

## **ADDENDUM NO. 1**

DATE: July 17, 2019

TO: All Potential Bidders

FROM: Penny Owens, Assistant Purchasing Agent, City of Knoxville

SUBJECT: Addendum No. 1 – Milton Roberts Recreation Center Roof Replacement

BIDS TO BE OPENED: July 23, 2019, at 11:00:00 a.m. (Eastern Time)

This addendum is being published to provide additional information for bidders and becomes a part of the Contract Document and modifies the original specifications as noted.

Attached with this addendum is the Roof Sampling Report from Quantum Environmental & Engineering Services regarding the presence of asbestos containing materials. Also attached is the preliminary Existing Roof Plan which indicates the findings from the core tests of the roof.



March 21, 2019

Shawn Fitzpatrick, P.E.  
City of Knoxville, Engineering Department  
3131 Morris Avenue  
Knoxville, TN 37909

Subject: Roof Sampling Report  
Milton Roberts Recreation Center, 5900 Asheville Highway, Knoxville, Tennessee

Dear Mr. Fitzpatrick:

On March 15, 2019, Quantum Environmental & Engineering Services, LLC (QE2) performed a sampling event at the City of Knoxville's Milton Roberts Recreation Center on Asheville Highway in Knoxville, Tennessee. The sampling was performed in support of a future roof replacement project at the site.

The Milton Roberts Recreation Center is steel-framed on a concrete slab, with a brick and concrete façade and a flat roof. The building includes multi-purpose rooms, restrooms, a kitchen, offices, storage rooms, and a gymnasium. The current sampling event included only the roof of the building. Photographs are provided in Attachment 1.

Suspect asbestos-containing materials (ACMs) on the roof were inspected and three homogeneous areas (HAs) were identified and documented. Materials identified included two types of tar-like sealants, and the layered roofing components. The layered flat components included sheet shingle, felt papers, and fiber board insulation over a wood base. The materials were logged and three representative samples were collected. Bulk samples were submitted to SanAir Technologies Laboratory (SanAir) in Powhatan, Virginia, for analysis by Polarized Light Microscopy (PLM). Six analyses were performed since the layered roofing materials sample contained four layers. The laboratory report with sample chain-of-custody is included as Attachment 2.

The analytical results indicated that no asbestos was detected in any component of any sample. The results for samples collected from the Milton Roberts Recreation Center are provided in Table 1. Laboratory data sheets and chain of custody forms are provided as Attachment 2.

**Table 1**  
**Laboratory Results of Asbestos Sampling**  
**Milton Roberts Recreation Center Roof, Knoxville**

Sample #s	Sample Description & Location	Asbestos Content
MB-1	Black tar-like roof sealant / Gym roof	ND
MB-2	White rubberized roof sealant / Gym roof	ND
MB-3	Flat, layered roofing materials (multiple layers – shingle, tar papers, fiber board insulation) / Gym roof	Black felt – ND Brown shingle – ND Black felt – ND Brown fiber - ND

MB = Milton Roberts Recreation Center      ND = None Detected

Other suspect materials could potentially be uncovered during the roof replacement work. If other potentially impacted suspect materials are encountered, they should be sampled to confirm or deny asbestos content.

QE2 appreciates this opportunity to conduct this work for the City of Knoxville. Please contact me at (865) 689-1395 if you have any other comments, questions, or concerns.

Sincerely,



Terence Davis, P.G.

Senior Environmental Specialist

c:      QE2 File: 501418

**ATTACHMENT 1**

**PHOTOGRAPHS**





**Milton Roberts Recreation Center – two photos**



**Gym roof**



**Roof over front area**



**Flat roof layers**



**Sample of roof profile**

**ATTACHMENT 2**

**LABORATORY REPORTS AND CHAIN-OF-CUSTODY**



**The Identification Specialists**

Analysis Report  
prepared for  
Quantum Environmental & Engineering Services, LLC

**Report Date: 3/20/2019**

**Project Name: Milton Roberts Rec Center**

**Project #: 501418**

**SanAir ID#: 19012276**



NVLAP LAB CODE 200870-0

1551 Oakbridge Dr. Suite B | Powhatan, Virginia 23139-8061  
888.895.1177 | 804.897.1177 | fax: 804.897.0070 | [IAQ@SanAir.com](mailto:IAQ@SanAir.com) | [SanAir.com](http://SanAir.com)



SanAir ID Number

19012276

FINAL REPORT

3/20/2019 3:56:50 PM

**Name:** Quantum Environmental & Engineering Services,  
**Address:** LLC  
126 Dante Road  
Knoxville, TN 37918  
**Phone:** 865-689-1395

**Project Number:** 501418

**P.O. Number:**

**Project Name:** Milton Roberts Rec Center

**Collected Date:** 3/15/2019

**Received Date:** 3/18/2019 8:45:00 AM

Dear Terry Davis,

We at SanAir would like to thank you for the work you recently submitted. The 3 sample(s) were received on Monday, March 18, 2019 via FedEx. The final report(s) is enclosed for the following sample(s): MB-1, MB-2, MB-3.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

A handwritten signature in black ink that reads "Sandra Sobrino". The signature is written in a cursive, flowing style.

Sandra Sobrino  
Asbestos & Materials Laboratory Manager  
SanAir Technologies Laboratory

Final Report Includes:

- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions:

- 3 samples in Good condition.





SanAir ID Number

19012276

FINAL REPORT

3/20/2019 3:56:50 PM

**Name:** Quantum Environmental & Engineering Services, LLC  
**Address:** 126 Dante Road  
Knoxville, TN 37918  
**Phone:** 865-689-1395

**Project Number:** 501418**P.O. Number:****Project Name:** Milton Roberts Rec Center**Collected Date:** 3/15/2019**Received Date:** 3/18/2019 8:45:00 AM

Analyst: Vaughan, Nathaniel

**Asbestos Bulk PLM EPA 600/R-93/116**

SanAir ID / Description	Stereoscopic	Components		Asbestos Fibers
	Appearance	% Fibrous	% Non-fibrous	
MB-1 / 19012276-001 Tar Roof Sealant/ Gym Roof	Black Non-Fibrous Heterogeneous		100% Other	None Detected
MB-2 / 19012276-002 Roof Sealant/ Gym Roof	White Non-Fibrous Heterogeneous		100% Other	None Detected
MB-3 / 19012276-003 Built-Up Roofing Materials (Several Layers)/ Gym Roof, Roofing	Black Non-Fibrous Heterogeneous	40% Cellulose	60% Other	None Detected
MB-3 / 19012276-003 Built-Up Roofing Materials (Several Layers)/ Gym Roof, Roofing	Brown Non-Fibrous Heterogeneous	40% Cellulose	60% Other	None Detected
MB-3 / 19012276-003 Built-Up Roofing Materials (Several Layers)/ Gym Roof, Felt Paper	Black Fibrous Heterogeneous	85% Cellulose	15% Other	None Detected
MB-3 / 19012276-003 Built-Up Roofing Materials (Several Layers)/ Gym Roof, Insulation	Brown Fibrous Heterogeneous	95% Cellulose	5% Other	None Detected

Analyst:

Approved Signatory:

Analysis Date: 3/20/2019

Date: 3/20/2019

## **Disclaimer**

The final report cannot be reproduced, except in full, without written authorization from SanAir. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations. The accuracy of the results is dependent upon the client's sampling procedure and information provided to the laboratory by the client. SanAir assumes no responsibility for the sampling procedure and will provide evaluation reports based solely on the sample and information provided by the client. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Samples are held for a period of 60 days.

For NY state samples, method EPA 600/M4-82-020 is performed.

Polarized- light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

### Asbestos Certifications

NVLAP lab code 200870

City of Philadelphia: ALL-460

PA Department of Environmental Protection Number: 68-05397

California License Number: 2915

Colorado License Number: AL-23143

Connecticut License Number: PH-0105

Massachusetts License Number: AA000222

Maine License Number: LB-0075

New York ELAP lab ID: 11983

Rhode Island License Number: AAL-126

Texas Department of State Health Services License Number: 300440

Commonwealth of Virginia 3333000323

Washington State License Number: C989

West Virginia License Number: LT000566

Vermont License: AL166318

Revision Date: 11/30/2017

# SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B - Powhatan, VA 23139  
804.897.1177 / 888.895.1177 / Fax 804.897.0070

www.sanair.com

## Asbestos Chain of Custody

SanAir ID Number

19012276

Company: Quantum Environmental & Engineering, LLC	Project #: 501418	Phone #: 865-689-1395
Address: 126 Dante Road	Project Name: Milton Roberts Rec Center	Phone #: 865-607-0210
City, St, Zip: Knoxville, TN 37918	Date Collected: 3/15/2019	Fax #: 865-689-6844
Samples Collected By: TLD	P O Number:	Email: tdavis@qe2llc.com

### Asbestos Analysis Types

Bulk		Air		Soil/Vermiculite	
ABB	PLM EPA 600/R-93/116	<input checked="" type="checkbox"/>	ABA	PCM NIOSH 7400	<input type="checkbox"/>
	Positive Stop	<input type="checkbox"/>	ABA-2	OSHA w/ TWA*	<input type="checkbox"/>
ABEPA	PLM EPA 400 Point Count	<input type="checkbox"/>	ABTEM	TEM AHERA	<input type="checkbox"/>
ABBIK	PLM EPA 1000 Point Count	<input type="checkbox"/>	ABATN	TEM NIOSH 7402	<input type="checkbox"/>
ABBEN	PLM EPA NOB	<input type="checkbox"/>	ABT2	TEM Level II	<input type="checkbox"/>
ABBCH	TEM Chatfield	<input type="checkbox"/>			
ABBTM	TEM EPA NOB	<input type="checkbox"/>			
ABBNY	TEM NY ELAP 198.4	<input type="checkbox"/>	ABHE	EPA 100.2	<input type="checkbox"/>
OTHER/ Matrix :		<input type="checkbox"/>			

Water		Dust	
ABWA	TEM Wipe ASTM D-6480	<input type="checkbox"/>	
ABDMV	TEM Microvac ASTM D-5755	<input type="checkbox"/>	

Turn Around Times	<input type="checkbox"/> 3 HR (4 HR TEM)	<input type="checkbox"/> 6 HR (8HR TEM)	<input type="checkbox"/> 12 HR	<input type="checkbox"/> 24 HR
	2 Days <input checked="" type="checkbox"/>	3 Days <input type="checkbox"/>	4 Days <input type="checkbox"/>	5 Days <input type="checkbox"/>

Sample #	Sample Identification/Location	Volume or Area	Sample Type	Flow Rate*	Time* Start - Stop
MB-1	black tar roof sealant / Gym roof		bulk		
MB-2	white roof sealant / Gym roof		bulk		
MB-3	Built-up roofing materials (several layers) / Gym roof		bulk		

Special Instructions	2-Day TAT - Thanks!
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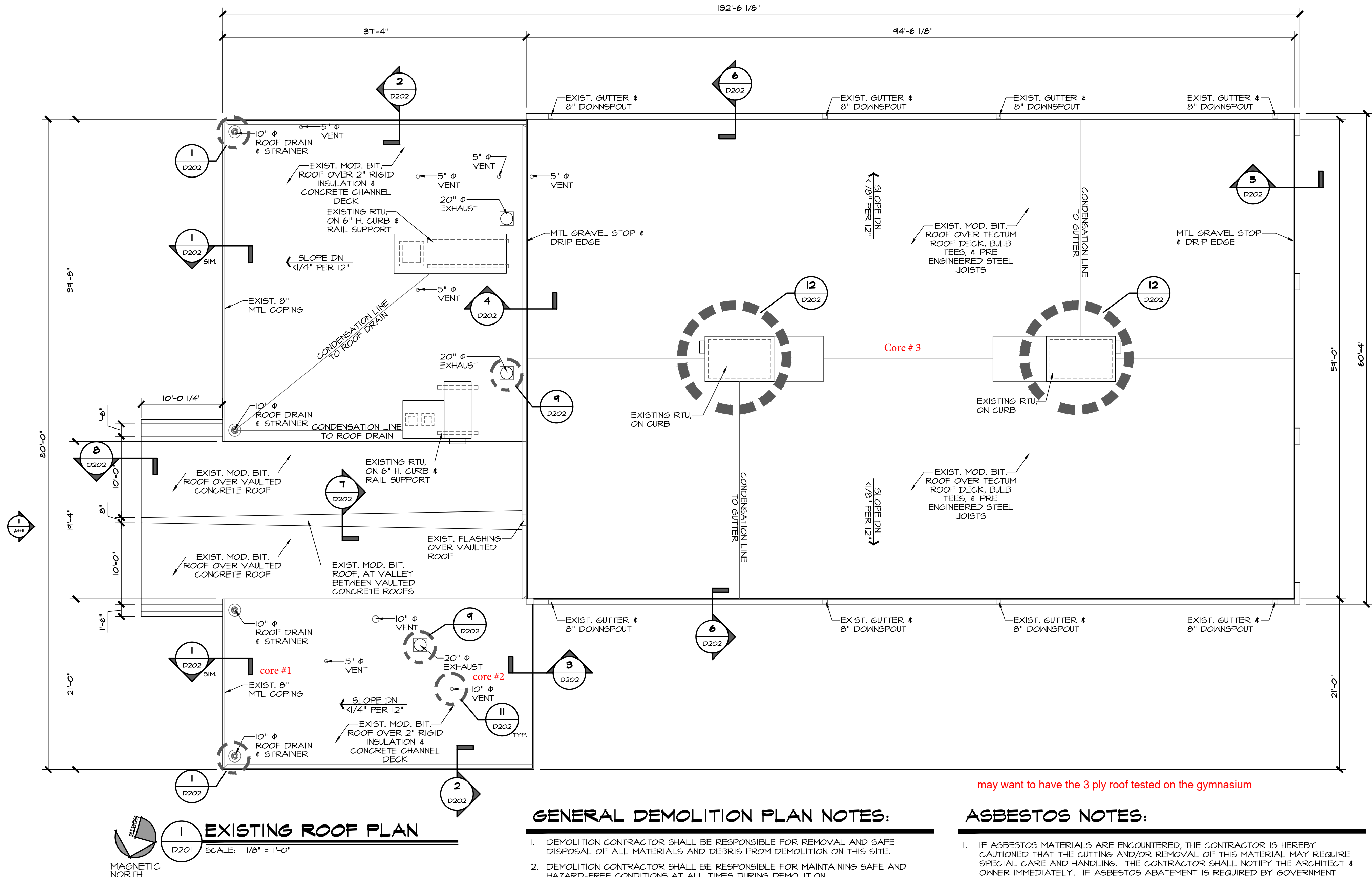
Relinquished by	Date	Time	Received by	Date	Time
Terence Davis	3/15/2019	1630	MC	MAR 15 2019	8:45 AM

Unless scheduled, the turn around time for all samples received after 5 pm Friday will begin at 8 am Monday morning.  
Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time.  
Work with standard turn around time sent Priority Overnight and Billed To Recipient will be charged a \$10 shipping fee.



Core Cuts:

- #1 - Concrete Deck, 1.5" Flat EPS insulation, 1/2" wood fiber, modified base and cap sheet  
#2 - Concrete Deck, 1.5" Flat EPS insulation, 1/2" wood fiber, modified base and cap sheet  
#3 - Tectum Deck, 1/2" wood fiber, 3 ply built-up roof system, 1/2" wood fiber, modified base and cap sheet



## CODE ANALYSIS

### APPLICABLE CODES:

- CITY OF KNOXVILLE ZONING ORDINANCE W/ LOCAL AMENDMENTS
- 2009 I.C.C./ANSI A117.1
- 2018 INTERNATIONAL ENERGY CONSERVATION CODE W/ LOCAL AMENDMENTS
- 2018 INTERNATIONAL BUILDING CODE W/ LOCAL AMENDMENTS
- 2018 INTERNATIONAL EXISTING BUILDING CODE W/ LOCAL AMENDMENTS
- 2018 INTERNATIONAL PERFORMANCE CODE W/ LOCAL AMENDMENTS
- 2018 INTERNATIONAL PLUMBING CODE W/ LOCAL AMENDMENTS
- 2011 NATIONAL ELECTRICAL CODE W/ LOCAL AMENDMENTS
- 2018 INTERNATIONAL FUEL GAS CODE W/ LOCAL AMENDMENTS
- 2018 INTERNATIONAL MECHANICAL CODE W/ LOCAL AMENDMENTS
- 2018 INTERNATIONAL PROPERTY MAINTENANCE CODE
- 2018 INTERNATIONAL PROPERTY MAINTENANCE CODE
- KNOXVILLE CODE OF ORDINANCES: CHAPTER 6 BUILDING SN BUILDING REGULATIONS, ARTICLE 1, SECTION 6-5, FIRE DISTRICT
- 2018 INTERNATIONAL FIRE CODE W/ LOCAL AMENDMENTS

### ZONING:

EXISTING BUILDING: MILTON E ROBERTS RECREATION CENTER  
ADDRESS: 5400 ASHEVILLE HWY, KNOXVILLE, TN 37924  
ZONE: OS-2 PARKS & OPEN SPACE DISTRICT  
OCCUPANCY: ASSEMBLY - 3  
TYPE OF CONSTRUCTION: TYPE II-B  
SPRINKLERED: NON-SPRINKLERED  
BUILDING AREA: 8550 SF EXISTING  
RISK CATEGORY: III  
SEISMIC DESIGN CATEGORY: C

### 2018 INTERNATIONAL EXISTING BUILDING CODE:

#### CH 3 PROVISIONS FOR ALL COMPLIANCE METHODS

- 301.3 THE ALTERATION, ADDITION, OR CHANGE OF OCCUPANCY OF ALL EXISTING BUILDINGS SHALL COMPLY WITH ONE OF THE METHODS LISTED IN SECTION 301.3.1, 301.3.2, 301.3.3 AS SELECTED BY THE APPLICANT. SECTIONS 301.3.1 THROUGH 301.3.3 SHALL NOT BE APPLIED IN COMBINATION WITH EACH OTHER.

- \* EXCEPTION SUBJECT TO THE APPROVAL OF THE CODE OFFICIAL, ALTERATIONS COMPLYING WITH THE LAWS IN EXISTENCE AT THE TIME THE BUILDING OR THE AFFECTED PORTION OF THE BUILDING WAS BUILT SHALL BE CONSIDERED IN COMPLIANCE WITH THE PROVISIONS OF THIS CODE.

#### 301.3.1 PRESCRIPTIVE COMPLIANCE METHOD (USED)

- ALTERATIONS, ADDITIONS AND CHANGES OF OCCUPANCY COMPLYING WITH CHAPTER 5 OF THIS CODE IN BUILDING COMPLYING WITH THE INTERNATIONAL FIRE CODE SHALL BE CONSIDERED IN COMPLIANCE WITH THE PROVISIONS OF THIS CODE.

#### 302.3 ADDITIONAL CODES

- ALTERATIONS, REPAIRS, ADDITIONS AND CHANGES OF OCCUPANCY TO, OR RELOCATION OF, EXISTING BUILDINGS AND STRUCTURES SHALL COMPLY WITH THE PROVISIONS FOR ALTERATIONS, REPAIRS, ADDITIONS AND CHANGES OF OCCUPANCY OR RELOCATION RESPECTIVELY, IN THIS CODE AND THE INTERNATIONAL ENERGY CONSERVATION CODE, INTERNATIONAL FIRE CODE, INTERNATIONAL FUEL GAS CODE, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL PLUMBING CODE, INTERNATIONAL PRIVATE SEWAGE DISPOSAL CODE, INTERNATIONAL PROPERTY MAINTENANCE CODE, INTERNATIONAL RESIDENTIAL CODE AND NFPA TO WHERE PROVISIONS OF THE OTHER CODES CONFLICT WITH PROVISIONS OF THIS CODE, THE PROVISIONS OF THIS CODE SHALL TAKE PRECEDENCE.

### 302.4 EXISTING MATERIALS

- MATERIALS ALREADY IN USE IN A BUILDING IN COMPLIANCE WITH REQUIREMENTS OR APPROVALS IN EFFECT AT THE TIME OF THEIR ERECTION OR INSTALLATION SHALL BE PERMITTED TO REMAIN IN USE UNLESS DETERMINED BY THE BUILDING OFFICIAL TO BE UNSAFE.

### 302.5 NEW AND REPLACEMENT MATERIALS

- EXCEPT AS OTHERWISE REQUIRED OR PERMITTED BY THIS CODE, MATERIALS PERMITTED BY THE APPLICABLE CODE FOR NEW CONSTRUCTION SHALL BE USED, LIKE MATERIALS SHALL BE PERMITTED FOR REPAIRS AND ALTERATIONS, PROVIDED THAT UNSAFE CONDITIONS ARE NOT CREATED, HAZARDOUS MATERIALS SHALL NOT BE USED WHERE THE CODE FOR NEW CONSTRUCTION WOULD NOT PERMIT THEIR USE IN BUILDINGS OF SIMILAR OCCUPANCY, PURPOSE AND LOCATION.

#### [BS] 302.5.1 NEW STRUCTURAL MEMBERS AND CONNECTIONS

- NEW STRUCTURAL MEMBERS AND CONNECTIONS SHALL COMPLY WITH THE DETAILING PROVISIONS OF THE INTERNATIONAL BUILDING CODE FOR NEW BUILDINGS OF SIMILAR STRUCTURE, PURPOSE AND LOCATION.

- EXCEPTION: WHERE ALTERNATIVE DESIGN CRITERIA ARE SPECIFICALLY PERMITTED.

#### 303 STRUCTURAL DESIGN LOADS AND EVALUATION AND DESIGN PROCEDURES

##### 303.1 LIVE LOADS

- WHERE AN ADDITION OR ALTERATION DOES NOT RESULT IN INCREASED DESIGN LIVE LOAD, EXISTING GRAVITY LOAD-CARRYING STRUCTURAL ELEMENTS SHALL BE PERMITTED TO BE EVALUATED AND DESIGNED FOR LIVE LOADS APPROVED PRIOR TO THE ADDITION OR ALTERATION. IF THE NONCONFORMING LIVE LOAD SHALL BE POSTED WITH PLACARDS OF APPROVED DESIGN INDICATING THE APPROVED LIVE LOAD, WHERE THE ADDITION OR ALTERATION RESULTS IN INCREASED DESIGN LIVE LOAD, THE LIVE LOAD REQUIRED BY SECTION 1607 OF THE INTERNATIONAL BUILDING CODE SHALL BE USED.

## GENERAL DEMOLITION PLAN NOTES:

- DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND SAFE DISPOSAL OF ALL MATERIALS AND DEBRIS FROM DEMOLITION ON THIS SITE.
- DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SAFE AND HAZARD-FREE CONDITIONS AT ALL TIMES DURING DEMOLITION.
- DEMOLITION CONTRACTOR SHALL PROVIDE BARRIERS TO KEEP PEDESTRIANS AND SHOPPING CENTER CUSTOMERS AWAY FROM DEMOLITION WORK.
- DEMOLITION CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL CODES AND REGULATIONS REGARDING DEMOLITION, MATERIALS AND SAFETY.
- THIS PLAN INDICATES THE GENERAL LOCATION OF MATERIAL TO BE REMOVED. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE ALL TRADES AND TO VERIFY THE EXTENT OF DEMOLITION.
- REFER TO ASBESTOS NOTES REGARDING CONTRACTORS RESPONSIBILITY.

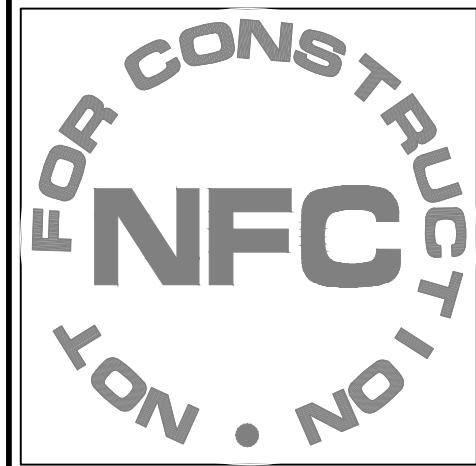
## ASBESTOS NOTES:

- IF ASBESTOS MATERIALS ARE ENCOUNTERED, THE CONTRACTOR IS HEREBY CAUTIONED THAT THE CUTTING AND/OR REMOVAL OF THE MATERIAL MAY REQUIRE SPECIAL CARE AND HANDLING. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT & OWNER IMMEDIATELY. IF ASBESTOS ABATEMENT IS REQUIRED BY GOVERNMENT AUTHORITIES, THE OWNER SHALL PAY THE ADDITIONAL COST, OR SHALL REMOVE THE MATERIAL UNDER A SEPARATE CONTRACT.
- IT IS THE INTENT OF THE ARCHITECT AND THE OWNER THAT ALL BUILDING MATERIALS USED IN AND DURING CONSTRUCTION SHALL BE FREE OF ASBESTOS, SHOULD MATERIAL SPECIFIED BE FOUND TO CONTAIN ASBESTOS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY SO THAT AN ALTERNATE MAY BE SPECIFIED.
- DOLLAR & EMMERS ARCHITECTURE, INC. IS NOT INVOLVED IN THE ABATEMENT OR REMOVAL OF ASBESTOS MATERIAL OR THE SPECIFICATION OF THEIR HANDLING.

**D&E**  
DOLLAR  
& EMMERS

## ARCHITECTURE, INC.

111 E. Jackson Avenue • Suite 101  
Knoxville, Tennessee • 37915  
phone: 865-546-9374 • fax: 865-673-9028  
e-mail: design@dollar-ewers.com



NO.	REVISIONS
1	
2	
3	
4	
5	
6	

A Re-Roof Project for:  
**MILTON ROBERTS REC CENTER**  
5900 ASHEVILLE HWY, KNOXVILLE, TN 37924

## EXISTING ROOF PLAN

**C O P Y R I G H T**  
ALL DRAWINGS, SPECIFICATIONS AND COPIES THEREOF  
FURNISHED BY DOLLAR & EMMERS ARCHITECTURE, INC.  
ARE AND SHALL REMAIN THE PROPERTY OF DE&E, INC.  
PROJECT AND ARE NOT TO BE USED WITH ANY OTHER  
PROJECT. WITH THE EXCEPTION OF ONE CONTRACT SET  
FOR EACH PARTY TO THE CONTRACT, SUCH DOCUMENTS ARE  
TO BE RETURNED OR DESTROYED ACCORDING TO DE&E, INC.  
ON REQUEST AT THE COMPLETION OF THE WORK. SUBMISSION  
OR FOR OTHER PURPOSES IN CONNECTION WITH THE PROJECT  
IS NOT TO BE CONSIDERED AS PUBLICATION OR REGISTRATION  
DEALS COMMON LAW COPYRIGHT OR OTHER RESERVED RIGHTS.  
**C O P Y R I G H T**

ISSUE DATE:  
DECEMBER 14, 2018  
PROJECT NO.:  
218176  
SHEET NUMBER:

**D201**