

**CHILLED WATER SERVICE AGREEMENT**

**Dated as of \_\_\_\_\_, 2016**

**Between**

**The City and County of Denver**

**and**

**Public Service Company of Colorado**

**PSCo Document No. 116090**

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## CHILLED WATER SERVICE AGREEMENT

THIS CHILLED WATER SERVICE AGREEMENT (“Agreement”) is dated as of \_\_\_\_\_, 2016, by and between Public Service Company of Colorado, a Colorado corporation (“Supplier”), and The City and County of Denver (“Customer”), a municipal corporation of the State of Colorado.

### RECITALS:

- A. Customer and Supplier are parties to four existing chilled water service agreements;
- B. Customer is the lessee of an office building located at 200 W. 14<sup>th</sup> Avenue (the “Premises” or “Permit Building”) pursuant to Lease Purchase agreement No. 2012C (dated May 17, 2012) between Denver Properties Leasing Trust 2012C, as Lessor, and City and County of Denver, Colorado, as Lessee;
- C. Customer desires to avoid making substantial capital investments with respect to installing new chiller facilities for the Permit Building and instead desires to subscribe to chilled water service provided by Supplier from its Central Chilled Water System in downtown Denver, Colorado;
- D. Supplier desires to use its Central Chilled Water System to provide chilled water service to Customer for the purpose of cooling space within the Premises;

THEREFORE, in consideration of the premises and of the mutual covenants herein contained, Supplier and Customer agree as follows:

### **ARTICLE I** **DEFINITIONS**

As used herein, the following terms shall have the meanings specified or referred to below which shall apply equally to single and plural forms:

- 1.1. “Actual Annual Consumption” means the quantity in Ton-Hours of chilled water service metered by Supplier and used by Customer for the Premises during a Calendar Year.
- 1.2. “Actual Capacity Requirement” means the maximum integrated demand for chilled water service for the Premises over a 15-minute period, provided, however, that non-recurring short term peaks that are the result of operating error, accident or other similar circumstances shall not be taken into account for purposes of determining Actual Capacity Requirement.
- 1.3. “Building” means the physical structure and improvements located on the Premises. The term “Building” shall refer to the Permit Building.

1.4. “Business Day” means a day on which commercial banks generally are open for business in the city of Denver, Colorado.

1.5. “Calendar Year” means each full period of twelve consecutive months during the Term hereof which begins on January 1 and ends on the following January 1.

1.6. “Commercial In-service Date” means the earlier of 1) two hundred and ten (210) days after this Agreement is approved and fully executed by Customer and Supplier or, 2) upon Supplier’s completion and full commissioning of the Energy Transfer Station.

1.7. “Commercial In-service Date Invoice” is as defined in Section 2.3(a).

1.8. “Conferral Invoice” is as defined in Section 2.3.

1.9. “Consumption Charge” means the annual charge which, for each Calendar Year or a portion thereof during the Term, shall be equal to the Consumption Charge Rate multiplied by the Estimated Annual Consumption for the Calendar Year, plus an adjustment equal to the difference that results (whether positive or negative) from subtracting the preceding Calendar Year’s Consumption Charge from the product of the preceding Calendar Year’s Consumption Charge Rate multiplied by the preceding Calendar Year’s Actual Annual Consumption.

1.10. “Consumption Charge Rate” means \$0.1395 per Ton-Hour during the Calendar Year 2016, as adjusted from year to year thereafter in accordance with Section 2.5 hereof.

1.11. “Contract Capacity” means 150 Tons of chilled water service which Supplier is obligated by this Agreement to make available to Customer, subject to the provisions of Section 2.1(b) hereof.

1.12. “Contract Capacity Charge” means the annual charge which, for each Calendar Year or a portion thereof during the Term, shall be equal to the Capacity Charge Rate multiplied by the Contract Capacity in effect on December 1 of the preceding Calendar Year, multiplied by twelve months, plus an adjustment equal to the difference that results (whether positive or negative) from subtracting the preceding Calendar Year’s Contract Capacity Charge from the sum of the twelve monthly products determined by multiplying the preceding Calendar Year’s Contract Capacity Charge Rate.

1.13. “Contract Capacity Charge Rate” means \$6.688 per Ton during the Calendar Year 2016, as adjusted from year to year thereafter in accordance with Section 2.5 hereof.

1.14. “Customer’s Internal Cooling System” means the internal piping, circulation pumps and other equipment located within the Premises on the output side of the Energy Transfer Station, which will be furnished, installed and used by Customer to cool space within the Premises after the Commercial In-service Date.

1.15. “Delivery Point” means the output flange of the Energy Transfer Station where chilled water service is delivered to Customer and metered hereunder.

1.16. “Energy Transfer Station” means the equipment between Supplier’s distribution piping and Customer’s Internal Cooling System, including without limitation one 200 ton plate frame heat exchanger assembly consisting of 150 tons of plate, piping, valves, meters and control equipment, installed by Supplier on the Premises pursuant to Section 3.1(a) for use in providing chilled water service to Customer.

1.17. “Estimated Annual Consumption” means the quantity in Ton-Hours of chilled water service estimated to be provided by Supplier and used by Customer for the Premises during a Calendar Year. For purposes of the Calendar Years ending December 31, 2016 and December 31, 2017, the parties hereby mutually agree that the Estimated Annual Consumption shall be equal to 1,200 equivalent full load hours. For Calendar Year 2018 and beyond, the Estimated Annual Consumption will be the actual equivalent full load hours of the prior Calendar year.

1.18. “Expense” means for purposes of Sections 8.1 and 8.2, any and all expenses incurred in connection with investigating, defending or asserting any claim, action, suit or proceeding incident to any matter indemnified against hereunder (including, without limitation, court filing fees, court costs, arbitration fees or costs, witness fees, and reasonable fees and disbursements of legal counsel, investigators, expert witnesses, consultants, accountants and other professionals).

1.19. “Force Majeure Event” means acts of God, war, civil commotion, embargoes, epidemics, fires, cyclones, hurricanes, tornadoes, droughts or floods, earthquakes, strikes, acts of terrorism, damage to facilities, pipe, or equipment caused by unauthorized acts of third parties, drought-related curtailment or interruption of water supply, or any governmental law, regulation, order, request, instruction or injunction, or failure to provide or cancellation of rights-of-way, permits, licenses or other authorization, whether valid or invalid, or any other cause, whether or not similar to the foregoing, beyond the reasonable control of a party hereto.

1.20. “Interconnection Specifications” means the Installation, Operation and Maintenance Specifications attached hereto as Schedule B.

1.21. “Loss” for purposes of Sections 8.1 and 8.2, shall include any and all losses, costs, obligations, liabilities, settlement payments, awards, judgments, fines, penalties, damages, expenses, deficiencies or other charges.

1.22. “Metering Charge” means the charges payable by the Customer pursuant to Section 2.2(a)(iii).

1.23 “Monthly Invoice” is as defined in Section 2.3(e).

1.24. “Premises” is as defined in the Recitals.

1.25. “Special Credits” means any monies or other remuneration received by or credited to the benefit of Customer or Supplier from any program issued, authorized or sponsored by any governmental body as a direct result of the installation of chilled water facilities or the provision

of chilled water service hereunder including, without limitation, public utility demand side energy management programs.

1.26. “Supplier’s Central Chilled Water System” means Supplier’s district cooling chiller and ice storage plant located at 500 15th Street and all of Supplier’s chilled water mains, leased chiller facilities, and appurtenant facilities used by Supplier to provide chilled water service to its existing customers in the downtown Denver business district.

1.27. “Term” shall mean the Initial Term and all renewal terms for which this Agreement continues in effect as provided in Article IX hereof.

1.28. “Ton” means cooling service equivalent to 12,000 BTUs, measured as a function of the gallons of chilled water which pass through the Energy Transfer Station and the temperature differential between the chilled water supply and return pipes at the Delivery Point.

1.29. “Ton-Hour” means 12,000 BTUs per hour of cooling.

## **ARTICLE II** **CHILLED WATER SERVICE**

2.1. Purchase. (a) Commencing on the Commercial In-service Date, Supplier agrees to supply, and Customer agrees to purchase, at the Delivery Point, chilled water service to meet Customer’s cooling needs in the Premises, up to the Contract Capacity.

(b) Contract Capacity.

(i) Supplier will ensure that the Contract Capacity, as defined in Section 1.10, of chilled water entering Customer’s Internal Cooling System at the Delivery Point for the purpose of cooling the Premises will be at a temperature and pressure that is described in the Interconnection Specifications. Customer will be responsible for temperature comfort levels of all space within the Premises.

(ii) In the event Customer determines that the Contract Capacity exceeds its needs at any time during the Term of this Agreement, then Customer and Supplier agree to negotiate in good faith a reasonable reduction in Customer’s Contract Capacity to reflect Customer’s Actual Capacity Requirements, provided, however, that in no event shall any reduction hereunder result in a Contract Capacity that is less than 140 Tons.

2.2. Charges. Customer agrees to pay to Supplier the following charges, as adjusted pursuant to Sections 2.5 and 2.7, for services provided by Supplier pursuant to this Agreement:

(a) Basic Charges.

(i) Contract Capacity Charge.

(ii) Consumption Charge.

- (iii) Metering Charge - a metering charge of \$5,000 per year per meter.

The Contract Capacity Charge, the Consumption Charge and the Metering Charge for the period from the Commercial In-service Date through December 31 of that year will be payable thirty (30) Days after the Commercial In-service Date Invoice is received. Each year thereafter, the Contract Capacity Charge, the Consumption Charge and the Metering Charge will be payable by Customer either thirty (30) days after receipt of the Conferral Invoice or thirty (30) days after receipt of the Monthly Invoice, as applicable, except as provided in Section 6.1(b).

(b) Adjustments to Charges.

(i) Service Quality Adjustments. The Consumption Charge shall be decreased by a percentage, in accordance with the following schedule, if Customer (secondary) Side return water temperature is in excess of the design temperature of 56°F by 1°F:

(A) if for any fifteen (15) minute interval, the average Customer (secondary) Side Internal Cooling System return water temperature is between 1°F and 2°F above the design temperature, then for the ton-hours consumed during that interval, the Consumption Charge will be decreased by 1.0%;

(B) if for any fifteen (15) minute interval, the average Customer (secondary) Side return water temperature is between 2°F and 4°F above the design temperature, then for the ton-hours consumed during that interval, the Consumption Charge will be decreased by 2.0%;

(C) if for any fifteen (15) minute interval, the average Customer (secondary) Side return water temperature is between 4°F and 6°F above the design temperature, then for the ton-hours consumed during that interval, the Consumption Charge will be decreased by 3.0%; or

(D) if for any fifteen (15) minute interval, the average Customer (secondary) Side return water temperature is more than 6°F above the design temperature, then for the ton-hours consumed during that interval, the Consumption Charge will be decreased by 3.5%.

(ii) Most Favored Nations Status. The Contract Capacity Charge and Consumption Charge shall be subject to annual adjustment as provided in Section 2.5 below. In addition, in the event Supplier enters into an agreement during the Term of this Agreement to provide chilled water service to any other customer located in downtown Denver similarly situated to Customer considering the terms and conditions contained herein, for which the annualized charge per Ton-Hour is less than the annualized charge per Ton-Hour under this Agreement, then the Contract Capacity Charge and/or Consumption Charge applicable hereunder shall automatically be reduced to equal such annualized charge per Ton-Hour. All provisions providing for adjustments for return water temperatures, or other incentives, shall continue to apply to any new rate or charge resulting from the operation of this paragraph.

### 2.3. Conferral Invoices.

(a) No later than ten (10) Business Days prior to the Commercial In-service Date Supplier shall send to Customer an invoice (“Commercial In-service Invoice”). No later than ten (10) Business Days following the end of each Calendar Year or partial Calendar Year ending after the Commercial In-service Date, the Supplier shall send to Customer a conferral invoice (“Conferral Invoice”). The purpose of the Conferral Invoice is to inform Customer of the Calendar Year charges for the coming year or partial Calendar Year, so that Customer may elect to make a single advance payment or pay the charges on a monthly basis.

(b) The Conferral Invoice shall set forth in reasonable detail the basic charges applicable under Section 2.2 for the next Calendar Year or partial Calendar Year and any taxes, fees and surcharges payable by Customer pursuant to Section 2.6 or Section 2.7. The Conferral Invoice shall include the Consumption Charge, including any true up adjustment for the prior Calendar Year, the Contract Capacity Charge, including any true up adjustment for the prior Calendar Year, and the Metering Charge, both of which shall be prorated in the case of a partial Calendar Year.

(c) The Conferral Invoice shall also reflect, as consideration for Customer’s advance payment of Calendar Year or partial Calendar year charges, a proposed reduction in the total amount of such basic charges as consideration for Customer’s advance payment of Calendar Year charges. Such reduction shall be equal to one-half of the difference, if any, obtained by subtracting the net present value as of the following January 1 of twelve (12) equal monthly installments (equal to 1/12th of the total invoice amount before the reduction for any prepayment discount) over the next Calendar Year, discounted based on the interest rate equal to the current return for the General Fund within Customer’s Investment Portfolio, as most recently reported on or before December 1 of the year the invoice is prepared, and the identical net present value calculation using the 12-month, weighted average interest rate applicable to Supplier’s short-term borrowings on December 1 of the year the invoice is prepared. Supplier and Customer agree to notify each other during the first week in December each year of their respective interest rates applicable on December 1 of such year.

(d) Pursuant to Section 1.16, for purposes of the Calendar Years ending December 31, 2016 and December 31, 2017, the parties have agreed that the Estimated Annual Consumption shall be equal to 1,200 equivalent full load hours. As a result, the Consumption Charge for Calendar Year 2016 shall be calculated by multiplying \$0.1395 per Ton-Hour by 1,200. The Consumption Charge for Calendar Year 2017 shall be calculated by multiplying the then prevailing Consumption Charge Rate for 2017 by 1,200.

(e) If the Customer elects to make a single advance payment, the payment shall be due and payable thirty (30) days after receipt of the Conferral Invoice. If the Customer elects to make payments on a monthly basis, the Supplier will issue a monthly invoice (“Monthly Invoice”) to the Customer by the end of the twentieth (20<sup>th</sup>) Business Day of each month. The Monthly Invoice shall reflect the sum of the chilled water consumed, contract capacity and meter charges. The amount due for the chilled water consumed will be calculated by multiplying the Ton-Hours consumed in the applicable calendar month (less any applicable discount) by the

applicable Consumption Charge Rate. The amount due for capacity will be calculated by multiplying the Contract Capacity times the Contract Capacity Charge Rate. The amount due for the meter will be calculated by dividing the annual Metering Charge by twelve (12). All appropriate taxes and/or fees will be calculated upon, and added to, the above consumption, capacity and meter charges.

(f) Customer shall notify Supplier of its election to pay either through a single advance payment or a Monthly Invoice by the end of the fifteenth (15<sup>th</sup>) Business Day after Customer's receipt of the Conferral Invoice. Should Customer fail to notify Supplier of its election by this date, Customer shall be deemed to have waived its right to make a single advance payment for the Calendar Year or Partial Calendar year charges for the coming year and Supplier shall send Customer Monthly Invoices.

2.4. Payment. A Monthly Invoice, and any other invoice delivered by Supplier under this Agreement, will be due and payable upon delivery to Customer and Customer will pay, or will cause its designated agent or contractor to pay, the total amount of such invoice (except to the extent disputed by Customer in good faith) to Supplier at the place of payment specified in such invoice within thirty (30) days after the date of such invoice, without any further notice or demand. In addition to any actions which Supplier may take during the continuance of a default by Customer, Customer will pay interest on the balance of each invoice which remains unpaid pursuant to the provisions of the Denver Revised Municipal Code.

2.5. Annual Adjustments. On January 1 of each year during the term of this Agreement, the Contract Capacity Charge Rate and the Consumption Charge Rate will each be adjusted by Supplier as follows:

(a) The Contract Capacity Charge Rate in effect on the last day of the immediately preceding Calendar Year will be multiplied by the Capacity Charge Index, as determined in accordance with Schedule "A" hereto, and the Contract Capacity Charge Rate as so adjusted shall remain in effect until further adjusted under this Agreement; and

(b) The Consumption Charge Rate in effect on the last day of the immediately preceding Calendar Year will be multiplied by the Consumption Charge Index, as determined in accordance with Schedule "A" hereto, and the Consumption Charge Rate as so adjusted shall remain in effect until further adjusted under this Agreement.

Adjustments set forth in this Section 2.5 will be determined by Supplier in good faith, which determination will be conclusive, and will be effective on January 1 of each Calendar Year during the term of this Agreement.

2.6. Taxes, Fees and Surcharges. Customer is exempt from payment of taxes. Customer will pay all applicable fees and surcharges from which Customer is not exempt, including without limitation, any present or future charge, assessment, franchise fee or fee of any other nature (including interest, penalties and additions thereto) that is imposed by any federal, state or local taxing authority on chilled water service provided by Supplier or any aspect of such service, or on any payments made by Customer, under this Agreement, excluding Supplier's income tax.

2.7. Change of Law. Supplier will adjust the Contract Capacity Charge and Consumption Charge to reflect any increases in Supplier's labor, fuel, operating, maintenance, environmental or other costs of providing chilled water service (including capital expenditures) which result from the adoption of, or any change in, any applicable laws or rules or regulations of any governmental authority after the date hereof, or from any change in the interpretation by any court, tribunal or regulatory authority of any applicable law or rule or regulation after such date, other than changes relating to the use of refrigerants used by Supplier in the Leased Facilities. In determining the amount of any increase permitted under this Section 2.7, any capital expenditure made by Supplier to comply with any adoption of, or change in, applicable laws or regulations shall be amortized on a straight line over the useful life of the item in question, as determined by Supplier. All costs passed through to Customer under this Section 2.7 shall be allocated among all of Supplier's customers (including Customer) during the year in question based on each customer's proportionate Contract Capacity of the aggregate chilled water production of Supplier during the year in question.

**ARTICLE III**  
**CONNECTION OF SYSTEM; INSTALLATION OF**  
**ENERGY TRANSFER STATION; METERS**

3.1 Chilled Water System Interconnection. (a) Supplier shall be responsible for modifying and expanding Supplier's Central Chilled Water System and for designing and installing the chilled water system piping, pumping equipment and interconnection equipment as necessary to connect the Permit Building to the Supplier's Central Chilled Water System. The interconnection will be installed in the location and in accordance with the specifications listed in the attached Schedule B.

(b) As partial reimbursement for Supplier's costs to construct the facilities necessary to connect the Permit Building to Supplier's Central Chilled Water System, Customer will appropriate, encumber and pay to Supplier, on or before May 31, 2016, an amount of three hundred twenty five thousand dollars (\$325,000.00).

3.2. Energy Transfer Station. (a) Supplier will be responsible for installing on the Premises an Energy Transfer Station. The Energy Transfer Station will be installed as specified in Schedule B and Schedule C attached hereto. Customer will provide all assistance reasonably requested by Supplier to allow Supplier to install the Energy Transfer Station and all other service and metering equipment in accordance with this Agreement.

(b) Supplier, at its expense, will maintain the Energy Transfer Station during the Term of this Agreement in accordance with Schedule B attached hereto.

(c) The Energy Transfer Station installed by Supplier on the Premises will remain the property of Supplier. The Energy Transfer Station will remain personal property and no item thereof will become a fixture of the Premises, notwithstanding its installation on or attachment to real property or any improvement located thereon. Plates or markings may be affixed to the Energy Transfer Station and piping by Supplier to indicate its ownership thereof.

(d) Customer, at its expense, will maintain Customer's Internal Cooling System during the term of this Agreement in accordance with the Interconnection Specifications. Customer will maintain the quality of water in Customer's Internal Cooling System in accordance with the Interconnection Specifications. At frequent intervals, Supplier will take a test sample of the water flowing through Customer's Internal Cooling System in accordance with the Interconnection Specifications, and will report results of such tests to Customer. Customer agrees to provide Supplier at least thirty (30) days prior written notice prior to commencing any modification to Customer's Internal Cooling System after the date hereof that may affect Supplier's operations in providing chilled water service hereunder. If Customer's operations or equipment adversely affect Supplier's metering of chilled water service, Customer will, at its expense, make such reasonable changes in its operations or equipment as will be necessary to allow accurate metering of such service. Supplier will also regularly test the quality of water in its own system and report the results to the Customer.

(e) The service stop valves and meter stop valves and other equipment on Supplier's side of the Delivery Point will be operated only by authorized personnel of Supplier, except that Customer may close the service stop valves when necessary due to emergency circumstances which require immediate cessation of chilled water supply, and Customer will give Supplier immediate notice of any such cessation. Supplier will close the service stop valves on the heat exchangers to allow Customer to repair or perform maintenance on Customer's Internal Cooling System upon reasonable advance request therefor; provided, that in emergency circumstances if Customer is unable to close the service stop valves, Supplier will use all reasonable efforts to close such valves as soon as practicable.

(f) The service stop valves on Customer's Internal Cooling System will be operated only by authorized personnel of Customer, except that Supplier may close the service stop valves when necessary due to emergency circumstances which require immediate cessation of the operation of Customer's Internal Cooling System, and Supplier will give Customer immediate notice of any such cessation.

3.3. Metering. (a) All metering equipment will be furnished, paid for, and maintained by Supplier. Supplier shall install one meter at the Delivery Point. The meter will remain personal property and will not become a fixture of the Premises, notwithstanding its installation on or attachment to real property or any improvement located thereon. Plates or markings may be affixed to the meter by Supplier to indicate its ownership thereof. Supplier will test its metering equipment every two years, or more frequently, if required, in accordance with the manufacturer's recommendations and, if requested by Customer, will conduct such tests in the presence of a representative of Customer. If requested by Customer, Supplier will conduct such testing on additional occasions; provided, that unless such testing indicates that the tested equipment provides metering results which are inaccurate by 2% or more in a manner which is adverse to Customer, Customer will pay all costs (including labor costs) and expenses incurred by Supplier in conducting such additional tests, as such costs and expenses are reasonably determined by Supplier. Supplier will maintain an accurate log or record of all such tests. In the event that any measuring equipment is found to be inaccurate by 2% or more and the error is not determinable by test or other recording device, then an appropriate correction to the consumption of Customer

hereunder shall be made if the percentage of error is ascertainable by calibration, special test or mathematical calculation or, if not available, by estimating the quantity of chilled water service provided during preceding periods under similar conditions when the measurement equipment was registering accurately. Such adjustment shall be made effective as of the midpoint in time between the date of the previous test and the date of repair or replacement of the measurement equipment.

(b) Supplier will repair or replace any materially defective metering equipment within a reasonable period after receiving notice of any material defect to such equipment.

(c) The regular meter reading and billing period will be monthly. If Supplier has installed more than one meter on the Premises, the readings of all meters will be used in calculating the invoice with respect thereto.

(d) If Supplier's metering record is interrupted at any time for any reason, the measurement of chilled water service to be billed for such period of interruption will be estimated by Supplier based, at its option, upon (i) Supplier's meter record immediately before and after the period of interruption, (ii) past Customer consumption during a similar period and under similar conditions, or (iii) some reasonable combination of these methods, and Customer will pay invoices during such period based on the estimated measurement. All billings based on estimated consumption will indicate the method of estimation employed.

(e) Customer will provide, without charge, adequate space on the Premises for the housing and maintenance of all metering and related equipment which Supplier will provide to comply with its obligations hereunder. Supplier shall have routine access to restricted areas, with an escort provided by Customer, only after providing four-hour advance notice to Customer.

#### **ARTICLE IV** **ACCESS**

4.1 License and Related Rights. Customer hereby grants Supplier the right and license to maintain sufficient space on the Premises for the purposes of installing, inspecting, testing, operating, protecting, servicing, maintaining, replacing and removing Supplier's Interconnection Facilities, and metering and other service equipment in the areas shown or the drawings referred to in Section 3.1. The location of Supplier's equipment necessary for Supplier's operation and maintenance of its facilities on the Premises, and the manner and location of Supplier's storage of materials, shall be subject to advance approval by Customer. Customer hereby grants to Supplier the right and license to install, operate, maintain and repair equipment on the Premises. Supplier shall have access to and from the Premises necessary for Supplier to perform any one or more of the activities, rights and obligations contemplated by or in connection with this Agreement, with an escort provided by Customer, if Customer deems such escort necessary; provided, however, that Supplier shall have routine access to restricted areas, with an escort provided by Customer, after providing four-hour advance notice to Customer, and emergency access to restricted areas upon expedited notice, with an escort provided by Customer. All space, licenses and rights-of-access will be in the location designated by Supplier and approved by Customer, such approval not to be unreasonably withheld, delayed or conditioned. Supplier's obligations under this Agreement are conditioned upon the grant, and undisturbed enjoyment of, the rights granted under

this Section. Supplier's representatives entering the Building must pass prior background checks acceptable to Customer.

## **ARTICLE V** **ADDITIONAL AGREEMENTS**

5.1 Customer Reporting. Customer will give immediate notice to Supplier of (i) any leaks of Supplier's pipes, pumps, and other equipment located on the Premises or (ii) any mixing of Customer's water passing through the Energy Transfer Station with Supplier's chilled water which passes through the Energy Transfer Station.

5.2 Resale of Chilled Water Service. Chilled water service supplied by Supplier hereunder may be resold by Customer; provided, that such resale does not subject Supplier to any governmental rules, regulation, taxes or laws to which it was not theretofore subject. Regardless of any such resale, Customer will remain primarily liable to Supplier for all costs and charges payable hereunder. Customer will be responsible for any taxes or other governmental charges arising from or in connection with any such resales.

5.3 Non-Exclusive Cooling. While it is anticipated that Supplier will be the sole provider of services to meet the space cooling needs of the Premises, Customer reserves the right to provide additional space cooling at its discretion.

5.4 Engineering Assistance. Supplier agrees, without additional cost to Customer, to coordinate with Customer and provide engineering assistance to Customer in optimizing the design and ongoing operations of Customer's Internal Cooling System.

5.5 Pursuit of Special Credits. Supplier and Customer, both individually and collectively, pledge to pursue any Special Credits reasonably obtainable by either of them and to share equally in the benefit of any such Special Credits under this Agreement in a manner that is mutually acceptable.

5.6 Examination of Records. Customer, through any duly authorized representative, including the Denver Auditor or his designee, shall have access to and the right to examine any directly pertinent books, documents, papers, and records of Supplier involving activities under this Agreement. All such records must be kept for a minimum of four (4) years.

## **ARTICLE VI** **INTERRUPTION OF SERVICES**

6.1 Performance Generally. (a) Supplier will use all reasonable efforts to make chilled water service available to Customer regularly and without interruption up to the Contract Capacity, but Supplier does not guarantee a constant supply of such chilled water service hereunder. Supplier will be liable to Customer for 125% of any direct costs of Customer reasonably incurred by Customer as a direct result of Supplier's failure to provide chilled water service, or any substitute service reasonably acceptable to Customer, such as rental chillers connected to Supplier-installed

quick connect couplings to supply piping, return piping and system piping and pumping, to Customer for a period exceeding four (4) consecutive hours up to four (4) consecutive days, and for 100% of such direct costs thereafter until service is restored or substitute service is established, except as otherwise provided in Section 6.2 below or if such failure is caused by an event of Force Majeure, as provided in Section 6.3 below. Supplier shall not be responsible for any percentage of Customer's direct costs, as provided in the foregoing sentence, to the extent electrical service is not available at the Premises to power Customer's fans, pumps, controls and other equipment necessary to receive substitute service. Except as specifically provided in this Section 6.1(a), Supplier will not be liable to Customer or any other person under any circumstances for any interruptions of the supply of, or failure to provide, chilled water service under this agreement. In no event shall Supplier have any liability under this Section 6.1(a) for special, exemplary or consequential damages, including without limitation, loss of profit or revenue or interference with operations, or have any liability under this Section 6.1(a) to any person other than Customer. Any liability of Supplier under this Section 6.1(a) shall be reduced by the amount of any insurance recovery of Customer.

(b) In the event that, after the Commercial In-service Date, Supplier fails to provide chilled water service for Customer's needs up to Customer's Contract Capacity, or any substitute service reasonably acceptable to Customer for a period exceeding 24 consecutive hours due to a service interruption described in item (i) of Section 6.2 (which are not the result of Customer's actions or omissions) or Supplier's negligence, then Supplier will subtract from the Contract Capacity Charge payable for any calendar month in which such period occurs, a pro rata amount attributable to the number of days of such period occurring during such month.

6.2. Service Interruption. Supplier will have the right at any time and from time to time to interrupt chilled water service: (i) for a reasonable duration, upon providing such notice to Customer as is reasonably practicable, for the purpose of performing maintenance, repairs, replacements connections or changes (on or off the Premises) for the purpose of complying with any order or request of any governmental authority; provided, that Supplier will exercise due diligence and will act with reasonable dispatch in restoring service and, to the extent practicable, will schedule such interruptions during non-business hours, or (ii) for a duration determined by Supplier in its sole discretion, with notice, if, in Supplier's judgment, Customer's Internal Cooling System or the Premises has become dangerous or defective, or if Supplier has received a notice from any governmental authority that Customer's Internal Cooling System or the Premises is dangerous or defective, so as to in any manner endanger any person, any component of the Energy Transfer Station or Supplier's other equipment and piping or Supplier's service to other customers.

6.3. Force Majeure. (a) Notwithstanding any other provision of this Agreement, if either party hereto is prevented from performing any of its obligations hereunder by reason of an event of Force Majeure, such party will notify the other party in writing as soon as practicable and thereafter will be excused from its obligations hereunder to the extent of such interference; provided, that no payment obligation hereunder will be excused or delayed as the result of Force Majeure.

(b) The party whose performance hereunder is prevented as the result of an event of Force Majeure, will use reasonable efforts to remedy its inability to perform; provided,

however, nothing in this Section 6.3(b) will be construed to require the settlement of any strike, walkout or other labor dispute on terms which, in the reasonable judgment of the affected party, are contrary to its interest. It is understood that the settlement of a strike, walkout or other labor dispute will be entirely within the discretion of the affected party.

(c) If, as a result of an event of Force Majeure, Supplier is prevented wholly from rendering, or Customer is prevented wholly from receiving and using, chilled water service hereunder for a period of thirty (30) consecutive days, then the party not prevented from so performing due to such event of Force Majeure shall have the right to terminate this Agreement as to such Building upon one (1) day's written notice to the other party. This subsection (c) shall not apply to give either party the right to terminate this Agreement on the event the Premises is rendered untenable by damage from fire or other casualty.

## **ARTICLE VII** **DEFAULT**

7.1 Defaults. In the event either party fails to perform any material obligation of such party under the terms of this Agreement, such failure shall constitute a default under this Agreement. Upon the occurrence of a default, the non-defaulting party shall be entitled to terminate this Agreement if such default is not cured, to the reasonable satisfaction of such non-defaulting party, within thirty (30) days after notice has been given to the defaulting party. In addition to said 30-day period, a defaulting party shall have, with respect to curable defaults only, that number of additional days which is equal in number to the number of days which the defaulting party is prevented from curing such default solely by reasons or causes beyond its reasonable control, provided the defaulting party has commenced curing such default within such 30-day period, is proceeding diligently and continuously, and is using all reasonable efforts to cure the default. Nothing in this section shall compromise Customer's rights in the event of interruption of service pursuant to Article VI hereof.

## **ARTICLE VIII** **INDEMNIFICATION**

8.1. Indemnification by Supplier. In addition to any rights Customer may have at law or in equity against Supplier with respect to any default by Supplier under this Agreement, Supplier agrees to defend, indemnify and hold harmless Customer from and against any and all Loss and Expense incurred by Customer in connection with or arising from any acts or omissions of Supplier's agents and employees or others under its control in connection with any accident, injury or death to any person or damage to property (including damage to any component of the Customer's Internal Cooling System or Customer's other equipment and piping) occurring on the Premises, except to the extent such Loss or Expense results from any negligent or intentional conduct of Customer or its agents or employees or others under its control. This section shall survive the termination of this Agreement.

8.2. Indemnification by Customer. Customer believes that it is legally prohibited from pledging its credit, indemnifying or otherwise contractually incurring obligations with respect to

claims or damages for injury to persons or property which may impose financial consequences on Customer for which Customer would not otherwise be legally responsible. To the extent permitted by law and without waiving Customer's position regarding such prohibitions and the provisions of the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101, *et seq.*, Customer shall defend, indemnify and hold harmless Supplier, its officers, employees and agents from and against any and all Loss and Expense incurred by Supplier in connection with any liability, loss, property damage or personal injury arising from this Agreement or from Supplier's presence on the Premises and caused by any negligent or intentional conduct of Customer, its employees or agents; provided, however, that Customer shall not indemnify, defend or hold harmless Supplier, its officers, agents and employees, from damages or liability to the extent resulting from the negligence or intentional conduct of Supplier's officers, agents and employees. This section shall survive the termination of this Agreement.

8.3. Notice of Claims. (a) Any party seeking indemnification hereunder will give to the other party a claim notice describing the facts underlying, and the amount of, its indemnification claim. A notice in respect of any action at law or suit in equity by or against a third person as to which indemnification will be sought will be given promptly after the party seeking indemnification has notice that such action or suit has commenced; provided, that failure to give such notice will not relieve the party from whom indemnification is sought of its obligations hereunder except to the extent it will have been prejudiced by such failure.

(b) In calculating any loss or expense, there will be deducted (i) any insurance recovery by the party seeking indemnification in respect thereof (and no right of subrogation will accrue hereunder to any insurer) and (ii) the amount of any tax benefit to the party seeking indemnification with respect to such loss or expense (after giving effect to the tax effect of receipt of the indemnification payments).

(c) After any claim notice has been given pursuant hereto, the amount of indemnification to which an party seeking indemnification will be entitled under this Article VIII will be determined: (i) by the written agreement between the party seeking indemnification and the other party; (ii) by a final judgment or decree of any court of competent jurisdiction; or (iii) by any other means to which the party seeking indemnification and the other party will agree.

## **ARTICLE IX**

### **TERM**

9.1. Term. This Agreement will be effective as of the date hereof and, unless sooner terminated as provided in Section 9.3, will remain in effect for an Initial Term ending on December 31, 2034. This Agreement will become automatically renewable for successive ten (10) year periods unless either party gives written notice of termination at least one year prior to the expiration of the Initial Term or any successive renewal term, to be effective at the end of such Initial Term or renewal term.

9.2. Government Appropriations. It is understood and acknowledged by the parties that the financial obligations of Customer are contingent upon funds for that purpose being appropriated, budgeted, encumbered, and otherwise made available. In the event sufficient funds

are not appropriated to Customer to meet its obligations hereunder, and this Agreement is terminated pursuant to Section 7.1, then Supplier shall be entitled to recover from Customer the unamortized portion of the total cost incurred by Supplier to construct Supplier's Interconnection Facilities, assuming a straight line amortization of such costs over the Initial Term.

9.3. Early Termination. In addition to the termination rights of either party under applicable law following a default, Supplier may terminate this Agreement as of the effective date of the withdrawal, cancellation or lapse of any right, permit or authorization of any governmental authority necessary to allow Supplier to operate its central chilled water system or to provide chilled water service to Customer.

9.4. Effect of Termination. Upon the expiration or earlier termination of this Agreement:

(a) Supplier may choose, in its sole discretion, upon providing notice to Customer within thirty (30) days after such expiration or termination, (i) to remove any or all of the components of the Supplier's Interconnection Facilities or its other equipment, piping and other property installed or otherwise located on the Premises, in which case Customer will provide Supplier access to the Premises reasonably requested by Supplier to allow Supplier to remove such property in a timely fashion and Supplier will have no obligations to restore the Premises to their original condition, or (ii) to abandon any or all of such property located on the Premises, in which case such property will be the responsibility of Customer and Supplier will have no obligation or liability with respect to such abandoned property.

(b) Customer will pay Supplier all amounts then payable to Supplier hereunder;  
and

(c) Customer and Supplier will have no further obligations hereunder other than (i) obligations accruing prior to the date of such termination, (ii) Customer's obligations to provide access rights pursuant to Section 9.4(a) and (iii) obligations under Article VIII, all which will survive the expiration or termination of this Agreement.

## **ARTICLE X**

### **LAWS AND REGULATORY BODIES**

10.1 Agreement Subject to Laws and Regulations. This Agreement and the rights and obligations of the parties hereunder shall be subject to all valid applicable state, local and federal laws, rules, regulations, ordinances, orders and decisions issued or promulgated for or by any court or regulatory agency having or asserting jurisdiction over this Agreement, the services to be performed hereunder or either of the parties hereto.

10.2 Rights Upon Regulatory Agency or Court Action. Except as may be otherwise provided herein, in the event that any court or regulatory agency having or asserting jurisdiction over these premises takes any action or issues any determination that directly or indirectly prohibits performance to a material extent under this Agreement by either or both parties or otherwise makes such performance illegal or impossible, such action or determination will be considered to be an event

of Force Majeure. In the event that any such court or regulatory agency takes any action or issues any determination that directly or indirectly effects a material adverse change to any substantive provision of this Agreement, in the terms of performance or with respect to the rights or obligations of either party hereto (in that party's reasonable good faith opinion), then the party materially adversely affected may: (i) continue to perform its obligations under the Agreement as changed, (ii) seek to renegotiate the terms of this Agreement by providing written notice to the other party of its desire to renegotiate, or (iii) at any time during a period of ninety (90) days next following receipt by the other party of written notice of any such action by any such court or regulatory agency, terminate this Agreement by providing written notice to the other party hereto on or before the end of such ninety (90) day period, such termination to be effective on the first day of the month next following ninety (90) days after the receipt of such notice of termination; provided however that, if such action or determination is rescinded prior to the effectiveness of such notice, such notice will be deemed invalid. In the event the Agreement terminates under this provision, all further rights and obligations of Supplier and Customer under this Agreement will be null and void. Each party hereto shall provide reasonable and prompt notice to the other party hereto as to any regulatory proceedings or actions described herein that could affect the rights and obligations of the parties hereto.

10.3 Performance Pending Renegotiation or Termination. Irrespective of any action by any court or regulatory agency as contemplated by Sections 10.1 or 10.2, above, each of the parties hereto shall continue to honor and perform all of their respective warranties, representations and obligations under this Agreement including, but not limited to, the obligations of Supplier to provide chilled water service and the obligations of Customer to accept and pay Supplier for chilled water service as provided herein, until the parties either mutually renegotiate the terms of this Agreement or until this Agreement terminates pursuant to the provisions of Section 10.2 above.

10.4. Governing Law. This Agreement will be governed by and construed in accordance with the internal laws (as opposed to the conflicts of law provisions) of the State of Colorado.

## **ARTICLE XI** **INSURANCE**

11.1 During the Term of this Agreement, Supplier shall maintain at its own expense a commercial general liability insurance policy with coverage in amounts not less than those which are from time to time acceptable to a prudent service provider in the same business as Supplier and in the area in which the Building are located, but in any event not less than \$5,000,000. Policies for such insurance shall waive any right of subrogation against Customer, except for claims Customer has agreed to indemnify Supplier against pursuant to Section 8.2 hereof. Supplier shall provide a certificate of such insurance policies which meets the foregoing requirements, and which also names Customer as an additional insured and provides that coverage will not terminate without at least thirty (30) days prior written notice to Customer. Except as otherwise provided in Section 8.2, Supplier shall be responsible for any and all claims, associated costs and expenses which fall within the deductible or self insured retention for insurance as required in the first sentence of this section.

11.2 Customer and Supplier shall maintain their own respective worker's compensation insurance policies insuring their respective employees, as required in the State of Colorado. Except

as otherwise provided in Section 8.2, Supplier's Worker's Compensation insurance program and policy shall waive any right of subrogation against Customer.

**ARTICLE XII**  
**GENERAL PROVISIONS**

12.1. Notices. All notices or other communications required or permitted hereunder will be in writing and will be deemed given or delivered (i) the day delivered when delivered personally, (ii) three (3) days after mailing when sent by registered or certified mail or by private courier and (iii) one (1) day after sending when sent by courier via commercial overnight delivery service, addressed as follows:

If to Customer, to:

City and County of Denver	and	Office of the Mayor
Attention: Director of Utilities		350 City and County Building
201 W. Colfax Ave. Suite 11 H 5		1437 Bannock St.
Denver, CO 80204		Denver, CO 80202

If to Supplier, to:

Public Service Company of Colorado  
Attention: Director of Thermal Energy  
P.O. Box 840  
1875 Delgany Street  
Denver, CO 80201

or to such other address as such party may indicate by a notice delivered to the other party hereto.

12.2. Successors and Assigns. (a) All of the terms, covenants, representations, warranties, and conditions of this Agreement shall be binding upon, and inure to the benefit of and be enforceable by, the parties hereto and their respective successors, but neither this Agreement nor the rights and obligations of the parties may be assigned without the prior written consent of the other party; provided, however, that a party shall have the right to assign its rights hereunder to one or more entities which are either wholly owned (directly or indirectly) by such party, or are under common ownership with such party. Either party may mortgage, pledge, or otherwise encumber its rights under this Agreement or its assets located on the Premises to secure any obligations of such party, and in connection therewith, upon the request of the other party hereto from time to time, Supplier or Customer, as the case may be, will provide one or more estoppel certificates in form and substance satisfactory to the requesting party.

(b) Nothing in this Agreement, expressed or implied, is intended or will be construed to confer upon any person (other than the parties and successors and assigns permitted by this Section 11.2) any right, remedy or claim under or by reason of this Agreement.

12.3. Entire Agreement; Amendments. This Agreement and the Schedules referred to herein and the documents delivered pursuant hereto contain the entire understanding of the parties hereto with regard to the subject matter contained herein or therein, and supersede all prior agreements or understandings between or among any of the parties hereto. This Agreement will not be amended, modified or supplemented except by a written instrument signed by an authorized representative of each of the parties hereto. In the event terms or provisions in the proposal, the letter of intent, the schedules, or documents delivered pursuant to this Agreement conflict with this Agreement, this Agreement will control.

12.4. Interpretation. Article titles and headings to sections herein are inserted for convenience of reference only and are not intended to be a part of or to affect the meaning or interpretation of this Agreement.

12.5. Reasonableness of Consent or Approval. Whenever under this Agreement "reasonableness" is the standard for the granting or denial of the consent or approval of either party hereto, such party shall be entitled to consider public and governmental policy, moral and ethical standards, as well as business and economic considerations.

12.6. Waivers. Any term or provision of this Agreement may be waived, or the time for its performance may be extended, by the party or parties entitled to the benefit thereof. Any such waiver will be validly and sufficiently authorized for the purposes of this Agreement if, as to any party, it is authorized in writing by an authorized representative of such party. The failure of any party hereto to enforce at any time any provision of this Agreement will not be construed to be a waiver of such provision, nor in any way to affect the validity of this Agreement or any part hereof or the right of any party thereafter to enforce each and every such provision. No waiver of any breach of this Agreement will be held to constitute a waiver of any other or subsequent breach.

12.7. Expenses. Each party hereto will pay all costs and expenses incident to its negotiation and preparation of this Agreement and, except as set forth herein, to its performance and compliance with all agreements and conditions contained herein on its part to be performed or complied with, including the fees, expenses and disbursements of its counsel and accountants.

12.8. Partial Invalidity. Wherever possible, each provision hereof will be interpreted in such manner as to be effective and valid under applicable law, but in case any one or more of the provisions contained herein will, for any reason, be held to be invalid, illegal or unenforceable in any respect, such provision will be ineffective to the extent, but only to the extent, of such invalidity, illegality or unenforceability without invalidating the remainder of such invalid, illegal or unenforceable provision or provisions or any other provisions hereof, unless such a construction would be unreasonable.

12.9. Execution in Counterparts. This Agreement may be executed in one or more counterparts, each of which will be considered an original instrument, but all of which will be considered one and the same agreement, and will become binding when one or more counterparts have been signed by each of the parties hereto and delivered to Supplier and Customer.

12.10. No Discrimination In Employment. In connection with the performance of work under this Agreement, Supplier agrees not to refuse to hire, discharge, promote or demote, or to discriminate in matters of compensation against any person otherwise qualified, solely because of race, color, religion, national origin, gender, age, military status, sexual orientation, marital status, or physical or mental disability; and Supplier further agrees to insert the foregoing provision in all subcontracts hereunder.

12.11 No Third Party Rights. This Agreement is exclusively for the benefit of the parties to this Agreement, their successors and permitted assigns and persons benefited by the indemnification provisions of this Agreement. No other person (including, without limitation, tenants of the Premises) shall be entitled to rely on any matter set forth in, or shall have any rights on account of the performance or non-performance by any party of its obligations under, this Agreement and no third party shall have the right to claim that they are a third party beneficiary and this paragraph shall be strictly construed.

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**Contract Control Number:**

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of

SEAL

**CITY AND COUNTY OF DENVER**

ATTEST:

By \_\_\_\_\_

\_\_\_\_\_

APPROVED AS TO FORM:

REGISTERED AND COUNTERSIGNED:

By \_\_\_\_\_

By \_\_\_\_\_

By \_\_\_\_\_



Contract Control Number: GENRL-201525360-00

Contractor Name: Public Service Company of Colorado

By: David L. Eves

Name: DAVID L EVES  
(please print)



Title: PRESIDENT  
(please print)

ATTEST: [if required]

By: \_\_\_\_\_

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

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



**SCHEDULE A**  
**Calculation of Indices**

Capacity Charge Index: The Capacity Charge Index will be determined on each January 1 as follows:

- (i) The index value for Consumer Price Index for All Urban Consumers, U.S. City Average, All Items (1982-84=100) (the CPI-U), as it appears in the Consumer Price index as published by the U.S. Department of Labor, Bureau of Labor Statistics will be determined as of September 30 of each of the five years immediately preceding such January 1.
- (ii) The index value for the CPI-U for the corresponding date one year prior to the date for each of the five years referred to above shall be determined.
- (iii) The value in (i) above for each of the five years immediately preceding such January 1 shall be divided by the value in (ii) above for the year prior to such year
- (iv) The average of the five quotients in (iii) above shall be calculated and the result shall be the Capacity Charge Index for the current time period.

Consumption Charge Index: The Consumption Charge Index will be determined on each January 1 in the following manner:

- (i) The index values for each of two index series specified below will be determined as of September 30 of each of the five years immediately preceding such January 1.
- (ii) The index values for each of the two index series specified below for the corresponding dates one year prior to the dates for each of the five years referred to above shall be determined.
- (iii) The values in (i) above for each of the five years immediately preceding such January 1 shall be divided by the corresponding values in (ii) above for each such index series for each such year.
- (iv) The average of the five quotients in (iii) above for each index series shall be calculated and the result shall be multiplied by the relative weight of such index, which shall be:
  - (a) eighty percent (80%), in the case of the Energy Index;
  - (b) twenty percent (20%), in the case of the Expendables Index.
- (iv) The sum of these two figures will be the value of the Consumption Charge Index for the current time period.

- (v) The following definitions will apply for the calculation of the Consumption Charge Index:
  - (a) The Producer Price Index Series ID PCU4981#138, not seasonally adjusted, electric power and natural gas utilities, mountain, as it appears in the Producer Price index as published by the U.S. Department of Labor, Bureau of Labor Statistics will be referred to as the Energy Index.
  - (b) The Producer Price Index Series ID PCU28\_#, not seasonally adjusted, chemicals and allied products, as it appears in the Producer Price Index as published by the U.S. Department of Labor, Bureau of Labor Statistics will be referred to as the Expendables Index.

In the event that the Bureau of Labor Statistics or any successor agency of the United States shall discontinue the calculation and/or publication of any index referred to in this Schedule A, then the index which most closely parallels the types of components in the discontinued index, both in description and by overall result, shall be utilized by the parties. The parties agree to negotiate in good faith within 30 days of notice by either to reach agreement upon the best replacement index meeting these criteria.

# SCHEDULE B

## Installation, Operation and Maintenance Specifications

### For

### City and County of Denver – Permit Building

#### GENERAL

##### A. GENERAL

1. This specification describes Supplier's district cooling interconnection to Customer. It includes the (1) design parameters, (2) materials to be used, and (3) work to be performed by Supplier and Customer to complete the district cooling interconnection.
2. Supplier will provide chilled water service to the Permit Building from its downtown Denver chilled water system. The chilled water will be distributed to the Permit Building from Supplier's chilled water plant(s) through a direct buried supply and return piping system. Supplier intends to construct additional cooling plants, which will be connected to this distribution system. A variable flow pumping system will provide the chilled water flow requirement at the incoming service to the Permit Building.

##### B. BASIC SYSTEM

1. Mechanical: Supplier's incoming service will interconnect with the Customer's Cooling System through heat exchangers installed in a suitable space provided by the customer and agreed to by Supplier.
2. Electrical: Electrical service to the interconnection control panel will be provided by the Customer.
3. System Design Temperatures

<u>Description</u>	<u>Temperature</u>
District Cooling Supply	40°F
District Cooling Return	54°F
Building Supply	42°F
Building Return	56°F

## **C. SUPPLIER'S RESPONSIBILITIES**

1. **Service Entrance:** Supplier will provide the supply and return pipes from the fittings on the main distribution pipes to the primary side (Supplier's side) of the heat exchangers.
2. **Equipment:** Supplier will provide the Energy Transfer Station (all equipment on the primary side of the heat exchangers, including one heat exchanger, the frame for which is rated for 200 tons, containing 150 tons of plate, isolating valves, primary service header, strainer, thermometers, control valves, metering equipment, insulation, etc.). Supplier will be responsible for installing its control system. Supplier will also furnish two temperature wells to be installed by Customer on the building side of the ETS for Supplier's temperature sensors. On the secondary side (Customer's side), Customer will provide the interconnecting supply and return pipes to the Customer's Cooling System. The Customer will also provide the controls and temperature sensor equipment for the control of the secondary loop of the Building cooling system.
3. **Heat Exchangers Pad(s):** Supplier will furnish recommended heat exchanger pad(s) layout (included in the layout will be a possible fourth heat exchanger) with minimum clearances within sixty (60) days of receipt of the Customer's final initial tonnage requirement for the Permit Building.
4. **Metering Information:** Supplier will provide the following metering information through isolation devices for use by the Customer in their Building Automation System: Building Supply Temperature (degree F), and Building Return Temperature (degree F). Unless otherwise requested by Customer, the signals will be a 0 – 10 volt DC signal.  
**Installation:** Supplier's contractor will install the Energy Transfer Station to Supplier's specifications. This includes the erection and installation of the heat exchangers, construction of the supply and return lines to the heat exchangers on the primary side. Supplier will install controls for the primary side of the cooling system.
5. **Commissioning:** In cooperation with the Building superintendent, Supplier will commission the primary system. This will include the flushing of the supply and return piping system and start-up of the control equipment.
6. **Make-up Water:** Supplier will provide the make-up water for the primary side of the system. Any required water treatment will be accomplished at the district cooling plant.
7. **Primary Side Service:** The strainer in the primary service line will be operated and maintained by Supplier. Supplier will also maintain the metering equipment.
8. **Water Treatment:** Supplier will test without charge to Customer the water in Customer's Cooling System and report the results to Customer. Such tests will be performed periodically in accordance with Supplier's standard maintenance practices.

## **D. CUSTOMER'S RESPONSIBILITIES**

1. **Space: Base System Operation Requirements:** Customer shall provide, at no cost to Supplier, suitable space for the installation of the Energy Transfer Station and other required equipment to complete the district cooling interconnection. This will include space for the (1) supply and return primary lines, (2) heat exchangers, (3) supply and return connections to Customer's Cooling System, and (4) all required auxiliary equipment. Supplier and Customer shall agree on the routing of the pipes through the Building and the location of the heat exchangers to determine the most effective solution from a cost and performance standpoint. Supplier and Customer shall agree on a strategy to modify the Customer's Cooling System to match the requirements for the district cooling system.
2. **Design:** Supplier will be responsible to properly design the interconnection.
3. **Electric: Base System Operation** Customer will be responsible for providing two dedicated, locked 120 volt AC, 20 amp circuits from Customer's bus with breaker for Supplier's control equipment. When sub-metering is involved, Customer shall supply a dedicated, locked 120 volt AC, 20-amp circuit with circuit breaker for metering equipment.
4. **Heat Exchanger Pad(s):** Customer to locate, furnish, and install the foundation supports (pads) for the heat exchangers.
5. **Installation of Supplier-Furnished Equipment:** Customer will install automatically operated isolation valves on the building supply line at each heat exchanger and two temperature wells on the building side of the ETS for Supplier's temperature sensors. Supplier will furnish the isolation valves and temperature wells.
6. **Metering Information:** Customer will provide all necessary wiring and conduit to Supplier's control panel to receive the following signals from Supplier's control system: Building Supply Temperature (degree F), and Building Return Temperature (degree F). Supplier will make the actual interconnections to Supplier's isolation devices. Unless otherwise requested by Customer, the signals will be a 0 – 10 volt DC signal.
7. **Building Modifications:** In cooperation with Customer's Building operating staff, Supplier will be willing, upon request, to help address the necessary modifications to optimize operation of Customer's Cooling System. A properly functioning building cooling system will benefit both Customer and Supplier. Generally, these modifications involve changes that will increase district cooling return water temperature.
8. **Commissioning:** During commissioning, Customer shall be responsible for Customer's Cooling System.
9. **Changes to the System:** Any changes to Customer's Cooling System that will impact the district cooling system shall be reported to Supplier. When applicable, these changes shall be acknowledged by Supplier.
10. **Make-up Water:** The Building, or secondary, side of the interconnection will be drained and filled as required by the work. The filling and draining of the secondary side will be the responsibility of Customer.
11. **Water Treatment:** Customer will maintain the water in the Customer's Cooling System. The pH level will be maintained between 9.0 and 10.0

and the total bacteria count will be maintained at less than 100 cfu/ml. Makeup water chloride level shall not exceed 300 ppm at 60°F. Maximum particle size shall be 0.10 inches. Maximum concentration of solids shall be 10%.

12. Connection Equipment: Customer will maintain the Connection Equipment (all equipment and piping between the Customer's Cooling System to the heat exchanger) and Customer's Cooling System including the volume expansion tank.

## **E. CODES AND STANDARDS**

1. Denver Building Code / Uniform Building Code.
2. Latest issue of American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Handbooks on "Fundamentals" and "Systems".
3. ASHRAE Energy Standard 90-80.
4. National Fire Protection Association (NFPA).
5. Underwriters' Laboratories (UL).
6. Air Conditioning and Refrigeration Institute (ARI).
7. American National Standards Institute (ANSI).
8. American Society of Mechanical Engineers (ASME).
9. American Society of Testing and Materials (ASTM).
10. National Electrical Manufacturer's Association (NEMA).
11. ANSI-MSS SP-58-1983, Pipe Hangers and Supports - Materials, Design and Manufacturer.
12. Standards of Tubular Heat Exchanger Manufacturers Association (TEMA).

## **F. CONTROLS**

System Configuration/Overview:

The heat transfer from primary to secondary will be made utilizing a plate and frame heat exchanger to maintain separation between the two closed loop systems. In general, Customer will control and operate its own system, with the ability to regulate cooling set points across the heat exchanger when permitted by Supplier.

A control valve shall modulate based on load demand and signal from the local controller. The control valve will be sized to minimize pressure drop and will generally run one size below line size. The flow meter generally runs one size below line size. The valve will normally be controlled from the local controller via the primary side outlet temperature (T2). When control is transferred to Customer (upon request), the valve position will be controlled via the secondary side outlet temperature (T3 Building Supply Temperature).

The control algorithm will transfer the controlling set-point and process variable to the Customer side of the heat exchanger. The control loop

shall then operate from the Customer's internal set-point and temperatures. The control shall remain transferred until the Customer's required secondary chilled water supply temperature returns to within its set point parameters, at which time the control will revert back to the primary side control variables. Should the primary side chilled water return temperature at any time fall below 54°F, and control resides with the Customer variables, the control shall automatically transfer back to the primary side control in order to maintain the return water temperature at a minimum of 54°F. Should the minimum 54°F return water temperature be met, the system will again allow the transfer option for the Customer's internal set-point.

The controller shall be used to calculate the Customer consumption utilizing primary side differential temperature and flow. Capacity shall be calculated in tons with 15-minute block averages on the hour and calculations at each minute. Each 15 minute integrated demand value will be time stamped and stored. Sufficient data storage at a minimum to hold 15 minute integrated demand values for one month is required.

The position of the control valve must be indicated on the controller display and capable of reading and control from the central plant. This, along with the primary side differential pressure, will allow the plant to reset distribution pumps differential pressure set-points depending on the valve position.

The controller must be capable of automatic local control as well as remote control via communication with the central plant. This communication link may be accomplished utilizing twisted pair wire.

It is anticipated that multiple buildings will be initially cooled using Supplier's chilled water system in the morning at approximately the same time. As a result, the controller will be required to ramp the valve position from closed to full open over a minimum of a 10-minute time frame.

A differential pressure (DP) transmitter is installed to provide continuous measurement across the Distributed Cooling Supply (DCS) and Distributed Cooling Return (DCR) lines for each customer. This DP reading is critical to control Supplier's plant distribution pump speed. As the pressure drops below set points, pump speed will be increased to meet system demands. This is especially important for locations farthest from Supplier's main plant.

A demand limiter shall be configured (as a part of the control software) to prevent overshooting of Customer's contracted peak energy demand (in tons) for any peak usage. The controller must limit flow as determined from system inputs and internal calculations. This set point must be compatible of remote and override changes from the central plant.

To prevent water from freezing in low flow winter conditions and to allow for some flow during low flow month to insure proper chemicals are maintained, a manual bypass valve will be opened. A small percentage of water will bypass from the DCS to DCR piping as long as the valve is open. This will be monitored based on the primary supply and return temperatures.

## **SCHEDULE C**

### **Interconnection Specification**

#### **For**

#### **City and County of Denver – Permit Building**

##### **A. Interconnection from District Chilled Water System to Building Entrance**

1. The 6-inch District Chiller Water Supply and Return water pipes along with a 4-inch control conduit will enter the Permit Building from 14<sup>th</sup> Avenue within 50 feet of the Bannock side of the alley between Bannock and Cherokee Streets at the first basement level below grade.

##### **B. Piping Interconnection from Building Entrance to Energy Transfer Station**

The 6-inch District Chilled Water Supply and Return piping along with a 4-inch control conduit will be run in the most convenient route from the service entrance to Energy Transfer Station located in the Permit Building's basement. Supplier will be responsible for installing the Energy Transfer Station.

The Energy Transfer Station will consist of one (1) flat plate heat exchanger with 150 tons capacity in plates on a frame with a maximum capacity of 200 tons, as described in Tranter's performance specification 1094098, dated 12/21/2015, Model No. GCD-054-M-4-NR-128. The Energy Transfer Station rating is based on a maximum of 20% glycol usage in the Premises chilled water distribution system.

All necessary district side isolating valves, strainer, thermometers, insulation, control instrumentation and metering devices will be supplied including but not limited to a control valve, flow meter and Tridium AX control system.

##### **C. Interconnection Drawing**

1. At least 60 days prior to the start of construction, Supplier will provide Customer for its approval, which shall not be unreasonably withheld, a drawing depicting the location of the building entrance, pipe routing, and Energy Transfer Station. Within ten (10) business days following receipt of such drawing, Customer shall either approve the drawing by acknowledging

its approval on a copy of the drawing and returning such copy to Supplier, or shall provide Supplier its exceptions to the drawing in writing.