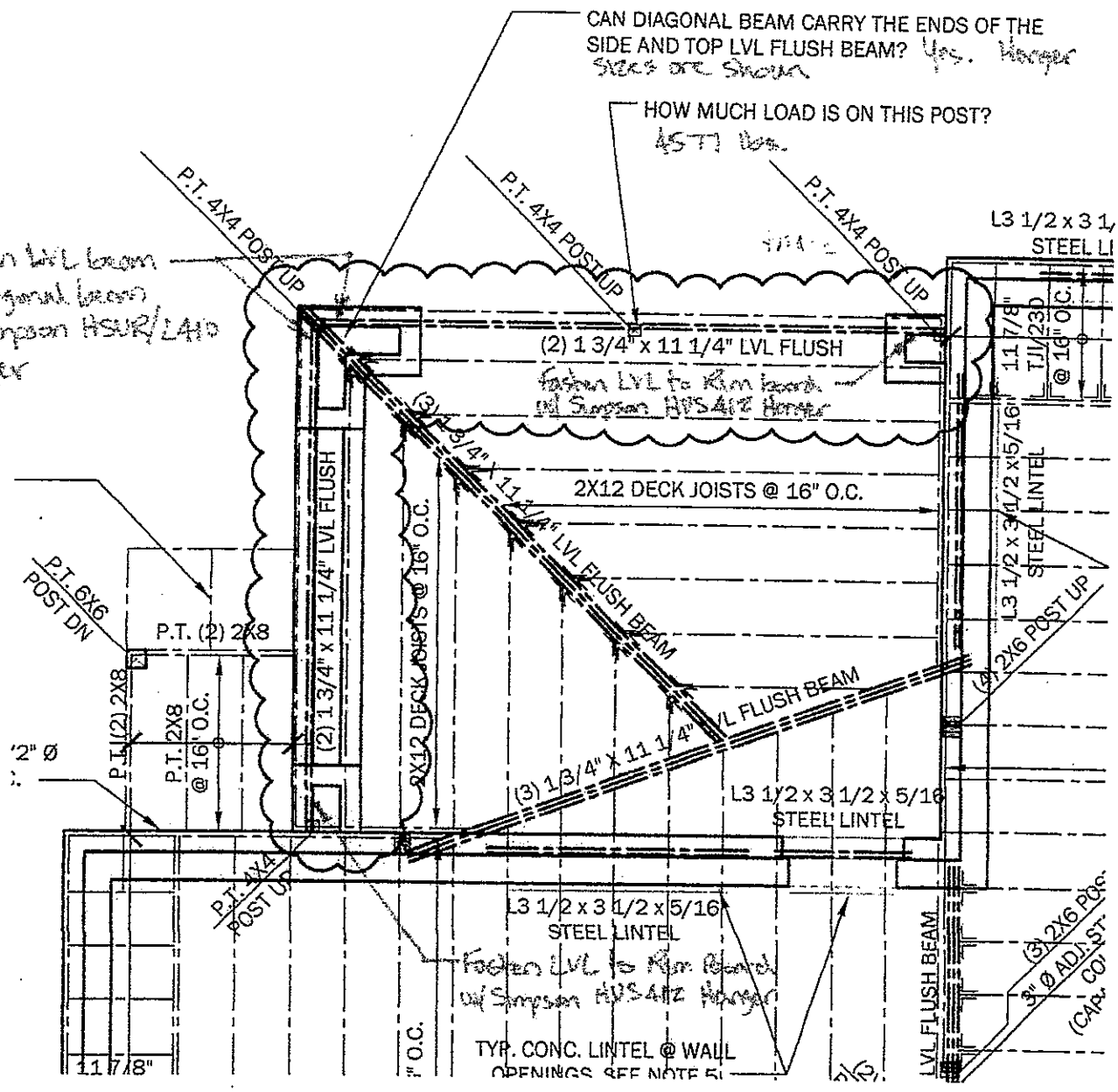
# KURTZ RESIDENCE

4087 N. 35TH STREET
ARLINGTON, VA 22207

10.09.12

SCALE:
1/4" = 1'-0"

3.1




1 / 2.1 SCREEN PORCH FRAMING PLAN

SCALE 1/4" = 1'-0" (PL02)

MOORE ARCHITECTS

MOORE ARCHITECTS, PC
603 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
t 703.837.0050
f 703.837.0088

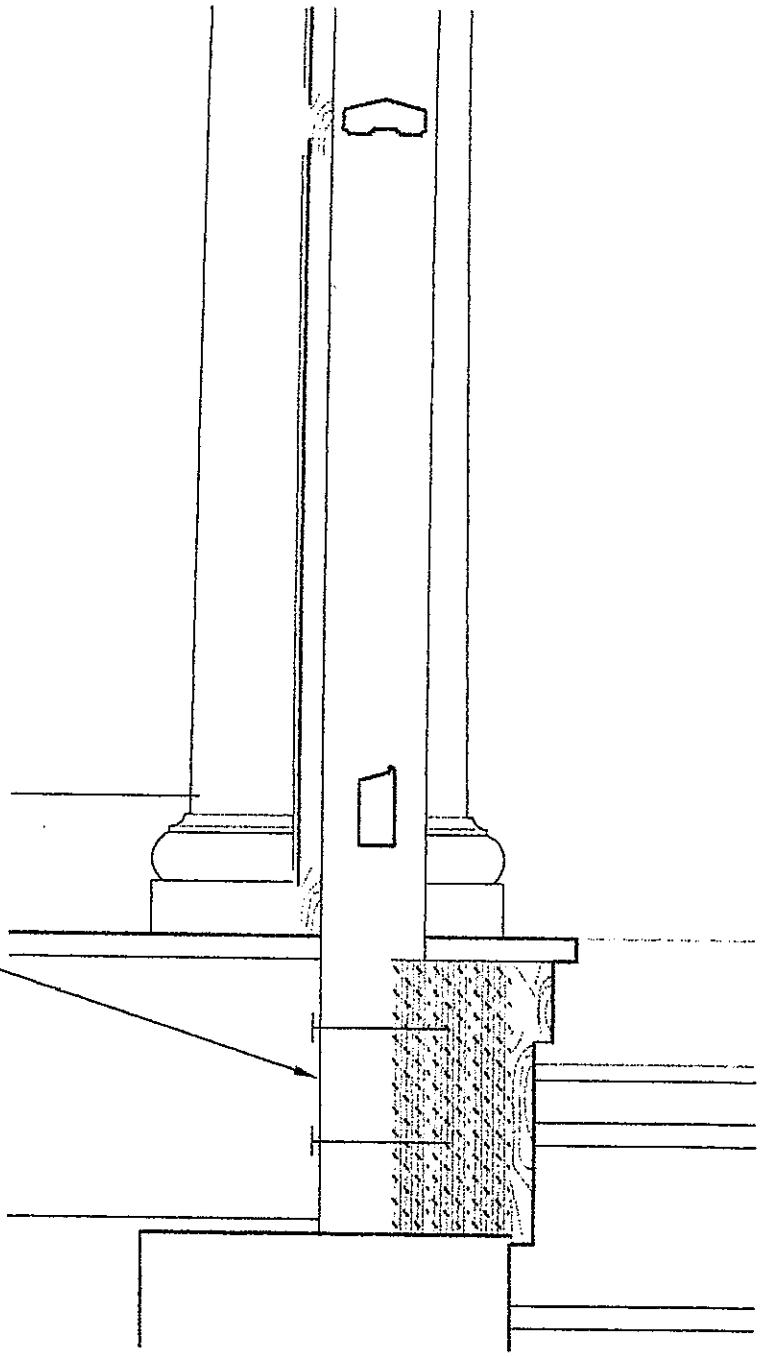
# KURTZ RESIDENCE

4087 N. 35TH STREET
ARLINGTON, VA 22207

10.09.12

SCALE: 1/4" = 1'-0"

3.2



CAN THIS POST CONNECTION WITHSTAND 200 LBS OF LATERAL FORCH? Yes.

Provide (2) 1/2" ϕ lag screws, galvanized.

1
1.1

## CENTRAL LOAD PATH DIAGRAM

SCALE 3/16" = 1'-0"

(PL02)

MOORE ARCHITECTS

MOORE ARCHITECTS, PC
603 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
t 703.837.0080
f 703.837.0088

# KURTZ RESIDENCE

4087 N. 35TH STREET
ARLINGTON, VA 22207

10.09.12

SCALE:
1 1/2" = 1'-0"

**STRUCTURAL DESIGN SERVICES, PLLC**
*STRUCTURAL ENGINEERING CONSULTING*
3551 WHITE OAK DRIVE
HARRISONBURG, VA 22801-5336
TEL. (540) 433-6135 FAX.(540) 433-6136

| Project: Kurtz Residence | | |
|---|---|---|
| Calculation By: RHS | Date: 10/12/12 | Project No.: 09007 |
| Checked By: | Date: | Page No.: 1 |

Structural Calculations for items discussed at Site Mtg on 10/5/12

Ref: Architectural Sketches 1.1 thru 4.1 dated 10/9/12

1. Sketch 1.1 - Size header at duct register in 1st flor hall wall

L = 1.75' P: Ridge Beam load
load is split at 2 headers. See attached sketch for calculation of load (pg 2 of calcs)

P = 1664 lb  $W = 160\,psf \cdot (15+30\,psf)\left(\frac{4.5}{2}+\frac{8}{12}\right)$

$$M = \frac{Pl}{4} + \frac{Wl^2}{8} = \frac{(1664\,lb)(1.75')}{4} + \frac{(160\,plf)(1.75)^2}{8} = 789\,lb\text{-}ft$$

$$S_{req'd} = \frac{M}{F_b} = \frac{789\,lb\text{-}ft(12)}{975\,psi\,(1.15)} = 8.4\,in^3$$

↑ Snow

Δ ok  (2) 2x8 Hdr ok

2. Sketch 2.1 - Verify Beam at corner is adequate for 9½" depth

(2) 1¾" x 9½" LVLs are adequate.
(See calculation in Excel area of page 2 of calcs)

STRUCTURAL DESIGN SERVICES, PLLC
STRUCTURAL ENGINEERING CONSULTING
13105 BOURNE PLACE
BRISTOW, VA 20136-1030
TEL. (703) 754-6135 FAX.(703) 753-9075

| Project: Kurtz Residence | | |
|---|---|---|
| Calculation By: RHS | Date: 3/30/09 | Project No.: 09007 |
| Checked By: | Date: | Page No.: 2 |

## II. Third Floor Framing

### A. Joists

1. Main Span

$L = 18'$ $W = (15 + 30\,psf)(\frac{16}{12}) = 60\,plf$ TL, 40 plf LL
Use 11 7/8" TJI 230 @ 16" o.c.

2. Joists @ Sunken Shower

$L = 14'$ $W = (51 + 30\,psf)(\frac{16}{12}) = 108\,plf$ TL, 40 plf LL
Use 9 1/2" TJI 230 @ 12" o.c.

### B. Beams

1. Beam under Front Dormer

a. $L = 9'$ $W = (20 + 21\,psf)(\frac{8}{2} + 1) + (10\,psf)(5') + (20 + 21\,psf)(\frac{3.5}{2}) + (15 + 30\,psf)(\frac{16}{12}) = 387\,plf$

$M = \frac{wL^2}{8} = 3918\,lb\text{-}ft$ Use (2) 11 7/8" LVL to match floor depth

Try (2) 9 1/2" LVL's $M_{cap} = (2)(5885\,lb\text{-}ft) = 11770\,lb\text{-}ft$ OK

$R = 387\,plf(\frac{9}{2}) = 1741\,lb$ $V_{cap} = (2)(3160\,lb) = 6320\,lb$ OK

$\Delta_{LL}$ Use $I_{req'd} = 471\,in^4 > (2)(125\,in^4)$ OK

(2) 9 1/2" LVLs OK

2. Beams @ Stair Opng

a. $L = 10'$ $W = (15 + 40\,psf)(\frac{9}{2}) = 248\,plf$

$M = \frac{wL^2}{8} = 3094\,lb\text{-}ft$ (2) 11 7/8" TJIs OK (110 or 230)

$R = 1240\,lb$

b. $L = 9'$ $W = 60\,plf$ $P = 1240\,lb$

$M = \frac{wL^2}{8} + \frac{PL}{4} = 3398\,lb\text{-}ft$ (2) 11 7/8" TJIs OK (110 or 230)

$R = 890\,lb$

1b. Beam under Rear Dormer

$w = (20 + 21\,psf)(\frac{14.5}{2} + 1.5'\,ecc) + (10\,psf)(5) = 409\,plf$

$L = 9'$ $M = 4141\,lb\text{-}ft$ (3) 2x10

$R = 1840$

7/09

# Arl. County Findings

The following is a list of our findings.

1) During this inspection, we received a copy of a letter from James G. Konnick, P.E, dated 09/22/2011 that lists 10 structural deviations from the permit documents (and his interpretation of these conditions). The Owner exposed several areas within the walls and ceilings in correlation to the 10 items noted by the engineer's letter. While it is obvious that there exists a deviation from the permit documents, we are unable to make a determination from our field visit as to whether the deviations maintain code compliance or if there is a violation. Our inspection did not find any visible signs of failure including cracks, warping, sagging, etc., which would indicate an immediate concern for the structural integrity of the house. **The architect or engineer of record is to submit plans and/ or calculations indicating these changes with sufficient data to show code compliance. We expect this documentation within 30 days from the receipt of this letter.**

2) The Owner exposed the north-west back corner house foundation for inspection. An approximate 1'-0" section of foundation wall was exposed. There were no apparent signs of foundation damp proofing as required by IRC Section R406.1. The Owner and the contractor both concurred that damp proofing exists on the structural foundation wall. The exposed CMU, that was visible, was added to provide a shelf for the stone veneer and essentially is a structural veneer. The damp proofing on the main foundation wall is sufficient to meet the code requirements outlined in Section R406.1 cited above and no violation is noted.

3) The Owner expressed concern about the appropriate anchorage (IRC Section R703.7.4) and the installation of weep holes (IRC Section R703.7.6) for the stone veneer. There were no visible signs on either the interior or exterior of these walls that a violation exists. The product data was not provided. Without the data and removal of veneer, code violation can not be ascertained.

4) In the garage, the Owner asked us to review the wall construction; with a particular concern for the aluminum flashing visible on top of the masonry foundation wall. The aluminum flashing was used under the pressure treated wood sill plate for the wood framed walls. Section R703.8 requires any wall flashing to be corrosion resistant. In the location inspected, the aluminum flashing did not appear to be flashing the wall cavity, but it was instead installed as a termite "shield" per Section R320. While multiple methods are permitted to be combined under this section, only one method is required. It is our finding that the pressure treated wood sill plate meets the code requirement for termite protection and that the flashing is superfluous. **The corrosion of this flashing due to galvanic corrosion does not violate the minimum code requirements and no violation is cited.**

5) No attic access is provided in the master bedroom. Section R807.1 requires access to all attic areas that exceed 30 square feet and have a vertical height of 30 inches or more. We could not visually inspect this area, but the permit drawings support the requirement for access in this area. There was no visual inspection possible in this

9) In this same area, there a few joist members (approx. 4-6 feet in length) that were not properly supported. Per Section 502.6.2, Joists framing into the side of a wood girder shall be supported by approved framing anchors or ledger strips not less than nominal 2 inches by 2 inches. **The contractor shall provide adequate anchorage for these members.**

10) Additionally, the Owner expressed concern that some fasteners used in this location were not corrosion resistant. From our inspection it appeared those fasteners (all nails) were not used for anchorage, but just as place holders. The corrosion of these will not adversely affect the structure and is not considered a code deviation.

11) In the mechanical room the Owner showed us a damaged TJI. The contractor has agreed to repair the damaged TJI as prescribed by the manufacturer. The repair is subject to inspection from this office.

12) In addition to Item #11, the Owner expressed concern about various other locations where he believes studs have been over drilled or notched. He was able to show us one location, in the mechanical room, where the header for a framed opening was notched to accommodate a water line. This is not acceptable. The Contractor shall relocate this line and replace or repair the header. The repair is subject to inspection from this office upon completion.

**13)** In the dining room, The Owner pointed out a switch that exceeded the maximum gap permitted around the box per Section E3806.6. **The Contractor shall install an extension per Section E3806.7 to bring the switch box installation into compliance.**

14) In the 2nd floor bathroom the owner showed us two areas that he believed required fire blocking per Section R602.8. One area was between a tub deck and the floor. Section 602.8 specifically requires fire blocking between stories. It is out interpretation that this code section does not pertain to this condition. In the adjacent bathroom we inspected one pipe penetration that was not sufficiently fire stopped. **The Contractor has agreed to complete this work. Our office will inspect the repair upon completion.**

15) Per Section 802.11.1, the front porch roof does not have adequate tie downs to protect from uplift pressures. While we did not inspect this area, the Contractor has stated that this work is incomplete. When this installation is complete, our office will inspect the work for code compliance.

16) The Owner stated that the roof valleys were not properly flashed per Section R905.2.8. The shingles were installed and we could not properly inspect this area. No violation was observed.

sealed. **The Contractor will check and remediate any windows that are not properly flashed and sealed.**

25) In the Owner's letter dated 06/15/2011, the Owner expressed concern about 4x4 supports that had been notched. This location was not available for inspection and no violation is cited.

26) In the same letter noted in item #25, the Owner noted an over-bored LVL beam where three electrical boxes were installed in front of house on the second floor landing. We inspected this area through a removed light fixture. The side of the beam had been bored. It is unclear whether this exceeds the maximum boring allowed. The architect and/ or engineer of record is to review this condition with the manufacturer and confirm that the LVL has maintained integrity.

27) Part of the basement has been insulated with R-11. R-13 is the minimum insulation prescriptive value required per Table N1102.1. As an alternative to the prescriptive values outlined in the code, the Contractor and/ or Architect can submit a REScheck to show code compliance.

28) The Owner and his agents expressed concern about the separation of the foam insulation from the interior spaces of the house. Per Section R314.4, a thermal barrier is required to separate foam insulation from the interior of the building. While no foam insulation is directly open to occupied spaces, the question was raised whether the mechanical system running through the unoccupied area provides a connection between the attic (and the exposed foam insulation) and the occupied areas of the house. It is our interpretation that this is not the intent of the code section referenced. Therefore no code violation is cited.

29) Additionally, the Owner and his agents noted that the foam insulation was over sprayed. The code does not specifically address the means and methods of installation for foam insulation. No code violation is cited.

30) Although not reviewed during this inspection we had noted from a previous inspection that the interior stair handrails required reinforcing.

# ADDITIONAL DOCUMENTS SUBMITTED BY R-1 CONSTRUCTION, LLC

**HART & HORAN, P.C.**
ATTORNEYS AND COUNSELLORS AT LAW
10505 JUDICIAL DRIVE, SUITE 101
FAIRFAX, VIRGINIA 22030

JAMES R. HART
ROBERT F. HORAN, III

TELEPHONE (703) 352-7330
FACSIMILE (703) 352-6940
email: jhart@tidalwave.net

July 31, 2013

VIA FEDERAL EXPRESS
Alan W. McMahan, Staff
Commonwealth of Virginia
Department of Housing & Community Development
State Building Code Technical Review Board
600 East Main Street, Suite 300
Richmond, VA

*Re: Appeal of Keith Kurtz to the Review Board (Appeal No. 13-2)*
*Our File No. 10-258*

Dear Mr. McMahan:

Pursuant to your letter of July 15, 2013, please find enclosed a copy of the Contractor's Response to Appeal Submittal, with exhibits. Copies have been provided to Mr. Amiri, the Arlington County building official, and to Mr. Gutkowski, counsel for Mr. and Mrs. Kurtz.

Thank you for your consideration of these matters. Please let me know when the time and place of the August 16 hearing is confirmed.

Very truly yours,

James R. Hart

JRH/abo
Enclosures
cc: Byron Ramirez, President
Shahriar Amiri, Chief Building Official
David C. Gutkowski, Esquire

HART & HORAN, P.C.
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VIRGINIA:

BEFORE THE STATE BUILDING CODE TECHNICAL REVIEW BOARD

IN RE: APPEAL OF KEITH KURTZ
APPEAL NO. 13-2

CONTRACTOR'S RESPONSE TO KURTZ APPEAL SUBMITTAL

COMES NOW the Contractor, R-One Contracting, LLC (hereinafter "R-One"), by counsel, and states as follows in response to the above-referenced appeal:

I. STATEMENT OF THE CASE

Keith and Carol Kurtz, disgruntled homeowners, appeal from multiple adverse decisions of the Arlington County Board of Building Code Appeals, related to construction of their new residence in Arlington County. Mr. and Mrs. Kurtz complain that the Arlington County building department did not issue certain violations of the Virginia Construction Code. R-One was the general contractor for the project. R-One is in general agreement with Arlington County's position herein. R-One has not appealed any of Arlington County's rulings, but wishes to make observations on several items.

R-One constructed the home according to the direction of Moore Architects, the owners' architect, who initially reviewed (and rejected) many of the Kurtzes' complaints. The home passed final inspection in September, 2010, and the architect certified R-One's final requisition for payment. R-One has thereafter attempted to perform legitimate punch list items, as directed by the owner's architect or Arlington County, and has been permitted to complete several items, but coordinating permission for access has been difficult. R-One has had limited access to the property,

and has not been able to evaluate all of the homeowners' complaints, as they have evolved. R-One has been shooting at a moving target since the final inspection, as Mr. and Mrs. Kurtz have created repeated and overlapping lists of ever-shifting complaints, extraordinarily time consuming for both Arlington County and R-One to review. The owners have changed attorneys multiple times since 2010, and more recently have had a falling out with their architect, further complicating any punch list work. Nevertheless, R-One has always been willing to perform legitimate punch list items, requested by Arlington County, subject to access being allowed. That work has continued during the pendency of this appeal, even affecting some of the items in dispute herein.

II. ISSUES PRESENTED BY MR. AND MRS. KURTZ

For Items 1A and 1B, regarding the LVLs in the rear porch, R-One is in agreement with Arlington County's position. The condition in question is routinely installed on exterior porches covered by a roof, and was done properly. Pressure-treated LVLs are not necessary, where protected and located under a roof. Moore Architects, the owners' architect, also confirmed that the work was done correctly, in conformance with the approved drawings. As Arlington County determined, the roof properly protects the porch area, including the non-pressure-treated LVLs, within the meaning of IRC R319.1(6), which is sufficient. Please refer to Exhibit 1 attached hereto, excerpt of sheet A3.4 of the approved plans; please also refer to Exhibit 2, memorandum from Charles Moore, AIA to Shahriar Amiri, CBO, pp. 9-10, Item 26. The architect notes that the LVL beams were "fully covered and protected . . . from any direct exposure to moisture," and that a roof is directly above this framing, which should satisfy the code requirement. The architect also notes that the LVL beams are protected from the effects of direct water or secondary water. No violation should be issued.

For Items 1C and 1D, R-One agrees with Arlington County's determination. Please refer to Exhibit 2, memo from Moore to Amiri, page 5, Item 8. R-One also had agreed to install a barrier if access were allowed, but unfortunately Mr. and Mrs. Kurtz are demanding pressure treated LVLs. No violation is necessary or appropriate.

For Item 1E, R-One is in agreement with Arlington County's position. R-One installed the handrail as directed by the owners' architect. Please refer to Exhibit 3, excerpt from sheet A5.2 of the approved plans; please also refer to Exhibit 2, memo from Moore to Amiri, page 10, Item 27. Please also refer to Exhibit 4, memorandum from Charles Moore, AIA to Shahriar Amiri, enclosing a letter from Robin H. Simmons, PE, regarding the attached sketch 4.1, depicting the railing in question. No violation should be issued.

For Item 1F, R-One is in agreement with Arlington County's position. Please refer to Exhibit 4, sheet 3.2. No violation should be issued.

For Items 2A through 2D, R-One is not clear, and never has understood, what Mr. and Mrs. Kurtz are complaining about. Upon information and belief, the load was properly transferred to the wall framing. The contract drawings, Page A3.5 (please refer to Exhibit 5), show an LVL ridge beam, 2 ¾ by 11 ⅞, and it is not clear why Mr. and Mrs. Kurtz question this member. R-One states that there is no cathedral ceiling in the master bedroom, and there are instead rafters with collar ties, as shown on the drawing. R-One also understands that Item 2A is not being considered in this appeal. For Item 2B, R-One understands that is related to a load path issue, for which Moore Architects submitted a revision, approved by Arlington County, but Mr. and Mrs. Kurtz will not allow R-One to perform that work as shown on the approved revision. The homeowners also have terminated the relationship with their architect, and believe his drawing is "inaccurate." Please refer

also to Exhibit 6, an excerpt of sheet A4.4 of the approved plans, showing a section through the master bedroom, confirming that there is no cathedral ceiling. No violation should be issued.

For Item 2C and Item 2D, R-One never knew about those complaints, has not been able to investigate, and is unaware of what is being requested by Mr. and Mrs. Kurtz, other than another violation. It is unclear whether Item 2C remains in dispute for this appeal. Item 2D is believed to be related to the load path, which R-One to date has been prevented from addressing, due to the homeowners' disagreement with the approved drawing prepared by their architect. The parties are at a stalemate on that item. No additional violation should be issued.

Items 3A and 3B both are minor insulation issues. R-One was previously issued a violation for item 3B, and had agreed to address both items, whether required or not. R-One had understood that Item 3B was no longer being appealed, and had expected that Item 3A, the basement closet, would be moot. R-One has upon information and belief completed both items 3A and 3B, subsequent to the instant appeal paperwork having been filed.

Mr. and Mrs. Kurtz allowed R-One access to the project for limited purposes, on July 19 and July 24, 2013, and R-One's insulation subcontractor, Southland Insulators, performed work on items 3A and 3B. Unfortunately, on July 26, 2013, the homeowner piled up boxes in front of the basement closet door, refused access to R-One and the Arlington County inspector, and would not allow inspection of Southland's work, including item 3A herein. Mr. and Mrs. Kurtz at the same time have raised a new complaint about the insulation in the space above the master bedroom ceiling, which R-One believes is not within the scope of Issues 3A or 3B, which to date have involved only the attic storage area and basement closet. To the extent that Mr. and Mrs. Kurtz are now complaining about insulation above the master bedroom ceiling, to R-One's knowledge, Arlington County inspectors

(and R-One or its subcontractor) have not yet been permitted to evaluate that area. That newest complaint is not properly before this board. Nor should that new issue excuse the homeowners' conduct, denying the county inspector access to see items 3A and 3B, so that they may be removed from the list of disputes.

For Item 4A, regarding the detached garage foundation, R-One is in agreement with Arlington County's position. No such vent is shown on the approved drawings, and R-One constructed the garage pursuant to the drawings. The structure in question is a detached garage, not necessarily "residential," and therefore not requiring either ventilation or access. Please refer to Exhibit 7, excerpts from page G1.1 of the approved drawings, showing the detached garage. The owners' architect also addressed this issue in the Exhibit 2 memo, pp. 4-5, Item 6. No violation should be issued.

For Item 4B, R-One is in agreement with Arlington County's position. In addition, the hurricane straps, whether necessary or not, are a very minor item, which should not require Board involvement. R-One has already agreed that if it were permitted to do that work, it would install the hurricane straps, in order to remove that item from the list of disputes, and simplify this proceeding. Mr. and Mrs. Kurtz's attorney has not yet responded on that issue. No violation is necessary.

## III. CONCLUSION

No further violations should be issued. For the reasons above stated, R-One respectfully requests that the decisions of the Arlington County Board of Building Code Appeals be upheld, and Mr. and Mrs. Kurtz's appeal denied, with such other and further relief as the Board determines appropriate and the nature of this case may require.

R-ONE CONTRACTING, LLC
By Counsel

HART & HORAN, P.C.

By: _____
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Counsel for Contractor

CERTIFICATE OF MAILING

I HEREBY CERTIFY that a true and accurate copy of the foregoing Contractor's Response to Appeal Submittal was mailed, first-class, postage prepaid, to David C. Gutkowski, Esquire, 1775 Wiehle Avenue, Suite #400, Reston, VA 20190, Alan W. McMahan, Staff, Department of Housing and Community Development State Building Code Technical Review Board, 600 East Main Street, Suite 300, Richmond, VA 23219 and Arlington County Inspection Services Division, 2100 Clarendon Boulevard, 10th Floor, Suite 1000, Arlington, VA 22201, this 31st day of July, 2013.

_____
James R. Hart

Sent overnight to the Board and emailed to counsel.



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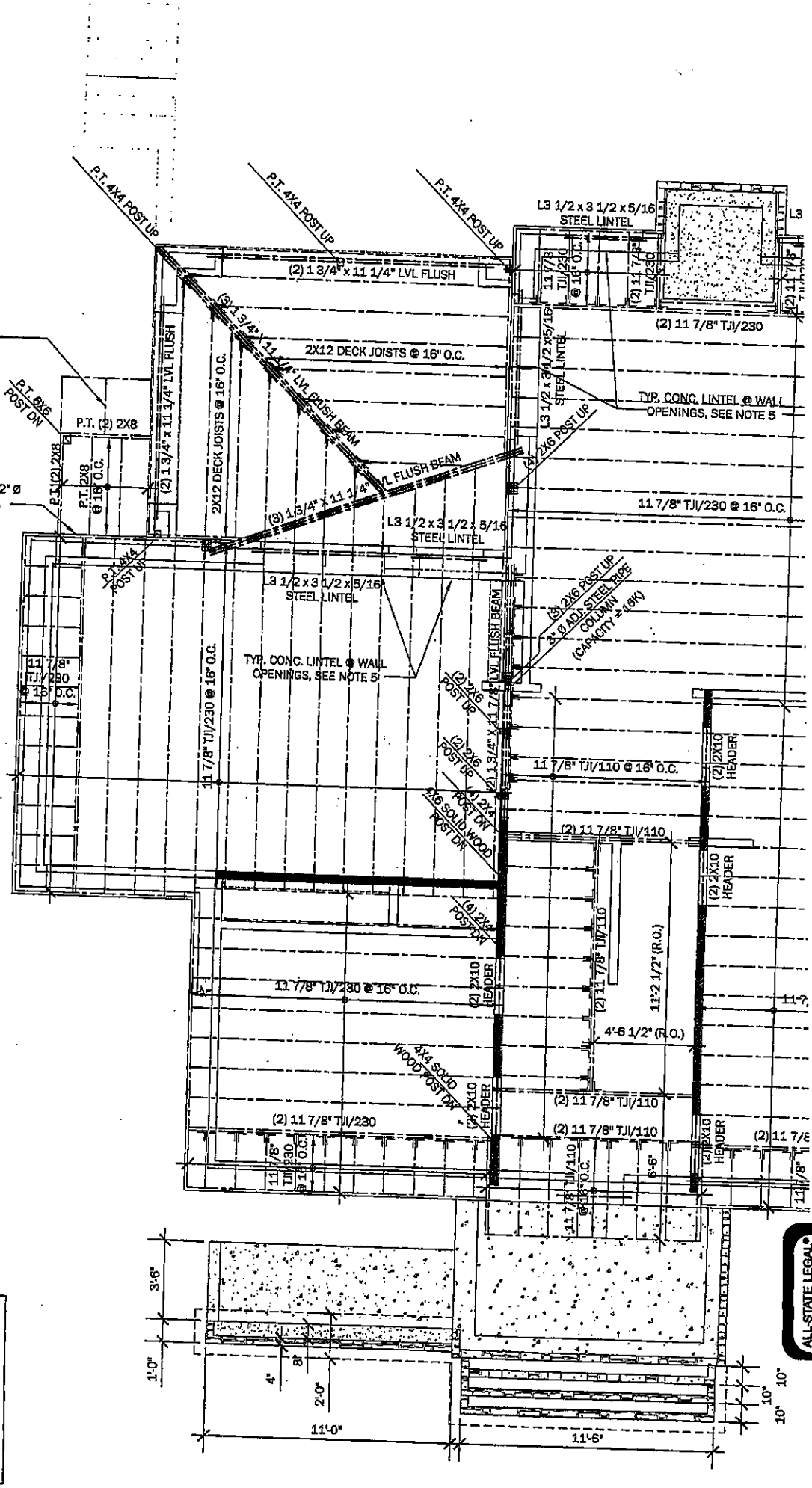
## EXHIBIT LIST

| EXHIBIT # | DESCRIPTION |
|---|---|
| 1. | Excerpt of Sheet A3.4 of the approved plans, showing the screen porch framing |
| 2. | Memorandum, Charles Moore, AIA to Shahriar Amiri, CBO, July 11, 2011 |
| 3. | Except of Sheet A5.2 of the approved plans, showing the screen porch railing and LVLs |
| 4. | Memorandum, Charles Moore, AIA to Shahriar Amiri, CBO, October 15, 2012 |
| 5. | Excerpt of Sheet A3.5 of the approved plans, showing the framing above the master bedroom |
| 6. | Excerpt of Sheet A4.4 of the approved plans, cross-section through master bedroom at upper left |
| 7. | Excerpts from Sheet G1.1 of the plans, showing the detached garage structure |

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SOUTHERN PINE

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RTS.
OPENINGS THROUGH
ETE WALL OPENING DETAIL

EXHIBIT

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ALL-STATE LEGAL®

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MOORE
ARCHITECTS

memo

to: Department of Community Planning, Housing & Development

attn: Shahriar Amiri, CBO
Chief Building Official

from: Charles Moore, AIA

date: 7.11.2011

re: 4087 35th Street, North, Arlington, VA
Kurtz Residence

via: email

On June 24, 2011 I attended a meeting at your request in your office to discuss the Kurtz Residence project located at 4087 35th Street, North, Arlington, VA. Mr. Byron Ramirez, the president of R-One Contracting, LLC, the general contractor for the new house construction, also attended the meeting. Moore Architects, PC is the architect for this house.

The purpose of the meeting was to review a document forwarded to your office on June 15, 2011 by Keith Kurtz, the owner of 4087 35th Street, North, Arlington, VA, and also my client. This document, titled 'List of Suspected Code Violations at 4087 35th Street North', cataloged construction issues that Mr. Kurtz believes are outstanding on the construction of his new home.

On April 1, 2011 Moore Architects, PC (MA) met with Keith and Carol Kurtz to review the status of the punch list items on the house. In that meeting Mr. Kurtz reviewed a number of posts that he believed had not been properly installed during the construction of the house. He also pointed out a number of other issues that he believed required resolution. I communicated to Mr. Kurtz that during conversations with Mr. Ramirez regarding reported deficiencies in the house that Mr. Ramirez indicated to me that he was fully prepared to make any and all necessary repairs to fully satisfy any construction deficiencies that are the responsibility of the general contractor for the project.

At the conclusion of the meeting Mr. Kurtz said that he would forward to MA a comprehensive list of what he believed to be further deficiencies in the construction of the house not later than the following Friday, April 8, 2011. MA did not receive that list from Mr. Kurtz, and has not had any further direct communication with Mr. Kurtz since that meeting.

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EXHIBIT
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On May 3, 2011 I was asked by James Anjam, CBO, Inspection Services Division for Arlington County, to attend a meeting in his office with the general contractor and other building officials to review a list of construction issues forwarded to Mr. Anjam by Mr. Kurtz. On May 23, 2011 I submitted a memo to Mr. Anjam responding to each of the items in that list.

Beginning in September 2010 and concluding in December 2010 a series of Punch Lists were developed by the team during regular and unscheduled project site meetings to review the unfinished or open issues connected to the completion of the house. The running punch list which was re-issued after each meeting showed the completion of open items, and the addition of new items. Most items on the open punch list were completed by the general contractor. Some items have remained open because of the difficulty in gaining access to the residence for additional disruptive construction work. The owner moved into the house in late September 2010.

At this point in time, the general contractor has not been paid final payments on the project. Approximately 12% of the total contract construction costs remain unpaid by the owner to the general contractor.

Suspected Code Violations

I have reviewed the new list dated June 15, 2011 submitted by the owner outlining what he believes to be suspected code violations. While I believe all of the items on the list are critical issues to the successful construction of a new house, I believe most areas of work were constructed according to the intent of the code (IRC 2006).

The most critical issues put forward – the miss placed ridge beam post, and the possible miss aligned load path posts should be addressed and corrected by the general contractor. Since these errors were brought to the architect's attention on April 1st, MA reviewed them with our structural engineer, and proposed solutions to the general contract. Mr. Ramirez immediately offered to go to the house to make these repairs. It is my understanding that the general contractor has not been given the opportunity by the owner to physically make these repairs. An error or omission of construction can certainly be a code violation if the issue is not resolved by the general contractor; in this case, the inability of the general contractor to make the correction outlined in the solution by the architect seems to diminish the liability of the issue on the general contractor.

At this juncture, long after the completion of the house, and after many months of on-again-off-again discussions, it is as if the owner would prefer t the issues raised remain unresolved so the general contractor can be cited for a code violation. I believe that errors and omissions, not willful neglect, in construction is raised to the level of a code violation when the general contractor is unwilling to correct said error. In this situation R1 has publicly expressed a desire to complete any outstanding relevant errors or omissions on the project. Further R1 would like to close out the open issues as a means for bringing the project to

100% completion. Additionally R1 would like to close out all final financial obligations for the project.

List of Suspected Code Violations; as presented by the owner:

1. R406.1

When the concrete subcontractor poured the concrete foundation walls for the house they omitted the installation of some of the styrofoam block-out inserts at the top of the wall on a section of west/left wall. These inserts create the void in the concrete wall for the masonry (stone) finished foundation material (located from -8" below grade up to the first floor sill plate); the stone sits on this ledge.

To remedy this omission R-One Contracting, LLC (R1) later cut out the brick (stone) ledge in this section to receive the stone veneer on the foundation.

This omission and resolution are not unusual in residential construction, and does not diminish the integrity of the concrete foundation wall of the structure.

Prior to the start of the installation of the stone foundation veneer for the house the foundation was fully damp proofed. Additionally the interior and exterior foundation drain tile was fully installed, with both independent drain systems emptying into the interior sump-crock. The corrugated perforated drain tile was installed so that it would drain from a high point into the sump-crock (low point).

Reference to October 1, 2010 flood:

As a byproduct of a sever storm on October 1, 2010 a portion of the left-rear corner of the house leaked creating flooding in the Play Room (B107). The investigation into this flooding showed two issues that were addressed as follows:

1. a natural gas line was added to the project to service a future grill to be located adjacent to the screened porch stair; when this gas line was drilled through the west concrete wall +/-24" below grade, the penetration around the new pipe was not properly caulked/waterproofed. After the flood R1 removed damaged drywall/insulation, repaired the condition by fully caulking and waterproofing the penetration, re-insulated the wall, and re-drywalled/painted the wall.
2. the owner/design/construction team agreed that because of the ultimate configuration of the concrete walls at the left-rear corner of the house (created by walls of the house, retaining walls under the screened porch and the foundation of the garage), in a sever storm excessive water may be trapped within the confines of these walls; it was agreed and R1 executed the installation of 2" weep holes in the base of the concrete walls adjacent to the rear exterior stair.

The solution to this issue appears to have fully resolved the issue that created the October 1, 2010 basement flooding.

2. R703.7.4
R1 states that galvanized metal ties were used to tie the stone veneer to the concrete foundation walls throughout the project. The architect recalls seeing the installation of galvanized ties used in the project to tie the stone veneer to the concrete foundation wall.

3. R703.7.6
I do not recall seeing the use of string weep material in the installation of the stone veneer. However the method for creating the stone foundation is 'dry-stack' which uses minimal mortar in the face of the foundation wall, allowing by default ample drainage of the masonry wall cavity.

There is no connection between the use of weep holes and the use of a 'keyed joint' in between the concrete footer and the concrete foundation wall. Further, the footer and the foundation wall are fully mechanically tied together with steel reinforcing bars imbedded into both masses at the time of the pours, per the construction drawings.

4. R703.5
R1 installed rubber flashing at the head of the windows/door opening, between the steel relieving angle and the stone.

5. R807.1
Attic access is provided from the third floor into the large attic above the master bedroom by way of an opening at the rear of the mechanical attic (see Building Section drawing A4.4/1). (Additionally the photograph provided by Mr. Kurtz of the miss located ridge beam column was taken from this rear attic via this access point.)

None of the other attic spaces including the left or right attics above the bedrooms nor the front porch roof are large enough to require a 22"x30" access opening. These spaces are at the borderline of being considered in excess of 30SF of area, and are only greater than 30" tall at the center ridge line. Additionally, none of these attic areas contain any HVAC, plumbing or electrical equipment requiring access for maintenance.

6. R408.4
The construction details for the detached single car garage for the project were modified three times during construction.

1. original drawings for building permit show garage slab located on a compacted fill foundation
2. because the rear of the garage slopes severely front-to-rear, the entire rear 'basement' of the garage is exposed; the detail for the construction of the foundation and garage floor were changed to create a partial basement space with foundation vents and a 20" x 30" access panel
3. the design was then changed adding windows in lieu of foundation vents, and a rear door in lieu of the access panel

Subsequent to these owner driven construction design changes Arlington County zoning ruled as a part of the building permit revision that there could not be any usable space in the 'basement' of the garage because this use creates a 'two-story' building. The design was then modified to create a closed space without windows, vent openings or an access door. The owner requested however that R1 pour the foundation walls without any access openings, but with scored lines on the interior face of the concrete walls to facilitate access basement space at a later date.

Due to these owner driven instructions to R1, no access was provided into the 'basement' cavity, nor was the space ventilated with foundation vents.

7. R311.5.5

Construction drawings indicate covering the exterior concrete stair treads with Pennsylvania flagstone treads, ultimately covering any imperfection in the concrete tread. R1 has agreed to install the stone tread material per the drawings. R1 has not had the opportunity install the treads.

8. R319.1

The front porch foundation structure is comprised of concrete foundation walls supporting a corrugated metal deck which supports the concrete deck slab. There is no structural wood on the interior of this closet space.

The structural beams and joists construction supporting the rear covered screened porch connect to the masonry foundation walls on pressure treated sill plates bolted to the foundation.

9. R502.6/R502.6.2

All first floor TJI floor joists and LVL beams bear fully on the 8" concrete foundation walls (foundation wall construction: 8" concrete plus 6" stone veneer; 14" concrete walls below grade),

The first floor joist/beam do not bear on the 2x4 wood stud interior perimeter basement walls; they extend significantly beyond these walls to the exterior face of the house. (See Detail Section A5.1/2).

10. R502.7

Rim joist are specified and installed around the entire perimeter of the house adjacent to the perpendicular ends of the TJI floor joists. Additionally 2x4 squash blocks were installed at interior bearing wall locations where joists terminate or where the butt ends of joists overlap.

11. R502.8

Drilling of TJI joists and LVL beams to run electrical wiring, plumbing piping and possibly HVAC ducting have been located within the required one-third distance from the bearing. The location and the method for required drilling of structural floor members appears to be per manufacturers requirements.

12. R602.6
Similar issues to #11 above.

R1 indicates that approved metal plates were used at any conditions in which a stud penetration exceeded code requirements. Additionally R1 indicates that steel plates were used on the face of the stud to protect the electrical wiring or plumbing pipes for future screw/nail damage by the drywall installation, or future picture hooks, etc.

13. R602.8/R602.8.1
The three sections of stairs connecting the four levels of the house are totally open between floors, negating the effectiveness or requirement of firestop within the stringer of the stair. The undersides of all stair structures are covered in drywall, including the closed closet space below the stair at the basement level. All surfaces of the stair are fully covered in finish materials – there are no open stair cavities.

As a standard procedure the R1 ( insulation subcontractor) filled vertical plumbing penetrations in bottom and top stud tracks with approved spray foam to create fireblocking.

14. R802.11/R802.11.1
The structurally rated architectural tapered round columns at the front porch were installed after the completion of the porch roof construction included the installation of the finished 1x trim material installed. Because of this sequence of construction the bottom of the trimmed roof beam/finished entablature connects directly to the top of the structural column. This connection is an error.

R1 has agreed to resolve the connection between the two front porch structural architectural columns and the wood roof beam by eliminating the 1x trim material separating the structural components, and installing mechanical roof ties between the two structural materials.

15. R905.2.8/R905.2.8.2
All roof valley flashing conditions are covered with 15# felt, and these (and other) conditions were covered with an additional waterproofing membrane (Grace Ice & Water Shield); the waterproofing membrane was installed using a 36" wide roll which provided coverage 18" up each side of the valley condition. Prior to the installation of the asphalt shingles a black aluminum 'W'-shape valley flashing was installed.

16. N1102.2.6
I am not aware of any uninsulated wall areas in the exterior basement walls of the house. All exterior basement/foundation walls were insulated floor-to-ceiling with rock-wool insulation.

There may be portions of insulation removed in the mechanical room to facilitate the installation of MEP systems. Any insulation removed to facilitate construction must be reinstalled.

The closet space below the front entrance porch was designed as unconditioned/uninsulated space. The design shows the thermal envelope extending across the straight front wall of the house. Additionally, the ceiling of this space was ultimately insulated with spray foam insulation.

17. N1102.4.1

The entire first / second floor construction, and third floor attic spaces and all ceiling/roof areas were insulated with Icynene insulation, closing all holes and cavities in the exterior walls to create a uniform thermal envelope for the house. Additionally the insulation subcontractor filled all joints and gaps in the exterior stud walls, plates, window and door openings and MEP penetrations.

18. P2503.5.2

All plumbing pipes were tested by the plumber prior to the plumbing close-in inspection. The rubber membrane shower pans were all tested prior to the installation of ceramic tile and stone thresholds. Most shower pans were designed and constructed with level floor recessed framing. The slope in the pan is created with the mud installed by the tile setter after GWB/tile backer has been installed. The soundness of the waterproofing membrane can be tested regardless of when the slope in the floor is created.

In this case two of the four shower pans were designed with recessed framing - meaning there is no 4" tall threshold to step over when accessing the shower. This detail makes access into the shower easier (including a handicapped person).

The rubber membrane waterproofing in the pan of the shower was protected during construction with +/- 3" of standing water left in the pan for many weeks; this allowed for R1 to check for any leaks in the pan during that period of time, and to keep workers from stepping in the pan.

19. R406.3.3/R406.3.4

The soil used for the backfill for the foundation walls of the house came from the excavation of other local residential construction projects in which the GC was working; this allowed for the GC to know the direct source of the soil. Specifically much of the backfill soil came from a new house under construction by R1 in north Arlington with outstanding soil conditions. None of the soil used from this source was a non-draining material such as marine-clay. Further, there is not a requirement to backfill a foundation with 'topsoil', nor 100% clean, screened material. There may be a minor amount of other non-organic materials mixed in with the back fill material.

The backfill material did not have any impact or connection with the October 1, 2010 basement flood, as described in item #1 above.

20. P2603.3/P2603.5
COPIED RESPONSE SECTION FROM #1 ABOVE:
As a byproduct of a sever storm on October 1, 2010 a portion of the left-rear corner of the house leaked creating flooding in the Play Room (B107). The investigation into this flooding showed two issues that were addressed as follows:

1. a natural gas line was added to the project to service a future grill to be located adjacent to the screened porch stair; when this gas line was drilled through the west concrete wall +/-24" below grade, the penetration around the new pipe was not properly caulked/waterproofed. R1 removed damaged drywall/insulation, repaired the condition by fully caulking/waterproofing the penetration; re-insulated the wall, and re-drywalled/painted the wall.
2. the owner/design/construction team agreed that because of the ultimate configuration of the concrete walls at the left-rear corner of the house (created by walls of the house, retaining walls under the screened porch and the foundation of the garage), in a sever storm excessive water may be trapped within the confines of these walls; it was agreed and R1 executed the installation of 2" weep holes in the base of the concrete walls adjacent to the exterior stair.

The solution to this issue appears to have fully resolved the issue that created the October 1, 2010 basement flooding.

20. P2604.1 / P2604.3
Refer to #19 above.

The work that was executed on June 23, 2010 to install the main gas line from the public line in the street to the gas meter on the left side of the house was fully executed by Washington Gas. All of this work, including any required support for one utility pipe passing above another utility pipe was the responsibility of the utility company, not the general contractor.

21. P2709.2
The bottom +/-12" of the side door jambs in two of the showers have experienced premature deterioration with the joints in the ceramic tile opening and heaving. It appears that water has been allowed to penetrate through the wall in these areas.

This issue was communicated by the owner at the April 1, 2011 meeting. R1 has agreed to repair the door jambs by removing the ceramic tile, extending the rubber membrane waterproofing higher up the wall jamb, and re-tiling the impacted area. This remediation work clearly falls under the one-year warrantee requirements of the State of Virginia.

22. R401.4
Approximately one-third of the rear of this property is located within the 100 foot forested RPA (Resource Protection Area). Because a portion of the left-rear corner

of the detached single car garage is located within the RPA, this project fell within the review and required long-term maintenance of the county. The resolution of all impervious and pervious rain water has been fully designed into the civil engineering documents integral to the construction drawings and review process. All surface water has been designed to flow into the following collection facilities: 1. a rain-garden, 2. a stormwater planter, or 3. a side Vee-ditch.

The civil engineering drawings for the project indicate that grade around the entire house be constructed to a minimum 2% slope of final grade away from the house . All indications are that this slope protocol was achieved around the entire house, connecting all water (including roof water) to the three approved surface water collection facilities.

In addition to the typical 2% yard slope around the house, the grading in the area directly behind the lower rear yard patio was modified to add a swale from the house to the edge of the RPA to assist in the removal of surface water away from the house adjacent to the rear patio.

23. E3302/E3302.1/E3302.2/E3302.3
Vertical penetrations in the framing for running electrical wiring or plumbing piping was fire stopped prior to the close-in inspection.

24.E3804.3/E3806.8/E3806.8.3
Generally all electrical junction boxes were installed by nailing the junction box to the adjacent wood stud.

The junction box adjacent to the wall cabinet in the Play Room B07 was added towards the end of construction to facilitate the owners request to eliminate power to the specified undercabinet wall lighting which the owner subsequently decided to eliminate. The wall mounted closed junction box is not located within the closed wall construction.

OTHERS:

25. WINDOWS
All wood windows in 2x6 wood frame construction were installed from the exterior of the stud wall; the vapor barrier (Tyvek) material was wrapped and taped into the jamb of the window opening. Aluminum flashing was installed at the head of the window, additionally covered with a standard wood drip cap at the head. The wood 5/4x4 window trim was perimeter caulked at the wood siding joint.

26. Exterior LVL Beams
LVL beams used in the floor construction of the rear screened porch were fully covered and protected with the perimeter 1x trim board detail, protecting the LVL beam from any direct exposure to moisture. The area directly above this framing includes an enclosed screened porch with T&G painted IPE flooring, and a screened porch roof with 18" overhangs.

The LVL beams are protected from the effects of direct water or secondary water. They are not protected from the effects of humidity, much like a LVL beam located on the interior of a garage is not protected from an open garage door.

27. Notched 4x4 Posts

For the construction of the screened porch 4x4 wood post were used to provide intermediate support of the guardrail between the structural columns at the perimeter of the porch which is greater than 30" above grade. The 4x4 was used because of its ability to fit under the standard wood top-rail/handrail. In some cases the 4x4 post is notched to fit around the major floor structure (double LVL beam below). A 6x6 post would not fit in this condition.

28. Damaged LVL Beam

The structural framing drawings do not indicate a LVL beam anywhere in the 2nd floor deck of the front foyer area of the house. There are however TJI floor joists supporting the floor structure to the adjacent bearing walls.

Late in the construction of the house the owner requested changes to the lighting layout in this area, thus requiring new holes to be cut in the drywall ceiling to facilitate the running of new wiring and junction boxes for new light fixtures. There may be holes cut through the TJI's to allow for the wiring to be relocated to satisfy this requirement.

MISSING BEARING POSTS IN THE HOUSE

LOCATION A.

An equal sized parallam post replacing a 4x6 post provides greater structural integrity.

LOCATION D.

An equal sized parallam post replacing a 4x6 post provides greater structural integrity.

The drywall in this area can be removed to verify that the post load path has been achieved.

LOCATION C.

The drywall in this area can be removed to verify that the adequate post has been installer per the construction drawings.

LOCATION B.

The drywall in this area can be removed to verify that the adequate post has been installer per the construction drawings.

LOCATION MB1

On April 25, 2011 MA issued a memo directive to R1 outlining the solution to the misplaced structural post above the Master Bedroom #206. Following is a portion

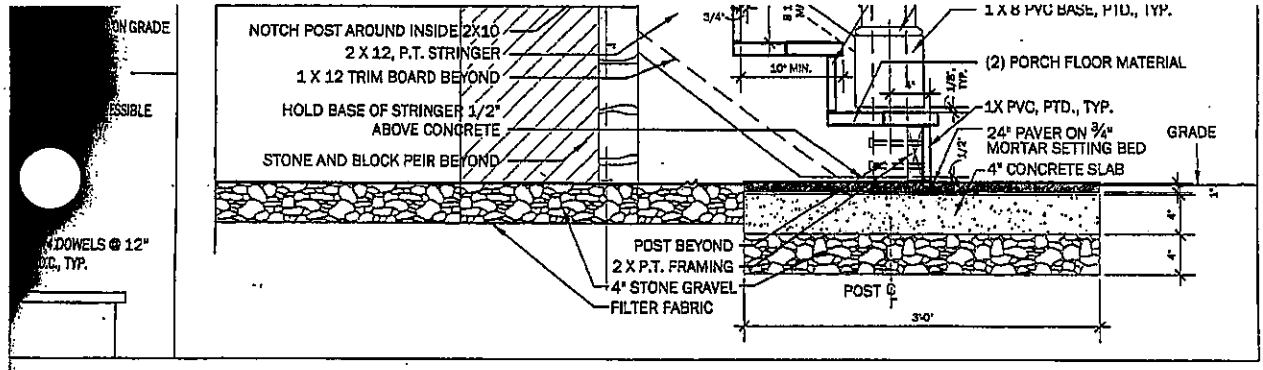
of that directive (this memo including sketches was forwarded to James Anjam in the MA memo dated June 23, 2011):

> *Attached please find a portion of the Construction Drawings including the second floor and roof framing plans for the Kurtz residence. The post supporting the rear gable (above the master bedroom) was positioned on the LVL beam located in the third floor deck; this post should have extended down inside the master bedroom / bathroom wall to the LVL beam located in the second floor deck. The LVL beam in the third floor deck was designed only to carry the main roof load and not any additional load from the rear gable roof.*
>
> *Once the new post down has been installed from the ridge down to the second floor deck LVL beam the misplaced post should be removed eliminating any load transfer to the third floor deck LVL beam. To install the post down the master bedroom side drywall will need to be removed providing access; this wall will then need to be patched, repaired and repainted.*

To date R1 has not had the opportunity to correct this condition.

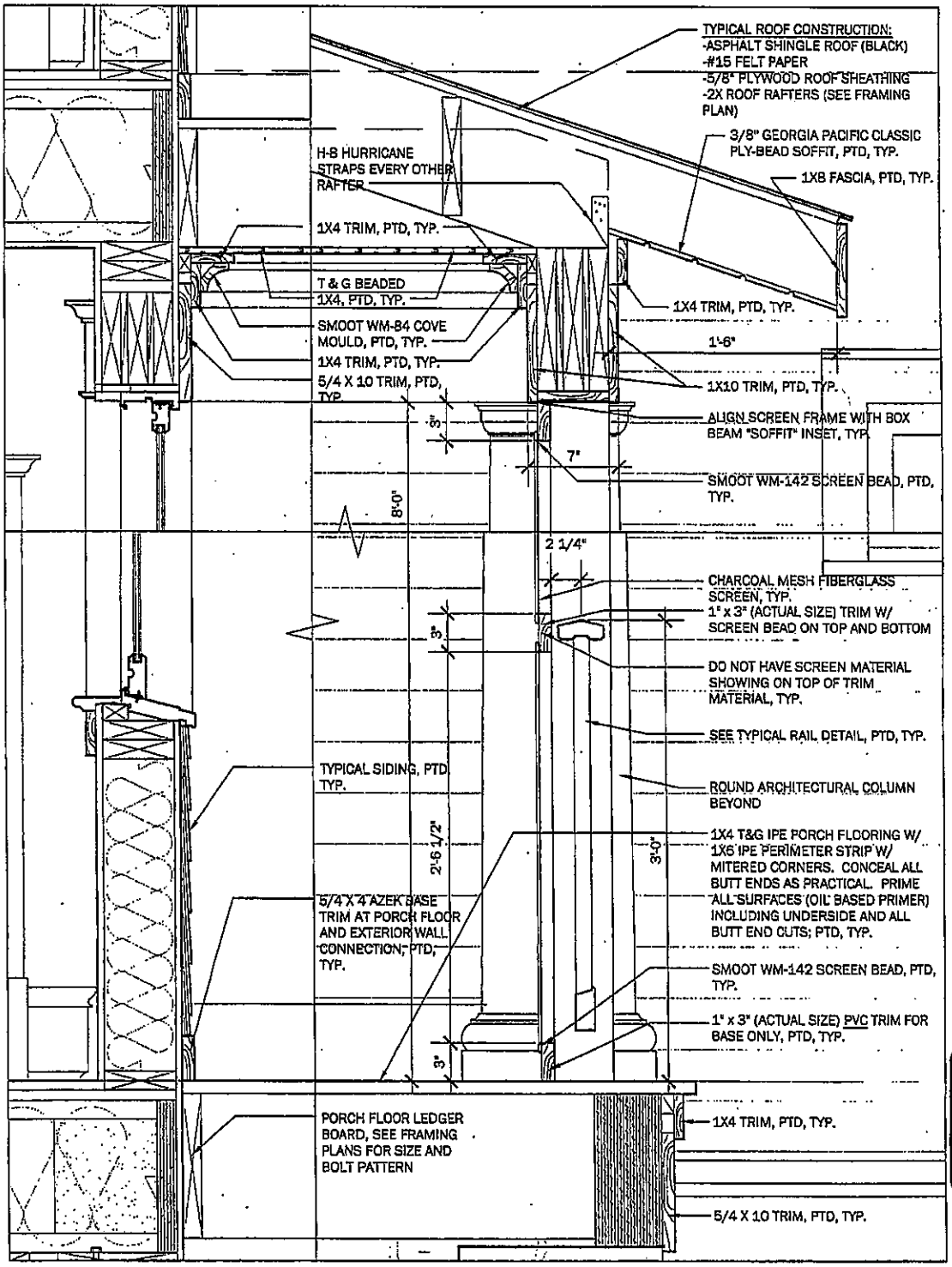
<u>LOCATION MB2</u>
While R1 is correcting the condition described above they must confirm the existence of a triple 2x6 post at the rear of the Master Bedroom ridge beam. If only a double 2x6 post was installed they must add one 2x6 post. This post must carry the ridge beam load from the ridge beam down to the beam located in the second floor deck.

End of Memo.




7 / A5.2 TYPICAL EXTERIOR RAIL DETAIL

SCALE 1" = 1'-0" (PL02)




5 / A5.2 SCREENED PORCH DETAIL

SCALE 1 1/2" = 1'-0" (PL02)

EXHIBIT

3

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241

MOORE
ARCHITECTS

**memo**

to: Arlington County
Department of Community Planning, Housing and Development
Inspection Services Division

attn: Mr. Shahriar Amiri; Chief Building Official
Carolyn Majowka

from: Charles Moore, AIA / Shamual Choudhury

date: 10.15.12

re: Kurtz Residence
4087 35th Street North, Arlington, Virginia

via: email/mail/fax

Per your request during our meeting on October 5, 2012, attached please find the attached details and calculations for structural conditions we reviewed at the Kurtz Residence. We have consulted with the structural engineer of record, Robin Simmons, PE of SDS, PLLC. P

end of memo

COMMONWEALTH OF VIRGINIA
CHARLES M.
MOORE
Lic. No. 8252
ARCHITECT

A Professional Corporation
603 King Street
Third Floor
Alexandria, VA 22314
(t) 703.837.0080
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www.moorearch.com

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EXHIBIT
4

SDS
STRUCTURAL DESIGN SERVICES, PLLC

October 15, 2012

Mr. Shamual Choudhury
Moore Architects, PC
603 King Street, 3rd Floor
Alexandria, VA 22314

RE: Kurtz Residence Project No.: 09007

Dear Shamual:

This letter is to respond to the comments from the site meeting on 10/5/12 for the Kurtz Residence. My responses to the structural comments are indicated below.

Sketch 1.1: The (2)2x8 header over the duct register in the first floor hall wall is sufficient. See the calculation on page 1 of the calculations attached to this letter

Sketch 2.1: The beam supporting the front dormer has been checked for 9 ½" depth due to a hole drilled at the bottom of the beam. The member is sufficient for 9 ½" depth. See calculation on page 1 and 2 of the calculations attached to this letter.

Sketch 3.1: The beam indicated in the sketch does support most of the load from the porch roof post above. The load is transferred to the edge beam from the triple LVL.

Sketch 3.2: The diagonal beam can support the ends of the side and top LVL beams. Hanger sizes are indicated on the sketch attached to this letter.

Sketch 4.1: The post connection can withstand the 200 lb. lateral force from the railing. Provide (2) ½" diameter lag screws through the post into the edge beam. The notch in the side of the base of the post is adequate. This type of connection is common in deck construction. The load from the post is taken by the edge beam in compression.

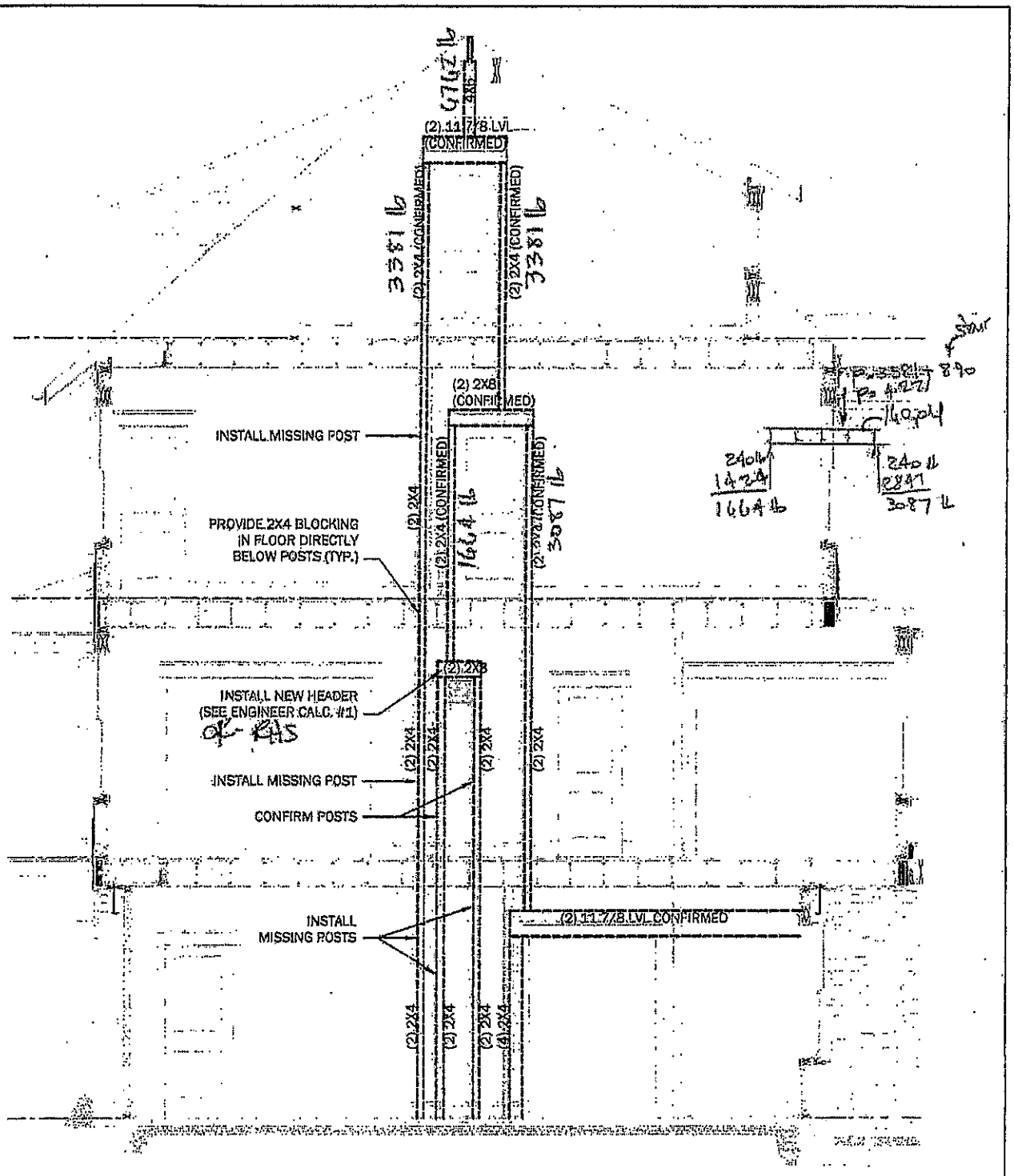
Please contact my office should you have any further questions concerning this matter.

Sincerely,

Robin H. Simmons, PE
Principal/Structural Engineer

COMMONWEALTH OF VIRGINIA
ROBIN H. SIMMONS
No. 022866
10/15/12
PROFESSIONAL ENGINEER

C:\...\STRUCTURAL DESIGN SERVICES PLLC\Project Files\PRO-2009\09007\State Appeal\09007 Response to Building Comments.doc




1 / 1.1 CENTRAL LOAD PATH DIAGRAM

SCALE 3/16" = 1'-0" (PL02)

MOORE ARCHITECTS
MOORE ARCHITECTS, PC
603 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
T 703.837.0080
F 703.837.0088

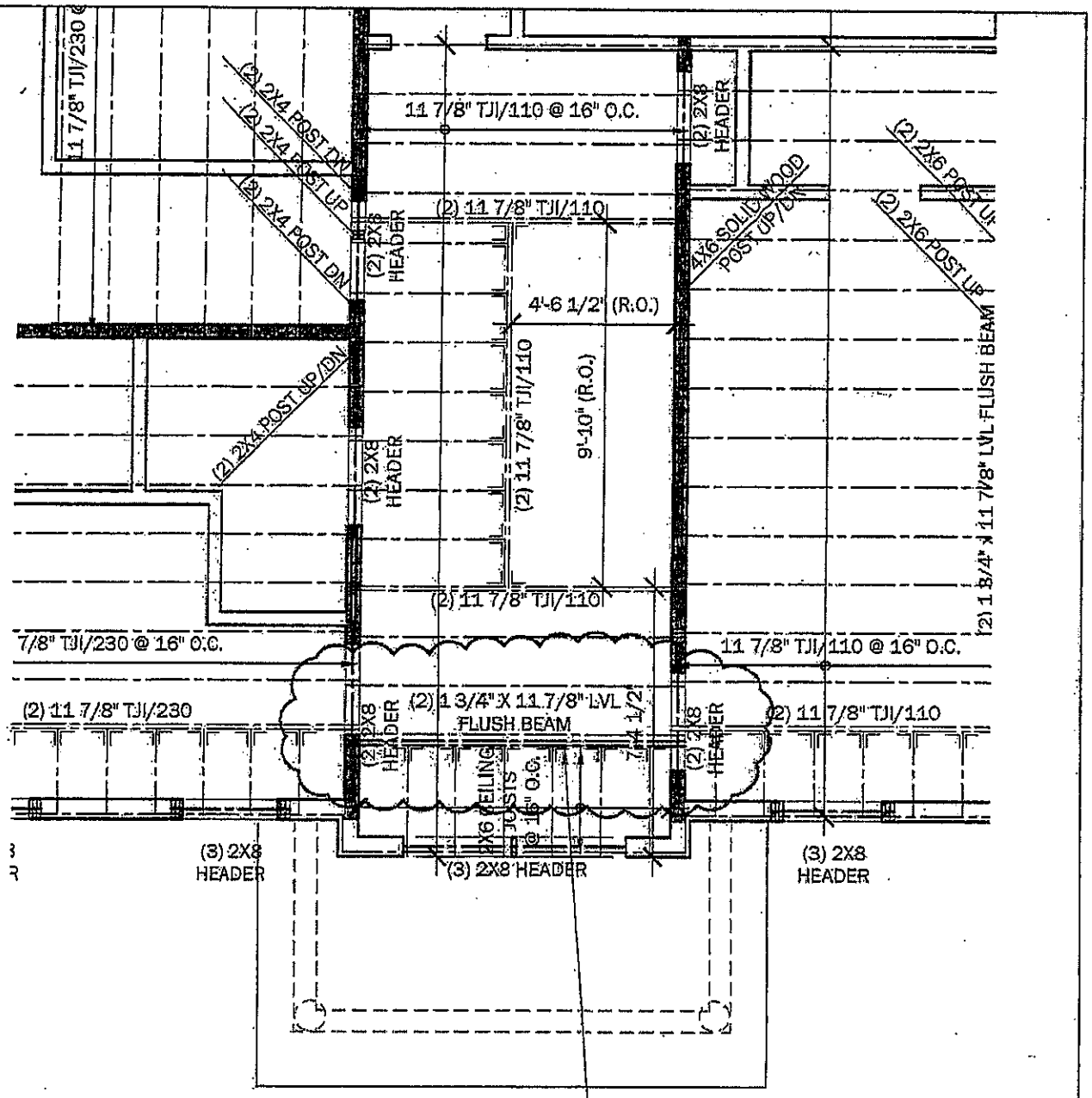
# KURTZ RESIDENCE

4087 N. 35TH STREET
ARLINGTON, VA 22207

10.09.12

SCALE: 3/16" = 1'-0"

1.1




1 / 2.1 ATTIC FLOOR/ ROOF FRAMING PLAN

SCALE 1/4" = 1'-0" (PL02)

MOORE ARCHITECTS

MOORE ARCHITECTS, PC
603 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
t 703.837.0080
f 703.837.0088

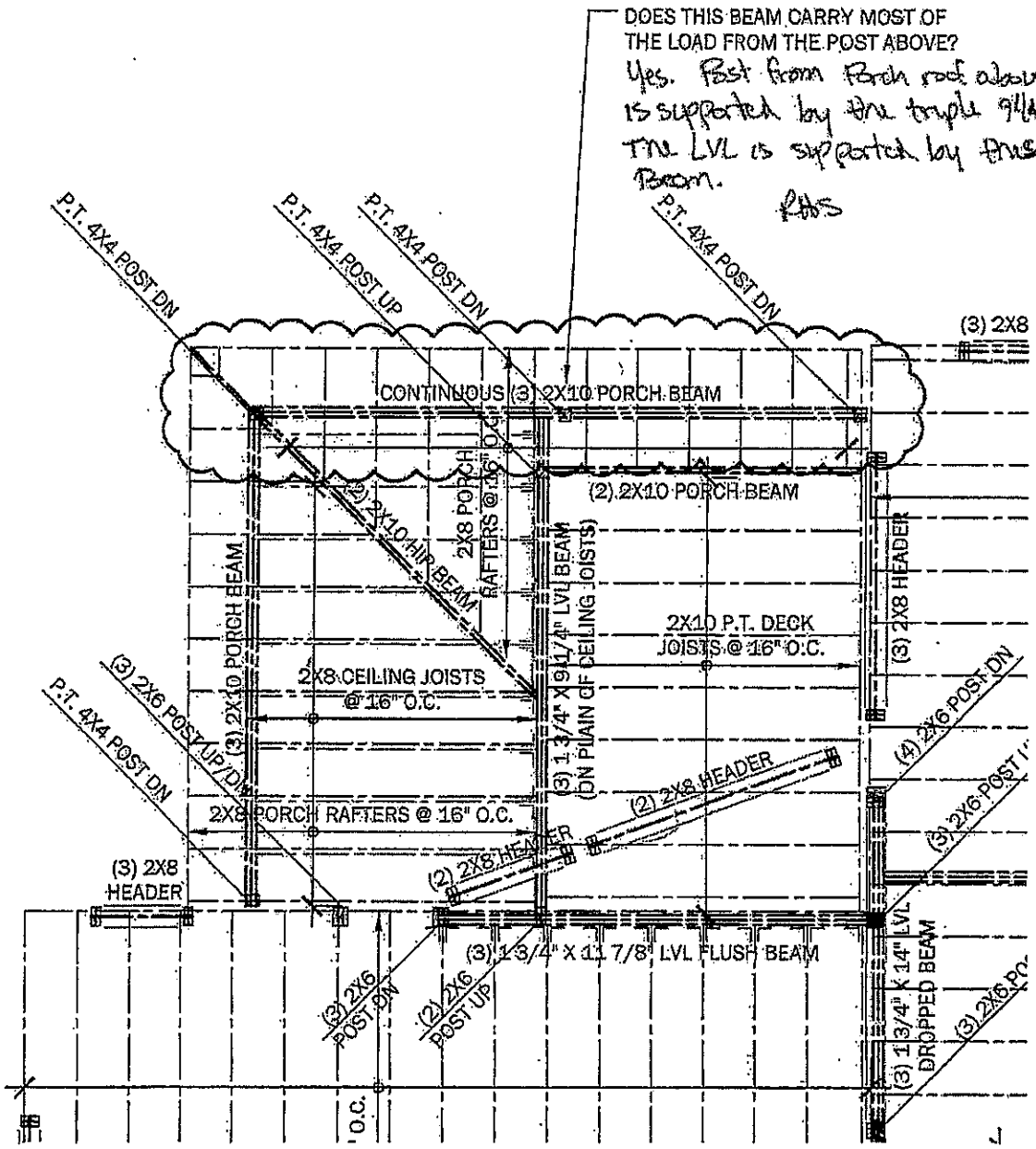
# KURTZ RESIDENCE

4087 N. 35TH STREET
ARLINGTON, VA 22207

10.09.12

SCALE: 1/4" = 1'-0"

2.1




1 / 2.1 SCREENED PORCH ROOF FRAMING PLAN

SCALE 1/4" = 1'-0" (PL02)

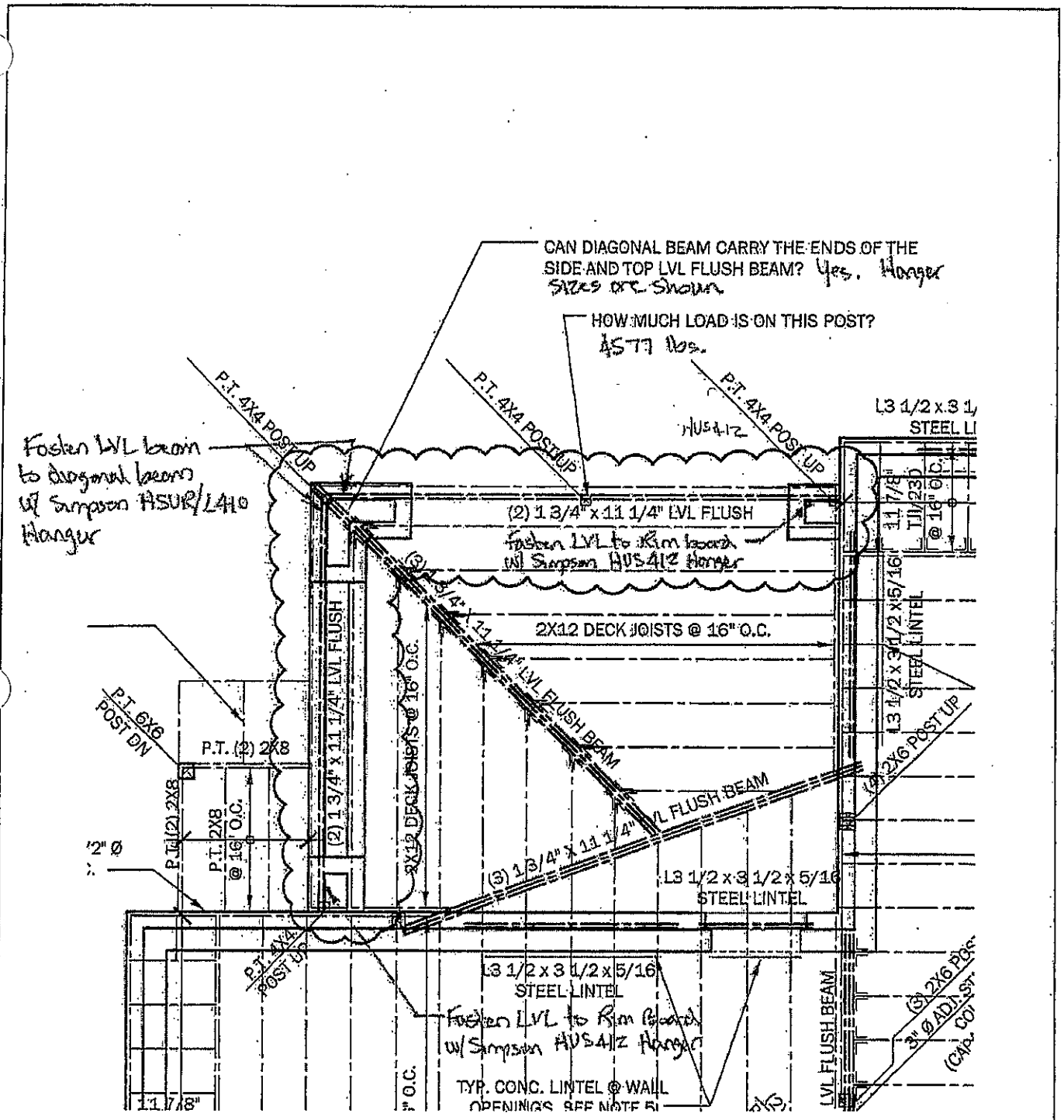
MOORE ARCHITECTS

MOORE ARCHITECTS, PC
503 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
t 703.837.0080
f 703.837.0088

# KURTZ RESIDENCE

4087 N. 35TH STREET
ARLINGTON, VA 22207

| 10.09.12 | |
|---|---|
| SCALE: 1/4" = 1'-0" | 3.1 |




1 / 2.1 SCREEN PORCH FRAMING PLAN

SCALE 1/4" = 1'-0" (PL02)

MOORE ARCHITECTS
MOORE ARCHITECTS, PC
603 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
t 703.837.0080
f 703.837.0088

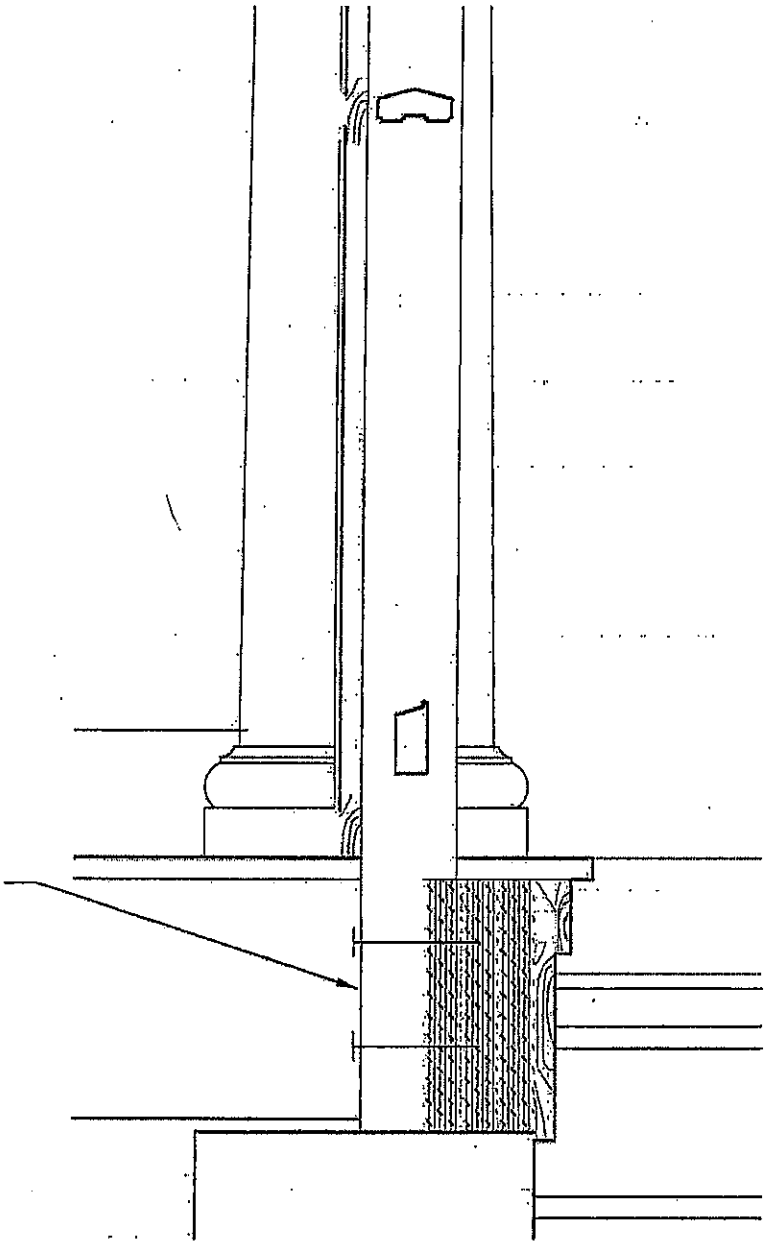
# KURTZ RESIDENCE

4087 N. 35TH STREET
ARLINGTON, VA 22207

10.09.12

SCALE: 1/4" = 1'-0"

3.2



CAN THIS POST CONNECTION WITHSTAND 200 LBS OF LATERAL FORCH? Yes.

Provide (2) 1/2" ϕ lag screws, galvanized.

1
1.1

## CENTRAL LOAD PATH DIAGRAM

SCALE 3/16" = 1'-0" (PL02)

MOORE ARCHITECTS

MOORE ARCHITECTS, PC
603 KING ST
3RD FLOOR
ALEXANDRIA, VA 22314
T 703.837.0080
F 703.837.0088

# KURTZ RESIDENCE

4087 N. 35TH STREET
ARLINGTON, VA 22207

10.09.12

SCALE:
1 1/2" = 1'-0"

4.1

STRUCTURAL DESIGN SERVICES, PLLC
STRUCTURAL ENGINEERING CONSULTING
3551 WHITE OAK DRIVE
HARRISONBURG, VA 22801-5336
TEL. (540) 433-6135 FAX. (540) 433-6136

| Project: Kurtz Residence | | |
|---|---|---|
| Calculation By: CHS | Date: 10/12/12 | Project No.: 09007 |
| Checked By: | Date: | Page No.: 1 |

Structural Calculations for items discussed at Site Mtg on 10/5/12

Ref: Architectural Sketches 1.1 thru 4.1 dated 10/9/12

1. Sketch 1.1 - Size header at dbl recessed in 1st floor hall wall

L = 1.75' P: Ridge Beam load

load is split at 2 headers. See attached sketch for calculation of load (P's & calcs)

P = 1664 lb w = 160 pcf × ((15 + 30 psf)(4.5/2 + 3/2))

$M = \frac{Pl}{4} + \frac{wl^2}{8} = \frac{(1664\text{ lb})(1.75')}{4} + \frac{(160\text{ plf})(1.75)^2}{8} = 789\text{ ft-lb}$

$S_{req'd} = \frac{M}{F_b} = \frac{789\text{ ft-lb}(12)}{975\text{ psi}(1.15)} = 8.4\text{ in}^3$

Δ ok (2) 2×8 Hdr ok

2. Sketch 2.1 - Verify Beam at corner is adequate for 9½" depth

(2) 1¾" × 9½" LVLs are adequate

(See calculations in excel area of page 2 of calcs)

STRUCTURAL DESIGN SERVICES, PLLC
STRUCTURAL ENGINEERING CONSULTING
13105 BOURNE PLACE
BRISTOW, VA 20136-1030
TEL. (703) 754-6135 FAX. (703) 753-9075

| Project: Kurtz Residence | | |
|---|---|---|
| Calculation By: RHS | Date: 3/30/09 | Project No.: 09007 |
| Checked By: | Date: | Page No.: ~~1~~ 2 |

# IV. Third Floor Framing

## A. Joists

### 1. Max Span

$L = 18'$ $W = (15 + 30\,psf)\left(\frac{16}{12}\right) + 60\,plf\ TL,\ 40\,plf\ LL$

Use 11 7/8" TJI 230 @ 16" o/c.

### 2. Joists @ Sunlit Shower

$L = 14'$ $W = (5 + 30\,psf)\left(\frac{16}{12}\right) = 105\,plf\ TL,\ 40\,plf\ LL$

Use 9 1/2" TJI 230 @ 16" o/c

## B. Beams

### 1. Beam under Front Dormer

a. $L = 9'$ $W = (20 + 21\,psf)\left(\frac{8}{2} + 1\right) + (10\,psf)(5') + (20 + 21\,psf)\left(\frac{3.5}{2}\right) + (15 + 30\,psf)\left(\frac{16}{12}\right) = 387\,plf$

$M = \frac{wL^2}{8} = 3918\,lb\text{-}ft$ Use (2) 11 7/8" LVL @ roof & floor dsgn

Use (2) 9 1/2" LVL's $M_{app} = (2)(5885\,lb\text{-}ft) = 11770\,lb\text{-}ft$ OK

$R = 387\,plf\left(\frac{9}{2}\right) = 1741\,lb$ $V_{app} = (2)(3160\,lb) = 6320\,lb$ OK

$\Delta_{LL} = 3/16"$ $I_{req'd} = 47\,in^4 < (2)(125\,in^4)$ OK

(2) 9 1/2" LVL's ok

### 2. Beams @ Stair Opng

a. $L = 10'$ $W = (15 + 40\,psf)\left(\frac{9}{2}\right) = 248\,plf$

$M = \frac{WL^2}{8} = 3094\,lb\text{-}ft$ (2) 11 7/8" TJIs ok (110 or 230)

$R = 1240\,lb$

b. $L = 9'$ $W = 60\,plf$ $P = 1240\,lb$

$M = \frac{wL^2}{8} + \frac{PL}{4} = 3398\,lb\text{-}ft$ (2) 11 7/8" TJI's ok (110 or 230)

$R = 890\,lb$

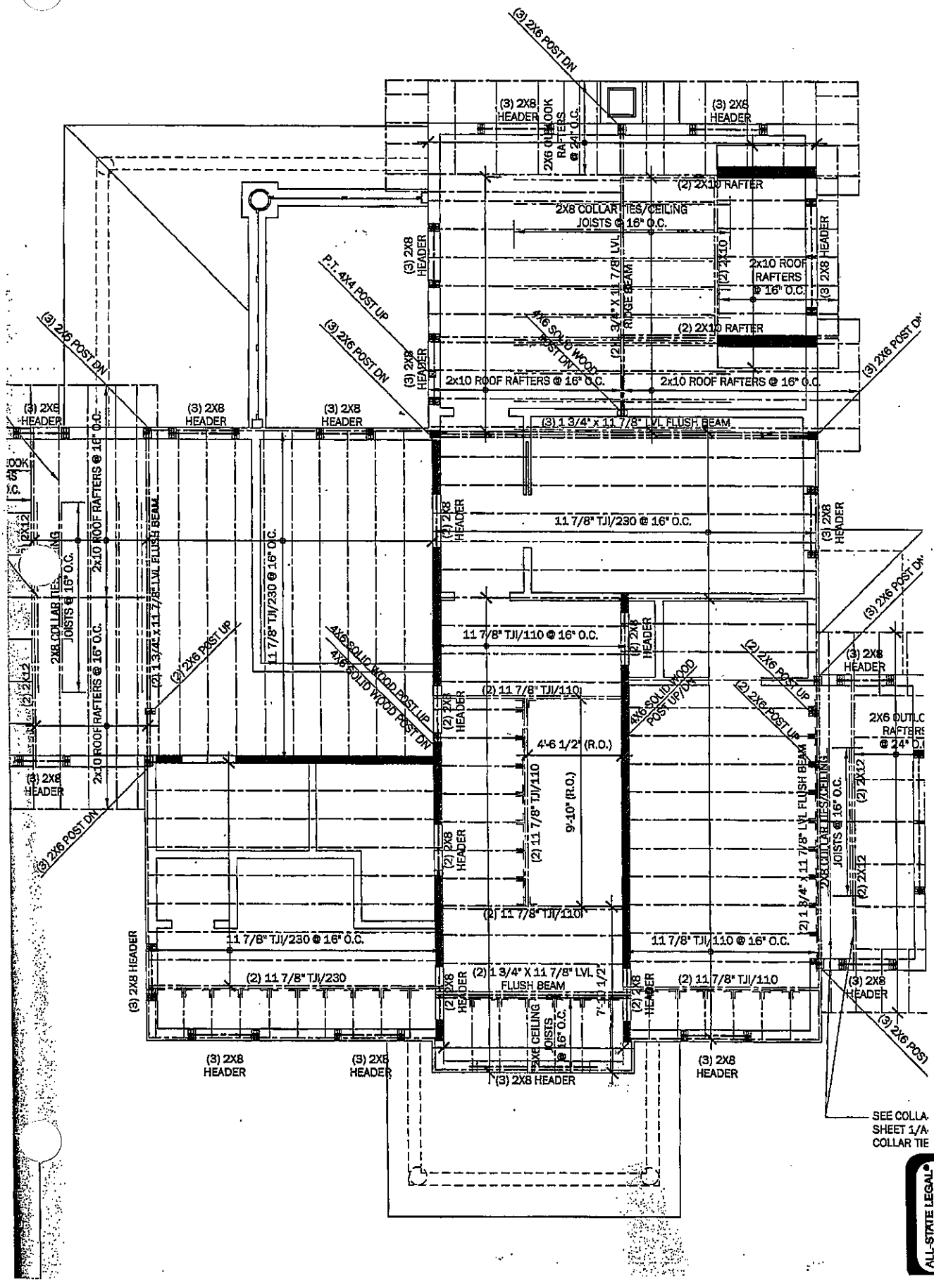
### 1b. Beam under Rear Dormer

10/7/09

$W = (20 + 21\,psf)\left(\frac{14.5}{2} + 1.5'\,ecc\right) + (10)(5) = 409\,plf$

$L = 9'$ $M = 4141\,lb\text{-}ft$ (3) 2x10

$R = 1840\,lb$



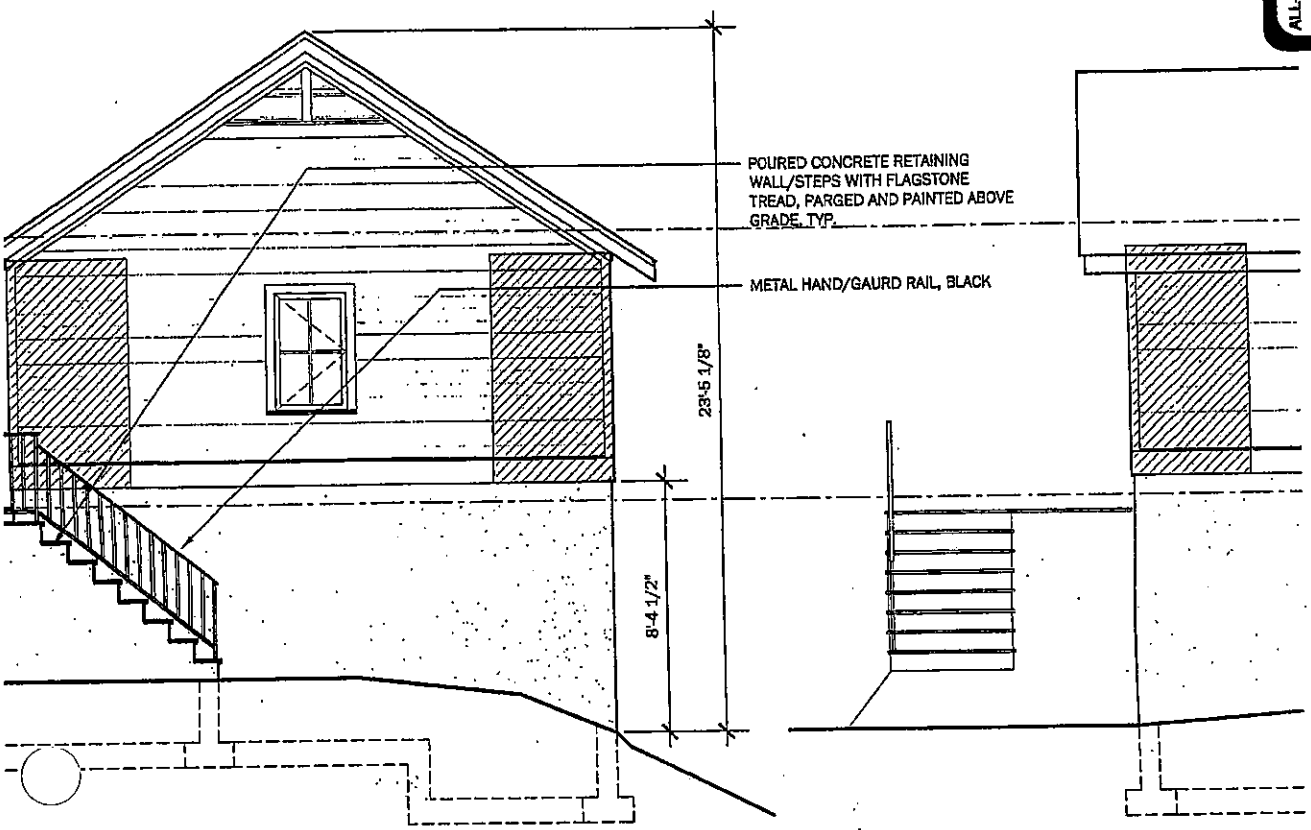
EXHIBIT

6


STEP FOOTINGS AT REAR OF HOUSE AS REQURIED TO ACHIEVE 30" FROST LINE DEPTH. TURN DOWN BASEMENT SLAB AND/OR THICKEN FOUNDATION AS NEEDED TO

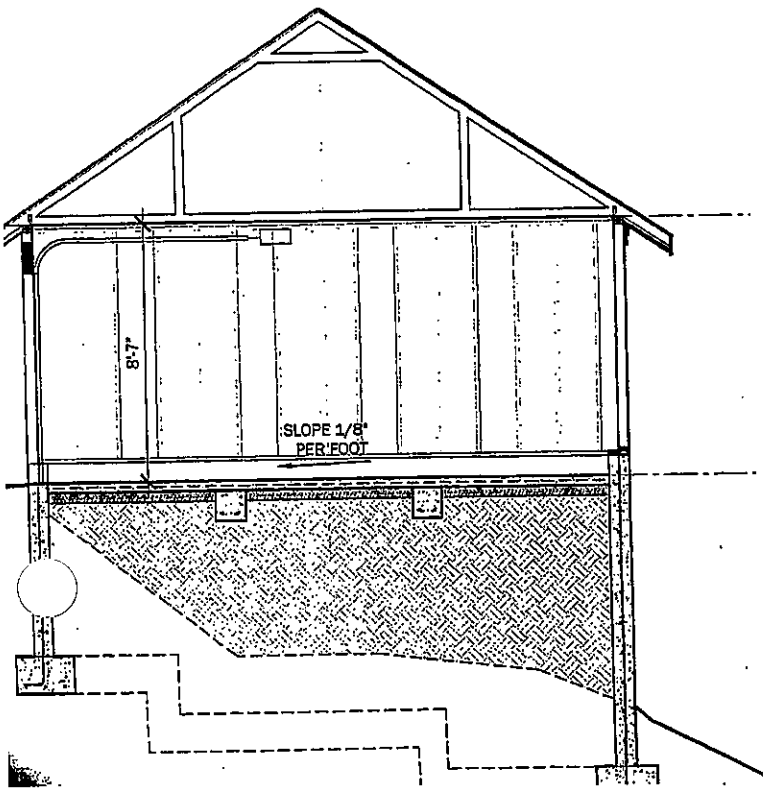
12 / G1.1 GARAGE WIND BRACING PLAN
SCALE 1/8" = 1'-0"

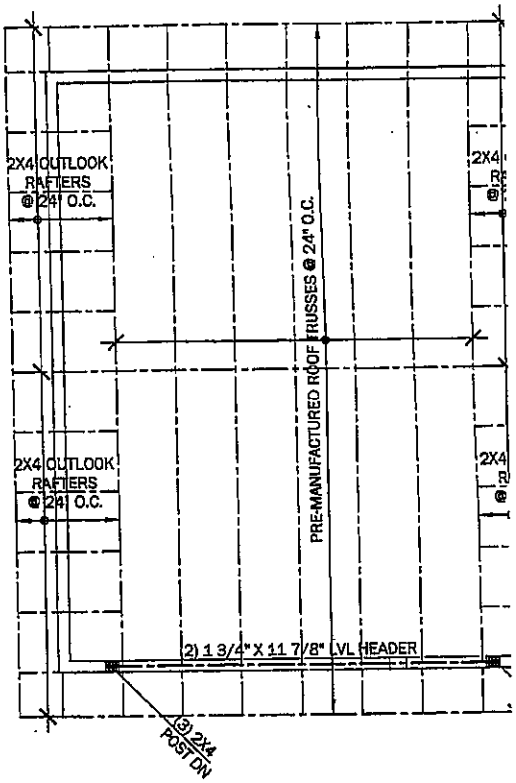
11 / G1.1 FIRE RATED WALL ASSEM
SCALE 1" = 1'-0"




9 / G1.1 ELEVATION - RIGHT
SCALE 1/8" = 1'-0"

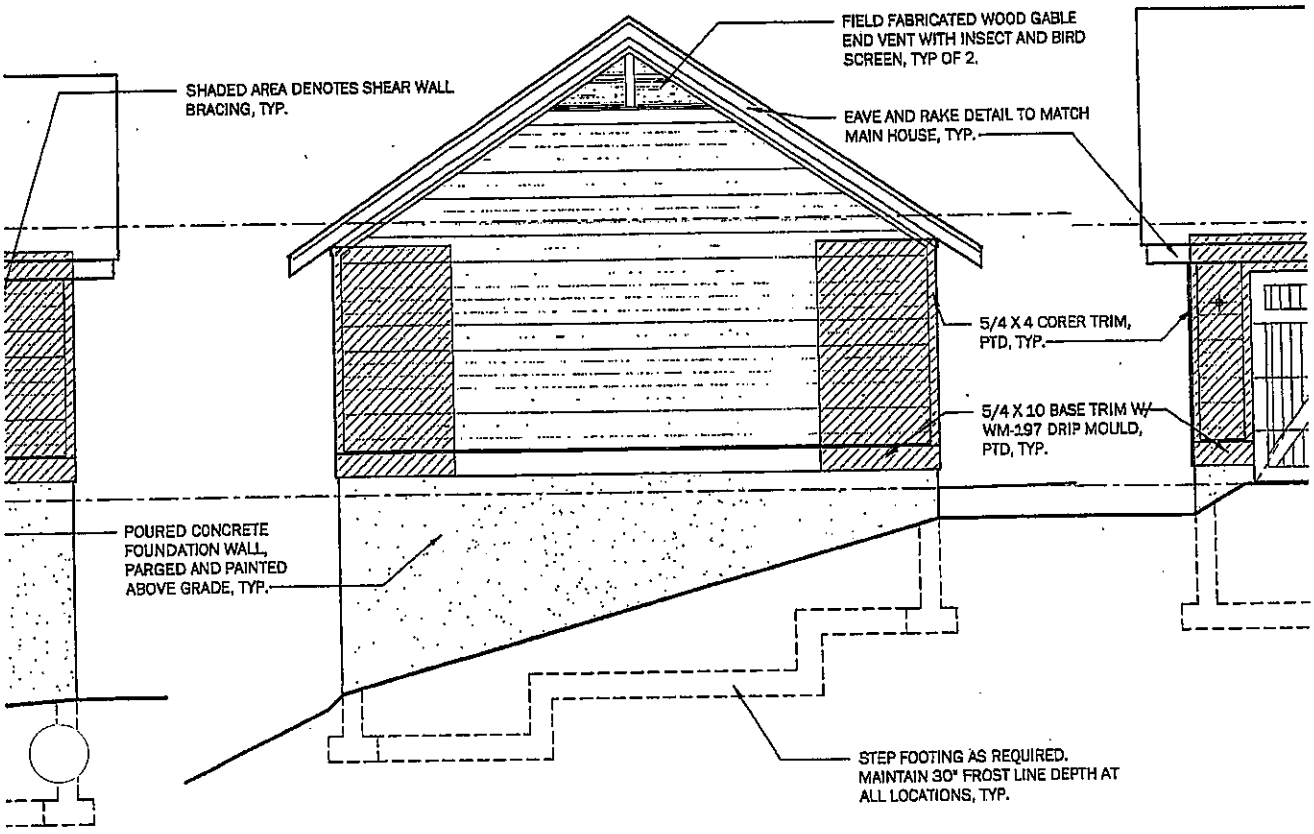
8 / G1.1 ELEVATIC
SCALE 1/8" = 1'-0"



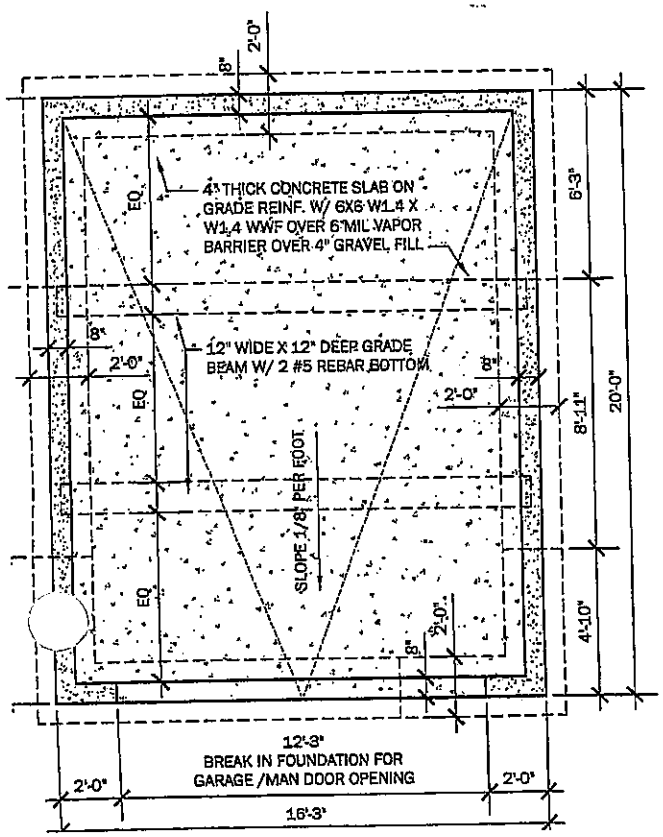



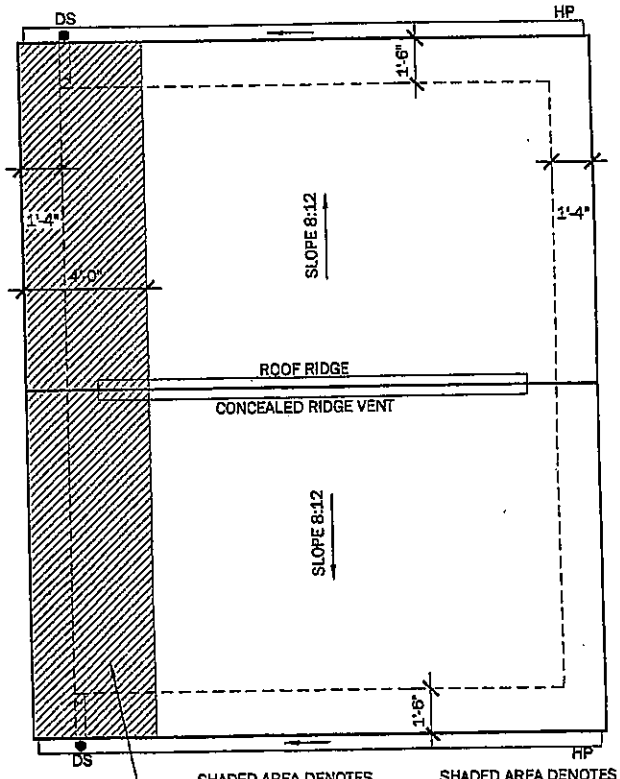
11 G1.1 ROOF DETAIL
SCALE 1" = 1'-0"

10 G1.1 SILL DETAIL
SCALE 1" = 1'-0"




7 G1.1 ELEVATION - LEFT
SCALE 1/8" = 1'-0"



**From:** Jim Hart [mailto:jhart@tidalwave.net]
**Sent:** Friday, August 23, 2013 4:52 PM
**To:** 'Gutkowski, David'; McMahan, Alan (DHCD)
**Cc:** samiri@arlingtonva.us; 'Brian Charville'; Hodge, Vernon (DHCD); 'Paula Eubank'
**Subject:** RE: Kurtz, Appeal 13-2

Dear Mr. McMahan,

I was very surprised to see Mr. Gutkowski's 2nd email today, and had to reply. I am sorry to have to clutter the record with additional material, but Mr. Gutkowski is mistaken.

Despite the incorrect assertions in Mr. Gutkowski's email, the Exhibit 8 plan sheet [Page G1.1] sent to you today is from R-One's approved plan set, with the original Arlington County approval stamps on the drawings. In fact, as Page G1.1 is the last page in the roll of plans, the originals of the approval stamps are actually on the reverse side of that same sheet. In addition, the ink from the approval stamps has bled through the paper to the front side of the drawing in places, as you can see from the area of details 5 and 9, particularly on the full size sheet [coming with the hard copy]. The approved drawing confirms that there are absolutely no vents shown in the concrete walls below the floor of the detached garage, consistent with the position of the architect and the County.

If that unexpected issue is now in dispute, we will bring the original of the plan set to the hearing, with the Arlington County approval stamps on the reverse side of Page G1.1. Thank you for your consideration of this reply.

## McMahan, Alan (DHCD)

**From:** Jim Hart [jhart@tidalwave.net]
**Sent:** Friday, August 23, 2013 12:45 PM
**To:** McMahan, Alan (DHCD)
**Cc:** samiri@arlingtonva.us; Brian Charville; Gutkowski, David; Hodge, Vernon (DHCD); Paula Eubank
**Subject:** Kurtz, Appeal 13-2
**Attachments:** Alan McMahan letter 02.pdf

Letter and response attached.

I have included a reduction of the referenced plan sheet [Exhibit 8] herewith. A full size copy is coming with the hard copy.

256

**HART & HORAN, P.C.**
ATTORNEYS AND COUNSELLORS AT LAW
10505 JUDICIAL DRIVE, SUITE 101
FAIRFAX, VIRGINIA 22030

JAMES R. HART
ROBERT F. HORAN, III

TELEPHONE (703) 352-7330
FACSIMILE (703) 352-6940
email: jhart@tidalwave.net

August 23, 2013

**VIA EMAIL AND REGULAR MAIL**
Alan W. McMahan, Staff
Commonwealth of Virginia
Department of Housing & Community Development
State Building Code Technical Review Board
600 East Main Street, Suite 300
Richmond, VA

*Re: Appeal of Keith Kurtz to the Review Board (Appeal No. 13-2)*
*Our File No. 10-258*

Dear Mr. McMahan:

Pursuant to your email of August 7, please find enclosed a copy of the Contractor's Supplemental Response to Appeal Submittal. Copies have been provided to Mr. Amiri, the Arlington County building official, and to Mr. Gutkowski, counsel for Mr. and Mrs. Kurtz.

Thank you for your consideration of these matters. We look forward to the hearing on September 20. Please let me know if anything additional will be required.

Very truly yours,

James R. Hart

JRH/grc
Enclosures
cc: Byron Ramirez, President
Shahriar Amiri, Chief Building Official
David C. Gutkowski, Esquire

HART & HC , P.C.
10505 JUDICIAL DRIVE, SUITE 101
FAIRFAX, VIRGINIA 22030
TELEPHONE: 703/352-7330
FAX: 703/352-6940

VIRGINIA:

BEFORE THE STATE BUILDING CODE TECHNICAL REVIEW BOARD

IN RE: APPEAL OF KEITH KURTZ
APPEAL NO. 13-2

CONTRACTOR'S SUPPLEMENTAL RESPONSE TO KURTZ APPEAL SUBMITTAL

COMES NOW the Contractor, R-One Contracting, LLC (hereinafter "R-One"), by counsel, and states as follows for its supplemental response to the appellants' submittal:

I. STATEMENT OF THE CASE

Keith and Carol Kurtz, disgruntled homeowners, appeal from multiple adverse decisions of the Arlington County Board of Building Code Appeals, related to construction of their new home in Arlington County. Mr. and Mrs. Kurtz complain that Arlington County did not issue certain code violations. R-One, the contractor, has not appealed any rulings, and is generally in agreement with Arlington County's position, but timely submitted a response to staff's summary of issues, on July 31st.

The homeowners submitted a letter on August 5, 2013, through counsel, objecting to several issues as framed by staff, and withdrawing three issues. Staff has requested supplemental responses to be filed by August 23, 2013.

R-One responds herein to the homeowners' response and objections to staff's summary of the issues.

## II. DISCUSSION OF KURTZ REVISED ISSUES

### A. Load Path Issues

Mr. and Mrs. Kurtz object to staff's paragraph 8 and the identification of issues 2A through 2D. While R-One agrees that the wall framing issue ought not concern use of a ridge beam or a cathedral ceiling, upon information and belief Mr. and Mrs. Kurtz's objection and recharacterization of these issues still relates to the same load path problem. Moore Architects, the architect for Mr. and Mrs. Kurtz, previously submitted a framing revision which was approved by Arlington County, but Mr. and Mrs. Kurtz have had a falling out with their architect, claim the drawing is "incorrect," and will not allow R-One to perform that work, as shown on the approved revision. However the load path situation is characterized, no additional violation is necessary.

The description in the Kurtzes' attorney's August 5 letter is a matter of semantics. The inspectors have seen that area repeatedly, and R-One has agreed to do what should be done, pursuant to the approved revision drawing. If a post were missing, for example, it will be put in. But Mr. and Mrs. Kurtz refuse to allow the approved revision drawing to be used.

Mr. and Mrs. Kurtz raise additional issues later in their letter with respect to the load path and/or issue 2D, but they still are part and parcel of the unresolved load path issue, involving the same area, the same hallway and the same structural members. R-One believes that there are squash blocks already there. R-One also notes that the Exhibit D, upon which Mr. and Mrs. Kurtz now rely, appears to have been annotated. That the statements at the bottom ("Web Stiffeners vs. Squash Blocks") appear to be an editorial comment added by them, not actual instructions from the manufacturer.

No additional violation should be issued.

B. Porch Railing

Mr. and Mrs. Kurtz also complain regarding issue 1E, on the basis that the actual post size differs from the drawing. Nevertheless, at the informal fact finding conference, it was suggested that no violation needs to be issued, at this time. The County personnel suggested that if Mr. and Mrs. Kurtz believe there is a legitimate problem with the railing, they should do a 200 pound test and see what happens. For whatever reason, no test has been done. The architect also has not had a problem with the deck railing detail. R-One had been willing to install additional lag bolts, if allowed, but no violation needs to be issued. This configuration is a typical deck railing detail, and should not be a problem.

C. Hangers

Mr. and Mrs. Kurtz also complain, with respect to issue 1D, that a subsequent drawing shows hangers which are supposedly absent, and have submitted photographs. But the photos may be misleading. In one of the photographs, the hanger may be hidden behind the block; the metal is partly visible to the right. The "hanger" issue also involves the same porch area where Mr. and Mr. Kurtz are insisting on pressure treated LVLs, previously addressed. Both the architect and Arlington County have denied that pressure treated LVLs are needed. The hangers themselves are a minor punch list item, for which no violation needs to be issued. If additional hangers were legitimately required, R-One remains willing to install them, but Mr. and Mrs. Kurtz have been waiting for resolution of the pressure treated LVL issue. Hangers, moreover, are not shown on the original approved drawing, and appear to have been handwritten later on the referenced supplemental drawing. R-One remains ready to do what is legitimately needed, if access is allowed, and no violation needs to be issued.

D. Porch Post

As to issue 1F, the disputed porch post, Mr. and Mrs. Kurtz have attached additional photographs, but the photos do not clarify why a violation needs to be issued. The post is properly notched, and the architect has confirmed that the installation is correct, as addressed previously. No violation should be issued.

E. Garage Vent Issue

As to issue 4A, Mr. and Mrs. Kurtz previously wanted to be able to access the space beneath the garage floor for storage, which generated their complaint on this issue. But no violation should be issued. Mr. and Mrs. Kurtz now incorrectly claim that vents are shown on the drawings of the detached garage. The drawings themselves, however, as approved, show no such vents in that area. The garage wall is shown as concrete, the wall section also shows no openings for vents, and no vents are required. This is not a "residential" structure. Nor is that space intended for storage. Please refer to Exhibit 8 attached hereto, showing a detail of the garage wall section. The garage plans were previously included as Exhibit 7 to R-One's initial submittal. The approved drawings show only a concealed ridge vent in the roof, and a vent in the eave, at the top of the side wall, unrelated to their issue below the floor, and absolutely no vents through the concrete walls, either in elevation or in section. Please refer to Exhibit 8 attached hereto, a copy of details of sheet G 1.1, the detached garage plan. No violation should be issued.

F. Withdrawn Issues

R-One agrees with the homeowners that issues 3A, 3B and 4B should be withdrawn from the appeal. R-One does not object to that request.

III. CONCLUSION

As stated previously, and as stated above, no further violations should be issued. R-One respectfully requests that the decisions of the Arlington County Board of Building Code Appeals be upheld, and Mr. and Mrs. Kurtz's appeal denied, together with such other and further relief as the Board deems appropriate and the nature of this case may require.

R-ONE CONTRACTING, LLC
By Counsel

HART & HORAN, P.C.

By: _____
James R. Hart, VSB #23277
10505 Judicial Drive, Suite 101
Fairfax, Virginia 22030
703-352-7330 telephone
703-352-6940 telefax
jhart@tidalwave.net
Counsel for Contractor

CERTIFICATE OF MAILING

I HEREBY CERTIFY that a true and accurate copy of the foregoing Contractor's Response to Appeal Submittal was mailed, first-class, postage prepaid, this 23 day of August, 2013 to:

David C. Gutkowski, Esquire
1775 Wiehle Avenue, Suite #400
Reston, VA 20190

Arlington Co. Inspection Services Division
2100 Clarendon Blvd, 10th Floor, Suite 1000
Arlington, VA 22201

Alan W. McMahan, Staff ✓
Department of Housing and Community Development State Building Code Technical Review Board
600 East Main Street, Suite 300
Richmond, VA 23219

Brian R. Charville, Esquire
Arlington County Attorney's Office
2100 Clarendon Boulevard, Suite 403
Arlington, VA 22201

also emailed to all

_____
James R. Hart

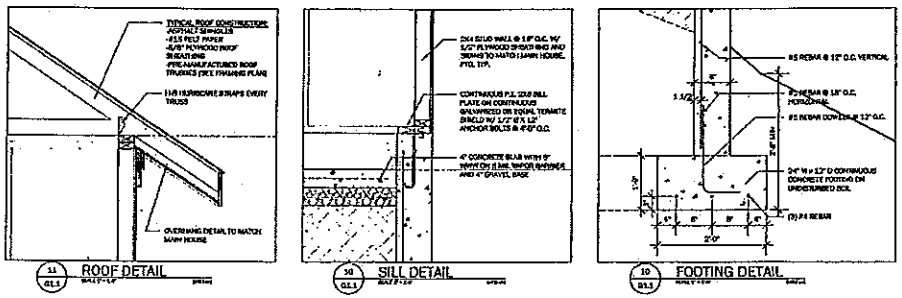


262

ALL-STATE LEGAL

EXHIBIT

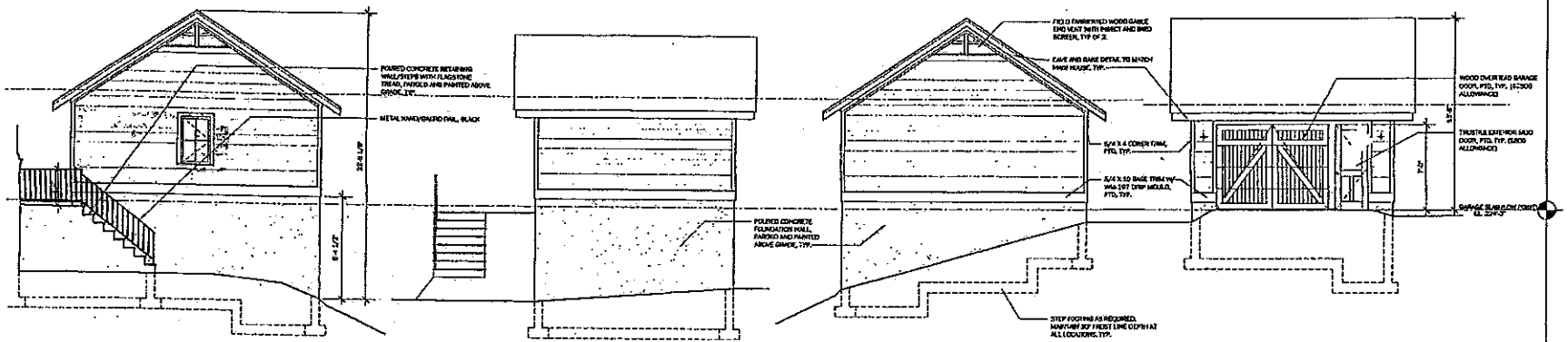
8




11 G1.1 ROOF DETAIL

10 G1.1 SILL DETAIL

10 G1.1 FOOTING DETAIL

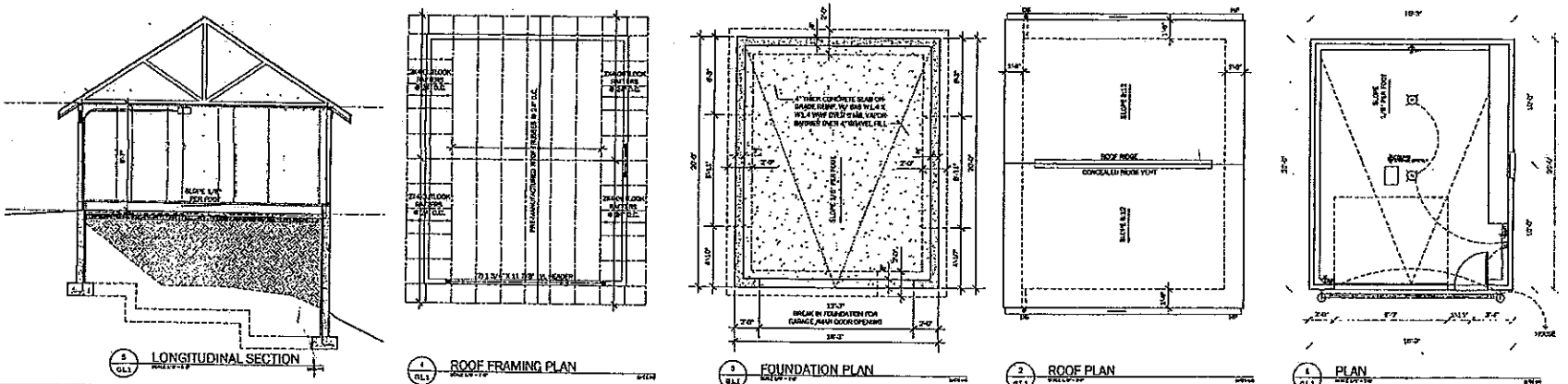



9 G1.1 ELEVATION - RIGHT

8 G1.1 ELEVATION - REAR

7 G1.1 ELEVATION - LEFT

6 G1.1 ELEVATION - FRONT




5 G1.1 LONGITUDINAL SECTION

4 G1.1 ROOF FRAMING PLAN

3 G1.1 FOUNDATION PLAN

2 G1.1 ROOF PLAN

1 G1.1 PLAN

MOORE ARCHITECTS
a professional corporation
www.moorearch.com
803 King Street
Third Floor
Alexandria, VA 22314
(t) 703.837.0000
(f) 703.837.0088

Issued
Pricing/Permit 05.17.09

Garage Details

KURTZ RESIDENCE
NEW HOUSE
4087 North 26th Street
Arlington, VA 22207



G1.1

# ADDITIONAL DOCUMENTS SUBMITTED BY KURTZ

Odin
Feldman
Pittleman PC

David C. Gutkowski
Attorney at Law
david.gutkowski@ofplaw.com
703-218-2162

August 5, 2013

*Via Electronic Mail and First Class Mail*

Mr. Alan McMahan
Commonwealth of Virginia
Department of Housing and Community Development
Main Street Centre
600 E. Main Street, Suite 300
Richmond, VA 23219

*Re:* ***Keith and Carol Kurtz Appeal No. 13-2***

Dear Mr. McMahan,

I write in response to your letter dated July 15, 2013. I understand from your correspondence that you sought a response to your letter and the document enclosed therein by Friday, August 1, 2013.[1]

On April 26, 2013, you sent an e-mail to the parties to the appeal. This e-mail related to the appeal process and included a timetable for responding to various steps in this process. According to that timetable, the parties have twenty-one days to respond to the Review Board Staff Document.

Your letter transmitting the Review Board Staff Document was dated July 15, 2013. As such, twenty-one days from the date of that letter is today, August 5, 2013. Therefore, Mr. & Mrs. Kurtz would respectfully request that this letter and the documents enclosed herein are included in the package of information provided to the Review Board members in advance of the hearing on August 16, 2013, as the submission is timely pursuant to the timetable you provided related to the various deadlines pertaining to the appeal process.

Suggested Statement of Case History and Pertinent Facts ("Case Statement")

Mr. & Mrs. Kurtz note their objection to Paragraph 8 as it pertains to the matters identified as Issues 2A through 2D ("Issues") of the Case Statement. Their specific objection relates to the notion that these Issues are not related to the use of a ridge beam versus the use of a conventional ridge board, or to the presence of a cathedral ceiling. While these items were

[1] I am unsure if you intended the letter to request a response by August 1, 2013, which was a Thursday, or August 2, 2013, which was a Friday.



1775 Wiehle Avenue, Suite 400, Reston, VA 20190 Phone 703-218-2100 Fax 703-218-2160
www.ofplaw.com

brought up at the fact finding meeting between the parties, they are unrelated to Mr. & Mrs. Kurtz's appeal. For instance, Issue 2A refers to a missing quadruple 4x4 post in the mechanical room wall. No citation has been issued for this missing post and this appeal item remains open. Likewise, Issue 2B refers to a load path on the basement through the 2nd floor level. Issue 2C concerns insufficient support to the ridge beam. Issue 2D refers to a retrofitted load path in the basement. Mr. & Mrs. Kurtz object to framing Issues 2A through 2D as to whether a ridge beam or conventional ridge board were utilized in the construction of their home.

Submission of Additional Material and Clarification of Issues

Issue 1E pertains to the railing posts being insufficient for the load. Mr. & Mrs. Kurtz wish to clarify their objection to the SDS engineering analysis. The analysis was based on a drawing (Moore Architects 4.1) that does not reflect the as-built actual structure. The drawing shows a railing post with a depth of approximately four inches (based on drawing scale and comparison to items of known size) versus the actual post size, which is 2 ½" by 3". The drawing also differs from the actual posts in both the length of the post along the attached board, and the form of attachment. The analysis is based on a drawing of a post that differs in strength, bearing dimension and attachment from what is present in the Kurtz's home. Arlington County Inspection Services Division is relying on the fact that the drawing and analysis have the necessary architects and engineer seals, and ignoring the fact that it does not reflect the real structure. Please see the attached photographs pertaining to the railing marked as Exhibit A. This is the gravamen of the Kurtz's concern.

Similarly with Issue 1D, Arlington County Inspection Services Division is relying on a drawing (Moore Architects drawing 3.2) that shows specific hangers providing sufficient bearing. As seen in the attached photographs marked as Exhibit B, the specified hangers to attach the LVL are missing. The Simpson HUS 412 specified for location 1 (upper right of drawing) is not there, the HSUR/L410 specified for location 2 (upper left) is not there and the HUS 412 in location 3 (lower left) is not there.

As to Issue 1F, please see the additional photographs enclosed and marked as Exhibit C, which are provided to better illustrate the notched post and supported roof area in question.

During the informal fact finding meeting on June 11, 2013, both the Arlington County Inspection Services Division representatives and R-One referred on several occasions to a load path diagram from Moore Architects. This drawing is inaccurate as it does not reflect the as-built condition of the home. R-One has brought this up in subsequent correspondence, along with the claim that Mr. & Mrs. Kurtz will not let R-One address the problem; a claim which is demonstrably false. Mr. & Mrs. Kurtz wish to clarify that that this load path (which was Notice of Violation No. 2 on the Arlington County Inspection Services Division's December of 2012 Notice of Violation) as reflected in the associated drawing from Moore Architects is unrelated to any items in this appeal and, as such, is nothing more than a red herring.

During the informal fact finding meeting on June 11, 2013, the Arlington County Inspection Services Division engineer stated that with respect to Issue 2D, the Kurtz appeal of this item was rejected because it was based on improperly installed squash blocks, and the

squash blocks were not required for the specific I-Joist used in the Kurtz residence. When asked for supporting data, the engineer provided an e-mail showing that web stiffeners, rather than squash blocks, were not required. The email is attached as Exhibit D. The manufacturer's literature concerning the squash blocks and web stiffeners is attached as part of Exhibit D. The relevant ESR report, ESR-1290 shows maximum load allowed of 1,415 pounds with 3 ½ inches bearing and 1,480 pounds with four inches bearing. This value is also included in the attached manufacturer's literature. For any load over this amount on the I-Joist, squash blocks are needed. While Arlington County Inspection Services Division is correct that web stiffeners will not add any load bearing capability, squash blocks are required for loads exceeding this limit.

As to Issue 4A, R-One claims that it built the garage to the approved drawings and no such vents are required on the drawings. This statement is simply not true. Photographs of the approved drawings previously submitted in support of the appeal show the vents in question are required. Arlington County Inspection Services Division reviewers specifically noted the required size and location of these vents, as required by code, on the drawings. As such, Mr. & Mrs. Kurtz do not understand R-One's position as to these vents.

Matters Dropped From the Appeal

Issue 3A has been resolved, as R-One applied the required intumescent coating in the basement closet. As such, this issue is withdrawn from the appeal

As to Issue 3B, Arlington County Inspection Services Division has clarified the cited code violation in question, and as a result, this issue is withdrawn from the appeal.

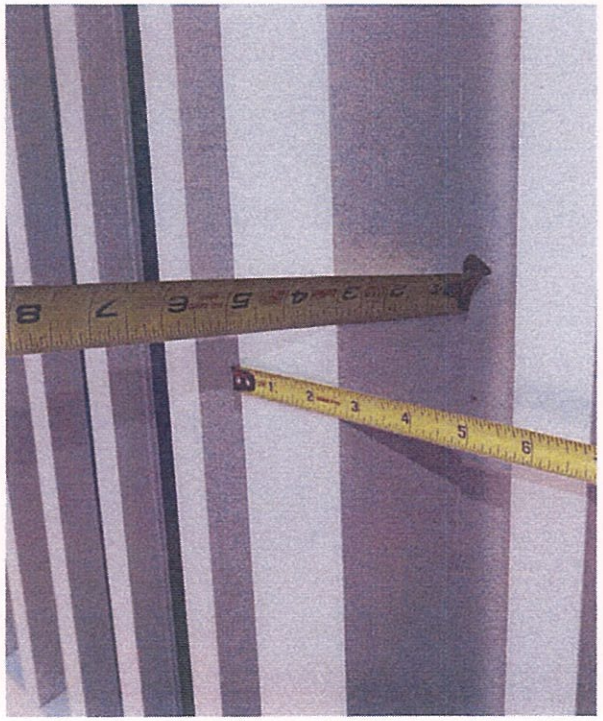
As to Issue 4B related to the missing hurricane ties in the garage. This portion of the appeal is withdrawn, as it is Mr. & Mrs. Kurtz's understanding that R-One has agreed to install the missing ties.

Please contact me if I can be of any further assistance.

Very truly yours,

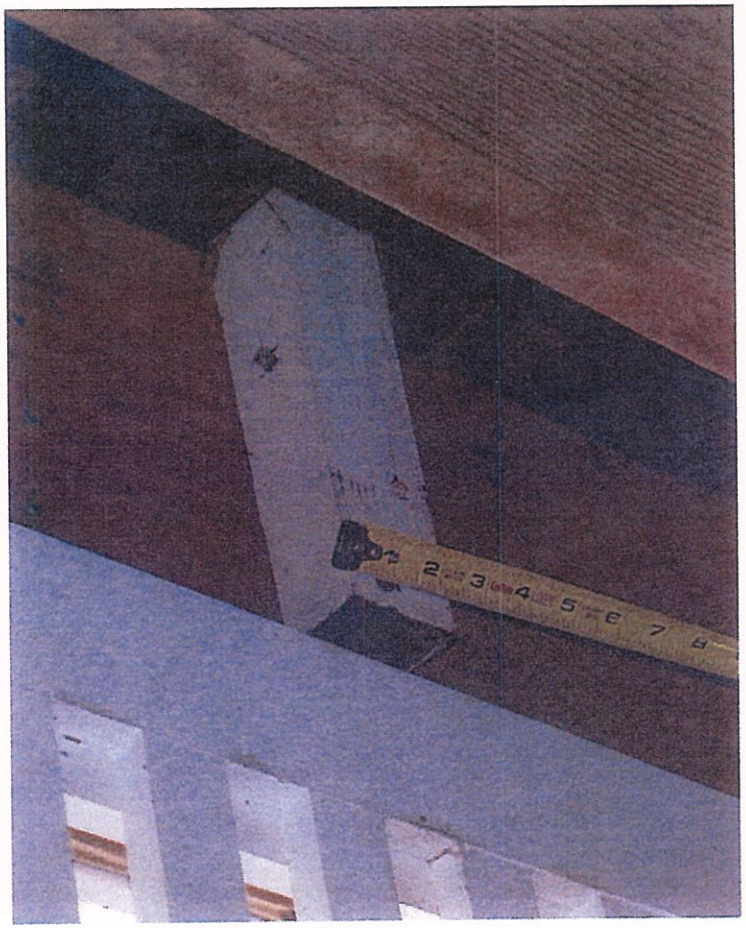
David C. Gutkowski

cc: Mr. & Mrs. Keith Kurtz (*Via Electronic Mail*)
James R. Hart, Esquire (*Via First-Class Mail*)
Vernon Hodge (*Via Electronic Mail*)
Shariar Amiri (*Via First-Class Mail*)
Brian Charville, Esquire (*Via First-Class Mail*)

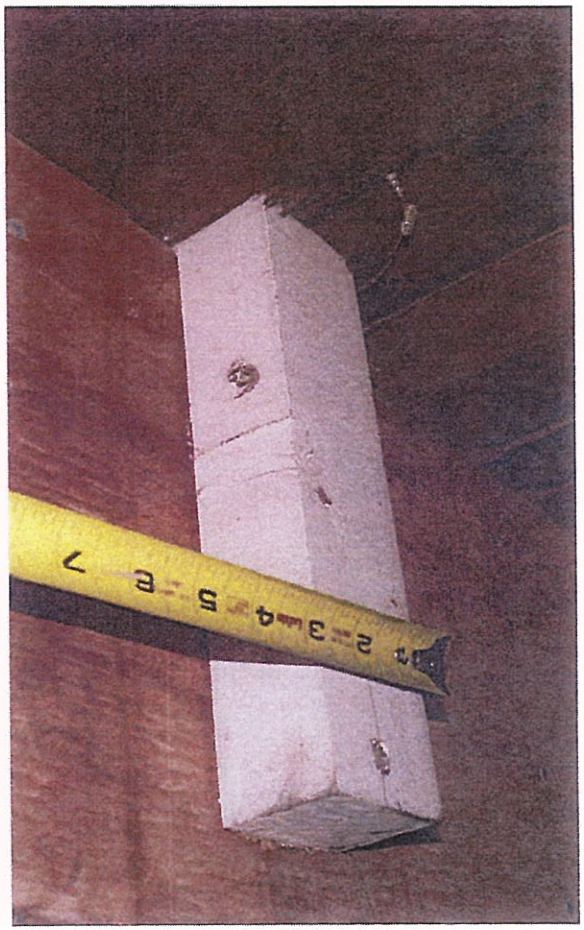


Actual Rail Size

Actual Rail Post Example 1

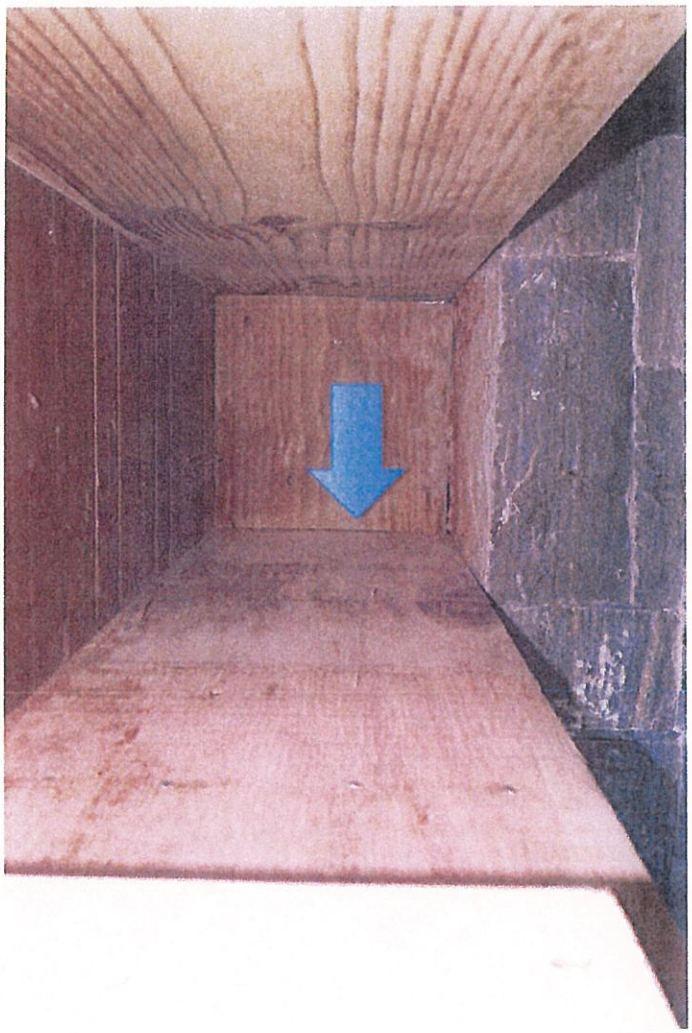


Example 2

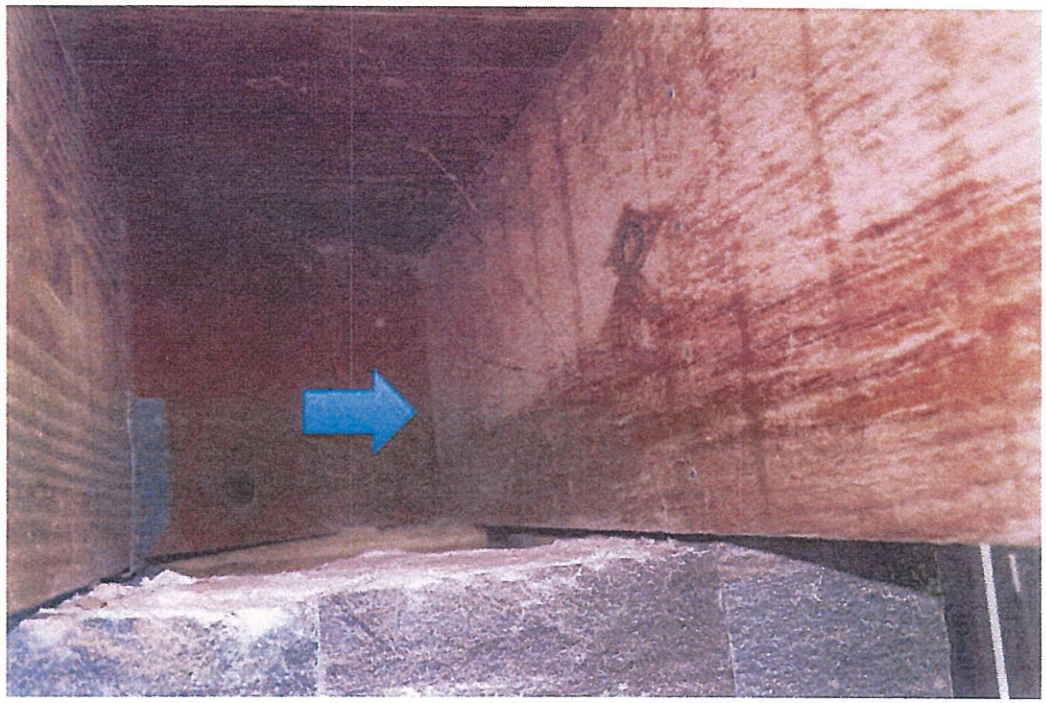


Example 3

2
3
1
EXHIBIT
B



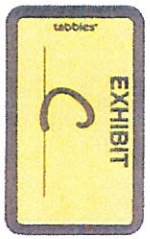
Missing hanger location 1



Missing hanger location 2

Missing hanger location 3

Post supporting 4577 lbs.



Post supporting 4577 lbs.

# Web Stiffener Requirements

A web stiffener is a wood block that is used to reinforce the web of an IB I-Joist at locations where:

- The webs of the IB I-Joists are in jeopardy of buckling out of plane. This results in lower buckling capacities for deeper I-Joist depths.
- The webs of the IB I-Joist are in jeopardy of "tearing" through the IB I-Joist flanges. This can occur at any IB I-Joist depth when the design reaction loads exceed a specific level.
- The IB I-Joists is supported in a hanger and the sides of the hanger do not extend up to the top flange. With the top flange unsupported by the hanger sides, the joist may deflect laterally, putting a twist in the flange of the joist. The web stiffener supports the IB I-Joist along a vertical axis as designed. (In this application, the web stiffener acts very much like a backer block.)

There are two kinds of web stiffeners: bearing stiffeners and load stiffeners. They are differentiated by the applied load and location of the gap between the slightly undersized stiffener and the top or bottom flange.

Bearing stiffeners are located at the reactions, both interior and exterior, when required. IB I-Joists do not need bearing stiffeners at any support when subjected to normal residential floor loads and installed in accordance with the allowable spans.

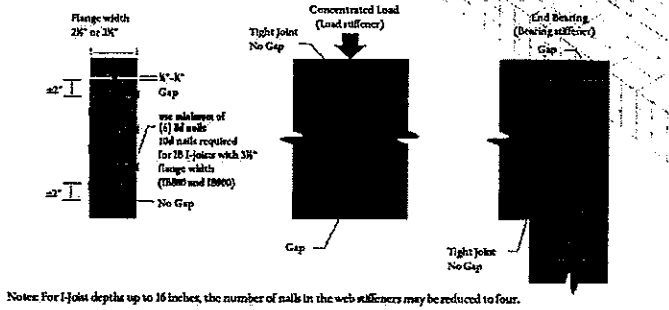
Load stiffeners are located between supports where significant point loads are applied to the top flange of an IB I- Joist.

Web stiffener blocks may be comprised of lumber, rim board, or structural wood panels. The minimum grade of structural wood panels is Rated Sheathing; minimum lumber grade is Utility grade SPF (south) or better. Any rim board product would also work satisfactorily. Ideally, the depth of the web stiffener should equal the distance between the flanges of the joist minus ¼ inch - ¼ inch. For bearing stiffeners, this gap is placed between the stiffener and the bottom of the top flange. For load stiffeners, the gap is located at the bottom of the stiffener.

1. A bearing stiffener is required in all engineered applications with design end reactions greater than the reference joist end reaction without bearing stiffeners. The gap between the stiffener and the flange is at the top.

2. A load stiffener is required at locations where a concentrated load greater than 1500 lb. (unfactored) is applied to the top flange between supports, or in the case of a cantilever, anywhere between the cantilever tip and the support. The gap between the stiffener and the flange is at the bottom.

3. A bearing stiffener is required when the IB I-Joist is supported in a hanger and the sides of the hanger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at top.



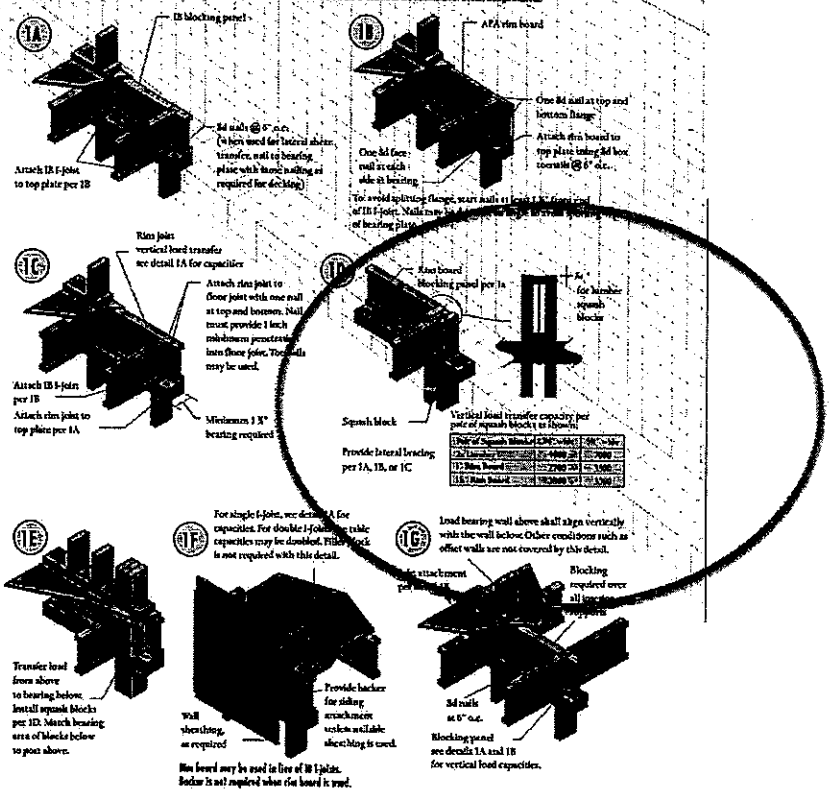

Note: For I-Joist depths up to 16 inches, the number of nails in the web stiffeners may be reduced to four.

| Designation | Web Stiffener Size Each Side of Web |
|---|---|
| IB 400/600 | 1½" x 2½" minimum width |
| IB 800/900 | 1½" x 3½" minimum width |

Printed in Canada

# Floor Framing Details

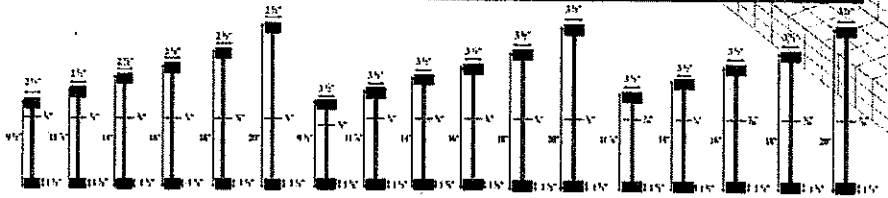
All nails shown in the details below are assumed to be common nails unless otherwise noted. 10d box nails may be substituted for 8d common shown in details. Individual components not shown to scale for clarity. Joist capacities for detail 1A thru 1H are available in the International Beam Design Manual.




Web Stiffeners vs. Squash Blocks

While Web Stiffeners are not meant to be used with these I-Joists (IB 400 11 7/8"), squash blocks are required for loads over the limit of 1415 lbs in ESR 1290

# International Beams Residential Product Line



| Series | Depth (In.) | Bending Stiffness[3] EI Joint (x10⁶ psi) | Moment[4] M (ft-lbs) | Shear[5] V (lbs) | ER[6] 1 3/4 in. brg. (lbs) | IR[7] 3 1/2 in. brg. (lbs) | Shear Deflection Factor[8] K (x10⁶ psi) | I-Joist Self-Weight (plf) |
|---|---|---|---|---|---|---|---|---|
| IB400 | 9½ | 196 | 2800 | 1185 | 1,080 | 2,160 | 4.94 | 2.6 |
| | 11⅞ | 336 | 3630 | 1480 | 1,200 | 2,500 | 6.18 | 2.9 |
| | 14 | 494 | 4370 | 1750 | 1,290 | 2,500 | 7.28 | 3.1 |
| | 16 | 673 | 5065 | 2000 | 1,375 | 2,500 | 8.32 | 3.3 |
| IB600 | 9½ | 235 | 3860 | 1370 | 1,080 | 2,160 | 4.94 | 2.6 |
| | 11⅞ | 399 | 5000 | 1570 | 1,200 | 2,500 | 6.18 | 2.9 |
| | 14 | 585 | 6020 | 1750 | 1,290 | 2,500 | 7.28 | 3.1 |
| | 16 | 799 | 6980 | 2000 | 1,375 | 2,500 | 8.32 | 3.3 |
| | 18 | 1,046 | 7,895 | 2,250 | 1,465 | 2,500 | 9.36 | 3.9 |
| | 20 | 1,304 | 8,735 | 2,500 | 1,550 | 2,500 | 10.40 | 4.1 |
| IB900 | 11⅞ | 604 | 8,825 | 1,925 | 1,400 | 3,355 | 6.18 | 3.9 |
| | 14 | 884 | 10,630 | 2,125 | 1,500 | 3,355 | 7.28 | 4.1 |
| | 16 | 1,199 | 12,635 | 2,330 | 1,400 | 3,355 | 8.32 | 4.3 |
| | 18 | 1,565 | 14,285 | 2,516 | 1,465 | 3,355 | 11.52 | 4.5 |
| | 20 | 1,984 | 15,810 | 2,695 | 1,550 | 3,355 | 12.80 | 4.7 |

Notes:

A. Design values are for floors used in accordance with NDS "National Design Specification for Wood Construction" for standard term load duration (CD = 1). All values, except EI and K, are permitted to be adjusted for other load durations as permitted by NDS.

B. Bending stiffness (EI) of the I-Joist.

C. Moment capacity (M) shall NOT be increased for any Code-allowed repetitive factor.

D. Shear capacity (V) of the I-Joist with a continuous end bearing of 4 inches with 3x4 minimum I-Joist without web stiffeners and maximum knockout holes may have lower capacities.
See table 1A for web stiffener requirements, which vary by depth and series.

E. End reaction (ER) capacity is for a minimum end bearing of 1 3/4" without web stiffeners. Higher end reactions are permitted with increased bearing length and web stiffeners.
See table 1A for web stiffener requirements which vary by depth and series.

F. Intermediate reaction (IR) capacity is for a minimum bearing length of 3 1/2 inches without web stiffeners. Higher intermediate reactions are permitted with increased bearing length and web stiffeners.
See table 1A for web stiffener requirements which vary by depth and series.

G. Shear deflection factor (K), which shall be used to calculate total-load and center-point load deflections of the I-joist as a simple span application based on equations #1 and #2 below:

Equation #1 (Uniform Load): $\Delta = \frac{5wL^4}{384EI} + \frac{wL^2}{8K}$

Equation #2 (Center Point Load): $\Delta = \frac{PL^3}{48EI} + \frac{PL}{4K}$

Where
Δ = Calculated deflection (inches)
w = Uniformly applied load (lbs/inch)
L = Design span (inches)
EI = Bending stiffness of I-joist (lbs-in2)
K = Shear deflection factor
P = Concentrated load (lbs)

H. For information relating to the use of International Beams products in Canada, refer to our Canadian literature.

ESR-1390 PR-L258

Emad Elmagraby <Eelmagraby@arlingtonva.us> July 25, 2013 10:04 AM
To: Keith Kurtz <keithkurtz@verizon.net>
Cc: "awmcmahan@dhcd.virginia.gov" <awmcmahan@dhcd.virginia.gov>, David Gutkowski <David.Gutkowski@ofplaw.com>
RE: State appeal issue: Use of squash blocks with floor joists

---

Mr. Kurtz,

Section 6.6 ASD stated " For shallow depth joists, where relatively low shear capacities are require, web stiffeners may not be needed.

Thanks

Emad Elmagraby, P. E, C.B.O.
Field Services Section Chief
Arlington County Government
Dept. of Community, Planning, Housing and Development
Inspection Services Division
2100 Clarendon Blvd., Suite 1000
Arlington, VA 22201
Tel: 703.228.7094
Fax: 703.228.7046
eelmagraby@arlingtonva.us



-----Original Message-----
From: Keith Kurtz [mailto:keithkurtz@verizon.net]
Sent: Tuesday, July 23, 2013 2:37 PM
To: Emad Elmagraby
Cc: awmcmahan@dhcd.virginia.gov; David Gutkowski
Subject: State appeal issue: Use of squash blocks with floor joists

Mr. Elmagraby,

We are reviewing our appeal to the state, and looking at which items should be removed from the appeal.

At the fact finding session last month, you stated that squash blocks should not be used with the type of floor joist we have. I believe you said this was documented in the NDS documents, but it may have been another reference.

Could you please provide me the reference, and preferably the wording of the relevant paragraph, so that I can delete the related item from the appeal if it is not valid.

Thanks,
Keith Kurtz
703-276-0365

## McMahan, Alan (DHCD)

**From:** Gutkowski, David [David.Gutkowski@ofplaw.com]
**Sent:** Friday, August 23, 2013 11:04 AM
**To:** McMahan, Alan (DHCD)
**Cc:** jhart@tidalwave.net; samiri@arlingtonva.us; Hodge, Vernon (DHCD); Paula Eubank
**Subject:** Appeal No. 13-2
**Attachments:** Photos Item 1A1.pptx; JGK Engineer update 22 August 2012.pdf; Additional photos Item 1 C.PPTX; Additonal Item 2 General load path 1.pptx; Additonal Item 2 General load path 2.pptx

Alan,

By way of response to your August 7, 2013 e-mail to the parties involved in Appeal No. 13-2, attached please find supplemental information provided by Mr. & Mrs. Kurtz to include in the materials previously provided for review by the State Review Board. Please add this supplemental material to the packet of information the Board will have for the September 20, 2013 meeting. Attached please find:

1) Photographs of the porch area of the home. This photographs correspond with section 1(A) of the appeal.
2) An updated report from JGK Engineering.
3) Additional photographs of the issue identified in section 1(C) of the appeal.
4) An annotated diagram of the major missing elements from the load path at the foundation level.
5) An annotated drawing and photographs related to the load path issues before the State Review Board.

Attachments # 4 and # 5 related to the issues identified in section 2 of the appeal.

Please let me know if you have any questions or concerns.

Thank you.

Dave Gutkowski

Odin Feldman Pittleman PC

**David Gutkowski**
**Attorney At Law**
David.Gutkowski@ofplaw.com
**Direct:** 703-218-2162

1775 Wiehle Ave, Suite 400 Reston, VA 20190
**Phone:** 703-218-2100 **Fax:** 703-218-2160 www.ofplaw.com

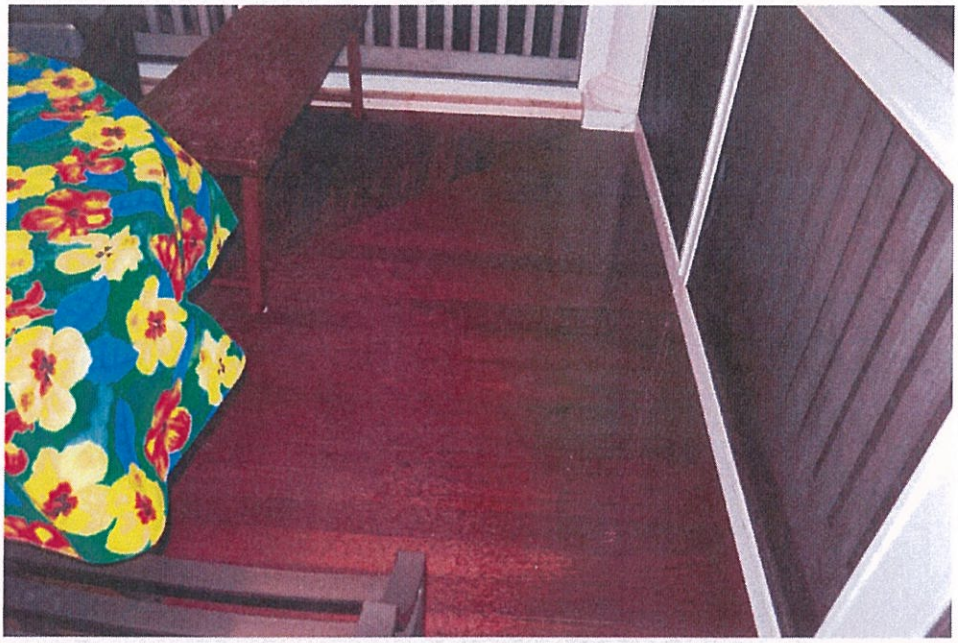


279

280

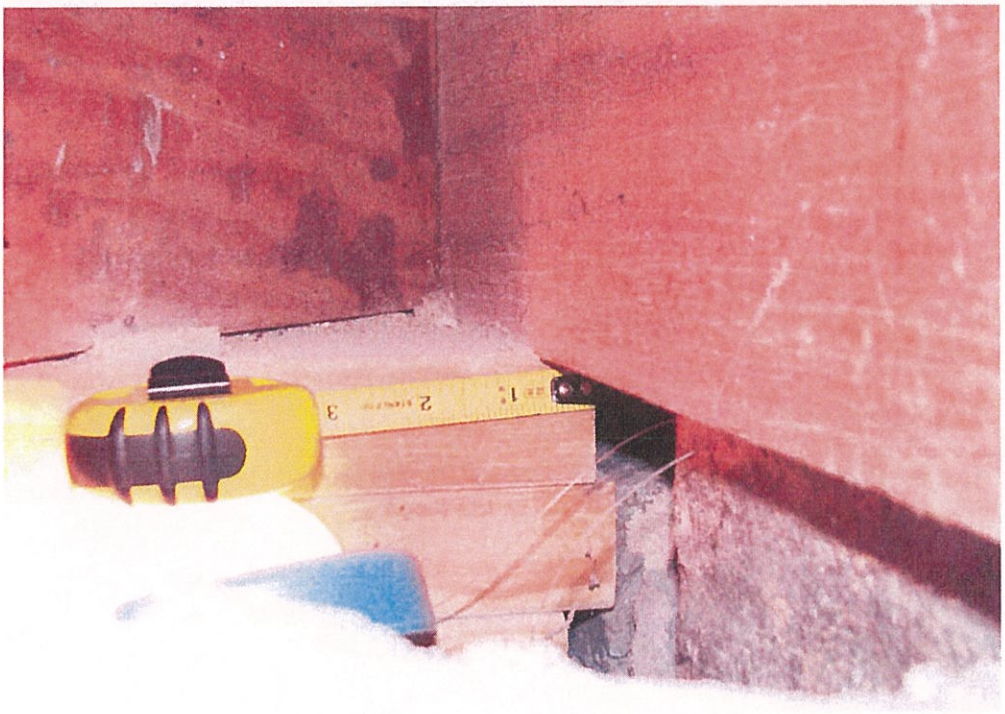
Views of Porch

(Place as first photos in item 1 A.)

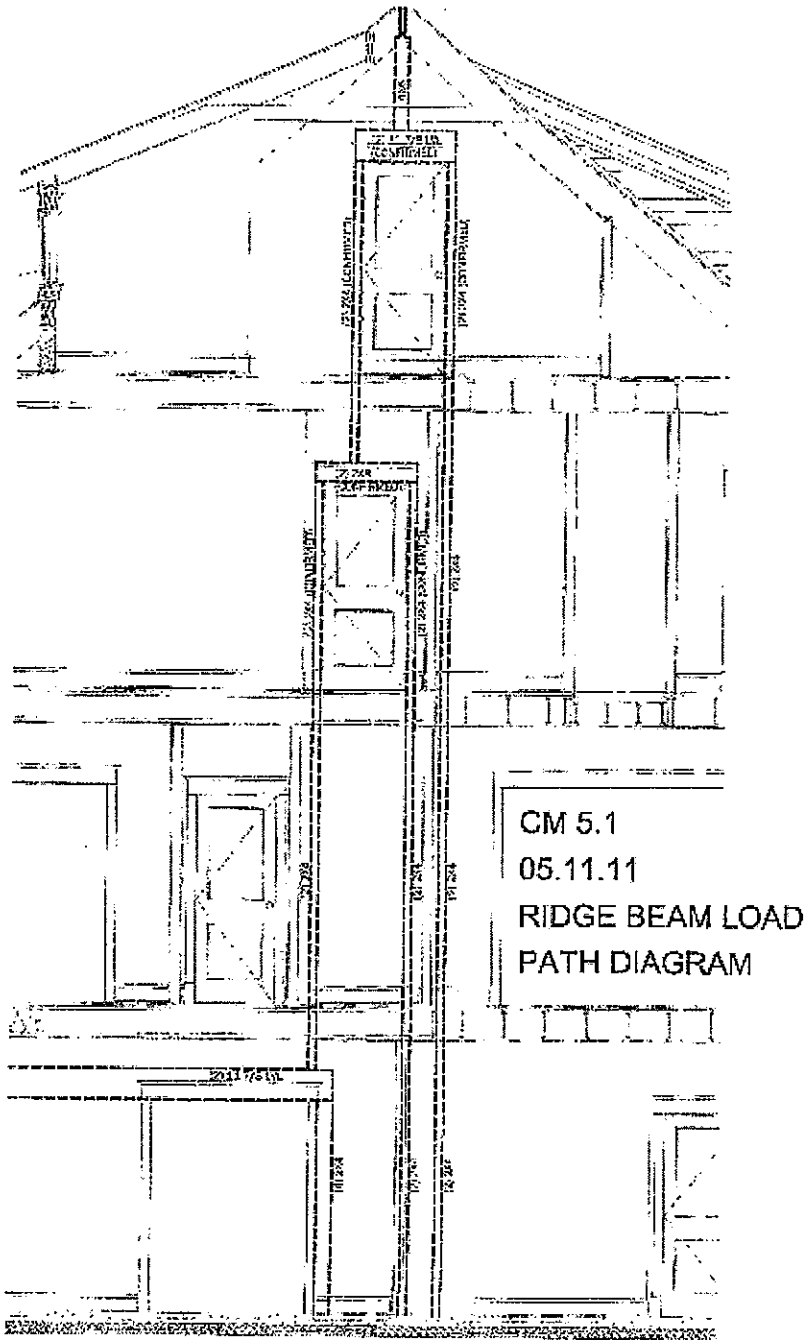


13 August 2013
Thunderstorm

(To be placed as fourth photo Item 1A)



Bearing issue:  LVL beam slightly bearing on the wood




May, 11, 2011.
Mr. Moore submitted this construction memo to Arlington County when he discovered that we had complained to them about the missing load paths. He provided instructions to "Confirm that the post supporting the mid-point of the ridge has a continuous load path down from the ridge to the masonry foundation at the basement level."

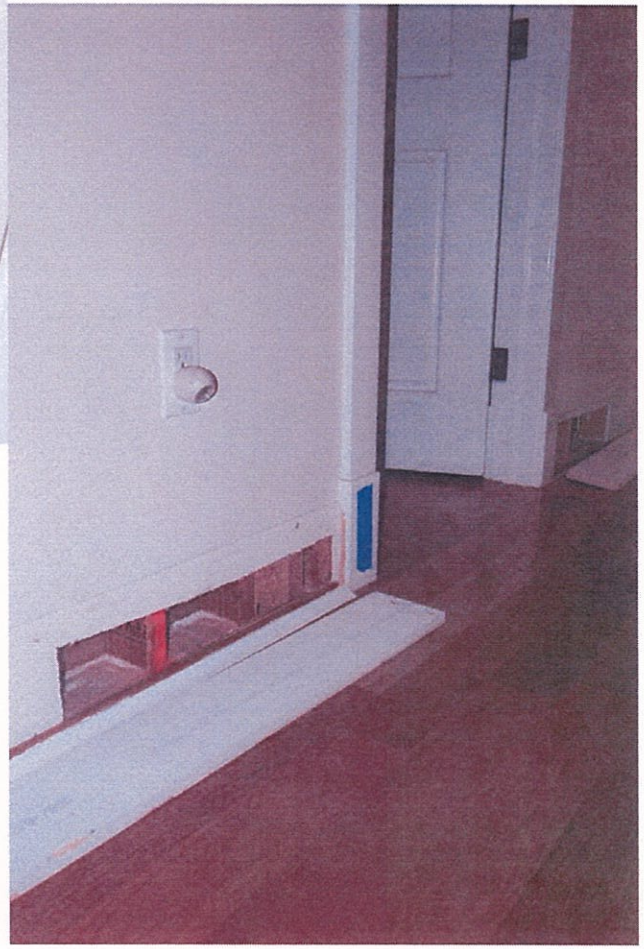

It only takes a few seconds to see that this drawing is not accurate. Standing on the stairs and tracing the line of the door frame down from the second floor to the first, a large vent is clearly in the way. It was clear from photos, from visible evidence and from the use of a stud finder that this drawing was wrong . No attempt was made to contact us to verify the accuracy of the drawing.

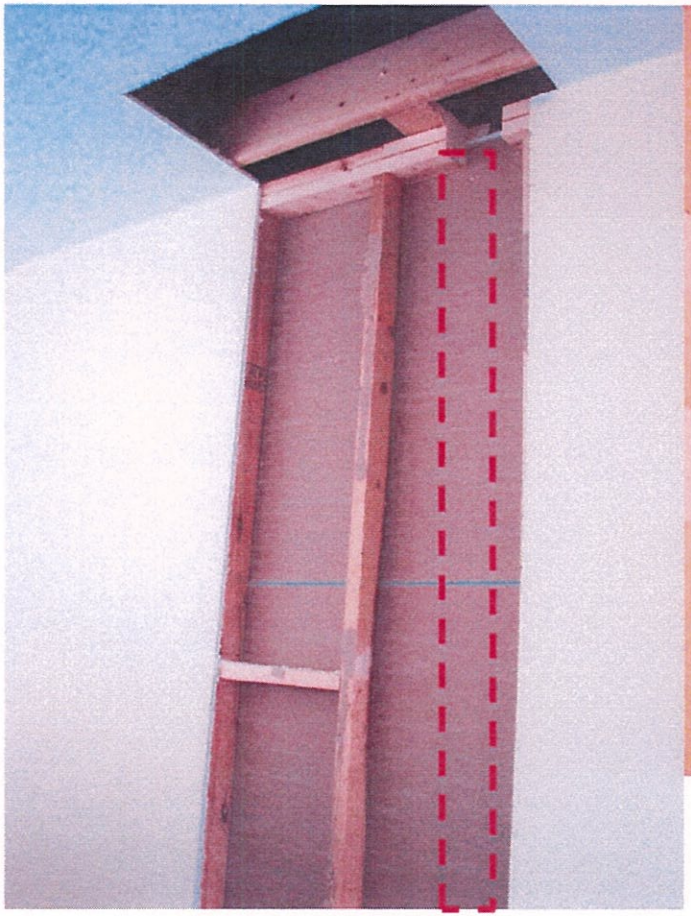
First Floor

In September 2011 walls were op
three floors to prove the Moore
was inaccurate.

Basement

Second Floor





Missing 4x6 Post from MBR floor to Ridge Beam

Missing 3" Steel Pipe
Post rate at 16000 lbs.

(Fixed May 2012)

JGK
STRUCTURAL ENGINEERS, P.C.

JAMES G. KONNICK, P.E.

August 22, 2013

Mr. & Mrs. Keith Kurtz
4087 N. 35th Street
Arlington, VA. 22207-4460

RE: 4087 N. 35th Street
Arlington, VA.
JGK NO: 11161

Dear Mr. & Mrs. Kurtz,

At your request, I visited the site of the above referenced project on Thursday, August 15, 2013.

The following structural issues were observed and noted:

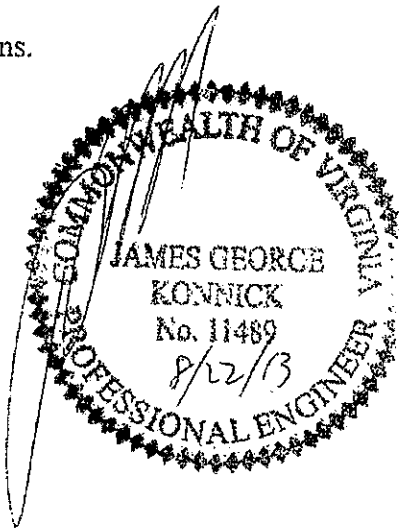
1. The exterior first floor beam supporting the rear screen porch and parallel to the rear wall of the house supports a post load of 4,577 pounds according to the architect of record, Moore Architects. The post is notched resulting in approximately 1-3/8 inches of bearing on the beam. Moreover, the post is not thru-bolted to the beam which is standard industry practice for notched posts. The reduced bearing contact area for the post results in an overstress in the beam in compression perpendicular to grain. The post should bear a minimum of 2-1/4" on the beam and have a positive anchorage to it by way of a prefabricated metal connector.
2. The post load at the first floor level and to the right of the central stair (as viewed from the front of the house) supports a load of approximately 6,638 pounds. This load is currently supported on an unreinforced 11-7/8 inch deep prefabricated I-joist. This I-joist needs to be reinforced with 2 X 4 squash blocks on each side as indicated in my report to you dated 9/22/11.
3. The second floor header between the entrance hall and the dining room is missing the supporting post on the right end of the header as viewed from the hallway. This post, which carries a load of approximately 4,400 pounds, needs to be installed.

2338 WALNUT STREET FALLS CHURCH, VIRGINIA 22046 TEL. (703)536-2033 FAX (703)237-8361

Please contact my office if you have any questions.

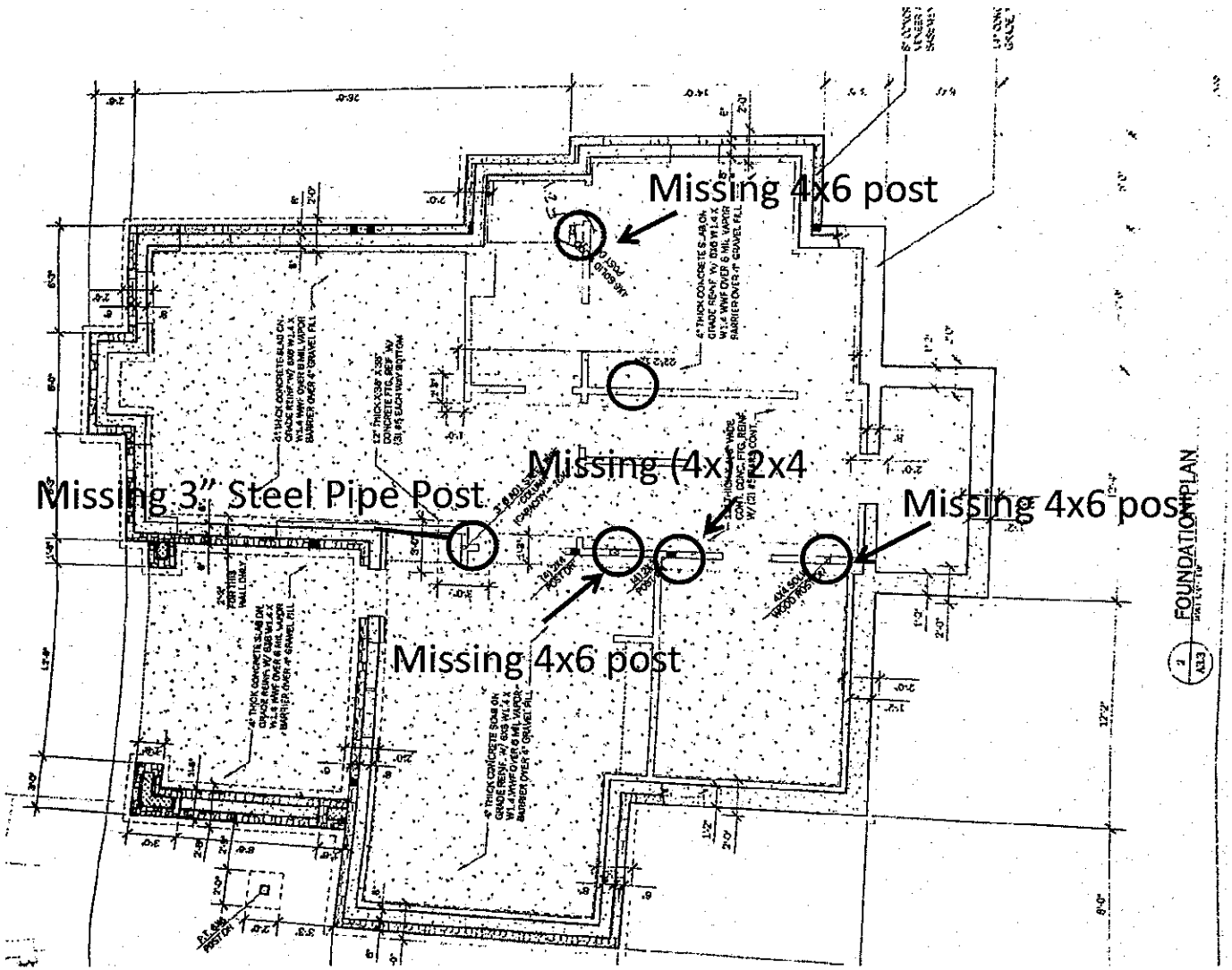
Sincerely,

James G. Konnick, P.E.
President



(Start of Item 2)

# Major Missing Load Path Posts at Foundation Level



## McMahan, Alan (DHCD)

**From:** Gutkowski, David [David.Gutkowski@ofplaw.com]
**Sent:** Friday, August 23, 2013 4:24 PM
**To:** McMahan, Alan (DHCD)
**Cc:** samiri@arlingtonva.us; Brian Charville; Hodge, Vernon (DHCD); Paula Eubank; Jim Hart (jhart@tidalwave.net)
**Subject:** RE: Kurtz, Appeal 13-2
**Attachments:** DCG Letter to A. McMahan 08.23.13.pdf

Alan,

Please see the attached letter. Please include this in the material provided to the Board for the hearing on September 20, 2013.

Thank you.

Dave Gutkowski

Odin Feldman Pittleman PC

**David Gutkowski**
**Attorney At Law**
David.Gutkowski@ofplaw.com
**Direct:** 703-218-2162

1775 Wiehle Ave, Suite 400 Reston, VA 20190
**Phone:** 703-218-2100 **Fax:** 703-218-2160 www.ofplaw.com



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**From:** Jim Hart [mailto:jhart@tidalwave.net]
**Sent:** Friday, August 23, 2013 12:45 PM
**To:** alan.mcmahan@dhcd.virginia.gov
**Cc:** samiri@arlingtonva.us; Brian Charville; Gutkowski, David; Hodge, Vernon (DHCD); Paula Eubank
**Subject:** Kurtz, Appeal 13-2

tter and response attached.

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I have included a reduction of the referenced plan sheet [Exhibit 8] herewith. A full size copy is coming with the hard copy.

Odin
Feldman
Pittleman PC

**David C. Gutkowski**
**Attorney at Law**
**david.gutkowski@ofplaw.com**
**703-218-2162**

August 23, 2013

***Via Electronic Mail and First Class Mail***

Mr. Alan McMahan
Commonwealth of Virginia
Department of Housing and Community Development
Main Street Centre
600 E. Main Street, Suite 300
Richmond, VA 23219

*Re:* ***Keith and Carol Kurtz Appeal No. 13-2***

Dear Mr. McMahan,

I write in response to the materials submitted today by R-One Contracting, LLC. While Mr. & Mrs. Kurtz take issue with much of R-One's submission, my clients felt it imperative to address several issues immediately.

First, Exhibit 8 to today's submission is of no import. It is a drawing that was submitted on June 17, 2009, and was done purely for cost purposes. It is not a part of the contract drawings or anything approved by Arlington County. In fact, there are two more recent drawings approved by Arlington County (October 29, 2009 and March 11, 2010, respectively) that significantly change the structure. The decision to rely on such a drawing is odd and totally misplaced, especially considering R-One is aware of the later drawings, as those are the ones it utilized in performing its work.

Second, much is made in R-One's submission as to the load path issue and, specifically, the Moore Architect drawing that does not capture the as-built condition of the home. That drawing relates to Notice of Violation No. 2 from the Arlington County Inspection Division Services December 2012 correspondence and is not a part of this appeal. Moreover, Mr. & Mrs. Kurtz categorically deny that they have forbidden R-One from constructing the load path as drawn. In fact, Mr. & Mrs. Kurtz invited R-One to enter the property and accurately build to the approved load path prescribed in the Moore drawing as recently as August 1, 2013.



1775 Wiehle Avenue, Suite 400, Reston, VA 20190 **Phone** 703-218-2100 **Fax** 703-218-2160
**www.ofplaw.com**

Please contact me if I can be of any further assistance.

Very truly yours,

David C. Gutkowski

cc: Mr. & Mrs. Keith Kurtz (*Via Electronic Mail*)
James R. Hart, Esquire (*Via First-Class Mail*)
Vernon Hodge (*Via Electronic Mail*)
Shariar Amiri (*Via First-Class Mail*)
Brian Charville, Esquire (*Via First-Class Mail*)

## McMahan, Alan (DHCD)

**From:** Gutkowski, David [David.Gutkowski@ofplaw.com]
**Sent:** Tuesday, August 27, 2013 9:11 AM
**To:** Jim Hart; McMahan, Alan (DHCD)
**Cc:** samiri@arlingtonva.us; 'Brian Charville'; Hodge, Vernon (DHCD); 'Paula Eubank'
**Subject:** RE: Kurtz, Appeal 13-2

Alan,

My clients stand by the contents of the correspondence sent to your attention on Friday. There were two revisions to the plans after Exhibit 8 was created (part of which included a change order invoiced by R-One and paid by Mr. & Mrs. Kurtz related to the second revision). To the extent that this fact is in dispute, my clients are happy to bring the requisite documentation to establish this fact to the hearing on September 20.

Dave Gutkowski

Odin Feldman Pittleman PC

**David Gutkowski**
**Attorney At Law**
David.Gutkowski@ofplaw.com
**Direct:** 703-218-2162

1775 Wiehle Ave, Suite 400 Reston, VA 20190
**Phone:** 703-218-2100 **Fax:** 703-218-2160 www.ofplaw.com



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**From:** Jim Hart [jhart@tidalwave.net]
**Sent:** Friday, August 23, 2013 4:52 PM
**To:** Gutkowski, David; alan.mcmahan@dhcd.virginia.gov
**Cc:** samiri@arlingtonva.us; 'Brian Charville'; 'Hodge, Vernon (DHCD)'; 'Paula Eubank'
**Subject:** RE: Kurtz, Appeal 13-2

Dear Mr. McMahan,

I was very surprised to see Mr. Gutkowski's 2nd email today, and had to reply. I am sorry to have to clutter the record with additional material, but Mr. Gutkowski is mistaken.

Despite the incorrect assertions in Mr. Gutkowski's email, the Exhibit 8 plan sheet [Page G1.1] sent to you today is from R-One's approved plan set, with the original Arlington County approval stamps on the drawings. In fact, as Page G1.1 is the last page in the roll of plans, the originals of the approval stamps are actually on the reverse side of that same sheet. In addition, the ink from the approval stamps has bled through the paper to the front side of the drawing in places, as you can see from the area of details 5 and 9, particularly on the full size sheet [coming with the hard copy]. The approved drawing confirms that there are absolutely no vents shown in the concrete walls below the floor of the detached garage, consistent with the position of the architect and the County.

If that unexpected issue is now in dispute, we will bring the original of the plan set to the hearing, with the Arlington County approval stamps on the reverse side of Page G1.1. Thank you for your consideration of this reply.

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**From:** Gutkowski, David [mailto:David.Gutkowski@ofplaw.com]
**Sent:** Friday, August 23, 2013 4:24 PM
**To:** alan.mcmahan@dhcd.virginia.gov
**Cc:** samiri@arlingtonva.us; Brian Charville; Hodge, Vernon (DHCD); Paula Eubank; Jim Hart (jhart@tidalwave.net)
**Subject:** RE: Kurtz, Appeal 13-2

Alan,

Please see the attached letter. Please include this in the material provided to the Board for the hearing on September 20, 2013.

Thank you.

Dave Gutkowski

Odin Feldman Pittleman PC

**David Gutkowski**
**Attorney At Law**
David.Gutkowski@ofplaw.com
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237

**To:** alan.mcmahan@dhcd.virginia.gov
**Cc:** samiri@arlingtonva.us; Brian Charville; Gutkowski, David; Hodge, Vernon (DHCD); Paula Eubank
**Subject:** Kurtz, Appeal 13-2

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I have included a reduction of the referenced plan sheet [Exhibit 8] herewith. A full size copy is coming with the hard copy.