



Boulder County Purchasing
1325 Pearl Street
Boulder, CO 80302
purchasing@bouldercounty.org

INVITATION TO BID
COVER PAGE

BID Number: **7128-20**

BID Title: **NEDERLAND MINING MUSEUM
ROOF REPLACEMENT**

Pre-Bid Meeting: March 25, 2020; 10:00 a.m.
200 N. Bridge Street Nederland, CO 80466

BID Questions Due: April 1, 2020 – 2:00 p.m.

Submittal Due Date: April 14, 2020 – 2:00 p.m.

Email Address: purchasing@bouldercounty.org

Documents included in this package:

- BID Instructions
- Bond Requirements
- Terms and Conditions
- Specifications
- Insurance and W-9 Requirements
- Bid Tab Section
- Submittal Checklist
- Signature Page
- Attachment A: Location Map
- Attachment B: ICC-ES Evaluation Report
- Attachment C: Parks Rules and Regulations
- Attachment D: Sample Contract



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BID INSTRUCTIONS

BACKGROUND:

Boulder County Parks and Open Space (BCPOS) is requesting bids from qualified and experienced roofing Contractors to install and apply a rubberized roofing material to replace the current rolled roofing located at the Nederland Mining Museum. The building is located at 200 N. Bridge Street, Nederland, CO 80466. The selected Contractor will be responsible for removing and disposing of old rolled roofing, then installing barrier board and rubberized membrane to the building's entire roof structure. The selected Contractor will complete all aspects of the project, weather permitting, within sixty (60) business days from the date of Notice to Proceed.

This property is sometimes open to the public and is used as an office space for some BCPOS employees on occasion. Work performed on the roof of the building will be scheduled when the building is occupant free as to avoid disturbances of the museum's operations, its occupants and the public. The selected Contractor will be given access to the inside of the building upon onsite request through a BCPOS employee. The Contractor will be expected to operate within the rules and regulations of Parks and Open Space (see Attachment C).

CONTRACT LANGUAGE:

The successful proposer will be required to enter into a Contract for Services and meet all insurance requirements as required prior to any work beginning.

All bidders are instructed to thoroughly review all the stated insurance requirements for this Project, the insurance requirements stated are the minimum and standard for Boulder County Government, for this Project. All hired contractors are required to meet the insurance requirements, as stated, for contracted services as part of the Boulder County contracting process. Owner/Sole Proprietors/Officer are not Exempt from the county's insurance requirements and coverage limits. Please refer to the Insurance Requirements in this BID.

In the event the selected contractor is unable to commence work as agreed to, the Boulder County Commissioners may rescind the bid award and proceed to award the contract to another bidder based on this BID, re-bid the work, or proceed in any lawful manner the County deems necessary.

MANDATORY PRE-BID MEETING:

A Mandatory Pre-Bid meeting is scheduled, starting promptly at **10:00 a.m., March 25, 2020**. Interested Parties are asked to meet at the Nederland Mining Museum, 200 N. Bridge Street, Nederland, CO 80466. **All interested Parties are required to Sign-In at the Pre-Bid Meeting and attend the Project Site Visit. Bids from companies not represented or not in attendance at the mandatory, pre-bid meeting, and project site visit will not be accepted.**

ATTACHMENTS:

The following documents are part of this BID:

1. Attachment A: Location Map
2. Attachment B: ICC-ES Evaluation Report
3. Attachment C: Parks and Open Space Rules and Regulations
4. Attachment D: Sample Contract

PAYMENT & PERFORMANCE BONDS:

Both a payment and a performance bond are required for this project, if applicable, and each bond must equal 100% of the proposed cost. Please include the cost of this bonding into the total proposed cost.

Payment and Performance Bond requirements are addressed in the attached Sample Contract. Payment and Performance bonds will be required for BIDS over \$50,000.00. Bonds must be received and approved, by the County, prior to work commencing. If applicable, Retainage and a Notice of Final Settlement posting will be required.

BID BOND:

A bid bond is not required for this Project.

WRITTEN INQUIRIES:

All inquiries regarding this BID will be submitted via email to the Boulder County Purchasing Office at purchasing@bouldercounty.org on or before 2:00 p.m. **APRIL 1, 2020**. A response from the county to all inquiries will be posted and sent via email no later than **APRIL 8, 2020**.

Please do not contact any other county department or personnel with questions or for information regarding this solicitation.

SUBMITTAL INSTRUCTIONS:

BIDs are due at the Administrative Services Information Desk or email box (preferred) listed below, for time and date recording on or before **2:00 p.m. Mountain Time on APRIL 14, 2020**. A bid opening will be conducted at 3:00 p.m. Mountain Time at county offices.

Your response can be submitted in the following ways. Please note that email responses to this solicitation are preferred but are limited to a maximum of 50MB capacity. NO ZIP FILES ALLOWED. Electronic submittals must be received in the email box listed below. Submittals sent to any other box will NOT be forwarded or accepted. This email box is only accessed on the due date of your questions or proposals. Please use the Delivery Receipt option to verify receipt of your email. It is the sole responsibility of the proposer to ensure their documents are received before the deadline specified above. Boulder County does not accept responsibility under any circumstance for delayed or failed email or mailed submittals.

Email purchasing@bouldercounty.org; identified as **BID# 7128-20** in the subject line.

-OR-

US Mail One (1) unbound copy of your submittal, printed double-sided, 11 point, on at least 50% post-consumer, recycled paper must be submitted in a sealed envelope, clearly marked as **BID# 7128-20**, to the Administrative Services Information Desk located at 1325 Pearl Street, Boulder, CO 80302.

All BIDs must be received, and time and date recorded by authorized county staff by the above due date and time. Sole responsibility rests with the bidder to see that their BID response is received on time at the stated location(s). Any BIDs received after due date and time will be returned to the bidder.

The Board of County Commissioners reserves the right to reject any and all BIDs, to waive any informalities or irregularities therein, and to accept the proposal that, in the opinion of the Board, is in the best interest of the Board and of the County of Boulder, State of Colorado.

Americans with Disabilities Act (ADA): If you need special services provided for under the Americans with Disabilities Act, contact the ADA Coordinator or the Human Resources office at (303) 441-3525 at least 48 hours before the scheduled event.



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TERMS AND CONDITIONS

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1. Bidders are expected to examine the drawing, specifications, schedule of delivery, and all instructions. Failure to do so will be at the bidder's risk.
 2. Each bidder will furnish the information required in the Invitation to Bid.
 3. The Contract/Purchase Order will be awarded to that responsible bidder whose submittal, conforming to the Invitation to Bid, will be most advantageous to the County of Boulder, based on best value not only price.
 4. The County of Boulder reserves the right to reject any or all bids and to waive informalities and minor irregularities in bids received, and to accept any portion of or all items proposed if deemed in the best interest of the County of Boulder to do so.
 5. No submittal will be withdrawn for a period of thirty (30) days subsequent to the opening of bids without the consent of the County Purchasing Agent or delegated representative.
 6. A signed purchase order or contract furnished to the successful bidder results in a binding contract without further action by either party.
 7. Late or unsigned bids will not be accepted or considered. It is the responsibility of bidders to ensure that the bid arrives at the Administrative Services Information Desk prior to the time indicated in the "Invitation to Bid."
 8. The proposed price will be exclusive of any Federal or State taxes from which the County of Boulder is exempt by law.
 9. Any interpretation, correction or change of the bid documents will be made by Addendum. Interpretations, corrections and changes of the bid documents made in any other manner will not be binding, and bidder will not rely upon such interpretations, corrections and changes. The County's Representative will not be responsible for oral clarification.
 10. Confidential/Proprietary Information: Bids submitted in response to this "Invitation to Bid" and any resulting contract are subject to the provisions of the Colorado Public (Open)

Records Act, 24-72-201 et.seq., C.R.S., as amended. Any restrictions on the use or inspection of material contained within the bid and any resulting contract will be clearly stated in the bid itself. Confidential/proprietary information must be readily identified, marked and separated/packaged from the rest of the bid. **Co-mingling of confidential/proprietary and other information is NOT acceptable. Neither a bid, in its entirety, nor bid price information will be considered confidential/proprietary. Any information that will be included in any resulting contract cannot be considered confidential.**

The Boulder County Attorney's Office retains sole authority for determining whether the Colorado Open Records Act requires or permits Boulder County to disclose proposal or bid documents, or any information contained therein, pursuant to an open records request.

11. Boulder County promotes the purchase/leasing of energy efficient, materials efficient and reduced toxic level products where availability, quality and budget constraints allow. Bidders are expected whenever possible to provide products that earn the ENERGY STAR and meet the ENERGY STAR specifications for energy efficiency with power management features enabled. Bidders are encouraged to offer products and equipment with post-consumer recycled-content materials. Products should be packaged and delivered with a minimum amount of recycled packaging that adequately protects the product but is not excessive.
12. Pursuant to Colorado law (House Bill 1292), in any bidding process for public works in which a bid is received from a non-resident bidder who is from a state that provides a percentage bidding preference, a comparable percentage disadvantage will be applied to the bid of that bidder. Bidders may obtain additional information from the Department of Personnel's website: <http://www.colorado.gov/dpa/>.



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SPECIFICATIONS

SPECIFICATIONS:

All preparation, including but not limited to: removal of old material and installation of new roofing material shall be completed in a professional manner and within a reasonable amount of time which will be agreed upon by the County and the selected Contractor. The current state/material of the roof is not sustainable and needs to be replaced for longevity and quality purposes.

For the Contractor to gain access to the inside of the building for water, electric, or any other purposes, they will need to be accompanied by a Boulder County employee. If electricity is needed during the entirety of the re-roofing process, an extension cord can be set up prior to the start of the project for access from the outside during operating hours.

The selected Contractor will use his/her discretion to avoid situations where weather might affect the quality of the final product. There is potential for the general public to be around the work site area, e.g. the parking lot and nearby sidewalks. The selected Contractor will take all precautions necessary to limit any impacts or disturbances to the public occupying the work zone.

The selected Contractor will remove all trash/waste generated while conducting the project and leave site in the same condition as it was upon their arrival. The cost of hauling all waste material or the rental of a roll-off receptacle should be figured into the final bid amount. The selected Contractor is responsible for providing a temporary portable restroom facility for their work crew while onsite. Both a rental roll-off receptacle and portable restroom are optional, however, the County will designate the areas for placement.

CONTRACTOR RESPONSIBILITIES:

1. The deconstruction of old material and the installation of all new roofing components must comply with the applicable code, the manufacturer's published installation instructions, and the ICC-ES Evaluation Report.
2. To remove and properly dispose of all previously placed rolled roofing and fasteners (e.g. nails, screws, staples) from the roof.
3. The Nederland Mining Museum roof is to be prepared completely for the installation of the new material. This will include the removal of all necessary objects of interference, scraping and cleaning exposed surface of any foreign matter that might negatively alter the new material installation prior to the start of the deck installation.
4. The contracted company is to then begin the process of applying a noncombustible decking material to form an initial base using a minimum of 15/32-inch thick plywood or

- 7/16-inch thick OSB. The substrate should be secured to the building's structurally sound frame using corrosion-resistant fasteners.
5. Next, barrier board or slip sheet will need to be fitted to the roof on top of the decking material. Using the recommended ¼-inch "DensDeck Prime" or ¼-inch thick "SECUROCK Gypsum Fiber Roof Board". *If gypsum board is used as barrier board in the roofing assembly, weather protection must be provided to avert damage to the gypsum board before the application of the roofing membrane. The final product selected must be UL-classified for roofing applications.
 6. The installation of the roofing membrane must be installed by professional roofing contractors who are trained and approved by the manufacturers. The manufacturers published instructions are required to be on the project site during the installation process.
 7. The barrier board/slip sheet must be clean, dry, free of frost, and clear of all foreign objects that could puncture the membrane or would interfere with the adhesion or attachment of the membrane before the EPDM or PVC membrane is applied.
 8. Penetrations and terminations of the roof covering must be flashed and made weather tight in accordance with the chosen membrane product's manufacturers recommendations.
 9. The selected single-ply roofing system membrane should be adhered and mechanically fastened on top of the barrier board/slip sheet using appropriately rated fasteners that will attach to the underlying decking and suitable high-strength bonding adhesive.

MATERIAL:

1. The recommend products and terms related to this project are associated with Carlisle Syntec Systems. But related thermal and moisture protection companies are: Kelly Company/2011 INC., Mule-Hide Company, INC., Versico, Weatherbond, or Roofing Products International, INC.
2. The adhered roofing system specs for this project can be found in the ICC-ES Evaluation Report (Attachment B) on page 7 in Table 2- 'Fire Classification Assemblies System' NO. 12.
3. The County requires the use of noncombustible min. 15/32-inch thick plywood or min. 7/16-inch OSB as the decking material.
4. The contractor's choice of barrier board or slip sheet must meet the following conditions: for barrier board, either minimum ¼-inch think "DensDeck Prime RoofBoard" or USG Corporation "SECUROCK Gypsum-Fiber Roof Board" with a 1/4-inch minimum thickness. For slip sheet, Carlisle "FR Base Sheet 1S or 2S," GAAF "VersaShield Fire-Resistant Roof Deck Protection (ESR-2053)," Elk "VersaSheild FB-1S or FB-2S" or Atlas "FR 10 or FR 50." Slip Sheets. All options must be UL-classified for roofing application.
5. If flashing is to be used on this project, it must be in accordance with IBC Section 1503.2 or IRC Section R903.2. Where flashing is of metal, the metal must be corrosion-resistant, minimum No. 26 gage galvanized steel.

6. The roofing membrane is required to be selected from the following options: **Sure-Seal FR**, an EPDM membrane with fire retardants. Thickness ranging from 0.045-inch to 0.090-inch. **Sure-Flex PVC**, a heat-weldable PVC Thermoplastic membrane consisting of a weft-inserted polyester fabric that is encapsulated by PVC. Thickness ranging from 0.05-inch to 0.08-inch. **Sure-Flex PVC FRS**, which is a heat-weldable thermoplastic membrane that consists of a fiberglass reinforcement encapsulated with PVC. Thickness of 0.60-inch to 0.80 inch. Or, **Sure-Flex KEE HP FleeceBACK**, consisting of a polyester reinforcing scrim, polyester fleece backing, and DuPont Elvaloy KEE HP copolymer. With a thickness ranging from 0.105-inch to 0.135-inch.
7. The visible exterior roofing material should resemble the color black.
8. Depending on which membrane material is selected by the contractor, supplemental fasteners and bonding adhesive that is recommended by the manufacturer should be used for application.
9. All material will be applied according to manufacturer's recommendations. Any material that is comparable or has better specs than the products listed above will be agreed upon by the County and the selected Contractor on a case by case basis. If material is different than what is listed above, the selected Contractor shall supply the County with the technical data sheet for the chosen material when submitting bids. No flat finishes will be accepted.
10. The County reserves the right to inspect preparation during the process and after it is complete. Any discrepancies will be reconciled prior to any material being applied to the buildings.
11. The County reserves the right to question or deny any materials proposed for this project.

WARRANTY:

A one-year implied warranty on all work performed as it relates to fit for purpose, being free from defects, and complying with regulations and specifications from the manufacturer.

PERMITS, LICENSES, LOCATES AND CODES:

The selected Contractor shall have full responsibility for identifying and obtaining, prior to the start of work, and for maintaining throughout the term of the Project, any permits and licenses which may be required in order to carry out the work. The Contractor shall also be responsible for following all State and County codes, which may be required in order to carry out the Project. The Contractor shall also be responsible for all "locates" of all public utilities related to performing work under the terms of this Contract. The Contractor shall also be responsible for insuring that any of its subcontractors performing work on the Project satisfy the provisions of this paragraph.

CONTRACTOR LICENSING:

General contractors, HVAC contractors, and roofing contractors require licensing through the Boulder County Land Use Department. Electricians and plumbers are required to be licensed through the State of Colorado and registered with the Boulder County Land Use Building Safety and Inspection Division. Furthermore, it is required for all Architects, Professional Engineers and Professional Land Surveyors to be fully-licensed through the State of Colorado. It is the

responsibility of the selected Contractor to apply for and ensure the appropriate Contractor's license is obtained.

PROJECT COMPLETION SCHEDULE:

The successful bidder will have **sixty (60) business** days after execution of the contract, weather permitting, to complete the work.

CONFLICT OF INTEREST:

Any party that has developed, designed or drafted specifications, requirements, statements of work and/or has participated in planning activities for this Project may be excluded from consideration for the award of this Project.

CHANGE ORDERS:

Any unplanned, change orders, modifications or additional services to this Project, shall be submitted by the Contractor, in a separate, written document, including a fee schedule and completion schedule and presented to the County for review. Approval from the County, in writing, must accompany all change order requests.

OVERNIGHT CAMPING:

Boulder County prohibits any overnight camping; all operational staff, including designated security staff, are not authorized to be present at Project site from sunset to sunrise, the open space property will remain closed during these hours to the contractor and its subcontractors and/or designated representatives and/or agents, unless specifically authorized by a BCPOS representative.

HOURS OF OPERATION:

Contractor work hours shall be designated as **Monday through Friday, 8:00 a.m. to 4:30 p.m.** Work on Saturdays and Sundays, nights, and designated Federal Holidays shall not be allowed unless approved, in writing, by the County.

PAYMENT FOR SERVICES:

The Project will be paid, in one lump sum, upon completion of the entire Project and once the work has been inspected and approved by the County.

Contractor shall submit, in writing, to Boulder County, a request for payment. Invoices shall be submitted on company letterhead and include, but not limited to, depending on the activity completed, designated project name, date(s), type of work performed. Additionally, all invoices should contain the current date, invoice number, amount due and current return address.



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INSURANCE AND W-9 REQUIREMENTS

INSURANCE REQUIREMENTS:

Note that the insurance amounts listed below are the minimum required for this project. **Proof of current insurance must be provided with your proposal in the form of a sample certificate or your proposal will be deemed non-responsive.** If you require a waiver of insurance requirements (e.g. Workers' Compensation and sole proprietorships) you may request one in your response with an explanation.

New certificates will be requested if the contract process takes more than 30 days after an award.

This type of coverage will be required to remain in place and be maintained by the selected contractor for the specified period, as noted, after completion of the Project.

*General Liability	\$1,000,000 Each Occurrence \$2,000,000 General Aggregate \$2,000,000 Products Completed Operations Aggregate 3 years Products/Completed Operations
Automobile Liability	\$1,000,000 Each Accident Including Hired & Non-Owned Auto
Worker's Compensation and Employer's Liability	Statutory limits

W-9 REQUIREMENT:

Please provide a copy of your business's W-9 with your proposal.



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BID TAB SECTION

<u>Item Number</u>	<u>Item Description</u>	<u>Cost</u>
	Complete Project: Including labor, equipment, rental, administrative & travel	_____
BID TOTAL		\$ _____

Company Name

Name of person and title submitting BID (PLEASE PRINT)

Signature of Bidder Date



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SUBMITTAL CHECKLIST

The bidder's attention is especially called to the items listed below, which must be submitted in full as part of the BID. Failure to submit any of the documents listed below as a part of your BID, or failure to acknowledge any addendum in writing with your BID, or submitting a bid on any condition, limitation or provision not officially invited in this Invitation to Bid (BID) may be cause for rejection of the BID.

THIS CHECKLIST MUST BE SUBMITTED AS PART OF YOUR BID PACKAGE: Bidder will check each box indicating compliance:

INCLUDED	ITEM
	Name and Address of the Partners and Subcontractors if applicable
	A detailed project schedule with an all-inclusive total cost
	Information on the relevant experience of key personnel
	State your compliance with the Terms and Conditions in the Sample Contract contained in this BID. Specifically list any deviations and provide justification for each deviation.
	Submit three references for similar projects your company has completed within the last three years and contact information
	Insurance Certificate
	Professional certifications and/or license and including a Copy of Boulder County issued contractor's license
	W-9
	Signature Page
	Addendum Acknowledgement(s) (If Applicable)



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SIGNATURE PAGE

Contact Information	Response
Company Name including DBA	
List Type of Organization (Corporation, Partnership, etc.)	
Name, Title, and Email Address of Person Authorized to Contract with Boulder County	
Company Address	
Company Phone Number	
Company Website	

By signing below, I certify that:

I am authorized to bid on my company's behalf.

I am not currently an employee of Boulder County.

None of my employees or agents is currently an employee of Boulder County.

I am not related to any Boulder County employee or Elected Official.

(Sole Proprietorships Only) I am not a Public Employees' Retirement Association (PERA) retiree.

**Signature of Person Authorized to Bid on
 Company's Behalf**

Date

Note: If you cannot certify the above statements, please explain in a statement of explanation.

ATTACHMENT A



ICC-ES Evaluation Report

ESR-1463

Reissued October 2018

Revised December 2019

This report is subject to renewal October 2020.

www.icc-es.org | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 53 23—Ethylene-Propylene-Diene-Monomer Roofing
Section: 07 54 19—Polyvinyl-Chloride Roofing
Section: 07 54 23—Thermoplastic-Polyolefin Roofing

REPORT HOLDER:

CARLISLE SYNTEC SYSTEMS, A DIVISION OF
 CARLISLE CONSTRUCTION MATERIALS, LLC

EVALUATION SUBJECT:

CARLISLE EPDM, PVC AND TPO SINGLE-PLY
 ROOFING MEMBRANES

ADDITIONAL LISTEES:

KELLY COMPANY/2001 INC.

MULE-HIDE PRODUCTS COMPANY, INC.

VERSICO

WEATHERBOND

ROOFING PRODUCTS INTERNATIONAL, INC.

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)†

†The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

For evaluation for compliance with codes adopted by the Los Angeles Department of Building and Safety (LADBS), see [ESR-1463 LABC and LARC Supplement](#).

Properties evaluated:

- Weather resistance
- Roof covering fire classification
- Wind uplift resistance
- Impact resistance

2.0 USES

Carlisle ethylene propylene diene monomer (EPDM), polyvinyl chloride (PVC) and thermoplastic polyolefin (TPO) single-ply roofing membranes are used as roof coverings in adhered and mechanically fastened membrane roofing systems.

3.0 DESCRIPTION

3.1 General:

The EPDM, PVC and TPO Membrane Roofing Systems described in this report consist of single-ply roofing membranes, insulation where used, barrier board or slip sheet where used, flashing, mechanical fasteners and adhesives that are installed on a combustible or noncombustible deck. See Table 1 for Carlisle product trade names and corresponding product names for Mule-Hide Products Company, Inc., WeatherBond, Versico, Kelly Company/2001 Inc., and Roofing Products International, Inc., the additional listees.

3.2 EPDM Membranes:

3.2.1 Sure-Seal: Sure-Seal is a black, nonreinforced EPDM membrane, 45 mils thick [0.045 inch (1.14 mm)].

3.2.2 Sure-Seal FR: Sure-Seal FR is a black, nonreinforced EPDM membrane with fire retardants. Available thicknesses range from 45 mils (0.045 inch [1.14 mm]) to 90 mils (0.090 inch [2.29 mm]).

3.2.3 Sure-White: Sure-White is a white, nonreinforced EPDM membrane. It is available in thicknesses of 60 mils [0.060 inch (1.52 mm)] and 90 mils [0.090 inch (2.29 mm)].

3.2.4 Sure-Tough: Sure-Tough is a black, reinforced membrane consisting of a polyester reinforcement encapsulated between two EPDM membrane plies. It is available in thicknesses ranging from 45 mils [0.045 inch (1.14 mm)] to 75 mils [0.075 inch (1.90 mm)].

3.2.5 Sure-Tough FR: Sure-Tough FR is a black, reinforced membrane consisting of a polyester reinforcement encapsulated between two EPDM membrane plies with fire retardants. Available thicknesses are 45 mils [0.045 inch (1.14 mm)] and 60 mils [0.060 inch (1.52 mm)].

3.2.6 Sure-Seal FleeceBACK: Sure-Seal FleeceBACK is a 45-mil to 90-mil [0.045 inch to 0.090 inch (1.14 mm to 2.29 mm)] non-reinforced EPDM bonded to a polyester fleece. Available product thicknesses range from 100 mils [0.100 inch (2.55 mm)] to 145 mils [0.145 inch (3.68 mm)].

3.2.7 Sure-White FleeceBACK: Sure-White FleeceBACK is a 45-, 60- or 90-mil [0.045, 0.060 or 0.090 inch

(1.14, 1.52 or 2.29 mm)] nonreinforced white EPDM bonded to a polyester fleece. Available product thicknesses are 100, 115 and 145 mils [0.100, 0.115 or 0.145 inch (2.54, 2.92 or 3.68 mm)].

3.2.8 Sure-Seal AFX: Sure-Seal AFX is a 45-mil [0.045 inch (1.14 mm)] or 60-mil [0.060 inch (1.52 mm)] non-reinforced EPDM bonded to a 7 polyester fleece. Available thicknesses are 90 mils [0.090 inch (2.29 mm)] and 105 mils [0.105 inch (2.67 mm)].

3.3 PVC Membranes:

3.3.1 Sure-Flex PVC: Sure-Flex PVC is a heat-weldable PVC thermoplastic membrane consisting of a weft-inserted polyester fabric that is encapsulated by PVC based top and bottom plies. Available thicknesses range from 50 mils [0.050 inch (1.27 mm)] to 80 mils [0.080 inch (2.03 mm)].

3.3.2 Sure-Flex KEE HP: Sure-Flex KEE HP is a heat-weldable thermoplastic membrane that consists of a polyester fabric that is encapsulated by KEE HP based top and bottom plies. Available thicknesses range from 50 mils [0.50 inch (1.27 mm)] to 80 mils [0.80 inch (2.03 mm)].

3.3.3 Sure-Flex PVC FRS: Sure-Flex PVC FRS is a heat-weldable thermoplastic membrane that consists of a fiberglass reinforcement encapsulated with PVC based top and bottom plies. Available thicknesses range from 60 mils [0.60 inch (1.52 mm)] to 80 mils [0.80 inch (2.03 mm)].

3.3.4 Sure-Flex PVC FleeceBACK: Sure-Flex PVC FleeceBACK membrane consists of polyester reinforcing scrim and polyester fleece backing. Available thicknesses range from 115 mils [0.115 inch (2.92 mm)] to 135 mils [0.135 inch (3.43 mm)].

3.3.5 Sure-Flex KEE HP FleeceBACK: Sure-Flex KEE HP FleeceBACK membrane consists of a polyester reinforcing scrim, polyester fleece backing, and DuPont® Elvaloy® KEE HP copolymer. Available thicknesses range from 105 mils [0.105 inch (2.67 mm)] to 135 mils [0.135 inch (3.43 mm)].

3.3.6 Sure-Flex PVC FRS FleeceBACK: Sure-Flex PVC FRS FleeceBACK membrane consists of a high-strength fiberglass scrim and polyester fleece backing. Available thicknesses range from 115 mils [0.115 inch (2.92 mm)] to 135 mils [0.135 inch (3.43 mm)].

3.3.7 Sure-Flex KEE HP FRS FleeceBACK: Sure-Flex KEE HP FRS FleeceBACK membrane consists of a fiberglass reinforcing scrim, polyester fleece backing, and DuPont® Elvaloy® KEE HP copolymer. Available thicknesses range from 105 mils [0.105 inch (2.67 mm)] to 135 mils [0.135 inch (3.43 mm)].

3.4 TPO Membranes:

3.4.1 Sure-Weld: Sure-Weld membrane consists of a polyester reinforcement encapsulated between two plies of TPO. The membrane is available in white, gray, tan and custom colors. Available thicknesses range from 45 mils [0.045 inch (1.14 mm)] to 80 mils [0.080 inch (2.03 mm)].

3.4.2 Sure-Weld HS: Sure-Weld HS is the Sure-Weld membrane formulated with an additional flame retardant for fire resistance at higher slopes. The membrane is available in white, gray, tan and custom colors. Available thicknesses are 45 mils (0.045 inch [1.14 mm]) and 60 mils (0.060 inch [1.52 mm]).

3.4.3 Sure-Weld SAT-TPO: Sure-Weld SAT-TPO is a self-adhered version of the Sure-Weld HS membrane with adhesive.

3.4.4 Sure-Weld FleeceBACK: Sure-Weld FleeceBACK is the Sure-Weld HS membrane, 45 mils [0.045 inch

(1.14 mm)], 60 mils [0.60 inch (1.52 mm)] and 80 mils [0.60 inch (2.03 mm)] thick, with a laminated polyester fleece backing. Available thicknesses are 100 mils [0.100 inch (2.54 mm)], 115 mils [0.115 inch (2.92 mm)] and 135 mils [0.135 inch (3.43 mm)].

3.4.5 Sure-Weld AFX: Sure-Weld AFX is the Sure-Weld HS membrane with a laminated polyester fleece backing. Available thicknesses range from 120 mils [0.120 inch (3.05 mm)] to 155 mils [0.155 inch (3.94 mm)].

3.4.6 Spectro-Weld: Spectro-Weld is the Sure-Weld membrane, described in Section 3.4.1, formulated with a brighter white color. Available thicknesses are 60 mils [0.060 inch (1.52 mm)] and 80 mils [0.080 inch (2.03 mm)].

3.4.7 Spectro-Weld FleeceBACK: Spectro-Weld FleeceBACK is the Spectro-Weld membrane with a laminated 5.5-ounce-per-square-yard (0.18 kg/m²) polyester fleece backing. It is 115 mils [0.115 inch (2.92 mm)] thick.

3.5 Insulation:

See Tables 2 through 5 for insulations for use with specific roofing systems. Foam plastic insulation, where used, must have a flame-spread index of not more than 75 when tested at the maximum thickness intended for use in accordance with ASTM E84 or UL 723.

3.6 Barrier Board:

Barrier board, where used, must be either minimum 1/4-inch-thick (6.4 mm) Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard," minimum 1/4-inch-thick (6.4 mm) Owens Corning "StrataGuard," minimum 1/4-inch-thick (6.4 mm) USG Corporation "SECUROCK® Gypsum-Fiber Roof Board" or "SECUROCK® Glass-Mat Roof Board," or minimum 1/2-inch-thick (12.7 mm) gypsum board. Barrier board must be UL-classified for roofing applications or UL-classified gypsum board.

3.7 Slip Sheet:

The slip sheet, where used, must include Carlisle "FR Base Sheet 1S or 2S," GAF "VersaShield® Fire-Resistant Roof Deck Protection (ESR-2053)," Elk "VersaShield FB-1S or FB-2S," or Atlas "FR 10 or FR 50." Slip sheets must be UL-classified for roofing applications.

3.8 Flashing:

Flashing must be provided in accordance with IBC Section 1503.2 or IRC Section R903.2, as applicable. Where flashing is of metal, the metal must be corrosion-resistant, minimum No. 26 gage [0.019 inch (0.483 mm)] galvanized steel.

3.9 Fasteners:

Fasteners, used to mechanically attach insulation and membranes to the roof deck, must be corrosion-resistant, and must be Carlisle fasteners, plates or fastening bars, unless otherwise noted in this report. Refer to Table 4 and 5 for spacing of fasteners.

3.9.1 HP Fastener: This is an epoxy-coated steel screw used in combination with Carlisle's fastening plates or bars to mechanically attach roofing insulation and membranes to steel or wood substrate. Fastener length must be selected to penetrate through the steel deck a minimum of 3/4 inch (19.1 mm), and into the wood deck a minimum of 1 inch (25.4 mm).

3.9.2 InsulFast Insulation Fastener: This is an epoxy-coated steel screw used in combination with Carlisle's insulation plates to mechanically attach roofing insulation to steel or wood substrates. Fastener length must be selected to penetrate through the steel deck a minimum of 3/4 inch

(19.1 mm), or into the wood deck a minimum of 1 inch (25.4 mm).

3.9.3 HP Purlin Fastener: This is an epoxy-coated steel screw used in combination with Carlisle's fastening plates or bars to mechanically attach roofing insulation and membranes to structural steel members. Fastener length must be selected to penetrate through the steel member a minimum of $\frac{3}{4}$ inch (19.1 mm.)

3.9.4 HD 14-10 Fastener: This is a heavy-duty, epoxy-coated steel screw used in combination with Carlisle's fastening plates or bars to mechanically attach roofing insulation and membranes to concrete roof deck. Fastener length must be selected to penetrate into the concrete deck a minimum of 1 inch (25.4 mm).

3.9.5 CD-10 Fastener: The CD-10 is an epoxy-coated, hammer-driven, nonthreaded fastener specifically designed to be used with insulation and seam fastening plates to secure membrane and insulation to structural concrete. Fastener length must be selected to penetrate into the concrete deck a minimum of 1 inch (25.4 mm).

3.9.6 Lite-Deck Fastener: The Lite-Deck Fastener is used in conjunction with a specially designed 3-inch (76.2 mm) Lite-Deck Metal Plate for insulation attachment to gypsum, cementitious wood fiber (Tectum [ESR-1112]), and lightweight concrete decks. Fastener length must be selected to penetrate into the deck a minimum of 2 inches (50.8 mm).

3.9.7 GypTec Fastener: The GypTec Fastener is a glass-filled nylon auger fastener designed for securing mechanically attached membranes and insulation to gypsum and cementitious wood fiber (Tectum [ESR-1112]) decks. Fastener length must be selected to penetrate into the deck a minimum of 1.5 inches (38.1 mm).

3.9.8 HP Polymer Seam Plate: This is a 2-inch-diameter (50 mm) polymer plate designed to be used with HP and HD 14-10 fasteners to mechanically attach roofing membranes to the roof deck.

3.9.9 Sure-Tite Fastener and ST Fastening Bar: This is a heavy-duty, epoxy-coated steel screw and bar used to secure reinforced EPDM membranes to steel or wood deck. The bar is 1-inch-wide-by-0.040-inch-thick-by-10-foot-long (25.4 mm by 1.1 mm by 3.1 m) galvalume-coated steel with pre-punched holes 6 inches (150 mm) on center.

3.9.10 HP-X Fastener: This is an epoxy-coated carbon steel screw used in combination with the Piranha Fastening Plate to mechanically attach TPO membranes to steel or wood substrate. Fastener length must be selected to penetrate through the steel deck a minimum of $\frac{3}{4}$ inch (19.1 mm), and into the wood deck a minimum of 1 inch (25.4 mm).

3.9.11 Piranha Fastening Plate: This is a $2\frac{3}{8}$ -inch-diameter galvalume-coated steel plate designed to be used with HP-X fasteners to mechanically attach PVC and TPO membranes to the roof deck.

3.9.12 HP-XTRA Fastener: This is an epoxy-coated carbon steel screw used in combination with the Piranha XTRA Fastening Plate to mechanically attach PVC and TPO membranes to steel or wood substrate. Fastener length must be selected to penetrate through the steel deck a minimum of $\frac{3}{4}$ inch (19.1 mm) and into the wood deck a minimum of 1 inch (25.4 mm).

3.9.13 Piranha XTRA Fastening Plate: This is a $2\frac{3}{8}$ -inch-diameter galvalume-coated steel plate designed to be used with HP-XTRA fasteners to mechanically attach PVC and TPO membranes to the roof deck.

3.9.14 PVC Oval Barbed Plate: This is a $1\frac{1}{2}$ -inch-by- $2\frac{3}{4}$ -inch (35 mm by 69.85 mm) Oval Barbed Plate designed to be used with HP-X Fasteners to mechanically attach PVC membranes to the roof deck.

3.9.15 OMG Roofing Products RhinoBond Plate: The RhinoBond Plate is a 3-inch-diameter (76.2 mm), 0.028-inch-thick (0.7 mm) galvalume-coated steel plate, coated with a proprietary adhesive and used with the HP-X fastener to mechanically attach PVC and TPO membranes to the roof deck. The adhesive bonds the plate to the underside of the membrane.

3.10 Carlisle Syntec Adhesives: See Tables 2 and 5 for adhered roofing systems.

3.10.1 90-8-30A Bonding Adhesive: 90-8-30A Bonding Adhesive is a high-strength, solvent-based contact adhesive used to adhere EPDM membranes to the insulation or substrate. It has a coverage rate of approximately 60 square feet per gallon (1.5 m²/L) when applied to the finished surface area. The adhesive is supplied in 5-gallon (18.9 L) containers and has a shelf life of one year.

3.10.2 Aqua Base 120 Bonding Adhesive: Aqua Base 120 Bonding Adhesive is a high-strength, water-based contact adhesive used to adhere EPDM and TPO membranes to the insulation or substrate. It has a coverage rate of approximately 120 square feet per gallon (3 m²/L) when applied to the finished surface area. The adhesive is supplied in 5-gallon (18.9 L) containers and has a shelf life of one year.

3.10.3 Low-VOC PVC Bonding Adhesives: Low VOC PVC Bonding Adhesives is high-strength, solvent-based contact adhesives used to adhere PVC membranes to an insulation or substrate. They have a coverage rate of approximately 60 square feet per gallon (1.5 m²/L) when applied to the finished surface area. The adhesive is supplied in 5-gallon (18.9 L) containers with a shelf life of one year.

3.10.4 Sure-Weld TPO Bonding Adhesive: Sure-Weld TPO Bonding Adhesive is a high-strength, solvent-based contact adhesive used to adhere TPO membranes to an insulation or substrate. It has a coverage rate of approximately 60 square feet per gallon (1.5 m²/L) when applied to the finished surface area. The adhesive is supplied in 5-gallon (18.9 L) containers with a shelf life of one year.

3.10.5 Low VOC Bonding Adhesive: Low VOC Bonding Adhesive is a high-strength, solvent-based contact adhesive used to adhere EPDM and TPO membranes to an insulation or substrate. It has a coverage rate of approximately 60 square feet per gallon (1.5 m²/L) when applied to the finished surface area. The adhesive is supplied in 5-gallon (18.9 L) containers with a shelf life of one year.

3.10.6 HydroBond Water-Based Bonding Adhesive: HydroBond Water-Based Bonding Adhesive is a water-based, wet lay-in, one-sided adhesive to be used to adhere Sure-Flex PVC, Sure-Flex PVC FRS and FleeceBACK membranes to an insulation or substrate. It has a coverage rate of 100 square feet per gallon (2.5 m²/L). The adhesive is supplied in 5-gallon (18.9 L) containers with a shelf life of one year.

3.10.7 Low VOC Bonding Adhesive 1168: Low VOC Bonding Adhesive 1168 is high-strength, solvent-based contact adhesive used to adhere EPDM and TPO membranes to an insulation or substrate. It has a coverage rate of approximately 60 square feet per gallon (1.58 m²/L) when applied to the finished surface area. The adhesive is

supplied in 5-gallon (18.9 L) containers with a shelf life of one year.

3.10.8 Solvent-Free EPDM Bonding Adhesive: Solvent-Free EPDM Bonding Adhesive is a high-strength, polymer-based adhesive. This adhesive can be used to adhere all Sure-Seal or Sure-White EPDM membranes as a one-sided, wet lay-in adhesive. It has a coverage rate of 100 square feet per gallon (2.5 m²/L). The adhesive is supplied in 5-gallon (18.9 L) containers with a shelf life of six months.

3.10.9 Cold Applied Adhesive: Cold Applied Adhesive is a solvent-free, asphalt-modified polyether adhesive. This adhesive can be used with all Sure-Seal or Sure-Weld AFX membranes as a one-sided, wet lay-in adhesive. It has a coverage rate of 67 square feet per gallon (1.6 m²/L). The adhesive is supplied in 5-gallon (18.9 L) containers with a shelf life of one year.

3.10.10 FAST Adhesives: FAST 100, FAST 100LV, and Flexible FAST Adhesives are two-component polyurethane adhesives used to adhere FleeceBACK membranes and insulations to various substrates. The adhesives have a coverage rate of approximately 100 square feet per gallon (2.5 m²/L). The adhesives are supplied in 5-gallon (18.9 L) jugs, 15-gallon (56.7 L) and 50-gallon (189 L) drums, box sets, cartridge tubes, dual tanks, and/or cylinders, and have a shelf life of one year.

3.10.11 OlyBond 500 Adhesive: OMG Roofing Products OlyBond 500 Spot Shot and OlyBond 500 BA are two-component polyurethane adhesives used to adhere insulations to various substrates. The adhesives have a coverage rate of approximately 100 square feet per gallon (2.5 m²/L). The adhesives are supplied in cartridge tubes and box sets, and have a shelf life of one year.

3.10.12 EPDM X-23 Low-VOC Bonding Adhesive: EPDM X-23 Low-VOC Bonding Adhesive is a high strength, solvent-based contact adhesive used to adhere EPDM membranes to an insulation or substrate. It has a coverage rate of approximately 60 square feet per gallon (1.5 m²/L) when applied to the finished surface area. The adhesive is supplied in 5-gallon (18.9 L) containers with a shelf life of one year.

3.10.13 CAV-GRIP III Low-VOC Adhesive/Primer: CAV-GRIP III Low-VOC Adhesive/Primer is a contact adhesive used to adhere EPDM and TPO membranes to various substrates. It has a coverage rate of 1000 ft² per cylinder when applied to the finished surface area. The adhesive is supplied in No. 40 cylinders with a shelf life of one year (unopened).

3.11 Impact Resistance:

The EPDM, PVC, and TPO roofing membranes described in this report meet requirements for impact resistance in IBC Section 1504.7, based on testing in accordance with Section 4.6 of FM 4470.

4.0 INSTALLATION

4.1 General:

Installation of the EPDM, PVC, and TPO roofing membranes described in this report must comply with the applicable code, the manufacturer's published installation instructions and this report. The manufacturer's published installation instructions must be available at all times on the jobsite during installation.

The substrate to which the membrane is to be applied must be clean, dry, and free of frost, loose fasteners, and other protrusions or contaminants that will interfere with the adhesion or attachment of the membrane or that will puncture the membrane. All materials must be protected

against contact with incompatible materials. Where gypsum board is used as barrier board in the roofing assembly, weather protection must be provided to prevent damage to the gypsum board prior to application of the roofing membrane.

The slope of the roof on which the single-ply membranes are installed must not be more than the maximum slope indicated for the particular assembly as listed in Tables 2 and 3.

Penetrations and terminations of the roof covering must be flashed and made weather tight in accordance with the requirements of the membrane manufacturer and the applicable code.

4.2 Fire Classification:

4.2.1 New Construction: The adhered and mechanically fastened EPDM, PVC, and TPO single-ply membrane roofing systems, when installed in accordance with this report, are Class A, B or C roof covering systems in accordance with ASTM E108 or UL 790, as noted in Tables 2 and 3.

4.2.2 Reroofing: The existing deck must be inspected to verify that the structure to be reroofed is structurally sound and adequate to support and secure the roofing membrane. Prior to installation of new roof coverings, inspection by and written approval from the code official having jurisdiction must be required.

Class A, B or C roof covering systems may be installed over existing classified roof covering systems under the following conditions without additional roof classification tests, provided the resulting classification is the lower of the new or existing roofing classification:

- New uninsulated systems installed only over existing uninsulated assemblies.
- New insulated systems installed over existing uninsulated systems only.

4.3 Wind Resistance:

4.3.1 New Construction: The allowable wind uplift pressures for the EPDM, PVC, and TPO roofing membranes as parts of roof assemblies are noted in Tables 4 and 5.

Metal edge securement systems must be listed in accordance with the 2011 edition of ANSI/SPRI/FM4435 ES-1 and designed and installed for wind loads in accordance with IBC Section 1504.5 and IBC Chapter 16.

4.3.2 Reroofing: Mechanically anchored systems may be accepted based on the adequacy of anchors penetrating through existing roof coverings into structural substrates. Since the composition and/or condition of any particular existing underlying material may vary widely, reroofing with adhered systems is outside the scope of this report.

5.0 CONDITIONS OF USE

The single-ply EPDM, PVC, and TPO roofing membranes described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** Installation must comply with the applicable code, the manufacturer's published installation instructions and this report. The instructions within this report must govern if there are any conflicts between the manufacturer's installation instructions and this report.
- 5.2** The adhered and mechanically fastened single-ply membrane roofing systems must be installed by professional roofing contractors who are trained and approved by the manufacturer.

- 5.3** Foam plastic insulation must be separated from the interior of the building by an approved thermal barrier in accordance with IBC Section 2603.4.1.5 or IRC Section R316.4, as applicable.
- 5.4** Foam plastic insulation, where used, must bear the label of an approved agency indicating that the foam plastic has a flame-spread index of not more than 75 when tested at the maximum thickness intended for use in accordance with ASTM E84 or UL 723, subject to the approval of the code official.
- 5.5** Design wind uplift pressure on any roof area, including edge and corner zones, must not exceed the allowable wind uplift pressure for the system installed in that particular area. Refer to allowable wind uplift pressures for systems as listed in Tables 4 and 5.
- 5.6** The allowable wind uplift pressures listed in Tables 4 and 5 are for the roof covering system only. The deck and framing to which the system is attached must be designed for the applicable components and cladding wind loads in accordance with the applicable code.
- 5.7** When application is over existing roofs, documentation of the wind-uplift resistance of the composite roof construction must be submitted to the code official for approval at the time of permit application.
- 5.8** For buildings under the IBC, above deck thermal insulation board must comply with the applicable standards listed in IBC Table 1508.2 or IRC Table R906.2, as applicable.
- 5.9** The roofing membranes are manufactured at Carlisle, Pennsylvania; Greenville, Illinois; Tooele, Utah; and Senatobia, Mississippi, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with ICC-ES Acceptance Criteria for Membrane Roof-covering Systems (AC75), dated July 2010 (editorially revised March 2018).

7.0 IDENTIFICATION

- 7.1** Each roll of the roofing membrane must bear a label noting the product name, the manufacturer's name (Carlisle SynTec Systems) or the name of the

additional listee, the manufacturer's address or plant code and the ICC-ES evaluation report number (ESR-1463).

- 7.2** The report holder's contact information is the following:

**CARLISLE SYNTEC SYSTEMS, A DIVISION OF
CARLISLE CONSTRUCTION MATERIALS
POST OFFICE BOX 7000
CARLISLE, PENNSYLVANIA 17013
(717) 245-7000
www.carlislesyntec.com**

- 7.3** The Additional Listees' contact information is the following:

**KELLY COMPANY/2001 INC.
325 THOMASTON AVENUE
WATERBURY, CONNECTICUT 06702
(203) 575-9220**

**MULE-HIDE PRODUCTS COMPANY, INC.
1195 PRINCE HALL DRIVE
BELOIT, WISCONSIN 53511
(800) 786-1492**

**VERSICO
POST OFFICE BOX 1289
CARLISLE, PA 17013
(800) 992-7663**

**WEATHERBOND
POST OFFICE BOX 251
PLAINFIELD, PENNSYLVANIA 17081
(866) 471-5125**

**ROOFING PRODUCTS INTERNATIONAL, INC.
57460 DEWITT STREET
ELKHART, INDIANA 46517
(800) 628-2957**

TABLE 1—PRODUCT NAMES

CARLISLE PRODUCT NAME	KELLY CO./ 2001 INC. PRODUCT NAME	MULE-HIDE PRODUCT NAME	VERSICO PRODUCT NAME	WEATHERBOND PRODUCT NAME	ROOFING PRODUCTS INTERNATIONAL PRODUCT NAME
Sure-Seal	C-EPDM	Mule-Hide Standard Black EPDM	VersiGard Non-reinforced EPDM	WeatherBond EPDM Non-Reinforced Membrane	Royal Edge Non-Reinforced EPDM
Sure-Seal FR	C-EPDM-C	Mule-Hide FR EPDM	VersiGard FR Non-Reinforced EPDM	WeatherBond EPDM FR Non-Reinforced Membrane	Royal Edge Non-Reinforced FR EPDM
Sure-Seal FleeceBACK	C-EPDM-FB	-	VersiFleece EPDM	WeatherBond Fleece EPDM Membrane	Royal Edge EPDM FleeceBACK
Sure-Seal AFX	C-EPDM-AFX	-	VersiFleece AC EPDM	WeatherBond EPDM AC Fleece Membrane	-
Sure-Tough	C-EPDM-C, Type 2	Mule-Hide Standard Reinforced EPDM	VersiGard Reinforced EPDM	WeatherBond EPDM Reinforced Membrane	Royal Edge Reinforced EPDM
Sure-Tough FR	C-EPDM-CR Reinforced	Mule-Hide FR Reinforced EPDM	VersiGardFR Reinforced EPDM	WeatherBond EPDM FR Reinforced Membrane	Royal Edge Reinforced Fire Rated EPDM
Sure-White	C-EPDM-White	Mule-Hide White-on-Black EPDM	VersiGard -White Standard	WeatherBond EPDM White Membrane	Re-Flex White EPDM
Sure-White FleeceBACK	C-EPDM-FB-White	-	-	-	Re-Flex White EPDM FleeceBACK
Sure-Weld	TPO-K	Mule-Hide TPO-c	VersiWeld Reinforced TPO Membrane	WeatherBond TPO Membrane	Re-Flex TPO
Sure-Weld HS	TPO-K-FR	Mule-Hide TPO-c (FR)	VersiWeld HS	WeatherBond TPO High Slope Membrane	Re-Flex TPO HS
Sure-Weld SAT-TPO	TPO-K_SAT	Mule-Hide SA-TPO	VersiWeld QA TPO Membrane	WeatherBond TPO PAS Membrane	Re-Flex TPO SAT
Sure-Weld FleeceBACK	TPO-K-FB	Mule-Hide TPO-c Fleece Back	VersiFleece TPO	WeatherBond FleeceTPO Membrane	Re-Flex TPO FleeceBACK
Sure-Weld AFX	TPO-K-AFX	Mule-Hide TPO-c Fleece Back Plus	VersiFleece AC TPO	WeatherBond TPO AC Fleece Membrane	-
Spectro-Weld	-	-	-	-	-
Spectro-Weld FleeceBACK	-	-	-	-	-
Sure-Flex PVC	-	Mule-Hide PVC Membrane	VersiFlex PVC	WeatherBond PVC Membrane	Re-Flex PVC
Sure-Flex KEE HP	-	Mule-Hide PVC KEE HP Membrane	VersiFlex KEE HP	WeatherBond KEE HP Membrane	Re-Flex KEE HP
Sure-Flex PVC FRS	-	Mule-Hide PVC FRS Membrane	VersiFlex FRS PVC	WeatherBond PVC FRS Membrane	Re-Flex FRS PVC
Sure-Flex PVC FleeceBACK	-	Mule-Hide PVC FleeceBack Membrane	VersiFleece PVC	WeatherBond PVC Fleece Membrane	-
Sure-Flex KEE HP FleeceBACK	-	Mule-Hide PVC KEE HP Fleece Back Membrane	VersiFleece KEE HP	WeatherBond KEE HP Fleece Membrane	-
Sure-Flex PVC FRS FleeceBACK	-	-	VersiFleece FRS PVC	WeatherBond PVC FRS Fleece Membrane	Re-Flex FRS PVC FleeceBACK
Sure-Flex KEE HP FRS FleeceBACK	-	-	VersiFleece FRS KEE HP	WeatherBond KEE HP FRS Fleece Membrane	-
90-8-30A Bonding Adhesive	2001 Inc. Bonding Adhesive	Mule-Hide Bonding Adhesive	G200SA Yellow Substrate Adhesive	LC-60 Bonding Adhesive	Royal Edge Bonding Adhesive
EPDM X-23 Low- VOC Bonding Adhesive	-	EPDM X-23 Low VOC Bonding Adhesive	EPDM X-23 Low VOC Bonding Adhesive	EPDM X-23 Low VOC Bonding Adhesive	-
Solvent-Free EPDM Bonding Adhesive	-	-	Solvent-Free EPDM Bonding Adhesive	Solvent-Free EPDM Bonding Adhesive	Royal Edge Solvent-Free EPDM Bonding Adhesive
Aqua Base 120 Bonding Adhesive	-	Aqua Base 120 Bonding Adhesive	Aqua Base 120 Bonding Adhesive	Aqua Base 120 Bonding Adhesive	Royal Edge Water Based Bonding Adhesive
Sure-Weld TPO Bonding Adhesive	-	Mule-Hide TPO-c Bonding Adhesive	VersiWeld TPO Bonding Adhesive	TPO Bonding Adhesive	Royal Edge EPDM/TPO Bonding Adhesive
Low VOC Bonding Adhesive	-	Low VOC Bonding Adhesive	LOW VOC Bonding Adhesive	Low VOC Bonding Adhesive	Royal Edge Low VOC Bonding Adhesive
Low VOC Bonding Adhesive 1168	-	Low VOC Bonding Adhesive 1168	Low VOC Bonding Adhesive 1168	Low VOC Bonding Adhesive 1168	--
Low VOC PVC Bonding Adhesive	-	Low -VOC PVC Bonding Adhesive	Low-VOC PVC Bonding Adhesive	Low-VOC PVC Bonding Adhesive	Re-Flex PVC Low VOC Bonding Adhesive
HydroBond Water-Based Bonding Adhesive	-	HydroBond Water-Based Bonding Adhesive-	HydroBond Water-Based Bonding Adhesive	HydroBond Water-Based Bonding Adhesive	=
CAV-GRIP III Low VOC Adhesive/Primer	-	AeroWeb Adhesive	Cav-Grip 3V Low VOC Adhesive/Primer	Cav-Grip III Low VOC Adhesive/Primer	-

TABLE 1—PRODUCT NAMES (continued)

CARLISLE PRODUCT NAME	KELLY CO./ 2001 INC. PRODUCT NAME	MULE-HIDE PRODUCT NAME	VERSICO PRODUCT NAME	WEATHERBOND PRODUCT NAME	ROOFING PRODUCTS INTERNATIONAL PRODUCT NAME
Cold Applied Adhesive	-	Cold Applied Adhesive	Cold Applied Adhesive	Cold Applied Adhesive	RPI Cold Applied Adhesive
FAST 100 Adhesive	-		DASH 100 Adhesive	-	-
FAST 100-LV Adhesive	-	Helix® 2 Low-Rise Adhesive	DAST Adhesive	DASHAdhesive	FastBond 100 LV Adhesive
Flexible FAST Adhesive	-	Helix® Max Low-Rise Adhesive	Flexible DAST Adhesive	Flexible DASH Adhesive	FastBond Flex Adhesive
OlyBond 500 Adhesive	-	-	OlyBond 500 Adhesive	OlyBond 500 Adhesive	OlyBond 500 Adhesive

TABLE 2—FIRE CLASSIFICATION ASSEMBLIES—ADHERED ROOFING SYSTEMS^{2,5}

SYSTEM NO.	ROOF CLASS	DECK	MAX SLOPE	BARRIER BOARD OR SLIP SHEET	INSULATION ¹	MEMBRANE
1	A	Noncombustible	1/4:12	—	Any of the following insulations, 1-inch min. to 6-inch max. thickness: Carlisle "SecurShield Polyiso", "InsulBase", Hunter Panels "H-Shield" or "H-Shield-CG"	Sure-Weld, Spectro-Weld
2			1/2:12			Sure-Seal FR, Sure-Tough, Sure-White, Sure-Seal FleeceBACK, Sure-Weld HS, Sure-Weld SAT-TPO, Sure-Weld FleeceBACK, Spectro-Weld FleeceBACK, Sure-White FleeceBACK
3			3/4:12			Sure-Flex PVC FleeceBACK, Sure-Flex KEE HP FleeceBACK, Sure-Flex PVC FRS FleeceBACK, Sure-Flex KEE HP FRS FleeceBACK
4			2:12			Sure-Flex PVC, Sure-Flex PVC FRS, Sure-Flex KEE HP
5	A	Noncombustible	3/4:12	—	1/2-inch-thick fiberboard ⁴ , 1/2-inch-thick fiberboard ⁴ or barrier board (see Section 3.6) over 5-inch max Insulfoam EPS ³ , 1/2-inch-thick fiberboard or barrier board (see Section 3.6) over System No. 1 insulations	Sure-White FleeceBACK
6			1:12			Sure-Seal FR, Sure-Tough
7			1 1/2:12			Sure-White, Sure-Seal FleeceBACK, Sure-Weld, Spectro-Weld, Sure-Weld HS, Sure-Weld SAT-TPO, Sure-Weld FleeceBACK, Spectro-Weld FleeceBACK, Sure-Flex PVC, Sure-Flex PVC FRS, Sure-Flex KEE HP, Sure-Flex PVC FleeceBACK, Sure-Flex KEE HP FleeceBACK, Sure-Flex PVC FRS FleeceBACK, Sure-Flex KEE HP FRS FleeceBACK
8	A	Noncombustible or Combustible - min. 15/32-inch-thick plywood or min. 7/16-inch-thick OSB.	3/4:12	1/4-inch thick "DensDeck Prime" or 1/4-inch thick "SECUROCK Gypsum Fiber Roof Board"	—	Sure-White FleeceBACK
9			1 1/2:12			Sure-White, Sure-Seal FleeceBACK
10			3:12			Sure-Tough, Sure-Weld, Spectro-Weld, Sure-Weld FleeceBACK, Spectro-Weld FleeceBACK
11			4:12			Sure-Weld HS, Sure-Weld SAT-TPO
12			Unlimited			Sure-Seal FR, Sure-Flex PVC, Sure-Flex PVC FRS, Sure-Flex KEE HP
13			3:12			Sure-Flex PVC FleeceBACK, Sure-Flex KEE HP FleeceBACK, Sure-Flex PVC FRS FleeceBACK, Sure-Flex KEE HP FRS FleeceBACK

TABLE 2—FIRE CLASSIFICATION ASSEMBLIES—ADHERED ROOFING SYSTEMS^{2,5} (continued)

SYSTEM NO.	ROOF CLASS	DECK	MAX SLOPE	BARRIER BOARD OR SLIP SHEET	INSULATION ¹	MEMBRANE
14	A	Combustible min. 1 ⁵ / ₃₂ -inch-thick plywood or min. 7 ⁷ / ₁₆ -inch-thick OSB.	1 ¹ / ₄ :12	Barrier board (see Section 3.6) or Slip sheet: 2 layers (see Section 3.7)	Any of the following insulations, 1-inch min. to 6-inch max. thickness: Carlisle "SecurShield Polyiso", "InsulBase", Hunter Panels "H-Shield" or "H-Shield-CG"	Sure-Weld, Spectro-Weld
15			1 ¹ / ₂ :12			Sure-Seal FR, Sure-Tough, Sure-White, Sure-Seal FleeceBACK, Sure-Weld HS, Sure-Weld SAT-TPO, Sure-Weld FleeceBACK, Spectro-Weld FleeceBACK, Sure-White FleeceBACK
16			3 ³ / ₄ :12			Sure-Flex PVC FleeceBACK, Sure-Flex KEE HP FleeceBACK, Sure-Flex PVC FRS FleeceBACK, Sure-Flex KEE FRS FleeceBACK
17			2:12			Sure-Flex PVC, Sure-Flex PVC FRS, Sure-Flex KEE HP
18	C	Noncombustible or Combustible min. 1 ⁵ / ₃₂ -inch-thick plywood or min. 7 ⁷ / ₁₆ -inch-thick OSB.	Unlimited	—	Any of the following insulations, min. 1- inch. thickness: Carlisle "InsulBase" or Hunter Panels "H-Shield"	EPDM, PVC and TPO Membranes
19	A	Combustible	1 ¹ / ₂ :12	—	Single layer of minimum 3.0" or double layer of minimum 1.5" Carlisle "SecurShield Polyiso" or Hunter Panels "H-Shield-CG"	EPDM, PVC, and TPO Membranes
20	B	Combustible	1 ¹ / ₂ :12	—	Single layer of minimum 1.9" Carlisle "SecurShield Polyiso" or Hunter Panels "H-Shield-CG"	EPDM, PVC, and TPO Membranes

For SI: 1 inch = 25.4 mm.

¹All foam plastic insulation must be UL-classified foamed plastic for roofing systems, and must be limited to the maximum thickness in accordance with Section 5.4 of this report or the maximum thickness in accordance with this table, whichever is less.

²See Section 3.10 for adhesive application rate.

³UL Classified EPS may be installed below min. 1-inch-thick Carlisle or Hunter Panels polyisocyanurate insulations (max slope 1:12) or below min. 1/2-inch-thick Carlisle SecurShield HD or Hunter Panels H-Shield HD (max slope 2:12) on noncombustible decks.

⁴Carlisle SecurShield HD or Hunter Panels H-Shield HD may replace fiberboard and may be used as a coverboard over any insulation. When these two boards are used directly below the Sure-Weld membrane, the slope is limited to max. 1¹/₂:12.

⁵When these systems are used for reroofing or recovering, installation must be in accordance with Sections 4.2.2 and 5.7 of this report, and 2018 and 2015 IBC Section 1511 [2012 and 2009 IBC Section 1510], 2018 and 2015 IRC Section R908 [2012 and 2009 IRC Section R907], as applicable.

TABLE 3—FIRE CLASSIFICATION ASSEMBLIES—MECHANICALLY FASTENED ROOFING SYSTEMS⁴

SYSTEM NO.	ROOF CLASS	DECK	MAX. SLOPE	BARRIER BOARD OR SLIP SHEET	INSULATION ¹	MEMBRANE/MAX. ROOF SLOPE
1	A	Noncombustible	1/2:12	—	Any of the following insulations, 1-inch min. to 6-inch max. thickness: Carlisle "SecurShield Polyiso" or "InsulBase", Hunter Panels "H-Shield" or "H-Shield-CG"	Sure-Tough, Sure-Weld, Spectro-Weld
2			1 1/2:12			Sure-Weld HS
3			3/4:12			Sure-Tough FR
4			2 1/2:12			Sure-Flex PVC, Sure-Flex KEE HP
5	A	Noncombustible	1:12	—	1/2-inch-thick fiberboard ³ , 1/2-inch-thick fiberboard ⁴ or barrier board (see Section 3.6) over 5-inch max Insulfoam EPS ² , 1/2-inch-thick fiberboard or barrier board (see Section 3.6) over System No. 1 insulations	Sure-Tough, Sure-Flex
6			1 1/2:12			Sure-Weld, Spectro-Weld, Sure-Weld HS
7			2 1/2:12			Sure-Tough FR
8	A	Noncombustible	1/2:12	—	To 5-inch max: Insulfoam SP	Sure-Weld, Spectro-Weld, Sure-Weld HS, Sure-Flex, Sure-Flex KEE HP
9	A	Noncombustible or Combustible min. 15/32-inch-thick plywood or min. 7/16-inch-thick OSB.	3:12	Barrier board (see Section 3.6)	—	Sure-Tough, Sure-Weld, Spectro-Weld
10			3 1/2:12			Sure-Tough FR
11			Unlimited			Sure-Weld HS, Sure-Flex, Sure-Flex KEE HP
12	A	Combustible min. 15/32-inch-thick plywood or min. 7/16-inch-thick OSB.	1/2:12	Barrier board (see Section 3.6) or Slip sheet: 2 layers, (see Section 3.7)	Any of the following insulations, 1-inch min. to 6-inch max. thickness: Carlisle "SecurShield Polyiso" or "InsulBase", Hunter Panels "H-Shield" or "H-Shield-CG"	Sure-Tough, Sure-Weld, Spectro-Weld
13			1 1/2:12			Sure-Weld HS
14			3/4:12			Sure-Tough FR
15			2 1/2:12			Sure-Flex PVC, Sure-Flex KEE HP
16	A	Combustible min. 15/32-inch-thick plywood or min. 7/16-inch-thick OSB	1:12	Slip sheet, 2 layers (see Section 3.7)	—	Sure-Tough
17			1 1/2:12			Sure-Tough FR, Sure Weld, Spectro-Weld, Sure-Weld HS, Sure-Flex, Sure-Flex KEE HP
18	B	Combustible min. 15/32-inch-thick plywood or min. 7/16-inch-thick OSB.	1 1/2:12	Slip sheet, 1 layer (see Section 3.7)	—	Sure-Tough, Sure-Tough FR, Sure-Weld, Spectro-Weld, Sure-Weld HS, Sure-Flex, Sure-Flex KEE HP
19	C	Combustible min. 15/32-inch-thick plywood or min. 7/16-inch-thick OSB.	Unlimited	—	Any of the following insulations, 1-inch min. thickness: Carlisle "SecurShield Polyiso" or "InsulBase", Hunter Panels "H-Shield" or H-Shield CG"	EPDM, PVC and TPO Membranes
20	A	Combustible	1/2:12	—	Single layer of minimum 3-inch or double layer of minimum 1.5-inch Carlisle "SecurShield Polyiso" or Hunter Panels "H-Shield-CG"	EPDM, PVC, and TPO Membranes
21	B	Combustible	1/2:12	—	Single layer of minimum 1.9-inch Carlisle "SecurShield Polyiso" or Hunter Panels "H-Shield-CG" or single layer of an inverted G3 cap sheet.	EPDM, PVC, and TPO Membranes

For SI: 1 inch = 25.4 mm.

¹All foam plastic insulation must be UL-classified foamed plastic for roofing systems, and must be limited to the maximum thickness in accordance with Section 5.4 of this report or the maximum thickness in accordance with this table, whichever is less.

²UL Classified EPS may be installed below min. 1-inch-thick Carlisle or Hunter Panels polyisocyanurate insulations (max slope 1:12) or below min. 1/2-inch-thick Carlisle SecurShield HD or Hunter Panels H-Shield HD (max slope 2:12) on noncombustible decks.

³Carlisle SecurShield HD or Hunter Panels H-Shield HD may replace fiberboard and may be used as a coverboard over any insulation. When these two boards are used directly below the Sure-Weld membrane, the slope is limited to 1/2:12.

⁴When these systems are used for reroofing or recovering, installation must be in accordance with Sections 4.2.2 and 5.7 of this report, and 2018 and 2015 IBC Section 1511 [2012 and 2009 IBC Section 1510], 2018 and 2015 IRC Section R908 [2012 and 2009 IRC Section R907], as applicable.

TABLE 4—WIND RESISTANCE—MECHANICALLY FASTENED ASSEMBLIES^{4,7}

SYSTEM NO.	MAXIMUM ALLOWABLE WIND UPLIFT (psf)	DECK ³	INSULATION ⁵	MEMBRANE	MEMBRANE FASTENING	MAXIMUM FASTENER SPACING (inches)	MAXIMUM FASTENER ROW SPACING ⁸
1	45	Noncombustible	Foam plastic insulation ^{1,2} , 1/2-inch-thick fiberboard ⁶ or barrier board (See Sect. 3.6)	Sure-Tough	HP-X Fastener & Metal Fastening Bar	12	6 ft 6 inches
2	75	Noncombustible	Same as System No. 1	Sure-Tough	HP-X Fastener & Metal Fastening Bar	6	6 ft 6 inches
3	52	Noncombustible	Same as System No. 1	Sure-Tough	HP Fastener & Polymer Seam Plate	6	9 ft 6 inches
4	45	Noncombustible	Same as System No. 1	Sure-Tough	Sure-Tite Fastener & ST Fastening Bar	12	9 ft 6 inches
5	30	Noncombustible	Same as System No. 1	Sure-Tough (75 mil)	HP Fastener & Polymer Seam Plate	12	9 ft 6 inches
6	60	Noncombustible	Same as System No. 1	Sure-Tough (75 mil)	HP Fastener & Polymer Seam Plate	6	9 ft 6 inches
7	45	Noncombustible	Same as System No. 1	Sure-Weld or Spectro-Weld	HP-X or HP-Xtra Fasteners with Piranha or Piranha Xtra Plates	12	7 ft 6 inches
8	45	Noncombustible	Same as System No. 1	Sure-Weld or Spectro-Weld	HP-Xtra Fasteners with Piranha Xtra Plates	12	9 ft 6 inches
9	60	Noncombustible	Same as System No. 1	Sure-Weld or Spectro-Weld	HP-X or HP-Xtra Fasteners with Piranha or Piranha Xtra Plates	6	9 ft 6 inches
10	67	Noncombustible	Same as System No. 1	Sure-Weld or Spectro-Weld	HP-X or HP-Xtra Fasteners with Piranha or Piranha Xtra Plates	6	7 ft 6 inches
11	30	Noncombustible	Same as System No. 1	Sure-Weld or Spectro-Weld	HP-X or HP-Xtra Fasteners with Piranha or Piranha Xtra Plates	12	11 ft 6 inches
12	60	Noncombustible	Same as System No. 1	Sure-Weld or Spectro-Weld	HP-X or HP-Xtra Fasteners with Piranha or Piranha Xtra Plates	6	11 ft 6 inches
13	53	Noncombustible	Same as System No. 1	Sure-Flex PVC or Sure-Flex KEE HP	HP-X Fasteners with Piranha Plates	6	6 ft 4 inches
14	83	Noncombustible	Same as System No. 1	Sure-Flex PVC or Sure-Flex KEE HP	HP-X Fasteners with Piranha Plates	6	2 ft 11 inches
15	30	Noncombustible	Same as System No. 1	Sure-Flex PVC or Sure-Flex KEE HP	HP-X or HP-Xtra Fasteners with Piranha or Piranha Xtra Plates	18	6 ft 4 inches
16	45	Noncombustible	Same as System No. 1	Sure-Flex PVC or Sure-Flex KEE HP	HP-X or HP-Xtra Fasteners with Piranha or Piranha Xtra Plates	12	6 ft 4 inches
17	53	Noncombustible	Same as System No. 1	Sure-Flex PVC or Sure-Flex KEE HP	HP-X Fasteners with Piranha Plates	12	2 ft 11 inches
18	60	Noncombustible	Same as System No. 1	Sure-Flex PVC or Sure-Flex KEE HP	HP-X or HP-Xtra Fasteners with Piranha Plates	6	9 ft 7 inches
19	45	Noncombustible	Same as System No. 1	Sure-Weld	HP-X Fasteners with OMG RhinoBond Plates	1 per 5.3 ft ²	N/A
20	60	Noncombustible	Same as System No. 1	Sure-Weld	HP-X Fasteners with OMG RhinoBond Plates	1 per 4 ft ²	N/A

For SI: 1 inch = 25.4 mm; 1 ft = 0.305 m; 1 psf = 47.88 Pa.

¹Foam plastic insulation must be any of the following (1-inch min. to 6-inch max. thickness): Carlisle "SecurShield Polyiso", "InsulBase" Hunter Panels "H-Shield" or Hunter Panels "H-Shield- CG".

²All foam plastic insulation must be UL-classified foamed plastic for roofing systems, and must be limited to the maximum thickness in accordance with Section 5.4 of this report or the maximum thickness in accordance with this table, whichever is less.

³Steel deck must be minimum No. 22 gage galvanized steel [base-metal thickness 0.030 inch (0.76 mm)]. Concrete must have a minimum compressive strength (*f'_c*) of 2500 psi. See Section 5.6 of this report.

⁴For existing metal roofing, the assemblies listed must be installed by fastening through the roofing and into structural members (purlins, angle iron, beams, etc.) capable of resisting all expected loads. The maximum allowable wind uplift (field) pressures are shown in Column 2.

⁵UL Classified EPS may be installed below min. 1-inch-thick Carlisle or Hunter Panels polyisocyanurate insulations (max slope 1:12) or below min. 1/2-inch-thick Carlisle SecurShield HD or Hunter Panels H-Shield HD (max slope 2:12) on noncombustible decks.

⁶Carlisle SecurShield HD or Hunter Panels H-Shield HD may replace fiberboard and may be used as a coverboard over any insulation. When these two boards are used directly below the Sure-Weld membrane, the slope is limited to 1/2:12.

⁷When these systems are used for reroofing or recovering, installation must be in accordance with Sections 4.2.2 and 5.7 of this report, and 2018 and 2015 IBC Section 1511 [2012 and 2009 IBC Section 1510], 2018 and 2015 IRC Section R908 [2012 and 2009 IRC Section R907], as applicable.

⁸Fastener row spaces shown are for field of roof only. See Section 4.3 for recognized fascia systems for mechanically fastened roof assemblies. Distance between the edge of the roof and the first row of fasteners must be determined accordingly.

TABLE 5—WIND RESISTANCE—ADHERED ASSEMBLIES^{5,6}

SYSTEM NO.	ALLOWABLE WIND UPLIFT (FIELD) (psf)	DECK ²	INSULATION / MIN. THICKNESS ^{1,3}	INSULATION FASTENING RATE	MEMBRANE TYPE
1	45	Combustible or Noncombustible	1/2 inch fiberboard ⁴ , 1 ⁵ / ₃₂ inch OSB, or 1/4-inch thick "DensDeck Prime" or 1/4-inch thick "SECUROCK Gypsum Fiber Roof Board"	1 per 2 ft ²	EPDM, PVC and TPO Membranes
2	45	Combustible or Noncombustible	Carlisle "InsulBase" or "SecurShield Polyiso"; Hunter Panels "H-Shield" or "H-Shield-CG" / 1.4 inch with 1/2-inch SECUROCK coverboard (optional)	1 per 3.2 ft ²	EPDM, PVC and TPO Membranes
3	45	Combustible or Noncombustible	Carlisle "InsulBase" or "SecurShield Polyiso"; Hunter Panels "H-Shield" or "H-Shield-CG" / 2.0 inch with 5/8-inch SECUROCK coverboard (optional)	1 per 4 ft ²	EPDM, PVC and TPO Membranes
4	68	Combustible or Noncombustible	Carlisle "InsulBase" or "SecurShield Polyiso"; Hunter Panels "H-Shield" or "H-Shield-CG" / 1.0 inch	FAST Adhesive	FleeceBACK Membranes
5	75	Combustible or Noncombustible	Carlisle "InsulBase" or "SecurShield Polyiso"; Hunter Panels "H-Shield" or "H-Shield-CG" / 2.0 inch with 1/2-inch SECUROCK coverboard (optional)	1 per 1.6 ft ²	EPDM, PVC and TPO Membranes
6	113	Combustible or Noncombustible	Carlisle "SecurShield" or "H-Shield CG" / 2.0 inch	1 per 1ft ²	PVC Membranes
7	120	Combustible or Noncombustible	Carlisle "InsulBase" or "SecurShield Polyiso"; Hunter Panels "H-Shield" or "H-Shield-CG" / 2.0 inch	1 per 1 ft ²	TPO Membranes; EPDM membranes (with noncombustible deck only)
8	128	Combustible or Noncombustible	Carlisle "InsulBase" or "SecurShield Polyiso"; Hunter Panels "H-Shield" or "H-Shield-CG" / 2.0 inch with 1/2-inch SECUROCK coverboard (optional)	1 per 1 ft ²	EPDM and TPO Membranes
9	135	Combustible or Noncombustible	Carlisle "InsulBase" or "SecurShield Polyiso"; Hunter Panels "H-Shield" or "H-Shield-CG" / 2.0 inch with 1/2-inch SECUROCK coverboard (optional)	1 per 1 ft ²	FleeceBACK Membranes
10	143	Combustible or Noncombustible	1/2 inch DensDeck Prime	1 per 1 ft ²	FleeceBACK Membranes

For SI: 1 inch = 25.4 mm; 1 ft = 0.305 m; 1 psf = 47.88 Pa

¹All foam plastic insulation must be UL-classified foamed plastic for roofing systems, and must be limited to the maximum thickness in accordance with Section 5.4 of this report or the maximum thickness in accordance with this table, whichever is less.

²Steel deck must be minimum No. 22 gage galvanized steel [base-metal thickness 0.030 inch (0.76 mm)]. Concrete must have a minimum compressive strength (f_c) of 2500 psi. See Section 5.6 of this report.

³UL Classified EPS may be installed below min. 1-inch-thick Carlisle or Hunter Panels polyisocyanurate insulations (max slope 1:12) or below min. 1/2-inch-thick Carlisle SecurShield HD or Hunter Panels H-Shield HD (max slope 2:12) on noncombustible decks.

⁴Carlisle SecurShield HD or Hunter Panels H-Shield HD may replace fiberboard and may be used as a coverboard over any insulation. When these two boards are used directly below the Sure-Weld membrane, the slope is limited to 1/2:12.

⁵When application is over existing roofs, documentation of the wind-uplift resistance of the composite roof construction must be submitted to the code official for approval at the time of permit application. For reroofing or recovering, installation must be in accordance with 2018 and 2015 IBC Section 1511 [2012 and 2009 IBC Section 1510], 2018 and 2015 IRC Section R908 [2012 and 2009 IRC Section R907], as applicable.

⁶See Section 3.10 for adhesive application rate.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 53 23—Ethylene-Propylene-Diene-Monomer Roofing
Section: 07 54 19—Polyvinyl-Chloride Roofing
Section: 07 54 23—Thermoplastic-Polyolefin Roofing

REPORT HOLDER:

CARLISLE SYNTEC SYSTEMS

EVALUATION SUBJECT:

CARLISLE EPDM, PVC AND TPO SINGLE-PLY ROOFING MEMBRANES

1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that Carlisle EPDM, PVC and TPO Single-ply Roofing Membranes, described in ICC-ES master evaluation report ESR-1463, have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2017 *City of Los Angeles Building Code* (LABC)
- 2017 *City of Los Angeles Residential Code* (LARC)

2.0 CONCLUSIONS

The Carlisle EPDM, PVC and TPO Single-ply Roofing Membranes, described in Sections 2.0 through 7.0 of the master evaluation report [ESR-1463](#), comply with the LABC Chapters 7A and 15, the LARC Section R337 and LARC Chapter 9, and are subjected to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Carlisle EPDM, PVC and TPO Single-ply Roofing Membranes, described in this evaluation report must comply with all of the following conditions:

- All applicable sections in the master evaluation report [ESR-1463](#).
- The design, installation, conditions of use and identification are in accordance with the 2015 *International Building Code*® (2015 IBC) and 2015 *International Residential Code*® (2015 IRC) provisions noted in the master evaluation report [ESR-1463](#).
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, or LARC Chapter 3, as applicable.
- The Carlisle EPDM, PVC and TPO Single-ply Roofing Membranes must not be installed over existing wood shakes or wood shingles in accordance with LABC Section 1511.
- The installation of the Carlisle EPDM, PVC and TPO Single-ply Roofing Membranes must comply with City of Los Angeles Information Bulletin P/BC 2014-16, "Dwellings in High Wind Velocity Areas (HWA)".
- Reroofing applications must comply with Sections 4.2.2, 4.3.2 and 5.7 of the master evaluation report [ESR-1463](#) and LABC Section 1511 or LARC Section R908, as applicable. Where spaced sheathing exists, a minimum of ¹⁵/₃₂-inch-thick (11.9 mm) plywood shall be installed prior to roofing installations.

- Where moderate or heavy foot traffic occurs for maintenance of equipment, the roof covering shall be adequately protected.
- The Building Inspector shall be notified 24 hours in advance prior to installation of the roof membranes.
- The Carlisle EPDM, PVC and TPO Single-ply Roofing Membranes may be used in the construction of new buildings located in any Fire Hazard Severity Zone within a State Responsibility Areas or any Wildland-Urban Interface Fire Area, provided installation is in accordance with the 2015 *International Building Code*[®] (IBC) provisions noted in the master report and the additional requirements of Sections 701A.3 and 705A of the LABC.
- The Carlisle EPDM, PVC and TPO Single-ply Roofing Membranes may be used in the construction of new buildings located in any Fire Hazard Severity Zone within a State Responsibility Areas or any Wildland-Urban Interface Fire Area, provided installation is in accordance with the 2015 *International Residential Code*[®] (IRC) provisions noted in the master report and the additional requirements of Sections R337.3.1 and R337.5 of the LARC.

This supplement expires concurrently with the master report, reissued October 2018 and revised December 2019.

RESOLUTION NO. 2018-132

A RESOLUTION CONCERNING RULES AND REGULATIONS FOR BOULDER COUNTY PARKS & OPEN SPACE AREAS (Superseding Resolution No. 2018-08).

WHEREAS the Board of County Commissioners (“Board”) is empowered by § 29-7-101(2), C.R.S. and § 30-15-401, C.R.S., as amended, to adopt rules and regulations pertaining to Boulder County Parks & Open Space areas; and

WHEREAS, Boulder County, through the Board, has elected to adopt such Rules and Regulations; and

WHEREAS, these Rules and Regulations are for the sole purpose of managing and protecting property which Boulder County owns, leases or otherwise manages as Parks & Open Space areas and will be enforced in accordance with established resources and operating procedures; and

WHEREAS, enactment of these Rules and Regulations constitutes neither a waiver of governmental immunity pursuant to §§ 24-10-101, et seq., C.R.S., as amended, nor the assumption of any duties of care to any person.

NOW, THEREFORE, BE IT RESOLVED that the prior Resolutions listed above concerning Rules and Regulations governing Boulder County Parks & Open Space areas are superseded by the following:

1. Resource Protection

- (a) It shall be unlawful for any unauthorized person to remove, move, destroy, mutilate, collect, or deface any natural or man-made object within any Boulder County Parks & Open Space area, including, but not limited to: trees, down timber or branches, shrubbery, plants, flowers, rocks, fences, signs, kiosks, restrooms, tables, benches, cultural resources, and trash containers.
- (b) It shall be unlawful to install or replace rock bolts, plant vegetation of any type or any other type of landscape material, or establish or construct trails or other facilities for public or private use without the written permission from the Director of the Boulder County Parks & Open Space Department (“Director”).

2. Wildlife

- (a) It shall be unlawful for any person to feed, hunt, pursue, trap, molest, disturb, or kill any wildlife, or for any person to allow any domestic animal to do the same, at any time within any Boulder County Parks & Open Space area, except where and when such activities are permitted by action of the Board or by written permission from the Director and except as provided for in Rule 3 below. This provision shall not apply to any county, state, or federal government personnel authorized by the Board to carry out a wildlife management program through law or county-approved rules and regulations.
- (b) It shall be unlawful for any unauthorized person to relocate or release any animal within Boulder County Parks & Open Space areas.

3. Fishing Regulations

Fishing is permitted in accordance with the Colorado Wildlife Commission's land and water regulations, except in open space areas designated and posted with special Boulder County Parks & Open Space regulations. Ice fishing is prohibited on all Boulder County Parks & Open Space areas, unless the area is specifically posted to allow ice fishing. It shall be unlawful to violate special fishing regulations posted within any Boulder County Parks & Open Space area. Rules and Regulations, fees, and special permit requirements shall be determined by the Board and posted at affected Boulder County Parks & Open Space areas. The Board and the Director may modify these regulations or create new ones when deemed necessary for repairs, wildlife, vegetation, and/or public safety concerns. The Director, within two days of modifying or creating any regulations under this Paragraph, sends notification to the Board of such action. The Board may, at a regularly scheduled business meeting, rescind or modify the decision by the Director. Only that portion of any decision by the Director that is specifically approved by the Board shall continue to be effective.

Unless otherwise posted or provided in these rules and regulations, float tubes, as defined under the boating regulations below, shall be permitted in conjunction with fishing wherever fishing is permitted within Boulder County Parks & Open Space areas.

It shall be unlawful to use seines, cast nets, and/or live traps on any body of water within Boulder County Parks or Open Space areas.

(a) Walden Pond Wildlife Habitat:

- i. Fishing in Wally Toevs Pond shall be limited to senior citizens (ages 64 and over) and their companions (ages 15 years or younger) and anglers with disabilities and their companions.
- ii. It shall be unlawful to exceed the posted creel limit.
- iii. All other ponds at Walden Ponds Wildlife Habitat are designated as catch and release fishing for largemouth and smallmouth bass. At these ponds anglers must use terminal tackle, such as flies and lures. Creel limits for all species other than largemouth and smallmouth bass must adhere to Colorado Parks and Wildlife Commission regulations.
- iv. Fishing is prohibited on Cottonwood Marsh Lake.
- v. All vessels and float tubes are prohibited.

(b) Cattail Ponds at the Boulder County Fairgrounds:

- i. All vessels and float tubes are prohibited.
- ii. Fishing is limited to people under 16 years of age.

(c) Lagerman Reservoir:

- i. Vessels at Lagerman Reservoir are limited to non-motorized vessels and motorized vessels with electric motors or gasoline motors of 8 horsepower or less.
- ii. Vessels are restricted to wakeless speeds (less than five miles per hour).
- iii. All largemouth and smallmouth bass possessed must be 15 inches or greater in length. All tiger muskie possessed must be 36 inches or greater in length and the creel limit is one. The creel limits for all species shall adhere to the Colorado Wildlife Commission regulations (creel limit for largemouth and smallmouth bass is five each).

(d) Stearns Lake at Carolyn Holmberg Preserve/Rock Creek Farm:

- i. All largemouth and smallmouth bass possessed must be 15 inches or greater in length. All tiger muskie possessed must be 36 inches or greater in length and the creel limit shall be one. The creel limits for all species shall adhere to the Colorado Wildlife Commission regulations (creel limit for largemouth and smallmouth bass is five each).
- ii. All vessels and float tubes are prohibited.

(e) Pella Crossing:

- i. All ponds at Pella Crossing are designated as catch and release fishing for largemouth and smallmouth bass. Anglers must use terminal tackle, such as flies and lures. Creel limits for all species other than largemouth and smallmouth bass must adhere to the Colorado Wildlife Commission regulations.
- ii. Fishing is prohibited on Webster Pond.
- iii. Non-motorized, portable vessels are allowed on Lake Sunset, Heron Lake, and Dragonfly, Poplar, and Clearwater Ponds. Such use is allowed only for the purpose of fishing.

(f) Twin Lakes:

- i. All vessels and float tubes are prohibited.

(h) Mud Lake:

- i. All vessels and float tubes are prohibited.

4. Projectiles, Weapons and Explosives

It shall be unlawful to carry or discharge on or into any Boulder County Parks & Open Space area, firearms (concealed or otherwise), projectile weapons, or explosives of any kind including but not limited to hand guns, rifles, shotguns, fireworks, BB guns, pellet guns, rockets, air guns, paint ball guns, blow guns, crossbows, longbows, and slingshots, except as expressly mandated by Article 12 of Title 18 of the Colorado Revised Statutes, as amended. Peace officers on official duty and Boulder County Park Rangers engaged in official wildlife management operations are excepted, as are residential tenants of the county within their living quarters and events under lease at the Boulder County Fairgrounds.

Further exceptions may be permitted only with written permission from the Board or the Director.

5. Domestic Animals/Livestock

- (a) Any dog or other domestic animal within a Boulder County Parks & Open Space area shall be restrained by a leash, cord, rope, or chain and under physical control of a person, except as otherwise provided for in this paragraph or posted with approval from the Board. Any owner/keeper accompanying a dog in an off-leash area must have the ability to restrain his or her dog when requested by Parks & Open Space staff.
- (b) It shall be unlawful for any owner/keeper to allow his or her domestic animals within a Boulder County Parks & Open Space area to engage in disorderly conduct or any activity which interferes with the health, safety, or welfare of users, livestock, other domestic animals or neighbors in the area, or which creates a nuisance, including unwanted physical contact or threatening behavior with any user, domestic animal, or livestock.
- (c) Any person who brings a dog into a Boulder County Parks & Open Space area shall pick up, carry out, and dispose of that dog's excrement.

- (d) Dogs may be prohibited on specific Boulder County Parks & Open Space areas by action of the Board.
- (e) Horses must be under the physical control of a person at all Boulder County Parks & Open Space areas except at the exhibitor and spectator areas at the Boulder County Fairgrounds and those permitted under a written grazing lease from Boulder County.
- (f) Domestic animals or livestock may be tied by a lead or rope sufficient to restrain the animals, but shall neither be left tied and unattended nor tied in any manner which damages vegetation or structures or which interferes with or disturbs the public's use of established trails, picnic areas, or campsites.
- (g) All feed provided to livestock while on Boulder County Parks & Open Space trails and trailheads must be free of weeds and weed seeds. Livestock grazing is allowed only by lease or written permission from the Director or the Board.
- (h) Exceptions to this rule are permitted for the use of a dog as a service animal as long as such use is in all respects in compliance with the regulations in 28 CFR § 35.136. A service animal must be individually trained to do work or perform tasks for the benefit of its handler's disability. Provision of emotional support, well-being, comfort, or companionship do not qualify as "work" or "tasks" which may be provided by a service animal.
- (i) It shall be unlawful to confine any animal in a motor vehicle in such a manner that places it in a life or health-threatening situation by exposure to a prolonged period of extreme heat or cold without proper ventilation or other protection from such heat or cold.

6. Camping

Camping is not permitted on Boulder County Parks & Open Space areas except in designated areas at the Boulder County Fairgrounds.

7. Fire

- (a) Campfires are unlawful. Charcoal fires may be built only in established picnic and camping areas, and then only in grills and fireplaces provided by the department or in personal grills or stoves. All charcoal fires must be built in a safe manner and attended at all times. All charcoal fires must be properly extinguished and left in the provided grills. Exceptions may be granted only with written permission from the Board or the Director.
- (b) Fires may be prohibited entirely by order of the Board, the Boulder County Sheriff, or the Director by the posting of special notices or public notification through the press.
- (c) It shall be unlawful to violate an order or special notice prohibiting fires on any Boulder County Parks & Open Space area.

8. Bicycles

No person shall ride a bicycle or unicycle within any Boulder County Parks & Open Space area except on trails where such use is designated, including day-of-use and directional designations, and at the Boulder County Fairgrounds. Unless otherwise stated, the definition of bicycle shall

include: all exclusively human-powered wheeled vehicles. Gas and electric assisted bicycles are prohibited within any County Parks & Open Space area except where such use is specifically designated. Strollers and wheelchairs are exempted from this regulation and are permitted within any Boulder County Parks & Open Space area.

9. Vehicles

- (a) No person shall operate a motor vehicle, including a car, truck, motorcycle, minibike, electric assisted bicycle, snowmobile, four-wheel drive or other recreational vehicle, within any Boulder County Parks & Open Space area, unless the area is specifically designated and posted to permit the operation of such vehicle in that area. Boulder County and emergency vehicles on official business are excepted from this rule. For exceptions related to disabled access refer to Rule 9(b).
- (b) Individuals with mobility disabilities are permitted to use wheelchairs and/or manually-powered mobility aids on any trail open to pedestrian use so long as they are used in a manner that is safe for the user. Individuals with mobility disabilities may use other power-driven mobility devices (“OPDMDs”) on all trails open for pedestrian use unless a particular trail has been designated as being unsafe for use by OPDMDs based upon the assessment factors found in 28 CFR § 35.137(b)(2). A current list of trails that have been designated as being unsafe for use of OPDMDs shall be kept on the Boulder County Parks & Open Space web site. County personnel who have been granted authority for enforcement of these Rules and Regulations pursuant to Rule 28 shall have the discretion to temporarily designate additional trail segments or other facilities on Boulder County Parks & Open Space areas as inappropriate for use of certain classes of OPDMDs based upon current conditions that may affect the safety of the OPDMD user or other members of the public and/or harm to the immediate environment or natural or cultural resources, such as weather, trail conditions, and volume of pedestrian traffic. Use of OPDMDs within any Parks & Open Space area must be in a safe manner and is at the risk of the user. OPDMDs may not be used off trail in any Parks & Open Space area.
- (c) Vehicles must be parked only in designated areas, and/or in compliance with all posted parking signs.
- (d) Vehicles may not be parked, attended or unattended, at any time from sunset to sunrise except with permission from the Director.
- (e) Only persons with a disability may park in spaces designated for persons with disabilities. A license plate or placard obtained pursuant to § 42-3-121, C.R.S., as amended, or otherwise authorized by § 42-4-1208 (4), C.R.S., as amended, shall be displayed at all times while vehicle is parked in such a space.
- (f) It shall be unlawful to park in a manner that impedes the safe flow of traffic.

10. Advertising and Signs Prohibited

Posting of signs, advertisements and flyers or placement of brochures on Boulder County Parks & Open Space areas or on vehicles within parking facilities is prohibited without permission from the Director.

11. Swimming and Skating

It shall be unlawful to swim, dive, ice skate, walk on ice, use any floatation device not designed for fishing, in or on any lake, pond, or stream within any Boulder County Parks & Open Space area, unless the area is specifically posted to allow such activity.

12. Littering/Dumping

- (a) It shall be unlawful to deposit or dispose of trash, garbage, rubbish, litter, debris, or other objects within any park or open space area, except that which is generated by legal activities conducted within the Boulder County Parks & Open Space area. Trash and debris legally generated within any Boulder County Parks & Open Space area must be removed or deposited in a designated trash receptacle.
- (b) It shall be unlawful to clean vehicles / livestock trailers out onto Boulder County Parks & Open Space areas, including the Boulder County Fairgrounds.
- (c) Under no circumstance may hazardous materials be deposited within Boulder County Parks & Open Space areas.

13. Glass Containers

It shall be unlawful for any person to carry or possess, outside of an enclosed vehicle, any glass bottle or other glass container within any Boulder County Parks & Open Space area, except as might be required for prescribed medical treatment or for food preparation in the concession areas or campground at the Boulder County Fairgrounds. Exceptions are also made for specific events under lease at the Boulder County Fairgrounds or pursuant to the terms of an agricultural lease. Further exceptions are permitted only by obtaining written permission from the Director or the Board.

14. Smoking

Smoking is prohibited within any Boulder County Parks & Open Space area. Smoking is defined as inhaling, exhaling, burning, or carrying any lighted cigar, cigarette, pipe, plant, electronic smoking device or other combustible substance in any manner or in any form, regardless of its composition.

15. Marijuana

It shall be unlawful to consume marijuana or any marijuana derivative within any Boulder County Parks & Open Space area.

16. Alcoholic Beverages

Possession and consumption of alcoholic beverages is permitted within Boulder County Parks & Open Space areas so long as in compliance with all other Rules and Regulations and state law. Vendors at the Boulder County Farmers' Market may conduct tastings at the Fairgrounds without a Special Events Permit if in compliance with the Fairgrounds Policy Manual and the lease from Boulder County to the Farmers' Market. Alcoholic beverages may be prohibited on specific Boulder County Parks & Open Space areas by action of the Board.

17. Hours

Boulder County Parks & Open Space areas shall be open for daytime use only, between sunrise and sunset, with the exception of the trail corridors for the Longmont-to-Boulder (LoBo) Trail, Coalton Trail, Coal Creek Trail, Rock Creek Trail, Meadowlark Trail, US 36 Bikeway, Boulder Canyon Trail, Open Sky Loop trail adjacent to Pike Road, and Mayhoffer-Singletree Trail. These trail corridors and

neighborhood connecting spurs shall be open 24 hours per day. Further exceptions are permitted only by obtaining written permission from the Director or the Board.

18. Research Projects

All research projects to be conducted within any park or open space area must be reviewed and written authorization granted in advance from the department.

19. Commercial Activity

It shall be unlawful for any person, acting individually or on behalf of a business or organization, to use any Boulder County Parks & Open Space area for any commercial purpose (such as races or events; filming movies or commercials; guiding service; equipment demonstrations; riding activities of a commercial horse stable, riding school, or livery). Individuals engaging in still camera photography are exempt as are nonprofit tax exempt entities and anyone acting pursuant to the terms of a lease.

20. Special Use Permits

Special use permits are required for any group of 25 or more. Requests must include the group affiliation, dates and time of use, trails or areas to be used, and other details of the use. If, in the opinion of the Board or the Director, the activity will cause significant impact to the natural environment or will require significant departmental resources, the county may prescribe a fee that includes the costs expected to be incurred by the department, or deny permission for the activity.

21. Disorderly Conduct

It shall be unlawful for any person to engage in disorderly conduct or any activity within a Boulder County Park and Open Space area which interferes with the health, safety, and welfare of users or neighbors in the area, or which creates a nuisance (including amplified sound). Exception from the ban on amplified sound is made for leased events at the Boulder County Fairgrounds.

22. Trail Use

- (a) It shall be unlawful for any trail user to fail to yield to other trail users in the manner defined herein or as otherwise posted at trailheads. The appropriate order for yielding the trail right-of-way is as follows: All users yield to equestrians, bicyclists yield to pedestrians, and bicyclists headed downhill yield to bicyclists headed uphill. Yielding the right-of-way requires slowing down to a safe speed, being prepared to stop, establishing communication, and passing safely.
- (b) The Board may, by resolution, adopt use restrictions on specific trails or Parks & Open Space areas when such restrictions are necessary for resource protection or safety related issues. Such restrictions shall be posted at the trailheads.

23. Closures

- (a) Boulder County Parks & Open Space areas being managed for agricultural purposes, whether by the department or a lessee, are closed to the public unless trails and other related facilities are designated for another purpose by the Board. It shall be unlawful for any unauthorized person to enter such closed areas.
- (b) The Board or the department may from time to time determine that closure of Boulder

County Parks & Open Space areas to the public and/or to certain animals is necessary or desirable due to wildlife, vegetation, management review, contractual agreement, public safety concerns, and/or other resource protection needs. The Board may designate an area as closed temporarily, permanently, or for an indefinite period of time. The Director or his or her designee may also designate an area closed, temporarily, for a period not to exceed four weeks, and within two business days of making such a decision, shall send notification of the closure to the Board. The Board may, at a regularly scheduled business meeting, rescind, extend, or otherwise modify the decision by the Director or his or her designee. It shall be unlawful for any unauthorized person to enter areas that are closed. All closures, whether temporary, permanent, or indefinite, and whether by the Board or by the Director, shall be designated at the site of the closure and on the Boulder County Parks & Open Space website.

- (c) Operators of remote-controlled gliders may apply to the Director or the Board for permission to retrieve gliders that may land on the Lindsay Open Space property.

24. Other Prohibited Activities

- (a) Other prohibited activities include: polluting land, water, or air; golfing; hangliding; paragliding; parapenting; parachuting; parasailing; the use of remote-controlled land, water, or air-borne devices; mountain skateboards; mountain ski-bikes; off-road roller blades; and similar devices unless the activity is permitted in a lease at the Boulder County Fairgrounds.
- (b) Except for emergency landings, it shall be unlawful to take off, operate, or land with any motorized or non-motorized aircraft within Parks & Open Space areas. "Aircraft" includes but is not limited to: airplanes, helicopters, ultralights, gliders/sailplanes, and hot-air balloons except as permitted by current Boulder County Parks & Open Space policies for unmanned aircraft systems or the conditions of a lease at the Boulder County Fairgrounds.
- (c) Special regulations may apply to buildings open to the public on Boulder County Parks & Open Space areas. These regulations shall be approved by the Board. Such regulations will be posted on site.
- (d) It shall be unlawful to take-off, land, or operate any unmanned aircraft system (drone) on Boulder County Parks & Open Space areas unless permitted by the Director. No person shall operate an unmanned aircraft system so as to endanger, harass, harm, or injure any person, companion animal, livestock, or wildlife on Boulder County Parks & Open Space areas.

25. Regulatory Signs

It shall be unlawful to violate any official rule or regulation posted on a sign.

26. Fairgrounds Campground

It shall be unlawful to violate the following rules and regulations for the Boulder County Fairgrounds.

- (a) Length of stay at the campground is not to exceed a total of fourteen days within a given calendar year. Campsites must be occupied during stay. Extensions may be permitted only by obtaining written permission from the Fairgrounds Manager.
- (b) Checkout time for those staying at the campground is 10:00 a.m. the morning following a paid

night's stay.

- (c) Quiet hours at the campground are between the hours of 9:00 p.m. and 6:00 a.m.
- (d) Discharge of gray or black water from motor homes, campers or trailers is permitted only at the designated dumpsite.
- (e) Permits for camping in designated areas must be kept current or secured in advance from the Fairgrounds staff or onsite paystation. Payment for that day must be received by 10:00 am or within one hour after arrival to the campground.
- (f) Livestock are prohibited in the camground.
- (g) Within the exhibitor and spectator areas at the Boulder County Fairgrounds, livestock must be penned or tied in the barn areas or otherwise under the physical control of a person. Livestock is defined as: "farm animals, raised for human use or profit (cattle, horses, goats, hogs, sheep, etc.)"
- (h) Campground restrooms and showers may be used by registered campers only.
- (i) It shall be unlawful to violate any rule or regulation contained in the Boulder County Fairgrounds Manual. Violations may result in a fine and/or expulsion from the campground.

27. Boating

- (a) Boating is only permitted on waterways which are owned and/or managed as Boulder County Parks & Open Space areas if the waterway is specifically posted to allow boating and if in compliance with Article 13 of Title 33, C.R.S., as amended.
 - i. "*Vessel*" means every description of watercraft used or capable of being used as a means of transportation for persons and property on the water, other than single-chambered air-inflated devices, float tubes, or seaplanes.
 - ii. "*Float tubes*" means a single person inflatable watercraft designed for fishing and in which a fisherman is submerged below the water level. If the fisherman sits above the surface of the water, the watercraft shall be considered a vessel and is subject to the rules and regulations related to boating.
 - iii. "*Portable vessels*" means non-motorized car top boats that can be lifted onto and taken from the top of a passenger vehicle such as kayaks, stand-up paddleboards, surfboards, and canoes.
- (b) Any vessel powered by the wind such as sailboats and sailboards are specifically prohibited on all Boulder County Parks & Open Space waters.
- (c) Motorized vessels are prohibited on all Boulder County Parks & Open Space waters, with the exception of Lagerman Reservoir, which allows motorized vessels with electric or gasoline powered motors of 8 horsepower or less. Any motorized vessel with a motor larger than 8 horsepower shall have that motor's propeller lifted out of the water at all times.

28. Interference

It shall be unlawful to interfere or attempt to interfere with any Boulder County Park Ranger or other Open Space employee who is acting in the performance of his or her duties on Parks & Open Space lands or waters or to give false or misleading information with the intent to mislead said person in the performance of his or her duties.

29. Exceptions to the Rules and Regulations

Exceptions to these Rules and Regulations as amended, re-enacted, or re-adopted, may be granted by the Board or the Director for activities that involve the management of Boulder County Parks & Open Space areas, provided these activities are undertaken or overseen by department staff, or as provided in the terms of a lease.

30. Enforcement

Pursuant to §§ 29-7-101(2) and (3) and § 30-15-401, C.R.S. et seq., as amended, it is the duty of the Boulder County Sheriff and the Sheriff's deputies to enforce any and all of the Rules and Regulations adopted for Boulder County Parks & Open Space areas. To the extent that the Board may find it desirable to vest specific enforcement authority in designated Boulder County personnel, those individuals so vested shall also have the authority and responsibility to enforce regulations adopted for Boulder County Parks & Open Space areas. Any person who violates any of these Rules and Regulations may be expelled from Boulder County Parks & Open Space areas.

31. Interpretation of Rules and Regulations

- (a) It is hereby declared to be the legislative intent that the provisions of this resolution shall be separable, in accordance with the provisions set forth as follows: If any provision of this resolution is ruled to be invalid by any court of competent jurisdiction:
 - i. The effect of such judgment shall be limited to that specific provision or provisions which are expressly stated in the judgment to be invalid; and
 - ii. Such judgment shall not affect, impair, or nullify the validity of application of the remainder of this resolution as a whole or any other part thereof, and the rest of this resolution shall continue in full force and effect.

- (b) The enactment of this resolution or any amendment thereto shall not be construed as abating any action now pending under or by virtue of prior provisions, or discontinuing, abating, modifying, or altering any penalty accruing or about to accrue, or as affecting the liability of any person, or as waiving any right of the county under any provision existing prior to the adoption of this resolution, or as vacating or annulling any rights obtained by any person by lawful action of the county except as shall be expressly provided for in this resolution.

32. Penalties

Violation of any rule or regulation above shall be a Class 2 Petty Offense as provided for in § 29-7-101(2) and § 30-15-402, C.R.S., as amended, and punishable by fine or as otherwise provided by law.

- (a) Any person having the authority and responsibility to enforce these rules and regulations and having knowledge of any violation of the rules and regulations stated herein may issue a citation or summons and complaint to the violator or, as set forth in Rule 32(b) herein, to a vehicle, stating the nature of the violation with sufficient particularity to give notice of said charge to the violator.

- (b) Any person having the authority and responsibility to enforce the rules and regulations for Boulder County Park and Open Space areas and having knowledge of any violation of the rules and regulations stated herein may use the Penalty Assessment Procedure defined under § 16-2-201, C.R.S., as amended, by issuing the violator a penalty assessment notice

and releasing the violator upon its terms or, as the law allows, by taking the violator before a county court judge. The penalty assessment notice shall be a summons and complaint and shall contain the identification of the offender, the specification of the offense, and the applicable fine. As provided in § 16-2-201(1.5), C.R.S., as amended, a penalty assessment notice may be placed on an unattended vehicle that is parked in apparent violation of any county regulation. A penalty assessment notice placed on a vehicle shall contain the license plate number and state of registration of the vehicle in lieu of the identification of the offender.

- (c) When the Penalty Assessment Procedure is used, the following schedule of fines shall be used with exception for parking, weapons, hunting, and fire-related violations as noted below:

Regulations assessments:

First Offense \$75

Second Offense \$150

Third Offense \$300

Subsequent Offenses \$300 or maximum allowable by law

Weapons, hunting, interference, and fire-related assessments:

First offense \$300

Subsequent Offenses \$300 or the maximum allowable by law

Closures, disorderly conduct, resource protection and vehicles in violation of Rule 9(a):

First Offense \$150

Subsequent Offenses \$300 or the maximum allowable by law

Parking assessments for violation of Rule 9(c):

First Offense \$25

Second Offense \$50

Third Offense \$75

Fourth Offense \$100

Subsequent Offenses \$300 or maximum allowable by law

Parking assessments for violation of Rule 9 (d): \$50

Parking assessments for violation of Rule 9 (e): \$100

The department shall make available for inspection to the public a current copy of the existing rules and regulations relating to Boulder County Parks & Open Space areas.

BE IT further RESOLVED that any prior resolutions setting forth Rules and Regulations for Boulder County Parks & Open Space areas, which are inconsistent herewith, are hereby expressly repealed.

A motion to adopt this Resolution was made by Commissioner Jones
seconded by Commissioner Gardner and adopted by a 3-0 vote.

ADOPTED this 4th day of December, 2018

BOARD OF COUNTY COMMISSIONERS
OF BOULDER COUNTY



Cindy Domenico
Cindy Domenico, Chair

Elise Jones
Elise Jones, Vice-Chair

Deb Gardner
Deb Gardner, Commissioner

ATTEST:

Cecilia G. Lacey
Cecilia G. Lacey, Clerk to the Board

ATTACHMENT D

THIS CONTRACT ("Contract") is entered into by and between the Board of County Commissioners on behalf of the County of Boulder, State of Colorado, a body corporate and politic, for the benefit of the [Department] ("County") and [Supplier] ("Contractor"). County and Contractor are each a "Party," and collectively the "Parties."

In consideration of the mutual covenants contained in this Contract, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. Incorporation into Contract: The **Details Summary** is incorporated into this Contract. The **Contract Documents** are incorporated into this Contract by reference, except to the extent that the Proposal, if any is incorporated, contains any obligations placed upon County and not otherwise contained in this Contract.

2. Work to be Performed: Contractor will provide all labor and equipment and do all tasks necessary and incidental to performing the work as described in the **Details Summary** and **Contract Documents** (the "Work"). Contractor will perform the Work (i) in a good and workmanlike manner, (ii) at its own cost and expense, (iii) in accordance with recognized industry standards of care, skill and diligence for the type of work being performed, and (iv) in strict accordance with the Contract. County and its representatives shall have access to the Work at all times.

a. Contractor shall supervise and direct the Work and shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

b. Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, transportation, and other facilities and services necessary for the proper execution and completion of the Work. Contractor warrants that all materials incorporated into the Work will be new unless otherwise specified.

c. Contractor shall at all times enforce good order among its employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to such person. Contractor shall initiate, maintain, and supervise all safety precautions and programs in connection with the Work to ensure safe conditions on the premises at all times. Contractor shall comply with all laws, regulations, ordinances, rules, and orders of any public authority bearing on the safety of persons and property. In the event that County notifies Contractor of any unsafe conditions or practices, Contractor shall immediately take all actions required to remediate them at no expense to County. County reserves the right to immediately suspend the Work in the event of imminent hazard, as determined by County.

d. At all times, Contractor shall keep the premises free from accumulation of waste materials or rubbish caused by Contractor's operations. Upon completion of the Work, Contractor shall remove all of its waste materials and rubbish from the premises, as well as its tools, construction equipment, machinery and surplus materials.

e. Contractor shall confine operations on the premises to areas permitted by law, ordinances, permits, this Contract, and as directed by County, including storage of any materials or equipment.

f. Any claim for an increase in the **Contract Amount** shall be made and generally described by Contractor in writing and delivered to County promptly, in no event later than thirty

(30) days after the occurrence of the event giving rise to the claim. Notice of the amount of the claim with supporting data shall be delivered to County within sixty (60) days after such occurrence and shall be accompanied by Contractor's written statement that the amount claimed covers all known amounts to which Contractor is entitled as a result of the occurrence of said event. All claims for increase in the **Contract Amount** shall be determined by County if the Parties are unable to otherwise reach agreement on the claim.

g. Before ordering any materials or doing any Work, Contractor shall verify all measurements for the Work and shall be responsible for the correctness of same.

3. Term of Contract: The **Contract Term** begins on the **Start Date** and expires on the Expiration Date. Notwithstanding, Work shall not commence until the County has provided a NOTICE TO PROCEED to Contractor, which shall set forth the date that Contractor may begin the Work. As specified in BID# XXXX-XX, Contractor shall have XXX calendar days to complete the Work, unless this Contract is terminated earlier or the County grants Contractor a written extension in accordance with paragraph 6 or 7. In no event shall Work be performed outside the **Contract Term**.

4. Payment for Work Performed: In consideration of the Work performed by Contractor, and subject to conditions contained in this Contract, County will pay an amount not to exceed the **Contract Amount** to Contractor in accordance with the **Contract Documents**.

5. Invoicing: Contractor will promptly provide a copy of its Form W-9 and invoice template to County upon request. Contractor must submit an invoice to the County by the fifteenth (15th) day of the month following completion of the Work. All invoices submitted require the following components: Contractor's name and address (submitted W-9 address must match remit address), detailed description of services, dates of services, itemization of labor and materials costs, "Bill to: Boulder County" language, payment remittance address, payer, name and address, date of invoice, unique invoice number, and total amount due. Contractor must send all completed invoices to the **Invoice Contact** in the **Details Summary**. Email delivery is preferred by the County; County may require delivery of invoices by email. Failure to submit invoices in a timely manner and in accordance with the terms of this Contract may cause a delay in payment. County may recoup any damages incurred because of Contractor's failure to submit invoices pursuant to the terms of this paragraph. County's acceptance or payment of an invoice will not constitute acceptance of any Work performed under this Contract.

6. Extra Time to Complete the Work: If Contractor cannot complete the Work by the **Expiration Date**, Contractor may request extra time to complete the Work. County, in its sole discretion, may grant Contractor additional time to complete the Work and, if so, will provide Contractor with written notice of the amount of extra time granted. County granting extra time to complete the Work will not entitle Contractor to additional compensation from County. This Contract will remain in full force and effect during any time period that Contractor is permitted to finish completing the Work.

7. Extension of Contract Term (Additional Work): Upon mutual agreement of the Parties, this Contract may be extended until the **Final End Date**. During any extended **Contract Term**, the terms of this Contract will remain in full force and effect, unless otherwise amended in writing by the Parties. Where the Contractor will provide additional services for additional compensation beyond the initial **Contract Amount**, the Parties must execute a written amendment before the then-current **Expiration Date**. If necessary, the written amendment will incorporate an updated Scope of Work and updated Fee Schedule as exhibits. Contractor must provide a current

Certificate of Insurance to the County that complies with the **Insurance Requirements** of this Contract, if any, prior to any extended **Contract Term**.

8. Schedule of Work: County may designate the hours (on a daily or weekly basis) during which Contractor can perform the Work, strictly for the purposes of minimizing inconvenience to the County and interference with County operations. Contractor will otherwise set its own work schedule. Contractor shall promptly notify County of any aspect of the Work that will not be delivered or accomplished according to the initial schedule.

9. Indemnity: Contractor will be liable for any damages to persons or property caused by or arising out of the actions, obligations, or omissions of Contractor, its employees, agents, representatives or other persons acting under Contractor's direction or control in performing or failing to perform the Work under this Contract. Contractor will indemnify and hold harmless County, its elected officials and appointed department heads, and its employees, agents and representatives (the "indemnified parties"), from any and all liability, claims, demands, actions, damages, losses, judgments, costs or expenses, including attorneys' fees, which may be made or brought or which may result against any of the indemnified parties as a result or on account of the actions or omissions of Contractor, its employees, agents or representatives, or other persons acting under Contractor's direction or control. This indemnification obligation will extend to claims based on Contractor's unauthorized use or disclosure of confidential information and intellectual property infringement. County will not be obligated to indemnify or defend Contractor under any circumstances. Contractor's obligations under this provision shall survive expiration or termination of this Contract. Nothing contained in this Contract or the **Contract Documents** is intended to limit or restrict the indemnification rights or obligations of any Party under this provision, or damages available for breaches of the obligations herein.

10. Nondiscrimination: Contractor will comply with the letter and spirit of the Colorado Anti-Discrimination Act, C.R.S. § 24-34-401, et seq., as amended, and all applicable local, State and Federal laws concerning discrimination and unfair employment practices. County prohibits unlawful discrimination on the basis of race, color, religion, gender, gender identity, national origin, age 40 and over, disability, socio-economic status, sexual orientation, genetic information, or any other status protected by applicable Federal, State or local law. Contractor must require that its subcontractors, if any, similarly comply with all applicable laws concerning discrimination and unfair employment practices.

11. Information and Reports: Contractor will provide to authorized County, State, and Federal government representatives all information and reports that may be required for any purpose authorized by law. Contractor will permit access to such representatives to Contractor's facilities, books, records, accounts, and any other relevant sources of information. Where information required by a representative is in the exclusive possession of a person or entity other than Contractor, Contractor must so certify to the County and explain what efforts it has made to obtain the information.

12. Independent Contractor: Contractor is an independent contractor for all purposes in performing the Work. Contractor is not an employee of the County for any purpose, including the Federal Insurance Contribution Act, the Social Security Act, the Federal Unemployment Tax Act, the provisions of the Internal Revenue Code, the Colorado Workers' Compensation Act, the Colorado Unemployment Insurance Act, and the Public Employees Retirement Association. Accordingly, County will not withhold or pay any income tax, payroll tax, or retirement contribution of any kind on behalf of Contractor or Contractor's employees. As an independent contractor, Contractor is responsible for employing and directing such personnel and agents as it requires to

perform the Work. Contractor will exercise complete authority over its personnel and agents and will be fully responsible for their actions.

13. Termination for Non-Appropriation: The other provisions of this Contract notwithstanding, the County is prohibited by law from making commitments beyond the current fiscal year. Payment to Contractor beyond the current fiscal year is contingent on the appropriation and continuing availability of funding in any subsequent year. County has reason to believe that sufficient funds will be available for the full **Contract Term**. Where, however, funds are not allocated for any fiscal period beyond the current fiscal year, County may terminate this Contract without penalty by providing seven (7) days' written notice to Contractor.

14. Termination for Breach: Either Party's failure to perform any of its material obligations under this Contract, in whole or in part or in a timely or satisfactory manner, will be a breach. The institution of proceedings under any bankruptcy, insolvency, reorganization or similar law, by or against Contractor, or the appointment of a receiver or similar officer for Contractor or any of its property, which is not vacated or fully stayed within thirty (30) days after the institution of such proceeding, will also constitute a breach. In the event of a breach, the non-breaching Party may provide written notice of the breach to the other Party. If the notified Party does not cure the breach, at its sole expense, within thirty (30) days after delivery of notice, the non-breaching Party may exercise any of its remedies provided under this Contract or at law, including immediate termination of this Contract.

15. Termination for Convenience: County may terminate this Contract, in whole or in part, for any reason, upon seven (7) days' advance written notice to Contractor.

16. Remedies for Non-Performance: If Contractor fails to perform any of its obligations under this Contract, County may, at its sole discretion, exercise one or more of the following remedies, which shall survive expiration or termination of this Contract:

a. Suspend Performance: County may require that Contractor suspend performance of all or any portion of the Work pending necessary corrective action specified by the County and without entitling Contractor to an increase in compensation or extension of the performance schedule. Contractor must promptly stop performance and incurring costs upon delivery of a notice of suspension by the County.

b. Withhold Payment Pending Corrections: County may permit Contractor to correct any rejected Work at the County's discretion. Upon County's request, Contractor must correct rejected work at Contractor's sole expense within the time frame established by the County. Upon completion of the corrections satisfactory to the County, County will remit payment to Contractor.

c. Deny Payment: County may deny payment for any Work that does not comply with the requirements of the Contract or that Contractor otherwise fails to provide or complete, as determined by the County in its sole discretion. Upon County request, Contractor will promptly refund any amounts prepaid by the County with respect to such non-compliant Work.

d. Removal: Upon County's request, Contractor will remove any of its employees or agents from performance of the Work, if County, in its sole discretion, deems any such person to be incompetent, careless, unsuitable, or otherwise unacceptable.

17. Binding Arbitration Prohibited: County does not agree to binding arbitration by any extra-judicial body or person.

18. Conflicts of Interest: Contractor must not engage in any business or personal activities or practices or maintain any relationships that conflict in any way with the full performance of Contractor's obligations.

19. Notices: All notices provided under this Contract must be in writing and sent by Certified U.S. Mail (Return Receipt Requested), electronic mail, or hand-delivery to the other Party's **Contact** at the address specified in the **Details Summary**. For certified mailings, notice periods will begin to run on the day after the postmarked date of mailing. For electronic mail or hand-delivery, notice periods will begin to run on the date of delivery.

20. Statutory Requirements: This Contract is subject to all statutory requirements that are or may become applicable to counties or political subdivisions of the State of Colorado generally, including but not limited to: C.R.S. § 38-26-107, which requires withholding funds where the County receives a claim for payment from a supplier or subcontractor of Contractor upon notice of final settlement (required for public works contracts that exceed \$150,000); C.R.S. § 8-17-101 et seq.; C.R.S. § 18-8-301, et seq.; and C.R.S. § 18-8-401, et seq.

21. Public Contracts for Services (C.R.S. §§ 8-17.5-101, et seq.): Contractor hereby certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform work under this Contract and further certifies that it will confirm the employment eligibility of all employees who are newly hired for employment to perform work under this Contract by participating in the E-Verify Program established under Pub. L. 104-28 or the department verification program established under C.R.S. § 8-17.5-102(5)(c). Contractor (i) shall not knowingly employ or contract with an illegal alien to perform work under this Contract; (ii) shall not enter into a contract with a subcontractor that fails to certify to the contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract; (iii) has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this Contract through participation in the E-Verify program or department program; (iv) is prohibited from using either the E-Verify program or department program procedures to undertake preemployment screening of job applicants while this Contract is being performed; and (v) shall comply with any reasonable request by the department made in the course of an investigation that the Colorado Department of Labor and Employment is undertaking pursuant to the authority established in C.R.S. § 8-17.5-102(5). If Contractor obtains actual knowledge that a subcontractor performing work under this Contract knowingly employs or contracts with an illegal alien, Contractor shall (a) notify the subcontractor and County within three (3) days that Contractor has actual knowledge that subcontractor is employing or contracting with an illegal alien; and (b) terminate the subcontract if, within three (3) days of receiving notice hereunder, subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien. Contractor's violation of this provision will constitute a material breach of this Contract, entitling the County to terminate the contract for breach. If this Contract is so terminated, Contractor shall be liable for actual and consequential damages to the County.

22. Entire Agreement/Binding Effect/Amendments: This Contract represents the complete agreement between the Parties and is fully binding upon them and their successors, heirs, and assigns, if any. This Contract terminates any prior agreements, whether written or oral in whole

or in part, between the Parties relating to the Work. This Contract may be amended only by a written agreement signed by both Parties.

23. Assignment/Subcontractors: This Contract may not be assigned or subcontracted by Contractor without the prior written consent of the County. If Contractor subcontracts any of its obligations under this Contract, Contractor will remain liable to the County for those obligations and will also be responsible for subcontractor's performance under, and compliance with, this Contract. Contractor shall not contract with a person or entity to whom County has made a reasonable objection.

24. Governing Law/Venue: The laws of the State of Colorado govern the construction, interpretation, performance, and enforcement of this Contract. Any claim relating to this Contract or breach thereof may only be brought exclusively in the Courts of the 20th Judicial District of the State of Colorado and the applicable Colorado Appellate Courts.

25. Breach: The failure of either Party to exercise any of its rights under this Contract will not be deemed to be a waiver of such rights or a waiver of any breach of the Contract. All remedies available to a Party in this Contract are cumulative and in addition to every other remedy provided by law.

26. Severability: If any provision of this Contract becomes inoperable for any reason but the fundamental terms and conditions continue to be legal and enforceable, then the remainder of the Contract will continue to be operative and binding on the Parties.

27. Third-Party Beneficiary: Enforcement of the terms and conditions and all rights and obligations of this Contract are reserved to the Parties. Any other person receiving services or benefits under this Contract is an incidental beneficiary only and has no rights under this Contract. Notwithstanding, where the beneficiary **Department** is led by an Elected Official, such Elected Official shall be considered a third-party beneficiary.

28. Colorado Open Records Act: County may disclose any records that are subject to public release under the Colorado Open Records Act, C.R.S. § 24-72-101, et seq.

29. Conflict of Provisions: If there is any conflict between the terms of the main body of this Contract and the terms of any of the **Contract Documents**, the terms of the main body of the Contract will control.

30. Governmental Immunity: Nothing in this Contract shall be construed in any way to be a waiver of the County's immunity protection under the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, et seq., as amended.

31. Representations and Warranties: Contractor represents and warrants the following:

- a. Execution of this Contract and performance thereof is within Contractor's duly authorized powers;
- b. The individual executing this Contract is authorized to do so by Contractor;
- c. Contractor is authorized to do business in the State of Colorado and is properly licensed by all necessary governmental and public and quasi-public authorities having jurisdiction over the Work and the Contractor; and
- d. Contractor and its subcontractors, if any, are financially solvent, able to pay all debts as they mature, and have sufficient working capital to complete the Work and perform all obligations under the Contract.

32. Legal Compliance: Contractor assumes full responsibility for obtaining and maintaining any permits and licenses required to perform the Work. Contractor's performance under this Contract and the Work itself will comply with all Federal, State, and local laws, regulations, ordinances and codes. Contractor shall promptly notify County if any drawings or specifications are at variance with any laws, regulations, ordinances, or codes. If Contractor performs any Work contrary to such laws, regulations, ordinances, or codes, Contractor shall bear all costs arising therefrom.

33. Litigation Reporting: Contractor is not currently involved in any action before a court or other administrative decision-making body that could affect Contractor's ability to perform the Work. Contractor will promptly notify the County if Contractor is served with a pleading or other document in connection with any such action.

34. Tax Exemption: County is exempt from payment of Federal, State, and local government taxes. Contractor shall collect no tax from the County, and the County shall not be liable to pay any taxes imposed on Contractor. County shall provide its tax exemption status information to Contractor upon request.

35. Delegation of Authority: The Parties acknowledge that the Board of County Commissioners has delegated authority to the Department Head or Elected Official that leads the beneficiary **Department** and their designees to act on behalf of the County under the terms of this Contract, including but not limited to the authority to terminate this Contract.

36. Ownership of Work Product: All work product, property, data, documentation, information or materials conceived, discovered, developed or created by Contractor pursuant to this Contract ("Work Product") will be owned exclusively by the County. To the extent possible, any Work Product will be deemed to be a work made for hire. Contractor unconditionally and irrevocably transfers and assigns to the County all right, title and interest in and to any Work Product.

37. Publicity Releases: Contractor will not refer to this Contract or the County in commercial advertising without prior written consent of the County. This provision shall survive expiration or termination of this Contract.

38. Execution by Counterparts; Electronic Signatures: This Contract may be executed in multiple counterparts, each of which will be deemed an original, but all of which will constitute one agreement. The Parties approve the use of electronic signatures, governed by the Uniform Electronic Transactions Act, C.R.S. §§ 24 71.3 101 to 121. The Parties will not deny the legal effect or enforceability of this Contract solely because it is in electronic form or because an electronic record was used in its creation. The Parties will not object to the admissibility of this Contract in the form of electronic record, or paper copy of an electronic document, or paper copy of a document bearing an electronic signature, because it is not in its original form or is not an original.

39. Limitation on Public Statements and Lobbying Activity. During the term of this Contract, Contractor may receive from the County its confidential data, work product, or other privileged or confidential information that is protected by law. To maintain the fact and appearance of absolute objectivity, Contractor shall not, without the prior written consent of the County, which shall not be unreasonably withheld, do any of the following: (a) disclose information obtained because of this contractual relationship to any third party; (b) lobby any State or Federal agency on any pending matter while this Contract is effective; or (c) make any public statements or appear at

any time to give testimony at any public meeting on the subject matters regarding which Contractor is or was retained by the County. County may set reasonable conditions on any disclosure authorized by the County under this provision. Notwithstanding, Contractor may make disclosures as required by law, and to law enforcement officials in connection with any criminal justice investigation.

40. Sustainability: All construction, deconstruction, remodel, and office move projects are required to follow construction waste procedure modeled off of Boulder County BuildSmart Code, International Green Construction Code (IGCC), International Energy Conservation Code (IECC), and Leadership in Energy and Environmental Design (LEED) certification, as an effort to achieve maximum jobsite waste diversion, energy efficiency, and water conservation. All 'demolition projects' are to follow deconstruction procedures. Instead of demolition project materials being crushed and primarily sent to the landfill, these projects should be systematically dismantled, typically in the opposite order they were constructed, in order to maximize the salvage of materials. Any hazardous materials encountered should follow state and federal standards, and contractor shall leverage the Boulder County Hazardous Materials Management facility for hazardous materials. The development of a project diversion plan is encouraged to include material types and volume/weight estimations as well as planned destinations. Projects must track all jobsite waste.

41. Limitation of Liability: COUNTY SHALL NOT BE LIABLE TO CONTRACTOR FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, PUNITIVE, OR INDIRECT DAMAGES ARISING FROM OR RELATING TO THIS CONTRACT, REGARDLESS OF ANY NOTICE OF THE POSSIBILITY OF SUCH DAMAGES. COUNTY'S AGGREGATE LIABILITY, IF ANY, ARISING FROM OR RELATED TO THIS CONTRACT, WHETHER IN CONTRACT, OR IN TORT, OR OTHERWISE, IS LIMITED TO, AND SHALL NOT EXCEED, THE AMOUNTS PAID OR PAYABLE HEREUNDER BY COUNTY TO CONTRACTOR. ANY CONTRACTUAL LANGUAGE LIMITING CONTRACTOR'S LIABILITY SHALL BE VOID.

42. County Opportunity to Review: Contractor shall provide County with the opportunity to review and approve or take other appropriate action upon the Contractor's submittals, such as Shop Drawings, Product Data, and Samples, but only for conformance with the design concept of the Work and with the information given in the Contract Documents.

43. Notice to Proceed: The Parties agree that time is of the essence and work shall after a "Notice to Proceed" has been issued by the County and in accordance with the terms therein.

44. Retainage: County may retain partial payment pending completion and County acceptance of the Work as satisfactory and complete. For contracts that exceed \$150,000, the retention rate shall not exceed five percent (5%). C.R.S. § 24-91-103. Contractor is responsible for submitting a final invoice for any retainage held by County. If It becomes necessary for County to take over completion of the Work, all of the amounts owing to Contractor, including the withheld percentage, shall be applied: First, towards completion of the Work; second, towards performance of the withholding requirement set forth in C.R.S. § 38-26-107; third, to the surety furnishing bonds for the Work, to the extent such surety has incurred liability or expense in competing the Work or made payments pursuant to C.R.S. § 38-26-106; then, to Contractor. Such retained percentage as may be due to Contractor shall be due and payable as provided by C.R.S. § 38-26-107.

45. Bonds: Upon County's request, Contractor shall obtain and deliver to County payment and performance bonds each equal to 100% of the total Contract. Bonds shall be executed by a qualified corporate surety and must be acceptable to County. County reserves the right to accept other acceptable forms of surety in lieu of a bond, and to reduce the bond requirements set forth herein consistent with C.R.S. § 38-26-106.

46. Change Orders: If unforeseen modifications or changes are required, Contractor may submit a Change Order request to County, which must include a complete description, timeline, and fee schedule for the proposed work. Change Orders are not effective until approved by County in writing.

47. No Suspension or Debarment: Contractor certifies, and warrants for the duration of this Contract, that neither it nor its principals nor any of its subcontractors are debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this Contract by any Federal or State department or agency. Contractor shall comply, and shall require its subcontractors to comply, with subpart C of 2 C.F.R. § 180.

48. Permits/Licenses/Code Compliance: Prior to starting the Work, Contractor will identify and obtain, and maintain during this Contract, all permits and licenses necessary to perform the Work. Contractor shall comply with all State and local codes. Contractor is responsible for locating all public utilities, as necessary. Contractor shall require its subcontractors to comply with this provision. HVAC, roofing, and general contractors must be licensed through Boulder County Land Use. Electricians and plumbers must be licensed through the State and registered with Boulder County Land Use Building Safety and Inspection Division. Architects, Professional Engineers and Professional Land Surveyors must be fully-licensed through the State. All required permits and licenses must be provided to County prior to Contractor beginning the Work.

49. Stormwater Quality Protection Requirements: Contractor will take all measures necessary to prevent pollutants from entering storm drains and watercourses. To eliminate stormwater pollution, Contractor shall implement effective Best Management Practices (BMPs). BMPs include general good housekeeping practices, appropriate scheduling of activities, operational practices, maintenance procedures and other measures to prevent the discharge of pollutants directly or indirectly to the storm drain system. These BMPs shall be maintained for the duration of this Contract. Contractor shall also be responsible for proper disposal of all waste materials, including wastes generated by the implementation of BMPs. Contractor shall otherwise comply with the Federal Clean Water Act, Colorado Water Quality Control Act, and Boulder County's local Clean Water Act, Illegal Discharge Ordinance (No. 2012-4). For work performed in urbanized areas, Contractor must comply with the requirements of MS4 permit (COR090000), which is available through the Colorado Department of Public Health and Environment.

50. Guaranties and Warranties: Upon completion of the Work, Contractor will provide County with a written guaranty covering all labor, materials and workmanship incorporated into the Work for one (1) year, or within any such longer period of time as may be prescribed by law, the specifications, or any other applicable special warranty required by the **Contract Documents**. Final payment upon completion of the Work will not relieve Contractor of responsibility for faulty material or workmanship, which County may require Contractor to fix at Contractor's sole

expense, in addition to County's other remedies. This provision shall apply to Work completed by Contractor's employees and subcontractors.

51. Substantial Completion: Substantial completion shall be achieved where the Work has progressed to the point where, in the opinion of County, it is sufficiently complete, in accordance with the **Contract Documents**, so that the Work (or specified part) can be utilized for the purposes for which it was intended.

a. When Contractor considers the entire Work ready for its intended use, Contractor shall notify County in writing that the entire Work is substantially complete (except for items that may be listed by Contractor as incomplete).

b. Within a reasonable time thereafter, County and Contractor shall make an inspection of the Work to determine the status of completion.

c. If County does not consider the Work substantially complete, County will notify Contractor in writing giving the reasons therefore. If County considers the Work substantially complete, County will provide notice to Contractor of the date of Substantial Completion. Notice of substantial completion may include a list of items to be completed or corrected before final payment; unless Contractor objects in writing and so informs County within seven (7) days, County's recommendations of Work to be completed and corrected shall be binding on Contractor until final payment.

52. Final Payment: A final inspection of the Work shall be conducted by County. If a list of deficiencies results from such final inspection, Contractor shall promptly rectify all items appearing thereon before final payment will be made. When County indicates acceptance of the Work, Contractor may request final payment from County, including any retained amounts. Final payment shall be subject to C.R.S. § 38-26-107.

53. Notice of Final Settlement: Prior to remitting final payment to Contractor, County shall publish a Notice of Final Settlement in accordance with C.R.S. § 38-26-107. Final payment will be rendered in accordance with the statute and the other terms of this Contract. Final payment will not be rendered until County, in its sole discretion, determines satisfactory completion of the Work.

54. Geographic Information System (GIS) Data: [RESERVED]

55. State Specifications: The Standard Specifications for Road and Bridge Construction 2017, either in whole or as set forth in the Bid Documents, are expressly incorporated into this Contract by reference.

56. Determination of Unit Prices: County will determine the actual quantities and classifications of Unit Price Work performed by Contractor. The Parties will review the County's preliminary determinations before County renders a written decision thereon (by recommendation of an Application for Payment or otherwise), which shall be final and binding upon Contractor. The value of any Unit Price Work covered by a Change Order or claim for an increase or decrease in the Contract Amount shall be determined by applying the unit prices to the quantities of items.

a. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, the Parties agree that the Contract Amount includes the total cost of Unit Price Work, determined by multiplying the quantity of each item by its unit price. Initial quantity determinations are estimates, which must be adjusted to reflect actual quantities. Contractor shall make a claim in writing to County for any additional amounts owed where actual quantities exceed estimated quantities. Contractor shall provide such written claim within twenty (20) days of providing the items and shall be accompanied by supporting documentation. The written claim shall include a statement that the claimed amount covers all known amounts (direct, indirect and consequential) to which Contractor is owed. County shall only pay Contractor for actual quantities of items provided hereunder.

b. The Parties agree that each unit price adequately covers Contractor's overhead and profit for each item.

57. Records Retention/Access/Audits: Contractor shall maintain all records and documents pertaining to this Contract in accordance with the requirements prescribed by County. Such records shall be maintained for a period of five (5) calendar years after the date of Contractor's final payment from County under this Contract. Contractor agrees that County or their designated representative shall have the right to review and to copy any records and supporting documentation pertaining to the performance of this Contract as necessary and upon request, throughout the term of this Contract, and for five (5) calendar years after the date of the final payment hereunder. Contractor agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records. County and Contractor acknowledge that protected information is exempt from this requirement without proper client release.

58. Insurance Requirements: Prior to commencing the Work, Contractor will provide a Certificate of Insurance to the County demonstrating adequate insurance coverage as required by this paragraph. All policies evidencing coverage required by the Contract will be issued by insurance companies satisfactory to the County. Contractor will forward Certificates of Insurance directly to the **County Department** and **Contact** listed in the **Details Summary**.

a. For the entire duration of this Contract including any extended or renewed terms, and longer as may be required by this Contract, Contractor shall procure and maintain at its own expense, and without cost to the County, the following kinds and minimum amounts of insurance to insure the liability risks that Contractor has assumed under this Contract:

i. **Commercial General Liability**

Coverage should be provided on an Occurrence form, ISO CG0001 or equivalent. The policy shall be endorsed to include Additional Insured Owners, Lessees or Contractors endorsements CG 2038 (or equivalent), Designated Construction Project(s) General Aggregate Endorsement CG2503 (or equivalent) and Additional Insured Completed Operations for Owners, Lessees or Contractors CG 2037 (or equivalent). Minimum limits required of \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate and \$2,000,000 Products/Completed Operations Aggregate. The County requires the Products/Completed Operations coverage to be provided 3 years after completion of construction. An endorsement must be included with the certificate.

ii. **Automobile Liability**

Bodily Injury and Property Damage for any owned, hired, and non-owned vehicles used in the performance of the Contract. Minimum limits \$1,000,000 Each Accident.

iii. **Workers' Compensation and Employer's Liability**

Workers' Compensation must be maintained with the statutory limits. Employer's Liability is required for minimum limits of \$100,000 Each Accident/\$500,000 Disease-Policy Limit/\$100,000 Disease-Each Employee.

b. **Boulder County as Additional Insured:** Boulder County shall be named as an additional insured for General Liability, Umbrella/Excess Liability, and Pollution Liability, as designated in this Contract. Additional insured shall be endorsed to the policy.

THE ADDITIONAL INSURED WORDING SHOULD BE AS FOLLOWS: *County of Boulder, State of Colorado, a body corporate and politic, is named as Additional Insured.*

c. **Notice of Cancellation:** Each insurance policy required by this Contract shall provide the required coverage and shall not be suspended, voided or canceled except after thirty (30) days' prior written notice has been given to the County except when cancellation is for non-payment of premium, then ten (10) days' prior notice may be given. If any insurance company refuses to provide the required notice, Contractor or its insurance broker shall notify the County any cancellation, suspension, or nonrenewal of any insurance policy within seven (7) days of receipt of insurers' notification to that effect.

d. **Insurance Obligations of County:** County is not required to maintain or procure any insurance coverage beyond the coverage maintained by the County in its standard course of business. Any insurance obligations placed on the County in any of the **Contract Documents** shall be null and void.

e. **Deductible:** Any and all deductibles contained in any insurance policy shall be assumed by and at the sole risk of Contractor.

f. **Primacy of Coverage:** Coverage required of Contractor and its subcontractors, if any, shall be primary over any insurance or self-insurance program carried by the County.

g. **Subrogation Waiver:** All insurance policies in any way related to this Contract secured or maintained by Contractor as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against County, its organizations, officers, agents, employees, and volunteers.

59. **Payable Costs in the Event of Termination:** As set forth herein, the County reserves the right to terminate this Contract at any time for either breach or convenience. In the event that the County terminates the Contract before its expiration, Contractor shall be entitled to receive payment only for Work satisfactory executed and actual costs incurred prior to delivery of the notice to terminate.

[Signature Page to Follow]

IN WITNESS WHEREOF, the Parties have executed and entered into this Contract as of the latter day and year indicated below.

SIGNED for and on behalf of Boulder County		SIGNED for and on behalf of Contractor	
Signature:		Signature:	
Name:		Name:	
Title:		Title:	
Date:		Date:	
↓↓ <i>For Board-signed documents only</i> ↓↓			
Attest:	<i>Initials</i>		
Attestor Name:			
Attestor Title:			