



**WATAUGA COUNTY  
BOARD OF EDUCATION**

Margaret E. Gragg Education Center  
175 Pioneer Trail Boone, NC 28607  
(828) 264-7190

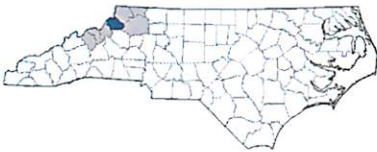
***WATAUGA COUNTY BOARD OF EDUCATION MEETING AGENDA***  
***March 11, 2024***

- |                  |   |  |
|------------------|---|--|
| <b>5:00 p.m.</b> | <b>1. CALL TO ORDER</b>   | Board Chair                                |
| <b>5:03 p.m.</b> | <b>2. CLOSED SESSION</b> <ul style="list-style-type: none"><li>A. Approval of the Minutes for 2/12/2024, 2/21/2024, &amp; 2/27/2024</li><li>B. Reportable Offenses – N.C.G.S.115C-288(g)</li><li>C. Student Records - N.C.G.S.143-318.11(a)(1)</li><li>D. Personnel – N.C.G.S.143-318.11(a)(6)</li><li>E. Attorney-Client - N.C.G.S. 143-318.11(a)(3)</li></ul> | Board Chair                                |
| <b>6:00 p.m.</b> | <b>3. OPEN SESSION CALL TO ORDER/<br/>WELCOME/MOMENT OF SILENCE</b>   | Board Chair                                |
| <b>6:03 p.m.</b> | <b>4. DISCUSSION AND ADJUSTMENT OF AGENDA</b>   | Board Chair                                |
| <b>6:05 p.m.</b> | <b>5. SUPERINTENDENT'S REPORT</b>   | Dr. Leslie Alexander                       |
| <b>6:10 p.m.</b> | <b>6. VALLE CRUCIS SCHOOL UPDATE</b>  | Dr. Leslie Alexander                       |
| <b>6:15 p.m.</b> | <b>7. STUDENTS' REPORT</b>  | Ms. Mia Llibre<br>Ms. Ellary Smith         |
| <b>6:20 p.m.</b> | <b>8. PUBLIC/SPECIAL RECOGNITION</b> <ul style="list-style-type: none"><li>★ NCSBA Academy of School Boardsmanship</li><li>★ WCS Spelling Bee Winner</li></ul>  | Dr. Leslie Alexander<br>Ms. Meredith Jones |

6:25 p.m.	9. <u>myFutureNC</u> : N.C.'s STATE ATTAINMENT GOAL	Ms. Kim Case
6:45 p.m.	10. PUBLIC COMMENT	Board Chair
6:55 p.m.	11. 2024-2025 CURRENT EXPENSE AND CAPITAL OUTLAY FUND REQUESTS	Ms. Ly Marze
7:10 p.m.	12. CONSENT AGENDA A. Approval of the Minutes for 2/12/2024, 2/21/2024, & 2/27/2024 B. Field Trip Requests C. Declaration of Surplus D. Valle Crucis Cafeteria Equipment Bids E. Reroofing Bids F. E-Rate Access Points G. Personnel Report	Dr. Leslie Alexander
7:15 p.m.	13. POLICIES: SUBSTANTIVE FOR SECOND READ <ul style="list-style-type: none"> <li>• 4040/7310: Staff-Student Relations</li> <li>• 7100: Recruitment and Selection of Personnel</li> <li>• 7130: Licensure</li> <li>• 7510: Leave</li> <li>• 7520: Family and Medical Leave</li> <li>• 7730: Employee Conflict of Interest</li> </ul>	Dr. Wayne Eberle
7:20 p.m.	14. POLICIES: SUBSTANTIVE FOR FIRST READ <ul style="list-style-type: none"> <li>• 3610: Counseling Program</li> <li>• 4110: Immunizations and Health Requirements for School Admission</li> <li>• 4240/7312: Child Abuse and Related Threats to Child Safety</li> <li>• 4342: Student Searches</li> <li>• 4720: Surveys of Students</li> <li>• 3320: School Trips</li> <li>• 3320-R: Field Trip Procedures</li> <li>• Watauga County Field Trip Request Form</li> </ul>	Dr. Wayne Eberle
7:35 p.m.	15. BOARD OPERATIONS → April BOE Meeting Date	Board Chair
7:45 p.m.	16. BOARD COMMENTS	Board Chair
7:50 p.m.	17. ADJOURNMENT	Board Chair

# Watauga County

myFutureNC 2024 Attainment Profiles



Boone-Wilkesboro  
Prosperity Zone Sub-Region  
Peer County Type: Rural - Non-Metro  
Local Education Agencies: 1 (2023)  
Charter Schools: 1 (2023)

2030 Proposed Watauga County Attainment Goal: 13,321 (Stretch Goal: 13,384) 2030 State Attainment Goal: 2 million

## Population Spotlight


2020 Census: 54,077  
2022 Estimate: 55,089  
Change: 1,012

## Growth Rate


1.9% County vs. 2.5% State

  
**\$57,888**  
Median Household Income (2022)  
State: \$67,516

  
**61%**  
Home Owners (2022)  
State: 67%

  
**8.8%**  
Child Poverty Rate (2022)  
State: 17.2%

  
**5.6%**  
Opportunity Youth Rate (2021)  
State: 12.1%

  
**77%**  
Households with Broadband (2022)  
State: 77%

  
**3.2%**  
Unemployment Rate (2022)  
State: 3.7%

## Educational Attainment

Watauga County residents ages 25-44, 2022

 **No Degree**  
**3,534**  
33.1%

 **Have Degree or Credential**  
**7,133**  
66.9%



Note: Numbers may not add up to 100% due to rounding

## Top Opportunities for Growth

These three areas represent the biggest opportunities for Watauga County to improve future attainment outcomes.



### Math Performance

47% of Watauga County 3-8 graders earn college-and-career-ready scores in Math, below the state goal of 86%.



### Reading Performance

45% of Watauga County 3-8 graders earn college-and-career-ready scores in Reading, below the state goal of 73%.



### FAFSA Completion

64% of Watauga County high school seniors complete the FAFSA, below the state goal of 80%.

## Promising Attainment Practices

The new **Promising Attainment Practices Database** is a curated, searchable, and filterable collection of about 250 county, region, and state-level initiatives and programs that directly address various components of the state's attainment challenge. The Database allows local and regional initiative leaders and other stakeholders to identify groups across the state who are developing or operating initiatives designed to boost attainment.

Follow link to discover how Watauga County has been meeting local needs:

[https://dashboard.myfuturenc.org/promising-attainment-practices/?wdt\\_search=Watauga](https://dashboard.myfuturenc.org/promising-attainment-practices/?wdt_search=Watauga)

LABOR MARKET ALIGNMENT

## In Boone-Wilkesboro Prosperity Zone Sub-Region:

**83.4%**

of postsecondary degrees and credentials conferred by regional institutions are aligned with labor market needs.

### Top areas of misalignment:

**Health Science** below bachelor's  
**Transportation, Distribution & Logistics** below bachelor's  
**Business Management & Administration** below bachelor's



**17** Individuals served in an ApprenticeshipNC program in 2020

### UNC and NC Community College Outcomes:

**5,202** graduates in 2020

**69%** of 2016 graduates were employed in NC in 2021

**\$44,421** annual average earnings of graduates employed in NC (includes both part-time and full-time jobs)

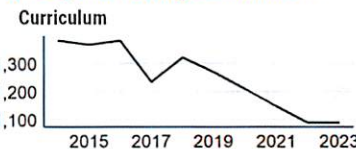


**44%** of adults (ages 25-44) in Watauga County earned a **family sustaining wage**, 2022

### Watauga County is served by:

High Country Workforce Development Board  
High Country Council of Governments

## UNC System College Enrollment



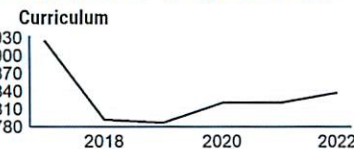
## Top 3 Five-Star Jobs in Boone-Wilkesboro Prosperity Zone Sub-Region

Job Title	Annual Growth
Nurse Practitioners	4%
Logisticians	3%
Occupational Therapy Assistants	3%

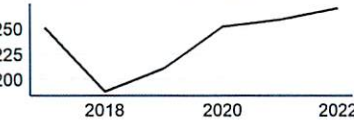
## Top 3 Employers in Watauga County

Employer	Employment Range
Appalachian State University	1000+
Appalachian Regional Healthcare Sys	1000+
Samaritan's Purse	500-999

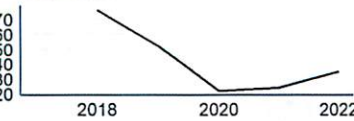
## NC Community College Enrollment



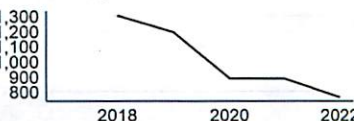
### First-time Curriculum Enrollments



### Basic Skills



### Continuing Education



POSTSECONDARY COMPLETION

COLLEGE & CAREER ACCESS

ACADEMIC READINESS

Adult Learners

Watauga County resident enrollments in NC Community Colleges, Fall 2022

- 35 Basic Skills
- 765 Continuing Education
- 837 Curriculum

17% of Watauga County residents have student loan debt; 5% of debt holders had student loans in default. 2022

Success of Watauga County High School Graduates

- 88% of students who enroll persist to their second year versus 78% in peer counties. 2022
- 65% of students who enroll earn a degree or certificate within 6 years versus 55% in peer counties. 2022

Top destinations of all college-goers, Fall 2023

- 1,007 of all college-goers attended Caldwell CC and TI
- 89 of all college-goers attended Wilkes CC
- 49 of all college-goers attended Appalachian State University

Degree Credentials Awarded, 2022

763 certificate | 499 associate | 4,461 bachelor's

Postsecondary assets in Boone-Wilkesboro Prosperity Zone sub-region

Public, 4-year or above  
Appalachian State University

Public, 2-year  
Mayland Community College, Wilkes Community College

Private not-for-profit, 4-year or above  
Lees-McRae College

Private not-for-profit, 2-year



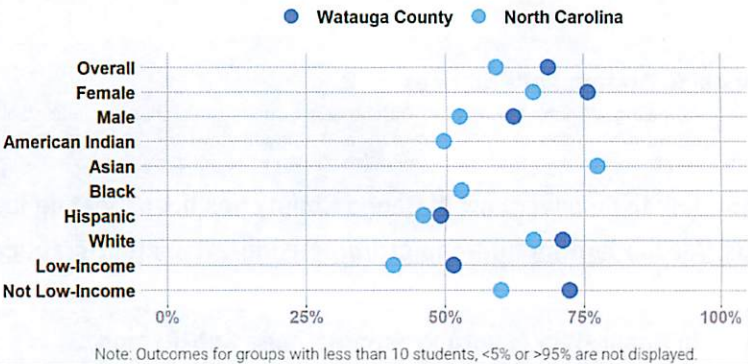
64% of seniors completed the FAFSA in 2023, compared to 62% statewide; 54 more need to complete in 2023 to meet state goal of 80%. 2023

81% of graduates reported intentions to enroll in a postsecondary institution versus 68% in peer counties. 2022

67% of graduates enrolled in a postsecondary institution within 12 months versus 52% in peer counties. 2022

44% of Watauga County students have parents with no college degree (either 2- or 4-year) versus 57% in peer counties.

Postsecondary Enrollment Rates for Select Groups in Watauga County, 2022



How students in Watauga County traditional schools are doing:

- Watauga County has met the goal for Pre-K enrollment. (Goal: 75%). 2023
- 45% of 3-8 graders are earning college-and-career-ready scores (level 4 or 5) in reading, compared to 30% statewide; 872 more needed to meet state goal of 73%. 2023
- 47% of 3-8 graders are earning college-and-career-ready scores (level 4 or 5) in math, compared to 35% statewide; 823 more needed to meet state goal of 86%. 2023
- 91% of 9th graders graduate within four years, compared to 87% statewide; 14 more needed to meet state goal of 95%. 2023
- 17% of students are chronically absent from school, compared to 32% statewide; 288 less needed to meet state goal of 11%. 2022

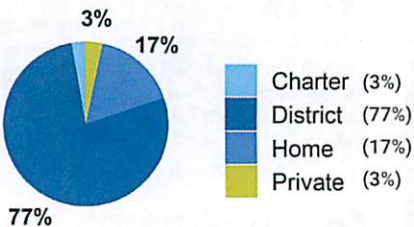
Watauga County has a student-to-school counselor ratio of 303:1 versus 325:1 in peer counties. 2022

2% of students drop out of high school (33 total students), compared to 2% statewide. 2022

School Choice

5,920 total students were enrolled in K-12 in Watauga County in the 2022-23 school year.

Note: This profile focuses on outcomes of students enrolled in district schools.



Access to Postsecondary Credits

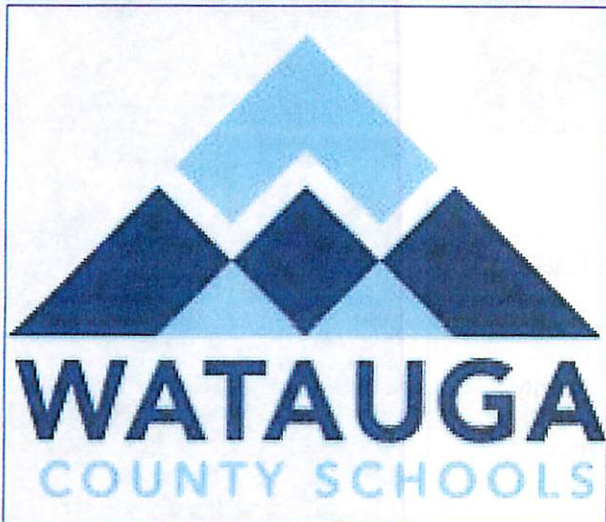
Students in Watauga County completed 498 Career & Technical Education (CTE) credentials (industry-valued credential data available in Spring 2024) and 170 concentrations in 2022. The top three CTE concentrations completed include Human Services; Transportation, Distribution, & Logistics; and Hospitality & Tourism.

303 high school students took at least one AP course (21%) versus 7% in peer counties (2022).

278 high school students participated in Career & College Promise programs (43%) versus 39% in peer counties (2022).

For more information about each indicator, including data sources and methodology, visit:  
[dashboard.myfuturenc.org/county-data-and-resources/](https://dashboard.myfuturenc.org/county-data-and-resources/)

*my*FUTURENC  
2 million by 2030



*Watauga County  
Board of Education  
March 11, 2024*

*my*FUTURENC

### House Bill 664

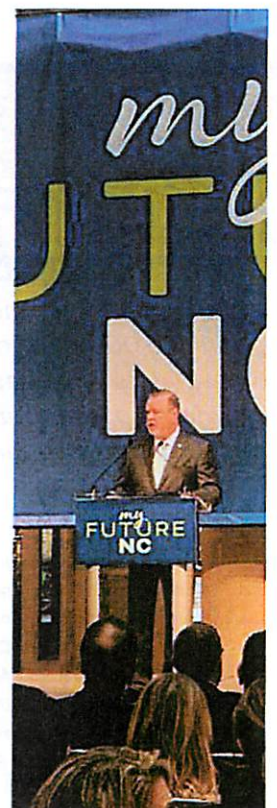
To ensure that the State remains economically competitive, the State shall ensure that by the year 2030:

# 2 MILLION

25- to 44-year-olds will have  
completed a high-quality credential  
or postsecondary degree

*To achieve our goal, myFutureNC will:*

- ★ Monitor & Report Progress
- ★ Identify & Advocate for Policy Solutions
- ★ Accelerate Action



## myFutureNC LEADERSHIP

Governed by a **cross-sector board of directors** comprised of NC education sector heads, policymakers, philanthropists, and business leaders. Additionally, the myFutureNC **Advisory Board of Commissioners** includes **58** individuals representing **35** North Carolina counties.



### NW Prosperity Zone Connections: Advisory Board of Commissioners

- Dr. Mark Poarch, President, Caldwell Community College & Technical Institute
- Mike LaBrose, Commissioner, Caldwell County
- Mr. Jeff Toner, Owner, James Tool Machine & Engineering, Burke County
- Sherry Carpenter, Vice President, Goodwill Industries of Northwest NC, Inc.
- Dr. Todd Roberts, Chancellor, NC School of Science and Mathematics

### Board of Directors

**John A. Fraley**, Chair  
**Lynn Good**, Vice-Chair  
**MC Belk Pilon**, Secretary and Treasurer

Deanna Ballard  
 Kathryn Black  
 Marshall Cherry  
 Dr. Jeff Cox  
 John F.A.V. Cecil  
 Geoff Coltrane  
 Eric C. Davis  
 Ann Goodnight  
 Peter Hans  
 Kevin Howell  
 Rep. Donny Lambeth  
 Senator Michael Lee  
 David Mounts Gonzales  
 Anna Spangler Nelson  
 Gary Salamido  
 Machelle Baker Sanders  
 Catherine Truitt  
 Dr. A. Hope Williams

## North Carolina repeats as America's Top State for Business in 2023



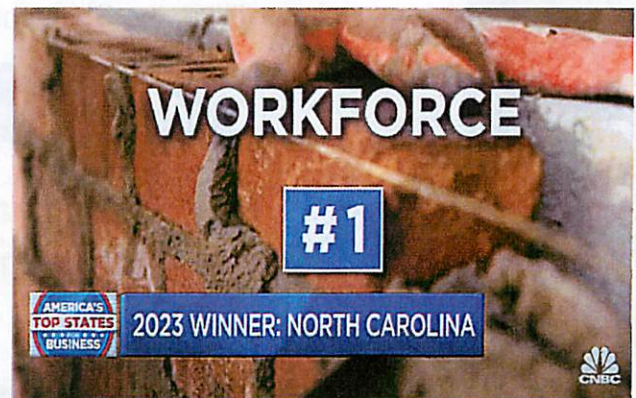
### AMERICA'S **TOP STATES** FOR BUSINESS

*"Last year's performance includes the creation of nearly 29,000 new jobs and \$19.3 billion in investments – the result of statewide collaboration, partnership, and hard work by our economic development community, including but not limited to ..."*

- myFutureNC
- North Carolina Community College System
- North Carolina Regional Councils of Governments
- North Carolina's 20 Local Workforce Development Boards
- North Carolina's 100 Counties
- North Carolina's 552 Municipalities
- The University of North Carolina System
- North Carolina Business Committee for Education
- 27 Additional Named Partners



Statement from NC Commerce Secretary Machelle Baker Sanders



In 2023, NC is also #1 state for starting a business.

myFUTURENC  
 2 million by 2030

## MOST ROBUST EDUCATION & WORKFORCE DEVELOPMENT INFRASTRUCTURE IN NATION

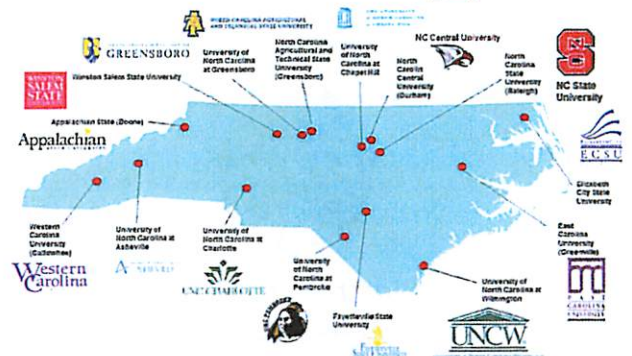
**58 Community Colleges**  
including 2 HSI's & 3 NASNTI's



**20 Workforce Development Boards**



**36 Private Institutions**  
including 5 HBCUs

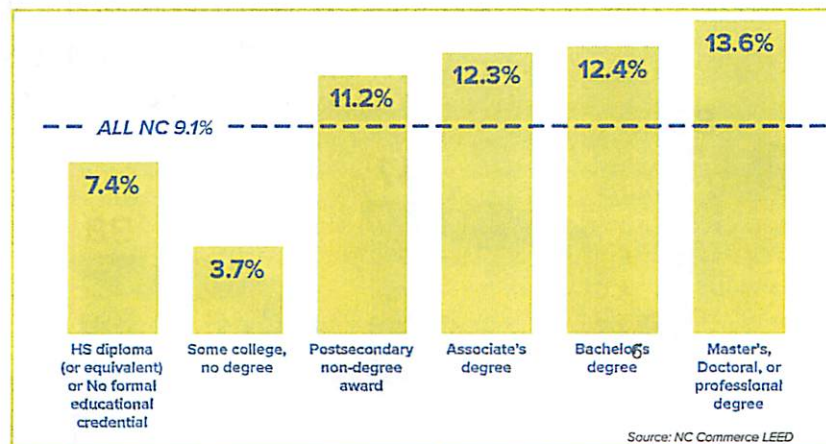


**16 Public Institutions**  
including 5 HBCUs & 1 NASNTI

## MINIMUM EDUCATION LEVELS FOR FUTURE NC JOBS

The majority of NC occupations will require post-secondary education in the form of credentials or degrees.

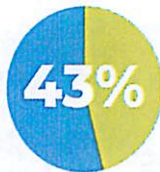
Projected growth rates of occupations in North Carolina by required minimum education 2021-2030



## UNDERSTANDING THE CHALLENGES

**311,178**

job openings in  
North Carolina  
(as of October 2023)



of North Carolinians  
aged 35-44 did not earn  
a **family-sustaining wage** in 2021

**1.2 million**

North Carolinians aged 25-44  
**without a postsecondary degree  
or credential** as of 2021

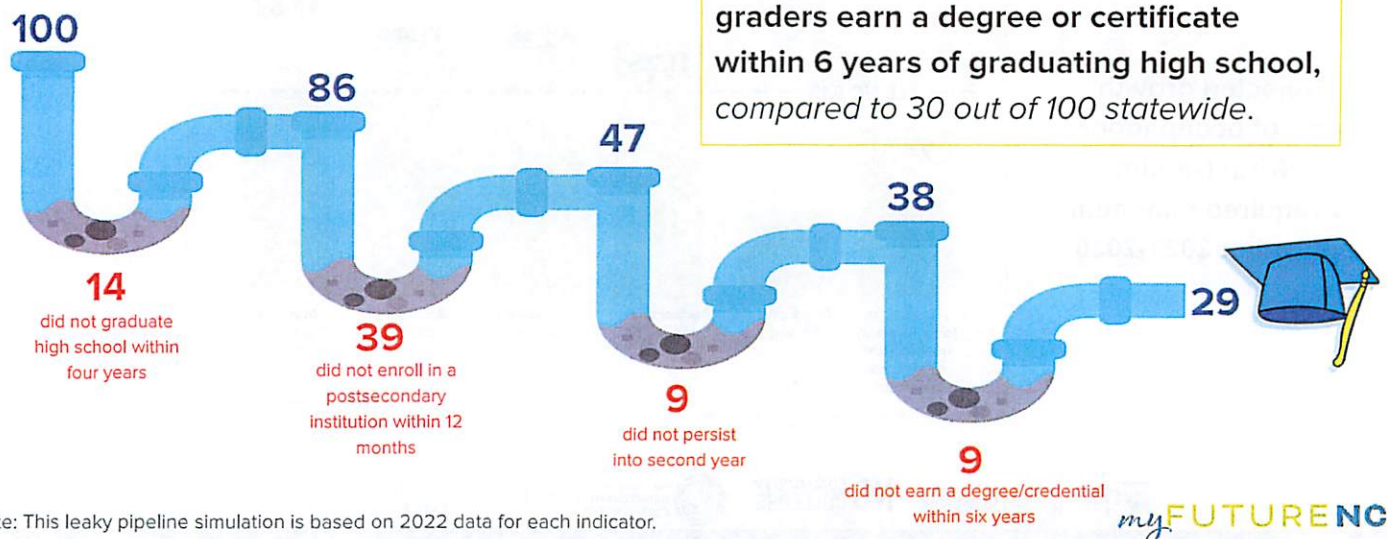


**Nearly 2 in 3** prospective  
students identify cost as a  
top barrier to enrollment

myFUTURENC  
2 million by 2030

## Educational Leaky Pipeline in the Northwest

Source: NCDPI & National Student Clearinghouse



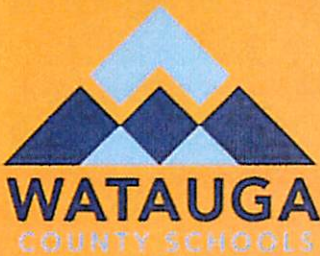
Note: This leaky pipeline simulation is based on 2022 data for each indicator.

myFUTURENC

## AN OPPORTUNITY FOR ALL

We believe a better educated  
North Carolina  
is the key to economic prosperity  
and upward mobility  
for all citizens.

*my***FUTURENC**  
2 million by 2030



## STATE LED, LOCALLY OWNED & DRIVEN



**Director of Regional Impact**  
Dr. Jeff McDaris  
jeff@myfuturenc.org | (818)-713-3154

### Regional Impact Managers

#### **NORTHWEST**

**Dr. Kim Case**  
kim@myfuturenc.org  
(828) 499-0176

#### **NORTH CENTRAL**

**Brett Brenton**  
brett@myfuturenc.org  
(919) 449-6267

#### **SOUTHEAST**

**Toni Blount**  
toni@myfuturenc.org  
(252) 670-4632

#### **SOUTHWEST**

**Senemeht Olatunji**  
senemeht@myfuturenc.org  
(704) 584-9596

#### **PIEDMONT-TRIAD**

**Preston Roseboro**  
preston@myfuturenc.org  
(704) 418-2827

#### **NORTHEAST**

**Dr. Angie Jenkins**  
angie@myfuturenc.org  
(252) 287-8991

#### **SANDHILLS**

**Dr. Robert Locklear**  
robert@myfuturenc.org  
(910) 374-5728

**Currently Vacant**  
Contact: Jeff McDaris

*my***FUTURENC**  
2 million by 2030

## Leveraging Partners: Building Attainment-Focused Networks

### Government

Councils of Governments/Workforce Boards  
Political boundaries (county/municipalities - state/regional/local)  
Prosperity Zones (Commerce)  
Sub-regions (MSA): Rural/Urban

### Education

College & Career Access  
RESAs  
DPI Regions (1-8)  
University cohorts/PS service areas

### Philanthropic Organizations

Goodwill of WNC; Dogwood Health Trust

### Geography

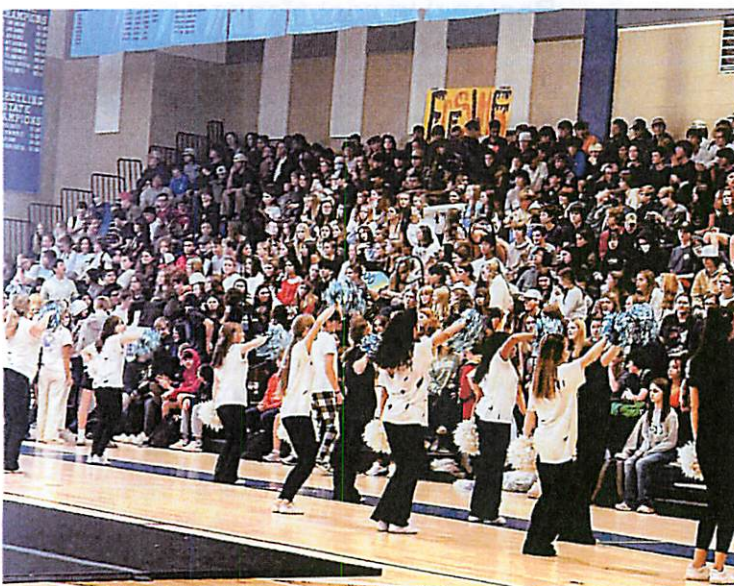
West & East of 77  
Virtual work world & vanishing boundaries

Businesses *don't care about "lines." They care about skilled employees.*



myFUTURENC  
2 million by 2030

## Locally Owned & Driven Work = 2 million by 2030

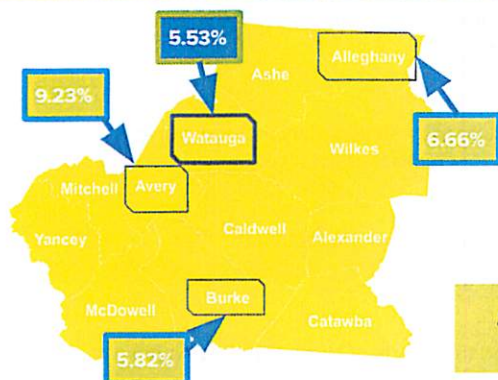


Watauga County Students

*What can we  
do together  
that we  
cannot do alone?*

myFUTURENC  
2 million by 2030

# COUNTY ATTAINMENT GAINS (2018 - 2021)



## Educational Attainment: Adults Ages 25-44

- **Population declined 1%** (2018-2021)
- **# of individuals holding postsecondary degree or credential grew 8%** in same period.

4 - NW Prosperity Zone counties with +5% increases over 3 years  
16 - NC counties with +5% increases

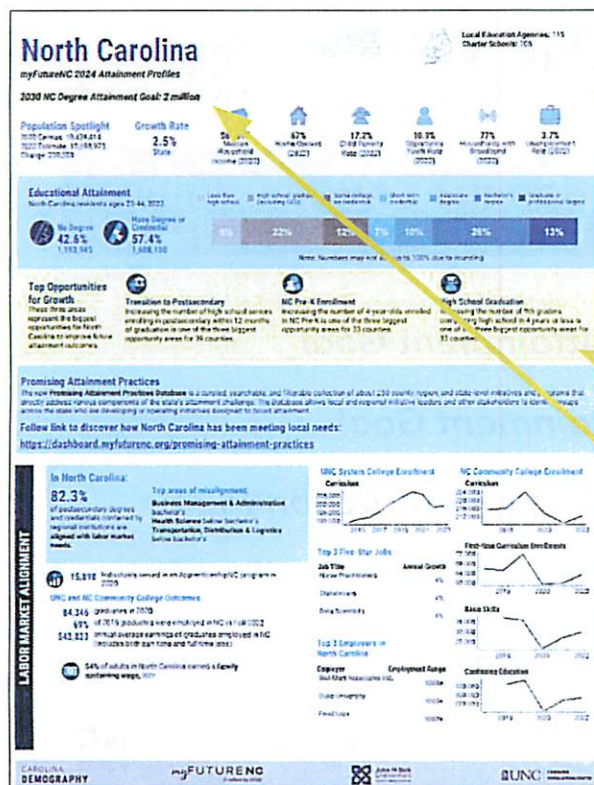
	Total population (aged 25-44)	Do not hold a degree/credential	Hold a degree/credential
2018	142,046	85,670	56,376
2021	140,670	79,551	61,119
Net change	(1,376)	(6,119)	4,743
Percent change	-0.97%	-7.14%	8.41%



SCAN ME

myFUTURENC  
2 million by 2030

13



## 2024 COUNTY ATTAINMENT PROFILES

- 100 Unique County Attainment Profiles
- Local Performance on Key Indicators
- Opportunities for Growth
- Recommended Local Goals

★ Access to 2024 County Profiles

myFUTURENC  
2 million by 2030



## FOUR KEY TRANSITION AREAS

### Academic Readiness

Building the foundation Pre-K to 12; high-quality early learning and strong academic progress in early years helps prepare children for future success.

### College & Career Access

Activities that prepare students to navigate the transition to postsecondary include gaining experience in college-level coursework and applying for financial assistance.

### Postsecondary Completion

Student progression and educational attainment from high school graduation to postsecondary completion.

### Labor Market Alignment

Alignment between the skills of college graduates and the needs of North Carolina employers.

#### Postsecondary Foundations for Success

- **Broadband** access, affordability, and adoption
- **Data analysis** of key performance indicators for educational attainment.

myFUTURE NC  
2 million by 2030



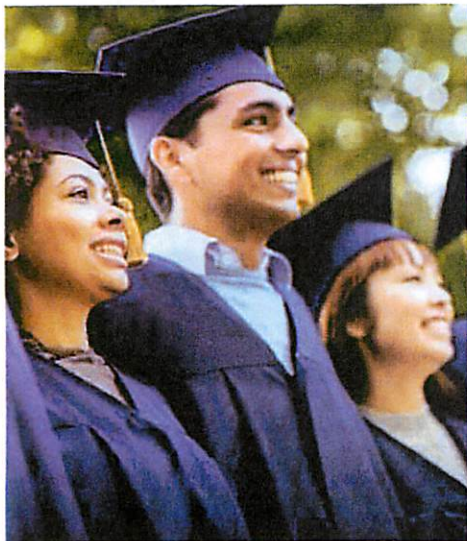
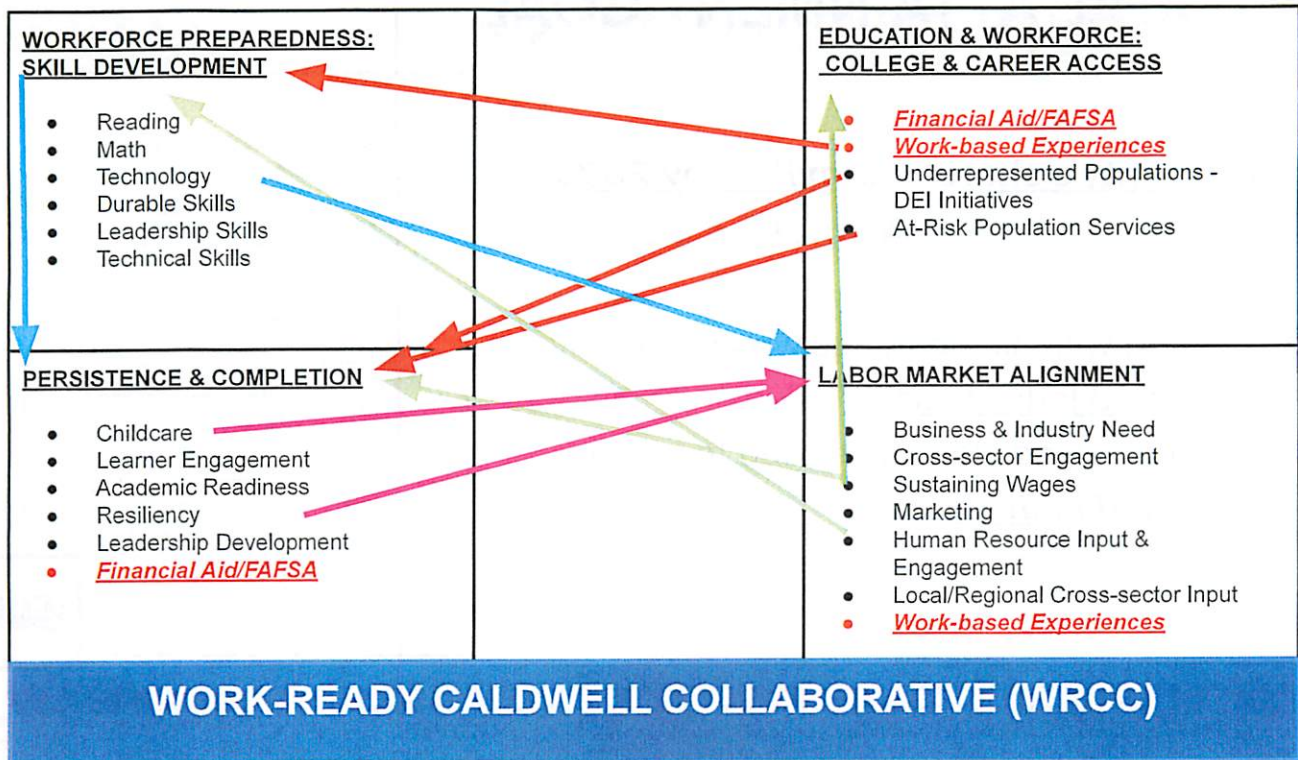
**"Your goal is not another new program or initiative; it is a fundamental redesign of the work—a paradigm shift."**

## JOIN THE WORK

### Build an Attainment-Focused Community

1. **Endorse State Attainment Goal**
2. **Adopt Local Attainment Goal**
3. **Develop Local Attainment Action Plan**
4. **Execute Action Plan**
5. **Increase Local Attainment**

myFUTURE NC  
2 million by 2030



## Considerations for Local Plan Goals

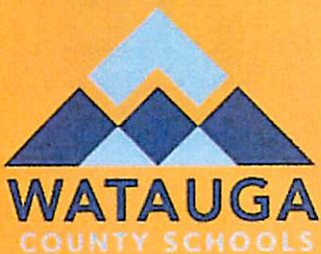
- ★ Immediate Goal: 2 million by 2030
- ★ Future Goals: 2030 & Beyond

### How do we reach everyone?

- What does it look like to ensure labor market alignment and maintain an equity focus?

### myFutureNC BIG BETS & POLICY PRIORITIES

- ➔ On-time enrollment & Persistence;
- ➔ Adult Learner Enrollment & Persistence;
- ➔ Labor Market Alignment



# OUR LOCAL ATTAINMENT GOAL

## Watauga County's share of 2 million by 2030

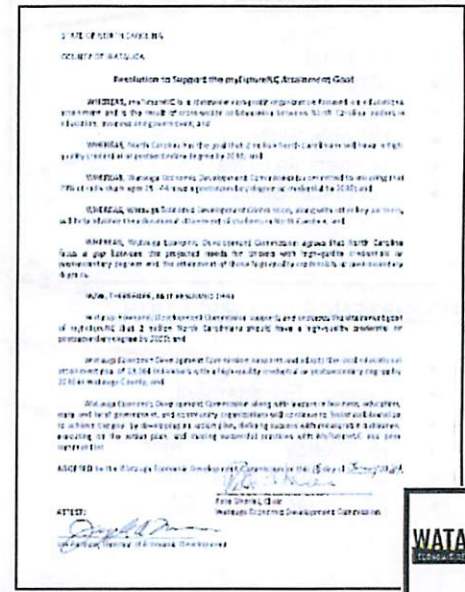
**Local Stretch Goal: 13,384 Total Individuals**

- ★ Anticipated with all the things we are already doing: 12,693 Individuals
- ★ The additional individuals needed to reach the goal: 691 Individuals

### Data Source for Goals:

This report relied on American Community Survey data from 2016.

This is based on the share of adults reporting an associate degree or higher in the 2019 ACS, plus an estimated 7.5% of adults with a high quality non-degree credential, based on research from Georgetown University for the Lumina Foundation. The projections presented here were developed in November 2020. At this time, the most current data was the 2019 ACS (statewide) and the 2018 5-Year ACS for all counties.



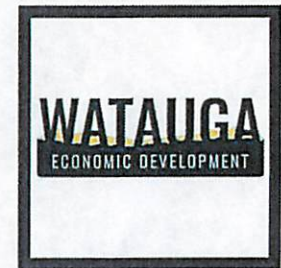
**myFUTURE NC**  
2 million by 2030

## WATAUGA COUNTY - PARTNERSHIPS (updated March 1, 2024)

### Government, Education and Business Endorsements

#### Local

- Watauga County Commissioners
- Caldwell County Community College & Technical Institute, Board of Trustees
  - (Caldwell & Watauga)
- Watauga County Chamber of Commerce
- Watauga County Economic Development Committee



#### Regional

- Western Piedmont Council of Government Workforce Development Board
- High Country Workforce Development Board (Watauga County - CCC&TI campus)



**BOONE**  
AREA CHAMBER OF COMMERCE



**myFUTURE NC**  
2 million by 2030

## CALL TO ACTION

- Join cross-sector partners to adopt your local goal and begin developing a local attainment-focused plan.
- Reach out to your myFutureNC Regional Impact Manager to:
  - Determine next steps for endorsing and adopting local attainment goals
  - Examine local data and begin asset mapping
  - Identify opportunities for local/regional/state partnerships



**Dr. Kim Case,**  
NW Regional Impact Manager  
[kim@myFutureNC.org](mailto:kim@myFutureNC.org)

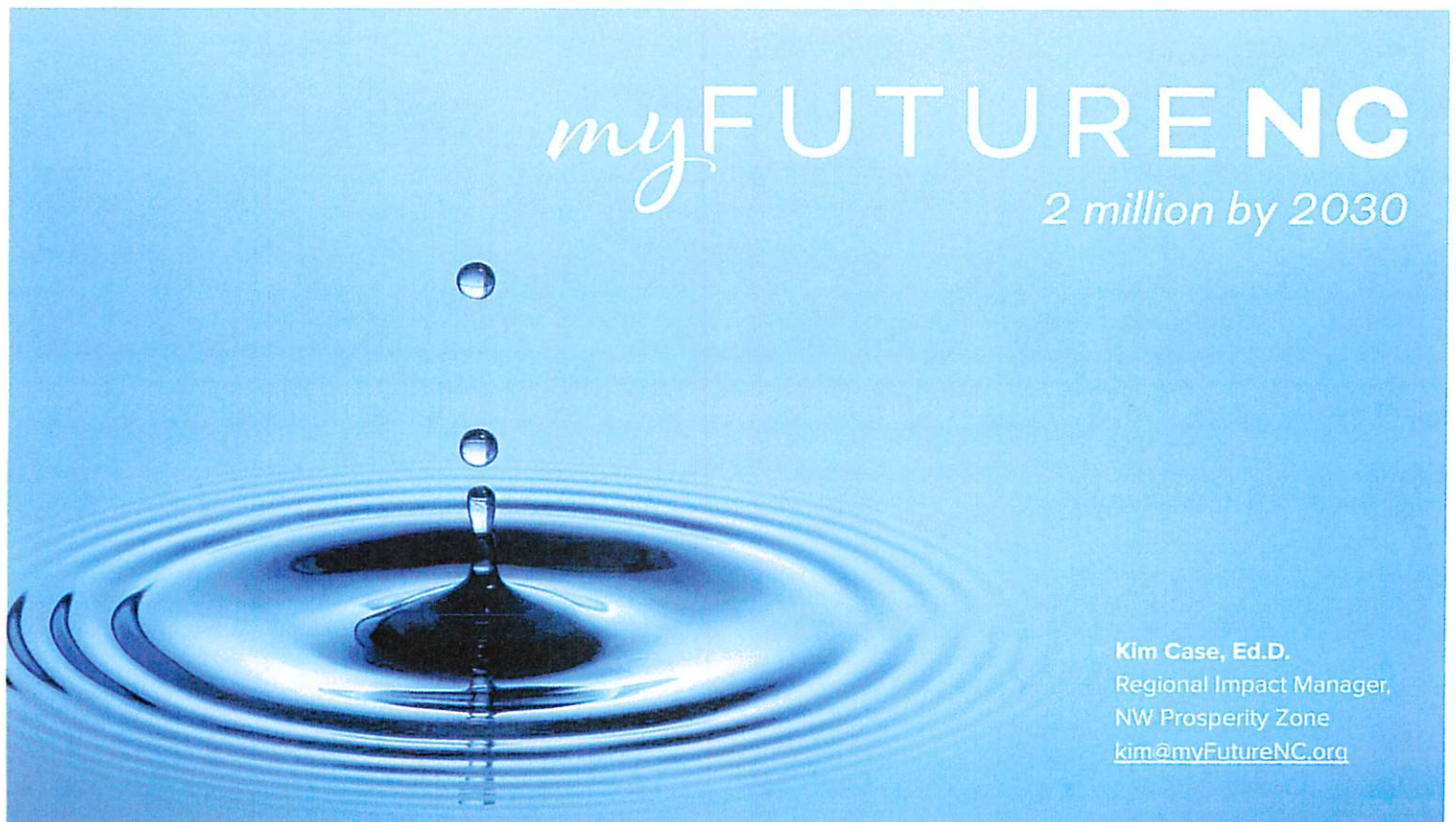
### Resource Links

<https://www.myfuturenc.org/>

<https://www.myfuturenc.org/2024stateofattainment/>

<https://www.myfuturenc.org/ourwork/northwest-region/>

*my***FUTURENC**  
2 million by 2030



CURRENT EXPENSE FUND 2024-25					3/11/2024
DESCRIPTION		2023-24 ADOPTED BUDGET	2024-25 PROPOSED BUDGET	CHANGE FROM PRIOR YR	PERCENT INCREASE
<b>5100</b>	<b>REGULAR INSTRUCTIONAL SERVICES</b>				
1	Salary - Local Positions	2,262,423	2,469,795	207,372	9.17%
2	Salary - JROTC	130,559	134,476	3,917	3.00%
3	JROTC Program Funds	10,000	10,000	-	0.00%
4	PreK Program	130,000	135,000	5,000	3.85%
5	Substitute Teacher Salaries	50,000	50,000	-	0.00%
6	Substitutes for Area Level Meetings	65,000	65,000	-	0.00%
7	Mentor Stipends	41,000	41,000	-	0.00%
8	District-wide Supplies/Materials	25,000	25,000	-	0.00%
9	Diagnostic Screeners/Online Intervention Resources	100,000	102,000	2,000	2.00%
10	New Classroom Needs	3,000	3,000	-	0.00%
11	Piano Tuning and Repairs	4,500	4,500	-	0.00%
12	Instrument Repairs	4,000	4,000	-	0.00%
13	Itinerant Teacher Travel	8,000	8,000	-	0.00%
14	Homebound Services	5,000	5,000	-	0.00%
15	Workers Compensation Insurance	155,000	155,000	-	0.00%
16	Unemployment Insurance	5,000	5,000	-	0.00%
17	Life Insurance	5,000	5,000	-	0.00%
18	Employee Assistance Program	3,500	3,500	-	0.00%
19	Disability	5,000	5,000	-	0.00%
20	Social Security	196,145	212,308	16,164	8.24%
21	Retirement Cost	612,735	639,529	26,794	4.37%
22	Hospital Insurance	544,104	647,600	103,496	19.02%
		4,364,966	4,729,708	364,742	8.36%
<b>5200</b>	<b>SPECIAL POPULATIONS SERVICES</b>				
23	Salary - Exceptional Children	549,177	565,652	16,475	3.00%
24	Social Security	42,012	43,272	1,260	3.00%
25	Retirement Cost	137,404	135,983	(1,421)	-1.03%
26	Hospital Insurance	143,583	153,805	10,222	7.12%
		872,176	898,712	26,536	3.04%
<b>5400</b>	<b>SCHOOL LEADERSHIP SERVICES</b>				
27	Salary - Principals	13,500	13,500	-	0.00%
28	Travel - Principals	10,800	10,800	-	0.00%
29	Salary - Assistant Principals	76,088	78,371	2,283	3.00%
30	Salary - Office Personnel	601,854	619,910	18,056	3.00%
31	Longevity	3,077	3,077	-	0.00%
32	Visual Arts Education Supplies and Materials				
	Bethel	496	510	14	2.82%
	Blowing Rock	1,068	1,084	16	1.50%
	Cove Creek	812	798	(14)	-1.72%
	Green Valley	822	754	(68)	-8.27%
	Hardin Park	1,942	1,914	(28)	-1.44%
	Mabel	536	530	(6)	-1.12%
	Parkway	1,544	1,504	(40)	-2.59%
	Valle Crucis	914	906	(8)	-0.88%
33	Physical Education Supplies and Materials				
	Bethel	496	510	14	2.82%
	Blowing Rock	1,068	1,084	16	1.50%
	Cove Creek	812	798	(14)	-1.72%
	Green Valley	822	754	(68)	-8.27%
	Hardin Park	1,942	1,914	(28)	-1.44%
	Mabel	536	530	(6)	-1.12%
	Parkway	1,544	1,504	(40)	-2.59%
	Valle Crucis	914	906	(8)	-0.88%

CURRENT EXPENSE FUND 2024-25					3/11/2024
DESCRIPTION		2023-24 ADOPTED BUDGET	2024-25 PROPOSED BUDGET	CHANGE FROM PRIOR YR	PERCENT INCREASE
34	Media Center Supplies and Materials				
	Bethel	1,142	1,170	28	2.45%
	Blowing Rock	2,286	2,318	32	1.40%
	Cove Creek	1,774	1,746	(28)	-1.58%
	Green Valley	1,794	1,658	(136)	-7.58%
	Hardin Park	4,034	3,978	(56)	-1.39%
	Mabel	1,222	1,210	(12)	-0.98%
	Parkway	3,238	3,158	(80)	-2.47%
	Valle Crucis	1,978	1,962	(16)	-0.81%
	Watauga High	6,526	6,722	196	3.00%
35	School Needs, Staff Development, and Supplies				
	Bethel	5,198	5,380	182	3.50%
	Blowing Rock	12,634	12,842	208	1.65%
	Cove Creek	9,306	9,124	(182)	-1.96%
	Green Valley	9,436	8,552	(884)	-9.37%
	Hardin Park	23,996	23,632	(364)	-1.52%
	Mabel	5,718	5,640	(78)	-1.36%
	Parkway	18,822	18,302	(520)	-2.76%
	Valle Crucis	10,632	10,528	(104)	-0.98%
	Watauga Virtual	3,170	-	(3,170)	-100.00%
	Watauga High	40,194	41,468	1,274	3.17%
36	Social Security	53,957	55,513	1,556	2.88%
37	Retirement Cost	173,769	171,852	(1,917)	-1.10%
38	Hospital Insurance	128,469	137,615	9,146	7.12%
		1,240,882	1,266,027	25,145	2.03%
5500	CO-CURRICULAR SERVICES				
39	Middle School Athletics				
	Coaching Supplements	47,000	47,000	-	0.00%
	Transportation	20,000	20,000	-	0.00%
	Catastrophic Insurance	1,800	1,800	-	0.00%
	Supplies	14,000	14,000	-	0.00%
	Contract Services	16,000	16,000	-	0.00%
40	WHS Athletics				
	Coaching Supplements	115,000	115,000	-	0.00%
	Transportation	35,000	50,000	15,000	42.86%
	Catastrophic Insurance/NCSHAA Dues	13,000	13,000	-	0.00%
	Athletic Complex	20,000	20,000	-	0.00%
	Athletic Drug Testing	3,000	3,000	-	0.00%
41	Cultural Arts Program	15,800	15,800	-	0.00%
42	Social Security	12,393	12,393	-	0.00%
43	Retirement Cost	40,532	38,945	(1,588)	-3.92%
		353,525	366,938	13,412	3.79%
5800	SCHOOL-BASED SUPPORT SERVICES				
44	Salary - School Nurses	-	172,500	172,500	100.00%
45	Salary - School Counselors	93,924	96,742	2,818	3.00%
46	Salary - Student Services /Data Managers	212,141	218,505	6,364	3.00%
47	Longevity	2,717	2,717	-	0.00%
48	Salary - Mental Health Specialist	50,336	52,818	2,482	4.93%
49	Student Assistance and Risk Assessment Program	4,000	4,000	-	0.00%
50	Mountain Alliance Partnership	9,000	9,000	-	0.00%
51	Supplies and Materials for School Nurses	2,500	10,000	7,500	300.00%
52	Supplies and Materials for Social Workers	500	1,000	500	100.00%
53	Safe Schools Program	1,000	1,000	-	0.00%
54	OSHA/Employee Safety	500	1,000	500	100.00%
55	ASU Clinical Screenings	700	700	-	0.00%
56	Cognia Accreditation	2,400	2,400	-	0.00%

CURRENT EXPENSE FUND 2024-25					3/11/2024
DESCRIPTION		2023-24 ADOPTED BUDGET	2024-25 PROPOSED BUDGET	CHANGE FROM PRIOR YR	PERCENT INCREASE
57	Staff Development for Departments and Programs				
	Administrative	6,000	6,000	-	0.00%
	Countywide	10,000	10,000	-	0.00%
	National Board Academy	3,500	3,500	-	0.00%
	K-5 Staff Development	11,000	13,250	2,250	20.45%
	6-8 Staff Development	11,000	11,000	-	0.00%
	9-12 Staff Development	2,000	6,000	4,000	200.00%
	School Improvement Staff Development	3,000	3,500	500	16.67%
	ITF/Media Staff Development	3,000	3,000	-	0.00%
	AIG	2,000	4,725	2,725	136.25%
	Science and Chemical Safety	500	500	-	0.00%
58	Staff Development/Travel for Departments and Directors				
	Superintendent	5,000	5,000	-	0.00%
	Chief Academic Officer	1,500	1,500	-	0.00%
	K-5 Curriculum	1,500	1,500	-	0.00%
	6-8 Curriculum	1,500	1,500	-	0.00%
	Testing	1,500	1,500	-	0.00%
	Student Services	5,100	5,500	400	7.84%
	Exceptional Children	2,000	2,000	-	0.00%
	Human Resources	3,450	3,750	300	8.70%
	Finance	4,000	6,000	2,000	50.00%
	Technology	9,000	10,000	1,000	11.11%
	Maintenance	7,500	7,500	-	0.00%
	Transportation	4,800	7,000	2,200	45.83%
	School Nutrition	2,000	2,000	-	0.00%
	Public Relations	1,200	1,200	-	0.00%
	School Nurses	3,000	5,000	2,000	66.67%
	School Improvement	1,500	1,500	-	0.00%
	Blended Learning Coordinator	-	1,200	1,200	100.00%
59	Social Security	23,622	37,521	13,899	58.84%
60	Retirement Cost	77,257	117,908	40,650	52.62%
61	Hospital Insurance	60,456	97,140	36,684	60.68%
		647,603	950,076	302,472	46.71%
6110	CURRICULAR SUPPORT SERVICES				
62	Salary - District Personnel	385,022	396,573	11,551	3.00%
63	Social Security	29,454	30,338	884	3.00%
64	Retirement Cost	96,333	95,336	(996)	-1.03%
65	Hospital Insurance	30,228	32,380	2,152	7.12%
		541,037	554,627	13,590	2.51%
6400	TECHNOLOGY SUPPORT SERVICES				
66	Salary - Technology and Instructional Support	266,589	274,587	7,998	3.00%
67	Longevity	1,530	1,530	-	0.00%
68	Technical Operating Contracts	160,000	220,000	60,000	37.50%
69	Communication Systems	60,000	50,000	(10,000)	-16.67%
70	Technology Repairs, Supplies and Wiring Needs	25,000	25,000	-	0.00%
71	Visitor Management Systems	10,000	10,000	-	0.00%
72	Maintenance Agreements	80,000	80,000	-	0.00%
73	Social Security	20,511	21,123	612	2.98%
74	Retirement Cost	67,083	66,378	(705)	-1.05%
75	Hospital Insurance	37,785	40,475	2,690	7.12%
		728,499	789,093	60,595	8.32%

CURRENT EXPENSE FUND 2024-25					3/11/2024
DESCRIPTION		2023-24 ADOPTED BUDGET	2024-25 PROPOSED BUDGET	CHANGE FROM PRIOR YR	PERCENT INCREASE
<b>6500</b>	<b>OPERATIONAL SUPPORT SERVICES</b>				
76	Salary - Maintenance	666,539	686,536	19,996	3.00%
77	Salary - Transportation	66,500	68,495	1,995	3.00%
78	Longevity	9,836	9,836	-	0.00%
79	Electricity	625,000	625,000	-	0.00%
80	Heating Fuel	400,000	400,000	-	0.00%
81	Water/Sewer	50,000	50,000	-	0.00%
82	Solid Waste Services	20,000	20,000	-	0.00%
83	Building Telephones and Cell Service	125,000	125,000	-	0.00%
84	Postage	6,000	2,000	(4,000)	-66.67%
85	Maintenance Supplies	210,000	225,000	15,000	7.14%
86	Maintenance Fees	175,000	180,000	5,000	2.86%
87	Custodial Supplies	110,000	115,000	5,000	4.55%
88	AHERA Inspection and Abatement of Asbestos	25,000	25,000	-	0.00%
89	Elevator Maintenance	7,500	10,000	2,500	33.33%
90	Water System Maintenance	32,500	35,000	2,500	7.69%
91	Painting	70,000	30,000	(40,000)	-57.14%
92	Transportation - Service and License Agreements	14,600	15,000	400	2.74%
93	Hazardous Waste Disposal	1,600	1,600	-	0.00%
94	Garage/Transportation Supplies	8,000	15,000	7,000	87.50%
95	Vehicle Repair Parts	31,000	40,000	9,000	29.03%
96	Gas	50,000	30,000	(20,000)	-40.00%
97	Oil	3,000	3,500	500	16.67%
98	Tires	5,000	5,000	-	0.00%
99	License/Title Fees	3,000	-	(3,000)	-100.00%
100	Drug Testing	4,500	2,000	(2,500)	-55.56%
101	Bus Lift Maintenance	500	-	(500)	-100.00%
102	Social Security	56,830	58,512	1,682	2.96%
103	Retirement Cost	185,867	183,874	(1,993)	-1.07%
104	Hospital Insurance	120,912	129,520	8,608	7.12%
		3,083,685	3,090,873	7,188	0.23%
<b>6600</b>	<b>FINANCIAL AND HUMAN RESOURCE SERVICES</b>				
105	Salary - Finance	161,622	145,249	(16,373)	-10.13%
106	Salary - Personnel	87,698	97,702	10,003	11.41%
107	Supplements				
	Certified Staff	1,030,433	1,288,041	257,608	25.00%
	Classified Staff	265,787	332,234	66,447	25.00%
	School Administrators	42,195	52,744	10,549	25.00%
	Directors	47,832	59,790	11,958	25.00%
	School Nutrition	36,754	45,943	9,189	25.00%
108	Finance Office Supplies	10,000	10,000	-	0.00%
109	Recruitment	20,000	33,000	13,000	65.00%
110	Employee License Renewal Fees	3,000	3,000	-	0.00%
	Pearson Exams, School Nurse Exams, etc.	2,500	2,500	-	0.00%
111	Workers Comp Drug Screenings	1,000	1,000	-	0.00%
112	Pre-employment Screenings	1,000	4,500	3,500	350.00%
	Background Checks	45,000	45,000	-	0.00%
113	Awards Program	10,000	15,000	5,000	50.00%
114	Beginning Teachers Program	4,000	5,000	1,000	25.00%
115	NC New Teacher Support Program	-	11,000	11,000	100.00%
116	Liability Insurance	25,000	45,000	20,000	80.00%
117	Vehicle Insurance	26,000	26,000	-	0.00%
118	Property Insurance	111,000	111,000	-	0.00%
119	Fidelity Bonds	1,500	1,500	-	0.00%
120	Social Security	124,705	150,625	25,921	20.79%
121	Retirement Cost	407,857	473,337	65,480	16.05%
122	Hospital Insurance	45,342	40,475	(4,867)	-10.73%
		2,510,225	2,999,639	489,414	19.50%

CURRENT EXPENSE FUND 2024-25					3/11/2024
DESCRIPTION		2023-24 ADOPTED BUDGET	2024-25 PROPOSED BUDGET	CHANGE FROM PRIOR YR	PERCENT INCREASE
<b>6700</b>	<b>ACCOUNTABILITY SERVICES</b>				
123	Supplies and Materials for Testing Department	6,000	12,000	6,000	100.00%
		6,000	12,000	6,000	100.00%
<b>6900</b>	<b>POLICY, LEADERSHIP, AND PUBLIC RELATIONS SERVICES</b>				
124	Salary - District Personnel	325,970	335,749	9,779	3.00%
125	Board of Education Staff Development	20,000	20,000	-	0.00%
126	Board of Education Compensation	23,000	23,000	-	0.00%
127	Board of Education Travel	7,500	7,500	-	0.00%
128	Legal Services	60,000	75,000	15,000	25.00%
129	Audit Services	40,000	40,000	-	0.00%
130	Membership Fees	50,000	50,000	-	0.00%
131	Public Relations Supplies	3,500	3,500	-	0.00%
132	Social Security	27,270	28,018	748	2.74%
133	Retirement Cost	81,558	80,714	(844)	-1.03%
134	Hospital Insurance	30,227	32,380	2,153	7.12%
		669,025	695,861	26,837	4.01%
<b>8100</b>	<b>PAYMENT TO OTHER GOVERNMENTAL UNITS</b>				
135	Transfer to Charter Schools	487,400	530,758	43,358	8.90%
<b>TOTAL CURRENT EXPENSE BUDGET</b>		<b>15,505,022</b>	<b>16,884,312</b>	<b>1,379,290</b>	<b>8.90%</b>

CURRENT EXPENSE FUND 2024-25					3/11/2024
SOURCE OF FUNDS		2023-24 ADOPTED BUDGET	2024-25 PROPOSED BUDGET	CHANGE FROM PRIOR YR	PERCENT INCREASE
	Fines and Forfeitures	225,000	225,000	-	0.00
	County Appropriation - General	14,792,622	16,128,553	1,335,931	9.03
	County Appropriation - Charter Schools*	487,400	530,758	43,358	8.90
	<b>CURRENT EXPENSE REVENUE TOTAL</b>	<b>15,505,022</b>	<b>16,884,312</b>	<b>1,379,290</b>	<b>8.90</b>
	Local Revenue	15,017,622	16,353,553		
	Allotted ADM per DPI	4,745	4,745		
	Local Revenue per ADM	3,165	3,446		
	Projected Charter School ADM	154	154		
	Total Budget for Charter Schools*	487,400	530,758		
		2023-24 ADOPTED BUDGET	2024-25 PROPOSED BUDGET	CHANGE FROM PRIOR YR	PERCENT INCREASE
	Current Expense County Appropriation	15,280,022	16,659,312	1,379,290	9.03

CAPITAL OUTLAY FUND 2024-25		3/11/2024
DESCRIPTION		2024-25 PROPOSED BUDGET
<b>CATEGORY I</b>		
1	Carpet & Tile Replacements	Lottery R&R 45,000
2	Roof Renovations/Replacements	Lottery R&R 80,000
3	Fire Alarm Replacements	Lottery R&R 140,000
4	Door Access Systems	Lottery R&R 60,000
5	Parkway Addition	Lottery R&R 500,000
6	Replace Kitchen/Cafeteria Equipment	Lottery 75,000
7	Gym Floors - Refinishing	Lottery 25,000
8	Door/Window Replacements	Lottery 20,000
9	Pavement and Sidewalk Maintenance/Repair	Lottery 80,000
10	Softball/Baseball Field Lighting - WHS	Lottery 180,000
11	Fencing Replacements	Lottery 100,000
12	Phase 1 Renovations	Long Term Capital 2,000,000
13	Bi-Directional Amplifiers/Radios	Long Term Capital 250,000
14	Gym Presentation Systems	Long Term Capital 25,000
15	Playground Updates/Renovations	Long Term Capital 30,000
16	HP, BR, GV Classrooms, Bathrooms, Decking Renovations	Long Term Capital 15,000
17	Security Cameras	Long Term Capital 25,000
18	Aerial Man Lift with Tracks	CIP Reserves 55,000
19	Heavy Vehicle Lift Replacement	CIP Reserves 175,000
20	HVAC/Sewer Pumps	CIP Reserves 25,000
<b>TOTAL CATEGORY I</b>		<b>3,905,000</b>
<b>CATEGORY II</b>		
1	1:1 Devices	CIP Reserves 300,000
2	Classroom Presentation Technology	CIP Reserves 80,000
3	Facilities - Furniture/Equipment	Current Capital 65,000
4	Custodial Equipment	Current Capital 22,000
5	Maintenance Equipment	Current Capital 12,000
6	Transportation Equipment	Current Capital 6,000
7	Classroom Furniture Replacements	Current Capital 30,000
8	Band Equipment	Current Capital 15,000
9	Arts Programs	Current Capital 15,000
10	Cafeteria Tables	Current Capital 15,000
<b>TOTAL CATEGORY II</b>		<b>560,000</b>
<b>CATEGORY III</b>		
1	Maintenance Vehicle Replacements	Current Capital 130,000
2	Activity Bus Replacements	Current Capital 140,000
<b>TOTAL CATEGORY III</b>		<b>270,000</b>
<b>CAPITAL OUTLAY BUDGET TOTAL</b>		<b>4,735,000</b>

CAPITAL OUTLAY FUND 2024-25				3/11/2024
SOURCE OF FUNDS		2023-24 ADOPTED BUDGET	2024-25 PROPOSED BUDGET	CHANGE FROM PRIOR YR  PERCENT INCREASE
NC Public School Building Lottery Fund		355,000	480,000	125,000 35.21%
NC Public School Building Lottery R&R Fund		589,932	825,000	235,068 39.85%
County Appropriation		5,030,000	3,430,000	(1,600,000) -31.81%
<b>CAPITAL OUTLAY TOTAL</b>		<b>5,974,932</b>	<b>4,735,000</b>	<b>(1,239,932) -20.75%</b>

CURRENT EXPENSE AND CAPITAL OUTLAY FUND REVENUE 2024-25					3/11/2024
SOURCE OF FUNDS	2023-24 ADOPTED BUDGET	2024-25 PROPOSED BUDGET	CHANGE FROM PRIOR YR	PERCENT INCREASE	
Fines and Forfeitures	225,000	225,000	-	0.00%	
NC Public School Building Lottery Fund	355,000	480,000	125,000	35.21%	
NC Public School Building Lottery R&R Fund	589,932	825,000	235,068	39.85%	
County Appropriation	20,310,022	20,089,312	(220,710)	-1.09%	
<b>TOTAL</b>	<b>21,479,954</b>	<b>21,619,312</b>	<b>139,358</b>	<b>0.65%</b>	



## WATAUGA COUNTY BOARD OF EDUCATION

Margaret E. Gragg Education Center  
175 Pioneer Trail Boone, NC 28607  
(828) 264-7190

### WATAUGA COUNTY BOARD OF EDUCATION MEETING

**DATE:** February 12, 2024

**TIME:** 6:00 p.m.

**PLACE:** Margaret E. Gragg Education Center

**PRESENT:**

- Gary Childers, Steve Combs, Marshall Ashcraft, Jason Cornett, Jay Fenwick, *BOE Members*
- Dr. Leslie Alexander, *Superintendent*

#### **CALL TO ORDER**

Jay Fenwick made a motion at 5:54 pm to go into open session. Steve Combs seconded, and all Board members approved. Board Chair Dr. Gary Childers called the meeting to order at 6:00 p.m.

#### **WELCOME/MOMENT OF SILENCE**

- Dr. Childers welcomed those attending the meeting. He began by acknowledging the loss of Carol Deal, former Associate Superintendent and Director of Curriculum, who died on January 22nd. He also expressed condolences for the death on February 1st of teacher/coach Michael Neff. Both of these educators had a great impact on the school district.
- Dr. Childers requested to observe a moment of silence.
- He acknowledged that two Board of Education candidates were present, and he gave Alison Idol and Charlotte Lloyd each a minute to introduce themselves.

#### **DISCUSSION AND ADJUSTMENT OF AGENDA**

There was not any discussion or adjustment to the agenda.

#### **SUPERINTENDENT'S REPORT**

- Dr. Leslie Alexander welcomed everyone who was present at the meeting. She then spoke about the recent passing of Coach Michael Neff and the influence he had on many students across the district. She acknowledged how loving and amazing the community has been in their outpouring of support

during this difficult loss.

➤ **Recognition Dates:**

- *Black History Month*: Many lessons and activities will be taking place across the district.
  - *Career and Technical Education Month*: Watauga County Schools has wonderful CTE teachers who provide engaging and hands-on experiences to students.
  - *National School Counselor Appreciation Week (2/5/-2/9)*: Dr. Alexander expressed her appreciation to the dedicated counselors who work to meet the needs of students every day.
  - *National School Resource Officer Appreciation Day (2/15)*: The district is very fortunate to have School Resource Officers in all of the schools. They help to ensure that students and staff are safe, and they are valued partners within school families.
  - *School Bus Driver Appreciation Day (2/22)*: Bus drivers are essential to the school district as they make sure students arrive at school on time and return home safely each day. Dr. Alexander stated that after her first winter in Watauga County, she has a new appreciation for what they do.
- Dr. Alexander expressed her gratitude to the Weather Team. This group of individuals begin checking roads at 3:30 am during inclement weather to help decide if buses can travel safely: Dr. Chris Blanton (Cove Creek/Mabel), Eric Bolick (Parkway), Carter Dishman (Bethel), Nathan Jernigan (Valle Crucis), Dillon Smith (Blowing Rock), Janet Tanner (Hardin Park), and Kevin Winebarger (Green Valley). She also thanked Bailey Little for communicating through social media, and Dr. Wayne Eberle for his communication to families.

After the Superintendent's Report, Dr. Childers pointed out that Dr. Alexander is also an important part of the Weather Team.

### **VALLE CRUCIS SCHOOL UPDATE**

- Area A: Cafeteria/Kitchen; Gym
- Area B: Administrative Offices; Band
- Area C: Classrooms Really great progress

Dr. Alexander shared the following updates:

There are approximately sixty workers on-site daily. Slabs have been poured in all areas except the north end of A (which should be poured in about three weeks). Underdrains have been completed except for the north end of A. Glulam has been installed in Area A, and glulam pieces are being bolted together for the remaining areas. Metal framing has been completed in Areas B and C, and it will begin in Area A in three weeks. Rok-On has been completed in Area C, and is currently being worked on for Area B. A storm drain system is currently being installed. Work will resume in April 2024 for the turn lane. The completion date is scheduled for December 2024 or January 2025.

Dr. Childers requested that Dr. Alexander put in her Friday notes to Board members when any Valle Crucis construction meetings will be held.

### **PUBLIC/SPECIAL RECOGNITION**

#### **Regional Teacher of the Year**

On December 1st, Watauga High School Automotive Technology teacher Mr. Erik Mortensen was

announced as the 2024 Northwest Regional Teacher of the Year! He was one of 16 teachers in the District 7 region in the running for this title. Mr. Mortensen has taught Auto Tech at Watauga High School for over five years. He entered the profession as a lateral entry teacher from a career as a highly skilled mechanic, and his vast career experience has given him the ability to impart real-world knowledge to the classroom. Erik Mortensen is the first Career and Technical Education (CTE) Teacher in Watauga County Schools to be named a countywide Teacher of the Year.

Dr. Alexander said: “Erik Mortensen is an expert in his field, and his ability to combine his expertise with genuine concern for each student is why he is the Teacher of the Year. Mr. Mortensen and his classes have been an integral part of helping many students be successful in high school. He meets students where they are and then goes the extra mile to challenge and support them in their learning. This explains why there is a waiting list each year of students wanting to enroll in his courses.” Dr. Childers reiterated that having a regional CTE teacher speaks volumes about Mr. Mortensen’s positive impact and dedication.

After being presented with a plaque, Mr. Mortensen shared a few words that reflected his passion and enthusiasm for students and the teaching profession.

### **STUDENTS’ REPORT**

- Watauga High School’s administration introduced a new tardy policy at the start of the second semester. Students who enter the building after 8:30 a.m. will be required to stop by the office before going to class. There were approximately 160 students tardy on the first day of the new policy, but there were only 27 students tardy the following day.
- Since the beginning of February, the community has rallied in support of those affected by the loss of Coach Michel Neff. Students from all across the school district were close with Neff, and many have searched for ways to support his family (including sharing cards and artwork at his service). Basketball teams wore special new warm-up shirts, and the Indoor Track Team (which Neff coached to success this very season), walked away from the state meet (with incredible achievements in his honor) proudly holding their “Team Neff” poster. While the spring Track season will be different, students are “better athletes and people for their years of Michael Neff’s coaching, teaching, leadership, mentorship, kindness, and persistent belief in them.”
- “The Love Run” will be on February 17th. This 5K serves to honor the late Elayne Bishop, who was a teacher and beloved High Country community member. The fundraising event initially began to support Elayne’s treatments while battling cancer in 2019. Last year, Watauga High School’s Student Council raised over \$1500 in their continued efforts, and all proceeds went to the High Country Breast Cancer Foundation. They hope to raise even more money this year in order to help provide additional support to those undergoing treatment.
- On February 27th, all juniors (and seniors who have not completed this graduation requirement) will take the ACT. Watauga’s “School’s Out” program has an ACT Prep program that is free of charge and available to all students up until February 26th.
- Seniors are planning their postsecondary journeys, with many having received college decisions and applying for scholarships. (The Watauga High School Student Services website is updated regularly with local scholarships, and students are encouraged to seek out additional ones as well.) Most

students are also working on or have completed the FAFSA form to apply for federal student aid. Because the FAFSA Simplification Act caused a delay with the newly designed 2024-2025 FAFSA, universities do not expect to receive students' information until mid-March (which is later than previous years) ~ which could postpone important decisions for some students/families.

- Watauga High School's spring musical "The Music Man" will be presented in the Ross Auditorium at Watauga High on April 19, 20, and 21. The Playmakers ensemble is also working on two different brief shows that they plan to perform for students at the K-8 schools later this semester.

### **WATAUGA OPPORTUNITIES**

A representative was not able to attend, so this will be part of the April agenda.

### **MOUNTAIN ALLIANCE**

Marisa Sedlak (Executive Director) and Rachel Witmer (Associate Director) presented highlights about Mountain Alliance, which was officially established in 1990 and has been serving teens for almost 35 years. The mission of Mountain Alliance is to provide "transformative experiences and support so that all High Country teens have the opportunity to lead an empowered, adventurous, and service-oriented life, regardless of means or background." Their programs center around leadership development, community service, outdoor adventure activities, environmental education, cultural experiences, mentoring, and academic support and college readiness (especially through the "School's Out" program which is offered five days/week). Mountain Alliance served around 900 students (including 200 middle school students) in the 2022-23 school year in Watauga County.

Alex Edgerton (Student Representative) shared about her personal growth and life-changing experiences through Mountain Alliance. Dr. Childers said, "I cannot say enough good about the program. The tradition has carried on strongly, and it is exciting to see how it continues to grow."

### **CONSENT AGENDA**

- A. Approval of the Minutes for 1/16/2023
- B. Field Trip Requests
- C. Declaration of Surplus
- D. Approval of Second Administration Summer Plan
- E. Personnel Report

Dr. Childers wanted to make sure that the minutes from the January meeting included that Jane Rogers, former Watauga High School Counselor, died (in January). While he had mentioned in December the loss of two former well-respected teachers, they were not included in the minutes from that month. Jimmie Owen passed away in October, and Deane Shuford passed away in December. All Board members were in agreement with making sure this was noted.

Marshall Ashcraft made a motion to approve the Consent Agenda. Steve Combs seconded the motion, and it was unanimously approved.

## **PUBLIC COMMENT**

There were three citizens who made public comments.

- ❖ Jeanne Mercer-Ballard: Ms. Mercer-Ballard shared comments to advocate for consideration of changes to the school calendar in order to hold final exams at Watauga High School before the winter/holiday break.
- ❖ Catherine Fountain: Ms. Fountain also made comments advocating that the school calendar be set up to allow for final exams to be held before the winter/holiday break.
- ❖ Hannah Massey: Ms. Massey wants to ensure that all students in Watauga County Schools feel safe at school. She spoke about the need for there to be more student access to specific bathroom spaces for LGBTQ+ students.

Dr. Childers explained that the Board has asked the North Carolina School Boards Association (NCSBA) Legislative Committee to make the calendar discussion a priority, and any help that parents can provide by working with legislators is appreciated. Watauga County is following the law with the school calendar (even though some other systems are not).

## **POLICIES: SUBSTANTIVE FOR FIRST READ**

- 4040/7310: Staff-Student Relations
- 7100: Recruitment and Selection of Personnel
- 7130: Licensure
- 7510: Leave
- 7520: Family and Medical Leave
- 7730: Employee Conflict of Interest
- 3320: School Trips
- 3320-R: Field Trip Procedures
- Watauga County Field Trip Request Form

Dr. Wayne Eberle presented these policies for first read.

There was discussion regarding field trip procedures and which ones could be approved by the Superintendent, and which ones should be approved by the Board. Dr. Alexander and Dr. Eberle will bring a recommendation on this to the March BOE meeting. Dr. Jay Fenwick mentioned that he would like to have a list of field trips that have been approved.

## **BOARD OPERATIONS**

- Dr. Alexander and Dr. Childers were unable to attend the NCSBA “Board Chairs & Superintendents Seminar” in January due to the weather.
- A LEAD Training will be held on April 22nd. (Dr. Childers reminded the Board members about the LEAD Training Survey.)
- Dr. Childers and Dr. Alexander will look at Superintendent Evaluations and determine the one they want to use.
- In regards to the facilities in Watauga County Schools, Mr. Ashcraft would like to get system-wide costs by category. He would like to have a baseline and look at inflation adjustments, and then look

at what the needs would cost compared to how much has been allocated. He would also like more site-specific figures/information, and a 3-5 year plan of priorities.

### **BOARD COMMENTS**

- The Board will consider having another Board retreat/work session at the end of the school year.
- Dr. Fenwick asked if Watauga County Schools is locked into the 2024-25 school calendar since it has been passed, and he wondered if any districts have had exemptions. Dr. Eberle said the Board could change the calendar if they wanted to, and he will look into if there have been exemptions.
- Dr. Childers commended Watauga High School Principal Scott Strickler on the new tardy policy.

### **ADJOURNMENT**

Steve Combs made a motion to adjourn, Jason Cornett seconded, and it was unanimously approved. The meeting adjourned at 7:56 p.m.

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Dr. Gary L. Childers, *Board of Education Chair*

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Dr. Leslie Alexander, *Superintendent*



## **WATAUGA COUNTY BOARD OF EDUCATION**

Margaret E. Gragg Education Center  
175 Pioneer Trail Boone, NC 28607  
(828) 264-7190

### **SPECIAL CALLED WATAUGA COUNTY BOARD OF EDUCATION MEETING**

**DATE:** February 21, 2024

**TIME:** 12:30 p.m.

**PLACE:** Margaret E. Gragg Education Center

**PRESENT:**

- Gary Childers, Steve Combs, Marshall Ashcraft, Jason Cornett (via Google Meet), Jay Fenwick (via Google Meet), *BOE Members*
- Dr. Leslie Alexander, *Superintendent*
- Dr. Chris Blanton, *Assistant Superintendent*
- Mr. Chris Campbell, *Board Attorney* (via Google Meet)
- Mr. Kris Caudill, *Attorney with Campbell Shatley* (via Google Meet)
- Ms. Jana Dobbins, *Director of Exceptional Children's Programs*

### **CALL TO ORDER**

Board Chair Dr. Gary Childers called the meeting to order at 12:39 p.m.

### **DISCUSSION AND ADJUSTMENT OF AGENDA**

There was not any discussion or adjustment to the agenda.

### **CLOSED SESSION**

Dr. Childers moved that the Board go into closed session pursuant to N.C.G.S. 143-318.11(a)(3) to receive information protected by the attorney-client privilege. Marshall Ashcraft seconded, and all Board members approved.

### **OPEN SESSION**

A motion was made by Steve Combs at 2:17 p.m. to return to open session, seconded by Marshall Ashcraft, and approved by all Board members (with the exception of Jason Cornett who had to leave the meeting early).

**ADJOURNMENT**

Marshall Ashcraft made a motion to adjourn, Steve Combs seconded the motion, and it was unanimously approved. The meeting adjourned at 2:19 p.m.

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Dr. Gary L. Childers, *Board of Education Chair*

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Dr. Leslie Alexander, *Superintendent*



## WATAUGA COUNTY BOARD OF EDUCATION

Margaret E. Gragg Education Center  
175 Pioneer Trail Boone, NC 28607  
(828) 264-7190

### **SPECIAL CALLED WATAUGA COUNTY BOARD OF EDUCATION MEETING**

**DATE:** February 27, 2024

**TIME:** 8:30 a.m.

**PLACE:** Parkway School

**PRESENT:**

- Gary Childers, Marshall Ashcraft, Jason Cornett (via Google Meet), Jay Fenwick, *BOE Members*
- Dr. Leslie Alexander, *Superintendent*
- Dr. Chris Blanton, *Assistant Superintendent*
- Mr. Kris Caudill, *Attorney with Campbell Shatley* (via Google Meet)
- Ms. Jana Dobbins, *Director of Exceptional Children's Programs*

### **CALL TO ORDER**

Board Chair Dr. Gary Childers called the meeting to order at 8:53 a.m.

### **DISCUSSION AND ADJUSTMENT OF AGENDA**

There was not any discussion or adjustment to the agenda.

### **CLOSED SESSION**

Dr. Childers stated that the Board would need to go into closed session pursuant to N.C.G.S. 143-318.11(a)(3) to receive information protected by the attorney-client privilege. Marshall Ashcraft made a motion to go into closed session, Jay Fenwick seconded, and all Board members approved.

### **OPEN SESSION**

A motion was made by Jay Fenwick at 9:46 a.m. to return to open session, seconded by Jason Cornett, and approved by all Board members.

Dr. Childers read a statement that the Board was in closed session pursuant to NCGS 143-318.11(a)(3) to consult with an attorney employed or retained by the public body in order to preserve the attorney-client privilege between the attorney and the public body, and to receive legal advice in A.P. v. Watauga County Board of Education, 24-EDC-00127.

**ADJOURNMENT**

Marshall Ashcraft made a motion to adjourn, Jay Fenwick seconded the motion, and it was unanimously approved. The meeting adjourned at 9:51 a.m.

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Dr. Gary L. Childers, *Board of Education Chair*

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Dr. Leslie Alexander, *Superintendent*

# WATAUGA COUNTY FIELD TRIP REQUEST FORM

This request is for a: \_\_\_ day trip \_\_\_ out of state day trip X overnight trip \_\_\_ overnight & out of state trip

Day trips must be submitted to the principal 15 days before the trip. Overnight trip requests must be submitted to the superintendent by the first day of each month. Overnight field trips require the prior approval of the principal, transportation director, superintendent, and Board of Education. All trips utilizing rental or charter vehicles require the prior approval of the transportation director. No employee will transport students in a personal vehicle and no employee or volunteer driver will transport students in a 12-15 passenger van. No more than five students will be transported by a school system employee or volunteer in any one vehicle other than a school bus or activity bus.

Sponsoring teacher: (Print) Zach Strickland School: WHS

Cell phone number: 570-494-6345 Grade(s): 12 Number of students: 2

Departure time/date: Thurs 2/15/24 9:00AM Return time/date: Sat 2/17/24 8:00PM

## Educational purpose:

Trip destination including city, state, and all places to be visited: (attach detailed itinerary as needed)

Greensboro NC, Greensboro Coliseum, Hotel, Nearby Restaurants  
(Sheraton Greensboro Four Seasons)

Purpose of trip and how it relates to the curriculum: We have 2 wrestlers that have  
qualified for the NCHSAA 4A State Tournament. They  
will have an opportunity to compete against great  
competition as well as represent our school, team, &  
community in a positive way.

## Supervision and Safety:

Names of all school staff chaperones: Zach Strickland & Terrell Williams &  
John Gray Singe (All Asst. Coaches)

Names of all non-school chaperones: Parents of each athlete also plan to  
attend.

All chaperones have a background check completed:

Sponsoring teacher initials: 25

Are all site(s) accessible to students with disabilities? ☒ yes ☐ no How will students with disabilities be accommodated for site access and transportation? N/A

Sponsoring Teacher Initials N/A (If applicable) A safety/supervision plan for high risk and/or water activities has been shared with the parents. Please attach a copy of the plan to this form if applicable.

**Transportation plan:**

Mode of transportation: ☐ Yellow bus with wheelchair lift ☐ Yellow bus without wheelchair lift  
☐ Activity bus with wheelchair lift ☐ Activity bus without wheelchair lift ☒ Rental car/mini-van  
☐ Charter bus Other (Please explain) WCS Mini Van

Name of charter bus company (if checked above) N/A

(If applicable, bus request form must be attached)

Driver/s: Zach Strickland Round trip mileage: 230 # of buses needed: 0

Total cost per student \$ None Source of funds: WHS Athletics

The sponsoring teacher has reviewed Board policies 3320, 3320-R, and 6315: Teacher initials: 25

**Approval/Signatures:**

Sponsoring teacher signature: Zach Strickland Date: 2 / 12 / 24

Principal approval: [Signature] Date: 2 / 12 / 24

**Required signatures if applicable:**

Transportation Director approval: [Signature] Date: 2 / 14 / 24

Superintendent approval: [Signature] Date: 2 / 13 / 24

Board of Education approval: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

NC Renewable Energy Competition - 3/22/24

ECU Outer Banks Campus

## WATAUGA COUNTY FIELD TRIP REQUEST FORM

This request is for a: \_\_\_ day trip \_\_\_ out of state day trip ☒ overnight trip \_\_\_ overnight & out of state trip

Day trips must be submitted to the principal 15 days before the trip. Overnight trip requests must be submitted to the superintendent by the first day of each month. Overnight field trips require the prior approval of the principal, transportation director, superintendent, and Board of Education. All trips utilizing rental or charter vehicles require the prior approval of the transportation director. No employee will transport students in a personal vehicle and no employee or volunteer driver will transport students in a 12-15 passenger van. No more than five students will be transported by a school system employee or volunteer in any one vehicle other than a school bus or activity bus.

Sponsoring teacher: (Print) Courtney Capozzoli School: Watauga High School

Cell phone number: 828-406-5260 Grade(s): 10-12 Number of students: 9

Departure time/date: Fri 3/22 @ 3:40pm Return time/date: Sun 3/24 @ 5pm

### Educational purpose:

Trip destination including city, state, and all places to be visited: (attach detailed itinerary as needed)

- Coastal Studies Institute, Wanchese, NC
- Ramada Plaza by Wyndham Nags Head, 1701 Virginia Dare Trail, Kill Devil Hills NC

Purpose of trip and how it relates to the curriculum: A team of physics & AP Env Science students will be competing in the NC Renewable Energy Challenge. They will design & build a wind turbine that will be tested in a wind tunnel to see which design can produce the most electricity.

More can be found at [coastalstudiesinstitute.org/nc-renewable-energy-challenge/](http://coastalstudiesinstitute.org/nc-renewable-energy-challenge/)

### Supervision and Safety:

Names of all school staff chaperones: Courtney Capozzoli (and possibly Jackie Blaw)

Names of all non-school chaperones: \_\_\_\_\_

All chaperones have a background check completed: Yes Sponsoring teacher initials: CBC  
Are all site(s) accessible to students with disabilities? ✓ yes    no How will students with disabilities be  
accommodated for site access and transportation? N/A

Sponsoring Teacher Initials    (If applicable) A safety/supervision plan for high risk and/or water activities has  
been shared with the parents. Please attach a copy of the plan to this form if applicable.

**Transportation plan:**

Mode of transportation:    Yellow bus with wheelchair lift    Yellow bus without wheelchair lift  
   Activity bus with wheelchair lift    Activity bus without wheelchair lift    Rental car/mini-van  
   Charter bus Other (Please explain) WHS min van (already reserved)

Name of charter bus company (if checked above)   

(If applicable, bus request form must be attached)

Driver/s: Courtney Capozzoli Round trip mileage: 678 # of buses needed: 0  
Total cost per student \$ 25.43 - mileage Source of funds: ASU Sustainable  
\$113 - lodging Technology Dept.  
\$138.43 total/student

The sponsoring teacher has reviewed Board policies 3320, 3320-R, and 6315: Teacher initials: CBS

**Approval/Signatures:**

Sponsoring teacher signature: CBCapozzoli Date: 1 / 31 / 24  
Principal approval: [Signature] Date: 2 / 6 / 24

**Required signatures if applicable:**

Transportation Director approval: [Signature] Date: 2 / 14 / 24  
Superintendent approval: [Signature] Date: 2 / 29 / 24  
Board of Education approval:    Date:    /    /

## WATAUGA COUNTY FIELD TRIP REQUEST FORM

This request is for a: \_\_\_ day trip \_\_\_ out of state day trip ☒ overnight trip \_\_\_ overnight & out of state trip

Day trips must be submitted to the principal 15 days before the trip. Overnight trip requests must be submitted to the superintendent by the first day of each month. Overnight field trips require the prior approval of the principal, transportation director, superintendent, and Board of Education. All trips utilizing rental or charter vehicles require the prior approval of the transportation director. No employee will transport students in a personal vehicle and no employee or volunteer driver will transport students in a 12-15 passenger van. No more than five students will be transported by a school system employee or volunteer in any one vehicle other than a school bus or activity bus.

Sponsoring teacher: (Print) Cindy Lentz School: Watauga HS  
Cell phone number: 773-2136 Grade(s): 10-12 Number of students: 4  
Departure date: April 3, 2024 Return date: April 5, 2024  
Departure time: 10:00 AM Return time: 11:30 PM

### Educational purpose:

Trip destination including city, state, and all places to be visited: (attach detailed itinerary as needed)

Greensboro, NC - Located at Koury Convention  
Center - Will be staying here as well

Purpose of trip and how it relates to the curriculum:

HOSA State Leadership Conference. 4 students  
will compete in HOSA competitions they  
have been preparing for. HOSA is the  
Health Science CTSO.

### Supervision and Safety:

Names of all school staff chaperones: Cindy Lentz

Names of all non-school chaperones: April Greene ✓

All chaperones have a background check completed: Yes Sponsoring teacher initials: CML  
Are all site(s) accessible to students with disabilities? ☒ yes ☐ no How will students with disabilities be  
accommodated for site access and transportation? \_\_\_\_\_

Sponsoring Teacher Initials CML (If applicable) A safety/supervision plan for high risk and/or water activities has  
been shared with the parents. Please attach a copy of the plan to this form if applicable. No water activities allowed

**Transportation plan:**

Mode of transportation: \_\_\_\_\_ Yellow bus with wheelchair lift \_\_\_\_\_ Yellow bus without wheelchair lift  
\_\_\_\_\_ Activity bus with wheelchair lift \_\_\_\_\_ Activity bus without wheelchair lift ☒ Rental car/mini-van  
\_\_\_\_\_ Charter bus Other (Please explain) \_\_\_\_\_

Name of charter bus company (if checked above) \_\_\_\_\_

(If applicable, bus request form must be attached)

Driver/s: Cindy Lentz Round trip mileage: 220 # of buses needed: 1

Total cost per student \$ \_\_\_\_\_ Source of funds: HOSA

The sponsoring teacher has reviewed Board policies 3320, 3320-R, and 6315: Teacher initials: CML

**Approval/Signatures:**

Sponsoring teacher signature: Cindy M. Lentz Date: 2 / 8 / 24

Principal approval: [Signature] Date: 2 / 9 / 24

**Required signatures if applicable:**

Transportation Director approval: [Signature] Date: 2 / 14 / 24

Superintendent approval: [Signature] Date: 2 / 29 / 24

Board of Education approval: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

## Declaration of Surplus Items - March 2024

Date Approved: \_\_\_\_\_

### Bethel

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>	<u>Usable</u>	<u>Unusable</u>
	<input type="text"/>		<input type="text"/>	<input type="text"/>
	0		0	0

### Blowing Rock

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>	<u>Usable</u>	<u>Unusable</u>
NONE	1	KIAVAC		1
None	1	wooden podium		1
None	1	canon typewriter		1
None	17	student desks		17
None	40	chairs		40
None	1	wooden desk		1
None	4	metal filing cabinets		4
None	2	wood cabinets		2
None	1	wooden magazine/book shelf		1
None	1	tv cart	1	
None	1	sharp air conditioner		1
28467	1	PROJ- EPSON		1
28467	1	PROJ- EPSON		1
NONE	2	STORAGE- POSTERBOARD		2
NONE	1	CART- MULTI-LEVEL ROLLING	1	
	<input type="text"/>		<input type="text"/>	<input type="text"/>
	75		2	73

### Cove Creek

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>	<u>Usable</u>	<u>Unusable</u>
NONE	1	MONITOR- DELL AS501		1
800386	1	AMP- BG115		1
NONE	2	SPEAKERS- AMPLIFIER		2
NONE	1	TV- SYLVANIA	1	
NONE	1	MONITOR- DELL 1707F Pt		1
34473	1	CHROMEBOOK- 300e	1	

7

2

5

## Green Valley

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>	<u>Usable</u>	<u>Unusable</u>
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0

0

0

## Hardin Park

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>	<u>Usable</u>	<u>Unusable</u>
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33374	1	CHROMEBOOK- 100e		1
NONE	1	FILE CABINET- 4 DRAWER	1	
NONE	2	FILE CABINET- 4 DR- LOCKABLE	2	
NONE	2	STUDENT CHAIRS		2
31822	1	CHROMEBOOK N23		1

7

3

4

## Mabel

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>	<u>Usable</u>	<u>Unusable</u>
----------------	-----------------	--------------------	---------------	-----------------

34023	1	CHROMEBOOK- 100e		1
NONE	2	DESK- TEACHER		2

3

0

3

## Parkway

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>	<u>Usable</u>	<u>Unusable</u>
----------------	-----------------	--------------------	---------------	-----------------

52259	1	CHROMEBOOK- 300e		1
700409	1	Walktie Talkie & Base		1
400410	1	Walktie Talkie & Base	1	
700594	1	Walktie Talkie & Base	1	
700411	1	Walktie Talkie & Base	1	
700408	1	Walktie Talkie & Base	1	

700412	1 Walkie Talkie & Base	1
700593	1 Walkie Talkie & Base	1
NONE	1 Walkie Talkie & Base	1
NONE	1 Walkie Talkie & Base	1
NONE	1 Walkie Talkie & Base	1
NONE	1 Walkie Talkie & Base	1

12

10	2

## Valle Crucis

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>	<u>Usable</u>	<u>Unusable</u>
300144	1	DOC CAMERA- ELMO		1

1

0	1

## Watauga High School

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>	<u>Usable</u>	<u>Unusable</u>
52106	1	CHROMEBOOK		1
902962	1	TOOL BOX- 26"	1	
902966	1	TOOL BOX- 26"	1	
80758	1	NITROGEN MACHINE		1
903846	1	LAMINATOR		1
36233	1	TRIPOD		1
32836	1	TRIPOD		1
39247	1	PROJ- APOLLO		1
NONE	1	PROJ- APOLLO		1
37039	1	PROJ- APOLLO		1
905820	1	Sony DVD Player		1
38801	1	Jam Box/Portable Radio/CD		1
904869	1	Cart		1
NONE	1	Filing Cabinet		1
906740	1	HP Prodesk CPU	1	
906742	1	HP Prodesk CPU	1	
906736	1	HP Prodesk CPU	1	
906732	1	HP Prodesk CPU	1	
906734	1	HP Prodesk CPU	1	
906741	1	HP Prodesk CPU	1	
906739	1	HP Prodesk CPU	1	

906738	1 HP Prodesk CPU	1
906731	1 HP Prodesk CPU	1
906737	1 HP Prodesk CPU	1
NONE	1 Dell Monitor	1
NONE	1 Dell Monitor	1
NONE	1 Dell Monitor	1
NONE	1 Dell Monitor	1
NONE	1 Dell Monitor	1
NONE	1 Dell Monitor	1
NONE	1 Dell Monitor	1
NONE	1 Dell Monitor	1
NONE	1 Keyboards/Mice/cables	1

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34

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22      12

## Central Office

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>
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0

<u>Usable</u>	<u>Unusable</u>

0      0

## Technology Department

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>
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26432	1	TABLET- IPAD
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1

<u>Usable</u>	<u>Unusable</u>
1	

1      0

## Transportation Department

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>
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51010	1	TESTER- VOLTAGE/AMP	1
51011	1	BATTERY CHARGER	1

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2

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0      2

## Maintenance Department

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>	<u>Usable</u>	<u>Unusable</u>
34559	1	CHROMEBOOK 300e		1
	<input type="text"/>		<input type="text"/>	<input type="text"/>
	1		0	1

## Child Nutrition

<u>Asset #</u>	<u>Quantity</u>	<u>Description</u>	<u>Usable</u>	<u>Unusable</u>
	<input type="text"/>		<input type="text"/>	<input type="text"/>
	0		0	0



## WATAUGA COUNTY BOARD OF EDUCATION

Margaret E. Gragg Education Center  
175 Pioneer Trail Boone, NC 28607  
(828) 264-7190

March 11, 2024

To: Dr. Leslie Alexander, Superintendent  
Members, Watauga County Board of Education

From: Ms. Monica Bolick, School Nutrition Director

Re: Vendor Recommendation for new VC School Equipment Purchases-Additional Items

Watauga County Schools is currently planning for the purchase and delivery of additional cafeteria equipment for the new Valle Crucis School building project. This purchase does not include any smallwares items.

Items that are not available for purchase on state contract were submitted to vendors for purchase by Invitation for Bid (IFB) on February 1, 2024. The IFB was issued to five separate vendors. Only one vendor returned a completed bid, Singer T&L.

It is respectfully requested to approve purchase for the goods and services on the attached bid with **Singer T&L** in the amount of **\$121,405.33**.

Pricing for this contract includes delivery. The contractor will make all final connections of equipment. The warranty on all items will begin once installed and when factory startups are complete.



FE&S 2023  
**DEALER**  
OF THE YEAR

# Quote

02/13/2024



**Project:**  
Watauga County Board of  
Education / Margaret E. Gragg  
Education Center





**From:**  
Singer T&L  
David Maxwell  
933 Robeson Street  
Fayetteville, NC 28305-5613  
(910) 484-1128  
(910)912-6741 (Contact)



Job Reference Number: SF8575M





This is a quote (the "Quote") to provide equipment and/or services. This Quote includes the conditions presented below and the terms that are included at <https://www.singerequipment.com/policies/quote-terms-conditions> (the "Terms").

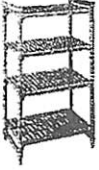

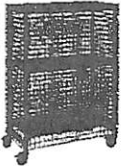
When you accept this Quote, as provided below, this Quote, together with the Terms, will form a binding contract (the "Contract") between you and Singer NC LLC d.b.a.Singer T&L, a division of Singer Equipment Company, Inc. ("Singer").


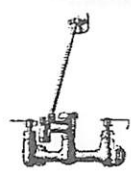



Item	Qty	Description	Sell	Sell Total
4	1 ea	<b>PLANETARY MIXER</b>  KitchenAid Commercial Model No. KSM8990OB KitchenAid® Commercial Stand Mixer, countertop, 8 quart bowl with lift, PowerCore® technology, commercial attachment power hub, ASF control panel, stainless steel bowl, dough hook, flat beater, and wire whip, speed control protection, onyx black finish, 500 watts, 1.3 HP, 120v/60/1-ph, 4' cord, cULus, NSF	\$698.42	\$698.42
	1 ea	Two year replacement warranty from date of purchase, extends to the purchaser and any succeeding owner Commercial Immersion Blenders operated in the 50 United States, the District of Columbia, & Canada, standard		
ITEM TOTAL:				\$698.42
8.2	2 ea	<b>INGREDIENT BIN</b>  Cambro Model No. IBS27148 Ingredient Bin, mobile, 27 gallon capacity, 1-pc seamless polyethylene bin, 2-pc sliding polycarbonate lid, scoop holder included (scoop sold separately), (4) 3" heavy duty casters (2 front swivel, 2 fixed), white with clear cover, NSF	\$242.25	\$484.50
ITEM TOTAL:				\$484.50
9	1 ea	<b>COOLER / FREEZER COMBO</b> BALLY REFRIGERATED BOXES INC Model No. CUSTOM	\$38,250.11	\$38,250.11

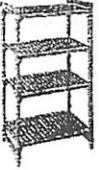
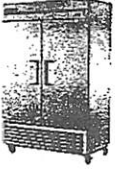


Item	Qty	Description	Sell	Sell Total
As quoted on bally Quote 220667-1-1-MM Singer T&L will put the walk-in together with other trades doing the refrigeration connections and the electrical.				
			<b>ITEM TOTAL:</b>	<b>\$38,250.11</b>
10	8 ea	<b>SHELVING UNIT, PLASTIC WITH POLY EXTERIOR STEEL POSTS</b>  Cambro Model No. CPU246072V4480 Camshelving® Premium Starter Unit, 24"W x 60"L x 72"H, 4-tier, withstands temperature -36°F (-38°C) to 190°F (88°C), includes: (4) vented polypropylene shelf plates with Camguard® antimicrobial protection, (2) pre-assembled post kits (posts constructed of steel with polypropylene exterior), (8) traverses & molded-in dovetails, 800 lbs. capacity per shelf /2,000 lbs. max capacity, speckled gray, NSF	\$589.00	\$4,712.00
			<b>ITEM TOTAL:</b>	<b>\$4,712.00</b>
11	2 ea	<b>SHELVING UNIT, PLASTIC WITH POLY EXTERIOR STEEL POSTS</b>  Cambro Model No. CPU247272V4PKG Camshelving® Premium Starter Unit, 24"W x 72"L x 72"H, 4-tier, withstands temperature -36°F (-38°C) to 190°F (88°C), includes: 4) vented polypropylene shelf plates with Camguard® antimicrobial protection, (2) unassembled post kits (posts constructed of steel with polypropylene exterior), (8) traverses & molded-in dovetails, 800 lbs. capacity per shelf /2,000 lbs. max capacity, speckled gray, NSF	\$697.50	\$1,395.00
			<b>ITEM TOTAL:</b>	<b>\$1,395.00</b>
19	2 ea	<b>LOCKER, 5 TIER 1 COL</b>  Winholt Equipment Model No. WL-55 Locker, Five Tier, 1 column, 5 doors per column, 10" x 12" x 12" compartment, doors are mesh grid vented, beige	\$272.70	\$545.40
			<b>ITEM TOTAL:</b>	<b>\$545.40</b>
22	1 ea	<b>CASHIER COUNTER</b> Delfield Model No. SCS-30 30" Cashier Counter / 36" High w/ trayslide	\$3,752.17	\$3,752.17
			<b>ITEM TOTAL:</b>	<b>\$3,752.17</b>
	1 ea	<b>WORK TABLE, PARTS &amp; ACCESSORIES</b>  Advance Tabco Model No. TA-46 Door lock, one required for each hinge door or for each set of sliding doors	\$192.93	\$192.93
			<b>ITEM TOTAL:</b>	<b>\$192.93</b>
	1 st	<b>BRAKES</b> Advance Tabco Model No. TA-255PB Packed 1 st For Brakes on All Wheels (enclosed base casters, set of (4) TA-255P or set of (6) TA-255AP) (upgrade only, must order casters separately)	\$191.64	\$191.64

Item	Qty	Description	Sell	Sell Total
			<b>ITEM TOTAL:</b>	<b>\$191.64</b>
23	1 ea	<b>OPEN DISPLAY MERCHANDISER</b>	\$8,105.52	\$8,105.52
		 Beverage Air Model No. VMHC-18-1-B Vuemax Series Open-Air Merchandiser, 52"W x 31-3/4"D x 83-3/8" H, 18.6 cu. ft. capacity, tempered thermal glass sides, (5) shelves, price tag molding, night curtain, 36° F - 40° F operating temperatures, LED interior lighting, maintenance-free condenser, automatic defrost, R290 Hydrocarbon refrigerant, painted steel interior, black vinyl wrapped exterior, (2) 1/3 HP, cETLus, ETL-Sanitation		
	1 ea	3 years parts & labor warranty (excludes maintenance items)		
	1 ea	7 years compressor warranty (part only), standard		
	1 ea	115v/60/1-ph, 12 amps, NEMA 5-20P		
			<b>ITEM TOTAL:</b>	<b>\$8,105.52</b>
24	1 ea	<b>ALL PURPOSE COUNTER</b>	\$3,382.81	\$3,382.81
		Delfield Model No. SC-60-NU 60" All Purpose Counter, 36" High w/ tray slide		
			<b>ITEM TOTAL:</b>	<b>\$3,382.81</b>
25	1 ea	<b>ICE CREAM NOVELTY MERCHANDISER</b>	\$2,215.56	\$2,215.56
		 Beverage Air Model No. NC51HC-1-W Novelty Case, 50-3/8"W, 13.19 cu. ft. capacity, angled top design, (2) removable glass lids, lid locks & keys, (5) removable baskets, adjustable thermostat control, integrated tag molding, LED lighting, drain plug, maintenance-free condenser, pre-painted white steel cabinet finish, 2" casters, R290 Hydrocarbon refrigerant, 1/4 HP, ETL- Sanitation, cETLus		
	1 ea	3 years parts & labor warranty (excludes maintenance items)		
	1 ea	7 years compressor warranty (part only), standard		
	1 ea	120v/60/1-ph, 3.5 amps, cord with NEMA 5-15P		
			<b>ITEM TOTAL:</b>	<b>\$2,215.56</b>
26	1 ea	<b>COLD PAN SERVING COUNTER</b>	\$7,335.47	\$7,335.47
		Delfield Model No. SC3C-50-BP 50" inch 3 pan cold serving line/ with tray slide		
			<b>ITEM TOTAL:</b>	<b>\$7,335.47</b>
26.1	1 ea	<b>FLEXIBLE SHIELD</b>	\$3,270.38	\$3,270.38
		Delfield Model No. DCFSFS 47.378" Fileable Shield to go on Cold Unit		
			<b>ITEM TOTAL:</b>	<b>\$3,270.38</b>
26	1 ea	<b>THREE WELL HOT FOOD COUNTER</b>	\$8,154.14	\$8,154.14
		Delfield Model No. SH-3-NU Three Well Hot Food Counter with tray slide		
			<b>ITEM TOTAL:</b>	<b>\$8,154.14</b>
26.1	1 ea	<b>FLEXIBLE SHIELD</b>	\$3,270.38	\$3,270.38

Item	Qty	Description	Sell	Sell Total
Delfield Model No. DCFSES 47.378" Fileable Shield to go on Cold Unit				
			<b>ITEM TOTAL:</b>	<b>\$3,270.38</b>
28	1 ea	<b>SHELVING UNIT, PLASTIC WITH POLY EXTERIOR STEEL POSTS</b>  Cambro Model No. CPU247272V4PKG (NS_CAMCPU247272V4PKG) Camshelving® Premium Starter Unit, 24"W x 72"L x 72"H, 4-tier, withstands temperature -36°F (-38°C) to 190°F (88°C), includes: 4) vented polypropylene shelf plates with Camguard® antimicrobial protection, (2) unassembled post kits (posts constructed of steel with polypropylene exterior), (8) traverses & molded-in dovetails, 800 lbs. capacity per shelf /2,000 lbs. max capacity, speckled gray, NSF	\$627.75	\$627.75
			<b>ITEM TOTAL:</b>	<b>\$627.75</b>
29	1 ea	<b>FLATWARE &amp; TRAY CART</b>  Caddy Model No. CM-1814-2CSL Caddy Magic Tray & Silverware Dispenser, cantilever style, unheated, (18) hole silverware holder, double stack for 14" x 18" trays, capacity up to (150) trays & (40) pieces of silverware each cylinder, self- leveling platform, 4" swivel casters, NSF	\$3,615.16	\$3,615.16
1 ea For freight classes, contact Caddy's shipping manager at shipping@caddycorp.com			<b>ITEM TOTAL:</b>	<b>\$3,615.16</b>
30	1 ea	<b>MILK COOLER</b>  Beverage Air Model No. SMF49HC-1-S (NS_10229800) School Milk Cooler, forced air, 49"W x 33-5/8"D x 47"H, 19.66 cu. ft., single access, exterior digital thermometer, (12) 13" x 13" x 11" or (8) 19" x 13" x 11" case capacity, self-latching doors/lids with safety bumpers, cylinder lock, wire floor racks, floor drain, electronic control, auto defrost, stainless steel interior & exterior, R290 Hydrocarbon refrigerant, 1/4 HP, cULus, UL EPH Classified, UL-Sanitation, Made in USA	\$4,268.06	\$4,268.06
1 ea 3 years parts & labor warranty (excludes maintenance items) 1 ea Self-Contained refrigeration 1 ea 7 years compressor warranty (part only), standard 1 ea 115v/60/1-ph, 3.0 amps, cord with NEMA 5-15P 1 ea 6" Heavy duty casters, (2) with brakes, standard			<b>ITEM TOTAL:</b>	<b>\$4,268.06</b>
31.1	1 ea	<b>PRE-RINSE FAUCET ASSEMBLY</b>  T&S Brass Model No. B-0133 EasyInstall Pre-Rinse Unit, wall mount mixing faucet with 8" adjustable centers, quarter-turn Eterna cartridges with spring checks, lever handles with color-coded indexes, 18" EasyInstall riser, 44" flexible stainless steel hose with heat-resistant gray handle & hold down ring, 1.15 GPM spray valve (B-0107), finger hook, polished	\$350.35	\$350.35

Item	Qty	Description	Sell	Sell Total
		chrome-plated brass faucet body, 1/2" NPT female inlets, CSA		
	1 ea	B-0109-01 Wall Bracket, 6"	\$41.48	\$41.48
	1 kt	B-0230-K Installation Kit, (2) 1/2" NPT nipples, lock nuts & washers, (2) short "Ell" 1/2" NPT female x male	\$34.07	\$34.07
	1 kt	B-0230-KIT Inlet Kit, 1/2" NPT nipple, close elbows, 24" flex supply hoses	\$39.13	\$39.13
ITEM TOTAL:				\$465.03
35	2 ea	<b>SHELVING UNIT, PLASTIC WITH POLY EXTERIOR STEEL POSTS</b>	\$499.50	\$999.00
		 Cambro Model No. CPU186072V4480 (NS_10082830) Camshelving® Premium Starter Unit, 18"W x 60"L x 72"H, 4-tier, withstands temperature -36°F (-38°C) to 190°F (88°C), includes: (4) vented polypropylene shelf plates with Camguard® antimicrobial protection, (2) pre-assembled post kits (posts constructed of steel with polypropylene exterior), (8) traverses & molded-in dovetails, 800 lbs. capacity per shelf /2,000 lbs. max capacity, speckled gray, NSF		
ITEM TOTAL:				\$999.00
36.1	1 ea	<b>PRE-RINSE FAUCET ASSEMBLY, WITH ADD ON FAUCET</b>	\$469.57	\$469.57
		 T&S Brass Model No. B-0133-ADF16-B EasyInstall Pre-Rinse Unit, 8" wall mount, adjustable centers, EasyInstall 16" add-on faucet with stream regulator, spring action gooseneck, quarter-turn Eterna cartridges with spring checks, lever handles with color coded indexes, 18" rigid riser, 44" flexible stainless steel hose, 1.15 GPM spray valve, 6" adjustable wall bracket, 1/2" NPT, low lead, NSF, cCSAus		
	1 kt	B-0230-K Installation Kit, (2) 1/2" NPT nipples, lock nuts & washers, (2) short "Ell" 1/2" NPT female x male	\$34.07	\$34.07
	1 kt	B-0230-KIT Inlet Kit, 1/2" NPT nipple, close elbows, 24" flex supply hoses	\$39.13	\$39.13
	1 ea	3 year limited warranty, standard		
ITEM TOTAL:				\$542.77
37	1 ea	<b>SECURITY UNIT</b>	\$2,364.75	\$2,364.75
		 Cambro Model No. CPMU244867SUPKG (NS_10082732) Camshelving® Premium Mobile Security Unit, 26-3/4"W x 50-1/4"L x 67-3/4"H, includes: (2) Premium mobile post kits, (2) vented shelf kits, (4) premium swivel casters with total locking brake, and (1) stainless steel full wrap security cage (CPFWSC244860), weight bearing capacity of 750 lbs.		
ITEM TOTAL:				\$2,364.75
	4 kt	<b>PLASTIC SHELVING</b>	\$85.05	\$340.20

Item	Qty	Description	Sell	Sell Total
		Cambro Model No. CPSK2448V1480 (NS_10082882) Packed 1 kt Camshelving® Premium Shelf Kit, 24"W x 48"L, withstands temperature from -36°F (-38°C) to 190°F (88°C), includes: vented shelf plates for 1 shelf with Camguard® antimicrobial protection & (2) traverses, speckled gray, NSF listed components, Made in USA		
		ITEM TOTAL:		\$340.20
1	1 ea	<b>SERVICE FAUCET</b>	\$146.84	\$146.84
		Krowne Model No. 16-127 (NS_10277667) Packed 6 ea Krowne Royal Series Service Faucet, splash-mounted, 8" centers, 6- 1/2" long heavy cast spout with bail hook & hose thread, bracket can mount above or below, vacuum breaker, rough brass, low lead compliant, NSF, Includes internal check valves to prevent backflow & cross contamination		
	1 ea	3 year warranty, standard		
		ITEM TOTAL:		\$146.84
38	1 ea	<b>SHELVING, WALL MOUNTED</b>	\$536.01	\$536.01
		Advance Tabco Model No. K-246 Utility Shelf, wall-mounted, 36"W x 8"D, 1-1/2" upturn on rear & sides, (3) mop holders, (4) rag hooks, stainless steel, NSF		
		ITEM TOTAL:		\$536.01
39	1 ea	<b>SHELVING UNIT, PLASTIC WITH POLY EXTERIOR STEEL POSTS</b>	\$627.75	\$627.75
		Cambro Model No. CPU247272V4PKG (NS_CAMCPU247272V4PKG) Camshelving® Premium Starter Unit, 24"W x 72"L x 72"H, 4-tier, withstands temperature -36°F (-38°C) to 190°F (88°C), includes: 4) vented polypropylene shelf plates with Camguard® antimicrobial protection, (2) unassembled post kits (posts constructed of steel with polypropylene exterior), (8) traverses & molded-in dovetails, 800 lbs. capacity per shelf /2,000 lbs. max capacity, speckled gray, NSF		
		ITEM TOTAL:		\$627.75
40	5 ea	<b>SHELVING UNIT, PLASTIC WITH POLY EXTERIOR STEEL POSTS</b>	\$558.00	\$2,790.00
		Cambro Model No. CPU246072V4480 (NS_10082863) Camshelving® Premium Starter Unit, 24"W x 60"L x 72"H, 4-tier, withstands temperature -36°F (-38°C) to 190°F (88°C), includes: (4) vented polypropylene shelf plates with Camguard® antimicrobial protection, (2) pre-assembled post kits (posts constructed of steel with polypropylene exterior), (8) traverses & molded-in dovetails, 800 lbs. capacity per shelf /2,000 lbs. max capacity, speckled gray, NSF		
		ITEM TOTAL:		\$2,790.00
41	1 ea	<b>SHELVING UNIT, PLASTIC WITH POLY EXTERIOR STEEL POSTS</b>	\$431.05	\$431.05

Item	Qty	Description	Sell	Sell Total
		Cambro Model No. CPU243672V4480 (NS_10276459) Camshelving® Premium Starter Unit, 24"W x 36"L x 72"H, 4-tier, withstands temperature -36°F (-38°C) to 190°F (88°C), includes: (4) vented polypropylene shelf plates with Camguard® antimicrobial protection, (2) pre-assembled post kits (posts constructed of steel with polypropylene exterior), (8) traverses & molded-in dovetails, 800 lbs. capacity per shelf /2,000 lbs. max capacity, speckled gray, NSF		
			<b>ITEM TOTAL:</b>	<b>\$431.05</b>
A-1	1 ea	<b>REACH-IN FREEZER</b>	\$7,104.31	\$7,104.31
		True Mfg. - General Foodservice Model No. TS-49F-HC Freezer, reach-in, two-section, -10°F, (2) stainless steel doors, (6) gray PVC coated adjustable wire shelves, LED interior lighting, stainless steel front/sides, stainless steel interior, 4" castors, R290 Hydrocarbon refrigerant, 1 HP, 115v/60/1-ph, 9.6 amps, NEMA 5-15P, cULus, CE, UL EPH Classified, Made in USA, ENERGY STAR® On State Term Contract		
	1 ea	Self-contained refrigeration standard		
	1 ea	7 year compressor warranty, 6 years parts warranty, 5 year labor warranty standard. Please visit <a href="http://www.truemfg.com">www.truemfg.com</a> for specifics standard		
	1 ea	Left door hinged left, right door hinged right standard		
	1 ea	4" stem castors, standard (adds 5" to OA height)		
			<b>ITEM TOTAL:</b>	<b>\$7,104.31</b>
A-2	1 ea	<b>HOSE REEL</b>	\$1,869.73	\$1,869.73
		T&S Brass Model No. B-7142-C01XS1E Hose Reel Assembly, 3/8" x 50' Enclosed stainless steel Reel, Exposed Piping & Accessories		
			<b>ITEM TOTAL:</b>	<b>\$1,869.73</b>
A-3	1 ea	<b>FOOD PROCESSOR, BENCHTOP / COUNTERTOP</b>	\$1,043.81	\$1,043.81
		Robot Coupe Model No. R2N Commercial Food Processor, 3 liter gray polycarbonate bowl with handle, vegetable prep attachment with external ejection, kidney-shaped opening, includes: (1) "S" blade (27055), (1) 2mm grating disc (27577), (1) 4mm slicing disc (27566), continuous feed, bowl attachment designed for vertical cutting & mixing, on/off & pulse switch, single speed, 1725 RPM, 120v/60/1-ph, 7.0 amps, 1 HP, NEMA 5-15P, cETLus, ETL-Sanitation On State Term Contract		
	1 ea	1 year parts & labor warranty		
			<b>ITEM TOTAL:</b>	<b>\$1,043.81</b>

**Singer T&L**

**02/13/2024**

**Merchandise**

**\$113,728.65**

**Tax 6.75%**

**\$7,676.68**

**Total**

**\$121,405.33**

Prices are valid for 30 days unless otherwise noted herein, thereafter reconfirm.

Unless otherwise noted herein, freight charges are NOT included.

#### Warranties

Manufacturer's standard warranties are included. No other warranty is extended or implied unless otherwise noted herein, and ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, ARE DISCLAIMED TO THE FULLEST EXTENT ALLOWED BY LAW.

#### Taxes

Prices do not include sales nor use tax unless otherwise noted herein. All applicable taxes are subject to the current rate at time of final invoicing and are the responsibility of the customer.

#### Payment Terms

Unless otherwise noted herein, standard payment terms are 50% due at signing of quote and acceptance of terms and conditions, and the remaining balance will be due prior to delivery. Prices are quoted based on check or ACH as a form of payment. Credit card payment may incur a service charge on the total order.

See link to the Terms and Conditions, Return/Cancellation Section for the return and cancellation terms applicable to this Quote.

See link to the Terms and Conditions, Delivery Section, for delivery and shipping terms applicable to this Quote.

See link to the Terms and Conditions, Scope of Work Section, for the scope of Singer's work and exclusions therefrom applicable to this Quote.

Please read this quotation carefully as it is based upon our interpretation of the items being requested. Review this quotation for errors, omissions or inaccuracies of any kind. The customer is responsible to verify all measurements, directions of operation, voltages and utility specifications prior to ordering. Any changes to the above may incur a price adjustment.

TO ACCEPT THE QUOTE AND THE TERMS, AND TO CONFIRM OUR CONTRACT, PLEASE EITHER:

- A. Select the "ACCEPT" button at the bottom of the screen which will prompt you to execute an electronic signature, which we accept. *By executing this Quote and the Contract hereby created, you are authorizing Singer to rely on your electronic signature as binding confirmation of your agreement to Contract. In addition, by executing this Quote, you are expressly acknowledging and agreeing to the Contract thereby created, comprised of this Quote and the Singer Terms, and the terms on each and every page of the Contract.*
- B. Print, sign and return this entire document to your Singer Representative or Copy and Paste this entire document into your confirming acceptance email and send the email to your Singer Representative.

As an authorized representative of the undersigned customer, the undersigned hereby confirms and accepts the terms of the Quote and the Terms at <https://www.singerequipment.com/policies/quote-terms-conditions>, which I hereby confirm on behalf of the Customer. I have reviewed and accepted, and thus confirm and the Contract between the undersigned Customer and Singer intending the undersigned Customer to be legally bound by the terms of the Contract hereby formed.

AS THE AUTHORIZED REPRESENTATIVE OF THE CUSTOMER, I FURTHER CONFIRM THAT ANY PRE-PRINTED TERMS THE CUSTOMER MAY INCLUDE ON ANY PURCHASE ORDER OR CONFIRMATION WILL NOT AMEND THIS QUOTE OR THE CONTRACT AND WILL NOT BE BINDING ON SINGER AND ARE EXPRESSLY EXCLUDED.

If you are an individual, YOU HEREBY CONFIRM THAT YOU ARE OF LEGAL AGE TO CONTRACT IN YOUR JURISDICTION (18 OR 19 DEPENDING UPON YOUR STATE), and are signing and returning this Contract as your voluntary act and deed, intending to be legally bound by this Contract, which includes the above Quote and the Terms at <https://www.singerequipment.com/policies/quote-terms-conditions>, both of which I hereby ACCEPT.

WE ACCEPT ELECTRONIC SIGNATURES. *By executing this Quote and the Contract hereby created, as the authorized representative of the Customer, you are authorizing Singer to rely on your electronic signature as binding confirmation of your agreement to Contract. In addition, by executing this Quote, on behalf of the Customer, you are expressly acknowledging and agreeing to the Contract thereby created, comprised of this Quote and the Singer Terms, and the terms on each and every page of the Contract.*

Insert name  
of customer: \_\_\_\_\_

By (signature): \_\_\_\_\_

Name (print): \_\_\_\_\_

Title (print): \_\_\_\_\_

Date: \_\_\_\_\_

Acceptance: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Project Grand Total: \$121,405.33



## WATAUGA COUNTY BOARD OF EDUCATION

Margaret E. Gragg Education Center  
175 Pioneer Trail Boone, NC 28607  
(828) 264-7190

March 11, 2024

To: Dr. Leslie Alexander, Superintendent  
Members, Watauga County Boards of Education

From: Ms. Monica Bolick, School Nutrition Director

Re: Vendor Recommendation for new VC School Equipment Purchases

Watauga County Schools is currently planning for the purchase and delivery of large cafeteria equipment for the new Valle Crucis School building project. This purchase does not include any smallwares items.

Some required items are available on state contract. The current state contract, 165A – Kitchen Equipment & Accessories, is held by Singer T&L. It is recommended that items which are available for purchase on state contract be purchased from Singer T&L.

Pricing for this contract includes delivery, uncrating of all items, setting in place, and mounting of all sinks and wall shelves. The contractor will make all final connections of equipment. The warranty on all items will begin once installed and when factory startups are complete.

It is respectfully requested to approve the state contract purchase for the goods and services on the attached quote with **Singer T&L** in the amount of **\$239,515.44**.



FE&S 2023  
**DEALER**  
OF THE YEAR

# Quote

02/21/2024

**Project:**

Watauga County Schools / Valle  
Crucis School / Misc Equipment /  
State Term Contract 165A




**From:**

Singer T&L  
David Maxwell  
933 Robeson Street  
Fayetteville, NC 28305-5613  
(910) 484-1128  
(910)912-6741 (Contact)

Job Reference Number: SF8226M




This is a quote (the "Quote") to provide equipment and/or services. This Quote includes the conditions presented below and the terms that are included at <https://www.singerequipment.com/policies/quote-terms-conditions> (the "Terms").

When you accept this Quote, as provided below, this Quote, together with the Terms, will form a binding contract (the "Contract") between you and Singer NC LLC d.b.a.Singer T&L, a division of Singer Equipment Company, Inc. ("Singer").

Item	Qty	Description	Sell	Sell Total
1	4 ea	<b>HAND SINK</b>  Advance Tabco Model No. 7-PS-69 Hand Sink, wall mounted, 14" wide x 10" front-to-back x 5" deep bowl, 20 gauge 304 stainless steel, heavy duty splash mounted faucet with wrist handles, lever drain with overflow, P-trap, side support brackets, soap & towel dispenser, wall bracket, NSF, cCSAus	\$1,371.40	\$5,485.60
ITEM TOTAL:				\$5,485.60
2	1 ea	<b>WELDED SIDE SPLASH</b>  Advance Tabco Model No. 7-PS-11 Welded Side Splash, 12"H (installed height), one side (specify side), for hand sinks with 14" wide x 10" front-to-back bowl, splash mounted faucets	\$280.56	\$280.56
ITEM TOTAL:				\$280.56
3	1 ea	<b>WORK TABLE, STAINLESS STEEL TOP</b>  Advance Tabco Model No. KSS-3012 Work Table, 144"W x 30"D, 14 gauge 304 stainless steel top with 5"H backsplash, 18 gauge stainless steel adjustable undershelf, stainless steel legs with stainless steel bullet feet, NSF	\$2,486.13	\$2,486.13
ITEM TOTAL:				\$2,486.13



Item	Qty	Description	Sell	Sell Total
	1 ea	<b>WORK TABLE, UNDERSHELF</b> Advance Tabco Model No. US-30-72 Work Table Undersheff, for work tables 72"W x 30"D, 18 gauge stainless steel, NSF (actual shelf is 6" shorter than table width & depth) (suggested maximum load 300 pounds distributed weight)	\$416.42	\$416.42
			<b>ITEM TOTAL:</b>	<b>\$416.42</b>
	2 ea	<b>WELD-IN SINK</b> Advance Tabco Model No. TA-11W-2 Double Sink Welded Into Table Top, 20"W x 20"D x 14" deep bowls, includes faucet, NSF (must specify sink location)	\$1,833.84	\$3,667.68
			<b>ITEM TOTAL:</b>	<b>\$3,667.68</b>
	2 ea	<b>HANDLE</b> Advance Tabco Model No. K-316-LU Wrist Handles Only, for splash or deck mount hand sink faucet (1 pair hot & cold 4" long blades), fits faucets supplied after November 2015 with hot & cold color rings that do not have exposed screw head	\$73.90	\$147.80
			<b>ITEM TOTAL:</b>	<b>\$147.80</b>
	2 ea	<b>DRAIN, LEVER / TWIST WASTE</b> Advance Tabco Model No. K-5 Drain, twist operated, 2" NPT & 1-1/2" IPS outlet connections	\$97.36	\$194.72
			<b>ITEM TOTAL:</b>	<b>\$194.72</b>
	2 ea	<b>DRAIN, LEVER / TWIST WASTE, PARTS</b> Advance Tabco Model No. K-4 Support Bracket, for lever waste drain handle, (1) support required for each lever drain	\$44.25	\$88.50
			<b>ITEM TOTAL:</b>	<b>\$88.50</b>
3.1	1 ea	<b>SHELVING, WALL MOUNTED</b> Advance Tabco Model No. WS-15-144-16 Shelf, wall-mounted, 144"W x 15"D, 1-5/8" bullnose front edge, 1-1/2"H rear up-turn, 16/304 satin finish stainless steel, NSF (units 84" & longer have (3) support brackets)	\$772.21	\$772.21
			<b>ITEM TOTAL:</b>	<b>\$772.21</b>

Item	Qty	Description	Sell	Sell Total
3.2	1 ea	<b>SHELVING, WALL MOUNTED</b> Advance Tabco Model No. WS-12-144-16 Shelf, wall-mounted, 144"W x 12"D, 1-5/8" bullnose front edge, 1-1/2"H rear up-turn, 16/304 satin finish stainless steel, NSF (units 84" & longer have (3) support brackets)	\$491.21	\$491.21
			<b>ITEM TOTAL:</b>	<b>\$491.21</b>
5	1 ea	<b>ICE MAKER, CUBE-STYLE</b> Manitowoc Model No. IYT0420A Indigo NXT™ Series Ice Maker, cube-style, air-cooled, self-contained condenser, 22"W x 24-1/2"D x 21-1/2"H, production capacity up to 460 lb/24 hours at 70°/50° (375 lb AHRI certified at 90°/70°), easyTouch display with 13 different language options, date/time stamp display, automatic reminder/alert icon, one touch asset information, automatic detection of accessories, continuous operating status, programmable production options (time, weight, day or night), one touch cleaning with displayed instructions, Alpha-San anti-microbial protection, acoustical ice sensing probe, self-diagnostic technology, DuraTech™ exterior, half-dice size cubes, R410A refrigerant, NSF, cULus, CE, ENERGY STAR® 1 ea WARRANTY-ICE-SC 3 year parts & labor (Machine), 5 year parts & labor (Evaporator), 5 year parts & 3 years labor (Compressor), standard 1 ea (-161) 115v/60/1-ph, 11.3 amps	\$3,422.45	\$3,422.45
			<b>ITEM TOTAL:</b>	<b>\$3,422.45</b>
6	1 ea	<b>ICE BIN FOR ICE MACHINES</b> Manitowoc Model No. D400 Ice Bin, 30"W x 34"D x 38"H, with side-hinged front-opening door, side grips, 365 lbs. application capacity, AHRI certified 12.3 cu. ft., for top-mounted ice maker, Duratech exterior, NSF 1 ea WARRANTY-BIN/DISP 3 year parts & labor warranty, standard 1 ea Legs, 6" adjustable stainless steel, standard	\$1,215.01	\$1,215.01
			<b>ITEM TOTAL:</b>	<b>\$1,215.01</b>
8	1 ea	<b>WORK TABLE, STAINLESS STEEL TOP</b> Advance Tabco Model No. TKSS-308 Work Table, 96"W x 30"D, 14 gauge 304 stainless steel top with 5"H backsplash, stainless steel legs with side & rear crossrails, adjustable stainless steel bullet feet, NSF	\$1,986.51	\$1,986.51
			<b>ITEM TOTAL:</b>	<b>\$1,986.51</b>
	1 ea	<b>OVERSHELF</b>	\$1,390.87	\$1,390.87





Item	Qty	Description	Sell	Sell Total
		Advance Tabco Model No. ODS-12-96R Overshelf, table mounted, double, 96"W x 12"D, 1"H rear up-turn, 18 gauge 430 stainless steel (non-adjustable, old style)		
	1 ea	Rear of table shelf location, 1" back splash is provided on table with splash		
ITEM TOTAL:				\$1,390.87
	1 ea	<b>WORK TABLE, UNDERSHELF</b> Advance Tabco Model No. US-30-48 Work Table Undershelf, for work tables 48"W x 30"D, 18 gauge stainless steel, NSF (actual shelf is 6" shorter than table width & depth) (suggested maximum load 300 pounds distributed weight)	\$337.65	\$337.65
		ITEM TOTAL:		\$337.65
13	1 ea	<b>COMBI OVEN, ELECTRIC</b>  Convotherm Model No. C4 ET 10.20EB-N DD SGL (School Model) Convotherm Maxx Pro Combi Oven/Steamer School Package, electric, steam generator, (10) 18" x 26" full size sheet pan or (20) 12" x 20" x 1" hotel pan capacity, includes: (10) 21" x 23" wire shelves & (10) 12" x 20" fry baskets, 10" wifi ready easyTouch control panel, US cookbook with 200 cooking recipes for common K-12 menu items, (4) cooking modes: hot air, steam, combi-steam & retherm, includes wire racks, disappearing door, anti-microbial hygienic door handle, hands-free auto clean, pull-out spray hose, ConvoClean+ fully automatic hands-free cleaning system, includes stand, stainless steel construction, UL-Listed ventless (no hood required - local codes prevail), cULus, NSF	\$22,042.54	\$22,042.54
	1 ea	NOTE: Purchasers, owners & operators are solely responsible to verify that the incoming water to the equipment is within the manufacturer's water quality specs as outlined on the product spec sheet. Water quality verification in virtually all cases requires water testing & in some cases, requires that water samples be submitted & for which the test results may take 4 weeks to receive. Non-compliance with manufacturer water quality specifications can cause irreparable damage to the equipment & / or its components & will VOID the original manufacturer's warranty. Water treatment solutions shown on this page & in the pricelist are offered for purchasing convenience only & can be selected only if the incoming water quality falls within the water treatment manufacturer's selection guidelines.		
	1 ea	K-12: 36 month parts & labor warranty, for K-12 schools only, standard		
	1 ea	FAS START UP Service Start-Up Check, inspect installation, start warranty protection; (Mainland U.S.)		
	1 ea	11000115826 Installation of First Unit, for 6.10, 6.20, 10.10 & 10.20	\$1,288.66	\$1,288.66

Item	Qty	Description	Sell	Sell Total
		(Non-discountable NET pricing) (Note: Pricing based on 200 mile round trip, additional charges may apply, see Installation flyer for details) (Note: Customer should indicate your preferred Welbilt Authorized Service Agent for installation on the PO otherwise Welbilt RISE will select an Authorized Service Agent for this install) (Mainland U.S.)		
1 ea		New Construction		
1 ea		Note: End user contact name & number at the site must be included with the PO to avoid delivery delays. This contact person should have up-to-the-minute status on water, drain, electric/gas availability, as well as confirmation of completion of interior & exterior doorways through which equipment must be transported.		
1 ea		11000115830 Convotherm Pre-installation site survey (Note: One required per location) (Non-discountable NET pricing) (Non-discountable NET pricing) (Includes 200 mile round trip, Mainland only, additional charges may apply, see Installation flyer for details)	\$463.92	\$463.92
1 kt		11000115817 Installation Kits, for 10.20, 12.20, 20.10 & 20.20 electric, DWV Copper (Non-discountable NET pricing) (See Installation Kit flyer for details)	\$595.88	\$595.88
1 ea		CONVOLINK Software Package, complete solution for HACCP and cooking-profile management, for use with Convotherm 4 appliances, Mini and the +3 appliance range (Download from Convotherm.com)		
1 ea		440-480v/60/3-ph	\$370.12	\$370.12
1 ea		(10) full size wire shelves (CWR20), standard		
1 ea		(10) half size fry baskets (CWB10), standard		
1 ea		Oven stand, open with storage shelf, stainless steel construction, 12" legs with feet (3251501), standard		
1 ea		An RO system must be included on this quote if mail-in water test results have not been received by the dealer PRIOR to creating this quote. A filter system should only be included on this quote if water test results are in hand & the test results indicate a water filter meets the water specification.		
1 ea		WBT-OPS175CR/16 OPS175CR/16 Reverse Osmosis System & 16-Gallon Hydropneumatic Storage Tank, combines RO water and mineral addition, non-electric design, operates at line pressure to produce 175-gpd, integrated pre-filtration with sediment and chlorine reduction & post-filter for chloramine reduction, includes hose, tubing & fittings (164-01416) (NET)	\$638.91	\$638.91
1 ea		11000115835 Installation for Reverse Osmosis 16 & 50 gallon systems (only for systems purchased with equipment and thru Welbilt) (Non-discountable NET pricing) (Note: Pricing based on 200 mile round trip, additional charges may apply, see Installation flyer for details) (Note: Customer should indicate your preferred Welbilt Authorized Service Agent for installation on the PO otherwise Welbilt RISE will select an Authorized Service Agent for this install) (Mainland U.S.)	\$567.01	\$567.01
ITEM TOTAL:				\$25,967.04

Item	Qty	Description	Sell	Sell Total
13.1	1 ea	<b>COMBI OVEN, ELECTRIC</b> Convotherm Model No. C4 ET 6.20EB-N DD SGL (School Model) Convotherm Maxx Pro Combi Oven/Steamer School Package, electric, steam generator, includes ONE (6) 18" x 26" full size sheet pan or (12) 12" x 20" x 1" hotel pan capacity ovens, includes: (6) 21" x 23" wire shelves & (6) 12" x 20" fry baskets, 10" wifi ready easyTouch control panel, US cookbook with 200 cooking recipes for common K-12 menu items, (4) cooking modes: hot air, steam, combi-steam & retherm, includes wire racks per oven, disappearing door, triple pane door with anti-microbial hygienic door handle, LED lights, pull-out spray hose, ConvoClean+ fully automatic hands-free cleaning system, includes open stand with feet, stainless steel construction, UL-Listed ventless (no hood required - local codes prevail), cULus, NSF	\$17,214.26	\$17,214.26
	1 ea	NOTE: Purchasers, owners & operators are solely responsible to verify that the incoming water to the equipment is within the manufacturer's water quality specs as outlined on the product spec sheet. Water quality verification in virtually all cases requires water testing & in some cases, requires that water samples be submitted & for which the test results may take 4 weeks to receive. Non-compliance with manufacturer water quality specifications can cause irreparable damage to the equipment & / or its components & will VOID the original manufacturer's warranty. Water treatment solutions shown on this page & in the pricelist are offered for purchasing convenience only & can be selected only if the incoming water quality falls within the water treatment manufacturer's selection guidelines.		
	1 ea	K-12: 36 month parts & labor warranty, for K-12 schools only, standard		
	1 ea	FAS START UP Service Start-Up Check, inspect installation, start warranty protection; (Mainland U.S.)		
	1 ea	11000115827 Installation of Second Unit, for 6.10, 6.20, 10.10 & 10.20 (at the same location & at the same time) (Non-discountable NET pricing) (Note: Pricing based on 200 mile round trip, additional charges may apply, see Installation flyer for details) (Note: Customer should indicate your preferred Welbilt Authorized Service Agent for installation on the PO otherwise Welbilt RISE will select an Authorized Service Agent for this install) (Mainland U.S.)	\$1,030.93	\$1,030.93
	1 kt	11000115806 Installation Kits (one per combi) for 6.10, 6.20 & 10.10 electric, DWV Copper (Non-discountable NET pricing) (See Installation Kit flyer for details)	\$584.54	\$584.54
	1 ea	CONVOLINK Software Package, complete solution for HACCP and cooking-profile management, for use with Convotherm 4 appliances, Mini and the +3 appliance range (Download from Convotherm.com)		
	1 ea	440-480v/60/3-ph	\$370.12	\$370.12
	1 ea	(6) full size wire shelves (CWR20), standard		
	1 ea	(6) half size fry baskets (CWB10), standard		
	1 ea	Oven stand, open with storage shelf, stainless steel construction, 12"		

Item	Qty	Description	Sell	Sell Total
		legs with feet (3251501), standard		
1 ea		An RO system must be included on this quote if mail-in water test results have not been received by the dealer PRIOR to creating this quote. A filter system should only be included on this quote if water test results are in hand & the test results indicate a water filter meets the water specification.		
1 ea		WBT-OPS175CR/10 OPS175CR/10 Reverse Osmosis System & 10-Gallon Hydropneumatic Storage Tank, combines RO water and mineral addition, non-electric design, operates at line pressure to produce 175-gpd, integrated pre-filtration with sediment and chlorine reduction & post-filter for chloramine reduction, includes hose, tubing & fittings (164-01410) (NET)	\$584.07	\$584.07
1 ea		11000115834 Installation for Reverse Osmosis 2, 5, & 10 gallon systems (only for systems purchased with equipment and thru Welbilt) (Non-discountable NET pricing) (Note: Pricing based on 200 mile round trip, additional charges may apply, see Installation flyer for details) (Note: Customer should indicate your preferred Welbilt Authorized Service Agent for installation on the PO otherwise Welbilt RISE will select an Authorized Service Agent for this install) (Mainland U.S.)	\$383.51	\$383.51
ITEM TOTAL:				\$20,167.43
14	2 ea	<b>CONVECTION OVEN, ELECTRIC</b>	\$11,049.11	\$22,098.22
		 Garland/US Range Model No. MCO-ES-20-S Master Series Convection Oven, electric, double-deck, standard depth 39", (2) speed 3/4 HP fan, Master 200 solid state controls with 1 hour timer, dependent 60/40 doors with windows, stainless steel front, sides & top, porcelain cavity, 24" cooking cavity height, with (6) chrome plated oven racks on 13-position rack guides, 6-1/2" legs, 20.8 kW (Garland), cUL, NSF		
	2 ea	(2) year limited parts & (1) year labor warranty, Door warranty (5) year limited parts except window, covers products purchased and installed in the USA & Canada only, standard		
	2 ea	(2) 460v/60/3-ph, 10.4kW, 3/4 hp, 14 amps, direct	\$1,623.66	\$3,247.32
	2 ea	NOTE: Contact factory for other connection options		
ITEM TOTAL:				\$25,345.54
15	1 ea	<b>TILTING SKILLET BRAISING PAN, ELECTRIC</b>	\$16,633.96	\$16,633.96
		 Cleveland Range Model No. SEL40TR DuraPan™ Tilting Skillet, electric, 40-gallon capacity, modular open base, standard with hydraulic hand tilt with quick lowering feature, stainless steel construction, includes spring-assisted cover and gallon markings, stainless steel level adjustable feet, UL, CE, NSF, IPX6		
	1 ea	1-year parts & labor warranty, standard		
	1 ea	Performance start-up included at customer request after equipment is installed (Free Water Quality Check included) (contact Cleveland Sales Representative for details)		

Item	Qty	Description	Sell	Sell Total
	1 ea	(VOSK3) 480v/60/3-ph, 21.7 amp	\$588.67	\$588.67
<b>ITEM TOTAL:</b>				<b>\$17,222.63</b>
16	1 ea	<b>HOTPLATE, COUNTERTOP, ELECTRIC</b>	\$1,613.61	\$1,613.61
		Garland/US Range Model No. ED-15HSE		
		Designer Series Hotplate, electric, 15" W, countertop, two burners, 9" sealed solid elements with individual six position controls with automatic cycle down to low if not in use, stainless steel front, sides, recessed top and 4" legs, 5.2kW, CE, CSA, NSF (Garland)		
	1 ea	One year limited parts and labor warranty, covers products purchased and installed in the USA only, standard		
	1 ea	208v/60/1-ph, 25 amps, direct, standard		
<b>ITEM TOTAL:</b>				<b>\$1,613.61</b>
17	1 ea	<b>EQUIPMENT STAND, FOR COUNTERTOP COOKING</b>	\$712.47	\$712.47
		Advance Tabco Model No. EG-302		
		Equipment Stand, 24"W x 30"D x 25"H (overall), 24" working height, 14 gauge 304 stainless steel top with 1"H up-turn on sides & rear, 18 gauge adjustable galvanized undershelf, galvanized legs with adjustable plastic bullet feet, NSF		
	1 st	TA-255 Casters, expanding adapter, for 1-5/8" dia. O.D. tube/table legs, 400 lb capacity per caster, set of (4) (2 with brakes)	\$350.04	\$350.04
<b>ITEM TOTAL:</b>				<b>\$1,062.51</b>
18	2 ea	<b>WORK TABLE, STAINLESS STEEL TOP</b>	\$1,078.89	\$2,157.78
		Advance Tabco Model No. TSAG-306		
		Work Table, 72"W x 30"D, 16 gauge 430 stainless steel top, stainless steel legs with side & rear crossrails, adjustable stainless steel bullet feet, NSF		
	2 ea	Mid mount		
	2 ea	TA-384 Drawer Assembly, (4) tier, 20"W x 20"D x 5" deep removable stainless steel drawer inserts, roller bearing drawer slides, self closing drawers with noise control, concealed side panels, 430 stainless steel, all TIG welded & fully assembled, (4) stainless steel legs with 1/2" adjustable hex feet (factory installation only)	\$2,906.09	\$5,812.18
	1 ea	SCT-72 Pot Rack, table mounted, circular design, 72" long, stainless steel, includes: (18) plated pot hooks & (1) AUR-72 utensil rack	\$1,321.83	\$1,321.83
	10 pk	TA-89A Pot Hooks, plated, single sided (package of 4)	\$37.17	\$371.70
<b>ITEM TOTAL:</b>				<b>\$9,663.49</b>
18.1	2 ea	<b>BUN / SHEET PAN RACK</b>	\$523.51	\$1,047.02
		Advance Tabco Model No. PR12-5W		
		Pan Rack, mobile, full height, end loading, 20-1/4"W x 26"D x 69-1/4"H, (12) 18" x 26" sheet pan capacity, slides on 5" centers, open sides, all-welded aluminum construction, 5" swivel casters, NSF		
<b>ITEM TOTAL:</b>				<b>\$1,047.02</b>

Item	Qty	Description	Sell	Sell Total
21	1 ea	<b>WORK TABLE, CABINET BASE HINGED DOORS</b>  Advance Tabco Model No. HF-SS-243 (NS_10001828) Work Table, 36"W x 24"D, cabinet base with hinged doors, 14 gauge 304 stainless steel top with 1-1/2"H rear up-turn, stainless steel legs with adjustable hex feet, NSF	\$2,780.85	\$2,780.85
	1 st	TA-255P (NS_ADVTA255P) Casters, 5", threaded stem, for cabinet base units, 300 lb capacity per caster, set of (4) (2 with brakes), 1/2-13 x 3/4" thread	\$413.32	\$413.32
	2 ea	TA-46 (NS_ADVTA46) Door lock, one required for each hinge door or for each set of sliding doors	\$199.58	\$399.16
<b>ITEM TOTAL:</b>				<b>\$3,593.33</b>
27	1 ea	<b>SHELVING, WALL MOUNTED</b>  Advance Tabco Model No. WS-18-60-16 (ADVWS186016) Shelf, wall-mounted, 60"W x 18"D, 1-5/8" bullnose front edge, 1-1/2"H rear up-turn, 16/304 satin finish stainless steel, NSF	\$623.08	\$623.08
<b>ITEM TOTAL:</b>				<b>\$623.08</b>
27.1	1 ea	<b>SHELVING, WALL MOUNTED</b>  Advance Tabco Model No. WS-15-60-16 (NS_10002733) Shelf, wall-mounted, 60"W x 15"D, 1-5/8" bullnose front edge, 1-1/2"H rear up-turn, 16/304 satin finish stainless steel, NSF	\$446.51	\$446.51
<b>ITEM TOTAL:</b>				<b>\$446.51</b>
31	1 ea	<b>DISHTABLE, SOILED "L" SHAPED</b>  Advance Tabco Model No. DTS-K30-96R Korner-Soil Dishtable, L-shaped, attaches to right of dish machine operator, 10-1/2"H backsplash, with pre-rinse sink, stainless steel legs, with stainless steel crossrails, 95" long, 14/304 stainless steel, Includes prerinse basket with slide bar (slide bar only when K-461 or K-461A disposer adapter is specified)	\$4,393.43	\$4,393.43
	1 ea	SPECIFY DISH MACHINE BRAND & MODEL to ensure proper fit, refer to attached document (AQ only) or consult <a href="http://www.advancetabco.com">www.advancetabco.com</a> for compatibility listing. Certain dish machines require modifications at additional cost not shown here		
	1 ea	K-456 (NS_10001913) Scrap Block, installed	\$241.62	\$241.62
	1 ft	DTA-84 (ADVDTA84) Simple Pass-Thru (sold per linear foot) (minimum 3 ft)	\$396.06	\$396.06
	1 ea	Print required		
	1 ea	Specify wall thickness		
	1 ea	Specify wall height		
	1 ea	Specify distance from dish machine		

Item	Qty	Description	Sell	Sell Total
	1 ft	DTA-87 Pass-thru window frame (sold per linear foot) (minimum 3 ft)	\$226.57	\$226.57
	1 ea	TA-1 Modify pass-thru shelf to accommodate roll-down door	\$92.05	\$92.05
ITEM TOTAL:				\$5,349.73
32	1 ea	<b>DISHWASHER, CONVEYOR TYPE</b>	\$37,301.07	\$37,301.07
		Hobart Model No. CL44EN-ADV+BUILDUP (NS_HOBCL44ENADVBUILDUP) Conveyor Dishwasher, Advansys model, single tank, (202) racks/hour, insulated hinged doors, .62 gallon/rack, stainless steel enclosure panels, microprocessor controls with low temperature & dirty water indicators, NSF Pot & Pan mode, programable de-lime notification, 30 kW stainless booster, energy recovery (DWER), automatic soil removal (ASR), drain water tempering kit, ENERGY STAR®, Free factory startup for installations within a 100 mile radius of a Hobart service office; installation beyond 100 miles will be charged at the quoted rate by the local Hobart service office		
	1 ea	Oversized units with crated shipping dimensions greater or equal to 72" in length and/or 90" in height. If delivery is to a facility without a standard height dock, additional shipping charges will apply depending on the service requested. consult Factory.		
	1 ea	Standard warranty - 1-Year parts, labor & travel time during normal working hours within the USA		
	1 ea	CL44EN-ADVHTE15K Electric tank heat 15kW	\$2,860.19	\$2,860.19
	1 ea	CL44EN-ADVERH30K 30kW electric booster		
	1 ea	CL44EN-ADVELE0CD 480v/60/3-ph		
	1 ea	Single Point (1) service connection standard (Field convertible options available)		
	1 ea	CL44EN-ADVHGTSTD Standard height		
	1 ea	CL44EN-ADVDIR0RL Right to left operation		
	1 ea	CL44EN-ADVFTSTD Standard feet		
	1 ea	NOTE: For water of 3-grains of hardness or more, Hobart suggests adding a water softener.		
	2 ea	EXTHD/E-ADJ E-series extended hood (adjustable)	\$1,230.05	\$2,460.10
ITEM TOTAL:				\$42,621.36
33	1 ea	<b>CLEAN DISHTABLE</b>	\$1,964.83	\$1,964.83



- 1 ea SPECIFY DISH MACHINE BRAND & MODEL to ensure proper fit, refer to attached document (AQ only) or consult [www.advancetabco.com](http://www.advancetabco.com) for compatibility listing. Certain dish machines require modifications at additional cost not shown here

Item	Qty	Description	Sell	Sell Total
<b>ITEM TOTAL:</b>				<b>\$1,964.83</b>
34	1 ea	<b>THREE (3) COMPARTMENT SINK</b>	\$5,992.72	\$5,992.72
		Advance Tabco Model No. 94-83-60-18RL (NS_10064030)		
		Regaline Sink, 3-compartment, with left & right-hand drainboards, 28" front-to-back x 20"W sink compartments, 14" deep, with 11"H backsplash, stainless steel legs with adjustable left-to-right and front cross rails, 18" drainboards, 1" adjustable bullet feet, 14 gauge 304 stainless steel, overall 36" F/B x 103" L/R, NSF		
	3 ea	K-40 (NS_10001892) Lever Drain, all stainless steel, 2"	\$563.34	\$1,690.02
	3 ea	K-4 (NS_10001891) Support Bracket, for lever waste drain handle, (1) support required for each lever drain	\$44.25	\$132.75
<b>ITEM TOTAL:</b>				<b>\$7,815.49</b>
38	1 ea	<b>MOP SINK</b>	\$2,423.29	\$2,423.29
		Advance Tabco Model No. 9-OP-33 (NS_10305129)		
		Mop Sink, floor mounted, 41"W x 29"D x 16"H (overall), 36"W x 24" front-to-back x 12" deep (bowl size), free flow drain with 2" IPS outlet, stainless steel construction		
<b>ITEM TOTAL:</b>				<b>\$2,423.29</b>
41	1 ea	<b>PASS-THRU HEATED CABINET</b>	\$17,988.65	\$17,988.65
		Delfield Model No. GAHPT2-GH		
		Specification Line® Heated Cabinet, Pass-Thru, two-section, 50.0 cubic feet capacity, (8) half-height hinged glass doors (locking), (6) adjustable chrome wire shelves, 4.3" easyTouch® screen temperature display/control with remote monitoring, incandescent interior lighting, stainless steel exterior front, sides & interior, (4) 5" locking casters, 208-240v/60/1-ph, 10.5 amps, NEMA 6-20P, NSF, cULus		
	1 ea	0460003CN 3 year parts & labor warranty, standard		
	1 ea	Left door hinged on left, right door hinged on right, standard (Thermometer side)		
	1 ea	Left door hinged on left, right door hinged on right, standard (Rear)		
	1 ea	Set of (4) 5" locking casters, standard		
<b>ITEM TOTAL:</b>				<b>\$17,988.65</b>
42	1 ea	<b>PASS-THRU REFRIGERATOR</b>	\$17,071.58	\$17,071.58
		Delfield Model No. GARPT2P-GH		
		Specification Line® Refrigerator, Pass-Thru, two-section, 50.0 cubic feet capacity, top-mounted self-contained refrigeration system, (8) half-height hinged glass doors (locking), (6) adjustable chrome wire shelves, 4.3" easyTouch® screen temperature display/control with remote monitoring, LED interior lighting, pilaster with shelf clips, stainless steel exterior front, sides & interior, (4) 5" locking casters, GreenGenius™ R290 Hydrocarbon refrigerant, 0.38 HP, 115v/60/1-ph, 6.5 amps, NEMA 5-15P, NSF, cULus, ENERGY STAR®		

Item	Qty	Description	Sell	Sell Total
1 ea		0460003CN 3 year parts & labor warranty, standard		
1 ea		W00003ACN Additional 4 years compressor warranty (parts only), standard		
1 ea		0460003CN 3 year parts & labor warranty, standard		
1 ea		W00003ACN Additional 4 years compressor warranty (parts only), standard		
1 ea		Left door hinged on left, right door hinged on right, standard (Thermometer side)		
1 ea		Left door hinged on left, right door hinged on right, standard (Rear)		
1 ea		Set of (4) 5" locking casters, standard		
			<b>ITEM TOTAL:</b>	<b>\$17,071.58</b>
			Merchandise	\$224,370.44
			Tax 6.75%	\$15,145.00
			<b>Total</b>	<b>\$239,515.44</b>

Prices are valid for 30 days unless otherwise noted herein, thereafter reconfirm.

Unless otherwise noted herein, freight charges are NOT included.

#### Warranties

Manufacturer's standard warranties are included. No other warranty is extended or implied unless otherwise noted herein, and ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, ARE DISCLAIMED TO THE FULLEST EXTENT ALLOWED BY LAW.

#### Taxes

Prices do not include sales nor use tax unless otherwise noted herein. All applicable taxes are subject to the current rate at time of final invoicing and are the responsibility of the customer.

#### Payment Terms

Unless otherwise noted herein, standard payment terms are 50% due at signing of quote and acceptance of terms and conditions, and the remaining balance will be due prior to delivery. Prices are quoted based on check or ACH as a form of payment. Credit card payment may incur a service charge on the total order.

See link to the Terms and Conditions. Return/Cancellation Section for the return and cancellation terms applicable to this Quote.

See link to the Terms and Conditions. Delivery Section, for delivery and shipping terms applicable to this Quote.

See link to the Terms and Conditions. Scope of Work Section, for the scope of Singer's work and exclusions therefrom applicable to this Quote.

Please read this quotation carefully as it is based upon our interpretation of the items being requested. Review this quotation for errors, omissions or inaccuracies of any kind. The customer is responsible to verify all measurements, directions of operation, voltages and utility specifications prior to ordering. Any changes to the above may incur a price adjustment.

TO ACCEPT THE QUOTE AND THE TERMS, AND TO CONFIRM OUR CONTRACT, PLEASE EITHER:

- A. Select the "ACCEPT" button at the bottom of the screen which will prompt you to execute an electronic signature, which we accept. *By executing this Quote and the Contract hereby created, you are authorizing Singer to rely on your electronic signature as binding confirmation of your agreement to Contract. In addition, by executing this Quote, you are expressly acknowledging and agreeing to the Contract thereby created, comprised of this Quote and the Singer Terms, and the terms on each and every page of the Contract.*
- B. Print, sign and return this entire document to your Singer Representative or Copy and Paste this entire document into your confirming acceptance email and send the email to your Singer Representative.

As an authorized representative of the undersigned customer, the undersigned hereby confirms and accepts the terms of the Quote and the Terms at <https://www.singerequipment.com/policies/quote-terms-conditions>, which I hereby confirm on behalf of the Customer. I have reviewed and accepted, and thus confirm and the Contract between the undersigned Customer and Singer Intending the undersigned Customer to be legally bound by the terms of the Contract hereby formed.

AS THE AUTHORIZED REPRESENTATIVE OF THE CUSTOMER, I FURTHER CONFIRM THAT ANY PRE-PRINTED TERMS THE CUSTOMER MAY INCLUDE ON ANY PURCHASE ORDER OR CONFIRMATION WILL NOT AMEND THIS QUOTE OR THE CONTRACT AND WILL NOT BE BINDING ON SINGER AND ARE EXPRESSLY EXCLUDED.

If you are an individual, YOU HEREBY CONFIRM THAT YOU ARE OF LEGAL AGE TO CONTRACT IN YOUR JURISDICTION (18 OR 19 DEPENDING UPON YOUR STATE), and are signing and returning this Contract as your voluntary act and deed, intending to be legally bound by this Contract, which includes the above Quote and the Terms at <https://www.singerequipment.com/policies/quote-terms-conditions>, both of which I hereby ACCEPT.

**WE ACCEPT ELECTRONIC SIGNATURES.** *By executing this Quote and the Contract hereby created, as the authorized representative of the Customer, you are authorizing Singer to rely on your electronic signature as binding confirmation of your agreement to Contract. In addition, by executing this Quote, on behalf of the Customer, you are expressly acknowledging and agreeing to the Contract thereby created, comprised of this Quote and the Singer Terms, and the terms on each and every page of the Contract.*

Insert name  
of customer: \_\_\_\_\_

By (signature): \_\_\_\_\_

Name (print): \_\_\_\_\_

Title (print): \_\_\_\_\_

Date: \_\_\_\_\_

Acceptance: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Project Grand Total: \$239,515.44



3/4/2024

Good evening Watauga County Board members, I recently bid out several roofing projects for the 2023/2024 school year. I sent out invitations to 4 roofing contractors, all 4 contractors bid off of the same proposal packet. Dr Blanton and myself opened the bids on Feb 20th at 12 noon and feel like we need to go with the lowest bidder for each project.

Green Valley School was bid at	\$688,000.00	Rike Roofing
Parkway School was bid at	\$1,778,500.00	Rike Roofing
Maintenance / Child Nutrition Building	\$187,900.00	Davco Roofing
TOTAL FOR ALL PROJECTS		\$2,654,400.00

We already have 2 million in our budget for roof replacements Budget code 4.5110.901.529  
We also have 2 million in our budget for Phase 1 Renovations Budget code 4.6580.901.311 that we can pull the remaining \$654,400.00 out of since it isn't lottery money according to Ly Marze. I have included the bid packets from the two lowest contractors and the Re-roof Proposal Packet that they went by to form their bids. I would like to ask for the approval and awarding of these bids so we can get the companies lined up and ready to proceed with this project. Thank you and please let me know if you have any questions and or concerns regarding this.

Eric R. Bolick  
Watauga County Schools  
Director of Maintenance / Facilities  
(828) 268-4630  
[bolicke@wataugaschools.org](mailto:bolicke@wataugaschools.org)

# BID FORM

(4 pages)

Watauga County Schools  
Reroofing Bids :  
Maintenance & Operations Building  
Green Valley Elementary  
Parkway Elementary

Bidder: Rike Roofing Services, Inc

(Bidder enter name here)

## BASE BID, SINGLE-PRIME (ALL TRADES) CONTRACT

The undersigned Bidder, having carefully examined the Bidding and Contract Requirements, Conditions of the Contract, Drawings, Specifications, dated and all subsequent Addenda, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services as described in the above documents, without exception, including all scheduled Allowances if any, necessary to complete the construction of:

Single Prime (All trades) Contract

for the above-named Project, in accordance with the requirements of the Bidding Documents, for the sum of:

## PLEASE INCLUDE A BID BOND & PAYMENT AND PERFORMANCE BOND IN BASE BIDS

### Base Bid Maintenance & Operations Building

Two Hundred Thirteen Thousand \_\_\_\_\_ Dollars (\$ 213,000.00 )

Estimated time of Completion 30 Calendar days

SQ. FT. for this project 10000

### Base Bid Green Valley Elementary

Six Hundred Eighty Eight Thousand \_\_\_\_\_ Dollars (\$ 688,000.00 )

Estimated time of Completion 60 Calendar days

SQ FT for this project 42000

**Base Bid for Parkway Elementary**

One Million Seven Hundred Seventy Eight Thousand Five Hundred \_\_\_\_\_ Dollars (\$ 1,778,500.00)

Estimated time of Completion 120 \_\_\_\_\_ Calendar days

SQ FT for this project 71100 \_\_\_\_\_

**Base Bid for All Projects (Maintenance & Operations/ Green Valley Elementary/ Parkway Elementary)**

Two Million Six Hundred Sixty Thousand \_\_\_\_\_ Dollars (\$ 2,660,000.00 )

Estimated time of Completion 120 \_\_\_\_\_ Calendar days

Sq FT for this project 123,000 \_\_\_\_\_

Safety Rating EMR .84 \_\_\_\_\_

**UNIT Cost**

Wood Nailers BF (\$ 5.50 )

Wood Decking BF (\$ 17.50 )

Gypsum 5/8" SF (\$ 2.00 )

Metal Decking SF ( 18.00 )

#### ACKNOWLEDGEMENT OF ADDENDA

The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

Addendum No. 1, dated 2/2/2024

Addendum No. 2, dated \_\_\_\_\_

Addendum No. 3, dated \_\_\_\_\_

#### CONTRACTOR'S LICENSE

The undersigned further states that he is a duly licensed Contractor, for the type of work proposed, in the State of North Carolina and that all fees, permits, etc., pursuant to the submission of this proposal have been paid in full.

#### SUBMISSION OF BID

Respectfully submitted this 20 day of February, 2024

By: Rike Roofing Services, Inc

(Name of bidding firm or corporation)

By: Allen Hughes

(Signature)

Allen Hughes

(Type or print name)

Title: VP

Address: 9160 Northfield Dr

Fort Mill, SC 29707

Phone: 704-334-1691

License: 73047

## Bid Bond

# AIA Document A310™ – 2010

**CONTRACTOR:**

*(Name, legal status and address)*

**RIKE ROOFING SERVICES, INC.**  
9160 Northfield Drive

**FORT MILL, SC 29707**

**SURETY:**

*(Name, legal status and principal place of business)*

**Old Republic Surety Company**  
P.O. Box 1635

**Milwaukee, WI 53201-1635**

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

**OWNER:**

*(Name, legal status and address)*

**Watauga County Schools**

**BOND AMOUNT: Five Percent of the Amount Bid (- - - 5.00% - - -)**

**PROJECT: Watauga County Schools Reroofing Project - Parkway Elementary School**

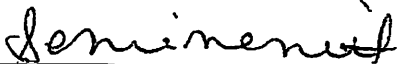
*(Name, location or address, and Project number, if any)*

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 20th day of February, 2024

  
(Witness)

  
(Witness) **Brittany H. Ferciot, Witness as to Surety**

**RIKE ROOFING SERVICES, INC.**

(Principal)

(Title)

**Old Republic Surety Company**

(Surety)

(Title) **Belinda Ferciot, Attorney-in-fact**

(Seal)

(Seal)



# OLD REPUBLIC SURETY COMPANY

## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That OLD REPUBLIC SURETY COMPANY, a Wisconsin stock insurance corporation, does make, constitute and appoint:

CHRIS G. DAVES, CINDY C. SHUMPERT, COURTNEY SEED,  
BELINDA FERCIOT, SANDY G. WALLACE, DEBRA L. STEWART of COLUMBIA, SC

its true and lawful Attorney(s)-in-Fact, with full power and authority for and on behalf of the company as surety, to execute and deliver and affix the seal of the company thereto (if a seal is required), bonds, undertakings, recognizances or other written obligations in the nature thereof, (other than bail bonds, bank depository bonds, mortgage deficiency bonds, mortgage guaranty bonds, guarantees of installment paper and note guaranty bonds, self-insurance workers compensation bonds guaranteeing payment of benefits, or black lung bonds), as follows:

### ALL WRITTEN INSTRUMENTS

and to bind OLD REPUBLIC SURETY COMPANY thereby, and all of the acts of said Attorneys-in-Fact, pursuant to these presents, are ratified and confirmed. This appointment is made under and by authority of the board of directors at a special meeting held on February 18, 1982.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following resolutions adopted by the board of directors of the OLD REPUBLIC SURETY COMPANY on February 18, 1982.

RESOLVED that, the president, any vice-president or assistant vice president, in conjunction with the secretary or any assistant secretary, may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the company to execute and deliver and affix the seal of the company to bonds, undertakings, recognizances, and suretyship obligations of all kinds; and said officers may remove any such attorney-in-fact or agent and revoke any Power of Attorney previously granted to such person.

RESOLVED FURTHER, that any bond, undertaking, recognizance, or suretyship obligation shall be valid and binding upon the Company

- (i) when signed by the president, any vice president or assistant vice president, and attested and sealed (if a seal be required) by any secretary or assistant secretary; or
- (ii) when signed by the president, any vice president or assistant vice president, secretary or assistant secretary, and countersigned and sealed (if a seal be required) by a duly authorized attorney-in-fact or agent; or
- (iii) when duly executed and sealed (if a seal be required) by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority evidenced by the Power of Attorney issued by the company to such person or persons.

RESOLVED FURTHER that the signature of any authorized officer and the seal of the company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the company; and such signature and seal when so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, OLD REPUBLIC SURETY COMPANY has caused these presents to be signed by its proper officer, and its corporate seal to be affixed this 7th day of October, 2022.

Karen J. Haffner  
Assistant Secretary



OLD REPUBLIC SURETY COMPANY

Alan Pavlic  
President

STATE OF WISCONSIN, COUNTY OF WAUKESHA - SS

On this 7th day of October, 2022, personally came before me, Alan Pavlic and Karen J. Haffner, to me known to be the individuals and officers of the OLD REPUBLIC SURETY COMPANY who executed the above instrument, and they each acknowledged the execution of the same, and being by me duly sworn, did severally depose and say: that they are the said officers of the corporation aforesaid, and that the seal affixed to the above instrument is the seal of the corporation, and that said corporate seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority of the board of directors of said corporation.



Kathryn R. Pearson  
Notary Public

My Commission Expires: September 28, 2026

(Expiration of notary's commission does not invalidate this instrument)

### CERTIFICATE

I, the undersigned, assistant secretary of the OLD REPUBLIC SURETY COMPANY, a Wisconsin corporation, CERTIFY that the foregoing and attached Power of Attorney remains in full force and has not been revoked; and furthermore, that the Resolutions of the board of directors set forth in the Power of Attorney, are now in force.

87-7180



Signed and sealed at the City of Brookfield, WI this 20th day of February, 2024.

Karen J. Haffner  
Assistant Secretary

ORSC 22262 (3-06)

ASSURED PARTNERS OF SC LLC

## Bid Bond

# AIA Document A310™ – 2010

**CONTRACTOR:**

(Name, legal status and address)

**RIKE ROOFING SERVICES, INC.**  
9160 Northfield Drive

**FORT MILL, SC 29707**

**SURETY:**

(Name, legal status and principal  
place of business)

**Old Republic Surety Company**  
P.O. Box 1635

**Milwaukee, WI 53201-1635**

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

**OWNER:**

(Name, legal status and address)

**Watauga County Schools**

**BOND AMOUNT: Five Percent of the Amount Bid (- - - 5.00% - - -)**

**PROJECT: Watauga County Schools Reroofing Project - Maintenance & Operations Building**


(Name, location or address, and Project number, if any)

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 20th day of February, 2024

  
(Witness)

  
(Witness) **Brittany H. Feriot, Witness as to Surety**

**RIKE ROOFING SERVICES, INC.**

(Principal)  (Seal)

(Title)

**Old Republic Surety Company**

(Surety)  (Seal)

(Title) **Belinda Feriot, Attorney-in-fact**



## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That OLD REPUBLIC SURETY COMPANY, a Wisconsin stock insurance corporation, does make, constitute and appoint:  
CHRIS G. DAVES, CINDY C. SHUMPERT, COURTNEY SEED,  
BELINDA FERCIOT, SANDY G. WALLACE, DEBRA L. STEWART of COLUMBIA, SC

its true and lawful Attorney(s)-in-Fact, with full power and authority for and on behalf of the company as surety, to execute and deliver and affix the seal of the company thereto (if a seal is required), bonds, undertakings, recognizances or other written obligations in the nature thereof, (other than bail bonds, bank depository bonds, mortgage deficiency bonds, mortgage guaranty bonds, guarantees of installment paper and note guaranty bonds, self-insurance workers compensation bonds guaranteeing payment of benefits, or black lung bonds), as follows:

### ALL WRITTEN INSTRUMENTS

and to bind OLD REPUBLIC SURETY COMPANY thereby, and all of the acts of said Attorneys-in-Fact, pursuant to these presents, are ratified and confirmed. This appointment is made under and by authority of the board of directors at a special meeting held on February 18, 1982.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following resolutions adopted by the board of directors of the OLD REPUBLIC SURETY COMPANY on February 18, 1982.

RESOLVED that, the president, any vice-president or assistant vice president, in conjunction with the secretary or any assistant secretary, may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the company to execute and deliver and affix the seal of the company to bonds, undertakings, recognizances, and suretyship obligations of all kinds; and said officers may remove any such attorney-in-fact or agent and revoke any Power of Attorney previously granted to such person.

RESOLVED FURTHER, that any bond, undertaking, recognizance, or suretyship obligation shall be valid and binding upon the Company

- (i) when signed by the president, any vice president or assistant vice president, and attested and sealed (if a seal be required) by any secretary or assistant secretary; or
- (ii) when signed by the president, any vice president or assistant vice president, secretary or assistant secretary, and countersigned and sealed (if a seal be required) by a duly authorized attorney-in-fact or agent; or
- (iii) when duly executed and sealed (if a seal be required) by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority evidenced by the Power of Attorney issued by the company to such person or persons.

RESOLVED FURTHER that the signature of any authorized officer and the seal of the company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the company; and such signature and seal when so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, OLD REPUBLIC SURETY COMPANY has caused these presents to be signed by its proper officer, and its corporate seal to be affixed this 7th day of October, 2022.

OLD REPUBLIC SURETY COMPANY



Alan Pavlic  
President

STATE OF WISCONSIN, COUNTY OF WAUKESHA - SS

On this 7th day of October, 2022, personally came before me, Alan Pavlic and Karen J Haffner, to me known to be the individuals and officers of the OLD REPUBLIC SURETY COMPANY who executed the above instrument, and they each acknowledged the execution of the same, and being by me duly sworn, did severally depose and say: that they are the said officers of the corporation aforesaid, and that the seal affixed to the above instrument is the seal of the corporation, and that said corporate seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority of the board of directors of said corporation.



Kathryn R. Pearson  
Notary Public

My Commission Expires: September 28, 2026

(Expiration of notary's commission does not invalidate this instrument)

### CERTIFICATE

I, the undersigned, assistant secretary of the OLD REPUBLIC SURETY COMPANY, a Wisconsin corporation, CERTIFY that the foregoing and attached Power of Attorney remains in full force and has not been revoked; and furthermore, that the Resolutions of the board of directors set forth in the Power of Attorney, are now in force.



87-7180

Signed and sealed at the City of Brookfield, WI this 20th day of February, 2024.

Karen J Haffner  
Assistant Secretary

ORSC 22262 (3-08)

ASSURED PARTNERS OF SC LLC

## Bid Bond

# AIA Document A310™ – 2010

**CONTRACTOR:**

(Name, legal status and address)

**RIKE ROOFING SERVICES, INC.**  
9160 Northfield Drive

**FORT MILL, SC 29707**

**SURETY:**

(Name, legal status and principal  
place of business)

**Old Republic Surety Company**  
P.O. Box 1635

**Milwaukee, WI 53201-1635**

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**OWNER:**

(Name, legal status and address)

**Watauga County Schools**

**BOND AMOUNT: Five Percent of the Amount Bid (- - - 5.00% - - -)**

**PROJECT: Watauga County Schools Reroofing Project - Maintenance & Operations Building**

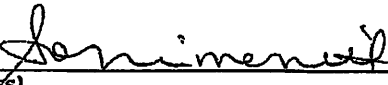
(Name, location or address, and Project number, if any)

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 20th day of February, 2024

  
(Witness)

  
(Witness) **Brittany H. Ferclot, Witness as to Surety**

**RIKE ROOFING SERVICES, INC.**

(Principal)

(Title)

**Old Republic Surety Company**

(Surety)

(Title) **Belinda Ferclot, Attorney-in-fact**

(Seal)

(Seal)



# OLD REPUBLIC SURETY COMPANY

## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That OLD REPUBLIC SURETY COMPANY, a Wisconsin stock insurance corporation, does make, constitute and appoint:  
**CHRIS G. DAVES, CINDY C. SHUMPERT, COURTNEY SEED,**  
**BELINDA FERCIOT, SANDY G. WALLACE, DEBRA L. STEWART of COLUMBIA, SC**

its true and lawful Attorney(s)-in-Fact, with full power and authority for and on behalf of the company as surety, to execute and deliver and affix the seal of the company thereto (if a seal is required), bonds, undertakings, recognizances or other written obligations in the nature thereof, (other than bail bonds, bank depository bonds, mortgage deficiency bonds, mortgage guaranty bonds, guarantees of installment paper and note guaranty bonds, self-insurance workers compensation bonds guaranteeing payment of benefits, or black lung bonds), as follows:

### ALL WRITTEN INSTRUMENTS

and to bind OLD REPUBLIC SURETY COMPANY thereby, and all of the acts of said Attorneys-in-Fact, pursuant to these presents, are ratified and confirmed. This appointment is made under and by authority of the board of directors at a special meeting held on February 18, 1982.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following resolutions adopted by the board of directors of the OLD REPUBLIC SURETY COMPANY on February 18, 1982.

RESOLVED that, the president, any vice-president or assistant vice president, in conjunction with the secretary or any assistant secretary, may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the company to execute and deliver and affix the seal of the company to bonds, undertakings, recognizances, and suretyship obligations of all kinds; and said officers may remove any such attorney-in-fact or agent and revoke any Power of Attorney previously granted to such person.

RESOLVED FURTHER, that any bond, undertaking, recognizance, or suretyship obligation shall be valid and binding upon the Company

- (i) when signed by the president, any vice president or assistant vice president, and attested and sealed (if a seal be required) by any secretary or assistant secretary; or
- (ii) when signed by the president, any vice president or assistant vice president, secretary or assistant secretary, and countersigned and sealed (if a seal be required) by a duly authorized attorney-in-fact or agent; or
- (iii) when duly executed and sealed (if a seal be required) by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority evidenced by the Power of Attorney issued by the company to such person or persons.

RESOLVED FURTHER that the signature of any authorized officer and the seal of the company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the company; and such signature and seal when so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, OLD REPUBLIC SURETY COMPANY has caused these presents to be signed by its proper officer, and its corporate seal to be affixed this 7th day of October, 2022.

Karen J. Haffner  
 Assistant Secretary



OLD REPUBLIC SURETY COMPANY

Alan Pavlic  
 President

STATE OF WISCONSIN, COUNTY OF WAUKESHA - SS

On this 7th day of October, 2022, personally came before me, Alan Pavlic and Karen J. Haffner, to me known to be the individuals and officers of the OLD REPUBLIC SURETY COMPANY who executed the above instrument, and they each acknowledged the execution of the same, and being by me duly sworn, did severally depose and say: that they are the said officers of the corporation aforesaid, and that the seal affixed to the above instrument is the seal of the corporation, and that said corporate seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority of the board of directors of said corporation.



Kathryn R. Pearson  
 Notary Public

My Commission Expires: September 28, 2026

(Expiration of notary's commission does not invalidate this instrument)

### CERTIFICATE

I, the undersigned, assistant secretary of the OLD REPUBLIC SURETY COMPANY, a Wisconsin corporation, CERTIFY that the foregoing and attached Power of Attorney remains in full force and has not been revoked; and furthermore, that the Resolutions of the board of directors set forth in the Power of Attorney, are now in force.

87-7180



Signed and sealed at the City of Brookfield, WI this 20th day of February, 2024.

Karen J. Haffner  
 Assistant Secretary

ORSC 22262 (3-06)

ASSURED PARTNERS OF SC LLC

## Bid Bond

# AIA Document A310™ – 2010

**CONTRACTOR:**

(Name, legal status and address)

**RIKE ROOFING SERVICES, INC.**  
9160 Northfield Drive

**FORT MILL, SC 29707**

**SURETY:**

(Name, legal status and principal  
place of business)

**Old Republic Surety Company**  
P.O. Box 1635

**Milwaukee, WI 53201-1635**

This document has important legal  
consequences. Consultation with  
an attorney is encouraged with  
respect to its completion or  
modification.

Any singular reference to  
Contractor, Surety, Owner or  
other party shall be considered  
plural where applicable.

**OWNER:**

(Name, legal status and address)

**Watauga County Schools**

**BOND AMOUNT: Five Percent of the Amount Bid (- - - 5.00% - - -)**

**PROJECT: Watauga County Schools Reroofing Project - Green Valley Elementary School**

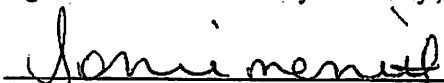
(Name, location or address, and Project number, if any)

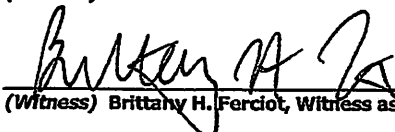
The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.


When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 20th day of February, 2024

  
(Witness)

  
(Witness) Brittany H. Ferriot, Witness as to Surety

**RIKE ROOFING SERVICES, INC.**

(Principal)  (Seal)

(Title)

**Old Republic Surety Company**

(Surety)  (Seal)

(Title) Belinda Ferriot, Attorney-in-fact



## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That OLD REPUBLIC SURETY COMPANY, a Wisconsin stock insurance corporation, does make, constitute and appoint:

CHRIS G. DAVES, CINDY C. SHUMPERT, COURTNEY SEED,  
BELINDA FERCIOT, SANDY G. WALLACE, DEBRA L. STEWART of COLUMBIA, SC

its true and lawful Attorney(s)-in-Fact, with full power and authority for and on behalf of the company as surety, to execute and deliver and affix the seal of the company thereto (if a seal is required), bonds, undertakings, recognizances or other written obligations in the nature thereof, (other than bail bonds, bank depository bonds, mortgage deficiency bonds, mortgage guaranty bonds, guarantees of installment paper and note guaranty bonds, self-insurance workers compensation bonds guaranteeing payment of benefits, or black lung bonds), as follows:

### ALL WRITTEN INSTRUMENTS

and to bind OLD REPUBLIC SURETY COMPANY thereby, and all of the acts of said Attorneys-in-Fact, pursuant to these presents, are ratified and confirmed. This appointment is made under and by authority of the board of directors at a special meeting held on February 18, 1982.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following resolutions adopted by the board of directors of the OLD REPUBLIC SURETY COMPANY on February 18, 1982.

RESOLVED that, the president, any vice-president or assistant vice president, in conjunction with the secretary or any assistant secretary, may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the company to execute and deliver and affix the seal of the company to bonds, undertakings, recognizances, and suretyship obligations of all kinds; and said officers may remove any such attorney-in-fact or agent and revoke any Power of Attorney previously granted to such person.

RESOLVED FURTHER, that any bond, undertaking, recognizance, or suretyship obligation shall be valid and binding upon the Company

- (i) when signed by the president, any vice president or assistant vice president, and attested and sealed (if a seal be required) by any secretary or assistant secretary; or
- (ii) when signed by the president, any vice president or assistant vice president, secretary or assistant secretary, and countersigned and sealed (if a seal be required) by a duly authorized attorney-in-fact or agent; or
- (iii) when duly executed and sealed (if a seal be required) by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority evidenced by the Power of Attorney issued by the company to such person or persons.

RESOLVED FURTHER that the signature of any authorized officer and the seal of the company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the company; and such signature and seal when so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, OLD REPUBLIC SURETY COMPANY has caused these presents to be signed by its proper officer, and its corporate seal to be affixed this 7th day of October, 2022.

Karen J. Haffner  
Assistant Secretary



OLD REPUBLIC SURETY COMPANY

Alan Pavlic  
President

STATE OF WISCONSIN, COUNTY OF WAUKESHA - SS

On this 7th day of October, 2022, personally came before me, Alan Pavlic and Karen J. Haffner, to me known to be the individuals and officers of the OLD REPUBLIC SURETY COMPANY who executed the above instrument, and they each acknowledged the execution of the same, and being by me duly sworn, did severally depose and say: that they are the said officers of the corporation aforesaid, and that the seal affixed to the above instrument is the seal of the corporation, and that said corporate seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority of the board of directors of said corporation.



Kathryn R. Pearson  
Notary Public

My Commission Expires: September 28, 2026

(Expiration of notary's commission does not invalidate this instrument)

### CERTIFICATE

I, the undersigned, assistant secretary of the OLD REPUBLIC SURETY COMPANY, a Wisconsin corporation, CERTIFY that the foregoing and attached Power of Attorney remains in full force and has not been revoked; and furthermore, that the Resolutions of the board of directors set forth in the Power of Attorney, are now in force.



87-7180

Signed and sealed at the City of Brookfield, WI this 20th day of February, 2024.

Karen J. Haffner  
Assistant Secretary

ORSC 22262 (3-06)

ASSURED PARTNERS OF SC LLC

# BID FORM

(4 pages)

Watauga County Schools  
Reroofing Bids :  
Maintenance & Operations Building  
Green Valley Elementary  
Parkway Elementary

Bidder: Davco Roofing and Sheet Metal, LLC

(Bidder enter name here)

## BASE BID, SINGLE-PRIME (ALL TRADES) CONTRACT

The undersigned Bidder, having carefully examined the Bidding and Contract Requirements, Conditions of the Contract, Drawings, Specifications, dated and all subsequent Addenda, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services as described in the above documents, without exception, including all scheduled Allowances if any, necessary to complete the construction of:

Single Prime (All trades) Contract

for the above-named Project, in accordance with the requirements of the Bidding Documents, for the sum of:

## PLEASE INCLUDE A BID BOND & PAYMENT AND PERFORMANCE BOND IN BASE BIDS

Base Bid Maintenance & Operations Building

One Hundred Eighty-Seven Thousand Dollars (\$ 187,900.00 )

Estimated time of Completion 20 Calendar days

SQ. FT. for this project 9,900

Base Bid Green Valley Elementary

Seven Hundred Twenty-Nine Thousand Dollars (\$ 729,000.00 )

Estimated time of Completion 75 Calendar days

SQ FT for this project 19,090

**Base Bid for Parkway Elementary**

One Million Seven Hundred Ninety-One Thousand Nine Hundred Dollars (\$ 1,791,900.00 )

Estimated time of Completion 120 Calendar days

SQ FT for this project 70,900

**Base Bid for All Projects (Maintenance & Operations/ Green Valley Elementary/ Parkway Elementary)**

Two Million Six Hundred Forty-Nine Thousand Dollars (\$ 2,649,000.00 )

Estimated time of Completion 215 Calendar days

Sq FT for this project 98,500

Safety Rating EMR .69

**UNIT Cost**

Wood Nailers BF (\$ 6.75 )

Wood Decking BF (\$ 8.50 )

Gypsum 5/8" SF (\$ 2.10 )

Metal Decking SF ( 17.50 )

#### ACKNOWLEDGEMENT OF ADDENDA

The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

Addendum No. 1, dated 02.02.24

Addendum No. 2, dated \_\_\_\_\_

Addendum No. 3, dated \_\_\_\_\_

#### CONTRACTOR'S LICENSE

The undersigned further states that he is a duly licensed Contractor, for the type of work proposed, in the State of North Carolina and that all fees, permits, etc., pursuant to the submission of this proposal have been paid in full.

#### SUBMISSION OF BID

Respectfully submitted this 20 day of February, 2024

By: Davco Roofing and Sheet Metal, LLC

(Name of bidding firm or corporation)

By: Chris Gore

(Signature)

Chris Gore

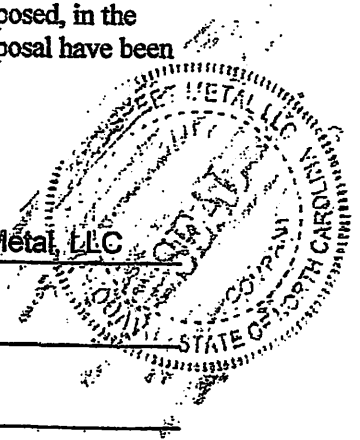
(Type or print name)

Title: Vice President

Address: 4408 Northpointe Industrial Blvd.,  
Charlotte, NC 28216

Phone: 704-817-9788

License: 67146



## Bid Bond

### CONTRACTOR:

(Name, legal status and address)

Davco Roofing and Sheet Metal, LLC  
4408 Northpointe Industrial Blvd.  
Charlotte, NC 28216

### SURETY:

(Name, legal status and principal place of business)

SiriusPoint America Insurance Company  
1 World Trade Center 285 Fulton Street  
47th Floor, Suite 47J  
New York, NY 10007

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification. Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

### OWNER:

(Name, legal status and address)

Watauga County Schools  
251 Pioneer Trail  
Boone, NC 28607

**BOND AMOUNT:** 5% (Five Percent of Amount Bid)

### PROJECT:

(Name, location or address, and Project number, if any)

Maintenance and Operations Building - Reroof

Project Number, if any:

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 20th day of February, 2024.

(Witness)

Davco Roofing and Sheet Metal, LLC

(Principal)

(Seal)

*Cohen*  
(Title) Vice President

SiriusPoint America Insurance Company

(Surety)

*Aaron Michael Steffey*  
(Title) Aaron Michael Steffey, Attorney-in-Fact



By arrangement with the American Institute of Architects, the National Association of Surety Bond Producers (NASBP) ([www.nasbp.org](http://www.nasbp.org)) makes this form document available to its members, affiliates, and associates in Microsoft Word format for use in the regular course of surety business. NASBP vouches that the original text of this document conforms exactly to the text in AIA Document A310-2010, Bid Bond. Subsequent modifications may be made to the original text of this document by users, so careful review of its wording and consultation with an attorney are encouraged before its completion, execution or acceptance.

PROHOU01\_0523

**POWER OF ATTORNEY  
SIRIUSPOINT AMERICA INSURANCE COMPANY  
NEW YORK**

**KNOW ALL MEN BY THESE PRESENTS:** That SiriusPoint America Insurance Company, a New York corporation, having its principal office in the City of New York, pursuant to the following Resolution, which was adopted by the Board of Directors of the Company, to wit:

**RESOLVED**, that the President, Senior Vice President, Chief Financial Officer, Secretary or Assistant Secretary is hereby authorized to execute Powers of Attorney appointing as attorneys-in-fact selected employees of certain surety companies who shall have the power for and on behalf of the Company to execute and affix the seal of the Company to surety contracts as co-surety.

Does hereby nominate, constitute and appoint:

Lisa Battista, Aaron Michael Steffey

Its true and lawful attorney-in-fact, to make, execute, seal and deliver for and on its behalf, and as its act and deed; any and all bonds, contracts, agreements of indemnity, and other undertakings in suretyship (NOT INCLUDING bonds without a fixed penalty or financial guarantee bonds) and to bind the Company thereby as fully and to the same extent as if same were signed by the duly authorized officers of the Company, provided, however, that the penal sum of any one such instrument executed hereunder shall not exceed the sum of:

\$30,000,000 single bond limit

All acts of said attorneys-in-fact pursuant to the authorities herein given are hereby ratified and confirmed. The executive officers listed above in the Resolution may from time to time and at any time remove any such appointees and revoke the power given to him or her.

The execution of such bonds or undertakings in pursuance of these presents, within one year of the date of issue of these presents, shall be binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in New York, New York, in their own proper persons.

**IN WITNESS WHEREOF**, SiriusPoint America Insurance Company has caused its corporate seal to be hereunto affixed, and these presents to be signed by its Secretary this 17th day of August in the year 2023.

SiriusPoint America Insurance Company

By: Melissa J. Ralph  
Melissa J. Ralph  
Secretary

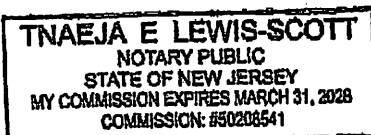
State of New York }

ss.

County of New York

On this 17<sup>th</sup> day of August 2023, before me, a Notary Public of the State of New York in and for the County of New York duly commissioned and qualified, came Melissa J. Ralph, Secretary, of SiriusPoint America Insurance Company, to me personally known to be the individual and officer described in, and who executed the preceding instrument, and acknowledged the execution of the same, and, being by me duly sworn, deposed and said, that she is the officer of the Company aforesaid, and that the seal affixed to the preceding instrument as the corporate seal of said Company, and the said corporate seal and her signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Company, referred to in the preceding instrument, is now in force.

**IN TESTIMONY WHEREOF**, I have hereunto set my hand and affixed my official seal.

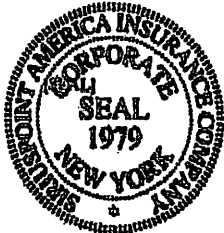


[Signature]  
Notary Public  
My Commission expires  
March 31, 2028

State of New York  
County of New York

I, Melissa J. Ralph, Secretary, of SiriusPoint America Insurance Company, a New York corporation, do hereby certify that the above and foregoing is a full, true correct copy of Power of Attorney, is still in force and effect and has not been revoked.

**IN WITNESS WHEREOF**, I have hereunto set my hand and affixed the seal of said Company this 20 day of February, 2024



[Signature]  
Melissa J. Ralph  
Secretary

## Bid Bond

### CONTRACTOR:

(Name, legal status and address)  
Davco Roofing and Sheet Metal, LLC  
4408 Northpointe Industrial Blvd.  
Charlotte, NC 28216

### SURETY:

(Name, legal status and principal place of business)  
SiriusPoint America Insurance Company  
1 World Trade Center 285 Fulton Street  
47th Floor, Suite 47J  
New York, NY 10007

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

### OWNER:

(Name, legal status and address)  
Watauga County Schools  
189 Big Hill Road  
Boone, NC 28607

**BOND AMOUNT:** 5% (Five Percent of Amount Bid)

### PROJECT:

(Name, location or address, and Project number, if any)  
Green Valley Elementary - Reroof

Project Number, if any:

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

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Signed and sealed this 20th day of February, 2024.

(Witness)

Davco Roofing and Sheet Metal, LLC

(Principal)

(Seal)

Charmaine  
(Title) Vice President

SiriusPoint America Insurance Company

(Surety)

Aaron Michael Steffey  
(Title) Aaron Michael Steffey, Attorney-in-Fact



By arrangement with the American Institute of Architects, the National Association of Surety Bond Producers (NASBP) ([www.nasbp.org](http://www.nasbp.org)) makes this form document available to its members, affiliates, and associates in Microsoft Word format for use in the regular course of surety business. NASBP vouches that the original text of this document conforms exactly to the text in AIA Document A310-2010, Bid Bond. Subsequent modifications may be made to the original text of this document by users, so careful review of its wording and consultation with an attorney are encouraged before its completion, execution or acceptance.

PROHOU01\_0523

**POWER OF ATTORNEY  
SIRIUSPOINT AMERICA INSURANCE COMPANY  
NEW YORK**

**KNOW ALL MEN BY THESE PRESENTS:** That SiriusPoint America Insurance Company, a New York corporation, having its principal office in the City of New York, pursuant to the following Resolution, which was adopted by the Board of Directors of the Company, to wit:

**RESOLVED**, that the President, Senior Vice President, Chief Financial Officer, Secretary or Assistant Secretary is hereby authorized to execute Powers of Attorney appointing as attorneys-in-fact selected employees of certain surety companies who shall have the power for and on behalf of the Company to execute and affix the seal of the Company to surety contracts as co-surety.

Does hereby nominate, constitute and appoint:

Lisa Battista, Aaron Michael Steffey

Its true and lawful attorney-in-fact, to make, execute, seal and deliver for and on its behalf, and as its act and deed; any and all bonds, contracts, agreements of indemnity, and other undertakings in suretyship (NOT INCLUDING bonds without a fixed penalty or financial guarantee bonds) and to bind the Company thereby as fully and to the same extent as if same were signed by the duly authorized officers of the Company, provided, however, that the penal sum of any one such instrument executed hereunder shall not exceed the sum of:

\$50,000,000 single bond limit

All acts of said attorneys-in-fact pursuant to the authorities herein given are hereby nullified and confirmed. The executive officers listed above in the Resolution may from time to time and at any time remove any such appointee and revoke the power given to him or her.

The execution of such bonds or undertakings in pursuance of these presents, within one year of the date of issue of these presents, shall be binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in New York, New York, in their own proper persons.

**IN WITNESS WHEREOF**, SiriusPoint America Insurance Company has caused its corporate seal to be hereunto affixed, and these presents to be signed by its Secretary this 17th day of August in the year 2021.

SiriusPoint America Insurance Company

By: Melissa J. Ralph  
Melissa J. Ralph  
Secretary

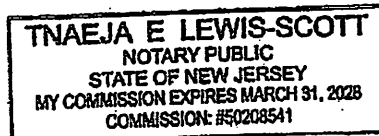
State of New York }

} ss.

County of New York

On this 17<sup>th</sup> day of August 2023, before me, a Notary Public of the State of New York in and for the County of New York duly commissioned and qualified, came Melissa J. Ralph, Secretary, of SiriusPoint America Insurance Company, to me personally known to be the individual and officer described in, and who executed the preceding instrument, and acknowledged the execution of the same, and, being by me duly sworn, depose and say, that she is the officer of the Company aforesaid, and that the seal affixed to the preceding instrument as the corporate seal of said Company, and the said corporate seal and her signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Company, referred to in the preceding instrument, is now in force.

**IN TESTIMONY WHEREOF**, I have hereunto set my hand and affixed my official seal.



TNAEJA E LEWIS-SCOTT  
Notary Public  
My Commission expires  
March 31, 2028

State of New York  
County of New York

I, Melissa J. Ralph, Secretary, of SiriusPoint America Insurance Company, a New York corporation, do hereby certify that the above and foregoing is a full, true correct copy of Power of Attorney, is still in force and effect and has not been revoked.

**IN WITNESS WHEREOF**, I have hereunto set my hand and affixed the seal of said Company this 20 day of February, 2024



Melissa J. Ralph  
Melissa J. Ralph  
Secretary

## Bid Bond

### CONTRACTOR:

(Name, legal status and address)  
Davco Roofing and Sheet Metal, LLC  
4408 Northpointe Industrial Blvd.  
Charlotte, NC 28216

### SURETY:

(Name, legal status and principal place of business)  
SiriusPoint America Insurance Company  
1 World Trade Center 285 Fulton Street  
47th Floor, Suite 47J  
New York, NY 10007

### OWNER:

(Name, legal status and address)  
Watauga County Schools  
160 Parkway School Dr.  
Boone, NC 28607

**BOND AMOUNT:** 5% (Five Percent of Amount Bid)

### PROJECT:

(Name, location or address, and Project number, if any)  
Parkway Elementary School - Reroof

Project Number, if any:

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.  
Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

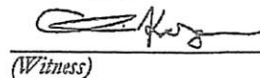
The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 20th day of February, 2024.

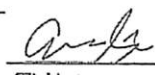
  
(Witness)

  
(Witness)

Davco Roofing and Sheet Metal, LLC  
(Principal)

  
(Title) Vice President

SiriusPoint America Insurance Company  
(Surety)

  
(Title) Aaron Michael Steffey, Attorney-in-Fact

(Seal)



By arrangement with the American Institute of Architects, the National Association of Surety Bond Producers (NASBP) ([www.nasbp.org](http://www.nasbp.org)) makes this form document available to its members, affiliates, and associates in Microsoft Word format for use in the regular course of surety business. NASBP vouches that the original text of this document conforms exactly to the text in AIA Document A310-2010, Bid Bond. Subsequent modifications may be made to the original text of this document by users, so careful review of its wording and consultation with an attorney are encouraged before its completion, execution or acceptance.

PROHOU01\_0523

**POWER OF ATTORNEY  
SIRIUSPOINT AMERICA INSURANCE COMPANY  
NEW YORK**

**KNOW ALL MEN BY THESE PRESENTS:** That SiriusPoint America Insurance Company, a New York corporation, having its principal office in the City of New York, pursuant to the following Resolution, which was adopted by the Board of Directors of the Company, to wit:

**RESOLVED**, that the President, Senior Vice President, Chief Financial Officer, Secretary or Assistant Secretary is hereby authorized to execute Powers of Attorney appointing as attorneys-in-fact selected employees of certain surety companies who shall have the power for and on behalf of the Company to execute and affix the seal of the Company to surety contracts as co-surety.

Does hereby nominate, constitute and appoint:

Lisa Battista, Aaron Michael Stiffley

Its true and lawful attorney-in-fact, to make, execute, seal and deliver for and on its behalf, and as its act and deed; any and all bonds, contracts, agreements of indemnity, and other undertakings in suretyship (NOT INCLUDING bonds without a fixed penalty or financial guarantee bonds) and to bind the Company thereby as fully and to the same extent as if same were signed by the duly authorized officers of the Company, provided, however, that the penal sum of any one such instrument executed hereunder shall not exceed the sum of:

\$50,000,000 single bond limit

All acts of said attorneys-in-fact pursuant to the authorities herein given are hereby ratified and confirmed. The executive officers listed above in the Resolution may from time to time and at any time remove any such appointees and revoke the power given to him or her.

The execution of such bonds or undertakings in pursuance of these presents, within one year of the date of issue of these presents, shall be binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in New York, New York, in their own proper persons.

IN WITNESS WHEREOF, SiriusPoint America Insurance Company has caused its corporate seal to be hereunto affixed, and these presents to be signed by its Secretary this 17th day of August in the year 2023.

SiriusPoint America Insurance Company

By: Melissa J. Ralph  
Melissa J. Ralph  
Secretary

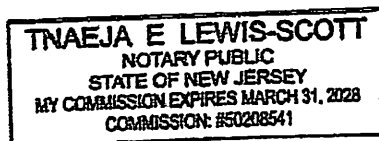
State of New York )

) ss.

County of New York

On this 17<sup>th</sup> day of August 2023, before me, a Notary Public of the State of New York in and for the County of New York duly commissioned and qualified, came Melissa J. Ralph, Secretary, of SiriusPoint America Insurance Company, to me personally known to be the individual and officer described in, and who executed the preceding instrument, and acknowledged the execution of the same, and, being by me duly sworn, deposed and said, that she is the officer of the Company aforesaid, and that the seal affixed to the preceding instrument as the corporate seal of said Company, and the said corporate seal and her signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Company, referred to in the preceding instrument, is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal.



TNAEJA E LEWIS-SCOTT  
Notary Public  
My Commission expires  
March 31, 2028

State of New York  
County of New York

I, Melissa J. Ralph, Secretary, of SiriusPoint America Insurance Company, a New York corporation, do hereby certify that the above and foregoing is a full, true correct copy of Power of Attorney, is still in force and effect and has not been revoked.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Company this 20 day of February, 2024



Melissa J. Ralph  
Melissa J. Ralph  
Secretary

# Watauga County Schools

Reroofing Package

February 1, 2024

Maintenance and Operations Building

Green Valley Elementary School

Parkway Elementary School

## SECTION 01100 - SUMMARY

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Work phases.
  - 2. Use of premises.
  - 3. Owner's occupancy requirements.
  - 4. Work restrictions.
  - 5. Specification formats and conventions.

#### 1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Roof Sections Main Roof
  - 1. Project Location: 175 Pioneer Trail, Boone, NC
  - 2. Owner's Representative: Eric Bolick, bolicke@wataugaschools.org

#### 1.3 TYPE OF CONTRACT

- A. Project will be carried out under a single prime contract.

#### 1.4 OWNER-FURNISHED PRODUCTS

- A. Owner will furnish products indicated. The Work includes providing support systems to receive Owner's equipment and making plumbing, mechanical, and electrical connections.

#### 1.5 EXISTING ROOF CONSTRUCTIONS:

- A. Roof Section Main Metal Deck/2" ISO/TPO

#### 1.6 SUMMARY OF WORK: REPLACEMENT

- A. Roof Section Main Roof
  - a. Comply with all OSHA safety requirements.
  - b. Tear off and removal of existing TPO Roof, insulation and flashings.
  - c. Mechanically Attach 2 layers of 2.6" Isocyanurate insulation
  - d. Mechanically Attach New 60 MIL Tremco TPA membrane and flashings.
  - e. Salvage and reuse existing gutter and down spouts.

- f. Provide a Two-Year contractor's warranty.
- g. Provide a Tremco 20 -Year Material and Labor QA manufacturer's warranty.
- B. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.
- C. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of the Project site beyond areas in which the Work is indicated.
  - 1. Limits: Confine constructions operations to specified roof area and staging areas as indicated during the pre-bid meeting.
- a. Do not enter occupied areas except where required by the Work.
- b. Do not use Owner's toilet rooms.
- c. Do not use Owner's cafeteria.
- 2. Owner Occupancy: Allow for Owner occupancy of Project site and use by the public.
- 3. Driveways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles always. Do not use these areas for parking or storage of materials.
- a. Schedule deliveries to minimize use of driveways and entrances.
- b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- D. Parking: Park in designated areas only.
- E. Deliveries: Provide representative to receive all materials and offload at the job site. The Owner will refuse all deliveries to other locations.
- F. Personnel Identification: All construction personnel in occupied portions of the facility must always wear Contractor-furnished identification badges. Personnel without proper identification are subject to removal from the site by the Owner.
- G. Safety and Security: Comply with Owner's requirements related to security, fire drills, alerts and Covid 19 safety requirements and protocol.
- H. Burning/Welding Operations: Comply with Owner's requirements related to Burning and Welding permits. Coordinate turning off fire/smoke detection systems in affected areas. The contractor shall be responsible for Fire Department response fees related to construction operations.
- I. Smoking: No smoking is allowed on the premises.
- J. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

#### 1.7 OWNER'S OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
  - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  - 2. Provide not less than 72 Insert number hours' notice to Owner of activities that will affect Owner's operations.

#### 1.8 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of 6 a.m. to 7 p.m., Monday through Friday, accept otherwise indicated.
  - 1. Weekend Hours: Permitted with at least 48 hours notice to the owner.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Owner's written permission.

END OF SECTION 01100

## SECTION 075419 - POLYVINYL-CHLORIDE (PVC/TPA) ROOFING

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Mechanically-fastened thermoplastic PVC roofing system on metal deck, including:
2. Roof insulation.
3. Walkway material.

B. Related Sections:

1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers and blocking.
2. Division 07 Section "Preparation for Re-Roofing" for recover board beneath new membrane roofing.
3. Division 07 Section "Air Barrier Rehabilitation" for requirements for sealing of air barrier at perimeter of roofing and within roofing system.
4. Division 07 Section "Sheet Metal Flashing and Trim" for shop-formed sheet metal items including roof drainage system items, roof penetration flashings, base and counterflashings and reglets, and formed copings and roof edge metal items.
5. Division 07 Section "Roof Specialties" for manufactured copings, roof edge flashings and counterflashings, and roof edge drainage systems.
6. Division 07 Section "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint assemblies.
7. Division 07 Section "Joint Sealants" for joint sealants, joint fillers, and joint preparation.

C. Alternates: Refer to Division 01 Section "Alternates" for description of Work in this Section affected by alternates.

D. Allowances: Refer to Division 01 Section "Allowances" for description of Work in this Section affected by allowances.

E. Unit Prices: Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.

## 1.2 DEFINITIONS

- A. **Roofing Terminology:** Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.

## 1.3 PREINSTALLATION MEETINGS

- A. **Preinstallation Roofing Conference:** Conduct conference at Project site.
  - 1. Review drawings and specifications.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Examine substrate conditions and finishes for compliance with requirements, including flatness and fastening.
  - 5. Review structural loading limitations of roof deck during and after roofing.
  - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
  - 7. Review governing regulations and requirements for insurance and certificates if applicable.
  - 8. Review temporary protection requirements for roofing system during and after installation.
  - 9. Review roof observation and repair procedures after roofing installation.

## 1.4 ACTION SUBMITTALS

- A. **Product Data:** For each type of product indicated.
- B. **Sustainable Design Submittals:**

## 1.5 INFORMATIONAL SUBMITTALS

- A. **Contractor's Product Certificate:** Submit certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.
- B. **Manufacturer Certificates:** Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
  - 1. Submit evidence of compliance with performance requirements.
    - a. Include: UL listing certificate.

2. Product Compatibility: Indicate manufacturer has verified compatibility of roofing system components, including but not limited to: Roofing membrane, flashing sheets, adhesives, and sealants.

C. Warranties: Unexecuted sample copies of special warranties.

D. Inspection Reports: Reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions taken to correct defective work.

#### 1.6 CLOSEOUT SUBMITTALS

A. Executed copies of warranties.

B. Maintenance Data: To include in maintenance manuals.

#### 1.7 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.

B. Manufacturer Qualifications: Approved manufacturer listed in this Section, UL listed for roofing systems comparable to that specified for this Project, with minimum five years' experience in manufacture of thermoplastic roof membrane products in successful use in similar applications.

C. Roofing Inspector Qualifications: A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:

1. An authorized full-time technical employee of the manufacturer.
2. An independent party certified as a Registered Roof Observer by the International Institute of Building Enclosure Consultants (formerly the Roof Consultants Institute) retained by the Contractor or the Manufacturer and approved by the Manufacturer.

D. Manufacturer's Installation Instructions: Obtain and maintain on-site access to manufacturer's written recommendations and instructions for installation of products.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.

- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
  - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

#### 1.9 PROJECT / FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.
- B. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
  - 1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of roofing sheet securely in place with joints and edges sealed.
  - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.
  - 3. Remove temporary plugs from roof drains at end of each day.
  - 4. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 1.10 WARRANTY

- A. Manufacturer's Warranty: Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
  - 1. Form of Warranty: Manufacturer's standard warranty form.
  - 2. Scope of Warranty: Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.
  - 3. Warranty Period: 20 years from date of completion.

- B. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.

1. Inspections to occur in following years: 2, 5, 10 and 15 following completion.

- C. Installer Warranty: Installer's warranty signed by Installer, as follows.

1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.

2. Scope of Warranty: Work of this Section.

3. Warranty Period: 2 years from date of completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Inc, Beachwood, OH, (800) 562-2728, [www.tremcoroofing.com](http://www.tremcoroofing.com) that are named in other Part 2 articles. Provide specified products.

- B. Source Limitations: Obtain components for roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

### 2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.

1. Accelerated Weathering: Roofing system shall withstand 10,000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.

2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746/D3746M, ASTM D4272/D4272M, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.

- B. Exterior Fire-Test Exposure: ASTM E108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.

- C. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E1980, based on testing identical products by a qualified testing agency.

- D. Energy Performance: Roofing system shall have an initial solar reflectance index of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

## 2.3 MATERIALS, GENERAL

- A. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

## 2.4 BASE-PLY / PLY SHEET

## 2.5 THERMOPLASTIC MEMBRANE MATERIALS

### A. PVC Roof Membrane:

- 1. Thermoplastic PVC/TPA sheet, internally fabric reinforced, Energy Star qualified, CRRC listed, and California Title 24 Energy Code compliant, ASTM D4434 Type IV.
  - a. Basis of design product: Tremco, TPA Single Ply Roof Membrane.
  - b. Tensile Strength at 0 deg. F (-18 deg. C), minimum, ASTM D751: 300 lbf/in (1330 N).
  - c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D751: 100 lbf (440 N).
  - d. Elongation at 0 deg. F (-18 deg. C), minimum at fabric break, ASTM D751: 25 percent machine direction, 25 percent cross-machine direction.
  - e. Minimum Thickness, nominal, ASTM D751: 0.060 in (1.5 mm).
  - f. Color: White.
  - g. Solar Reflectance Index (SRI), ASTM E1980: 108 (White, initial) 84 (White, 3-year aged).
  - h. Recycled Content, minimum: 25 percent pre-consumer.

- B. Membrane Flashing: Manufacturer's standard, smooth-backed, sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

## 2.6 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.

- 1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
- 2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - a. Plastic Foam Adhesives: 50 g/L.

- b. Single-Ply Roof Membrane Sealants: 450 g/L.
  - c. Nonmembrane Roof Sealants: 300 g/L.
  - d. Sealant Primers for Nonporous Substrates: 250 g/L.
  - e. Sealant Primers for Porous Substrates: 775 g/L.
- 3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Flashing Membrane Adhesive:
  - 1. Bonding adhesive, contact-type solvent-based low VOC, for bonding TPA non-fleece-backed single ply membranes and flashings to substrates.
    - a. Basis of design product: Tremco, TPA LV Single Ply Bonding Adhesive.
    - b. VOC, maximum, ASTM D3960: 200 g/L.
- C. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 mm by 3 mm) thick; with anchors.
- D. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch (25 mm wide by 1.3 mm) thick, prepunched.
- E. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening components to substrate, and acceptable to membrane roofing system manufacturer.
- F. Joint Sealant: Elastomeric joint sealant compatible with roofing materials, with movement capability appropriate for application.
  - 1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
    - a. Basis of design product: Tremco, TremSEAL Pro.
    - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
    - c. Hardness, Shore A, ASTM C661: 40.
    - d. Adhesion to Concrete, ASTM C794: 35 pli.
    - e. Tensile Strength, ASTM D412: 350 psi (2410 kPa).

f. Color: White.

G. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.

H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

## 2.7 ROOF INSULATION MATERIALS

A. General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from insulation manufacturer's standard sizes, suitable for application, and of thicknesses indicated.

B. Roof Insulation: Provide roof insulation product in thicknesses indicated in Part 3 as follows:

1. Board Insulation, Polyisocyanurate: CFC- and HCFC- free, with recycled content glass-fiber mat facer on both major surfaces, ASTM C1289 Type II Class 1.
  - a. Basis of design product: Tremco, Trisotech Insulation.
  - b. Compressive Strength, ASTM D1621: Grade 2: 20 psi (138 kPa).
  - c. Conditioned Thermal Resistance at 75 deg. F (24 deg. C): 14.4 at 2.5 inches (50.8 mm) thick.

## 2.8 ROOF INSULATION ACCESSORIES

A. Insulation Cant Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

B. Wood Cant Strips: Comply with requirements in Division 06 rough carpentry Section.

C. Tapered Edge Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

D. Substrate Joint Tape: 6- or 8-inch- (150- or 200-mm-) wide, coated, glass fiber.

E. Insulation Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.

## 2.9 WALKWAY MATERIALS

A. Walkway Material:

1. Walkway roll, reinforced PVC/TPA membrane roll with serrated slip-resistant surface, fabricated for heat welding to compatible PVC/TPA membrane surface.
  - a. Basis of design product: Tremco, TPA Walkway Roll.
  - b. Roll Size: 36 inches by 60 foot (914 mm by 18.3 m).

- c. Thickness / Color: Gray, 0.072 inch (2 mm).
- d. Tensile, Grab ASTM D751: 200 lbf (890 N).
- e. Tear Strength, Tongue : 45 lbf (200N).
- f. Low Temp Flex: -40 deg F. (-40 deg C.).

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
  - 1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
  - 2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  - 3. Steel Roof Deck:
    - a. Verify that deck is securely fastened and properly supported with no projecting fasteners and with no adjacent units in excess of 1/16 inch (1.6 mm) out of plane relative to adjoining deck.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 3.3 INSTALLATION, GENERAL

- A. Install roofing system in accordance with manufacturer's written instructions and approved details.
- B. Install wood cants, blocking, curbs, and nailers in accordance with requirements of Division 06 Section "Miscellaneous Rough Carpentry."

- C. NRCA Installation Details: Install roofing system in accordance with applicable NRCA Manual Plates and NRCA recommendations; modify as required to comply with manufacturer's approved details and perimeter fastening requirements of FM Global references if applicable.

### 3.4 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (70 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
  - 1. Flat Insulation System on Sloped Roof Deck: Install insulation at minimum thickness as follows:
    - a. Minimum total thickness of Continuous Insulation: 5.2 inches.
      - 1) Minimum thickness of base layer: 2.6 inches.
      - 2) Minimum thickness of each subsequent layer: 2.6 inches.
- D. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
  - 1. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.
- E. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
  - 1. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.

### 3.5 MECHANICALLY FASTENED MEMBRANE ROOFING INSTALLATION

- A. Mechanically fasten membrane roofing over area to receive roofing and install according to roofing system manufacturer's written instructions.
  - 1. For in-splice attachment, install membranes roofing with long dimension perpendicular to steel roof deck flutes.
- B. Start installation of membrane roofing in presence of roofing system manufacturer's technical personnel.

- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Mechanically fasten or adhere membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- E. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- F. In-Seam Attachment: Secure one edge of membrane sheet using fastening plates or metal battens centered within membrane seam and mechanically fasten membrane sheet to roof deck.
- G. Welded Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
  - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
  - 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.

### 3.6 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Seal top termination of base flashing with a metal termination bar and a continuous bead of joint sealant.

### 3.7 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

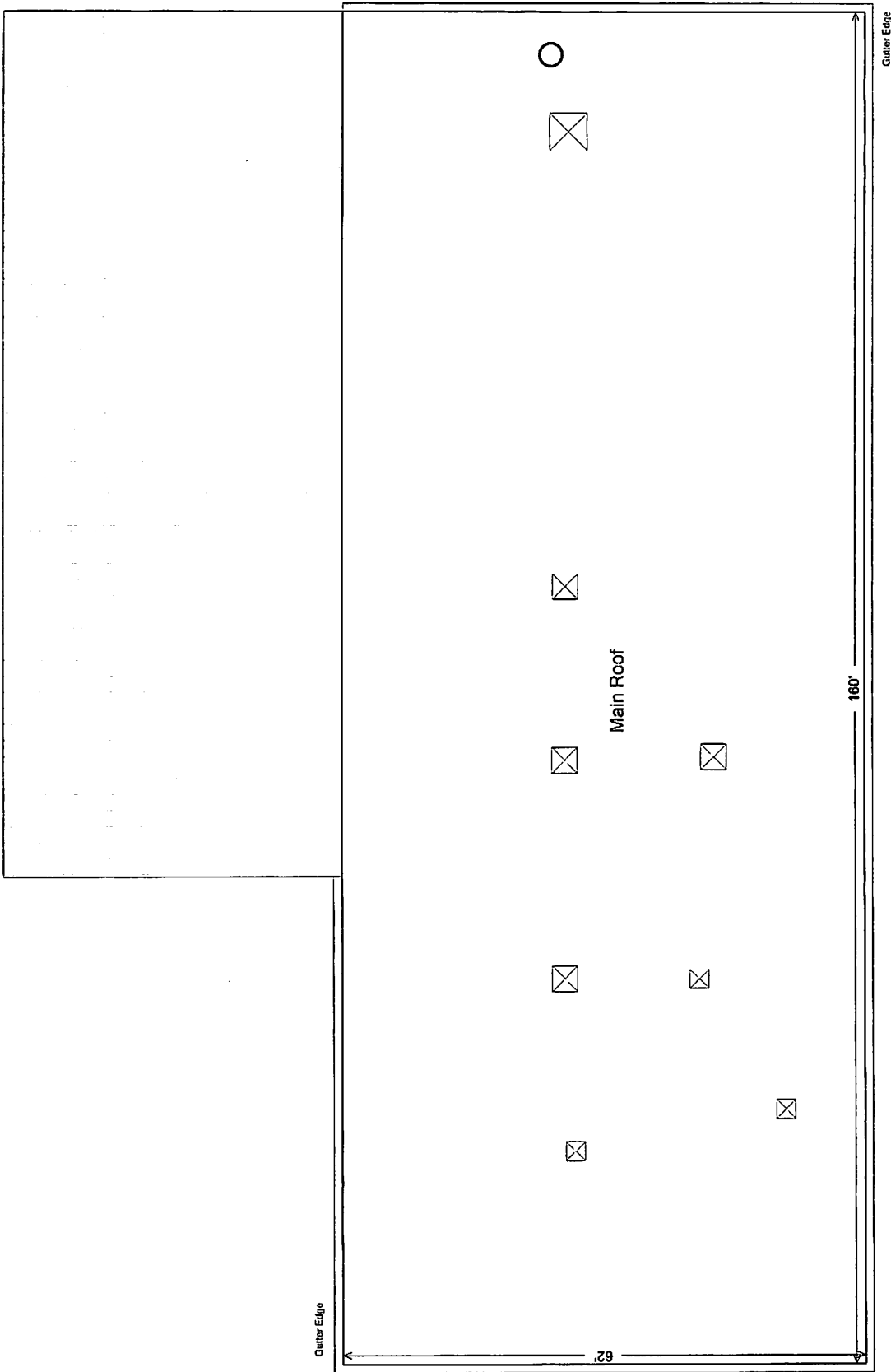
3.8 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- B. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- C. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.9 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Owner's Consultant and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075419



## Main Roof - 9,922 SF

\*Square footage and measurements are approximate and should be verified during the bid process.

### Legend

- |   |   |  |
|---|---|--|
| <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>● Hot Stack</li> <li>○ Used Shove Stack</li> </ul> <p><b>Drainage</b></p> <ul style="list-style-type: none"> <li>Drain (Existing)</li> <li>Drain (New)</li> </ul> | <p><b>Microcosms</b></p> <ul style="list-style-type: none"> <li>Can Line</li> <li>Wayway</li> <li>Power Wayway</li> </ul> <p><b>Problem Indicators</b></p> <ul style="list-style-type: none"> <li>Blister</li> <li>Ponding</li> </ul> | <p><b>Other</b></p> <ul style="list-style-type: none"> <li>Chicken</li> <li>Roof Level Change</li> <li>Core Test</li> </ul> <p><b>Flagging</b></p> <ul style="list-style-type: none"> <li>Flag Spot</li> </ul> |
|---|---|--|
- \* Note: -U indicates an unused item

Note: -U indicates an unused item

## SECTION 01100 - SUMMARY

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Work phases.
  - 2. Use of premises.
  - 3. Owner's occupancy requirements.
  - 4. Work restrictions.
  - 5. Specification formats and conventions.

#### 1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Roof Sections 1,2,,3,3a,3b,4,5
  - 1. Project Location: 189 Big Hill Road, Boone, NC
  - 2. Owner's Representative: Eric Bolick, bolicke@wataugaschools.org

#### 1.3 TYPE OF CONTRACT

- A. Project will be carried out under a single prime contract.

#### 1.4 OWNER-FURNISHED PRODUCTS

- A. Owner will furnish products indicated. The Work includes providing support systems to receive Owner's equipment and making plumbing, mechanical, and electrical connections.

#### 1.5 EXISTING ROOF CONSTRUCTIONS:

- A. **Roof Section 1, 2,5**
- B. Roof 1: Concrete Deck/2.5" of Isocyanurate MA/ Fully Adhered EPDM Membrane
- C. Roof 2: Metal Deck/Perlite/BUR/Gravel/1/2" WF/EPDM Adhered
- D. Roof 5: Wood Deck/BUR/Gravel/2"ISO/EPDM Adhered
- E. **Roof Sections 3,3a,3b,4 Shingles**
- F. SUMMARY OF WORK: REPLACEMENT

**G. Roof Section 1**

**H. Comply with all OSHA safety requirements.**

- a. Tear off and removal of existing EPDM Roofs, insulation and flashings.
- b. Adhere 2 layers of 2.6" Isocyanurate/adhere 1/4" tapered Isocyanurate/adhere 1/4" gypsum coverboard. All insulation adhered with Tremco Low Rise Foam.
- c. Adhere 60 Mil Tremco TPA membrane and flashings in Tremco Standard TPA adhesive.
- d. Install new 24-gauge metal copings, gutters and downspouts.

**Roof Section 2**

- MA 2 layers of 2.6" Isocyanurate
- MA 1/4" taper
- MA Tremco 60 Mil TPA Membrane

**Roof Section 5**

- MA 1 layer of 2.6" of Isocyanurate
- MA 1/4" densdeck
- Add crickets between drains
- MA Tremco 60 Mi TPA membrane

- e. Provide a Two-Year contractor's warranty.
- f. Provide a Tremco 20 -Year Material and Labor QA manufacturer's warranty.

**I. Roof Sections 3,3a,3b,4**

- 1. Tear off existing shingle down to the deck.
- 2. Install GAF Ice and Water shield membrane over entire deck.
- 3. Install New GAF TimberLine HDZ RS 30 Year Architectural Shingles (**Color Cool Weatherwood**)
- 4. Install new gutters and downspouts.
- 5. Provide GAF 30-year warranty.
- 6. Provide 2-year Contractor Warranty

**J. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.**

**K. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of the Project site beyond areas in which the Work is indicated.**

- 1. Limits: Confine constructions operations to specified roof area and staging areas as indicated during the pre-bid meeting.
- a. Do not enter occupied areas except where required by the Work.
- b. Do not use Owner's toilet rooms.
- c. Do not use Owner's cafeteria.
- 2. Owner Occupancy: Allow for Owner occupancy of Project site and use by the public.
- 3. Driveways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles always. Do not use these areas for parking or storage of materials.
- a. Schedule deliveries to minimize use of driveways and entrances.
- b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

- L. Parking: Park in designated areas only.
- M. Deliveries: Provide representative to receive all materials and offload at the job site. The Owner will refuse all deliveries to other locations.
- N. Personnel Identification: All construction personnel in occupied portions of the facility must always wear Contractor-furnished identification badges. Personnel without proper identification are subject to removal from the site by the Owner.
- O. Safety and Security: Comply with Owner's requirements related to security, fire drills, alerts and Covid 19 safety requirements and protocol.
- P. Burning/Welding Operations: Comply with Owner's requirements related to Burning and Welding permits. Coordinate turning off fire/smoke detection systems in affected areas. The contractor shall be responsible for Fire Department response fees related to construction operations.
- Q. Smoking: No smoking is allowed on the premises.
- R. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

#### 1.6 OWNER'S OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
  - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  - 2. Provide not less than 72 Insert number hours' notice to Owner of activities that will affect Owner's operations.

#### 1.7 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of 6 a.m. to 7 p.m., Monday through Friday, accept otherwise indicated.
  - 1. Weekend Hours: Permitted with at least 48 hours notice to the owner.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

Watauga County Schools  
Green Valley Elementary School  
189 Big Hill Road  
Boone, NC 28607

Summary Scope of Work Section

1. Notify Owner not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Owner's written permission.

END OF SECTION 01100








Building	Green Valley School Elementary
Customer	Watauga County Schools
DRG, by	MCR
Location	Boone, NC
Date	4/20/2021

Roof 1 - 11,486 SF  
Roof 2 - 2,094 SF  
Roof 2a - 224 SF  
Roof 3 - 13,993 SF  
Roof 3a - 202 SF  
Roof 3b - 370 SF  
Roof 4 - 4,524 SF  
Roof 5 - 4,113 SF  
Roof 6 - 734 SF  
Roof 7 - 1,144 SF  
Roof 8 - 6,573 SF

\*Square footage and measurements are approximate and should be verified during the bid process.

Roof Outline	Expansion Joint Ridge Valley
<input checked="" type="checkbox"/> HVAC on Curb	<input checked="" type="checkbox"/> Skylight
<input checked="" type="checkbox"/> Roof Hatch	<input checked="" type="checkbox"/> Unit on Curb
<input checked="" type="checkbox"/> HVAC on Slopers	<input checked="" type="checkbox"/> Unit on Slopers

- Projections**
- Plumbing Stack
  - Hot Stack
  - Pitch Pan
  - Metal Slove Stack
- Drainage**
- ◆ Down (Eisentrug)
  - ◆ Drain (New)
  - ◆ Scooper
- \* Negro - if medicine an unused item

- | Miscellaneous |   | Problem Indicators |   |
|---------------|---|--------------------|---|
| Gas Line      |  | Cracks             |  |
| Walkway       |  | Road Level Change  |  |
| Power Walkway |  | Core Test          |  |
|               |   | Discolor           |  |
|               |   | Ponding            |  |
|               |   | Flagging           |  |
|               |   | Bare Spot          |  |

2. **Notes:** 1) In the future, we can extend the

## SECTION 075419 - POLYVINYL-CHLORIDE (PVC/TPA) ROOFING

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Adhered thermoplastic PVC roofing system on concrete deck, including:
2. Roof insulation.
3. Roof insulation cover board.
4. Walkway material.

B. Related Sections:

1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers and blocking.
2. Division 07 Section "Preparation for Re-Roofing" for recover board beneath new membrane roofing.
3. Division 07 Section "Sheet Metal Flashing and Trim" for shop-formed sheet metal items including roof drainage system items, roof penetration flashings, base and counterflashings and reglets, and formed copings and roof edge metal items.
4. Division 07 Section "Roof Specialties" for manufactured copings, roof edge flashings and counterflashings, and roof edge drainage systems.
5. Division 07 Section "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint assemblies.
6. Division 07 Section "Joint Sealants" for joint sealants, joint fillers, and joint preparation.
7. Division 22 Section "Roof Drains" for roof drains.

C. Unit Prices: Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.

#### 1.2 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.

### 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
  - 1. Review drawings and specifications.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Examine substrate conditions and finishes for compliance with requirements, including flatness and fastening.
  - 5. Review temporary protection requirements for roofing system during and after installation.
  - 6. Review roof observation and repair procedures after roofing installation.

### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Sustainable Design Submittals:

### 1.5 INFORMATIONAL SUBMITTALS

- A. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
  - 1. Submit evidence of compliance with performance requirements.
    - a. Include: UL listing certificate.
  - 2. Product Compatibility: Indicate manufacturer has verified compatibility of roofing system components, including but not limited to: Roofing membrane, flashing sheets, adhesives, and sealants.
- B. Warranties: Unexecuted sample copies of special warranties.
- C. Inspection Reports: Reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions taken to correct defective work.

### 1.6 CLOSEOUT SUBMITTALS

- A. Executed copies of warranties.
- B. Maintenance Data: To include in maintenance manuals.

## 1.7 QUALITY ASSURANCE

- A. **Installer Qualifications:** An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. **Manufacturer Qualifications:** Approved manufacturer listed in this Section, UL listed for roofing systems comparable to that specified for this Project, with minimum five years' experience in manufacture of thermoplastic roof membrane products in successful use in similar applications.
- C. **Roofing Inspector Qualifications:** A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:
  - 1. An authorized full-time technical employee of the manufacturer.
- D. **Manufacturer's Installation Instructions:** Obtain and maintain on-site access to manufacturer's written recommendations and instructions for installation of products.

## 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
  - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

## 1.9 PROJECT / FIELD CONDITIONS

- A. **Weather Limitations:** Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

- B. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
  - 1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of roofing sheet securely in place with joints and edges sealed.
  - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.
  - 3. Remove temporary plugs from roof drains at end of each day.
  - 4. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 1.10 WARRANTY

- A. Manufacturer's Warranty: Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
  - 1. Form of Warranty: Manufacturer's standard warranty form.
  - 2. Scope of Warranty: Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.
  - 3. Warranty Period: 20 years from date of completion.
- B. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
  - 1. Inspections to occur in following years: 2, 5, 10 and 15 following completion.
- C. Installer Warranty: Installer's warranty signed by Installer, as follows.
  - 1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.
  - 2. Scope of Warranty: Work of this Section.
  - 3. Warranty Period: 2 years from date of completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Inc, Beachwood, OH, (800) 562-2728, [www.tremcoroofing.com](http://www.tremcoroofing.com) that are named in other Part 2 articles. Provide specified products.

1. Manufacturers of comparable products: Approved by Owner prior to bid.

## 2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
  1. Accelerated Weathering: Roofing system shall withstand 10,000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
- B. Flashings and Fastening: Comply with requirements of Division 07 Sections "Sheet Metal Flashing and Trim" and "Roof Specialties." Provide base flashings, perimeter flashings, detail flashings and component materials and installation techniques that comply with requirements and recommendations of the following:
  1. NRCA Roofing Manual (Sixth Edition) for construction details and recommendations.
  2. SMACNA Architectural Sheet Metal Manual (Seventh Edition) for construction details.
- C. Exterior Fire-Test Exposure: ASTM E108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- D. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.
- E. Energy Performance: Roofing system shall have an initial solar reflectance index of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

## 2.3 MATERIALS, GENERAL

- A. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

## 2.4 THERMOPLASTIC MEMBRANE MATERIALS

- A. PVC Roof Membrane:
  1. Thermoplastic PVC/TPA sheet, internally fabric reinforced, Energy Star qualified, CRRC listed, and California Title 24 Energy Code compliant, ASTM D4434 Type IV.
    - a. Basis of design product: Tremco, TPA Single Ply Roof Membrane.
    - b. Tensile Strength at 0 deg. F (-18 deg. C), minimum, ASTM D751: 300 lbf/in (1330 N).
    - c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D751: 100 lbf (440 N).

- d. Elongation at 0 deg. F (-18 deg. C), minimum at fabric break, ASTM D751: 25 percent machine direction, 25 percent cross-machine direction.
  - e. Minimum Thickness, nominal, ASTM D751: 0.060 in (1.5 mm).
  - f. Color: White.
  - g. Solar Reflectance Index (SRI), ASTM E1980: 108 (White, initial) 84 (White, 3-year aged).
  - h. Recycled Content, minimum: 25 percent pre-consumer.
- B. Membrane Flashing: Manufacturer's standard, smooth-backed, sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

## 2.5 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.
- 1. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
    - a. Plastic Foam Adhesives: 50 g/L.
    - b. Single-Ply Roof Membrane Sealants: 450 g/L.
    - c. Nonmembrane Roof Sealants: 300 g/L.
    - d. Sealant Primers for Nonporous Substrates: 250 g/L.
    - e. Sealant Primers for Porous Substrates: 775 g/L.
  - 2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Membrane Adhesive:
- 1. Elastomeric solvent-based contact-type adhesive for bonding TPA fleece-backed and non-fleece-backed single ply membranes and flashings to substrates.
    - a. Basis of design product: Tremco, TPA Single Ply Bonding Adhesive.
    - b. Density at 77 deg. F (25 deg. C), minimum, ASTM D147: 7.0 lb/gal (0.84 kg/L).
    - c. Percent solids, minimum ASTM D316: 25 percent.

- d. VOC, maximum, ASTM D 3960: 612 g/L.
- C. Flashing Membrane Adhesive:
  - 1. Bonding adhesive, contact-type solvent-based low VOC, for bonding TPA non-fleece-backed single ply membranes and flashings to substrates.
    - a. Basis of design product: Tremco, TPA LV Single Ply Bonding Adhesive.
    - b. VOC, maximum, ASTM D3960: 200 g/L.
- D. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 mm by 3 mm) thick; with anchors.
- E. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch (25 mm wide by 1.3 mm) thick, prepunched.
- F. Joint Sealant: Elastomeric joint sealant compatible with roofing materials, with movement capability appropriate for application.
  - 1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
    - a. Basis of design product: Tremco, TremSEAL Pro.
    - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
    - c. Hardness, Shore A, ASTM C661: 40.
    - d. Adhesion to Concrete, ASTM C794: 35 pli.
    - e. Tensile Strength, ASTM D412: 350 psi (2410 kPa).
    - f. Color: White.
- G. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

## 2.6 ROOF INSULATION MATERIALS

- A. General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from insulation manufacturer's standard sizes, suitable for application, and of thicknesses indicated.
  - 1. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches (1:48) unless otherwise indicated.

2. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated, not less than two times the roof slope.

B. Roof Insulation: Provide roof insulation product in thicknesses indicated in Part 3 as follows:

1. Board Insulation, Polyisocyanurate: CFC- and HCFC- free, with recycled content glass-fiber mat facer on both major surfaces, ASTM C1289 Type II Class 1.
  - a. Basis of design product: Tremco, Trisotech Insulation.
  - b. Compressive Strength, ASTM D1621: Grade 2: 20 psi (138 kPa).
  - c. Conditioned Thermal Resistance at 75 deg. F (24 deg. C): 14.4 at 2.5 inches (50.8 mm) thick.

2.7 ROOF INSULATION ACCESSORIES

A. Cover Board:

1. Gypsum panel, cellulosic fiber reinforced, water-resistant, ASTM C1278/C1278M.
  - a. Basis of design product: Tremco/USG Securock.
  - b. Thickness: 1/4 inch (6mm).

B. Roof Insulation Adhesive:

1. Urethane adhesive, bead-applied, low-rise two-component solvent-free low odor, formulated to adhere roof insulation to substrate.
  - a. Basis of design product: Tremco, Low Rise Foam Insulation Adhesive.
  - b. Flame Spread Index, ASTM E84: 10.
  - c. Smoke Developed Index, ASTM E84: 30.
  - d. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 0 g/L.
  - e. Tensile Strength, minimum, ASTM D412: 250 psi (1720 kPa).
  - f. Peel Adhesion, minimum, ASTM D903: 17 lbf/in (2.50 kN/m).
  - g. Flexibility, 70 deg. F (39 deg. C), ASTM D816: Pass.

C. Insulation Cant Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

D. Wood Cant Strips: Comply with requirements in Division 06 rough carpentry Section.

E. Tapered Edge Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

- F. Substrate Joint Tape: 6- or 8-inch- (150- or 200-mm-) wide, coated, glass fiber.

## 2.8 WALKWAY MATERIALS

### A. Walkway Material:

1. Walkway roll, reinforced PVC/TPA membrane roll with serrated slip-resistant surface, fabricated for heat welding to compatible PVC/TPA membrane surface.
  - a. Basis of design product: Tremco, TPA Walkway Roll.
  - b. Roll Size: 36 inches by 60 foot (914 mm by 18.3 m).
  - c. Thickness / Color: Gray, 0.072 inch (2 mm).
  - d. Tensile, Grab ASTM D751: 200 lbf (890 N).
  - e. Tear Strength, Tongue : 45 lbf (200N).
  - f. Low Temp Flex: -40 deg F. (-40 deg C.).

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
  2. Concrete Roof Deck:
    - a. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
    - b. Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D4263.
    - c. Verify that concrete substrate is visibly dry and free of moisture, and that minimum concrete internal relative humidity is not more than 75 percent, or as recommended by roofing system manufacturer, when tested according to ASTM F2170.
      - 1) Test Frequency: One test probe per each, or portion thereof, of roof deck, with no fewer than three test probes. 1000 sq. ft (93 sq. m).
      - 2) Submit test reports within 24 hours of performing tests.
    - d. Verify that concrete curing compounds that will impair adhesion of roofing components to roof deck have been removed.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- D. Prime surface of concrete deck with manufacturer's recommended primer at rate required by manufacturer and allow primer to dry.

### 3.3 INSTALLATION, GENERAL

- A. Install roofing system in accordance with manufacturer's written instructions and approved details.
- B. Install wood cants, blocking, curbs, and nailers in accordance with requirements of Division 06 Section "Miscellaneous Rough Carpentry."
- C. NRCA Installation Details: Install roofing system in accordance with applicable NRCA Manual Plates and NRCA recommendations; modify as required to comply with manufacturer's approved details and perimeter fastening requirements of FM Global references if applicable.

### 3.4 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Tapered Insulation and Crickets: Install tapered insulation under area of roofing to conform to slopes indicated.
  - 1. Where crickets are indicated or required to provide positive slope to drain, make slope of crickets minimum of two times the roof slope, not less than 1/4 inch in 12 inches (1:48).
- D. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (70 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
  - 1. Tapered Insulation System for Flat Roof Deck: Install insulation as follows:

- a. Minimum total thickness of Continuous Insulation: 5.2 inches.
  - 1) Minimum thickness of base layer: 2.6 inches.
  - 2) Minimum thickness of each subsequent layer: 2.6 inches.
- b. Minimum Continuous Insulation R-value: Not less than 30.
- E. Insulation Drain Sumps: Tapered insulation sumps, not less than 2 by 2 ft. (600 by 600 mm), sloped to roof drain; sump to maximum depth of not more than 1 inch (25 mm) less than the Project-stipulated continuous insulation thickness based upon code requirements.
- F. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- G. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
  - 1. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.
- H. Adhered Insulation: Install each layer of insulation and adhere to substrate as follows:
  - 1. Prime substrate with primer as recommended by manufacturer and allow to dry.
  - 2. Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
- I. Cover Boards: Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches (150 mm) in each direction. Loosely butt cover boards together.
  - 1. Adhere cover boards by setting in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining cover board in place.

### 3.5 BASE-PLY / PLY SHEET INSTALLATION

### 3.6 ADHERED MEMBRANE ROOFING INSTALLATION

- A. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.
- B. Start installation of membrane roofing in presence of membrane roofing system manufacturer's technical personnel.
- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Solvent-Based Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow adhesive to become tacky before installing membrane

roofing; do not allow adhesive to fully dry. Roll membrane into adhesive. Do not apply adhesive to splice area of membrane.

- E. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- F. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- G. Welded Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
  - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
  - 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.
- I. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition. Install in such a manner as to not void warranty of existing membrane roofing system.

### 3.7 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Seal top termination of base flashing with a metal termination bar and a continuous bead of joint sealant.

### 3.8 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.9 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- B. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- C. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.10 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Owner's Consultant and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075419

# **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

## **GENERAL**

### **1.01 SECTION INCLUDES**

- A Asphalt roofing shingles.
- B Leak barrier and roof deck protection.
- C Metal flashing associated with shingle roofing.
- D Attic ventilation.

### **1.02 RELATED SECTIONS**

- A Section 06100 - Rough Carpentry: Framing, wood decking, and roof sheathing.
- B Section 07620 - Flashing and Sheet Metal: Sheet metal flashing not associated with shingle roofing; gutters and downspouts.
- C Section 08630 - Unit Skylights: Skylights

### **1.03 REFERENCES American Society for Testing and Materials (ASTM) - Annual Book of ASTM Standards**

- 1. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - 2. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
  - 3. ASTM B 370 - Standard Specification for Copper Sheet and Strip for Building Construction.
  - 4. ASTM D 3018 - Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules.
  - 5. ASTM D 3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
  - 6. ASTM D 3462 – Standard Specification for Asphalt Shingles Made From Glass Felt and Surfaced with Mineral Granules.
  - 7. ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
  - 8. ASTM D 7158 - Standard Test Method for Wind-Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method).
  - 9. AC438-1011-R1 – New Acceptance Criteria for Alternative Asphalt Roofing Shingles
  - 10. ASTM E 903 – Standard Test Method for Solar Absorptance, Reflectance, and Transmission of Materials Using Integrating Spheres. Underwriters Laboratories (UL) - Roofing Systems and Materials Guide (TFWZ.R21)
    - 1. UL 790 - Tests for Fire Resistance of Roof Covering Materials.
    - 2. UL 997 - Wind Resistance of Prepared Roof Covering Materials.
    - 3. UL 2218 – Impact Resistance of Prepared Roof Covering Materials.
- C Asphalt Roofing Manufacturers Association (ARMA)
- D Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - Architectural Sheet Metal Manual.
- E National Roofing Contractors Association (NRCA)

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

F American Society of Civil Engineers (ASCE).

1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.

G U.S. Green Building Council (USGBC)

H Leadership in Energy and Environmental Design (LEED)

I ENERGY STAR

J Cool Roof Rating Council (CRRC)

K Miami Dade County

### **1.04 DEFINITIONS**

A Roofing Terminology: Refer to ASTM D1079 and the glossary of the National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual for definitions of roofing terms related to this section.

### **1.05 LEED CERTIFICATION**

A Provide a roofing system that will achieve or aid in the qualification of points satisfying

1. Sustainable Site credit 7.2 - Heat Island Effect - Roof.

2. Materials & Resource credit 5 - Local and Regional Materials.

### **1.06 SUBMITTALS**

A Submit copies of GAF® product data sheets, detail drawings and samples for each type of roofing product.

B L.E.E.D. submittal: Coordinate with Section 01115 - Green Building Requirements, for LEED certification submittal forms and certification templates.

### **1.07 QUALITY ASSURANCE**

A Manufacturer Qualifications: Provide all primary roofing products, including shingles, underlayment, leak barrier, and ventilation, by a single manufacturer.

B Installer Qualifications: Installer must be approved for installation of all roofing products to be installed under this section.

### **1.08 REGULATORY REQUIREMENTS**

A Provide a roofing system achieving an Underwriters Laboratories (UL) Class A fire classification.

B . Install all roofing products in accordance with all federal, state and local building codes.

D All work shall be performed in a manner consistent with current OSHA guidelines.

### **1.09 PREINSTALLATION MEETING**

A General: For all projects in excess of 250 squares of roofing, a pre-installation meeting is strongly recommended.

B Timing: The meeting shall take place at the start of the roofing installation, no more than 2 weeks into the roofing project.

C Attendees: Meeting to be called for by manufacturer's certified contractor. Meeting's mandatory attendees shall include the certified contractor and the manufacturer's representative. Non-mandatory attendees shall include the owner's representative, architect or engineer's representative, and the general contractor's representative.

D Topics: Certified contractor and manufacturer's representative shall review all pertinent requirements for the project, including but not limited to, scheduling, weather considerations, project duration, and requirements for the specified warranty.

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

### **1.10 DELIVERY, STORAGE, AND HANDLING**

- A Store all products in manufacturer's unopened, labeled packaging until they are ready for installation.
- B Store products in a covered, ventilated area, at temperature not more than 110 degrees F (43 degrees C); do not store near steam pipes, radiators, or in direct sunlight.
- C Store bundles on a flat, properly drained surface. Maximum stacking height shall not exceed GAF®'s recommendations. Store all rolls on end.
- D Store and dispose of solvent-based materials in accordance with all federal, state and local regulations.

### **1.11 WEATHER CONDITIONS**

- A Proceed with work only when existing and forecasted weather conditions will permit work to be performed in accordance with GAF®'s recommendations

### **1.12 WARRANTY Provide to the owner a **GAF® Shingle & Accessory Ltd. Warranty** for:**

- 1. **GAF® Lifetime Shingles** covering
  - a Single family detached homes owned by individuals the first
  - b Manufacturing defects: 100% coverage for materials for:
    - 10 years non-prorated, then 20% thereafter for all GAF Lifetime Shingles.
    - 5 years non-prorated, then 20% thereafter for GAF Royal Sovereign and Marquis Weathermax Shingles.
  - c Any other type of owner or building – 40 years with the first 5 years non - prorated.
  - d With the use of three or more GAF Accessory Products (GAF Ridge Cap Shingles, GAF Starter Strip Shingle, GAF Leak Barrier, GAF Roof Deck Protection, GAF Cobra
- 2. **Against algae discoloration for 10 years**
- B **Provide to the owner a **GAF® WeatherStopper® Golden Pledge® Ltd Warranty** covering:**
  - 1. **Roofs installed by a Certified GAF® Master Elite™ Contractor only.**
  - 2. **Manufacturing defects: 100% coverage for materials and labor for:**
    - a **Single family detached homes owned by individuals the first**
      - 50 years non-prorated, then 20% thereafter for all GAF lifetime shingles.
      - 20 years non-prorated, then 20% thereafter for GAF Marquis Weathermax and GAF Royal Sovereign Shingles.
    - b **Any other type of owner or building – 40 years with the first 20 years non-prorated. (excludes Marquis WeatherMax and Royal Sovereign)**
  - 3. **Workmanship errors: 100% coverage for workmanship errors for:**
    - a **Single family detached homes owned by individuals - the first 25 years for after installation. (20 years for Marquis WeatherMax and Royal Sovereign)**
    - b **Any other type of owner or building - 20 years.**
  - 4. **Roof system NOT installed over an existing roof, all existing roof materials must be removed to the deck.**
  - 5. **Warranted against algae discoloration for 10 years**

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6. Full roof installations (Roofs installed on portions of buildings do not qualify) using the following GAF® products.
    - a You must use GAF® Roof Deck Protection.
    - b You must use eligible GAF® Leak Barrier in valleys and around dormers, sidewalls, firewalls, chimneys, plumbing vents, and skylights. In the North, leak barriers must be used at all eaves at least 24 inch inside warm wall.
    - c You must use GAF® pre-cut starter strip products (only those with factory applied adhesive) at the eaves. Note: To obtain bonus wind coverage, you must use GAF® pre cut starter strip products (with factory applied adhesive) at the eaves and rakes and you must install each shingle using 6 nails. For Miami Dade County Florida, no adhesive on rakes. You must cement the starter strip in and nail along the rake.
    - d You must use eligible COBRA® ventilation with adequate intake ventilation. Master Flow® exhaust ventilation products can be substituted only if COBRA® ridge ventilation cannot be installed due to a structure's architecture. In any event, adequate ventilation should meet the following requirements:
      - i. Minimum net free ventilation area of 1 sq ft per 150 sq ft of ceiling area is required. When intake vents are located at the eaves and exhaust vents are located near the roof's peak (in a properly balanced system) for maximum air flow, ventilation may be reduced to 1 sq ft per 300 sq ft. If these standards are not met, GAF® cannot be responsible for damage caused by inadequate ventilation.
    - e You must use GAF® Ridge Cap Shingles or shingles that correspond to the shingle product you are installing.
    - f You must use eligible GAF® Roofing Shingles.
    - g New metal flashings must be installed. Metal drip edge must be used at eaves and is recommended at rake edges.
  7. In addition to the requirements listed above, you installer must register and pay for this warranty. On projects that total more than 250 squares, the permanent Golden Pledge® Ltd Warranty will be issued only if the project passes GAF®'s final inspection. GAF® reserves the right to withhold the warranty if the roof has not been installed according to GAF®'s written application instructions. GAF® also strongly recommends that your Master Elite® Contractor schedule a start-up and at least one interim inspection on projects of 250 squares or more by contacting GAF® at least three weeks prior to the start of roof work.
- C Provide to the owner a **GAF® WeatherStopper® Silver Pledge® Ltd Warranty** covering:
1. Roofs installed by a Certified GAF® Master Elite™ Contractor only.
  2. Manufacturing defects: 100% coverage for materials and labor for:
    - a Single family detached homes owned by individuals the first
      - 50 years non-prorated, then 20% thereafter for all GAF lifetime shingles.
      - 20 years non-prorated, then 20% thereafter for GAF Marquis Weathermax and GAF Royal Sovereign Shingles.
    - b Any other type of owner or building – 40 years with the first 20 years non-prorated. (excludes Marquis WeatherMax and Royal Sovereign)
  3. Workmanship errors: 100% coverage for workmanship errors for:

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

- a Single family detached homes owned by individuals - the first 10 years for after installation. (20 years for Marquis WeatherMax and Royal Sovereign)
  - b Any other type of owner or building - 10 years.
4. Roof system NOT installed over an existing roof, all existing roof materials must be removed to the deck.
5. Warranted against algae discoloration for 10 years
6. Full roof installations (Roofs installed on portions of buildings do not qualify) using the following GAF® products.
- a If a new nail base insulated deck system is being installed, you must install GAF Cornell Ventilated Nail Base Roof Insulation (covered only by a separate ThermaCal® Nail Base Roof Insulation Panels Ltd. Warranty).
  - b You must use GAF® Roof Deck Protection.
  - c You must use eligible GAF® Leak Barrier in valleys and around dormers, sidewalls, firewalls, chimneys, plumbing vents, and skylights. In the North, leak barriers must be used at all eaves at least 24 inch inside warm wall.
  - d You must use GAF® pre-cut starter strip products (only those with factory applied adhesive) at the eaves. Note: To obtain bonus wind coverage, you must use GAF® pre cut starter strip products (with factory applied adhesive) at the eaves and rakes and you must install each shingle using 6 nails. For Miami Dade County Florida, no adhesive on rakes. You must cement the starter strip in and nail along the rake.
  - e You must use eligible COBRA® ventilation with adequate intake ventilation. Master Flow® exhaust ventilation products can be substituted only if COBRA® ridge ventilation cannot be installed due to a structure's architecture. In any event, adequate ventilation should meet the following requirements:
    - i. Minimum net free ventilation area of 1 sq ft per 150 sq ft of ceiling area is required. When intake vents are located at the eaves and exhaust vents are located near the roof's peak (in a properly balanced system) for maximum air flow, ventilation may be reduced to 1 sq ft per 300 sq ft. If these standards are not met, GAF® cannot be responsible for damage caused by inadequate ventilation.
  - f You must use GAF® Ridge Cap Shingles or shingles that correspond to the shingle product you are installing.
  - g You must use eligible GAF® Roofing Shingles.
  - h New metal flashings must be installed. Metal drip edge must be used at eaves and is recommended at rake edges.
7. In addition to the requirements listed above, you installer must register and pay for this warranty. On projects that total more than 250 squares, the permanent Golden Pledge® Ltd Warranty will be issued only if the project passes GAF®'s final inspection. GAF® reserves the right to withhold the warranty if the roof has not been installed according to GAF®'s written application instructions. GAF® also strongly recommends that your Master Elite® Contractor schedule a start-up and at least one interim inspection on projects of 250 squares or more by contacting GAF® at least three weeks prior to the start of roof work.
- D Provide to the owner a **GAF® Weather Stopper® System Plus Ltd Warranty** covering:
- 1. Roofs installed by a Authorized Home Builder, Certified Contractor or Certified GAF® Master Elite™ Contractor only.

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

2. Manufacturing defects: 100% coverage for materials and labor for:
    - a Single family detached homes owned by individuals the first
      - 50 years non-prorated, then 20% thereafter for all GAF lifetime shingles.
      - 20 years non-prorated, then 20% thereafter for GAF Marquis Weathermax and GAF Royal Sovereign Shingles.
    - b Any other type of owner or building – 40 years with the first 20 years non-prorated. (excludes Marquis WeatherMax and Royal Sovereign)
  3. Warranted against algae discoloration for 10 years
- E Provide to the owner a GAF® All American Pledge™ Guarantee**
1. Provide to the owner a GAF® WeatherStopper® Golden Pledge® Ltd Warranty for the Steep Slope System covering:
    - a Roofs installed by a Certified GAF® Master Elite™ Contractor only.
    - b Manufacturing defects: 100% coverage for materials and labor for:
      - i. Single family detached homes owned by individuals the first
        - 50 years non-prorated, then 20% thereafter for all GAF lifetime shingles.
        - 20 years non-prorated, then 20% thereafter for GAF Marquis Weathermax and GAF Royal Sovereign Shingles.
      - ii. Any other type of owner or building – 40 years with the first 20 years non-prorated. (excludes Marquis WeatherMax and Royal Sovereign)
    - c Workmanship errors: 100% coverage for workmanship errors for:
      - i. Single family detached homes owned by individuals - the first 25 years for after installation. (20 years for Marquis WeatherMax and Royal Sovereign)
      - ii. Any other type of owner or building - 20 years.
  2. Roof system NOT installed over an existing roof, all existing roof materials must be removed to the deck.
  3. Warranted against algae discoloration for 10 years
  4. Provide Manufacturers standard WeatherStopper® Diamond Pledge™ Guarantee for the Low Slope system covering:
    - a Single source **Edge-to-Edge** coverage\* and no monetary limitation, where the manufacturer agrees to repair or replace components in the roofing system and pre-approved metal edge details, which cause a leak due to a failure in materials or workmanship.
      - i Duration: (20) Twenty years from the date of completion
- F Provide to the owner a GAF Cornell® ThermaCal Nail Base Roof Insulation Ltd. Warranty.**
- a TBD.
    - i. Duration: (15) Fifteen years from the date of completion

## **PART II PRODUCTS**

### **2.01 MANUFACTURER**

- A Acceptable Manufacturer: GAF®, 1 Campus Drive, Parsippany, NJ 07054. Tel: 1-973-628-3000.**

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

- B Requests for substitutions will be considered in accordance with provisions of Section 01600.

### **2.02 VENTILATED ROOF INSULATION PANELS**

- A Preassembled panel consisting of a oriented strand board top surface a wood spacer block separating a layer of Isocyanurate insulation on the bottom, **ThermaCal® 1 Ventilating Roof Insulation Panel** by GAF-Cornell.
1. 7/16", 5/8", 3/4" OSB or plywood **\*\*\*Select A Thickness\*\*\***
  2. 1", 1-1/2", 2" wood spacers blocks **\*\*\*Select A Thickness\*\*\***
- B Preassembled panel with two layers of oriented strand board separated by spacer blocks and isocyanurate insulation on the bottom, **ThermaCal® 2 Ventilating Roof Insulation Panel** by GAF-Cornell.
1. 7/16", 5/8", 3/4" OSB or plywood **\*\*\*Select A Thickness\*\*\***
  2. 1", 1-1/2", 2" wood spacers blocks **\*\*\*Select A Thickness\*\*\***

### **2.03 SHINGLES**

- A Granule surfaced, high reflectance, self-sealing asphalt shingle with a strong fiberglass reinforced Micro Weave core and a mineral granule surfacing. Architectural laminate styling provides a wood shake appearance with a 5 5/8in. exposure. Features highly reflective roofing granules that bounce back the sun's rays and more effectively release absorbed heat. Rated by the Cool Roof Rating Council (CRRC), Title 24 compliant and meets initial Energy Star performance levels. UL 790 Class A rated with UL 997 Wind Resistance Label; ASTM D 7158, Class H; ASTM D 3161, Type 1; ASTM D 3018, Type 1; ASTM D 3462; AC438 compliant; CSA 123.5-98; Dade County Approved, Florida Building Code Approved, Texas Dept of Insurance Approved, ICC Report Approval. **Timberline® Cool Series Energy-Saving Architectural Shingles**, by GAF®.
1. Color: As selected from manufacturers' full range.
  2. Color: \_\_\_\_\_

### **2.04 HIP AND RIDGE SHINGLES**

- A High profile self sealing hip and ridge cap shingle matching the color of selected roof shingle. Each bundle covers approx. 20 lineal feet (6.10m). **Timbertex® Premium Ridge Cap Shingles**, by GAF®.
- B Distinctive self sealing hip and ridge cap shingle complementing the color of selected roof shingle. Each bundle covers approx. 31 lineal feet (9.45m) with an 8 inch (203mm) exposure. **Ridglass™ 10" Ridge Cap Shingles** by GAF®.
- C Distinctive self sealing hip and ridge cap shingle complementing the color of selected roof shingle. Each bundle covers approx. 31 lineal feet (9.45m) with an 8 inch (203mm) exposure **Ridglass™ 8" Ridge Cap Shingles** by GAF®.
- D Distinctive self sealing hip and ridge cap shingle complementing the color of selected roof shingle. Each bundle covers approx. 25 lineal feet (7.62mm) with a 6 2/3 inch (169mm) exposure. **Seal-A-Ridge® Ridge Cap Shingles** by GAF®.
- E Distinctive hip and ridge cap shingle complementing the color of selected roof shingle. Each bundle covers approx. 33.3 lineal feet (10.15m) with a 5 5/8 inch (147mm) exposure. **Z® Ridge Shingles** by GAF®.
- F UL 2218, Class 4, self sealing hip and ridge cap shingle complementing the color of selected roof shingle. Each bundle covers approx. 25 lineal feet (7.62mm) with a 6 2/3 inch (169mm) exposure. **Seal-A-Ridge® ArmorShield™ II Ridge Cap Shingles** by GAF®.

### **2.05 STARTER STRIP**

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

- A Self sealing starter shingle designed for premium roof shingles. Each bundle covers approx. 100 lineal feet (30.48m) for English and metric shingles or 50 lineal feet (15.24m) for oversized shingles. **WeatherBlocker™** Eave/Rake Starter Strip by GAF®.
- B Self sealing starter shingle designed for all roof shingles. Each bundle covers approx. 120 lineal feet (36.58m). **ProStart™** Starter Strip by GAF®.
- C Pre-cut, color coordinated starter strip shingle designed as a second starter course for shingles with large cut-outs. Each bundle covers approx.. 60 lineal feet (18.29 m) **StarterMatch™** Starter Strip by GAF®.

### **2.06 LEAK BARRIER**

- A Self-adhering, self-sealing, bituminous leak barrier surfaced with fine, skid-resistant granules. Approved by UL, Dade County, ICC, State of Florida and Texas Department of Insurance. Each roll contains approx. 150 sq ft (13.9 sq.m.), 36" X 50' (0.9m x 20.3m) or 200 sq ft (18.6 sq.m.), 36" X 66.7' (0.9m x 20.3m). **WeatherWatch®** Leak Barrier, by GAF®.
- B Self-adhering, self-sealing, bituminous leak barrier surfaced with a smooth polyethylene film. Approved by UL, Dade County, ICC, State of Florida and Texas Department of Insurance. Each Roll contains approx. 200 sq ft. (18.6 sq.m.), 36" X 66.7' (0.9m x 20.3m), and 60 mils thick. **StormGuard®** Leak Barrier, by GAF®.

### **2.07 SHINGLE UNDERLAYMENT**

- A Premium, water repellant, breather type non-asphaltic underlayment. UV stabilized polypropylene construction. Meets or exceeds ASTM D226 and D4869. Approved by Dade County, Florida Building Code, and ICC. Each roll contains approximately 10 squares (1003 sq. ft.) of material and is 54 in. x 223 ft. **Deck-Armor™** Premium Breathable Roof Deck Protection, by GAF®.
- B Synthetic, non-asphaltic, non-woven, anti-skid back coated, polypropylene constructed non breathable underlayment. Meets or exceeds ASTM D226 and D4869 approved by UL, Florida Building Code, ICC and CSA A220.1. Each roll contains approximately 10 squares (1000 gross sq. ft.) of material and is 48 in. x 250 ft. (14.6 m x 76.2 m), **Tiger-Paw™** Roof Deck Protection by GAF®.
- C Water repellent, breather type cellulose/glass fiber composite roofing underlayment. Meets or exceed ASTM D226 and D4869 and approved by UL and the Florida Building Code. Each roll contains approximately 4 squares (432 sq. ft.) of material and is 36" x 144" **Shingle-Mate®** Roof Deck Protection, by GAF®.
- D Premium, all-purpose fiberglass reinforced SBS modified underlayment. Meets or exceeds ASTM D226. Approved by UL and ICC. Each roll contains 2 squares (20.06 sqm.) of material and is 39.37 in. x 65.8 ft. (1m x 20m), **Roof Pro™** SBS Modified All-Purpose Underlayment by GAF®.
- E Non-woven fiberglass mat underlayment coated on both sides suing a highly filled polymer. Provides a fire barrier and water resistant. Approved by Dade County, Florida Building Code, and ICC approval. Each roll contains 350 gross sq ft (32.52 m<sup>2</sup>) of material and is 42 in. x 100 ft. (1.07 m x 30.48 m) **VersaShield®** Fire-Resistant Roof Deck Protection by GAF®.
- F #15 Roofing Underlayment – By Others: Water repellent breather type cellulose fiber building paper. Meets or exceeds the requirements of ASTM D-4869 Type I.
- G #30 Roofing Underlayment - By Others: Water repellent breather type cellulose fiber building paper. Meets or exceeds the requirements of ASTM D-4869 Type II.

### **2.08 ROOFING CEMENT**

- A Asphalt Plastic Roofing Cement meeting the requirements of ASTM D 4586, Type I or II.

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

### **2.09 ROOF ACCESSORIES**

- A Exterior acrylic rust resistant aerosol roof accessory paint. Each 6 oz can is available in boxes of 6 and in a wide variety of colors to compliment the roof. **Shingle-Match™** Roof Accessory Paint by GAF®.
- B UV stable solid molded PVC compression collar, Kynar PVDF coated 24 gauge galvanized flange, **Ultimate Pipe Flashing** by Lifetime Tool.

### **2.10 ATTIC VENTILATION**

#### **A Ridge Vents**

1. Flexible rigid plastic ridge ventilator designed to allow the passage of hot air from attics, while resisting snow infiltration. For use in conjunction with eave/soffit ventilation products. Provides 12.5 sq inches Net Free Ventilation Area per lineal foot (26460 sq.mm/m). Each package contains 20 lineal feet (6.10m) of vent. **Cobra® Ridge Runner™** Ridge Vent by GAF®.
2. Flexible ridge ventilator designed to allow the passage of hot air from attics. For use in conjunction with eave/ soffit intake ventilation products. Provides 16.9 inches (1430 mm/m) Net Free Ventilation Area (Hand Nail) and 14.1 inches (1193 mm/m) Net Free Ventilation Area (Nail Gun) per lineal foot. **Cobra® Exhaust Vent**, by GAF®.
3. Rigid plastic ridge ventilator designed to allow the passage of hot air out of attics. For use in conjunction with eave/ soffit intake ventilation products. Provides 18.0 sq inches (38102 sq.mm/m) in Net Free Ventilation Area per lineal foot. Each package contains 40 lineal feet (12.19m) of vent. **Cobra® Rigid Vent 3™** ridge vent (includes 3" (76mm) galvanized ring shank nails), by GAF®
4. Rigid plastic ridge ventilator designed to allow the passage of hot air from attics while prohibiting snow infiltration. For use in conjunction with eave/ soffit intake ventilation products. Provides 18.0 sq inches (19051 sq.mm/m) Net Free Ventilation Area per lineal foot. Each package contains 40 lineal feet (12.19m) of vent. **Cobra® Snow Country™** or **Cobra® Snow Country Advanced™** Ridge Vent (includes 3" (76mm) galvanized ring shank nails), by GAF®.

#### **B Fascia and Soffit/Under Eave Vents**

1. Flexible rigid plastic ridge ventilator designed to allow the passage of hot air out of attics at the roof top along the eaves. For use in conjunction with ridge ventilation products. Provides 9.0 sq inches (11613 sq.mm/m) in NFVA per lineal foot. Each package contains 40 lineal feet (12.19m) of vent, **Cobra® IntakePro™** Rooftop Intake Vent (includes 1-3/4" (44.5 mm) coil nails), by GAF®
2. Flexible ridge ventilator designed to allow the passage of air into thru the fascia. 1"x3" (25 mm x 76mm) provides a Net Free Ventilation Area of 11 square inches per foot and 1½" x3" (38 mm x 76 mm) provides a Net Free Ventilation Area of 16 square inches per foot. **Cobra® Fascia Vent**, by GAF®.
3. Surface mounted closeable soffit vent with intrgal screen to help prevent wildfire embers from being drawn into the attic. 16.5" x 9" (419 mm x 229 mm) paintable finish providing 56 sq. in. (36,131 sq mm) of NFA, **MasterFlow® EmberShield® Closeable Soffit Vent** by GAF
4. Surface mounted, screened aluminum, corrosion resistant soffit vent. **MasterFlow™ EAC Soffit Vent** by GAF®.
5. Surface mounted, high impact resin, oval snap-in designed soffit vent. **MasterFlow™ EAP Soffit Vent** by GAF®.
6. Continuous aluminum 8ft section soffit vent. **MasterFlow™ LSV8 Series Soffit Vent** by GAF®.

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

### **C Hip Vents**

1. Flexible low profile rigid plastic ridge ventilator designed to allow the passage of hot air from attics, while resisting rain and snow infiltration. For use in conjunction with eave/soffit ventilation products. Provides 9 sq inches Net Free Ventilation Area per lineal foot (19,046 sq.in/ft). Each package contains 40 lineal feet (12.19m) of vent. **Cobra® Hip Vent Exhaust Vent** by GAF®.

### **D Solar Powered Vents**

1. High powered solar powered roof exhaust vent designed to remove damaging heat and moisture from attics. Each vent provides 750 CFM and is solar powered to help reduce related utility costs. **Green Machine™ High Powered Solar Powered Roof Exhaust Vent**, by GAF®.
2. Solar powered roof exhaust vent designed to remove damaging heat and moisture from attics. Each vent provides 500 CFM and is solar powered to help reduce related utility costs. **Green Machine™ Solar Powered Roof Exhaust Vent**, by GAF®.
3. Solar powered intake booster vent designed for houses with insufficient soffit ventilation. Each vent provides up to 500 CFM airflow and is solar powered to help reduce related utility costs. **Green Machine™ Solar Powered Intake Booster™ Vent**, by GAF®.
4. Solar powered gable mounted exhaust ventilators designed to remove damaging heat and moisture from attics. Each vent provides 500 CFM and is solar powered to help reduce related utility costs. **Green Machine™ Solar Powered Gable Vent**, by GAF®.

### **E Dual Powered Vents**

1. Dual powered roof exhaust vent designed to remove damaging heat and moisture from attics. Each vent provides 500 CFM and is solar and electric powered to provide continuous operation and help reduce related utility costs. **Green Machine™ Dual Powered Roof Exhaust Vent**, by GAF®.
2. Dual powered gable mounted exhaust ventilators designed to remove damaging heat and moisture from attics. Each vent provides 500 CFM and is solar and electric powered to provide continuous operation and help reduce related utility costs. **Green Machine™ Dual Powered Gable Vent**, by GAF®.

### **F Powered Vents**

1. Powered, rooftop mounted exhaust ventilators designed to evacuate hot air from attics. Each vent permits the passage of 1000 to 1600 c.f.m. Thermostat and/or humidistat controlled. **MasterFlow™ PR or ERV Series** power roof ventilators, by GAF®.
2. Powered, gable mounted exhaust ventilators designed to evacuate hot air from attics. Each vent permits the passage of 1280 to 1600 c.f.m. Thermostat and/or humidistat controlled. **MasterFlow™ PG or EGV Series** power roof ventilators, by GAF®.

### **G Roof Louvers**

1. Rooftop mounted, square-top designed, high-impact resin exhaust ventilator designed to evacuate hot air from attics. Each vent provides 60 sq in NFVA. **MasterFlow™ RT-65 Passive Roof Louver**, by GAF®.
2. Rooftop mounted, slant-back designed, metal exhaust ventilator designed to evacuate hot air from attics. Each vent provides 60 sq in NFVA. **MasterFlow™ SSB 960A Passive Roof Louver**, by GAF®.
3. Rooftop mounted, slant-back designed, high-impact resin exhaust ventilator designed to evacuate hot air from attics. Each vent provides 65 sq in NFVA. **MasterFlow™ IR65 Passive Roof Louver**, by GAF®.

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

4. Rooftop mounted, low-profile square-top designed, high-impact resin exhaust ventilator designed to evacuate hot air from attics. Each vent provides 37 sq in NFVA. **MasterFlow™ IR-61** Passive Roof Louver, by GAF®.
5. Rooftop mounted, square-top, slant-back, metal exhaust ventilator designed to evacuate hot air from attics. Each vent provides 50 sq in NFVA. **MasterFlow™ NSB50A** Passive Roof Louver, by GAF®.
6. Rooftop mounted, square-top metal utility ventilator designed to evacuate hot air from attics, bathrooms, and kitchen ducts. Each vent provides 50 sq in NFVA. **MasterFlow™ RV50A** Metal Utility Vent, by GAF®.

### **H Gable Louvers**

1. Surfaced mounted, flush or recessed one piece integral construction in thermoformed plastic or aluminum. **Masterflow™ DA** Series or **SL** Series Gable Louver by GAF®.
2. Circular surfaced mounted, one piece integral construction high-impact white plastic mini vent. **Masterflow™ RLSC** Series Circular Louver by GAF®.

### **I Roof Turbines**

1. Rooftop mounted, stainless dual bearing, high performance, aluminum rotary turbine exhaust vents. **MasterFlow™ AIC12 & AIC14** Rotary Turbine Vents by GAF®.
2. Rooftop mounted, stainless dual bearing, high performance, galvanized rotary turbine exhaust vents. **MasterFlow™ GC12E** Rotary Turbine Vent by GAF®.

### **J Whole House Fans \*\*attic spaces greater than 1000sq.ft only\*\***

1. Interior ceiling mounted belt drive deluxe house fan. Super quiet 1/3 hp permanent split capacitor motor, wall switch operated. **MasterFlow™ 30BWHFS** Belt Drive Deluxe Whole House Fan by GAF®.
2. Interior ceiling mounted direct drive standard house fan. Super quiet 1/4 hp permanent split capacitor motor, chain switch operated. **MasterFlow™ WHFS24M** Direct Drive Standard Whole House Fan by GAF®.
3. Interior ceiling mounted tandem whole house fan. 2 speed remote operated. **MasterFlow™ WHFTAN1** Tandem Whole House Fan by GAF®.

## **2.11 VENTILATION ACCESSORIES**

### **A Chimney Cap**

1. Stainless steel vented chimney cap. **MasterFlow™ CC1313SS** Safety Cap by GAF®.
2. Epoxy powder finished vented chimney cap. **MasterFlow™ CC99, CC913 and CC1313** Safety Cap by GAF®.
3. Epoxy powder finished adjustable bracket mount vented chimney cap. **MasterFlow™ CC99, CC913 and CC1313** Safety Cap by GAF®.

### **B Foundation Vent**

1. High Density Polyethylene constructed electric foundation vent provides up to 330 CFM/airflow. Independent laboratory approved. **Masterflow™ PFV1** Foundation Vent by GAF®.
2. High Density Polyethylene constructed automatic foundation vent. **Masterflow™ FVRABL** Foundation Vent by GAF®.
3. Die Cast aluminum positive open/closed damper foundation vent. **Masterflow™ 500** Foundation Vent by GAF®.

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

4. Galvanized steel or aluminum high level ventilation foundation vent. **Masterflow™ BVSII** Foundation Vent by GAF®.

### **2.12 NAILS**

- A Standard round wire, zinc-coated steel or aluminum; 10 to 12 gauge, smooth, barbed or deformed shank, with heads 3/8 inch (9mm) to 7/16 inch (11mm) in diameter. Length must be sufficient to penetrate into solid wood at least 3/4 inch (19mm) or through plywood or oriented strand board by at least 1/8 inch (3.18mm).

### **2.13 METAL FLASHING**                      24 gauge hot-dip galvanized steel sheet, complying with ASTM A 653/A 653M, G90/Z275.

- B 16-oz/sq ft (0.56mm) copper sheet, complying with ASTM B 370.

- C 0.032-inch (0.8mm) aluminum sheet, complying with ASTM B 209.

## **PART III EXECUTION**

### **3.01 EXAMINATION**

- A Do not begin installation until the roof deck has been properly prepared.
- B If roof deck preparation is the responsibility of another installer, notify the architect or building owner of unsatisfactory preparation before proceeding.

### **3.02 PREPARATION**                      Remove all existing roofing down to the roof deck.

- B Verify that the deck is dry, sound, clean and smooth. It shall be free of any depressions, waves, and projections.
- C Cover with sheet metal, all holes over 1 inch (25mm) in diameter, cracks over 1/2 inch (12mm) in width, loose knots and excessively resinous areas.
- D Replace damaged deck with new materials.
- E Clean deck surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

### **3.03 PREPARATION OF SUBSTRATE**                      Clean deck surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

- B At areas that receive eaves protection membrane, fill knotholes and cracks with latex filler.
- C Install crickets on the upslope side of all chimneys in the north, any chimney wider than 24" (610mm), and on all roofs steeper than 6/12.

### **3.04 PREPARATION**                      Verify that the deck is structurally sound and free of deteriorated decking. All deteriorated decking shall be removed and replaced with new materials.

- B Verify that the existing shingles are dry, sound, clean and smooth. All curled, buckled or loose tabs shall be nailed down or removed.
- C Clean shingle surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

### **3.05 SUBSTRATE INSTALLATION**

- A The structural roof deck shown in the plans shall be smooth and level and free of water or debris before the nail base insulation is installed. Apply vapor retarder if required.

NOTE: GAF recommends that the designer carefully considers the need for a vapor/air retarder.

- B Installation shall follow the GAF written installation instructions.

- C Fasten with ThermaCal® Fasteners to the supporting roof deck shown in the plans.

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

- D Protect nail base insulation work from exposure to moisture damage and deterioration, primarily by prompt installation of the roofing, sheet metal and waterproofing work.

### **3.06 INSTALLATION OF UNDERLAYMENTS General:**

1. Install using methods recommended by GAF®, in accordance with local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.

#### **B Eaves:**

1. Install eaves edge metal flashing tight with fascia boards; lap joints 2 inches (51mm) and seal with plastic cement or high quality urethane sealant; nail at the top of the flange.
2. In the north, and on all roofs between 2/12 and 4/12 (low slopes) install GAF® leak barrier up the slope from eaves edge a full 36 inches (914mm) or to at least 24 inches (610 mm) beyond the interior "warm wall". Lap ends 6 inches (152mm) and bond.

#### **C Valleys:**

1. Install eaves protection membrane at least 36 (914mm) inches wide and centered on the valley. Lap ends 6 inches (152mm) and seal.
2. Where valleys are indicated to be "open valleys", install metal flashing over GAF® leak barrier before GAF® roof deck protection is installed; DO NOT nail through the flashing. Secure the flashing by nailing at 18 inches (457 mm) on center just beyond edge of flashing so that nail heads hold down the edge.

#### **D Hips and Ridges:**

1. Install GAF® leak barrier along entire lengths. If ridge vents are to be installed, position the GAF® leak barrier so that the ridge slots will not be covered.

#### **E Roof Deck Protection:**

1. Install one layer of GAF® roof deck protection over the entire area not protected by GAF® leak barrier at the eaves or valley. Install sheets horizontally so water sheds and nail in place.
2. On roofs sloped at more than 4:12, lap horizontal edges at least 2 inches (51mm) and at least 2 inches (51mm) over eaves protection membrane.
3. On roofs sloped between 2:12 and 4:12, lap horizontal edges at least 19 inches (482 mm) and at least 19 inches (482mm) over eaves protection membrane.
4. Lap ends at least 4 inches (102 mm). Stagger end laps of each layer at least 36 inches (914 mm).
5. Lap GAF® roof deck protection over GAF® leak barrier in valley at least 6 inches (152mm).

#### **F Deck-Armor™ Application**

1. Deck-Armor shall be installed over a clean, dry deck.
2. Install Weather Watch® or StormGuard® Leak Barrier at eaves, valleys, rakes, skylights, dormers and other vulnerable leak areas.
3. Lay Deck-Armor™ over deck and overlap 3" (76mm) at side laps and 6" (152mm) at end laps.
4. For exposure to rain or snow, overlap 12" (305mm) at end laps.
5. For side and end laps: fasten Deck-Armor 12" (305mm) o.c. (6" (152mm)o.c. for high wind areas).

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6. For middle of the roll: fasten Deck-Armor 24" (610mm) o.c. (12" (305mm) o.c. for high wind areas).
7. For exposure to rail or snow, completely cover all side laps, end laps and fasteners with tape.
8. For long term exposure see complete Deck-Armor installation instructions for side lap detail.
9. If roof may be exposed to high winds, apply tape over all fasteners at the center of the roll to prevent rain or snow from entering at the fasteners.
10. For slopes less than 2:12, a double application of Deck-Armor™ is required. See complete Deck-Armor installation instructions for more information.

### **G Penetrations:**

1. Vent pipes: Install a 24 inch (610 mm) square piece of eaves protection membrane lapping over roof deck underlayment; seal tightly to pipe.
2. Vertical walls: Install eaves protection membrane extending at least 6 inches (152mm) up the wall and 12 inches (305mm) on to the roof surface. Lap the membrane over the roof deck underlayment.
3. Skylights and roof hatches: Install eaves protection membrane from under the built-in counterflashing and 12 inches (305mm) on to the roof surface lapping over roof deck underlayment.
4. Chimneys: Install eaves protection membrane around entire chimney extending at least 6 inches (152mm) up the wall and 12 inches (305mm) on to the roof surface. Lap the membrane over the roof deck underlayment.
5. Rake Edges: Install metal edge flashing over eaves protection membrane and roof deck underlayment; set tight to rake boards; lap joints at least 2 inches (51mm) and seal with plastic cement; secure with nails.

### **3.07 INSTALLATION OF STARTER SHINGLES**

#### **A General:**

1. Install in accordance with GAF®'s instructions and local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.
2. Refer to application instructions for the selected starter strip shingles.

#### **B Placement and Nailing:**

1. For maximum wind resistance along rakes & eaves, install any GAF® starter strip containing sealant or cement shingles to underlayment and each other in a 4" (102mm) width of asphalt plastic roof cement.
2. Place starter strip shingles 1/4" – 3/4" (6 – 19mm) over eave and rake edges to provide drip edge.
3. Nail approximately 1-1/2" – 3" (38 – 76mm) above the butt edge of the shingle.
4. Rake starter course should overlap eave edge starter strip at least 3" (76mm).

### **3.08 INSTALLATION OF SHINGLES**

#### **A General:**

1. Install in accordance with GAF®'s instructions and local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.

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2. Minimize breakage of shingles by avoiding dropping bundles on edge, by separating shingles carefully (not by "breaking" over ridge or bundles), and by taking extra precautions in temperatures below 40 degrees F (4 degrees C).
  3. Handle carefully in hot weather to avoid scuffing the surfacing, or damaging the shingle edges.
- B Placement and Nailing:** Secure with 4, 5, or 6 nails per shingle per GAF®'s application instructions or local codes.
2. Placement of nails varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
  3. Nails must be driven flush with the shingle surface. Do not overdrive or under drive the nails.
  4. Shingle offset varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
- C Placement and Nailing:** Beginning with the starter strip, trim shingles so that they "nest" within the shingle located beneath it. This procedure will yield a first course that is typically 3 inch (76mm) to 4 inch (102mm) rather than a fully exposed shingle.
2. Laterally, offset the new shingles from the existing keyways, to avoid waves or depressions caused by excessive dips in the roofing materials.
  3. Using the bottom of the tab on existing shingles, align subsequent courses.
  4. \*Note: DO NOT install standard sized shingles (5inch exposure) over metric (5 5/8 inch exposure) shingles, as it will overexpose the shingles and reveal the nails. Use standard alignment methods to assure proper shingle placement.
  5. Secure with 4, 5, or 6 nails per shingle per GAF®'s instructions or local codes.
  6. Placement of nails varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
  7. Nails must be driven flush with the shingle surface. Do not overdrive or under drive the nails.
  8. Shingle offset varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
- D Valleys** Install valleys using the "open valley" method:
- a Snap diverging chalk lines on the metal flashing, starting at 3 inches (76mm) each side of top of valley, spreading at 1/8 inch per foot (9mm per meter) to the eaves.
  - b Run shingles to chalk line.
  - c Trim last shingle in each course to match the chalk line; do not trim shingles to less than 12 inches (305mm) wide.
  - d Apply a 2 inch (51mm) wide strip of plastic cement under ends of shingles, sealing them to the metal flashing.
2. Install valleys using the "closed cut valley" method:
- a Run the first course of shingles from the higher roof slope across the valley at least 12 inches (305mm).
  - b Run succeeding courses of shingles from the lower roof slope across the valley at least 12 inches (305mm) and nail not closer than 6 inches (152mm) to center of valley.

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- c Run shingles from the upper roof slope into the valley and trim 2 inches (51mm) from the center line.
- 3. Install valleys using "woven valley" method: Run shingles from both roof slopes at least 12 inches (305mm) across center of valley, lapping alternate sides in a woven pattern.
  - b DO NOT nail less than 6 inches (152mm) from the valley center line.
- E Penetrations
  - 1. All Penetrations are to be flashed according to GAF®, ARMA and NRCA application instructions and construction details.
- F Skylights and Roof Hatches
  - 1. Consult the manufacturer of the skylight or roof hatch for specific installation recommendations.
  - 2. Skylights and roof hatches shall be installed with pre-fabricated metal flashings specifically designed for the application of the unit.
- 3.09 INSTALLATION OF ATTIC VENTILATION
  - A General
    - 1. Ventilation must meet or exceed current F.H.A., H.U.D. and local code requirements.
  - B Ridge / Soffit ventilation
    - 1. Install ridge vent along the entire length of ridges:
    - 2. Cut continuous vent slots through the sheathing, stopping 6 inches (152mm) from each end of the ridge.
    - 3. On roofs without ridge board, make a slot 1 inch (25mm) wide, on either side of the peak (2 inch (51mm) overall).
    - 4. On roofs with ridge board, make two slots 1-3/4 inches (44.5mm) wide, one on each side of the peak (3 ½ inch (89mm) overall).
    - 5. Install ridge vent material along the full length of the ridge, including uncut areas.
    - 6. Butt ends of ridge vent material and join using roofing cement.
    - 7. Install eaves vents in sufficient quantity to equal or exceed the ridge vent area.
  - C Roof and Gable Louvers:
    - 1. Cut vent hole through sheathing as specified by the manufacturer for the type of vent to be installed.
    - 2. Install a 24 inches (610mm) square of leak barrier, centered around the hole for roof louvers
    - 3. Install according to manufacturers instructions for flashing vent penetrations
    - 4. Install eave vents in sufficient quantity to equal or exceed the exhaust vent area, calculated as specified by manufacturer.
  - D Powered (& Solar Powered) Ventilators & Roof turbines:
    - 1. Cut vent hole through sheathing as specified by the manufacturer for the type of vent to be installed.
    - 2. On rooftop applications, install a 36 inches (914mm) square of leak barrier, centered around the hole
    - 3. Install according to manufacturers instructions for flashing vent penetrations

## **GAF ASPHALT SHINGLE GUIDE SPECIFICATION**

4. Install eave vents in sufficient quantity to equal or exceed the exhaust vent area, calculated as specified by manufacturer

### **E Hip Vents and Rooftop Vents**

1. Install according to manufacturer's instructions.
2. Install vents in sufficient quantity to equal or exceed the exhaust vent area, calculated as specified by manufacturer.

### **F Whole House Fans**

1. Install at desired locations in ceiling below attic space per manufacturer recommended location and application instructions.

## **3.10 INSTALLATION OF VENTILATION ACCESSORIES**

### **A Chimney Caps**

1. Install chimney caps to manufacturer recommendations

### **B Foundation Vents**

1. Install foundation vents per manufacturer recommendations and applications.

## **3.11 PROTECTION**

- A Protect installed products from foot traffic until completion of the project.
- B Any roof areas that are not completed by the end of the workday are to be protected from moisture and contaminants.

**END OF SECTION**

## SECTION 01100 - SUMMARY

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Work phases.
  - 2. Use of premises.
  - 3. Owner's occupancy requirements.
  - 4. Work restrictions.
  - 5. Specification formats and conventions.

#### 1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Roof Sections Main Roof
  - 1. Project Location: 175 Pioneer Trail, Boone, NC
  - 2. Owner's Representative: Eric Bolick, bolicke@wataugaschools.org

#### 1.3 TYPE OF CONTRACT

- A. Project will be carried out under a single prime contract.

#### 1.4 OWNER-FURNISHED PRODUCTS

- A. Owner will furnish products indicated. The Work includes providing support systems to receive Owner's equipment and making plumbing, mechanical, and electrical connections.

#### 1.5 EXISTING ROOF CONSTRUCTIONS:

- A. See Roof Construction Document for all Roofs.

#### 1.6 SUMMARY OF WORK: REPLACEMENT

- A. Roof Section All Roofs
  - a. Comply with all OSHA safety requirements.
  - b. Tear off and removal of existing EPDM & TPO Roofs, insulation and flashings.
  - c. Metal Decks with no slope:
    - 1) Mechanically Attach 2 layers of 2.6" Isocyanurate insulation
    - 2) MA ¼" taper ISO

- 3) MA Tremco 60 Mil TPA Membrane
- d. Metal decks with Slope: Same configuration as above with no Taper needed.
- e. Concrete Decks:
  - A Adhere 2 layers 2.6" of Isocyanurate in Tremco Low Rise Foam
  - Adhere 1/4" Taper in Tremco Low Rise Foam
  - Adhere 1/4" densdeck in Tremco Low Rise Foam
  - Adhere Tremco 60 Mil TPA membrane in Tremco TPA Adhesive
- f. Wood Deck:
  - 1) MA 2 layers of Isocyanuarate
  - 2) MA 1/4" taper
  - 3) MA 1/4: Densdeck
  - 4) MA Tremco 60 Mil TPA Membrane
- g. Tectum Deck:
  - 1) MA 2 layers Isocyanurate
  - 2) Adhere 1/2" Densdeck Tremco Low Rise Foam
  - 3) Adhere Tremco 60 Mil TPA Tremco TPA Bonding Adhesive
- h. Provide a Two-Year Contractor's warranty.
  - Provide a Tremco 20 -Year Material and Labor QA Manufacturer's Warranty.
  - B. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.
  - C. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of the Project site beyond areas in which the Work is indicated.
    - 1. Limits: Confine constructions operations to specified roof area and staging areas as indicated during the pre-bid meeting.
  - a. Do not enter occupied areas except where required by the Work.
  - b. Do not use Owner's toilet rooms.
  - c. Do not use Owner's cafeteria.
  - 2. Owner Occupancy: Allow for Owner occupancy of Project site and use by the public.
  - 3. Driveways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles always. Do not use these areas for parking or storage of materials.
  - a. Schedule deliveries to minimize use of driveways and entrances.
  - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- D. Parking: Park in designated areas only.
- E. Deliveries: Provide representative to receive all materials and offload at the job site. The Owner will refuse all deliveries to other locations.
- F. Personnel Identification: All construction personnel in occupied portions of the facility must always wear Contractor-furnished identification badges. Personnel without proper identification are subject to removal from the site by the Owner.

- G. Safety and Security: Comply with Owner's requirements related to security, fire drills, alerts and Covid 19 safety requirements and protocol.
- H. Burning/Welding Operations: Comply with Owner's requirements related to Burning and Welding permits. Coordinate turning off fire/smoke detection systems in affected areas. The contractor shall be responsible for Fire Department response fees related to construction operations.
- I. Smoking: No smoking is allowed on the premises.
- J. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

#### 1.7 OWNER'S OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
  - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  - 2. Provide not less than 72 Insert number hours' notice to Owner of activities that will affect Owner's operations.

#### 1.8 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of 6 a.m. to 7 p.m., Monday through Friday, accept otherwise indicated.
  - 1. Weekend Hours: Permitted with at least 48 hours notice to the owner.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Owner's written permission.

END OF SECTION 01100

## SECTION 075419 - POLYVINYL-CHLORIDE (PVC/TPA) ROOFING

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Mechanically-fastened thermoplastic PVC roofing system on metal deck, including:
2. Substrate board.
3. Roof insulation.
4. Walkway material.

B. Related Sections:

1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers and blocking.
2. Division 07 Section "Preparation for Re-Roofing" for recover board beneath new membrane roofing.
3. Division 07 Section "Air Barrier Rehabilitation" for requirements for sealing of air barrier at perimeter of roofing and within roofing system.
4. Division 07 Section "Sheet Metal Flashing and Trim" for shop-formed sheet metal items including roof drainage system items, roof penetration flashings, base and counterflashings and reglets, and formed copings and roof edge metal items.
5. Division 07 Section "Roof Specialties" for manufactured copings, roof edge flashings and counterflashings, and roof edge drainage systems.
6. Division 07 Section "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint assemblies.
7. Division 07 Section "Joint Sealants" for joint sealants, joint fillers, and joint preparation.
8. Division 22 Section "Roof Drains" for roof drains.

C. Alternates: Refer to Division 01 Section "Alternates" for description of Work in this Section affected by alternates.

D. Allowances: Refer to Division 01 Section "Allowances" for description of Work in this Section affected by allowances.

E. Unit Prices: Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.

## 1.2 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.

## 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
  - 1. Meet with Owner, Architect, Owner's Consultant, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
  - 2. Review drawings and specifications.
  - 3. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 4. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 5. Examine substrate conditions and finishes for compliance with requirements, including flatness and fastening.
  - 6. Review structural loading limitations of roof deck during and after roofing.
  - 7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
  - 8. Review governing regulations and requirements for insurance and certificates if applicable.
  - 9. Review temporary protection requirements for roofing system during and after installation.
  - 10. Review roof observation and repair procedures after roofing installation.

## 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Sustainable Design Submittals:
  - 1. Product Test Reports for Solar Reflectance: For roof materials, indicating that roof materials comply with Solar Reflectance Index requirement.
  - 2. Product Data and Laboratory Test Reports: For adhesives and sealants, indicating compliance with requirements for low-VOC/low-emitting materials.

- C. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.
  - 1. Base flashings and membrane terminations.
    - a. Indicate details meet requirements of NRCA and FMG required by this Section.
  - 2. Tapered insulation, including slopes and crickets.
  - 3. Roof plan showing types and orientation of roof deck and orientation of membrane roofing and fastening spacings and patterns for mechanically fastened membrane roofing if applicable.
  - 4. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
- D. Samples for Verification: For the following products:
  - 1. Sheet roofing, of color specified, including T-shaped side and end lap seam.
  - 2. Walkway pads or rolls.
  - 3. Metal termination bars.
- E. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Contractor's Product Certificate: Submit certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.
- B. Qualification Data: For Installer, Manufacturer and Roofing Inspector.
  - 1. Include letter from Manufacturer written for this Project indicating approval of Installer.
- C. Warranties: Unexecuted sample copies of special warranties.
- D. Inspection Reports: Reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions taken to correct defective work.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Executed copies of warranties.
- B. Maintenance Data: To include in maintenance manuals.

## 1.7 QUALITY ASSURANCE

- A. **Installer Qualifications:** An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. **Manufacturer Qualifications:** Approved manufacturer listed in this Section, UL listed for roofing systems comparable to that specified for this Project, with minimum five years' experience in manufacture of thermoplastic roof membrane products in successful use in similar applications.
- C. **Roofing Inspector Qualifications:** A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:
  - 1. An authorized full-time technical employee of the manufacturer.
- D. **Manufacturer's Installation Instructions:** Obtain and maintain on-site access to manufacturer's written recommendations and instructions for installation of products.

## 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
  - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

## 1.9 PROJECT / FIELD CONDITIONS

- A. **Weather Limitations:** Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

- B. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of roofing sheet securely in place with joints and edges sealed.
  2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.
  3. Remove temporary plugs from roof drains at end of each day.
  4. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 1.10 WARRANTY

- A. Manufacturer's Warranty: Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
1. Form of Warranty: Manufacturer's standard warranty form.
  2. Scope of Warranty: Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.
  3. Warranty Period: 20 years from date of completion.
- B. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
1. Inspections to occur in following years: 2, 5, 10 and 15 following completion.
- C. Installer Warranty: Installer's warranty signed by Installer, as follows.
1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.
  2. Scope of Warranty: Work of this Section.
  3. Warranty Period: 2 years from date of completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Inc, Beachwood, OH, (800) 562-2728, [www.tremcoroofing.com](http://www.tremcoroofing.com) that are named in other Part 2 articles. Provide specified products.

## 2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
  - 1. Accelerated Weathering: Roofing system shall withstand 10,000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
  - 2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746/D3746M, ASTM D4272/D4272M, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.
- B. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency in accordance with ANSI/FM 4474, UL 580, or UL 1897, and to resist uplift pressures calculated in accordance with ASCE-7 and applicable code.
- C. SPRI Wind Design Standard: Manufacture and install copings and roof-edge flashings tested according to ANSI/SPRI ES-1.
- D. Exterior Fire-Test Exposure: ASTM E108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- E. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E1980, based on testing identical products by a qualified testing agency.
- F. Energy Performance: Roofing system shall have an initial solar reflectance index of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

## 2.3 MATERIALS, GENERAL

- A. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

## 2.4 BASE SHEET MATERIALS

## 2.5 THERMOPLASTIC MEMBRANE MATERIALS

- A. PVC Roof Membrane:
  - 1. Thermoplastic PVC/TPA sheet, internally fabric reinforced, Energy Star qualified, CRRC listed, and California Title 24 Energy Code compliant, ASTM D4434 Type IV.
    - a. Basis of design product: Tremco, TPA Single Ply Roof Membrane.

- b. Tensile Strength at 0 deg. F (-18 deg. C), minimum, ASTM D751: 300 lbf/in (1330 N).
  - c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D751: 100 lbf (440 N).
  - d. Elongation at 0 deg. F (-18 deg. C), minimum at fabric break, ASTM D751: 25 percent machine direction, 25 percent cross-machine direction.
  - e. Minimum Thickness, nominal, ASTM D751: 0.060 in (1.5 mm).
  - f. Color: White.
  - g. Solar Reflectance Index (SRI), ASTM E1980: 108 (White, initial) 84 (White, 3-year aged).
  - h. Recycled Content, minimum: 25 percent pre-consumer.
- B. Membrane Flashing: Manufacturer's standard, smooth-backed, sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

## 2.6 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.
- 1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
  - 2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
    - a. Plastic Foam Adhesives: 50 g/L.
    - b. Single-Ply Roof Membrane Sealants: 450 g/L.
    - c. Nonmembrane Roof Sealants: 300 g/L.
    - d. Sealant Primers for Nonporous Substrates: 250 g/L.
    - e. Sealant Primers for Porous Substrates: 775 g/L.
  - 3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Membrane Adhesive:

C. Flashing Membrane Adhesive:

1. Elastomeric solvent-based contact-type adhesive for bonding TPA fleece-backed and non-fleece-backed single ply membranes and flashings to substrates.
  - a. Basis of design product: Tremco, TPA Single Ply Bonding Adhesive.
  - b. Density at 77 deg. F (25 deg. C), minimum, ASTM D147: 7.0 lb/gal (0.84 kg/L).
  - c. Percent solids, minimum ASTM D316: 25 percent.
  - d. VOC, maximum, ASTM D 3960: 612 g/L.

D. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 mm by 3 mm) thick; with anchors.

E. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening components to substrate, and acceptable to membrane roofing system manufacturer.

F. Joint Sealant: Elastomeric joint sealant compatible with roofing materials, with movement capability appropriate for application.

1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
  - a. Basis of design product: Tremco, TremSEAL Pro.
  - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
  - c. Hardness, Shore A, ASTM C661: 40.
  - d. Adhesion to Concrete, ASTM C794: 35 pli.
  - e. Tensile Strength, ASTM D412: 350 psi (2410 kPa).
  - f. Color: White.

G. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.

H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.7 SUBSTRATE BOARDS

A. Gypsum panel, glass-mat-faced, ASTM C1177/C1177M.

1. Basis of design product: Tremco/GP Gypsum DensDeck.

2. Thickness: 1/2 inch (12 mm).

- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate board to roof deck.

## 2.8 ROOF INSULATION MATERIALS

- A. General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from insulation manufacturer's standard sizes, suitable for application, and of thicknesses indicated.

1. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated, not less than two times the roof slope.

- B. Roof Insulation: Provide roof insulation product in thicknesses indicated in Part 3 as follows:

1. Board Insulation, Polyisocyanurate: CFC- and HCFC- free, with recycled content glass-fiber mat facer on both major surfaces, ASTM C1289 Type II Class 1.
- a. Basis of design product: Tremco, Trisotech Insulation.
  - b. Compressive Strength, ASTM D1621: Grade 2: 20 psi (138 kPa).
  - c. Conditioned Thermal Resistance at 75 deg. F (24 deg. C): 14.4 at 2.5 inches (50.8 mm) thick.

## 2.9 WALKWAY MATERIALS

- A. Walkway Material:

1. Walkway roll, reinforced PVC/TPA membrane roll with serrated slip-resistant surface, fabricated for heat welding to compatible PVC/TPA membrane surface.
- a. Basis of design product: Tremco, TPA Walkway Roll.
  - b. Roll Size: 36 inches by 60 foot (914 mm by 18.3 m).
  - c. Thickness / Color: Gray, 0.072 inch (2 mm).
  - d. Tensile, Grab ASTM D751: 200 lbf (890 N).
  - e. Tear Strength, Tongue : 45 lbf (200N).
  - f. Low Temp Flex: -40 deg F. (-40 deg C.).

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
  - 1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
  - 2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  - 3. Steel Roof Deck:
    - a. Verify that deck is securely fastened and properly supported with no projecting fasteners and with no adjacent units in excess of 1/16 inch (1.6 mm) out of plane relative to adjoining deck.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 3.3 INSTALLATION, GENERAL

- A. Install roofing system in accordance with manufacturer's written instructions and approved details.
- B. Install wood cants, blocking, curbs, and nailers in accordance with requirements of Division 06 Section "Miscellaneous Rough Carpentry."
- C. NRCA Installation Details: Install roofing system in accordance with applicable NRCA Manual Plates and NRCA recommendations; modify as required to comply with manufacturer's approved details and perimeter fastening requirements of FM Global references if applicable.

#### 3.4 SUBSTRATE BOARD

- A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.

1. Loosely lay substrate board to deck and secure using mechanical fasteners subsequently installed to secure other layers of roof system.
2. Fasten substrate board to top flanges of steel deck to resist uplift pressure at corners, perimeter, and field of roof according to membrane roofing system manufacturers' written instructions.

### 3.5 INSULATION INSTALLATION

- A. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (70 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
  1. Flat Insulation System on Sloped Roof Deck: Install insulation at minimum thickness as follows:
    - a. Minimum total thickness of Continuous Insulation: 5.2 inches.
      - 1) Minimum thickness of base layer: 2.6 inches.
      - 2) Minimum thickness of each subsequent layer: 2.6 inches.
    - b. Minimum Continuous Insulation R-value: Not less than 30.
- B. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
  1. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.

### 3.6 MECHANICALLY FASTENED MEMBRANE ROOFING INSTALLATION

- A. Mechanically fasten membrane roofing over area to receive roofing and install according to roofing system manufacturer's written instructions.
  1. For in-splice attachment, install membranes roofing with long dimension perpendicular to steel roof deck flutes.
- B. Start installation of membrane roofing in presence of roofing system manufacturer's technical personnel.
- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Mechanically fasten or adhere membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- E. Apply membrane roofing with side laps shingled with slope of roof deck where possible.

- F. In-Seam Attachment: Secure one edge of membrane sheet using fastening plates or metal battens centered within membrane seam and mechanically fasten membrane sheet to roof deck.
- G. Welded Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
  - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
  - 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.
- I. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition. Install in such a manner as to not void warranty of existing membrane roofing system.

### 3.7 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Seal top termination of base flashing with a metal termination bar and a continuous bead of joint sealant.

### 3.8 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

### 3.9 FIELD QUALITY CONTROL

- A. Roofing Inspector: Owner will engage a qualified roofing inspector to perform roof tests and inspections and to prepare test reports.

- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- C. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- D. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.10 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Owner's Consultant and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075419

## SECTION 075419 - POLYVINYL-CHLORIDE (PVC/TPA) ROOFING

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Mechanically-fastened thermoplastic PVC roofing system on metal deck, including:
2. Substrate board.
3. Roof insulation.
4. Roof insulation cover board.
5. Walkway material.

B. Related Sections:

1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers and blocking.
2. Division 07 Section "Preparation for Re-Roofing" for recover board beneath new membrane roofing.
3. Division 07 Section "Air Barrier Rehabilitation" for requirements for sealing of air barrier at perimeter of roofing and within roofing system.
4. Division 07 Section "Sheet Metal Flashing and Trim" for shop-formed sheet metal items including roof drainage system items, roof penetration flashings, base and counterflashings and reglets, and formed copings and roof edge metal items.
5. Division 07 Section "Roof Specialties" for manufactured copings, roof edge flashings and counterflashings, and roof edge drainage systems.
6. Division 07 Section "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint assemblies.
7. Division 07 Section "Joint Sealants" for joint sealants, joint fillers, and joint preparation.
8. Division 22 Section "Roof Drains" for roof drains.

C. Alternates: Refer to Division 01 Section "Alternates" for description of Work in this Section affected by alternates.

D. Allowances: Refer to Division 01 Section "Allowances" for description of Work in this Section affected by allowances.

- E. Unit Prices: Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.

## 1.2 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.

## 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
  - 1. Meet with Owner, Architect, Owner's Consultant, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
  - 2. Review drawings and specifications.
  - 3. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 4. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 5. Examine substrate conditions and finishes for compliance with requirements, including flatness and fastening.
  - 6. Review structural loading limitations of roof deck during and after roofing.
  - 7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
  - 8. Review governing regulations and requirements for insurance and certificates if applicable.
  - 9. Review temporary protection requirements for roofing system during and after installation.
  - 10. Review roof observation and repair procedures after roofing installation.

## 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Sustainable Design Submittals:
  - 1. Product Test Reports for Solar Reflectance: For roof materials, indicating that roof materials comply with Solar Reflectance Index requirement.

2. Product Data and Laboratory Test Reports: For adhesives and sealants, indicating compliance with requirements for low-VOC/low-emitting materials.
- C. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.
1. Base flashings and membrane terminations.
    - a. Indicate details meet requirements of NRCA and FMG required by this Section.
  2. Tapered insulation, including slopes and crickets.
  3. Roof plan showing types and orientation of roof deck and orientation of membrane roofing and fastening spacings and patterns for mechanically fastened membrane roofing if applicable.
  4. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
- D. Samples for Verification: For the following products:
1. Sheet roofing, of color specified, including T-shaped side and end lap seam.
  2. Walkway pads or rolls.
  3. Metal termination bars.
- E. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Contractor's Product Certificate: Submit certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.
- B. Qualification Data: For Installer, Manufacturer and Roofing Inspector.
1. Include letter from Manufacturer written for this Project indicating approval of Installer.
- C. Warranties: Unexecuted sample copies of special warranties.
- D. Inspection Reports: Reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions taken to correct defective work.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Executed copies of warranties.
- B. Maintenance Data: To include in maintenance manuals.

## 1.7 QUALITY ASSURANCE

- A. **Installer Qualifications:** An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. **Manufacturer Qualifications:** Approved manufacturer listed in this Section, UL listed for roofing systems comparable to that specified for this Project, with minimum five years' experience in manufacture of thermoplastic roof membrane products in successful use in similar applications.
- C. **Roofing Inspector Qualifications:** A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:
  - 1. An authorized full-time technical employee of the manufacturer.
- D. **Manufacturer's Installation Instructions:** Obtain and maintain on-site access to manufacturer's written recommendations and instructions for installation of products.

## 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
  - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

## 1.9 PROJECT / FIELD CONDITIONS

- A. **Weather Limitations:** Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

- B. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
  - 1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of roofing sheet securely in place with joints and edges sealed.
  - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.
  - 3. Remove temporary plugs from roof drains at end of each day.
  - 4. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 1.10 WARRANTY

- A. Manufacturer's Warranty: Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
  - 1. Form of Warranty: Manufacturer's standard warranty form.
  - 2. Scope of Warranty: Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.
  - 3. Warranty Period: 20 years from date of completion.
- B. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
  - 1. Inspections to occur in following years: 2, 5, 10 and 15 following completion.
- C. Installer Warranty: Installer's warranty signed by Installer, as follows.
  - 1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.
  - 2. Scope of Warranty: Work of this Section.
  - 3. Warranty Period: 2 years from date of completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Inc, Beachwood, OH, (800) 562-2728, [www.tremcoroofing.com](http://www.tremcoroofing.com) that are named in other Part 2 articles. Provide specified products.

## 2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
  - 1. Accelerated Weathering: Roofing system shall withstand 10,000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
  - 2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746/D3746M, ASTM D4272/D4272M, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.
- B. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency in accordance with ANSI/FM 4474, UL 580, or UL 1897, and to resist uplift pressures calculated in accordance with ASCE-7 and applicable code.
- C. FM Global Compliance: Roofing, base flashings, and component materials shall comply with requirements in FM Global 4470 as part of a roofing system and shall be listed in FM Global's "RoofNav" or shall receive written FM Global project approval for Class 1 or non-combustible construction, as applicable. Identify applicable materials with FM Global markings.
  - 1. Fire Classification:
- D. SPRI Wind Design Standard: Manufacture and install copings and roof-edge flashings tested according to ANSI/SPRI ES-1.
- E. Exterior Fire-Test Exposure: ASTM E108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- F. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E1980, based on testing identical products by a qualified testing agency.
- G. Energy Performance: Roofing system shall have an initial solar reflectance index of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

## 2.3 MATERIALS, GENERAL

- A. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

## 2.4 BASE SHEET MATERIALS

## 2.5 THERMOPLASTIC MEMBRANE MATERIALS

- A. PVC Roof Membrane:

1. Thermoplastic PVC/TPA sheet, internally fabric reinforced, Energy Star qualified, CRRC listed, and California Title 24 Energy Code compliant, ASTM D4434 Type IV.
  - a. Basis of design product: Tremco, TPA Single Ply Roof Membrane.
  - b. Tensile Strength at 0 deg. F (-18 deg. C), minimum, ASTM D751: 300 lbf/in (1330 N).
  - c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D751: 100 lbf (440 N).
  - d. Elongation at 0 deg. F (-18 deg. C), minimum at fabric break, ASTM D751: 25 percent machine direction, 25 percent cross-machine direction.
  - e. Minimum Thickness, nominal, ASTM D751: 0.060 in (1.5 mm).
  - f. Color: White.
  - g. Solar Reflectance Index (SRI), ASTM E1980: 108 (White, initial) 84 (White, 3-year aged).
  - h. Recycled Content, minimum: 25 percent pre-consumer.
- B. Membrane Flashing: Manufacturer's standard, smooth-backed, sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

## 2.6 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.
  1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
  2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
    - a. Plastic Foam Adhesives: 50 g/L.
    - b. Single-Ply Roof Membrane Sealants: 450 g/L.
    - c. Nonmembrane Roof Sealants: 300 g/L.
    - d. Sealant Primers for Nonporous Substrates: 250 g/L.
    - e. Sealant Primers for Porous Substrates: 775 g/L.
  3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the

Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources  
Using Environmental Chambers."

- B. Membrane Adhesive:
- C. Flashing Membrane Adhesive:
  - 1. Elastomeric solvent-based contact-type adhesive for bonding TPA fleece-backed and non-fleece-backed single ply membranes and flashings to substrates.
    - a. Basis of design product: Tremco, TPA Single Ply Bonding Adhesive.
    - b. Density at 77 deg. F (25 deg. C), minimum, ASTM D147: 7.0 lb/gal (0.84 kg/L).
    - c. Percent solids, minimum ASTM D316: 25 percent.
    - d. VOC, maximum, ASTM D 3960: 612 g/L.
- D. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 mm by 3 mm) thick; with anchors.
- E. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening components to substrate, and acceptable to membrane roofing system manufacturer.
- F. Joint Sealant: Elastomeric joint sealant compatible with roofing materials, with movement capability appropriate for application.
  - 1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
    - a. Basis of design product: Tremco, TremSEAL Pro.
    - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
    - c. Hardness, Shore A, ASTM C661: 40.
    - d. Adhesion to Concrete, ASTM C794: 35 pli.
    - e. Tensile Strength, ASTM D412: 350 psi (2410 kPa).
    - f. Color: White.
- G. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

## 2.7 SUBSTRATE BOARDS

- A. Gypsum panel, glass-mat-faced, ASTM C1177/C1177M.
  - 1. Basis of design product: Tremco/GP Gypsum DensDeck.
  - 2. Thickness: 1/2 inch (12 mm).
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate board to roof deck.

## 2.8 ROOF INSULATION MATERIALS

- A. General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from insulation manufacturer's standard sizes, suitable for application, and of thicknesses indicated.
  - 1. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated, not less than two times the roof slope.
- B. Roof Insulation: Provide roof insulation product in thicknesses indicated in Part 3 as follows:
  - 1. Board Insulation, Polyisocyanurate: CFC- and HCFC- free, with recycled content glass-fiber mat facer on both major surfaces, ASTM C1289 Type II Class 1.
    - a. Basis of design product: Tremco, Trisotech Insulation.
    - b. Compressive Strength, ASTM D1621: Grade 2: 20 psi (138 kPa).
    - c. Conditioned Thermal Resistance at 75 deg. F (24 deg. C): 14.4 at 2.5 inches (50.8 mm) thick.

## 2.9 WALKWAY MATERIALS

- A. Walkway Material:
  - 1. Walkway roll, reinforced PVC/TPA membrane roll with serrated slip-resistant surface, fabricated for heat welding to compatible PVC/TPA membrane surface.
    - a. Basis of design product: Tremco, TPA Walkway Roll.
    - b. Roll Size: 36 inches by 60 foot (914 mm by 18.3 m).
    - c. Thickness / Color: Gray, 0.072 inch (2 mm).
    - d. Tensile, Grab ASTM D751: 200 lbf (890 N).
    - e. Tear Strength, Tongue : 45 lbf (200N).

- f. Low Temp Flex: -40 deg F. (-40 deg C.).

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
  2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  3. Steel Roof Deck:
    - a. Verify that deck is securely fastened and properly supported with no projecting fasteners and with no adjacent units in excess of 1/16 inch (1.6 mm) out of plane relative to adjoining deck.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 3.3 INSTALLATION, GENERAL

- A. Install roofing system in accordance with manufacturer's written instructions and approved details.
- B. Install wood cants, blocking, curbs, and nailers in accordance with requirements of Division 06 Section "Miscellaneous Rough Carpentry."
- C. NRCA Installation Details: Install roofing system in accordance with applicable NRCA Manual Plates and NRCA recommendations; modify as required to comply with manufacturer's approved details and perimeter fastening requirements of FM Global references if applicable.

### 3.4 SUBSTRATE BOARD

- A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.
  - 1. Loosely lay substrate board to deck and secure using mechanical fasteners subsequently installed to secure other layers of roof system.
  - 2. Fasten substrate board to top flanges of steel deck to resist uplift pressure at corners, perimeter, and field of roof according to membrane roofing system manufacturers' written instructions.

### 3.5 INSULATION INSTALLATION

- A. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (70 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
  - 1. Flat Insulation System on Sloped Roof Deck: Install insulation at minimum thickness as follows:
    - a. Minimum total thickness of Continuous Insulation: 5.2 inches.
      - 1) Minimum thickness of base layer: 2.6 inches.
      - 2) Minimum thickness of each subsequent layer: 2.6 inches.
    - b. Minimum Continuous Insulation R-value: Not less than 30.

### 3.6 MECHANICALLY FASTENED MEMBRANE ROOFING INSTALLATION

- A. Mechanically fasten membrane roofing over area to receive roofing and install according to roofing system manufacturer's written instructions.
  - 1. For in-splice attachment, install membranes roofing with long dimension perpendicular to steel roof deck flutes.
- B. Start installation of membrane roofing in presence of roofing system manufacturer's technical personnel.
- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Mechanically fasten or adhere membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- E. Apply membrane roofing with side laps shingled with slope of roof deck where possible.

- F. In-Seam Attachment: Secure one edge of membrane sheet using fastening plates or metal battens centered within membrane seam and mechanically fasten membrane sheet to roof deck.
- G. Welded Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
  - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
  - 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.
- I. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition. Install in such a manner as to not void warranty of existing membrane roofing system.

### 3.7 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Seal top termination of base flashing with a metal termination bar and a continuous bead of joint sealant.

### 3.8 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

### 3.9 FIELD QUALITY CONTROL

- A. Roofing Inspector: Owner will engage a qualified roofing inspector to perform roof tests and inspections and to prepare test reports.

- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- C. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- D. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.10 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Owner's Consultant and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075419

## SECTION 075419 - POLYVINYL-CHLORIDE (PVC/TPA) ROOFING

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Mechanically-fastened thermoplastic PVC roofing system on wood deck, including:
2. Roof insulation.
3. Roof insulation cover board.
4. Walkway material.

B. Related Sections:

1. Division 07 Section "Sheet Metal Flashing and Trim" for shop-formed sheet metal items including roof drainage system items, roof penetration flashings, base and counterflashings and reglets, and formed copings and roof edge metal items.

C. Unit Prices: Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.

#### 1.2 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.

#### 1.3 PREINSTALLATION MEETINGS

A. Preinstallation Roofing Conference: Conduct conference at Project site.

1. Meet with Owner, Architect, Owner's Consultant, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
2. Review drawings and specifications.
3. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
4. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

5. Examine substrate conditions and finishes for compliance with requirements, including flatness and fastening.
6. Review structural loading limitations of roof deck during and after roofing.
7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
8. Review governing regulations and requirements for insurance and certificates if applicable.
9. Review temporary protection requirements for roofing system during and after installation.
10. Review roof observation and repair procedures after roofing installation.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

#### 1.5 CLOSEOUT SUBMITTALS

- A. Executed copies of warranties.
- B. Maintenance Data: To include in maintenance manuals.

#### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. Manufacturer Qualifications: Approved manufacturer listed in this Section, UL listed for roofing systems comparable to that specified for this Project, with minimum five years' experience in manufacture of thermoplastic roof membrane products in successful use in similar applications.
  1. Approval of Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:
    - a. Product data, including certified independent test data indicating compliance with requirements.
    - b. Samples of each component.
    - c. Sample submittal from similar project.

- d. Project references: Minimum of five installations of specified products not less than five years old, with Owner and Architect contact information.
    2. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements.
    3. Approved manufacturers must meet separate requirements of Submittals Article.
  - C. Roofing Inspector Qualifications: A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:
    1. An authorized full-time technical employee of the manufacturer.
    2. An independent party certified as a Registered Roof Observer by the International Institute of Building Enclosure Consultants (formerly the Roof Consultants Institute) retained by the Contractor or the Manufacturer and approved by the Manufacturer.
  - D. Manufacturer's Installation Instructions: Obtain and maintain on-site access to manufacturer's written recommendations and instructions for installation of products.
- 1.7 DELIVERY, STORAGE, AND HANDLING
- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
  - B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
    1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
  - C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
  - D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.
- 1.8 PROJECT / FIELD CONDITIONS
- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

- B. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
  - 1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of roofing sheet securely in place with joints and edges sealed.
  - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.
  - 3. Remove temporary plugs from roof drains at end of each day.
  - 4. Remove and discard temporary seals before beginning work on adjoining roofing.

## 1.9 WARRANTY

- A. Manufacturer's Warranty: Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
  - 1. Form of Warranty: Manufacturer's standard warranty form.
  - 2. Scope of Warranty: Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.
  - 3. Warranty Period: 20 years from date of completion.
- B. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
  - 1. Inspections to occur in following years: 2, 5, 10 and 15 following completion.
- C. Installer Warranty: Installer's warranty signed by Installer, as follows.
  - 1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.
  - 2. Scope of Warranty: Work of this Section.
  - 3. Warranty Period: 2 years from date of completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Inc, Beachwood, OH, (800) 562-2728, [www.tremcoroofing.com](http://www.tremcoroofing.com) that are named in other Part 2 articles. Provide specified products.

- B. Source Limitations: Obtain components for roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

## 2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
  - 1. Accelerated Weathering: Roofing system shall withstand 10,000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
- B. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency in accordance with ANSI/FM 4474, UL 580, or UL 1897, and to resist uplift pressures calculated in accordance with ASCE-7 and applicable code.
- C. SPRI Wind Design Standard: Manufacture and install copings and roof-edge flashings tested according to ANSI/SPRI ES-1.
- D. Flashings and Fastening: Comply with requirements of Division 07 Sections "Sheet Metal Flashing and Trim" and "Roof Specialties." Provide base flashings, perimeter flashings, detail flashings and component materials and installation techniques that comply with requirements and recommendations of the following:
  - 1. NRCA Roofing Manual (Sixth Edition) for construction details and recommendations.
  - 2. SMACNA Architectural Sheet Metal Manual (Seventh Edition) for construction details.
- E. Exterior Fire-Test Exposure: ASTM E108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- F. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E1980, based on testing identical products by a qualified testing agency.
- G. Energy Performance: Roofing system shall have an initial solar reflectance index of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

## 2.3 MATERIALS, GENERAL

- A. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

## 2.4 BASE SHEET MATERIALS

## 2.5 THERMOPLASTIC MEMBRANE MATERIALS

### A. PVC Roof Membrane:

1. Thermoplastic PVC/TPA sheet, internally fabric reinforced, Energy Star qualified, CRRC listed, and California Title 24 Energy Code compliant, ASTM D4434 Type IV.
  - a. Basis of design product: Tremco, TPA Single Ply Roof Membrane.
  - b. Tensile Strength at 0 deg. F (-18 deg. C), minimum, ASTM D751: 300 lbf/in (1330 N).
  - c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D751: 100 lbf (440 N).
  - d. Elongation at 0 deg. F (-18 deg. C), minimum at fabric break, ASTM D751: 25 percent machine direction, 25 percent cross-machine direction.
  - e. Minimum Thickness, nominal, ASTM D751: 0.060 in (1.5 mm).
  - f. Color: White.
  - g. Solar Reflectance Index (SRI), ASTM E1980: 108 (White, initial) 84 (White, 3-year aged).
  - h. Recycled Content, minimum: 25 percent pre-consumer.

- B. Membrane Flashing: Manufacturer's standard, smooth-backed, sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

## 2.6 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.

1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - a. Plastic Foam Adhesives: 50 g/L.
  - b. Single-Ply Roof Membrane Sealants: 450 g/L.
  - c. Nonmembrane Roof Sealants: 300 g/L.
  - d. Sealant Primers for Nonporous Substrates: 250 g/L.

- e. Sealant Primers for Porous Substrates: 775 g/L.
- 3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Membrane Adhesive:
- C. Flashing Membrane Adhesive:
  - 1. Elastomeric solvent-based contact-type adhesive for bonding TPA fleece-backed and non-fleece-backed single ply membranes and flashings to substrates.
    - a. Basis of design product: Tremco, TPA Single Ply Bonding Adhesive.
    - b. Density at 77 deg. F (25 deg. C), minimum, ASTM D147: 7.0 lb/gal (0.84 kg/L).
    - c. Percent solids, minimum ASTM D316: 25 percent.
    - d. VOC, maximum, ASTM D 3960: 612 g/L.
- D. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 mm by 3 mm) thick; with anchors.
- E. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch (25 mm wide by 1.3 mm) thick, prepunched.
- F. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening components to substrate, and acceptable to membrane roofing system manufacturer.
- G. Joint Sealant: Elastomeric joint sealant compatible with roofing materials, with movement capability appropriate for application.
  - 1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
    - a. Basis of design product: Tremco, TremSEAL Pro.
    - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
    - c. Hardness, Shore A, ASTM C661: 40.
    - d. Adhesion to Concrete, ASTM C794: 35 pli.
    - e. Tensile Strength, ASTM D412: 350 psi (2410 kPa).

f. Color: White.

H. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.

I. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

## 2.7 SUBSTRATE BOARDS

A. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate board to roof deck.

## 2.8 ROOF INSULATION MATERIALS

A. General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from insulation manufacturer's standard sizes, suitable for application, and of thicknesses indicated.

1. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches (1:48) unless otherwise indicated.

2. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated, not less than two times the roof slope.

B. Roof Insulation: Provide roof insulation product in thicknesses indicated in Part 3 as follows:

1. Board Insulation, Polyisocyanurate: CFC- and HCFC- free, with recycled content glass-fiber mat facer on both major surfaces, ASTM C1289 Type II Class 1.

a. Basis of design product: Tremco, Trisotech Insulation.

b. Compressive Strength, ASTM D1621: Grade 2: 20 psi (138 kPa).

c. Conditioned Thermal Resistance at 75 deg. F (24 deg. C): 14.4 at 2.5 inches (50.8 mm) thick.

## 2.9 ROOF INSULATION ACCESSORIES

A. Cover Board:

1. Gypsum panel, glass-mat-faced, ASTM C1177/C1177M.

a. Basis of design product: Tremco/GP Gypsum DensDeck.

b. Thickness: 1/4 inch (6 mm).

B. Insulation Cant Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

- C. Tapered Edge Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

## 2.10 WALKWAY MATERIALS

### A. Walkway Material:

1. Walkway roll, reinforced PVC/TPA membrane roll with serrated slip-resistant surface, fabricated for heat welding to compatible PVC/TPA membrane surface.
  - a. Basis of design product: Tremco, TPA Walkway Roll.
  - b. Roll Size: 36 inches by 60 foot (914 mm by 18.3 m).
  - c. Thickness / Color: Gray, 0.072 inch (2 mm).
  - d. Tensile, Grab ASTM D751: 200 lbf (890 N).
  - e. Tear Strength, Tongue : 45 lbf (200N).
  - f. Low Temp Flex: -40 deg F. (-40 deg C.).

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
  1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
  2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  3. Existing Prepared Roof Substrate: Verify that existing insulation and substrate is sound and dry. Refer to requirements of Division 07 Section "Preparation for Re-Roofing."
  4. Wood Roof Deck: Verify that deck is sound and dry and securely fastened with no projecting fasteners and with no adjacent units in excess of 1/16 inch (1.6 mm) out of plane relative to adjoining deck.
  5. Verify that existing insulation and substrate is sound and dry.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

### 3.3 INSTALLATION, GENERAL

- A. Install roofing system in accordance with manufacturer's written instructions and approved details.
- B. Install wood cants, blocking, curbs, and nailers in accordance with requirements of Division 06 Section "Miscellaneous Rough Carpentry."
- C. NRCA Installation Details: Install roofing system in accordance with applicable NRCA Manual Plates and NRCA recommendations; modify as required to comply with manufacturer's approved details and perimeter fastening requirements of FM Global references if applicable.

### 3.4 INSULATION INSTALLATION

- A. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (70 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
  - 1. Flat Insulation System on Sloped Roof Deck: Install insulation at minimum thickness as follows:
    - a. Minimum total thickness of Continuous Insulation: 5.2 inches.
      - 1) Minimum thickness of base layer: 2.6 inches.
      - 2) Minimum thickness of each subsequent layer: 2.6 inches.
    - b. Minimum Continuous Insulation R-value: Not less than 30.
  - 2. Tapered Insulation System for Flat Roof Deck: Install insulation as follows:
    - a. Minimum total thickness of Continuous Insulation: 1.4" inches.
- B. Cover Boards: Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches (150 mm) in each direction. Loosely butt cover boards together.
  - 1. Secure cover boards to resist uplift pressure at corners, perimeter, and field of roof.
  - 2. Mechanically fasten cover boards.

### 3.5 MECHANICALLY FASTENED MEMBRANE ROOFING INSTALLATION

- A. Mechanically fasten membrane roofing over area to receive roofing and install according to roofing system manufacturer's written instructions.
  - 1. For in-splice attachment, install membranes roofing with long dimension perpendicular to steel roof deck flutes.
- B. Start installation of membrane roofing in presence of roofing system manufacturer's technical personnel.
- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Mechanically fasten or adhere membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- E. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- F. In-Seam Attachment: Secure one edge of membrane sheet using fastening plates or metal battens centered within membrane seam and mechanically fasten membrane sheet to roof deck.
- G. Welded Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
  - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
  - 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.
- I. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition. Install in such a manner as to not void warranty of existing membrane roofing system.

### 3.6 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.

- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Seal top termination of base flashing with a metal termination bar and a continuous bead of joint sealant.

### 3.7 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

### 3.8 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- B. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- C. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

### 3.9 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Owner's Consultant and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075419

## SECTION 075419 - POLYVINYL-CHLORIDE (PVC/TPA) ROOFING

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Adhered thermoplastic PVC roofing system on cementitious wood fiber deck, including:
2. Substrate board.
3. Roof insulation.
4. Roof insulation cover board.
5. Walkway material.

B. Section includes the installation of acoustical roof deck rib insulation strips furnished under Division 05 Section "Steel Decking."

C. Related Sections:

1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers and blocking.
2. Division 07 Section "Preparation for Re-Roofing" for recover board beneath new membrane roofing.
3. Division 07 Section "Air Barrier Rehabilitation" for requirements for sealing of air barrier at perimeter of roofing and within roofing system.
4. Division 07 Section "Sheet Metal Flashing and Trim" for shop-formed sheet metal items including roof drainage system items, roof penetration flashings, base and counterflashings and reglets, and formed copings and roof edge metal items.
5. Division 07 Section "Roof Specialties" for manufactured copings, roof edge flashings and counterflashings, and roof edge drainage systems.
6. Division 07 Section "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint assemblies.
7. Division 07 Section "Joint Sealants" for joint sealants, joint fillers, and joint preparation.
8. Division 22 Section "Roof Drains" for roof drains.

D. Alternates: Refer to Division 01 Section "Alternates" for description of Work in this Section affected by alternates.

- E. Allowances: Refer to Division 01 Section "Allowances" for description of Work in this Section affected by allowances.
- F. Unit Prices: Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.

## 1.2 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.

## 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
  - 1. Meet with Owner, Architect, Owner's Consultant, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
  - 2. Review drawings and specifications.
  - 3. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 4. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 5. Examine substrate conditions and finishes for compliance with requirements, including flatness and fastening.
  - 6. Review structural loading limitations of roof deck during and after roofing.
  - 7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
  - 8. Review governing regulations and requirements for insurance and certificates if applicable.
  - 9. Review temporary protection requirements for roofing system during and after installation.
  - 10. Review roof observation and repair procedures after roofing installation.

## 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Sustainable Design Submittals:

- C. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Contractor's Product Certificate: Submit certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.
- B. Qualification Data: For Installer, Manufacturer and Roofing Inspector.
  - 1. Include letter from Manufacturer written for this Project indicating approval of Installer.
- C. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
  - 1. Submit evidence of compliance with performance requirements.
    - a. Include: UL listing certificate.
  - 2. Product Compatibility: Indicate manufacturer has verified compatibility of roofing system components, including but not limited to: Roofing membrane, flashing sheets, adhesives, and sealants.
- D. Warranties: Unexecuted sample copies of special warranties.
- E. Inspection Reports: Reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions taken to correct defective work.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Executed copies of warranties.

#### 1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. Manufacturer Qualifications: Approved manufacturer listed in this Section, UL listed for roofing systems comparable to that specified for this Project, with minimum five years' experience in manufacture of thermoplastic roof membrane products in successful use in similar applications.
- C. Roofing Inspector Qualifications: A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved

by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:

1. An authorized full-time technical employee of the manufacturer.

- D. Manufacturer's Installation Instructions: Obtain and maintain on-site access to manufacturer's written recommendations and instructions for installation of products.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.

- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.

1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

#### 1.9 PROJECT / FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

- B. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.

1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of roofing sheet securely in place with joints and edges sealed.

2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.

3. Remove temporary plugs from roof drains at end of each day.

4. Remove and discard temporary seals before beginning work on adjoining roofing.

## 1.10 WARRANTY

- A. **Manufacturer's Warranty:** Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
  - 1. **Form of Warranty:** Manufacturer's standard warranty form.
  - 2. **Scope of Warranty:** Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.
  - 3. **Warranty Period:** 20 years from date of completion.
- B. **Manufacturer Inspection Services:** By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
  - 1. **Inspections to occur in following years:** 2, 5, 10 and 15 following completion.
- C. **Installer Warranty:** Installer's warranty signed by Installer, as follows.
  - 1. **Form of Warranty:** Form acceptable to Roofing Manufacturer and Owner.
  - 2. **Scope of Warranty:** Work of this Section.
  - 3. **Warranty Period:** 2 years from date of completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. **Basis of Design:** The roof system specified in this Section is based upon products of Tremco CPG Inc, Beachwood, OH, (800) 562-2728, [www.tremcoroofing.com](http://www.tremcoroofing.com) that are named in other Part 2 articles. Provide specified products.
  - 1. **Manufacturers of comparable products:** Approved by Owner prior to bid.
- B. **Source Limitations:** Obtain components for roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

### 2.2 PERFORMANCE REQUIREMENTS

- A. **General Performance:** Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
  - 1. **Accelerated Weathering:** Roofing system shall withstand 10,000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.

2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746/D3746M, ASTM D4272/D4272M, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.
- B. SPRI Wind Design Standard: Manufacture and install copings and roof-edge flashings tested according to ANSI/SPRI ES-1.
- C. Exterior Fire-Test Exposure: ASTM E108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- D. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.
- E. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E1980, based on testing identical products by a qualified testing agency.
- F. Energy Performance: Roofing system shall have an initial solar reflectance index of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

## 2.3 MATERIALS, GENERAL

- A. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

## 2.4 THERMOPLASTIC MEMBRANE MATERIALS

### A. PVC Roof Membrane:

1. Thermoplastic PVC/TPA sheet, internally fabric reinforced, Energy Star qualified, CRRC listed, and California Title 24 Energy Code compliant, ASTM D4434 Type IV.
  - a. Basis of design product: Tremco, TPA Single Ply Roof Membrane.
  - b. Tensile Strength at 0 deg. F (-18 deg. C), minimum, ASTM D751: 300 lbf/in (1330 N).
  - c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D751: 100 lbf (440 N).
  - d. Elongation at 0 deg. F (-18 deg. C), minimum at fabric break, ASTM D751: 25 percent machine direction, 25 percent cross-machine direction.
  - e. Minimum Thickness, nominal, ASTM D751: 0.060 in (1.5 mm).
  - f. Color: White.
  - g. Solar Reflectance Index (SRI), ASTM E1980: 108 (White, initial) 84 (White, 3-year aged).

- h. Recycled Content, minimum: 25 percent pre-consumer.

- B. Membrane Flashing: Manufacturer's standard, smooth-backed, sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

## 2.5 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.

- 1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
- 2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - a. Plastic Foam Adhesives: 50 g/L.
  - b. Single-Ply Roof Membrane Sealants: 450 g/L.
  - c. Nonmembrane Roof Sealants: 300 g/L.
  - d. Sealant Primers for Nonporous Substrates: 250 g/L.
  - e. Sealant Primers for Porous Substrates: 775 g/L.
- 3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

- B. Membrane Adhesive:

- 1. Elastomeric solvent-based contact-type adhesive for bonding TPA fleece-backed and non-fleece-backed single ply membranes and flashings to substrates.
  - a. Basis of design product: Tremco, TPA Single Ply Bonding Adhesive.
  - b. Density at 77 deg. F (25 deg. C), minimum, ASTM D147: 7.0 lb/gal (0.84 kg/L).
  - c. Percent solids, minimum ASTM D316: 25 percent.
  - d. VOC, maximum, ASTM D 3960: 612 g/L.

- C. Flashing Membrane Adhesive: Same as membrane bonding adhesive.

- 1. Elastomeric solvent-based contact-type adhesive for bonding TPA fleece-backed and non-fleece-backed single ply membranes and flashings to substrates.

- a. Basis of design product: Tremco, TPA Single Ply Bonding Adhesive.
  - b. Density at 77 deg. F (25 deg. C), minimum, ASTM D147: 7.0 lb/gal (0.84 kg/L).
  - c. Percent solids, minimum ASTM D316: 25 percent.
  - d. VOC, maximum, ASTM D 3960: 612 g/L.
- D. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 mm by 3 mm) thick; with anchors.
- E. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch (25 mm wide by 1.3 mm) thick, prepunched.
- F. Ballast Retaining Bar: Perimeter securement system consisting of a slotted extruded-aluminum retention bar with an integrated compression fastening strip.
1. Fasteners: 1-1/2-inch (38-mm) stainless steel fasteners with neoprene washers.
- G. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening components to substrate, and acceptable to membrane roofing system manufacturer.
- H. Fasteners, Induction Welding System: Factory-coated FM Global approved drill point steel fasteners for insulation and membrane attachment to wood, steel and structural concrete roof decks, separation pads, and polyester-backed, adhesive-coated metal stress plates approved for bonding to roofing membrane using welding method described in Part 3, complying with corrosion-resistance provisions in FM Global 4470, and acceptable to membrane roofing system manufacturer.
- I. Joint Sealant: Elastomeric joint sealant compatible with roofing materials, with movement capability appropriate for application.
1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
    - a. Basis of design product: Tremco, TremSEAL Pro.
    - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
    - c. Hardness, Shore A, ASTM C661: 40.
    - d. Adhesion to Concrete, ASTM C794: 35 pli.
    - e. Tensile Strength, ASTM D412: 350 psi (2410 kPa).
    - f. Color: White.
- J. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.

- K. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

## 2.6 SUBSTRATE BOARDS

- A. Gypsum panel, glass-mat-faced, ASTM C1177/C1177M.
  - 1. Basis of design product: Tremco/GP Gypsum DensDeck.
  - 2. Thickness: 1/2 inch (12 mm).
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate board to roof deck.

## 2.7 ROOF INSULATION MATERIALS

- A. General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from insulation manufacturer's standard sizes, suitable for application, and of thicknesses indicated.
  - 1. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated, not less than two times the roof slope.
- B. Roof Insulation: Provide roof insulation product in thicknesses indicated in Part 3 as follows:
  - 1. Board Insulation, Polyisocyanurate: CFC- and HCFC- free, with recycled content glass-fiber mat facer on both major surfaces, ASTM C1289 Type II Class 1.
    - a. Basis of design product: Tremco, Trisotech Insulation.
    - b. Compressive Strength, ASTM D1621: Grade 2: 20 psi (138 kPa).
    - c. Conditioned Thermal Resistance at 75 deg. F (24 deg. C): 14.4 at 2.5 inches (50.8 mm) thick.

## 2.8 ROOF INSULATION ACCESSORIES

- A. Cover Board:
  - 1. Gypsum panel, glass-mat-faced, ASTM C1177/C1177M.
    - a. Basis of design product: Tremco/GP Gypsum DensDeck.
    - b. Thickness: 1/2 inch (12 mm).
- B. Roof Insulation Adhesive:

1. Urethane adhesive, bead-applied, low-rise two-component solvent-free low odor, formulated to adhere roof insulation to substrate.
  - a. Basis of design product: Tremco, Low Rise Foam Insulation Adhesive.
  - b. Flame Spread Index, ASTM E84: 10.
  - c. Smoke Developed Index, ASTM E84: 30.
  - d. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 0 g/L.
  - e. Tensile Strength, minimum, ASTM D412: 250 psi (1720 kPa).
  - f. Peel Adhesion, minimum, ASTM D903: 17 lbf/in (2.50 kN/m).
  - g. Flexibility, 70 deg. F (39 deg. C), ASTM D816: Pass.
- C. Insulation Cant Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.
- D. Wood Cant Strips: Comply with requirements in Division 06 rough carpentry Section.
- E. Tapered Edge Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.
- F. Substrate Joint Tape: 6- or 8-inch- (150- or 200-mm-) wide, coated, glass fiber.
- G. Insulation Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.

## 2.9 WALKWAY MATERIALS

### A. Walkway Material:

1. Walkway roll, reinforced PVC/TPA membrane roll with serrated slip-resistant surface, fabricated for heat welding to compatible PVC/TPA membrane surface.
  - a. Basis of design product: Tremco, TPA Walkway Roll.
  - b. Roll Size: 36 inches by 60 foot (914 mm by 18.3 m).
  - c. Thickness / Color: Gray, 0.072 inch (2 mm).
  - d. Tensile, Grab ASTM D751: 200 lbf (890 N).
  - e. Tear Strength, Tongue : 45 lbf (200N).
  - f. Low Temp Flex: -40 deg F. (-40 deg C.).

- B. Protection Fabric: Woven or nonwoven polypropylene, polyolefin, or polyester fabric, water permeable and resistant to UV degradation, type and weight as recommended by roofing system manufacturer for application.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
  - 1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
  - 2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  - 3. Cementitious Wood Roof Deck: Verify that deck is sound and dry and securely fastened with no projecting fasteners and with no adjacent units in excess of 1/16 inch (1.6 mm) out of plane relative to adjoining deck.
  - 4. Verify that existing insulation and substrate is sound and dry.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 3.3 INSTALLATION, GENERAL

- A. Install roofing system in accordance with manufacturer's written instructions and approved details.
- B. Install wood cants, blocking, curbs, and nailers in accordance with requirements of Division 06 Section "Miscellaneous Rough Carpentry."

#### 3.4 SUBSTRATE BOARD

- A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.

1. Loosely lay substrate board to deck and secure using mechanical fasteners subsequently installed to secure other layers of roof system.
2. Set substrate board in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining substrate board in place according to approved shop drawings and membrane roofing system manufacturer's written instructions.

### 3.5 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (70 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
  1. Flat Insulation System on Sloped Roof Deck: Install insulation at minimum thickness as follows:
    - a. Minimum total thickness of Continuous Insulation: 5.2 inches.
      - 1) Minimum thickness of base layer: 2.6 inches.
      - 2) Minimum thickness of each subsequent layer: 2.6 inches.
    - b. Minimum Continuous Insulation R-value: Not less than 30.
- D. Insulation Drain Sumps: Tapered insulation sumps, not less than 2 by 2 ft. (600 by 600 mm), sloped to roof drain; sump to maximum depth of not more than 1 inch (25 mm) less than the Project-stipulated continuous insulation thickness based upon code requirements.
- E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- F. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
  1. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.
- G. Adhered Insulation: Install each layer of insulation and adhere to substrate as follows:
  1. Prime substrate with primer as recommended by manufacturer and allow to dry.
  2. Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.

3. Set each layer of insulation in a uniform solid mopping of hot roofing asphalt, firmly pressing and maintaining insulation in place.
  - H. Cover Boards: Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches (150 mm) in each direction. Loosely butt cover boards together.
    1. Secure cover boards to resist uplift pressure at corners, perimeter, and field of roof.
    2. Adhere cover boards by setting in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining cover board in place.
    3. Adhere cover boards by setting in a uniform solid mopping of hot roofing asphalt, firmly pressing and maintaining cover boards in place.
    4. Loosely lay cover boards and secure to deck with mechanical fasteners installed with mechanically-attached membrane.
- 3.6 BASE-PLY / PLY SHEET INSTALLATION
- 3.7 ADHERED MEMBRANE ROOFING INSTALLATION
- A. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.
  - B. Start installation of membrane roofing in presence of membrane roofing system manufacturer's technical personnel.
  - C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
  - D. Solvent-Based Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow adhesive to become tacky before installing membrane roofing; do not allow adhesive to fully dry. Roll membrane into adhesive. Do not apply adhesive to splice area of membrane.
  - E. Urethane Adhesive, Ribbon-Applied for Fleece-Backed Membranes: Apply to substrate at adhesive bead size and spacing required by manufacturer for wind uplift performance requirements. Apply at not less than 1/4 inch (6 mm) wide adhesive bead at 12 inches (300 mm) oc. Roll membrane in wet adhesive. Do not apply adhesive to splice area of membrane.
  - F. Water-Based Bonding Adhesive: Apply to substrate at rate required by manufacturer. Install membrane immediately into adhesive, avoiding any air entrapment; do not allow adhesive to dry. Roll membrane into wet adhesive. Do not apply adhesive to splice area of membrane.
  - G. Hot Asphalt Adhesive: Install roofing membrane sheet according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:

1. Adhere to substrate in a solid mopping of hot roofing asphalt applied at not less than 425 deg F (218 deg C).
- H. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- I. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- J. Welded Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
  1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
  2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
  3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- K. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.
- L. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition. Install in such a manner as to not void warranty of existing membrane roofing system.

### 3.8 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Seal top termination of base flashing with a metal termination bar and a continuous bead of joint sealant.

### 3.9 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.10 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- B. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- C. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.11 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Owner's Consultant and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075419

## SECTION 075419 - POLYVINYL-CHLORIDE (PVC/TPA) ROOFING

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Adhered thermoplastic PVC roofing system on concrete deck, including:
2. Roof insulation.
3. Roof insulation cover board.
4. Walkway material.

B. Related Sections:

1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers and blocking.
2. Division 07 Section "Preparation for Re-Roofing" for recover board beneath new membrane roofing.
3. Division 07 Section "Sheet Metal Flashing and Trim" for shop-formed sheet metal items including roof drainage system items, roof penetration flashings, base and counterflashings and reglets, and formed copings and roof edge metal items.
4. Division 07 Section "Roof Specialties" for manufactured copings, roof edge flashings and counterflashings, and roof edge drainage systems.
5. Division 07 Section "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint assemblies.
6. Division 07 Section "Joint Sealants" for joint sealants, joint fillers, and joint preparation.
7. Division 22 Section "Roof Drains" for roof drains.

C. Unit Prices: Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.

#### 1.2 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.

### 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
  - 1. Review drawings and specifications.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Examine substrate conditions and finishes for compliance with requirements, including flatness and fastening.
  - 5. Review temporary protection requirements for roofing system during and after installation.
  - 6. Review roof observation and repair procedures after roofing installation.

### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Sustainable Design Submittals:

### 1.5 INFORMATIONAL SUBMITTALS

- A. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
  - 1. Submit evidence of compliance with performance requirements.
    - a. Include: UL listing certificate.
  - 2. Product Compatibility: Indicate manufacturer has verified compatibility of roofing system components, including but not limited to: Roofing membrane, flashing sheets, adhesives, and sealants.
- B. Warranties: Unexecuted sample copies of special warranties.
- C. Inspection Reports: Reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions taken to correct defective work.

### 1.6 CLOSEOUT SUBMITTALS

- A. Executed copies of warranties.
- B. Maintenance Data: To include in maintenance manuals.

## 1.7 QUALITY ASSURANCE

- A. **Installer Qualifications:** An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. **Manufacturer Qualifications:** Approved manufacturer listed in this Section, UL listed for roofing systems comparable to that specified for this Project, with minimum five years' experience in manufacture of thermoplastic roof membrane products in successful use in similar applications.
- C. **Roofing Inspector Qualifications:** A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:
  - 1. An authorized full-time technical employee of the manufacturer.
- D. **Manufacturer's Installation Instructions:** Obtain and maintain on-site access to manufacturer's written recommendations and instructions for installation of products.

## 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
  - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

## 1.9 PROJECT / FIELD CONDITIONS

- A. **Weather Limitations:** Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

- B. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
  - 1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of roofing sheet securely in place with joints and edges sealed.
  - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.
  - 3. Remove temporary plugs from roof drains at end of each day.
  - 4. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 1.10 WARRANTY

- A. Manufacturer's Warranty: Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
  - 1. Form of Warranty: Manufacturer's standard warranty form.
  - 2. Scope of Warranty: Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.
  - 3. Warranty Period: 20 years from date of completion.
- B. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
  - 1. Inspections to occur in following years: 2, 5, 10 and 15 following completion.
- C. Installer Warranty: Installer's warranty signed by Installer, as follows.
  - 1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.
  - 2. Scope of Warranty: Work of this Section.
  - 3. Warranty Period: 2 years from date of completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Inc, Beachwood, OH, (800) 562-2728, [www.tremcoroofing.com](http://www.tremcoroofing.com) that are named in other Part 2 articles. Provide specified products.

1. Manufacturers of comparable products: Approved by Owner prior to bid.

## 2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
  1. Accelerated Weathering: Roofing system shall withstand 10,000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
- B. Flashings and Fastening: Comply with requirements of Division 07 Sections "Sheet Metal Flashing and Trim" and "Roof Specialties." Provide base flashings, perimeter flashings, detail flashings and component materials and installation techniques that comply with requirements and recommendations of the following:
  1. NRCA Roofing Manual (Sixth Edition) for construction details and recommendations.
  2. SMACNA Architectural Sheet Metal Manual (Seventh Edition) for construction details.
- C. Exterior Fire-Test Exposure: ASTM E108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- D. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.
- E. Energy Performance: Roofing system shall have an initial solar reflectance index of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

## 2.3 MATERIALS, GENERAL

- A. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

## 2.4 THERMOPLASTIC MEMBRANE MATERIALS

- A. PVC Roof Membrane:
  1. Thermoplastic PVC/TPA sheet, internally fabric reinforced, Energy Star qualified, CRRC listed, and California Title 24 Energy Code compliant, ASTM D4434 Type IV.
    - a. Basis of design product: Tremco, TPA Single Ply Roof Membrane.
    - b. Tensile Strength at 0 deg. F (-18 deg. C), minimum, ASTM D751: 300 lbf/in (1330 N).
    - c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D751: 100 lbf (440 N).

- d. Elongation at 0 deg. F (-18 deg. C), minimum at fabric break, ASTM D751: 25 percent machine direction, 25 percent cross-machine direction.
- e. Minimum Thickness, nominal, ASTM D751: 0.060 in (1.5 mm).
- f. Color: White.
- g. Solar Reflectance Index (SRI), ASTM E1980: 108 (White, initial) 84 (White, 3-year aged).
- h. Recycled Content, minimum: 25 percent pre-consumer.

- B. Membrane Flashing: Manufacturer's standard, smooth-backed, sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

## 2.5 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.

- 1. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - a. Plastic Foam Adhesives: 50 g/L.
  - b. Single-Ply Roof Membrane Sealants: 450 g/L.
  - c. Nonmembrane Roof Sealants: 300 g/L.
  - d. Sealant Primers for Nonporous Substrates: 250 g/L.
  - e. Sealant Primers for Porous Substrates: 775 g/L.
- 2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

- B. Membrane Adhesive:

- 1. Elastomeric solvent-based contact-type adhesive for bonding TPA fleece-backed and non-fleece-backed single ply membranes and flashings to substrates.
  - a. Basis of design product: Tremco, TPA Single Ply Bonding Adhesive.
  - b. Density at 77 deg. F (25 deg. C), minimum, ASTM D147: 7.0 lb/gal (0.84 kg/L).
  - c. Percent solids, minimum ASTM D316: 25 percent.

- d. VOC, maximum, ASTM D 3960: 612 g/L.
- C. Flashing Membrane Adhesive:
  - 1. Bonding adhesive, contact-type solvent-based low VOC, for bonding TPA non-fleece-backed single ply membranes and flashings to substrates.
    - a. Basis of design product: Tremco, TPA LV Single Ply Bonding Adhesive.
    - b. VOC, maximum, ASTM D3960: 200 g/L.
- D. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 mm by 3 mm) thick; with anchors.
- E. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch (25 mm wide by 1.3 mm) thick, prepunched.
- F. Joint Sealant: Elastomeric joint sealant compatible with roofing materials, with movement capability appropriate for application.
  - 1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
    - a. Basis of design product: Tremco, TremSEAL Pro.
    - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
    - c. Hardness, Shore A, ASTM C661: 40.
    - d. Adhesion to Concrete, ASTM C794: 35 pli.
    - e. Tensile Strength, ASTM D412: 350 psi (2410 kPa).
    - f. Color: White.
- G. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

## 2.6 ROOF INSULATION MATERIALS

- A. General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from insulation manufacturer's standard sizes, suitable for application, and of thicknesses indicated.
  - 1. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches (1:48) unless otherwise indicated.

2. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated, not less than two times the roof slope.

B. Roof Insulation: Provide roof insulation product in thicknesses indicated in Part 3 as follows:

1. Board Insulation, Polyisocyanurate: CFC- and HCFC- free, with recycled content glass-fiber mat facer on both major surfaces, ASTM C1289 Type II Class 1.
  - a. Basis of design product: Tremco, Trisotech Insulation.
  - b. Compressive Strength, ASTM D1621: Grade 2: 20 psi (138 kPa).
  - c. Conditioned Thermal Resistance at 75 deg. F (24 deg. C): 14.4 at 2.5 inches (50.8 mm) thick.

2.7 ROOF INSULATION ACCESSORIES

A. Cover Board:

1. Gypsum panel, cellulosic fiber reinforced, water-resistant, ASTM C1278/C1278M.
  - a. Basis of design product: Tremco/USG Securock.
  - b. Thickness: 1/4 inch (6mm).

B. Roof Insulation Adhesive:

1. Urethane adhesive, bead-applied, low-rise two-component solvent-free low odor, formulated to adhere roof insulation to substrate.
  - a. Basis of design product: Tremco, Low Rise Foam Insulation Adhesive.
  - b. Flame Spread Index, ASTM E84: 10.
  - c. Smoke Developed Index, ASTM E84: 30.
  - d. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 0 g/L.
  - e. Tensile Strength, minimum, ASTM D412: 250 psi (1720 kPa).
  - f. Peel Adhesion, minimum, ASTM D903: 17 lbf/in (2.50 kN/m).
  - g. Flexibility, 70 deg. F (39 deg. C), ASTM D816: Pass.

C. Insulation Cant Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

D. Wood Cant Strips: Comply with requirements in Division 06 rough carpentry Section.

E. Tapered Edge Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

- F. Substrate Joint Tape: 6- or 8-inch- (150- or 200-mm-) wide, coated, glass fiber.

## 2.8 WALKWAY MATERIALS

### A. Walkway Material:

1. Walkway roll, reinforced PVC/TPA membrane roll with serrated slip-resistant surface, fabricated for heat welding to compatible PVC/TPA membrane surface.
  - a. Basis of design product: Tremco, TPA Walkway Roll.
  - b. Roll Size: 36 inches by 60 foot (914 mm by 18.3 m).
  - c. Thickness / Color: Gray, 0.072 inch (2 mm).
  - d. Tensile, Grab ASTM D751: 200 lbf (890 N).
  - e. Tear Strength, Tongue : 45 lbf (200N).
  - f. Low Temp Flex: -40 deg F. (-40 deg C.).

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
  2. Concrete Roof Deck:
    - a. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
    - b. Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D4263.
    - c. Verify that concrete substrate is visibly dry and free of moisture, and that minimum concrete internal relative humidity is not more than 75 percent, or as recommended by roofing system manufacturer, when tested according to ASTM F2170.
      - 1) Test Frequency: One test probe per each, or portion thereof, of roof deck, with no fewer than three test probes. 1000 sq. ft (93 sq. m).
      - 2) Submit test reports within 24 hours of performing tests.
    - d. Verify that concrete curing compounds that will impair adhesion of roofing components to roof deck have been removed.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- D. Prime surface of concrete deck with manufacturer's recommended primer at rate required by manufacturer and allow primer to dry.

### 3.3 INSTALLATION, GENERAL

- A. Install roofing system in accordance with manufacturer's written instructions and approved details.
- B. Install wood cants, blocking, curbs, and nailers in accordance with requirements of Division 06 Section "Miscellaneous Rough Carpentry."
- C. NRCA Installation Details: Install roofing system in accordance with applicable NRCA Manual Plates and NRCA recommendations; modify as required to comply with manufacturer's approved details and perimeter fastening requirements of FM Global references if applicable.

### 3.4 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Tapered Insulation and Crickets: Install tapered insulation under area of roofing to conform to slopes indicated.
  - 1. Where crickets are indicated or required to provide positive slope to drain, make slope of crickets minimum of two times the roof slope, not less than 1/4 inch in 12 inches (1:48).
- D. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (70 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
  - 1. Tapered Insulation System for Flat Roof Deck: Install insulation as follows:

- a. Minimum total thickness of Continuous Insulation: 5.2 inches.
    - 1) Minimum thickness of base layer: 2.6 inches.
    - 2) Minimum thickness of each subsequent layer: 2.6 inches.
  - b. Minimum Continuous Insulation R-value: Not less than 30.
  - E. Insulation Drain Sumps: Tapered insulation sumps, not less than 2 by 2 ft. (600 by 600 mm), sloped to roof drain; sump to maximum depth of not more than 1 inch (25 mm) less than the Project-stipulated continuous insulation thickness based upon code requirements.
  - F. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
  - G. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
    - 1. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.
  - H. Adhered Insulation: Install each layer of insulation and adhere to substrate as follows:
    - 1. Prime substrate with primer as recommended by manufacturer and allow to dry.
    - 2. Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
  - I. Cover Boards: Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches (150 mm) in each direction. Loosely butt cover boards together.
    - 1. Adhere cover boards by setting in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining cover board in place.
- 3.5 BASE-PLY / PLY SHEET INSTALLATION
- 3.6 ADHERED MEMBRANE ROOFING INSTALLATION
- A. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.
  - B. Start installation of membrane roofing in presence of membrane roofing system manufacturer's technical personnel.
  - C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
  - D. Solvent-Based Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow adhesive to become tacky before installing membrane

roofing; do not allow adhesive to fully dry. Roll membrane into adhesive. Do not apply adhesive to splice area of membrane.

- E. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- F. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- G. Welded Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
  - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
  - 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.
- I. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition. Install in such a manner as to not void warranty of existing membrane roofing system.

### 3.7 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Seal top termination of base flashing with a metal termination bar and a continuous bead of joint sealant.

### 3.8 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.9 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- B. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- C. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.10 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Owner's Consultant and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075419

## SECTION 075419 - POLYVINYL-CHLORIDE (PVC/TPA) ROOFING

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Mechanically-fastened thermoplastic PVC roofing system on metal deck, including:
2. Substrate board.
3. Roof insulation.
4. Walkway material.

B. Section includes the installation of acoustical roof deck rib insulation strips furnished under Division 05 Section "Steel Decking."

C. Related Sections:

1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers and blocking.
2. Division 07 Section "Preparation for Re-Roofing" for recover board beneath new membrane roofing.
3. Division 07 Section "Sheet Metal Flashing and Trim" for shop-formed sheet metal items including roof drainage system items, roof penetration flashings, base and counterflashings and reglets, and formed copings and roof edge metal items.
4. Division 07 Section "Roof Specialties" for manufactured copings, roof edge flashings and counterflashings, and roof edge drainage systems.
5. Division 07 Section "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint assemblies.
6. Division 07 Section "Joint Sealants" for joint sealants, joint fillers, and joint preparation.
7. Division 22 Section "Roof Drains" for roof drains.

D. Unit Prices: Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.

#### 1.2 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.

### 1.3 PREINSTALLATION MEETINGS

#### A. Preinstallation Roofing Conference: Conduct conference at Project site.

1. Meet with Owner, Architect, Owner's Consultant, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
2. Review drawings and specifications.
3. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
4. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
5. Examine substrate conditions and finishes for compliance with requirements, including flatness and fastening.
6. Review structural loading limitations of roof deck during and after roofing.
7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
8. Review governing regulations and requirements for insurance and certificates if applicable.
9. Review temporary protection requirements for roofing system during and after installation.
10. Review roof observation and repair procedures after roofing installation.

### 1.4 ACTION SUBMITTALS

#### A. Product Data: For each type of product indicated.

#### B. Sustainable Design Submittals:

1. Product Data and Laboratory Test Reports: For adhesives and sealants, indicating compliance with requirements for low-VOC/low-emitting materials.

#### C. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

### 1.5 INFORMATIONAL SUBMITTALS

#### A. Contractor's Product Certificate: Submit certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.

#### B. Qualification Data: For Installer, Manufacturer and Roofing Inspector.

1. Include letter from Manufacturer written for this Project indicating approval of Installer.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Executed copies of warranties.
- B. Maintenance Data: To include in maintenance manuals.

#### 1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. Manufacturer Qualifications: Approved manufacturer listed in this Section, UL listed for roofing systems comparable to that specified for this Project, with minimum five years' experience in manufacture of thermoplastic roof membrane products in successful use in similar applications.
- C. Roofing Inspector Qualifications: A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:
  1. An authorized full-time technical employee of the manufacturer.
  2. An independent party certified as a Registered Roof Observer by the International Institute of Building Enclosure Consultants (formerly the Roof Consultants Institute) retained by the Contractor or the Manufacturer and approved by the Manufacturer.
- D. Manufacturer's Installation Instructions: Obtain and maintain on-site access to manufacturer's written recommendations and instructions for installation of products.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
  1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

#### 1.9 PROJECT / FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.
- B. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
  - 1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of roofing sheet securely in place with joints and edges sealed.
  - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.
  - 3. Remove temporary plugs from roof drains at end of each day.
  - 4. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 1.10 WARRANTY

- A. Manufacturer's Warranty: Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
  - 1. Form of Warranty: Manufacturer's standard warranty form.
  - 2. Scope of Warranty: Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.
  - 3. Warranty Period: 20 years from date of completion.
- B. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
  - 1. Inspections to occur in following years: 2, 5, 10 and 15 following completion.
- C. Installer Warranty: Installer's warranty signed by Installer, as follows.
  - 1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.

2. Scope of Warranty: Work of this Section.
3. Warranty Period: 2 years from date of completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Inc, Beachwood, OH, (800) 562-2728, [www.tremcoroofing.com](http://www.tremcoroofing.com) that are named in other Part 2 articles. Provide specified products.

### 2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
  1. Accelerated Weathering: Roofing system shall withstand 10,000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
  2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746/D3746M, ASTM D4272/D4272M, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.
- B. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency in accordance with ANSI/FM 4474, UL 580, or UL 1897, and to resist uplift pressures calculated in accordance with ASCE-7 and applicable code.
- C. SPRI Wind Design Standard: Manufacture and install copings and roof-edge flashings tested according to ANSI/SPRI ES-1.
- D. Flashings and Fastening: Comply with requirements of Division 07 Sections "Sheet Metal Flashing and Trim" and "Roof Specialties." Provide base flashings, perimeter flashings, detail flashings and component materials and installation techniques that comply with requirements and recommendations of the following:
  1. NRCA Roofing Manual (Sixth Edition) for construction details and recommendations.
  2. SMACNA Architectural Sheet Metal Manual (Seventh Edition) for construction details.
- E. Exterior Fire-Test Exposure: ASTM E108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- F. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E1980, based on testing identical products by a qualified testing agency.

- G. Energy Performance: Roofing system shall have an initial solar reflectance index of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

## 2.3 MATERIALS, GENERAL

- A. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.
- B. FM Global Standards: Roofing, base flashings, and component materials shall be identical to materials that comply with requirements in FM Global 4470 as part of a roofing system listed or approved by FM Global. Identify applicable materials with FM Global markings.

## 2.4 BASE SHEET MATERIALS

## 2.5 THERMOPLASTIC MEMBRANE MATERIALS

- A. PVC Roof Membrane:
  - 1. Thermoplastic PVC/TPA sheet, internally fabric reinforced, Energy Star qualified, CRRC listed, and California Title 24 Energy Code compliant, ASTM D4434 Type IV.
    - a. Basis of design product: Tremco, TPA Single Ply Roof Membrane.
    - b. Tensile Strength at 0 deg. F (-18 deg. C), minimum, ASTM D751: 300 lbf/in (1330 N).
    - c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D751: 100 lbf (440 N).
    - d. Elongation at 0 deg. F (-18 deg. C), minimum at fabric break, ASTM D751: 25 percent machine direction, 25 percent cross-machine direction.
    - e. Minimum Thickness, nominal, ASTM D751: 0.060 in (1.5 mm).
    - f. Color: White.
    - g. Solar Reflectance Index (SRI), ASTM E1980: 108 (White, initial) 84 (White, 3-year aged).
    - h. Recycled Content, minimum: 25 percent pre-consumer.
- B. Membrane Flashing: Manufacturer's standard, smooth-backed, sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

## 2.6 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.

1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
  2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
    - a. Plastic Foam Adhesives: 50 g/L.
    - b. Single-Ply Roof Membrane Sealants: 450 g/L.
    - c. Nonmembrane Roof Sealants: 300 g/L.
    - d. Sealant Primers for Nonporous Substrates: 250 g/L.
    - e. Sealant Primers for Porous Substrates: 775 g/L.
  3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Flashing Membrane Adhesive:
1. Elastomeric solvent-based contact-type adhesive for bonding TPA fleece-backed and non-fleece-backed single ply membranes and flashings to substrates.
    - a. Basis of design product: Tremco, TPA Single Ply Bonding Adhesive.
    - b. Density at 77 deg. F (25 deg. C), minimum, ASTM D147: 7.0 lb/gal (0.84 kg/L).
    - c. Percent solids, minimum ASTM D316: 25 percent.
    - d. VOC, maximum, ASTM D 3960: 612 g/L.
- C. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 mm by 3 mm) thick; with anchors.
- D. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening components to substrate, and acceptable to membrane roofing system manufacturer.
- E. Fasteners, Induction Welding System: Factory-coated FM Global approved drill point steel fasteners for insulation and membrane attachment to wood, steel and structural concrete roof decks, separation pads, and polyester-backed, adhesive-coated metal stress plates approved for bonding to roofing membrane using welding method described in Part 3, complying with corrosion-resistance provisions in FM Global 4470, and acceptable to membrane roofing system manufacturer.

- F. Joint Sealant: Elastomeric joint sealant compatible with roofing materials, with movement capability appropriate for application.
  - 1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
    - a. Basis of design product: Tremco, TremSEAL Pro.
    - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
    - c. Hardness, Shore A, ASTM C661: 40.
    - d. Adhesion to Concrete, ASTM C794: 35 pli.
    - e. Tensile Strength, ASTM D412: 350 psi (2410 kPa).
    - f. Color: White.
- G. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

## 2.7 SUBSTRATE BOARDS

- A. Gypsum panel, glass-mat-faced, ASTM C1177/C1177M.
  - 1. Basis of design product: Tremco/GP Gypsum DensDeck.
  - 2. Thickness: 1/2 inch (12 mm).
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate board to roof deck.

## 2.8 ROOF INSULATION MATERIALS

- A. General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from insulation manufacturer's standard sizes, suitable for application, and of thicknesses indicated.
  - 1. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches (1:48) unless otherwise indicated.
  - 2. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated, not less than two times the roof slope.
- B. Roof Insulation: Provide roof insulation product in thicknesses indicated in Part 3 as follows:

1. Board Insulation, Polyisocyanurate: CFC- and HCFC- free, with recycled content glass-fiber mat facer on both major surfaces, ASTM C1289 Type II Class 1.
  - a. Basis of design product: Tremco, Trisotech Insulation.
  - b. Compressive Strength, ASTM D1621: Grade 2: 20 psi (138 kPa).
  - c. Conditioned Thermal Resistance at 75 deg. F (24 deg. C): 14.4 at 2.5 inches (50.8 mm) thick.

## 2.9 ROOF INSULATION ACCESSORIES

## 2.10 WALKWAY MATERIALS

### A. Walkway Material:

1. Walkway roll, reinforced PVC/TPA membrane roll with serrated slip-resistant surface, fabricated for heat welding to compatible PVC/TPA membrane surface.
  - a. Basis of design product: Tremco, TPA Walkway Roll.
  - b. Roll Size: 36 inches by 60 foot (914 mm by 18.3 m).
  - c. Thickness / Color: Gray, 0.072 inch (2 mm).
  - d. Tensile, Grab ASTM D751: 200 lbf (890 N).
  - e. Tear Strength, Tongue : 45 lbf (200N).
  - f. Low Temp Flex: -40 deg F. (-40 deg C.).

### B. Roof Pavers: Refer to Division 07 Section "Roof Pavers."

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
  1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
  2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  3. Steel Roof Deck:

- a. Verify that deck is securely fastened and properly supported with no projecting fasteners and with no adjacent units in excess of 1/16 inch (1.6 mm) out of plane relative to adjoining deck.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

### 3.3 INSTALLATION, GENERAL

- A. Install roofing system in accordance with manufacturer's written instructions and approved details.
- B. Install wood cants, blocking, curbs, and nailers in accordance with requirements of Division 06 Section "Miscellaneous Rough Carpentry."
- C. NRCA Installation Details: Install roofing system in accordance with applicable NRCA Manual Plates and NRCA recommendations; modify as required to comply with manufacturer's approved details and perimeter fastening requirements of FM Global references if applicable.

### 3.4 SUBSTRATE BOARD

- A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.
  1. Loosely lay substrate board to deck and secure using mechanical fasteners subsequently installed to secure other layers of roof system.
  2. Fasten substrate board to top flanges of steel deck to resist uplift pressure at corners, perimeter, and field of roof according to membrane roofing system manufacturers' written instructions.

### 3.5 INSULATION INSTALLATION

- A. Tapered Insulation and Crickets: Install tapered insulation under area of roofing to conform to slopes indicated.
  1. Where crickets are indicated or required to provide positive slope to drain, make slope of crickets minimum of two times the roof slope, not less than 1/4 inch in 12 inches (1:48).

- B. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (70 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
    - 1. Flat Insulation System on Sloped Roof Deck: Install insulation at minimum thickness as follows:
      - a. Minimum total thickness of Continuous Insulation: 5,2 inches.
        - 1) Minimum thickness of base layer: 2,6 inches.
        - 2) Minimum thickness of each subsequent layer: 2,6 inches.
      - b. Minimum Continuous Insulation R-value: Not less than 30.
    - 2. Tapered Insulation System for Flat Roof Deck: Install insulation as follows:
      - a. Minimum total thickness of Continuous Insulation: 1/4" inches.
        - 1) Minimum thickness of base layer: 1/4" inches.
      - b. Minimum Continuous Insulation R-value: Not less than 30.
  - C. Insulation Drain Sumps: Tapered insulation sumps, not less than 2 by 2 ft. (600 by 600 mm), sloped to roof drain; sump to maximum depth of not more than 1 inch (25 mm) less than the Project-stipulated continuous insulation thickness based upon code requirements.
  - D. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
  - E. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
    - 1. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.
  - F. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
    - 1. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.
- 3.6 MECHANICALLY FASTENED MEMBRANE ROOFING INSTALLATION
- A. Mechanically fasten membrane roofing over area to receive roofing and install according to roofing system manufacturer's written instructions.
    - 1. For in-splice attachment, install membranes roofing with long dimension perpendicular to steel roof deck flutes.

- B. Start installation of membrane roofing in presence of roofing system manufacturer's technical personnel.
- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Mechanically fasten or adhere membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- E. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- F. In-Seam Attachment: Secure one edge of membrane sheet using fastening plates or metal battens centered within membrane seam and mechanically fasten membrane sheet to roof deck.
- G. Welded Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
  - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
  - 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.
- I. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition. Install in such a manner as to not void warranty of existing membrane roofing system.

### 3.7 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Seal top termination of base flashing with a metal termination bar and a continuous bead of joint sealant.

3.8 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.9 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- B. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- C. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.10 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075419

## SECTION 075419 - POLYVINYL-CHLORIDE (PVC/TPA) ROOFING

### PART 1 - GENERAL

#### 1.1 SUMMARY

##### A. Section Includes:

1. Mechanically-fastened thermoplastic PVC roofing system on metal deck, including:
2. Substrate board.
3. Roof insulation.
4. Roof insulation cover board.
5. Walkway material.

##### B. Related Sections:

1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers and blocking.
2. Division 07 Section "Preparation for Re-Roofing" for recover board beneath new membrane roofing.
3. Division 07 Section "Air Barrier Rehabilitation" for requirements for sealing of air barrier at perimeter of roofing and within roofing system.
4. Division 07 Section "Sheet Metal Flashing and Trim" for shop-formed sheet metal items including roof drainage system items, roof penetration flashings, base and counterflashings and reglets, and formed copings and roof edge metal items.
5. Division 07 Section "Roof Specialties" for manufactured copings, roof edge flashings and counterflashings, and roof edge drainage systems.
6. Division 07 Section "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint assemblies.
7. Division 07 Section "Joint Sealants" for joint sealants, joint fillers, and joint preparation.
8. Division 22 Section "Roof Drains" for roof drains.

##### C. Alternates: Refer to Division 01 Section "Alternates" for description of Work in this Section affected by alternates.

##### D. Allowances: Refer to Division 01 Section "Allowances" for description of Work in this Section affected by allowances.

- E. Unit Prices: Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.

## 1.2 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.

## 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
  - 1. Meet with Owner, Architect, Owner's Consultant, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
  - 2. Review drawings and specifications.
  - 3. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 4. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 5. Examine substrate conditions and finishes for compliance with requirements, including flatness and fastening.
  - 6. Review structural loading limitations of roof deck during and after roofing.
  - 7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
  - 8. Review governing regulations and requirements for insurance and certificates if applicable.
  - 9. Review temporary protection requirements for roofing system during and after installation.
  - 10. Review roof observation and repair procedures after roofing installation.

## 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Sustainable Design Submittals:
  - 1. Product Test Reports for Solar Reflectance: For roof materials, indicating that roof materials comply with Solar Reflectance Index requirement.

2. Product Data and Laboratory Test Reports: For adhesives and sealants, indicating compliance with requirements for low-VOC/low-emitting materials.
- C. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.
1. Base flashings and membrane terminations.
    - a. Indicate details meet requirements of NRCA and FMG required by this Section.
  2. Tapered insulation, including slopes and crickets.
  3. Roof plan showing types and orientation of roof deck and orientation of membrane roofing and fastening spacings and patterns for mechanically fastened membrane roofing if applicable.
  4. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
- D. Samples for Verification: For the following products:
1. Sheet roofing, of color specified, including T-shaped side and end lap seam.
  2. Walkway pads or rolls.
  3. Metal termination bars.
- E. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Contractor's Product Certificate: Submit certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.
- B. Qualification Data: For Installer, Manufacturer and Roofing Inspector.
1. Include letter from Manufacturer written for this Project indicating approval of Installer.
- C. Warranties: Unexecuted sample copies of special warranties.
- D. Inspection Reports: Reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions taken to correct defective work.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Executed copies of warranties.
- B. Maintenance Data: To include in maintenance manuals.

## 1.7 QUALITY ASSURANCE

- A. **Installer Qualifications:** An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. **Manufacturer Qualifications:** Approved manufacturer listed in this Section, UL listed for roofing systems comparable to that specified for this Project, with minimum five years' experience in manufacture of thermoplastic roof membrane products in successful use in similar applications.
- C. **Roofing Inspector Qualifications:** A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:
  - 1. An authorized full-time technical employee of the manufacturer.
- D. **Manufacturer's Installation Instructions:** Obtain and maintain on-site access to manufacturer's written recommendations and instructions for installation of products.

## 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
  - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

## 1.9 PROJECT / FIELD CONDITIONS

- A. **Weather Limitations:** Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

- B. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
  - 1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of roofing sheet securely in place with joints and edges sealed.
  - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.
  - 3. Remove temporary plugs from roof drains at end of each day.
  - 4. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 1.10 WARRANTY

- A. Manufacturer's Warranty: Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
  - 1. Form of Warranty: Manufacturer's standard warranty form.
  - 2. Scope of Warranty: Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.
  - 3. Warranty Period: 20 years from date of completion.
- B. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
  - 1. Inspections to occur in following years: 2, 5, 10 and 15 following completion.
- C. Installer Warranty: Installer's warranty signed by Installer, as follows.
  - 1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.
  - 2. Scope of Warranty: Work of this Section.
  - 3. Warranty Period: 2 years from date of completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Inc, Beachwood, OH, (800) 562-2728, [www.tremcoroofing.com](http://www.tremcoroofing.com) that are named in other Part 2 articles. Provide specified products.

## 2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
  - 1. Accelerated Weathering: Roofing system shall withstand 10,000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
  - 2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746/D3746M, ASTM D4272/D4272M, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.
- B. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency in accordance with ANSI/FM 4474, UL 580, or UL 1897, and to resist uplift pressures calculated in accordance with ASCE-7 and applicable code.
  - 1. All Zones (Corner, Perimeter, and Field-of-Roof) Uplift Pressures: As indicated on Drawings.
- C. FM Global Compliance: Roofing, base flashings, and component materials shall comply with requirements in FM Global 4470 as part of a roofing system and shall be listed in FM Global's "RoofNav" or shall receive written FM Global project approval for Class 1 or non-combustible construction, as applicable. Identify applicable materials with FM Global markings.
  - 1. Fire Classification:
- D. SPRI Wind Design Standard: Manufacture and install copings and roof-edge flashings tested according to ANSI/SPRI ES-1.
- E. Exterior Fire-Test Exposure: ASTM E108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- F. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.
- G. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E1980, based on testing identical products by a qualified testing agency.
- H. Energy Performance: Roofing system shall have an initial solar reflectance index of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

## 2.3 MATERIALS, GENERAL

- A. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

2.4 BASE SHEET MATERIALS

2.5 THERMOPLASTIC MEMBRANE MATERIALS

A. PVC Roof Membrane:

1. Thermoplastic PVC/TPA sheet, internally fabric reinforced, Energy Star qualified, CRRC listed, and California Title 24 Energy Code compliant, ASTM D4434 Type IV.
  - a. Basis of design product: Tremco, TPA Single Ply Roof Membrane.
  - b. Tensile Strength at 0 deg. F (-18 deg. C), minimum, ASTM D751: 300 lbf/in (1330 N).
  - c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D751: 100 lbf (440 N).
  - d. Elongation at 0 deg. F (-18 deg. C), minimum at fabric break, ASTM D751: 25 percent machine direction, 25 percent cross-machine direction.
  - e. Minimum Thickness, nominal, ASTM D751: 0.060 in (1.5 mm).
  - f. Color: White.
  - g. Solar Reflectance Index (SRI), ASTM E1980: 108 (White, initial) 84 (White, 3-year aged).
  - h. Recycled Content, minimum: 25 percent pre-consumer.

- B. Membrane Flashing: Manufacturer's standard, smooth-backed, sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

2.6 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.

1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - a. Plastic Foam Adhesives: 50 g/L.
  - b. Single-Ply Roof Membrane Sealants: 450 g/L.
  - c. Nonmembrane Roof Sealants: 300 g/L.
  - d. Sealant Primers for Nonporous Substrates: 250 g/L.

- e. Sealant Primers for Porous Substrates: 775 g/L.
- 3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Membrane Adhesive:
- C. Flashing Membrane Adhesive: Same as membrane bonding adhesive.
  - 1. Elastomeric solvent-based contact-type adhesive for bonding TPA fleece-backed and non-fleece-backed single ply membranes and flashings to substrates.
    - a. Basis of design product: Tremco, TPA Single Ply Bonding Adhesive.
    - b. Density at 77 deg. F (25 deg. C), minimum, ASTM D147: 7.0 lb/gal (0.84 kg/L).
    - c. Percent solids, minimum ASTM D316: 25 percent.
    - d. VOC, maximum, ASTM D 3960: 612 g/L.
- D. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 mm by 3 mm) thick; with anchors.
- E. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening components to substrate, and acceptable to membrane roofing system manufacturer.
- F. Joint Sealant: Elastomeric joint sealant compatible with roofing materials, with movement capability appropriate for application.
  - 1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
    - a. Basis of design product: Tremco, TremSEAL Pro.
    - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
    - c. Hardness, Shore A, ASTM C661: 40.
    - d. Adhesion to Concrete, ASTM C794: 35 pli.
    - e. Tensile Strength, ASTM D412: 350 psi (2410 kPa).
    - f. Color: White.
- G. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.

- H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

## 2.7 SUBSTRATE BOARDS

- A. Gypsum panel, glass-mat-faced, ASTM C1177/C1177M.
  - 1. Basis of design product: Tremco/GP Gypsum DensDeck.
  - 2. Thickness: 1/2 inch (12 mm).
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate board to roof deck.

## 2.8 ROOF INSULATION MATERIALS

- A. General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from insulation manufacturer's standard sizes, suitable for application, and of thicknesses indicated.
  - 1. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated, not less than two times the roof slope.
- B. Roof Insulation: Provide roof insulation product in thicknesses indicated in Part 3 as follows:
  - 1. Board Insulation, Polyisocyanurate: CFC- and HCFC- free, with recycled content glass-fiber mat facer on both major surfaces, ASTM C1289 Type II Class 1.
    - a. Basis of design product: Tremco, Trisotech Insulation.
    - b. Compressive Strength, ASTM D1621: Grade 2: 20 psi (138 kPa).
    - c. Conditioned Thermal Resistance at 75 deg. F (24 deg. C): 14.4 at 2.5 inches (50.8 mm) thick.

## 2.9 WALKWAY MATERIALS

- A. Walkway Material:
  - 1. Walkway roll, reinforced PVC/TPA membrane roll with serrated slip-resistant surface, fabricated for heat welding to compatible PVC/TPA membrane surface.
    - a. Basis of design product: Tremco, TPA Walkway Roll.
    - b. Roll Size: 36 inches by 60 foot (914 mm by 18.3 m).
    - c. Thickness / Color: Gray, 0.072 inch (2 mm).

- d. Tensile, Grab ASTM D751: 200 lbf (890 N).
- e. Tear Strength, Tongue : 45 lbf (200N).
- f. Low Temp Flex: -40 deg F. (-40 deg C.).

B. FRP Roof Walkways: Refer to Division 07 Section "Roof Walkways."

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
  - 1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
  - 2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  - 3. Steel Roof Deck:
    - a. Verify that deck is securely fastened and properly supported with no projecting fasteners and with no adjacent units in excess of 1/16 inch (1.6 mm) out of plane relative to adjoining deck.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 3.3 INSTALLATION, GENERAL

- A. Install roofing system in accordance with manufacturer's written instructions and approved details.
- B. Install wood cants, blocking, curbs, and nailers in accordance with requirements of Division 06 Section "Miscellaneous Rough Carpentry."

- C. NRCA Installation Details: Install roofing system in accordance with applicable NRCA Manual Plates and NRCA recommendations; modify as required to comply with manufacturer's approved details and perimeter fastening requirements of FM Global references if applicable.

### 3.4 SUBSTRATE BOARD

- A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.
  - 1. Loosely lay substrate board to deck and secure using mechanical fasteners subsequently installed to secure other layers of roof system.
  - 2. Set substrate board in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining substrate board in place according to approved shop drawings and membrane roofing system manufacturer's written instructions.
  - 3. Fasten substrate board to top flanges of steel deck to resist uplift pressure at corners, perimeter, and field of roof according to membrane roofing system manufacturers' written instructions.

### 3.5 INSULATION INSTALLATION

- A. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (70 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
  - 1. Flat Insulation System on Sloped Roof Deck: Install insulation at minimum thickness as follows:
    - a. Minimum total thickness of Continuous Insulation: 5.2 inches.
      - 1) Minimum thickness of base layer: 2.6 inches.
      - 2) Minimum thickness of each subsequent layer: 2.6 inches.
    - b. Minimum Continuous Insulation R-value: Not less than 30.

### 3.6 MECHANICALLY FASTENED MEMBRANE ROOFING INSTALLATION

- A. Mechanically fasten membrane roofing over area to receive roofing and install according to roofing system manufacturer's written instructions.
  - 1. For in-splice attachment, install membranes roofing with long dimension perpendicular to steel roof deck flutes.
- B. Start installation of membrane roofing in presence of roofing system manufacturer's technical personnel.

- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Mechanically fasten or adhere membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- E. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- F. In-Seam Attachment: Secure one edge of membrane sheet using fastening plates or metal battens centered within membrane seam and mechanically fasten membrane sheet to roof deck.
- G. Welded Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
  - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
  - 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.
- I. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition. Install in such a manner as to not void warranty of existing membrane roofing system.

### 3.7 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Seal top termination of base flashing with a metal termination bar and a continuous bead of joint sealant.

3.8 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

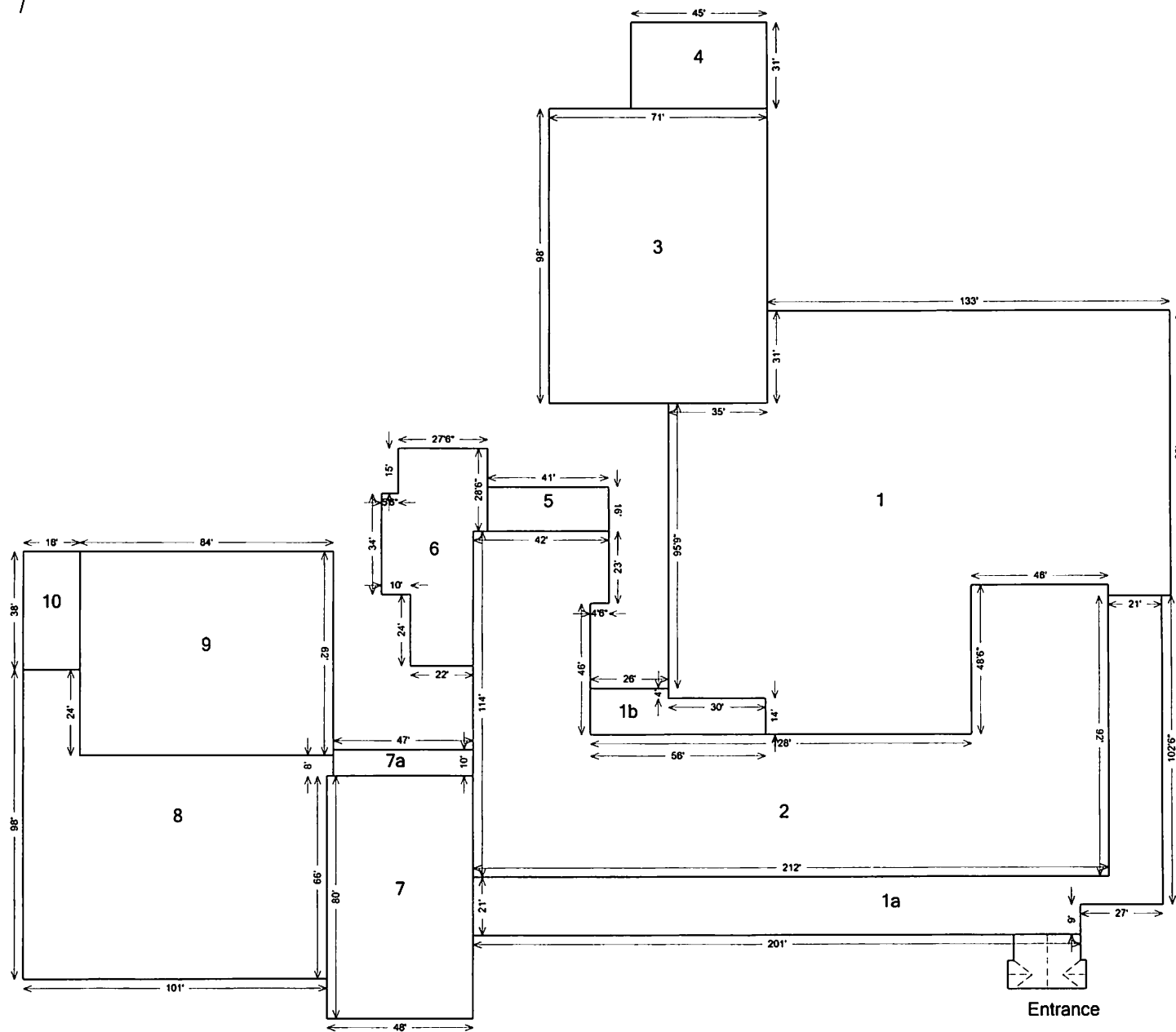
3.9 FIELD QUALITY CONTROL

- A. Roofing Inspector: Owner will engage a qualified roofing inspector to perform roof tests and inspections and to prepare test reports.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- C. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- D. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.10 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Owner's Consultant and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075419



## Legend

—	Roof Outline	- - - - -	Expansion Joint
			Ridge/Valley
Roof Top Units			
[Symbol]	HVAC on Curb	[Symbol]	Skylight
[Symbol]	Roof Hatch	[Symbol]	Unit on Curb
[Symbol]	HVAC on Slopers	[Symbol]	Unit on Slopers
Protections			
●	Plumbing Stack	●	Hot Stack
●	Pitch Pan	○	Metal Sleeve Stack
Drainage			
●	Drain (Existing)	[Symbol]	Scupper
●	Drain (New)		
Miscellaneous			
—	Gas Line	▽	Crickets
—	Walkway	▲	Roof Level Change
—	Paver Walkway	⊙	Core Test
Problem Indicators			
[Symbol]	Blister	~~~~~	Ridging
[Symbol]	Ponding	[Symbol]	Bare Spot
XXXXXX	Fleshing Problem	(A)	Photo Indicator

\* Note: -U indicates an unused item

## Square Footage

Roof 1 - 19,031 sf  
Roof 1a - 5,807 sf  
Roof 1b - 786 sf  
Roof 2 - 15,018 sf  
Roof 3 - 7,146 sf  
Roof 4 - 1,312 sf  
Roof 5 - 600 sf  
Roof 6 - 2,052 sf  
Roof 7 - 3,919 sf  
Roof 7a - 402 sf  
Roof 8 - 8,086 sf  
Roof 9 - 5,795 sf  
Roof 10 - 747 sf

## Notes

\*Square footage and measurements are approximate and should be verified during the bid process.

## Tremco Roofing

Building Parkway Elementary  
Customer Watauga County Schools  
Drawn By MCR  
Location Boone, NC  
Date 11/12/2018

## **WATAUGA COUNTY SCHOOLS ROOF CONSTRUCTION**

### **PARKWAY ELEMENTARY SCHOOL**

#### **ROOF 1**

**METAL DECK SLOPED**

**5/8" GYPSUM**

**3" ISO**

**EPDM ADHERED**

#### **ROOF 1A**

**CONCRETE DECK**

**1" WOOD FIBER**

**4-5 " TAPER ISO**

**EPDM ADHERED**

#### **ROOF 1B**

**CONCRETE DECK**

**8-12" TAPERED ISO**

**BUR/GARVEL**

**EPDM ADHERED**

#### **ROOF 2**

**CONCRETE DECK**

**½" WOOD FIBER**

**BUR/GRAVEL**

**6-12" TAPER ISO**

EPDM ADHERED

ROOF 3

METAL DECK

2" ISO

EPDM ADHERED

ROOF 4

METAL

TAPERED ISO

EPDM ADHERED

ROOF 5

CONCRETE DECK

4-5" TAPERED ISO

EPDM ADHERED/COATING

ROOF 6

METAL DECK

5/8" GYPSUM

5" TAPER ISO

EPDM ADHERED /COATING

ROOF 7

WOOD DECK

BUR SMOOTH

3" EPS

½" WF

EPDM ADHERED / COATING

ROOF 7A

CONCRETE DECK

BUR/GRAVEL

2 LAYERS OF ISO TAPERED

TPO/COATING

ROOF 8

METAL DECK

2" PERLITE

BUR/GRAVEL

MEMBRANE

¼" EPS

½" EXTRUDED

TPO/COATING

ROOF 9 GYM

TECTUM DECK

3" ISO

5/8" GYPSUM

EPDM ADHERED

ROOF 10

METAL DECK

5/8" GYPSUM

3" ISO

EPDM ADHERED

## **GREEN VALLEY ELELMENTARY SCHOOL**

### **ROOF 5**

**WOOD DECK**

**BUR/GRAVEL**

**2"ISO**

**1.5"ISO**

**EPDM ADHERED**

### **ROOF 2**

**METAL DECK**

**PERLITE**

**BUR/GRAVEL**

**½" WF**

**EPDM ADHERED**

### **ROOF 1**

**CONCRETE**

**2.5" ISO**

**EPDM ADHERED**

## OPERATIONS AND MAINTENANCE BUILDING

METAL DECK

2" ISO

TPO MA

# BID FORM

(4 pages)

Watauga County Schools  
Reroofing Bids :  
Maintenance & Operations Building  
Green Valley Elementary  
Parkway Elementary

Bidder: \_\_\_\_\_

(Bidder enter name here)

## BASE BID, SINGLE-PRIME (ALL TRADES) CONTRACT

The undersigned Bidder, having carefully examined the Bidding and Contract Requirements, Conditions of the Contract, Drawings, Specifications, dated and all subsequent Addenda, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services as described in the above documents, without exception, including all scheduled Allowances if any, necessary to complete the construction of:

Single Prime (All trades) Contract

for the above-named Project, in accordance with the requirements of the Bidding Documents, for the sum of:

## PLEASE INCLUDE A BID BOND & PAYMENT AND PERFORMANCE BOND IN BASE BIDS

### Base Bid Maintenance & Operations Building

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

Estimated time of Completion \_\_\_\_\_ Calendar days

SQ. FT. for this project \_\_\_\_\_

### Base Bid Green Valley Elementary

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

Estimated time of Completion \_\_\_\_\_ Calendar days

SQ FT for this project \_\_\_\_\_

**Base Bid for Parkway Elementary**

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

Estimated time of Completion\_\_\_\_\_Calendar days

SQ FT for this project\_\_\_\_\_

**Base Bid for All Projects (Maintenance & Operations/ Green Valley Elementary/ Parkway Elementary)**

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

Estimated time of Completion\_\_\_\_\_Calendar days

Sq FT for this project\_\_\_\_\_

**Safety Rating** EMR \_\_\_\_\_

**UNIT Cost**

Wood Nailers BF (\$\_\_\_\_\_)

Wood Decking BF (\$\_\_\_\_\_)

Gypsum 5/8" SF (\$\_\_\_\_\_)

Metal Decking SF (\_\_\_\_\_)

#### ACKNOWLEDGEMENT OF ADDENDA

The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

Addendum No. 1, dated \_\_\_\_\_

Addendum No. 2, dated \_\_\_\_\_

Addendum No. 3, dated \_\_\_\_\_

#### CONTRACTOR'S LICENSE

The undersigned further states that he is a duly licensed Contractor, for the type of work proposed, in the State of North Carolina and that all fees, permits, etc., pursuant to the submission of this proposal have been paid in full.

#### SUBMISSION OF BID

Respectfully submitted this \_\_\_\_ day of \_\_\_\_\_, 2024

By: \_\_\_\_\_

(Name of bidding firm or corporation)

By: \_\_\_\_\_

(Signature)

\_\_\_\_\_  
(Type or print name)

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_

License: \_\_\_\_\_



## WATAUGA COUNTY BOARD OF EDUCATION

Margaret E. Gragg Education Center  
175 Pioneer Trail Boone, NC 28607  
(828) 264-7190

March 4, 2024

To: Dr. Leslie Alexander, Superintendent  
Members, Watauga County Board of Education

From: Ms. Ly Marze, Finance Officer

Re: Vendor Recommendation for District-wide Access Points

Watauga County Schools' Technology Department released a "Mini-Bid" request for leverage of funding benefits under NCDPI's E-Rate Category 2 State Master Contracts for Access Points with licensing. Multiple companies were solicited of which 4 responded to the Mini-Bid request. Quotes and proposals were opened by the technology team on February 26, 2024. The responsive vendors and their responses are as follows:

VENDOR	PRICE QUOTE	SCORE
Applied Network Consulting (ANC) - Ruckus	\$302,750.90	58
Applied Network Consulting (ANC) - Aruba	\$283,514.80	55
CNIC Extreme (w/AP410C-FCC)	\$245,798.30	81
CNIC Extreme (w/APC4000-WW)	\$304,832.55	75
Encore - Meraki	\$272,812.67	93

Based on all criteria, eligible costs, technical sufficiency, vendor experience, ineligible costs, technical support, and single source, we respectfully recommend the Mini-Bid request for E-Rate Access Points be awarded to Encore as they scored the highest in total bid criteria. Attached is the rubric used for scoring of submissions for your information and review. As a reminder, federal E-Rate funds will cover 70% of the cost while the remaining 30% will be the school district's cost.

**Encore - \$272,812.67**

E-Rate portion (70%) – \$190,968.87

Watauga County Schools portion (30%) - \$81,843.80

The logo for Encore Technology Group features the word "encore" in a bold, red, sans-serif font. The letter "o" is replaced by a stylized graphic of three concentric, overlapping circles in red, white, and blue. Below "encore" is the word "technology group" in a smaller, grey, sans-serif font. The background of the entire page is a black and white photograph of a cityscape. In the foreground, a metal truss bridge spans a river. To the left, a modern multi-story building with many windows is visible. To the right, an older brick building with arched windows stands. The sky is cloudy.

# encore

technology group

simplifying IT • enabling success

**Watauga County Schools**

**NCDPI Cat 2 Request- Wireless**

**Encore Technology Group – Spin 143037152**

141 Grace Drive • Easley, SC 29640

(888) 983-6267 • [www.encoretg.com](http://www.encoretg.com)

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## Quick Overview

Encore Technology Group is a solutions provider that supplies best-in-class enterprise networks, managed services, digital and physical security, infrastructure cabling, cloud computing, and data center engineering services. A trusted advisor to clients across the southeastern United States and beyond, works collaboratively with organizations to optimize and defend their mission-critical functions.

## Encore's General Info

- **Legal Name** Encore Technology Group, LLC.
- **Headquarters** 141 Grace Drive, Easley, SC 29640
- **Remittance** Dept 720017, PO Box 1335, Charlotte, NC 28201-1135
- **Support Phone** (888) 983-6267 Option 1

## ID Numbers

<b>Federal Taxpayer ID</b>	46-1594391
<b>FCC Registration</b>	0022372619
<b>DUNS</b>	078748531

## Your Dedicated Team Members

### Your Dedicated Account Executive

Riley McIntosh  
864-320-7659  
[rmcintosh@encoretg.com](mailto:rmcintosh@encoretg.com)

### Your Dedicated Account Manager

Jennifer Stone  
864-326-3572  
[jstone@encoretg.com](mailto:jstone@encoretg.com)

## About Encore

### Company History

Encore Technology Group was newly established in 2013, but our storied history dates back to 1989. Throughout our history, we have provided innovative technology solutions for K-12 organizations, higher education institutions, state and local government agencies, and commercial enterprises. Today, we are one of the largest independent technology solution providers in the southeastern United States, though our prestigious client roster spans across the nation.

### Design Services

Encore Technology Group has the ability to design effective on-premises, cloud-based, or hybrid computing solutions to support diverse business and operational requirements. Based on a thorough needs analysis of your organization, our solution consultants design solutions that attain the defined goals cost effectively. From a comprehensive on-premises system, to hosting a single SaaS application, to supporting a massive enterprise IaaS strategy, Encore consultants design professional solutions for all of our Clients' needs.

### Implementation Services

Encore Technology Group has more than 25 years of industry experience. We recognize and appreciate the value of adhering to proven methodologies to accomplish complex projects. Our implementation methodology enables us to take advantage of proven processes including detailed project planning, project phasing and structured communication.

### Support Services

Encore Technology Group understands that assisting our Clients with the best consulting, design, and implementation of technology is not complete without offering professional support service offerings. Encore Technology Group maintains a dedicated support services organization which includes industry certified engineers and a set of integrated services designed to provide our Clients with the best support services plan. Encore Technology Group's support services organizations provides:

- A Commitment to Client Satisfaction
- Comprehensive Support Services Plans
- Dedicated Support Service Professionals
- Strong Vendor Partnerships with Integrated Support
- Certified Warranty Service for Major Vendors
- Service Level Agreements
- Integrated Call Management and Tracking
- Flexible Support Options
- Comprehensive Geographical Coverage



### Flexible Contracts

Encore Technology Group understands that each organization's support needs and environment are unique and may change from year to year. Therefore, Encore Technology Group offers many flexible support options and constantly works with our Clients to provide optimal support solutions.

## Encore and E-Rate

Encore's team of technology specialists include former educators and administrators with specific expertise in the Schools and Libraries Program of the Universal Service Fund, commonly known as "E-Rate." For over 28 years, Encore has helped schools and libraries of all sizes to identify and maximize their available E-Rate funding. We understand compliance and know to be successful, E-Rate deployments must not only meet all compliance guidelines, but also align the right technology and services to meet each organization's unique needs.

Leveraging the E-rate program, Encore provides comprehensive support to schools and libraries including:

- Identifying opportunity areas for funding
- Defining the right solutions to meet the budget
- Providing guidance through the funding application and execution process

Records Service Providers

**#143037152 - Encore Technology Group LLC**

CREATE A CUSTOMER SERVICE CA... CREATE APPEAL CREATE SERVICE SUBSTITUTION ...

Summary Customer Service Cases Consulting Firms FRN Appeals News Related Actions

### Organization Details

<b>Name</b>	Encore Technology Group LLC	<b>Organization Type</b>	Service Provider Organization
<b>Doing Business As</b>	Encore Technology Group LLC	<b>DUNS Number</b>	078748531
<b>SPIN</b>	143037152	<b>Status</b>	Active

### Contact Information

<b>Address</b>	141 Grace Drive Easley, SC 29640	<b>Phone Number</b>	336-870-0848
<b>Mailing Address</b>	141 Grace Drive Easley, SC 29640	<b>Email</b>	mingram@encoretg.com
		<b>Website URL</b>	

### Discounts and LCP

Due to our involvement, and E-rate guidelines, we must follow the Lowest Corresponding Price rule. Therefore, Encore has priced its products and services to meet this guideline for all E-rate eligible products to all of its current and potential clients.

### Record Retention

Encore will abide by USAC's record retention rules and maintain documents for 10 years or longer when needed.

## Scope of Work

### Overview

Watauga County Schools (CLIENT) has issued a Mini-Bid to purchase access points (AP) with remote configuration, replicating their Extreme Cloud IQ account in Meraki Dashboard. The CLIENT has also requested UPS' with no installation.

Encore Technology Group (Encore) would like to thank the CLIENT for the opportunity to respond to the need for the acquisition and installation of equipment. This Statement of Work (SOW) outlines the recommended scope and approach for a successful implementation.

### Project Scope

Encore shall be responsible for:

#### Project Planning Phase:

- Project Kickoff Call - A pre-project planning meeting will be held to:
  - Ensure CLIENT and Encore agree to scope as defined
  - Identify key stakeholders and points of contact
  - Create tentative project schedule
  - Establish communication plan
- Project Plan – creation of detailed plan to include:
  - Establishing project timeline
  - Scheduling of required resources
  - Scheduling of project status call day and time
- Discovery – Encore Engineering Team shall:
  - Obtain and review existing network configurations for integration with new hardware.

#### Implementation

- Encore Project Manager shall:
  - Conduct regular status update meetings and distribute project status report
  - Ensure Encore resources adhere to defined scope
  - Serve as escalation point for CLIENT Project Manager
  - Notify CLIENT Project Manager if delays within CLIENT owned scope effort are witnessed
  - Obtain written signoffs from CLIENT for all main project phases
  - Maintain project plan
- Encore Engineering Team shall:
  - Wireless Implementation:
    - Setup and import Meraki access points and licensing into Meraki account
    - Replicate CLIENT's existing cloud IQ Extreme wLAN in Meraki dashboard based on information collected during Discovery
    - Create PPSK to support guest account

#### Post Implementation

- Encore Project Manager shall:
  - Conduct close out meeting
  - Obtain final project sign off
  - Provide CLIENT with a copy of all final documentation – based Project Deliverables as defined below
- Encore Enterprise Networking Team shall:
  - Confirm proper wireless operation for each SSID, testing/validation of traffic passing, access to network devices, internet, WPA2 keys, and isolation of Guest SSID

## Project Deliverables

- Configuration and licensing reside in CLIENT's cloud account.
- Provide a Visio diagram illustrating access point deployment.
- Provide CLIENT with a copy of the product inventory.
- Provide a copy of all licensing.

## Out of Scope

- Any changes required post sign-off will result in a project change order and may result in additional billing. A copy of the Change Request Form is attached in Appendix B.
- Work performed outside Encore standard work hours of Monday through Friday would be considered out of scope
- Items/conditions identified in Customer Responsibilities and General Assumptions which have not been met would be considered out of scope.
- Anything not listed above as in scope shall be considered out of scope

## CLIENT Responsibilities

- CLIENT will provide:
  - full and timely administrative access, including remote access, to all physical and logical components required for project Monday - Friday
  - all necessary hardware, software, licensing, etc. unless defined differently in an attached Bill of Materials
  - an onsite resource to facilitate all information and communication per project requirements
  - availability for downtime, if required
  - for a secure area to store and deploy product from, at each site
  - all hardware, licensing and all necessary network cabling, cabling tie-wraps, etc. not defined in the Bill of Materials
  - any additional mounting brackets required to install the access points other than the hardware provided for in the BoM
  - for the installation of the UPS and configuration of the network management cards.
  - Inventory APs using a barcode scanner and recording in an Excel file:
    - Model
    - Serial number
    - MAC address in Excel file
    - If required, attach and scan CLIENT provided asset tag and FRN label
    - Print and apply a label to the AP per CLIENT's standard
    - Recording the site[s] the AP is to be installed at, and segregating boxes by site.
    - Provide Encore Enterprise Networking Team a copy of the inventory for each site before deploying access point[s]
  - Hang (420) MR44 access points on the drop ceiling grid below the drop ceiling not more 12 foot above the floor, reference Appendix D for Site Brak out
  - Hang (37) MR46 access points on the drop ceiling grid below the drop ceiling not more 12 foot above the floor, reference Appendix D for Site Brak out
  - Mount (22) MR86 access points on the building exterior 12 foot above the floor, reference Appendix D for Site Brak out
- CLIENT will coordinate:
  - with Encore Project Manager to sign-off on project plan / design prior to implementation
  - with the primary contact at each site to ensure access to all affected area as well as a schedule a start time and cutover period, prior to start of the project

## General Assumptions

- Work may be performed remotely or onsite at Encore's discretion
- An executed Project Completion Sign-off form (Appendix A) will be required to indicate project completion
- Encore assumes that the existing AP deployment meets the CLIENT's requirements for RF coverage and density and that this scope is limited to replacing CLIENT's deprecated AP's with new AP's in same location.
- Encore assumes that all switch ports connected to APs are configured to support 802.1q tagging



## Notice to CLIENT

THE TERMS AND CONDITIONS OF THIS AGREEMENT ARE STATED ON THE PREVIOUS PAGES AND IN THE FOLLOWING APPENDICES. BY SIGNING THIS AGREEMENT, YOU ACKNOWLEDGE THAT YOU HAVE READ, UNDERSTAND, AND AGREE TO BE BOUND BY THIS AGREEMENT. FURTHER, YOU AGREE THAT THIS IS THE COMPLETE STATEMENT OF THE AGREEMENT BETWEEN YOU AND ENCORE WHICH SUPERSEDES ALL OTHERS, ORAL OR WRITTEN, RELATING TO THE SUBJECT MATTER OF THIS AGREEMENT.

## Acceptance

By signing below, both Encore and the Client acknowledge that they have read and understood the information disclosed in this document, and agree to the terms herein.

Encore Technology Group, LLC.  
141 Grace Drive  
Easley, SC 29640

Watauga County Schools  
175 Pioneer Trail  
Boone, NC 28607

\_\_\_\_\_  
Encore Authorized Signature

\_\_\_\_\_  
CLIENT Authorized Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

## Appendix A – Project Completion Signoff

### Project Information

The information below provides detailed information related to the project. It is provided as an additional level of detail and clarification of the client and associated contacts.

<b>Client Name</b>			
<b>Address</b>			
<b>City, State Zip Code</b>			
<b>Phone</b>		<b>Email</b>	
<b>Project Name</b>		<b>Project Number</b>	
<b>Account Executive</b>		<b>PO Number</b>	
<b>Lead Engineer</b>		<b>Project Manager</b>	

### Project Signoff

By signing below, you agree that all work has been completed as documented in the Scope of Work section of this Statement of Work. Final project billing will be submitted for invoicing and payment as documented in the Encore General Terms and Conditions.

Encore Technology Group, LLC.  
141 Grace Drive  
Easley, SC 29640

Watauga County Schools  
175 Pioneer Trail  
Boone, NC 28607

\_\_\_\_\_  
Encore Authorized Signature

\_\_\_\_\_  
CLIENT Authorized Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name


\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

## Appendix B – Change Order Form

		141 Grace Drive Easley, SC 29640 (888) 983-6762		<b>Change Order Form</b>	
<b>Client</b>				<b>Order Number</b>	
<b>Project Name</b>				<b>Project Location</b>	
We hereby agree to make change(s) as described herein:					
<b>NOTE – This change order becomes part of an in conformance with the existing contract.</b>					
We AGREE to make the change(s) specified at this price				→	\$
<b>Encore Technology Group</b>					
Signature			Signature		
Printed Name			Printed Name		
Title			Title		
Date			Date		
<b>ACCEPTANCE – The above prices and specifications of this Change Order are satisfactory and are hereby accepted. All work to be performed under the same terms and conditions as specified in the original contract unless otherwise specified.</b>					

## Appendix C

Product Deployment									
	Classroom APs			Large Area APs				Exterior APs	Total
	Grid Ceiling	Wall Mount	Abnormal	Grid Ceiling	Wall Mount	Abnormal	Gym		
Bethel	22			1			1	1	25
Blowing Rock	33			3			1	1	38
Cove Creek	36			2			1	1	40
Green Valley	34			3			1	1	39
Hardin Park	14		45	1		4	1	4	69
Mabel	24			1			1	2	28
Parkway	49			3			1	2	55
Valle Crucis	24	18		2	1		1	4	50
Watauga High School	119	2		4	1		3	6	135
<b>Total</b>	<b>355</b>	<b>20</b>	<b>45</b>	<b>20</b>	<b>2</b>	<b>4</b>	<b>11</b>	<b>22</b>	<b>479</b>

The board expects all employees to maintain the highest professional, moral, and ethical standards in their interactions with students. Employees are required to provide an atmosphere conducive to learning through consistently and fairly applied discipline and established and maintained professional boundaries. Employees are expected to motivate each student to perform to his or her capacity while modeling the behavior expected of students in staff-student relationships.

The interactions and relationships between staff and students must be based upon cooperation, mutual respect, and an understanding of the appropriate boundaries between adults and students inside and outside of the educational setting. Employees are expected to demonstrate good judgment and to avoid the appearance of impropriety in their interactions with students. Employees must consult their supervisor any time they suspect or are unsure whether conduct is inappropriate or otherwise constitutes a violation of this or other board policy.

For the purposes of this policy, the terms “staff” and “employees” include independent contractors, school safety officers, and volunteers, but do not include student employees or student volunteers.

**A. ROMANTIC RELATIONSHIPS AND SEXUAL CONTACT PROHIBITED**

All employees are prohibited from dating, courting, or entering into a romantic relationship or having sexual contact with any student enrolled in the school system regardless of the student’s age. Employees engaging in such inappropriate conduct will be subject to disciplinary action, up to and including dismissal, and may be subject to criminal action as provided in G.S. 14-202.4 and 14-27.32. Further, school system personnel shall provide no assistance to an employee in finding another job, beyond the routine transmittal of personnel or administrative files, if the employee engaged in sexual misconduct with a minor or a student in violation of the law.

**B. RESTRICTIONS ON ELECTRONIC COMMUNICATIONS**

1. In accordance with policy 7335, Employee Use of Social Media, employees are prohibited from communicating with current students through non-school-controlled social media without parental permission except to the extent that the employee and student have an appropriate relationship which originated outside of the school setting. Any communication through social media authorized under policy 7335 must meet the professional standards established in this policy and must otherwise be consistent with law and all other board policy.
2. Instant messages will be treated as a form of communication through social media subject to the terms of policy 7335 and subsection B.1 above, regardless of whether the messaging service is actually provided through a social media service or otherwise.
3. Employees are prohibited from engaging in other forms of one-to-one electronic

communications (e.g., voice, voice mail, email, texting, and photo or video transmission) with students without written prior approval of the employee's supervisor and the student's parent. This rule shall not apply, however, if one or more of the following circumstances exist:

- a. the communication (1) is for an educational purpose, (2) is conducted through a school system-provided platform which archives all such communications for a period of at least three years (this requirement does not apply to telephone or voice mail communications), or is conducted via an electronic video-conferencing platform (e.g., Zoom, Webex, Google Meet) that has been approved by the superintendent or designee for instructional use and (3) occurs after the employee has given prior notice to his or her supervisor or designee that such communications will occur and when they will occur;
- b. the communication serves an educational purpose and is simultaneously copied or transmitted to the employee's supervisor or designee and, upon request, to the parent or guardian;
- c. the communication is necessary in a bona fide emergency, provided the communication is disclosed to the supervisor and parent or guardian as soon as reasonably possible; or
- d. the communication derives from a relationship or association outside of the school setting and occurs with the consent of the parent or guardian, provided such communication does not otherwise violate this or other board policy.

Any one-to-one electronic communication permitted by this subsection must meet the professional standards established in this policy and must otherwise be consistent with law and all other board policies.

4. It is the duty of every employee to notify his or her supervisor of any unsolicited one-to-one communication, in any form, electronic or otherwise, received from a student when the communication lacks a clear educational purpose. School counselors are excluded from this requirement only to the extent that it conflicts with their professional duties.
5. Violations of this section will be considered unprofessional behavior subject to discipline, up to and including dismissal. Factors that may be relevant to the determination of an appropriate disciplinary response to unauthorized communications with students include, but are not limited to:
  - a. the content, frequency, subject, and timing of the communication(s);
  - b. whether the communication(s) was appropriate to the student's age and

maturity level;

- c. whether the communication(s) could reasonably be viewed as a solicitation of sexual contact or the courting of a romantic relationship, including sexual grooming;
- d. whether there was an attempt to conceal the communication(s) from the employee's supervisor and/or the student's parent or guardian;
- e. whether the communication(s) created a disruption of the educational environment; and
- f. whether the communication(s) harmed the student in any manner.

### **C. REPORTING INAPPROPRIATE CONDUCT**

#### **1. Reporting by Employees**

Any employee who has reason to believe any of the following shall immediately report that information to the superintendent or designee:

- a. that another employee is involved in a romantic or other inappropriate relationship or has had sexual contact with a student;
- b. that another employee has engaged in other behavior prohibited by this policy; or
- c. that the employee has witnessed behavior by another employee that has the appearance of impropriety, whether or not the behavior may have a valid purpose.

An employee who fails to inform the superintendent or designee as provided in this section may be subject to disciplinary action, up to and including dismissal.

#### **2. Reporting by Students**

Any student who believes that he or she or another student has been subject to misconduct that violates this policy should immediately report the situation to the principal, school counselor, or the Title IX coordinator designated in policy 1720/4030/7235, Title IX Nondiscrimination on the Basis of Sex.

#### **3. Report of Criminal Misconduct**

Any principal who has reason to believe that a student has been the victim of criminal conduct shall immediately report the incident in accordance with policy 4335, Criminal Behavior.

#### 4. Report to State Board of Education ~~Superintendent of Public Instruction~~

Any administrator, including the superintendent, a deputy/associate/assistant superintendent, a personnel administrator, or a principal, who knows, ~~or~~ has reason to believe, or has actual notice of a complaint that a licensed employee has engaged in misconduct resulting in dismissal, disciplinary action, or resignation shall report the misconduct to the State Board of Education within five days of dismissal, determination of disciplinary action, or acceptance of resignation. If the employee resigns within 30 days of a complaint for misconduct or during an ongoing investigation of a complaint, the misconduct is presumed to have resulted in the resignation. For purposes of this subsection, “misconduct” is conduct that would justify automatic revocation of the employee’s license pursuant to G.S. 115C-270.35(b) or the infliction of physical injury against a child other than by accident or in self-defense. ~~involves physical or sexual abuse of a child shall report that information to the State Superintendent of Public Instruction within five working days of any disciplinary action, dismissal, or resignation based on the conduct.~~ For purposes of this subsection, ~~physical abuse is the infliction of physical injury other than by accidental means or in self-defense, and sexual abuse is the commission of any sexual act upon a student or causing a student to commit a sexual act, regardless of consent and the age of the student.~~ Failure to report such misconduct is a felony and may result in the suspension or revocation of an administrator’s license by the State Board of Education.

This reporting requirement applies in addition to any duty to report suspected child abuse in accordance with state law and policy 4240/7312, Child Abuse and Related Threats to Child Safety, as applicable.

Legal References: Elementary and Secondary Education Act, 20 U.S.C. 7926; Title IX of the Education Amendments of 1972, 20 U.S.C. 1681 *et seq.*, 34 C.F.R. pt. 106; G.S. 14-27.32, -202.4; 115C-47(18), -270.35(b), -326.20; 16 N.C.A.C. 6C .0372, .0373, .0601, .0602; State Board of Education Policy EVAL-014

Cross References: Governing Principle – Removal of Barriers (policy 1700), Title IX Nondiscrimination on the Basis of Sex (policy 1720/4030/7235), Title IX Sexual Harassment – Prohibited Conduct and Reporting Process (policy 1725/4035/7236), Title IX Sexual Harassment Grievance Process (policy 1726/4036/7237), Student and Parent Grievance Procedure (policy 1740/4010), Child Abuse and Related Threats to Child Safety (policy 4240/7312), Bullying and Harassing Behavior Prohibited (policy 4329/7311), Criminal Behavior (policy 4335), School Volunteers (policy 5015), Staff Responsibilities (policy 7300), Employee Use of Social Media (policy 7335)

Adopted: August 12, 2020

Revised: April 12, 2021; July 26, 2021; {DATE}



## RECRUITMENT AND SELECTION OF PERSONNEL

Policy Code:

7100

### A. GENERAL PRINCIPLES

It is the policy of the Watauga County Board of Education (the "board") to provide all applicants for employment with equal employment opportunities and to provide current employees with training, compensation, promotion, and other benefits of employment without regard to race, color, religion, national origin, military affiliation, genetic information, ~~sex, age, or disability, except when sex~~ (including pregnancy, childbirth, sexual orientation, and gender identity), age (40 or older), or disability, except when sex, age, or physical requirements are essential occupational qualifications. All candidates will be evaluated on their merits and qualifications for positions. All employment decisions will be consistent with the board's objective of providing students with the opportunity to receive a sound basic education, as required by state law.

The board also is committed to diversity throughout the programs and practices of the school system. To further this goal, the recruitment and employment program should be designed to encourage a diverse pool of qualified applicants.

### B. RECRUITMENT

Recruitment for a specific vacancy will be undertaken only after the need and qualifications for the position are established and proper authorization is obtained.

All vacancies must be adequately publicized within the school system so that employees will be informed of opportunities for promotion or transfer to new jobs; however, the superintendent or designee may forgo publicizing a vacancy if the position will be filled through a lateral assignment, reassignment, or promotion of a current employee or if exigent circumstances necessitate that the position be filled immediately. Vacancies also may be publicized externally to attract qualified applicants.

### C. CRIMINAL HISTORY

Except as otherwise provided in Section D of this policy, applicants must notify the human resources director immediately if they are arrested, charged with, or convicted of a criminal offense (including entering a plea of guilty or *nolo contendere*) other than a minor traffic violation (i.e., speeding, parking, or a lesser violation). Notice must be in writing, must include all pertinent facts, and must be delivered to the human resources director no later than the next scheduled business day following the arrest, charge, or conviction, unless the applicant is hospitalized or incarcerated, in which case the applicant must report the alleged violation within 24 hours after his or her release. Upon judicial action in the matter, the applicant must report the disposition and pertinent facts in writing to the human resources director no later than the next business day following adjudication.

A criminal history check and a check of sex offender registries must be conducted on all final candidates for employment with the school system. Criminal history checks must be conducted in accordance with state law and any procedures established by the superintendent. School officials shall not require candidates to disclose expunged arrests, charges, or convictions and shall not ask candidates to voluntarily disclose such information without first advising that disclosure is not required. The superintendent or designee shall report to the State Board of Education any licensed individual who is found to have a criminal history, as required by State Board policy. Special requirements are described in Section D of this policy for criminal history checks of candidates for certain positions working with pre-school children or working in afterschool or developmental day programs.

A final candidate for employment or for hiring as an independent contractor will be excluded from hiring on the basis of criminal conduct only when doing so is job-related and consistent with business necessity. If a final candidate is found to have been convicted (including entering a plea of guilty or *nolo contendere*) of a criminal offense, other than a minor traffic violation, the superintendent shall determine whether the individual is qualified for employment despite the criminal history by considering, among other things, whether the individual poses a threat to the safety of students or personnel or has demonstrated that he or she does not have the integrity or honesty to fulfill the duties of the position. The following factors will be considered in making this determination: (1) the nature and gravity of the offense or conduct; (2) the time that has passed since the offense or conduct and/or completion of the sentence; and (3) the nature of the job sought. Before the superintendent may exclude a final candidate based on his or her past criminal convictions, the superintendent must give the candidate the opportunity to demonstrate that the exclusion does not properly apply to him or her. The requirements of this paragraph do not apply to a childcare provider who is determined to be disqualified by the Division of Child Development and Early Education on the basis of a criminal history check conducted pursuant to G.S. 110-90.2, 42 U.S.C. 9858f, and 45 C.F.R. 98.43. (See Section D of this policy).

The board has determined that every position with the school system, regardless of whether the position is located in a school or elsewhere, potentially entails contact with students, either on a regular, occasional, or emergency basis. For that reason, no individual who is a registered sex offender subject to the provisions of policy 5022, Registered Sex Offenders, will be hired for any position with the school system.

In addition, each contract executed by the board with an independent contractor or for services of independent contractors must require the contractor to check sex offender registries as specified in policy 5022, Registered Sex Offenders.

#### **D. CRIMINAL HISTORY CHECKS OF CHILD CARE PROVIDERS**

For purposes of this section, a "childcare provider" is:

1. any person who works or is a final candidate seeking to work in a classroom or program licensed by the Department of Health and Human Services, Division of Child Development and Early Education (DCDEE); and
2. any person, including a volunteer, who has unsupervised contact with children enrolled in such classrooms or programs.

Before beginning initial employment or volunteer service and at least every ~~three~~five years thereafter, each child care provider must complete a criminal background check that meets the requirements of G.S. 110-90.2, 42 U.S.C. 9858f, and 45 C.F.R. 98.43 and present a letter issued by DCDEE indicating that the individual is qualified to have responsibility for the safety and well-being of children based on the individual's criminal history.

~~After September 30, 2019, n~~No person shall (1) be employed, continue to be employed, or be permitted to volunteer as a child care provider, or to otherwise have unsupervised contact with students enrolled in a licensed classroom or program operated by the school system or (2) be counted in the staff/child ratio of such classroom or program, unless the person holds a current valid qualification letter issued by DCDEE. However, a childcare provider with provisional status may be employed pending final results of the criminal background check but shall be subject to the restrictions established by 10A N.C.A.C. 09 .2703(f).

The application fee and cost of fingerprinting associated with the DCDEE criminal history check process shall be borne by the board.

A child care provider who has incurred any pending charges, indictments, or convictions (other than minor traffic offenses) since the last qualification letter was issued by DCDEE shall notify the assistant superintendent of human resources in writing of such charges within five business days or before returning to work, whichever comes first. The assistant superintendent of human resources shall notify DCDEE within one business day of being notified.

The superintendent or designee shall include the criminal history mandatory reporting requirement in all new employee orientation information for childcare providers. The superintendent shall also be responsible for establishing effective recordkeeping methods and other processes as necessary to ensure compliance with all legal requirements pertaining to criminal history record checks of childcare providers.

#### **E. SELECTION**

##### **1. Qualifications**

Candidates for employment must be selected based upon their likely ability to fulfill duties identified in the job description as well as performance standards established by the board. In making the determination, the following information must be considered:

- a. application;
- b. education and training;
- c. licensure and certification (when applicable);
- d. relevant experience;
- e. personal interviews; and
- f. references and/or background checks.

When several applicants for the same position are equally qualified and suitable for the position, employees within the school system will be given priority.

2. Nepotism

- a. For purposes of this subsection, the following definitions apply.
  - i. “Immediate family” means spouse, parent, child, brother, sister, grandparent, or grandchild. The term includes the step, half, and in-law relationships.
  - ii. “Central office staff administrator” includes directors, supervisors, specialists, staff officers, assistant superintendents, area superintendents, superintendents, and principals.
- b. Before any immediate family of any board of education member or central office staff administrator is employed by the board or engaged in any capacity as an employee, independent contractor, or otherwise, (1) the board member or central office staff administrator must disclose the familial relationship to the board and (2) the prospective employment or engagement must be approved by the board in a duly called open session meeting.
  - i. An employee who knowingly fails to disclose a familial relationship to the board as required will be subject to disciplinary action up to and including dismissal.
  - ii. Notification by the employee to the director of human resources will be deemed disclosure to the board. The director of human resources is responsible for conveying the disclosure to the board before the board takes action on the prospective employment or engagement.
- c. When making recommendations for the selection and assignment of personnel, the superintendent shall attempt to avoid situations in which one

employee occupies a position in which he or she has influence over the employment status, including hiring, salary, and promotion, of another employee who is a member of the first employee's immediate family.

- d. No administrative or supervisory personnel may directly supervise a member of his or her immediate family.

### 3. Employment Procedures

All applicants selected for employment must be recommended by the superintendent and approved by the board. In situations in which the employee must be hired between board meetings, the superintendent is authorized to approve hiring such personnel, contingent upon approval by the board at its next scheduled board meeting.

State guidelines must be followed in selection and employment procedures. The superintendent shall develop any other procedures necessary to implement this policy.

The superintendent shall develop procedures for verifying new employees' legal status or authorization to work in the United States as required by law.

Legal References: Age Discrimination in Employment Act of 1967, 29 U.S.C. 621 *et seq.*; Americans with Disabilities Act of 1990, 42 U.S.C. 12101 *et seq.*; Equal Educational Opportunities Act of 1974, 20 U.S.C. 1703; Equal Pay Act of 1963, 29 U.S.C. 206; Fair Credit Reporting Act, 15 U.S.C. 1681 *et seq.*; Genetic Information Nondiscrimination Act of 2008, 42 U.S.C. 2000ff *et seq.*; Military Selective Service Act, 50 U.S.C. Appx. 453; Rehabilitation Act of 1973, 29 U.S.C. 794; Title VII of the Civil Rights Acts of 1964, 42 U.S.C. 2000e *et seq.*; Title IX of the Education Amendments of 1972, 20 U.S.C. 1681 *et seq.*; Uniformed Services Employment and Reemployment Rights Act of 1994, 38 U.S.C. 4301 *et seq.*; 8 U.S.C. 1101 *et seq.*; 42 U.S.C. 9858f; 45 C.F.R. 98.43; *Bostock v. Clayton County*, 590 U.S. \_\_\_, 140 S. Ct. 1731 (2020); *Green v. Missouri Pacific Railroad*, 523 F.2d 1290 (8<sup>th</sup> Cir. 1975); *Enforcement Guidance on the Consideration of Arrest and Conviction Records in Employment Decisions Under Title VII of the Civil Rights Act of 1964*, U.S. Equal Employment Opportunity Commission (April 25, 2012) available at [http://www.eeoc.gov/laws/guidance/arrest\\_conviction.cfm](http://www.eeoc.gov/laws/guidance/arrest_conviction.cfm); G.S. 14-208.18; 15A-153; 110-90.2; 115C-12.2, -36, -47, -276(j), -332; 126-7.1(i), -16; 127A-202.1 *et seq.*; 127B-10, -12, -14; 143B-421.1, -1209.11-934; *Leandro v. State*, 346 N.C. 336 (1997); 10A N.C.A.C. 09 .0102, -.2701, -.2702, -.2703; 16 N.C.A.C. 6C .0313; State Board of Education Policy BENF-009

Cross References: Board Authority and Duties (policy 1010), Registered Sex Offenders (policy 5022)

Adopted: February 9, 2015

Replaces: Policy 3.02.40 Qualifications of Certified Personnel, policy 3.02.55 Recruitment, and policy 3.01.30 Equal Employment Opportunity

Revised: January 28, 2016; August 14, 2017 (Legal references only); November 13, 2018;  
September 9, 2019; May 11, 2020; July 26, 2021 (Legal references only); November 8, 2021;  
{DATE}

The Watauga County Board of Education (the “board”) intends to comply fully with all licensure requirements of the Elementary and Secondary Education Act, state law, and State Board of Education policies.

**A. LICENSURE AND OTHER QUALIFICATION REQUIREMENTS**

1. Except as otherwise permitted by the State Board of Education or state law, a person employed in a professional educator position must hold at all times a valid North Carolina professional educator’s license appropriate to his or her position.
2. To the extent possible, all professional teaching assignments will be in the area of the professional employee’s license except as may be otherwise allowed by state and federal law and State Board policy.
3. The board may employ candidates entering the teaching profession from other fields who hold a residency license or an emergency license.
4. In extenuating circumstances when no other appropriately licensed professionals or persons who are eligible for a residency license are available to fill a position, the board may employ an individual who holds a permit to teach issued by the State Board of Education.

**B. EXCEPTIONS TO LICENSURE REQUIREMENTS**

1. Adjunct CTE Instructors

An unlicensed individual who meets the adjunct hiring criteria established by the State Board of Education for a specific career and technical education (CTE) career cluster may be employed as an adjunct CTE instructor for up to 20 hours per week or up to five full consecutive months of employment, provided the individual first completes preservice training and meets all other statutory requirements for serving as an adjunct instructor established by G.S. 115C-157.1.

2. Adjunct Instructors in Core Academic Subjects, Fine and Performing Arts, and Foreign Languages

In accordance with G.S. 115C-298.5, an unlicensed faculty member of a higher education institution who meets the adjunct hiring criteria established by the State Board of Education may be employed as a temporary adjunct instructor for specific core academic subjects, fine and performing arts, and foreign language courses in grades kindergarten through twelve provided the individual first completes preservice training and meets all other statutory and State Board of Education requirements.

In addition, an individual with a related bachelor's or graduate degree may be employed as a temporary adjunct instructor to teach high-school level courses in core academic subjects, fine and performing arts, and foreign language in the individual's area of specialized knowledge or work experience provided the individual first completes preservice training required under G.S. 115C-298.5(a1).

3. Interim Principals

A retired former principal or assistant principal may be employed as an interim principal for the remainder of any school year, regardless of licensure status.

4. Cherokee Language and Culture Instructors

An individual approved to teach in accordance with an MOU entered into pursuant to G.S. 115C-270.21 will be authorized to teach Cherokee language and culture classes without a license.

5. Driver Education Instructors

An individual, ~~who~~ is not licensed in driver education, is authorized to work as a driver education instructor if the individual holds Certified Driver Training Instructor status according to minimum standards established by State Board of Education pPolicy DRIV-003.

6. Service Members and their Spouses Relocating to North Carolina

A service member or the spouse of a service member who is under military orders to relocate to North Carolina, is in possession of a current educator's license from another jurisdiction, and meets any other conditions established by 50 U.S.C. 4025a or State Board of Education Policy LICN-001 will be considered to hold a valid North Carolina educator's license until the military orders expire or June 30th of the year in which the military orders expire, whichever is later.

**C. BEGINNING TEACHER SUPPORT PROGRAM**

The superintendent or designee shall develop a plan and a comprehensive program for beginning teacher support. The plan must be approved by the board and the Department of Public Instruction and kept on file for review. The plan must be aligned to the State Board of Education's beginning teacher support program standards and, when monitored must demonstrate proficiency. The school system will also participate in implementing a regionally-based annual peer review and support system.

Teachers with fewer than three years of teaching experience will be required to participate in the Beginning Teacher Support Program.

**D. LICENSE CONVERSION**

Teachers must meet all requirements of the State Board of Education in order to move from an initial professional license or residency license to a continuing professional license or to move from a continuing professional license to a lifetime license.

**E. LICENSE RENEWAL**

Licensure renewal is the responsibility of the individual, not of the school system. Any employee who allows a license to expire must have it reinstated prior to the beginning of the next school year. A teacher whose license has expired is subject to dismissal.

The school system may offer courses, workshops, and independent study activities to help school personnel meet license renewal requirements. Any renewal activity offered must be consistent with State Board of Education policy. In addition, the superintendent or designee shall develop a procedure to determine the appropriateness of any credit offered in advance of renewal activities.

Decisions regarding the employment of teachers who fail to meet the required proficiency standard for renewal of a continuing professional license will be made in accordance with G.S. 115C-270.30(b)(4) and applicable State Board of Education requirements. The superintendent or designee shall determine the professional development required of a teacher whose continuing professional license has reverted to an initial professional license and/or has expired due to performance issues. The superintendent or designee may authorize or direct principals to prescribe professional development to such employees in accordance with the employee's demonstrated deficiencies.

Although lifetime license holders do not have to complete continuing education credits to maintain licensure, the superintendent may require them to participate in professional development opportunities as a condition of employment. (See policy 1610/7800, Professional and Staff Development.)

**F. PARENTAL NOTIFICATION**

At the beginning of each school year, school system officials shall notify the parents or guardians of each student attending a Title I school or participating in a Title I program of their right to request the following information about qualifications of their child's teacher: whether the teacher has met NC qualification and licensing criteria for the grade level(s) and subject area(s) in which the teacher provides instruction; whether the teacher is teaching under emergency or other provisional status through which North Carolina qualification or licensing criteria have been waived; whether the teacher is teaching in the field of discipline of his or her certification; and whether the child is provided services by a paraprofessional, and if so, the paraprofessional's qualifications.

The school system will give notice within 10 school days to the parents of children who have been assigned or, after four consecutive weeks, have been taught by a teacher who

does not meet applicable State certification or licensure requirements at the grade level and subject area in which the teacher has been assigned.

#### **G.     EQUITABLE DISTRIBUTION OF TEACHERS**

The superintendent shall assess whether low-income, minority, learning disabled, and/or English learners are being taught by inexperienced, ineffective, or out-of-field teachers at higher rates than students who do not fall into these categories and shall develop a plan to address any such disparities. If DPI does not require such a plan of the LEA, the superintendent is not required to develop a plan under this subsection unless he or she determines that one is needed to address inequities within the school system.

Legal References: Elementary and Secondary Education Act, 20 U.S.C. 6301 *et seq.*; 50 U.S.C. 4025a; 34 C.F.R. 200.55-57, 200.61; G.S. 115C art. 17E; 115C-157.1, -270.15, -270.20, -270.21, -284, -295, -298.5, -325(e)(1)(m) (applicable to career status teachers), -325.4(a)(12) (applicable to non-career status teachers), -333, -333.1; State Board of Education Policies CTED-004, DRIV-003, DRIV-004, EVAL-004. EVAL-023, EVAL-034, LICN-001, LICN-005, LICN-021, LICN-022, TCED-016; *Beginning Teacher Support Program Handbook* (NCDPI), available at <https://sites.google.com/dpi.nc.gov/ncref/bt-support-program-resources>

Cross References: Professional and Staff Development (policy 7800)

Adopted: February 9, 2015

Revised: September 11, 2017; May 21, 2018; March 11, 2019; September 9, 2019; May 11, 2020; February 8, 2021 and July 26, 2021 (Legal references only); December 13, 2021; May 8, 2023; {DATE}

Replaces: Policy 3.02.40, Qualifications of Certified Personnel

The Watauga County Board of Education (the “board”) believes that it is important for employees to have leave available to attend to personal, civic, and professional matters as well as to meet family commitments. This need for leave is to be balanced with the need to provide an effective instructional program for students. No employee may be discharged, demoted, or otherwise subjected to adverse employment action for taking leave in accordance with board policies and administrative procedures.

All requests for leave, with or without pay, must be addressed in accordance with state and federal law, as well as policies promulgated by the State Board of Education, including those specified in the most current edition of the *North Carolina Public Schools Benefits and Employment Policy Manual*, available at <https://www.dpi.nc.gov/districts-schools/districts-schools-support/district-human-capital/employee-policy>.

In addition to applicable laws and regulations, this board policy applies to leave requests. The information in this policy is intended to supplement, not replace, the requirements of law and the State Board of Education. In the event that changes to State or federal law or regulation conflict with current State Board or local board policies, the board intends that its leave practices be modified to the extent necessary to comply with current law until such time as conforming changes to State Board and/or local board policy are made.

The superintendent shall develop any necessary administrative procedures and make them available to employees upon request.

**A. MINIMUM LEAVE TIME**

An employee may take any type of leave in increments of hours unless otherwise specified in this policy.

**B. CONTINUOUS LEAVE OF MORE THAN 10 DAYS**

An employee must comply with the notice and verification requirements provided in policy 7520, Family and Medical Leave, for any continuous leave of more than 10 days if: (1) the leave also is eligible for leave under the Family and Medical Leave Act (FMLA), defined in policy 7520, and (2) the leave is designated as FMLA-eligible at the time it is taken or as soon as is feasible thereafter. See policy 7520, Family and Medical Leave.

**C. SICK LEAVE**

The superintendent or designee may require a statement from a medical doctor or other acceptable proof that the employee was unable to work due to illness or injury. Employees who anticipate using sick leave should inform their immediate supervisor in advance so that arrangements may be made to reassign the employee’s duties during the period of absence.

**D. PAID PARENTAL LEAVE**

An employee shall provide his or her supervisor and the assistant superintendent of human resources with 10 weeks' advance written notice of the intent to take paid parental leave when it is reasonably possible to do so. If 10 weeks' advanced written notice is not reasonably possible, the employee must provide as much notice as is reasonable under the circumstances.

**D.E. PERSONAL LEAVE**

Teachers earn personal leave at a rate of .20 days for each full month of employment, not to exceed two days per year. Unused personal leave may be carried forward from one year to another and may be accumulated without limitation until June 30 of each year. On June 30, personal leave in excess of five days shall be converted to sick leave so that a maximum of five days of personal leave is carried forward to July 1. At the time of his or her retirement, a teacher may also convert accumulated personal leave to sick leave for creditable service towards retirement.

Personal leave must be used in half or whole day units. Personal leave may be requested by application in accordance with the policies of the State Board of Education and may be used only upon the authorization of the teacher's immediate supervisor and in accordance with legal requirements and procedures established by the superintendent. A teacher shall not take personal leave on the first day he or she is required to report for the school year, on a required teacher workday, on days scheduled for state testing, or on the day before or the day after a holiday or scheduled vacation day, unless the request is approved by the principal. On all other days, if the request is made at least five days in advance, the request will be automatically granted subject to the availability of a substitute teacher. The teacher cannot be required to provide a reason for the request.

**E.F. VACATION LEAVE**

Vacation may be taken only upon the authorization of the employee's immediate supervisor and in accordance with legal requirements and procedures established by the superintendent.

To promote the efficient operation of the schools, the superintendent may designate certain periods during the nonacademic year as preferred vacation periods for 12-month employees.

For 10-month employees the first 10 days of annual vacation leave must be scheduled in the school calendar and must be taken as scheduled.

Annual vacation leave may be accumulated without any applicable maximum until June 30 of each calendar year. On June 30, accumulated annual vacation leave in excess of 30 days will be converted to sick leave so that only 30 workdays of annual vacation leave are

carried forward.

An employee who has unused vacation time from another school system in North Carolina may have the vacation time transferred to this school system.

Instructional personnel who must be replaced by a substitute may not take earned vacation on days when school is in session for students unless the employee's absence is due to the employee's own catastrophic illness and the employee has exhausted all of his or her sick leave or unless the employee qualifies as a new parent. In such instances, the employee will not be required to pay the substitute.

The superintendent shall establish procedures for reviewing requests for the use of vacation leave for catastrophic illness by instructional personnel.

#### **F.G. PARENT INVOLVEMENT LEAVE**

All employees may take up to four hours of paid leave per year to attend or otherwise be involved in the school of a child for whom the employee is a parent, guardian, or person standing in loco parentis. The scheduling of parent involvement leave is subject to the approval of the principal or other supervisor as appropriate.

#### **G.H. COMPENSATORY LEAVE**

Because professional employees are expected to fulfill all job duties, compensatory leave should apply only in extraordinary circumstances.

Employees who are not exempt from the provisions of the Fair Labor Standards Act may accrue compensatory time (comp time) as described in policy 7500, Workday and Overtime. Supervisors shall arrange for employees to take comp time within one pay period following the time it is earned, if possible; however, the superintendent or designee may exempt certain employees or categories of employees from this requirement when deemed necessary for the proper administration of the school system.

An employee must obtain approval from his or her immediate supervisor before taking compensatory leave.

#### **H.I. LEAVE TO TEACH AT A CHARTER, REGIONAL, OR LAB SCHOOL**

Leave of absence to teach for one year at a charter, regional, or lab school will be granted to a teacher upon timely written request to the board. The request must be provided at least 45 days before the teacher would otherwise have to report for duty if it is the initial year of the charter/regional/lab school's operation and at least 90 days if it is after the charter/regional/lab school's initial year of operation. The teacher may return to work in the school system in accordance with the provisions of applicable state law.

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**I.J. DISCRETIONARY LEAVE OF ABSENCE WITHOUT PAY**

An employee, who wishes to take leave that is not eligible for any other specific type of leave, may be granted a leave of absence without pay for a period of up to one calendar year at the discretion of the superintendent with approval from the board.

The employee is expected first to consult with his or her immediate supervisor and then to provide advance written notice (60 days if possible) stating the beginning and ending dates of the desired leave of absence. The superintendent may request documentation from the employee in support of his or her request. In determining the length of the leave of absence without pay that will be approved, due and proper consideration must be given to the welfare of the students as well as the employee. The superintendent may require the employee to give notice of his or her intent to return to work at reasonable time intervals during the leave.

Once a leave of absence without pay has been requested by an employee and approved by the board, the dates are binding unless both parties agree to a change.

**J.K. OTHER LEAVE**

Other types of leave, such as leave for observance of a bona fide religious holiday, professional leave, community responsibility leave, leave for jury duty or court attendance, elected officials leave, parental involvement in schools leave, parental leave without pay, and military leave (see policy 7530, Military Leave), will be granted in accordance with the requirements of law and State Board of Education policy.

Legal References: G.S. 95-28.3; 115C-12, -36, -47, -84.2, -218.90(a)(3), -238.68(3), -285, -302.1, -316, -336, -336.1; 116-239.10(4); 126-5(c19), -8.6; 143B-1033; 16 N.C.A.C. 6C .0405, .0408; State Board of Education Policy BENF-001, *North Carolina Public Schools Benefits and Employment Policy Manual* (N.C. Dept. of Public Instruction, current version), available at <https://www.dpi.nc.gov/districts-schools/districts-schools-support/district-human-capital/employee-policy>

Cross References: Workday and Overtime (policy 7500), Compliance with State Board of Education Employment Policies (policy 7505), Family and Medical Leave (policy 7520), Military Leave (policy 7530), Voluntary Shared Leave (policy 7540), Absences Due to Inclement Weather (policy 7550)

Adopted: December 14, 2015

Replaces: Policy 2.04.50, School Volunteers (in part re parent involvement leave), policy 3.04.10, Annual Vacation Leave, policy 3.04.20, Leave Of Absence , policy 3.04.30, Personal Leave, policy 3.04.40, Sick Leave, policy 3.04.60, Employee Leaves and Absences, policy 3.04.70, Parent Involvement Leave, and policy 3.01.20, Employment Definitions

Revised: August 14, 2017 (Legal references only); May 21, 2018; September 14, 2020 (Legal

| references only); {DATE}

All eligible employees will be provided leave as required by the federal Family and Medical Leave Act of 1993 (FMLA), as amended, and applicable state laws and State Board of Education policies. The FMLA allows eligible employees to take job-protected, unpaid leave, or to substitute appropriate paid leave if the employee has earned or accrued it, for up to a total of 12 workweeks (or 26 workweeks in certain cases) in any 12-month period for certain qualifying conditions or events. The employee may continue to participate in the school system's group insurance plan while on FMLA leave.

This policy is intended for guidance only and is not intended to alter or expand the school system's responsibilities beyond the requirements of law. If any provision of this policy is inconsistent with federal law or regulation, the federal rule must take precedence. The superintendent is authorized to develop additional regulations for FMLA leave consistent with the requirements of the law and this policy. Employees can find more information about FMLA leave in the North Carolina Public Schools *Benefits and Employment Policy Manual*.

The Watauga County Board of Education (the "board") strictly prohibits interfering with, restraining, or denying the ability of any employee to exercise any right provided by the FMLA. The board also strictly prohibits any type of discrimination against or discharge of an employee who has filed a complaint in regard to the FMLA. A copy of this policy will be provided to each employee upon hiring.

**A. DEFINITIONS**

**1. Serious Health Condition**

A serious health condition is an illness, injury, impairment, or physical or mental condition that involves either an overnight stay in a medical care facility or continuing treatment by a health care provider for a condition that either prevents the employee from performing the functions of the employee's job or prevents the qualified family member from participating in school or other daily activities.

**2. Continuing Treatment**

Subject to certain conditions, the continuing treatment requirement in the above definition of "serious health condition" may be met by a period of incapacity of more than three consecutive calendar days combined with at least two visits to a health care provider or one visit and a regimen of continuing treatment or incapacity due to pregnancy or a chronic condition. Other conditions may meet the definition of continuing treatment.

**3. Other Terms**

Unless otherwise noted, all terms in this policy must be defined in accordance with 29 C.F.R. pt. 825.

**B. ELIGIBILITY**

Generally, employees are eligible for unpaid FMLA leave if they have:

1. been employed by the school system for at least 12 months (not necessarily consecutively); and
2. worked at least 1,250 hours during the previous 12 months.

Further information about these requirements can be found in the Code of Federal Regulations at 29 C.F.R. 825.110.

**C. QUALIFYING CONDITIONS**

Except in cases of leave to care for a covered servicemember with a serious illness or injury, an eligible employee is entitled to a total of 12 workweeks of FMLA leave during any 12-month period for any one or more of the following reasons:

1. the birth and first-year care of the employee's child;
2. adoption or foster placement of a child with the employee;
3. a serious health condition of the employee or the employee's spouse, child, or parent;
4. a qualifying exigency (see Section F) arising out of the fact that the spouse or a son, daughter, or parent of the employee has been deployed, or is on notice of an impending deployment to a foreign country as a member of the regular Armed Forces on active duty or as a member of the Reserve components of the Armed Forces under a federal call or order to active duty in support of a contingency operation; or
5. to care for a covered servicemember with a serious illness or injury ("covered servicemember" and "serious injury or illness" are defined in federal regulation 29 C.F.R. 825.127). An employee who is a spouse, son, daughter, parent, or next of kin of the servicemember may take leave for a period of up to 26 workweeks under this provision.

**D. DETERMINING THE 12-MONTH LEAVE PERIOD**

The 12-month period during which an employee is eligible for FMLA leave will be from July 1 to June 30, except that the period for leave to care for a covered servicemember with a serious injury or illness begins on the first day the employee takes leave for this reason and ends 12 months later.

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**E. ENTITLEMENT TO LEAVE**

Eligible employees may take leave as follows:

1. **Medical leave for serious health conditions:** A combined total of 12 workweeks during a 12-month period. The leave may be taken intermittently or on a reduced leave schedule as is medically necessary.
2. **Family leave for pregnancy, birth of a child, or placement of a child for foster care or adoption:** A combined total of 12 consecutive workweeks during a 12-month period. Eligibility for FMLA leave expires 12 months from the birth, foster care placement, or adoption of the child. Leave must be used in a single block of time unless the board agrees to another arrangement.
3. **Military service exigency:** A combined total of 12 workweeks during a 12-month period. The leave may be taken intermittently or on a reduced leave schedule.
4. **Leave to care for injured servicemember:** A combined total of no more than 26 workweeks during a single 12-month period. The leave may be taken intermittently or on a reduced leave schedule. If combined with other types of FMLA leave, the total leave taken in a single 12-month period still may not exceed 26 weeks.
5. **Spouses employed by the school system:** Spouses who are both employed by the school system and eligible for FMLA leave are limited in the amount of family leave they may take for the birth and care of a newborn child, for the placement of a child for adoption or foster care, or to care for a parent who has a serious health condition to a combined total of 12 weeks (or 26 weeks if leave to care for a covered servicemember with a serious injury or illness is also used).

**F. QUALIFIED MILITARY SERVICE EXIGENCIES**

A military service exigency that qualifies for FMLA leave must be defined in accordance with federal regulations. Qualified exigencies may include:

1. short-notice deployment;
2. military events and related activities;
3. school and childcare activities;
4. financial and legal arrangements;
5. counseling;

6. rest and recuperation leave;
7. post-deployment activities;
8. parental care; and
9. additional activities agreed upon by the board and employee.

**G. INTERMITTENT OR REDUCED WORK SCHEDULE**

1. An employee may take FMLA leave on an intermittent or reduced leave schedule as required for the health of the employee or family member, due to a qualifying exigency, or as otherwise approved by the superintendent. The employee must make a reasonable effort to schedule treatment so as not to disrupt unduly the operations of the school. Whenever possible, the employee should discuss scheduling with his or her immediate supervisor prior to scheduling any medical treatment in order to accommodate the work schedule.
2. An employee who requests intermittent or reduced leave time for medical treatment of a serious health condition may be required to give the reasons for the intermittent or reduced leave schedule and the schedule for treatment.
3. To better accommodate an employee's need for intermittent or reduced leave for a serious health condition, the school system may require an employee to take an alternative position during the period of leave. The alternative position must have equal pay and benefits, but it does not have to have equivalent duties.
4. Employees may take intermittent leave in increments of one hour.
5. Instructional personnel are subject to special rules for taking intermittent or reduced leave. (See Section H.)

**H. INSTRUCTIONAL PERSONNEL**

The following special rules apply to instructional personnel only. For the purposes of this policy, instructional personnel are teachers, athletic coaches, driving instructors, special education assistants, teacher assistants, and any other employees whose principal function is to teach and instruct students.

1. Use of Intermittent or Reduced Schedule Leave
  - a. Instructional employees may use intermittent or reduced schedule leave only when the employee and the school system have reached an agreement on how the leave will be used.

- b. If an instructional employee requests intermittent or reduced schedule leave for more than 20 percent of the workdays of the duration of a leave due to medical treatment, the school system may require the employee to take continuous leave for up to the entire duration of the scheduled leave or to transfer to an alternative position with equivalent pay and benefits for the period of leave.
- c. Instructional employees who take intermittent or reduced schedule leave that constitutes 20 percent or less of the workdays during the leave period are not subject to transfer to an alternative position.

2. Extension of FMLA Leave at School System Discretion

The school system may require instructional personnel to continue leave through the end of the school semester if any of the following conditions exist:

- a. the leave will begin more than five weeks before the end of the term; the leave will last at least three weeks; and the employee would return to work in the last three weeks of the academic term;
- b. the leave is for a purpose other than the employee's own serious health condition or for a military exigency; the leave will begin in the last five weeks of the term; the leave will last more than two weeks; and the employee would return to work during the last two weeks of the academic term; or
- c. the leave is for a purpose other than the employee's own serious health condition or for a military exigency; the leave will begin in the last three weeks of the term; and the leave will last at least five days.

If the school system requires an instructional employee to take leave until the end of the academic term, only the period of leave until the employee is ready and able to return to work will be charged against the employee's FMLA entitlement.

**I. EMPLOYEE'S RESPONSIBILITY WHEN REQUESTING LEAVE**

To ensure that employees receive proper notification of their rights and responsibilities and that leave is properly designated, all employees requesting any type of leave must make the request to the assistant superintendent of human resources or designee.

1. Employee's Responsibilities When Leave is Foreseeable

- a. The employee must provide 30 days' advance notice of the need to take FMLA leave when the need is foreseeable. If this amount of notice is not possible, then notice must be given as soon as practicable, taking into account all of the facts and circumstances.

- b. The employee must provide sufficient information for the school system reasonably to determine (1) whether the FMLA may apply to the leave request and (2) the anticipated timing and duration of the leave. This information would include, for example, notice that the employee is unable to perform job functions, notice that the family member is unable to perform daily activities, notice of the need for hospitalization or continuing treatment by a health care provider, or notice of circumstances supporting the need for military family leave.
  - c. If the employee does not provide 30 days' notice and there is no reasonable justification for the delay, the school system may delay the FMLA leave until at least 30 days after the employee provides notice of the need for FMLA leave.
  - d. If an instructional employee fails to give the required notice of foreseeable leave for an intermittent or reduced leave schedule, the school system may require the employee to take continuous leave for the duration of his or her treatment or may temporarily transfer the employee to an alternative position for which the employee is qualified and that has the same benefits. (See Section H.)
2. Employee's Responsibilities When Leave is Not Foreseeable
- a. When leave is not foreseeable, the employee must comply with the usual school system procedures for notifying his or her supervisor of the absence and requesting leave, including any applicable requirements established by policy 7510, Leave. If the employee fails to do so, the leave may be delayed or denied.
  - b. When giving notice of an absence, the employee must inform the supervisor if the requested leave is for a reason for which FMLA leave was previously taken or certified.
  - c. The employee also must notify the assistant superintendent of human resources or designee of the need for FMLA leave as soon as practicable.
  - d. All employee responsibilities in the FMLA for notice, medical certification, fitness for duty certification, and notice of intent to return to work apply as specified in this policy and policy 7510.

**J. SCHOOL SYSTEM'S DESIGNATION AND NOTICE TO EMPLOYEE**

- 1. Whether or not the employee specifically requests FMLA leave, the assistant superintendent of human resources or designee is responsible for asking any questions of the employee necessary to make a determination of whether the leave

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is FMLA-eligible, unless the employee has already requested and received FMLA leave or certification for the same condition or event. The assistant superintendent may require the employee to provide notice of the need and the reason for leave.

2. The human resources director or designee shall provide all legally-required notices to the employee within five days of receiving this information or otherwise learning that an employee's leave may be for an FMLA-qualifying reason, unless there is a justifiable delay, such as a delay for documentation.

The required notices must indicate whether the employee is eligible under the FMLA. If the employee is eligible, the notice must specify any additional information required from the employee and must explain the employee's rights and responsibilities under the FMLA. If the employee is not eligible, the notice must provide a reason for the ineligibility. The required notices also must state whether the leave will be designated as FMLA-protected and, if so, the amount of leave that will be counted against the employee's leave entitlement.

3. Leave may be designated as both FMLA-eligible and as leave under the school system's paid leave policy if paid leave has been substituted. Such leave would be counted toward the employee's 12-week FMLA entitlement. In addition, the assistant superintendent of human resources may designate an absence (taken as paid or unpaid leave) that meets the criteria for an FMLA-qualifying absence as part of the employee's total FMLA entitlement, whether or not the employee has requested FMLA leave. (See Section M.)
4. Leave that has been taken for an FMLA-qualifying reason may be retroactively designated as FMLA leave with appropriate notice to the employee, provided that such designation does not cause harm or injury to the employee.

#### **K. CERTIFICATION**

The school system reserves the right to require employees to provide certification of any FMLA-qualifying event or condition of the employee or the employee's spouse, child, parent, or next of kin, including certification for military exigency leave. The school system will not request more medical certification information than that allowed by the FMLA and the Americans with Disabilities Act. The assistant superintendent may request a second or third opinion at the school system's expense if reason to doubt the validity of a medical certification exists. The school system may require periodic recertification to support the leave, as permitted by law.

#### **L. RETURN TO WORK**

The school system may require an employee to periodically report on his or her status and intent to return to work. Any employee who is taking leave through the end of an academic semester must report on his or her intent to return to work no later than four

weeks before the end of the academic semester. In addition, the school system may require the employee to report on his or her intent to return to work on a regular basis while on FMLA leave.

Before an employee returns to work from FMLA leave taken for the employee's own serious health condition, the employee must present a "fitness-for-duty" certification that states that the employee is able to return to work. This requirement does not apply to an employee taking intermittent leave unless the employee's condition presents a reasonable safety concern.

#### **M. SUBSTITUTION OF PAID LEAVE**

1. The school system will substitute appropriate paid leave, including sick leave, parental leave, personal leave, and vacation time for unpaid, FMLA leave to the extent allowed by law and policy, giving proper notice to the employee that the leave is designated as FMLA. If an employee has exhausted his or her accrued paid leave but an FMLA-qualifying reason for absence continues, the school system will designate resulting absences as protected FMLA leave until the employee has used all allowable FMLA leave. Such absences will be unpaid.
2. When an employee has an absence (taken as paid or unpaid leave) that meets the criteria for an FMLA-qualified absence, the school system may, with proper notice to the employee, designate the absence as part of the employee's total annual FMLA entitlement. If the absence continues for more than 10 days, all employee responsibilities in the FMLA to provide notice for foreseeable and unforeseeable leave, medical certification, fitness for duty certification, and notice of intent to return to work apply as specified in this policy and policy 7510.
3. An employee must not be permitted to exhaust paid leave before beginning FMLA leave if it has been determined that the employee's reason for using paid leave meets the FMLA eligibility requirements.

#### **N. RESTORATION TO EQUIVALENT POSITION**

1. Generally

Employees, except "key" employees, will be restored to the same or an equivalent position upon return from FMLA leave.

The equivalent position will have virtually identical pay, benefits and working conditions, including privileges, perquisites, and status, as the position the employee held prior to the leave. The position also must involve substantially similar duties and responsibilities, which must entail substantially equivalent skill, effort, responsibility, and authority. All positions within the same job classification are considered "equivalent positions" for the purposes of this policy, so long as these conditions are met. For licensed employees, all positions with the

same salary and licensure requirements also will be considered equivalent positions, so long as these conditions are met.

**2. Key Employees**

Key employees do not have the right to be restored to the same or an equivalent position upon their return from FMLA leave. Key employees are salaried FMLA-eligible employees who are among the highest paid 10 percent of all employees. If restoring a key employee would result in substantial and grievous economic injury to the school system, then the school system has no obligation to restore the employee to the same or an equivalent position.

An employee will be informed at the time leave is taken if he or she is considered a key employee and will be informed once a determination is made that the employee will not be restored to the same or an equivalent position upon return from FMLA leave. A key employee who has been informed that he or she will not be restored still has the right to health benefits for the full period in which he or she is eligible for FMLA leave.

**O. CONTINUATION OF HEALTH BENEFITS**

Health care coverage and benefits will be continued for the duration of an employee's FMLA leave on the same conditions as would have been provided if the employee had continued working. Employees do not have the right to the accrual of earned benefits during FMLA leave. If an employee takes intermittent or reduced leave, he or she has the right to maintain the same health care benefits, but earned benefits may be reduced in proportion to hours worked when such a reduction is normally based upon hours worked.

The school system may recover from the employee the cost of health insurance premiums paid on behalf of the employee while the employee was on unpaid FMLA leave if the employee does not return to work after the leave, so long as the reason for not returning does not relate to a serious health condition or to circumstances beyond his or her control.

**P. POSTING REQUIREMENT**

The superintendent or designee shall ensure that notices of FMLA provisions and information on procedures for filing complaints are posted in places that are readily accessible to employees and applicants.

**Q. RECORDKEEPING REQUIREMENT**

The human resources office shall maintain records of the following information for at least three years: basic payroll and identifying employee data, the dates (or hours) of FMLA leave taken by each employee, and premium payments of employee benefits. Medical information, such as that relating to medical certifications, also will be maintained in the human resources office in confidential medical records.

The assistant superintendent will maintain for at least three years copies of employee notices, including general and specific notices, any other documents describing employee benefits or policies, and records of disputes between the school system and any employee regarding designation of FMLA leave.

**R. ENFORCEMENT**

An employee may file a complaint with the U.S. Department of Labor or bring a private lawsuit against the school system for violations of the FMLA.

FMLA does not affect any federal or state law prohibiting discrimination or supersede any state or local law that provides greater family or medical leave rights.

**S. OUTSIDE EMPLOYMENT/FALSIFICATION OF RECORDS**

The school system may deny FMLA benefits to an employee who engages in self-employment or employment for any employer while on continuous leave if the employee fraudulently obtained FMLA leave. Falsification of records and failure to correct records known to be false are violations of this policy and will result in discipline, which may include termination from employment.

Legal References: Americans With Disabilities Act, 42 U.S.C. 12101 *et seq.*; Family and Medical Leave Act of 1993, as amended, 29 U.S.C. 2601 *et seq.*; 29 C.F.R. pt. 825; National Defense Authorization Act for 2008, Pub. L. 110-181 sec. 585; *North Carolina Public Schools Benefits and Employment Policy Manual*, N.C. Department of Public Instruction (current version)

Cross References: Leave (policy 7510)

Adopted: January 11, 2016

Revised: November 8, 2021; {DATE}

Employees are expected to avoid engaging in any conduct that creates or gives the appearance to the public of creating a conflict of interest with their job responsibilities. Employees shall not engage in or have a financial interest, directly or indirectly, in any activity that conflicts with duties and responsibilities in the school system. Although conflicts of interest are not limited to those described in this policy, at a minimum employee must comply with the Watauga County Board of Education (the "board") directives established below. In addition, employees engaged directly or indirectly in the school system's procurement, purchasing, and/or contracting process must comply with policy 6401/9100, Ethics and the Purchasing Function.

**A. CONTRACTS WITH THE BOARD**

An employee shall not do any of the following:

1. obtain a direct benefit from a contract that he or she is involved in making or administering on behalf of the board, unless an exception is allowed pursuant to G.S. 14-234 or other law;
2. participate in the selection, award, or administration of a contract supported in whole or in part by federal funds if the employee has a real or apparent conflict of interest as described in policy 8305, Federal Grant Administration;
3. influence or attempt to influence anyone who is involved in making or administering a contract on behalf of the board when the employee will obtain a direct benefit from the contract; or
4. solicit or receive any gift, favor, reward, service, or promise of reward, including a promise of future employment, in exchange for recommending, influencing or attempting to influence the award of a contract by the board.

An employee is involved in administering a contract if he or she oversees the performance of the contract or has authority to interpret or make decisions regarding the contract. An employee is involved in making a contract if he or she participates in the development of specifications or terms of the contract or participates in the preparation or award of the contract.

An employee derives a direct benefit from a contract if the employee or his or her spouse does any of the following: (1) has more than a 10 percent ownership or other interest in an entity that is a party to the contract; (2) derives any income or commission directly from the contract; or (3) acquires property under the contract. An exception is allowed for employment contracts between the board and the spouse of the superintendent if approved by the board in an open session meeting in accordance with the requirements of state law and subsection D.2 of policy 7100, Recruitment and Selection of Personnel.

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**B. MISUSE OF INFORMATION**

An employee shall not do any of the following:

1. use information, which was learned in the employee's role as an employee and which has not been made public, to acquire a financial interest or gain a financial benefit, or to intentionally help another do so; or
2. acquire or gain, or intentionally help another person to acquire or gain, a financial interest or benefit in contemplation of official action by the employee or the school system.

**C. NON-SCHOOL EMPLOYMENT**

The board recognizes that some employees may pursue additional compensation on their own time. Any such employee shall not engage in the following:

1. non-school employment that adversely affects the employee's availability or effectiveness in fulfilling job responsibilities;
2. work of any type in which the sources of information concerning customer, client or employer originate from any information obtained through the school system;
3. work of any type that materially and negatively affects the educational program of the school system;
4. any type of private business using system facilities, equipment or materials, unless prior approval is provided by the superintendent;
5. any type of private business during school time or on school property, unless prior approval is provided by the superintendent;
6. having any financial or material interest in supplying books, maps, furniture, and/or apparatus to the school system or to any school in the system;
7. acting as an agent for any author, publisher, or dealer in recommending or procuring the use of any book, map, apparatus, furniture, school supply, construction material, or service of any kind;
8. disclosing information concerning a school system business transaction to an individual, organization, or company seeking to conduct business with the Watauga County Schools;
9. accepting a gift or soliciting a gift from any individual, company, or organization or accept any other types of favors, services, or accommodations from any

individual, company, or organization with whom the school district has an actual or potential contractual relationship;

An employee may accept a meal or token promotional gift (value less than \$25) that is given routinely by an individual, company, or organization, such as pens, notepads, and marketing materials.

10. using confidential information for financial or personal benefit or share such information with an individual not affiliated with the school district for that individual's financial or material benefit; or
11. accepting money or gifts from outside individuals, companies, or organizations for the purpose of influencing a student's decision to attend a particular college or university.

The superintendent may grant prior approval for work performed under subsections C.4 and C.5 above if such work enhances the employee's professional ability or professional growth for school-related work. The superintendent may establish reporting procedures that require employees to notify the school system of any non-school employment.

Except as otherwise provided in the superintendent's contract, the superintendent is subject to the provisions of this section on non-school employment and shall seek prior approval from the board before engaging in consulting or other employment activities outside the school system. The board expects the superintendent to comply with all sections of this policy and all state and federal laws regarding conflicts of interest in his or her position as superintendent.

#### **D. RECEIPT OF GIFTS**

No employee may solicit or accept any gifts from any potential or current provider of E-rate services or products in violation of federal E-rate program gifting rules.

No employee may solicit or accept trips, meals, favors, or other gifts or items of monetary value from any other person or group desiring to do or doing business with the school system, unless such gifts are of nominal value (\$50 or less) and (1) are instructional products or advertising items of nominal value that are widely distributed; (2) are honorariums for participating in a meeting; (3) are meals served at a banquet; or (4) are approved for receipt by the superintendent or designee. These exceptions for gifts of nominal value do not apply to employees involved in purchasing and procurement activities except as provided in policies 6401/9100, Ethics and the Purchasing Function, and 8305, Federal Grant Administration, and applicable state and federal law.

#### **E. TRAINING VIOLATIONS**

The superintendent or designee shall ensure that all personnel are aware of the

requirements of this policy and applicable conflict of interest laws.

As required by G.S. 115C-335.15, employees who are involved in the making or administering of contracts shall receive conflict of interest training that includes position-specific education on conflicts of interest and ethical standards of conduct. The training must be provided by qualified sources approved by the board.

#### **F. VIOLATIONS**

Any individual aware of any violation of this policy, policy 2121, Board Member Conflict of Interest, policy 6401/9100, Ethics and the Purchasing Function, the conflict of interest provisions of policy 8305, Federal Grant Administration, or applicable conflict of interest laws shall report such violation in accordance with policy 1760/7280, Prohibition Against Retaliation. Employees who violate this policy, policy 6401/9100, or the conflict of interest provisions of policy 8305, will be subject to disciplinary action.

#### **F.G. DISCLOSURES**

The Superintendent, Principals, Assistant Principals, and Central Level Administrators shall complete disclosure forms annually indicating that they have been free of any conflict of interest during the preceding year and will maintain that position during the next year.

#### **G.H. ETHICS REVIEW COMMITTEE**

The Superintendent shall appoint an Ethics Review Committee to investigate and review any complaints of a conflict of interest, including recommendations for appropriate sanctions.

Legal References: 2 C.F.R. 200.318(c)(1); 47 C.F.R. 54.503; FCC Sixth Report and Order 10-175; G.S. 14-234, -234.1; 133-32, -33; 115C-47(17a), -47(18), -335.15; 133-32; Attorney General Opinion requested by L.W. Lamar regarding G.S. 133-32, the Applicability to Attorneys and Law Firms Providing Professional Services to Local Boards of Education, dated May 13, 1993

Cross References: Prohibition Against Retaliation (policy 1760/7280), Board Member Conflict of Interest (policy 2121), Ethics and the Purchasing Function (policy 6401/9100), Recruitment and Selection of Personnel (policy 7100), Federal Grant Administration (policy 8305)

Adopted: December 14, 2015

Replaces: Policy 3.08.90, Conflict of Interest (in part related to employees)

Revised: March 11, 2019; {DATE}

Guidance and counseling programs are provided by the school system with the ultimate aim of improving student performance by implementing strategies and activities that support and maximize student learning; helping students to grow in their personal and social development; and providing a foundation for acquiring the skills that enable students to graduate career and college ready and prepared to be lifelong learners. The principal of each school, in consultation with the student services director, shall develop a counseling program that is data-driven and meets the objectives of the State Board of Education's comprehensive school counseling program curriculum and the academic, career, and social/emotional developmental needs of the student population at that school. The program will include individual and group counseling, classroom presentations, academic advising, career development services, consultation, parent education, and other responsive services.

In addition, the counseling program will incorporate the following specific elements.

**A. INVOLVEMENT OF PARENTS AND OTHERS**

The counseling program is the shared responsibility of teachers, counselors, parents and community members, and should operate with the collaboration of all individuals involved in educating students, including those who assist children with special needs or students who are at risk of dropping out of school or not meeting performance expectations. Input from parents and students should be sought in accordance with the school's parental involvement plan (See policy 4002, Parental Involvement.)

Each year, the principal or designee shall inform parents of the guidance and counseling services available to students. Parents will be notified of the right to opt their students out of participation in certain group academic or career guidance or personal or social counseling services of a generic nature (see policy 4002).

**B. PROVISION OF COUNSELING SERVICES**

Counseling services may be provided on an individual basis or in small or large groups. Students may seek counseling or be referred by staff or parents. School officials and teachers may recommend a counseling program to help a student meet standards of conduct and academic performance established by the board and school system administrators. If students have extensive needs or needs that go beyond the purpose of the counseling program, school counselors may refer them to community resources.

Counseling programs are most effective when voluntarily entered into by a student. Students will not be required to attend individual or small group counseling sessions to address identified significant personal issues unless agreement has been reached with the parent and student in a behavior contract, an intervention plan or, for special education students, an individualized education plan. (See student behavior policies (4300 series), policy 3420, Student Promotion and Accountability, and policy 3520, Special Education

Programs/Rights of Students with Disabilities.)

**C. PEER-TO-PEER SUPPORT PROGRAMS**

All schools with grades six and higher will have peer-to-peer student support programs that address areas such as conflict resolution, general health and wellness, and mentoring. Schools are encouraged to implement peer-to-peer student support programs in other grades as appropriate.

**C.D. ACADEMIC ADVISING**

School counselors and other guiding adults in middle and high schools shall support equitable access to opportunities and rigorous and relevant curricula for all students. Prior to the ninth grade, students will be informed about the course requirements for regular and accelerated college entry and the availability of early graduate scholarships for those students who complete high school in three years. School counselors shall encourage ninth grade students to complete the requirements for college entry in less than four years, if feasible and appropriate.

**D.E. NOTIFICATION OF SAFE SURRENDER LAW**

School personnel shall annually provide all students in grades 9 through 12 with information on the manner in which a parent may lawfully abandon a newborn baby with a responsible person, in accordance with Article 5A of Chapter 7B of the General Statutes G.S. 7B-500.

**E.F. EMPLOYEE MANDATORY REPORTING**

Any staff member who is aware that a student is contemplating suicide or is otherwise suffering from an emotional or psychological crisis must immediately notify the counseling program in accordance with any rules established by the superintendent or principal.

Any counselor or other staff member who knows or has cause to suspect maltreatment of a child must report the information as provided in policy 4240/7312, Child Abuse and Related Threats to Child Safety, and as required by law.

**F.G. CONFIDENTIALITY**

Information obtained in a session with a counselor may be privileged and protected from disclosure as provided by law. A counselor cannot be required to testify concerning privileged information unless, as provided by G.S. 8-53.4, the student waives the privilege or the court compels testimony as necessary to the proper administration of justice. The school counselor privilege does not, however, exempt the counselor from reporting child abuse as required by law and policy 4240/7312.

Any notation made by a counselor for his or her own use is a confidential document and is neither a public record nor a part of the student's record. Such confidential documents do not have to be shared with parents or others except as required by law. Any document prepared by a counselor that is shared or intended to be shared with other staff is considered an educational record of the student and is available to the parent or eligible student in accordance with policy 4700, Student Records.

Legal References: Family Educational Rights and Privacy Act, 20 U.S.C. 1232g; G.S. 7B-301,—500; 7B art. 5A; 8-53.4; 110-105.4; 115C-12, -47, -400, -401; 116 art. 23; State Board of Education Policies GRAD-006, SCOS-011

Cross References: Parental Involvement (policy 4002), Goals and Objectives of the Educational Program (policy 3000), Student Promotion and Accountability (policy 3420), Special Education Programs/Rights of Students with Disabilities (policy 3520), Child Abuse and Related Threats to Child Safety (policy 4240/7312), Student Behavior Policies (4300 series), Student Records (policy 4700)

Adopted: August 3, 2015

Replaces: Board policy 5.05.56, Safe Surrender of a Newborn

Revised: August 14, 2017 (Legal references only); August 12, 2020 (Legal references only); September 13, 2021; {DATE}

## **IMMUNIZATION AND HEALTH REQUIREMENTS FOR SCHOOL ADMISSION**

*Policy Code:*

**4110**

The Watauga County Board of Education (the “board”) requires all students to meet the eligibility requirements for school admission established by the State and the board, including immunization and health assessments. The principal or designee shall maintain on file immunization and health assessment records for all students, and these records may be inspected by officials of the county or state health departments in accordance with state and federal law. Each school principal shall file required reports with the Department of Health and Human Services and the Department of Public Instruction.

### **A. IMMUNIZATION**

#### **1. Requirements for Initial Entry**

Within 30 calendar days of his or her first day of attendance in the school system, each student must show evidence of age-appropriate vaccination in accordance with state law and regulation, including the following vaccines as applicable:

- a. DTaP (diphtheria, tetanus, and pertussis);
- b. poliomyelitis (polio);
- c. measles (rubeola);
- d. rubella (German measles);
- e. mumps;
- f. Haemophilus influenzae, type b (Hib);
- g. hepatitis B;
- h. varicella (chickenpox);
- i. pneumococcal conjugate (only for children entering school before age five);  
and
- j. any other vaccine as may be required by law or regulation.

The current required vaccination schedule is available from the N.C. Immunization Branch online at <http://www.immunize.nc.gov/>.

#### **2. Additional Requirements**

- a. All students entering seventh grade or who have reached age 12, whichever comes first, are required to receive the following:
  - i. a booster dose of Tdap (tetanus, diphtheria, and pertussis vaccine), if they have not previously received it; and
  - ii. the meningococcal conjugate vaccine (MCV).
- b. All students entering the twelfth grade or who have reached age 17 are required to receive a booster dose of MCV.

3. Certificate of Immunization

- a. Evidence of immunizations must be shown in the form of a certificate furnished by a licensed physician or by the health department. A student who received immunizations in a state other than North Carolina must present an official certificate that meets the immunizations requirements of G.S. 130A-154(b).
- b. Principals are required to refuse admittance to any child whose parent or guardian does not present a medical certification of proper immunizations within the allotted time. If, following approved medical practice, the administration of a vaccine requires more than 30 calendar days to complete, upon certification of this fact by a physician, additional days may be allowed in order to obtain the required immunizations.
- c. Exceptions to the immunization requirements will be made only for religious reasons or for medical reasons approved by a physician pursuant to state law and regulation.

Medical exemptions must be certified in writing by a physician licensed to practice in NC, and must state the basis for the exemption, the specific vaccination(s) that the student should not receive, and the length of time for which the exemption is necessary.

Religious exemptions require the submission of a written statement from a parent or guardian saying that he/she holds bona fide religious beliefs in opposition to immunization requirements.

**B. HEALTH ASSESSMENT/VISION SCREENING**

Within 30 calendar days of the first day of school entry, all students entering public schools for the first time, regardless of grade level, must furnish to the principal a form that meets the requirements of state law indicating that the student has received a health assessment pursuant to G.S. 130A-440. A student who fails to meet this requirement will not be permitted to attend school until the required health assessment form has been presented.

Such absences will not be considered suspensions, and the student will be given an opportunity to make up work missed during the absence as described below. The principal or designee shall, at the time of enrollment, notify the parent, guardian, or person standing *in loco parentis* that the completed health assessment form is needed on or before the child's first day of attendance. The date the student's health assessment form is received will be recorded in the student's official record, and the form will be maintained on file in the school.

The assessment must include a medical history and physical examination with screening for vision and hearing and, if appropriate, testing for anemia and tuberculosis. The health assessment must be conducted no more than 12 months prior to the date of school entry. Exceptions to the health assessment requirement will be made only for religious reasons.

~~Vision screening must comply with the vision screening standards adopted by the former Governor's Commission on Early Childhood Vision Care.~~ Within 180 days of the start of the school year, the parent of the child must present to the principal or designee certification that within the past 12 months, the child has obtained a comprehensive eye examination performed by an ophthalmologist or optometrist or has obtained a vision screening conducted by a licensed physician, an optometrist, a physician assistant, a nurse practitioner, a registered nurse, an orthoptist or a vision screener certified by Prevent Blindness North Carolina.

Children who receive and fail to pass the required vision screening must obtain a comprehensive eye exam conducted by a duly licensed optometrist or ophthalmologist. The provider of the exam must present to the parent a signed transmittal form, which the parent must submit to the school. If a member of the school staff has reason to believe that a child enrolled in kindergarten through third grade is having problems with vision, the staff member may recommend to the child's parent that the child have a comprehensive eye examination.

No child will be excluded from attending school solely for a parent's failure to obtain a comprehensive eye exam. If a parent fails or refuses to obtain a comprehensive eye exam or to provide the certification of a comprehensive eye exam, school officials shall send a written reminder to the parent of required eye exams.

Upon request, the teacher(s) of a student subject to an absence from school for failure to provide the health assessment form required by this section shall provide to the student all missed assignments, and to the extent practicable, the materials distributed to students in connection with the assignments. The principal or designee shall arrange for the student to take home textbooks and school-furnished digital devices for the duration of the absence and shall permit the student to take any quarterly, semester, or grading period examinations missed during the absence period.

#### C. HOMELESS STUDENTS

Notwithstanding the provisions of this policy, admissions for homeless students will not

be prohibited or delayed due to the student's inability to provide documentation of immunizations or health assessments. The homeless liaison shall work with the student, parent/guardian, school personnel or other agencies to obtain documentation of immunization and/or the health assessment or to arrange for such immunizations and/or assessments in a timely manner.

#### **D. FOSTER CHILDREN**

Notwithstanding the provisions of this policy, admissions for students in foster care will not be prohibited or delayed due to the student's inability to provide documentation of immunizations or health assessments. The enrolling school will immediately contact the school last attended by the foster child to obtain any relevant documentation.

#### **E. CHILDREN OF MILITARY FAMILIES**

The board acknowledges that immunization requirements for newly enrolling children of military families are governed by the Interstate Compact on Educational Opportunity for Military Children (G.S. 115C-407.5) and G.S. 115C-407.12. Children of military families, as defined in policy 4050, Children of Military Families, will have 30 days from the date of enrollment to obtain any required immunization. For a series of immunizations, initial vaccinations must be obtained within 30 days.

Legal References: Elementary and Secondary Education Act, 20 U.S.C. 6311(g)(1)(E); McKinney-Vento Homeless Assistance Act, 42 U.S.C. 11431 *et seq.*; G.S. 115C-390.2(l), -407.5, -407.12; 130A-152 to -157, -440 to -443; 10A N.C.A.C. 41A .0401

Cross References: Children of Military Families (policy 4050), Homeless Students (policy 4125), Attendance (policy 4400)

Other Resources: N.C. Immunization Branch, available at <http://www.immunize.nc.gov/>

Adopted: July 14, 2014, replaces policies 5.03.40 and 5.03.50

Revised: August 3, 2015; March 14, 2016; November 13, 2017; October 5, 2020; September 12, 2022; March 13, 2023; {DATE}

## **CHILD ABUSE AND RELATED THREATS TO CHILD SAFETY**

*Policy Code:*     **4240/7312**

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The Watauga County Board of Education (the “board”) is concerned with the health, safety, and welfare of all children and recognizes the legal and ethical obligations that school employees, contractors, and volunteers have to report known or suspected maltreatment of children. North Carolina has two separate systems that mandate reports to state authorities of suspected child abuse, neglect, dependency, or maltreatment and a third system for mandated reporting of certain crimes against juveniles to local law enforcement.

When a parent or other caretaker is suspected to have caused a child to be abused, neglected, or dependent, this information must be reported to the county child welfare agency. Suspected human trafficking, involuntary servitude, and sexual servitude of a child and death of a child as a result of maltreatment are special forms of child abuse under law and must be reported to the county child welfare agency, regardless of the relationship between the victim and the perpetrator. By contrast, suspected child maltreatment by a caregiver in a child care facility, including in a licensed preschool classroom or other licensed classroom or program operated by the school system, must be reported to the Department of Health and Human Services (DHHS), Division of Child Development and Early Education (DCDEE). When the source of the harm or threat of harm to the child is uncertain, a report should be made to both the county child welfare agency and DCDEE.

In addition, state law mandates reports to local law enforcement when a child is a victim of certain violent offenses, sexual offenses, or misdemeanor child abuse. An adult who knows or reasonably should have known of any of these offenses inflicted upon a child must report that information immediately.

The board supports all employees who in good faith make a report under North Carolina’s mandated reporting laws.

The superintendent shall develop any necessary procedures for making a report or otherwise implementing this policy.

### **A. DUTY TO REPORT CERTAIN CRIMES AGAINST CHILDREN TO LOCAL LAW ENFORCEMENT**

A school employee, contractor, or volunteer is legally required to report to local law enforcement when the employee or volunteer knows or reasonably should know that a child has been a victim of any of the following crimes:

1. a sexual offense (which for purposes of this policy, the board interprets to mean any offense that relates to inappropriate sexual conduct with or involving a child);
2. an offense that inflicts serious bodily injury or serious physical injury upon the child by nonaccidental means;

3. an attempt, solicitation, or conspiracy to commit either offense described above, or aiding and abetting either offense; or
4. misdemeanor child abuse, which occurs when a parent or any other person providing care or supervision to a child who is under the age of sixteen (1) inflicts or allows to be inflicted physical injury to the child by nonaccidental means or (2) creates or allows a substantial risk of physical injury to the child by nonaccidental means.

Compliance with this reporting requirement does not relieve the employee or volunteer from his or her duty to report pursuant to Sections B and C of this policy. The employee, contractor, or volunteer also shall immediately report the case to the principal.

A school employee, contractor, or volunteer is immune by statute from any state civil and/or criminal liability when making a report in good faith under this Section. An employee who fails to report or who prevents another person from making a report is subject to disciplinary action by the school system and civil and criminal action under the law. A volunteer or contractor who fails to report or prevents another person from making a report may be restricted from school property or lose the privilege of volunteering for or contracting with the school system and is subject to civil and criminal action under the law.

**B. DUTY TO REPORT CHILD ABUSE, NEGLECT, DEPENDENCY, OR DEATH AS A RESULT OF MALTREATMENT TO THE COUNTY CHILD WELFARE AGENCY**

A school employee, contractor, or volunteer who knows or has cause to suspect that (1) a parent, guardian, custodian, or caretaker of a child has caused the child to be abused, neglected, or dependent, or (2) that a child has died as a result of maltreatment or been a victim of human trafficking, involuntary servitude, or sexual servitude by any person is legally required to report the case to the director of social services. The employee, contractor, or volunteer also shall immediately report the case to the principal. Any doubt about reporting a suspected situation must be resolved in favor of reporting, and the report must be made immediately.

A school employee, contractor, or volunteer is immune by statute from any civil and/or criminal liability when making a report in good faith under this Section. An employee who fails to report or who prevents another person from making a report is subject to disciplinary action by the school system and civil and criminal action under the law. A volunteer or contractor who fails to report or prevents another person from making a report may be restricted from school property or lose the privilege of volunteering for or contracting with the school system and is subject to civil and criminal action under the law.

**C. DUTY TO REPORT CHILD MALTREATMENT IN A CHILD CARE FACILITY TO THE DIVISION OF CHILD DEVELOPMENT AND EARLY EDUCATION**

A school employee, contractor, or volunteer who has cause to suspect that a child in a child care facility has been maltreated by a caregiver or has died as a result of maltreatment occurring in a child care facility is legally required to report the case to DCDEE.

A "child care facility" includes any DHHS-licensed classroom or program operated by the school system, including for example, licensed pre-school or Title I classrooms, licensed afterschool programs, and licensed developmental day programs.

Any doubt about reporting a suspected situation or uncertainty whether the child's care is being provided in a child care facility must be resolved in favor of reporting, and the report should be made immediately.

An employee making a report to DCDEE also shall immediately report the case to the principal. If the suspected maltreatment occurred in a licensed preschool classroom or other licensed classroom or program operated by board, the principal shall immediately notify the superintendent of the suspected maltreatment. No reprisals of any kind may be taken against an employee who makes a good faith report of child maltreatment occurring in any licensed preschool classroom or other licensed classroom or program operated by the board.

An employee who fails to make a report as required by law and this policy may be subject to disciplinary action by the school system. In addition, if the employee works in a licensed preschool classroom or other licensed classroom or program operated by the board, failure to report maltreatment of a child in the program or classroom may itself constitute child maltreatment and result in the employee being placed on the state child maltreatment registry. A volunteer or contractor who fails to report or prevents another person from making a report may be restricted from school property or lose the privilege of volunteering for or contracting with the school system.

**D. DUTY TO REPORT LICENSED EMPLOYEES TO THE STATE BOARD OF EDUCATION~~SUPERINTENDENT OF PUBLIC INSTRUCTION~~**

In addition to the other reporting requirements of this policy, any administrator who knows, ~~or has reason to believe, or has actual notice of a complaint~~ that a licensed employee has engaged in misconduct resulting in dismissal, disciplinary action, or resignation~~conduct that would justify automatic revocation of the employee's license pursuant to G.S. 115C-270.35(b) or involves physical or sexual abuse of a child~~ shall report that information to the State Board of Education~~Superintendent of Public Instruction~~ in accordance with subsection C.4 of policy 4040/7310, Staff-Student Relations. For purposes of this section, "misconduct" is conduct that would justify automatic revocation of the employee's license pursuant to G.S. 115C-270.35(b) or the infliction of physical injury against a child other than by accident or in self-defense.

**E. COOPERATION WITH STATE AND LOCAL AGENCIES**

1. The principal may establish a contact person in the school to act as a liaison with state and local agencies charged with investigating reports made pursuant to this policy.
2. Employees shall cooperate fully with agency personnel conducting an investigation.
3. In a case under the jurisdiction of local law enforcement in which the child's parent, guardian, or custodian is suspected of wrongdoing, employees shall permit the child to be interviewed by local law enforcement on school campuses during school hours. Otherwise, permission from the parent, guardian, or custodian must be obtained before the child may be interviewed by local law enforcement on school campus during school hours.
4. In a case under the jurisdiction of social services, employees shall permit the child to be interviewed by social services on school campuses during school hours.
5. In a case under the jurisdiction of DCDEE concerning suspected child maltreatment by a caregiver in a child care facility, permission from the parent must be obtained before the child may be interviewed on school campus during school hours.
6. Employees shall provide confidential information to agency personnel, so long as the disclosure does not violate state or federal law.
7. Any confidential information disclosed by the investigating agency to employees must remain confidential and may be redisclosed only for purposes directly connected with carrying out the responsibilities of the school system or the employee.

**F. SHARING INFORMATION WITH OTHER AGENCIES**

Upon request and to the extent permitted by law, school system officials shall share with other agencies designated in G.S. 7B-3100(a) information that is relevant to (1) any assessment by the department of social services of a report of child abuse, neglect, dependency or death as a result of maltreatment; (2) the provision or arrangement of protective services in a child abuse, neglect, or dependency case by the department of social services; or (3) any case in which a petition is filed alleging that a juvenile is abused, neglected, dependent, undisciplined, or delinquent. School system officials and the designated agencies must continue to share such information until the protective services case is closed by the department of social services or, if a petition is filed, until the juvenile is no longer subject to the jurisdiction of juvenile court.

**G. CHILD SEXUAL ABUSE AND SEX TRAFFICKING TRAINING PROGRAM**

In even numbered years, the school system will provide a child sexual abuse and sex trafficking education and awareness training program for teachers, instructional support personnel, principals, and assistant principals. The program will include at least two hours of training related to best practices from the field of prevention, the grooming process of sexual predators, the warning signs of sexual abuse and sex trafficking, how to intervene when sexual abuse or sex trafficking is suspected or disclosed, legal responsibilities for reporting sexual abuse or sex trafficking, and available resources for assistance. Designated school personnel shall participate in such training as required by law and board policy.

#### **H. CHILD ABUSE AND NEGLECT INFORMATION AND RESOURCES FOR STUDENTS**

In accordance with G.S. 115C-47(65) and State Board of Education Policy SHLT-003, the school system will provide information on child abuse and neglect, including age-appropriate information on sexual abuse, to students in grades 6 through 12. Such information will be provided in the form of (1) a document given to all students in grades 6 through 12 at the beginning of each school year and (2) a display posted in visible, high-traffic areas throughout each secondary school.

Legal References: Family Educational Rights and Privacy Act, 20 U.S.C. 1232g; G.S. 7B-101, -301, -302, -309, -3100; 8-53.4; 14-208.6, -318.2, -318.4, -318.6; 110-90.2, -105.3, -105.4, -105.5; 115C-47(65), -270.35(b), -326.20, -375.20, -400, -402; 126-5; 16 N.C.A.C. 6C.0373; 16 N.C.A.C. 6D .0403; State Board of Education Policy SHLT-003

Cross References: Professional and Staff Development (policy 7800), Staff-Student Relations (policy 4040/7310), Student Records (policy 4700)

Adopted: July 14, 2014

Revised: July 9, 2018; September 9, 2019; January 13, 2020; March 12, 2020; August 9, 2021; May 8, 2023; {DATE}

School officials have the authority to conduct reasonable searches of students and to seize students' unauthorized materials for the purposes of maintaining a safe, orderly environment and upholding standards of conduct established by the Watauga County Board of education (the "board") or school. Any searches or seizures must be conducted in accordance with the standards described in this policy and any other applicable legal requirements. All school officials carrying out a search or seizure are expected to be knowledgeable about the ~~constitutional~~ legal rights of students and the appropriate procedures for conducting the search or seizure. A search must be justified at its inception, ~~and~~ permissible in scope, and conducted using methods that are narrowly tailored to be minimally intrusive. School officials shall make reasonable, good faith efforts to investigate allegations of misconduct before a student search is conducted.

This policy applies to searches conducted on school grounds, in school facilities, or at school-sponsored events.

Policy 3225/4312/7320, Technology Responsible Use, not this policy, applies to the search of school system-owned technological resources and the data located on school system-owned electronic equipment.

**A. SEARCHES BASED ON INDIVIDUALIZED REASONABLE SUSPICION**

A student or the student's possessions may be searched when a school official has reasonable suspicion that the search will turn up evidence that the particular student has violated or is violating a specific law or school rule. This reasonable suspicion must be based upon specific and articulable facts, which have been acquired through reliable and/or corroborated information from employees, students, law enforcement officers, or other credible sources, or upon visual or other evidence (e.g., the smell of alcohol or marijuana, an alert from a metal detector or drug dog) viewed in light of the totality of the circumstances and the school official's professional judgment. The scope of the search ~~and the methods used to conduct the search~~ must be reasonably related to the objectives of the search, and the methods used to conduct the search must be narrowly tailored to be and not excessively minimally intrusive in light of the age and sex of the student and the nature of the infraction.

Reasonable suspicion is not required if a student freely and voluntarily consents to the search of his or her person or possessions.

In accordance with the standards described above, the board authorizes the following types of searches based on reasonable suspicion.

**1. Searches of Personal Effects**

School officials may search a student's desk, locker, and/or personal effects,

including but not limited to purses, book bags, and ~~outer-clothing (for example, coats or jackets)~~ not currently being worn by the student. Policy 4318, Use of Wireless Communication Devices, addresses the circumstances under which searches of student cell phones and other electronic devices may be conducted.

2. Searches of Motor Vehicles

School officials may search the interior of a student's motor vehicle.

3. "Pat-down" Searches

A school official may conduct a frisk or "pat-down" search of a student's person. The search must be conducted in private by a school official ~~of the same gender~~ with an adult witness present. Both the school official conducting the search and the adult witness must be the same sex as the student.

4. More Intrusive Personal Searches

More intrusive personal searches are discouraged and are to be used only in very limited circumstances. A personal search is more intrusive when it extends beyond a student's personal effects and outer clothing and potentially exposes intimate body parts and/or undergarments. Such intrusive personal searches will be permissible only if: (1) the school official has reasonable suspicion that a search of a particular student will yield dangerous contraband (e.g., drugs or weapons); and (2) the school official has reasonable suspicion that the student has hidden the contraband in his or her undergarments. This search must be conducted in private by a school official of the same ~~sex~~gender as the student, with an adult witness of the same ~~sex~~gender present, and only with the prior approval of the superintendent or designee, unless the health or safety of students will be endangered by the delay that might be caused by following these procedures. Body cavity searches and searches that require a student to completely disrobe are strictly prohibited.

5. Metal Detector Searches

Except as provided in Section B.2, below, a metal detector may be used to search a student's person and/or personal effects. The search must be conducted by a school official and will be done in private, when feasible.

**B. SUSPICIONLESS GENERAL SEARCHES**

In an effort to maintain a safe, drug-free, and weapon-free learning environment, school officials may conduct certain types of general, suspicionless searches in the schools. All general searches must be conducted in a minimally-intrusive, nondiscriminatory manner (e.g., all students in randomly selected classrooms, every third individual entering a school-sponsored extracurricular activity) and may not be used to single out a particular

individual or category of individuals. The searches must be conducted in accordance with standardized procedures established by the superintendent or designee. Absent exigent circumstances (e.g., a report of a weapon on campus), prior to conducting general searches, school administrators must: (1) demonstrate to the superintendent or designee the need for general searches based upon a pattern or expectation of violence, drug activity, or disruption; and (2) provide written notice to students and parents of the school policy and/or procedures governing general searches, but not of specific times when or places where searches will be conducted.

When conducted in accordance with the standards described above and any corresponding procedures, the board authorizes the following types of general, suspicionless searches.

1. Searches of Desks and Lockers

School officials may conduct routine searches of student desks and lockers. Student desks and lockers are school property and remain at all times under the control of the school. However, students are expected to assume full responsibility for the security of their desks and lockers. Student desks and lockers may not be used to store illegal, unauthorized, or contraband materials.

A student's personal effects found within a desk or locker, such as a backpack, gym bag, or purse, may be searched only in accordance with the guidelines for individualized searches of personal effects described in Section A, above.

2. Point-of-Entry Metal Detector Searches

School officials may use metal detectors to conduct general point-of-entry searches of students and other persons for weapons.

3. Use of Trained Dogs

With the prior approval of the superintendent, and in conjunction with local law enforcement, school officials may use trained dogs (canines) to locate illegal materials. All dogs must be accompanied by a certified and authorized trainer who is responsible for the dog's actions and who is able to verify the dog's reliability and accuracy in sniffing out illegal material. Trained dogs may sniff lockers, desks, book bags, motor vehicles, and other inanimate objects. Dogs may not be used to sniff students or other persons under any circumstances. No students should be present during a dog search. Before a search occurs in a classroom, students will first be moved to a location outside the classroom.

**C. SEIZED ITEMS**

Any illegal contraband seized by school officials must be promptly turned over to the proper law enforcement authorities.

**D. FAILURE TO COOPERATE**

A student's failure to cooperate with a reasonable search or seizure as provided in this policy will be considered a violation of the expected standard of behavior, and will subject the student to appropriate consequences.

Any person who is not a student who refuses to permit a general metal detector search of his or her person and/or belongings at the point-of-entry to a school-sponsored activity may be denied entry to the activity.

**E. NOTICE**

School principals shall take reasonable steps to provide notice of this policy to students and parents at the start of each school year.

Legal References: U.S. Const. amend. IV; *New Jersey v. T.L.O.*, 469 U.S. 325 (1985), *Safford United School District #1 v. Redding*, 557 U.S. 364 (2009); G.S. 115C-47, -288, -307, -390.2, 391.2

Cross References: Technology Responsible Use (policy 3225/4312/7320), School Plan for Management of Student Behavior (policy 4302), Use of Wireless Communication Devices (policy 4318), School-Level Investigations (policy 4340)

Adopted: February 9, 2015

Replaces: Policy 5.05.64, Search and Seizure

Revised: {DATE}

The superintendent shall ensure that all notification and other requirements of state law and the Protection of Pupil Rights Amendment are met, including all legal requirements regarding the surveying of students.

**A. SURVEYS INVOLVING PROTECTED TOPICS**

**1. Definition of Protected Topic Survey**

For purposes of this policy, the following are considered a “protected topic”:

- a. political affiliations or beliefs of the student or the student’s parent;
- b. mental or psychological problems of the student or the student's family;
- c. sex behavior and/or attitudes;
- d. illegal, anti-social, self-incriminating or demeaning behavior;
- e. critical appraisals of other individuals with whom respondents have close family relationships;
- f. legally recognized privileged or analogous relationships, such as those of lawyers, physicians and ministers;
- g. religious practices, affiliations or beliefs of the student or the student’s parent; or
- h. income (other than that required by law to determine eligibility for participation in a program or for receiving financial assistance under such program).

For purposes of this policy, a “protected topic survey” is any survey, analysis, or evaluation that reveals information concerning any of the protected topics.

**2. Rules Regarding Protected Topic Surveys**

**a. Protection of Student Privacy**

The school system will take measures to protect the identification and privacy of students participating in any protected topic survey. These measures may include limiting access to completed surveys and to survey results, as allowed by law.

b. Parental Notification and Consent

The school system will notify parents at the beginning of each school year of the specific or approximate dates of administration of protected topic surveys. At least 10 days prior to the administration of a protected topic survey, parents and eligible students (students who are 18 years of age or older or who are emancipated minors) will be provided the opportunity to review both electronically and in person the process for providing consent to participate in the protected topic survey and the full text of the protected topic survey.

e. ~~Parental Consent~~

Parents will be provided notice of the opportunity to opt out of any protected topic survey given as part of the Centers for Disease Control and Prevention's Youth Risk Behavior Surveillance System or National Youth Tobacco Survey. Before a student will be permitted to participate in any other protected topic survey, the parent or eligible student must provide prior written or electronic consent.

**B. WELL-BEING QUESTIONNAIRES AND HEALTH SCREENING FORMS**

Before any student well-being questionnaire or health screening form is administered to students in kindergarten through third grade, the principal or designee shall provide parents with a copy of the questionnaire or form and shall inform parents of the means for parents to consent to the use of the questionnaire or form for their children. See also policy 4002, Parental Involvement.

If a well-being questionnaire or health screening form falls under the definition of a protected topic survey, all rules for protected topic surveys, as described above in subsection A.2, also apply.

**C. OTHER SURVEYS CREATED BY A THIRD PARTY**

Parents and eligible students have the right, upon request, to inspect any other survey created by a third party before the survey is administered or distributed to a student.

**D. COLLECTION OF STUDENT DATA FOR MARKETING PURPOSES**

The school system generally will not collect, disclose or use personal student information for the purpose of marketing or selling the information or otherwise providing the information to others for that purpose. However, in the event the board approves a collection, disclosure, or use of personal student information for one of those purposes,

the school system will (1) notify parents at the beginning of each school year of the specific or approximate dates of such collection, disclosure, or use, (2) allow parents to inspect any instrument used to collect the information before the instrument is administered or distributed to a student, and (3) offer the parent the opportunity to opt out of the collection, disclosure, or use of the student's personal information.

The preceding rules for the collection, disclosure, and use of personal student information do not apply if the school system collects, discloses, or uses personal information from students for the exclusive purpose of developing, evaluating, or providing educational products or services for or to students or educational institutions, such as the following:

1. college or other postsecondary education recruitment or military recruitment;
2. book clubs, magazines, and programs providing access to low-cost literary products;
3. curriculum and instructional material used by elementary schools and secondary schools;
4. tests and assessments used by elementary schools and secondary schools to provide cognitive, evaluative, diagnostic, clinical, aptitude, or achievement information about students (or to generate other statistically useful data for the purpose of securing such tests and assessments) and the subsequent analysis and public release of the aggregate data from such tests and assessments;
5. the sale by students of products or services to raise funds for school-related or education-related activities; and
6. student recognition programs.

#### **E. OTHER RELEVANT POLICIES**

In addition to this policy, the Watauga County Board of Education, with parental and community input, has developed other policies concerning surveys and related matters as required by the Protection of Pupil Rights Amendment. These policies include: 4002, Parental Involvement; 3210, Parental Request to Review Instructional Materials; 4700, Student Records; and 5240, Advertising in the Schools.

Legal References: Family Educational Rights and Privacy Act, 20 U.S.C. 1232g, h, 34 C.F.R. pt. 99; Protection of Pupil Rights Amendment, 20 U.S.C. 1232h; G.S. 115C-36, -76.25(a)(11), -76.45(a)(3), -76.65, -402.15

Cross References: Parental Involvement (policy 4002), Student and Parent Grievance Procedure (policy 4010), Parental Request to Review Instructional Materials (policy 3210), Student

Discipline Records (policy 4345), Student Records (policy 4700), Advertising in the Schools (policy 5240)

Adopted: January 12, 2015

Replaces: Policy 5.05.85, Protection of Pupil Rights

Revised: February 14, 2022, November 6, 2023, {DATE}

School trips designed to stimulate student interest and inquiry may be appropriate classroom extensions and may enhance learning in the classroom. School trips may help meet educational goals and objectives by connecting learning with experiences outside of the classroom environment.

All eligible students will be given an opportunity to participate in school sponsored trips. No student will be denied participation because of economic hardship or because the student has a disability.

**A. AUTHORIZATION OF SCHOOL SPONSORED TRIPS**

A school sponsored trip occurs when a student or group of students leaves a school campus under the sponsorship of the school and under the supervision of school employees to extend the educational experiences of that student or group. This includes such trips taken by extracurricular groups but does not include trips by athletic teams to participate in athletic events or competitions that are part of the team's regular season or playoffs. The principal must approve all school trips in advance and will ensure that all trips are consistent with the educational goals and objectives of the Watauga County Schools. School sponsored trips that involve travel out of state and/or are an overnight stays must also receive prior approval from the superintendent or designee. School sponsored trips that require travel outside of the continental United States are prohibited. Non-school sponsored trips involving international travel may take place only in compliance with section G of this policy. The superintendent shall develop procedures for the request and approval of school trips.

School personnel planning day field trips and overnight in-state trips ~~that do not involve overnight stays~~ shall submit requests to the principal for approval a minimum of 15 days in advance. ~~These requests shall be kept on file at the school, and are not forwarded to the superintendent.~~ Overnight field trip requests will be forwarded to the superintendent for approval.

Requests for field trips that involve an overnight stay and out of state ~~shall~~ first be submitted to the principal. Following approval by the principal, the principal shall forward the request to the superintendent by the 1<sup>st</sup> day of each month for the trip request to come before the Board of Education on the 2<sup>nd</sup> Monday of each month. The superintendent shall submit the approved requests to the Watauga County Board of Education ("board") for final approval. The superintendent has the discretion to approve field trips on an emergency basis when the timing is between regular Board of Education meetings. The superintendent shall notify the board at the next regularly scheduled meeting of any trips approved on an emergency basis and the rationale.

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**B. PARENTAL NOTICE AND CONSENT**

All students who participate in a school trip must provide signed parental consent forms to participate, unless a student is officially emancipated, in which case the student can consent on his or her own behalf. A student who fails to provide a signed consent form may be denied participation in the trip. No student's grade may be lowered or raised based on parental consent to participate in the school trip. The superintendent shall develop procedures to ensure parents are given proper notice of trip details and that parents provide signed authorization and consent regarding their child's participation and care during the trip.

**C. COSTS**

Students may be charged a fee for any school trip. Pursuant to policy 4600, Student Fees, and any corresponding fee waiver or reduction procedures, any fees imposed for school trips will be waived or reduced for students who demonstrate real economic hardship.

**D. STUDENT SAFETY AND DISCIPLINE**

Policy 4200/7270, School Safety, applies to all students, school employees, and volunteers while they are taking part in school trips. Students are also subject to the student behavior policies in the 4300 series, the Code of Student Conduct, and all school rules while participating in a school trip. The superintendent shall develop any additional regulations necessary to ensure student safety, provide adequate supervision, and clarify student behavior standards.

**E. TRANSPORTATION AND OTHER ACCOMMODATIONS**

Policy 6320, Use of Student Transportation Services, applies to the use of vehicles for all school trips. Policy 6315, Drivers, applies to all drivers of school buses and activity buses but does not apply to drivers of charter buses who are not subject to school board authority, aside from any agreed upon provisions in the contract with the charter company.

Any contracts with outside companies to provide transportation, lodging, or other accommodations related to a school trip must be approved in accordance with policy 6340, Transportation Service/Vehicle Contracts, and policy 6420, Contracts with the Board.

The superintendent shall develop any necessary additional regulations governing transportation on school trips. Groups planning to use a charter motor coach must follow the Watauga County Schools' guidelines. These guidelines and a list of approved commercial carriers are available on the Transportation Department page of the Watauga County Schools website.

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**F. CHAPERONES AND VOLUNTEERS**

All chaperones and volunteers accompanying students on school trips must meet the standards established by policy 5015, School Volunteers. The superintendent shall develop any necessary additional regulations governing chaperones and volunteers on school trips. At least one chaperone for each 15 students must be maintained on a field trip that does not include an overnight stay for Kindergarten through 8th grade students. At least one chaperone for each 20 students must be maintained on a field trip that does not include an overnight stay for high school students. At least one chaperone for each 15 students must be maintained on a field trip that includes an overnight stay regardless of grade level. At least one professional staff member must accompany students on any field trip, regardless of the number of non-certified staff and/or non-staff adult chaperones going on the trip.

**G. NON-SCHOOL SPONSORED TRIPS**

A non-school sponsored trip is a trip or tour organized and sponsored by (1) an individual teacher or group of teachers acting as private citizens and not as school employees, (2) a travel agency, or (3) any other individual or association not employed by, sponsored by, or under contract with the board. The board and the school system assume no responsibility or liability for non-school sponsored trips.

Non-school sponsored trips may be promoted or advertised in the schools only in accordance with policy 5240, Advertising in the Schools. Promotional materials may be displayed or distributed in the schools only in accordance with policy 5210, Distribution and Display of Non-School Material. All promotional materials for non-school sponsored trips must prominently state that the trip is not sponsored or endorsed by the school or school system. Moreover, any employee who sponsors or recruits students for a non-school sponsored trip shall notify the students and their parents or guardians that the trip is not sponsored or endorsed by the school or school system and shall obtain a signed acknowledgement from each parent that the trip is not school-sponsored. The trip sponsor must provide the principal with the planned itinerary of the trip before the trip can be promoted or advertised in school, and must provide the final itinerary, including sponsor and lodging contact information, at least one week before departure.

School employees shall not engage in any planning or administrative tasks associated with a non-school sponsored trip during the employee workday. School employees who want to use school facilities to hold a meeting concerning a non-school sponsored trip must follow the process set forth in policy 5030, Community Use of Facilities, and any corresponding regulations. School employees must use eligible leave for any time missed from work during a non-school sponsored trip.

School employees are prohibited from participating in non-school sponsored trips that conflict with instructional school days or are scheduled fewer than 10 school days prior to final exams or other state-mandated assessments.

Students will not be required to participate in any non-school sponsored trip. Students are discouraged from participating in non-school sponsored trips that conflict with instructional school days or are scheduled fewer than 10 school days prior to final exams or other state-mandated assessments. Absences for non-school sponsored trips will be designated as excused or unexcused in accordance with policy 4400, Attendance.

Legal References: G.S. 115C-47, -288, -307, State Board of Education Policy TRAN-009

Cross References: School Safety (policy 4200/7270), Goals and Objectives of the Educational Program (policy 3000), Student Behavior Policies (4300 series), Attendance (policy 4400), Student Fees (policy 4600), School Volunteers (policy 5015), Community Use of Facilities (policy 5030), Distribution and Display of Non-School Material (policy 5210), Advertising in the Schools (policy 5240), Drivers (policy 6315), Use of Student Transportation Services (policy 6320), Transportation Service/Vehicle Contracts (policy 6340), Contracts with the Board (policy 6420)

Adopted: February 8, 2016

Revised: August 14, 2017; \_\_\_\_\_

Replaces: Board Policy 4.01.20, Instructional Program (in part)

**I. TRIP APPROVAL**

All school trips ~~not involving an overnight stay~~ must be approved in advance by the principal. Trips involving an overnight and out of state stay must be approved in advance by the principal, the superintendent, and the Board of Education.

The superintendent has the discretion to approve field trips on an emergency basis when the timing is between regular Board of Education meetings. The superintendent shall notify the board at the next regularly scheduled meeting of any trips approved on an emergency basis and the rationale.

**A. Approval Criteria**

School trips must meet at least the following criteria to be approved:

1. have a trip sponsor who is currently a teacher in the school system;
2. be age appropriate, relevant to the course of study, and provide an effective method for accomplishing curriculum objectives;
3. keep to a minimum any disruptions of other educational programs and/or loss of instructional time;
4. be reasonable in terms of time, distance, and cost;
5. be planned with careful consideration of safety and security for students and all participants in all elements of the trip; and
6. ensure that all eligible students will be given an opportunity to participate and that no student will be denied participation because of the expense of the trip or because the student has a disability.

**B. School Trip Requests**

The trip sponsor must obtain prior approval for a school trip by filing the appropriate WCS Field Trip Request Form with the principal at least 15 days prior to the trip.

In addition to the information required by the trip request form, overnight trip requests must also include the following:

1. detailed itinerary with dates, times, locations, etc.;

2. a detailed description of how any requirements for transporting students with special needs or disabilities will be met;
3. detailed routing of the entire trip including all scheduled stops;
4. the name(s), address(es), and contact information for all lodging;
5. lodging details, including the number of students in each room, whether there will be a chaperone on each floor, room locations (e.g., block of adjacent rooms, separate floors for males and females, etc.), description of showering/restroom facilities, and other relevant information;
6. if all students and chaperones will not be lodged in a single building (e.g., different hotels, separate cabins, etc.), a detailed description of where the students will be in proximity to the rest of the group and to the chaperones.

The principal may grant preliminary approval if it will be impractical or impossible to complete all of the specific details of the request until permission to proceed has been granted. Final approval will be subject to receipt of all additional information required by the principal. In extenuating circumstances, the principal may extend the deadline for filing a trip request in advance.

#### **C. Review Process**

1. The principal shall review the school trip request subject to the criteria above and any other school-specific criteria. Incomplete requests shall be returned to the trip sponsor for correction.
2. The principal is encouraged to consult with the school system Finance Department and/or Transportation Department for trips that involve significant costs or complex travel arrangements.
3. The principal shall decide whether to approve the trip request and inform the trip sponsor of the decision within seven days of receiving the request.
4. The principal shall retain a copy of the request and return a copy to the trip sponsor.
5. For approved out of state ~~or~~ and overnight trips, the principal shall forward the school trip request to the superintendent by the first day of the month for review by the Board of Education on the second Monday of that month.

## **II. PREPARATION FOR AN APPROVED TRIP**

### **A. Contracts**

Any contracts related to the trip must be signed and approved by authorized school officials in accordance with policy 6420, Contracts with the Board, and policy 6421, Pre-Audit Certification. The trip sponsor does not have authority to enter contracts on behalf of the school system.

**B. Sponsor Responsibilities**

1. Prior to the trip, the trip sponsor shall carefully review all applicable board policies and regulations on school trips.
2. After a trip is approved, the trip sponsor may finalize all reservations and other arrangements for the trip. No expenditures related to the trip may be made nor any fees or payments collected until after the trip has received final approval as specified in this regulation.
3. The trip sponsor shall request all required substitute teachers per school procedure.
4. The trip sponsor shall make arrangements for students who have elected not to participate in the school trip to receive alternate educational services throughout the duration of the trip.
5. The trip sponsor shall develop a plan for the event that a student needs to be removed from the trip for disciplinary reasons.
6. Preferably ten but no less than two school days before the trip, the trip sponsor shall submit the following to the principal:
  - a. a final schedule/itinerary with contact information (addresses, phone numbers, maps, etc.) for all destinations and lodging. The information must be detailed enough that the principal can contact the trip sponsor and/or students at any time during the trip.
  - b. a final roster of all students, school personnel, and chaperones participating in the school trip; and
  - c. signed and completed parental consent forms as described below for all student participants.

The principal is authorized to cancel the trip if information is missing or incomplete (see also Section V, below).

**C. Student Attendance**

Students suspended from school or assigned to in-school suspension on the day of a school trip are prohibited from participating in the trip.

**D. Parental Consent**

1. All students must provide signed parental consent forms to participate in a school trip unless a student is officially emancipated, in which case the student can sign on his or her own behalf. A student who fails to provide a signed consent form may be denied participation in the trip.
2. The standard parental consent form approved by the superintendent or designee shall be used for all school sponsored field trips.
3. No student's grade may be lowered if the student's parent or guardian refuses consent to participate in the school trip.

**III. SAFETY AND SUPERVISION OF STUDENTS**

The principal and trip sponsor shall ensure that adequate supervision is maintained at all times, including at least the ratio of chaperones required by policy 3320, School Trips.

**A. Chaperone Requirements**

1. Chaperones must be current school system employees or volunteers, including parents, all of whom meet the standards established by Board policy, including background checks.
2. Chaperones must abide by all other applicable board policies, regulations, and school rules. At all times during a school trip, chaperones are strictly forbidden from engaging in any behavior that would violate board policy if an employee engaged in the behavior on school property. This includes, but is not limited to consuming, using, possessing, or being under the influence of alcoholic beverages, controlled substances, or tobacco products, or possessing a weapon. Principals shall ensure that chaperones receive written information explaining their responsibilities.
3. If applicable, a special needs student will be accompanied by a designated aide or nurse in accordance with the student's IEP or Section 504 plan. The aide or nurse will not be considered a chaperone for purposes of meeting the required student-chaperone ratio.

**B. Additional Chaperone Requirements for Overnight Trips**

1. Separate accommodations for male and female students and chaperones must be maintained. In all cases, single showering and/or restroom facilities shall be used by males and females at different times.

2. Chaperones must be assigned to accommodations on every floor that is occupied by students.
3. Chaperones shall not stay in the same room or private accommodation as a student unless necessary to meet student needs identified in the student's IEP or Section 504 plan or the chaperone is the student's parent or guardian. If the form of accommodation is a group dormitory, this prohibition shall not apply.

**C. Threat Assessment**

The principal and superintendent or designee shall check and heed any travel advisories or restrictions that have been issued by the State Department or other governmental agencies.

**D. Higher Risk Activities**

The principal and trip sponsor shall develop a detailed safety plan for trips that involve a higher risk of injury due to the nature of the activity (e.g., water activities) or location (e.g., theme parks, fairs/carnivals). Notice of higher risk activities must be included on all parental consent forms.

Swimming and other water sports or activities (e.g., diving, boating, rafting, canoeing, waterslides, etc.) are not permissible without explicit approval from the superintendent and without a certified lifeguard on duty during the activity. The exception to this stipulation is wading and tubing in water knee deep or less. A detailed written plan for ensuring continuous supervision of all water-related activities must be approved by the principal prior to any school trips involving such activities.

**E. Medical Treatment**

School employees may administer medication to a student during a school trip only upon prior written request of the student's parent or guardian and prior authorization by the principal or designee in accordance with policy 6125, Administering Medicines to Students. A separate request and authorization is required for the administration of medication to students (or a request to self-administer medicine) during the trip when the scheduled dose falls outside of regular school hours.

In the event of a medical emergency, the trip sponsor or any other staff member may arrange for the emergency medical treatment of a student. The school system will not be responsible for the cost of any such treatment.

As soon as possible during or after a medical emergency, the trip sponsor shall notify the principal and fill out a written incident/injury report.

#### **IV. TRANSPORTATION**

The most appropriate and cost-effective mode of transportation will be used for all school trips. The principal shall work with the transportation department ensure that the arranged transportation will accommodate any students with disabilities who require accommodations.

The following modes of transportation are available for school trips.

- Regular school buses for trips during regular school hours, so long as this use will not interfere with the regular transportation program.
- Activity buses for trips during or outside of regular school hours.
- Commercial transportation (e.g., charter bus, commercial flight) with a pre-approved company for field trips involving longer distances and/or multiple days of travel.

Private vehicles (i.e., not school-owned and not commercial), are prohibited for school trips without:

- the advance written approval of the principal and of the parent/guardian of any child to be transported in a private vehicle
- a signed statement (from the person operating the private vehicle) acknowledging that the board's insurance coverage will not apply, that the board is not liable for any accident or injury, and that only the driver's private personal auto insurance coverage will be in effect

In compliance with State Board of Education Policy TCS-H-006, the bus driver or another school system employee will review the School Activity Trip Safety Statement with school bus passengers before every school-related field trip.

#### **V. TRIP MODIFICATIONS AND/OR CANCELLATION**

If any significant aspect of the trip changes after the initial approval has been granted, the trip sponsor must restart the process established in subsection I.B and submit a new school trip request to the principal. The trip sponsor shall notify all students and parents of any significant modifications to the trip arrangements or itinerary prior to the trip date. The principal or superintendent may cancel or postpone school trips when necessary if conditions change such that student travel is unsafe or otherwise impracticable under the circumstances. The trip sponsor shall notify all students and parents of such cancellation or postponement as soon as reasonably possible.

The principal and trip sponsor shall endeavor to refund any trip fees or deposits to the fullest extent possible but such reimbursements are not guaranteed.

## **VI. RESPONSIBILITIES DURING A TRIP**

### **A. Sponsor's Responsibilities**

1. The trip sponsor and all chaperones shall be accessible by cellular phone at all times during the trip. The principal shall have the sponsor's contact information readily available.
2. For the duration of the trip, the trip sponsor shall keep a notebook or other record with the emergency contact information and parental consent forms for all participants.
3. The trip sponsor or designee shall store medication in a safe and secure location during the trip and shall administer medication to students in accordance with policy 6125, Administering Medicine to Students, except to a student who has been pre-authorized to secure and self-administer his or her own medication.
4. The trip sponsor is responsible for all activities during the trip and shall ensure that all activities conform to the approved itinerary.
5. The trip sponsor is responsible for enforcing applicable board policies, regulations, school rules, and the Code of Student Conduct. The trip sponsor shall impose disciplinary consequences for violations accordingly. The trip sponsor is encouraged to contact the principal prior to sending any student home from the trip early.
6. If any emergency occurs, the trip sponsor shall contact the principal as soon as possible. If the principal is unreachable, the trip sponsor shall contact the student services director or superintendent.

### **B. Student Responsibilities**

1. Students must abide by all applicable board policies, regulations, the Code of Student Conduct, and school rules at all times during school trips.
2. Students must also abide by any additional rules established by the principal to govern the conduct of students during participation in school trips. Students will be notified of such rules in advance of the trip.
3. If a student is found to have violated any of these rules and regulations and the trip sponsor deems it necessary to remove the student from a trip or from an activity during the trip, the student must be supervised by a

teacher or chaperone at all times. If a student is sent home early, he or she must be accompanied by a teacher or chaperone until he or she is released to the physical custody of his or her parent or guardian.

Cross Reference: Policy 3320, School Trips

Issued: February 8, 2016

# WATAUGA COUNTY FIELD TRIP REQUEST FORM

This request is for a: \_\_\_ day trip \_\_\_ out of state day trip \_\_\_ overnight trip \_\_\_ overnight & out of state trip

**Day and overnight trips must be submitted to the principal 15 days before the trip. ~~Overnight trip requests must be submitted to the superintendent by the first day of each month.~~ Overnight and out of state field trips require the prior approval of the principal, transportation director, superintendent, and Board of Education. All trips utilizing rental or charter vehicles require the prior approval of the transportation director. No employee will transport students in a personal vehicle and no employee or volunteer driver will transport students in a 12-15 passenger van. No more than five students will be transported by a school system employee or volunteer in any one vehicle other than a school bus or activity bus. . The superintendent has the discretion to approve field trips on an emergency basis when the timing is between regular Board of Education meetings. The superintendent shall notify the board at the next regularly scheduled meeting of any trips approved on an emergency basis and the rationale.**

Sponsoring teacher: (Print) \_\_\_\_\_ School: \_\_\_\_\_

Cell phone number: \_\_\_\_\_ Grade(s): \_\_\_\_\_ Number of students: \_\_\_\_\_

Departure date: \_\_\_\_\_ Return date: \_\_\_\_\_

Departure time: \_\_\_\_\_ Return time: \_\_\_\_\_

**Educational purpose:**

Trip destination including city, state, and all places to be visited: (attach detailed itinerary as needed)

\_\_\_\_\_  
\_\_\_\_\_

Purpose of trip and how it relates to the curriculum: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Supervision and Safety:**

Names of all school staff chaperones: \_\_\_\_\_

\_\_\_\_\_

Names of all non-school chaperones: \_\_\_\_\_

\_\_\_\_\_

All chaperones have a background check completed: ☐ Sponsoring teacher initials: \_\_\_\_\_

Are all site(s) accessible to students with disabilities? \_\_\_\_yes \_\_\_\_no How will students with disabilities be accommodated for site access and transportation? \_\_\_\_\_

Sponsoring Teacher Initials \_\_\_\_\_ (If applicable) A safety/supervision plan for high risk and/or water activities has been shared with the parents. Please attach a copy of the plan to this form if applicable. Sponsoring Teacher Initials (If applicable)

**Transportation plan:**

Mode of transportation: \_\_\_\_\_ Yellow bus with wheelchair lift \_\_\_\_\_ Yellow bus without wheelchair lift  
\_\_\_\_\_ Activity bus with wheelchair lift \_\_\_\_\_ Activity bus without wheelchair lift \_\_\_\_\_ Rental car/mini-van  
\_\_\_\_\_ Charter bus Other (Please explain) \_\_\_\_\_

Name of charter bus company (if checked above) \_\_\_\_\_

(If applicable, bus request form must be attached)

Driver/s: \_\_\_\_\_ Round trip mileage: \_\_\_\_\_ # of buses needed: \_\_\_\_\_

Total cost per student \$ \_\_\_\_\_ Source of funds: \_\_\_\_\_

The sponsoring teacher has reviewed Board policies 3320, 3320-R, and 6315: Teacher initials: \_\_\_\_\_

**Approval/Signatures:**

Sponsoring teacher signature: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Principal approval: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**Required signatures if applicable:**

Transportation Director approval: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Superintendent approval: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Board of Education approval: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Revised: October 30, 2023; \_\_\_\_\_