

2016 Inspiring Communities RFP Properties

All questions related to the RFP must be submitted through the Supplier Portal at: www.stpaulbids.com

First Priority Property												
Pin	Address (click for tests/reports)	Neighborhood	Lot or Building*	Approx. Building Sq. Ft.	Approx. Lot Dimensions	Lot Sq Ft	Zoning	HRA Demo	Tax Forfeit	Fund	Eligible Use	Acquisition Price
012823420069	69 Garfield Street	Little Bohemia	Single family	936	37 x 40	1,307	R4	N/A	N	ISP	Ownership or rental	\$49,900
282922240172	971 Jenks Ave	Payne Phalen	Single family	1,776	40 x 116	4,792	RT1	N/A	N	NSP MHFA	Ownership or rental	\$45,000

*Regardless of current building type, the desired outcome in all instances is single family.

Second Priority Property												
PIN	Address	Neighborhood	Lot or Building	Approx. Building Sq. Ft.	Approx. Lot Size	Lot Sq Ft	Zoning	HRA Demo	Tax Forfeit	Fund	Eligible Use	Acquisition Price
322922210054	686 Burr Street	Payne Phalen	Lot	N/A	40 x 132	5,227	RT1	N	N	CDBG/MHFA	Ownership or rental	\$10,900
322922210081	716 Desoto Street	Railroad Island	Lot	N/A	40 x 120	4,792	RT1	N	N	CDBG/MHFA	Ownership or rental	\$10,000

Third Priority Property												
PIN	Address	Neighborhood	Lot or Building	Approx. Building Sq. Ft.	Approx. Lot Size	Lot Sq Ft	Zoning	HRA Demo	Tax Forfeit	Fund	Eligible Use	Acquisition Price
322922210079	704 Desoto Street	Railroad Island	Lot	N/A	40 x 165	6,534	RT1	Y	N	NSP CITY 2/MHFA	Ownership or rental	\$13,650
322922210080	699 Preble Street	Railroad Island	Lot	N/A	40 x 101	3,920	RT1	N	N	NSP MHFA	Ownership or rental	\$8,181
012823420152	376 Sturgis Street	Little Bohemia	Lot	N/A	43 x 183 (irregular)	7,841	R4	N	N	ISP	Ownership or rental	\$17,300
302922320024	947 Sylvan Street	North End	Lot	N/A	40 x 145	5,800	RT1	N	N	NSP CITY 1	Ownership or rental	\$12,100

Property reports are available for the following addresses

69 Garfield - Page 3

971 Jenks - Page 84



CITY OF SAINT PAUL

Christopher B. Coleman, Mayor

375 Jackson Street, Suite 220
Saint Paul, MN 55101-1806

Telephone: 651-266-8989
Facsimile: 651-266-9124
www.stpaul.gov/dsi

Code Compliance Report

December 26, 2014

*** * This Report must be Posted
on the Job Site * ***

Housing & Redev Authority
25 Fourth St W #1100
St Paul MN 55102-1634

Re: 69 Garfield St
File#: 10 132538 VB2

Dear Property Owner:

The following is the Code Compliance report you requested on November 04, 2014.

Please be advised that this report is accurate and correct as of the date December 26, 2014. All deficiencies identified by the City after this date must also be corrected and all codes and ordinances must be complied with. This report is valid for 365 days from December 26, 2014. This report may be used in lieu of a Truth in Housing Report required in St Paul Legislative Code 189. This building must be properly secured and the property maintained at all times.

In order to sell or reoccupy this property the following deficiencies must be corrected:

ZONING

1. This property is in a(n) R4 zoning district.
2. This property was inspected as a Single Family Dwelling.

BUILDING Inspector: Jim Seeger

Phone: 651-266-9046

1. Insure basement cellar floor is even, is cleanable, and all holes are filled. SPLC 34.10 (1)
2. Any framing members that required repair or do not meet code (where wall and ceiling covering is removed, members that are over-spanned, over-spaced, not being carried properly, door and window openings that are not adequately supported, etc.) are to be reconstructed in an approved manner. SPLC 34.34 (1)
3. Air-seal and insulate attic/access door. MN Energy Code Ch 1322.1102.4
4. Install Smoke Detectors/Carbon Monoxide Detectors per MN Conservation

Code and the MN Dept. of Labor and Industry: Install per code where feasible.
MNRC Ch 1309 Sect 313.2.1

5. Provide major clean-up of premises. SPLC 34.34 (4)
6. Repair siding, soffit, fascia, trim, etc. as necessary. SPLC 34.09 (1)
7. Provide proper drainage around house to direct water away from foundation of house. SPLC 34.08 (2)
8. Install insulated door for cellar and clean trash out of cellar.
9. Repair rear storage shed and complete siding and trim.
10. Raise up side porch and install frost footings .(relevel)
11. Tuck Point interior/exterior of foundation as necessary. SPLC 34.09 (1)
12. Remove mold, mildew and moldy or water damaged materials. SPLC 34.10 (1)
13. Install handrails (34 inches - 38 inches above each nosing) and guardrails (36 inch minimum) at all stairways, and return hand rail ends into a newel post or wall per attachment. MNRC Ch 1309 Sect. 311 & 312
14. Provide complete storms and screens, in good repair for all door and window openings. SPLC 34.09 (3e)
15. Provide functional hardware at all doors and windows. SPLC 34.09 (3f)
16. Exit doors shall be capable of being opened from the inside, easily and without the use of a key. Remove all surface bolts. SPLC 34.09 (3h)
17. Repair walls, ceiling and floors throughout, as necessary. SPLC 34.34 (6)
18. Prepare and paint interior and exterior as necessary. Observe necessary abatement procedures (EPA, MPCA and St. Paul Legislative Code, Chapter 34 for additional information) if lead base paint is present. SPLC 34.33 (1)
19. A building permit is required to correct the above deficiencies. All work is to be done in a workmanship like manner. SPLC 33.03 (a)

ELECTRICAL Inspector: Joe Sobanski

Phone: 651-266-9034

1. Properly wire electric dryer receptacle/branch circuit/overcurrent device to current NEC.
2. Install hard-wired, battery backup, Carbon Monoxide smoke detector as specified in Chapter 58 of the Saint Paul Legislative Code, and other smoke detectors and carbon monoxide detectors as required by the Minnesota State Building Code. SPLC 58, IRC
3. Properly support/wire exterior luminaire (light fixture) at entry door. Articles 110.3 (B), 314.20, NEC
4. Remove and/or rewire all illegal, improper or hazardous wiring to current NEC.
5. Replace/repair damaged electric baseboard heater to current NEC.
6. Properly wire furnace to current NEC.
7. No power at time of inspection. Test all electrical outlets and ensure all luminaires (light fixtures) are working properly when power is restored.
8. Repair the electrical service grounding conductor to the metallic water piping system. Install a conductor sized to Table 250.66 (NEC) from the electrical service to within 5' of the entrance point of the water service, and bond around the water meter. Article 250, NEC

9. Provide a complete circuit directory at service panel indicating location and use of all circuits. Article 408.4, NEC
10. Verify that fuse/circuit breaker amperage matches wire size in panel. Replace improperly sized overcurrent devices. Article 240.4, NEC
11. Close openings in service panel/junction boxes with knockout seals, breaker blanks, proper cable clamps, and/or junction box covers. Article 110.12 (A), NEC
12. Properly strap and support cables and/or conduits. Chapter 3, NEC
13. Throughout -Repair or replace all broken, painted over, corroded, missing or loose receptacles, luminaires (light fixtures), switches, covers and plates to current code. Article 406.4(D) & Article 410, NEC
14. Throughout -Check all receptacles for proper polarity (including 2-prong) and verify ground on 3-prong receptacles. Ensure all GFCI receptacles are functioning properly. Rewire and/or replace receptacles that are improperly wired or not functioning properly. Article 406.4(D), NEC
15. All added receptacles must be grounded, tamper-resistant and be on an Arc-Fault Circuit Interrupter-protected circuit.
16. Any open walls or walls that are opened as part of this project must be wired to the standards of the current NEC.
17. All electrical work must be done by a Minnesota-licensed electrical contractor under an electrical permit.

PLUMBING Inspector: Troy McManus

Phone: 651-266-9053

1. Basement -Soil and Waste Piping -(MPC 1000) Install a front sewer clean out.
2. Basement -Water Heater -(MPC 2210 Subp.3) A pressure and temperature relief valve is required.
3. Basement -Water Heater -(MFGC 402.1) Install the gas shut off and the gas piping to code.
4. Basement -Water Heater -(MPC 1730 Subp.1) Install the water piping for the water heater to code.
5. Basement -Water Heater -(MPC 2180) The water heater must be fired and in service.
6. Basement -Water Meter -(MPC 2280) Raise the water meter to a minimum of 12 inches above the floor.
7. Basement -Water Meter -(MPC MPC1700-SPRWS, Sec.88.10) The water meter must be installed and in service.
8. Basement -Water Piping -(MPC 1720) Repair or replace all the corroded, broken, or leaking water piping.
9. Basement -Water Piping -(MPC 1700) Provide water piping to all fixtures and appliances.
10. Basement -Water Piping -(SPRWS Water Code) Provide a one (1) inch water line to the first major take off.
11. Exterior -Lawn Hydrants -(MPC 2000) The lawn hydrant(s) require a backflow assembly or device.
12. First Floor -Gas Piping -(MFGC 411) Install an approved shut off; connector

and gas piping for the range.

13. First Floor -Gas Piping -(MFGC 614.1-614.7) Vent clothes dryer to code.
14. First Floor -Laundry Tub -(MPC 0200 E & MPC 2500) Install a proper fixture vent to code.
15. First Floor -Laundry Tub -(MPC 2300) Install the waste piping to code.
16. First Floor -Lavatory -(MPC 0200 E & MPC 2500) Install a proper fixture vent to code.
17. First Floor -Lavatory -(MPC 2300) Install the waste piping to code.
18. First Floor -Sink -(MPC 0200 E & MPC 2500) Install a proper fixture vent to code.
19. First Floor -Toilet Facilities -(MPC 0870) Reset the toilet on a firm base.
20. Second Floor -Lavatory -(MPC 0200 E & MPC 2500) Install a proper fixture vent to code.
21. Second Floor -Lavatory -(MPC 2300) Install the waste piping to code.
22. Second Floor -Toilet Facilities -(MPC 0870) Reset the toilet on a firm base.
23. Second Floor -Tub and Shower -(MPC 0200 E & MPC 2500) Install a proper fixture vent to code.
24. Second Floor -Tub and Shower -(MPC 2300) Install the waste piping to code.
25. Second Floor -Tub and Shower -(MPC 1380 Subp.5) Install an anti-scald control device, ASSE Standard 1016.
26. Second Floor -Tub and Shower -(MPC 1240 Subp.4) Install a temperature limiting device, ASSE Standard 1070.
27. Second Floor -Tub and Shower -(MPC 2000 B) Install a vacuum breaker for the hand held shower.
28. All the above corrections to waste, vent, water, and gas piping shall be per the Minnesota Plumbing Code Chapter 4715 & Chapter 326, the Minnesota Mechanical Code, the Minnesota Fuel Gas Code, and the Saint Paul Regional Water Code. All plumbing must be done by a plumbing contractor licensed in the State of Minnesota and the City of St. Paul under an approved permit.

Heating Inspector: Pat McCullough

Phone: 651-266-9015

1. Install approved level handle manual gas shutoff valve on furnace and remove unapproved valve
2. Install approved automatic gas valve for furnace
3. Install approved lever handle manual building shutoff gas valve in an accessible location ahead of the first branch tee
4. Clean and Orsat test furnace burner. Check all controls for proper operation. Check furnace heat exchanger for leak; provide documentation from a licensed contractor that the heating unit is safe
5. Provide a means of returning air from every habitable room to the furnace. Return air can not be taken from closets, bathrooms, toilet rooms, kitchen or mechanical rooms.
6. Install approved metal chimney liner
7. Replace furnace flue venting to code

8. Vent clothes dryer to code and provide approved gas piping and valve.
9. Provide adequate combustion air and support duct to code
10. Install furnace air filter access cover
11. Provide all supply and return ducts for warm air heating system must be clean before final approval for occupancy. Documentation is required from a licensed duct-cleaning contractor that the duct system has been cleaned.
12. Repair and/or replace heating registers as necessary
13. Provide heat in every habitable room and bathrooms
14. Bathrooms require a means to ventilate the space. Provide a window with an aggregate glazing area of not less than 3 square feet, one half of which must be operable. Alternative is a bath fan properly vented to the outside. All kitchen exhaust must be venting to exterior. A mechanical ventilation permit will be required for the bath fan and/or kitchen exhaust.

Notes:

1. See attachment for permit requirements and appeals procedure.
2. Roof, sidewalks, etc. snow covered and could not be inspected. All must meet appropriate codes when completed.
3. There was considerable storage/clutter within property at the time of the inspection. Property is to meet appropriate codes when complete.

This is a registered vacant building. In order to sell or reoccupy this building, all deficiencies listed on this code compliance report must be corrected in accordance with the Minimum Housing Standards of the St. Paul Legislative Code (Chapter 34) and all required permits must receive final approval within six (6) months of the date of this report. One (1) six-month time extension may be requested by the owner and will be considered if it can be shown that the code compliance work is proceeding and is more than fifty (50) percent complete in accordance with Legislative Code Section 33.03(f).

You may file an appeal to this notice by contacting the City Clerk's Office at 651-266-8688. Any appeal must be made in writing within 10 days of this notice. (You must submit a copy of this notice when you appeal, and pay a filing fee.)

Re: 69 Garfield St
December 26, 2014
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If you have any questions regarding this inspection report, please contact Jim Seeger between 7:30 - 9:00 AM at 651-266-9046 or leave a voice mail message.

Sincerely,

James L. Seeger
Code Compliance Officer
Department of Safety and Inspections
City of Saint Paul
375 Jackson Street, Suite 220
Saint Paul MN 55101
Phone: 651-266-9046
Email: jim.seeger@ci.stpaul.mn.us

Attachments

Midwest
Environmental
Consulting, L.L.C.



November 4, 2014

Rennie Smith
All Phase Companies, Inc.
404A St. Croix Trail North
Lakeland MN 55043

RE: HUD Lead-Based Paint Inspection and Risk Assessment at the Residential Property, 69 Garfield Street, St. Paul, Minnesota (All Phase Phone: 651-436-2930)

Dear Rennie Smith:

At your request, Midwest Environmental Consulting, L.L.C. (MEC) performed a HUD lead-based paint inspection and risk assessment of the residential property located at 69 Garfield Street, St. Paul, Minnesota on October 30 & October 31, 2014.

Andrew Myers, Environmental Project Manager with MEC and licenced lead risk assessor (MN LR #578) with MEC performed all field work associated with this project. MEC credentials can be found in Appendix A.

The purpose of this project was to determine whether lead-based paint or other lead hazards are present on the interior or exterior surfaces of the residential property. This report contains the results of the HUD lead-based paint inspection and risk assessment.

The inspection was conducted following the Housing and Urban Development (HUD) "Guidelines for the Evaluation and Control of Lead-Based Paint in Housing," (2012 revision). The sampling criteria used are those outlined in the HUD Standards 24 CFR Part 35 et al, "Requirements for Notification Evaluation and Education of Lead-Based Paint Hazards in Federally Owned Residential Property and Housing Receiving Federal Assistance." Also included, is an evaluation for lead dust hazards and bare soil hazards as part of the risk assessment.

According to HUD protocol, if the first 5 of a building component are identified as positive for lead-based paint, the remaining like components are assumed to be lead-based paint containing. (More than 5 window systems were tested as a part of this evaluation).

SITE DESCRIPTION

The single family residential property located at 69 Garfield Street, St. Paul, Minnesota is a two story wood framed structure constructed on a stone foundation/basement constructed in approximately the early 1900's. The interior walls & ceilings are primarily plaster with some areas of drywall. The window systems are primarily double hung wood windows. There is metal siding over asphalt and wood siding. There is metal soffits, fascia and trim over wood. There is a shed in the back yard. Bare soil was present and a soil sample was collected.

The property is currently vacant.

RESULTS OF PAINT INSPECTION

MEC used a paint inspection sampling strategy as described in the HUD *Guidelines* (2012 revision). The results of portable X-Ray Fluorescence (XRF) spectrum analysis of representative building components in each functional area or room are shown in Appendix B. Results are organized and shown in actual sequence of analysis. All tests were made using a Niton® XLp 303A X-Ray Fluorescence Spectrum Analyzers (Serial # 26848).

XRF analytical results in Appendix B, in the column labeled "Results" represent lead concentrations per square centimeter of painted surface (mg/cm^2).

HUD regulations 24 CFR Part 35 et al, the HUD *Guidelines* and the Minnesota Department of Health (MDH) define the paint action level as lead concentrations at or above the level of $1.0 \text{ mg}/\text{cm}^2$ when measured with a portable XRF instrument (0.5% by weight when measured by laboratory methods).

The lead-based paint risk assessment protocol described in the HUD *Guidelines* and the EPA regulations rely on evaluation of surface coatings meeting the definition of poor, planned renovations, presence of dust and soil above current EPA and Minnesota Department of Health (MDH) Standards.

Tests are performed on each test combination. A test combination consists of unique combinations of substrate, color, building component, and location.

XRF results are classified as positive or negative. A positive classification indicates that lead is present on the testing combination at or above the HUD standards. It's important to note that the limited inspection of surfaces tested only applies to those surfaces areas tested and does not meet the requirements of a full HUD lead-based paint inspection and those surface areas not tested would be assumed to contain lead-based paint.

Appendix B includes a record of XRF calibration checks. Those checks were performed on thin films supplied by the XRF manufacturer; they contain known concentrations of lead. The graphs in that appendix show the variation of quality control with time. The assays in the table of raw data (Appendix B) that are labeled "Calibrate" indicate that they are for quality control. Additional quality control data and information are available to you upon request.

Side A: South, faces Garfield Street
 Side B: West, faces residential properties
 Side C: North, faces back yard, shed
 Side D: East, faces residential properties

Specific building components determined to have a lead concentration above the action level of (1.0 mg/cm²) are listed below:

LOCATION	COMPONENT
Living Room	Painted wood doors' components
Living Room	Wood floor
Living Room	Painted wood baseboards
Living Room	Painted wood window components
Living Room	Painted plaster wall & ceiling
1 st Floor Bathroom	Painted wood baseboards
Kitchen	Painted plaster ceiling
Kitchen	Painted wood wainscoting
Kitchen	Painted wood window components
Kitchen	Painted wood door components
Bedroom 1	Painted wood door components
Bedroom 1	Painted wood window components
Bedroom 1	Painted wood trim
Stairway to 2 nd Floor	Painted wood baseboards
Stairway to 2 nd Floor	Painted wood stair treads & risers
Stairway to 2 nd Floor	Painted wood window components

Stairway to 2 nd Floor	Painted plaster walls
Bedroom 2	Painted wood baseboards
Bedroom 2	Painted wood window components
Bedroom 2	Painted wood closet door casings
Bedroom 2	Painted plaster ceiling
Bedroom 3	Painted wood baseboards
Bedroom 3	Painted wood window components
Bedroom 3	Painted wood door components
2 nd Floor Bathroom	Painted wood door components
2 nd Floor Bathroom	Painted wood baseboards
2 nd Floor Bathroom	Painted wood window components
2 nd Floor Bathroom	Bathtub
2 nd Floor Bathroom	Painted metal pipe
Exterior	Metal window components (depth index indicates lead beneath the metal surfaces)
Exterior	Metal siding
Exterior	Painted wood door components
Exterior	Metal door components (depth index indicates lead beneath the metal surfaces)
Exterior	Metal soffits, fascia & trim (depth index indicates lead beneath the metal surfaces)
Exterior	Painted wood columns
Exterior	Painted wood bulkhead
Basement	Painted wood door & jamb

Also included in Appendix B of this report is a rating of the condition of paint on components (column titled "Condition"). Comments on the condition include:

Intact: good condition; **Fair:** less than 2 square feet of damage to large interior surface, i.e., wall, less than 10 square feet of damage to large exterior surface, i.e., outside walls, or less than 10% damage to small surface areas, i.e., baseboards, trim, etc.; **Poor:** more than 2 square feet of damage on large interior surfaces, more than 10 square feet of damage to large exterior surface areas, or more than 10% damage to small surface areas.

RESULTS OF LEAD RISK ASSESSMENT

The risk assessment portion of this investigation involved two major phases: collecting information about the property through use of a visual inspection of the dwelling; and reviewing paint test data, and visual assessment notes in order to determine the type, location, and number of samples needed to further identify lead hazards at the property. These samples may consist of paint, dust, soil, and water.

- The date of construction of the residence is approximately the early 1900's.
- The property is a single family structure.
- Interior walls & ceilings are primarily plaster with some drywall
- Window systems are primarily original vintage wood. double hung windows
- The exterior siding, soffits, fascia and trim are metal over asphalt & wood
- The property is currently vacant.
- Bare soil was observed.

Visual Inspection

MEC conducted an inspection of painted and varnished surfaces on the interior and exterior of the residence. Emphasis was placed on chewable surfaces within 5 feet of the ground or floor.

The results of the visual inspection indicate that the interior and the exterior of the structure is mainly in poor condition with a few components in fair or intact condition.

Please note, however, the condition report within the XRF table for painted or varnished surfaces found to be fair or poor, that were below the 1.0 mg/cm² action level.

Environmental Sampling Plan

Based on the location of lead-based paint, deteriorated lead-based paint, and information gathered during the visual inspection, MEC formulated the following environmental sampling plan to identify other lead hazards on this property. Water samples were not collected as they were not part of the scope of work for this project. Bare soil was observed and a bare soil sample was collected.

Samples were collected and delivered to EMSL Laboratory (ELLAP 163162), Minneapolis, Minnesota, where they were prepared and analyzed using current appropriate protocols for lead. Laboratory results for environmental samples may be found in Appendix C.

Analytical results are reported below for each sample and compared to standard action levels that have been identified for this project.

SAMPLE # DATE	LOCATION	RESULT	PROJECT ACTION LEVEL
502/1014-W1 10/30/14	Living Room, Side D, entry, floor	150 $\mu\text{g}/\text{ft}^2$	40 $\mu\text{g}/\text{ft}^2$
502/1014-W2 10/30/14	Living Room, Side D, window stool	200 $\mu\text{g}/\text{ft}^2$	250 $\mu\text{g}/\text{ft}^2$
502/1014-W3 10/30/14	Bedroom 1, Side D, window trough	9700 $\mu\text{g}/\text{ft}^2$	400 $\mu\text{g}/\text{ft}^2$
502/1014-W4 10/30/14	Bedroom 1, Side D, floor	24 $\mu\text{g}/\text{ft}^2$	40 $\mu\text{g}/\text{ft}^2$
502/1014-W5 10/30/14	Bedroom 3, Side C, floor	42 $\mu\text{g}/\text{ft}^2$	40 $\mu\text{g}/\text{ft}^2$
502/1014-W6 10/30/14	Bedroom 3, Side C, window stool	7300 $\mu\text{g}/\text{ft}^2$	250 $\mu\text{g}/\text{ft}^2$
502/1014-W7 10/30/14	Blind Field Blank	<10 $\mu\text{g}/\text{ft}^2$	-----
502/1014-S1 10/30/14	Bare soil Foundation	380 ppm	100 ppm

* Unit Abbreviations: $\mu\text{g}/\text{ft}^2$ = micrograms per square foot ppm=parts per million

Dust wipe samples and a bare soil sample were collected from the residence, however, water and sodium rhodizonate swabs were not collected as part of this project.

RECOMMENDATIONS

Lead-based paint or lead hazards were found during the inspection and risk assessment of the property including window components; painted wood doors & door components; painted wood baseboards; painted plaster & ceilings; bath tub; and beneath metal exterior cladding.

According to HUD protocol, if the first 5 of a building component are identified as positive for lead-based paint, the remaining like components are assumed to be lead-based paint containing.

At the request of the City of St. Paul, only abatement options are provided for lead hazards identified during this evaluation. Abatement options can include removal of building components to the substrate and replacement with new lead free products; enclosure of building components under dust tight barriers; encapsulation; or removal of coatings to the substrates and re-coating with lead free coatings.

Living Room:

Painted wood door components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Wood floor: In poor condition.

- Option 1: Remove floor to sub-floor using Lead Safe Work Practices and replace with new lead free coatings.
- Option 2: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Remove coating to bare substrate using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.

Painted wood baseboards: In poor condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted plaster walls & ceiling: In fair condition.

- Option 1: Remove wall & ceiling systems using Lead Safe Work Practices and

- replace with new lead free wall system.
- Option 2: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

1st Floor Bathroom:

Painted wood baseboards: In intact condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Kitchen:

Painted plaster ceiling: In fair condition.

- Option 1: Remove ceiling systems using Lead Safe Work Practices and replace with new lead free wall system.
- Option 2: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood wainscoting: In intact condition.

- Option 1: Remove components using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In intact condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood door components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Bedroom 1:

Painted wood door components: In fair condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood trim: In intact condition.

- Option 1: Remove components using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Stairway to 2nd Floor:

Painted wood baseboards: In fair condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance

Plan with ongoing monitoring.

- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood stair risers treads: In fair to poor condition.

- Option 1: Remove stair components using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted plaster walls: In poor condition.

- Option 1: Remove wall systems using Lead Safe Work Practices and replace with new lead free wall system.
- Option 2: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Bedroom 2:

Painted wood baseboards: In poor condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood closet door components: In intact condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted plaster ceiling: In fair condition.

- Option 1: Remove ceiling systems using Lead Safe Work Practices and replace with new lead free wall system.
- Option 2: Enclose under a dust tight barrier using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Bedroom 3:

Painted wood baseboards: In fair condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood door components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.

- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

2nd Floor Bathroom:

Painted wood door components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood baseboards: In poor condition.

- Option 1: Remove baseboards using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings

Bathtub: In fair condition.

- Option 1: Remove tub using Lead Safe Work Practices and replace with new lead free products.
- Option 2: Enclose under a lead free tub surround using Lead Safe Work Practices and include into an Operation & Maintenance Plan with ongoing monitoring.

Painted metal pipe: In fair condition.

- Option 1: Remove components using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Encapsulate with an approved lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Exterior:

Metal window, fascia & soffit & trim & door components: In intact to poor condition.

- Option 1: Remove and replace damaged metal cladding making sure that seams and seals are maintained in a sealed condition using elastomeric caulk and include into an Operation & Maintenance Plan with ongoing monitoring. (The metal cladding is already an enclosure).
- Option 2: Remove components using Lead Safe Work Practices and replace with new lead free products.
- Option 3: Remove coatings under cladding to bare substrate and re-coat with lead free coatings.

Painted wood door components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood columns: In poor condition.

- Option 1: Remove columns using Lead Safe Work Practices and replace with new lead free products.
- Option 2: Enclose under a dust tight barrier and include into an Operation & Maintenance Plan with ongoing monitoring.
- Option 3: Remove coatings to bare substrates using Lead Safe Work Practice and re-coat with lead free coatings.

Painted wood bulkhead components: In poor condition.

- Option 1: Remove components using Lead Safe Work Practices and replace with new lead free components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Basement:

Painted wood door & jamb components: In poor condition.

- Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.
- Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Lead Dust:

Dust was identified as a lead hazard on window and floor surfaces tested. All floors and window systems should be cleaned and made smooth and cleanable. If planned renovation or work activity will disturb lead coated surfaces, lead safe work practices should be followed, which include requirements for clean up of the work area and clearance testing.

Bare Soil:

Bare soil was observed and a bare soil sample was collected and found to be above the MDH standard of 100 parts per million.

- Abatement Option 1: Removal of bare soil and replacement with new soil of 25 parts per million of lead or less.
- Abatement Option 2: Covering bare soil with asphalt, concrete or other impervious coating.

When qualified contractors are performing the planned renovation/remodeling activities, precautions should be properly done to minimize the potential for lead-based paint contamination to the workers, occupants and the environment.

DISCUSSION

The mere presence of lead-coated surfaces does not create a lead hazard. Maintenance of lead containing coatings will prevent lead from becoming a hazard. Lead-based paint above the action level of 1.0 mg/cm^2 was found on surfaces tested.

Because exterior surfaces are to be remediated and lead-coatings are present, covering the ground and providing adequate protection to soil is very important. Bare soil was found to be above defined action levels.

Dust wipe samples collected found lead dust levels above the action levels on floor and window surfaces tested as defined by MDH, HUD and EPA in the sampling locations tested. Contractors will be required to clean all floor systems and window surfaces throughout the complex for lead hazards in dust following and as a part of the planned restoration.

The preceding lead reduction recommendations include different ways to treat each lead hazard that was identified by the risk assessment/inspection. The most effective treatments are considered abatement and require little or no ongoing maintenance to preserve a lead safe environment. The less effective treatments are called interim controls and these treatments require an increased amount of ongoing maintenance to preserve a lead safe environment.

If no lead dust, soil, or lead-based paint is found, then no monitoring is required.

If no hazards are found, but lead-based paint is found, then reevaluation should occur every three years, and an owner's visual survey should occur annually.

If lead dust, soil, or lead-based paint hazards are found to be present, choosing the option with removal of all lead-based paint will result in no monitoring requirements. If abatement options are chosen that include enclosure, then no re-evaluation is required, but the owner should conduct visual surveys every year to ensure the enclosure has not

failed. If the interim control options (stabilize and paint) are chosen, then re-evaluation should occur after the first year and then every two years after that. Visual surveys by the owner should occur annually.

If lead dust levels are found to be more than ten times the standard levels, then reevaluation after interim control measures should occur six months after the hazard reduction.

In general, all painted surfaces should be monitored. A negative result does not necessarily indicate that no lead is present in that surface, but rather indicates that any lead present in that surface does not rise above the 1.0 mg/cm^2 threshold in the areas tested. Therefore, all painted surfaces should be maintained in accordance with the Minnesota Department of Health standards.

ROUGH ESTIMATED COSTS:

- Work site preparation for interior, approximately \$75.00 to \$250.00 per room.
- Window replacement, approximately \$150.00 and up, depending on style.
- Exterior preparation approximately \$35.00 to \$75.00 per component (i.e., windows, doors), removal or enclosure.
- Work area cleaning: \$0.15 to \$0.35 per square foot.
- Paint stabilization: \$0.20 to \$0.65 per square foot.
- Removal: Paint - chemical stripper: \$0.65 to \$1.50 square foot.
- Soil Remediation:
 - a. Clean-up of visible exterior paint chips: \$0.90 to \$1.35 square foot.
 - b. Seed and tack grass: \$0.45 to \$0.75 square foot.
 - c. Sod: \$1.25 to \$3.30 square foot.
 - d. Regrade at foundation and sod: \$3.00 to \$5.00 square foot.
 - e. Mulch - 4": \$0.50 to \$0.90 square foot.
 - f. Concrete: \$4.50 to \$8.00 square foot.
 - g. Replace soil: \$42.00 to \$65.00 cubic yard.

If work is going to be performed on these surfaces, individuals and/or contractors should be informed of the results of testing. At a minimum, the person(s) performing the work should follow the requirements of the Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1926.62, Lead in the Construction Industry.

For the protection of the occupants and workers, and because of the use of federal funds, you are required by the HUD rules to use qualified firms who are knowledgeable about the hazards associated with lead. Supervisor should be licensed and workers will be required to be licensed or certified, as MEC understands the scope of work.

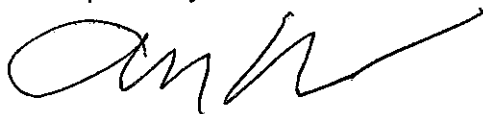
Please maintain a copy of the lead inspection/risk assessment report for your records and provide a copy of the report to any contractors that may be involved in any future renovations or remodeling projects.

A copy of this lead inspection/risk assessment summary must be provided to purchasers or lessees (tenants) of this property under Federal Law (24 CFR Part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract.

The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet approved by the U.S. Environmental Protection Agency and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from lead-based paint hazards.

It has been our pleasure to provide this service to you and your organization. Please contact me if you have questions relating to any aspect of this work.

Respectfully submitted,



Andrew Myers
Environmental Services Project Manager

APPENDIX A
INSPECTOR CREDENTIALS

MINNESOTA DEPARTMENT OF HEALTH

has authorized

MIDWEST ENVIRONMENTAL CONSULTING, LLC
125 RAILROAD AVE SW
MORA, MINNESOTA 55051

In accordance with Minnesota Statutes, section 144.9505 and Minnesota Rules, part 4761.2200, to practice in the State of Minnesota as a

CERTIFIED LEAD FIRM

LICENSE NO: LF551

EXPIRES: 04/07/2015

THIS CERTIFICATE IS NONTRANSFERABLE



A handwritten signature in black ink, appearing to read "TP Hogan", is located to the left of the director's name.

Thomas P. Hogan, Director
Environmental Health Division

Andrew Myers

has completed the Minnesota-Approved Lead Training course entitled:

Lead Risk Assessor Refresher Training

August 21, 2014

given by

Midwest Environmental Consulting, L.L.C.

125 Railroad Avenue SW, Mora MN 55051

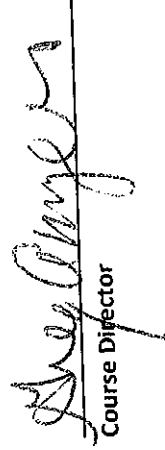
Phone: 763-691-0111/320-679-4054

SUCCESSFULLY PASSED THE EXAMINATION ON August 21, 2014, IN COON RAPIDS, MINNESOTA

IDENTIFICATION NUMBER: MEC/LRAR 1080

Expiration Date: August 21, 2015

MDH Permit Number: RAR-006


Course Director

Approved by the State of Minnesota under *Minnesota Rules*, parts 4761.2000 to 4761.2700



I-0031

Lead Inspector Independent Examination

121 East Seventh Place, Suite 220 • St. Paul • Minnesota 55101 • (651) 215-0700

This certifies that

Andrew Myers

has successfully passed the required independent examination for:

Lead Inspector

March 22, 2001
Morris, Minnesota

This certificate is nontransferable.

Ian K. Malcom
Commissioner

Patricia A. Bloomgren

Patricia A. Bloomgren, Director
Division of Environmental Health



RA-0239

Lead Risk Assessor Independent Examination

121 East Seventh Place, Suite 220 • St. Paul, Minnesota 55101 • (651) 215-0700

This certifies that

Andrew Myers

has successfully passed the required independent examination for:

Lead Risk Assessor

June 26, 2001

Minneapolis, Minnesota

This certificate is nontransferable.

Patricia A. Bloomgren, Director
Division of Environmental Health

Jan K. Malcom
Commissioner

Andrew J. Myers

has completed the Minnesota-Approved Lead Training Course entitled:

Initial Lead Inspector Training
March 12-14, 2007

given by

Midwest Environmental Consulting, LLC
145 - 2nd Avenue SE, Cambridge, MN 55008

SUCCESSFULLY PASSED THE EXAMINATION ON MARCH 14, 2007, IN MOORE, MINNESOTA

IDENTIFICATION NUMBER: **00411 0042**
Expiration Date: **March 14, 2012**
MDEP Permit No: **LI-003**

Andrew J. Myers
Course Director

Andrew J. Myers

has completed the Minnesota-Approved Lead Training course entitled:

Lead-Based Paint Risk Assessor Training

June 25-26, 2001

given by

Midwest Environmental Consulting, LLC
145 - 2nd Avenue SE, Cambridge, MN 55008

• SUCCESSFULLY PASSED THE EXAMINATION ON JUNE 28, 2001, IN MINNEAPOLIS, MINNESOTA

IDENTIFICATION NUMBER: MEST/PA-0111

Expiration Date: June 28, 2002

Issue Number: F-PA-002

Gregory A. Myers
Course Director

APPENDIX B

**XRF TEST RESULTS
SAMPLING MAPS
DATA PAGES
CALIBRATION DATA**

231-
232
shed

Residential-2

Residential

B

C

*

Residential

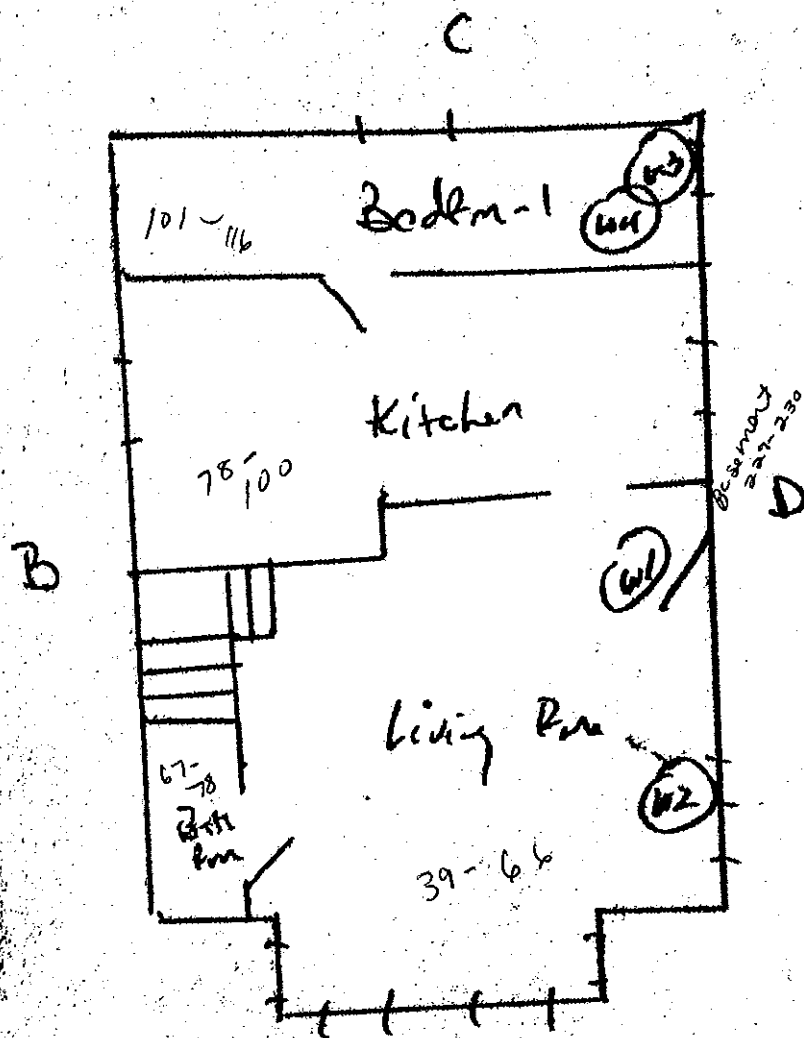
233
235

199-226

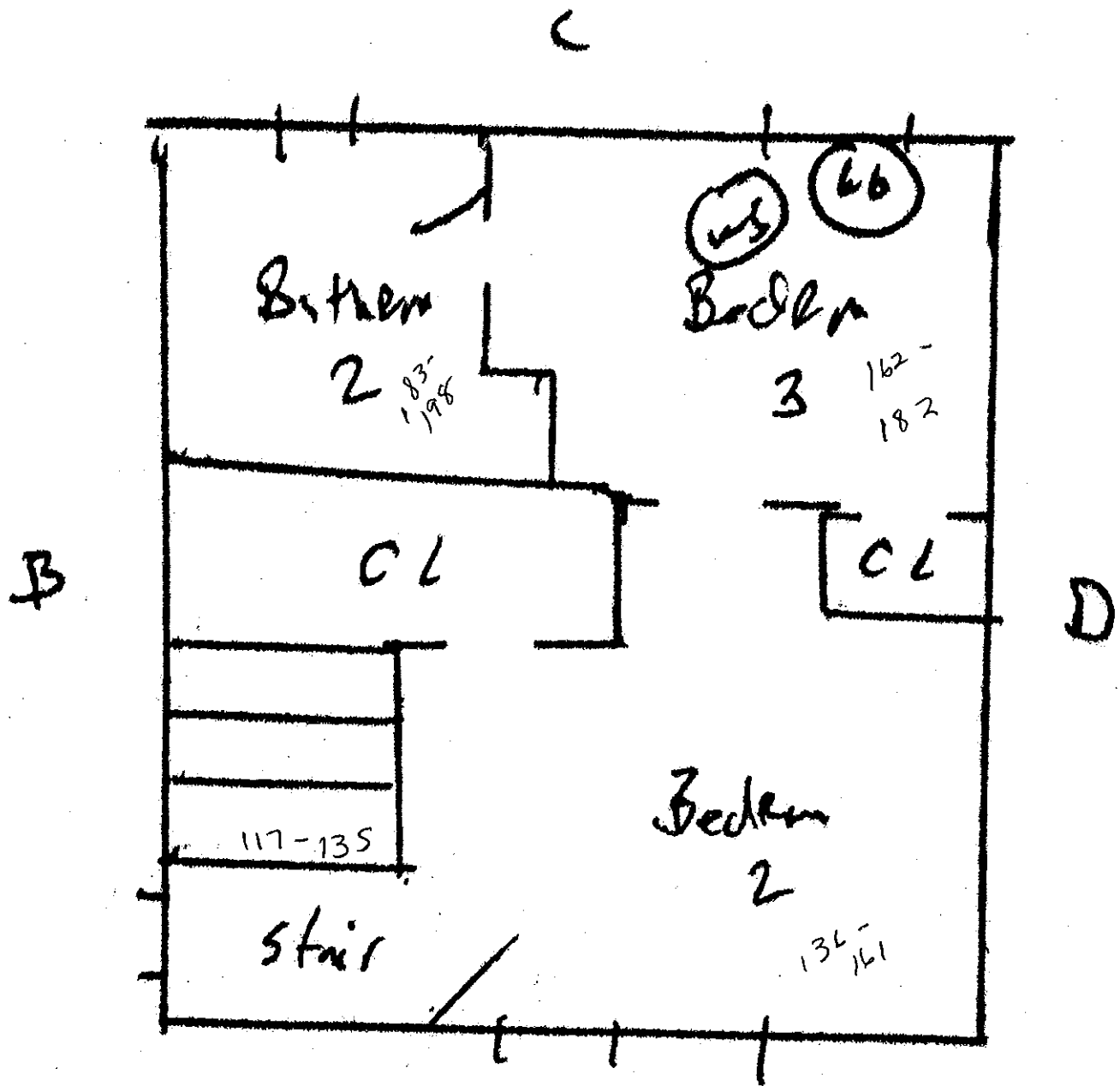
D

A

Garfield



1st Flr



2nd F1R

A

All Phase Companies
69 Garfield Street
St. Paul MN

Site: All Phase Companies: 69 Garfield Street, St. Paul MN									
Date: Oct. 31, 2014									
XRF: Xlp303A, Serial # 26848									
Site	DOB	Date	Room	Substrate	Condition	Color	Moisture	Temperature	Notes
69 Garfield St	35	10/31/2014 11:36					1.55	0.37	0
69 Garfield St	36	10/31/2014 11:41	calibrate				POS	1	1 < LOD
69 Garfield St	37	10/31/2014 11:42	calibrate				POS	1	1 < LOD
69 Garfield St	38	10/31/2014 11:44	calibrate				POS	1	0.7
69 Garfield St	39	10/31/2014 11:45	LIVING ROOM	WOOD	POOR	WHITE	POS	6.4	3.5
69 Garfield St	40	10/31/2014 11:45	LIVING ROOM	WOOD	POOR	WHITE	Neg	< LOD	< LOD
69 Garfield St	41	10/31/2014 11:45	LIVING ROOM	WOOD	POOR	WHITE	Neg	< LOD	< LOD
69 Garfield St	42	10/31/2014 11:45	LIVING ROOM	WOOD	POOR	WHITE	POS	3.4	3.5
69 Garfield St	43	10/31/2014 11:46	LIVING ROOM	WOOD	POOR	WHITE	Neg	< LOD	< LOD
69 Garfield St	44	10/31/2014 11:46	LIVING ROOM	WOOD	POOR	WHITE	Neg	< LOD	< LOD
69 Garfield St	45	10/31/2014 11:46	LIVING ROOM	WOOD	POOR	WHITE	Null	< LOD	< LOD
69 Garfield St	46	10/31/2014 11:47	LIVING ROOM	WOOD	POOR	BROWN	Neg	0.19	0.19
69 Garfield St	47	10/31/2014 11:47	DOOR threshold	WOOD	POOR	BROWN	POS	3.1	0.4
69 Garfield St	48	10/31/2014 11:47	FLOOR	WOOD	POOR	BROWN	POS	15.2	7.2
69 Garfield St	49	10/31/2014 11:48	FLOOR	WOOD	POOR	BROWN	Neg	0.11	0.11
69 Garfield St	50	10/31/2014 11:48	BASEBOARD	WOOD	POOR	WHITE	POS	1.4	2.1
69 Garfield St	51	10/31/2014 11:49	WINDOW	WOOD	POOR	WHITE	POS	1.43	3.3
69 Garfield St	52	10/31/2014 11:49	WINDOW	WOOD	POOR	WHITE	POS	11.5	< LOD
69 Garfield St	53	10/31/2014 11:49	WINDOW	WOOD	POOR	WHITE	POS	1.49	< LOD
69 Garfield St	54	10/31/2014 11:50	FLOOR vent	METAL	POOR	BROWN	Neg	< LOD	< LOD
69 Garfield St	55	10/31/2014 11:52	WALL	PLASTER	FAIR	WHITE	Neg	< LOD	0.24
69 Garfield St	56	10/31/2014 11:53	WALL	PLASTER	FAIR	WHITE	POS	9.37	< LOD
69 Garfield St	57	10/31/2014 11:53	WALL	PLASTER	FAIR	WHITE	Neg	< LOD	< LOD
69 Garfield St	58	10/31/2014 11:54	WALL	PLASTER	FAIR	WHITE	Neg	< LOD	0.27
69 Garfield St	59	10/31/2014 11:55	CEILING	PLASTER	FAIR	TAN	Null	< LOD	< LOD
69 Garfield St	60	10/31/2014 11:56	CEILING	PLASTER	FAIR	TAN	POS	1.3	1.3
69 Garfield St	61	10/31/2014 11:57	CEILING	tile	FAIR	WHITE	Null	< LOD	< LOD
69 Garfield St	62	10/31/2014 11:57	CEILING	tile	FAIR	WHITE	Null	< LOD	< LOD
69 Garfield St	63	10/31/2014 11:57	CEILING	tile	FAIR	WHITE	Null	< LOD	< LOD
69 Garfield St	64	10/31/2014 11:57	CEILING	tile	FAIR	WHITE	Null	< LOD	< LOD
69 Garfield St	65	10/31/2014 11:57	CEILING	tile	FAIR	WHITE	Neg	< LOD	< LOD
69 Garfield St	66	10/31/2014 11:58	CEILING molding	WOOD	INTACT	WHITE	Neg	< LOD	< LOD
69 Garfield St	67	10/31/2014 11:59	DOOR	WOOD	INTACT	WHITE	Neg	0.4	0.4
69 Garfield St	68	10/31/2014 11:59	DOOR	WOOD	INTACT	WHITE	Neg	< LOD	< LOD
69 Garfield St	69	10/31/2014 11:59	DOOR	WOOD	INTACT	WHITE	Neg	< LOD	< LOD
69 Garfield St	70	10/31/2014 12:00	BASEBOARD	WOOD	INTACT	WHITE	POS	5.9	5.3
69 Garfield St	71	10/31/2014 12:00	BATHROOM	WOOD	INTACT	WHITE	POS	1.64	3.33

69 Garfield St	71	10/31/2014 12:00	1	BATHROOM		FLOOR	vinyl	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	2.23	1.61	AM
69 Garfield St	72	10/31/2014 12:00	1	BATHROOM	A	CABINET	WOOD	INTACT	BROWN	Neg	< LOD	< LOD	< LOD	2.25	1.21	AM
69 Garfield St	73	10/31/2014 12:01	1	BATHROOM	A	CABINET	WOOD	INTACT	BROWN	Neg	< LOD	< LOD	< LOD	3.28	1	AM
69 Garfield St	74	10/31/2014 12:01	1	BATHROOM	A	WALL	PLASTER	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	3.89	1.63	AM
69 Garfield St	75	10/31/2014 12:02	1	BATHROOM	B	WALL	PLASTER	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	3.43	4.34	AM
69 Garfield St	76	10/31/2014 12:02	1	BATHROOM	C	WALL	PLASTER	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	2.84	1	AM
69 Garfield St	77	10/31/2014 12:03	1	BATHROOM	D	WALL	PLASTER	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	2.1	1	AM
69 Garfield St	78	10/31/2014 12:03	1	BATHROOM		CEILING	PLASTER	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	2.53	1	AM
69 Garfield St	79	10/31/2014 12:04	1	KITCHEN		CEILING	PLASTER	POOR	TAN	Null	< LOD	< LOD	< LOD	0.6	1.62	AM
69 Garfield St	80	10/31/2014 12:05	1	KITCHEN		CEILING	PLASTER	POOR	TAN	Null	0.9	< LOD	< LOD	9.74	1.49	AM
69 Garfield St	81	10/31/2014 12:05	1	KITCHEN		CEILING	PLASTER	POOR	TAN	Null	< LOD	< LOD	< LOD	0.3	1.63	AM
69 Garfield St	82	10/31/2014 12:06	1	KITCHEN		CEILING	PLASTER	POOR	TAN	POS	< LOD	< LOD	< LOD	9.88	1.49	AM
69 Garfield St	83	10/31/2014 12:06	1	KITCHEN		CEILING	tile	POOR	WHITE	Neg	< LOD	< LOD	< LOD	3.43	4.16	AM
69 Garfield St	84	10/31/2014 12:08	1	KITCHEN		FLOOR	vinyl	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	2.98	1.12	AM
69 Garfield St	85	10/31/2014 12:08	1	KITCHEN	D	RADIATOR	METAL	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	2.23	1	AM
69 Garfield St	86	10/31/2014 12:08	1	KITCHEN	D	BASEBOARD	WOOD	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	2.25	1.76	AM
69 Garfield St	87	10/31/2014 12:09	1	KITCHEN	D	Wainscoting	WOOD	INTACT	WHITE	POS	< LOD	< LOD	< LOD	1.35	10	AM
69 Garfield St	88	10/31/2014 12:09	1	KITCHEN	D	chair rail	WOOD	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	2.24	1	AM
69 Garfield St	89	10/31/2014 12:10	1	KITCHEN	D	WINDOW	WOOD	INTACT	WHITE	POS	< LOD	< LOD	< LOD	1.94	10	AM
69 Garfield St	90	10/31/2014 12:10	1	KITCHEN	D	WINDOW	WOOD	INTACT	WHITE	POS	< LOD	< LOD	< LOD	2.09	10	AM
69 Garfield St	91	10/31/2014 12:10	1	KITCHEN	D	WINDOW	WOOD	INTACT	WHITE	POS	< LOD	< LOD	< LOD	1.79	10	AM
69 Garfield St	92	10/31/2014 12:11	1	KITCHEN	A	CABINET	WOOD	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	3.15	1.32	AM
69 Garfield St	93	10/31/2014 12:11	1	KITCHEN	A	CABINET	WOOD	INTACT	BROWN	Neg	< LOD	< LOD	< LOD	2.24	1.85	AM
69 Garfield St	94	10/31/2014 12:12	1	KITCHEN	C	DOOR	WOOD	INTACT	BROWN	Neg	< LOD	< LOD	< LOD	2.24	1	AM
69 Garfield St	95	10/31/2014 12:12	1	KITCHEN	C	DOOR	WOOD	POOR	WHITE	POS	< LOD	< LOD	< LOD	2.74	10	AM
69 Garfield St	96	10/31/2014 12:13	1	KITCHEN	A	DOOR	WOOD	INTACT	BROWN	Neg	< LOD	< LOD	< LOD	2.25	1	AM
69 Garfield St	97	10/31/2014 12:13	1	KITCHEN	A	WALL	WOOD	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	4.48	10	AM
69 Garfield St	98	10/31/2014 12:14	1	KITCHEN	B	WALL	WOOD	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	4.31	7.15	AM
69 Garfield St	99	10/31/2014 12:14	1	KITCHEN	C	WALL	WOOD	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	2.24	3.46	AM
69 Garfield St	100	10/31/2014 12:15	1	KITCHEN	D	WALL	WOOD	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	4.34	1.78	AM
69 Garfield St	101	10/31/2014 12:16	1	BEDROOM 1	A	DOOR	WOOD	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	2.23	1	AM
69 Garfield St	102	10/31/2014 12:16	1	BEDROOM 1	A	DOOR	WOOD	FAIR	WHITE	POS	< LOD	< LOD	< LOD	1.94	7.84	AM
69 Garfield St	103	10/31/2014 12:16	1	BEDROOM 1	A	BASEBOARD	WOOD	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	2.23	1	AM
69 Garfield St	104	10/31/2014 12:17	1	BEDROOM 1	D	WINDOW	WOOD	POOR	WHITE	POS	< LOD	< LOD	< LOD	3.29	4.08	AM
69 Garfield St	105	10/31/2014 12:17	1	BEDROOM 1	D	WINDOW	WOOD	POOR	WHITE	POS	< LOD	< LOD	< LOD	1.8	2.88	AM
69 Garfield St	106	10/31/2014 12:17	1	BEDROOM 1	D	WINDOW	WOOD	POOR	WHITE	POS	< LOD	< LOD	< LOD	1.64	2.37	AM
69 Garfield St	107	10/31/2014 12:18	1	BEDROOM 1	A	WALL	PLASTER	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	5.21	1	AM
69 Garfield St	108	10/31/2014 12:19	1	BEDROOM 1	B	WALL	PLASTER	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	4.16	1	AM
69 Garfield St	109	10/31/2014 12:19	1	BEDROOM 1	C	WALL	PLASTER	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	3.28	1.13	AM
69 Garfield St	110	10/31/2014 12:19	1	BEDROOM 1	D	WALL	PLASTER	FAIR	WHITE	Null	< LOD	< LOD	< LOD	2.23	1	AM

69 Garfield St	111	10/31/2014 12:20	1	BEDROOM 1	D	WALL	FAIR	WHITE	Neg	< LOD < LOD	1	7.9	1	AM	
69 Garfield St	112	10/31/2014 12:20	1	BEDROOM 1	D	TRIM	FAIR	WHITE	Neg	< LOD < LOD	< LOD	2.09	2.88	AM	
69 Garfield St	113	10/31/2014 12:21	1	BEDROOM 1	D	TRIM	FAIR	WHITE	POS	63	36	2.26	10	AM	
69 Garfield St	114	10/31/2014 12:21	1	BEDROOM 1	D	TRIM	FAIR	WHITE	Null	< LOD < LOD	< LOD	0.45	1	AM	
69 Garfield St	115	10/31/2014 12:21	1	BEDROOM 1		CEILING	FAIR	WHITE	Null	< LOD < LOD	< LOD	0.15	1	AM	
69 Garfield St	116	10/31/2014 12:22	1	BEDROOM 1		CEILING	FAIR	WHITE	Neg	< LOD < LOD	< LOD	4.32	1.26	AM	
69 Garfield St	117	10/31/2014 12:23	2	STAIR		CEILING	FAIR	TAN	Null	< LOD < LOD	< LOD	1.05	1.59	AM	
69 Garfield St	118	10/31/2014 12:24	2	STAIR		CEILING	FAIR	WHITE	Null	< LOD < LOD	< LOD	0.89	1	AM	
69 Garfield St	119	10/31/2014 12:24	2	STAIR		CEILING	FAIR	WHITE	Neg	< LOD < LOD	< LOD	1.8	1	AM	
69 Garfield St	120	10/31/2014 12:25	2	STAIR	C	CABINET	WOOD	WHITE	Neg	< LOD < LOD	< LOD	2.1	1	AM	
69 Garfield St	121	10/31/2014 12:25	2	STAIR	C	CABINET	WOOD	WHITE	Neg	< LOD < LOD	< LOD	2.08	3.8	AM	
69 Garfield St	122	10/31/2014 12:26	2	STAIR	C	CABINET	WOOD	WHITE	Neg	< LOD < LOD	< LOD	2.24	1.19	AM	
69 Garfield St	123	10/31/2014 12:26	2	STAIR	B	BASEBOARD	WOOD	WHITE	Null	< LOD < LOD	< LOD	0.45	10	AM	
69 Garfield St	124	10/31/2014 12:26	2	STAIR	B	BASEBOARD	WOOD	WHITE	POS	81	< LOD	2.09	10	AM	
69 Garfield St	125	10/31/2014 12:26	2	STAIR	A	TRIM	WOOD	WHITE	Neg	< LOD < LOD	< LOD	2.25	1	AM	
69 Garfield St	126	10/31/2014 12:27	2	STAIR	A	TREAD	WOOD	WHITE	POS	116	< LOD	2.23	10	AM	
69 Garfield St	127	10/31/2014 12:27	2	STAIR	A	RISER	WOOD	WHITE	POS	99	32	2.1	4.68	AM	
69 Garfield St	128	10/31/2014 12:28	2	STAIR	D	DOOR	WOOD	BROWN	Neg	< LOD < LOD	< LOD	2.25	1	AM	
69 Garfield St	129	10/31/2014 12:28	2	STAIR	D	DOOR	WOOD	WHITE	Neg	< LOD < LOD	< LOD	2.09	1	AM	
69 Garfield St	130	10/31/2014 12:28	2	STAIR	B	WINDOW	WOOD	WHITE	POS	83	< LOD	2.25	10	AM	
69 Garfield St	131	10/31/2014 12:29	2	STAIR	B	WINDOW	WOOD	WHITE	POS	73	23	2.23	8.18	AM	
69 Garfield St	132	10/31/2014 12:32	2	STAIR	A	WALL	PLASTER	WHITE	Neg	0.7	0.19	0.7	46.25	10	AM
69 Garfield St	133	10/31/2014 12:32	2	STAIR	B	WALL	PLASTER	WHITE	Neg	< LOD < LOD	< LOD	4.34	1.37	AM	
69 Garfield St	134	10/31/2014 12:33	2	STAIR	C	WALL	PLASTER	WHITE	POS	16	< LOD	10.75	10	AM	
69 Garfield St	135	10/31/2014 12:34	2	STAIR	D	WALL	DRYWALL	WHITE	Neg	< LOD < LOD	< LOD	2.38	1	AM	
69 Garfield St	136	10/31/2014 12:35	2	BEDROOM 2	B	DOOR casing	WOOD	WHITE	Neg	< LOD < LOD	< LOD	2.25	1	AM	
69 Garfield St	137	10/31/2014 12:35	2	BEDROOM 2	B	BASEBOARD	WOOD	WHITE	POS	194	53	1.79	10	AM	
69 Garfield St	138	10/31/2014 12:36	2	BEDROOM 2	A	WINDOW	WOOD	WHITE	POS	215	93	1.8	8.1	AM	
69 Garfield St	139	10/31/2014 12:36	2	BEDROOM 2	A	WINDOW	WOOD	WHITE	POS	184	10.1	1.94	6	AM	
69 Garfield St	140	10/31/2014 12:36	2	BEDROOM 2	A	WINDOW	WOOD	WHITE	Null	< LOD < LOD	< LOD	1.19	10	AM	
69 Garfield St	141	10/31/2014 12:36	2	BEDROOM 2	A	WINDOW	WOOD	WHITE	POS	16	< LOD	1.04	5.4	AM	
69 Garfield St	142	10/31/2014 12:37	2	BEDROOM 2	A	RADIATOR	METAL	TAN	Neg	< LOD < LOD	< LOD	2.24	1.4	AM	
69 Garfield St	143	10/31/2014 12:37	2	BEDROOM 2	B	WALL vent	METAL	WHITE	Neg	< LOD < LOD	< LOD	2.24	1	AM	
69 Garfield St	144	10/31/2014 12:38	2	BEDROOM 2	C	DOOR	WOOD	BROWN	Neg	< LOD < LOD	< LOD	2.23	1.05	AM	
69 Garfield St	145	10/31/2014 12:38	2	BEDROOM 2	C	DOOR	WOOD	BROWN	Neg	< LOD < LOD	< LOD	3.13	1	AM	
69 Garfield St	146	10/31/2014 12:38	2	BEDROOM 2	C	CLOSET dr casing	WOOD	WHITE	Neg	< LOD < LOD	< LOD	1.5	1	AM	
69 Garfield St	147	10/31/2014 12:39	2	BEDROOM 2	C	CLOSET dr casing	WOOD	WHITE	POS	193	73	1.2	7.29	AM	
69 Garfield St	148	10/31/2014 12:39	2	BEDROOM 2	C	CLOSET shelf	WOOD	WHITE	Neg	< LOD < LOD	< LOD	2.25	1	AM	
69 Garfield St	149	10/31/2014 12:40	2	BEDROOM 2	C	CLOSET shelf	WOOD	WHITE	Neg	< LOD < LOD	< LOD	2.25	2.17	AM	
69 Garfield St	150	10/31/2014 12:40	2	BEDROOM 2	C	CLOSET shelf	WOOD	WHITE	Neg	0.3	0.3	2.39	1.54	AM	

**All Phase Companies
69 Garfield Street
St. Paul MN**

[illegible]

69 Garfield St	191	10/31/2014 12:57	2	BATHROOM	A	WALL	PLASTER	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	4.18	1.29	AM
69 Garfield St	192	10/31/2014 12:57	2	BATHROOM	B	WALL	PLASTER	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	4.03	5.17	AM
69 Garfield St	193	10/31/2014 12:59	2	BATHROOM	C	WALL	PLASTER	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	22.25	6.72	AM
69 Garfield St	194	10/31/2014 12:59	2	BATHROOM	D	WALL	PLASTER	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	4.17	1.96	AM
69 Garfield St	195	10/31/2014 13:00	2	BATHROOM	D	pipe	METAL	FAIR	WHITE	POS	5.1	4.1	5.1	3.14	10	AM
69 Garfield St	196	10/31/2014 13:00	2	BATHROOM	B	CABINET	WOOD	FAIR	BROWN	Neg	< LOD	< LOD	< LOD	2.08	1	AM
69 Garfield St	197	10/31/2014 13:01	2	BATHROOM		CEILING	PLASTER	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	4.04	1.46	AM
69 Garfield St	198	10/31/2014 13:01	2	BATHROOM		CEILING molding	WOOD	FAIR	WHITE	Neg	< LOD	< LOD	< LOD	2.24	1	AM
69 Garfield St	199	10/31/2014 13:04		OUTSIDE	A	WINDOW	WOOD	POOR	WHITE	Neg	< LOD	< LOD	< LOD	2.24	1.66	AM
69 Garfield St	200	10/31/2014 13:04		OUTSIDE	A	WINDOW	WOOD	POOR	WHITE	Null	< LOD	< LOD	< LOD	0.45	1	AM
69 Garfield St	201	10/31/2014 13:04		OUTSIDE	A	WINDOW	WOOD	POOR	WHITE	Neg	< LOD	< LOD	< LOD	2.24	1	AM
69 Garfield St	202	10/31/2014 13:04		OUTSIDE	A	WINDOW	METAL	INTACT	BROWN	Null	< LOD	< LOD	< LOD	0.3	10	AM
69 Garfield St	203	10/31/2014 13:05		OUTSIDE	A	WINDOW	METAL	INTACT	BROWN	POS	14.6	< LOD	14.6	1.3	10	AM
69 Garfield St	204	10/31/2014 13:05		OUTSIDE	A	WINDOW	METAL	INTACT	BROWN	POS	24.1	< LOD	24.1	1.79	10	AM
69 Garfield St	205	10/31/2014 13:06		OUTSIDE	A	siding	METAL	INTACT	BROWN	Neg	< LOD	< LOD	< LOD	5.98	1.92	AM
69 Garfield St	206	10/31/2014 13:06		OUTSIDE	B	siding	METAL	INTACT	BROWN	POS	7.2	< LOD	7.2	4.34	2.88	AM
69 Garfield St	207	10/31/2014 13:06		OUTSIDE	B	WINDOW	METAL	INTACT	BROWN	Null	< LOD	< LOD	< LOD	1.35	10	AM
69 Garfield St	208	10/31/2014 13:07		OUTSIDE	B	WINDOW	METAL	INTACT	BROWN	POS	11.3	< LOD	11.3	1.79	10	AM
69 Garfield St	209	10/31/2014 13:07		OUTSIDE	C	WINDOW	METAL	INTACT	BROWN	POS	14.3	< LOD	14.3	1.79	10	AM
69 Garfield St	210	10/31/2014 13:08		OUTSIDE	C	siding	METAL	INTACT	BROWN	POS	7.1	< LOD	7.1	4.63	2.35	AM
69 Garfield St	211	10/31/2014 13:08		OUTSIDE	D	siding	METAL	INTACT	BROWN	Null	< LOD	< LOD	< LOD	0.59	1	AM
69 Garfield St	212	10/31/2014 13:10		OUTSIDE	D	siding	METAL	INTACT	BROWN	Neg	< LOD	< LOD	< LOD	18.81	1.46	AM
69 Garfield St	213	10/31/2014 13:10		OUTSIDE	D	WINDOW	METAL	INTACT	BROWN	POS	20.2	< LOD	20.2	1.94	10	AM
69 Garfield St	214	10/31/2014 13:10		OUTSIDE	D	DOOR	METAL	INTACT	WHITE	Neg	< LOD	< LOD	< LOD	2.24	1	AM
69 Garfield St	215	10/31/2014 13:11		OUTSIDE	D	DOOR	WOOD	POOR	WHITE	POS	24	< LOD	< LOD	2.84	6.59	AM
69 Garfield St	216	10/31/2014 13:11		OUTSIDE	D	DOOR	WOOD	POOR	WHITE	POS	14.1	< LOD	14.1	1.94	4.39	AM
69 Garfield St	217	10/31/2014 13:11		OUTSIDE	D	DOOR	WOOD	POOR	BROWN	Neg	0.4	< LOD	< LOD	2.39	1.82	AM
69 Garfield St	218	10/31/2014 13:12		OUTSIDE	D	DOOR	WOOD	POOR	BROWN	POS	18	< LOD	18	1.79	4.96	AM
69 Garfield St	219	10/31/2014 13:12		OUTSIDE	D	DOOR	METAL	INTACT	BROWN	POS	11.8	< LOD	11.8	2.09	10	AM
69 Garfield St	220	10/31/2014 13:12		OUTSIDE	D	TRIM	METAL	POOR	BROWN	POS	36.4	< LOD	36.4	2.69	7.72	AM
69 Garfield St	221	10/31/2014 13:13		OUTSIDE	D	COLUMN	WOOD	POOR	BROWN	POS	23.6	< LOD	23.6	1.79	8.18	AM
69 Garfield St	222	10/31/2014 13:13		OUTSIDE	D	soffit	METAL	INTACT	BROWN	POS	11.2	< LOD	11.2	2.98	10	AM
69 Garfield St	223	10/31/2014 13:14		OUTSIDE	D	fascia	METAL	INTACT	BROWN	POS	32.3	< LOD	32.3	1.79	6.96	AM
69 Garfield St	224	10/31/2014 13:15		OUTSIDE	D	bulkhead	WOOD	POOR	BROWN	Neg	< LOD	< LOD	< LOD	1.34	1	AM
69 Garfield St	225	10/31/2014 13:15		OUTSIDE	D	bulkhead	WOOD	POOR	WHITE	Neg	< LOD	< LOD	< LOD	2.24	1.83	AM
69 Garfield St	226	10/31/2014 13:16	0	OUTSIDE	D	bulkhead	WOOD	POOR	WHITE	POS	2.2	< LOD	2.2	3.29	7.5	AM
69 Garfield St	227	10/31/2014 13:16	0		D	TREAD	METAL	POOR	WHITE	Neg	< LOD	< LOD	< LOD	2.09	1.47	AM
69 Garfield St	228	10/31/2014 13:16	0		D	BASEBOARD	METAL	POOR	WHITE	Neg	< LOD	< LOD	< LOD	2.25	1.73	AM
69 Garfield St	229	10/31/2014 13:17	0		D	trim	WOOD	POOR	WHITE	POS	3	< LOD	3	2.24	3.24	AM
69 Garfield St	230	10/31/2014 13:18	0		D	DOOR	WOOD	POOR	WHITE	POS	2.5	< LOD	2.5	0.9	2.58	AM

Address	Unit	Floor Room		Garage Room		Substrate		Component		Color		Condition	Depth	Remarks				
		Room	Room	Room	Room	Room	Room	Room	Room									
69 Garfield St	231	10/31/2014	13:20		SHED		DOOR		WOOD	POOR	WHITE	Neg	< LOD	< LOD	2.09	1	AM	
69 Garfield St	232	10/31/2014	13:20		SHED		TRIM	D	WOOD	POOR	WHITE	Neg	< LOD	< LOD	2.23	1	AM	
69 Garfield St	233	10/31/2014	13:21		OUTSIDE		RISER	A	WOOD	POOR	grey	Neg	< LOD	< LOD	2.4	1.25	AM	
69 Garfield St	234	10/31/2014	13:21		OUTSIDE		RISER	A	WOOD	POOR	grey	Neg	< LOD	< LOD	2.24	1.64	AM	
69 Garfield St	235	10/31/2014	13:21		OUTSIDE		RISER	A	WOOD	POOR	grey	Null	< LOD	< LOD	0.6	1	AM	
69 Garfield St	236	10/31/2014	13:23				calibrate					Neg	0.9	0.9	< LOD	7.64	1.03	AM
69 Garfield St	237	10/31/2014	13:23				calibrate					Null	1	1	< LOD	10.03	1.13	AM
69 Garfield St	238	10/31/2014	13:25				calibrate					POS	1	1	< LOD	21.09	1.08	AM
69 Garfield St	239	10/31/2014	13:26				calibrate					Neg	0.8	0.8	< LOD	6.12	1.07	AM

Description of Column Titles

Site:	The sequential number of the site (homes or buildings) inspected on a particular day.
No:	The sequential XRF sample number for a given site.
XL No/Map:	The sample number recorded on the maps of a particular site.
Date:	Date that the XRF sample was analyzed.
Time:	Time of XRF sample analysis.
Floor:	The sample location floor level (0 = basement, 1 = first floor, 2 = second floor).
Room:	The specific location where the sample was analyzed on the site. Calibrate is also recorded in this column when appropriate.
Side:	Side of the room based on sampling methodology as described earlier in this report. The only four sides that can be designated are A, B, C, and D.
Structure:	This refers to the general building component that the test was performed on. It may also include modifications such as: upper, lower, exterior, interior, right, and left.
Feature:	Specifies additional information about a structure.
Condition:	Describes whether the surface being tested is Intact: good condition; Fair: less than 2 square feet of damage to large interior surface, i.e., wall, less than 10 square feet of damage to large exterior surface, i.e., outside walls, or less than 10% damage to small surface areas, i.e., baseboards, trim, etc.; Poor: more than 2 square feet of damage on large interior surfaces, more than 10 square feet of damage to large exterior surface areas, or more than 10% damage to small surface areas.
Substrate:	Refers to the material that the structure was made of, i.e., wood, concrete, drywall, etc.
Color:	Color of surface tested.
Result:	The lead concentration in mg/cm ² as determined with L-shell and K-shell X-ray data.
PbL(mg/cm²):	The lead concentration as determined with L-shell X-ray data.
RES:	Results: POS - above action level, NEG - below action level.
PbK:	The lead concentration in mg/cm ² on the K-shell X-ray data spectrum.
PbC:	The combined lead concentration in mg/cm ² of the L-shell and K-shell X-ray data spectrum.
Depth:	This is the index that is a qualitative indication of the depth of the lead in paint. As the number approaches 1, the lead is concentrated close to the top layers of paint. The largest number available for depth index is 10. The greater the number, the more likely interfering elements may have been detected.
Duration:	The length of the XRF sample analysis in seconds.
Inspector:	When multiple inspectors are used, this number indicates who sampled at the time indicated.
Note:	This refers to any notes that were collected during the analysis of the particular sample. Then can be found on the field data sheet titled "Lead-Based Paint Inspection Data Page."

SAMPLING METHODOLOGY

Buildings were systematically inspected for lead-based paints. The **A** side of the building is the side facing the street. Starting from the **A** side, the other sides are lettered consecutively (**B, C, D**), going clockwise around the building.

Inside the unit, each floor was assigned a number starting with **0** for the basement, **1** for the first floor, and **2** for the second floor.

Some rooms that are unique in the building are named on the inspection report. These would include things like pantry, kitchen, halls, bathrooms, and staircases. If there is more than one of a certain type of named room, then they are numbered (e.g., staircases to basements are numbered staircase 1, while staircases to the second floor are labeled staircase 2). Room numbering starts in the **A-D** corner of the building and continues clockwise from that point.

Within each room of the building, each of the sides of the room are named. The naming of walls in a room, for instance, follows the same pattern as that used on the exterior of the building, namely, the street side of each room is labeled **A**, and then clockwise from that wall, walls are labeled **B, C, D**.

APPENDIX C
LABORATORY RESULTS
CHAIN-OF-CUSTODY

**EMSL Analytical, Inc.**

14375 23rd Avenue North, Minneapolis, Mn 55447

Phone/Fax (763) 449-4922 / (763) 449-4924

<http://www.EMSL.com>minneapolislab@emsl.com

EMSL Order: 351406758

CustomerID: MIDW56

CustomerPO: cc/

ProjectID:

Attn: **Greg Myers**
Midwest Environmental Consulting, L.L.C.
125 Railroad Ave SW

Phone: (763) 691-0111
Fax: (763) 691-0145
Received: 10/30/14 2:50 PM
Collected: 10/30/2014

Mora, MN 55051

Project: 602/1014, 69 Garfield St., St. Paul

Test Report: Lead in Dust by Flame AAS (SW 846 3050B/7000B)*

<i>Client SampleDescription</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Area Sampled</i>	<i>RDL</i>	<i>Lead Concentration</i>
502/1014 - W1 351406758-0001	10/30/2014	10/31/2014	144 in ² Site: Living Rm Side-D Entry Flr	10 µg/ft ²	150 µg/ft ²
502/1014 - W2 351406758-0002	10/30/2014	10/31/2014	36 in ² Site: Living Rm Side-D Stool	40 µg/ft ²	200 µg/ft ²
502/1014 - W3 351406758-0003	10/30/2014	10/31/2014	36 in ² Site: BedRm-1 Side-D Trough	4000 µg/ft ²	9700 µg/ft ²
502/1014 - W4 351406758-0004	10/30/2014	10/31/2014	144 in ² Site: BedRm-1 Side-D Flr	10 µg/ft ²	24 µg/ft ²
502/1014 - W5 351406758-0005	10/30/2014	10/31/2014	144 in ² Site: BedRm-3 Side-C Flr	10 µg/ft ²	42 µg/ft ²
502/1014 - W6 351406758-0006	10/30/2014	10/31/2014	36 in ² Site: BedRm-3 Side-C Stool	4000 µg/ft ²	7300 µg/ft ²
502/1014 - W7 351406758-0007	10/30/2014	10/31/2014	144 in ² Site: Hall Middle Flr	10 µg/ft ²	<10 µg/ft ²

Rachel Travis, Laboratory Manager
or other approved signatory

*Analysis following Lead in Dust by EMSL SOP/ Determination of Environmental Lead by FLAA. Reporting limit is 10 ug/wipe. ug/wipe = ug/ft² x area sampled in ft². Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities (such as volume sampled) or analytical method limitations. Samples received in good condition unless otherwise noted. The lab is not responsible for data reported in µg/ft² which is dependant on the area provided by non-lab personnel. The test results contained within this report meet the requirements of NELAC unless otherwise noted. "<" (less than) results signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise.

Samples analyzed by EMSL Analytical, Inc. Minneapolis, Mn AIHA-LAP, LLC-ELLAP Accredited #163162

Initial report from 10/31/2014 13:16:41

**Midwest Environmental Consulting, L.L.C.**

125 Railroad Avenue SW • Mora, MN 55051

763-691-0111 / 320-679-4054

Fax: 763-691-0145 / 320-679-4442

Client Address:

Contact:

CHAIN OF CUSTODYProject Number: 502/1014Client: All PhaseProject: 69 Garfield St St Paul

Phone/Fax:

Sample ID	Sample Description	Collection Date/Time	Matrix (Vol./Area)	Analysis Requested
502/1014-W1	16.0g for S/N-D Bkg PIR	10-30-14	12" x 12"	PB / My P2
W2	11" 11" steel		2" x 18"	
W3	Bedrock 11" trench		11"	
W4	11" 11" PIR		12" x 12"	
W5	Bedrock 3 side-c PIR		11"	
W6	11" 11" steel		2" x 18"	
W7	11" middle PIR		12" x 12"	
502/1014-S1	Barrel Soil Foundation		Foundation	PB / P2

Sampled by: [Signature] Date: 10-30 Time: 2:15
 Received by: [Signature] Date: 10-30 Time: 2:50pm
 Received by Lab: Chlorine W Date: 10/30/14 Time: 2:50pm
 Disposition of Samples: only B3m wipes used

Notes:

Garner's Gold blank

24 hour Analysis

**EMSL Analytical, Inc.**

14376 23rd Avenue North, Minneapolis, Mn 55447

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EMSL Order: 351406758

CustomerID: MIDW56

CustomerPO: cc/

ProjectID:

Attn: **Greg Myers**
Midwest Environmental Consulting, L.L.C.
125 Railroad Ave SW

Mora, MN 55051

Phone: (763) 691-0111
Fax: (763) 691-0145
Received: 10/30/14 2:50 PM
Collected: 10/30/2014

Project: 502/1014, 69 Garfield St., St. Paul

Test Report: Lead in Soils by Flame AAS (SW 846 3050B/7000B)*

<i>Client Sample Description</i>	<i>Collected</i>	<i>Analyzed</i>	<i>RDL</i>	<i>Lead Concentration</i>
502/1014-S1	10/30/2014	10/31/2014	40 mg/Kg	380 mg/Kg
351406758-0008	Site: Bare Soil Foundation			

Rachel Travis, Laboratory Manager
or other approved signatory

*Analysis following Lead in Soil/Solids by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 40 mg/kg based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. Results reported based on dry weight. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise.

Samples analyzed by EMSL Analytical, Inc. Minneapolis, Mn AIHA-LAP, LLC--ELLAP Accredited #163162

Initial report from 10/31/2014 13:16:41

AllPhase Companies, Incorporated

404-A St. Croix Trail North, Lakeland, MN 55043

Phone: 651-436-2930 Fax: 651-436-3918

April 30, 2011

Cynthia Carlson Heins
Real Estate Manager
Planning and Economic Development
Suite 1100, 25 West 4th Street
Saint Paul, MN 55102

RE: Asbestos Survey
69 Garfield Street South, St. Paul, MN
1596-11S-N

Dear Ms. Cynthia Carlson Heins:

AllPhase Companies, Incorporated, (AllPhase) performed an asbestos survey at the above referenced site in connection with a renovation in order to identify asbestos-containing material (ACM). The following report contains the results of the survey performed at the above referenced site.

In summary, 26 samples of building materials were collected and analyzed for asbestos type and amount. Asbestos was detected in **two of the thirty samples**, above 1 percent which is considered Asbestos Containing Building Materials (ACBM). These samples only represent building materials that were collected from the referenced building structure.

No samples detected asbestos above 0% and less than 1% asbestos.

Friable asbestos-containing material (ACM), is defined by the Asbestos NESHAP, as any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. (Sec. 61.141)

Nonfriable ACM is any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. EPA also defines two categories of nonfriable ACM, Category I and Category II nonfriable ACM, which are described later in this guidance.

"Regulated Asbestos-Containing Material" (RACM) is (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Refer to the asbestos Laboratory Report and chain of custody for other building materials tested and their locations. The following samples detected the presence of asbestos greater than 1%:

Category I - 1st floor kitchen floor tile black (2nd layer)—160 sf
Category I - 1st floor kitchen floor tile gray—included above

This survey is an attempt to identify ACM. However, there is no guarantee that all potential ACM was identified. If suspect ACM is discovered during the work and is not listed in this or previous limited surveys, work on that

portion of the building should cease, the material wetted and covered, and an asbestos inspector brought to the site to sample and submit to a certified laboratory the sample to determine its asbestos content. Pending analytical results, an abatement crew should remove the ACM before work continues.

INTRODUCTION

The scope of our services was to conduct an asbestos survey which includes collecting a small portion of the building materials and submitting the sample to a certified laboratory for analysis by PLM. Analysis only assesses the portion of building material collected and submitted.

- A. Collect bulk samples of suspect ACMs for laboratory analysis.
- B. Analyze the collected samples for asbestos content.

Minnesota requires surveys to be performed by a Minnesota Certified Inspector. This survey was conducted by David Jenkin ĩ Asbestos Inspector #AI8101.

Samples of suspect ACMs were collected by AllPhase by removing a small portion of the suspect material and then placing the individual samples into separate sealed containers.

DISCLAIMERS

Asbestos surveys do not necessarily succeed in identifying all locations and types of ACM on-site. This is because of the variety of locations and the inconsistency of asbestos occurrence in a given building material. Our survey is based solely upon the building materials that were observed and sampled for analysis. Therefore, if unsampled building materials are encountered during the demolition, they should be assessed on a material-by-material basis. If suspect ACM is observed which has not been listed in our evaluation, it should be collected and evaluated by a certified individual and laboratory, respectively. If there is a potential for that material to be ACM, work should stop until the question of asbestos content and/or abatement is resolved in a manner that protects human health and the environment and abides by regulatory guidelines.

Certain building materials are not considered suspect ACM and are not sampled as part of the survey. These materials include but are not limited to wood, concrete (with exceptions), plastics such as polyethylene, polystyrene and polyvinylchloride, fiberglass, rubber (natural and neopreneĒ black synthetic), foam insulation, metals and glass.

METHODOLOGY

Building materials were analyzed by a NVLAP-accredited laboratory, #101768-0. Laboratory analysis was conducted in accordance with Environmental Protection Agency (EPA) guidelines. The examination for the presence and identification of asbestos fibers in bulk samples is performed in the laboratory using cross-polarized light microscopy and dispersion-staining, particle-identification techniques. Analysis was performed in accordance with EPA 600/M4-82-020 and EPA 600/R-93/116 where applicable. This methodology determines the presence of asbestos varieties, which include Chrysotile, Amosite, Crocidolite, Anthophyllite, Tremolite and Actinolite.

REMARKS

Some of the rules and regulations set by the Environmental Protection Agency (EPA) may apply when the existence of ACMs is confirmed. A complete review of these rules can be found in Part 3 of the Federal Register EPA, 40 CFR Part 61. Summaries of these rules are as follows:

Asbestos Survey
69 Garfield Street South, St. Paul, Minnesota

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According to §61.145 of NESHAPS, friable ACMs must be removed from the site prior to demolition. This includes materials that were originally non-friable but have become friable— that is, Category I & II material— due to damage or deterioration— for example, floor tile that has significant chipping or cracking. The necessity for the removal of Category I and II material is evaluated on a site-by-site basis.

Disturbing ACM may require that the Minnesota Pollution Control Agency and/or the Minnesota Department of Health be notified prior to activities with asbestos.

The environmental services performed by AllPhase's survey crew and analyst for this project have been conducted in a manner consistent with the degree of care and technical skill exercised by environmental professionals currently practicing in this area under similar budget and time constraints. Recommendations contained in this report represent our professional judgment at the time the project was performed. No other warranty is intended or implied.

A handwritten signature in black ink, appearing to read 'Rennie Smith', with a stylized flourish at the end.

Rennie Smith, P.G.
Asbestos Inspector (#AI3119)

LABORATORY REPORT

ASBESTOS BULK ANALYSIS

Client: **AllPhase Companies, Inc.**
 404-A St. Croix Trail, North
 Lakeland, MN 55043

CEI Lab Code: A11-2915
 Received: 04-25-11
 Analyzed: 04-27-11
 Reported: 04-27-11
 Analyst: Anna Malmberg

Project: 69 Garfield St. S.; 1596-11S

CLIENT ID	CEI LAB ID	HOMOGENEITY DESCRIPTION	% ASBESTOS
G-1	A1139419	<u>SHINGLE & FELT</u> Heterogeneous, Black, Grey, Fibrous, Bound	ND
		TAR 45 % CELL 45 % GRAV 10 %	
G-2	A1139420	<u>SHINGLE & FELT</u> Heterogeneous, Black, Red, Fibrous, Bound	ND
		TAR 45 % FBGL 30 % GRAV 10 % CELL 15 %	
G-3	A1139421	<u>SHINGLE & FELT</u> Heterogeneous, Black, Green, Fibrous, Bound	ND
		TAR 45 % FBGL 30 % GRAV 10 % CELL 15 %	
G-4	A1139422	<u>WINDOW GLAZING</u> Heterogeneous, Grey, White, Fibrous, Bound	ND
		BIND 90 % PAINT 10 % MICA <1 %	
G-5	A1139423A	<u>CEIL. TEXT.</u> Heterogeneous, Grey, White, Fibrous, Bound	ND
		CACO 80 % PAINT 10 % MICA 10 %	
	A1139423B	<u>SHEETROCK</u> Heterogeneous, Off-white, Tan, Fibrous, Bound	ND
		GYPSUM 80 % CELL 20 %	

CAROLINA ENVIRONMENTAL, INC.
 107 New Edition Court, Cary, NC 27511
 Phone: 919-481-1413 Fax: 919-481-1442

Project: 69 Garfield St. S.; 1596-11S

Lab Code: A11-2915

CLIENT ID	CEI LAB ID	HOMOGENEITY DESCRIPTION	% ASBESTOS	
G-6	A1139424A	<u>WALL TEXT.</u>	ND	
		Heterogeneous, Grey, White, Fibrous, Bound		
		CACO 80 %		
		PAINT 10 %		
		MICA 10 %		
	A1139424B	<u>SHEETROCK</u>	ND	
		Heterogeneous, Off-white, Tan, Fibrous, Bound		
		GYPSUM 80 %	CELL	20 %
G-7	A1139425	<u>CEIL. TILE</u>	ND	
		Heterogeneous, Off-white, Tan, Fibrous, Loosely Bound		
		PAINT 2 %	CELL	98 %
G-8a	A1139426	<u>FLOOR TILE</u>	ND	
		Homogeneous, White, Fibrous, Bound		
		VINYL 100 %		
		MICA <1 %		
G-8b	A1139427	<u>MASTIC</u>	ND	
		Homogeneous, Clear, Fibrous, Bound		
		MAST 98 %	CELL	2 %
		MICA <1 %		
G-8c	A1139428	<u>FLOOR TILE</u>	CHRY 10%	
		Homogeneous, Black, Fibrous, Bound		
		CHRY 10% VINYL 90 %		
		MICA <1 %		
G-8d	A1139429	<u>MASTIC</u>	ND	
		Homogeneous, Black, Fibrous, Bound		
		MAST 98 %	CELL	2 %
		MICA <1 %		

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 107 New Edition Court, Cary, NC 27511
 Phone: 919-481-1413 Fax: 919-481-1442

Project: 69 Garfield St. S.; 1596-11S

Lab Code: A11-2915

CLIENT ID	CEI LAB ID	HOMOGENEITY DESCRIPTION	% ASBESTOS			
G-8e	A1139430	<u>TAR PAPER</u> Homogeneous, Black, Brown, Fibrous, Bound	ND			
		TAR 35 %	CELL	60 %		
		MAST 5 %				
G-9	A1139431	<u>FLOOR TILE (ONLY)</u> Homogeneous, Grey, Fibrous, Bound	CHRY 10%			
		CHRY 10% VINYL 90 %				
		MICA <1 %				
G-10	A1139432	<u>FL. SHEET (ONLY)</u> Homogeneous, Off-white, Fibrous, Bound	ND			
		VINYL 50 %	FBGL	10 %		
		FOAM 40 %				
G-11	A1139433A	<u>FL. SHEET, TYPE 1</u> Heterogeneous, Brown, Tan, Fibrous, Bound	ND			
		VINYL 20 %	CELL	45 %		
		TAR 35 %				
	A1139433B	<u>FL. SHEET, TYPE 2</u> Heterogeneous, Brown, Tan, Fibrous, Bound	ND			
		VINYL 20 %	CELL	45 %		
		TAR 35 %				
G-12	A1139434A	<u>FLOOR TILE</u> Homogeneous, Tan, Non-fibrous, Bound	ND			
		VINYL 100 %				
		MICA <1 %				
	A1139434B	<u>MASTIC</u> Homogeneous, Clear, Fibrous, Bound	ND			
		MAST 98 %	CELL	2 %		
		MICA <1 %				

CLIENT ID	CEI LAB ID	HOMOGENEITY DESCRIPTION	% ASBESTOS
	A1139434C	<u>FL. SHEET</u> Heterogeneous, Tan, Black, Fibrous, Bound	ND
		VINYL 40 % CELL 35 % TAR 25 % MAST <1 %	
G-13	A1139435	<u>FLOOR TILE</u> Homogeneous, White, Non-fibrous, Bound	ND
Insufficient mastic.		VINYL 100 % MICA <1 %	
G-14	A1139436	<u>INSULATION</u> Homogeneous, Grey, Tan, Fibrous, Loosely Bound	ND
		DEBR <1 % CELL 100 %	
G-15	A1139437	<u>GLAZING</u> Heterogeneous, Grey, Tan, Non-fibrous, Bound	ND
		BIND 98 % PAINT 2 % MICA <1 %	
G-16	A1139438	<u>PLASTER</u> Heterogeneous, White, Tan, Fibrous, Bound	ND
		PLAS 93 % CELL 5 % PAINT 2 %	
G-17	A1139439	<u>MATTING</u> Heterogeneous, Black, Tan, Fibrous, Bound	ND
		TAR 25 % CELL 65 % VINYL 5 % BIND 5 %	

The following definitions apply to the abbreviations used in the ASBESTOS BULK ANALYSIS REPORT:

CHRY = Chrysotile	CELL = Cellulose	DEBR = Debris
AMOS = Amosite	FBGL = Fibrous Glass	BIND = Binder
CROC = Crocidolite	CACO = Calcium Carbonate	SILI = Silicates
TREM = Tremolite	SYNT = Synthetics	GRAV = Gravel
ANTH = Anthophyllite	WOLL = Wollastonite	MAST = Mastic
ACTN = Actinolite	CERWL = Ceramic Wool	PLAS = Plaster
N D = None Detected	NTREM = Non-Asbestiform Tremolite	PERL = Perlite
NANTH = Non-Asbestiform Anthophyllite	FBGY = Fibrous Gypsum	RUBR = Rubber
		VER = Vermiculite

CLIENT: AllPhase Companies, Inc.

PROJECT: 69 Garfield St. S.; 1596-11S

CEI LAB CODE: A11-2915

Stereoscopic microscopy and polarized light microscopy coupled with dispersion staining is the analytical technique used for sample identification. The percentage of each component is visually estimated by volume. These results pertain only to the samples analyzed. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Unless notified in writing to return samples, Carolina Environmental, Inc. will discard all bulk samples after 30 days.

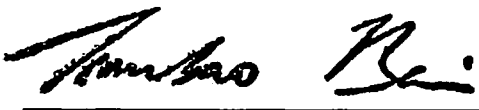
Many vinyl floor tiles have been manufactured using greater than 1% asbestos. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" (ND) reading on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles.

It is certified by the signature below that Carolina Environmental, Inc. is accredited by the National Voluntary Accreditation Program (NVLAP) for the analysis of asbestos in bulk materials. The accredited test method is EPA / 600 / M4-82 / 020 for the analysis of asbestos in building materials. Procedures described in EPA / 600 / R-93 / 116 have been incorporated where applicable. The detection limit for the method is 0.1% (trace amount). Carolina Environmental, Inc.'s NVLAP accreditation number is #101768-0. This report is not to be used to claim product endorsement by NVLAP or any agency of the U. S. Government. This report and its contents are only valid when reproduced in full. Dust and soil analyses for asbestos using PLM are not covered under NVLAP accreditation.

ANALYST



REVIEWED BY



Tianbao Bai, Ph.D.
Laboratory Director

End of Report



CAROLINA ENVIRONMENTAL, INC.

107 New Edition Court, Cary, NC 27511
Tel: 866-481-1412; Fax: 919-481-1442

11.2915 (21)
A1139419. A1139459

CHAIN OF CUSTODY RECORD ASBESTOS/LEAD ANALYSIS

Pg 1 of 2

Client: <i>All Phase Companies, Inc.</i>		Project Manager: <i>David Jenkin</i>											
Address: <i>404-A St. Croix Trl. N. Lakeland, MN 55043</i>		Phone: <i>651-436-2930</i>											
Email: <i>allphasecompany@questoffice.net</i>		Fax: <i>-3918</i>											
PO #: <i>69 Garfield St. S.</i>		ASBESTOS						LEAD PAINT				TURN-AROUND TIME *Lead results require 48 Hour TAT or longer	
PROJECT DESCRIPTION	PROJECT CODE	PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint*	Lead Wipe*	Lead Soil*	Lead Air*		Other Analysis
<i>House exterior siding</i>	<i>G-1 Shingle + felt</i>	<i>X</i>											☐ 5 DAYS ☐ 3 DAYS ☒ 48 HOURS ☒ 24 HOURS* <i>Per client (rep)</i> ☐ 4 HOURS*
<i>Crawl Space Entry door</i>	<i>2 Shingle ^(red) + felt</i>	<i> </i>											
<i>House roof</i>	<i>3 Shingle ^(grn) + felt</i>	<i> </i>											
<i>1st Fl. W. Add'n, N. window</i>	<i>4 Window glazing</i>	<i> </i>											
<i>" "</i>	<i>5 Ceil. Text.</i>	<i> </i>											
<i>" "</i>	<i>6 Wall Text, st shetrk</i>	<i> </i>											
<i>" Kitchen</i>	<i>7 Ceil. Tile, 15x15</i>	<i> </i>											
<i>" "</i>	<i>8 2nd Fl. Tile, 12"x12", white</i>	<i> </i>											
<i>" "</i>	<i>bath. yellow</i>	<i> </i>											CLIENT ID# <i>1596-115</i>
<i>" "</i>	<i>c.f. black</i>	<i> </i>											
<i>" "</i>	<i>d. Mastic, blk</i>	<i> </i>											
<i>" "</i>	<i>e. Tan paper</i>	<i> </i>											
REMARKS:													
Relinquished By: <i>David Jenkin</i>		Date / Time: <i>4/22/11</i>		Received By: <i>Kristy Pruitt</i>				Date / Time: <i>APR 25 2011 11:30am</i>					
Relinquished By:		Date / Time:		Received By:				Date / Time:					



CAROLINA ENVIRONMENTAL, INC.

107 New Edition Court, Cary, NC 27511
Tel: 866-481-1412; Fax: 919-481-1442

CHAIN OF CUSTODY RECORD ASBESTOS/LEAD ANALYSIS

Pg 2 of 2

A11.2915

Client: <i>All Phase Companies, Inc.</i>		Project Manager: <i>David Jenkin</i>												
Address: <i>404 A St, Croix Trl. N. Lakeland, MN 55043</i>		Phone: <i>651-436-2930</i>												
Email: <i>allphasecompany@questoffice.net</i>		Fax: <i>-3918</i>												
PO #: <i>69 Garfield St. S.</i>														
PROJECT DESCRIPTION	PROJECT CODE	ASBESTOS						LEAD PAINT						TURN AROUND TIME
		FLUORIDE	FLUORIDE	FLUORIDE	FLUORIDE	FLUORIDE	FLUORIDE	FLUORIDE	FLUORIDE	FLUORIDE	FLUORIDE	FLUORIDE		
<i>1st Fl., Kitchen</i>	<i>G-9 F.T. gray</i>	<i>X</i>												☐ 5 DAYS ☐ 3 DAYS ☐ 48 HOURS ☒ 24 HOURS* ☐ 4 HOURS*
<i>" Bathroom</i>	<i>10 Fl. Sheet. ^{pink} yellow</i>													
<i>2nd Fl., Closet of rm off stairs</i>	<i>11 Fl. Sheet.</i>													
<i>" Bathroom, main fl.</i>	<i>12 Fl. Sheet</i>													
<i>" " , toilet area</i>	<i>13 Fl. Sheet</i>													
<i>" S. Wall in stairwell</i>	<i>14 Insul'n ^{cellulose}</i>													
<i>" W. Wall main house</i>	<i>15 Glazing</i>													
<i>" Rm off stairs, Ceil.</i>	<i>16 Plaster</i>													
<i>1st Fl., W. Wall of Lvg Rm</i>	<i>17 Matting</i>													CLIENT ID# <i>1596-115</i>
REMARKS: <i>Don't run adhesives on G-9 and G-10 - same as G-8b & 8d They are the</i>														Samples will be disposed of 30 days after analysis, unless otherwise requested.
Relinquished By: <i>David Jenkin</i>		Date / Time: <i>4/22/11</i>		Received By:				Date / Time:						
Relinquished By:		Date / Time:		Received By:				Date / Time:						

Neighborhood Energy Connection

Residential Energy Specification

Customer: City of Saint Paul

Auditor: Michael Childs

Address: 69 Garfield Street 10/10/2014

Phone: 651-789-5710

Spec ID#	Spec Title	Specification	Location / Notes
104	Replace Furnace with 95%+ AFUE, Multi-stage, Forced Air Furnace or boiler (see below)	All work is to be performed to manufacturer's specifications and be in compliance with current building codes. Remove existing furnace, recycle all metal components and dispose of all other materials in a code legal dump. Install a new ENERGY STAR rated, gas-fired, multi-stage burner, forced air furnace with a minimum AFUE rating of 95%+ and ECM distribution fan with 2" rise above floor. Connect to existing duct work and gas line. New furnace to be vented with PVC piping per manufacturer's specifications. New furnace will have minimum limited warranties of 20 years on heat exchangers; 5 years on parts. Include auto setback thermostat controls, vent pipe & new shut-off valve. Rework cold air return if necessary to ensure easy access, good fit & easy replacement of air filter. An exterior return air filter box shall be installed on one side, both sides or bottom of new furnace. Seal all exposed duct joints with duct mastic. Remove all existing cloth duct tape prior to installing mastic. Any asbestos containing equipment and materials will be abated in accordance with State laws and regulations.	

202	Replace Boiler with 90% AFUE Hot Water Boiler or furnace (see above)	All work is to be performed to manufacturer's specifications and be in compliance with current building codes. Replace existing boiler with a gas fired, modulating, direct vent, 90%+ AFUE+ hot water boiler. Installation to include all power & control wiring, a setback thermostat, expansion tank, one circulation pump, water & gas supply & flue piping. The installation is required to maintain a minimum 70 F indoor temperature evenly throughout the conditioned space when outdoor temperature is - 10 F. Remove existing boiler, recycle all metal components and dispose of all other materials in a code legal dump. Any asbestos containing equipment and materials will be abated in accordance with State laws and regulations.	
302	Replace Water Heater with an Energy Star rated power vent or direct vent model	All work is to be performed to manufacturer's specifications and be in compliance with current building codes. Replace water heater with an Energy Star rated power vent or direct vent model. Include pressure & temperature release valve, discharge tube to within 6" of floor and PVC flue to power vent to exterior.	
500	Seal Attic Bypasses	Contractor shall seal all attic bypasses. Bypasses shall be defined as any building air leakage pathway between conditioned and unconditioned areas. Bypass locations include, but are not limited to, the following areas: chimney chases, combustion and soil stack chases, open wall tops, dropped ceilings, open plumbing walls, beneath knee walls and around duct work, electrical work and attic access points. Bypasses shall be sealed in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be detected by an infrared scan when the house is pressurized to 50 Pascals. Materials used for bypass sealing are determined by the size and location of the bypass and shall be installed to manufacturer's recommendations and shall meet current building code requirements. These materials include high quality caulks (20-year life span), polyethylene rod stock, foam, sheetrock, sheet metal, extruded polystyrene and densely packed insulation.	

510	Blow Open Attic to R-50	Before insulating the attic, Contractor shall confirm proper air sealing. Installation must meet or exceed the Minnesota Energy Code where space permits. Blow insulation to depth indicated on manufacturer's coverage chart, consistently and evenly to R-50. Provide attic insulation depth markers. One marker shall be placed for every 100 sq. ft. of attic area, and all markers must be visible from attic access points. A signed manufacturer's coverage chart or attic information card shall be posted at each attic access point which lists the number of bags used or pounds installed, the date of installation, installed thickness in inches, sq. ft. of coverage area, installed R-value, and contractor information.	
512	Dense Pack Slants to capacity	Determine cavities are free of hazards and can support dense packing pressures, locate drilling hazards. If drilling from the interior, control dust and plug, patch and sand holes. Installation must meet or exceed the Minnesota Energy Code where space permits. Blow Slant walls with cellulose to capacity using the Dense Pack Method to a minimum density 3.5 lbs./ft ³ , or dense pack spider fiberglass per manufacturer's instructions.	
526	Insulate Above Bay Window	Installation must meet or exceed the Minnesota Energy Code where space permits. Insulate cavities above and below bays. Dense pack with cellulose to capacity using the Dense Pack Method to a minimum density 3.5 lbs./ft ³ , or dense pack spider fiberglass per manufacturer's instructions. Access holes must be patched, plugged and painted as necessary.	
530	Install Air Chutes	All work shall meet Minnesota State Residential and Energy Codes. When soffit vents are installed or existing, a passage for air movement shall be cleared before insulating. Vent chutes and wind baffles shall be installed at all soffit vents. Attic areas below the baffle or chute shall be insulated to R-50 or to capacity as space allows.	

532	Build Dam, insulate and weather strip attic hatch	Access hatch door to attic shall be insulated to R-50 as space allows with a rigid insulation dam constructed around the opening. Opening shall be weather stripped to provide an air tight seal.	
602	Dense pack exterior walls.	Determine cavities are free of hazards and can support dense packing pressures. Locate drilling hazards and ensure openings into the house are blocked. - Exterior Treatment: Shakes and siding shall be removed before drilling access holes. Holes in sheathing shall be plugged with tight fitting wood or urethane foam plugs before shakes or siding are nailed back without damage using appropriate galvanized nails. Stucco shall be punched or drilled to provide access. Holes must be plugged weather tight with tight fitting plugs and patched. - Interior Treatment: Control dust when drilling from interior. Holes must be filled with tight fitting plugs and patched. Completely fill each cavity to a consistent density. Dense pack cellulose to a minimum density of 3.5 lbs./ft³ or dense pack spider fiberglass per manufacturer's instructions. Follow all applicable Lead Safe Work Practices as per the EPA's RRP Rules.	
802	Air Seal and Insulate Rim Joist	Remove existing insulation if present. Seal cracks and holes in rim joist before insulating. Caulk or foam 3 inches of rigid insulation in place; or apply two-part polyurethane foam evenly and consistently according to manufacturer's instructions to insulate to R-10 around basement rim joist.	
912	Insulate crawl space walls	Installation must meet or exceed the Minnesota Energy Code where space permits. Install minimum 6 mil. poly on the ground, overlap seams 18", run poly up wall 8", seal to wall and tape all seams. Crawl space walls shall be insulated by installing fire code compliant rigid foam insulation attached permanently and directly against rim joist, band joist and exterior walls extending one foot onto poly ground covering. Alternatively, spray foam on rim joist, band joist and walls to R-19.	

1010	Install continuous ventilation	Install Continuous Ventilation - Install an ENERGY STAR rated two-speed bathroom fan rated for continuous use, maximum of 1.0 sone for full flow rate of 110 cfm or less and maximum of 1.5 sones for a full flow rate above 110 cfm, with a pre-set low-speed of 25-35 CFM and a minimum 70 cfm high-speed boost capability initiated by a wall switch or motion detector manual or automatic two-speed switch (such as an occupancy sensor) that toggles the fan between the high and low flow rates only; the switch shall not turn the fan off. Alternately, install an ENERGY STAR rated kitchen exhaust fan rated for continuous use. Vent fan using rigid duct insulated to R-8 minimum and vented to the exterior with dampered roof vent.	
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Radon Test Result: 0.8 ±0.6 pCi/L

Test Started 08/22/14 at 11:00 am

Test Ended 08/26/14 at 3:00 pm

Closed house conditions maintained during test.

Location 1st Floor
LIVING RM



Air Chek, Inc.

PO Box 2000

Naples, NC 28760

www.radon.com



TCHU YAJH
69 GARFIELD ST
SAINT PAUL, MN 55102

INTERPRETING YOUR TEST RESULT

The US EPA action level for indoor radon is 4.0 pCi/L. The EPA indicates that there is little short-term risk with test results in this range (0.6 to 1.9 pCi/L). However, because radon levels fluctuate daily, as well as seasonally, you may want to retest during another season. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

You may be able to obtain additional information about radon related subjects by contacting your state radon office at "www.health.mn.gov/radonkit" or by calling the "Radon Fix-It Line" at 800-644-6999 Monday thru Friday between NOON and 8PM EST.

Your Test Result

This result has been rounded to one-tenth (0.1) of a pCi/L (picocurie per liter). This test result reflects the amount of radon measured in this sample AFTER it arrived at our laboratory. All analysis calculations are automatically adjusted to reflect the length of test, the amount of moisture in the sample, temperature, time from the end of test, and the amount of radiation measured. If your test kit was used prior to the Use By date, ALL the testing protocols and instructions were carefully followed, and the data recorded properly on the test packet, then it is reasonable to assume this is an accurate assessment of the average level of the radon this sample was exposed to during the test period.

Health Risks

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. EPA has set an Action Level for radon at 4 pCi/L; however radon concentrations less than 4 pCi/L still pose some health risks. The Indoor Radon Abatement Act set a goal for indoor radon concentrations to equal the amount of radon found outdoors, which is estimated to be ~ 0.4 pCi/L.

Conducting Follow-up Measurements

USEPA protocol describes two general types of radon measurements: short-term tests conducted from 48 hours up to 90 days, and long-term tests that last from 91 to 365 days. Your first test (initial/screening) should be a short-term 'worst-case' screening to see if there is a potential for high exposure to radon. Screening tests should be conducted under closed-building conditions, in the lowest lived-in area in the house, because the highest concentrations of radon will usually be found in a room closest to the underlying soil. Tests made under these conditions are less likely to miss a house with a potential for high concentrations. On the other hand, if the results of worst-case screening tests are very low, there is a high probability that the average annual concentrations in the house are also low.

(Continued on Back)

Most states have a radon office to assist citizens with general questions about radon and radon reduction techniques. Many states maintain a list of licensed or certified radon testing and mitigation professionals. You can visit www.state-radon.info to find the list of state radon contacts, as well as links to additional radon resources in your area.

Conducting Follow-up Measurements

The higher your initial (screening) tests, the sooner you should conduct follow-up measurements. The EPA states that you should retest the same location that was tested initially.

For additional or follow-up testing, make sure at least one test is conducted in the **lowest lived-in level** of the home. Also choose regularly used rooms, such as family rooms, dens, playrooms, or bedrooms. A bedroom on the lower level may be a good choice, because people generally spend the most time in their bedrooms (approximately one-third of the year). If there are children, it may be appropriate to test their rooms or other areas where they spend a lot of time, especially at the lower levels. All short-term follow-up tests **must** be conducted under closed-building conditions. If closed-building conditions cannot be maintained, a long-term measurement conducted under normal living conditions could be used to help estimate average annual exposures.

Tests **should not be conducted** in a kitchen or a bathroom because high humidity, exhaust fans, and other factors can adversely affect the test results. Tests **should not be conducted** in storage areas or laundry rooms, because relatively little time is spent there. Although radon in water may be a contributor to the concentration of airborne radon, radon in air should be **confirmed** before a test for radon in water is performed.

It is recommended that before spending any time or money on radon mitigation, one should conduct multiple (two or more) tests to be certain there is a need. A few more tests will most certainly cost considerably less than any mitigation work.

If follow-up measurements have **confirmed** that the average annual level of radon is equal to or greater than 4 pCi/L, the USEPA recommends that the building or home be mitigated for radon. Consider also that a future buyer is likely to demand that the building pass a radon test before purchasing.

Variations in Radon Levels – What can affect your test results and why it may be important to conduct confirmation tests.

When tests are performed in different seasons or under different weather conditions, the initial screening and follow-up tests may vary considerably. Radon levels can vary significantly between seasons, so different results **are often expected**. Even during normal weather, indoor radon levels may rise and fall by a factor of two on a daily cycle; for example, from 5 pCi/L to 10 pCi/L in 24 hours. During rapidly changing or stormy weather, the levels may change more dramatically.

If you are comparing tests, or are averaging a series of tests, bear in mind that any radon test returns only the average of the levels present during a **specific period of time** at the **precise location** of the test. Conditions during a different test period or at a different location in the building are **expected to be different**.

Test results can also vary if the radon test instructions were not carefully followed. A laboratory measuring radon in samples taken outside the lab **must rely on the person conducting the test**. For example, the wrong starting or ending date of a test will significantly affect the calculated result. The location of each radon test can also influence the result. For example, a test placed in the blowing air stream of a fan is likely to collect more radon than it would under normal conditions. Also, three tests conducted in one home, but in three different rooms, **would be expected to have at least slightly different test results**.

Test results from a properly used activated charcoal test will more closely reflect the average radon concentrations over the last three to four days of the test period. This happens because the radon collected by the activated charcoal has a radioactive half-life of only four days. This means, for example, over one-half of the radon collected during the first three days of a seven day test 'died' before the test ended.

If you have further questions regarding this test or need advice on follow-up testing, call fax or email our technical service department listed below.

Thank you for choosing the Air Chek test device

PERFORMING RADON TESTS FOR A REAL ESTATE TRANSACTION

EPA guidelines recommend that at least two short-term tests should be conducted, either together or sequentially, in the lowest level of the building usable by the buyers. If the average of all the tests is 4 pCi/L or more, the recommendation is to have the building mitigated by a certified professional. If the average is below 4 pCi/L, then no further action is necessary at this time, although testing in the future is recommended. It is **highly recommended** that any property transaction tests be conducted by a certified radon professional. To locate a listed or certified radon tester, contact your state radon office (www.state-radon.info) or go to www.nrpp.info to download a list of professionals certified by the National Radon Proficiency Program (NRPP).

Also visit www.epa.gov/radon to download the latest copy of their publication: *Home Buyer's and Seller's Guide to Radon*.

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Notice to Pennsylvania Residents: The Radon Certification Act requires that anyone who provides any radon-related service or product to the general public must be certified by the Pennsylvania Department of Environmental Protection. You are entitled to evidence of certification from any person who provides such services or products. You are also entitled to a price list for services or products offered. All radon measurement data will be sent to the Department as required in the Act and will be kept confidential. If you have any questions, comments, or complaints concerning persons who provide radon-related services, please contact the Department of Environmental Protection, P.O. Box 8469, Harrisburg, PA 17105-8469 (717-783-4594).

The radon test kit(s) used for this report is certified by the National Radon Proficiency Program (NRPP), Lab ID: 101138AL, for use in all fifty states. It is also listed or certified for use in all states that have a radon program.

For technical information, call (800) 247-2435. Office hours are Mon-Fri 8:30 to 5:30 Eastern
You can reach us by Fax at (828) 684-8498 or by email at info@radon.com
Web Site: www.radon.com

LITTLE BOHEMIA NEIGHBORHOOD / UPPERTOWN
WEST SEVENTH / FORT ROAD FEDERATION

OUTLINE SCOPES OF WORK & HISTORICAL RESEARCH SUMMARIES

326 HARRISON AVENUE - 69 GARFIELD STREET - 301 STURGIS STREET - 47 DOUGLAS STREET



Prepared for:
Community Neighborhood Housing Services
West 7th/Fort Road Federation
Little Bohemia Neighborhood Association

Prepared by:
Becca Hine, architect
Jim Sazevich, historian

Funding provided by:
Ward 2 City Council
Community Organization Partnership Program (COPP)

September, 2013

LITTLE BOHEMIA NEIGHBORHOOD / UPPERTOWN

"Little Bohemia" is one of several sub-neighborhoods of Uppertown (originally Upper Town), which is part of the larger West Seventh Street community. Uppertown is one of two original neighborhoods in the City of Saint Paul, and home to some of the oldest houses in the City. The Lower Landing, at the foot of Jackson Street, spawned the Lower Town (Lowertown) neighborhood. The Upper Landing, at the foot of Chestnut Street, gave birth to Uppertown. The two neighborhoods shared a common border at St. Peter Street.

The original boundaries of Uppertown consisted of Summit Avenue on the north, St. Peter Street on the east, the Mississippi River on the south, and Toronto/Dale Street on the west. From the incorporation of the city in 1854, everything west of Toronto Street was outside of the city and part of the Reserve Township of Ramsey County, until 1872, when the first of three annexations of the Reserve occurred. The boundaries of Uppertown today are Hwy 35E to the north, Kellogg Blvd to the east, the Mississippi River to the south, and Toronto and Drake Streets to the west. The boundaries of Little Bohemia have been defined as the area bounded by 35E to the North, Smith Avenue to the East, West 7th Street to the South, and Grace Street to the West (-Jim Sazevich).

HISTORIC ASSETS AND COMMUNITY REDEVELOPMENT

After identifying the historic assets and evaluating the reuse alternatives for vacant properties in the Little Bohemia neighborhood, the property reports advocate for preserving the existing housing stock and guiding future development in a historically sensitive manner. Rehabilitation, versus demolition, supports the larger community goals of protecting and enhancing the cultural heritage of the West 7th neighborhood. The four properties selected for evaluation have been deteriorating for years and a fear of demolition escalated the need for action.

Buildings from the 1850s to the early 1870s are rare in the Uppertown neighborhood and the city as a whole. Existing buildings dating from the 1850's, 1860s, or early 1870s, are an irreplaceable architectural asset. A few hundred residential structures were built in Uppertown during the 1850s, and only a couple dozen of those survive today. For the decade 1860 – 1870, even fewer structures were built in Uppertown, and very few of those still stand. In all of Uppertown's approximately 650 structures, there are about twenty buildings dating from the 1860s, and roughly ninety buildings dating from the early 1870s (-Jim Sazevich).

In the late 1990's, the West 7th/Fort Road Federation (W7/FRF) identified this unique area of the West 7th neighborhood as a priority redevelopment district. With its historic housing stock, proximity to downtown, and adjacency to the United Hospital, Little Bohemia is positioned to be a thriving residential area. Instead, due to a high concentration of substandard rental units, problem properties and vacant buildings, the neighborhood has been in need of a strategic intervention. In partnership with the City of Saint Paul's Housing and Redevelopment Authority (HRA), the W7/FRF has acquired more than twenty vacant properties in the target area. Four single family rehabilitations have been completed and financing is in place to complete an additional eight single family projects by the end of 2014. Additional funding sources will be required to address the remaining structures and vacant lots.

Based on the W7/FRF's founding principle, "that citizens acting together can maintain and improve the quality of life in their neighborhoods and help commercial endeavors prosper", the Little Bohemia Neighborhood Association formed in 2009 to provide community input and local support of the redevelopment plans. Residents, landlords, and business owners meet on a monthly basis to monitor redevelopment efforts and implement community projects supporting their mission to provide a safe, clean, pedestrian-friendly residential neighborhood.

LITTLE BOHEMIA NEIGHBORHOOD / UPPERTOWN
WEST SEVENTH / FORT ROAD FEDERATION

OUTLINE SCOPE OF WORK & HISTORICAL RESEARCH SUMMARY

69 GARFIELD STREET



THE JOHN AND MARY MYERS HOUSE, 1872

Category 2 Registered Vacant Building: 04/05/2010
Owner: City of Saint Paul/Housing and Redevelopment Authority
Developer: West Seventh/Fort Road Federation, Phase II

Scope prepared by Becca L. Hine, beccahine@gmail.com
Historical research by Jim Sazevich, jimsazevich@yahoo.com

69 GARFIELD - HIGHLIGHTS FOR REHAB

1. Full rehabilitation required, interior and exterior
 2. Reconfigure floor plan, relocate interior stairs
 3. Stabilize exterior basement access, 5'-0" clear headroom
 4. Investigate structure at front bay and chimney and identify solutions for leveling of floors
 5. Stabilize front/side porch and provide open porch details, replace if required
 6. Evaluate reuse of rear 1 story addition (original porch), no foundation present
 7. Selective demolition/further investigation:
 - a. expose original exterior siding, soffit, fascia, trim & porch details
 - b. evaluate rear enclosed addition/porch, identify work to be performed
 - c. evaluate foundation walls, joists and rim conditions, identify work to be performed
 - d. evaluate plaster walls and ceilings, identify areas for repair and/or replacement
 8. Reconfigure floor plan
 9. Prepare Bid documents, by developer/architect
-

SCOPE SUMMARY

The outline scope is intended to guide future development in a historically sensitive manner; it is not intended to be conclusive and allows the developer/architect broad latitude on final design decisions.

Scope recommendations support a long standing neighborhood priority to maintain the historic character and architectural details of the West 7th housing stock. While historically appropriate rehabilitation methods favor a preference for restoration of original materials, replacement is often necessary and easily achieved. Appropriate alternates have been specified, so long as they maintain a similar material, size and profile.

The scope of work has been based on:

1. Visual observations and discussions with Ed Johnson and Jim Glendening (W7/FRF)
2. Visual observations and discussions with the Little Bohemia Neighborhood Association
3. Preservation based rehabilitation standards
4. City of Saint Paul/HRA Design Standards (v6, August 2013)

The outline scope assumes that the:

1. Project will meet Code Compliance, see report requirements
2. HVAC, plumbing, and electrical systems will be new, install per code
3. Energy efficiency and sustainable design methods and materials will be integrated
 - a. Specific funding requirements to be addressed at time of redevelopment
 - i. Enterprise Green Communities Certification (see criteria 5.1c)
4. Energy Audit/HERS testing will be completed
5. Painted surfaces contain Lead
6. Laminate flooring and kitchen &/or bath fixtures contain Asbestos
7. Radon levels are acceptable
8. Grading, storm water management and landscape plans will be incorporated
9. Connections to all City services and utilities will be provided
10. Developer/architect will determine the full scope of work and prepare construction documents at the time of redevelopment

OUTLINE SCOPE OF WORK

Division 1 – General Requirements

1. To be determined by developer/architect

Division 2 – Existing Conditions

Additional locations to be determined by developer/architect

1. Demolition
 - a. Roofing, all layers
 - b. Roof decking, areas where damaged
 - c. Vinyl siding, including attachments and underlayments
 - d. Front/side porch and steps, retain roof, header and columns
 - e. Rear addition, stabilization methods to be determined by developer/architect
 - f. Basement stair covering, replace
 - g. Concrete walks, pavers
 - h. Interior stairs, reconfigure to meet code
 - i. Ceiling and wall plaster at deteriorated locations
 - j. Ceiling and wall insulation at deteriorated locations
 - k. Wall coverings; paneling
 - l. Floor coverings; carpet and laminate
 - m. Interior doors, trim, and baseboard
 - n. Kitchen and bath, cabinets and appliances
 - o. Plumbing fixtures
 - p. Obsolete HVAC, plumbing and electrical services
 - q. Chimney removal, top to bottom, evaluate alternate to retain chimney
2. Asbestos Remediation
 - a. Testing and appropriate remediation to be performed
3. Lead Hazard Control Activities
 - a. Testing and appropriate remediation to be performed
4. Radon Mitigation
 - a. Testing and appropriate remediation to be performed

Division 3 – Concrete

Additional locations to be determined by developer/architect

1. Cast in Place Concrete
 - a. Side and rear entry stairs, new footings
 - b. Front/side porch, new footings
 - c. Basement columns/slab, verify
 - d. Foundation (parging) repair at areas of deterioration

Division 4 – Masonry

Additional locations to be determined by developer/architect

1. Maintenance of Masonry
 - a. Repair and repoint basement access, exterior
 - b. Repair and repoint all foundation walls, interior
 - c. Provide as alternate: repair and repoint chimney, top to bottom
2. Concrete Unit Masonry
 - a. Rear addition reconstruction, verify

Division 5 – Metals

Additional locations to be determined by developer/architect

1. Decorative Metal Railings
 - a. Exterior
2. Miscellaneous
 - a. Exterior and interior

Division 6 – Wood, Plastics and Composites

Additional locations to be determined by developer/architect

1. Rough Carpentry (see Division 02)
 - a. Exterior Rough Carpentry
 - i. Side and rear entry stairs
 - ii. Front/side porch construction
 - iii. Rear addition reconstruction
 - iv. Eave and rake framing repairs
 1. replacement where required
 - v. New openings
 - vi. Provide as alternate: replace wood roof decking
 - b. Interior Rough Carpentry (see Division 02)
 - i. Framing required per code
 1. Double up framing where required
 2. Install headers at existing openings, when missing
 3. Install blocking where required
 - ii. Reconfigure plan per developer/architect
 - iii. Reconfigure/relocate stairs, to meet code
 - iv. Coordinate all heating, plumbing and electrical locations
 1. Minimize soffits on floor 1
2. Finish Carpentry
 - a. Exterior Finish Carpentry (see Division 02)
 - i. Side and rear entry stairs
 - ii. Front/side porch
 - iii. Wood siding and trim to be repaired
 1. replaced where required
 - iv. Wood fascia boards and soffits to be repaired
 1. replaced where required
 - v. Repair and/or replace
 1. Frieze board and bed molding
 2. Window sill extensions and trim
 3. Water table and weather board
 - b. Interior Finish Carpentry (see Division 02)
 - i. New wood trim and base throughout
 1. Similar to existing size and style

Division 7 – Thermal and Moisture Protection

Selections and additional locations to be determined by developer/architect

1. Thermal Insulation
 - a. Attic (R-50)
 - b. Sloped Ceilings (R-30)
 - c. Exterior walls (R-19)
 - d. Basement rim joist (R-10)
2. Weather Barriers
 - a. Install where required, original wood siding to remain
 - b. Provide as alternate: full house
3. Air Barriers
 - a. Seal attic bypass locations
 - b. Install and seal new attic hatch
 - c. Basement rim
 - d. Seal areas prone to air leakage
4. Asphalt Shingles
 - a. New roof, house
 - b. New roof, rear addition and front/side porch

5. Wood Fiber Board Siding
 - a. Provide as alternate: house
 - i. LP SmartSide, smooth, lap
 - ii. Trim, fascia, soffits
6. Sheet Metal Flashing and Trim
 - a. Roof drip edge
 - b. Roof joint at vertical walls, porches
 - c. Roof joint at chimney
7. Manufactured Gutters and Downspouts
 - a. Main roof
 - b. Rear addition and front/side porch
 - c. Locate downspouts per developer/architect

Division 8 – Openings

Selections and additional locations to be determined by developer/architect

1. Exterior Metal Doors and Frames
 - a. Storm doors
2. Wood Door Restoration (see Division 02)
 - a. Restore front entry door
3. Wood Doors
 - a. Exterior, rear entry
 - b. Interior, per plans
4. Fiberglass Doors
 - a. Provide as alternate, exterior
 - b. Smooth finish
5. Wood Window Restoration (see Division 02)
 - a. Repair and repaint original double hung windows, maintain existing divided lites
 - b. Install jamb liners, including insulation and weather-stripping
6. Wood Windows
 - a. Double Hung
 - b. Energy Star rated
 - c. Basement
 - d. New locations, see plans
7. Fiberglass Windows
 - a. Provide as alternate, all windows
 - b. Double Hung
 - i. Do not replicate existing divided lite patterns
 - c. Energy Star rated
 - d. Standard color
8. Storm Windows
 - a. Provide flush mount, full screen combination windows
9. Hardware
 - a. Provide all required hardware: locks, lifts, and screens

Division 9 – Finishes

Selections and additional locations to be determined by developer/architect

1. Repair of Plaster and Gypsum Board
 - a. Walls to be repaired and skim coated
 - b. Texture to be verified by developer/architect
2. Hardwood Flooring Restoration
 - a. Patch where required
 - b. Sand existing wood floors
 - c. Stain and refinish existing wood floors

3. Gypsum Board Installation
 - a. New ceilings at floor 1 and 2
 - b. New wall construction, see plans
 - c. Replace plaster with gypsum board in areas of repair, verify
 - d. Cement backerboard at tub/shower surrounds
4. Tiling
 - a. Floors, kitchen, bath, laundry
 - b. Walls, kitchen, bath
5. Laminate Flooring
 - a. Provide as alternate: kitchen, bath, laundry
6. Carpeting
 - a. Provide as alternate: bedrooms
7. Painting and Coating (see Division 02)
 - a. Exterior, paint all wood surfaces
 - b. Exterior, stain porch floor
 - c. Exterior, doors and windows
 - d. Interior, all plaster and gypsum surfaces
 - e. Interior, all door and window components
 - f. Interior, all wood trim and base
 - g. Basement, where required
8. Concrete and Masonry Coating
 - a. Exterior, where required at perimeter
 - b. Basement, walls and floors

Division 10 – Specialties

Selections and additional locations to be determined by developer/architect

1. Closet Storage Shelving

Division 11 - Equipment

Selections and additional locations to be determined by developer/architect

1. Appliances, Energy Star rated
 - a. Kitchen, laundry
2. Garage door openers

Division 12 - Furnishings

Selections and additional locations to be determined by developer/architect

1. Mailbox and Address Numbers
2. Bathroom Furnishings
 - a. Toilet paper holder, shower curtain rod, towel bars (2)
 - b. Mirror
3. Residential Casework
 - a. Kitchen, bath, laundry
 - i. Plywood box, wood face and frame, dovetail joinery
 - ii. Provide crown molding
 - iii. Provide all hardware and finish end panels

Division 22 - Plumbing

Selections and additional locations to be determined by developer/architect

1. Plumbing Equipment
 - a. New hot water heater
2. Plumbing Fixtures and Piping
 - a. All new supply and waste piping throughout house
 - i. Connect waste lines to existing cast iron drain at basement slab
 - ii. Reconfigure main stack to accommodate plumbing requirements
 - b. Kitchen and Bath Fixtures
 - i. Low flow fixtures
 - ii. Gas stove

- c. Laundry Fixtures
 - i. W/D hook ups
 - ii. Gas dryer
- d. Basement
 - i. Laundry tub
- e. Exterior
 - i. Hose Bibs (2), with backflow preventer

Division 23 - HVAC: Heating, Ventilating, and Air-Conditioning

Selections and additional locations to be determined by developer/architect

- 1. Residential Ventilation
 - a. Install kitchen, bath and laundry exhaust
- 2. Forced Air Furnace and Ducts
 - a. Install new furnace, ducts and floor registers
 - i. Note: 5'-0" ceiling height at basement
 - ii. Minimize soffits on floor 1
 - iii. Limited access in areas, system may require slim fit design solutions
- 3. Forced Air A/C
 - a. Provide as alternate

Division 26 - Electrical

Selections and additional locations to be determined by developer/architect

- 1. Power, Wiring and Devices
 - a. Entire house to comply with Saint Paul Bulletin 80-1.
 - b. Category 2 and 3 vacant properties require additional hardwired smoke detection
 - c. Install new service panel
 - d. Install new wiring, remove all obsolete wiring
 - e. Provide all new outlets, switches, and cover plates
 - f. Provide cable and phone jack
 - g. Coordinate electrical plan with developer/architect
- 2. Lighting
 - a. Provide all new lighting fixtures and compact fluorescent lamps
 - b. Exterior and interior

Division 28 - Electronic Safety and Security

- 1. Intrusion Detection
 - a. Provide as alternate

Division 31 - Earthwork

Locations to be determined by developer/architect

- 1. Grading
 - a. Finish grade to be 6" minimum below exterior siding materials

Division 32 - Exterior Improvements

Selections and locations to be determined by developer/architect

- 1. Fencing
- 2. Concrete Paving
- 3. Sodding
- 4. Plants

HISTORICAL RESEARCH SUMMARY

The John and Mary Myers House

69 Garfield Street
Saint Paul, MN 55102

On August 8, 1872, John and Mary M. Myers paid John Wann, \$450 for the property at the southwest corner of Green (later Garfield) and Prairie (later Harrison) Streets. Work began at once on a one-story, frame cottage, which was built at the southernmost part of the property, and would eventually be known as No. 69 Garfield Street. There is good evidence that Myers used at least some salvaged materials from earlier buildings to build his homestead. Today, there are two six-over-six window sashes in the main living room of the house, which predates the construction of the house by at least ten years or more. This is not an unusual practice, as our early pioneers were very good at recycling used building materials. What is unusual is that the window sashes would survive the multiple remodeling projects the house has experienced over the past 140 years.

The Myers' homestead at No. 69 experienced physical improvements as money allowed, and styles changed. By the late 1870s, or early 1880s, the front door of the Myers' home was removed and reinstalled in the northern façade of the structure. Two windows were also moved from the front (east) façade to the north façade. A side porch was built to allow access to the new entry. In place of the front door and two windows, a rectangular bay window was built and centered in the front façade of the house. About 1891, a second story was added to the original one-story house. An interior staircase was built on the south wall of the living room to provide access to the new floor. The first bathroom and inside toilet were likely added at this time.

In 1868, John Myers, a twenty-nine year-old, native New Yorker of German parentage, arrived in St. Paul, Minnesota. He had served the Union Army during the Civil War, as a private in Co. I, Fifth Regiment, N.Y. Heavy Artillery, and had been mustered out at the end of the war, after two years of service. In May 1871, Myers was married to thirty-seven year-old, Mary McNamara, at the Cathedral of St. Paul. Mary arrived in the city in 1860, and had immigrated to the United States from Ireland. The newlyweds went shopping for a place to build a homestead, and by 1872, found a corner parcel of land for sale in the Uppertown neighborhood.

The land they purchased was the eastern portion of two lots in Marshall's Subdivision, at the southwest corner of Green (later Garfield) Street, and Prairie (later Harrison) Street. The property was 94-1/2 feet wide on Green Street, by 40 feet deep on Prairie Street. Located in a sparsely settled area of the city, the property was first platted in 1849, (the same year Minnesota became an official U.S. territory) as part of a forty acre tract, known as "Leech's Outlots". The original developer, Samuel Leech, had intended the large lots he laid-out and offered for sale, for sites to build "country estates" by wealthy residents of the infant city. By the end of the 1850s, there were only five people who had chosen to buy and build in Leech's Outlots.

In Minnesota's statehood year of 1858, William R. Marshall (who would be elected governor of Minnesota in 1866) purchased 2-1/2 acres in Lot 3, of Leech's Outlots, and platted it as "Marshall's Subdivision" to be sold as a dozen city lots. The lots were of average size, and should have sold quickly, had it not been for a national financial crash, followed by the opening of the Civil War, within the next couple of years. As settlement of a lawsuit in 1862, Marshall forfeited the twelve lots to Thaddeus R. Fletcher, a wealthy retired merchant, living in Burlington, Vermont. Seven years later, still considered located in a remote part of the city, "Marshall's

Subdivision" property remained vacant. The only income generated by the land, came from grazing fees, and that money was hardly enough to pay the real estate taxes.

After suffering from chronic lung disease for years, Thaddeus R. Fletcher, by 1870, knew he was dying. He decided to liquidate much of his real estate holdings, and donate the money to charity. Fletcher put his St. Paul property in Marshall's Subdivision on the market at reduced rates, and hired a local attorney to finalize the sales contracts. Within the next two years, he was able to sell all twelve lots in the addition, and several of the buyers had already started building homesteads. Thaddeus Fletcher died at Burlington, Vermont in December 1871, at age 70, but not before he was able to give away more than \$20,000 to various charities. Some of that money was generated from his real estate sales in St. Paul. His widow and daughter continued philanthropic work, long after his death.

Four of Fletcher's twelve St. Paul lots were purchased by John Wann, a St. Paul lawyer and real estate dealer, in July 1871, for \$3,000. A year later, Wann sold part of two of the lots to John G. Hunstock, and Daniel Cashel, who built their adjoining homes, facing Prairie (now Harrison) Street, just west of Green (now Garfield) Street. In 1872, John Myers joined Hunstock and Cashel with the purchase of the lot on the southwest corner of Green and Prairie Streets.

Myers was working as a teamster and an express delivery driver, so he had need of a wagon and at least one horse, if not more. At the corner, in the northern most part of his Green Street property, he built a two-story, frame barn to house his wagon and shelter his team.

It's unknown whether John and Mary had plans for raising children. Mary was already nearing forty years old when they married, so perhaps they didn't try. In 1879, when two of their friends and neighbors died within months of each other, James and Johanna Duffy, John and Mary offered to adopt the Duffy's two year-old daughter. By 1880, Cecelia Duffy Myers was living in the Myers household on Green Street. She would be the only child of John and Mary Myers.

One of the earliest documents, which records the Myers' residency and property ownership on Green Street, is a petition circulated by his neighbor Gotfried Siegenthaler, in 1881. James A. Garfield, the 20th president of the United States, had been gravely wounded in an assassination attempt on July 2, 1881. Out of "respect for, and sympathy with" the dying president, Siegenthaler asked his neighbors to sign a petition to request the city of St. Paul to change the name of "Green Street" to "Garfield Street". On September 16th, the document bearing fifteen signatures was delivered to the City Council offices, and just three days later, President Garfield succumbed to his wounds. On October 21, 1881, members of the City Council voted unanimously to change the name to "Garfield Street."

Myers' express business prospered, and by 1882, he was ready to build a 2nd house to be used for rental income on his Garfield Street property. The 1-1/2 story, frame house was built between Myers' homestead (69), and the barn, which stood at the corner. The house cost him \$1,200 to complete, and although modest, it was modern in every respect for its day. This house would eventually be known as No. 65 Garfield Street, and was used as rental property by the Myers family for many years.

Mary McNamara Myers died at her Garfield Street home on April 4, 1915, at age 80. Her funeral was held from the Cathedral of St. Paul, where she had been married forty-four years earlier. John Myers continued working as an express man well into his sixties, but his last recorded occupation is listed as a foreman, with the street department for the City of St. Paul in 1910, when he was seventy-one years old. He died in St. Paul on August 18, 1919, at age 80. John and his wife were buried at Calvary Cemetery in St. Paul. At the death of John and Mary, their Garfield Street property passed to their daughter Cecelia.

Cecelia Duffy Myers, born in 1877, had worked her entire adult life as a dressmaker, and seamstress for various tailor and dress shops in St. Paul, and had lived with her parents on Garfield Street the entire time. In 1918, she decided to move to Grand Island, Nebraska to serve as housekeeper for her (biological) brother, the Rev. James Duffy, Bishop of the Diocese of Grand Island. Rev. Duffy was born in St. Paul in 1873, attended St. Thomas College and the St. Paul Seminary, and was ordained a priest in St. Paul in 1899. In 1913, he was named first Bishop of the Diocese of Kearney (later Grand Island), Nebraska, by Pope St. Pius X. Bishop Duffy died in 1968, at age 94, and at the time of his death was the senior bishop in the U.S. in both age, and years of consecration. The original James and Johanna Duffy family home in St. Paul, built in 1874, still stands at 253 Banfil Street, in the Uppertown neighborhood.

After her brother left active service as a Catholic Bishop, and his move to a retirement home in 1933, Cecelia Myers returned to St. Paul, and moved into the house at No. 65 Garfield Street. She had continued to own and lease out both No. 65 and No. 69, after her parents deaths. Cecelia lived in her home at No. 65, for the next two decades, until her death, at age 76, in May 1953. After her death, both houses were sold by her heirs. The Myers family had owned and occupied their Garfield Street property for 81 years.

Some of the later residents of No. 69 Garfield Street:

1920 – 1923: Joseph E. Batzer, age 50, born Maryland, clerk in religious article shop with wife Helen C., age 37, born N.Y., and two sons.

In 1926, the Batzer family moved to San Francisco, California

1929 – 1939: Mrs. Katherine Gersting, (widow of Albert Gersting) with son Albert D., and daughter Margaret

1940 – 1941: Edward C. Christopherson – paid \$18 per month for rent

1950: Ronald H. Peterson, switch tender for railroad with wife, Dorothy

1960 – 1970: Herbert R. Loomis, handyman and cafeteria worker, with wife, Evelyn D., a dishwasher in a cafeteria. Loomis was first owner of No. 69 Garfield, after the death of Cecelia Myers (owners).

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STATEMENT OF SIGNIFICANCE FOR 69 GARFIELD STREET

The importance of this structure lies in the fact that it is a key element in the historic streetscape of Garfield Street, between Sturgis and Harrison Streets. Beginning in 1869, and continuing for the next sixteen years, houses were built on each of the lots facing Garfield Street. Since 1885, the existing six frame cottages have lined the street, all in close proximity of the adjoining structures. To remove even one, would be like removing a tooth from a beautiful smile. Each of the structures are examples of the evolution of building materials, incorporated into home improvement projects, initiated by various owners, over many decades. Even with all of the changes to the facades of the structures, each retains its original scale, and complimentary relationship to its neighbors.

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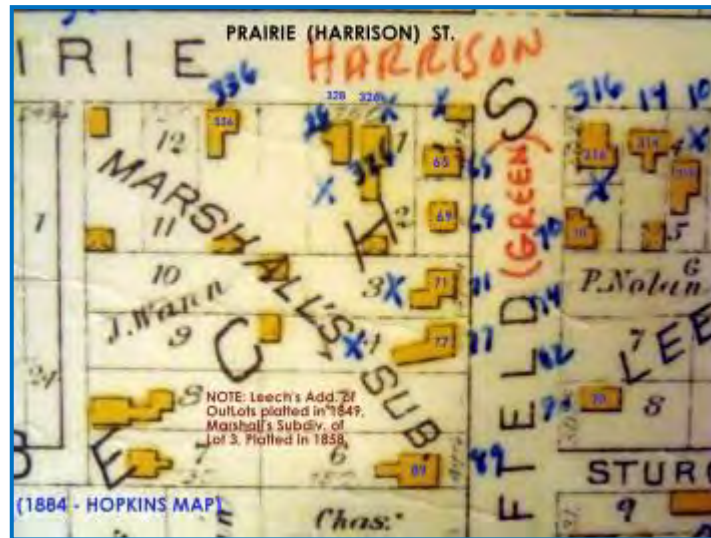
SEE ATTACHED PROPERTY MAPS AND BIOGRAPHICAL INFORMATION

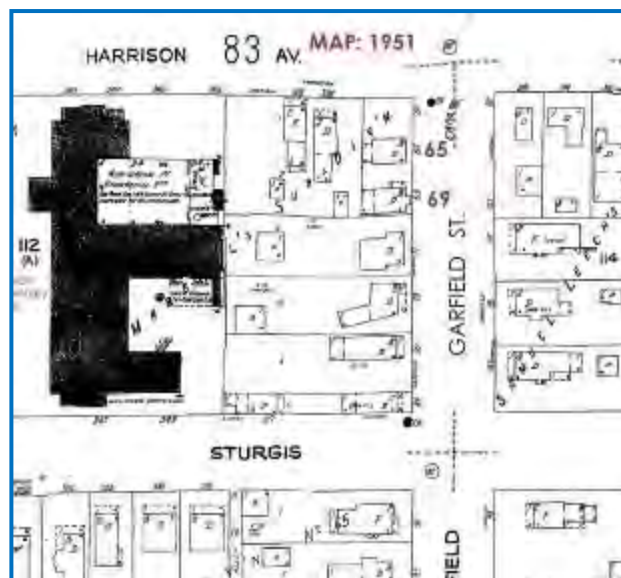
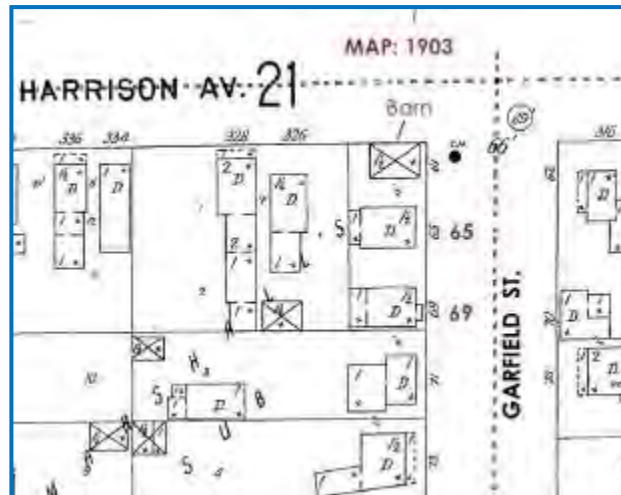


1981



2011





dwelling; cost 1,000. *Globe (St. Paul) Dec. 31, 1882*

Garfield street, Anton Baverki, one story frame house, cost \$1,000.

X Garfield street, John Myers, two-story frame house; cost \$2,500. *(Likely the house at 43 Garfield St.)*

Goodhue street, Frank Gringinger, two story frame house; cost \$2,000.

Goodhue street, James O'Halloran, two story frame house; cost \$2,000.

Goodhue street, Henry Smith, one story frame house; cost \$1,500.

Goodhue street, one-story frame house cost, \$1,000.

Globe (St. Paul) Nov. 4, 1891

Total, five transfers.....\$32,522

BUILDING PERMITS.

The following building permits were issued yesterday:

N A Halmer, addition to dwelling, Park, near Arcade.....\$1,000

X John Myers, addition to frame dwelling, Garfield, near Sturgiss.....1,000

Five minor permits.....1,100

Total, 7 permits.....\$3,100

STATEMENT OF

T. R. FLETCHER, Esq.,

HILLSTOWN, Jan. 15, 1871

TO THE PUBLIC:

I have been under the care of Drs. Lighthill & Smyth for the past two months, for an obstinate disease of the lungs of long standing, accompanied with severe catarrhal affections. I have received great, and I hope lasting benefit, from their unremitting attention and skilful treatment of my disease, and with pleasure recommend them to the afflicted.

(In January 1871, Theodore R. Fletcher was ill, and he was busy selling his real estate in order to donate his proceeds to charity. Beginning in 1869, he started selling his land in Washburn's subdivision in St. Paul, and had all of it sold before his death in December 1871.)

T. R. FLETCHER.

MUR	322	MUR
<i>(1873 - St. Paul City Directory)</i>		
Murnane William Jr, expressman, bds. Western av. sw. cor. Banfil, w 4, b Illinois		
X Murnane & Donohue (James Murnane and John Donohue), wood dealers, Third, nw. cor. Exchange		
Murphy Bernard, trunkmkr. Crippen & Upson, bds. 32 Marshall av. w 3, b New York		
Murphy Clarkson A. clk. Dyer Bros. & Howard, bds. 51 W. Fourth, w 2, b Pennsylvania		
Murphy Dennis, cigarmkr. Fetsch Bros. bds. 210 Third, w 2, b New York		
Murphy Dennis, policeman, bds. 59 Iglehart, w 3, b Canada		
Murphy E. P. driver, Minnehaha, No. 2, r. 15 E. Seventh, w 1 m 2 f 3 t 5, b Ireland		
Murphy George (J. A. Stevenson & Co.) r. Fine, bet. Sixth and Seventh, w 5 m 1 f 5 t 6, b England		
Murphy James, baker, bds. Rice, bet. Melrose av. and Summer, w 3, b Ireland		
Murphy James, lab. r. 22 Marshall av. w 4 m 2 f 2 t 4, b Ireland		
Murphy James, marble polisher, T. Bower, r. 17 Oak, w 3 m 4 f 4 t 8, b Ireland		
Murphy John, lab. bds. 59 Iglehart, w 3, b Canada		
Murphy John, lab. bds. 34 Woodward, w 5, b Ireland		
Murphy John B. cigars and tobacco, bds. Commercial, bet. Con-		

Murray William, brakeman, bds. Fourth, nr. Hoffman av. w 5
MURRAY WILLIAM P. lawyer, 170 Third, r. 16 W. Seventh, w 2 m 3 f 7 t 10, b Ohio
 Music Hall, 160 Third
 Musser James P. carpenter, r. Bradley, bet. Sixth and Seventh, w 5 m 1 f 2 t 3, b Ohio
 Muzzy Charles, porter, Forepaugh & Tarbox, r. 66 Third, w 1 m 1 t 1, b Massachusetts *(1873 - St. Paul City Directory)*
 X Myers John, teamster, Murnane & Donahue, r. Green, cor. Prairie, w 4 m 1 f 1 t 2, b Germany
 Myers Michael, lab. r. Rice, bet. Melrose and Summer, w 3 m 2 f 2 t 4, b Ireland
 Myers Theodore B. (Myers & Finch), bds. 38 W. Twelfth, w 2, b New York
MYERS & FINCH (T. B. Myers and F. M. Finch), watches and jewelry, 292 Third
 Myler James, saloon and boarding house, 71 Fort, w 4 m 12 f 4 t 16, b Ireland
 Mylon Martin, teamster, r. Chestnut, bet. Fort and Oak, w 4 m 2 f 3 t 5, b Ireland
 Myrick Nathan, contractor, r. 102 Fort, w 4 m 3 f 4 t 7, b New York
 Myrick William N. clk. bds. 102 Fort, w 4, b Minnesota

M. SHEIRE & BRO., Architects and Superintendents,
18 EAST FIFTH STREET, St. Paul.

To the Hon. City Council of the City
of St. Paul Minn:

The petition of the undersigned comprising
all the resident lot owners and residents of
along Green Street in this city respectfully
sheweth: that said Green Street is one of
the streets connecting St. Anthony Hill
with Fort Street and promises to be a much-
travelled thoroughfare in course of time—
that your petitioners are desirous, as a mark
of respect for and sympathy with President
Garfield to have the name of said Green
Street changed to that of Garfield Street.

Wherefore your petitioners pray that the
name of Green Street be changed to that
of Garfield Street.

Ch. Siegenthaler
Edith Parker
August Rutzow

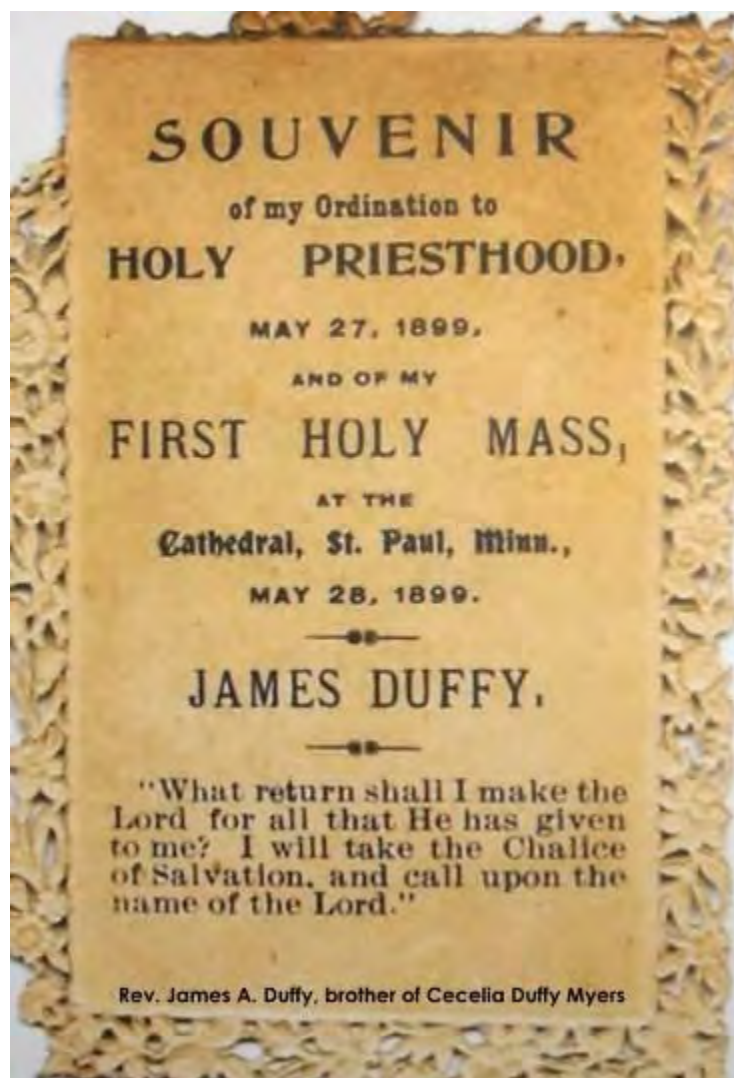
Petition to change Green St.
to Garfield St. - Sept. 1881 -
signed by property owners.

Wm. J. G. G. G.
S. J. Goldsmith
A. H. Reese
A. Moore

D. Leo.
Andrew C. Burk
John Myers
Mrs M. J. Martin

< John Myers
of No. 69 Garfield

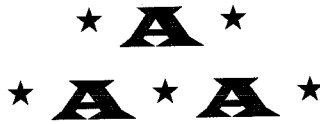
Frank Winthrop
Wm. Harbo



Rev. James A. Duffy



Bishop James A. Duffy



Asbestos Abatement Associates

3125 Logan Ave. N., Minneapolis, MN 55411

**Asbestos/Hazardous Materials Survey
Residential Property
971 Jenks Ave.
St. Paul, MN 55106**

**Prepared by:
Asbestos Abatement Associates
3125 Logan Ave. N.
Mpls., MN 55411**

**Prepared for:
City of St. Paul
Cindy Carlson
25 West 4th St. #1100
St. Paul, MN 55102**

**Richard Pruitt #1207
November 15, 2012**

A handwritten signature in dark ink, appearing to read 'R. Pruitt'.

(Signature)

A handwritten date in dark ink, '11-15-12'.

(Date)

*North Metro: 612-588-7755
St. Paul: 651-633-4060*

*South Metro: 612-823-2955
Fax: 612-588-6780*

Email: abatenow@popp.net

★ A ★
★ A ★ A ★
Asbestos Abatement Associates
3125 Logan Ave. N., Minneapolis, MN 55411

Project Description
971 Jenks Ave., St. Paul, MN

Asbestos Abatement Associates was retained by Cindy Carlson of the City of St. Paul to conduct an Asbestos/Hazardous Materials Survey for a residential home located at 971 Jenks Ave., St. Paul, MN. We were asked to prepared this report (the Survey) and report the findings of the Survey.

The reason for the visit is to identify friable and non-friable asbestos containing materials which may become friable during renovation or demolition.

The home is approximately 103 years old. It has 3 levels and is approximately 2,664 sq. ft. This home has concrete footings and foundation with concrete flooring in the partial basement. There is a crawl space about 14x4 which has general debris mixed with Asbestos paper in it. The home is wood framed and sided with vinyl overlayment. There are hardwood floors throughout. The 2nd floor has carpeting. The walls and ceilings are made of plaster. The attic is insulated with Mineral Wool. The garage is 12x17 and is slab on grade that is wood framed and sided. Both structures have asphalt roofing.

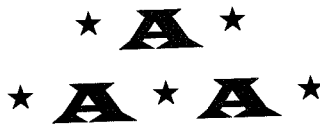
This Survey represented by Richard Pruitt on November 15, 2012. The Survey Area consisted of accessible portions of the Building at the time of the Survey.

Copies of Mr. Pruitt's Asbestos Inspector certificate and license are included.

★ **A** ★
★ **A** ★ **A** ★
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Scope of Services
971 Jenks Ave., St. Paul, MN

- A destructive assessment of accessible portions of the building was conducted Richard Pruitt, Asbestos Building Inspector #1207. Suspect Asbestos containing building materials were identified per current Minnesota Department of Health (MDH) Asbestos Abatement Rules and Occupational Safety and Health Administration (OSHA) regulations.
- Samples of suspect ACM identified during the Survey were collected for laboratory analysis in accordance with MDH and OSHA regulations.
- The location, estimated quantity, and condition of suspect ACM were documented.
- The presence and/or quantity of other materials such as hazardous wastes or building materials that would be classified as special wastes for demolition were documented.
- The presence and/or quantity of equipment that could contain polychlorinated biphenyls (PCBs), ozone depleting chemicals (ODCs), and mercury or other regulated metals was documented.



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Sampling Methodology **971 Jenks Ave., St. Paul, MN**

- Asbestos Abatement Associates identified homogenous building materials in accordance with the Environmental Protection Agency (EPA) Asbestos Hazardous Emergency Response Act (AHERA) 40 CFR Part 763, Subpart E as specified in MDH and OSHA rules and regulations. Homogenous areas are defined as areas of surfacing materials, thermal system insulation materials or other miscellaneous materials which upon examination for properties such as age, color, size and texture appear to be composed of the same material.
- The building materials are collected from randomly selected locations throughout the building where the material is found to be present. Samples of these materials are assumed to be representative of that material wherever it is found throughout the building.
- Samples of potential ACMs were collected by Asbestos Abatement Associates and were analyzed using Polarized Light Microscopy (PLM) by Carolina Environmental, Inc., in Cary, NC. NVLAP's National Voluntary Laboratory Accreditation Program code number is 10768-0. (Copy of Lab Qualification Included) The MDH, OSHA, and EPA define ACM as a material which contains greater than one percent asbestos by qualitative or quantitative analysis

*North Metro: 612-588-7755
St. Paul: 651-633-4060*

*South Metro: 612-823-2955
Fax: 612-588-6780*

Email: abatenow@popp.net

★ **A** ★
★ **A** ★ **A** ★
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971 Jenks Ave., St. Paul, MN

techniques. The EPA's National Emission Standard for Hazardous Air Pollutants (NESHAP) requires quantitative analysis, commonly referred to as a "point count", for all qualitative analysis results when asbestos is detected in concentrations less than one to ten percent. However, under common practice, qualitative results greater than three and less than ten percent are often accepted to be ACM.

Testing Results

Asbestos Abatement Associates collected a total of eighteen (18) samples of suspect (ACM) that were analyzed by Carolina Environmental, Inc.

See Survey/Sample Results in table on the next pages with the sample results in the page following.

★ **A** ★
★ **A** ★ **A** ★
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Sample Results
971 Jenks Ave., St. Paul, MN

Sample #10 is grey window glazing in the basement and was found to contain 2% Chrysotile Asbestos containing material and must be removed by a State Licensed Asbestos Contractor with the estimated cost for removal is \$250.00.

Sample #13 is white window glazing on the 1st floor and was found to contain 2% Chrysotile Asbestos containing material and must be removed by a State Licensed Asbestos Contractor with the estimated cost for removal is \$300.00.

Sample #14 is grey paper on the cold air returns in the SW corner was found to contain 22% Chrysotile Asbestos containing material and must be removed by a State Licensed Asbestos Contractor with the estimated cost for removal \$350.00.

Assumed to Contain Asbestos related items are listed as follows:

- Paper next to furnace estimated cost for removal \$150.00 each
- Paper on boots in basement with estimated cost for removal \$450.00 each
- Paper on heat vents 1st floor estimated cost for removal \$195.00 each

- Asbestos paper mixed with general debris in crawl space and clean up with estimated cost being \$850.00
- Paper on ducting running to 2nd floor with estimated cost for removal \$2,100.00

All other items tested were found to be non-asbestos containing listed as follows:

- Window glazing white 2nd floor 15 total
- Light green plaster skim and base coats 2nd floor bedroom #4
- White ceiling texture dining room 15x14
- Ceiling texture white living room 20x12
- Green plaster skim and base coats living room
- Ivory plaster skim and base coats dining room
- Brick black, white and red kitchen wall 16x8 and 9x6 areas
- White sink under coating 4 sq. ft.
- Blue ceramic tile w/brown grout 1st floor bathroom 7x4 and 9x5 areas
- White ceiling tile 1st floor bathroom 9x4
- Grey sheet vinyl backing under 1st floor kitchen 10x16

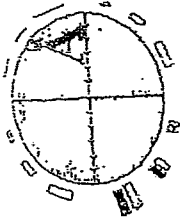
Hazardous Waste Items Found On Site

- | | |
|---------------------|--------------------------|
| • 1 dehumidifier | • 1 stove |
| • 1 dryer | • 3 televisions (garage) |
| • 1 furnace | • 1 thermostat |
| • 1 alarm system | • 1 washer |
| • 1 refrigerator | • 1 water heater |
| • 7 smoke detectors | • 1 window a/c |

The estimated cost for removal of Hazardous Waste items is \$750.00.

Angstrom Analytical
5001 Cedar Lake Road
St. Louis Park, Mn 55416

3 DAY TURN AROUND



★ ★ ★

★ ★ ★

ASBESTOS ABATEMENT ASSOCIATES

ASBESTOS (PLM) BULK SAMPLES:
REPORT OF MATERIALS ANALYSIS

CLIENT <i>City of St. Paul</i>		Project Location	Results Via <i>Email</i>	Date Entry <i>11/16/12</i>	Approved By <i>KH</i>
CLIENT ADDRESS <i>971 Genessee Ave.</i>		Client/Recalling # <i>1-10</i>		Project # <i>27060</i>	Analyst <i>KH</i>
<i>St. Paul 55106</i>		Assigned Lab # <i>12-11</i>		Date Rec'd <i>11/16/12</i>	Analyzed <i>11/19/12</i>
Fax #				Date Mailed	Phone'd

Sample Number	Material	Physical Description	Location	Asbestos Type	Approximate Percent
1	Window Glazing	White	15 total 2nd Floor	None	Detected
2	Plaster - skim	H. green	2nd Floor Bedrm #4	None	Detected
3	Plaster - base	Cementitious	" "	None	Detected
4	Ceiling Texture	White	Dining Room 15x14	None	Detected
5	Ceiling Texture	White	Living Room 20x12	None	Detected
6	Plaster - skim	Green	Living Room	None	Detected
7	Plaster - base	Cementitious	" "	None	Detected
8	Plaster - skim	Ivory	Dining	None	Detected
9	Plaster - base	Cementitious	" "	None	Detected
10	Window Glazing	Grey	Basement 5 Total	Chlor	2%

Angstrom Analytical
5001 Cedar Lake Road
St. Louis Park, Mn 55416



ASBESTOS ABATEMENT ASSOCIATES

ASBESTOS (PLM) BULK SAMPLES
REPORT OF MATERIALS ANALYSIS

CLIENT City of St. Paul	Project Location	Result Via Email	Date Entry 11/16/12	Approved By KM
CLIENT ADDRESS 971 Genks Ave.	Client/Receiving # 11-18		Project # 27060	Analyst KM
St. Paul 55106	Assigned Lab # 12-10		Date Rec'd 11/16/12	Analyzed 11/19/12
Fax #			Date Mailed	Picked

Sample Number	Material	Physical Description	Location	Asbestos Type	Approximate Percent
11	Brick Composite	Black, white, Red	10x8 and 9x6 areas Kitchen Wall	None	Detected
12	Under Coating	White	Sink 4 sq. ft.	None	Detected
13	Window Glazing	White	1st Floor - total Cold Air Return SW Corner 10 lin. ft.	CH2	2%
14	Paper	Grey	1st Floor Bathroom } 7x4 and 9x5 areas	CH2	22%
15	Ceramic Tile	Blue	1st Floor Bathroom } 7x4 and 9x5 areas	None	Detected
16	Grout to #15	Brown	1st Floor Bathroom } 7x4 and 9x5 areas	None	Detected
17	Ceiling Tile Sheet Vinyl	White	1st Floor Bathroom } 7x4 and 9x5 areas	None	Detected
18	Backing	Grey	Under 1st Floor Kitchen 10x16	None	Detected

ANGSTROM ANALYTICAL
MAR 4 2009 3:22PM



Asbestos Abatement Associates

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The structure is ready to be demolished only after the Friable Asbestos containing items are removed by an Asbestos contractor. The non-friable Asbestos can remain in place for demolition but you must make the landfill aware the debris has non-friable class nine materials mixed in. Non Friable Asbestos containing materials are subject to the MPCA rules and notifications.

All hazardous materials need to be managed properly and removed prior to demolition. The following is a sample of hazardous building materials:

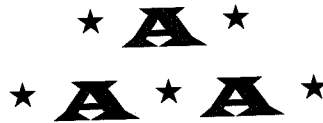
- Polychlorinated Biphenyls (PCBS) found in light ballasts, capacitors, HVAC systems, and transformers.
- Mercury found in fluorescent lamps, switches, vapor lamps, thermostats, metal halide lamps, high pressure sodium lamps, neon lamps, manometers, and gauges. Many mercury containing materials were used in appliances, HVAC systems, or industrial switches or controls, thermocouples, temperature sensors, and other electrical equipment.
- Pb based paint that is not adhering to the substrate.
- Refrigerants/CFCs/HCFCs are found in refrigerators, AC systems, drinking fountains, dehumidifiers, vending machines, heat pumps, chillers, freezers, ice machines, food display cases.
- Appliances including stoves, refrigerators, furnaces, air exchangers, water heaters, etc.
- Chemicals, oils, batteries, paint cans, agricultural chemicals, other hazardous building materials.
- Trash, furniture, mattresses, engine parts, construction waste, etc.

Sincerely,
Richard Pruitt

*North Metro: 612-588-7755
St. Paul: 651-633-4060*

*South Metro: 612-823-2955
Fax: 612-588-6780*

Email: abatenow@popp.net

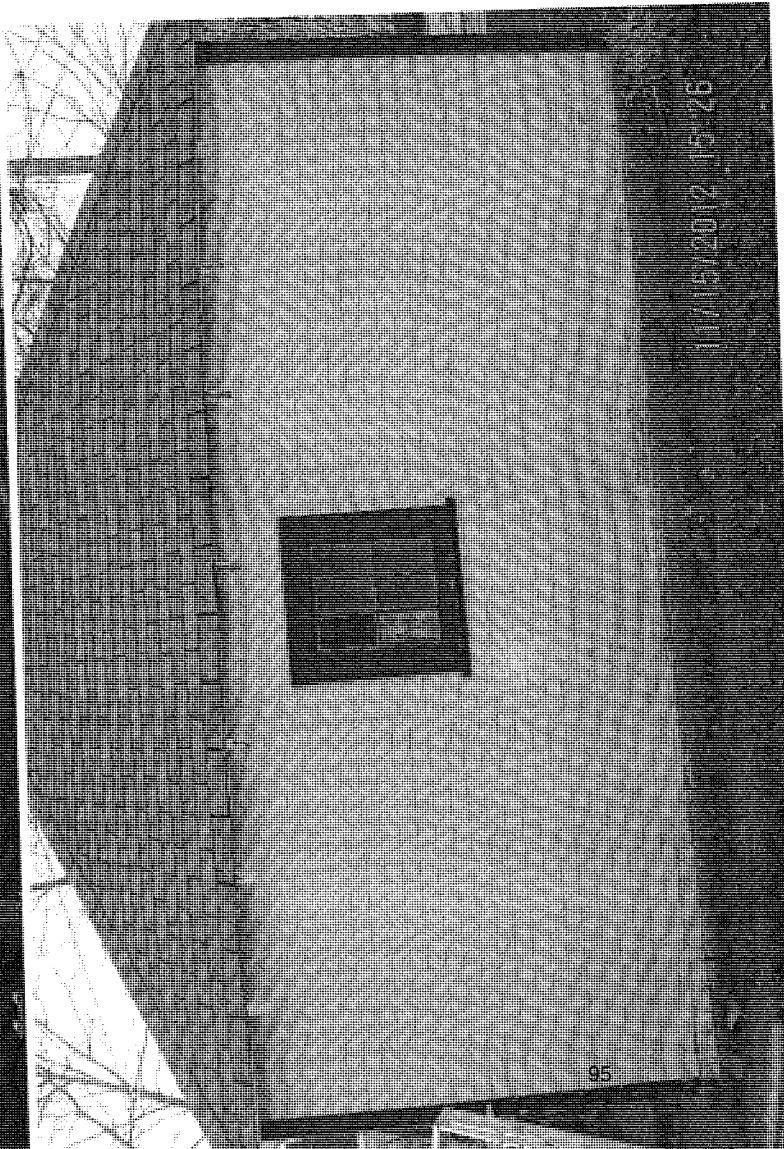
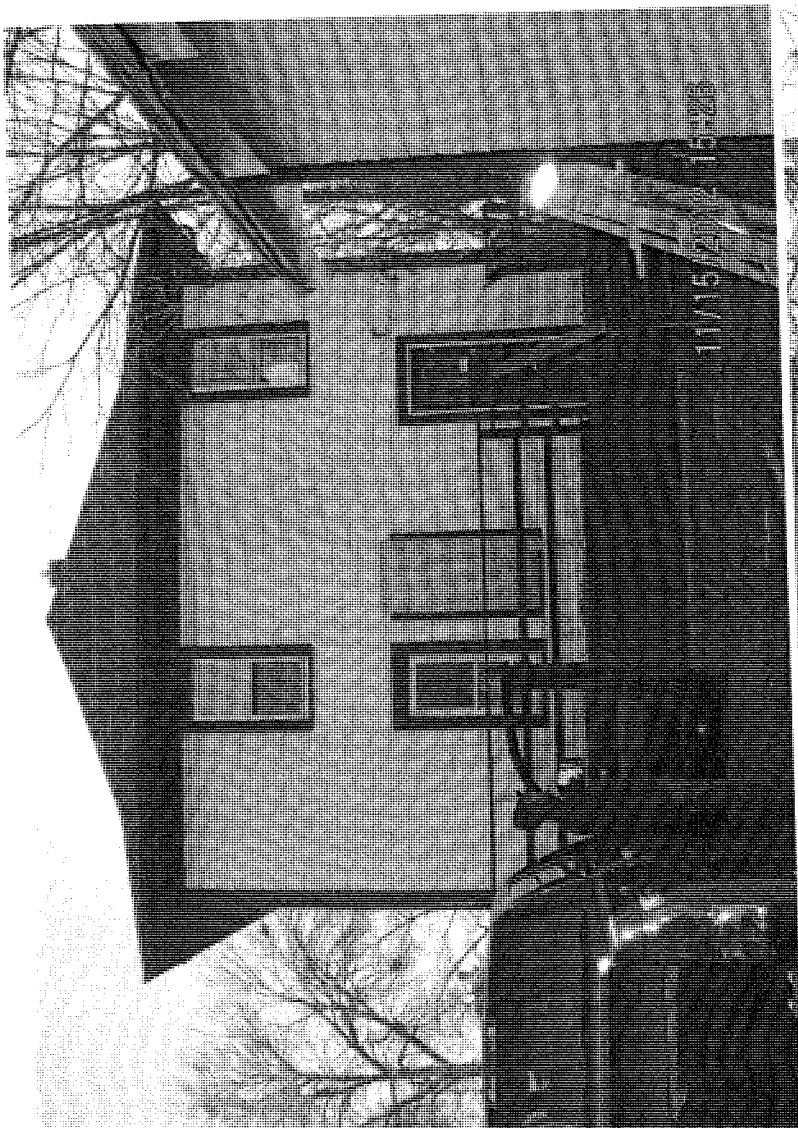
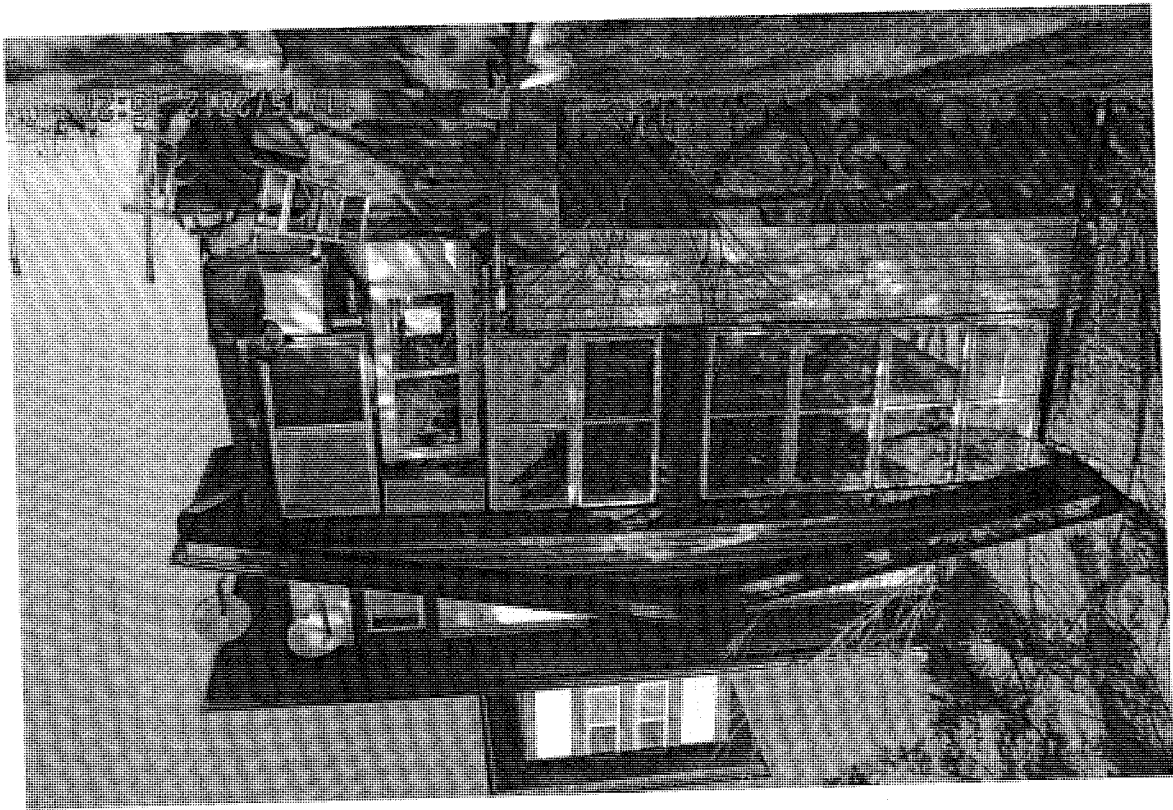


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3125 Logan Ave. N., Minneapolis, MN 55411

Sampling Area Measurements for Abatement 971 Jenks Ave., St. Paul, MN

Sample #10 grey window glazing basement	5 total
Sample #13 white window glazing 1st floor	6 total
Sample #14 grey paper on cold air return SW Corner 10 linear ft.	
Assumed: paper next to furnace	2 sq. ft.
Assumed: paper on boots in basement	4-6 sq. ft.
Assumed: paper heating vent 1st floor 2 each	4 sq. ft.
Assumed: Asbestos paper mixed with general debris in crawl space unknown amount space size 14x4	
Assumed: paper on ducting running to 2nd floor 80-100 sq. ft.	



AIHA Bulk Asbestos Program - Individual Lab Results

Text of the "Final Report to Laboratories" (PDF)

Home

American Industrial Hygiene Association Bulk Asbestos Analytical Testing Program Results of Round A69-406 1/15/2007

Charles Tye
Angstrom Analytical, Inc.
5001 Cedar Lake Road South
St. Louis Park, MN 55416

Laboratory ID Number
101099

Total Penalty Points
Round Status
Program Status
0
P
P

Lot Designation\Sample ID Numbers	A) 4995	B) 2942	C) 3637	D) 2594
Analysis Results from Laboratory Number 101099				
Asbestos (%)	AMOS (10)	CHRY (35)	NONE (0)	ANTH (80)
	CHRY (8)	NONE (0)	NONE (0)	NONE (0)
	NONE (0)	NONE (0)	NONE (0)	NONE (0)
Other Fibrous Materials (%)	NONE (0)	NONE (0)	SYNT (40)	NONE (0)
	NONE (0)	NONE (0)	NONE (0)	NONE (0)
Nonfibrous Material (%)	OTHR (82)	OTHR (65)	OTHR (40)	OTHR (20)
Penalty Points Assessed	0	0	0	0

Analysis Results from Reference Laboratory One						ANTH (70)
Asbestos (%)	AMOS (8)	CHRY (25)				
	CHRY (6)	ACTN (TRA)				
Other Fibrous Materials (%)		FBGL (5)	CELL (15)			
Nonfibrous Material (%)	ACID (86)	ACID (70)	MICA (40)	OTHR (30)		
			ACID (45)			

Analysis Results from Reference Laboratory Two						ANTH (85)
Asbestos (%)	AMOS (15)	CHRY (11)				
	CHRY (3)	AMOS (TRA)				
Other Fibrous Materials (%)		FBGL (81)	CELL (25)			
Nonfibrous Material (%)	OTHR (82)	OTHR (8)	OTHR (75)	OTHR (15)		

Acceptable Quantitation Range (%)	AMOS (1-25)	CHRY (5-50)				ANTH (35-100)
	CHRY (TRA-15)					

Summary of Results from all Laboratories						ANTH 53.7
Type One Asbestos	AMOS 11.5	CHRY 22.0				
Type One Mean	CHRY 14.8					
Type Two Asbestos						
Type Two Mean						
Type Three Asbestos						
Type Three Mean						
Other Asbestos Types Reported in Sample	ACTN, ANTH, CROC	AMOS, ANTH, CROC, TREM				ACTN, AMOS, CHRY, TREM

ACTN=Actinolite
AMOS=Amosite
ANTH=Anthophyllite

CHRY=Chrysotile
CROC=Crocidolite
TREM=Tremolite

CELL=Cellulose
FBGL=Fiberglass/Mineral Wool
SYNT=Synthetic

ACID = acid-soluble fraction, including but not limited to, calcite, gypsum, dolomite, magnesite, hydromagnesite, anhydrite, and bassanite
MICA=Micaceous Material
OTHR=Other

Round Status: P=Pass F=Fail TE = Temporarily Excused
Program Status: P=Proficient NP=Nonproficient NA = Not Applicable

Expiration Date: April 2, 2013

Certificate No: 5LM04021217IR

This is to certify that

Richard C. Pruitt

has attended and successfully completed an

**ASBESTOS INSPECTOR
REFRESHER TRAINING COURSE**

permitted by

the State of Minnesota under Minnesota Rules 4620.3702 to 4620.3722
and meets the requirements of

Section 206 of Title II of the Toxic Substances Control Act (TSCA)
conducted by

Lake States Environmental, Ltd.

White Bear Lake, MN on April 2, 2012

Examination Date: April 2, 2012

Lake States Environmental, Ltd.
P. O. Box 645, Rice Lake, WI 54868
(800) 254-9811

Paul D. Pruitt
Training Instructor



Certified by:
State of Minnesota
Department of Health
Expires: 04/02/2013
Richard C Pruitt
3125 Logan Ave No
Minneapolis, MN 55411

Richard C. Pruitt
Director, Env. Health Div.

No. A11207

Issued: 04/05/2012



**Angstrom Analytical &
Environmental Services**

5001 Cedar Lake Road * St. Louis Park, MN 55416
952-252-0405 952-252-0407 fax

November 19, 2012

Asbestos Abatement Associates
3125 Logan Ave N
Minneapolis, MN 55411
612-588-7755

Owner:
City of St. Paul
15 Kellogg Blvd.
St. Paul, MN 55102
651-266-8989

Lead-Based Paint Inspection
971 Jenks Ave. St. Paul, MN

This report provides the results of lead-based paint testing conducted on November 19, 2012 at 971 Jenks Ave. The property is a single-family residential property located in St. Paul, MN. The inspection was conducted by Kevin Hagen (MN Lic. No. LR 2036). Angstrom Analytical, Inc. was authorized by you to conduct an inspection for lead-based paint using a field portable x-ray fluorescence (XRF) analyzer. The purpose of this assessment was to determine if lead based paint exists at the above referenced property.

The property consists of a two story single family home with a full basement. The basement is unfinished. There was a garage on the property. According to Zillow.com the property was built in 1909. For sample location purposes, side A of the building is the side facing Jenks Ave. and is lettered clockwise around the building. The exteriors consist of a vinyl siding with some wood lap siding on the front porch. There is also metal trim work, fascia, soffit and metal gutters, all with factory applied finishes. Building foundation is concrete. Bare soil was observed around the property. No soil samples were collected. At a minimum, the Minnesota Dept. of Health recommends bare soils be made intact by covering them over with either sod, landscaping stone or mulch.

The interior has been remodeled with most of the windows being stained with some being vinyl, uniform in size and are of the double hung type. The cabinets in the bathrooms and kitchen are painted.

Results

Results of XRF analysis are summarized in the following report (see Appendix A), which utilize Department of Housing and Urban Development (HUD) thresholds (see remarks) for lead-based paint. Painted surfaces are rated on condition as Intact, Fair or Poor. Intact surfaces are free of visual damage/deterioration. Fair or poor rating indicates the paint is damaged and is deteriorated. Any condition listed as fair or poor is a deteriorated condition. The inspection was conducted using HUD "Guidelines for the Evaluation and Control of Lead Based Paint in Housing" using the October 1997 revised Chapter 7 protocols. The sampling criteria used are found in the HUD Standards 24 CFR Part 35 et al.

Methodology

Testing was accomplished using a Niton XL 300 series. This instrument is a portable, non-destructive, in-site testing and measurement instrument that renders an average precision of ± 0.3 milligrams per square centimeter (mg/cm^2) depending upon the length of time the sample point is tested. The XRF uses a source of Cd-109. Specific precision limits are established by the National Institute of Standards and Technology (NIST). The XRF instrument was checked using the NIST Standard Reference for calibration checks. The instrument's operational mode is standard paint mode. This instrument is operated by Minnesota Department of Health licensed lead inspectors. Where conclusive results were not obtained by XRF testing, confirmatory paint chip samples were or can be collected for laboratory analysis. The XRF instrument was calibrated, using a known lead paint film, at the beginning, every four hours and at the end of each day.

Remarks

The Lead-Based Paint Poisoning Prevention Act (LBPPA) has established an action level for public housing. Under the statute, lead-based paint hazards equal to or greater than $1.0 \text{ mg}/\text{cm}^2$ or 0.5 percent by weight must be abated. It is important to keep in mind that the testing results of a component also apply to any similar component not tested. For example, if a white, painted baseboard tests positive then the entire white painted baseboard in that room is also considered positive.

All sampling was conducted by representatives of Angstrom Analytical, Inc. Standards for private or commercial housing may vary by locality.

Results

The results of the portable x-ray fluorescence (XRF) analysis of the representative building components are listed in appendix A. All paint testing was conducted using the XRF unit. The XRF was calibrated and the beginning of each days inspection, during the inspection and at the end of each days inspection. Calibration was conducted on known lead paint films provided by the manufacturer. The results of the calibrations are within acceptable limits of the Performance Characteristic Sheet for the instrument. XRF results are expressed in units of milligrams per square centimeter (mg/cm^2) (see Remarks for action levels). XRF results are classified as positive or negative. A component that tests positive indicates leads is present at or above the standard (see Remarks).

Discussion

Painted building components were assessed visually for condition. Paint is rated on its condition as intact, fair and poor. Intact means good condition, Fair means less than two square feet of damage to a large interior surface or less than 10 square feet to a large exterior surface or less than 10% damage to a small surface area. Poor condition means greater than 2 square feet of damage on large interior surface, more than 10 square feet on a large exterior surface or more than 10% damage to a small surface area. Painted surfaces listed as in fair or poor condition are considered deteriorated. Based on our inspection findings, lead based paint was identified on the following:

- Painted wood walls.
- Painted plaster ceilings.
- Painted plaster walls.
- Painted wood window components.
- Painted wood doors and door components.

Lead Based Painted Components

- The tan painted plaster walls in the master bedroom.
- The white painted plaster ceiling in the master bedroom.
- The metal clad window troughs throughout the house.
- The white painted plaster ceiling in the 2nd floor hallway.
- The tan painted plaster walls in the 2nd floor west bedroom.
- The white painted plaster ceiling in the 2nd floor west bedroom.
- The tan painted plaster walls in the 2nd floor east bedroom.
- The white painted plaster ceiling in the 2nd floor east bedroom.
- The white painted wood door in the 1st floor hallway. (Leading to the deck)
- The white painted wood cellar windows throughout the basement.
- The green painted lap siding on the front porch.
- The green painted wood columns on the front porch.
- The white painted window ledge on the front porch.
- The white painted wood windows throughout the front porch.
- The green and black painted metal clad trim throughout the exterior of the house.
- The white painted wood basement cellar windows throughout the exterior of the house.
- The white painted wood side door on the exterior of the house.
- The black painted wood side door jamb.
- The black painted metal clad side door trim.
- The black painted wood door on the back deck.
- The black painted metal door trim on the back deck.

- The white painted wood siding on the garage.
- The black painted wood trim on the garage.
- The black painted wood window components on the garage.
- The white painted wood double doors on the garage.

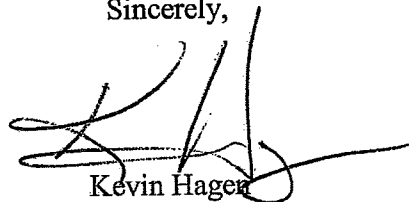
Please refer to the Lead Based Paint Testing Report (Appendix A) for specific locations and conditions. At a minimum, surfaces in fair to poor condition need to be stabilized. Intact lead based paint surfaces are not considered a hazard. However they do need to be maintained in an intact condition and periodically monitored. Specific surfaces not identified in this report should be treated as lead based unless testing proves otherwise.

Recommendations

Angstrom Analytical recommends that lead related work be performed by trained individuals and follow all applicable regulations regarding lead and lead hazards. If you are using federal funding you are required to use qualified firms, knowledgeable in hazards associated with lead and are certified / licensed to perform lead remediation services. A copy of this report must be provided to purchasers/lessees on this property under Federal law, 24 CFR part 35 and 40 CFR part 745.

If you have any questions or need further assistance, please call us at the number above.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kevin Hagen', with a stylized flourish extending from the end.

Kevin Hagen
Angstrom Analytical, Inc.

Sample No.	Date	Time	Location	Material	Condition	Color	Notes	Test Results	Remarks
1	11/19/2012	12:05						4.96	0
2	11/19/2012	12:08	cal-in	WOOD	INTACT	WHITE		Positive	0.2
3	11/19/2012	12:09	cal-in	WOOD	INTACT	WHITE		Positive	0.1
4	11/19/2012	12:09	cal-in	WOOD	INTACT	WHITE		Positive	0.2
5	11/19/2012	12:10	TREAD	WOOD	INTACT	WHITE	attic Stairwell	Negative	0.38
6	11/19/2012	12:11	WALL	WOOD	INTACT	WHITE	attic stairwell	Negative	2.12
7	11/19/2012	12:12	WALL	PLASTER	INTACT	TAN	MBR	Positive	4.9
8	11/19/2012	12:13	CEILING	PLASTER	INTACT	WHITE	MBR	Positive	6.75
9	11/19/2012	12:13	crwn mold	WOOD	INTACT	WHITE	MBR	Negative	0.05
10	11/19/2012	12:13	WINDOW	WOOD	INTACT	BROWN	MBR	Negative	0.17
11	11/19/2012	12:14	WINDOW trim	WOOD	INTACT	BROWN	MBR	Negative	0.18
12	11/19/2012	12:14	WINDOW trough	METAL	INTACT	WHITE	MBR	Positive	10.6
13	11/19/2012	12:15	BASEBOARD	WOOD	INTACT	BROWN	MBR	Negative	0.08
14	11/19/2012	12:15	DOOR	WOOD	INTACT	WHITE	MBR	Negative	0.08
15	11/19/2012	12:16	BASEBOARD	WOOD	INTACT	WHITE	HALL	Negative	0.11
16	11/19/2012	12:16	WALL	DRYWALL	INTACT	TAN	HALL	Negative	0.03
17	11/19/2012	12:17	CEILING	PLASTER	INTACT	WHITE	HALL	Positive	13.5
18	11/19/2012	12:17	DOOR	WOOD	INTACT	WHITE	HALL	Negative	0.03
19	11/19/2012	12:18	DOOR trim	WOOD	INTACT	WHITE	HALL	Negative	0.12
20	11/19/2012	12:19	DOOR trim	WOOD	INTACT	WHITE	w. bedroom	Negative	0.16
21	11/19/2012	12:19	BASEBOARD	WOOD	INTACT	WHITE	w. bedroom	Negative	0.12
22	11/19/2012	12:19	WINDOW	WOOD	INTACT	WHITE	w. bedroom	Negative	0.2
23	11/19/2012	12:20	WINDOW trim	WOOD	INTACT	WHITE	w. bedroom	Negative	0.13
24	11/19/2012	12:20	WINDOW trough	METAL	INTACT	WHITE	w. bedroom	Positive	28.5
25	11/19/2012	12:21	WALL	PLASTER	INTACT	TAN	w. bedroom	Positive	14.1
26	11/19/2012	12:21	CEILING	PLASTER	INTACT	WHITE	w. bedroom	Positive	13.95
27	11/19/2012	12:22	CEILING	PLASTER	INTACT	TAN	w. bedroom	Positive	4.4
28	11/19/2012	12:22	WALL	PLASTER	INTACT	WHITE	E bedroom	Positive	6.9
29	11/19/2012	12:22	BASEBOARD	WOOD	INTACT	WHITE	E bedroom	Positive	4.5
30	11/19/2012	12:22	DOOR	WOOD	INTACT	WHITE	E bedroom	Negative	0.17
31	11/19/2012	12:23	DOOR trim	WOOD	INTACT	WHITE	E bedroom	Negative	0.03
32	11/19/2012	12:23	WINDOW	WOOD	INTACT	WHITE	E bedroom	Negative	0.09
33	11/19/2012	12:23	WINDOW	WOOD	INTACT	WHITE	E bedroom	Null	0.62
								Negative	0.16

34	11/19/2012 12:24 WINDOW trim	WOOD	D	INTACT	WHITE	971 SECOND	E bedroom	Negative	< LOD	0.06
35	11/19/2012 12:24 WINDOW trough	METAL	D	INTACT	WHITE	971 SECOND	E bedroom	Positive	< LOD	2.6
36	11/19/2012 12:25 WINDOW trough	METAL	C	INTACT	WHITE	971 SECOND	N bedroom	Negative	< LOD	0.13
37	11/19/2012 12:26 WINDOW trim	WOOD	C	INTACT	WHITE	971 SECOND	N bedroom	Negative	< LOD	0.08
38	11/19/2012 12:26 WINDOW	WOOD	C	INTACT	WHITE	971 SECOND	N bedroom	Negative	< LOD	0.4
39	11/19/2012 12:26 BASEBOARD	WOOD	C	INTACT	WHITE	971 SECOND	N bedroom	Negative	< LOD	0.17
40	11/19/2012 12:27 DOOR	WOOD	A	INTACT	WHITE	971 SECOND	N bedroom	Negative	< LOD	0.03
41	11/19/2012 12:27 DOOR trim	WOOD	A	INTACT	GREEN	971 SECOND	N bedroom	Negative	< LOD	0.03
42	11/19/2012 12:27 WALL	PLASTER	A	INTACT	WHITE	971 SECOND	N bedroom	Null	0.5	0.2
43	11/19/2012 12:28 CEILING	PLASTER	A	INTACT	WHITE	971 SECOND	N bedroom	Negative	< LOD	1.35
44	11/19/2012 12:28 CEILING	PLASTER	A	INTACT	WHITE	971 SECOND	BATHROOM	Null	1	0.6
45	11/19/2012 12:29 CEILING	PLASTER	A	INTACT	WHITE	971 SECOND	BATHROOM	Null	0.9	0.2
46	11/19/2012 12:30 CEILING	PLASTER	A	INTACT	WHITE	971 SECOND	BATHROOM	Negative	< LOD	0.03
47	11/19/2012 12:30 CEILING	PLASTER	A	INTACT	RED	971 SECOND	BATHROOM	Negative	< LOD	0.03
48	11/19/2012 12:30 WALL	DRYWALL	A	INTACT	WHITE	971 SECOND	BATHROOM	Negative	< LOD	0.03
49	11/19/2012 12:31 BASEBOARD	WOOD	B	INTACT	WHITE	971 SECOND	BATHROOM	Negative	< LOD	0.06
50	11/19/2012 12:31 WINDOW	WOOD	B	INTACT	WHITE	971 SECOND	BATHROOM	Negative	< LOD	0.03
51	11/19/2012 12:32 WINDOW trim	WOOD	B	INTACT	WHITE	971 SECOND	BATHROOM	Negative	< LOD	0.03
52	11/19/2012 12:32 WINDOW trough	METAL	B	INTACT	WHITE	971 SECOND	BATHROOM	Positive	< LOD	11.4
53	11/19/2012 12:33 DOOR	WOOD	C	INTACT	WHITE	971 SECOND	BATHROOM	Negative	< LOD	0.03
54	11/19/2012 12:33 DOOR trim	WOOD	C	INTACT	WHITE	971 SECOND	BATHROOM	Negative	< LOD	0.03
55	11/19/2012 12:34 CABINET	WOOD	D	INTACT	WHITE	971 SECOND	BATHROOM	Negative	< LOD	0.03
56	11/19/2012 12:35 stringer	WOOD	D	INTACT	BROWN	971 FIRST	STAIR	Negative	< LOD	0.09
57	11/19/2012 12:35 railing	WOOD	D	INTACT	BROWN	971 FIRST	STAIR	Negative	< LOD	0.13
58	11/19/2012 12:36 DOOR	METAL	A	INTACT	WHITE	971 FIRST	LIVING ROOM	Negative	< LOD	0.03
59	11/19/2012 12:36 DOOR trim	WOOD	A	INTACT	BROWN	971 FIRST	LIVING ROOM	Negative	< LOD	0.03
60	11/19/2012 12:37 CEILING	PLASTER	A	INTACT	WHITE	971 FIRST	LIVING ROOM	Negative	< LOD	0.03
61	11/19/2012 12:37 crown mold	WOOD	A	INTACT	WHITE	971 FIRST	LIVING ROOM	Negative	< LOD	0.03
62	11/19/2012 12:38 WALL	PLASTER	A	INTACT	GREEN	971 FIRST	LIVING ROOM	Negative	< LOD	0.11
63	11/19/2012 12:38 BASEBOARD	WOOD	A	INTACT	BROWN	971 FIRST	LIVING ROOM	Negative	< LOD	0.11
64	11/19/2012 12:38 WINDOW	WOOD	A	INTACT	BROWN	971 FIRST	LIVING ROOM	Negative	< LOD	0.29
65	11/19/2012 12:39 WINDOW trim	WOOD	A	INTACT	BROWN	971 FIRST	LIVING ROOM	Negative	< LOD	0.03
66	11/19/2012 12:39 FLOOR	WOOD	A	INTACT	BROWN	971 FIRST	LIVING ROOM	Negative	< LOD	0.03
67	11/19/2012 12:40 FLOOR	WOOD	A	INTACT	BROWN	971 FIRST	dining	Negative	< LOD	0.03

68	11/19/2012 12:40	WALL	PLASTER	C	INTACT	GREEN	971 FIRST	dining	Negative	< LOD	0.03
69	11/19/2012 12:41	CEILING	PLASTER	C	INTACT	WHITE	971 FIRST	dining	Negative	< LOD	0.03
70	11/19/2012 12:41	BASEBOARD	WOOD	C	INTACT	BROWN	971 FIRST	dining	Negative	< LOD	0.12
71	11/19/2012 12:41	WINDOW trim	WOOD	C	INTACT	BROWN	971 FIRST	dining	Negative	< LOD	0.17
72	11/19/2012 12:42	crown mold	WOOD	C	INTACT	WHITE	971 FIRST	dining	Negative	< LOD	0.21
73	11/19/2012 12:43	crown mold	WOOD	B	INTACT	WHITE	971 FIRST	W room	Negative	< LOD	0.08
74	11/19/2012 12:43	CEILING tile	WOOD	B	INTACT	WHITE	971 FIRST	W room	Negative	< LOD	0.09
75	11/19/2012 12:44	BASEBOARD	WOOD	B	INTACT	WHITE	971 FIRST	W room	Negative	< LOD	0.22
76	11/19/2012 12:44	WALL	PLASTER	B	INTACT	RED	971 FIRST	W room	Negative	< LOD	0.03
77	11/19/2012 12:44	WALL	WOOD	C	INTACT	RED	971 FIRST	W room	Negative	< LOD	0.03
78	11/19/2012 12:45	WINDOW trim	WOOD	C	INTACT	BROWN	971 FIRST	W room	Negative	< LOD	0.13
79	11/19/2012 12:45	DOOR	WOOD	D	INTACT	WHITE	971 FIRST	W room	Negative	< LOD	0.03
80	11/19/2012 12:47	DOOR trim	WOOD	D	INTACT	WHITE	971 FIRST	W room	Negative	< LOD	0.12
81	11/19/2012 12:48	DOOR trim	WOOD	D	INTACT	WHITE	971 FIRST	KITCHEN	Negative	< LOD	0.25
82	11/19/2012 12:49	DOOR	WOOD	D	INTACT	WHITE	971 FIRST	KITCHEN	Negative	< LOD	0.25
83	11/19/2012 12:49	WINDOW trim	WOOD	D	INTACT	WHITE	971 FIRST	KITCHEN	Negative	< LOD	0.2
84	11/19/2012 12:49	BASEBOARD	WOOD	D	INTACT	WHITE	971 FIRST	KITCHEN	Negative	< LOD	0.03
85	11/19/2012 12:50	CABINET	WOOD	C	INTACT	WHITE	971 FIRST	KITCHEN	Negative	< LOD	0.12
86	11/19/2012 12:50	WALL	WOOD	A	INTACT	RED	971 FIRST	KITCHEN	Negative	< LOD	0.03
87	11/19/2012 12:50	WALL	DRYWALL	A	INTACT	RED	971 FIRST	KITCHEN	Negative	< LOD	0.03
88	11/19/2012 12:51	WALL	brick	D	INTACT	RED	971 FIRST	KITCHEN	Negative	< LOD	0.15
89	11/19/2012 12:52	CEILING	DRYWALL	B	INTACT	WHITE	971 FIRST	HALL	Negative	< LOD	0.03
90	11/19/2012 12:52	CEILING	DRYWALL	B	INTACT	WHITE	971 FIRST	HALL	Negative	< LOD	0.03
91	11/19/2012 12:53	WALL	DRYWALL	B	INTACT	GREEN	971 FIRST	HALL	Negative	< LOD	0.03
92	11/19/2012 12:53	BASEBOARD	WOOD	B	INTACT	WHITE	971 FIRST	HALL	Negative	< LOD	1
93	11/19/2012 12:53	DOOR	WOOD	C	INTACT	WHITE	971 FIRST	HALL	Positive	2.2	0.06
94	11/19/2012 12:53	DOOR trim	WOOD	C	INTACT	WHITE	971 FIRST	HALL	Negative	< LOD	0.03
95	11/19/2012 12:54	DOOR trim	WOOD	C	INTACT	WHITE	971 FIRST	BATHROOM	Negative	< LOD	0.04
96	11/19/2012 12:54	DOOR	WOOD	C	INTACT	WHITE	971 FIRST	BATHROOM	Negative	< LOD	0.03
97	11/19/2012 12:54	WALL	WOOD	A	INTACT	WHITE	971 FIRST	BATHROOM	Negative	< LOD	0.3
98	11/19/2012 12:55	WALL	DRYWALL	A	INTACT	WHITE	971 FIRST	BATHROOM	Negative	< LOD	0.03
99	11/19/2012 12:56	TREAD	WOOD	B	INTACT	WHITE	971 BASEMENT	STAIR	Negative	< LOD	0.1
100	11/19/2012 12:57	FLOOR	CONCRETE	B	INTACT	gray	971 BASEMENT		Negative	< LOD	0.03
101	11/19/2012 12:57	WALL	CONCRETE	B	POOR	WHITE	971 BASEMENT		Negative	< LOD	0.03

102	11/19/2012 12:58 WINDOW	WOOD	D	INTACT	WHITE	971 BASEMENT	971	1.7	0.7
103	11/19/2012 13:00 siding	WOOD	A	INTACT	GREEN	PORCH	971	< LOD	31.2
104	11/19/2012 13:00 COLUMN	WOOD	A	INTACT	GREEN	PORCH	971	< LOD	37.2
105	11/19/2012 13:01 WINDOW ledge	WOOD	A	INTACT	WHITE	PORCH	971	< LOD	28.8
106	11/19/2012 13:01 WINDOW sill	WOOD	C	INTACT	WHITE	PORCH	971	< LOD	25.2
107	11/19/2012 13:02 WINDOW	WOOD	C	INTACT	WHITE	PORCH	971	21.4	12.2
108	11/19/2012 13:02 WINDOW trim	WOOD	C	INTACT	WHITE	PORCH	971	< LOD	37.2
109	11/19/2012 13:02 CEILING	WOOD	C	INTACT	BROWN	OUTSIDE	971	< LOD	0.03
110	11/19/2012 13:03 steps	CONCRETE	A	POOR	GREEN	OUTSIDE	971	< LOD	0.03
111	11/19/2012 13:04 foundation	CONCRETE	A	POOR	GREEN	OUTSIDE	971	< LOD	0.03
112	11/19/2012 13:05 sill flashing	METAL	A	INTACT	black	OUTSIDE	971	< LOD	0.03
113	11/19/2012 13:06 siding	METAL	A	INTACT	WHITE	OUTSIDE	971	< LOD	0.8
114	11/19/2012 13:06 TRIM	METAL	A	INTACT	black	OUTSIDE	971	1.9	0.9
115	11/19/2012 13:07 TRIM	METAL	A	INTACT	GREEN	OUTSIDE	971	< LOD	0.03
116	11/19/2012 13:08 soffit	METAL	A	INTACT	black	OUTSIDE	971	< LOD	7.95
117	11/19/2012 13:08 cellar window	WOOD	D	POOR	WHITE	OUTSIDE	971	8.2	4.2
118	11/19/2012 13:09 WINDOW trim	METAL	D	INTACT	black	OUTSIDE	971	1.9	0.8
119	11/19/2012 13:10 side door	WOOD	D	INTACT	WHITE	OUTSIDE	971	16.4	9.7
120	11/19/2012 13:10 side door jamb	WOOD	D	INTACT	black	OUTSIDE	971	1.7	0.6
121	11/19/2012 13:11 side door trim	METAL	D	INTACT	black	OUTSIDE	971	< LOD	0.03
122	11/19/2012 13:12 deck	WOOD	D	POOR	black	OUTSIDE	971	< LOD	6.3
123	11/19/2012 13:12 DOOR	WOOD	D	INTACT	black	OUTSIDE	971	< LOD	28.5
124	11/19/2012 13:13 DOOR trim	METAL	D	INTACT	black	OUTSIDE	971	< LOD	0.03
125	11/19/2012 13:13 siding	vinyl	D	INTACT	WHITE	OUTSIDE	971	2	0.7
126	11/19/2012 13:14 siding	WOOD	A	INTACT	WHITE	GARAGE	971	< LOD	9.6
127	11/19/2012 13:15 TRIM	WOOD	A	INTACT	black	GARAGE	971	2.6	1.3
128	11/19/2012 13:15 WINDOW	WOOD	A	INTACT	black	GARAGE	971	< LOD	6.45
129	11/19/2012 13:15 WINDOW trim	WOOD	A	INTACT	black	GARAGE	971	< LOD	0.03
130	11/19/2012 13:16 DOOR	METAL	A	INTACT	WHITE	GARAGE	971	< LOD	0.03
131	11/19/2012 13:16 DOOR trim	WOOD	A	PEELING	WHITE	GARAGE	971	< LOD	0.41
132	11/19/2012 13:17 DOOR trim	WOOD	C	INTACT	black	GARAGE	971	< LOD	62.7
133	11/19/2012 13:17 DOOR	WOOD	C	PEELING	WHITE	GARAGE	971	1.2	0.2
134	11/19/2012 13:18 cal-out						971	1.1	0.1
135	11/19/2012 13:19 cal-out						971		

136 11/19/2012 13:19 cal-out

971

Positive

1.2

0.2



David L. Osterman
Director, Env. Health Div.



**LEAD
Risk Assessor**

Licensed by:
State of Minnesota
Department of Health
License No. LR2036
Expires 09/20/2013

Kevin P Hagen
7038 Upper 36th St N
Oakdale, MN 55128

Minnesota Department of Health

has authorized

Angstrom Analytical, Inc.

5001 Cedar Lake Rd S

St Louis Park, Minnesota 55416

in accordance with Minnesota Statutes, section 144.9505 and Minnesota Rules, part 4761.2200,
to practice in the State of Minnesota as a

Certified Lead Firm

License No: LF127

Expires 12/08/2012

This certificate is nontransferable.


Linda B. Bruemmer, Director
Division of Environmental Health

Radon Test Result: 0.6 ±0.1 pCi/L

Test Started 11/15/12 at 11:00 am

Test Ended 11/20/12 at 10:00 am

Closed house conditions maintained during test.

Location Basement

|||||
JULES ATANGANA
971 JENKS AVE
SAINT PAUL, MN 55106-3211

INTERPRETING YOUR TEST RESULT

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READ THIS FIRST

This result has been rounded to one-tenth (0.1) of a pCi/L (picoCurie per liter), the most common method of reporting radon in air.

NEXT...PLEASE...READ

everything under the heading

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Your health risk

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. Exposures up to 4 pCi/L may present some risk of contracting lung cancer to more sensitive occupants, especially children. Recently the US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

What is a picoCurie

For those interested in the numbers, a picoCurie is 0.000,000,000,001 (one-trillionth) of a Curie, an international measurement unit of radioactivity. One pCi/L means that in one liter of air there will be 2.2 radioactive disintegrations each minute. For example, at 4 pCi/L there will be approximately 12,672 radioactive disintegrations in one liter of air, during a 24-hour period.

Conducting Follow-up Measurements

USEPA protocol describes two general types of radon measurements: short-term tests conducted from 48 hours up to 90 days, and long-term tests that last from 90 to 365 days. Your first test (initial/screening) should be a short-term 'worst-case' screening to see if there is a potential for high exposure to radon. Screening tests should be conducted under closed-building conditions, in the lowest lived-in area in the house, because the highest concentrations of radon will usually be found in a room closest to the underlying soil. Tests made under these conditions are less likely to miss a house with a potential for high concentrations. On the other hand, if the results of worst-case screening tests are very low, there is a high probability that the average annual concentrations in the house are also low.

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It is recommended that before spending any time or money on radon mitigation, one should conduct multiple (three or more) tests to be certain there is a need. A few more tests will most certainly cost considerably less than any mitigation work.

If follow-up measurements have **confirmed** that the average annual level of radon is equal to or greater than 4 pCi/L, the USEPA recommends that the building or home be mitigated for radon. Consider also that a future buyer is likely to demand that the building pass a radon test before purchasing.

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weather, indoor radon levels may rise and fall by a factor of two on a daily cycle; for example, from 5 pCi/L to 10 pCi/L in 24 hours. During rapidly changing or stormy weather, the levels may change more dramatically. Because continual changes in radon levels are considered the norm, expose the testing device for as long as is practical, while following the manufacturer's recommendations. This, of course, provides a better overall average of the measurement.

If you are comparing tests, or are averaging a series of tests, bear in mind that any radon test returns only the average of the levels present during a **specific period of time** at the **precise location** of the test. Conditions during a different test period or at a different location in the building are **expected to be different**.

Test results can also vary if the radon test instructions were not carefully followed. A laboratory measuring radon in samples taken outside the lab **must rely on the person conducting the test**. For example, the wrong starting or ending date of a test will significantly affect the calculated result. The location of each radon test can also influence the result. For example, a test placed in the blowing air stream of a fan is likely to collect more radon than it would under normal conditions. Also, three tests conducted in one home, but in three different rooms, **would be expected to have at least slightly different test results**.

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Web Site: <http://www.radon.com> **Email to:** info@radon.com

Neighborhood Energy Connection

Residential Energy Specification

Customer: City of Saint Paul

Auditor: Michael Childs

Address: 971 Jenks Avenue

Phone: 651-221-4462 x145

Spec ID#	Spec Title	Specification	Location / Notes
104	Replace Furnace with 95%+ AFUE, Multi-stage, Forced Air Furnace	Remove existing furnace, recycle all metal components and dispose of all other materials in a code legal dump. Install a new ENERGY STAR rated, gas-fired, multi-stage burner, forced air furnace with a minimum AFUE rating of 95%+ and ECM Motor with 2" rise above floor. Connect to existing duct work and gas line. New furnace to be vented with PVC piping per manufacturer's specifications. New furnace will have minimum limited warranties of 20 years on heat exchangers; 5 years on parts. Include auto setback thermostat controls, vent pipe & new shut-off valve. Rework cold air return if necessary to ensure easy access, good fit & easy replacement of air filter. An exterior return air filter box shall be installed on one side, both sides or bottom of new furnace. Seal all exposed duct joints with duct mastic. Remove all existing cloth duct tape prior to installing mastic.	
302	Replace Water Heater with Power Vented .67 EF	Replace water heater with a power-vented water heater with an EF of .67. Include pressure & temperature release valve, discharge tube to within 6" of floor and PVC flue to power	

		vent to exterior.	
310	Install Central Air Conditioning Unit	Install 16 SEER split system central air conditioning unit, following local building code. Using OEM performance information and industry-approved procedures, confirm that the selected equipment satisfies/meets the load requirements at the system design conditions.	
500	Seal Attic Bypasses	Contractor shall seal all attic bypasses. Bypasses shall be defined as any break in the envelope of a house between a heated living space and an unheated area or exterior. Bypass locations include, but are not limited to, the following areas: chimneys, soil stacks, end walls, dropped ceilings, open plumbing walls, beneath knee walls and around duct work, electrical work and attic access points. Bypasses shall be sealed in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be detected by an infrared scan when the house is pressurized to 30 Pascals. Materials to be used for sealing bypasses depend on the size and location of the bypass and meet code requirements. These materials include high quality caulks (20-year life span), polyethylene rod stock, foam, sheetrock, sheet metal, extruded polystyrene and densely packed insulation.	
502	Dense Pack Below Floor and blow above floor to R-50	All bypasses shall be sealed before insulating in such a manner that the movement of air through the bypass is essentially stopped. Floored attics shall be blown below floorboards using the Dense Pack Method to a minimum density 3.5 lbs/ft ³ . Blow above floorboards to bring below and above	2 x 6 floored cavity is mostly filled.

		total to R-50 or more.	
532	Build Dam, insulate and weather strip attic hatch	Access hatch door to attic shall be insulated to R-44 and insulation dam constructed around opening. Opening shall be weather stripped to provide a tight seal.	I recommend taking out existing stairs.
616	Wall insulation - Interior Application: Dense Pack Cellulose	Exterior walls insulated from inside the house shall be drilled through to provide access. Determine cavities are free of hazards and can support dense packing pressures, locate drilling hazards, control dust when drilling from interior. Completely fill each cavity to a consistent density. Dense pack cellulose to a minimum density of 3.5 lbs./ft ³ or dense pack spider fiberglass per manufacturer's instructions. Follow all applicable Lead Safe Work Practices as per the EPA's RRP Rules.	Walls have blown mineral wool – reinsulate as needed during rehab.
800	Air Seal Rim Joist	Seal cracks and holes in rim joist using caulk, foam or other air tight materials.	
912	Insulate crawl space walls	Install poly on the ground. Affix 2" rigid board (Thermax) insulation with minimum R-value of 7 per inch. Alternately, apply two-part foam evenly and consistently according to manufacturer's instructions to insulate to R-10. Follow applicable code requirements.	
1000	Install ENERGY STAR Rated Kitchen Fan	Install an ENERGY STAR rated exhaust fan connected with insulated rigid ductwork into a dampered vent.	
1010	Install ENERGY STAR Rated 2-stage Bathroom Fan	Install an ENERGY STAR rated two-speed bathroom fan .8 sones or less, with a pre-set low-speed of 10-30 CFM and a high-speed boost capability of 70-110 CFM initiated by a wall	

		switch or motion detector. Vent bathroom fan using rigid duct and insulated with fiberglass and vented out with dampered roof vent.	
1200	Replace incandescents with CFLs	Replace incandescent bulbs with ENERGY STAR rated compact fluorescent lights. Install fixtures that meet the lighting needs of the particular area.	
1210	Install ENERGY STAR Rated Washing Machine	Connect new ENERGY STAR rated clothes washer sized appropriately for the household. Use braided steel water supply lines and a smooth rubber drain line connected to a 2 inch drain with trap. Remove existing washer, recycle all metal components and dispose of all other materials in a code legal dump.	
1214	Install ENERGY STAR Rated Refrigerator	Install ENERGY STAR rated refrigerator sized appropriately for the household. Remove existing refrigerator, recycle all metal components and dispose of all other materials in a code legal dump.	

Home Energy Rating Certificate

971 Jenks Ave E
Saint Paul, MN 55106



**3 Stars Plus
As Is**

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

HERS Index: 147

General Information

Conditioned Area: 2610 sq. ft.
Conditioned Volume: 19930 cubic ft.
Bedrooms: 4
HouseType: Single-family detached
Foundation: More than one type

Mechanical Systems Features

Heating: Fuel-fired air distribution, Natural gas, 80.0 AFUE.
Water Heating: Conventional, Natural gas, 0.59 EF, 40.0 Gal.

Duct Leakage to Outside: RESNET/HERS default
Ventilation System: None
Programmable Thermostat: Heating: No Cooling: No

Building Shell Features

Ceiling Flat: R-19
Vaulted Ceiling: NA
Above Grade Walls: R-0
Foundation Walls: R-0.0
Slab: R-0.0 Edge, R-0.0 Under
Exposed Floor: R-0
Window Type: S W Op (w/St)
Infiltration:
Rate: Htg: 3335 Clg: 3335 CFM50
Method: Blower door test

Lights and Appliance Features

Percent Interior Lighting: 0.00
Percent Garage Lighting: 0.00
Refrigerator (kWh/yr): 691.00
Dishwasher Energy Factor: 0.46
Range/Oven Fuel: Natural gas
Clothes Dryer Fuel: Natural gas
Clothes Dryer EF: 2.67
Ceiling Fan (cfm/Watt): 0.00

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

REM/Rate - Residential Energy Analysis and Rating Software v12.99

This information does not constitute any warranty of energy cost or savings.
© 1985-2012 Architectural Energy Corporation, Boulder, Colorado.

Registry ID:

Rating Number:

Certified Energy Rater: Michael Childs

Rating Date: 11/12/12

Rating Ordered For: City of Saint Paul

Estimated Annual Energy Cost

Use	MMBtu	Cost	Percent
Heating	256.8	\$2383	68%
Cooling	0	\$0	0%
Hot Water	23.6	\$213	6%
Lights/Appliances	31.4	\$704	20%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$180	5%
Total		\$3479	100%

**This home meets or exceeds the minimum
criteria for all of the following:**

TITLE

Company

Address

City, State, Zip

Phone #

Fax #

Home Energy Rating Certificate

971 Jenks Ave E
Saint Paul, MN 55106



**5 Stars Plus
Projected Rating**

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

HERS Index: 70

General Information

Conditioned Area: 2610 sq. ft.
Conditioned Volume: 19930 cubic ft.
Bedrooms: 4

HouseType: Single-family detached
Foundation: More than one type

Mechanical Systems Features

Heating: Fuel-fired air distribution, Natural gas, 96.0 AFUE.
Water Heating: Conventional, Natural gas, 0.67 EF, 40.0 Gal.
Cooling: Air conditioner, Electric, 16.0 SEER.
Duct Leakage to Outside: 66.00 CFM.
Ventilation System: Exhaust Only: 64 cfm, 15.0 watts.
Programmable Thermostat: Heating: Yes Cooling: Yes

Building Shell Features

Ceiling Flat: R-50 Exposed Floor: NA
Vaulted Ceiling: NA Window Type: NFRC .35 / .32
Above Grade Walls: R-13
Foundation Walls: R-0.0, R-10.0 Rate: Htg: 2335 Clg: 2335 CFM50
Slab: R-0.0 Edge, R-0.0 Under Method: Blower door test

Lights and Appliance Features

Percent Interior Lighting: 90.00 Range/Oven Fuel: Natural gas
Percent Garage Lighting: 0.00 Clothes Dryer Fuel: Natural gas
Refrigerator (kWh/yr): 691.00 Clothes Dryer EF: 2.67
Dishwasher Energy Factor: 0.46 Ceiling Fan (cfm/Watt): 0.00

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

REM/Rate - Residential Energy Analysis and Rating Software v12.99

This information does not constitute any warranty of energy cost or savings.

© 1985-2012 Architectural Energy Corporation, Boulder, Colorado.

Registry ID:

Rating Number:

Certified Energy Rater: Michael Childs

Rating Date: 11/12/12

Rating Ordered For: City of Saint Paul

Estimated Annual Energy Cost

Projected Rating

Use	MMBtu	Cost	Percent
Heating	103.4	\$946	48%
Cooling	1.6	\$47	2%
Hot Water	21.2	\$191	10%
Lights/Appliances	27.3	\$596	30%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$180	9%
Total		\$1960	100%

**This home meets or exceeds the minimum
criteria for all of the following:**

TITLE

Company

Address

City, State, Zip

Phone #

Fax #

SECTION 00 0101
HRA PROJECT TITLE PAGE

HRA SPECIFICATION FOR 971 JENKS AVENUE

JANUARY X, 2013

**INVEST SAINT PAUL INITIATIVE
NEIGHBORHOOD STABILIZATION PROGRAMS
AND REBUILDING PLAN 2009-2013**

OWNER

The Housing and Redevelopment Authority of Saint Paul, Minnesota

25 West Fourth Street, Suite 1100

Saint Paul, MN 55102

Marty McCarthy – Project Manager

(651) 266-6552

Marty.McCarthy@ci.stpaul.mn.us

HRA SCOPE WRITER

Lunning Wende Associates, Inc.

275 East Fourth Street, Suite 620

Saint Paul, MN 55101

Scott Wende, AIA

(651) 221-0915

scott@lunningwende.com

HRA Construction Manager

Spero Properties, LLC

475 Cleveland Ave. N.

Saint Paul, MN 55104

Jill Welda

651.646.0659

Jill@sperorebuilt.com

**SECTION 00 0110
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- 00 0101 - Project Title Page
- 00 0110 - Table of Contents
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- 00 4101 - HRA Bid Submission Documents
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- 01 2000 - Price and Payment Procedures
- 01 6000 - Product Requirements
- 01 6116 - Volatile Organic Compound (VOC) Content Restrictions
- 01 7000 - Execution and Closeout Requirements
- 01 7419 - Construction Waste Management and Disposal
- 01 7700 - Closeout Procedures and Submittals
- 01 8113 - Sustainable Design Requirements

DIVISION 02 – EXISTING CONDITIONS

- For Site Preparation and Earthwork, See Division 31
- 02 4100 - Demolition
- 02 8200 - Asbestos Remediation
- 02 8313 - Lead Hazard Control Activities

DIVISION 03 - CONCRETE

- 03 0100 - Maintenance of Concrete
- 03 3000 - Cast-in-Place Concrete

DIVISION 04 - MASONRY

- 04 0100 - Maintenance of Masonry
- 04 2300 - Glass Unit Masonry

DIVISION 05 - METALS

- 05 7300 - Decorative Metal Railings

DIVISION 06 – WOOD, PLASTICS AND COMPOSITES

- 06 1000 - Rough Carpentry
- 06 2000 - Finish Carpentry

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

- 07 2119 - Foamed-In-Place Insulation
- 07 2126 - Blown Insulation
- 07 2500 - Weather Barriers
- 07 2700 - Air Barrier System (Sealing of Bypasses)

07 3113 - Asphalt Shingles
07 6200 - Sheet Metal Flashing and Trim
07 7123 - Manufactured Gutters and Downspouts

DIVISION 08 - OPENINGS

08 1100 - Exterior Insulated Metal Doors and Frames
08 1429 - Wood Doors
08 2550 – Attic Access Stair
08 3323 - Overhead Garage Doors
08 5200 - Wood Windows
08 5313 - Vinyl Windows

DIVISION 09 - FINISHES

09 0120 - Repair of Plaster and Gypsum Board Surfaces
09 0160 - Hardwood Floor Restoration
09 2116 - Gypsum Board Installation
09 3000 – Tiling
09 6219 – Laminate Flooring
09 9000 - Painting and Coating

DIVISION 10 - SPECIALITIES

10 5623 - Closet Storage Shelving

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11 3100 - HRA Residential Appliances

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DIVISION 21 – FIRE SUPPRESSION

DIVISION 22 - PLUMBING

22 3000 - Plumbing Equipment
22 4000 - Plumbing Fixtures and Piping

DIVISION 23 - HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

23 0000 – Residential Ventilation
23 5400 – Forced Air Furnace and Ducts
23 6213 – Forced Air AC

DIVISION 26 - ELECTRICAL

26 0001 - Power, Wiring and Devices

26 5101 - HRA Lighting

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DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

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DIVISION 31 - EARTHWORK

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32 1313 - Concrete Paving

32 3129 – Wood Fences and Gates

32 9223 - Sodding

32 9300 - Plants

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SECTION 00 4002
HRA BID INVITATION

PART 1 GENERAL

1.01 CONTACT TRANSLATION

- A. In Hmong - Ceeb toom. Yog koj xav tau kev pab txhais cov xov no rau koj dawb, Amy Filice 651-266-6568;
- B. In Spanish - Atención. Si desea recibir asistencia gratuita para traducir esta información, llame a Amy Filice 651-266-6568;
- C. In Somali - Ogow. Haddii aad dooneyso in lagaa kaalmeeyo tarjamadda macluumaadkani oo lacag la' aan wac, Amy Filice 651-266-6568.

1.02 PROJECT SUMMARY

- A. Project description: This is a Residential Renovation project located at 775 Magnolia Avenue East. This project is funded by Neighborhood Stabilization Program through the The Housing and Redevelopment Authority of Saint Paul, Minnesota. This project is not required to conform to Federal and/or Little Davis Bacon requirements.

1.03 NOTICE TO PROSPECTIVE BIDDERS

- A. These documents constitute an invitation to bid to General Contractors for the construction of the project described within this bid manual.

1.04 OWNERSHIP INFORMATION

- A. The Owner, The Housing and Redevelopment Authority of Saint Paul, Minnesota, hereinafter, referred to as Owner.
- B. Owner's Project Manager: Marty McCarthy
Address: 25 West Fourth Street, Saint Paul, MN 55102, Suite 1200
Phone Number: (651) 266-6552
Email: Marth.McCarthy@ci.stpaul.mn.us

1.05 OWNER'S CONSULTANT(S)

Owner's Project Specification Consultant: Lunning Wende Associates, Inc.

- 1. Specification Writer's Name: Scott Wende, AIA
- 2. Address: 275 East Fourth Street, Suite 620, Saint Paul, MN 55101
- 3. Phone Number: 651.221.0915
Email: scott@lunningwende.com
- A. Owner's Construction Manager Consultant: Spero Properties, LLC
 - 1. Construction Manager: Jill Welda
 - 2. Address: 475 Cleveland Ave. N., Saint Paul, MN 55104
 - 3. Phone: (651) 646.0659
 - 4. Email: Jill@sperorebuilt.com

1.06 IMPORTANT BID DATES

- A. Bids Issued: October 12, 2012
- B. Mandatory Pre-Bid Site Tour: Thursday, October 18, 2012 from 9:00 am to 10:30 am
- C. **BID DUE DATE ON OR BEFORE:** November 2, 2012 no later than Insert time 2:00 PM local time.
- D. Bid Delivery Location: The offices of The Housing and Redevelopment Authority of Saint Paul, Minnesota
Address: 25 West Fourth Street, Saint Paul, MN 55102, Suite 1100
Bid Opening at 2:15 pm
- E. Public Bid Opening and Location: The Housing and Redevelopment Authority of Saint Paul, Minnesota

Address: 25 West Fourth Street, Saint Paul, MN 55102, Suite 1100
Suite: 1100

- F. Executed Contract: Within 30 days of the bid award.
- G. Construction Start Date (Approximate): ASAP after contract execution
- H. Construction Completion Date: 120 days from the time of issued Notice to Proceed.

1.07 RIGHTS RESERVED BY THE OWNER

- A. The Owner reserves the right to:
 - 1. Reject all bids received in response to this Bid Invitation, and at the Owner's discretion, issue a new Bid Invitation.
 - 2. Amend any portion of this Bid Invitation and disseminate such amendments to potential bidders in the same manner as the original Bid Invitation (eg newspaper, online posting). Bidders will be responsible for meeting the requirements of all amendments.
 - 3. Waive any minor irregularities in bids received.
 - 4. Disapprove any subcontractor proposed to be used by a bidder based on the subcontractor not being a responsible subcontractor and/or being on a debarment list.
 - 5. Select more than one bidder to perform various elements of the Project.

END OF BID INVITATION

SECTION 00 4003

HRA INSTRUCTIONS FOR BIDDERS

PART 1 GENERAL BID DIRECTIONS

1.01 Each Bidder shall fully inform him / herself and any subcontractors prior to bidding as to all existing conditions and limitations including compliance requirements under which the work is to be performed and shall include in the bid a sum to cover the cost of all items necessary to perform the work as set forth in the Bid Project Manual. The submission of a bid shall be construed as conclusive evidence that the Bidder has made such examination.

1.02 Bid Forms

- A. The Bid Submission forms are available online at <http://www.stpaul.gov/nsp>.
- B. Each bid must be submitted on the Bid Submission forms identified in the provided checklist. It is expected that the Contractor retain a copy of their entire submittal for their records. The copy of the bid submitted must be signed at every place that a signature is requested.

1.03 Corrections

- A. Erasures or other changes in the bid must be dated and initialed over the signature of the bidder.

1.04 Bid Envelope

- A. Place bid in envelope with the contractor name and address in the upper left-hand corner as the return address, and list the property address in the middle of the envelope as the addressee. Seal envelope.

1.05 Interpretations of Scope of Work

- A. Every request for an interpretation shall be in writing, unless otherwise documented by the Specification Writer. Questions will be taken until 3 days before bids are due.
- B. Interpretations will be in the form of an addenda which will be on file at the website, and in the offices of the Specification Writer at least three calendar days before bids are opened.
- C. It shall be the bidder's responsibility to make inquiry as to addenda issued.
 - 1. All such addenda shall become a part of the contract and all bidders shall be bound by such addenda.

1.06 Conflict with Documents

- A. When a conflict arises between the Drawings or the Scope of Work, the Drawings shall govern.

1.07 Materials Approved:

- A. Where items of equipment and material are specifically identified herein by a trade name, model or catalog number, only such specified items may be used in the base bid.
- B. Contractors desiring approval of substitute products may submit data cut sheets and product information for approval during the bidding cycle.
- C. Contractors will be notified only by addendum of additional approved products.
- D. Material identifications made in work specifications are considered as minimal quality for acceptance in bidding and installation.

1.08 Allowances:

- A. The Contractor shall include in the bid proposal the cash allowances listed.
- B. Unless otherwise indicated, the lump sum amount shall be for the material / product.
- C. Labor to install the material / product must be submitted separately.

1.09 Alternates:

- A. The Contractor must submit bids for each alternate listed in the Alternates List.
- B. If pricing is not listed for Alternates the bid may be disqualified.

1.10 Time for Receiving Bids:

- A. Bids are to be delivered to the HRA's office.
- B. Bids received prior to the time of opening will be securely kept.
- C. Bids received by phone or fax will not be considered.
- D. Modification of bids already submitted will be considered if received prior to the hour set for receiving the bids and written confirmation of such modification - with the signature of the bidder - is placed in the mail and postmarked and / or delivered to the HRA prior to the time set for bid opening.

1.11 Opening of Bids:

- A. At the time and place fixed for the opening of bids, every bid received within the time fixed for receiving bids will be opened irrespective of any irregularities.
- B. The opening of the bids will be an "open process" (open to the public).

1.12 Withdrawal of Bids:

- A. Bids may be withdrawn in writing, by phone, or by fax prior to the time fixed for opening; provided that written confirmation of any phoned or faxed withdrawal is placed in the mail and postmarked and / or delivered prior to the time set for bid opening.
- B. Negligence on the part of the bidder in preparing their bid confers no right of withdrawal or modification of his bid after such bid has been opened.

PART 2 BID ANALYSIS PROCESS

2.01 Contractor Selection Date: Earliest Practical Date

- A. This project is funded by the Neighborhood Stabilization Program (NSP), a federal stimulus program created to rehabilitate vacant housing or construct new housing on vacant lots within targeted areas of the City of Saint Paul.
- B. The Housing and Redevelopment Authority of Saint Paul, Minnesota reserves the right to check the qualifications of contractors for each project; previous experience working on projects with the The Housing and Redevelopment Authority of Saint Paul, Minnesota, will not automatically deem a contractor qualified.

2.02 Minimum Contractor Qualifications

- A. Please note the following minimum qualifications that apply to all bidders:
 - 1. **Quality Workmanship and Qualifications**
 - a. Three references from jobs with similar work (include on Contractor Qualification form)
 - b. Two financial references (included on Contractor Qualification Form)
 - c. At least 2 years of experience as a General Contractor (HRA will verify)
 - d. Review of standing with Secretary of State, Federal Excluded Parties list, City of Saint Paul Debarment list, Department of Labor and Industry, Better Business Bureau (HRA will verify)
 - e. Houses with historic features or located within a historic district may require demonstration of quality workmanship for historic renovation at the discretion of HRA staff.
 - 2. **Financial Capacity**
 - a. Demonstrated ability to pay two months of construction costs for each project awarded (these amounts are added together if more than one project is under construction). Financial capacity documentation must be in the name of the General Contractors organization or the principal of that organization.
 - 1) For a 120 day project, the contractor shall demonstrate the ability to pay 50% of bid amount.
 - 2) For a 90 day project, the contractor shall demonstrate the ability to pay 65% of the bid amount.
 - 3) Demonstration of capacity can be in the form of:

- (a) Line of credit from banking or lending institution
 - (b) Cash balances from banking or lending institution
- 3. **Ability to Perform**
 - a. Up-to-date submittals to Affirmative Action, Section 3, and Vendor Outreach programs.
 - b. Adherence to timelines confirmed from professional references.
 - c. Use of certified subcontractors for environmental remediation including:
 - 1) Insulation: contractor must be on Xcel Energy approved contractor list
 - 2) Asbestos: contractor must be certified for asbestos removal by the State of Minnesota
 - 3) Lead: either general contractor or subcontractor must be certified for lead abatement by the State of Minnesota
 - 4) Radon: contractor must be on Minnesota Department of Health approved radon mitigation list.
- 4. **Bid Award Policy**
 - a. Contractors that meet the criteria for qualification above, yet have not worked with The Housing and Redevelopment Authority of Saint Paul, Minnesota on a Neighborhood Stabilization Program project previously will initially be awarded one house, even if the contractor is low bidder for more than one house.
 - b. Once the contractor demonstrates quality workmanship, financial capacity, and ability to perform timely completion, they may be awarded more than one house at the same time for subsequent bids on a case-by-case basis.
- 5. **Other Qualifications**
 - a. Each property has its own unique characteristics and challenges. Variables include items relating to environmental conditions, historic nature of structures, etc.
 - b. Depending on the specific property, there may be other qualifications needed by the bidder which will be specified by the HRA in its request for bids.

PART 3 POST AWARD REQUIREMENTS

3.01 CONSTRUCTION CONTRACT REQUIREMENTS

- A. The bidder agrees that, if selected by the HRA, the bidder will enter into a contract with the HRA no later than 30 calendar days from bid award and will submit the following information to the HRA as a condition to entering into that contract; refer to Bid Rehab Manual for attachments:
 - 1. Certificates of Insurance as required by the Construction Contract and proof of Insurance and Bonding.
 - 2. Final Sworn Construction Statement Affidavit and Sworn Construction Statement that list contractors, material suppliers, and subcontractors, who will work under the contract and the cost of their work.
 - 3. Proof of a valid license as a Residential builder in the State of Minnesota and proof of valid licenses as required by the City of Saint Paul for work to be done.
 - 4. Bidders may be required to submit payment and performance bonds as a condition of the construction contract. Verify with Scope Writer prior to submitting bid.
 - 5. Proof of compliance with requirements attached for Affirmative Action, Vendor Outreach Program, and Section 3, including an Acknowledgement and Final Section 3 Action Plan.
 - 6. **Construction Schedule must be submitted to the Dayton's Bluff Neighborhood Housing Services to enter into the Contract.**
- B. Attendance of a Pre-Construction Conference
 - 1. The selected Contractor and all Subcontractors will be required to attend a Pre-Construction Conference.
 - 2. **Time, date, and place of the Pre-Construction Conference will be announced by the Spero Properties, LLC and/or HRA.**
- C. Computerized System for Compliance Tracking and Reporting:

1. The Contractor is required to use the B2Gnow/LCPtracker reporting system. Refer to attachment.

PART 3 WAGE REQUIREMENTS

4.01 The following are wage requirements associated with this Projects

- A. Federal Davis-Bacon and/or Little Davis-Bacon Wages are not required for this project.

END OF SECTION

SECTION 00 4101
HRA BID SUBMISSION DOCUMENTS

SECTION 1 GENERAL

1.01 BID SUBMISSION DOCUMENTS, located at <http://www.stpaul.gov/nsp>

- A. Bid Submittal Checklist
- B. Bid Cover Sheet
- C. Bid Proposal and Non-Collusive Affidavit
- D. Preliminary Section-3 Action Plan
- E. Contractor Application / Statement of Qualifications
- F. Itemized Cost Breakdown and Scope of Work Bid (Section 004102)

END OF SECTION

SECTION 00 4102

HRA LINE ITEM BID SHEET

PART 1 MANUAL BID SHEET - LINE ITEM BREAKDOWN OF WORK

DIVISION 01 - GENERAL REQUIREMENTS

DIVISION 02 - EXISTING CONDITIONS

024100 - Demolition \$ _____

028200 - Asbestos Remediation \$ _____

028313 - Lead Hazard Control Activities \$ _____

DIVISION 03 - CONCRETE

030100 - Maintenance of Concrete \$ _____

033000 - Cast in Place Concrete \$ _____

DIVISION 04 - MASONRY

040100 - Maintenance of Masonry \$ _____

042300 - Glass Unit Masonry \$ _____

DIVISION 05 - METALS

057300 - Decorative Metal Railings \$ _____

DIVISION 06 - WOOD, PLASTICS AND COMPOSITES

061000 - Rough Carpentry \$ _____

062000 - Finish Carpentry \$ _____

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

072119 - Foamed-In-Place Insulation \$ _____

072126 - Blown Insulation \$ _____

072500 - Weather Barriers \$ _____

072700 - Air Barrier System \$ _____

073113 - Asphalt Shingles \$ _____

076200 - Sheet Metal Flashing and Trim \$ _____

077123 - Manufactured Gutters and Downspouts \$ _____

DIVISION 08 - OPENINGS

081100 - Exterior Insulated Metal Doors and Frames \$ _____

081429 - Wood Doors \$ _____

082550 - Attic Access Door \$ _____

083323 - Overhead Garage Door \$ _____

085200 - Wood Windows \$ _____

085313 - Vinyl Windows \$ _____

DIVISION 09 - FINISHES

090120 - Repair of Plaster and Gypsum Board \$ _____

090160 - Hardwood Flooring Restoration \$ _____

092116 - Gypsum Board Assemblies \$ _____

093000 - Tiling \$ _____

096219 - Laminate Flooring \$ _____

099000 - Painting and Coating \$ _____

DIVISION 10 - SPECIALTIES

105623 - Closet Storage Shelving \$ _____

DIVISION 11 - EQUIPMENT

113100 - HRA Residential Appliances \$ _____

DIVISION 12 - FURNISHINGS

121110 - HRA Mail Box and House Numbers \$ _____

121111 - Bathroom Furnishings \$ _____

123530 - Residential Casework \$ _____

DIVISION 22 - PLUMBING

223000 - Plumbing Equipment \$ _____

224000 - Plumbing Fixtures and Piping \$ _____

DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING

230000 – Residential Ventilation \$ _____

235400 – Forced Air Furnace and Ducts \$ _____

236213 – Forced Air AC \$ _____

DIVISION 26 - ELECTRICAL

261001 - Power, Wiring and Devices \$ _____

265101 - HRA Lighting \$ _____

DIVISION 28 - ELECTRONIC SAFETY AND SECURITY

281600 - Intrusion Detection \$ _____

DIVISION 31 - EARTHWORK

312200 - Grading \$ _____

DIVISION 32 - EXTERIOR IMPROVMENTS

321313 - Concrete Paving \$ _____

323129 – Wood Fences and Gates \$ _____

329223 - Sodding \$ _____

329300 - Planting \$ _____

TOTAL \$ _____

END OF SECTION

SECTION 01 0010
HRA GENERAL REQUIREMENTS

PART 1 GENERAL

1.01 CONTRACTOR'S RESPONSIBILITY

- A. All labor, material, supplies, tools, or other costs or items needed for complete construction of the project, including permits, temporary facilities, safety, security and utilities during construction, are the responsibility of the Contractor.
- B. The General Contractor is responsible for the maintenance of the lawn and landscaping, clean up and dispose of fallen leaves and snow removal during the winter. The responsibility begins at the issuance of the notice to proceed and ends with approval of Final Completion.
- C. The General Contractor shall be responsible for the coordination of all subcontractors working on, or furnishing material for use on this project. In addition, the General Contractor shall be responsible for the coordination of all work performed under separate contracts.

1.02 CONTRACTOR'S USE OF PREMISES

- A. During the construction period the General Contractor and its Subcontractors shall have full use of the premises for construction operations, including use of the site. All use of the site shall be under control and supervision of the General Contractor.
- B. General Contractor and its Subcontractors will be limited to construction work between the hours of 7:00 am and 6:00 pm on weekdays and 8:00 am to 4:00 pm on Saturday. Work at any other times will be allowed only with the Owner's and Project Manager's consent.
- C. HRA Staff and its representatives shall have access to the premises at anytime.

1.03 MATERIALS & MATERIAL STORAGE

- A. The General Contractor shall provide all materials, hardware, and fixtures required to accomplish the Scope of Work, unless otherwise indicated.
- B. The General Contractor shall use materials specified throughout unless approved in writing by Owner and Project Manager before ordering and installing.
- C. The General Contractor is responsible for verification of all measurements. Materials transported to the job site and stored are the General Contractor's responsibility until installed and accepted by the Owner and Project Manager.
- D. The General Contractor shall deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
- E. Damaged or stolen materials and equipment must be replaced as part of the work at no additional cost to the Owner. Damaged property that is removed shall belong to the General Contractor, unless otherwise stated in writing.

PART 2 PERFORMANCE REQUIREMENTS

2.01 ENERGY CONSERVATION

- A. General
 - 1. This property must go through Xcel Energy's Home Performance with Energy Star program.
 - 2. This means that all insulation and HVAC work must be performed by Xcel Energy's approved contractor list.
 - 3. General Contractors that are on the Home Performance list may choose Subcontractors that are not on the list, but those General Contractors will be held responsible for all work completed.
 - 4. The "Specifications for Energy Improvement Upgrades" provided by the Neighborhood Energy Connection (See appendix) are a part of the Scope of Work for this property.
 - 5. Any discrepancies between the Scope of Work and NEC's specifications are to be clarified during the bid process.

- B. Provide an Energy Efficient Lighting
 - 1. All fixtures should have energy efficient CFLs or LED lamps that are within the maximum wattage allowable.
 - 2. The Owner and Project Manager shall select specific locations of fixtures and switches in each area.
 - 3. All lighting fixtures will be purchased new, unless otherwise indicated in the scope of work.
 - 4. No plastic lighting fixtures are acceptable.
 - 5. No fluorescent tube light fixtures are acceptable in living spaces.
 - 6. Provide light bulbs for all fixtures. All light fixtures are to have color corrected bulbs. Light bulbs that are viewable within fixtures will be a globe or candelabra style CFL.
 - 7. Provide and install lighting fixtures and switches.
 - 8. Review fixtures with Owner and Project Manager prior to installation.
 - 9. All electrical outlets and cover plates are to be replaced throughout the building, unless otherwise indicated in the scope of work.

2.02 ENERGY EFFICIENT APPLIANCES

- A. All appliances must be purchased new and be Energy STAR certified or high efficiency models when Energy STAR certification is not possible.
- B. High-efficiency appliances meet the following standards:
- C. Clothes washers must have a CEE Tier 2 or higher, a minimum Energy Factor of 2.0 or greater, and a water factor 6.0 or less.
- D. Clothes Dryers must be a minimum 7.0 cubic feet capacity, have a sensor dry system, and have 5 Temperature Levels - High, Medium High, Medium, Low & Ultra Low
- E. Dishwashers must be CEE Tier 2 or higher, with a minimum Energy Factor of 0.68 or greater, and a maximum annual energy use of 325 kilowatt-hours or less.

2.03 LOW FLOW PLUMBING FIXTURES

- A. New plumbing fixtures should be water conserving fixtures with a faucet flow rate of 2.0 GPM or less and a commode flush rate of 1.3 GPF or less.

PART 3 PRICE AND PAYMENT PROCEDURES

3.01 SCHEDULE OF VALUES

- A. Form to be used: Sworn Construction Statement.

3.02 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Execute certification/pay application by signature of authorized officer.
- C. Submit two copies of each Application for Payment to Construction Manager.

PART 4 CONTRACT MODIFICATION PROCEDURES

4.01 HRA WINTER WORK POLICY

- A. The Housing and Redevelopment Authority of the City of St. Paul (HRA) recognizes that there are weather related exterior items that cannot be completed in winter conditions ("Weather Conditional Work"), including but not limited to:
 - 1. Exterior painting
 - 2. Sod
 - 3. Foundation plantings
 - 4. Rain garden installation
 - 5. Concrete sidewalks, steps, landings, curbs, garage slabs, and asphalt driveways
- B. The HRA defines winter conditions as "temperatures consistently below a high of 50 degrees Fahrenheit". Winter conditions are typically in effect from November 15th through April 15th each year, although there is potential for an earlier or later start and end date depending on weather.

- C. In the case of NSP homes where a notice to proceed is issued between October and February, the time parameter of winter conditions could mean that the entire timeline for construction completion (typically 90-120 days) is within winter conditions.
- D. It is the responsibility of the contractor to communicate, to the Owner, the exterior line items in the scope of work that are Weather Conditional Work as a component of the timeline submission required prior to issuance of a notice to proceed.
- E. Contractors are also responsible for ensuring that all Weather Conditional Work is completed within the manufacturer's or industry standards recommended temperature range.
- F. The Contractor is responsible for prioritizing Weather Related Work when winter conditions are not present, in order to complete the house within the construction timeline whenever possible.
- G. The HRA's objective is to ensure that remodeling work on NSP projects is substantially complete within the timeline for construction completion (90-120 days) so that the project can be issued a certificate of occupancy and sold to a new homeowner; the contractor is responsible for ensuring that temporary, structurally sound solutions are implemented when Weather Related Work will effect the ability to secure a Certificate of Occupancy.
- H. In the event that winter conditions are present throughout the 120 day construction contract period, the HRA will escrow 1 and 1/2 times the cost for Weather Conditional Work (150%), to be completed within 30 days of the end of winter conditions.

4.02 SUBSTITUTIONS

- A. Changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by the General Contractor after award of the Contract are considered to be requests for substitutions.
- B. Submit requests according to procedures required for change-order proposals.
- C. Substitution requests shall include a complete list of changes or modifications needed in the Scope of Work in order to accommodate the proposed substitution.
- D. Provide samples and product data, including drawings and descriptions of products as well as fabrication and installation procedures, where applicable or where requested by the Owner or Project Manager.
- E. Indicate the substitution's effect on the Contractor's Construction Schedule, if any. Indicate cost information, including a proposal of the net change, if any, in the Contract Sum. Acceptance will be in the form of a written Change Order signed by the Owner and Project Manager.

PART 5 COMPLIANCE INFORMATION AND REQUIRMENTS

5.01 SEE HRA NSP WEBSITE FOR COMPLIANCE REQUIRMENTS.

- A. ://www.stpaul.gov/nsp
- B. Review the document labeled: Section II - Compliance Information and Requirements.
 - 1. It contains additional information on:
 - a. Insurance
 - b. B2Gnow/LCP Tracker, Contract Compliance Monitoring System
 - c. Vendor Outreach Program
 - d. Affirmative Action
 - e. Sustainable Green Policy
 - f. Section 3
 - g. Two Bid Policy
 - h. Limited English Policy
 - i. Xcel Energy Participating Contractors' List
 - j. Radon Mitigation Contractors' List

5.02 SECURITY PROCEDURES

- A. General Contractor is responsible for maintaining security of the site, including:
 - 1. locking buildings at the end of each work day;

2. boarding window or door openings;
 3. installing security fencing;
 4. providing temporary barricades, bracing or railings;
 5. and any other work or facilities necessary to maintain a safe and secure site, including compliance with all health, safety, building, and other codes and laws.
- B. Any tools or materials or other property stored on the site prior to installation are the responsibility of the General Contractor and its Subcontractors are responsible for insuring their own such property against loss by theft or other cause.

5.03 JOB CONDITIONS

- A. The General Contractor shall notify the Owner and Project Manager of repair not covered in the Scope of Work that is necessary for satisfactory completion of the Project.
- B. Defects that become evident as work progresses shall be reported not concealed.
- C. Ensure safe passage of all employees during the course of demolition or other persons as necessary by erecting barriers, bracing, or other temporary supports as required.

5.04 SAFETY AND CLEAN UP

- A. The General Contractor must keep the site clean at all times during construction.
- B. In no event can debris be stored outside overnight unless it is inside a dumpster.
- C. All floors are to be picked up and kept broom clean at the end of the work day.
- D. No combustible debris shall be thrown, stored, or burned on the property, adjacent parcels, sidewalks, streets, or alleys.
- E. Debris created from work at the property must be disposed of immediately.
- F. Any debris caused by the General Contractor or its Subcontractor shall be removed from the work area in the General Contractor's containers and disposed of off site by the General Contractor.

PART 6 SPECIAL PROCEDURES

6.01 ASBESTOS ABATEMENT,

- A. If asbestos is found on this project follow the necessary requirements for proper abatement. A contractor must be licensed by the Minnesota Department of Health to perform asbestos-related work. Asbestos-related work includes the work area preparation, enclosure, removal, or encapsulation of asbestos-containing material.

6.02 LOW VOC, SEE SECTION 01 6116

6.03 LEAD BASED PAINT

- A. General Information
 1. Projects funded in whole or in part with federal funds must comply with the "Regulation on Lead-Based Paint Hazards in Federally Owned Housing and Housing Receiving Federal Assistance".
 2. Properties built after 1/1/78 and properties needing emergency rehab assistance are exempt from Lead-Based Paint Regulation requirements.
 3. All projects receiving over \$25,000 of HUD funds per unit for rehabilitation, must abate all Lead-based paint hazards.
- B. **Removal Procedures**
 1. Risk Assessments:
 - a. A Risk Assessment must be completed by a licensed Lead-Based Paint Risk Assessor on all properties built before 1/1/78 (excluding emergency rehab cases).
 - b. The Owner or Project Manager arranges and pays for the Risk Assessment.
 - c. The Risk Assessment report will summarize the nature and scope of known lead-based paint hazards.

- C. Scope of Work: The Project Manager prepares the Scope of Work incorporating lead hazard reduction work based on the Risk Assessment report.
- D. Licensed Lead Abatement Supervisor: Only General or Subcontractors who are State licensed Lead Abatement Supervisors are allowed to bid on projects involving lead hazard reduction work.
- E. Project Plan: The General Contractor must prepare a written project plan and communicate it to the Owner and Project Manager. It shall include:
 - 1. Start-up date and how long the project is expected to last.
 - 2. Areas to be abated and precautions to take.
 - 3. A warning to pay attention to the caution signs that are posted by the General Contractor around the project site.
 - 4. Location of areas that may be restricted.
- F. The selected General Contractor performs the work, using lead hazard control measures where indicated in the Scope of Work.
- G. The General contractor will notify the Project Manager when work is complete.
- H. A Clearance Test for lead-based paint dust is required upon completion of the Lead Based Paint Hazard Reduction Project Plan.
 - 1. The Clearance Test must be performed by a State licensed Clearance Examiner.
 - 2. It is the responsibility of the General Contractor to arrange and pay for any and all of the Clearance Tests that may be required. If the Clearance Test indicates lead levels lower than acceptable amounts, the General Contractor's lead reduction and control work is complete and the final construction payment application may be processed.
 - 3. If the Clearance Test is found to contain lead levels above an acceptable amount, the General Contractor must clean the work area again and request another Clearance Test at no additional cost to the Owner, until the Clearance Test is passed.
 - 4. The Final payment application will not be processed until all areas are determined to be free of hazardous lead levels.
- I. Additional Information:
 - 1. General Contractor must obtain and review the following documents, which provide more detailed information on lead paint hazards and reduction and control measures:
 - a. Minnesota Department of Lead program, "Safely Working with Lead While Remodeling the Older Home" pamphlet series. 1-651-215-0890.
 - 1) U.S. Environmental Protection Agency, "Renovate Right: Important Lead Hazard Information for Families, Child Care Providers, and Schools" 21 page booklet. <<http://www.epa.gov/lead/pubs/rrpamph.pdf>>
 - 2) U.S. Department of Housing and Urban Development, "Lead Paint Safety: A Field Guide for Painting, Home Maintenance, and Renovation Work:". English and Spanish versions available. <http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/healthyhomes/lead>
 - 3) U.S. Department of Housing and Urban Development, "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing". October 1996. <http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/lbp/hudguidelines>
 - 4) U.S. Environmental Protection Agency, "Model Lead-Based Paint Abatement Worker Training Course." English and Spanish versions available. <<http://www.epa.gov/lead/pubs/abateworker.htm>>
 - 5) U.S. Environmental Protection Agency, "Lead Safety for Renovation, Repair, and Remodeling: Student Manual". <http://www.epa.gov/lead/pubs/rrp_8hr_studentmanual_feb09.pdf>
- J. Abatement:

1. **Component Replacement:** The removal of building components that contain lead-based paint. It is most appropriate for items such as doors, windows, trim, and cabinets.
2. **Paint Removal:** The separation of paint from the substrate using safe heat, chemical, or abrasive methods. It may be done on- or off-site. Abrasive methods can create a great deal of dust, are the most hazardous, and require the greatest care and most thorough clean-up.
3. **Enclosure:** The installation of a barrier (such as gypsum board or paneling) that is mechanically attached to the building component, with all edges and seams sealed to prevent escape of lead-based paint dust. It is most appropriate for large surfaces, such as walls, ceilings, floors, and exteriors.
4. **Encapsulation:** The application of a liquid or adhesive material that covers the component and forms a barrier that makes the lead-based paint surface inaccessible by relying upon adhesion. It may be appropriate for many kinds of smooth surfaces but it cannot be used effectively on friction surfaces, surfaces in poor condition, or surfaces that may become wet. It also must be compatible with existing paint.
5. **Soil Removal:** The removal of at least the top six inches of topsoil is adequate for most projects. In areas with heavy contamination, up to two feet may have to be removed, and must be disposed of using proper waste management techniques that comply with local requirements. The maximum lead concentration in replacement soil shall not exceed 200 ug/g. Sod or seeding of new soil should occur.
6. **Soil Cultivation:** The mixing of low lead soil with high lead soil is an appropriate method if the average lead concentration of the soil to be abated is below 1,500 ug/g. Thorough mixing is required, and pilot testing of various techniques may be needed to ensure that thorough mixing does occur.
7. **Paving:** The covering of highly contaminated soil with high quality concrete or asphalt. Paving is common in high traffic areas but not appropriate in play areas. The need for uncontaminated replacement soil is eliminated as is waste disposal costs. Paving often turns out to be the most economical recourse, despite its aesthetic disadvantages.

6.04 WASTE MANAGEMENT, SEE SECTION 01 7419

PART 7 SUBMITTALS

7.01 GENERAL

- A. Coordinate preparation and processing of submittals with performance of construction activities.
- B. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
- C. Provide the following submittals required for performance of the Work, including the following:
 1. Administrative Submittals.
 2. Construction Schedule
 3. Samples/Product Data.

7.02 ADMINISTRATIVE SUBMITTALS

- A. Provide as required in the Contract Documents. Such submittals include, but are not limited to, the following:
 1. Sworn Construction Statement
 2. Required permits.
 3. Applications for Payment.
 4. Insurance certificates.
 5. List of subcontractors.

7.03 CONSTRUCTION SCHEDULE

- A. A construction schedule must be submitted to the Owner and Project Manager with the bid, unless requested otherwise in writing. Construction shall be completed within 120 days of notice to proceed.

7.04 SAMPLES/PRODUCT DATA:

- A. Submit Samples as specified to be physically identical with the material or product proposed.
- B. Samples include partial sections of manufactures or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
- C. Provide product samples and/or product data for the following where included in the scope of work and for any other requirements mentioned in the specifications or drawings:
 - 1. Paint colors.
 - 2. Masonry and mortar color samples.
 - 3. Windows.
 - 4. Doors and hardware.
 - 5. Bathroom accessories.
 - 6. Kitchen cabinets.
 - 7. Plumbing fixtures.
 - 8. Lighting fixtures.
 - 9. Foundation waterproofing.
 - 10. Stair railings.
 - 11. Tile.
 - 12. Carpet.
 - 13. Interior trim samples.
 - 14. Exterior trim and siding samples.

END OF SECTION

SECTION 01 2000
PAYMENT PROCEDURES

PART 1 GENERAL

1.01 PAYMENT DOCUMENTS

- A. All documents required to create a complete Payment Application can be downloaded from <https://sites.google.com/site/nspconstructiondocs/>
- B. Payment Application form to be used: Application and Certificate for Payment provided by the HRA.
 - 1. Columns A, B, C should not change during the course of construction and should directly relate to the Sworn Construction Statement provided at the start of construction. As draws progress, columns D, E and F change to reflect work completed.
- C. Additional Documents to be submitted with each pay application:
 - 1. Monthly Employment Utilization (MEU) Form
 - 2. Identification of Prime and Subcontractor Form
 - a. An updated Sub ID sheet must be attached to help HR/EEO staff track subcontractor utilization.
 - 3. B2Gnow
 - a. Ensure each subcontractor is logging into the B2Gnow system and logging payments received.

1.02 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement. The Owner will process the payment within 30 days.
- B. Applications for payment must be signed by an authorized officer of the general construction firm
- C. Use data from approved Sworn Construction Statement. Provide dollar value in each column for each line item for portion of work performed .
- D. Submit one signed copy of the Application for Payment, complete with all required attachments, to the Construction Manager.

1.03 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Price or Contract Time, Construction Manager will issue instructions directly to Contractor.
- B. Execution of Change Orders: Construction Manager will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- C. After execution of Change Order, promptly revise Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Price.
 - 1. Change orders shall be listed as lump sums on the bottom of the pay application and referred to on the cover sheet.
 - 2. Include each line item of the change order as a separate line item in the pay application and the amount of the contractor adjustments.

1.04 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Price, previous payments, and sum remaining due.
- B. Additional documents:
 - 1. Final lien waivers from all subcontractors/material providers
 - 2. Monthly Employment Utilization (MEU) Form
 - 3. Project Employment Utilization (PEU) for City Funded Projects
 - 4. Lead Clearance
 - 5. NEC Certificate of Completion
 - 6. Waste Management Plan Report

7. Permit Sign-offs/Certificate of Code Compliance
 8. Winter Work/Weather Related Work Escrow
 9. Certificate of Substantial/Final Completion
- C. See Section 01 7700 - Closeout Procedures and Submittals, for additional information.

END OF SECTION

SECTION 01 6000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

- A. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.

2.02 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.

2.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- C. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- D. Substitution Submittal Procedure:
 - 1. Submit two copies of request for substitution for consideration. Limit each request to one proposed substitution.
 - 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 - 3. The Construction Manager will notify Contractor in writing of decision to accept or reject request.

END OF SECTION

SECTION 01 6116

VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS

PART 1 GENERAL

1.01 SUMMARY

- A. Implement the following procedures in an effort to improve indoor air quality during Owner's occupancy.
- B. Construction Indoor Air Quality (IAQ) Management
 - 1. Provide low-emitting products

1.02 DEFINITIONS

- A. VOC-Restricted Products: All products of each of the following categories when installed or applied on-site in the building interior:
 - 1. Adhesives, sealants, and sealer coatings.
 - 2. Carpet.
 - 3. Carpet cushion.
 - 4. Resilient floor coverings.
 - 5. Wood flooring.
 - 6. Paints and coatings.
 - 7. Insulation.
 - 8. Gypsum board.
 - 9. Acoustical ceilings and panels.
 - 10. Cabinet work.
 - 11. Wall coverings.
 - 12. Composite wood and agrifiber products used either alone or as part of another product.
 - 13. Other products when specifically stated in the specifications.
- B. Interior of Building: Anywhere inside the exterior weather barrier.
- C. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.
- D. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.

PART 2 PRODUCTS

2.01 MATERIALS

- A. All VOC-Restricted Products: Provide products having VOC content of types and volume not greater than those specified in State of California Department of Health Services Standard Practice for the Testing of Volatile Organic Emissions From Various Sources Using Small-Scale Environmental Chambers.
 - 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Current GREENGUARD Children & Schools certification; www.greenguard.org.
 - b. Current Carpet and Rug Institute Green Label Plus certification; www.carpet-rug.org.
 - c. Current SCS Floorscore certification; www.scscertified.com.
 - d. Current SCS Indoor Advantage Gold certification; www.scscertified.com.
 - e. Product listing in the CHPS Low-Emitting Materials Product List at www.chps.net/manual/lem_table.htm.
 - f. Current certification by any other agencies acceptable to CHPS.
 - g. Report of laboratory testing performed in accordance with CHPS requirements for getting a product listed in the Low-Emitting Materials Product List; report must include laboratory's statement that the product meets the specified criteria.
- B. Adhesives and Joint Sealants: Provide only products having volatile organic compound (VOC) content not greater than required by South Coast Air Quality Management District Rule No.1168.
 - 1. Evidence of Compliance: Acceptable types of evidence are:

- a. Report of laboratory testing performed in accordance with requirements.
 - b. Published product data showing compliance with requirements.
 - c. Certification by manufacturer that product complies with requirements.
- C. Aerosol Adhesives: Provide only products having volatile organic compound (VOC) content not greater than required by GreenSeal GS-36.
 - 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Current GreenSeal Certification.
- D. Paints and Coatings applied within building waterproof envelope:
 - 1. Comply with VOC Content limits (as noted in Criterion 6.1) of Green Seal Standard GS-11 "Paints," First Edition; Standard GC-03 "Anti Corrosive Paints," and MPI GPS-2-8, as follows (in grams/Liter):
 - a. Flat: 50
 - b. Non-flat: 50
 - c. Anti-Corrosive and Anti Rust: 250
 - d. Floor Coatings: 100
- E. Carpet and Adhesive: Provide products having VOC content not greater than that required for CRI Green Label Plus certification.
 - 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Current Green Label Plus Certification.
 - b. Report of laboratory testing performed in accordance with requirements.
- F. Carpet, Carpet Cushion, and Adhesive: Provide products having VOC content as specified in Section 09 6800.
- G. Carpet Cushion: Provide products having VOC content not greater than that required for CRI Green Label Plus certification.
 - 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Current Green Label Plus Certification.
 - b. Report of laboratory testing performed in accordance with requirements.
- H. Composite Wood and Agrifiber Products and Adhesives Used for Laminating Them: Provide products having no added urea-formaldehyde resins.
 - 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Current SCS "No Added Urea Formaldehyde" certification; www.scscertified.com.
 - b. Published product data showing compliance with requirements.
 - c. Certification by manufacturer that product complies with requirements.
- I. Other Product Categories: Comply with limitations specified elsewhere.

PART 3 EXECUTION

3.01 GENERAL

- A. Incorporate procedures and processes during construction and prior to occupancy as described herein

END OF SECTION

SECTION 01 7000
EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 PROJECT CONDITIONS

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- C. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
- D. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
- E. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
- F. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

PART 3 EXECUTION

3.01 LAYING OUT THE WORK

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Construction Manager of any discrepancies discovered.
- C. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:

3.02 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.03 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.

6. Repair new work damaged by subsequent work.
 7. Remove samples of installed work for testing when requested.
 8. Remove and replace defective and non-conforming work.
- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- D. Patching:
1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

3.04 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

3.05 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.06 FINAL CLEANING

- A. Use cleaning materials that are nonhazardous.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

3.07 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
- B. Review Section 01 7700 CLOSEOUT PROCEDURES AND SUBMITTALS.
- C. Notify Construction Manager when work is considered ready for Substantial Completion.
- D. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Construction Manager's review.
- E. Notify Construction Manager when work is considered finally complete.
- F. Complete items of work determined by Construction Manager's final inspection.

END OF SECTION

SECTION 01 7419

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Owner requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. HRA Policy for this project is dependent on diversion of 50 percent, by weight, of potential landfill trash/waste by recycling and/or salvage.
- D. The following recycling incentive programs are mandatory for this project; Contractor is responsible for implementation:

1.02 SUBMITTALS

- A. ACTION SUBMITTALS
 - 1. **CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT(CWM) PLAN**
 - a. Analysis of estimated job-site waste to be generated, including types and quantities of compostable, recyclable, and salvageable materials.
 - b. Description of means and methods to achieve 50 percent diversion requirement for compostable, recyclable, and salvageable materials, including those that may be donated to charitable organizations.
 - c. Identification of the carpet product's composition as polymer, nylon or polypropylene
 - d. Identification of recycling contractors and haulers proposed for use in the project and locations accepting construction waste materials or entities providing related services.
- B. FINAL WASTE MANAGEMENT REPORT: General Contractor is responsible to submit at completion of construction and prior to contract close-out, in electronic format.
 - 1. All information required in Waste Management Progress Reports
 - 2. Legible copies of on-site logs, manifests, weight tickets, and receipts.
 - 3. Final calculations, including total amount (by weight or volume) of diverted construction and demolition waste, and the total amount (by weight or volume) of landfilled waste.

PART 2 EXECUTION

2.01 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor and Construction Manager.
- C. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
- D. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.
- E. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.
- F. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.
- G. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

2.02 UNACCEPTABLE METHODS OF WASTE DISPOSAL

- A. Burning or incinerating on or off project site

- B. Burying on project site, other than fill.
- C. Dumping or burying on other property, public or private, other than official landfill.
- D. Illegal dumping or burying.

END OF SECTION

SECTION 01 7700
CLOSEOUT PROCEDURES AND SUBMITTALS

PART 1 GENERAL

1.01 SUBMITTALS

- A. All documents required to create a complete Final Payment Application can be downloaded from <https://sites.google.com/site/nspconstructiondocs/>
- B. Notify Construction Manager when work is considered ready for Substantial Completion.
 - 1. Make sure the work is mostly complete and cleaned for inspection.
- C. Substantial Completion: According to MN Statute Substantial Completion = “when construction is sufficiently completed so that the owner can occupy or use the improvement for the intended purpose”
 - 1. Submittals: Submit documents listed below to Construction Manager:
 - a. Final Pay Application
 - b. Monthly Employment Utilization (MEU) Form
 - c. Project Employment Utilization (PEU) for City Funded Projects
 - d. Lead-based Paint Hazard Clearance Testing
 - e. Radon Mitigation Verification Submittal
 - f. Energy Modeling/NEC Compliance Report
 - g. Final Waste Management Report, see Section 01 7419 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
 - h. Permit Closeout/Code Compliance
 - i. Winter Work/Weather Related Work Escrow
 - j. Final Lien Waivers
 - k. Material Allowance Reconciliation Change Order (if necessary).
- D. Notify Construction Manager when work is considered finally completed. All Punch List items shall be completed and approved by Construction Manager and HRA Project Manager.
- E. Final Completion Submittals:
 - 1. Project Record Documents: Submit documents listed below to Construction Manager:
 - a. Building Maintenance Manual and Warranty documents for following:
 - 1) Appliance and building systems
 - (a) HVAC equipment
 - (b) Lighting equipment
 - (c) Kitchen and Laundry Appliance Manuals
 - 2) Water-using equipment and controls installed:
 - (a) Hot water heater
 - (b) Toilets
 - (c) Faucets
 - (d) Shower head(s)
 - (e) Dishwasher
 - (f) Clothes washer
 - (g) Clothes dryer
 - b. Signed Certificate of Substantial Completion
 - c. Punch List Items Completed

PART 2 EXECUTION

2.01 LEAD-BASED PAINT HAZARD CLEARANCE TESTING

- A. Where lead-based paint hazard control or reduction work has been performed by the General Contractor, the General Contractor will contact a certified third party Clearance Technician from Ramsey County Department of Public Health or other certified testing agency for clearance testing.

2.02 ENERGY MODELING (NEC)

- A. Contractor must work with the Neighborhood Energy Connection (NEC) who will:
 - 1. Create an energy model with the building plans and specifications to show the building's projected energy performance in the design stages
 - 2. Conduct a mid-construction pre drywall thermal enclosure inspection
 - 3. Verify the final performance of the building with performance testing

2.03 OPERATION AND MAINTENANCE MANUALS

- A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.
- B. Prepare data in the form of an instructional manual.

END OF SECTION

SECTION 01 8113
SUSTAINABLE DESIGN REQUIREMENTS

PART 1 GENERAL

1.01 ENERGY CONSERVATION

- A. This property must go through Xcel Energy's Home Performance with Energy Star program.
 - 1. All insulation and HVAC work must be performed by Xcel Energy's approved contractor list.
 - 2. General Contractors that are on the Home Performance list may choose Subcontractors that are not on the list, but those General Contractors will be held responsible for all work completed.
 - 3. General Contractors will be responsible for submitting documentation required of the Home Performance with Energy Star program and will be responsible for achieving Energy Improvements outlined by Neighborhood Energy Connection.
 - 4. The "Specifications for Energy Improvement Upgrades" provided by the Neighborhood Energy Connection (See appendix) are a part of the Scope of Work for this property.
 - 5. Any discrepancies between the Scope of Work and NEC's specifications are to be clarified during the bid process.
- B. Energy Efficient Lighting
 - 1. The Owner/Project Manager shall select specific locations of fixtures and switches in each area.
 - 2. All lighting fixtures will be purchased new, unless otherwise indicated.
 - 3. No plastic lighting fixtures are acceptable.
 - 4. No fluorescent tub light fixtures are acceptable in living spaces.
 - 5. Provide Energy Star certified CFL or LED light bulbs for all fixtures.
 - 6. All light fixtures are to have color corrected bulbs.
 - 7. Light bulbs that are viewable within fixtures will be a globe or candelabra style CFL.
 - 8. Provide and install lighting fixtures and switches.
 - 9. Review fixtures with Owner prior to installation.
 - 10. All electrical outlets and cover plates are to be replaced throughout the building.
- C. Energy Efficient Appliances
 - 1. All appliances must be purchased new and be Energy Star certified or high efficiency models when Energy Star certification is not possible.
 - 2. High-efficiency appliances meet the following standards

1.02 QUALITY ASSURANCE

- A. The Neighborhood Energy Connection (NEC), through its Peak Performance Homes custom consulting program, certifies independent consultants who provide developers with specific information about how to increase the energy efficiency of their buildings.

PART 2 PRODUCTS

2.01 LOW-EMITTING MATERIALS

- A. Cabinet Materials: Low VOC
 - 1. Provide wood cabinets with self closing hinges and adjustable shelves from the Schrock Select (available at Menard's), Mid-Continent Cabinetry (available at All Inc), or MINNCOR (available at MINNCOR) design lines or approved equal.
 - 2. Cabinets are to have plywood sides and bases.
 - 3. Drawer boxes shall be plywood with dovetail joinery.
 - 4. Cabinets to be constructed with maple; full overlay doors and flat or 5 piece. Alternative styles may be approval by the HRA.

PART 3 EXECUTION

3.01 CONSTRUCTION WASTE MANAGEMENT

- A. Comply with Construction Waste Management and Disposal Plan. Section 01 7419

3.02 CONSTRUCTION INDOOR-AIR-QUALITY MANAGEMENT

- A. Change all air filters regularly during construction with filters specified for the specific furnace.
 - 1. Replace all air filters immediately prior to Substantial Completion with the specified permanent filters.

END OF SECTION

SECTION 02 4100

DEMOLITION

PART 1 GENERAL

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1.01 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Company specializing in the type of work required.

PART 2 PRODUCTS

2.01 NONE

PART 3 EXECUTION

3.01 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
1. Obtain required permits.
 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 3. Protect hardwood floors for possible refinishing later.
 4. Provide, erect, and maintain temporary barriers and security devices.
- B. If hazardous materials are discovered during removal operations, stop work and notify Construction Manager and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- C. Perform demolition in a manner that maximizes salvage and recycling of materials.
1. Inform Project Manager of potential strategies to reuse construction material.
 - a. Only move forward with reusing of construction materials with Project Manager's consent.

3.02 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
- B. Remove existing work as indicated and as required to accomplish new work.
- C. Services (Including but not limited to Site, Building Interior, Building Exterior, HVAC, Plumbing, and Electrical): Remove existing systems and equipment as indicated.
- D. Interior Demolition to Include:
1. Basement/Mechanical
 - a. Furnace, washer and dryer
 - b. Dryer vent
 - c. Electrical boxes
 - d. Water heater
 - e. Code Compliant items
 - f. Windows, prepare openings for glass block.
 - g. Wood walls throughout
 - h. Existing mechanical piping
 - i. Thin plaster coat at foundation wall
 - j. Stairs to first floor
 2. Kitchen
 - a. Refrigerator, sink

- b. Cabinets and counter tops
 - c. Stove
 - d. East exit door
 - e. Flooring material
 - 1) Including subflooring
 - f. Faux brick wall covering
- 3. Living Room
 - a. Front exterior door
 - b. Wood surround, infill shelving, just west of stairs
 - c. Carpet / pad on stairs
- 4. Dining
 - a. Wood surround, infill shelving, just west of stairs
- 5. Side Room, First Floor
 - a. Shelving
 - b. Acoustical panel ceiling
- 6. First Floor Bathroom
 - a. Plumbing fixtures – sink, medicine cabinet, toilet, tub, faucet
 - b. Tile wall and floor
 - c. Wood wainscoat
 - d. Wood door and frame
 - e. Ceiling fan and acoustical ceiling
 - f. Misc. items; grab bar, bath fan, mirrors, lights, etc.
- 7. Rear Entry Hall
 - a. Exterior door
 - b. Flooring material
- 8. Front Porch
 - a. Enclosure of windows, walls, porch entry door
 - b. Floor
- 10. Second Floor Front Bedroom
 - a. Stairs to attic
 - b. Carpet / pad
 - c. Wall opening to accommodate new closet
- 11. Second Floor Hall
 - a. Carpet / pad
- 12. Second Floor East Bedroom
 - a. Carpet / pad
 - b. West door and trim
- 13. Second Floor West Middle Room
 - a. Carpet / pad
- 14. Second Floor Rear Bedroom and Closet
 - a. Carpet / pad
 - b. Sheetrock – south wall of closet
- 15. Second Floor Bathroom
 - a. Plumbing fixtures – sink, vanity, mirror, toilet, tub, faucet
 - b. Floor material
 - c. Misc. items; grab bar, bath fan, mirrors, lights, etc.
 - d. South wall
 - e. New door opening
- 9. Throughout
 - a. Entry doors
 - b. Unnecessary hooks, nails, brackets, etc from walls
 - c. All non-code compliant issues, including but not exclusively electrical and plumbing
 - d. Lighting Fixtures. All.
 - e. Switch plate and receptacle covers. All.

- f. All shelving
 - g. Windows – with the exception of west Living Room wood window and Second Floor front Bedroom west wood window
 - h. Mechanical as required for new plan
 - i. Wood doors
- E. Exterior Demolition to Include:
 - 1. Exterior Building and Garage
 - a. Shingles, flashings and related roofing materials
 - b. Metal encasing trim
 - c. Metal screens over windows
 - d. Metal and wood siding
 - 2. Site Demolition:
 - a. Front steps at sidewalk and entry sidewalk
 - b. Portion of front retaining wall
 - b. Front porch entry steps
 - c. Side entry steps and sidewalk
 - d. Rear deck and steps
 - e. Exterior fencing and post footings
 - f. Garage, garage slab and apron
 - g. See Landscape drawings for additional notes
- F. Protect existing work to remain.

3.04 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Waste removal must be done in accordance with the Waste Management Plan and that at least 50% of the waste must be diverted from landfills.

END OF SECTION

**:SECTION 02 8200
ASBESTOS REMEDIATION**

PART 1 GENERAL

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1.01 DESCRIPTION OF WORK AND CONTRACTOR RESPONSIBILITIES

- A. Provide all labor, equipment, material supervision and subcontracting for the removal and disposal of all Asbestos-Containing Material (ACM) as specified in the attached Asbestos Test.
- B. When work areas include both friable and non-friable types of ACM, Contractor's shall prepare work area using procedures for friable asbestos removal.

1.02 SUBMITTALS

- A. Proof that the Contractor is qualified to perform Asbestos Remediation in the State of Minnesota.
- B. Test Reports: Indicate Complete Remediation of Project.

PART 2 EXECUTION

2.01 LOCATIONS

- A. Review the Asbestos report, included in this Manual, for locations.
- B. Asbestos has been identified at the following locations:
 - 1. Basement; grey window glazing
 - 2. First Floor; white window glazing
 - 3. First Floor; grey paper on cold air returns
- C. Assumed to contain Asbestos
 - 1. Basement; paper next to furnace
 - 2. Basement; paper on boots
 - 3. Basement; paper mixed with general debris in crawl space
 - 4. First Floor; paper on heat vents
 - 5. First Floor; paper on duct to Second Floor

SECTION 02 8313
LEAD HAZARD CONTROL ACTIVITIES

PART 1 GENERAL

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1.01 GENERAL INFORMATION

- A. Projects funded in whole or in part with federal funds must comply with the "Regulation on Lead-Based Paint Hazards in Federally Owned Housing and Housing Receiving Federal Assistance." As a component of Title X, Sections 1012 and 1013, rehabilitation projects receiving more than \$25,000 of federal funds must abate all lead.
- B. Properties built after 1/1/78 and properties needing emergency rehab assistance are exempt from Lead-Based Paint Regulations.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Provide a price for the appropriate methods of abatement required by this scope of work.

1.03 SUBMITTALS

- A. Project Plan: The General Contractor must prepare a written project plan and communicate it to the Construction Manager, Project Manager, and MN Department of Health. It shall include:
 - 1. Start-up date and how long the project is expected to last.
 - 2. Areas to be abated and precautions to take.
 - 3. A warning to pay attention to the caution signs that are posted by the General Contractor around the project site.
 - 4. Location of areas that may be restricted.
- B. Test Reports: Indicate Lead Based Paint Clearance.
 - 1. Submitted at final draw

1.04 QUALITY ASSURANCE

- A. Licensed Lead Abatement Supervisor: Only General or Subcontractors who are State licensed to conduct lead hazard reduction work are allowed to bid on projects involving lead hazard reduction work. See Minnesota Statutes 144.9501-144.9512 and Minnesota Rules 4761.2000-4761.2700 for applicable safety precautions, disposal regulations, and other compliance regulations that apply to abatement activities.
- B. Per MN Statute, Contractors must provide a 5 day notification to the Minnesota Department of Health prior to beginning lead abatement activities. During lead abatement, a MN Licensed Lead Abatement Supervisor must be on site and workers conducting lead abatement must be MN Licensed Lead Abatement Workers. See the MDH website for additional information:
- C. <http://www.health.state.mn.us/divs/eh/lead/prof/notification.html>

PART 2 EXECUTION

2.01 ABATEMENT

- A. When the Risk Assessment process determines that a Project contains a lead-based paint hazard, the General Contractor shall comply with the abatement measures defined by HUD in 24 CFR Part 35 Subpart A through R 35.1325
http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/enforcement/lshr

and by the EPA in 40 CFR 745.227(e).

<http://www.gpo.gov/fdsys/pkg/CFR-2011-title40-vol31/pdf/CFR-2011-title40-vol31-sec745-227.pdf>

and lead hazard reduction methods defined in Minnesota Statutes 144.9501-144.9512 and Minnesota Rules 4761.2000-4761.2700

<http://www.health.state.mn.us/divs/eh/lead/rule.html>

1. **Component Replacement:** The removal of building components that contain lead-based paint. It is most appropriate for items such as doors, windows, trim, and cabinets.
2. **Paint Removal:** The separation of paint from the substrate using safe heat, chemical, or abrasive methods. It may be done on- or off-site. Abrasive methods can create a great deal of dust, are the most hazardous, and require the greatest care and most thorough clean-up.
3. **Enclosure:** The installation of a barrier (such as gypsum board or paneling) that is mechanically attached to the building component, with all edges and seams sealed to prevent escape of lead-based paint dust. It is most appropriate for large surfaces, such as walls, ceilings, floors, and exteriors.
4. **Encapsulation:** The application of a liquid or adhesive material that covers the component and forms a barrier that makes the lead-based paint surface inaccessible by relying upon adhesion. It may be appropriate for many kinds of smooth surfaces but it cannot be used effectively on friction surfaces, surfaces in poor condition, or surfaces that may become wet. It also must be compatible with existing paint.
5. **Soil Removal:** The removal of at least the top six inches of topsoil is adequate for most projects. In areas with heavy contamination, up to two feet may have to be removed, and must be disposed of using proper waste management techniques that comply with local requirements. The maximum lead concentration in replacement soil shall not exceed 200 ug/g. Sod or seeding of new soil should occur.
6. **Soil Cultivation:** The mixing of low lead soil with high lead soil is an appropriate method if the average lead concentration of the soil to be abated is below 1,500 ug/g. Thorough mixing is required, and pilot testing of various techniques may be needed to ensure that thorough mixing does occur.
7. **Paving:** The covering of highly contaminated soil with high quality concrete or asphalt. Paving is common in high traffic areas but not appropriate in play areas. The need for uncontaminated replacement soil is eliminated as is waste disposal costs. Paving often turns out to be the most economical recourse, despite its aesthetic disadvantages.

2.02 LEAD-BASED PAINT HAZARD CLEARANCE TESTING

- A. Where lead-based paint hazard control or reduction work has been performed by the General Contractor, the General Contractor will contact a certified third party Clearance Technician for clearance testing.
- B. The Clearance Technician will conduct a visual assessment of completed work, take dust samples, have dust samples analyzed, and prepare a Clearance Report.
- C. If sample results fail, Minnesota rules 4761.2670 subpart 2 and subpart 3 must be repeated. If test results of samples fail to meet clearance standards, surfaces must be retreated or re-cleaned at no additional cost to the Owner until clearance standard is met.
- D. When the Clearance Report indicates that clearance standards have been met, and all other requirements of this section have been met, the Construction Manager and Owner will approve the final pay application.

2.03 LOCATIONS

- A. Review Lead Report, attached in this Manual. Locations identified in the lead report are defined below, with reference to expected finish in other areas of the specification. Contractor is responsible for ensuring treatments meet abatement requirements as defined in federal and state statute.

Encapsulate - Painted wood walls
Encapsulate - Painted plaster ceilings
Encapsulate - Painted plaster walls
Encapsulate - Painted wood window components
Encapsulate - Painted wood doors and door components

END OF SECTION

SECTION 03 0100
MAINTENANCE OF CONCRETE

PART 1 GENERAL

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1.01 SECTION INCLUDES

- A. Cleaning of existing concrete surfaces.
- B. Repair of exposed structural, shrinkage, and settlement cracks.
- C. Resurfacing of concrete surfaces having spalled areas and other damage.
- D. Repair of deteriorated concrete.

PART 2 PRODUCTS

2.01 CLEANING MATERIALS

- A. Detergent: Non-ionic detergent.

2.02 CEMENTITIOUS PATCHING AND REPAIR MATERIALS

- A. Cementitious Repair Mortar, Trowel Grade: One- or two-component, factory-mixed, polymer-modified cementitious mortar; dry material complying with ASTM C928/C928M; in-place material capable of withstanding freeze/thaw conditions.
- B. Cementitious Hydraulic Waterstop: Very fast setting, low slump, hand formable, and capable of stopping active water leaks; dry material complying with ASTM C928/C928M; in-place material capable of withstanding freeze/thaw conditions.

PART 3 EXECUTION

3.01 CLEANING EXISTING CONCRETE

- A. Clean concrete surfaces of dirt or other contamination using the gentlest method that is effective.
 - 1. Try the gentlest method first, then, if not clean enough, use a less gentle method taking care to watch for impending damage.
 - 2. Clean out cracks and voids using same methods.
- B. The following are acceptable cleaning methods, in order from gentlest to less gentle:
 - 1. Water washing using low-pressure, maximum of 100 psi, and, if necessary, brushes with natural or synthetic bristles.
 - 2. Increasing the water washing pressure to maximum of 400 psi.
 - 3. Adding detergent to washing water; with final water rinse to remove residual detergent.
 - 4. Steam-generated low-pressure hot-water washing.

3.02 CONCRETE SURFACE REPAIR USING CEMENTITIOUS MATERIALS

- A. Clean concrete surfaces, cracks, and joints of dirt, laitance, corrosion, and other contamination using method(s) specified above and allow to dry.
- B. Apply coating of bonding agent to entire concrete surface to be repaired.
- C. Apply repair mortar by steel trowel to a minimum thickness of 1/4 inch (6 mm) over entire surface, terminating at a vertical change in plane on all sides.
- D. Trowel finish to match adjacent concrete surfaces.

3.03 LOCATIONS

- A. Interior foundation wall
- B. Exterior foundation wall

END OF SECTION

SECTION 03 3000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

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1.01 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301 and ACI 318.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Formwork Design and Construction: Comply with guidelines of ACI 347 to provide formwork that will produce concrete complying with tolerances of ACI 117.
- B. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
 - 1. Form Ties: Cone snap type that will leave no metal within 1-1/2 inches (38 mm) of concrete surface.

2.02 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M Grade 40 (280).

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type I - Normal Portland type.

2.04 CONCRETE MIX DESIGN

- A. Normal Weight Concrete:
 - 1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 3,000 psi (20.7 MPa).

PART 3 EXECUTION

3.01 PREPARATION

- A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.
- B. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.

3.02 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

- A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.

3.03 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304R.

3.04 FLOOR FLATNESS AND LEVELNESS TOLERANCES

- A. Maximum Variation of Surface Flatness:
 - 1. Exposed Concrete Floors: 1/4 inch (6 mm) in 10 ft (3 m).
- B. Correct the slab surface if tolerances are less than specified.
- C. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.05 CONCRETE FINISHING

- A. Repair surface defects, including tie holes, immediately after removing formwork.
- B. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:
 - 1. "Wood float" as described in ACI 302.1R; Garage Floor/Apron.
 - 2. "Steel trowel" as described in ACI 301.1R; Basement Floor.

3.06 CURING AND PROTECTION

- A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

3.07 LOCATIONS

- A. Front retaining wall
- B. Front steps from public sidewalk
- C. Front porch steps
- D. Garage apron and pad with gravel sub-base

END OF SECTION

**SECTION 04 0100
MAINTENANCE OF MASONRY**

PART 1 GENERAL

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1.01 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of ACI 530/530.1/ERTA or applicable building code, whichever is more stringent.

PART 2 PRODUCTS

2.01 NONE

PART 3 EXECUTION

3.01 REBUILDING

- A. Cut out damaged and deteriorated masonry with care in a manner to prevent damage to any adjacent remaining materials.

3.02 REPOINTING

- A. Cut out loose or disintegrated mortar in joints to minimum 1/2 inch (6 mm) depth or until sound mortar is reached.
- B. Pre-moisten joint and apply mortar. Pack tightly in maximum 1/4 inch (6 mm) layers. Form a smooth, compact concave joint to match existing.

3.03 CLEANING NEW MASONRY

- A. Verify mortar is fully set and cured.
- B. Clean surfaces and remove large particles with wood scrapers, brass or nylon wire brushes.

3.04 LOCATIONS

- A. Perimeter interior/exterior foundation wall

END OF SECTION

**SECTION 04 2300
GLASS UNIT MASONRY**

PART 1 GENERAL

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1.01 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of ACI 530/530.1/ERTA or applicable building code, whichever is more stringent.

PART 2 PRODUCTS

2.01 GLASS UNITS

- A. Hollow Glass Units: Permanently seal hollow unit by heat fusing joint; with joint key to assist mortar bond.

2.02 MORTAR MIXING

- A. Thoroughly mix mortar ingredients in accordance with ASTM C270 in quantities needed for immediate use.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Erect glass units and accessories in accordance with manufacturer's instructions.

3.02 LOCATIONS

- A. Provide glass block windows with vent and perimeter frame at all basement windows
- B. Second Floor Bathroom

END OF SECTION

SECTION 05 7300
DECORATIVE METAL RAILINGS

PART 1 GENERAL

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PART 2 PRODUCTS

2.01 RAILING SYSTEMS

- A. Railings - General: Factory- or shop-fabricated in design indicated, to suit specific project conditions, and for proper connection to building structure, and in largest practical sizes for delivery to site.
 - 1. Design Criteria: Design and fabricate railings and anchorages to resist the following loads without failure, damage, or permanent set; loads do not need to be applied simultaneously.
 - a. Lateral Force: 75 lb (333 N) minimum, at any point, when tested in accordance with ASTM E935.
 - b. Distributed Load: 50 pounds per foot (0.73 kN per m) minimum, applied in any direction at the top of the handrail, when tested in accordance with ASTM E935.
 - c. Concentrated Loads on Intermediate Rails: 50 pounds per square ft (0.22 per sq m), minimum.
 - d. Concentrated Load: 200 pounds (888 N) minimum, applied in any direction at any point along the handrail system, when tested in accordance with ASTM E935.
 - 2. Assembly: Join lengths, seal open ends, and conceal exposed mounting bolts and nuts using slip-on non-weld mechanical fittings, flanges, escutcheons, and wall brackets.
 - 3. Joints: Tightly fitted and secured, machined smooth with hairline seams.
 - 4. Field Connections: Provide sleeves to accommodate site assembly and installation.
 - 5. Welded and Brazed Joints: Make exposed joints butt tight, flush, and hairline; use methods that avoid discoloration and damage of finish; grind smooth, polish, and restore to required finish.
 - a. Ease exposed edges to small uniform radius.
 - b. Welded Joints:
 - 1) Carbon Steel: Perform welding in accordance with AWS D 1.1/D1.1M.
 - 2) Stainless Steel: Perform welding in accordance with AWS D 1.6.
 - c. Brass/Bronze Brazed Joints:
 - 1) Perform torch brazing in accordance with AWS C3.4/3.4M.
 - 2) Perform induction brazing in accordance with AWS C3.5/3.5M.
 - 3) Perform resistance brazing in accordance with AWS C3.9/3.9M.
- B. Steel and Iron: At round pipe railings and guardrails: 1-1/2" outside diameter pipe with horizontal rails spaced no more than 5-1/2" o.c.. At Square pipe railing and guardrails: 1-1/2" square posts, 1-1/2 X 1/2 top and bottom rails, 1/2" solid square bar vertical pickets spaced 4" on center maximum. Top rails to be 2'10" above stair nosing or ramp and extends 12" at top and bottom of stairs.
 - 1. Finishes: Prepare raw material by "Brush-Off Blast Cleaning". Rust inhibiting alkyd primer (1 coat and flat black finish (2 coats), applied in ship to all exposed surfaces of metal, even if not normally visible.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Comply with manufacturer's drawings and written instructions.
- B. Install components plumb and level, accurately fitted, free from distortion or defects and with tight joints, except where necessary for expansion.
- C. Anchor posts in concrete by inserting into formed or core-drilled holes and grout space between post and concrete.
- D. Anchor handrail ends to concrete and masonry with round flanges connected to rail ends and anchored to wall construction with drilled in expansion anchors.

- E. Anchor securely to structure.

3.02 LOCATIONS

- A. Front porch steps; anchored to concrete steps.
- B. Front steps from public sidewalk; anchored to concrete steps.

END OF SECTION

**SECTION 06 1000
ROUGH CARPENTRY**

PART 1 GENERAL

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1.01 SUBMITTALS

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 - 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
 - 3. Lumber of other species or grades is acceptable provided structural and appearance characteristics are equivalent to or better than products specified.
- B. Lumber fabricated from old growth timber is not permitted.
- C. Provide wood harvested within a 500 mile (805 km) radius of the project site; see Section 01 6000 for requirements for locally-sourced products.
- D. Lumber salvaged from deconstruction or demolition of existing buildings or structures is permitted in lieu of sustainably harvested lumber provided it is clean, de-nailed, and free of paint and finish materials, and other contamination; identify source; see Section 01 6000 for requirements for reused products.
- E. Lumber fabricated from recovered timber (abandoned in transit) is permitted in lieu of sustainably harvested lumber, unless otherwise noted, provided it meets the specified requirements for new lumber and is free of contamination; identify source.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings.
- B. Moisture Content: S-dry or MC19.
- C. Stud Framing (2 by 2 through 2 by 6 (50 by 50 mm through 50 by 150 mm)):
 - 1. Grade: No. 2.
- D. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16 (50 by 150 mm through 100 by 400 mm)):
- E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.

2.03 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel per ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
 - 2. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.
- B. Joist Hangers: Hot dipped galvanized steel, sized to suit framing conditions.
 - 1. For contact with preservative treated wood in exposed locations, provide minimum G185 (Z550) galvanizing per ASTM A653/A653M.
- C. Building Paper: Water-resistant Kraft paper.

2.04 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWP A U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWP A standards.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.02 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Install structural members full length without splices unless otherwise specifically detailed.
- C. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AFPA Wood Frame Construction Manual.
- D. Install horizontal spanning members with crown edge up and not less than 1-1/2 inches (38 mm) of bearing at each end.

3.03 INSTALLATION OF CONSTRUCTION PANELS

- A. Underlayment: Secure to subflooring with nails and glue.

3.04 LOCATION

- A. Basement – Frame in new stair at existing stair location.
- B. First Floor Bathroom – Prepare Bathroom walls for tile where noted. Frame in new shower.
- C. Kitchen – Remove existing fake brick. Frame in window and door openings as indicated. Prepare walls for new kitchen cabinet installation. Remove subfloor and level structure, insulate where needed.
- D. Dining Room – Repair arch and columns.
- E. First Floor Side Room – Install sheetrock ceiling.
- F. Living Room – Remove infill shelves and wood surround just west of stairs in order to restore wood arch.
- G. Front Porch - Remove existing windows, enclosure walls and flooring. Retain existing roof and front soffit, temporarily support existing roof as needed. Level floor structure as needed.
- H. Rear Deck – Frame in rear deck and stair.
- I. Second Floor Front Bedroom – Frame in new closet. Frame in new attic access stair door.
- J. Second Floor East Bedroom – Frame in new closet and west door opening.
- K. Second Floor West Middle Room – Frame in new north wall.
- L. Second Floor Rear Bedroom and Closet – Frame in new closet and bathroom door opening.
- M. Second Floor Bathroom – Frame in relocated plumbing fixtures.
- N. Garage – Construct new 2 car garage. Position entry door and window to face rear yard and coordinate service door location with new concrete walks.
- O. Throughout – Structural reinforcing as shown on drawings.

END OF SECTION

SECTION 06 2000
FINISH CARPENTRY

PART 1 GENERAL

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1.01 RELATED SECTIONS

- A. See Section 09 9000 Painting and Coating, for trim finish and color.

PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

- A. Quality Grade: Unless otherwise indicated provide products of quality specified by AWI/AWMAC/WI Architectural Woodwork Standards for Premium Grade.

2.02 WOOD-BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.
- B. Provide sustainably harvested wood, certified or labeled as specified in Section 01 6000.
- C. Provide wood harvested within a 500 mile (805 km) radius of the project site.

2.03 LUMBER MATERIALS

- A. Softwood Lumber: Pine species, maximum moisture content of 6 percent; with vertical grain, of quality suitable for transparent finish.
 - 1. Baseboard system: #2 1X6 with 3/16 Radius shoulder with finger jointed WM-65fj 11/16" x 1 3/8" base cap molding.
 - 2. Window Trim: Header, stop, stool, apron and casing using 1"X4", #2 grade pine or better.
 - a. Ease all outside edges with 1/16" radius.

2.04 MANUFACTURED WOOD SIDING & TRIM

- A. First Floor Lap Siding: LP SmartSide, 8-inch exposure
- B. Second Floor Lap Siding: LP SmartSide, 4-inch exposure
- C. Door, Window, and

2.05 FABRICATION

- A. Shop assemble work for delivery to site, permitting passage through building openings.

2.06 SHOP FINISHING

- A. Sand work smooth and set exposed nails and screws.
- B. Apply wood filler in exposed nail and screw indentations.
- C. Finish work in accordance with AWI/AWMAC/WI Architectural Woodwork Standards, Section 5 - Finishing for Grade specified and as follows:

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install work in accordance with AWI/AWMAC/WI Architectural Woodwork Standards requirements for grade indicated.
- B. Set and secure materials and components in place, plumb and level.
- C. Use finish nails of sufficient length to penetrate framing 1".
- D. Miter all lap joints, and break all lap joints over framing.
- E. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch (1 mm). Do not use additional overlay trim to conceal larger gaps.

3.02 LOCATIONS

- A. Kitchen – Install new kitchen cabinetry and baseboard.
- B. Living / Dining Rooms – Restore arches.
- C. First Floor Bathroom – Install new door and frame.

- D. Front Porch – Install porch floor and railing. Porch detailing with standard posts and railings. Construct stair and landing for front entry
- E. Reconstruct Basement stair
- F. Rear Deck – Install porch floor and railing.
- G. Second Floor Bathroom – Install bathroom cabinet and door
- H. Second Floor Front Bedroom – Install attic access door and stair. Install new doors
- I. Second Floor East Bedroom – Install closet door and frame.
- J. Second Floor Rear Bedroom and Closet – Install closet door and frame.
- K. Repair wood soffits, fascia, brackets and trim at roof.
- L. Interior base, door and window trim, as required.
- M. Repair of existing interior doors.
- N. Installation of closet shelving and rods.
- O. Finish carpentry, as required, for a complete and finished project.
- P. LP Smart Side siding and trim on House.
- Q. LP Smart Side siding and trim on Garage.

END OF SECTION

SECTION 07 2119
FOAMED-IN-PLACE INSULATION

PART 1 GENERAL

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PART 2 PRODUCTS

2.01 MATERIALS

- A. Foamed-In-Place Insulation: Medium-density, rigid or semi-rigid, closed cell polyurethane foam; foamed on-site, using blowing agent of water or non-ozone-depleting gas.
 - 1. Closed Cell Content: At least 90 percent.

2.02 ACCESSORIES

PART 3 EXECUTION

3.01 APPLICATION

- A. Apply insulation in accordance with manufacturer's instructions.

3.02 LOCATION

- A. Insulate and air seal to rim joist cavities to an r-value of R-19.
- B. See NEC Energy Audit Recommendations in Section 01 9200.

END OF SECTION

**SECTION 07 2126
BLOWN INSULATION**

PART 1 GENERAL

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PART 2 PRODUCTS

2.01 MATERIALS

- A. Loose Fill Insulation: ASTM C739, cellulose fiber type, nodulated for pour and bulk for pneumatic placement.
 - 1. R-Value: Attic R-50
- B. Dense Pack Insulation: Fill Insulation: ASTM C739, cellulose fiber type, nodulated for pour and bulk for pneumatic placement.
 - 1. R-Value: 19 if possible
 - 2. Density: 3.5 Lbs. per Cubic Foot for the entire cavity
- C. Ventilation Baffles: Formed plastic.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install insulation and ventilation baffle in accordance with ASTM C1015 and manufacturer's instructions.
- B. Drill 2 inch (50 mm) diameter insulation access ports in fascia boards to permit equipment access.
- C. Place insulation pneumatically to completely fill stud, joist, and rafter spaces .
- D. Pour insulation to completely fill stud, joist, and rafter spaces to a density of 3.5 lbs per cubic foot per cavity.
- E. Completely fill intended spaces. Leave no gaps or voids.
- F. Carefully seal all drilled holes with wood or foam plugs and patch all holes to match surrounding materials if the surface is exposed.
- G. In balloon framed houses insures that blown cellulose is blocked from entering floor cavities such as second floor flooring.

3.02 LOCATIONS

- A. There are Attic areas will need to be accessed from the roof
- B. See additional locations such as knee walls, slants, etc. as mentioned in the NEC Specifications
- C. See NEC Energy Audit Recommendations is Section 01 9200

END OF SECTION

**SECTION 07 2500
WEATHER BARRIERS**

PART 1 GENERAL

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1.01 UNIT PRICES

- A. Provide a bid price for labor and additional materials required to perform work to code.
 - 1. Vendor: Lampert Siding
 - 2. Tyvek Housewrap

PART 2 PRODUCTS

2.01 WEATHER BARRIER ASSEMBLIES

- A. Weather Barrier Membrane: Spunbonded polyolefin, non-woven, non-perforated, weather barrier
 - 1. Manufacturer: DuPont Tyvek HomeWrap or like product to be approved by owner.
- B. Seam Tape: DuPont Tyvek or like product
- C. Flashing: DuPont Tyvek or like product
- D. Fasteners: DuPont Tyvek or like product
- E. Interior Vapor Retarder: 6 Mil heavy plastic (polyethylene) sheeting
 - 1. On inside face of masonry and concrete walls use vapor retarder sheet, self-adhesive type,.
 - a. Install to cover ground in crawl space and 6" up foundation walls
 - b. Overlap seams by 2' and secure with Tyvek tape.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install materials in accordance with manufacturer's instructions.
- B. Air Barriers: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
- C. Install weather barrier over exterior face of exterior wall substrate in accordance with manufacturers recommendations.
- D. Attach weather barrier to studs through exterior sheathing. Secure using weather barrier manufacturers recommended fasteners, spaced 12-18 inches vertically on center along stud line, and 24 inches on center, maximum horizontally.

3.02 LOCATION

- A. Exterior of the House and Garage, under siding.
- B. Around new windows and door openings.
- B. See NEC Energy Audit Recommendations is Section 01 9200.

END OF SECTION

SECTION 07 2700
AIR BARRIER SYSTEM (SEALING OF BYPASSES)

PART 1 GENERAL

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1.01 QUALITY ASSURANCE

- A. Designer Qualifications: Perform design under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in Minnesota.

PART 2 PRODUCTS

2.01 ADHESIVES AND SEALANTS

- A. VOC content not to exceed the following [g/L; less water and less exempt compounds]
 - 1. Multipurpose construction adhesives: 70 g/L

PART 3 EXECUTION

3.01 INSTALLATION

- A. Provide continuous air barriers.
 - 1. Install continuous interior air barrier around the building
 - 2. Install continuous external air barrier between all conditioned space and unconditioned space.
- B. Compartmentalization of dwelling units:
 - 1. Walls
 - a. Seal exterior wall corners with joint sealant [and/or foam]
 - b. Seal vertical walls at all penetrations with joint sealant [and/or foam]
 - c. Seal window frame with low expanding foam
 - d. Seal bottom plates on exterior walls with a foam gasket [and/or caulk, foam]
 - 2. Floors
 - a. Provide complete seal at joists supporting conditioned space with joint sealant [and/or foam]
 - 3. Ceilings
 - a. Install continuous top and bottom plates, and sheathing to create a six-sided air barrier on all attic knee walls and seal with foam [and/or caulk].
 - b. Install blocking at exposed edges of insulation at joists and rafters
 - c. Truss framing: Install blocking at the top and bottom of each framing bay.
 - d. Seal attic hatches with joint sealant [and/or foam].
 - e. Provide sealing around skylight shaft with joint sealant [and/or foam]
 - f. Install baffles between all rafters or trusses to direct the flow of air over and above the attic insulation.
 - g. Recessed lighting when below unconditioned attic: Install insulation contact, airtight rated (ICAT) and seal to drywall with gasket [and/or caulk, foam]
 - 4. Garage Isolation Air Barrier (when attached to dwelling unit)
 - a. Install continuous air barrier between the conditioned living space and any garage space and seal with foam [and/or caulk].
 - b. Seal between all walls separating conditioned and garages spaces with foam [and/or caulk].
 - c. All pipe and conduit penetrations shall be sealed with material compatible with the adjacent materials and resilient to temperature fluctuations and providing fire-resistive characteristics of required by authority having jurisdictions.
 - d. Floor trusses: Seal and block floor trusses and joists between conditioned space and garage with foam [and/or caulk].
 - 5. Bathtub and Shower Enclosures
 - a. Use mold-resistant material [plywood, oriented strand board (OSB), sheathing boards, moisture resistant gypsum] behind bathtub or shower enclosures, and extend the mold-resistant material the full length and width of the wall(s) on which the bathtub or shower enclosure abuts. Seal at all joints.

- b. Install spray foam at framing behind bathtub or shower enclosure prior to setting tub or shower.
- C. Continuity of External Air Barrier
 - 1. Roof
 - a. Install 4-inch to 6 inch "peal and seal" self-adhering waterproofing strips over joints in roof decking before installing the roof underlayment and cover.
 - 2. Mechanical work
 - a. Seal holes from penetrations from unconditioned spaces with joint sealant and provide flashing.
 - b. Seal flue openings with flashing and fire-rated joint sealant
 - 3. Building Envelope
 - a. Air barrier must be continuous around building, including all components that act together as the exterior air barrier (sheet or liquid membrane with compatible tapes, caulks, flashing). Foam or caulk all exterior sheathing joints and intersections.
 - b. Install weatherstripping hard-fastened to the door or frame at entranceways.
 - c. Seal the roof curb at ductwork penetrations.
 - d. Install continuous air barrier at the intersection of the porch roof and conditioned space.
 - e. Air seal and insulate exterior sheathing on bottom of cantilevered floor.
 - f. Lap and Foam or caulk exterior rigid insulation over the seams of the exterior wall sheathing.
 - 4. Fireplace Enclosures
 - a. Seal fireplace flue and wall penetrations with fire-rated caulking along with flashing or UL-rated collars.
 - 5. Use air sealing with polyurethane caulk for following areas:
 - a. Slab openings
 - b. Slab penetrations
 - c. Control or expansion joints
 - d. Sump cover
 - 6. Pest Management Measures
 - a. For openings in the building envelope less than 1/4 inch, including pipe and electrical penetrations:
 - 1) completely seal to avoid pest entry.
 - b. Install rodent-and corrosion proof screens for openings greater than 1/4 inch.

3.02 LOCATION

- A. Exterior and Interior Throughout, including attic.
- B. See NEC Energy Audit Recommendations is Section 01 9200

SECTION 07 3113
ASPHALT SHINGLES

PART 1 GENERAL

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1.01 UNIT PRICES

- A. Provide a bid price for labor and additional materials required to perform work to code.
 - 1. Vendor: Lampert Roofing
 - 2. GAF Elk Timberline 30 year HD Shingles
 - 3. Timbertex
 - 4. Ice and Water Shield
 - 5. 15 lb. felt.

1.02 QUALITY ASSURANCE

- A. Perform Work in accordance with the recommendations of NRCA Steep Roofing Manual.

PART 2 PRODUCTS

2.01 SHINGLES

- A. Asphalt Shingles: Asphalt-coated glass felt, mineral granule surfaced, complying with ASTM D3462; Class A fire resistance.
 - 1. Self-sealing type.
 - 2. Manufacturer: GAF ELK, Timberline 30 Year HD shingles
 - 3. Style: Architectural Shingle.
 - 4. Color: Weathered Wood.

2.02 ACCESSORIES

- A. Nails: Standard round wire shingle type, of hot-dipped zinc coated steel, 12 gage, 0.105 inch (2.67 mm) shank diameter, 3/8 inch (9.5 mm) head diameter, of sufficient length to penetrate through roof sheathing or 3/4 inch (19 mm) into roof sheathing or decking.

PART 3 EXECUTION

3.01 INSTALLATION - SHINGLES

- A. Install shingles in accordance with manufacturer's instructions.

3.02 LOCATION

- A. Provide asphalt shingles, drip edge and underlayment at entire house and porch.
- B. Provide asphalt shingles, drip edge and underlayment at garage.

END OF SECTION

SECTION 07 6200
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

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1.01 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA Architectural Sheet Metal Manual requirements and standard details, except as otherwise indicated.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

- A. Aluminum: ASTM B209 (ASTM B209M); 0.032 inch (0.8 mm) thick; anodized finish of color as selected.
 - 1. Clear Anodized Finish: AAMA 611 AA-M12C22A41 Class I clear anodic coating not less than 0.7 mils (0.018 mm) thick.
- B. Pre-Finished Aluminum Soffit, Trim and Facia: ASTM B209 (ASTM B209M); 0.024 inch (____ mm) thick; plain finish shop pre-coated with modified silicone coating.
 - 1. Manufacturer: Alsco Perfect Trim Plus

PART 3 EXECUTION

3.01 INSTALLATION

- A. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
- B. Seal metal joints watertight.

3.02 LOCATION

- A. Exterior of the house – soffit to be fully vented.
- B. Garage – soffit to be fully vented.

END OF SECTION

SECTION 07 7123
MANUFACTURED GUTTERS AND DOWNSPOUTS

PART 1 GENERAL

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1.01 DESIGN REQUIREMENTS

- A. Conform to applicable code for size and method of rain water discharge.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Pre-Finished Aluminum Sheet: ASTM B209 (ASTM B209M); 0.032 inch (0.8 mm) thick.
 - 1. Finish: Plain, shop pre-coated with modified silicone coating.
 - 2. Color: To match the house paint color.

2.02 COMPONENTS

- A. Gutters: K style profile, seamless, one-piece aluminum gutter and guard
- B. Gutter Guard: seamless, one-piece aluminum gutter and guard
- C. Downspouts: SMACNA Rectangular profile.
 - 1. Size: 3X5
- D. Anchors and Supports: Profiled to suit gutters and downspouts.
 - 1. Gutter Supports: Brackets.
 - 2. Downspout Supports: Straps.
- E. Fasteners: Galvanized steel , with soft neoprene washers.

2.03 ACCESSORIES

- A. Splash Pads: Precast concrete type, size and profiles indicated; minimum 3000 psi (21 MPa) at 28 days, with minimum 5 percent air entrainment.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install gutters, downspouts, and accessories in accordance with manufacturer's instructions.
- B. Where feasible, a minimum of 6' offset extension shall be installed at the ends of all downspouts to divert water away from foundation.
- C. Downspouts shall divert the entire water load in the direction of the rain garden according to the Landscape Plan.

3.02 LOCATION

- A. Downspouts shall divert the entire water load in the direction of the rain garden according to the Landscape Plan.
- B. Refer to drawings for location.
- C. Provide concrete splash blocks at each downspout.

END OF SECTION

SECTION 08 1100
EXTERIOR INSULATED METAL DOORS AND FRAMES

PART 1 GENERAL

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PART 2 PRODUCTS

2.01 EXTERIOR PREHUNG METAL DOOR

- A. Front Door:
 - 1. Product: Mastercraft, TS-640
- B. Rear Door:
 - 1. Product: Mastercraft, Half Lite w/ Blinds - LT-10
- C. Garage Service Door:
 - 1. Product: Mastercraft, 6-Panel - E-1

2.02 ALUMINUM STORM DOORS

- A. Front Door
 - 1. Product: Larson, Oakley, or approved equivalent
- B. Rear/Side Doors
 - 1. Product: Larson, Oakley, or approved equivalent

2.03 ACCESSORIES

- A. DOOR HARDWARE: Door hardware finish to be Satin Nickel
 - 1. Front Door Hardware: Schlage Avanti
 - 2. Interior Door Hardware: Schlage Avanti

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine doors and installed door frames before hanging doors.
 - 1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
 - 2. Reject doors with defects
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Use an expanding foam to insulate between the door frame and the rough opening.
- C. Set units plumb, level, and true-to-line, without warping or racking doors, and with specified clearances; anchor in place.
- D. Align and fit doors in frames with uniform clearances set by manufacturer.
- E. Seal edges of doors, edges of cutouts, and mortises after fitting and machining

3.03 SYSTEMS INTEGRATION

- A. Coordinate with low-voltage security contractor to install contacts in door.

3.04 ADJUSTING

- A. Adjust Doors for smooth operation.
- B. Operation: Rehang or replace doors that do not swing or operate freely.

3.05 LOCATIONS

- A. Front Entrance
- B. Rear Entrance
- C. Service door and hardware at new garage.
- D. Provide storm doors at front and rear entrance.

END OF SECTION

SECTION 08 1429
WOOD DOORS

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PART 2 PRODUCTS

2.01 INTERIOR WOOD DOORS

- A. Quality Level: Premium Grade , in accordance with AWI/AWMAC/WI Architectural Woodwork Standards.
- B. Wood products that Emit Low or No Formaldehyde
- C. Wood products that Emit Low or No VOC
- D. Interior Doors: 1-3/4 inches (44 mm) thick unless otherwise indicated; solid lumber construction; mortised and tendoned joints.
 - 1. Wood: Hardwood
 - 2. Door Type: 2-panel, prehung
- E. Bi-fold
 - 1. Wood: Pine

2.02 ACCESSORIES

- A. Molding: Wood, match existing, of same species as door facing, mitered corners; prepared for countersink style tamper proof screws.
- B. Adhesives and Sealants: VOC content not to exceed the following [g/L; less water and less exempt compounds]:
 - 1. Multipurpose Construction Adhesives: 70g/L
- C. Privacy Lockset
- D. Hinges to match the lockset
- E. Door stop

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions and AWI/AWMAC Quality Standards requirements.
- B. Coordinate installation of doors with installation of frames and hardware.

3.02 TOLERANCES

- A. Conform to specified quality standard for fit, clearance, and joinery tolerances.

3.03 LOCATIONS

- A. First Floor
 - a. Bathroom
 - b. West Side Room – double door
 - c. Dining Room – closet below stair
- B. Second Floor
 - a. South Bedroom – double door
 - b. Bathroom – reuse from East Bedroom if possible
- C. Bi-fold
 - a. North and East Bedroom Closet
- D. Refer to drawing for more information, including location, swing and schedule.
- E. Adjust all existing and new doors to close properly without binding.

END OF SECTION

**SECTION 08 2550
ATTIC ACCESS STAIR**

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PART 1 GENERAL

1.01 WARRANTY

- A. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 ATTIC ACCESS STAIR

- A. Quality Level: Type 1A Duty Rating
- B. Steel rail, rung and frame construction.
- C. Load capacity: 350 lbs.
- D. Attic Access Stair:
 - 1. Manufacturer: Fakro, available at Home Depot
 - 2. Model: LWM 22x47
 - 3. Dimensions: 22" x 47" x 8'-3" or as required by conditions.
 - 4. Insulated Door.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install Attic Access Stair in accordance with manufacturer's .
- B. Coordinate framing of opening as required.

3.02 TOLERANCES

- A. Conform to specified quality standard for fit, clearance, and joinery tolerances.

3.03 LOCATIONS

- A. Ceiling of South Bedroom Closet, as shown on Drawings.

END OF SECTION

**SECTION 08 3323
OVERHEAD GARAGE DOORS**

PART 1 GENERAL

PART 2 PRODUCTS

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2.01 COILING DOORS

- A. Exterior Coiling Doors: Un-insulated aluminum slat curtain.
 - 1. Guides: Formed track; galvanized steel.
 - 2. Electric operation.
 - 3. Mounting: Within framed opening.
 - 4. Exterior lock and latch handle.

2.02 ELECTRIC OPERATION

- A. Electric Operators: Chain Drive Garage Door Opener
 - 1. Motor Rating: 1/3 hp (250 W); continuous duty.
 - 2. Motor Controller: NEMA ICS 2, full voltage, reversing magnetic motor starter.
 - 3. Controller Enclosure: NEMA 250 Type 1.
 - 4. Opening Speed: 12 inches per second (300 mm/s).
 - 5. Brake: Adjustable friction clutch type, activated by motor controller.
 - 6. Manual override in case of power failure.
- B. Control Station: Standard three button (OPEN-STOP-CLOSE) momentary control for each operator.
 - 1. 24 volt circuit.
- C. Safety Edge: Located at bottom of curtain, full width, electro-mechanical sensitized type, wired to stop operator upon striking object, hollow neoprene covered.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install units in accordance with manufacturer's instructions.
- B. Fit and align assembly including hardware; level and plumb, to provide smooth operation.
- C. Complete wiring from disconnect to unit components.

3.02 LOCATION

- A. Overhead door and electric door opener with two remotes at new garage.

END OF SECTION

**SECTION 08 5200
WOOD WINDOWS**

PART 1 GENERAL

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1.01 WARRANTY

- A. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 WOOD WINDOWS

- A. Existing Wood Windows: Wood frame and sash.
1. Grade: AAMA/WDMA/CSA 101/I.S.2/A440 R15.
 2. Exterior Finish: Match exterior paint color
 3. Interior Finish: Stain
 4. Configuration: As indicated on drawings.
 5. Frame and Sash Members: Mortise and tenon joints. Glue and steel pin joints to hairline fit, weather tight.
 6. Clearances and Shim Spacing: Minimum required for installation and dynamic movement of perimeter seal.

2.02 COMPONENTS

- A. Clean, repair, finish and ensure operation of exterior storm windows

2.03 MATERIALS

PART 3 EXECUTION

3.01 INSTALLATION

- A. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.

3.02 LOCATION

- A. Living Room – west window.
- B. Living Room – south window, repair/create storm windows for fixed panes.
- B, Second Floor Front Bedroom – west window.

END OF SECTION

SECTION 08 5313

VINYL WINDOWS

PART 1 GENERAL

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1.01 PERFORMANCE REQUIREMENTS

- A. Performance Requirements: Energy Star Rated to meet Minnesota climate conditions. Climate Zone 6 for 2006 IECC, ASHRAE 90.1-2007 and ENERGY STAR.

PART 2 PRODUCTS

2.01 COMPONENTS

- A. Windows: Extruded, hollow, tubular, ultra-violet resistant polyvinyl chloride (PVC) with integral color; factory fabricated; with vision glass, related flashings, anchorage and attachment devices.
 - 1. Performance Requirements: AAMA/WDMA/CSA 101/I.S.2/A440 R15.
 - 2. Configuration: double hung and fixed double hung sash.
 - 3. Color: Color as selected.
- B. Insect Screens: 14/18 mesh, steel strands.
- C. Fasteners: Stainless steel.

2.02 ADHESIVES AND SEALANTS

- A. VOC content not to exceed the following [g/L; less water and less exempt compounds]:
 - 1. Multipurpose Construction Adhesives: 70 g/L
 - 2. Structural Glazing Adhesives: 100 g/L

2.03 HARDWARE

- A. Double Hung Sash: Metal and nylon spiral friction slide cylinder, each sash, each jamb.
- B. Sash lock: Lever handle with cam lock.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install window units in accordance with manufacturers instructions.
- B. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.
- C. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.
- D. Insulate any voids between the window frame and the rough opening with foam insulation.

3.02 ADJUSTING

- A. Adjust hardware for smooth operation and secure weathertight closure.

3.03 APPLICATIONS

- A. Water Management: Walls, Exterior Windows
 - 1. Provide weather-resistive barrier/housewrap
 - 2. Provide pathway for liquid water to exit exterior wall assembly
 - 3. Provide pan flashing, side flashing, and head flashing

3.04 LOCATION

- A. REPLACEMENT WINDOWS
 - 1. DOUBLE HUNG:
 - a. Living Room – south wall, each side of fixed panes
 - b. Dining Room – east wall
 - c. West Side Room – west wall
 - d. South Bedroom Closet – south wall
 - e. South Bedroom – south wall

- f. Laundry – west wall
 - g. East Bedroom – east wall
 - h. Bathroom – west wall
 - i. North Bedroom – north and east wall
- 2. FIXED WINDOW
 - a. Living Room – south wall
- B. NEW WINDOWS
 - a. Kitchen – north and west walls

END OF SECTION

SECTION 09 0120
REPAIR OF PLASTER AND GYPSUM BOARD SURFACES

PART 1 GENERAL

\$ _____

1.01 SUMMARY

- A. This section covers surface repairs of plaster and gypsum board surfaces.
- B. Finish surface type should be smooth unless otherwise indicated, including skimcoating

PART 2 PRODUCTS

2.01 ACCESSORIES

- A. Galvanized metal lath
- B. Joint Compound
- C. Plaster
- D. Plastic Tarps

PART 3 EXECUTION

3.01 REPAIR

- A. Walls and Ceilings: Repair interior surface(s) so that finish surface is smooth, even and properly prepared for finish application.
 - 1. Protect adjacent finished surfaces by covering with plastic or tarps.
 - 2. Install galvanized metal lath (weight per city code) over area of back up as required. May also secure with screws and inserted piece of gypsum board in areas to be patched.
 - 3. Before applying scratch coats, dampen areas to reduce absorption from joint compound/plaster.
 - 4. Apply finish coat and bring to thickness flush with surrounding surface.
 - 5. The interior temperature must be no less than a minimum 60 degrees during this work.

3.02 LOCATION

- A. Throughout; First and Second Floor as needed following improvements. Refer to drawings

END OF SECTION

**SECTION 09 0160
HARDWOOD FLOORING RESTORATION**

PART 1 GENERAL

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1.01 UNIT PRICE

A. Unit Price #3: Provide a per square cost for replacement of wood flooring.

1.02 RELATED SECTIONS

- A. See Section 099000 Painting and Coating.
- B. See Section 01 6116 Volatile Organic Compound Content Restrictions

PART 2 PRODUCTS

- A. Match existing flooring species and dimensions to the extent possible.

PART 3 EXECUTION

3.01 RESTORATION

- A. Restore hardwood floors: Counter sink all nails and fill holes. Remove the quarter round molding and protect the wall molding with painters tape. Drum sand and edge floor finishing with 120 grit sandpaper to completely remove the existing finish. Vacuum and wipe floor with slightly water dampened rag, until no dust is present.
- B. Apply a coat of Minwax Low-VOC Water Based Polyurethane base coat followed by 3 coats of Minwax Low-VOC Water Based polyurethane for floors.
 - 1. Product may not exceed 250 grams of VOC per Liter

3.02 LOCATIONS

- A. First Floor:
 - 1. Throughout
 - 2. Except Kitchen, Rear Hall, Bathroom
- B. Second Floor:
 - 1. Throughout
 - 2. Except Bathroom, North Bedroom and Closet
- C. Provide new wood floor for North Bedroom and Closet.

END OF SECTION

SECTION 09 2116
GYPSUM BOARD INSTALLATION

PART 1 GENERAL

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1.01 RELATED SECTIONS

- A. Section 01 8131 – Sustainable Design Requirements

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.

2.02 BOARD MATERIALS

- A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
 2. Thickness:
 - a. Vertical Surfaces: 1/2 inch (13 mm).
 - b. Ceilings: 1/2 inch (13 mm).
- B. Backing Board For Wet Areas:
1. Surfaces behind tile in wet areas including tub and shower surrounds and shower ceilings.
 2. All bathrooms will have non-paper-faced materials such as cement board, fiber cement board, or equivalent.

2.03 ACCESSORIES

- A. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.
1. Tape: 2 inch (50 mm) wide, creased paper tape for joints and corners, except as otherwise indicated.
 2. Ready-mixed vinyl-based joint compound.
 3. Powder-type vinyl-based joint compound.
 4. Chemical hardening type compound.

PART 3 EXECUTION

3.01 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

3.02 JOINT TREATMENT

- A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
 2. Level 1: Fire rated wall areas above finished ceilings, whether or not accessible in the completed construction.

3.03 LOCATIONS

- A. As required by suggested demolition:
1. First Floor West Side Room - new ceiling to replace fiberboard ceiling
 2. First Floor Bathroom – new ceiling to replace fiberboard ceiling
 3. Bathroom walls at shower / tub surround
 4. Walls and ceilings, as required by the Work.

END OF SECTION

SECTION 09 3000

TILING

PART 1 GENERAL

\$ _____

1.01 ALLOWANCES

- A. Allowances for Tile of \$3.00 per square foot.

1.02 FIELD CONDITIONS

- A. Do not install adhesives in an unventilated environment.
- B. Maintain ambient and substrate temperature of 50 degrees F (10 degrees C) during installation of mortar materials.

PART 2 PRODUCTS

2.01 TILE

- A. Glazed Wall Tile Type Ceramic: ANSI A137.1 , and as follows:
 - 1. Colors: To be selected by Construction Manager from manufacturer's standard range.

2.02 TRIM AND ACCESSORIES

- A. Ceramic Accessories: Glazed finish, same color and finish as adjacent field tile; same manufacturer as tile.
- B. Ceramic Trim: Matching bullnose, double bullnose, cove base, and cove ceramic shapes in sizes coordinated with field tile.
- C. Thresholds: Marble, white or gray, honed finish; 2 inches (50 mm) wide by full width of wall or frame opening; 1/2 inch (12 mm) thick; beveled one long edge with radiused corners on top side; without holes, cracks, or open seams.

2.03 GROUT MATERIALS

- A. Standard Grout: Any type specified in ANSI A118.6 or A118.7.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Install tile, thresholds, and stair treads and grout in accordance with applicable requirements of ANSI A108.1 through A108.13, manufacturer's instructions, and The Tile Council of North America Handbook recommendations.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.

3.02 INSTALLATION - FLOORS - THIN-SET METHODS

- A. Over wood substrates, install in accordance with The Tile Council of North America Handbook Method F142, with standard grout, unless otherwise indicated.
 - 1. Where epoxy bond coat and grout are indicated, install in accordance with The Tile Council of North America Handbook Method F143.
- B. Over wood substrate with backer board underlayment, install in accordance with The Tile Council of North America Handbook Method F144, for cementitious backer boards, with standard grout.

3.03 INSTALLATION - FLOORS - MORTAR BED METHODS

- A. Over wood substrates, install in accordance with The Tile Council of North America Handbook method F141, with standard grout, unless otherwise indicated.

3.04 INSTALLATION - SHOWERS AND BATHTUB WALLS

- A. At tiled shower receptors install in accordance with The Tile Council of North America Handbook Method B415, mortar bed floor, and W244, thin-set over cementitious backer unit walls.
- B. At bathtub walls install in accordance with The Tile Council of North America Handbook Method B412, over cementitious backer units with waterproofing membrane.

- C. Grout with standard grout as specified above.

3.05 INSTALLATION - WALL TILE

- A. On exterior walls install in accordance with The Tile Council of North America Handbook Method W202, thin-set over concrete and masonry with latex-Portland cement grout.
- B. Over cementitious backer units on studs, install in accordance with The Tile Council of North America Handbook Method W244, using membrane at toilet rooms.

3.06 LOCATIONS

- A. First Floor Shower Tile Surround
- B. Second Floor Bathroom Bathtub Tile Surround

END OF SECTION

SECTION 09 6219
LAMINATE FLOORING

PART 1 - GENERAL

\$ _____

1.01 ALLOWANCES

- A. Allowances for Material, including flooring and underlayment, \$4.50 per square feet.

1.02 SYSTEM DESCRIPTION

- A. Design Requirements: Provide concealed fastening wherever possible.
 - 1. Attachment considerations shall take into account site peculiarities and expansion and contraction movements so there is not possibility of loosening, weakening, buckling, or fracturing connection between wood flooring and substrate.

1.03 QUALITY ASSURANCE

- A. Single Source Responsibility: Furnish laminate flooring from one manufacturer for Residential Units unless otherwise acceptable to Project Manager.
- B. Composite-wood Products: Contain no urea formaldehyde.
- C. Installer Qualifications: Acceptable to manufacturer with experience on at least five projects of similar nature in past five years.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Protect materials from damage, moisture, soiling and deterioration during transit and storage.
- B. Do not deliver flooring materials until Project site conditions and operations which could damage, soil or deteriorate work are complete.
- C. Store products and materials in ventilated, interior locations under constant minimum temperature and relative humidity recommended by manufacturer.

1.05 FIELD CONDITIONS

- A. Environmental Requirements: Obtain and maintain temperature and moisture conditions as recommended by laminate flooring manufacturer during installation and remainder of construction period.

PART 2 - PRODUCTS

2.01 LAMINATE FLOORING – RESIDENTIAL UNITS

- A. Description: Laminate flooring (Direct Pressure Laminate) consisting of four layered construction, Four layered thermal fused process includes smooth, abrasion resistant wear surface composed of cellulose paper saturated with melamine resin embedded with aluminum oxide to provide stain and scratch resistance, VTX print saturated with melamine resin to provide fade resistance, high density fiberboard core with technology to add moisture resistance, and melamine saturated balanced backing paper for added dimensional stability.
- B. Basis of Design: Tarkett series to be selected by Project Manager. Selected from currently available Collection in 4.92 inches width x 47.24 inches length having nominal total gauge of 0.47 inch.
- C. Other Acceptable Manufacturers:
 - 1. Pergo Laminate Floors, Mediterranean Kempas.

2.02 ACCESSORIES

- A. Transition Pieces: Provide coordinating transitions and moulding pieces designated for L8706 to meet installation application for finishing and transitioning to other flooring products.
- B. Primer and Adhesive: Manufacturer's recommended for conditions.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine conditions and proceed with work in accordance with Section 01 40 00.
 - 1. Verify that substrates comply with manufacturer's requirements.
 - 2. Ensure concrete has cured 28 days minimum.
 - 3. Verify concrete curing compounds are compatible with flooring adhesive.
 - 4. Verify that substrate is clean, dry, free of voids and cracks.

3.02 PREPARATION

- A. Concrete Substrate Moisture Testing: Perform tests recommended by manufacturer and as follows. Proceed with installation only after substrates pass testing.
 - 1. Perform anhydrous calcium chloride test, ASTM F1869. Ensure concrete is within floor manufacturer's recommended limits prior to installation.
 - 2. For substrates with moisture vapor permeance in excess of 3 pounds water vapor per 1000 SF per 24 hour period, use floor coating manufacturer's suggested remedy. Do not proceed with flooring application until condition is corrected.
- B. Preparation:
 - 1. Remove ridges, bumps, trowel marks and protrusions from substrate.
 - 2. Clean substrate to remove paint, dirt, oil, grease, sealers, release agents, hardening compounds, curing compounds, residual adhesives, and harmful substances which could impair performance of adhesive materials used with flooring products.
 - 3. Fill depressions, low spots, cracks, joints, holes, indentations, and other defects with leveling and patching compounds. Trowel to smooth, flat surface producing substrate to within tolerance of 1/4 inch in 10 feet.
 - 4. Vacuum clean substrate.
 - 5. Prime substrate in accordance with manufacturer's requirements.

3.03 LAMINATE FLOORING INSTALLATION

- A. Install flooring and adhesive in accordance with manufacturer's recommendations.
 - 1. Install laminate flooring plumb, level, square, and free from warp or twist while maintaining dimensional tolerances and alignment with surrounding construction.
 - 2. Roll flooring immediately after installation with minimum 100 pounds roller.
 - 3. Install flooring wall to wall before installation of floor-set cabinets, casework, furniture, equipment, movable partitions, etc. Extend flooring into toe spaces, door recesses, closets, and similar openings.
 - 4. Scribe, cut, and fit to permanent fixtures, columns, walls, partitions, pipes, outlets, and built-in furniture and cabinets leaving required expansion of 1/4 inch to 1/2 inch.
 - 5. Install flooring with adhesives, tools, and procedures in accordance with manufacturer's recommendations. Observe recommended adhesive trowel notching, open times, and working times.
- B. Transition Pieces: Install coordinated transitions and molding pieces in accordance with manufacturer's recommendations.

3.04 CLEANING AND PROTECTION

- A. Cleaning: Clean as recommended by manufacturer. Do not use materials or methods which may damage finish and surrounding construction.
 - 1. Remove excess adhesive from floor surface as work progresses.

3.05 LOCATIONS

- A. Second Floor – North Bedroom and Closet.

**SECTION 09 9000
PAINTING AND COATING**

PART 1 GENERAL

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1.01 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.02 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Paints and Coatings: Sherwin Williams Low VOC or an any manufacturer listed in MPI Approved Products List (at www.paintinfo.com) approved by Project Manger.
 - 1. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
 - 2. Provide all paint and coating products from the same manufacturer to the greatest extent possible.
- B. Stains: Minwax Low VOC or any other manufacturer approved by Project Manager
- C. Masonry: Benjamin-Moore elastomeric paint, flat finish.

2.02 MATERIALS - GENERAL

- A. Volatile Organic Compound (VOC) Content:
 - 1. Provide coatings that comply with the most stringent requirements specified in the following:
 - a. Flat: 50 grams/Liter
 - b. Non-Flat: 50 grams/Liter
 - c. Floor Coating: 100 grams/Liter
 - d. Anti-Corrosive: 250 grams/Liter

2.03 PAINT SYSTEMS

- A. Provide Premium Grade systems (2 top coats) as defined in MPI Architectural Painting Specification Manual, except as otherwise indicated.
- B. Where a specified paint system does not have a Premium Grade, provide Custom Grade system.
- C. Where sheen is not specified or more than one sheen is specified, sheen will be selected later by Construction Manager from the manufacturer's full line.
- D. Provide colors as directed by Construction Manager.
- E. Provide smooth texture throughout.

2.04 EXTERIOR PAINT SYSTEMS

- A. Wood Traffic Surfaces:
 - 1. Applications include but are not limited to Decks.
 - 2. EXT 6.5D Deck Stain: Wood Preservative MPI #37, Deck Stain MPI #33.
- B. Masonry Paint

2.05 INTERIOR PAINT SYSTEMS

- A. Dressed Lumber:
 - 1. Applications include but are not limited to doors, door frames, window frames, window casings, trim, baseboards, and moldings.

- B. Plaster and Gypsum Board:

PART 3 EXECUTION

3.01 SCOPE -- SURFACES TO BE FINISHED

- A. Paint all exposed surfaces except where indicated not to be painted or to remain natural; the term "exposed" includes areas visible through permanent and built-in fixtures when they are in place.
- B. Paint the surfaces described in PART 2 and as follows:
 - 1. If a surface, material, or item is not specifically mentioned, paint in the same manner as similar surfaces, materials, or items, regardless of whether colors are indicated or not.
 - 2. Paint surfaces behind movable equipment and furnishings the same as similar exposed surfaces.
 - 3. Paint surfaces to be concealed behind permanently installed fixtures, equipment, and furnishings, using primer only, prior to installation of the permanent item.
 - 4. Paint back sides of access panels and removable and hinged covers to match exposed surfaces.
- C. Do Not Paint or Finish the Following Items:
 - 1. Items fully factory-finished unless specifically noted; factory-primed items are not considered factory-finished.
 - 2. Items indicated to receive other finish.
 - 3. Items indicated to remain naturally finished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.

3.02 APPLICATION

- A. Apply products in accordance with manufacturer's instructions and as specified or recommended by MPI Manual, using the preparation, products, sheens, textures, and colors as indicated.
- B. Do not apply finishes over dirt, rust, scale, grease, moisture, scuffed surfaces, or other conditions detrimental to formation of a durable coating film; do not apply finishes to surfaces that are not dry.
- C. Use applicators and methods best suited for substrate and type of material being applied and according to manufacturer's instructions.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate; provide total dry film thickness of entire system as recommended by manufacturer.
- E. Apply finish to completely cover surfaces with uniform appearance without brush marks, runs, sags, laps, ropiness, holidays, spotting, cloudiness, or other surface imperfections.

3.03 LOCATIONS

- A. Throughout
 - 1. Walls and Ceilings: Eggshell Sherwin Williams Low VOC
 - a. Wall Color: Wool Skein, SW 6148
 - b. Ceiling Color: Ceiling White
 - 2. Interior Trim: Semi-gloss Sherwin Williams Low VOC
 - a. Trim Color: Extra White, SW 7006

- B. Bathroom
 - 1. Walls and Ceilings: Semi-gloss Sherwin Williams Low VOC
 - a. Wall Color: Nacre, SW 6154
 - b. Ceiling Color: Ceiling White
- C. Basement:
 - 1. Floor
 - a. Color: Match concrete floor grey
 - 2. Masonry Walls
 - a. Color: Wool Skein, SW 6148
- D. Exterior:
 - 1. Front Porch - Stain
 - a. Color: Yankee Barn, SW3505
 - 2. House siding
 - a. Color: Stone Lion, SW7507
 - 3. House trim
 - a. Color: Windfresh White, SW7628
 - 4. Garage to match house

END OF SECTION

SECTION 10 5623
CLOSET STORAGE SHELVING

PART 1 GENERAL

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1.01 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, with installation instructions.

PART 2 PRODUCTS

2.01 SHELVING APPLICATIONS

- A. Shelf Depth: 12 inches (305 mm), unless otherwise indicated.
- B. Other Bedroom Closets:
 - 1. Wall-to-wall shelf with free sliding hanger rod.
 - 2. Not less than 4 feet (1.25 m) of shoe shelf.
- C. Coat Closets:
 - 1. Wall-to-wall shelf with integral hanger rod.
- D. Linen Closets:
 - 1. Wall-to-wall shelves spaced at 13 inch (330 mm) vertically, not less than 16 inch (408 mm) deep.
- E. Storage Closets:
 - 1. Wall-to-wall storage shelves, stacked at 13 inch (330 mm) vertically, not less than 12 inch (305 mm) deep.

2.02 MATERIALS

- A. Wire Shelving: Factory-assembled coated wire mesh shelf assemblies for wall-mounting, with all components and connections required to produce a rigid structure that is free of buckling and warping.
 - 1. Construction: Cold-drawn steel wire with average tensile strength of 100,000 psi (690 MPa) resistance welded into uniform mesh units, square, rigid, flat, and free of dents or other distortions, with wires trimmed smooth.
 - 2. Coating: PVC or epoxy, applied after fabrication, covering all surfaces.
 - 3. PVC Coating: 9 to 11 mils (0.23 to 0.028 mm) thick.
 - 4. Epoxy Coating: Non-toxic epoxy-polyester powder coating baked-on finish, 3 to 5 mils (0.76 to 1.27 mm) thick.
 - 5. Standard Mesh Shelves: Cross deck wires spaced at 1 inch (25.4 mm).
 - 6. Close-Mesh Shelves: Cross deck wires spaced at 1/2 inch (12.7 mm).
 - 7. Shelf and Rod Units: Integral hanging rod at front edge of shelf.
 - 8. Free-Sliding Hanging Rod: Integral hanging rod that permits uninterrupted sliding of hangers the full width of the shelf.
 - 9. Shoe Shelves: Same wire spacing as standard mesh shelves; angled wall brackets; upturned front lip.
- B. Fasteners: As recommended by manufacturer for mounting substrates.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions, with shelf surfaces level.
- B. Install back clips, end clips at side walls, and support braces at open ends. Install intermediate support braces as recommended by manufacturer.

3.02 LOCATIONS

- A. Closets Throughout

END OF SECTION

SECTION 11 3100
HRA RESIDENTIAL APPLIANCES

PART 1 GENERAL

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1.01 SUMMARY

- A. All appliances must be purchased new and Energy Star certified or high efficiency models when Energy Star certification is not possible.
- B. All appliances must meet the Sustainable Design Requirements covered in Section 018113

1.02 PRICE AND PAYMENT PROCEDURES

- A. Appliances have been pre-purchased by the HRA for this project. Delivery of all material to the job site is included in pre-purchase. Contractor is responsible for contacting specified vendor to arrange for and take delivery. Provide a bid price for labor and additional materials required to perform work to code.
 - 1. Vendor: All, Inc. Appliances
 - 2. Product:
 - a. Refrigerator: FFHT2126LS/K Energy Star Rated 21 cu ft top mounted refrigerator, stainless steel, with icemaker
 - b. Range: FFGF3053LS Frigidaire 30" Free-standing Gas Range, Self Clean, Clock
 - c. Microwave/Hood: FFMV162LS Over the Range Micro/Hood, to be vented to exterior
 - d. Dishwasher: FGHD2433KF Energy Star 24" Built-in Dishwasher, including dishwasher cord.
 - e. Washer: FAFW3801LW Energy Star Residential Front Load Washer
 - f. Dryer: FAQG7001LW Residential Gas Dryer

1.03 SUBMITTALS

- A. Product Data: Manufacturer's data indicating dimensions, capacity, and operating features of each piece of residential equipment specified.

1.04 QUALITY ASSURANCE

- A. Electric Appliances: Listed and labeled by UL and complying with NEMA standards.
- B. Gas Appliances: Bearing design certification seal of AGA.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 INSTALLATION

- A. All appliances shall be uncrated, cleaned and readied for use.
- B. Installation shall include all cord attachments, wiring, plumbing as gas hook ups necessary for appliance operation.
- C. Install in accordance with manufacturer's instructions.
- D. Anchor built-in equipment in place.

3.02 LOCATIONS

- A. Basement
- B. Kitchen

END OF SECTION

SECTION 12 1110
HRA MAIL BOX AND HOUSE NUMBERS

PART 1 GENERAL

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1.01 PRICE AND PAYMENT PROCEDURES

- A. Allowances: Not used.

PART 2 PRODUCTS

2.01 MAILBOX

- A. Black Locking Wall Mounted Mailbox
 - 1. 12.5"x9.625"x4.375"
 - 2. Available at Menards

2.02 HOUSE NUMBERS

- B. Black Distinction Flush Mount
 - 1. 4" high
 - 2. Two sets: House and Garage
 - 3. Available at Menards

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.02 LOCATION

- A. House Number and Mailbox at Front Entrance
- B. House Number at Garage Overhead Door Entrance

END OF SECTION

**SECTION 12 1111
BATHROOM FURNISHINGS**

PART 1 GENERAL

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PART 2 PRODUCTS

2.01 TOWEL SETS

- A. Install a metal bath set comprised of a hand towel ring, 24" towel bar and toilet paper holder
- B. Manufacturer: Sage Series Toilet Accessories
 - 1. Hand Towel Ring: Model # DN6886xx
 - 2. Towel Bar: Model # DN6818xx
 - 3. Toilet Paper Holder: Model # DN6808xx
- C. Brushed nickel finish to match faucet

2.02 MEDICINE CABINET

- A. Install a medicine cabinet with hinged plate glass mirror and two shelves over the sink.
- B. Manufacturer: Pace, Meadowood Maple. Model # SMC-2530
- C. Brushed nickel finish to match faucet

2.03 SHOWER CURTAIN ROD

- A. Install a shower curtain rod using wall anchors.
- B. Manufacturer: Moen, Adjustable Shower Rod. Model # DN2160xx
- C. Brushed nickel finish to match faucet

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.02 LOCATIONS

- A. First Floor Bathroom
- B. Second Floor Bathroom

END OF SECTION

**SECTION 12 3530
RESIDENTIAL CASEWORK**

PART 1 GENERAL

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1.01 PRICE AND PAYMENT PROCEDURES

1.02 SUBMITTALS

- A. Shop Drawings: Indicate casework locations, large scale plans, elevations, clearances required, rough-in and anchor placement dimensions and tolerances.

1.03 QUALITY ASSURANCE

- A. Products: Complying with KCMA A161.1 and KCMA Certified.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. The HRA has approved Shrock Select, Medallion or Mid-Continent

2.02 COMPONENTS

- A. Kitchen Cabinets: See Kitchen Design
- B. Cabinet Construction: Plywood sides and bases.
- C. Kitchen Countertop: Post formed plastic laminate over particle board, coved to back splash.
 - 1. Side Splash: Plastic laminate over particle board, square internal intersections to back splash and top surface, contoured to suit counter top profile.
 - 2. Manufacturer: WilsonArt, Desert Springs: 4904
- D. Door and Drawer Fronts: Solid wood.
- E. Drawer Box Construction: Plywood with dovetail joinery

2.03 HARDWARE

- A. Hardware: Schrock – Pull H63, Modern, Brushed Nickel

2.04 FABRICATION

- A. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.
- B. Fabricate corners and joints without gaps or inaccessible spaces or areas where dirt or moisture could accumulate.

2.05 FINISHES

- A. Exposed To View Surfaces: Stain, seal, and varnish of _____ color as selected.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install casework, components and accessories in accordance with manufacturer's instructions.
- B. Set casework items plumb and square, securely anchored to building structure.

3.02 LOCATIONS

- A. Kitchen Cabinets & Counter Top

END OF SECTION

**SECTION 22 3000
PLUMBING EQUIPMENT**

PART 1 GENERAL

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1.01 SUBMITTALS

- A. Product Data:
 - 1. Provide Owner's Manuals for all equipment.
 - 2. Manufacturer's Warranty.

1.02 SPECIAL COORDINATION

- A. Upgrade of Water Meter. Contact: Northern Water Works (888) 497-4171
 - 1. There is no cost associated with the purchase or installation of the Water Heater. The only cost associated with this bid is for the coordination with Northern Water Works to install the meter.

PART 2 PRODUCTS

2.01 RESIDENTIAL INDIRECT-FIRED WATER HEATER

- A. General Requirements:
 - 1. The unit shall be AGA certified and have intermittent electronic ignition, glass lined tank, dip tube, screw in magnesium anode rods, turbo shot combustion system. ASME Temperature & Pressure relief valve piped to the floor, 5 year tank warranty, ASHRAE 90.1 lb – 1992 and NAECA compliant and draft switch. Provide PVC power vent to exterior.
 - 2. The outer tank shall be surrounded with a minimum of 2 inches of CFC/HCFC – free rigid polyurethane foam insulation with an equivalent "R" value of R-16.
- B. Manufacturer: High Efficiency
 - 1. Hot water tank shall have ETL certification and EF of .67.

2.02 ACCESSORIES

- A 110v outlet on GFCI.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install plumbing equipment in accordance with manufacturer's instructions, as required by code, and complying with conditions of certification, if any.
- B. Coordinate with plumbing piping and related fuel piping work to achieve operating system complying with all applicable codes.
- C. Provide water & gas supply & flue piping.

END OF SECTION

SECTION 22 4000
PLUMBING FIXTURES AND PIPING

PART 1 GENERAL

\$ _____

1.01 PRICE AND PAYMENT PROCEDURES

PART 2 PRODUCTS

2.01 SINKS

- A. Kitchen Sink: Remove existing sink to code legal dump.
 - 1. Sink: Install a 22 gauge 33"x22"x8" double bowl, stainless steel, self rimming kitchen sink. Manufacturer: Moen, Model number 2212, or like product to be approved by Project Manager
 - 2. Faucet: Manufactured by Moen, Model 7825 or like product to be approved by Project Manager
 - a. Flow Rate: 2.0 GPM maximum
- B. Laundry Tub: Remove existing sink to code legal dump.
 - 1. Sink: Install single bowl, 24" fiberglass laundry tray to fit under faucet.
 - 2. Faucet: 1.5 GPM
- C. Bathroom:
 - 1. Pedestal Sink: Kohler, Sterling: Sacramento 442121-0 White
 - 2. Faucet: Single lever faucet with 1.5 GPM maximum flow rate
 - a. High Arch Faucet: Manufactured by Moen, Model number (Nickel) CA84003CBN

2.02 DUAL FLUSH TOILET

- A. Dual Flush Water Closets: ASME A112.19.14; high efficiency and low consumption, vitreous china, dual flush, tank type.
 - 1. Bowl: Elongated.
 - 2. Flush Actuator: Manufacturer's standard.
 - 3. Rough in: 12 inch (305 mm).
 - 4. Seat: Manufacturer's standard or recommended elongated closed front seat with lid.
 - 5. Color: White.

2.03 BATHTUBS

- A. Bathtub: ASME A112.19.4M porcelain on steel bathtub with slip resistant surface, contoured front apron, 60 inches (1500 mm) long, White color.
- B. Bath and Shower Trim: ASME A112.18.1; concealed shower and over rim supply with diverter spout, pressure balanced mixing valve, bent shower arm with adjustable spray ball joint showerhead with maximum 1.5 gallons per minute (5.6 liters per minute) flow and escutcheon, lever operated pop-up waste and overflow.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install each fixture with trap, easily removable for servicing and cleaning.
- B. Install new PVC or ABS waste and vent piping from basement to kitchen sink, all bathroom fixtures, and laundry sink.
- C. Install flexible PEX piping with a minimum number of coupling to all fixtures. Install mechanical connectors and shut off valves if appropriate for each fixture.
 - 1. Size pipe to 1990 CABO minimums per table 2406.5
 - 2. Include clothes washer hook up.
- D. Furnish and install all water piping and shut-off valves necessary to complete work.
- E. Retrofit the water meter to comply with existing code.
- F. Install components level and plumb.

- G. Seal fixtures to wall and floor surfaces with sealant as specified in Section 07 9005, color to match fixture.
- H. Seal around plumbing penetrations in all exterior surfaces, surfaces that border on unconditioned spaces, between floors, and through the exterior of the building.
- I. Clean out basement floor drain at end of construction period and verify operation and function.
 - 1. Install new drain cover.

3.02 LOCATIONS

- A. Exterior:
 - 1. Hose bib – located east side of home.
- B. Basement:
 - 1. Domestic Water
 - 2. Indirect-Fired Water Heater
- C. Main Level:
 - 1. Kitchen:
 - a. Kitchen Sink
 - b. Dishwasher
 - 2. Bathroom:
 - a. Dual Flush Toilet
 - b. Pedestal Sink
 - c. Shower
- D. Second Floor:
 - 1. Bathroom
 - a. Dual Flush Toilet
 - b. Vanity Sink
 - c. Tub / Shower
 - d. Laundry appliance hook up

**SECTION 23 0000
RESIDENTIAL VENTILATION**

PART 1 GENERAL

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PART 2 PRODUCTS

2.01 BATHROOM VENT FAN/LIGHT FIXTURE:

- A. All vent fans shall be energy star rated ceiling mounted fan/light fixtures rated for a minimum 100 watt exterior ducted vent fan capable of a minimum of 80 CFM
- B. Product: NuTone QTREN080FLT or like product to be approved by the Project Manger
- C. Switch: Light and fan shall use same switch with a time delay for fan such as the EFI/Light Time Delay Switch Part # 5100.505 or equipped with a humidistat sensor.
- D. Ducting: Install 4" metal duct and vent to the exterior ideally through a gable end using a 4" hooded vent with damper.
 - 1. All duct seams shall be sealed with duct mastic. Insulate duct work with vinyl or foil faced R-6 minimum duct insulation.
 - 2. Repair any damage to the ceiling installation or air seal fan/light assembly to the ceiling with low VOC caulk.

2.02 DUCT ASSEMBLIES

- A. Low Pressure Supply (Heating Systems): 1/2 inch w.g. (125 Pa) pressure class, galvanized steel.
- B. Low Pressure Supply (System with Cooling Coils): 1/2 inch w.g. (125 Pa) pressure class, galvanized steel.
- C. General Exhaust: 1/2 inch w.g. (125 Pa) pressure class, galvanized steel.
- D. Kitchen Cooking Hood Exhaust: 1/2 inch w.g. (125 Pa) pressure class, galvanized steel.

2.03 DUCTWORK FABRICATION

- A. Fabricate and support in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated.
- B. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.
- C. Increase duct sizes gradually, not exceeding 15 degrees divergence wherever possible; maximum 30 degrees divergence upstream of equipment and 45 degrees convergence downstream.
- D. Fabricate continuously welded round and oval duct fittings in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible.

2.04 KITCHEN HOOD EXHAUST DUCTWORK

- A. Fabricate in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, SMACNA Kitchen Ventilation Systems and Food Service Equipment Fabrication & Installation Guidelines and NFPA 96.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Bathroom
- B. Kitchen

END OF SECTION

SECTION 23 5400
FORCED AIR FURNACE AND DUCTS

PART 1 GENERAL

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1.01 SUBMITTALS

- A. Product Data: Provide rated capacities, weights, accessories, electrical nameplate data, and wiring diagrams.
- B. Product data indicating Heating, Cooling equipment and Ducts are in compliance with Air Conditioning Contractors of America (ACCA) Manuals, Parts J, S, and D. Alternate Compliance paths are as Follows:
 - 1. ASHRAE Handbooks

PART 2 PRODUCTS

2.01 GAS FIRED FURNACES

- A. Annual Fuel Utilization Efficiency (AFUE): 0.95 ("condensing").
- B. Units: Self-contained, packaged, factory assembled, pre-wired unit consisting of cabinet, supply fan, heating element, controls, air filter, humidifier, and accessories; wired for single power connection with control transformer.
 - 1. Safety certified by CSA in accordance with ANSI Z 21.47.
 - 2. Venting System: Direct.
 - 3. Combustion: Sealed
 - 4. Air Flow Configuration: Upflow.
 - 5. Heating: Natural gas fired.
- C. Performance:
 - 1. HVAC contractor will be responsible to determine heat load using Manual J.
- D. Cabinet: Steel with baked enamel finish, easily removed and secured access doors with safety interlock switches, glass fiber insulation with reflective liner.
- E. Primary Heat Exchanger:
 - 1. Material: Hot-rolled steel
 - 2. Shape: Tubular type.
- F. Secondary Heat Exchanger:
 - 1. Material: Aluminized steel.
 - 2. Coating: Polypropylene.
- G. Gas Burner:
 - 1. Atmospheric type with adjustable combustion air supply,
 - 2. Gas valve, two stage provides 100 percent safety gas shut-off; 24 volt combining pressure regulation, safety pilot, manual set (On-Off), pilot filtration, automatic electric valve.
 - 3. Electronic pilot ignition, with electric spark igniter.
- H. Supply Fan: Centrifugal type rubber mounted with direct drive with adjustable variable pitch motor pulley.
- I. Motor: Refer to Section 22 0513; 1750 rpm two-speed, permanently lubricated, hinge mounted.
- J. Air Filters: 1 inch (25 mm) thick glass fiber, disposable type arranged for easy replacement.
- K. Ducts: Install all new supply and return air ducting to code.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with NFPA 90A.
- B. Install gas fired furnaces in accordance with NFPA 54.
- C. Provide vent connections in accordance with NFPA 211.

- D. The Contractor shall have all HVAC ducting cleaned by a professional duct cleaning company after all interior repairs are completed inside the house.

END OF SECTION

SECTION 23 6213
FORCED AIR A/C

PART 1 GENERAL

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1.01 SUBMITTALS

- A. Product Data: Provide rated capacities, weights specialties and accessories, electrical nameplate data, and wiring diagrams. Include equipment served by condensing units in submittal, or submit at same time, to ensure capacities are complementary.
- B. Design Data: Indicate pipe and equipment sizing.

PART 2 PRODUCTS

2.01 MANUFACTURED UNITS

- A. Units: Self-contained, packaged, factory assembled and pre-wired units suitable for outdoor use consisting of cabinet, compressors, condensing coil and fans, integral sub-cooling coil, controls, liquid receiver, wind deflector, and screens.
- B. Performance Ratings: Seasonal Energy Efficiency Ratio of 16

2.02 CASING

- A. House components in welded steel frame with galvanized steel panels with weather resistant, baked enamel finish.

2.03 CONDENSER COILS

- A. Coils: Aluminum fins mechanically bonded to seamless copper tubing. Provide sub-cooling circuits. Air test under water to 425 psig (2900 kPa), and vacuum dehydrate. Seal with holding charge of nitrogen.

2.04 FANS AND MOTORS

- A. Weatherproof motors suitable for outdoor use, single phase permanent split capacitor or 3 phase, with permanent lubricated ball bearings and built in current and thermal overload protection.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Provide piping for refrigeration system as required.
- B. Provide connection to refrigeration piping system and evaporators. Comply with ASHRAE Std 15.

3.02 LOCATION

- A. See Drawing A001 for location of new A/C Compressor

END OF SECTION

SECTION 26 0001
POWER, WIRING AND DEVICES

PART 1 GENERAL

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1.01 SUMMARY OF BULLETIN 80-1 (Property Maintenance Code)

- A. All hazardous, improper and/or illegal wiring shall be removed or required to the present Electrical Code. This will include other buildings on the property such as garages, sheds, etc.
- B. Minimum size for all new services for single residential occupancies shall be 100 ampere, 240 Volt.
- C. No additions or extensions will be allowed on an existing ampere services.
- D. The Following are minimum requirements for new service installation:
 - 1. **Electrical outlets required:** Every habitable room 120 square feet or less in area, of a dwelling or dwelling unit of a multiple dwelling shall contain at least two separate and remote duplex outlet shall be required for each additional 80 square feet or fraction thereof. Most new outlets must be Arc-Fault Circuit Interrupters (AFCI) protected according to Section 210.12 of the 2008 National Electrical Code.
 - 2. **In Kitchens:** Three separate and remote duplex outlets shall be required. At least one of the required duplex outlets shall be supplied by a separate twenty ampere circuit. Any new receptacle installed for the counter top shall be of the Ground Fault Circuit Interrupter (GFCI) type.
 - 3. **Every public hall, water closet compartment, bathroom, laundry room and furnace room must contain at least one electric light fixture.** In addition to the light fixture, every bathroom and laundry room must have at least one duplex outlet. The required duplex outlet in each laundry room must be on a separate twenty ampere circuit. The required duplex outlet in each bathroom must be of the (GFCI) type. Any existing outlets in any bathroom must be converted to a GFCI-protected outlet or removed. The required GFCI outlet in the bathroom must be immediately adjacent to the sink. If a bathroom is added or gutted as part of the update, a 20 ampere circuit will be required per NEC 210.11(C)(3).
 - 4. **Every common hall and inside stairway** in every residential structure or dwelling unit shall be adequately lit with an illumination of at least five lumens per square foot in the darkest portion of the normally traveled stairs and passageways.
 - 5. **All exterior exits and entryways** are required to be illuminated a minimum of one footcandle at grade level for security.
 - 6. **Exterior lighting** at garages is required to be adequate so as to not endanger health or safety. An average of one footcandle at the pavement is required. Exterior lighting must be in conformance with other city codes.
 - 7. **Basement:** One lighting outlet is required for each 200 square feet of floor space. At least one of the required basement lighting outlets shall be switched from the head of the stairs.
 - 8. **Smoke Detectors:**
 - a. All single-family dwelling shall have a hard-wired (120 volt electrical, not battery) battery-backup smoke detector installed near (not in) the bedrooms. If there are legal bedrooms on more than one level, the detector shall be installed on the level that has the greater number of bedrooms. If there are an equal number of bedrooms on more than one level, the detector shall be installed on the upper level near the bedrooms.
 - b. If the project includes building construction that requires a Building Permit, additional hard wired interconnected and/or battery-type smoke detectors are required per the Building Code.
 - 9. **Metallic Light Fixtures (Luminaries):** If within five feet horizontally or eight feet vertically of grounded surfaces (metallic piping, concrete floor, etc.) must be grounded.
 - 10. **Residential Closet Lights:** All closet lights must either be a florescent fixture(luminaire) or an enclosed incandescent fixture of the types required by the present Electrical Code. Fixtures must not be directly over the storage area in a closet; they must either be moved or eliminated and blanked off.

11. **Service conduits run in outside walls:** If a 100-ampere service is changed from fuses to circuit breakers, the meter is already outside, and the existing conduit is run in the outside wall, the conduit may be re-used. If the service is an upgrade (increase in amperage), conduit in the wall may not be re-used.

1.02 SECTION INCLUDES:

- A. Rewire house to code
- B. Overhead Garage Door Opener: see Section 08 3323
- C. Certify Electrical Distribution: Electrician shall inspect all exposed wiring, motors, fixtures and devices for malfunction, shorts and hosing code compliance. Non-functioning and dangerous equipment and wiring shall be replaced
- D. Replace existing electrical service with a residential, 150 amp, single phase, 3 wire electric service to the basement.

PART 2 PRODUCTS

2.01 APPLICATIONS

- A. Conduit and Cable: Provide materials that meet code requirements.
- B. New Service: Include a main disconnect, 22 circuit panel board, meter socket, weather head, service cable, and ground rod and cable. Seal exterior service penetrations.
 - 1. New service panel shall conform to the BOCA Existing Structures code.
- C. Devices and Coverplates: Provide all White or Ivory devices per Project Managers Selection. Provide heavy duty residential grade devices.
- D. Smoke/CO Detectors: Hard wired w/ battery-back up type units
- E. Doorbell system: System containing a low voltage transformer, power connection, buzzer and front door button.
- F. Equipment Wiring: Provide the correct power supply on separate circuit, with over current protection including all connectors for the Water Heater, Boiler, Microwave, Refrigerator, and Dishwasher.
 - 1. Kitchen Receptacles to be 20 amp Circuits:
 - a. Install small appliance circuits along counter tops to code.
 - 1) Evenly dividing the number of countertop appliance receptacles between 2 circuits.
 - 2) GFCI receptacles when they fall within 6 feet of sink.
 - b. Individual circuits for permanently installed appliances; range, dishwasher, exteriorly vented Microwave with Rangehood and refrigerator to code.
- G. Bathroom Vent Fan/Light Fixture: Shall be Energy Star rated ceiling mounted fan/light fixture rated for a min 100 watt exterior ducted vent fan capable of a minimum of 80 CFM
 - 1. Product: NuTone QTREN080FLT or like product to be approved by the Project Manager
 - 2. Switch: Light and fan shall use same switch with a time delay for fan such as the EFI/Light Time Delay Switch Part # 5100.505 or equipped with a humidistat sensor.
 - 3. Ducting: Install 4" metal duct and vent to the exterior ideally through a gable end using a 4" hooded vent with damper.
 - a. All duct seams shall be sealed with duct mastic. Insulate duct work with vinyl or foil faced R-6 minimum duct insulation.
 - b. Repair any damage to the ceiling installation or air seal fan/light assembly to the ceiling with low VOC caulk.
- H. GFCI Receptacles: Install flush mounted, ground fault circuit interrupted ivory duplex receptacle adjacent to lavatory using copper Romex.

2.02 MATERIALS

- A. All materials shall be UL approved and/or National Electrical Code rated.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Building Codes: The extent of electrical work indicated in the Scope of work is stated generally to indicate end result of work. The Contractor is responsible for making a thorough inspection of the site to determine the full extent of work required to achieve the end results. All electrical work must meet current building code requirements and must pass City of Saint Paul field inspection. Any work that does not meet codes or pass inspection must be corrected to the satisfaction of the city inspector at no additional cost to the Owner.
- C. Remove and dispose of all abandoned wiring and devices. Modify existing wiring and devices as indicated.
- D. All new wiring, when passing through living areas, shall be concealed.
- E. All new receptacles and switches
- F. All new outlet covers: White
- G. All drilling, cutting and fastening shall be neat and true, and shall not critically damage framing members.
- H. All patching shall match the surrounding surface.

3.02 LOCATIONS

- A. Throughout
 - 1. House
 - 2. Garage

END OF SECTION

SECTION 26 5101

HRA LIGHTING

PART 1 GENERAL

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1.01 PRICE AND PAYMENT PROCEDURES

PART 2 PRODUCTS

2.01 INTERIOR LIGHTING

- A. Royce Lighting
 - 1. Product Series: Valhalla, Heirloom Bronze Finish
 - a. 3 Light Flush Mount: Model RFM2247
 - b. 2 Light Wall Sconce: Model RW2247
 - c. 3 Light Semi Flush Mount: Model RSF2247
 - d. 3 Light Vanity: Model RV2247
 - e. Pendant Light: Model RP2247/1-46
- B. Bathroom Fan
 - 1. NuTone, Model QTREN080FLT
- C. Other Acceptable Manufacturers: To be approved by Project Manager

2.02 EXTERIOR LIGHTING

- A. Garages: DualBrite 300 watt motion security light with shields: Model SL-5318-WH-D
- B. Exterior Pendants:
 - 1. Patriot Lighting
 - a. Mission, Model #od37276bbz
- C. Exterior Flush Mount
 - 1. Patriot Lighting
 - a. Mission, Model #MND0092A

2.03 BASEMENT LIGHTING

- A. Stairway: One fixture on ceiling of rear entry. One switch at the top of the basement stairway to control this light.
- B. Additional ceiling mounted pull chain lights in various location throughout the basement where necessarily.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. All new wiring when passing through living areas shall be concealed.
- C. Wire mold and surface mount boxes for receptacles.
- D. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.

3.02 LOCATIONS

- A. BASEMENT:
 - 1. Replace all with new pull chain porcelain fixtures where currently existing
- B. MAIN LEVEL:
 - 1. Front Porch – Ceiling mounted fixtures.
 - 2. Living Room - Ceiling mounted fixture at stair.
 - 3. Dining Room – Ceiling mounted fixtures.
 - 4. Dining Room Closet – Wall mounted fixture.
 - 5. West Side Room – Ceiling mounted fixture.
 - 6. Kitchen – Ceiling mounted fixtures and under cabinet fixture.
 - 7. Rear Entry Vestibule – Ceiling mounted fixtures.

8. Bathroom – Vanity light.
- C. SECOND FLOOR
 1. South Bedroom – Ceiling mounted fixture
 2. South Bedroom Closet – Ceiling mounted fixtures, wall mount fixture
 3. Hall – Ceiling mounted fixtures
 4. East Bedroom – Ceiling mounted fixture
 5. Laundry Room – Ceiling mounted fixture
 6. Bathroom – Vanity light
 7. North Bedroom – Ceiling mounted fixture
 8. North Bedroom Closet – Ceiling mounted fixture
- D. EXTERIOR:
 1. Rear Entry – Wall fixture.
 2. Garage
 3. Exterior fixtures are switched from the interior

END OF SECTION

SECTION 28 1600
INTRUSION DETECTION

PART 1 GENERAL

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1.01 SUMMARY

- A. Provide and install a security system, to include a minimum of hardwired control panel with cellular transmitter (no phone line required), 2 hardwired keypads, two (2) Door sensors, motion detector, low temperature monitoring and siren.
- B. Include a monthly monitoring service at a rate not to exceed \$50/month.
- C. Contracts for monitoring must be month to month, not an extended period.
- D. Monitoring shall begin upon completion of construction and be paid by Owner.

1.02 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.
- B. Products: Furnish products listed and classified by Underwriters Laboratories Inc. as suitable for purpose specified and indicated.

PART 2 PRODUCTS

2.01 ALARM CONTROL PANEL

- A. Control Panel: Modular construction with surface wall-mounted enclosure.
- B. Power supply: Adequate to serve control panel modules, remote detectors, and alarm signaling devices. Include battery-operated emergency power supply with capacity for operating system in standby mode for 24 hours.

2.02 INITIATING DEVICES

- A. Magnetic Switches:
- B. Motion Detectors:

2.03 SIGNAL DEVICES

- A. Alarm Bells: NFPA 72, electric single stroke, 8 inch (200 mm) bell with operating mechanism behind dome. Sound Rating: 81 dB at 10 feet (3 M).

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Use 18 AWG minimum size conductors for detection and signal circuit conductors. Install wiring in cable.
- C. As soon as System is installed contact HRA Project Manager www.Marty.McCarthy@ci.stpaul.mn.us by email to inform him/her to apply for a security permit.

3.02 CLOSEOUT ACTIVITIES

- A. Demonstrate normal and abnormal modes of operation, and required responses to each.

END OF SECTION

SECTION 31 2200

GRADING

PART 1 GENERAL

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1.01 REQUIREMENTS

- A. Follow industry standards for provision and placement of materials.
- B. Locate utilities prior to performing the Work. Do not interrupt existing utilities.
- C. Unauthorized excavation consists of removing material beyond indicated subgrade elevations or dimensions without prior direction by the Construction Manager. Unauthorized excavation or remedial work shall be at the Contractor's expense.

PART 2 PRODUCTS

1.01 MATERIALS

- A. Imported soils shall be clean, finely graded and weed-free.

PART 3 EXECUTION

3.01 ROUGH GRADING

- A. When excavating through roots, perform work by hand and cut roots with sharp axe.

3.02 FINISH GRADING

- A. Build up ground slope at foundation wall using clean fill.
- B. New fill shall have an approximate slope of 1/12 and extend away from the foundation wall approximately five feet.
- C. Adjust window wells for new slope.
- D. Remove roots, weeds, rocks, and foreign material while spreading.
- E. Vigorously tamp or roll new fill to achieve settled depth.
- F. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.

3.03 EXAMINATION

- A. Verify that survey bench mark and intended elevation for the work are as indicated.

3.04 PREPARATION

- A. Identify required lines, levels, contours and datum.
- B. Stake and flag locations of known utilities.

3.05 LOCATIONS

- A. Soils removed from the site may contain lead and must be disposed of using proper waste management techniques that comply with local requirements.
- B. See Landscape Plan.
 - 1. This plan does include a raingarden
 - 2. Add fill and grade as required.

END OF SECTION

**SECTION 32 1313
CONCRETE PAVING**

PART 1 GENERAL

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1.01 REQUIREMENTS

- A. Submittals: Design mixes for concrete and laboratory test reports.
- B. Comply with ACI 301, "Specifications for Structural Concrete."

PART 2 PRODUCTS

2.01 PAVING ASSEMBLIES

- A. Concrete Sidewalks and Median Barrier: 3,000 psi (20.7 MPa) 28 day concrete, 4 inches (100 mm) thick, buff color Portland cement, exposed aggregate finish.

2.02 FORM MATERIALS

- A. Wood form material, profiled to suit conditions.

PART 3 EXECUTION

3.01 FORMING

- A. Place and secure forms to correct location, dimension, profile, and gradient.

3.02 COLD AND HOT WEATHER CONCRETING

- A. Follow recommendations of ACI 305R when concreting during hot weather.
- B. Follow recommendations of ACI 306R when concreting during cold weather.

3.03 FINISHING

- A. Sidewalk Paving: Light broom, texture perpendicular to direction of travel with troweled and radiused edge 1/4 inch (6 mm) radius.
- B. Curbs and Gutters: Light broom, texture parallel to pavement direction.

3.04 LOCATIONS

- A. See Landscape Plan
- B. Preserve existing concrete paving at driveway as possible. Extend existing concrete driveway, as shown on the Site Plan.
- C. Provide walks from public walk to front entry and from rear entry to garage, as shown in the Site Plan.
- D. Front steps at porch.

END OF SECTION

SECTION 32 3129
WOOD FENCES AND GATES

PART 1 GENERAL

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1.01 SUMMARY

- A. Provide a 6' high wood privacy fence and gates

1.02 SECTION INCLUDES

- A. Wood fence, gates and hardware.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Lumber Standards: Comply with PS 'American Softwood Lumber Standard' for lumber and with applicable gradeing rules of inspection agencies.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard and manufacturer's recommendations for moisture content of finish carpentry.
- C. Fence Materials: Provide the Following:
 - 1. Species and Grade: Western Red Cedar, heartwood. No cracks, splits or warps.
 - 2. Posts: 4x4 (3 1/2 x 3 1/2 actual)
 - 3. Rails: 2x4 (1 1/2 x 1/2 actual), 3 per fence section (top, bottom and middle)
 - 4. Pickets: 1x4 (3/4 x 3 1/2 actual), square edges and corners.
- D. Fasteners: Stainless Steel.
- E. Gates:
 - 1. 3' wide gates consisting of 2x4 frame and diagonal bracing with 1x4 pickets. Three heavy duty hinges and heavy duty latch per gate.
- F. Cast -in- place Concrete: See Section 03 3000

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Locate utilities before installation. Locate fence and gates according to site plan. Install all components true and level
- C. Set 12" sonotubes at post locations to allow for concrete footings minimum 42" below grade plus 6" gravel. Install posts per site plan, maximum of 6'-0" o.c.. Set post level on top of gravel before pouring footing.
- D. Slope top of footing to drain away from posts, top of footing at grade level. Allow for concrete footings to cure before installing rails and pickets.
- E. Install rails 2" below finished top of pickets, 2" above bottom, and at midpoint, with outside face of rails flush with outside face of post. Install pickets on exterior side (facing away from house) of rails and post, with 1/4" gap between pickets.
- F. Install pickets with consistent top height across entire fence and minimum 2" maximum 5" between bottom of pickets and grade (consistent height each section between posts).

3.02 LOCATION

- A. See Landscape Plan

END OF SECTION

SECTION 32 9223

SODDING

PART 1 GENERAL

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1.01 REQUIREMENTS

- A. Submittals: Product certificates.
- B. Sod: Comply with TPI's "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Transplanting and Installation."

PART 2 PRODUCTS

2.01 MATERIALS

- A. Sod: TPI, Certified Turfgrass Sod quality; cultivated grass sod; type indicated in plant schedule on Drawings; with strong fibrous root system, free of stones, burned or bare spots; containing no more than 5 weeds per 1000 sq ft (100 sq m). Minimum age of 18 months, with root development that will support its own weight without tearing, when suspended vertically by holding the upper two corners.

PART 3 EXECUTION

3.01 LAYING SOD

- A. Moisten prepared surface immediately prior to laying sod.
- B. Lay sod immediately after delivery to site to prevent deterioration.
- C. Lay sod smooth and tight with no open joints visible, and no overlapping; stagger end joints 12 inches (300 mm) minimum. Do not stretch or overlap sod pieces.
- D. Water sodded areas immediately after installation. Saturate sod to 4 inches (100 mm) of soil.

3.02 MAINTENANCE

- A. General Contractor is responsible for the maintenance of sod until project closeout.

3.03 LOCATION

- A. See Landscape Plan
- B. Site Work, as needed. (No bare soil is permitted.)

END OF SECTION

SECTION 32 9300

PLANTS

PART 1 GENERAL

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1.01 REQUIREMENTS

- A. Submittal: Plant materials certificates and planting schedule.
- B. Comply with delivery and handling requirements of American Standard for Nursery Stock.
- C. Warranty: Warrant the landscape plants, Trees, Shrubs, Groundcover, and Herbaceous Plants for one year from date of Substantial Completion, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, or incidents that are beyond Contractor's control.

PART 2 PRODUCTS

2.01 PLANTS

- A. Plants: Species, size and quantity identified in Landscape Plan, grown in climatic conditions similar to those in locality of the work.

2.02 MULCH MATERIALS

- A. Mulching Material: Hardwood species wood shavings, free of growth or germination inhibiting ingredients.

PART 3 EXECUTION

3.01 RAINGARDEN INSTALLATION

- A. Remove 18 inches of soil leaving compacted 1 to 1 side slopes rising to finished grade.
- B. Deeply till and break apart basin floor beyond compaction.
- C. Add 2 inches of leaf compost and till into soil.
- D. Finish Raingarden by hand grading a flat, level basin and 2 to 1 side slope, as indicated on Landscape Plan.
- E. Add 2-inches of shredded hard wood mulch, as with slopes
- F. Install edging as indicated on Landscape Plan.
- G. Ensure that downspout runoff enters the raingarden.

3.02 PLANTING

- A. Set plants vertical according to the Landscape Plan.
- B. Saturate soil with water when the pit or bed is half full of topsoil and again when full.

3.03 MAINTENANCE

- A. Provide maintenance at no extra cost to Owner; Owner will pay for water.

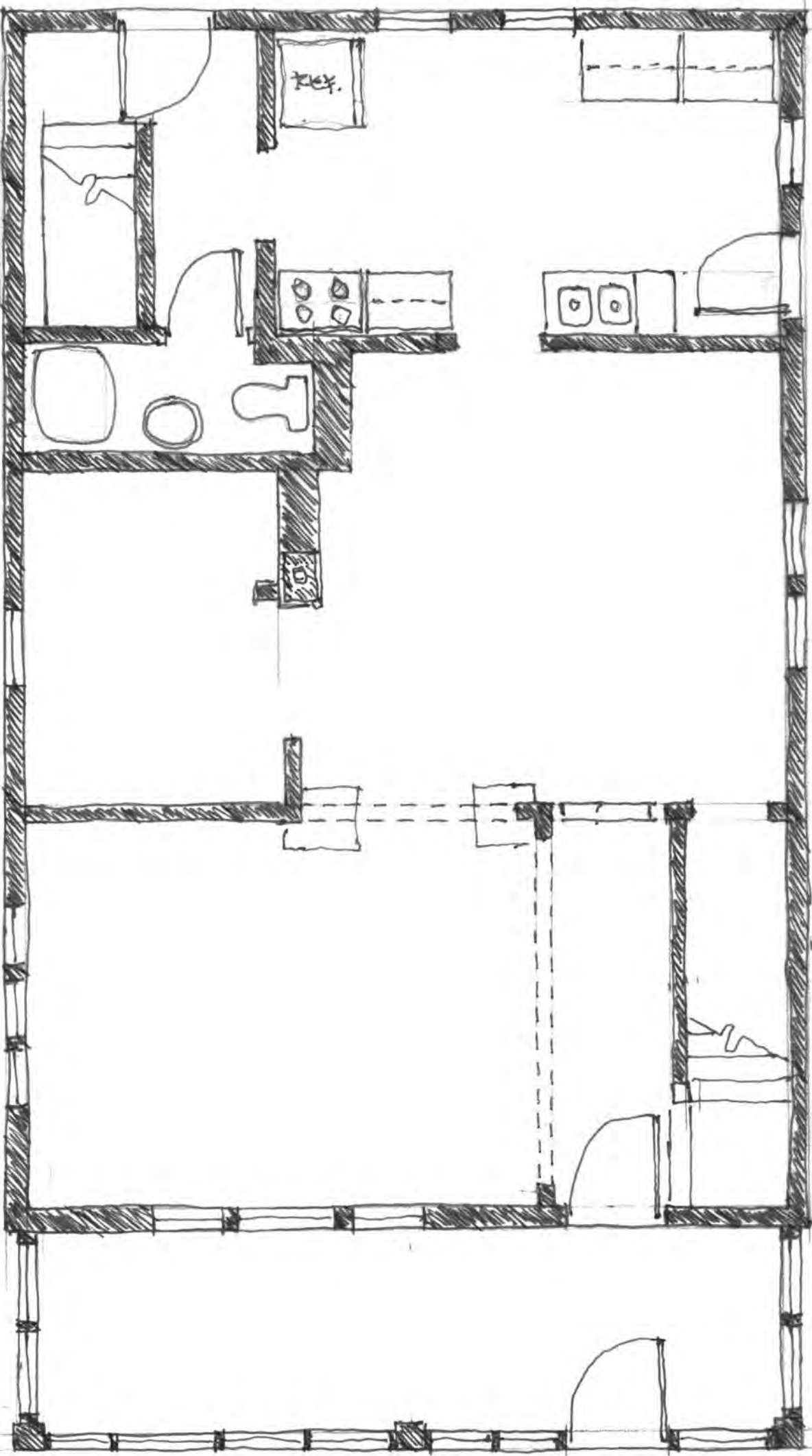
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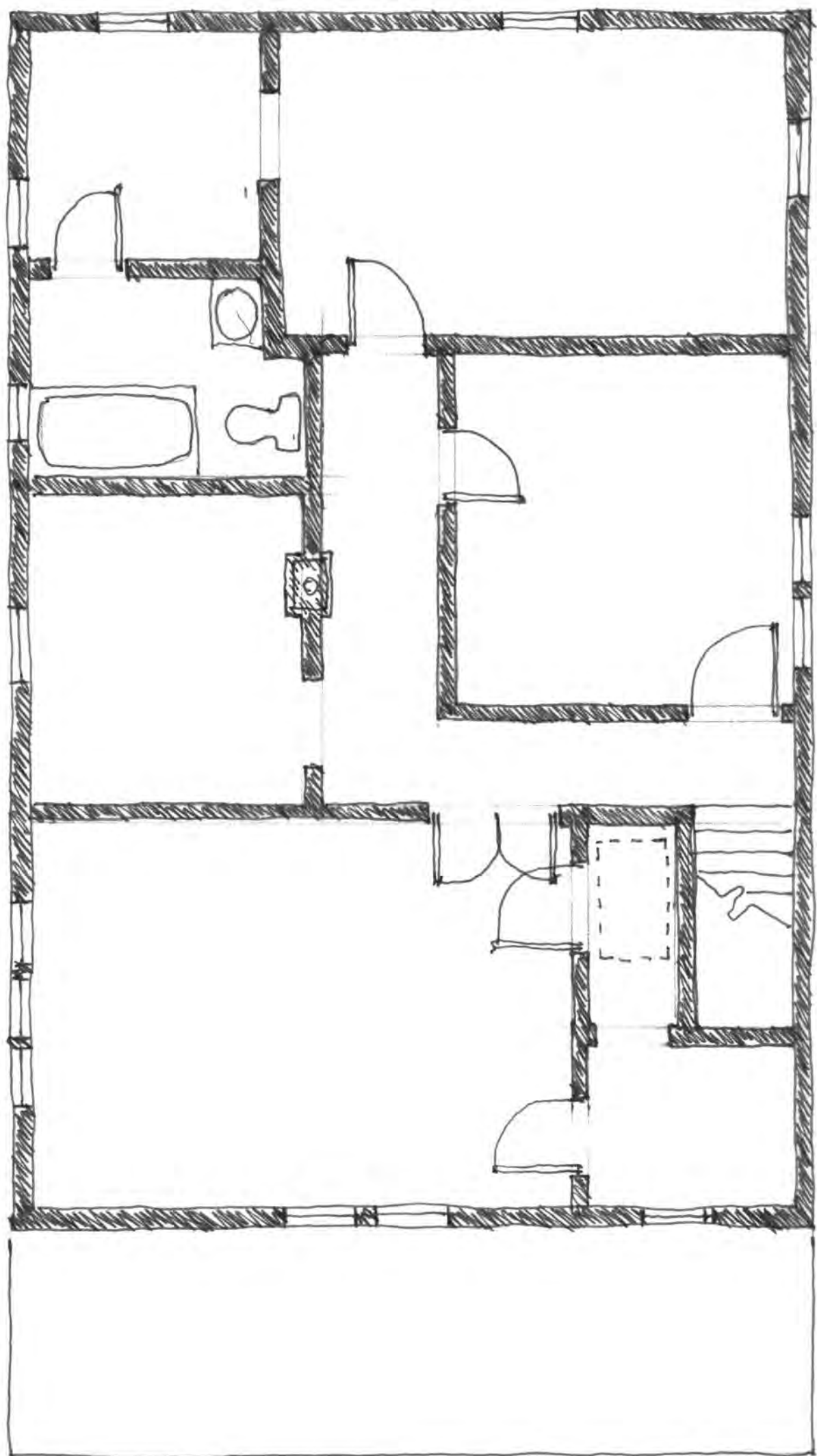
- A. As indicated by the Landscape Plan

END OF SECTION

	Color and Material Schedule					
	Project Address:	971 Jenks Ave. E.				
	Contractor:					
	Location	Description	Manufacturer	Finish	Color	Notes
Lighting	Dining Room, Kitchen, West Side Room, Rear Hall, Second Floor Hall, Bedrooms, Laundry Room (Total 14)	Flushmount Ceiling	Royce Lighting, Valhalla		Heirloom Bronze	at Menards
	Bathrms - First and Second Floor	3-Light Vanity	Royce Lighting, Valhalla		Heirloom Bronze	at Menards
	Bathrms - First and Second Floor	Fan Light	NuTone, Model QTREN080FLT			
	Dining Room	3 Light Semi-Mount	Royce Lighting, Valhalla		Heirloom Bronze	at Menards
	Overhead Garage Door	Motion Detector Sconce Light	DualBright 300 Watt motion security light with shields Model SL-5318-WH-D			at Menards
	Garage Service Door and Rear Entry to House -2	Non-motion Detector Light	Patriot Lighting, Mission, Model MND0092A			
	Front Entry Porch (Total 2)	Ceiling Light	Twin Pack Flush Mount 15"		Oil-rubbed Bronze with Alabaster	at Menards
	Rear Entry	2 Light Wall Sconce	Royce Lighting, Valhalla		Heirloom Bronze	at Menards
	South Bedroom Closet, Dining Room Closet (Total 3)	Wall Sconce	Royce Lighting, Valhalla		Heirloom Bronze	at Menards
	Outlet and Switchplate Covers				White	
Plumbing Fixtures	Kitchen	Kitchen Faucet	Moen, Model: 7825		Chrome	at Menards
	Kitchen	Kitchen Sink	Moen, 33"X22"X8" Model 2212		Stainless	at Menards
	Bathroom - First Floor	Pedestal Sink	Kohler; Sterling, Sacramento 442121-0		White	at Menards
	Bathrooms- First/Second Floor	Bathroom Faucet	Moen, High Arc CA84003CBN		Nickel	at Menards
	Bathroom - Second Floor	Recessed Oval Bowl Vanity Top	Imperial Marbel, RCxx22SPW		White	at Menards
	Bathroom s - First/Second Floor	Shower	Moen, 82008SRN		Nickel	at Menards
Casework and Furnishings	Kitchen	Kitchen Cabinets	Schock, Medallion or Midcontinent, full overlay flat door and drawer	See Plan	Cider/Wheatfield	Maple cabinet
	Kitchen	Kitchen Cabinet Hardware	Schrock Hardware, Model Pull H63 for drawers and doors		Brushed Nickel	at Menards or Home Depot
	Kitchen	Kitchen Counter Top	WilsonArt, Desert Springs 4904		Desert Springs	at Menards
	Bathroom - First/Second Floor	Medicine Cabinet	Pace, Model: SMC-2530		Meadowood Maple	at Menards
	Bathroom - First/Second Floor	Toilet Topper	Pace, Model: MOJ-2430-MDW		Meadowood Maple	at Menards
	Bathroom - First/Second Floor	Towel Bar (2 Total)	Moen, Model # DN6818xx		Brushed Nickel	at Menards
	Bathroom - First/Second Floor	Toilet Paper Holder	Moen, Model # DN6808xx		Brushed Nickel	at Menards
	Bathroom - First/Second Floor	Hand Towel Ring	Moen, Model # DN6886xx		Brushed Nickel	at Menards
	Bathroom - First/Second Floor	Curved Shower Rod	Moen, Model # DN2160xx		Brushed Nickel	at Menards
	Kitchen	Hardware	Schrock Hardware, Model Pull H63 for drawers and doors		Brushed Nickel	at Menards
Coatings	Walls Throughout (except bathrooms)	Wall Paint	Sherwin Williams No VOC, SW 6148	eggshell	Wool Skein	Knock Down Finish
	Walls Kitchen	Wall Paint	Sherwin Williams No VOC, SW 6148	semi-gloss	Wool Skein	
	Walls Bathrooms	Wall Paint	Sherwin Williams No VOC, SW 6154	semi-gloss	Nacre	
	Ceiling Throughout (except bathrooms)	Ceiling Paint	Sherwin Williams No VOC	flat	ceiling white	Knock Down Finish
	Ceiling Bathrooms	Ceiling Paint	Sherwin Williams No VOC	eggshell	ceiling white	
	Painted Baseboards in Bedrooms, Halls and Kitchen	Trim	Encapsulating Paint			
Flooring	Living Room, Dining Room, West Side Room, Hallway, and South and East Bedrooms	Refinished Wood				
	Kitchen and Rear Stair Vestibule	Floor	Forbo Marmoleum Striato 5220		Ploughed Acre	
	Bathrooms - First/Second Floor	Ceramic Tile	American Olean Midwest, Torre Venato		Sabbia TN86	at American Olean
	North Bedroom	Laminate Flooring	Tarkett -			
Appliances	Kitchen	Range	30", Gas Range		stainless	
	Kitchen	Microhood	Vented to exterior		stainless	
	Kitchen	Refrigerator	Energy STAR, 30" wide		stainless	
	Kitchen	Dishwasher	Energy STAR, 24" Frigidaire		stainless	
	Basement	Washer	Energy STAR, 18 cubic feet		stainless	
	Basement	Dryer	Gas Dryer		stainless	
Doors	Front Entry	Storm and Steel EntryDoor	Rochester, Patina, Model A73190			at Menards
	House Rear Entry	Storm and Steel Entry Door	Mastercraft LT-10 half view w/ internal blind			
	Service Door	Steel Entry Door				at Menards
	Interior doors	Interior Wood Door	Replace interior doors to match existing			at Menards
	Door Hardware	Interior Doors	Schlage, Avanti, Model 221-389x		Satin Nickel	
	Door Hardware	Front and Rear Entry Door	Schlage, Avanti, Model 221-409x		Satin Nickel	
Exterior Finishes	House and Garage Siding	Lap Siding	Hardie-Board	flat	SW7507 - Stone Lion	Pre-Purchase
	Roof - House and Garage	Weathered Wood	GAF Elk 30 year HD shingle			Pre-Purchase
	Door and Window Trim		Safe Encasement Products paint	flat	SW7628 - Windfresh White	at Diamond Vogel
	Soffit/Fascia	White		flat	SW7628 - Windfresh White	
	Exterior Foundation and Under-Deck Screen		Sherwin Williams No VOC, SW 7548	flat	Portico	
	Front Porch Floor	Stain color	Sherwin Williams No VOC, SW 3505		Yankee Barn	
	Gutters/Downspouts	Match house color	Edco			at United Products

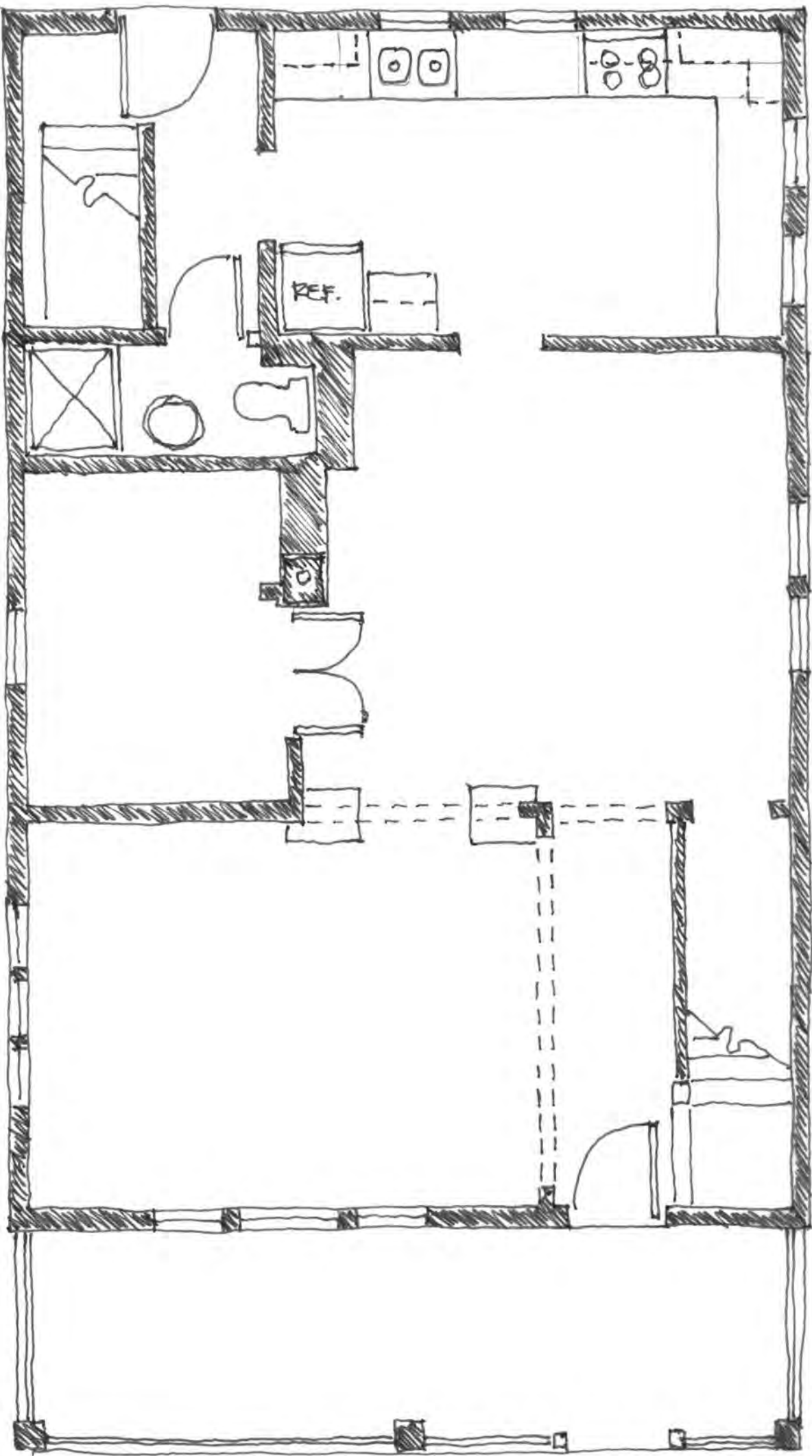
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JENKS

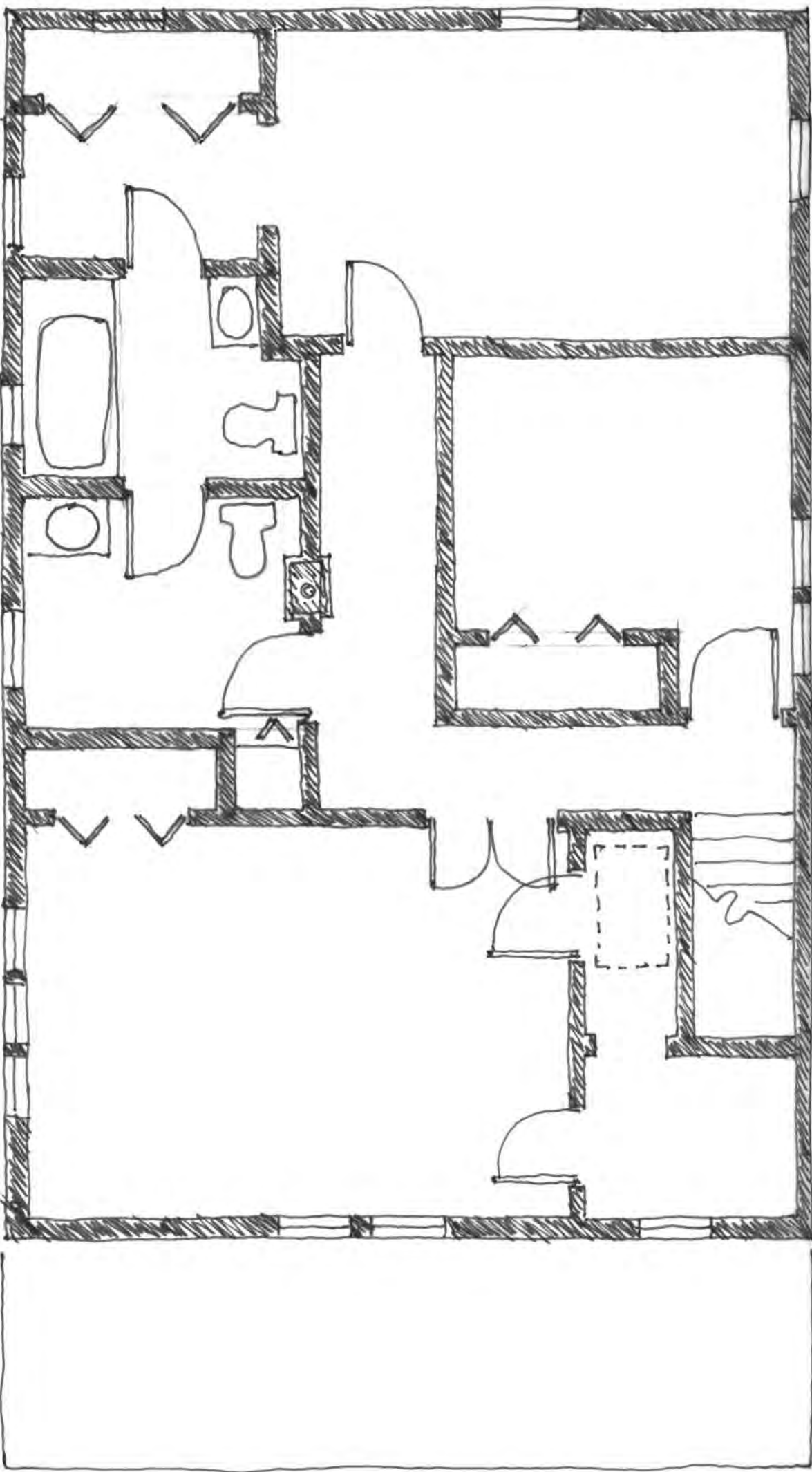




1ST. SECOND FLR.
71 JENKS

REMODEL
FIRST FLR.

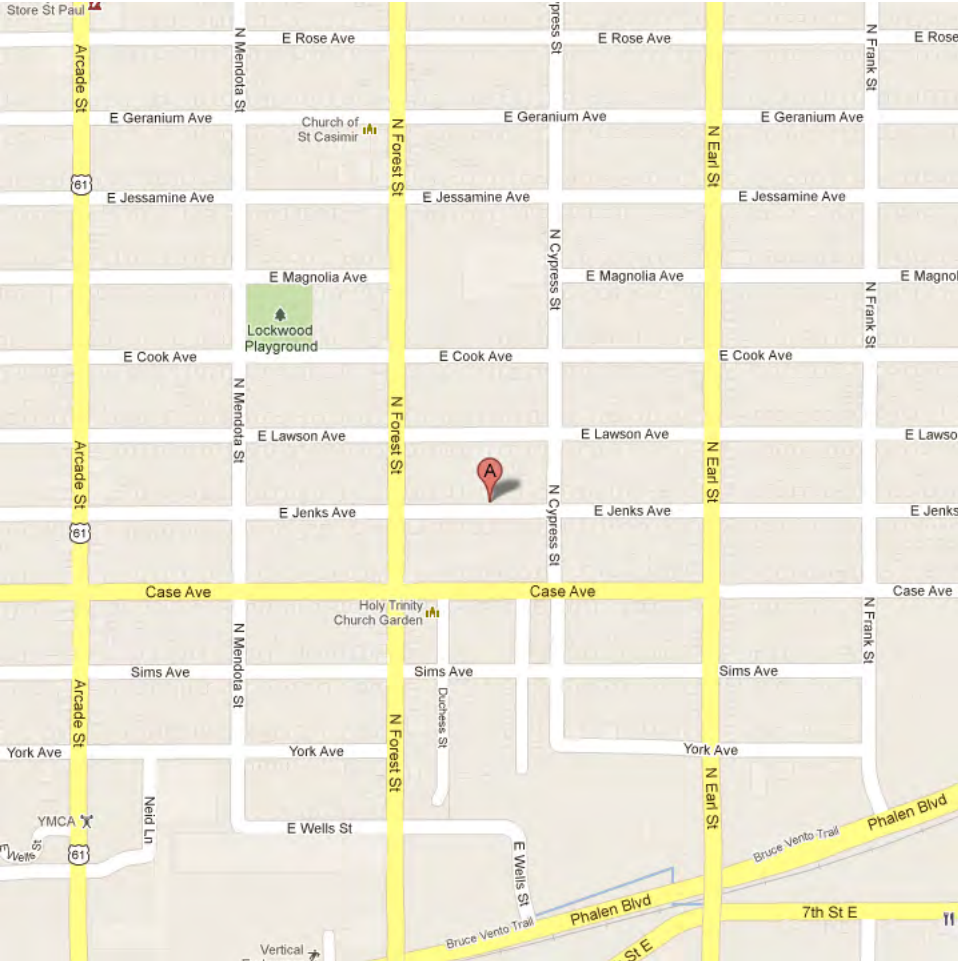




EMODEL
SECOND FLR.

City of Saint Paul • HRA

Residence Remodel
971 Jenks Avenue
Saint Paul, MN



1 Location Map
SCALE: NTS



PROJECT TEAM	
PROJECT:	Residence Remodel
LOCATION:	971 Jenks Avenue Saint Paul, MN
OWNER:	City of Saint Paul HRA Sarah Corn, Project Manager 25 west 4th Street Saint Paul, MN 55102 651.266.6552 --@ci.StPaul.mn.us
ARCHITECT:	LUNNING WENDE ASSOCIATES, INC. 275 EAST FOURTH STREET, SUITE 620 SAINT PAUL, MN 55101 Scott Wende PHONE: 651.221.0915 FAX: 651.222.6259 Scott@LunningWende.com

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SURVEY	
V-101	Survey
LANDSCAPE	
LD101	Landscape Demolition Plan
L-101	Landscape Site Layout Plan
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ARCHITECTURAL	
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AD102	Second Floor/Roof Demo Plan
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S-101	Floor Plan Structural Notes
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City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

No.	Date	Appr	Revision Notes
△			

No.	Date	Issue Notes
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Not for
Construction

Design Firm	Lunning Wende Associates, Inc. 275 Fourth Street East, Suite 620 Saint Paul, MN 55101 P: 651.221.0915 F: 651.222.6259
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Consultant	
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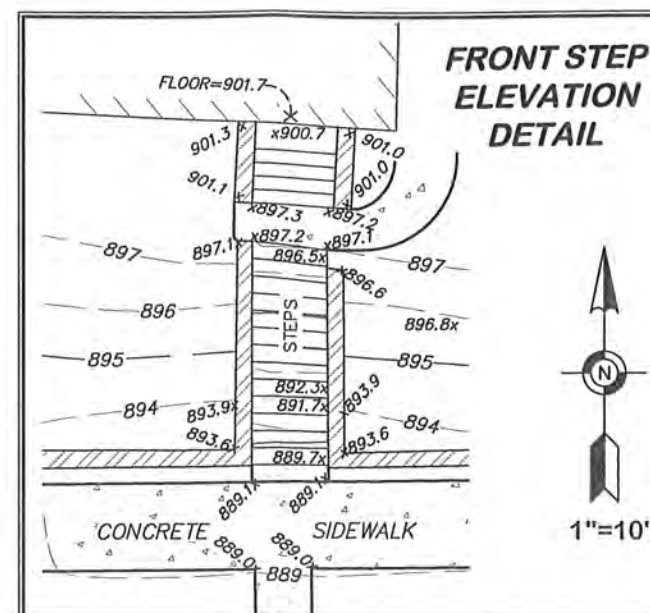
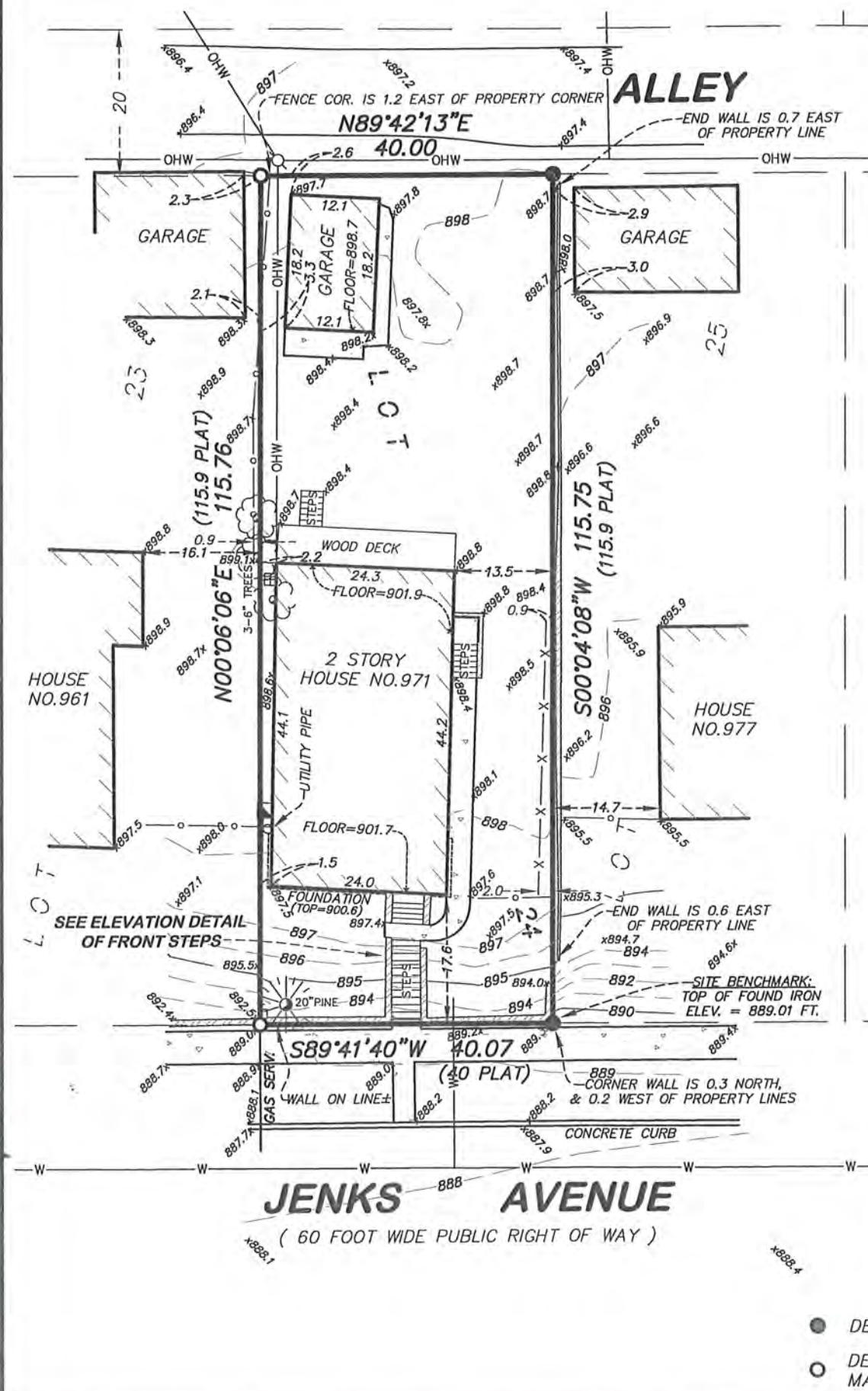
Owner	City of Saint Paul HRA Marty McCarthy, Project Manager 25 west 4th Street, Saint Paul, MN 55102 651.266.6552
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Project Title	City of Saint Paul • HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN
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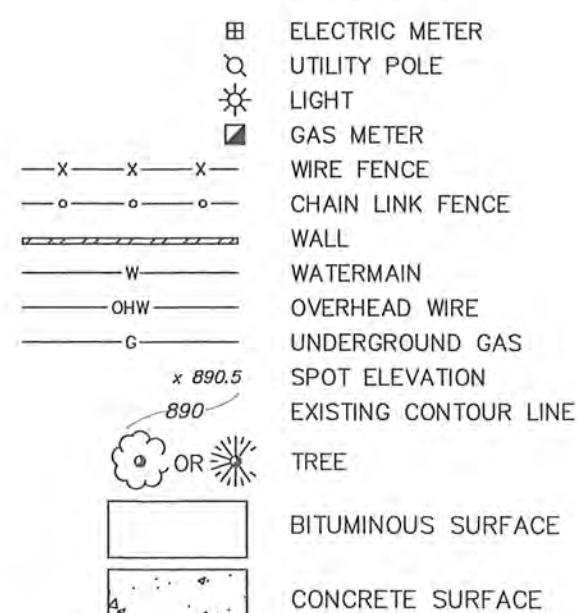
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Project Manager Scott Wende	Project ID 2012-04
Drawn By SM	Scale No scale
Reviewed By	Drawing No. G-101
Date 20130116	
File Name	

CERTIFICATE OF SURVEY FOR:
HOUSING AND REDEVELOPMENT AUTHORITY OF THE CITY OF SAINT PAUL, MINNESOTA



LEGEND



- DENOTES FOUND IRON MONUMENT
- DENOTES IRON MONUMENT SET & MARKED BY LICENSE NO. 22033

LEGAL DESCRIPTION:

(per tradition Title & Real Estate Services, File 1007014)

Lot 24, Block 3, Forestdale Addition, Ramsey County, Minnesota.

Abstract Property.

Parcel Number: 28.29.22.24.0172
Parcel Address: 971 Jenks Avenue

NOTES:

- The orientation of this bearing system is based on the Ramsey County coordinate grid (NAD 83-96 Adj.).
- The total area of the property described hereon is 4,635 square feet or 0.1064 acres.
- The legal description and easement information used in the preparation of this survey were based on a Title Policy issued by Tradition Title & Real Estate Services, as agent for Stewart Title Guaranty Company, File No. 1007014, having a policy date of September 2, 2010.
- Existing utilities, services and underground structures shown hereon were located either physically, from existing records made available to us, by resident testimony, or by locations provided by Gopher State One Call, per Ticket No. 123530345. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. Where additional or more detailed information is required, the client is advised that excavation may be necessary. Other utilities and services may be present and verification and location of all utilities and services should be obtained from the owners of the respective utilities prior to any design, planning or excavation.
- Visible improvements are shown on the survey. Other improvements not visible to the surveyor may be present.
- BENCHMARK: Top found iron monument located at the southeast corner of the property described hereon. Elevation=889.01 feet (NAVD 88) per MNDOT VRS Network.

CERTIFICATION:

I hereby certify that this survey was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Date of survey: December 19, 2012.
Date of signature: December 28, 2012.

Lee J. Nord, P.L.S.
Minnesota License No. 22033

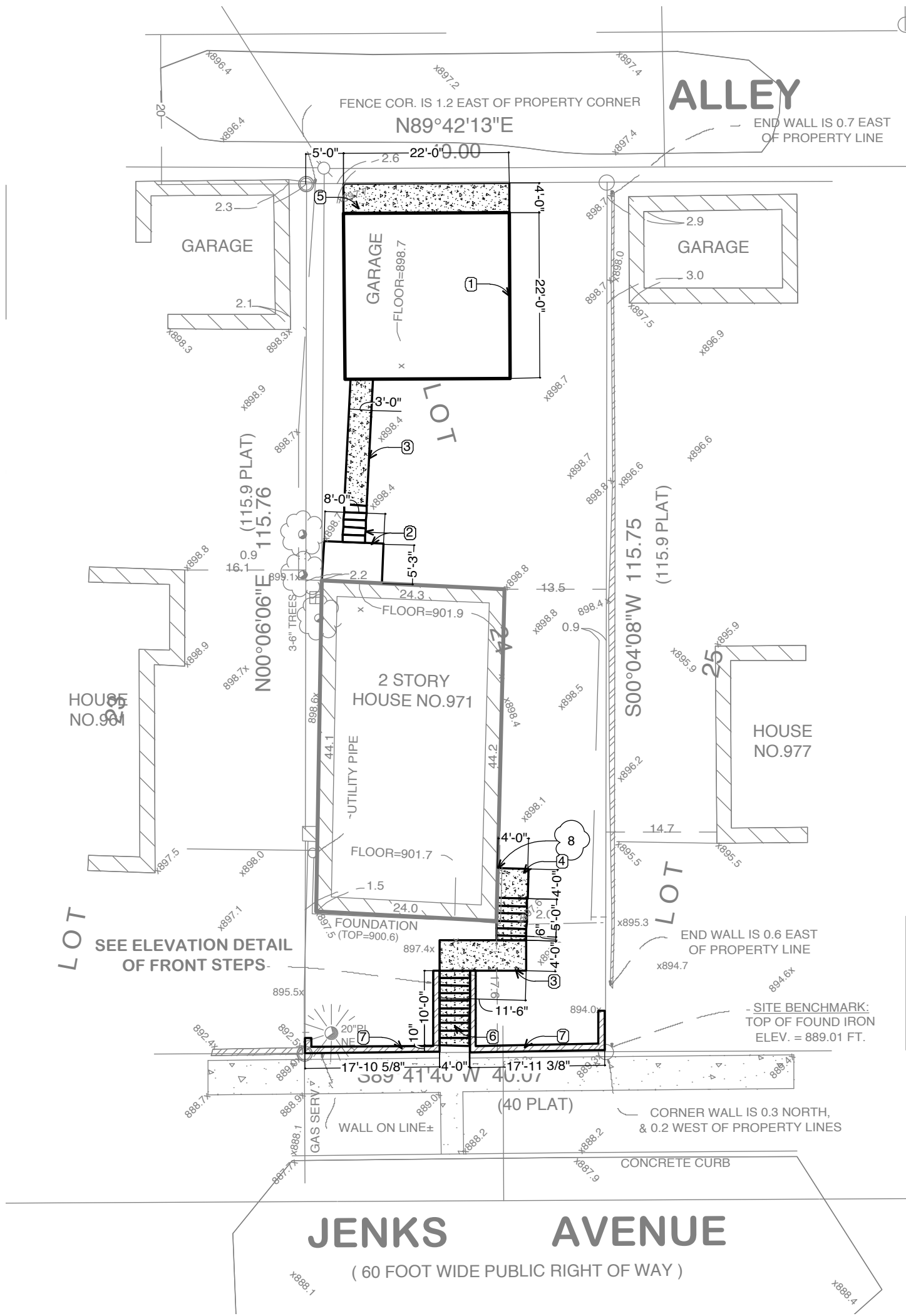
1229 Tyler Street NE, Suite 100
Minneapolis, Minnesota 55413
PHONE: (612) 466-3300
FAX: (612) 466-3383
WWW.EFNSURVEY.COM
COPYRIGHT © 2012 BY EGAN, FIELD & NOWAK, INC.



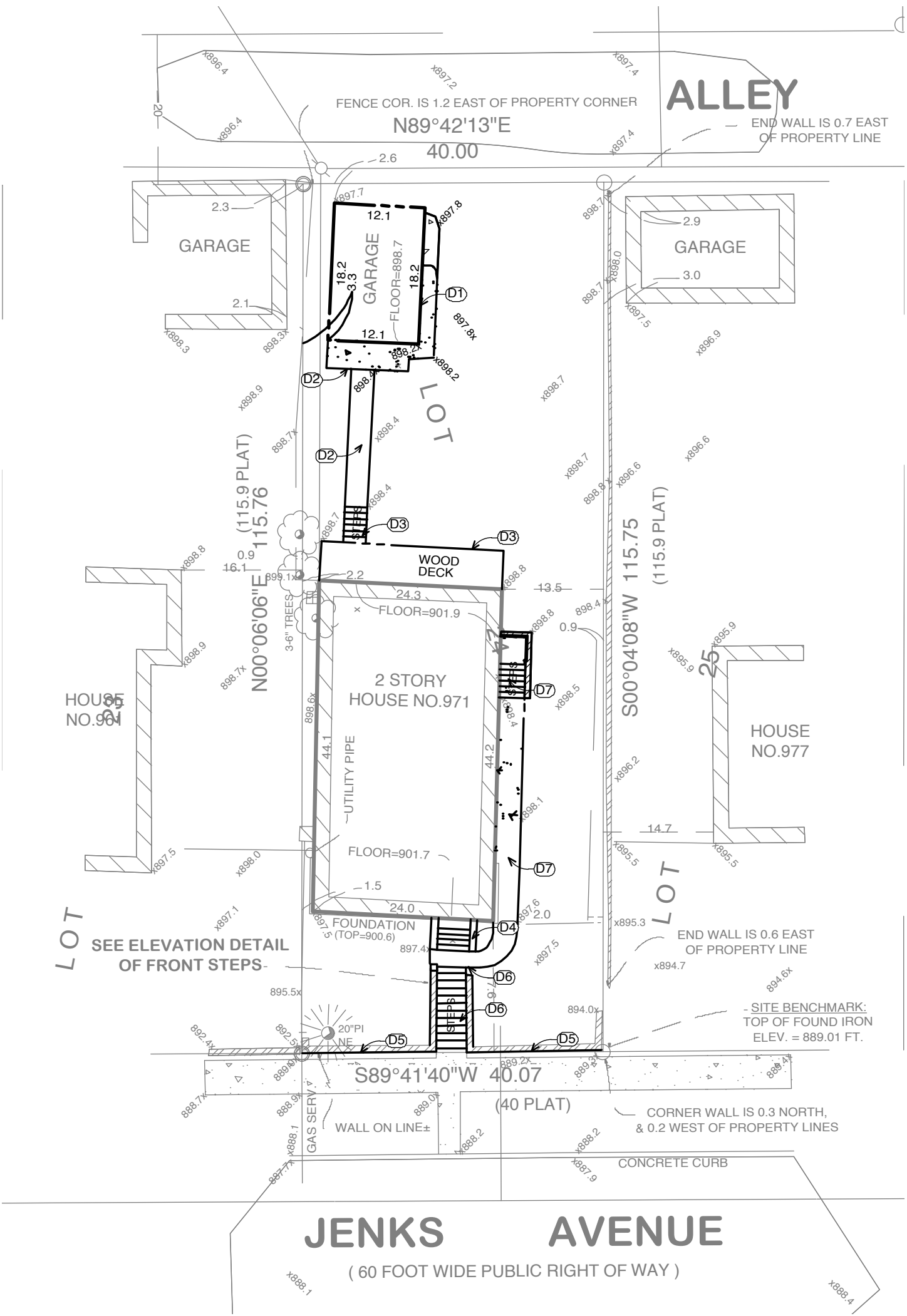
SURVEY FOR:
HOUSING & REDEVELOPMENT AUTHORITY
OF THE CITY OF SAINT PAUL, MINNESOTA
971 JENKS AVENUE, SAINT PAUL, MN

FIELD BOOK	PAGE	FIELDWORK CHIEF	DATE	DRAWN BY	CHECKED BY
2792	32	S.W.	12/19/12	kgf	L.J.N.
DRAWING NAME:		35440.JWG			
JOB NO.		35440			
FILE NO.		4490			

Consultant	
Owner	City of Saint Paul HRA Marty McCarthy, Project Manager 25 west 4th Street, Saint Paul, MN 55102 651.266.6552
Project Title	City of Saint Paul • HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN
Drawing Title	Survey
Project Manager	Scott Wende
Project ID	2012-04
Drawn By	EB
Scale	Varies
Reviewed By	
Drawing No.	V-101
Date	20130116
File Name	



2 Architectural Site Plan (New Construction)
AS101 Scale: 1/16" = 1'-0"



1 Architectural Site Plan (Demolition)
AS101 Scale: 1/16" = 1'-0"

- General Notes - New Construction**
1. Provide radon ventilation in basement per radon test report recommendations.
 2. All interior walls 2x4 WD framing UNO.
 3. Provide paper free GWB or cement fiberboard at all interior wall locations with plumbing fixture(s).
 4. Clean and reinstall existing door hardware as noted if to be reused.
 5. Fully encapsulate lead-paint at locations per code (see HRA Report)
 6. All occupiable spaces to have a minimum ceiling height Of 7'-0" per code (application for variance per client request).
 7. Refinish hardwood floors when present (see schedule).
 8. Verify all existing mechanical & electrical for code compliance. Install new outlets & fixtures as required (see specifications).
 9. Provide fire blocking/fire safing as required per code.
 10. Verify existing Smoke detection system. Reuse if possible; replace per code as required.

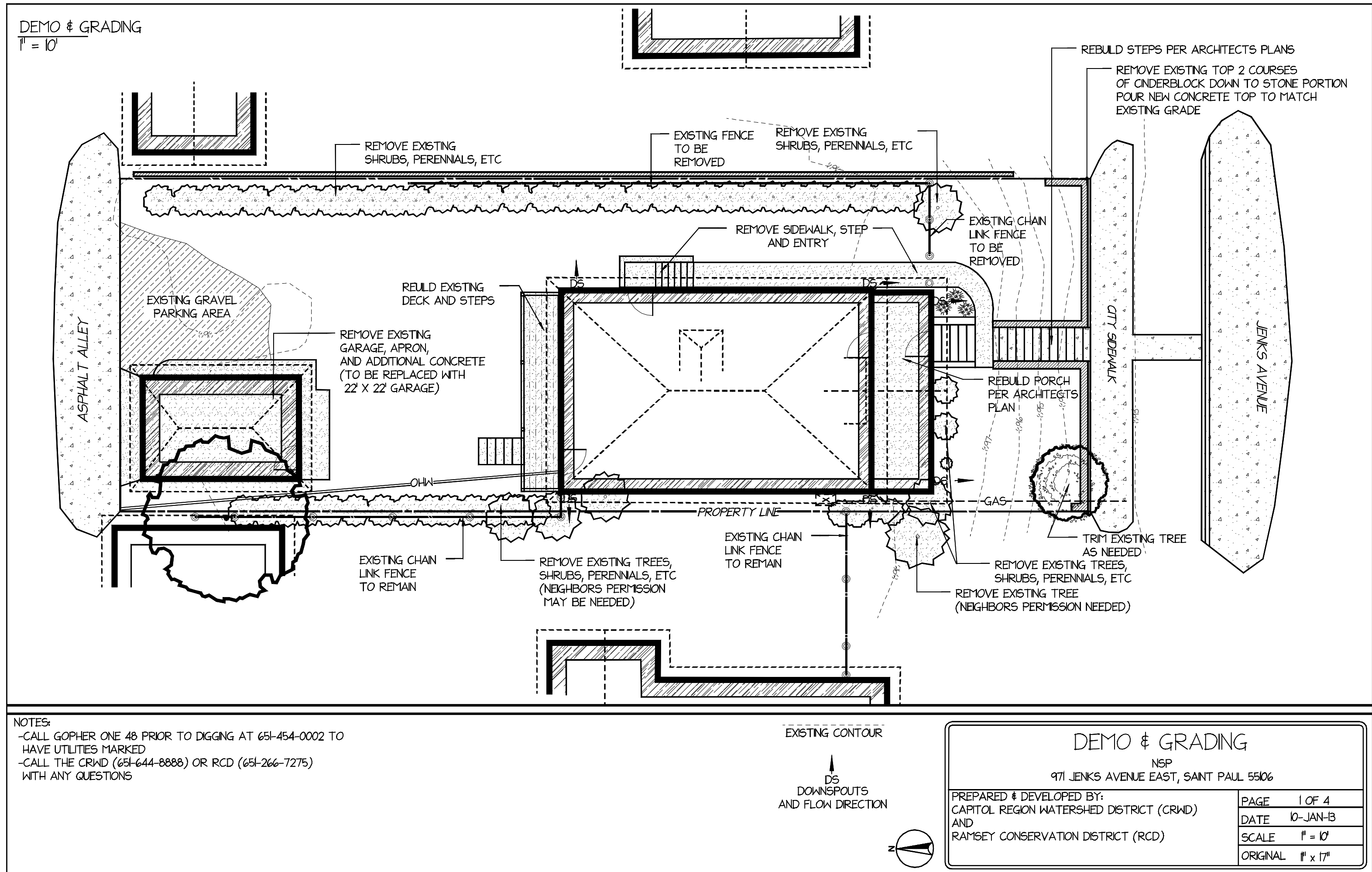
- New Construction Notes**
1. All Roofs: new roofing and vents to code. See Specifications.
 2. New siding and house trim. See specifications for type.
 3. All windows are replacement windows. Unless noted otherwise.

- Demolition Site Notes**
- (D1) Demolish garage, garage slab and apron
 - (D2) Demolish existing concrete walk
 - (D3) Demolish existing wood deck, stair and grade beam; repair and prepare existing ledger for new wood deck. Coordinate with new construction plans.
 - (D4) Demolish front porch entry steps
 - (D5) Demolish portion of front retaining wall
 - (D6) Demolish front steps at sidewalk and entry sidewalk
 - (D7) Demolish side entry steps and sidewalk

- New Construction Site Notes**
- (1) New garage and concrete pad.
 - (2) New wood deck, stairs and footings.
 - (3) New concrete walk.
 - (4) New concrete porch landing and stairs with wrought iron railing to code.
 - (5) New concrete apron.
 - (6) New concrete stairs and wrought iron railing to code.
 - (7) Repaired block wall with new parging to match house base.
 - (8) Relocate down spout to north side of new stair and landing?

City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

No.	Date	Appr	Revision Notes
△			
No.	Date	Issue Notes	
Not for Construction			
Design Firm		Lunning Wende Associates, Inc. 275 Fourth Street East, Suite 620 Saint Paul, MN 55101 P: 651.221.0915 F: 651.222.6259	
Consultant			
Owner		City of Saint Paul HRA Marty McCarthy, Project Manager 25 west 4th Street, Saint Paul, MN 55102 651.266.6552	
Project Title		City of Saint Paul • HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN	
Drawing Title Architectural Site Plan			
Project Manager Scott Wende		Project ID 2012-04	
Drawn By SM		Scale 1/8" = 1'-0"	
Reviewed By		Drawing No.	
Date 20130116		AS101	
File Name			



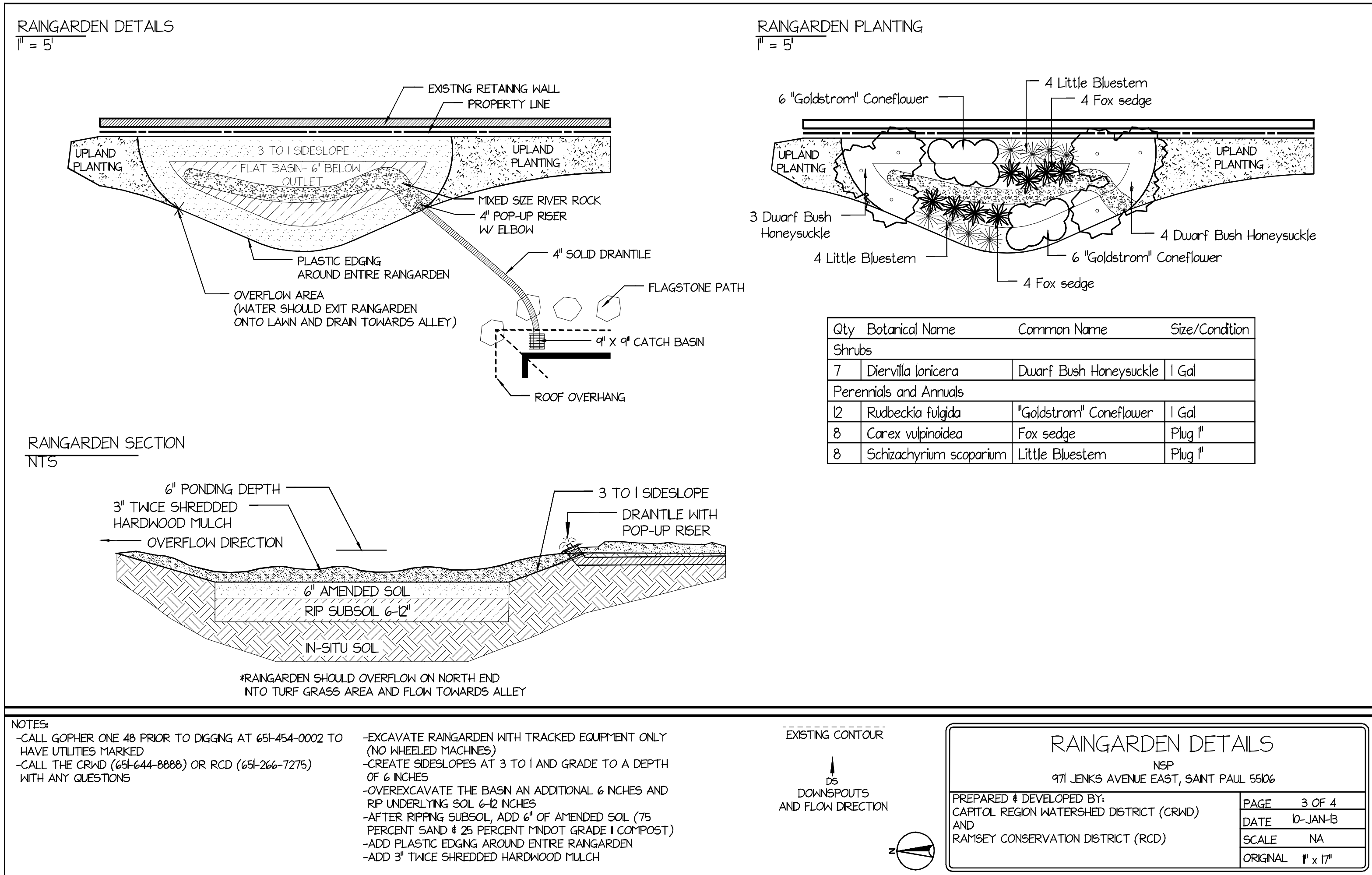
Consultant

Owner
City of Saint Paul HRA
Marty McCarthy, Project Manager
25 west 4th Street, Saint Paul, MN 55102
651.266.6552

Project Title
City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

Drawing Title
Landscape Demolition Plan

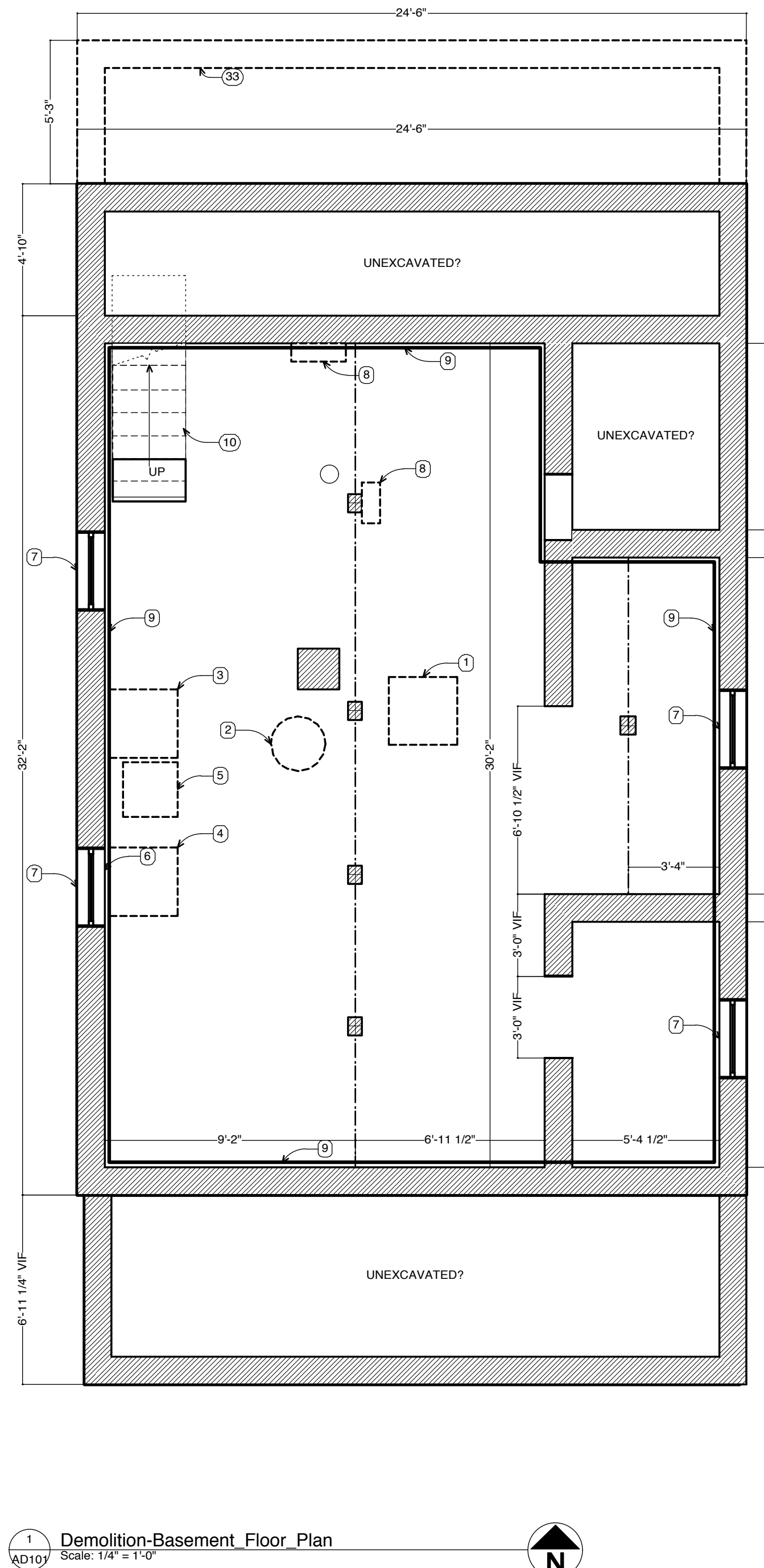
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Reviewed By	Drawing No. LD101
Date 20130116	File Name

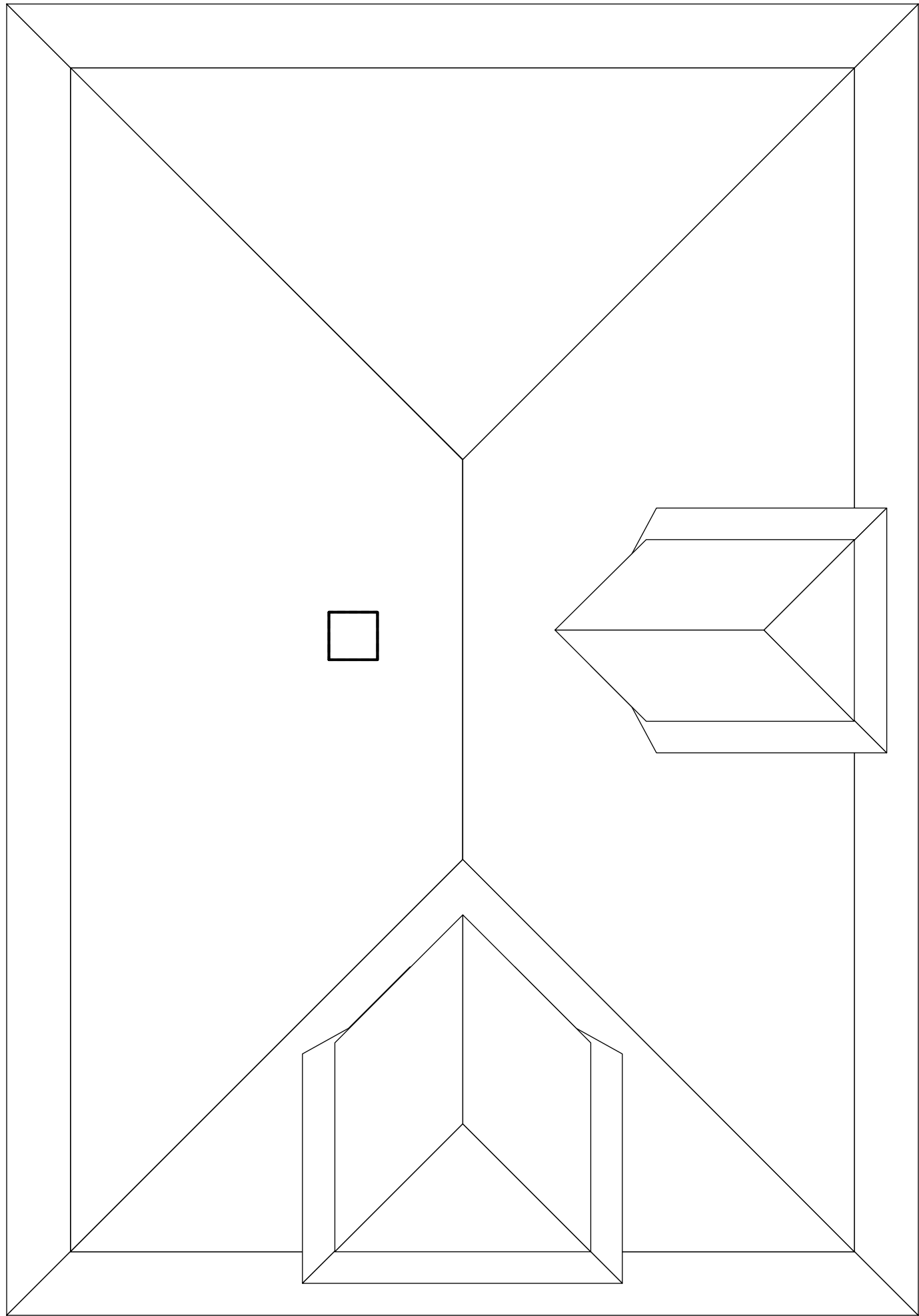


Consultant	
Owner	
City of Saint Paul HRA Marty McCarthy, Project Manager 25 west 4th Street, Saint Paul, MN 55102 651.266.6552	
Project Title	
City of Saint Paul • HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN	
Drawing Title	
Landscape Details	
Project Manager	Project ID
Scott Wende	2012-04
Drawn By	Scale
EB	Varies
Reviewed By	Drawing No.
Date	L-102
20130116	
File Name	

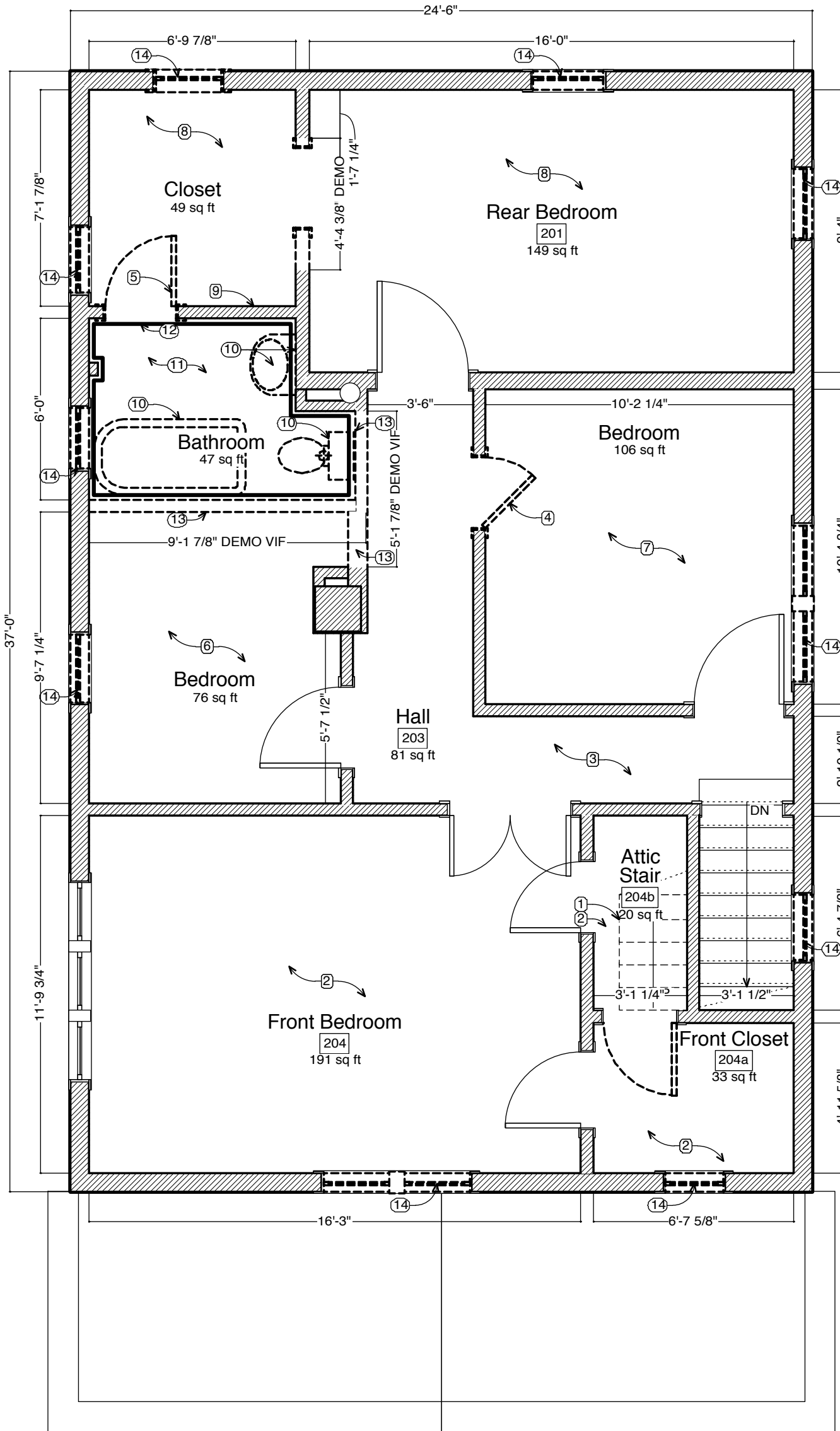
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Consultant	
Owner	
City of Saint Paul HRA Marty McCarthy, Project Manager 25 west 4th Street, Saint Paul, MN 55102 651.266.6552	
Project Title	
City of Saint Paul • HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN	
Drawing Title	
Landscape Planting Plan	
Project Manager	Project ID
Scott Wendel	2012-04
Drawn By	Scale
EB	Varies
Reviewed By	Drawing No.
Date	L-103
20130116	
File Name	





2 Demolition-Roof Plan
Scale: 1/4" = 1'-0"



1 Demolition-Second Floor Plan
Scale: 1/4" = 1'-0"



General Notes - Demolition

1. Field verify all existing conditions and dimensions.
2. Demo work shown dashed.
3. See specifications for construction waste removal and landfill diversion instructions.
4. Remove landscaping per HRA & Saint Paul Forestry recommendations.
5. Test for radon levels in existing basement (see specifications).
6. Clean, sand and refinish all existing stored materials for reuse (see specifications).
7. Remove existing asbestos siding whenever/wherever present.
8. Modify, relocate or cap existing mechanical & electrical as required.
9. Verify structural integrity of all existing framing, columns & beams.
10. Coordinate all structural modifications with qualified engineers.
11. Verify conditional & code compliance of all mechanical & electrical fixtures & outlets (see HRA Code Report)
12. See new plans to coordinate location and dimensions of new openings.
13. Upon removal of existing floor finishes, field verify condition of existing substrate and if hardwood floor exists.
14. Remove and retain all existing interior trim before demolishing interior walls. Reuse as needed.

Demolition Notes

1. Replace all windows. Verify condition for trim repair. See plans for noted exceptions.
2. Demo existing siding. Verify sheathing condition for repair.
3. Demo existing roof shingles and underlayment. Repair sheathing as needed.
4. Clean and tuckpoint existing foundation as required

Floor Plan Demolition Keynotes

- ① Front Bedroom - Demolish stair to attic
- ② Front Bedroom - Demolish carpet and pad
- ③ Front Hall - Demolish carpet and pad
- ④ East Bedroom - Demolish west door and trim
- ⑤ North Bedroom Closet- Demolish wood door and frame
- ⑥ West Bedroom - Demolish carpet and pad
- ⑦ East Bedroom - Demolish carpet and pad
- ⑧ North Bedroom and Closet- Demolish carpet and pad
- ⑨ North Bedroom Closet - Demolish south wall sheetrock
- ⑩ Bathroom - Demolish plumbing fixtures - sink, vanity, mirror, toilet, tub and faucet; retract and cap discontinued electrical, water and waste lines - coordinate with new construction plans
- ⑪ Bathroom - Demolish flooring material
- ⑫ Bathroom - Demolish miscellaneous items: grab bar(s), bath fan, mirror(s), lights, etc.
- ⑬ Bathroom - Demolish wall
- ⑭ Throughout - Demolish window

City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

No.	Date	Appr	Revision Notes
△			

No.	Date	Issue Notes
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Not for
Construction

Design Firm
 Lunning Wende Associates, Inc.
275 Fourth Street East, Suite 620
Saint Paul, MN 55101
P: 651.221.0915 F: 651.222.6259

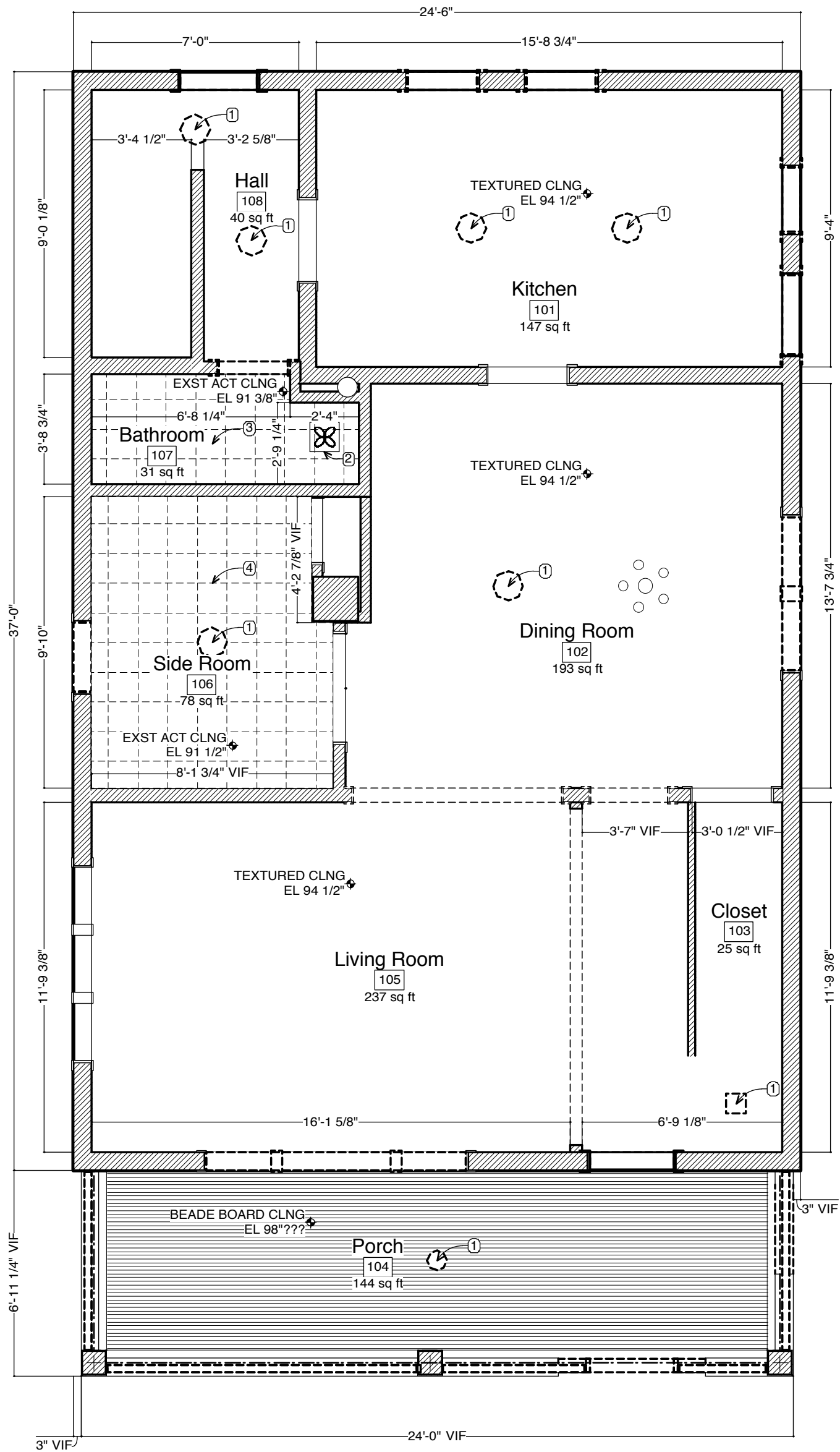
Consultant

Owner
City of Saint Paul HRA
Marty McCarthy, Project Manager
25 west 4th Street, Saint Paul, MN 55102
651.266.6552

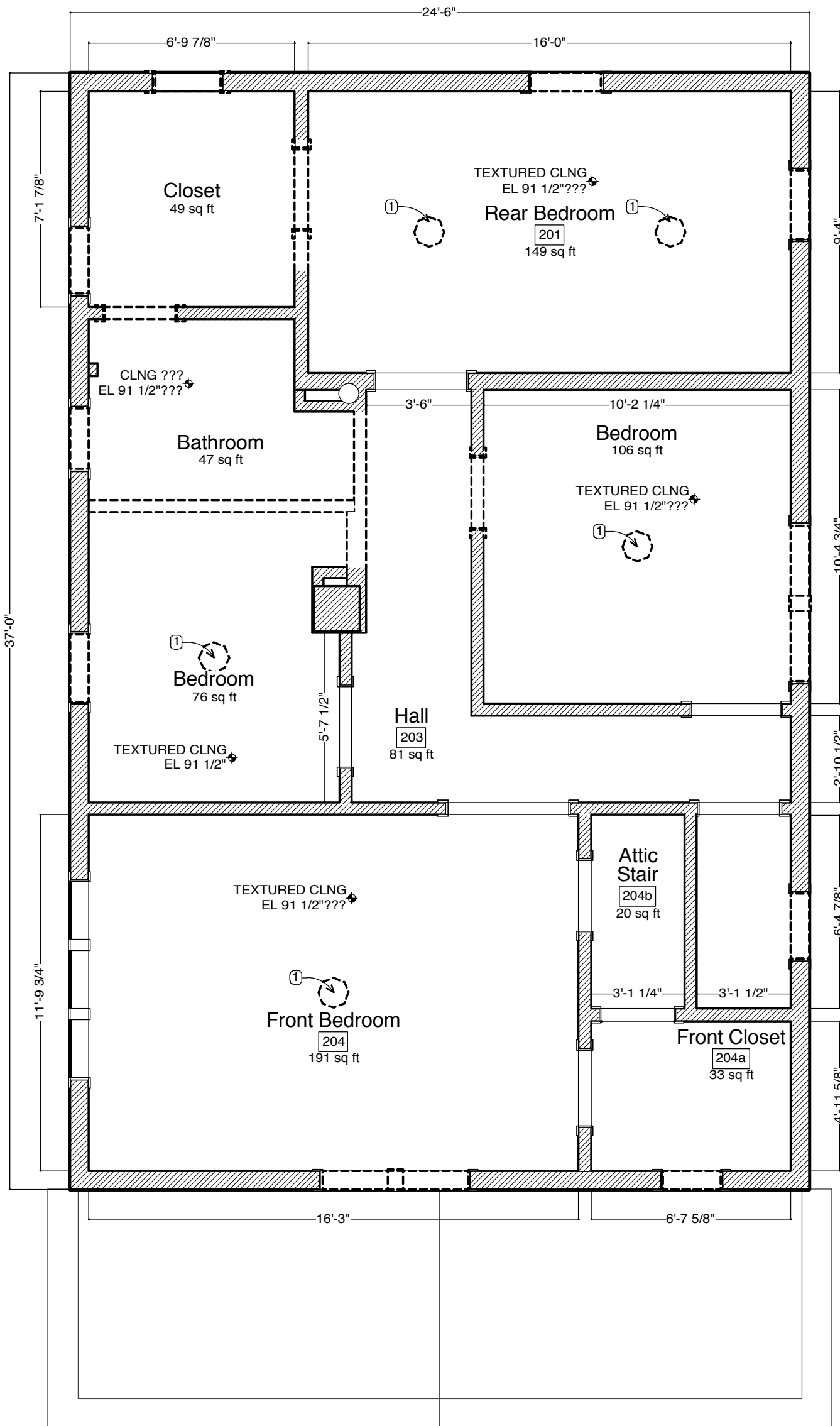
Project Title
City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

Drawing Title
Demo Second Floor/Roof Plan

Project Manager Scott Wende	Project ID 2012-04
Drawn By SM	Scale 1/4" = 1'-0"
Reviewed By	Drawing No. AD102
Date 20130116	File Name



2 Demolition-Reflected Ceiling Plan-First Floor
AD121 Scale: 1/4" = 1'-0"



1 Demolition-Reflected Ceiling Plan-Second Floor
AD121 Scale: 1/4" = 1'-0"



General Notes - Demolition

1. Field verify all existing conditions and dimensions.
2. Demo work shown dashed.
3. See specifications for construction waste removal and landfill diversion instructions.
4. Remove landscaping per HRA & Saint Paul Forestry recommendations.
5. Test for radon levels in existing basement (see specifications).
6. Clean, sand and refinish all existing stored materials for reuse (see specifications).
7. Remove existing asbestos siding whenever/wherever present.
8. Modify, relocate or cap existing mechanical & electrical as required.
9. Verify structural integrity of all existing framing, columns & beams.
10. Coordinate all structural modifications with qualified engineers.
11. Verify conditional & code compliance of all mechanical & electrical fixtures & outlets (see HRA Code Report)
12. See new plans to coordinate location and dimensions of new openings.
13. Upon removal of existing floor finishes, field verify condition of existing substrate and if hardwood floor exists.
14. Remove and retain all existing interior trim before demolishing interior walls. Reuse as needed.

Demolition Notes

1. Replace all windows. Verify condition for trim repair. See plans for noted exceptions.
2. Demo existing siding. Verify sheathing condition for repair.
3. Demo existing roof shingles and underlayment. Repair sheathing as needed.
4. Clean and tuckpoint existing foundation as required

Reflected Ceiling Plan Demolition Keynotes

- ① Throughout - Demolish lighting fixtures - all
- ② Bathroom - Demolish ceiling fan
- ③ Bathroom - Demolish acoustical tile ceiling
- ④ Side Room - Demolish acoustical tile ceiling

City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

No.	Date	Appr	Revision Notes
△			

No.	Date	Issue Notes
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Not for
Construction

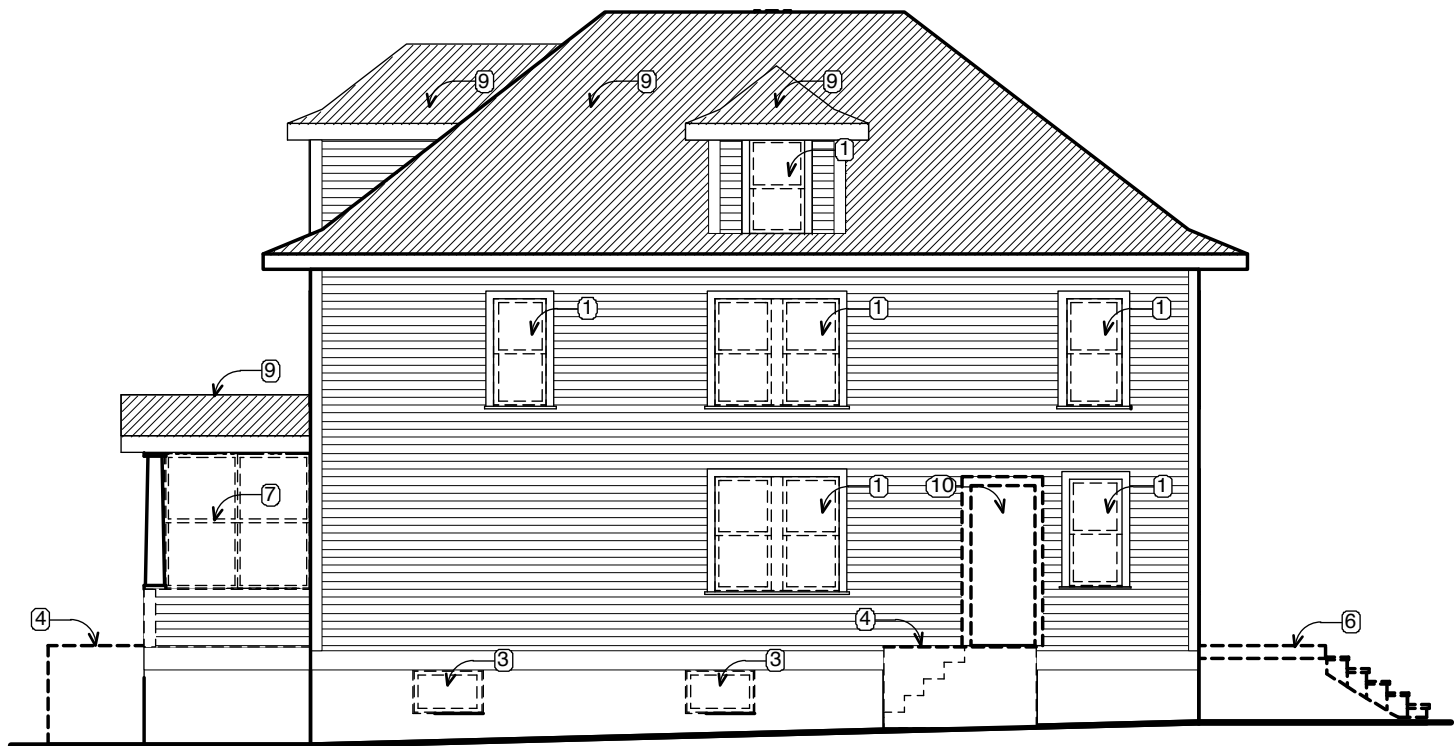
Design Firm
 Lunning Wende Associates, Inc.
275 Fourth Street East, Suite 620
Saint Paul, MN 55101
P: 651.221.0915 F: 651.222.6259

Owner
City of Saint Paul HRA
Marty McCarthy, Project Manager
25 west 4th Street, Saint Paul, MN 55102
651.266.6552

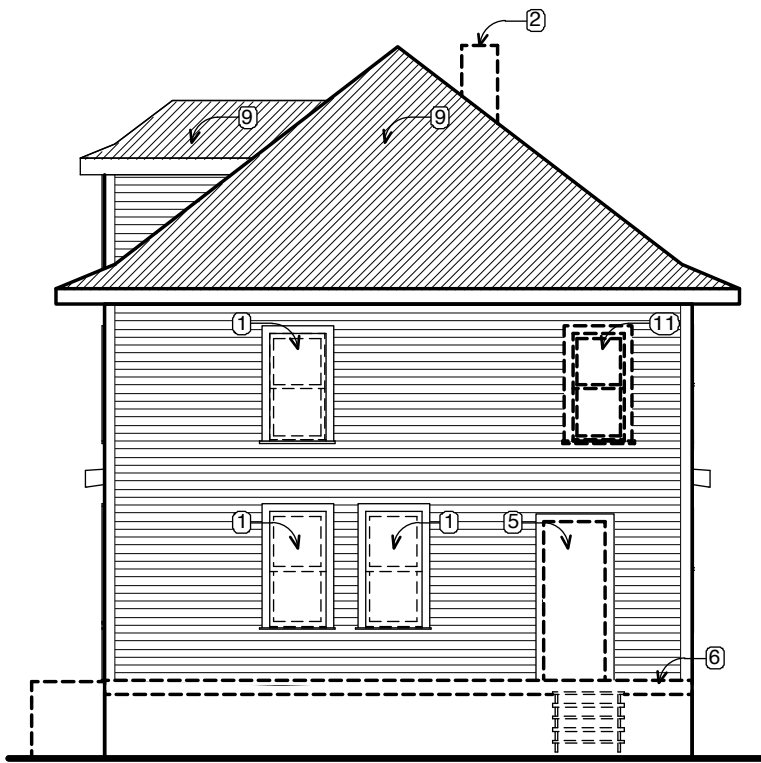
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City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

Drawing Title
Demo Reflected Ceiling Plans

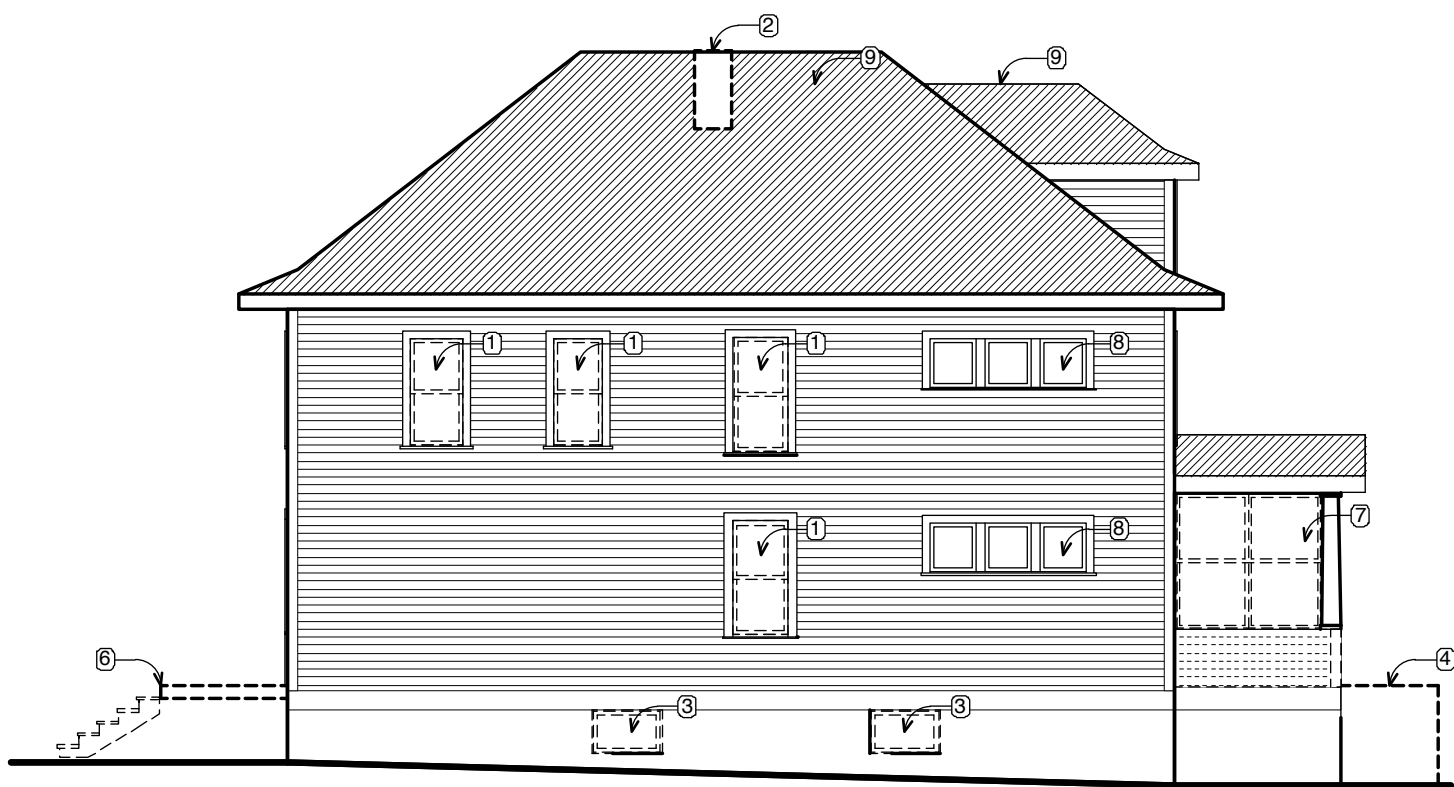
Project Manager Scott Wende	Project ID 2012-04
Drawn By SM	Scale 1/4" = 1'-0"
Reviewed By	Drawing No. AD121
Date 20130116	File Name



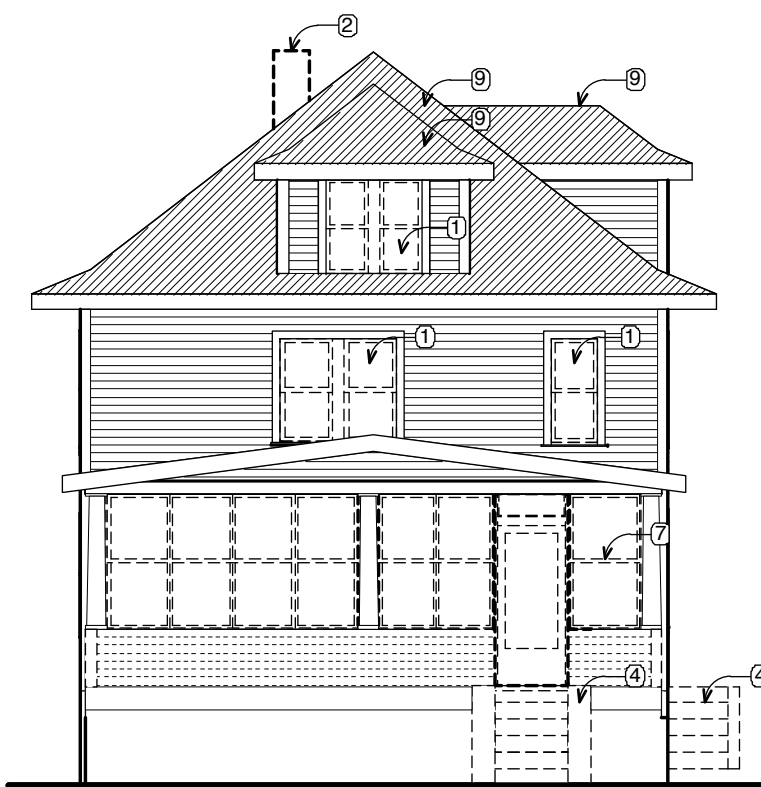
2 Demolition Elevation-East
Scale: 1/8" = 1'-0"



1 Demolition Elevation-North
Scale: 1/8" = 1'-0"



4 Demolition Elevation-West
Scale: 1/8" = 1'-0"



3 Demolition Elevation-South
Scale: 1/8" = 1'-0"

General Notes - Demolition

1. Field verify all existing conditions and dimensions.
2. Demo work shown dashed.
3. See specifications for construction waste removal and landfill diversion instructions.
4. Remove landscaping per HRA & Saint Paul Forestry recommendations.
5. Test for radon levels in existing basement (see specifications).
6. Clean, sand and refinish all existing stored materials for reuse (see specifications).
7. Remove existing asbestos siding whenever/wherever present.
8. Modify, relocate or cap existing mechanical & electrical as required.
9. Verify structural integrity of all existing framing, columns & beams.
10. Coordinate all structural modifications with qualified engineers.
11. Verify conditional & code compliance of all mechanical & electrical fixtures & outlets (see HRA Code Report)
12. See new plans to coordinate location and dimensions of new openings.
13. Upon removal of existing floor finishes, field verify condition of existing substrate and if hardwood floor exists.
14. Remove and retain all existing interior trim before demolishing interior walls. Reuse as needed.

Demolition Notes

1. Replace all windows. Verify condition for trim repair. See plans for noted exceptions.
2. Demo existing siding. Verify sheathing condition for repair.
3. Demo existing roof shingles and underlayment. Repair sheathing as needed.
4. Clean and tuckpoint existing foundation as required

Demolition Elevation Keynotes

- ① Remove existing window unit; prepare existing opening for new window. See specifications
- ② Retract chimney below roof structure; infill hole in roof and prepare for new roof system
- ③ Remove existing window and prepare for new glass block system; see specifications
- ④ Remove existing concrete stair and side walls
- ⑤ Remove existing door and prepare opening for new door
- ⑥ Remove existing wood deck, stair and grade beam; repair/prepare existing ledger for new work
- ⑦ Remove existing storm window system, partial height walls, screen door and flooring; shore up roof and floor structure as needed for new work
- ⑧ Retain existing window
- ⑨ Remove shingles, flashings and related roofing materials
- ⑩ Remove and infill door opening; prepare for new siding system
- ⑪ Remove existing window unit, frame and trim; prepare opening for infill and new siding system

City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

No.	Date	Appr	Revision Notes
△			

No.	Date	Issue Notes
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Not for
Construction

Design Firm	Lunning Wende Associates, Inc. 275 Fourth Street East, Suite 620 Saint Paul, MN 55101 P: 651.221.0915 F: 651.222.6259
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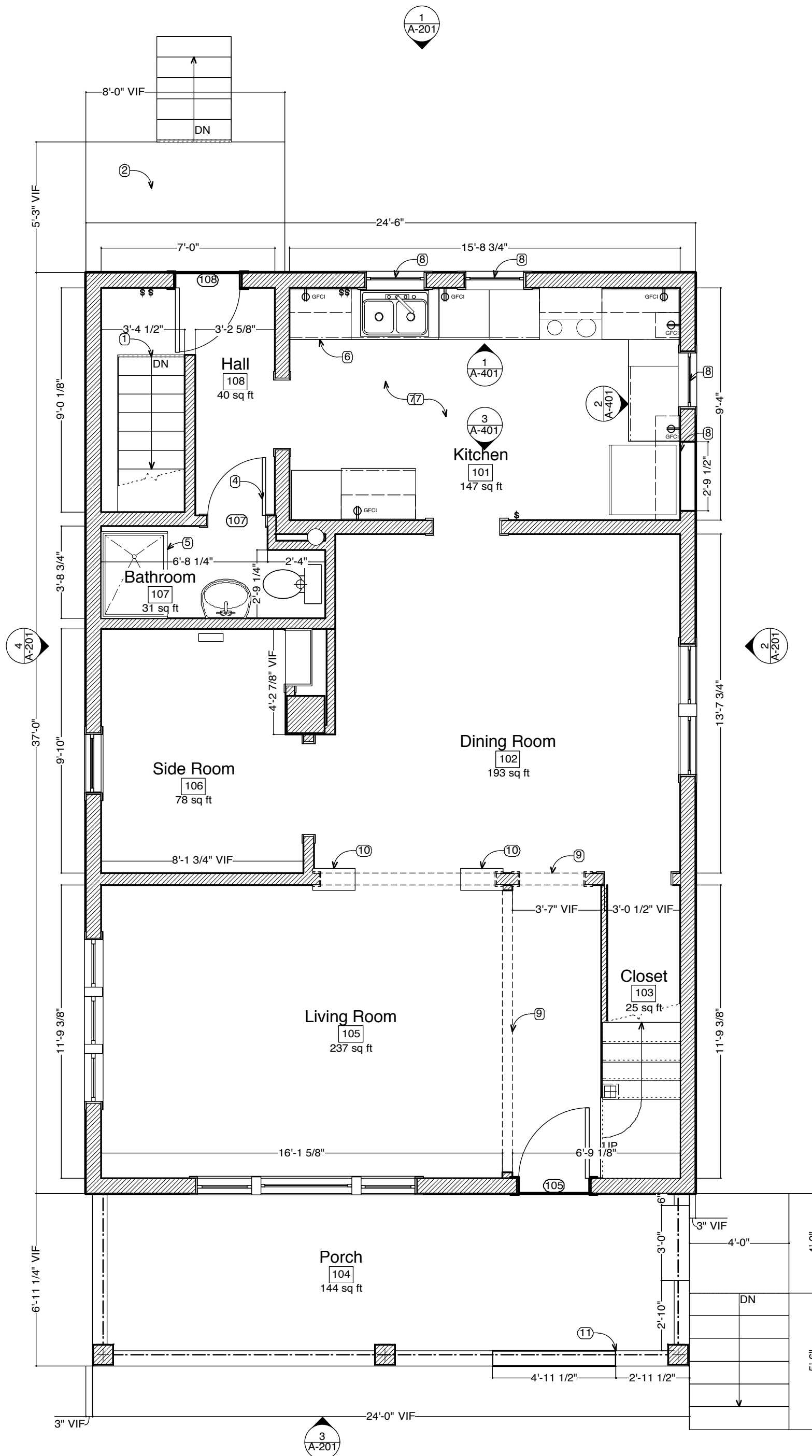
Consultant	
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Owner	City of Saint Paul HRA Marty McCarthy, Project Manager 25 west 4th Street, Saint Paul, MN 55102 651.266.6552
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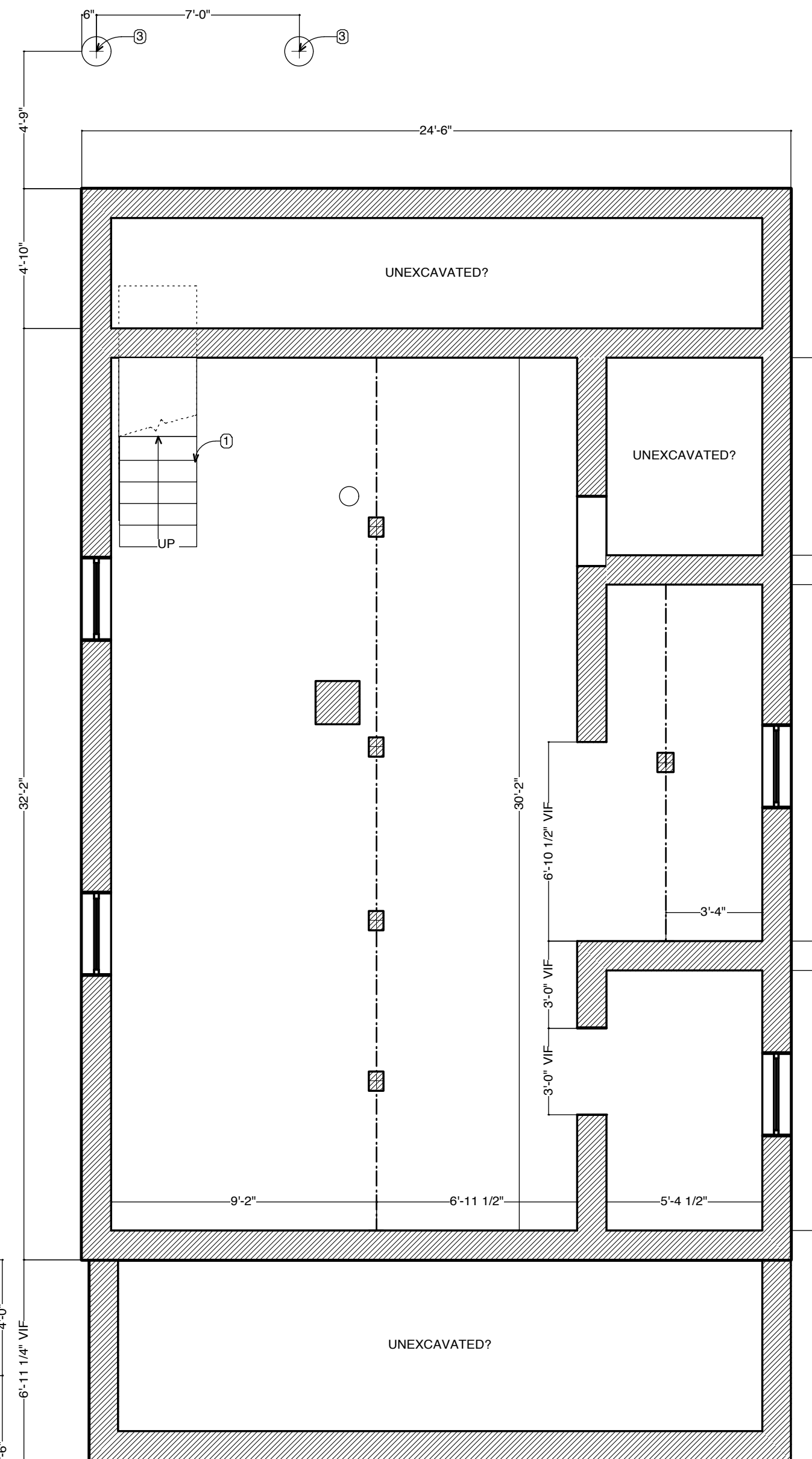
Project Title	City of Saint Paul • HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN
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Drawing Title	Demo Elevations
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Project Manager Scott Wende	Project ID 2012-04
Drawn By SM	Scale 1/8" = 1'-0"
Reviewed By	Drawing No. AD201
Date 20130116	
File Name	



2 Floor Plan-First Floor
Scale: 1/4" = 1'-0"



1 Floor Plan-Basement
Scale: 1/4" = 1'-0"



General Notes - New Construction

1. Provide radon ventilation in basement per radon test report recommendations.
2. All interior walls 2x4 WD framing UNO.
3. Provide paper free GWB or cement fiberboard at all interior wall locations with plumbing fixture(s).
4. Clean and reinstall existing door hardware as noted if to be reused.
5. Fully encapsulate lead-paint at locations per code (see HRA Report)
6. All occupiable spaces to have a minimum ceiling height Of 7'-0" per code (application for variance per client request).
7. Refinish hardwood floors when present (see schedule).
8. Verify all existing mechanical & electrical for code compliance. Install new outlets & fixtures as required (see specifications).
9. Provide fire blocking/fire safing as required per code.
10. Verify existing Smoke detection system. Reuse if possible; replace per code as required.

New Construction Notes

1. All Roofs: new roofing and vents to code. See Specifications.
2. New siding and house trim. See specifications for type.
3. All windows are replacement windows. Unless noted otherwise.

New Construction Keynotes

- ① Basement - Frame in new stair at existing stair location
- ② Rear Deck - Install deck footings, floor, railing and stair
- ③ Rear Deck - New 12" Sono Tube footings.
- ④ Bathroom - Install new door and frame
- ⑤ Bathroom - Prepare Bathroom walls for tile where noted. Frame in shower.
- ⑥ Kitchen - Install new kitchen cabinetry and baseboard
- ⑦ Kitchen - Install new flooring and insulation
- ⑧ Kitchen - Frame in window and door openings as indicated.
- ⑨ Living/Dining Room - Restore and repair arch
- ⑩ Living/Dining Room - Restore book case
- ⑪ Front Porch - Remove existing windows, enclosure walls and flooring. Retain existing roof and front soffit; temporarily support existing roof as needed. Level floor structure as needed. Install porch floor and railing Porch detailing with standard posts and railings. Construct stair and landing for front entry.

City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

No.	Date	Appr	Revision Notes
△			

No.	Date	Issue Notes
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Not for
Construction

Design Firm	Lunning Wende Associates, Inc. 275 Fourth Street East, Suite 620 Saint Paul, MN 55101 P: 651.221.0915 F: 651.222.6259
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Consultant	
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Owner	City of Saint Paul HRA Marty McCarthy, Project Manager 25 west 4th Street, Saint Paul, MN 55102 651.266.6552
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Project Title	City of Saint Paul • HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN
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Drawing Title	Basement/First Floor Plan
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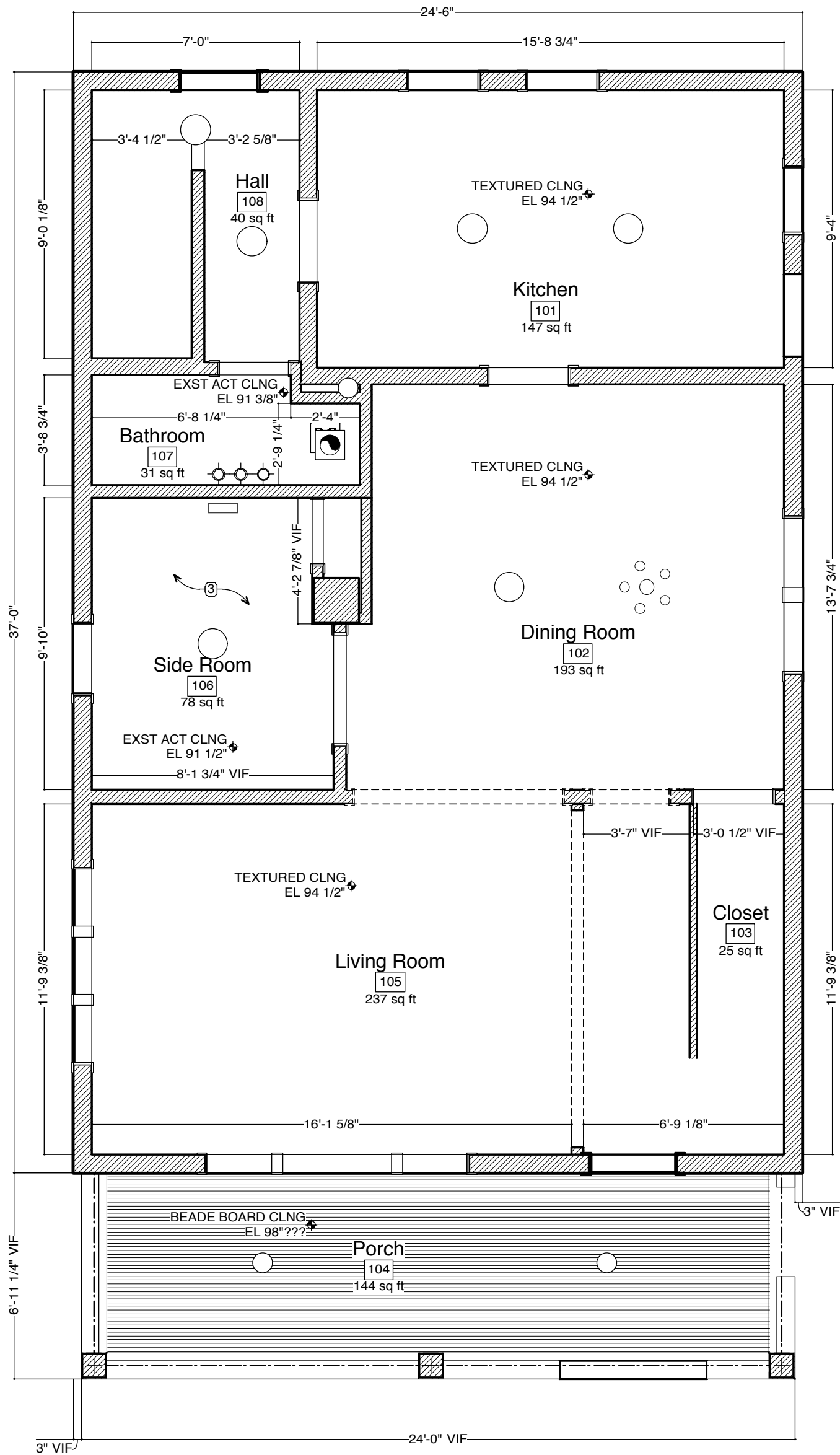
Project Manager Scott Wende	Project ID 2012-04
Drawn By SM	Scale 1/4" = 1'-0"
Reviewed By	Drawing No. A-101
Date 20130116	
File Name	



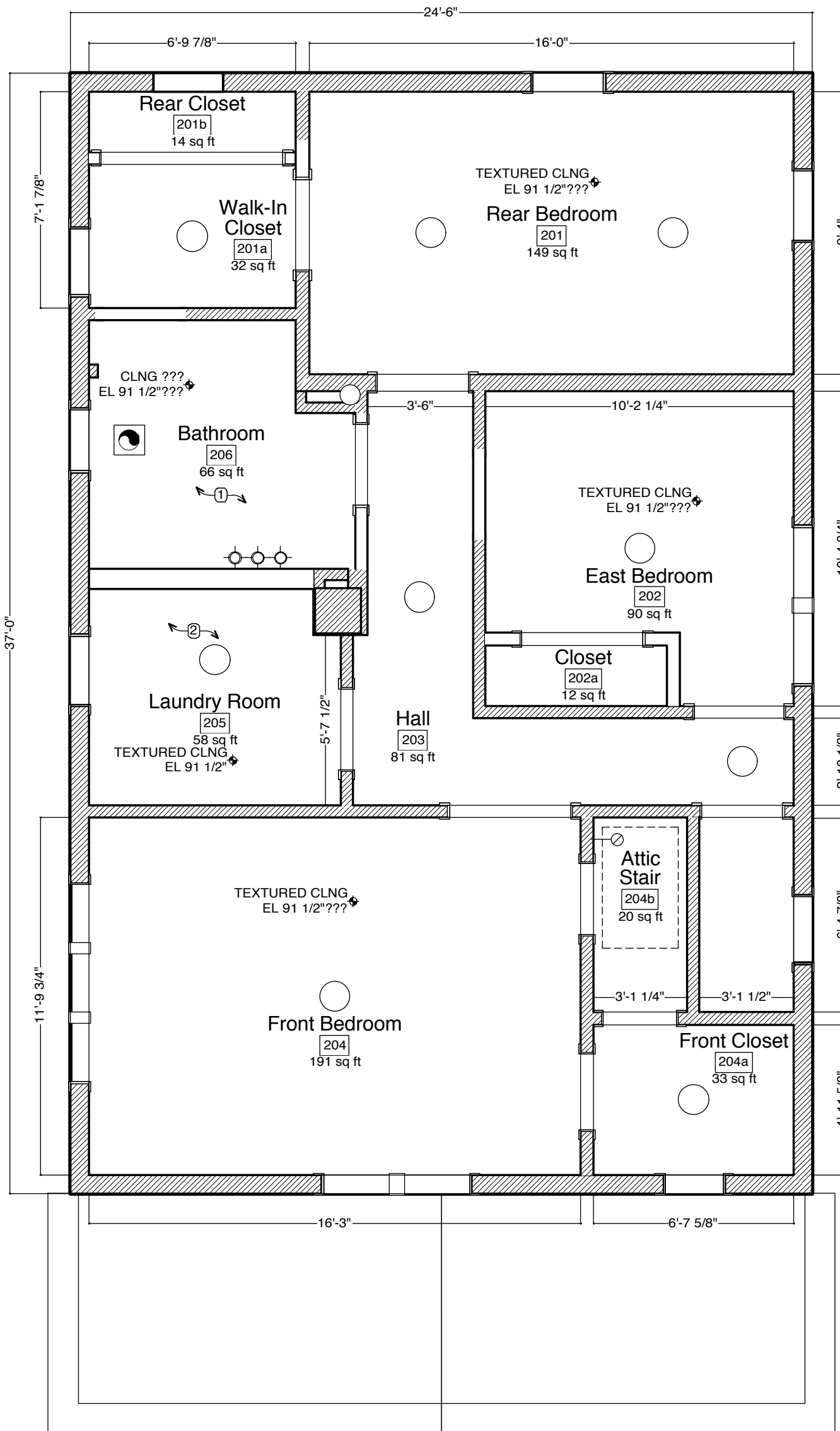
- ## New Construction Keynotes
- ① Rear Closet - Install closet door and frame
 - ② Rear Closet - Frame in new closet. Install closet shelving and rods
 - ③ Rear Closet - Frame in existing window opening
 - ④ Bathroom - Infill door opening with new wood stud and sheetrock
 - ⑤ Bathroom - Install bathroom cabinet
 - ⑥ Bathroom - New door and frame
 - ⑦ Bathroom - Frame in new tub, sink and toilet
 - ⑧ Bathroom - Frame in new east wall door and frame
 - ⑨ Laundry Room - New washer and dryer; vent dryer to exterior through west wall
 - ⑩ Laundry Room - Frame in new north wall
 - ⑪ Laundry Room - New dryer vent to outside
 - ⑫ East Bedroom - Frame in new closet. Install closet shelving and rods
 - ⑬ East Bedroom - Install closet door and frame
 - ⑭ East Bedroom - Frame in new west wall in former door opening
 - ⑮ Front Bedroom - Install attic access door and stair
 - ⑯ Exterior - Repair wood soffits, fascia, brackets and trim at roof

Project Manager Scott Wendt	Project ID 2012-04
Drawn By SM	Scale 1/4" = 1'-0"
Reviewed By	Drawing No. A-102
Date 20130116	
File Name	

City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN



2 Reflected Ceiling Plan-First Floor-Existing
A-121 Scale: 1/4" = 1'-0"



1 Reflected Ceiling Plan-Second Floor-Existing
A-121 Scale: 1/4" = 1'-0"

- General Notes - New Construction**
1. Provide radon ventilation in basement per radon test report recommendations.
 2. All interior walls 2x4 WD framing UNO.
 3. Provide paper free GWB or cement fiberboard at all interior wall locations with plumbing fixture(s).
 4. Clean and reinstall existing door hardware as noted if to be reused.
 5. Fully encapsulate lead-paint at locations per code (see HRA Report)
 6. All occupiable spaces to have a minimum ceiling height Of 7'-0" per code (application for variance per client request).
 7. Refinish hardwood floors when present (see schedule).
 8. Verify all existing mechanical & electrical for code compliance. Install new outlets & fixtures as required (see specifications).
 9. Provide fire blocking/fire safing as required per code.
 10. Verify existing Smoke detection system. Reuse if possible; replace per code as required.

- New Construction Notes**
1. All Roofs: new roofing and vents to code. See Specifications.
 2. New siding and house trim. See specifications for type.
 3. All windows are replacement windows. Unless noted otherwise.

- New Construction RCP Keynotes**
- ① Bathroom - Install/repair sheetrock ceiling
 - ② Laundry Room - Install/repair sheetrock ceiling
 - ③ Side Room - Install sheetrock ceiling

City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

No.	Date	Appr	Revision Notes

No.	Date	Issue Notes
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Not for Construction

Design Firm
 Lunning Wende Associates, Inc.
275 Fourth Street East, Suite 620
Saint Paul, MN 55101
P: 651.221.0915 F: 651.222.6259

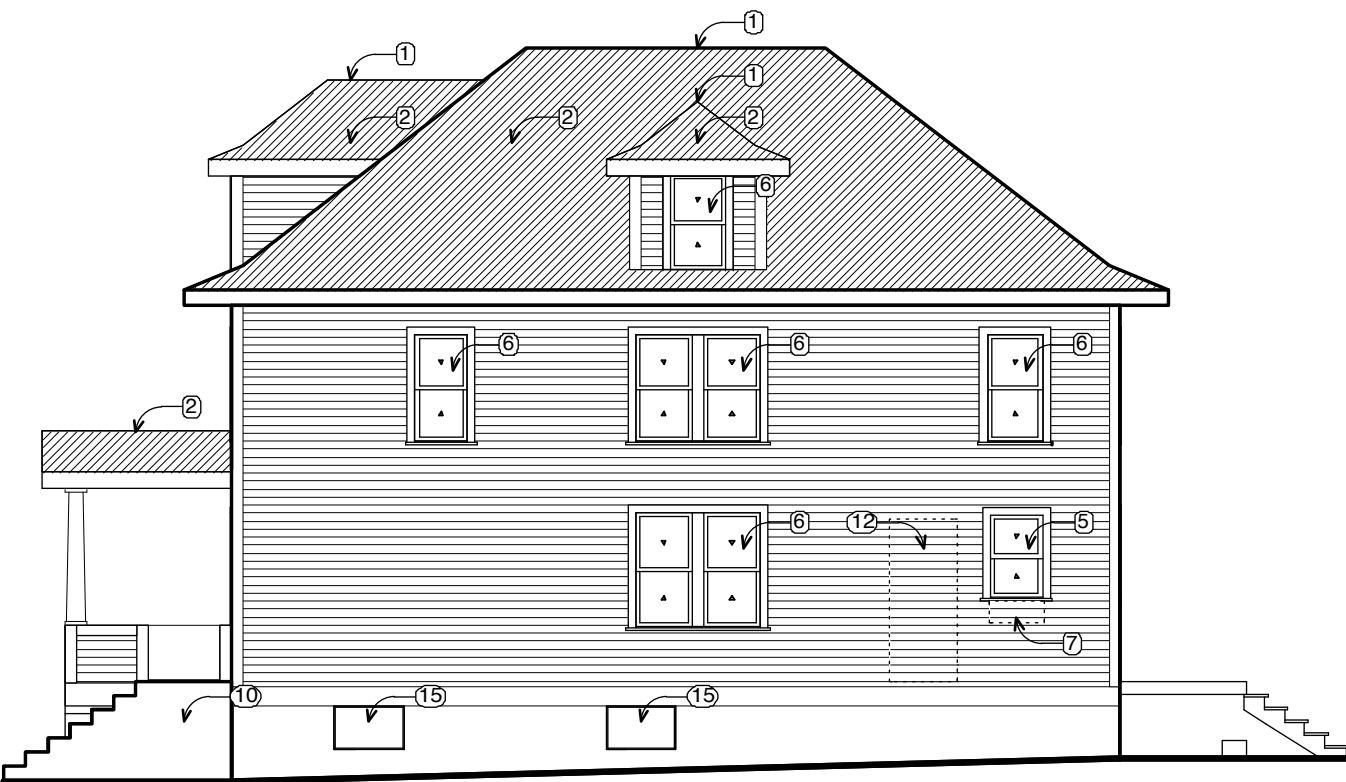
Consultant

Owner
City of Saint Paul HRA
Marty McCarthy, Project Manager
25 west 4th Street, Saint Paul, MN 55102
651.266.6552

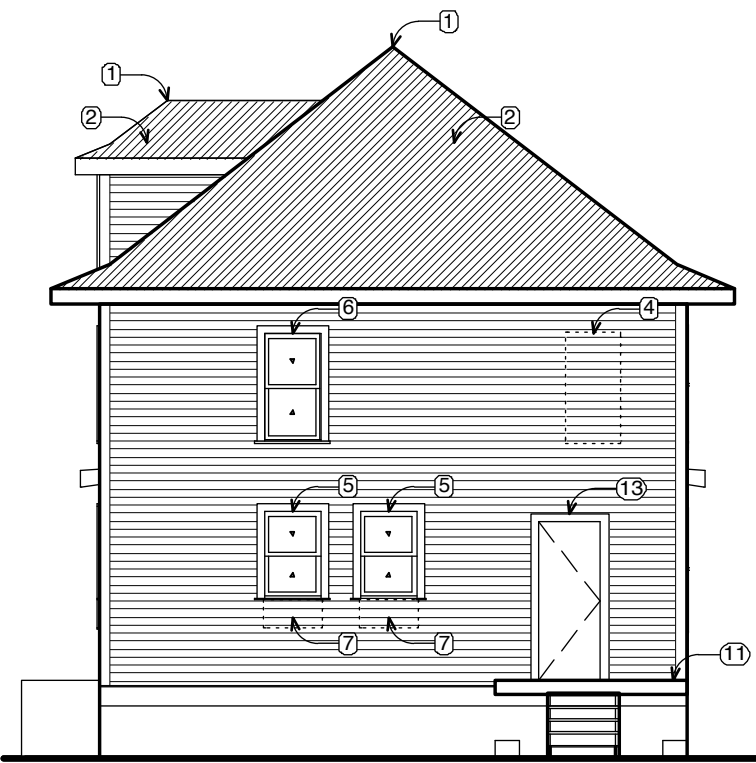
Project Title
City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

Drawing Title
Reflected Ceiling Plans

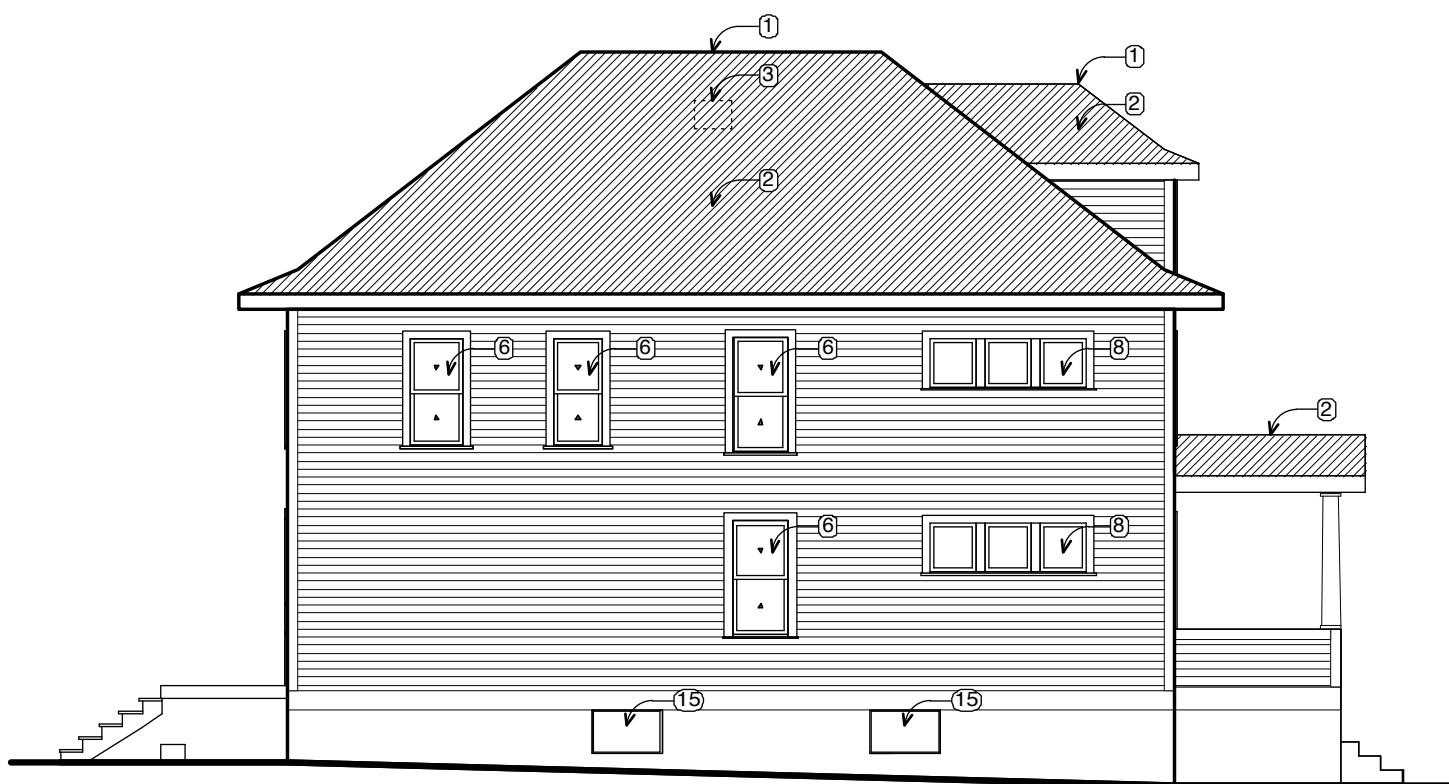
Project Manager Scott Wende	Project ID 2012-04
Drawn By SM	Scale 1/4" = 1'-0"
Reviewed By	Drawing No. A-121
Date 20130116	
File Name	



2 Elevation-East
A-201 Scale: 1/8" = 1'-0"



1 Elevation-North
A-201 Scale: 1/8" = 1'-0"



4 Elevation-West
A-201 Scale: 1/8" = 1'-0"



3 Elevation-South
A-201 Scale: 1/8" = 1'-0"

- General Notes - New Construction**
1. Provide radon ventilation in basement per radon test report recommendations.
 2. All interior walls 2x4 WD framing UNO.
 3. Provide paper free GWB or cement fiberboard at all interior wall locations with plumbing fixture(s).
 4. Clean and reinstall existing door hardware as noted if to be reused.
 5. Fully encapsulate lead-paint at locations per code (see HRA Report)
 6. All occupiable spaces to have a minimum ceiling height Of 7'-0" per code (application for variance per client request).
 7. Refinish hardwood floors when present (see schedule).
 8. Verify all existing mechanical & electrical for code compliance. Install new outlets & fixtures as required (see specifications).
 9. Provide fire blocking/fire safing as required per code.
 10. Verify existing Smoke detection system. Reuse if possible; replace per code as required.

- New Construction Notes**
1. All Roofs: new roofing and vents to code. See Specifications.
 2. New siding and house trim. See specifications for type.
 3. All windows are replacement windows. Unless noted otherwise.

- Elevation Keynotes**
- 1 New ridge vent
 - 2 New shingles, flashings and related roofing materials
 - 3 Infill hole in roof from retracted chimney; prepare for new roof system
 - 4 Infill window opening and prepare for new sheathing system
 - 5 New window in existing opening with raised sill
 - 6 New window in existing opening
 - 7 Partially infill window opening to raised sill height and prepare for new sheathing system
 - 8 Existing window to remain
 - 9 Existing fixed glass windows in central bay to remain; affix storm window to exterior
 - 10 New concrete stair and landing with guard rail to code; see specifications
 - 11 New footings, wood deck and stair; see structural and landscape sheets
 - 12 Infill door opening and prepare for new sheathing system
 - 13 New door in existing opening
 - 14 New front porch partial height wall with siding system
 - 15 New glassblock window infill

City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

No.	Date	Appr	Revision Notes

No.	Date	Issue Notes
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Not for Construction

Design Firm
 Lunning Wende Associates, Inc.
275 Fourth Street East, Suite 620
Saint Paul, MN 55101
P: 651.221.0915 F: 651.222.6259

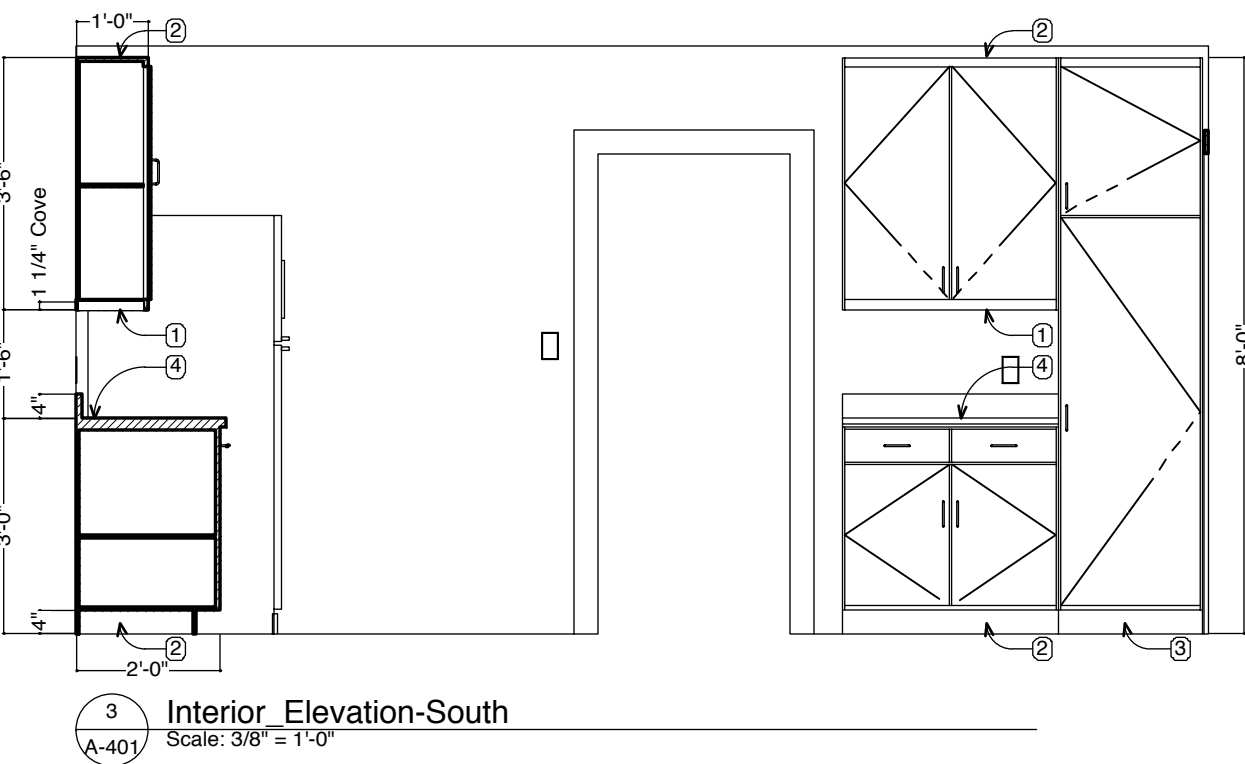
Consultant

Owner
City of Saint Paul HRA
Marty McCarthy, Project Manager
25 west 4th Street, Saint Paul, MN 55102
651.266.6552

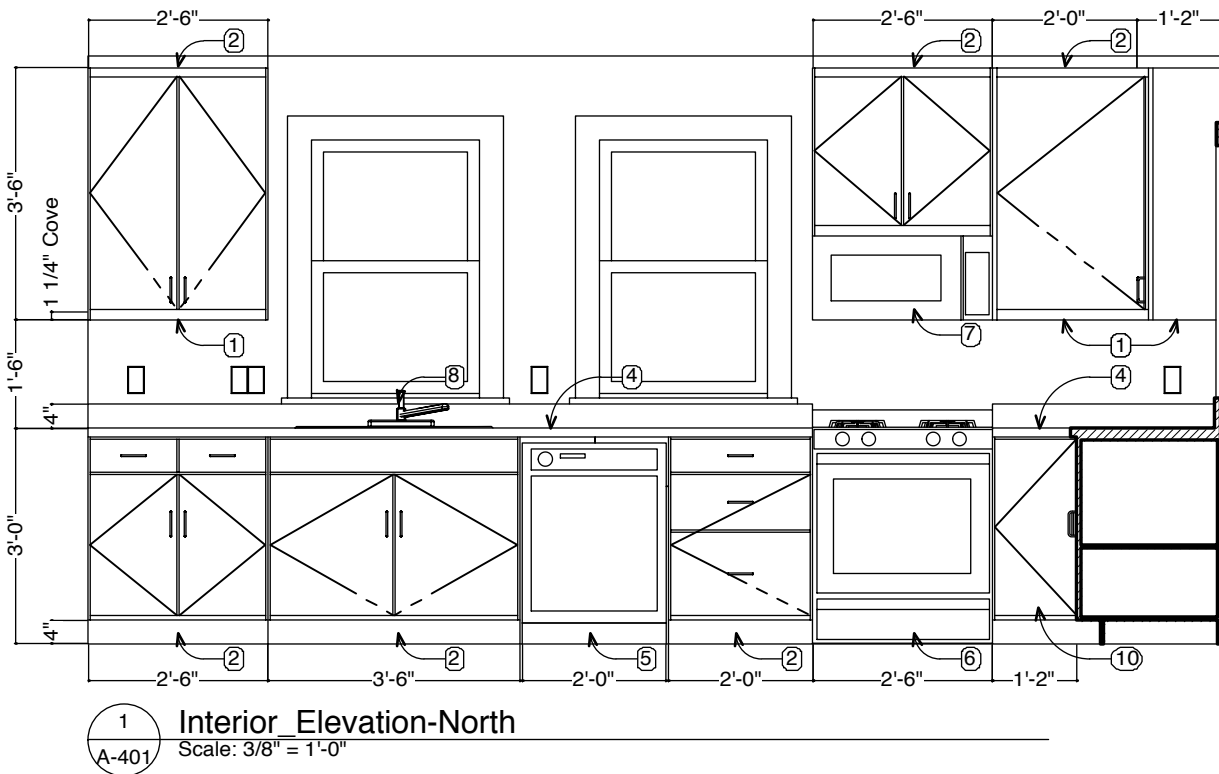
Project Title
City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

Drawing Title
Elevations

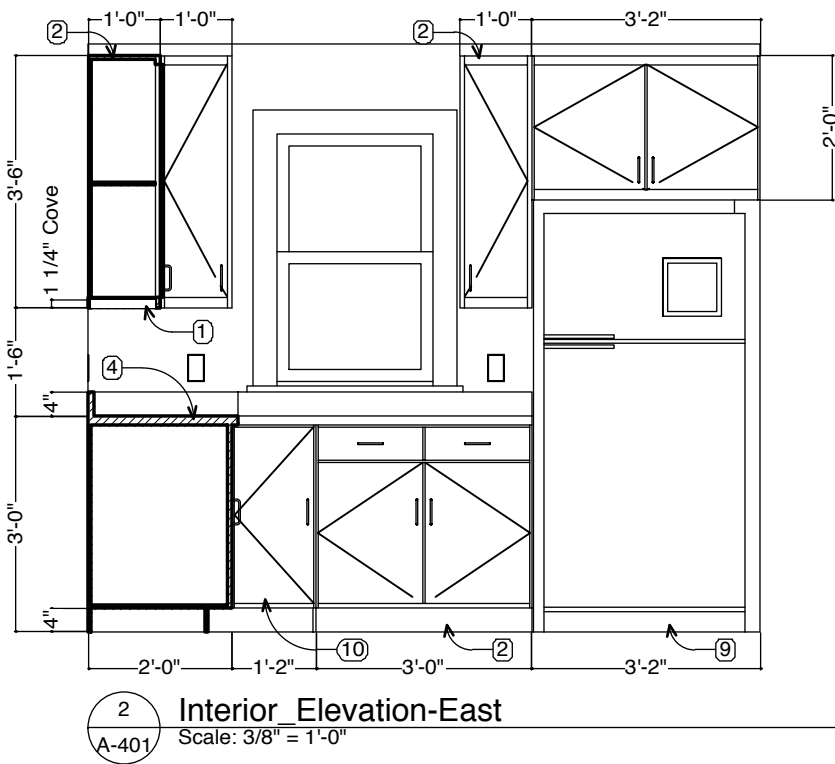
Project Manager Scott Wende	Project ID 2012-04
Drawn By SM	Scale 1/8" = 1'-0"
Reviewed By	Drawing No. A-201
Date 20130116	
File Name	



3 Interior Elevation-South
A-401 Scale: 3/8" = 1'-0"



1 Interior Elevation-North
A-401 Scale: 3/8" = 1'-0"



2 Interior Elevation-East
A-401 Scale: 3/8" = 1'-0"

- General Notes - New Construction**
1. Provide radon ventilation in basement per radon test report recommendations.
 2. All interior walls 2x4 WD framing UNO.
 3. Provide paper free GWB or cement fiberboard at all interior wall locations with plumbing fixture(s).
 4. Clean and reinstall existing door hardware as noted if to be reused.
 5. Fully encapsulate lead-paint at locations per code (see HRA Report)
 6. All occupiable spaces to have a minimum ceiling height Of 7'-0" per code (application for variance per client request).
 7. Refinish hardwood floors when present (see schedule).
 8. Verify all existing mechanical & electrical for code compliance. Install new outlets & fixtures as required (see specifications).
 9. Provide fire blocking/fire safing as required per code.
 10. Verify existing Smoke detection system. Reuse if possible; replace per code as required.

- New Construction Notes**
1. All Roofs: new roofing and vents to code. See Specifications.
 2. New siding and house trim. See specifications for type.
 3. All windows are replacement windows. Unless noted otherwise.

- Interior Elevation Keynotes**
- ① Kitchen - New undercabinet lighting. See specifications
 - ② Kitchen - New cabinetry. See Specifications
 - ③ Kitchen - New cabinetry - full-height pantry. See Specifications
 - ④ Kitchen - New plastic laminate counter and backsplash. See specifications
 - ⑤ Kitchen - New dishwasher
 - ⑥ Kitchen - New range
 - ⑦ Kitchen - New microwave
 - ⑧ Kitchen - New sink and faucet. See specifications
 - ⑨ Kitchen - New refrigerator. See Specifications
 - ⑩ Kitchen - New cabinetry - corner cabinet with 'lazy suzan'. See Specifications

City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

No.	Date	Appr	Revision Notes
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No.	Date	Issue Notes
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Not for
Construction

Design Firm
 Lunning Wende Associates, Inc.
275 Fourth Street East, Suite 620
Saint Paul, MN 55101
P: 651.221.0915 F: 651.222.6259

Consultant

Owner
City of Saint Paul HRA
Marty McCarthy, Project Manager
25 west 4th Street, Saint Paul, MN 55102
651.266.6552

Project Title
City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

Drawing Title
Interior Elevations

Project Manager Scott Wende	Project ID 2012-04
Drawn By SM	Scale 3/8" = 1'-0"
Reviewed By	Drawing No. A-401
Date 20130116	
File Name	

Room Finish Schedule forthcoming; see specifications.

City of Saint Paul • HRA
Residence Remodel
971 Jenks Avenue
Saint Paul, MN

No.	Date	Appr	Revision Notes
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A	7/19/12	Issue for Bid	
No.	Date	Issue Notes	
Not for Construction			
Design Firm  Lunning Wende Associates, Inc. 275 Fourth Street East, Suite 620 Saint Paul, MN 55101 P: 651.221.0915 F: 651.222.6259			
Consultant			
Owner City of Saint Paul HRA Marty McCarthy, Project Manager 25 west 4th Street, Saint Paul, MN 55102 651.266.6552			
Project Title City of Saint Paul • HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN			
Drawing Title Schedules			
Project Manager Scott Wende		Project ID 2012-04	
Drawn By SM		Scale No scale	
Reviewed By		Drawing No. A-601	
Date 20130116			
File Name			



Date: January 14, 2013

To: Lunning/Wende Associates, Inc.
275 East Fourth St.
Suite 620
St. Paul, MN 55101

Attn: Scott Wende

From: Eric Bunkers
Project: Residence
971 E. Jenks Ave.
St. Paul, MN

Proj. No: 12255
Subject: Proposed Structural Reinforcements & Remodel

Dear Scott:

As requested, we designed new structural members for the above referenced project. We have designed the new members using a roof and floor dead load of 15 psf, a roof snow load of 35 psf and a floor live load of 40 psf in accordance with the Minnesota State Building Code. Our work only includes designing the new members as shown at the above reference project and is based on drawings provided by you, our conversations, and our site visit.

Attached are 3 framing sheets with annotated framing notes showing the new members and connections. All framing shall be shored and temporarily braced as required by the contractor and all minimum nailing shall be in accordance with IRC Table R602.3(1). Lumber shall be minimum #2 SPF with treated lumber to be #2 S. Pine and engineered lumber to have Fb = 2600 psi with E = 1.9. Our calculations assume all lumber is of good quality and does not have large splits and checks and shall be visually inspected by the contractor at the time of construction. All fasteners in contact with treated lumber shall be G185 hot dipped galvanized or equal. Rebar shall be grade 60.

Concrete used for footings (4" slump) and masonry core grout (8" slump) shall have a 28 day compressive strength of 3000 psi. The new footings have been designed as a typical spread footing based on a presumptive load-bearing value of 2000 psf in accordance with Table R401.4.1 of the IRC. The existing footings have been assumed to be typical spread footings on good soils that are assumed to be performing adequately. The contractor shall also verify the condition of structural members and foundations affected by the remodeling and repairs. Exterior grade shall slope away from the building and gutters with long downspouts should be used whenever possible. Foundation backfill shall be granular when excavated for foundation repair.

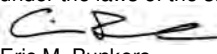
When installed as indicated above, the new framing members and new foundations shown on the attached sheets shall support the loads as required in accordance with the Minnesota State Building Code. If you have any questions or concerns, please feel free to contact us.

Sincerely,

Bunkers and Associates, LLC

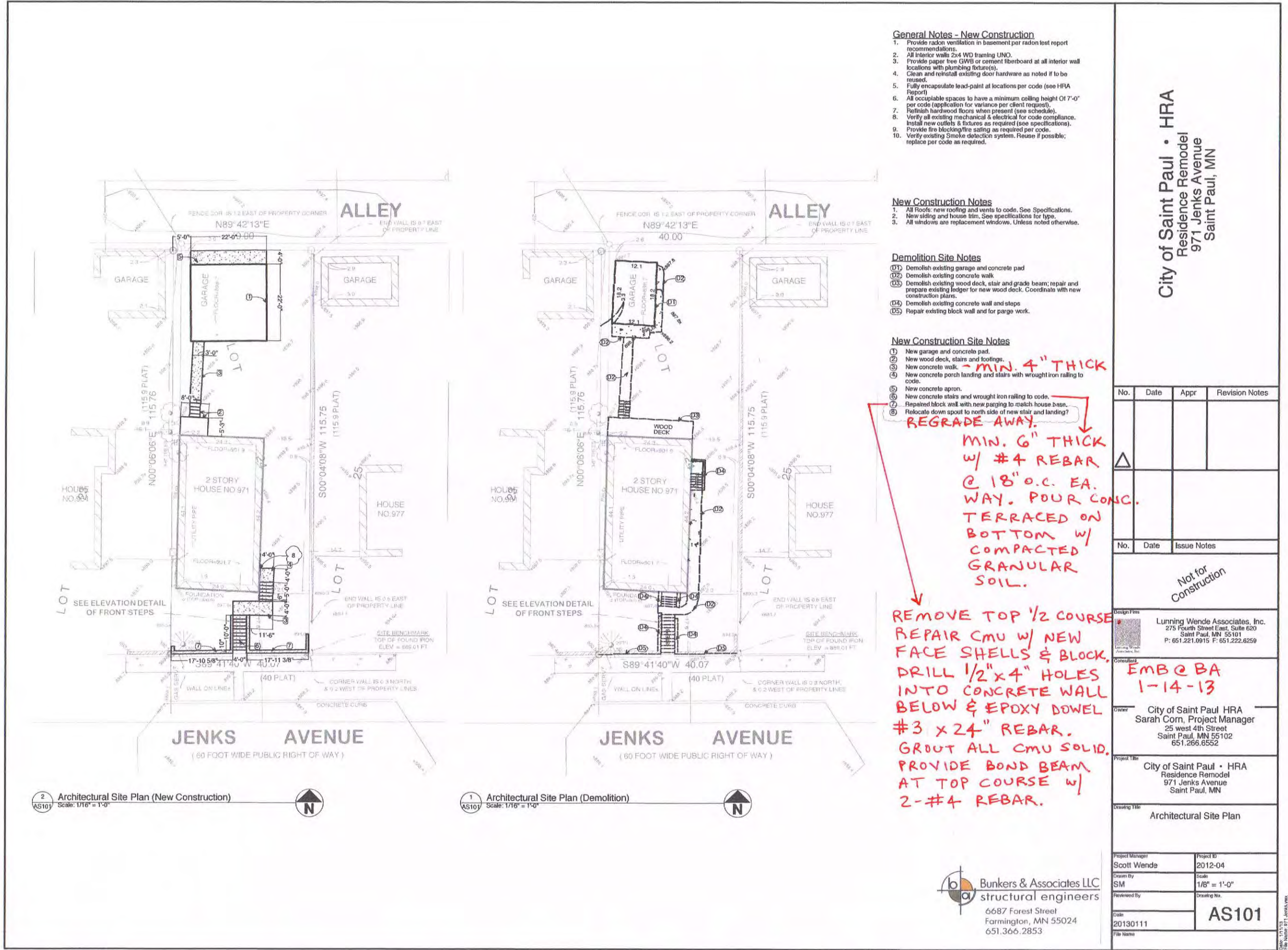

Eric M. Bunkers, P.E.
MN Reg. Num. 26490

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

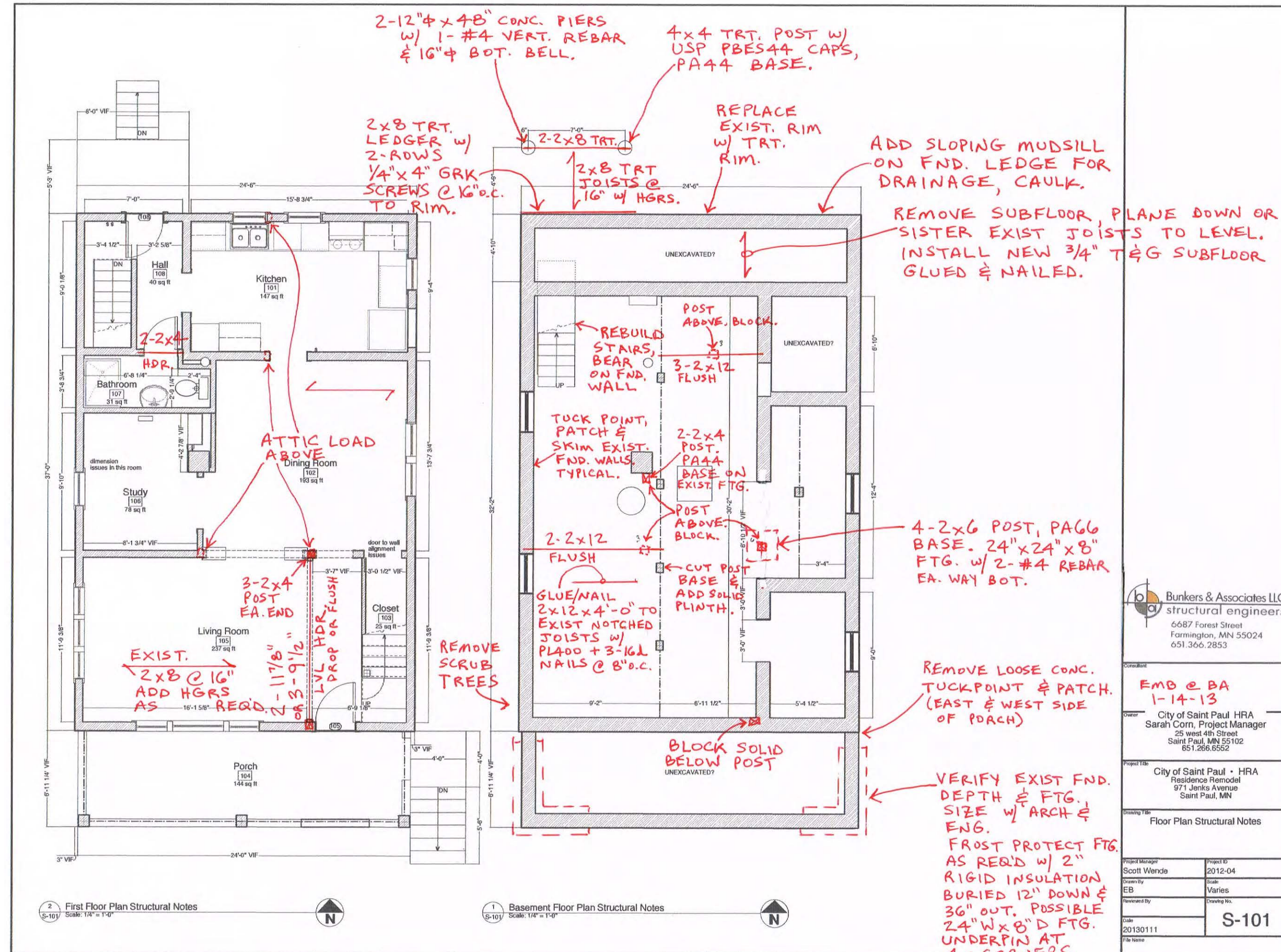

Eric M. Bunkers

Date: January 14, 2013 Reg. No. 26490

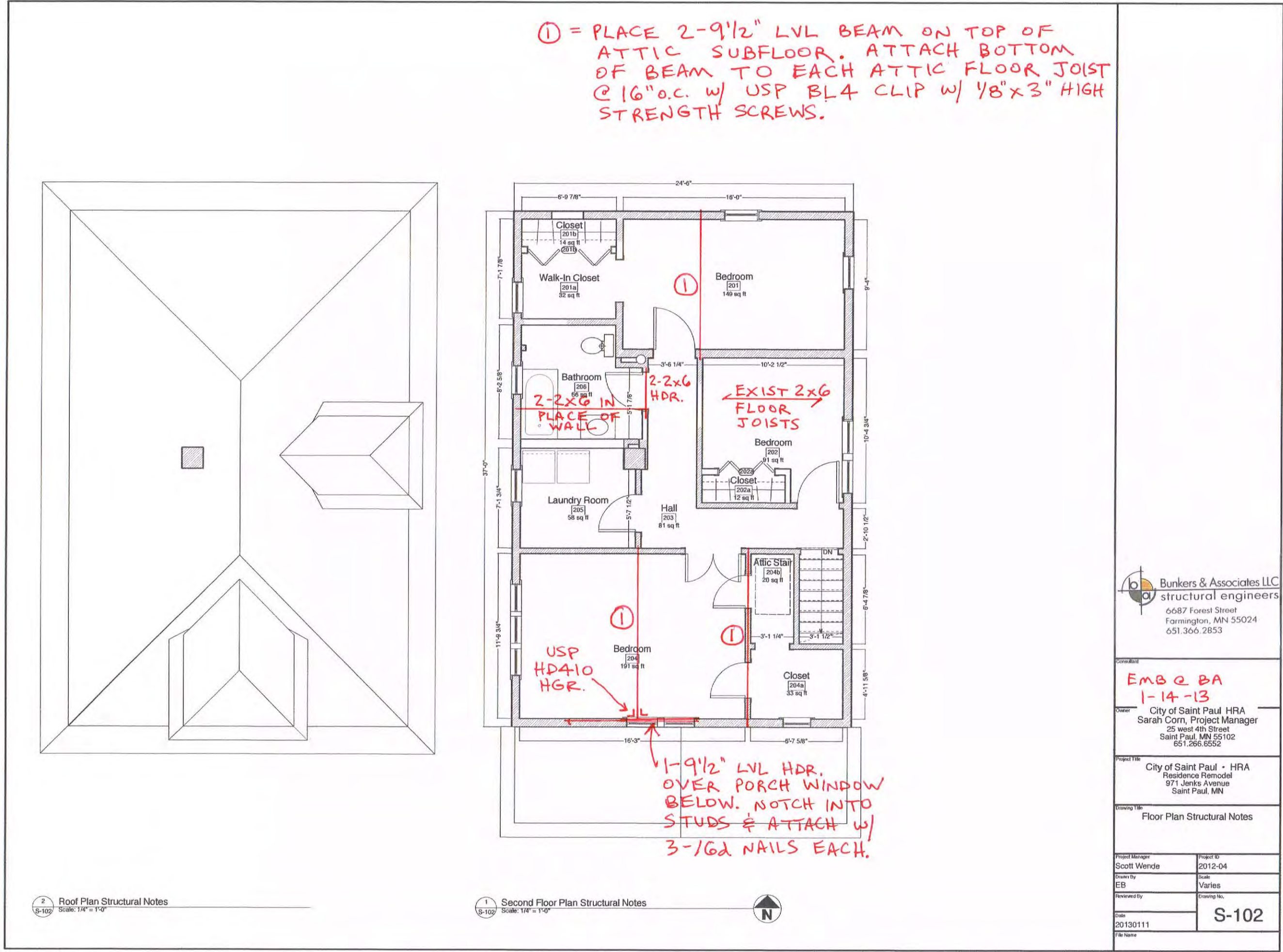
Consultant	
Owner	
City of Saint Paul HRA Marty McCarthy, Project Manager 25 west 4th Street, Saint Paul, MN 55102 651.266.6552	
Project Title	
City of Saint Paul • HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN	
Drawing Title	
Structural Letter	
Project Manager	Project ID
Scott Wende	2012-04
Drawn By	Scale
EB	Varies
Reviewed By	Drawing No.
Date	S-100
20130116	



Consultant	
Owner	
City of Saint Paul HRA Marty McCarthy, Project Manager 25 west 4th Street, Saint Paul, MN 55102 651.266.6552	
Project Title	
City of Saint Paul • HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN	
Drawing Title	
Structural Site Plan Notes	
Project Manager Scott Wende	Project ID 2012-04
Drawn By EB	Scale Varies
Reviewed By	Drawing No. SS101
Date 20130116	
File Name	



Consultant	
Owner	
City of Saint Paul HRA Marty McCarthy, Project Manager 25 West 4th Street, Saint Paul, MN 55102 651.266.6552	
Project Title	
City of Saint Paul - HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN	
Drawing Title	
Floor Plan Structural Notes	
Project Manager	Project ID
Scott Wende	2012-04
Drawn By	Scale
EB	Varies
Reviewed By	Drawing No.
	S-101
Date	
20130111	
File Name	



Consultant	
Owner	
City of Saint Paul HRA Marty McCarthy, Project Manager 25 west 4th Street, Saint Paul, MN 55102 651.266.6552	
Project Title	
City of Saint Paul - HRA Residence Remodel 971 Jenks Avenue Saint Paul, MN	
Drawing Title	
Floor Plan Structural Notes	
Project Manager	Project ID
Scott Wende	2012-04
Drawn By	Scale
EB	Varies
Reviewed By	Drawing No.
Date	S-102
20130116	
File Name	

Radon Test Result: 0.9 ±0.6 pCi/L

Test Started 09/19/14 at 12:00 pm

Test Ended 09/23/14 at 12:00 pm

Closed house conditions maintained during test.

Location 1st Floor
BASEMENT



TCHU YAJH
971 JENKS AVE
SAINT PAUL, MN 55106

INTERPRETING YOUR TEST RESULT

The US EPA action level for indoor radon is 4.0 pCi/L. The EPA indicates that there is little short-term risk with test results in this range (0.6 to 1.9 pCi/L). However, because radon levels fluctuate daily, as well as seasonally, you may want to retest during another season. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

You may be able to obtain additional information about radon related subjects by contacting your state radon office at "www.health.mn.gov/radonkit" or by calling the "Radon Fix-It Line" at 800-644-6999 Monday thru Friday between NOON and 8PM EST.



Air Chek, Inc.

PO Box 2000

Naples, NC 28760

www.radon.com

Your Test Result

This result has been rounded to one-tenth (0.1) of a pCi/L (picocurie per liter). This test result reflects the amount of radon measured in this sample AFTER it arrived at our laboratory. All analysis calculations are automatically adjusted to reflect the length of test, the amount of moisture in the sample, temperature, time from the end of test, and the amount of radiation measured. If your test kit was used prior to the Use By date, ALL the testing protocols and instructions were carefully followed, and the data recorded properly on the test packet, then it is reasonable to assume this is an accurate assessment of the average level of the radon this sample was exposed to during the test period.

Health Risks

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. EPA has set an Action Level for radon at 4 pCi/L; however radon concentrations less than 4 pCi/L still pose some health risks. The Indoor Radon Abatement Act set a goal for indoor radon concentrations to equal the amount of radon found outdoors, which is estimated to be ~ 0.4 pCi/L.

Conducting Follow-up Measurements

USEPA protocol describes two general types of radon measurements: short-term tests conducted from 48 hours up to 90 days, and long-term tests that last from 91 to 365 days. Your first test (initial/screening) should be a short-term 'worst-case' screening to see if there is a potential for high exposure to radon. Screening tests should be conducted under closed-building conditions, in the lowest lived-in area in the house, because the highest concentrations of radon will usually be found in a room closest to the underlying soil. Tests made under these conditions are less likely to miss a house with a potential for high concentrations. On the other hand, if the results of worst-case screening tests are very low, there is a high probability that the average annual concentrations in the house are also low.

(Continued on Back)

Most states have a radon office to assist citizens with general questions about radon and radon reduction techniques. Many states maintain a list of licensed or certified radon testing and mitigation professionals. You can visit www.state-radon.info to find the list of state radon contacts, as well as links to additional radon resources in your area.

Conducting Follow-up Measurements

The higher your initial (screening) tests, the sooner you should conduct follow-up measurements. The EPA states that you should retest the same location that was tested initially.

For additional or follow-up testing, make sure at least one test is conducted in the **lowest lived-in level** of the home. Also choose regularly used rooms, such as family rooms, dens, playrooms, or bedrooms. A bedroom on the lower level may be a good choice, because people generally spend the most time in their bedrooms (approximately one-third of the year). If there are children, it may be appropriate to test their rooms or other areas where they spend a lot of time, especially at the lower levels. All short-term follow-up tests **must** be conducted under closed-building conditions. If closed-building conditions cannot be maintained, a long-term measurement conducted under normal living conditions could be used to help estimate average annual exposures.

Tests **should not be conducted** in a kitchen or a bathroom because high humidity, exhaust fans, and other factors can adversely affect the test results. Tests **should not be conducted** in storage areas or laundry rooms, because relatively little time is spent there. Although radon in water may be a contributor to the concentration of airborne radon, radon in air should be **confirmed** before a test for radon in water is performed.

It is recommended that before spending any time or money on radon mitigation, one should conduct multiple (two or more) tests to be certain there is a need. A few more tests will most certainly cost considerably less than any mitigation work.

If follow-up measurements have **confirmed** that the average annual level of radon is equal to or greater than 4 pCi/L, the USEPA recommends that the building or home be mitigated for radon. Consider also that a future buyer is likely to demand that the building pass a radon test before purchasing.

Variations in Radon Levels – What can affect your test results and why it may be important to conduct confirmation tests.

When tests are performed in different seasons or under different weather conditions, the initial screening and follow-up tests may vary considerably. Radon levels can vary significantly between seasons, so different results **are often expected**. Even during normal weather, indoor radon levels may rise and fall by a factor of two on a daily cycle; for example, from 5 pCi/L to 10 pCi/L in 24 hours. During rapidly changing or stormy weather, the levels may change more dramatically.

If you are comparing tests, or are averaging a series of tests, bear in mind that any radon test returns only the average of the levels present during a **specific period of time** at the **precise location** of the test. Conditions during a different test period or at a different location in the building are **expected to be different**.

Test results can also vary if the radon test instructions were not carefully followed. A laboratory measuring radon in samples taken outside the lab **must rely on the person conducting the test**. For example, the wrong starting or ending date of a test will significantly affect the calculated result. The location of each radon test can also influence the result. For example, a test placed in the blowing air stream of a fan is likely to collect more radon than it would under normal conditions. Also, three tests conducted in one home, but in three different rooms, **would be expected to have at least slightly different test results**.

Test results from a properly used activated charcoal test will more closely reflect the average radon concentrations over the last three to four days of the test period. This happens because the radon collected by the activated charcoal has a radioactive half-life of only four days. This means, for example, over one-half of the radon collected during the first three days of a seven day test 'died' before the test ended.

If you have further questions regarding this test or need advice on follow-up testing, call fax or email our technical service department listed below.

Thank you for choosing the Air Chek test device

PERFORMING RADON TESTS FOR A REAL ESTATE TRANSACTION

EPA guidelines recommend that at least two short-term tests should be conducted, either together or sequentially, in the lowest level of the building usable by the buyers. If the average of all the tests is 4 pCi/L or more, the recommendation is to have the building mitigated by a certified professional. If the average is below 4 pCi/L, then no further action is necessary at this time, although testing in the future is recommended. It is **highly recommended** that any property transaction tests be conducted by a certified radon professional. To locate a listed or certified radon tester, contact your state radon office (www.state-radon.info) or go to www.nrpp.info to download a list of professionals certified by the National Radon Proficiency Program (NRPP).

Also visit www.epa.gov/radon to download the latest copy of their publication: *Home Buyer's and Seller's Guide to Radon*.

Limitation of Liability: While we at Air Chek, Inc. make every effort to maintain the highest possible quality control and include several checks and verification steps in our procedures, we make **NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS** with respect to any item furnished, information supplied or services rendered you by Air Chek, Inc. Before any action is taken on the basis of test results given to you by Air Chek, Inc. we recommend that further testing be done. Neither Air Chek, Inc., nor any of our employees or agents, shall be liable under any claim, charge, or demand, whether in contract, tort or otherwise, for any and all losses, costs, charges, claims, demands, fees, expenses, injuries or damages (including without limitation **INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH ARE EXCLUDED**) of any nature or kind arising out of, connected with, resulting from, or sustained as a result of any item furnished, information supplied, or service rendered to you by Air Chek, Inc.

Notice to Pennsylvania Residents: The Radon Certification Act requires that anyone who provides any radon-related service or product to the general public must be certified by the Pennsylvania Department of Environmental Protection. You are entitled to evidence of certification from any person who provides such services or products. You are also entitled to a price list for services or products offered. All radon measurement data will be sent to the Department as required in the Act and will be kept confidential. If you have any questions, comments, or complaints concerning persons who provide radon-related services, please contact the Department of Environmental Protection, P.O. Box 8469, Harrisburg, PA 17105-8469 (717-783-4594).

The radon test kit(s) used for this report is certified by the National Radon Proficiency Program (NRPP), Lab ID: 101138AL, for use in all fifty states. It is also listed or certified for use in all states that have a radon program.

For technical information, call (800) 247-2435. Office hours are Mon-Fri 8:30 to 5:30 Eastern
You can reach us by Fax at (828) 684-8498 or by email at info@radon.com
Web Site: www.radon.com



City of Saint Paul
Department of Safety Inspections
375 Jackson St, Suite 220
Truth-in-Sale of Housing Program

File#: 14-331894

Date of Evaluation: Sep 23, 2014

Address: 971 JENKS AVE

Owner: Hra City Of St Paul

Client Name: St Paul Redevelopment Authority

Client Contact: Cindy Carlson

Evaluator Name: Gary Scott Lighthouse Home Inspe

Evaluator Phone: Work: 651-482-8382

Evaluator Email: lighthouse.gary@gmail.com

Truth-in-Sale of Housing Disclosure Report

This Report:

1. is intended to provide basic information to the home buyer and seller prior to the time of sale. This report WILL NOT be used to enforce the requirements of the Legislative Code; however, this evaluation form will be used to determine if there is compliance with the requirements for a hard-wired smoke detectors.
2. is based on the current Truth-in-Sale of Housing Evaluator Guidelines and is based upon different standards than the lender, Federal Housing Administration (FHA) or Veterans Administration (VA).
3. is not warranted, by the City of Saint Paul nor by the evaluator for the condition of the building component, nor of the accuracy of this report.
4. covers only the items listed on the form and only those items visible at the time of the evaluation. The Evaluator is not required to operate the heating plant (except during the heating season), use a ladder to observe the condition of the roofing, disassemble items or evaluate inaccessible areas.
5. is valid for one year from the date of issue and only for the owner named on this report.

Questions regarding this report should be directed to the evaluator. Complaints regarding this report should be directed to Department of Safety and Inspections, Truth-in-Sale of Housing Program, Phone 651-266-8989.

IMPORTANT NOTIFICATIONS AND WARNINGS

For questions on these items, call the City's information and Complaint line at 651-266-8989.

Description/Comment:

This property was evaluated as Single Family Dwelling

This property is NOT within a designated historical preservation district, nor is it a specifically designated historical property.

SD Present: H SD Properly Located: H SD HardWired: N

SD Comment: Missing Smoke detectors - No power to house

This property has No Moratorium Warning

This property has No Sewer Warning.

This property has No Open Permits.

This property is Category 1 Registered Vacant Building. New owners must re-register the building, pay all outstanding fees and obtain permission for occupancy.

Property Address: _____

Rating Key: M = Meets minimum B = Below minimum C = See Comment H = Hazardous Y = Yes N = No NV = Not Visible/Viewed NA = Not Applicable

BASEMENT/CELLAR

1. Stairs and Handrails..... B
 2. Basement/cellar floor..... M
 3. Foundation..... C
 4. Evidence of dampness or staining..... Yes
 5. First floor, floor system..... M
 6. Beams and columns..... B

ELECTRICAL SERVICE(s) # of Services

1

7. Service size:

Amps: 30 60 100 X 150 Other _____

Volts: 115 115/220 X

8. Electrical service installation/grounding..... H
 9. Electrical wiring, outlets and fixtures..... H

PLUMBING SYSTEM

10. Floor drain(s) (basement)..... M
 11. Waste and vent piping (all floors)..... M
 12. Water piping (all floors)..... B
 13. Gas piping (all floors)..... H
 14. Water heater(s) installation..... C
 15. Water heater(s) venting..... C
 16. Plumbing fixtures (basement)..... B

HEATING SYSTEM(S) # of _____ 117. Heating plant(s): Fuel: Gas Type: Forced Air

- a. Installation and visible condition..... B
 b. Viewed in operation (required in heating season) No
 c. Combustion venting..... B

The Evaluator is not required to operate the heating plant(s), except during heating season Oct 15 – April 15.

18. Additional heating unit(s) Fuel: N/A Type: N/A

- a. Installation and visible condition..... N/A
 b. Viewed in operation.....
 c. Combustion venting..... N/A

19. ADDITIONAL COMMENTS (1 through 18) N/A**Item#****Comments**

- 01 B Low headroom - B Uneven tread & Riser -
 03 Crawlspace walls not visible
 04 C Stained in areas -
 06 Not fully supported in areas on beams

- 08 Open panel - not connected - wiring missing
 09 Electrical system is compromised by vandals

- 12 All visible water lines have been removed - vandals
 13 Open gas lines - Compromised by vandals
 14 Removed/disconnected flue/water pipes/gas
 15 Removed
 16 LT in place but no water lines

- 17a Damaged deteriorated furnace - Replace
 17c Opne venting in areas

Page 2 of 4EVALUATOR: Gary Scott DATE: 9/23/2014

Rev 3/200

Property Address: 971 Jenks

Rating Key: M = Meets minimum B = Below minimum C = See Comment H = Hazardous Y = Yes N = No NV = Not Visible/Viewed NA = Not Applicable

Where there are multiple rooms to a category, the Evaluator must specify the room to which a Comment is related.

	<u>Item #</u>	<u>Comments</u>
KITCHEN		
20. Walls and ceilings	B	20 B Damaged wall/ceiling -
21. Floor condition and ceiling height	B	23 C No power to house - electrical off -
22. Evidence of dampness or staining	No	24 Mechanical vent in place on sink
23. Electrical outlets and fixtures	C	25 C Unable to test water turned off -
24. Plumbing fixtures	B	26 Windows boarded Up /damaged
25. Water flow	C	27 Windows damaged/broken
26. Window size/openable area/mechanical exhaust	B	
27. Condition of windows/doors/mech. Exhaust	B	
LIVING AND DINING ROOM(S)		
28. Walls and ceiling	B	28 B Damaged wall/ceiling -
29. Floor condition and ceiling height	M	31 C No power to house - electrical off -
30. Evidence of dampness or staining	No	33 B Broken window -
31. Electrical outlets and fixtures	C	
32. Window size and openable area	M	
33. Window and door condition	B	
HALLWAYS, STAIRS AND ENTRIES		
34. Walls ceilings and floors	M	39 C Smoke detector not testable - No power
35. Evidence of dampness or staining	No	39a H Missing detector(s) -
36. Stairs and handrails to upper floors	M	39b H Missing detector(s) -
37. Electrical outlets and fixtures	M	
38. Window condition	M	
39. Smoke detector(s)	H	
Properly Located	H	
Hard-wired (HWSD)	* H	
*If N or H in Single Family Home then SPF Fire Dept requires HWSD Installation		
BATHROOM(S)		
40. Walls and ceiling	B"	42 C Stained in areas -
41. Floor condition	M	43 C No power to house - electrical off -
42. Evidence of dampness or staining	Yes	45 C Unable to test water turned off -
43. Electrical outlets and fixtures	C	47 No power/no window
44. Plumbing fixtures	M	
45. Water flow	C	
46. Window size/openable/mechanical exhaust	M	
47. Condition of windows/doors/mech. Exhaust	C	
SLEEPING ROOM(S)		
48. Walls and ceiling	B	48 B Damaged wall/ceiling -
49. Floor condition, area, and ceiling height	B	49 Dog excrement problems
50. Evidence of dampness or staining	Yes	50 C Stained in areas -
51. Electrical outlets and fixtures	C	51 C No power to house - electrical off -
52. Window size and openable are	M	53 B Broken window - both floors
53. Window and door condition	B	
ENCLOSED PORCHES AND OTHER ROOMS		
54. Walls and floor condition	B	54 Porch pulling away from house - no access W
55. Evidence of dampness or staining	Yes	57 Damaged front screen door
56. Electrical outlets and fixtures	C	
57. Window condition	C	
ATTIC SPACE (Visible Areas)		
58. Roof boards and rafters	M	
59. Evidence of dampness or staining	Yes	59 C Stained in areas -
60. Electrical wiring/outlets/fixtures	C	60 C No power to house - electrical off -
61. Ventilation	M	62 No CO detector within 10 feet of each bedroom
62. ADDITIONAL COMMENTS (20 through 61)	H	

CO Detector Information Reported Here

Gary Scott

Page 3 of 4

EVALUATOR: _____ DATE: 9/23/2014

Rev 3/2009

Property Address: **971 Jenks**

Rating Key: M = Meets minimum B = Below minimum C = See Comment H = Hazardous Y = Yes N = No NV = Not Visible/Viewed NA = Not Applicable

Item #

Comments

EXTERIOR

63. Foundation..... B
64. Basement/cellar windows B
65. Drainage (grade)..... B
66. Exterior walls M
67. Doors (frames/storms/screens)..... B
68. Windows (frames/storms/screens)..... B
69. Open porches, stairways and decks..... B
70. Cornice and trim M
71. Roof covering and flashing..... M
72. Gutters and downspouts..... M
73. Chimneys..... M
74. Outlets, fixtures and service entrance B

- 63 B Crack(s)- B Damaged / missing mortar -
64 B Deteriorated windows - B Broken window -
65 B Some grade slopes toward house -
67 damaged doors
68 B Cracked windows - H Broken jagged glass - B
Missing storms & screens -
69 Damaged retaining walls / front stairs / porch stairs
74 In trees - no power

GARAGE / ACCESSORY STRUCTURE(S)

75. Roof structure and covering..... C
76. Wall structure and covering..... B
77. Slab condition N/A
78. Garage doors..... B
79. Garage opener (see important notice #6) N/A
80. Electrical wiring, outlets and fixtures C
81. Additional Comments (63 through 80) N/A

- 75 No access screwed shut Roof at end of life
76 Leaning toward E
78 B - Deteriorated Garage Door -
80 C No power to house - electrical off -

FIREPLACES/WOODSTOVES # of

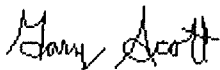
82. Dampers installed in fireplaces..... N/A
83. Installation..... N/A
84. Condition..... N/A

SUPPLEMENTAL INFORMATION - No determination is made whether items meet minimum standards (Y/N,NA,NV, only)

- | INSULATION | Y/N | Type | Inches/Depth |
|---------------------------|------------|---------------------|--------------|
| 85. Attic Insulation | <u>Yes</u> | <u>Mineral Wool</u> | <u>1-5 -</u> |
| 86. Foundation Insulation | <u>No</u> | | |
| 87. Knee Wall Insulation | <u>NV</u> | | |
| 88. Rim Joist Insulation | <u>No</u> | | |

89. ADDITIONAL COMMENTS (82 through 88).....

I hereby certify I prepared this report in compliance with the Saint Paul Evaluator Guidelines and all other applicable policies and procedures of the Truth-in-Sale of Housing Board. I have utilized reasonable and ordinary care and diligence and I have noted all conditions found that do not conform to the minimum standards of maintenance.



651-482-8382

9/23/2014

Printed Name Evaluator Signature
Gary Scott

Phone Number

Date

Rev 3/2009

Page 4 of 4

IMPORTANT NOTICES

IMPORTANT NOTICES

1. All single family residences in Saint Paul must have at least one smoke detector connected to the electrical system (hard-wired). The detector must be located near sleeping rooms. For more information call Fire Prevention, 651-266-9090. (Saint Paul Legislative Code, Chapter 58.)
2. Rainleaders connected to the sanitary sewer system must be disconnected. For more information call Public Works, Sewer Utility, (651) 266-6234.
3. A house built before 1978 may have lead paint on/in it. If children ingest lead paint, they can be poisoned. For more information call Ramsey County Public Health, 651-266-1199.
4. Neither the City of Saint Paul nor the Evaluator is responsible for the determination of the presence of airborne particles such as asbestos, noxious gases such as radon, or other conditions of air quality that may be present, nor the conditions which may cause the above.
5. If this building is used for any purpose other than a single family dwelling, it may be illegally zoned. To help you determine legal uses under the zoning ordinance, contact the Zoning Administrator at 651-266-9008.
6. An automatic garage door should reverse upon striking an object. If it does not reverse it poses a serious hazard and should be immediately repaired



CITY OF SAINT PAUL

Christopher B. Coleman, Mayor

375 Jackson Street, Suite 220 Telephone: 651-266-8989
Saint Paul, MN 55101-1806 Fax: 651-266-9124

September 26, 2014

Hra City Of St Paul
25 4th St W Ste 1400
Saint Paul MN 55102-1632

RE: 971 JENKS AVE

Dear Homeowner:

The City of Saint Paul learned from your recent Truth-in-Sale of Housing Evaluation that your home does not have a functional hard-wired smoke detector. The City enacted Chapter 58 of the Saint Paul Legislative Code to prevent tragedies resulting from this problem. Chapter 58 requires all single-family dwellings built prior to January 1, 1973, be equipped with one (1) operating hard-wired smoke detector. Hard-wired means the unit is directly and permanently wired into the dwelling's electrical system, into a junction box that is energized at all times, in a way that prevents interruption of electrical power to the detector.

The homesteaded homeowner is responsible for installing, or contracting with a Minnesota Licensed Electrical contractor to install, the hard-wired smoke detector whether or not the home sells. An electrical permit for the installation and/or repair of these smoke detectors must be obtained from the Department of Safety and Inspections, 375 Jackson St, Suite 220, St Paul, MN 55101-1806. This requirement must be met within sixty (60) days of the date of this letter.

Chapter 58.03 contains the following guidelines for the installation of the hard-wired detector:

- (a) The smoke detector shall be mounted on the ceiling or wall at a point centrally located in a corridor or area giving access to rooms used for sleeping purposes.
- (b) Ceiling-mounted smoke-detectors shall be located as close to the center of the ceiling as possible and/or per manufacturer's instructions.
- (c) Wall-mounted smoke detectors shall be mounted on a wall per manufacturer's instructions.

Enclosed is a "Hard-Wired Smoke Detector Fact Sheet" which provides answers to common questions about the City's ordinance. If you do not obtain a permit and receive final approval by an inspector for the installation of a hard-wired smoke detector in your home, within the next 60 days, our inspector will contact you to set up an inspection for the purpose of determining compliance with Chapter 58. **Failure to comply with any provision of the chapter is a misdemeanor and subject to the penalties provided in Section 1.5 of our Saint Paul Legislative Code.**

For questions about the requirement for this permit or for a final inspection after the detector has been installed, please contact me directly. I can be reached between 7:30 and 9:00 a.m. at the telephone number listed below my name.

Sincerely,

Daniel T. Moynihan
Senior Electrical Inspector
651-266-9036
Enclosure



CITY OF SAINT PAUL
Christopher B. Coleman, Mayor

375 Jackson Street, Suite 220
Saint Paul, Minnesota 55101-1806

Telephone: 651-266-8989
Facsimile: 651-266-9124
Web: www.stpaul.gov/dsi

"HARD-WIRED" SMOKE DETECTOR INSTALLATION GUIDELINES

If you are selling your single-family house in the City of St. Paul, you **must** have a 120 volt "hard-wired" battery-backup smoke detector installed before the sale. The following guidelines are to assist if you, as the owner and homesteader, are applying for the permit to install the detector yourself. If you are installing smoke detector(s) as part of a remodeling project, more than the 1 hard-wired detector may be required. Consult the Building Inspector (651-266-9002) for further information on these additional detectors.

An Electrical Permit must be purchased prior to the start of any electrical work. The only people who can purchase an Electrical Permit are a Licensed Minnesota Electrical Contractor, or the "homesteaded homeowner".

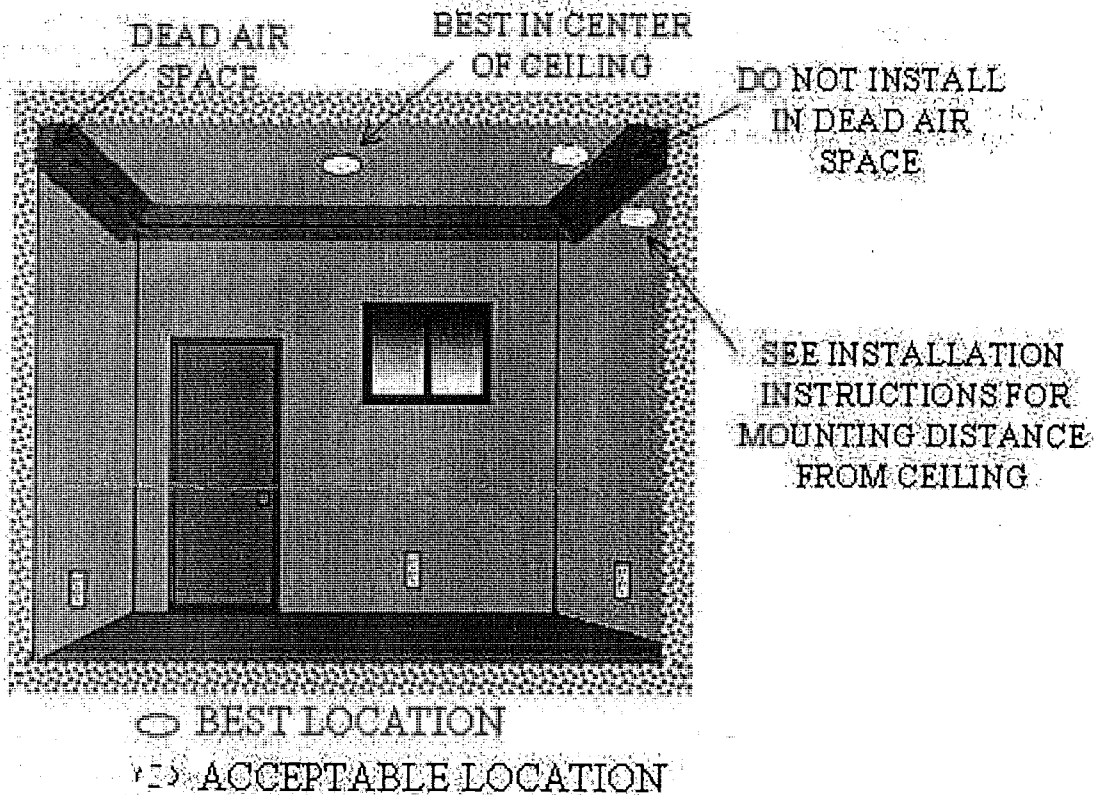
Only one detector mounted in the hallway outside the bedrooms is required to satisfy the ordinance. Additional detectors **do** increase your level of safety, but are not mandatory. If all the bedrooms in the house are on one level, the detector must be mounted in the hallway (not in a stairwell) outside of the bedrooms. If you have legal bedrooms on more than one level, the detector must be mounted as follows:

1. The detector must go on the level with the MOST bedrooms. If, for example, you have three bedrooms on one level and one on the other, the detector goes on the level with the three bedrooms.
2. If you have an equal number of bedrooms on more than one floor, the detector must go on the upper level of bedrooms. For example, if your house has two bedrooms on the first floor and two on the second, the detector must go on the second floor.

The detector may be mounted on the wall or ceiling (see figure 1 on the next page). The best place is in the center of the ceiling, but if the construction of the house prohibits ceiling mount, it may be wall-mounted. **READ THE DIRECTIONS THAT COME WITH THE DETECTOR-** They give certain measurements that must be followed for the distance down from the ceiling for a wall-mounted detector.

The power for the newly wired detector **is required to be "AFCI" protected. This can be accomplished by installing a combination AFCI breaker in the electrical panel, or on the load side of a branch-circuit type AFCI receptacle installed at the first outlet on the circuit.** All electrical splices must be done in an electrical box (the box that a device such as a switch, outlet or light fixture is mounted on). **DO NOT CONNECT TO ANY OPEN WIRING OUTSIDE OF THESE BOXES!** The most popular method of running power from the existing electrical box to the new box you install for the detector is NM-B cable, or Romex. Romex must be fished inside of a wall or ceiling- it CANNOT be run on the outside of a wall, floor or ceiling without mechanical protection. This cable is run through a "knockout" or opening in the side or back of the electrical boxes. Some type of cable clamp or bushing is required where the cable goes through the knockout. There are several brands of plastic boxes available for remodeling work that have "ears" to hold the box in place in the wall, and have integral cable clamps to hold the Romex. **The smoke detector must be mounted on an electrical box.** When the box is cut into the ceiling or wall,

Figure #1 Mounting Location of Smoke Detector



the opening must be flush with the ceiling or wall surface. You should be able to see the electrical box opening when the detector is detached from the box (see Fig. 2). You **MUST** use listed wire nuts for any wire splices- twisting the wires together and taping the bare wires is not acceptable! Your finished installation prior to mounting the detector on the box should look like Figure 2.

Call your Inspector for the final inspection, his name and direct number is on your copy of the permit. If you cannot find your copy, call the Electrical Inspection general number, 266-9003 between 7:30 and 9am Monday through Friday and they will transfer you to the Inspector that covers your area.

FIG. 2- TYPICAL INSTALLATION

