State of Utah

JON M. HUNTSMAN, JR.
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Department of Administrative Services
KIMBERLY K. HOOD
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Division of Facilities Construction and Management
DAVID G. BUXTON
Director

ADDENDUM NO. 2

Date:	June 24, 2008
To:	Contractors
From:	Jim Russell, Project Manager, DFCM
Reference:	Richfield UHP/DTS Alternate Dispatch Modification Department of Public Safety – Richfield, Utah DFCM Project No. 06298550
Subject:	**Addendum No. 2**

Pages	Addendum Cover Sheet	1	page
	Engineer's Addendum	19	pages
	Total	20	pages

Note: This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to Disqualification.

While we contend that SB220 should only be potentially applicable to a contract issued after the effective date of said bill, this is to clarify that for purposes of this contract, regardless of the execution or effective dates of this contract, the status of Utah Law and remedies available to the State of Utah and DFCM, as it relates to any matter referred to or affected by said SB220, shall be the Utah law in effect at the time of the issuance of this Addendum.

1.1 **SCHEDULE CHANGES –** No changes to Project Schedule.

1.2 **GENERAL ITEMS**: Changes/Clarifications to Specifications and Drawings from WHW Engineering.

ADDENDUM

Project Name: Department of Safety Richfield
U.H.P. - I.T.S Dispatch Modifications

Addendum No.: 2

DFCM Project # 06298550

Date: 06-23-08

From: WHW Engineering Inc
8619 S Sandy Parkway Suite 101
Sandy, Utah 84070
Phone (80) 466-4021 Fax (801) 466-8536

To: Jim Russell - DFCM

This Addendum forms and becomes a part of the Contract Documents and modifies the original Bidding Documents dated Jan 22, 2008 as noted below. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of 19 pages.

I - CHANGES TO PRIOR ADDENDA: None

II - CHANGES TO BIDDING REQUIREMENTS: None

III - CHANGES TO AGREEMENT & OTHER CONTRACT FORMS: None

IV – CHANGES/CLARIFICATIONS TO CONDITIONS OF THE CONTRACT: None

V - CHANGES/CLARIFICATIONS TO SPECIFICATIONS:

Item V-1. Add new section 08710 finish hardware: See Attachment

Item V-2. See attached electrical addendum, Paragraph 1 page 1 and 2 of 4: Items E 2.5 A, B C, D and D.1.

Item V-3. See attached electrical addendum: Page 2 of 4 - paragraph F - items 2.4- A, B, C, D, E, F, G, H, I, J, paragraph 2, 2A

VI - CHANGES/CLARIFICATIONS TO DRAWINGS:

Item VI-1. Architectural drawing 01/AFP-101: Remove Reference note No 2.

Item VI -2. Architectural drawing 10/ADT-500: Partial locker elevation break room 106 “Delete all references to the painted 9”X5” metal louvers or metal lockers.” Lockers shall not be metal.

Item VI-3. Mechanical controls: Existing controls are obsolete. This contractor shall provide stand alone programmable thermostats and new controls for VVT system.

Item VI-4. See attached electrical addendum, paragraph 1. page 1 of 4 items 1-A, B, C & D.

Item VI-5. See attached electrical addendum, paragraph 3 - page 3 of 4 items A, B and C.

Item VI-6. See attached electrical addendum, paragraph 4 - page 3 of 4 items A and B, B1, 2 and 3.

Item VI-7. See attached electrical addendum, paragraph 5 - page 3 of 4 items 5,5A- 1, 2.

Item VI-8. See attached electrical addendum: paragraph 6. page 3 of 4 items 6 and 6A.

Item VI-9. See attached electrical addendum - drawings SE-1, SE-2 and SE-3.

PRIOR APPROVALS

THE FOLLOWING ITEMS, AS SUBMITTED, ARE CONSIDERED, IN GENERAL AND IN NAME ONLY, AS EQUAL TO THOSE ITEMS SPECIFIED. THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR OR SUPPLIER OF THE RESPONSIBILITY OF CONFORMING TO THE DRAWINGS AND SPECIFICATIONS, NOR DOES IT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS FOR COORDINATION WITH OTHER TRADES. ALL DIMENSIONS SHALL BE CONFIRMED AND CORRELATED AT THE JOBSITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND THE SUITABILITY OF “EQUAL” PRODUCTS FOR THE SPECIFIED APPLICATION.

Description	**Manufacturer**
Rooftop units	York International
Electrical	See Electrical addendum page 3 and 4, paragraph 7

SECTION 08710--FINISH HARDWARE

PART 1 --GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

A. Definition: "Finish Hardware" includes items known commercially as finish hardware which are required for swing, sliding and folding doors, except special types of unique and non-matching hardware specified in the same section as the door and door frame.

B. Extent of finish hardware required is indicated on drawings and in schedules.

C. Types of finish hardware required include the following:

Butt Hinges
Continuous Hinges
Lock cylinders and keys
Lock and latch sets
Exit devices
Closers
Electronic door control devices
Overhead Holders
Door trim units

1.3 RELATED SECTIONS

A. Division 8 - Steel Doors and Frames.
B. Division 8 - Flush Wood Doors.
C. Division 16 – Electrical

1.4 QUALITY ASSURANCE

A. Manufacturer: Obtain each type of hardware (latch and locksets, etc.) from a single manufacturer

B. Supplier: A recognized architectural finish hardware supplier, with warehousing facilities, who has been furnishing hardware in the project's vicinity for a period of not less than 2 years, and who is, or who employs an experienced Architectural Hardware Consultant who is available, at reasonable times during the course of the work, for consultation about project's hardware requirements, to Owner, Architect and Contractor.

C. Fire-Rated Openings: Provide hardware for fire-rated openings in compliance with NFPA Standard No. 80 and local building code requirements. Provide only hardware which has been tested and listed by UL or an approved testing agency for types and sizes of doors required and complies with requirements of door and door frame labels.

D. Where emergency exit devices are required on fire-rated doors (with supplementary marking on doors with labels indicating "Fire Door to be Equipped with Fire Exit Hardware") provide labels on exit devices indicating "Fire Exit Hardware

E. This supplier shall be responsible to field check existing openings for proper application of sizes and strikes for all openings.

1.5 REGULATORY REQUIREMENTS

A. Where indicated to comply with accessibility requirements, comply with Americans with Disabilities Act (ADA), “Accessibilities Guidelines for Buildings and Facilities (ADAAG),” ANSI A117.1, FED-STD-795, “Uniform Federal Accessibility Standards.”

1.6 SUBMITTALS

A. Product Data: Submit manufacturers technical product data for each item of hardware in accordance with Division-1 section "Submittals". Include whatever information may be necessary to show compliance with requirements, and include instructions for installation and for maintenance of operating parts and finish.

B. Hardware Schedule: Submit final hardware schedule in a vertical format as recognized by the Door and Hardware Institute (DHI). Horizontal schedule format will not be accepted. Coordinate hardware with doors, frames and related work to ensure proper size, thickness, hand, function and finish of hardware.

1. Final Hardware Schedule Content: Based on finish hardware indicated, organize hardware schedule into "hardware sets" indicating complete designations of every item required for each door or opening. Include the following information:

a. Type, style, function, size and finish of each hardware item.
b. Name and manufacturer of each item.
c. Fastenings and other pertinent information.
d. Index to include location of hardware set cross-referenced to indications on drawings both on floor plans and in door and frame schedule.
e. Explanation of all abbreviations, symbols, codes, etc., contained in schedule.
f. Mounting locations for hardware.
g. Door and frame sizes and materials.
h. Keying information.
i. Wiring diagrams with theory of operation.

C. Submittal Sequence: Submit schedule in accordance to Division 1, particularly where acceptance of hardware schedule must precede fabrication of other work (e.g., hollow metal frames) which is critical in the project construction schedule. Include with schedule the product data, samples, shop drawings of other work affected by finish hardware, and other information essential to the coordinated review of hardware schedule.

D. Keying Schedule: Submit separate detailed schedule indicating clearly how the Owner's final instructions on keying of locks has been fulfilled.

E. Samples if Requested: Prior to submittal of the final hardware schedule and prior to final ordering of finish hardware, submit one sample of each type of exposed hardware unit, finish as required, and tagged with full description for coordination with schedule. Return to project in time for installation.

F. Templates: Furnish hardware templates to each fabricator of doors, frames and other work to be factory-prepared for the installation of hardware. Upon request, check shop drawings of such other work, to confirm that adequate provisions are made for proper location and installation of hardware.

1.7 PRODUCT HANDLING

A. Tag each item or package separately, with identification related to final hardware schedule, and include basic installation instructions with each item or package.

B. Inventory hardware jointly with representatives of hardware supplier and hardware installer until each is satisfied that count is correct.

C. Deliver individually packaged hardware items at the proper times to the proper locations (shop or project site) for installation.

D. Provide secure lock-up for hardware delivered to the project, but not yet installed. Control handling and installation of hardware items which are not immediately replaceable, so that completion of the work will not be delayed by hardware losses, both before and after installation.

PART 2—PRODUCTS

2.1 SCHEDULED HARDWARE

A. Requirements for design, grade, function, finish, size and other distinctive qualities of each type of finish hardware is indicated in the Finish Hardware Data Sheet and Hardware Schedule at the end of this section. Products are identified by using hardware designation numbers of the following.

B. Manufacturer's Product Designations:

Butt Hinges:	Ives
Locksets:	Schlage
Closers:	LCN
Overhead Holders:	Glynn-Johnson
Kickplates:	Ives
Floor/Wall Stops:	Ives
Threshold & Weatherstrip	National Guard Products

2.2 MATERIALS AND FABRICATION

A. General:

1. Hand of door: Drawings show direction of slide, swing or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.
2. Manufacturer's Name Plate: Do not use manufacturer's products which have manufacturer's name or trade name displayed in a visible location (omit removable nameplates), except in conjunction with required UL labels and as otherwise acceptable to Architect.
3. Manufacturer's identification will be permitted on rim of lock cylinders only.
4. Finish: All hardware finish shall match US26D unless otherwise indicated. Closer bodies, covers and arms shall be powder-coated finishes.
5. Lockset Design: Lever handle design shall be Rhodes as manufactured by Schlage Lock Co.
6. Fasteners: Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation. Do not provide hardware which has been prepared for self-tapping sheet metal screws, except as specifically indicated.
7. Furnish screws for installation, with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of such other work as closely as possible, including "prepared for paint" in surfaces to receive painted finish.
8. Provide concealed fasteners for hardware units which are exposed when door is closed, except to extent no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work, except where it is not feasible to adequately reinforce the work. In such cases, provide sleeves for each thru-bolt or use sex screw fasteners.
9. Tools and Maintenance Instructions for Maintenance: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of finish hardware.

2.3 HINGES, BUTTS AND PIVOTS

A. Templates: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.

B. Screws: Furnish Phillips flat-head or machine screws for installation of units, except furnish Phillips flat-head or wood screws for installation of units into wood. Finish screw heads to match surface of hinges or pivots.

A. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
1. Steel Hinges: Steel pins.
2. Non-ferrous Hinges: Stainless steel pins.
3. Out-swing Corridor Doors: Non-removable pins.
4. Interior Doors: Non-rising pins.
5. Tips: Flat button and matching plug, finished to match leaves.
6. Number of hinges: Provide number of hinges indicated but not less than 3 hinges per door leaf for doors 90" or less in height and one additional hinge for each 30" of additional height.

B. Furnish hinges in sizes and types as required by architect's details to achieve maximum degree of opening.

E. Acceptable Manufacturers:

1. Ives
2. McKinney
3. Hager

2.4 LOCK CYLINDERS AND KEYING

A. General: Supplier will meet with Owner to finalize keying requirements and obtain final instructions in writing.

B. Review the keying system with the Owner and provide the type required integrated with Owner's existing system. If key pinning charts are required, owner to furnish charts to hardware supplier.

C. Furnish temporary keyed cores for the construction period, and remove these when directed. The construction cores remain property of the supplier and shall be returned to the supplier when they are removed. Contractor shall install the permanent cores in the presence of the owner's representative.

D. Metals: Construct lock cylinder parts from brass/bronze, stainless steel or nickel silver.

E. Comply with Owner's instructions for masterkeying and, except as otherwise indicated, provide individual change key for each lock which is not designated to be keyed alike with a group of related locks.

F. Permanently inscribe each key and cylinder with Visual Key Control that identifies cylinder manufacturer key symbol, and inscribe key with the notation "DO NOT DUPLICATE".

G. Key Material: Provide keys of nickel silver only.

H. Key Quantity:

1. Furnish 3 change keys for each lock.
2. 5 master keys for each master system.
3. 5 grandmaster keys for each grandmaster system.
4. One extra blank for each lock.
5. 3 Control Keys.
6. 6 Construction master keys.

I. Deliver keys to Owner's representative.

2.5 LOCKS, LATCHES AND BOLTS

A. Locks shall meet these certifications:

1. Cylindrical Locks - ANSI A156.2 Series 4000, Grade 1 Strength and Operational requirements. Meets A117.1 Accessibility Codes. Latch bolts shall be steel with

minimum ½" throw, deadlocking on keyed and exterior functions. ¾" throw anti-friction latchbolt on pairs of fire doors. Strikes: Provide manufacturer's standard wrought box strike for each latch or lock bolt, with curved lip extended to protect frame. Locksets to be tested to exceed 3,000,000 cycles. Lock case shall be steel. Lock shall incorporate one piece spring cage and spindle. Provide 5/8" minimum throw of latch and deadbolt used on pairs of doors. Provide Seven Year Warranty.

a. Lock design shall be Schlage ND series "RHO" design – Finish to be 626

B. Comply with UL requirements for throw of bolts and latch bolts on rated fire openings.

C. Lock Manufacturers: Subject to compliance with requirements, provide lockset products of the following approved manufacturers:

1. Schlage Lock Co. "ND Line" where scheduled.

D. Flush Bolt Heads: Minimum of 1/2" diameter rods of brass, bronze or stainless steel, with minimum 12" long rod for doors up to 7'-0" in height. Provide longer rods as necessary for doors exceeding 7'-0" in height.

E. Provide dust-proof strikes for foot bolts, except where special threshold construction provides non-recessed strike for bolt.

2.6 CLOSERS AND DOOR CONTROL DEVICES

A. Size of Units: Except as otherwise specifically indicated, comply with the manufacturer's recommendations for size of door control unit, depending upon size of door, exposure to weather and anticipated frequency of use.

B. Closers: All door closers shall be of one manufacturer to provide for proper installation and servicing after installation. All closers shall be inspected after installation by a factory representative to ensure proper adjustment and operation. Closer shall carry a manufacturer's 10 year warranty for hydraulic units and 2 year warranty for electrical and/or handicap power assist door closers against manufacturing defects and workmanship.

C. Cylinder: Shall be of high strength cast iron construction. All door exterior closers shall be tested to ANSI/BHMA A156.4 test requirements by a BHMA certified independent testing laboratory. A written certification showing successful completion of a minimum of 10,000,000 cycles for all exterior door closers must be provided. Cylinder shall have been manufactured and in the marketplace for a minimum of 10 years.

D. All door closers shall be fully hydraulic and have full rack and pinion action with a shaft diameter of a minimum of 11/16" and piston diameter of 1-1/2". Closer shall utilize full complement bearings at shaft. Pinion and pistons shall be hardened regardless of closer size. The closer shall incorporate tamper resistant non-critical screw valves of V-slot design to reduce possible clogging. Closer shall have separate and independent screw valve adjustments for latch speed, general speed and hydraulic backcheck. Backcheck shall be properly located so as to effectively slow the swing of the door at a minimum of 10 degrees in advance of the dead stop location. Pressure relief valves are not acceptable.

E. All door closers shall pass UL10C positive pressure fire test.

F. Parallel Arm Closers: Shall incorporate one piece solid forged steel arms with bronze bushings. 1-9/16" x 1/2" steel stud shoulder bolts, shall be incorporated in regular arms, hold open arms, arms with stop built in, arms with hold open and stop built in. All other closers to have forged steel main arms for strength, and durability.

G. Built-In Stops: Where closers with built-in positive stops are used, the stops shall be of one piece cast malleable iron material. Screw on stops of any kind are not acceptable. Where required, the hold-open assembly handle for these stops shall rotate on ball bearings.

H. All closers to have a powder coat finish on closer body, arm, metal cover and adapter plate. Powder coat finish shall exceed a minimum 100 hour salt spray test, as described in ANSI Standard A156.4 and ASTM B117.

I. Hydraulic Fluid: All closers, with the exception of interior and interior electronic closers, shall utilize temperature stable fluid capable of withstanding temperature ranges of 120 degrees F. to -30F. without requiring seasonal adjustment of closer speed to properly close the door.

J. Supply all drop plates, shoe supports, templates, etc. to properly install closers according to manufacturer's recommendations.

K. Provide grey resilient parts for exposed bumpers.

L. Pressure relief valves are not accepted.

M. Closer being submitted for approval shall have been manufactured for at least 10 years. A list of (10) year old projects using submitted closer shall be available upon request.

N. All door closers shall be furnished with metal covers.

O. Closer Manufacturers: Subject to compliance with requirements, provide closer products of the following approved manufacturers:

1. LCN Closers - 4000 Series

2.7 DOOR TRIM UNITS

A. Fasteners: Provide manufacturer's standard exposed fasteners for door trim units (kick plates, edge trim, viewers, knockers, mail drops and similar units); either machine screws or self-tapping screws.

B. Fabricate edge trim of stainless steel, not more than 1/2" nor less than 1/16" smaller in length than door dimension.

C. Fabricate protection plates (armor, kick or mop) not more than 1-1/2" less than door width on stop side and not more than 1/2" less than door width on pull side, x the height indicated.

D. Where existing doors are receiving new hardware, provide new protection plates on all doors that have existing plates, if not already specified. New plates are to be of equal or greater size than existing plates.

E. Metal Plates: Stainless steel, .050" (U.S. 18 ga.).

F. Acceptable Manufacturers:

1. Ives
2. Rockwood
3. Quality

2.8 WEATHERSTRIP AND GASKETING

A. General: Except as otherwise indicated, provide continuous weather stripping at each leaf of every exterior door. Provide type, sizes and profiles shown or scheduled. Provide non-corrosive fasteners as recommended by manufacturer for application indicated.

B. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips is easily replaceable and readily available from stocks maintained by the manufacturer.

C. Acceptable Manufacturers:

1. Pemko
2. National Guard Products
3. Zero

2.9 THRESHOLDS

A. General: Except as otherwise indicated provide standard aluminum threshold unit of type, size and profile as shown or detailed.

B. Provide welded custom thresholds where scheduled and noted in the hardware sets. Provide cover plates where scheduled.

C. Provide thresholds that are 1” wider than depth of frame

D. Acceptable Manufacturers:

1. National Guard Products
2. Pemko
3. Zero

2.10 DOOR SILENCERS

All hollow metal frames shall have grey resilient type silencers. Quantity (3) on single doors and quantity (2) on pairs of doors.

2.13 ELECTRICAL HARDWARE

A. Furnish wiring diagrams to electrical contractor for use in installing electrical hardware products.

B. Electrical contractor to run all wiring and make all final connections for electrified hardware. Hardware supplier shall be responsible to furnish all wiring diagrams to operate electrified hardware. Access control material and electrified hardware to interface at junction boxes.

PART 3--EXECUTION

3.1 INSTALLATION

A. Hardware specified under this section for aluminum doors will be coordinated and delivered in a timely manner to aluminum door manufacturer for installation on aluminum doors prior to delivery to project. This coordination will not impede delivery of storefront or securing exterior of building during construction.

B. Mount hardware units at heights indicated in "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute, except as specifically indicated or required to comply with governing regulations, and except as may be otherwise directed by Architect.

C. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished in another way, coordinate removal, storage and reinstallation or application of surface protections with finishing work specified in the Division-9 sections. Do not install surface-mounted items until finishes have been completed on the substrate.

D. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

E. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.

F. Set thresholds for exterior doors in full bed of butyl-rubber or polyisobutylene mastic sealant.

3.2 ADJUST AND CLEAN

A. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.

B. Clean adjacent surfaces soiled by hardware installation.

C. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of a space or area, return to the work during the week prior to acceptance or occupancy, and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish

of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

C. Instruct Owner's Personnel in proper adjustment and maintenance of hardware and hardware finishes, during the final adjustment of hardware.

3.3 HARDWARE SCHEDULE

HW SET: 01
DOOR NUMBER:
105A

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	STOREROOM LOCK	ND80PD RHO	626	SCH
1	EA	SURFACE CLOSER	4111 EDA ST 2730	689	LCN
1	EA	OVERHEAD STOP	900S	630	GLY
1	SET	SEALS	5020B	BRN	NGP

HW SET: 02
DOOR NUMBER:
103A

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	ND80PD RHO	626	SCH
1	EA	ELECTRIC STRIKE	6211 FSE 24VDC	630	VON
1	EA	SURFACE CLOSER	4010	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CCV	628	IVE
3	EA	SILENCER	SR64	GRY	IVE
1	EA	POWER SUPPLY	PS861	GRY	VON
1		HID CARD READER	5375 (MATCH EXISTING)		HID

HW SET: 03
DOOR NUMBER:
101A 102A

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	ENTRANCE LOCK	ND53PD RHO	626	SCH
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CCV	628	IVE
3	EA	SILENCER	SR64	GRY	IVE

DEPARTMENT OF SAFETY
RICHFIELD U.H.P. - I.T.S. DISPATCH
MODIFICATIONS
DFCM PROJECT NO. 06298550

Richfield, Utah 84701

June 20, 2008

Electrical Addendum includes 4 Pages and 3 drawings (8.5" x 11").

Drawings: Supplement Electrical Drawing SE-1: Partial New Power Plan
Supplement Electrical Drawing SE-2: Partial New Power Plan Keyed Notes
Supplement Electrical Drawing SE-3: Wall Duct Detail C1/E-601.

ELECTRICAL ADDENDUM ITEMS

1. Add Dimming for F-4 Fixtures in Dispatch Room 103. Refer to New Lighting Plan, Sheet EL101 and Fixture Schedule, Sheet E-601.

   A. Delete normal power circuit LP1-5 and switched emergency power circuit ELP-3 in Dispatch Room 103. Connection of these circuits to fixtures in other rooms are to remain as shown on the drawings.

      1) Provide new switched emergency power circuit ELP-6 for all fixtures in Dispatch Room 103 except 1 lamp of “EM” fixture connected to unswitched emergency circuit ELP-1 indicated by Keyed Note ‘L5' is to remain as shown.

   B. Furnish F-4 fixtures with 277 volt electronic dimming ballasts equal to Advance Mark 10 except ballast for 1 inboard lamp of “EM” Fixture indicated by Keyed Note ‘L5' may be specified electronic ballast.

      1) Revised catalog number for specified F-4 Fixture is:

         a. PMC SPF13-DI-P-3/OCT-20-WHT-277-DIM/MARK10-2CIR

   C. Delete switches shown in Dispatch Room 103 and provide electronic fluorescent dimmers rated 277 Volt, 600 Watts minimum as follows:

      1) Provide four dimmers to control each 8 ft fixture section.

      2) Provide one dimmer to control the two 4 ft fixture sections.

         a. Coordinate location and arrangement of switches and dimmers with Engineer and Owner prior to installation.

   D. Burn in all dimmer controlled lamps for 100 continuous hours at full power prior to operating at reduced light levels. This is required to obtain the specified full dimming range of the lamps.

   E. Add the following paragraph to Specification Section 16140 - Outlets and Wiring Devices:

      2.5 DIMMERS

         A. Provide full-range dimmers for continuously variable control of light intensity.

         B. Provide each dimmer with an on-off function accomplished by a mechanical air gap switch to totally disconnect power from the load in the “off” position and preventing any

leakage current from being present at the controlled fixtures.

C. Dimmers shall be designed to minimize interference with nearby electronic equipment such as radio, audio and, video equipment and shall be integrally protected against voltage surges.

D. Provide fluorescent dimmers which have been specifically designed and tested to operate with the dimming ballasts furnished with the fixtures to be controlled by the dimmer.

1) The contractor and/or supplier is responsible to provide dimmer controls which are fully compatible with the electronic dimming ballasts.

F. Add the following paragraph to Specification Section 16500 - Lighting:

2.4 ELECTRONIC FLUORESCENT DIMMING BALLASTS

A. Provide Advance Mark 10, or equal, Solid State Electronic Dimming Ballasts for Fixture Types as specified in the Fixture Schedule on the drawings.

B. Provide Premium Class 'P' Electronic Dimming Ballasts. Operating temperature of the ballasts shall not exceed 75^0 C at any point on the case during normal operation.

C. Electronic dimming ballasts shall operate lamps at a frequency of 25 KHz or higher with no detectable lamp flicker.

D. Electronic dimming ballasts shall comply with FCC and NEMA limits governing EMI and RFI and shall not interfere with the operation of other normal electric and electronic equipment.

E. Electronic dimming ballasts shall be a programmed rapid start type and preheat lamp cathodes before applying arc voltage to ensure rated lamp life is not diminished.

F. Electronic dimming ballasts shall have a dimming range of 100% to 5%. Ballast shall maintain constant light output of $\pm$2% over a line voltage variation of $\pm$10%.

G. Provide Electronic Dimming Ballasts with the following characteristics:

1)	Minimum Ballast Factor	0.85
2)	Minimum Power Factor	95%
3)	Maximum Total Harmonic Distortion (THD)	10% at full light output
4)	Maximum Lamp Current Crest Factor	1.6

H. Ballasts shall be marked with manufacturer's name, part number, supply voltage, power factor, open circuit voltage, current draw for each lamp type, UL listing, CBM Certification and Date of Manufacture Code.

I. Electronic Dimming Ballast Warranty shall be 3 Years from the "Date of Manufacture" Code on the ballast.

J. The contractor and/or supplier is responsible to provide dimmer controls which are fully compatible with the electronic dimming ballasts.

2. Add Ballasts to Extra Material Stock.

A. Refer to Specification Section 16500, Paragraph 2.4:

1) Provide 10% extra material stock of ballasts, but not less than 1 of each type of ballast used on the project. This is to include electronic dimming ballast specified above.

3. Clarify Suspended Fixture Locations with Reflected Ceiling Plan.

   A. Suspended Fixtures F-1, F-2, F-3 and F-4 will be furnished with rigid stem mounting and require an outlet box in the new ceiling for installation of the rigid stem. The outlet box is to be located near the center of ceiling tiles.

   B. New Reflected Ceiling Plan, Sheet A-FP01, indicates the ends of the suspended fixtures to align with ceiling grid which will not allow installation of the outlet box in the ceiling.

   C. Coordinate with General Contractor and Ceiling Contractor to allow the suspended fixture outlet boxes to center in the ceiling tiles with fixtures properly centered in each room.

4. Add Communication Raceways in Rooms 101, 102, and 103.

   A. Add flush mounted wall duct for owner furnished communication cables in Rooms 101, 102 and 103 as shown attached Partial New Power Plan, Supplemental Electrical Drawing SE-1, and indicated by Revision No. 1.

   B. Delete new telephone/data outlets at the following locations:

      1) One in east wall of Manager's Office 101.

      2) One in north wall of Supervisors Office 102.

      3) Three in north wall of Dispatch 103.

5. Modify Receptacle Circuiting in Dispatch 103.

   A. Modify receptacle circuiting in Dispatch 103 as shown attached Partial New Power Plan, Supplemental Electrical Drawing SE-1, and indicated by Revision No. 1.

      1) Provide minimum 2 different circuits from Panel UP1 at each Dispatch Work Station.

      2) Connect one receptacle at each Dispatch Work Station to a separate circuit from Panel 'RP2' for plug-in electric heater which dispatchers may use.

6. Clarify Conduit Installation for New Telephone/Data Outlets. Refer to Specification Section 16740 - Telephone/Data System, Paragraph 2.1, A..

   A. Install 1" conduit from each new tele/data outlet to existing communication cable tray indicated by Keyed Note 'P8' on Sheet EP101 of the drawings. Terminate conduit within 6 " horizontally and 12" vertically of the existing cable tray.

7. SUBMITTALS FOR PRIOR APPROVAL

   A. Listing herein of the following equipment submitted for prior approval indicates that the brand name and general characteristics are acceptable, but does not relieve the Contractor of the responsibility of providing equipment and accessories as specified in the Contract Documents unless specific mention of the departure was made in the submittal and acknowledged in writing by the Architect and/or Engineer.

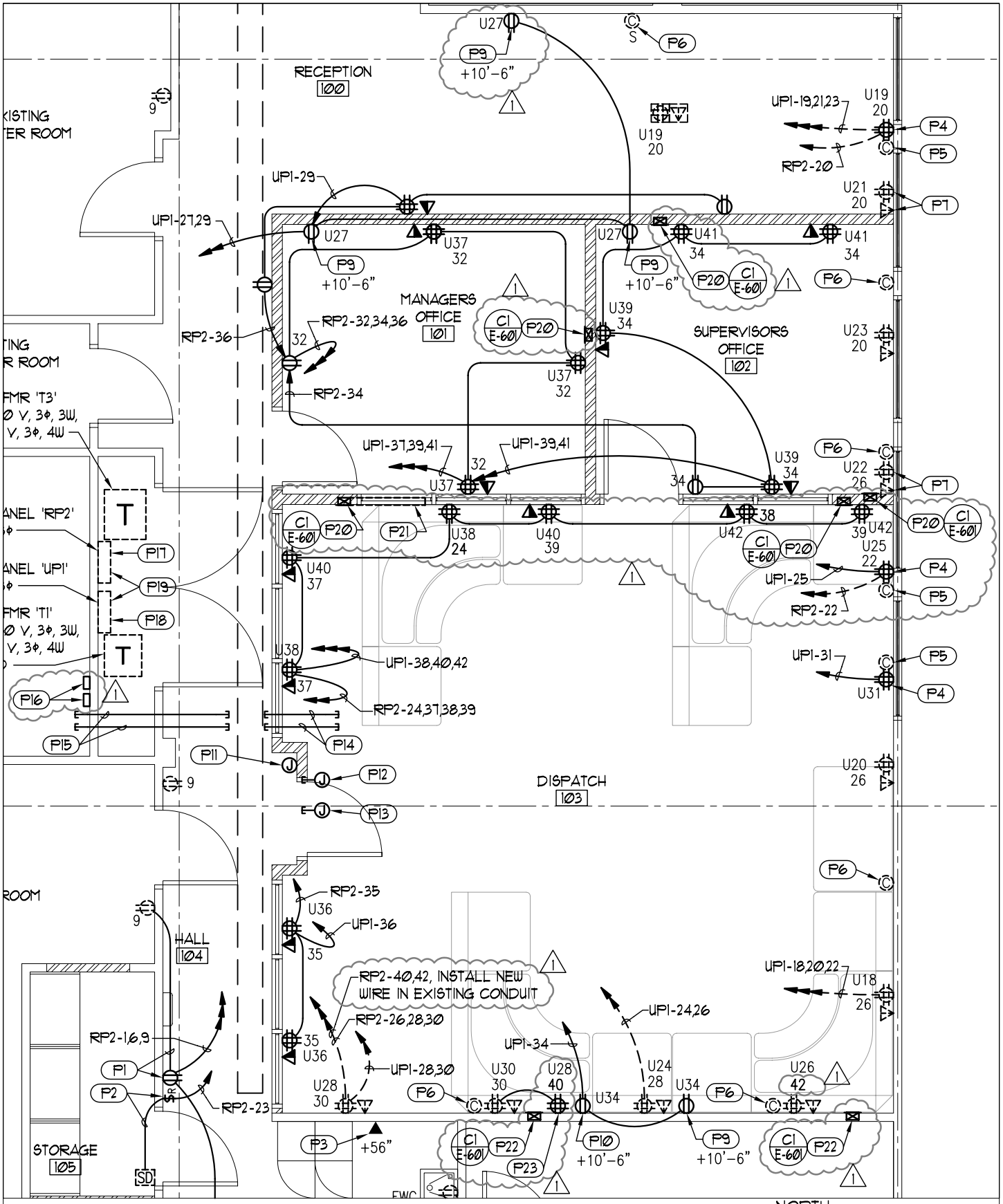
ITEM	Manufacturer	Catalog No.
Fixture F-1	Corelite	AP-W-P-2T8-1C-277-PP-18"-JB-4'-ER81
	Lightolier	LP2B-2T8-4-U-HR-STEM18"
	Litecontrol	P-I-98PF-24T8-TCWM-ELBPRLHUNV-1CWQ-P6S18"
	LSI	LAP-4-232-SSO10PR-S-UE-LSF18UE
	Peerless	10CMR7-232-WHR-4FT-R4-GEB10RS-SCT-F3/18

Fixture F-2	Corelite	AP-W-P-3T8-2C-277-PP-18"-JB-4'-ER82
	Lightolier	LP2B-3T8-4-U-HR-DS-STEM18"
	Litecontrol	P-I-98PF-34T8-TCWM-TW-ELBPRLHUNV-2CWQ-P6S18"
	LSI	LAP-4-332-SSO210PR-D-UE-LSF18UE
	Peerless	10CMR7-332-WHR-4FT-R4-GEB10RS-DCT-F3/18
Fixture F-3	Corelite	AP-W-P-4T8-2C-277-PP-18"-JB-4'-ER82
	Lightolier	LP2B-4T8-4-U-HR-DS-STEM18"
	Litecontrol	P-I-98PF-44T8-TCWM-TW-ELBPRLHUNV-2CWQ-P6S18"
	LSI	LAP-4-432-SSO210PR-D-UE-LSF18UE
	Peerless	10CMR7-432-WHR-4FT-R4-GEB10RS-DCT-F3/18
Fixture F-4	Corelite	AP-W-P-3T8-2C-277-PP-18"-JB-20'-DIM-MARK10
	Lightolier	LP2B-3T8-20-D2/MARK10-DS-STEM18"
	Litecontrol	P-I-98PF-320T8-TCWM-TW-DIMX/ELB277-2CWQ-P6S18"
	LSI	LAP-8/4/8-332-SSODMARK10-D-277-LSF18UE
	Peerless	10CMR7-332-WHR-20FT-R8-ADEZ/277-DCT-F3/18

Note: Fixture F-4 submitted catalogs numbers have been revised to include Advance Mark 10, or equal, Electronic Dimming Ballast specified above.

Fixture F-5	Columbia	P414-132G-LD16-S-EPU
Fixture F-6	Capri	S82H13QPL-U-T82HTT-CS
	Gotham	AF-2/13TT-8AR-MVOLT
	Halo	H800E-810C
	Infinity	PH75-213Q-G24q-1-CS-BH-UNV
	Lightolier	8052-6213HU
Fixture F-7	Dual Lite	SESGB

END OF ELECTRICAL ITEMS



PARTIAL NEW POWER PLAN

SCALE: 3/8" = 1'-0" (8-1/2" x 11" SHEET) 0 2' 4' 8'

NORTH

WHW ENGINEERING INC.
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DEPT. OF SAFETY
RICHFIELD UHP - ITS DISPATCH MODIFICATIONS
DFCM PROJECT NO. 06298550

SHEET EP101 - REVISION NO. 1
SUPPLEMENTAL ELECTRICAL DRAWING:
DATE: 06/20/08

SE-1

NEW PARTIAL POWER PLAN KEYED NOTES:

1

P14 PROVIDE (2) 4" CONDUITS FROM EXISTING CABLE TRAY TO ACCESSIBLE CEILING SPACE OF DISPATCH ROOM. TERMINATE CONDUITS WITH GROUNDING BUSHINGS AND BOND TO EXISTING CABLE TRAY.

P15 PROVIDE (2) 4" CONDUITS FROM EXISTING CABLE TRAY TO ACCESSIBLE CEILING SPACE OF EXISTING STORAGE ROOM. TERMINATE CONDUITS WITH GROUNDING BUSHINGS AND BOND TO EXISTING CABLE TRAY.

P16 PROVIDE TWO VERTICAL RUNS OF WIREMOLD V6000, OR EQUAL, SURFACE METAL RACEWAY FROM EXISTING STORAGE ROOM CEILING SPACE TO RAISED FLOOR SPACE. PROVIDE NEW SUITABLE TRIM AT EXISTING RAISED FLOOR TILE. EXTEND RACEWAY 6"± ABOVE CEILING AND 6"± BELOW RAISED FLOOR AND TERMINATE EACH END WITH WIREMOLD #G6086, OR EQUAL, PANEL CONNECTOR TO PROTECT CABLES FOR ABRASION.

P17 PROVIDE 8 NEW SIEMENS TYPE 'BL' BREAKERS IN EXISTING PANEL 'RP1'.

P18 PROVIDE 6 NEW SIEMENS TYPE 'BL' BREAKERS IN EXISTING PANEL 'UP1'.

P19 PROVIDE NEW TYPEWRITTEN CIRCUIT DIRECTORY FOR EXISTING PANELBOARDS TO REFLECT ALL CHANGES IN CIRCUITING.

1

P20 PROVIDE NEW FLUSH MOUNTED WALL DUCT IN NEW WALL. SEE DETAIL C4/E-601. FIELD COORDINATE EXACT LOCATION WITH ENGINEER, GENERAL CONTRACTOR, AND OWNER.

P21 PROVIDE HORIZONTAL ELBOW AND EXTEND WALL WALL DUCT TO BEHIND NEW DISPATCH WORK STATION.

P22 PROVIDE NEW FLUSH MOUNTED WALL DUCT IN EXISTING WALL SIMILAR TO DETAIL C1/E-601. FIELD COORDINATE EXACT LOCATION WITH ENGINEER, GENERAL CONTRACTOR, AND OWNER. RELOCATE AND RECONNECT ANY EXISTING HORIZONTAL CONDUIT RUNS AS REQUIRED TO INSTALL THE NEW WALL DUCT. REPAIR EXISTING WALL AS REQUIRED TO MATCH SURROUNDING SURFACES.

P23 CUT EXISTING GYPBOARD WALL AS REQUIRED TO INSTALL NEW FLUSH MOUNTED OUTLET BOX AND TO EXISTING RECEPTACLE AS INDICATED. REPAIR EXISTING WALL AS REQUIRED.

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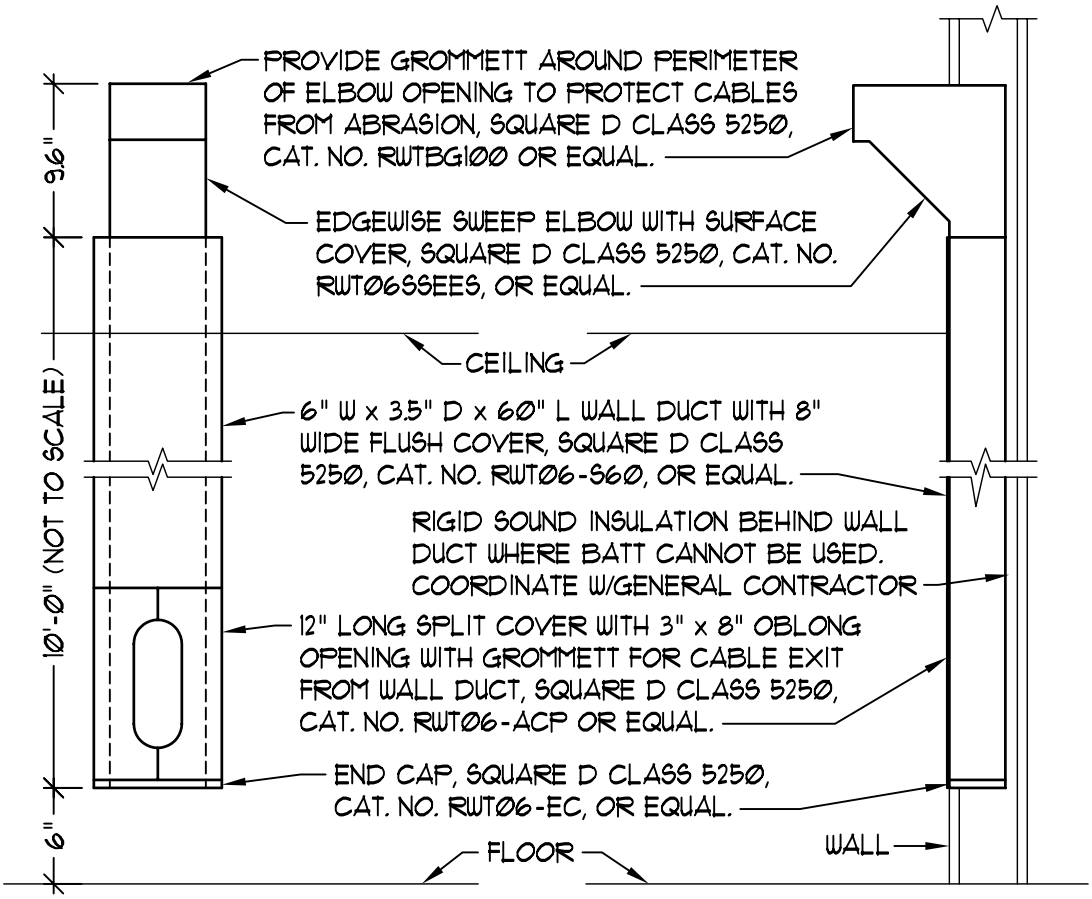
DFCM PROJECT NO. 06298550

SHEET EP101 - REVISION NO. 1
SUPPLEMENTAL ELECTRICAL DRAWING:
DATE: 06/20/08
SE-2



C1 WALL DUCT DETAIL

SCALE: 1" = 1'-0"

0 6" 1' 2'

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DFCM PROJECT NO. 06298550

SHEET E-601 - REVISION NO. 1
SUPPLEMENTAL ELECTRICAL DRAWING:
DATE: 06/20/08
SE-3