

MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

Scouting Number	2025-255
Item to be Scouted	Electrical PVC Conduit & Fittings (Underground)
Days to be scouted	10
Response Due By	08/16/2025
Description	DEW Construction (GC), our electrical trade partner (Norway and Sons) need assistance sourcing BABAA compliant underground PVC conduit, fittings, detectable underground and non-detectable underground tape. This project is

Section 2: Technical Information

Type of supplier being sought	Manufacturer
Reason	Regarding the duration of "Days to be scouted": the response is unfortunately no. I cannot extend to the full recommended 30 days. There is not enough time before this project's Substantial Completion for DEW accounting for the sourcing wait period, contact with MEP partners (if positive results are located), engage companies, price, evaluate (order / manufacturer / deliver / install) and has no bearing on the engineer of record's acceptance of this product.
Describe the manufacturing processes (elaborate to provide as much detail as possible)	Unknown, this is not standard information listed in a product data submittal and Vermont
Provide dimensions / size / tolerances / performance specifications for the item	Please see attached CSI specification #260533.13 Conduit for Electrical Systems and approved submittal 260533.13-001-0 Conduit & Fittings. All compliant products were removed from the submittal leaving the non-compliant materials. For the conduit & fittings, Norway & Sons has highlighted the sizes and fittings purchased in yellow.
List required materials needed to make the product, including materials of product components	PVC, Aluminum foil core + LDPE.
Are there applicable certification requirements?	No
Are there applicable regulations?	Yes
Details	NFPA 70
Are there any other standards, requirements, etc.?	Yes
Details	PVC Conduit - NEMA TC2, PVC Fittings - NEMA TC 3
Additional Technical Comments	Please see attached CSI specification #260533.13 Conduit for Electrical Systems and approved submittal 260533.13-001-0 Conduit & Fittings.

Section 4: Business Information

Estimated potential business volume	This will be a single purchase for the Burlington Technical Center Aviation project.
Estimated target price / unit cost information (if unavailable explain)	Estimated total price for all PVC conduit, fittings and warning tape is \$500. As of this submission, the electrician's supplier has not provided a detailed breakout of unit quantities and unit prices for each non-compliant item.
When is it needed by?	Immediately. This project is in active construction nearing substantial completion.
Describe packaging requirements	Packaging is to be determined by the manufacturer such that equipment arrives undamaged to the project site.
Where will this item be shipped?	South Burlington, VT 05495.

Additional Comments

Is there other information you would like to include?

Funding Agency: Department of Commerce, National Institute of Standards and Technology. Attached for reference is the grant award letter provided to Burlington High School for this project.

DEW Construction, BABAA Contact: Michael Snyder, Cell: (802) 798-4976, Email: msnyder@dewconstruction.com.

SECTION 26 0533.13
CONDUIT FOR ELECTRICAL SYSTEMS

Job #	10424
Cost #	
Construction Set	
Received	11/7/2024
DEW CONSTRUCTION	

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Galvanized steel rigid metal conduit (RMC).
- B. Flexible metal conduit (FMC).
- C. Liquidtight flexible metal conduit (LFMC).
- D. Galvanized steel electrical metallic tubing (EMT).
- E. Rigid polyvinyl chloride (PVC) conduit.
- F. Liquidtight flexible nonmetallic conduit (LFNC).

1.02 RELATED REQUIREMENTS

- A. Section 07 8400 - Firestopping.
- B. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables: Cable assemblies consisting of conductors protected by integral metal armor.
- C. Section 26 0526 - Grounding and Bonding for Electrical Systems.
 - 1. Includes additional requirements for fittings for grounding and bonding.
- D. Section 26 0529 - Hangers and Supports for Electrical Systems.
- E. Section 26 0533.16 - Boxes for Electrical Systems.
- F. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.
- G. Section 26 2100 - Low-Voltage Electrical Service Entrance: Additional requirements for electrical service conduits.
- H. Section 27 0533.13 - Conduit for Communications Systems.

1.03 REFERENCE STANDARDS

- A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC).
- B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S).
- C. NECA 1 - Standard for Good Workmanship in Electrical Construction.
- D. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT).
- E. NECA 111 - Standard for Installing Nonmetallic Raceways (RNC, ENT, LFNC).
- F. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable.
- G. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Conduit.
- H. NEMA TC 3 - Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing.
- I. NFPA 70 - National Electrical Code.
- J. UL 1 - Flexible Metal Conduit.
- K. UL 6 - Electrical Rigid Metal Conduit-Steel.
- L. UL 360 - Liquid-Tight Flexible Metal Conduit.
- M. UL 514A - Metallic Outlet Boxes.
- N. UL 514B - Conduit, Tubing, and Cable Fittings.
- O. UL 651 - Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings.
- P. UL 797 - Electrical Metallic Tubing-Steel.
- Q. UL 1203 - Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations.

- R. UL 1660 - Liquid-Tight Flexible Nonmetallic Conduit.
- S. UL 2419 - Outline of Investigation for Electrically Conductive Corrosion Resistant Compounds.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate minimum sizes of conduits with actual type and quantity of conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
 - 2. Coordinate arrangement of conduits with structural members, ductwork, piping, equipment, and other potential conflicts.
 - 3. Verify exact conduit termination locations required for boxes, enclosures, and equipment.
 - 4. Coordinate work to provide roof penetrations that preserve integrity of roofing system and do not void roof warranty.
 - 5. Notify Engineer of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Sequencing:
 - 1. Do not begin installation of conductors and cables until installation of conduit between termination points is complete.

1.05 SUBMITTALS

- A. Product Data: Provide manufacturer's standard catalog pages and data sheets for conduits.
- B. Project Record Documents: Record actual routing for conduits installed underground and conduits 2-inch (53 mm) trade size and larger.

1.06 QUALITY ASSURANCE

- A. Documents at Project Site: Maintain at project site one copy of manufacturer's instructions.
- B. Product Listing Organization Qualifications: Organization recognized by OSHA as Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store conduit and fittings in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 CONDUIT APPLICATIONS

- A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70, manufacturer's instructions, and product listing.
- B. Unless otherwise indicated and where not otherwise restricted, use conduit types indicated for specified applications. Where more than one listed application applies, comply with most restrictive requirements. Where conduit type for particular application is not specified, use galvanized steel rigid metal conduit.
- C. Underground:
 - 1. Exterior, Direct-Buried: Use galvanized steel rigid metal conduit (RMC) or rigid PVC conduit.
 - 2. Where rigid polyvinyl chloride (PVC) conduit is provided, transition to galvanized steel rigid metal conduit (RMC) where emerging from underground.
 - 3. Where rigid polyvinyl (PVC) conduit larger than 2-inch (53 mm) trade size is provided, use galvanized steel rigid metal conduit (RMC) elbows for bends.
- D. Concealed Above Accessible Ceilings: Use galvanized steel electrical metallic tubing (EMT).
- E. Interior, Damp or Wet Locations: Use galvanized steel rigid metal conduit (RMC).
- F. Exposed, Interior, Not Subject to Physical Damage: Use galvanized steel electrical metallic tubing (EMT).
- G. Exposed, Interior, Subject to Physical Damage: Use galvanized steel rigid metal conduit (RMC).

1. Locations subject to physical damage include, but are not limited to:
 - a. Where exposed below 8 feet, except within electrical and communication rooms or closets.
- H. Hazardous/Classified Locations: Use galvanized steel rigid metal conduit (RMC).
- I. Flexible Connections to Luminaires Above Accessible Ceilings: Use flexible metal conduit (FMC).
 1. Maximum Length: 6 feet.
- J. Flexible Connections to Vibrating Equipment:
 1. Dry Locations: Use flexible metal conduit (FMC).
 2. Damp, Wet, or Corrosive Locations: Use liquidtight flexible metal conduit (LFMC).
 3. Maximum Length: 6 feet unless otherwise indicated.
 4. Vibrating equipment includes, but is not limited to:
 - a. Transformers.
 - b. Motors.

2.02 CONDUIT - GENERAL REQUIREMENTS

- A. Comply with NFPA 70.
- B. Fittings for Grounding and Bonding: See Section 26 0526 for additional requirements.
- C. Provide conduit, fittings, supports, and accessories required for complete raceway system.
- D. Provide products listed, classified, and labeled as suitable for purpose intended.
- E. Minimum Conduit Size, Unless Otherwise Indicated:
 1. Branch Circuits: 3/4-inch trade size.
 2. Branch Circuit Homeruns: 3/4-inch trade size.
 3. Control Circuits: 1/2-inch trade size.
 4. Flexible Connections to Luminaires: 1/2-inch trade size.
 5. Underground, Exterior: 1-inch trade size.
- F. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

- A. Manufacturers:
 1. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.com/#sle.
 2. Nucor Tubular Products: www.nucortubular.com/#sle.
 3. Rymco USA: www.rymcousa.com/#sle.
 4. Western Tube, a division of Zekelman Industries: www.westerntube.com/#sle.
 5. Wheatland Tube, a division of Zekelman Industries: www.wheatland.com/#sle.
- B. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.
- C. Fittings:
 1. Manufacturers:
 - a. ABB; T&B: www.electrification.us.abb.com/#sle.
 - b. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.us/#sle.
 - c. Bridgeport Fittings Inc: www.bptfittings.com/#sle.
 - d. Emerson Electric Co; O-Z/Gedney: www.emerson.com/#sle.
 2. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6.
 3. Hazardous/Classified Locations: Use fittings listed and labeled as complying with UL 1203 for classification of installed location.
 4. Material: Use steel.
 5. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.04 FLEXIBLE METAL CONDUIT (FMC)

- A. Manufacturers:
 - 1. AFC Cable Systems, a division of Atkore International: www.afcweb.com/#sle.
 - 2. Electri-Flex Company: www.electriflex.com/#sle.
 - 3. International Metal Hose: www.metalhose.com/#sle.
- B. Description: NFPA 70, Type FMC standard-wall steel flexible metal conduit listed and labeled as complying with UL 1, and listed for use in classified firestop systems.
- C. Fittings:
 - 1. Manufacturers:
 - a. ABB; T&B: www.electrification.us.abb.com/#sle.
 - b. Bridgeport Fittings, LLC: www.bptfittings.com/#sle.
 - c. Emerson Electric Co; O-Z/Gedney: www.emerson.com/#sle.
 - 2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 3. Material: Use steel or malleable iron.

2.05 LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC)

- A. Manufacturers:
 - 1. AFC Cable Systems, a division of Atkore International: www.afcweb.com/#sle.
 - 2. Electri-Flex Company: www.electriflex.com/#sle.
 - 3. International Metal Hose: www.metalhose.com/#sle.
- B. Description: NFPA 70, Type LFMC polyvinyl chloride (PVC) jacketed steel flexible metal conduit listed and labeled as complying with UL 360.
- C. Fittings:
 - 1. Manufacturers:
 - a. ABB; T&B: www.electrification.us.abb.com/#sle.
 - b. Bridgeport Fittings, LLC: www.bptfittings.com/#sle.
 - c. Emerson Electric Co; O-Z/Gedney: www.emerson.com/#sle.
 - 2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 3. Material: Use steel or malleable iron.

2.06 GALVANIZED STEEL ELECTRICAL METALLIC TUBING (EMT)

- A. Manufacturers:
 - 1. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.com/#sle.
 - 2. Nucor Tubular Products: www.nucortubular/#sle.
 - 3. Rymco USA: www.rymcousa.com/#sle.
 - 4. Western Tube, a division of Zekelman Industries: www.westerntube.com/#sle.
 - 5. Wheatland Tube, a division of Zekelman Industries: www.wheatland.com/#sle.
- B. Description: NFPA 70, Type EMT galvanized steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.
- C. Fittings:
 - 1. Manufacturers:
 - a. ABB; T&B: www.electrification.us.abb.com/#sle.
 - b. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.us/#sle.
 - c. Bridgeport Fittings, LLC: www.bptfittings.com/#sle.
 - d. Emerson Electric Co; O-Z/Gedney: www.emerson.com/#sle.
 - 2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 3. Material: Use steel or malleable iron.
 - 4. Connectors and Couplings: Use compression/gland or set-screw type.
 - a. Do not use indenter type connectors and couplings.
 - 5. Damp or Wet Locations, Where Permitted: Use fittings listed for use in wet locations.

2.07 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT

- A. Manufacturers:
 - 1. ABB; Carlon: www.carlon.com/#sle.
 - 2. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.com/#sle.
 - 3. Cantex Inc: www.cantexinc.com/#sle.
 - 4. Heritage Plastics, a division of Atkore International: www.heritageplastics.com/#sle.
 - 5. JM Eagle: www.jmeagle.com/#sle.
- B. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and listed and labeled as complying with UL 651; Schedule 40 unless otherwise indicated, Schedule 80 where subject to physical damage; rated for use with conductors rated 90 degrees C.
- C. Fittings:
 - 1. Manufacturer: Same as manufacturer of conduit to be connected.
 - 2. Description: Fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; material to match conduit.

2.08 ACCESSORIES

- A. Conduit Joint Compound: Corrosion-resistant, electrically conductive compound listed as complying with UL 2419; suitable for use with conduit to be installed.
- B. Solvent Cement for PVC Conduit and Fittings: As recommended by manufacturer of conduit and fittings to be installed.
- C. Pull Strings: Use nylon or polyester tape with average breaking strength of not less than 1,250 lbf.
- D. Sealing Compound for Hazardous/Classified Location Sealing Fittings: Listed for use with particular fittings to be installed.
- E. Flashing Panels for Exterior Wall Penetrations: Premanufactured components and accessories as required to preserve integrity of building envelope; suitable for conduits and facade materials to be installed.
- F. Firestop Sleeves: Listed; provide as required to preserve fire resistance rating of building elements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive conduits.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install conduit in accordance with NECA 1.
- C. Galvanized Steel Rigid Metal Conduit (RMC): Install in accordance with NECA 101.
- D. Rigid Polyvinyl Chloride (PVC) Conduit: Install in accordance with NECA 111.
- E. Conduit Routing:
 - 1. Unless dimensioned, conduit routing indicated is diagrammatic.
 - 2. When conduit destination is indicated without specific routing, determine exact routing required.
 - 3. Conceal conduits unless specifically indicated to be exposed.
 - 4. Conduits in the following areas may be exposed, unless otherwise indicated:
 - a. Electrical rooms.
 - b. Mechanical equipment rooms.
 - c. Within joists in areas with no ceiling.

- d. Hangar and Shops.
- 5. Unless otherwise approved, do not route exposed conduits:
 - a. Across floors.
 - b. Across building exterior surfaces.
- 6. Conduits installed underground or embedded in concrete may be routed in shortest possible manner unless otherwise indicated. Route other conduits parallel or perpendicular to building structure and surfaces, following surface contours where practical.
- 7. Arrange conduit to maintain adequate headroom, clearances, and access.
- 8. Arrange conduit to provide no more than equivalent of four 90-degree bends between pull points.
- 9. Arrange conduit to provide no more than 150 feet between pull points.
- 10. Route conduits above water and drain piping where possible.
- 11. Arrange conduit to prevent moisture traps. Provide drain fittings at low points and at sealing fittings where moisture may collect.
- 12. Maintain minimum clearance of 6 inches between conduits and piping for other systems.
- 13. Maintain minimum clearance of 12 inches between conduits and hot surfaces. This includes, but is not limited to:
 - a. Heaters.
 - b. Hot water piping.
- 14. Group parallel conduits in same area on common rack.
- F. Conduit Support:
 - 1. Secure and support conduits in accordance with NFPA 70 using suitable supports and methods approved by authorities having jurisdiction; see Section 26 0529.
 - 2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
 - 3. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conduits to lay on ceiling tiles.
- G. Connections and Terminations:
 - 1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
 - 2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
 - 3. Use suitable adapters where required to transition from one type of conduit to another.
 - 4. Provide drip loops for liquidtight flexible conduit connections to prevent drainage of liquid into connectors.
 - 5. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
 - 6. Provide insulating bushings, insulated throats, or listed metal fittings with smooth, rounded edges at conduit terminations to protect conductors.
 - 7. Secure joints and connections to provide mechanical strength and electrical continuity.
- H. Penetrations:
 - 1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
 - 2. Make penetrations perpendicular to surfaces unless otherwise indicated.
 - 3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
 - 4. Conceal bends for conduit risers emerging above ground.
 - 5. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
 - 6. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty.

7. Install firestopping to preserve fire resistance rating of partitions and other elements; see Section 07 8400.
- I. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:
 1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
 2. Where calculated in accordance with NFPA 70 for rigid polyvinyl chloride (PVC) conduit installed above ground to compensate for thermal expansion and contraction.
 3. Where conduits are subject to earth movement by settlement or frost.
- J. Conduit Sealing:
 1. Use foam conduit sealant to prevent entry of moisture and gases. This includes, but is not limited to:
 - a. Where conduits enter building from outside.
 - b. Where service conduits enter building from underground distribution system.
 - c. Where conduits enter building from underground.
 - d. Where conduits may transport moisture to contact live parts.
 2. Where conduits cross barriers between areas of potential substantial temperature differential, use foam conduit sealant at accessible point near penetration to prevent condensation. This includes, but is not limited to:
 - a. Where conduits pass from outdoors into conditioned interior spaces.
 - b. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.
 3. Where conduits cross boundaries of hazardous/classified locations, provide identified/listed sealing fittings or conduit mechanical seals as approved by authorities having jurisdiction; locate as indicated or in accordance with NFPA 70.
- K. Provide pull string in each empty conduit and in conduits where conductors and cables are to be installed by others. Leave minimum slack of 12 inches at each end.
- L. Provide grounding and bonding; see Section 26 0526.
- M. Identify conduits; see Section 26 0553.

3.03 CLEANING

- A. Clean interior of conduits to remove moisture and foreign matter.

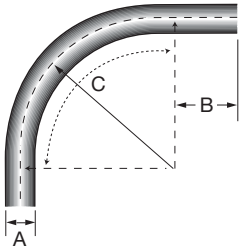
3.04 PROTECTION

- A. Immediately after installation of conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.

END OF SECTION 26 0533.13

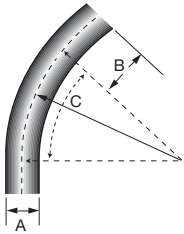
Kraloy PVC fittings are not BABAA compliant (Country of Origin is Canada.)

CONDUIT ELBOWS



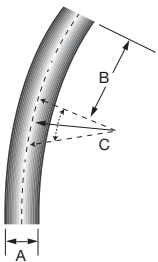
90° Elbows Schedule 40 Standard Radius

Size inches	Part Number	Product Code	A inches	B inches	C inches
1/2	40STD0590	078540	0.840	1.500	4.000
3/4	40STD0790	078541	1.050	1.500	4.500
1	40STD1090	078542	1.315	1.875	5.750
1-1/4	40STD1290	078543	1.660	2.000	7.250
1-1/2	40STD1590	078544	1.900	2.000	8.250
2	40STD2090	078545	2.375	2.000	9.500
2-1/2	40STD2590	078546	2.875	3.000	10.500
3	40STD3090	078547	3.500	3.125	13.000
3-1/2	40STD3590	078548	4.000	3.250	15.000
4	40STD4090	078549	4.500	3.375	16.000
5	40STD5090	078550	5.563	3.625	24.000
6	40STD6090	078551	6.625	3.750	30.000



45° Elbows Schedule 40 Standard Radius

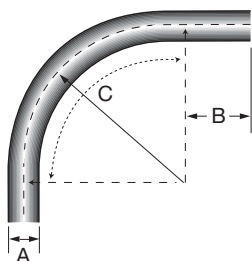
Size inches	Part Number	Product Code	A inches	B inches	C inches
1/2	40STD0545	078552	0.840	1.500	4.000
3/4	40STD0745	078553	1.050	1.500	4.500
1	40STD1045	078554	1.315	1.875	5.750
1-1/4	40STD1245	078555	1.660	2.000	7.250
1-1/2	40STD1545	078556	1.900	2.000	8.250
2	40STD2045	078557	2.375	2.000	9.500
2-1/2	40STD2545	078558	2.875	3.000	10.500
3	40STD3045	078559	3.500	3.125	13.000
3-1/2	40STD3545	078560	4.000	3.250	15.000
4	40STD4045	078561	4.500	3.375	16.000
5	40STD5045	078562	5.563	3.625	24.000
6	40STD6045	078563	6.625	3.750	30.000



30° Elbows Schedule 40 Standard Radius

Size inches	Part Number	Product Code	A inches	B inches	C inches
1/2	40STD0530	078564	0.840	1.500	4.000
3/4	40STD0730	078565	1.050	1.500	4.500
1	40STD1030	068622	1.315	1.875	5.750
1-1/4	40STD1230	078567	1.660	2.000	7.250
1-1/2	40STD1530	078568	1.900	2.000	8.250
2	40STD2030	078569	2.375	2.000	9.500
2-1/2	40STD2530	078570	2.750	3.000	10.500
3	40STD3030	078571	3.500	3.125	13.000
3-1/2	40STD3530	078572	4.000	3.250	15.000
4	40STD4030	078573	4.500	3.375	16.000
5	40STD5030	078574	5.563	3.625	24.000
6	40STD6030	078575	6.625	3.750	30.000

CONDUIT ELBOWS



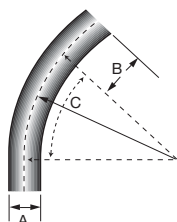
Size inches	Part Number	Product Code	D inches	T inches	R inches
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90° Elbows Schedule 80 Standard Radius

1/2	80STD0590	078620	0.840	1.500	4.000
3/4	80STD0790	078621	1.050	1.500	4.500
1	80STD1090	078622	1.315	1.875	5.750
1-1/4	80STD1290	078623	1.660	2.000	7.250
1-1/2	80STD1590	078624	1.900	2.000	8.250
2	80STD2090	078625	2.375	2.000	9.500
2-1/2	80STD2590	078626	2.875	3.000	10.500
3	80STD3090	078627	3.500	3.125	13.000
4	80STD4090	078628	4.500	3.375	16.000
5	80STD5090	078629	5.563	3.625	24.000
6	80STD6090	078630	6.625	3.750	30.000

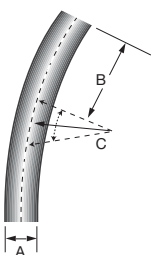
45° Elbows Schedule 80 Standard Radius

1/2	80STD0545	078631	0.840	1.500	4.000
3/4	80STD0745	078632	1.050	1.500	4.500
1	80STD1045	078633	1.315	1.875	5.750
1-1/4	80STD1245	078634	1.660	2.000	7.250
1-1/2	80STD1545	078635	1.900	2.000	8.250
2	80STD2045	078636	2.375	2.000	9.500
2-1/2	80STD2545	078637	2.875	3.000	10.500
3	80STD3045	078638	3.500	3.125	13.000
4	80STD4045	078639	4.500	3.375	16.000
5	80STD5045	078640	5.563	3.625	24.000
6	80STD6045	078641	6.625	3.750	30.000



30° Elbows Schedule 80 Standard Radius

1/2	80STD0530	078642	0.840	1.500	4.000
3/4	80STD0730	078643	1.050	1.500	4.500
1	80STD1030	078644	1.315	1.875	5.750
1-1/4	80STD1230	078645	1.660	2.000	7.250
1-1/2	80STD1530	078646	1.900	2.000	8.250
2	80STD2030	078647	2.375	2.000	9.500
2-1/2	80STD2530	078648	2.750	3.000	10.500
3	80STD3030	078649	3.500	3.125	13.000
4	80STD4030	078650	4.500	3.375	16.000
5	80STD5030	078651	5.563	3.625	24.000
6	80STD6030	068560	6.625	3.750	30.000



CONDUIT ELBOWS - SCHEDULE 40 SPECIAL RADIUS (PLAIN END)

Size inches	Degree Bend	18" Radius Product Code	24" Radius Product Code	30" Radius Product Code	36" Radius Product Code	48" Radius Product Code	60" Radius Product Code
1	90	068702	068722	068742	068762	068782	#
	45	068802	068822	068842	068862	068882	#
	30	068902	068922	068942	068962	068982	#
	22-1/2	078853	078035	#	278288	#	#
1-1/4	90	068703	068723	068743	068763	068783	#
	45	068803	068823	068843	068863	068883	#
	30	068903	068923	068943	068963	068983	#
	22-1/2	068513	078667	#	#	#	#
1-1/2	90	068704	068724	068744	068764	068784	#
	45	068804	068824	068844	068864	068884	#
	30	068904	068924	068944	068964	068984	#
	22-1/2	068523	078668	#	#	#	#
2	90	068705	068725	068745	068765	068785	068113
	45	068805	068825	068845	068865	068885	#
	30	068905	068925	068945	068965	068985	#
	22-1/2	068514	068547	#	068515	#	#
2-1/2	90	068706	068726	068746	068766	068786	178168
	45	068806	068826	068846	068866	068886	#
	30	068906	068926	068946	068966	068986	#
	22-1/2	068524		#	278229	#	#
3	90	068707	068727	068747	068767	068787	068114
	45	068807	068827	068847	068867	068887	#
	30	068907	068927	068947	068967	068987	#
	22-1/2	068516	068525	#	068517	068526	#
3-1/2	90		068728	068748	068768	068788	178169
	45	Use Standard Schedule 40 Elbow	068828	068848	068868	068888	#
	30		068928	068948	068968	068988	#
	22-1/2		068130	#	#	#	#
4	90	Use Standard Schedule 40 Elbow	068729	068749	068769	068789	068112
	45		068829	068849	068869	068889	078011
	30		068929	068949	068969	068989	#
	22-1/2		068518	068519	068520	068521	068111
5	90			068751	068771	068791	068115
	45	Use Standard Schedule 40 Elbow		068851	068871	068891	078615
	30			068951	068971	068991	068132
	22-1/2			068529	068522	#	#
6	90				068772	068792	078937
	45	Use Standard Schedule 40 Elbow			068872	068892	078220
	30				068972	068992	178255
	22-1/2				068528	068527	078221
8	90	-	-	-	-	068052	#
	45	-	-	-	-	068082	#
	22-1/2	-	-	-	-	068081	#
	11-1/4	-	-	-	-	068080	#

Note: 1) # indicates available on request. Material is **non-cancelable** and **non-returnable**.

2) Larger Radius Elbows are available on request and are **non-cancelable** and **non-returnable**.

CONDUIT ELBOWS - SCHEDULE 40 SPECIAL RADIUS (BELLED ONE END)

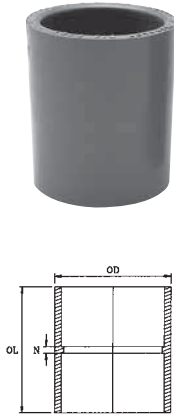
Size inches	Degree Bend	18" Radius Product Code	24" Radius Product Code	36" Radius Product Code	48" Radius Product Code
2	90	068014	068030	068054	068078
	45	068015	068033	068055	068079
2-1/2	90	068016	068034	068056	068086
	45	068017	068035	078508	068090
3	90	068018	068036	068058	068091
	45	068019	068037	078513	068092
3-1/2	90	Use Std. Sch. 40 Radius (15")	068038	068070	068093
	45		068039	068071	068094
4	90	Use Std. Sch. 40 Radius (16")	068050	068072	068095
	45		078945	068073	068096
5	90	Use Std. Sch. 40 Radius (24")		068074	068097
	45			068075	068098
6	90	Use Std. Sch. 40 Radius (30")		068076	068099
	45			068077	068106

CONDUIT ELBOWS - SCHEDULE 80 SPECIAL RADIUS (PLAIN END)

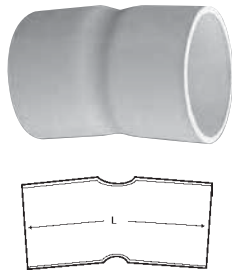
Size inches	Degree Bend	18" Radius Product Code	24" Radius Product Code	30" Radius Product Code	36" Radius Product Code	48" Radius Product Code
1	90	068710	078374	#	068049	068541
	45	#	#	#	178194	#
1-1/4	90	068711	068735	#	#	068542
	45	#	078114	#	#	#
1-1/2	90	068712	078854	#	068545	068543
	45	178104	078113	#	#	#
2	90	068713	068736	078910	068775	068544
	45	#	068530	#	068534	078198
2-1/2	90	068714	068737	078524	068776	068548
	45	#	068531	#	068535	#
3	90	068715	068738	078525	068777	068794
	45	#	068532	#	068536	#
4	90	068716	068739	068549	068778	068795
	45	#	068533	#	068537	078911
5	90	Use Standard Schedule 80 Radius (24")		078373	068779	068796
	45			#	068538	068546
6	90	Use Standard Schedule 80 Radius (30")			068540	068797
	45				068539	078966

Note: 1) # indicates available on request. Material is **non-cancelable** and **non-returnable**.
 2) 30° and 22½° Elbows are available on request.
 3) Larger Radius Elbows are available on request and are **non-cancelable** and **non-returnable**.

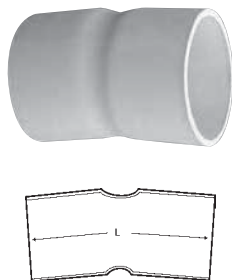
CONDUIT FITTINGS



Size inches	Part Number	Product Code	N Min inches	OD inches	OL inches
Couplings					
1/2	CP05	078001	0.055	1.062	1.410
3/4	CP07	078002	0.070	1.265	1.535
1	CP10	078003	0.095	1.545	1.860
1-1/4	CP12	078004	0.110	1.945	2.020
1-1/2	CP15	078005	0.084	2.180	2.255
2	CP20	078006	0.095	2.683	2.390
2-1/2	CP25	078007	0.170	3.240	3.120
3	CP30	078008	0.166	3.940	3.340
3-1/2	CP35	078009	0.200	4.480	3.615
4	CP40	078010	0.225	5.000	3.765
5	CP50	078012	0.270	6.120	4.170
6	CP60	078014	0.255	7.285	4.875
8	CP80	178192	-	-	-

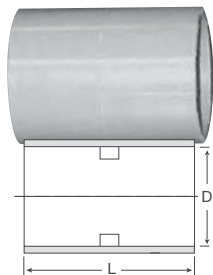


Size inches	Part Number	Product Code	L inches
5° Couplings B x B			
2	5EC20	078049	4.0
3	5EC30	078051	6.0
4	5EC40	078053	7.0
5	5EC50	078055	7.5
6	5EC60	077106	11.0



Size inches	Part Number	Product Code	L inches
5° Couplings B x S			
2	5EC20BS	078025	4.0
3	5EC30BS	078026	6.0
4	5EC40BS	078028	7.0
6	5EC60BS	078030	11.0

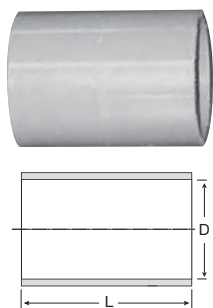
CONDUIT FITTINGS



Size inches	Part Number	Product Code	L inches	D Max inches
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Long Line Couplings

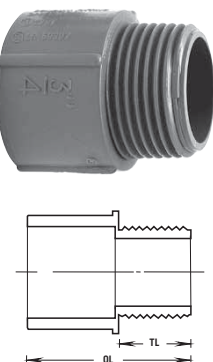
2	LLC20	078063	3.675	2.399
2-1/2	LLC25	078065	4.28	2.897
3	LLC30	078066	4.80	3.523
4	LLC40	078067	6.20	4.524
5	LLC50	078068	8.22	5.603
6	LLC60	078069	8.22	6.669



Size inches	Part Number	Product Code	L inches	D Min inches	D Max inches
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Repair Coupling Sleeves

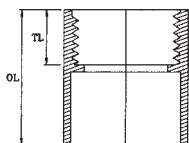
1-1/2	REC15	077292	2.300	1.912	1.924
2	REC20	078617	2.405	2.367	2.399
2-1/2	REC25	078041	3.450	2.883	2.897
3	REC30	078042	3.600	3.507	3.523
4	REC40	078044	3.920	4.506	4.524
5	REC50	077297	4.275	5.583	5.603
6	REC60	077298	4.620	6.647	6.669



Size inches	Part Number	Product Code	OL inches	TL Min inches
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Terminal Adapters

1/2	TA05	078084	1.305	0.550
3/4	TA07	078085	1.435	0.565
1	TA10	078086	1.775	0.800
1-1/4	TA12	078087	1.855	0.800
1-1/2	TA15	078088	1.980	0.800
2	TA20	078089	2.070	0.810
2-1/2	TA25	078090	2.480	0.820
3	TA30	078091	2.580	0.765
3-1/2	TA35	078092	2.815	0.920
4	TA40	078093	2.870	0.870
5	TA50	078094	3.710	1.390
6	TA60	078095	3.540	1.080
8	TA80	178190	-	-



Size inches	Part Number	Product Code	OL inches	TL Min inches
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Female Adapters

1/2	FA05	078070	1.400	0.700
3/4	FA07	078071	1.550	0.765
1	FA10	078072	2.000	1.000
1-1/4	FA12	078073	2.065	1.000
1-1/2	FA15	078074	2.185	1.000
2	FA20	078075	2.260	1.000
2-1/2	FA25	078076	2.290	1.000
3	FA30	078077	2.950	1.145
3-1/2	FA35	078078	4.100	1.800
4	FA40	078079	3.120	1.150
5	FA50	078080	3.750	1.520
6	FA60	078081	4.062	1.500
8	FA80	178189	-	-

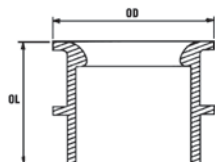
Size inches	Part Number	Product Code
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Reducer Bushings

3/4 x 1/2	MR0705	078353
1 x 1/2	MR1005	078354
1 x 3/4	MR1007	078355
1-1/4 x 3/4	MR1207	078356
1-1/4 x 1	MR1210	078357
1-1/2 x 1	MR1510	078359
1-1/2 x 1-1/4	MR1512	078360
2 x 1	MR2010	078361
2 x 1-1/4	MR2012	078363
2 x 1-1/2	MR2015	078362
2-1/2 x 2	MR2520	078364
3 x 2	MR3020	078365
3 x 2-1/2	MR3025	078366
4 x 2	MR4020	078369
4 x 3	MR4030	078367
4 x 3-1/2	MR4035	078368



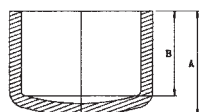
CONDUIT FITTINGS



Size inches	Part Number	Product Code	OD inches	OL inches
End Bells				
1/2	MEB05	078288	1.250	1.000
3/4	MEB07	078289	1.500	1.000
1	MEB10	078290	1.745	1.120
1-1/4	MEB12	078291	2.085	1.200
1-1/2	MEB15	078292	2.950	1.500
2	MEB20	078293	3.050	1.440
2-1/2	MEB25	078294	3.585	1.790
3	MEB30	078295	3.865	1.910
3-1/2	MEB35	078296	4.437	2.093
4	MEB40	078297	4.870	2.175
5	MEB50	078298	6.187	2.375
6	MEB60	078299	7.187	2.562
NEW 8*	MEB80	278123	-	-
8**	FEB80	077652		

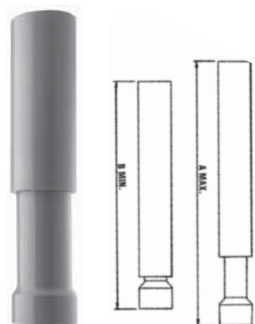
* NEW Molded

** Fabricated



Size inches	Part Number	Product Code	A inches	B inches
End Caps				
1/2	EC05	078314	1.410	1.000
3/4	EC07	078315	1.630	1.125
1	EC10	078316	1.860	1.187
1-1/4	EC12	078317	2.005	1.275
1-1/2	EC15	078318	2.115	1.500
2	EC20	078319	2.445	1.812
2-1/2	EC25	078320	2.915	2.125
3	EC30	078321	3.050	2.375
3-1/2	EC35	078322	2.150	2.625
4	EC40	078323	3.260	3.050
5	EC50	077431	4.375	3.000
6	EC60	078325	5.180	4.125
8	EC80	178191	-	-

CONDUIT EXPANSION FITTINGS

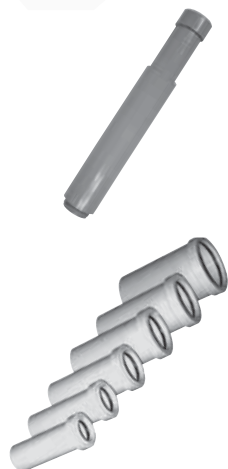


Size inches	Part Number	Product Code	A Max inches	B Min inches
Expansion Joints				
1/2	EJ05	078328	12.00	8.00
3/4	EJ07	078329	12.00	8.00
1	EJ10	078330	12.50	8.50
1-1/4	EJ12	078331	13.00	9.00
1-1/2	EJ15	078332	13.00	9.00
2	EJ20	078333	13.25	9.25
2-1/2	EJ25	078334	22.25	14.25
3	EJ30	078336	22.25	14.25
3-1/2	EJ35	078337	22.90	14.90
4	EJ40	078338	22.90	14.90
5	*EJ50	078339	34.00	26.00
6	*EJ60	078340	34.00	26.00

* indicates Fabricated fittings



Size (in.)	Part Number	Product Code
Slip Meter Risers (NEC Article 300)		
2' slip sleeve / 2" TA	SMR20TA	068371
2' slip sleeve / 2-1/2" TA	SMR25TA	068372
2' slip sleeve / 3" TA	SMR30TA	068373
2' slip sleeve / 4" TA	SMR40TA	068374



Expansion Joint c/w Terminal Adapter		
2" x 4" of travel	EJ35TA	077680
2-1/2" x 12" of travel	EJ40TA	077398
3" x 8" of travel	EJ45TA	077681
4" x 8" of travel	EJ55TA	077682



One Piece Expansion Joints		
1/2	OPEJ05	078240
3/4	OPEJ07	078209
1	OPEJ10	078208
1-1/4	OPEJ12	078204
1-1/2	OPEJ15	078045
2	OPEJ20	078388

Expansion and Deflection Fittings Assemblies		
2	SE-J-35	077889
3	SE-J-45	077890
4	SE-J-55	077891



Size (in.)	Part Number	Product Code
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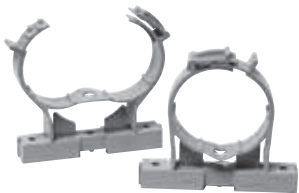
Pipe Straps, PVC 2 Hole

1/2	PS05	078375
3/4	PS07	078376
1	PS10	078377
1-1/4	PS12	078378
1-1/2	PS15	078379
2	PS20	078380
2-1/2	PS25	178108
3	PS30	178109
4	PS40	178110



Pipe Straps, PVC Coated Steel 2 Hole

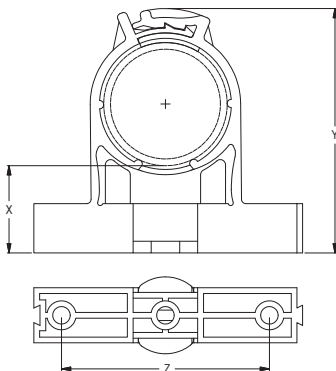
2	PSC20	078190
2-1/2	PSC25	078191
3	PSC30	078192
3-1/2	PSC35	078193
4	PSC40	078194
5	PSC50	078195
6	PSC60	078196



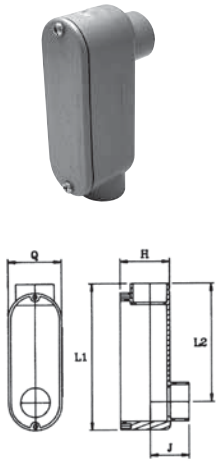
Size inches	Part Number	Product Code	X inches	Y inches	Z inches
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Conduit Clamps & Spacers

1/2	CCS10	278106	1.191	2.414	1.824
3/4	CCS15	278095	1.195	2.660	2.106
1	CCS20	278096	1.215	2.962	2.443
1-1/4	CCS25	278097	1.182	3.300	2.855
1-1/2	CCS30	278098	1.193	3.600	3.170
2	CCS35	278099	1.195	4.135	3.785
Base	CCS-B	278107	-	-	-



ACCESS FITTINGS

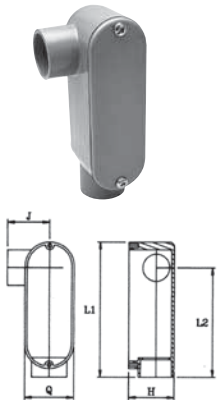


Size inches	Part Number	Product Code	L1 inches	L2 inches	H inches	J inches	Q inches
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Type 'LB' Access Fittings

1/2	LB05	078140	4.285	3.290	1.500	1.175	1.312
3/4	LB07	078141	4.970	3.980	1.625	1.375	1.500
1	LB10	078142	5.900	4.656	2.010	1.665	1.750
1-1/4	LB12	078143	7.650	6.060	2.510	1.910	2.450
1-1/2	LB15	078144	7.812	6.180	2.520	2.187	2.468
2	LB20	078145	9.970	8.055	3.455	2.500	3.062
2-1/2	LB25	078146	13.750	11.843	4.625	3.375	4.625
3	LB30	078147	14.250	11.843	4.625	3.405	4.625
3-1/2	LB35	078148	15.500	12.750	5.450	4.210	5.445
4	LB40	078149	15.500	12.750	5.450	4.210	5.445

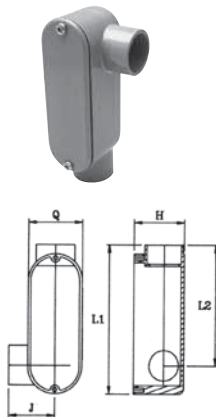
Includes: Gasket, Cover & Screws



Type 'LR' Access Fittings

1/2	LR05	078164	4.625	3.615	1.490	1.405	1.310
3/4	LR07	078165	5.260	4.265	1.665	1.540	1.500
1	LR10	078166	6.125	4.875	2.000		1.750
1- 1/4	LR12	078167	8.125	6.500	2.500	2.250	2.500
1-1/2	LR15	078168	8.187	6.500	2.750	2.312	2.500
2	LR20	078169	10.562	8.625	3.500	2.687	3.125
2-1/2	LR25	078170	13.812	12.125	4.625	5.562	4.625
3	LR30	078171	14.250	12.125	4.625	5.562	4.625
3-1/2	LR35	078172	15.656	14.250	5.484	6.203	5.468
4	LR40	078173	15.500	14.250	5.484	6.203	5.468

Includes: Gasket, Cover & Screws



Type 'LL' Access Fittings

1/2	LL05	078152	4.625	3.500	1.500	1.375	1.312
3/4	LL07	078153	5.250	4.260	1.675	1.545	1.500
1	LL10	078154	6.170	4.925	2.000	1.820	1.750
1-1/4	LL12	078155	8.187	6.500	2.500	2.250	2.500
1-1/2	LL15	078156	8.250	6.500	2.750	2.312	2.500
2	LL20	078157	10.500	8.625	3.500	2.687	3.125
2-1/2	LL25	078158	13.875	12.125	4.625	5.562	4.625
3	LL30	078159	14.250	12.125	4.625	5.562	4.625
3-1/2	LL35	078160	15.656	14.250	5.484	6.203	5.468
4	LL40	078161	15.500	14.250	5.484	6.203	5.468

Includes: Gasket, Cover & Screws

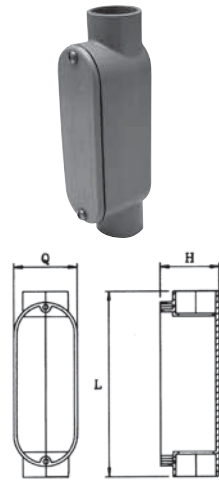


Size inches	Part Number	Product Code	L1 inches	L2 inches	H inches	J inches	Q inches
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Type 'T' Access Fittings

1/2	T05	078176	4.565	2.275	1.500	1.315	1.315
3/4	T07	078177	5.330	2.685	1.625	1.490	1.490
1	T10	078178	6.390	3.195	2.000	1.770	1.740
1-1/4	T12	078179	9.125	6.500	2.500	2.250	2.500
1-1/2	T15	078180	9.250	6.500	2.750	2.312	2.500
2	T20	078181	11.375	8.625	3.500	2.687	3.125
2-1/2	T25	078182	17.125	12.125	4.625	5.562	4.625
3	T30	078183	17.562	12.125	4.625	5.562	4.625
3-1/2	T35	078184	19.125	14.250	5.484	6.203	5.468
4	T40	078185	19.125	14.250	5.484	6.203	5.468

Includes: Gasket, Cover & Screws

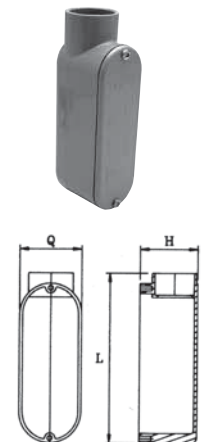


Size inches	Part Number	Product Code	L inches	H inches	Q inches
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Type 'C' Access Fittings

1/2	C05	078116	5.230	1.490	1.330
3/4	C07	078117	5.880	1.675	1.510
1	C10	078118	6.937	2.000	1.750
1-1/4	C12	078119	9.125	2.500	2.500
1-1/2	C15	078120	9.250	2.750	2.500
2	C20	078121	11.437	3.500	3.125
2-1/2	C25	078122	17.125	4.625	4.625
3	C30	078123	17.652	4.625	4.625
3-1/2	C35	078124	19.125	5.484	5.468
4	C40	078125	19.125	5.484	5.468

Includes: Gasket, Cover & Screws

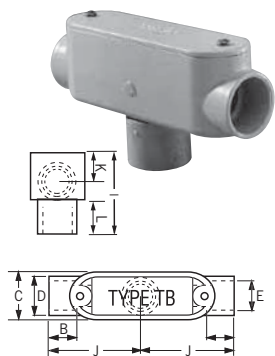


Type 'E' Access Fittings

1/2	E05	078128	4.635	1.500	1.312
3/4	E07	078129	5.250	1.675	1.515
1	E10	078130	6.170	2.000	1.750
1-1/4	E12	078131	8.187	2.500	2.500
1-1/2	E15	078132	8.250	2.750	2.500
2	E20	078133	10.500	3.500	3.125
2-1/2	E25	078134	13.875	4.625	4.625
3	E30	078135	14.250	4.625	4.625
3-1/2	E35	078136	15.656	5.484	5.468
4	E40	078137	15.500	5.484	5.468

Includes: Gasket, Cover & Screws

ACCESS FITTINGS



Size (in.)	Part Number	Product Code
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Access Fittings* Type TB

1/2	STB10S	077451
3/4	STB20S	077452
1	STB30S	077453
1-1/4	STB40S	077454
1-1/2	STB50S	077455
2	STB60S	077456

Not UL listed.

Access Fitting Dimensions*

Size (in)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)
1/2	5.6	0.6	1.3	1.1	0.8	4.3
3/4	5.6	0.8	1.5	1.3	1.1	5.4
1	6.5	0.9	1.7	1.6	1.3	6.3
1-1/4	7.9	1.1	2.3	2.0	1.7	7.6
1-1/2	8.5	1.1	2.7	2.3	1.9	8.3
2	10.9	1.2	3.2	2.8	2.4	10.5
2-1/2	14.6	1.8	4.5	4.0	2.9	13.6
3	14.6	1.9	4.5	4.0	3.5	13.6
3-1/2	17.0	2.1	5.5	5.0	4.0	16.0
4	17.0	2.1	5.5	5.0	4.5	16.0

Size (in)	G (in)	H (in)	I (in)	J (in)	K (in)	L (in)
1/2	4.1	1.3	2.5	2.3	1.0	0.8
3/4	4.1	1.3	2.5	2.8	1.0	0.8
1	4.8	1.5	2.1	3.3	1.1	1.1
1-1/4	5.8	1.8	3.6	4.0	1.6	1.0
1-1/2	6.5	1.8	3.9	4.3	1.7	1.1
2	8.2	2.3	4.5	5.4	2.0	1.2
2-1/2	9.8	3.8	6.2	7.3	2.6	-
3	10.9	2.7	6.2	7.3	2.6	-
3-1/2	11.5	4.5	7.5	8.5	3.0	-
4	11.5	4.5	7.5	8.5	3.0	-

* Notes: All access fittings are UL listed for wet locations.
Supplied with threaded brass inserts, brass screws and PVC gasketing.
Stainless steel screws are available upon request.



Size (in.)	Part Number	Product Code
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Service Entrance Fittings

1/2	MH05	078302
3/4	MH07	078303
1	MH10	078304
1-1/4	MH12	078305
1-1/2	MH15	078306
2	MH20	078307
2-1/2	MH25	078308
3	MH30	078309
3-1/2	MH35	078310
4	MH40	078311



Pull Elbow

1/2 & 3/4	PULEL0705	078386
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The new "two-in-one" access pull elbow reduces your inventory costs (3/4" hub fitting supplied with 3/4" x 1/2" reducers). The pull elbow is approved for wet location use and is manufactured from high impact, nonconducting and noncorroding PVC.

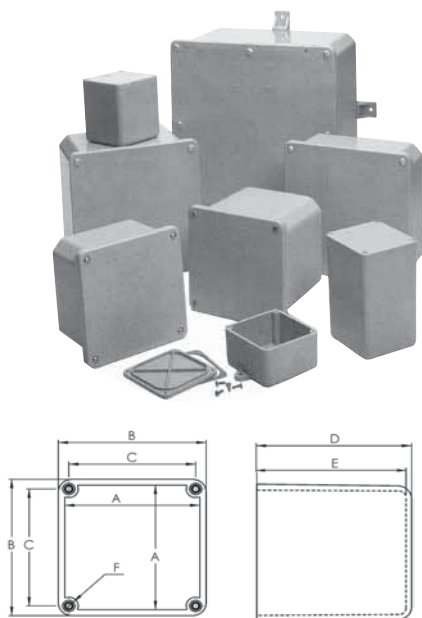


Size S x H (in)	Part Number	Product Code	OL (in)
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Offset Terminal Adapters

1-1/4	MO12	078351	4.240
2	MO20	078352	4.360

STANDARD JUNCTION BOXES



Size (in.)	Part Number	Part Number	A	B	C (inches)	D	E	F
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Junction Boxes

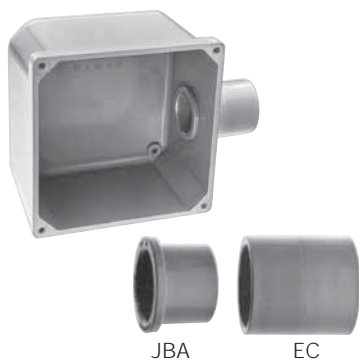
4 x 4 x 2	JB442	078242	3.71	4.05	3.42	2.15	1.99	8-32
4 x 4 x 4	JB444	078243	3.65	4.00	3.43	4.17	4.02	8-32
4 x 4 x 6	JB446	078244	3.65	4.02	3.43	6.23	6.00	8-32
5 x 5 x 2	JB552	078245	4.66	5.00	4.50	2.00	1.85	8-32
6 x 6 x 4	JB664	078246	6.08	6.41	5.80	4.20	4.00	8-32
6 x 6 x 6	JB666	078247	6.02	6.38	5.80	6.00	6.21	8-32
8 x 8 x 4	JB884	078248	8.06	8.60	7.95	4.18	3.97	1/4-20
8 x 8 x 7	JB887	078249	8.10	8.60	7.95	7.24	7.00	1/4-20
12 x 12 x 4	JB12124	078250	11.93	12.48	11.84	4.26	4.00	1/4-20
12 x 12 x 6	JB12126	078251	11.97	12.36	11.80	6.25	5.99	1/4-20
12 x 12 x 8	JB12128	078252	11.90	12.50	11.84	8.24	7.96	1/4-20

External mounting feet are supplied with all sizes except JB442 and JB552.

Kraloy PVC Junction Boxes are:

NEMA 1, 2, 3, 4, 4X, 6P, 12, 13

UL listed for wet locations



Size inches	Part Number	Product Code	ID inches	OD inches	L inches	OL inches
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Junction Box Adapters

1/2	JBA05	078276	0.62	1.20	0.81	0.95
3/4	JBA07	078277	0.79	1.40	0.87	1.01
1	JBA10	078278	1.00	1.58	0.89	1.06
1-1/4	JBA12	078279	1.35	1.98	1.12	1.30
1-1/2	JBA15	078280	1.59	2.37	1.10	1.33
2	JBA20	078281	2.05	2.85	1.25	1.54
2-1/2	JBA25	078282	2.45	3.34	1.68	1.99
3	JBA30	078283	3.05	3.10	1.77	2.11
3-1/2	JBA35	078284	3.54	4.50	2.09	2.41
4	JBA40	078285	4.02	5.03	1.99	2.30



A CSW Industrials Company

PRODUCT DATA SHEET

PVC ELECTRICAL CONDUIT CEMENT 633L

Low VOC PVC Solvent Cement

Description

PVC Electrical Conduit Cement 633L is specially formulated for use on polyvinyl chloride (PVC) conduit Types I and II. It is a medium body cement in clear or gray to match conduit color. Max VOC per SCAQMD 1168/316A or BAAQMD Method 40: 510 g/L.

Instructions

1. Store and apply between 40°F and 110°F. Protect from freezing. Do not thin or use if cement has become curdled, lumpy or thickened or is beyond two years from date stamped on container.
2. Wear non-permeable gloves during application to avoid skin contact.
3. Clean fitting socket and pipe, and check for proper fit. Primer not required for non-metallic electrical conduit. While still wet, quickly begin solvent cement application.
4. Shake well before using and stir frequently while using. Apply with supplied dauber applicator. For pipe greater than 2" diameter, use natural-bristle brush sized 1/2 of the pipe diameter.
5. Apply thin coat evenly to socket. Avoid puddling. Quickly apply heavy coat to pipe end. While wet, quickly insert pipe into fitting with slight twisting movement until it bottoms out.
6. Hold pipe into fitting for at least 30 seconds to prevent pipe backing out.
7. Wipe excess cement from joint with rag. Allow 15 minutes before handling. Avoid full-line pressure for 24 hours. Cure times varies with size, fit, temperature and humidity.

**Characteristics | Features**

- Medium body - thick formula to reduce product run off
- Medium fast setting allows corrections before setting up
- Excellent gap filling characteristics
- LEED Compliant
- Exceeds ASTM D2564 specifications
- NSF approved formula

Applications

PVC Electrical Conduit Cement 633L is designed for use on PVC conduit Types I and II up to and including 6" for Schedule 40 and Schedule 80. Primer NOT REQUIRED for non-metallic electrical conduit.

Packaging

Clear Code	Gray Code	Size	Qty. per Case	Lbs. per Case	Cubic Ft per Case
55980	--	1/2 Pint Dauber top (237 ml)	24 Cans	16	.45
55983	--	Pint Dauber top (473 ml)	12 Cans	15	.43
55985	55996	Quart Dauber top (946 ml)	12 Cans	27	.78
55979	--	Wide Mouth Gallon (3.8 L)	4 Cans	35	.80

PVC ELECTRICAL CONDUIT CEMENT 633L

Low VOC PVC Solvent Cement

Specifications

Wt/Gal @ 77°F	7.6 lbs./gal.
Flash Point	-20°C (-4°F) TCC based on Acetone
Color	Clear or Gray
Shelf Life	2 years



FILE NO. 1796



pw-dwv-sw

Suggestions and recommendations covering the use of our products are based on our past experience and laboratory findings. However, as we have no control as to the methods and conditions of application, we only assume responsibility for the uniformity of our products within manufacturing tolerances.



DANGER!

Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC-DAY OR NIGHT 1-800-424-9300.

KEEP OUT OF REACH OF CHILDREN.

For additional information, refer to Safety Data Sheet (SDS).

Limited Warranty

RectorSeal, LLC makes the Limited Express Warranty that when the instructions for storage and handling of our products are followed we warrant our products to be free from defects. THIS LIMITED EXPRESS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY OTHER OBLIGATION ON THE PART OF RectorSeal, LLC. The sole remedy for breach of the Limited Express Warranty shall be the refund of the purchase price. All other liability is negated and disclaimed, and RectorSeal, LLC shall not be liable for incidental or consequential damages.

Manufactured by

RectorSeal, LLC

2601 Spenwick Drive • Houston, TX 77055, USA • 800-231-3345 • Fax 800-441-0051 • rectorseal.com

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Detectable Underground Tapes

- Solid aluminum foil core tapes for protection, location and identification of underground utility installations
- Meets or exceeds industry standards including the American Public Works Association (APWA) color code
- Formulated to resist degradation from acid and alkali found in soils
- Lead-free pigments and organic lead-free ink



Property	Method	Value
Thickness	ASTMD2103	5.0 Mils
Elongation	ASTMD882-75B	80%
Composition	IDEAL Specs.	Bottom layer PE Top layer PET Foil industry standard
Tensile Strength	ASTMD882	35 lbs./in. (15,000 PSI)

Legend	Color	Size	Cat. No.
Caution Buried Electric Line Below	Red	3 in. x 1,000 ft.	42-201
Caution Buried Electric Line Below	Red	6 in. x 1,000 ft.	42-251
Caution Buried Fiber Optic Line Below	Orange	6 in. x 1,000 ft.	42-252

Non-Detectable Underground Tapes

- For protection, location and identification of underground utility installations
- Formulated to resist degradation from acid and alkali found in soils
- Lead-free pigments and organic lead-free ink



Property	Method	Value
Thickness	ASTMD2103	4.0 Mils
Elongation	ASTMD882-75B	500%
Composition	IDEAL Specs.	LDPE
Tensile Strength	ASTMD882	2,750 PSI

Recommended Burial Depth

3 in. Tape – 4 in. to 6 in.

6 in. Tape – less than 12 in.

Legend	Color	Size	Cat. No.
Caution Buried Electric Line Below	Red	3 in. x 1,000 ft.	42-101
Caution Buried Electric Line Below	Red	3 in. x 250 ft.	42-131
Caution Buried Electric Line Below	Yellow	3 in. x 1,000 ft.	42-102
Caution Buried Telephone Line Below	Orange	3 in. x 1,000 ft.	42-103
Caution Buried Fiber Optic Line Below	Orange	3 in. x 1,000 ft.	42-104
Caution Buried Electric Line Below	Red	6 in. x 1,000 ft.	42-151
Caution Buried Electric Line Below	Yellow	6 in. x 1,000 ft.	42-152

Barricade Tapes



- High-visibility safety yellow or red polyethylene construction with bold black letters
- Meets OSHA specifications Section 1010.144 for marking physical hazards

Property	Method	Value
Elongation	ASTM D88-75B	≥ 400%
Composition	IDEAL Specs.	LDPE
Tensile Strength	ASTM D882	2,350 PSI TD 1,893 PSI MD

Legend	Color	Size	Thickness	Cat. No.
Caution	Yellow	3 in. x 1,000 ft.	4.0 Mils	42-001
Caution Do Not Enter	Yellow	3 in. x 1,000 ft.	4.0 Mils	42-002
Caution High Voltage	Yellow	3 in. x 1,000 ft.	4.0 Mils	42-003
Danger	Red	3 in. x 1,000 ft.	4.0 Mils	42-051
Danger High Voltage 277V/480V Keep Out	Red	3 in. x 1,000 ft.	4.0 Mils	42-052

Legend	Color	Size	Thickness	Cat. No.
Caution	Yellow	3 in. x 250 ft.	2.0 Mils	42-031
Caution	Yellow	3 in. x 1,000 ft.	2.0 Mils	42-011
Caution Do Not Enter	Yellow	3 in. x 1,000 ft.	2.0 Mils	42-012
Danger	Red	3 in. x 1,000 ft.	2.0 Mils	42-015

FINANCIAL ASSISTANCE AWARD**FEDERAL AWARD ID NUMBER**

60NANB23D159

RECIPIENT NAME

Burlington School District

PERIOD OF PERFORMANCE

09/01/2023 - 08/31/2026

STREET ADDRESS

150 Colchester Ave

FEDERAL SHARE OF COST

\$9,900,000.00

CITY, STATE ZIP

Burlington, VT 05401-1422

RECIPIENT SHARE-OF COST

\$0.00

AUTHORITY

Consolidated Appropriations Act, 2022

TOTAL ESTIMATED COST

\$9,900,000.00

CFDA NO. AND NAME

11.617 Congressionally-Identified Projects

PROJECT TITLE:

Burlington Aviation Technology Center Facility

This Award Document (Form CD-450) signed by the Grants Officer constitutes an obligation of Federal funding. By signing this Form CD-450, the Recipient agrees to comply with the Award provisions checked below and attached. Upon acceptance by the Recipient, the Form CD-450 must be signed by an authorized representative of the Recipient and returned to the Grants Officer. If not signed and returned without modifications by the Recipient within 30 days of receipt, the Grants Officer may unilaterally withdraw this Award offer and de-obligate the funds.

☒ DEPARTMENT OF COMMERCE FINANCIAL ASSISTANCE STANDARD TERMS AND CONDITIONS

R & D AWARD

FEDERAL-WIDE RESEARCH TERMS AND CONDITIONS, AS ADOPTED BY THE DEPT. OF COMMERCE

☒ SPECIFIC AWARD CONDITIONS

☒ LINE ITEM BUDGET

☒ 2 CFR PART 200, UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS, AS ADOPTED PURSUANT TO 2 CFR § 1327.101

48 CFR PART 31, CONTRACT COST PRINCIPLES AND PROCEDURES

MULTI-YEAR AWARD. PLEASE SEE THE MULTI-YEAR SPECIFIC AWARD CONDITION.

☒ OTHER(S): U.S. DEPARTMENT OF COMMERCE, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
STANDARD TERMS AND CONDITIONS FOR EXTRAMURAL CONSTRUCTION PROJECTS, MAY 11, 2023

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER

SHIOU YUN LIU

Digitally signed by SHIOU YUN
LIU
Date: 2023.09.15 08:23:32 -04'00'

Shiou Liu

DATE

PRINTED NAME, PRINTED TITLE, AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL

Tom Flanagan, Superintendent



DATE

9/18/23

Award Number: 60NANB23D159, Amendment Number 0

Federal Program Officer: Robert Slocum

Requisition Number: 195161

Employer Identification Number: 471351664

UEI Number: VCCSKXGSMEJ5

Recipient ID: 1155128

Requestor ID: 1155128

Award ACCS Information

Bureau	FCFY	Project-Task	Organization	Object Class	Obligation Amount
57	2023	1959000-000	10-19-0195-00-00-00-00	41-98-00-00	\$9,900,000.00

Award Contact Information

Contact Type	Contact Name	Email	Phone
Administrative	Mr. Barry Gruessner	bgruessn@bsdvt.org	8028648462

NIST Grants Officer:

Shiou Liu
100 Bureau Drive, MS 1650
Gaithersburg, MD 20899-1650
(301) 975-8245

NIST Grants Specialist:

LaShae Green
100 Bureau Drive, MS 1650
Gaithersburg, MD 20899-1650
(301) 975-3070

**NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
2022 CONGRESSIONALLY IDENTIFIED CONSTRUCTION GRANT PROGRAM
FINANCIAL ASSISTANCE
SPECIFIC AWARD CONDITIONS**

1. Description of Work:

The National Institute of Standards and Technology (NIST) hereby enters into this grant number 60NANB23D159 with Burlington School District to support the work described in the proposal entitled “Burlington Aviation Technology Center Facility” dated November 17, 2022, and any revisions received during the application review, which are hereby incorporated into this award by reference.

The scope of work for this project is anticipated to provide a total building space in the range of 30,000 to 45,000 gross SF to include classrooms, offices, shops/tech areas, storage, hangar space and general building facilities with the intent to educate up to 150 high school students and adults each year with the technical center housing aviation for 11th and 12th graders as well as adult programs that finishes the airframe and powerplant training.

Work will be completed in accordance with the schedule submitted by Burlington School District in the Project Management and Schedule dated November 17, 2022.

The Burlington School District shall diligently pursue the development of the project to ensure completion within this time schedule and shall promptly notify NIST in writing of any event that could substantially delay meeting any of the prescribed time limits for the project as set forth above. The Burlington School District further acknowledges that failure to meet the development time schedule may result in NIST taking action to suspend or terminate the Award in accordance with the regulations set forth at 2 CFR § 200.339.

Where the terms of this award and the proposal differ, the terms of this award shall prevail.

2. Recipient Contact Information:

Administrative:

Barry Gruessner
Grants Director
Burlington School District
150 Colchester Avenue
Burlington, VT 05401-1422
Telephone: 802-864-8462
Email: bgruessn@bsdvt.org

NIST Financial Assistance Award Number: 60NANB23D159

Amendment: NEW

Recipient: Burlington School District

Authorized Representative:

Tom Flanagan
Superintendent
Burlington School District
150 Colchester Avenue
Burlington, VT 05401-1422
Telephone: 802-865-5332
Email: tflanagan@bsdvt.org

3. NIST Award Contact Information:

Grants Officer:

Michelle Shiouyun Liu
National Institute of Standards and Technology
100 Bureau Drive, Mail Stop 1650
Gaithersburg, MD 20899-1650
Telephone: 301-975-8245
Email: shiouyun.liu@nist.gov

Grants Specialist:

LaShae Green
National Institute of Standards and Technology
100 Bureau Drive, Mail Stop 1650
Gaithersburg, MD 20899-1650
Telephone: 301-975-3070
Email: lashae.green@nist.gov

Federal Program Officer:

Robert Slocum
National Institute of Standards and Technology
100 Bureau Drive
Gaithersburg, MD 20899
Email: robert.slocum@nist.gov

4. Award Payments:

This award is hereby funded through advanced payments using the Department of Treasury's Automated Standard Application for Payments (ASAP) system. Payments will be issued in accordance with 2 CFR § 200.305 and the Department of Commerce Financial Assistance Standard Terms and Conditions, B.02, dated November 12, 2020.

Payments for allowable costs may be drawn down as needed by the Recipient enrolled in ASAP. Funds may be requested through ASAP by the authorized *Payment Requestor* who is the individual designated by the Recipient to access Federal funds.

NIST Financial Assistance Award Number: 60NANB23D159

Amendment: NEW

Recipient: Burlington School District

This award has the following control or withdrawal limits set in ASAP:

- ☐ None
- ☐ Agency Review required for all withdrawals (see explanation below)
- ☐ Agency Review required for all withdrawal requests over
\$ _____ (see explanation below)
- ☒ Maximum Draw Amount controls (see explanation below)
 - \$ _____ each month
 - \$ _____ each quarter
 - \$0.00 _____ Max drawdown amount

Explanation:

Environmental & Historic Compliance Requirements

A total of \$9,900,000.00 in Federal funding is hereby withheld until the requirements identified in Specific Award Condition (SAC) #17 Environmental and Historic Review is satisfied. A Six-Month Expenditure Plan may be submitted to request funding for expenditures limited to Environmental and Historic Requirement compliance as identified in SAC #17.

In addition, the final site selection for the Burlington Aviation Technology Center Facility must be provided to NIST and approved by NIST prior to advertisement of construction. All federal funding is hereby withheld until this requirement is satisfied, as identified in SAC #19 Final Site Selection, below.

5. Return Payments for Funds Withdrawn through ASAP:

Funds that have been withdrawn through ASAP may be returned to ASAP via the Automated Clearing House (ACH) or via FEDWIRE. The ACH or FEDWIRE transaction may only be completed by the Recipient's financial institution. Full or partial amounts of payments received by a Payment Requestor/Recipient Organization may be returned to ASAP. All funds returned to the ASAP system will be credited to the ASAP Suspense Account. The Suspense Account allows the Regional Financial Center to monitor returned items and ensure that funds are properly credited to the correct ASAP account. Returned funds that cannot be identified and classified to an ASAP account will be dishonored and returned to the originating depository financial institution (ODFI). The Payment Requestor/Recipient Organization should notify the NIST Grants Office and provide a reason whenever return payments are made.

It is essential that the Payment Requestor/Recipient Organization provide its financial institution with ASAP account information (ALC, Recipient ID and Account ID) to which the return is to be credited. Additional detailed information is accessible at:
<https://www.fiscal.treasury.gov/asap/>.

6. Period of Performance and Funding Limitations:

NIST Financial Assistance Award Number: 60NANB23D159
Amendment: NEW
Recipient: Burlington School District

The period of performance and budget incorporated into this award cover a 3-year period of performance and provide for a maximum total amount of \$9,900,000.00 in Federal funding. This award is being fully funded via this award action.

The maximum amount of NIST funding in support of this award will not exceed the amount specified in the award documents, unless otherwise amended in writing by the NIST Grants Officer. The Department of Commerce is not liable for any obligations, expenditures, or commitments which involve any amount in excess of the Federal funds being made available pursuant to this award.

7. Request for Application - 2022 Congressionally Identified Construction Grant Program:

The Department of Commerce, National Institute of Standards and Technology Request for Application (RFA) No. 2022-NIST-RFA-CICGP-01, dated October 18, 2022, is incorporated by reference into this award. It is accessible at:
<https://www.grants.gov/web/grants/view-opportunity.html?oppId=344108>

8. Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements:

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements as published in the *Federal Register* on December 30, 2014 (79 FR 78390) is incorporated by reference into this award. It is accessible at:
<http://www.gpo.gov/fdsys/pkg/FR-2014-12-30/pdf/2014-30297.pdf>.

9. Uniform Administrative Requirements, Cost Principles and Audit Requirements

Through 2 C.F.R. § 1327.101, the Department of Commerce adopted Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 C.F.R. Part 200, which apply to awards in this program. Refer to <http://go.usa.gov/SBYh> and <http://go.usa.gov/SBg4>. Awards issued pursuant to this program may be subject to specific award conditions as authorized by 2 C.F.R. § 200.208.

10. Deviation to the Department of Commerce Financial Assistance Standard Terms and Conditions, Section A.01 "Reporting Requirements":

The Recipient must submit a Federal Financial Report (SF-425) and Performance Progress Report on a quarterly basis for the periods ending March 31, June 30, September 30, and December 31, or any portion thereof.

Reports are due no later than 30 calendar days following the end of each reporting period. A final SF-425 and Performance Progress Report must be submitted within 120 days after the expiration of the period of performance.

All SF-425 and Performance Progress Reports must be submitted to: GReports@nist.gov, within the prescribed timeframes identified in the terms and conditions of the award.

The Recipient organization name, NIST award number, and reporting period must be included in the email subject line. The Recipient contact information should be included in the body of the message. To the greatest extent possible, SF-425 and Performance Progress Reports should be submitted together in the same email.

SF-425 and Performance Progress Reports must not be sent directly to NIST personnel (e.g. Grants Specialist, Grants Officer, Administrative Assistant, GMD Division Chief, Federal Program Officer, etc.).

Any SF-425 or Performance Progress Reports sent directly to NIST personnel will be returned to the sender with instructions on how to submit through the GReports@nist.gov mailbox.

No other correspondence may be sent through this mailbox; timely responses to any other inquiries received in this mailbox are not guaranteed. The mailbox will not be used for any other purpose except for purposes identified above.

11. Department of Commerce Financial Assistance Standard Terms and Conditions:

As indicated on the Form CD-450 for this award, the Department of Commerce Financial Assistance Standard Terms and Conditions (ST&C) issued November 12, 2020, are incorporated by reference into this award. The Department's ST&C, as well as a link to 2 CFR Part 200, are accessible at: <https://www.commerce.gov/oam/policy/financial-assistance-policy>.

12. NIST Standard Terms and Conditions for Extramural Construction Projects:

As indicated on the Form CD-450 for this award, the National Institute of Standards and Technology Standard Terms and Conditions for Extramural Construction Projects (Construction ST&Cs) dated May 11, 2023 are incorporated by reference into this award. The Construction ST&Cs are accessible at [NIST Standard Terms and Conditions for Extramural Construction Projects | NIST](#).

13. Unfunded Grant Actions Mailbox (UGAM):

Requests for unfunded award actions, which include, but are not limited to, requests for no-cost extension, change in key personnel, change in scope of work, and budget revisions must be submitted to: UGAM@nist.gov, within the prescribed timeframes identified in the terms and conditions of the award.

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Amendment: NEW

Recipient: Burlington School District

Unfunded award action requests and related correspondence, including justification to support the request, sent to the mailbox must contain the following information in the email subject line: (1) Recipient name; (2) NIST award number; (3) Principal Investigator/Project Director; and (4) Action being requested (e.g. no cost extension, change in key personnel, etc.).

Unfunded award action requests must not be sent directly to NIST personnel (e.g. Grants Specialist, Grants Officer, Administrative Assistant, GMD Director, Federal Program Officer, etc.).

Any requests sent directly to NIST personnel will be returned to the sender with instructions on how to submit through the UGAM@nist.gov mailbox.

No other correspondence may be sent through this mailbox; timely responses to any other inquiries received in this mailbox are not guaranteed. The mailbox will not be used for any other purpose except for purposes identified above.

Requests that are processed will be authorized via a Form CD-451 Amendment to the Financial Assistance Award or a Non-Funded Administrative Change Letter.

14. Supervision of the Recipient's Staff and Associates and Compliance with NIST Policies on Use of Federal Facilities and Equipment:

Consistent with Department of Commerce Financial Assistance Standard Terms and Conditions, Section A.05, nothing in this award will be construed as authorizing the Recipient or its employees, agents, or assigns to act as an agent or assign of NIST, and the Recipient must exercise all diligence to ensure that no third party construes the Recipient as an actual, ostensible, or apparent agent of NIST. For purposes of this award, the use of the term "personnel" herein includes all third parties, such as contractors, subrecipients, students, fellows, or others participating under the direction of the Recipient's programs. The Recipient acknowledges that it is independent of NIST in the performance of the approved projects, and that the Recipient assumes full and sole responsibility for all benefits and protections of the Recipient's personnel and agents whose services are utilized by the Recipient in the execution of this award.

Accordingly, the Recipient must control the means and manner of its personnel's activities on the project, including those conducted on a NIST campus, on Recipient property, and at other locations for the project. The Recipient must directly provide a salary, stipend, or other funding to the personnel, and must establish the work schedule and tenure for the personnel. The Recipient is the supervisor of record for the personnel and will coordinate with NIST as needed to ensure that the research remains consistent with NIST program objectives.

15. Estimated Useful Life:

The estimated useful life of the building renovation portion of this project is 15 years from when the date on which the Certificate of Occupancy for the renovations is issued.

16. Property Trust Relationship and Public Notice Filings for Grant-Acquired Property:

In accordance with 2 CFR § 200.316 (Property trust relationship), real property, equipment, and intangible property, that are acquired or improved with a Federal award must be held in trust by the non-Federal entity (*i.e.*, Recipient or Subrecipient) as trustee for the beneficiaries of the project or program under which the property was acquired or improved. This trust relationship exists throughout the duration of the property's estimated useful life, as determined by the Grants Officer in consultation with the Program Office, during which time the Federal Government retains an undivided, equitable reversionary interest in the property (Federal Interest). The non-Federal entity must comply with all use and disposition requirements and restrictions as set forth in 2 C.F.R. §§ 200.310 (Insurance coverage) through 200.316 (Property trust relationship), as applicable, and in the terms and conditions of the Federal award.

The Grants Officer may require a non-Federal entity (*i.e.*, a Recipient or Subrecipient) to execute and to record (as applicable) a statement of interest, financing statement (Form UCC-1), lien, mortgage or other public notice of record to indicate that real or personal property acquired or improved in whole or in part pursuant to this award is subject to the Federal Interest, and that certain use and disposition requirements apply to the property. The statement of interest, financing statement (Form UCC-1), lien, mortgage or other public notice must be acceptable in form and substance to the NIST Grants Officer and must be placed on record in accordance with applicable State and local law, with continuances re-filed as appropriate. In such cases, the NIST Grants Officer may further require the non-Federal entity to provide a written statement from a licensed attorney in the jurisdiction where the property is located, certifying that the Federal Interest has been protected, as required under the award and in accordance with applicable State and local law. The attorney's statement, along with a copy of the instrument reflecting the recordation of the Federal Interest, must be promptly returned to the Grants Officer.

Without releasing or excusing the non-Federal entity from these obligations, the non-Federal entity, by execution of the financial assistance award or by expending Federal financial assistance funds (in the case of a subrecipient), authorizes the NIST Grants Officer to file such notices and continuations as it determines to be necessary or convenient to disclose and protect the Federal Interest in the property. The NIST Grants Officer may elect not to release any or a portion of the Federal award funds until the non-Federal entity has complied with this provision and any other applicable award terms or conditions, unless other arrangements satisfactory to the NIST Grants Officer are made.

17. Environmental and Historic Review:

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Amendment: NEW
Recipient: Burlington School District

The Recipient must comply with all applicable requirements, environmental and historic preservation laws, Executive Orders, regulations, standards, and guidance, and identify to NIST any impact a project may have on the environment or historic resources.

Project implementation may not begin prior to the completion of a review of potential environmental impacts, per the National Environmental Policy Act of 1969 (42 U.S.C. 4321, et. seq.) (NEPA) and Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. § 470, et. seq.).

The completion of NEPA compliance activities will result in one of the following: a Categorical Exclusion, an Environmental Assessment/Finding of No Significant Impact (EA/FONSI), or an Environmental Impact Statement. A decision document will not be issued until all required consultations, including, Section 7 of the Endangered Species Act (16 U.S.C. §1531, et. seq.), and any other required consultations are complete. The Recipient must also address compliance with all other applicable federal, state, and local environmental laws and regulations.

Under Section 106 of the NHPA, federal agencies, and by extension recipients of federal grant funds, must evaluate the potential effects of any proposed projects (“undertakings”) on properties listed on, or eligible for listing on, the National Register of Historic Places. Grant recipients are encouraged to initiate Section 106 consultation with relevant State Historic Preservation Offices (SHPOs) or, in the case of institutions located on tribal lands, the proper Tribal Historic Preservation Office (THPO) as directed by NIST. NIST will remain involved in resolution in the event of an adverse effect determination.

A Environmental and Historic Review, to include any required consultations under NEPA and Section 106 of the NHPA, must be completed no later than six months after the award start date; unless a formal request for extension is submitted and approved by the Grants Officer. The Recipient must comply with all conditions placed on the project as the result of the consultation processes. The Recipient may not expend any federal grant funds, except as authorized by the Grants Officer pursuant to approval of the 6-month expenditure plan (discussed below).

The Recipient is required to provide the following information that will enable NIST to make a preliminary determination regarding the potential impact of the proposed project on environmental and historic resources:

1. A thorough description of all proposed project activities, particularly buildings and other capital improvement activities that will be conducted. Include: (i) the area and extent of earthwork (drilling, excavation, fill, blasting, dredging, etc.), (ii) environmental communication, documentation, or permitting (planned, pending, or in place), (iii) any determination upon the project by any department of environment or other agency or office, (iv) floodplain mapping on the site itself or any adjacent or contiguous property, (v) any special interest in the project or the site, (vi) any public meetings planned or held regarding the on the site itself or adjacent or contiguous property, (vii) any threatened or

endangered species or any migratory birds or bald or golden eagles on the site itself or adjacent or contiguous property, or (viii) any essential fish habitat or any portion of the National Wild and Scenic River System or Coastal Barrier System or navigable waters on the site itself or adjacent or contiguous property, (ix) any waters of any stream or other body of water “proposed or authorized, permitted or licensed to be impounded, diverted, or otherwise controlled or modified”, (x) any identified or potential wetland on the site itself or any adjacent or contiguous property, (xi) any hazardous or regulated substances or Superfund activity on the site itself or adjacent or contiguous property, and/or (xii) any invasive species on the site itself or adjacent or contiguous property.

2. Maps of the project area and ground-level and aerial photographs with installation/renovation locations clearly marked on the buildings impacted. Free online resources, such as Google maps or similar images, are acceptable.

3. For the list of buildings, referenced in Item #1, state the year those buildings were first constructed as well as the dates of any subsequent major renovations. For buildings that are 45 years old or older, provide photos of installation sites, as well as exterior and interior photos of the building. Provide any property relevant to this application which is (i) within the viewshed of a registered historic property or (ii) within a historic district or (iii) registered as historic itself or (iv) noted to be historically or architecturally significant in any study or article of public interest. Provide any communication, documentation, or permitting under the project, e.g., determination upon the project by a SHPO and/or THPO.

NOTE: The Recipient must submit a draft Environmental and Historic Review with all initial required project information listed above in Items #1 – #3 to NIST via UGAM@nist.gov no later than 60 calendar days after award start date, unless an extension has been requested in writing by the Recipient and approved by the Grants Officer.

Follow-on information may be required for NIST to determine the level of impacts of the project on environmental and historic resources. If consultation is required, grantees are encouraged to initiate consultation as referenced above and must provide NIST with relevant documentation of the consultation process. Once appropriate and applicable consultations have been completed, and environmental review documentation has been completed, NIST will review all documentation and determine whether the review sufficiently addresses all resource areas and whether the project may qualify for an approval decision.

Once the above information is provided, NIST will review and provide guidance on the next steps that the recipient should take regarding required consultations and/or environmental and historic preservation documentation required to make environmental determinations. Next steps may include, but are not limited to, the submittal and completion of the following:

1. The completion of any required consultations as described above where applicable and directed by NIST, to include consultations with the SHPO and/or THPO and the appropriate federally-recognized Native American tribes (if applicable), under Section 106 of the NHPA, and/or consultations with the USFWS under Section 7 of the ESA;
2. The completion of environmental review and issuance by NIST of a decision document, as described above, that meets the requirements of NEPA; and
3. Compliance with all other applicable federal, state, and local environmental laws and regulations.

The Recipient is required to provide any information requested by NIST in a timely and effective manner to ensure both initial and ongoing compliance with environmental and historic preservation laws, regulations, and best practices. All such information must be sent to the FPO.

The Recipient shall notify NIST within 24 hours upon receipt of any notices of foreclosure; notices for continuing consultation received from the SHPO, THPO or other consulting party; or notices of noncompliance received from consulting authorities or regulatory agencies. These notices shall be sent to the FPO. Projects which, after consultation with appropriate agencies, are determined to be ineligible for a CE will require the development of an EA/FONSI. The Recipient may wish to coordinate with NIST to rescope or descope the proposed project to avoid or minimize impacts to environmental and historic resources.

Any change to the approved project scope, resulting from consultations or for other reasons, that have the potential for altering the nature or extent of environmental or cultural resources impacts must immediately be brought to the attention of NIST and will be re-evaluated for compliance with applicable regulatory requirements.

For all ground disturbing activities in the vicinity of known archaeological sites or suspected or known burials, the Recipient must ensure that an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards monitors ground disturbance, and if any potential archeological resources or buried human remains are discovered, then the Recipient must immediately cease construction in that area and notify NIST and the interested SHPO, THPO, and tribes. Such construction activities may then only continue with the written approval of NIST.

6-Month Expenditure Plan

While this SAC is in effect, the Recipient shall submit, in advance of any program fund drawdowns from ASAP.gov, a 6-month expenditure plan that presents the proposed expenditure of award funds prior to the completion of the environmental review process, including any preliminary procurement activities. The NEPA Coordinator and the Federal

Preservation Officer will review the plan and provide recommendations to the Federal Program Officer and the Grants Officer for final approval to ensure that the proposed activities and expenditures are reasonable and necessary in the context of environmental and historical compliance. Approval of the Grants Officer is required prior to fund drawdowns of the 6-Month Expenditure Plan through ASAP.gov.

The allowable use of funds for preliminary expenditures prior to beginning project implementation includes, but is not limited to, the initiation of activities necessary to meet the project completion requirements as specified in the award including environmental and historic preservation requirements:

1. Required environmental and historic preservation consultation activities;
2. Purchase or lease of equipment, or entering into binding contracts to do so; and
3. Purchase of applicable or conditional insurance.

The allowable use of preliminary expenditure funds is limited; must not result in an irrevocable commitment of resources; and is only allowed after inclusion in and approval of a 6-month expenditure plan.

18. Signage and Public Acknowledgement Requirements:

a. Signs - The Recipient is encouraged to include project signage, satisfactory in form and content to NIST, that identifies the nature of the project and indicates that “the project is funded by the Consolidated Appropriations Act, 2022.” In addition, guidelines for project signage, including an emblem and corresponding logomark, is available in the Official Investing in America Emblem Style Guide: <https://www.whitehouse.gov/wp-content/uploads/2023/02/Investing-in-America-Brand-Guide.pdf>. Costs associated with signage must be reasonable and limited. The Recipient is encouraged to use recycled or recovered materials when procuring signs. Signs should not be produced or displayed if doing so results in unreasonable cost, expense, or recipient burden. Any construction site sign should be displayed throughout the construction phase of the project in an easily visible location directly linked to the work taking place. The Recipient is responsible to maintain the sign in good condition throughout the construction period.

b. Plaque - Any plaque installed at the discretion of the Recipient, citing the origins or history of the project, should identify the project as a “project funded by Consolidated Appropriations Act, 2022.”

c. Communications - Any banner or other message intended for public display on the project site should remain within the spirit of transparency and public information provided herein.

19. Final Site Selection:

NIST Financial Assistance Award Number: 60NANB23D159

Amendment: NEW

Recipient: Burlington School District

Within 60 calendar days of the award start date, the Recipient must provide to the Federal Program Officer and Grants Specialist identified in this award, a final site selection for the Burlington Aviation Technology Center Facility. The site selection must be approved by NIST prior to advertisement of construction. All grant funding will be withheld until this Specific Award Condition is deemed satisfied in writing by the NIST Grants Officer.

End of Specific Award Conditions

BUDGET INFORMATION - Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
2. Land, structures, rights-of-way, appraisals, etc.	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
3. Relocation expenses and payments	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
4. Architectural and engineering fees	\$ <input type="text" value="947,427.00"/>	\$ <input type="text" value="547,427.00"/>	\$ <input type="text" value="400,000.00"/>
5. Other architectural and engineering fees	\$ <input type="text" value="50,000.00"/>	\$ <input type="text"/>	\$ <input type="text" value="50,000.00"/>
6. Project inspection fees	\$ <input type="text" value="600,000.00"/>	\$ <input type="text"/>	\$ <input type="text" value="600,000.00"/>
7. Site work	\$ <input type="text" value="7,050,000.00"/>	\$ <input type="text"/>	\$ <input type="text" value="7,050,000.00"/>
8. Demolition and removal	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
9. Construction	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
10. Equipment	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
11. Miscellaneous	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
12. SUBTOTAL (sum of lines 1-11)	\$ <input type="text" value="8,647,427.00"/>	\$ <input type="text" value="547,427.00"/>	\$ <input type="text" value="8,100,000.00"/>
13. Contingencies	\$ <input type="text" value="1,800,000.00"/>	\$ <input type="text"/>	\$ <input type="text" value="1,800,000.00"/>
14. SUBTOTAL	\$ <input type="text" value="10,447,427.00"/>	\$ <input type="text" value="547,427.00"/>	\$ <input type="text" value="9,900,000.00"/>
15. Project (program) income	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ <input type="text" value="10,447,427.00"/>	\$ <input type="text" value="547,427.00"/>	\$ <input type="text" value="9,900,000.00"/>
FEDERAL FUNDING			
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.			Enter eligible costs from line 16c Multiply X <input type="text" value="100"/> % \$ <input type="text" value="9,900,000.00"/>

