ADDENDUM NO. 1

TO

POLYTECH HIGH SCHOOL
RENOVATIONS AND ADDITIONS
BID PACKAGE 'B'

This addendum is hereby made part of the Project Manual and Drawings dated 9 November 2012.

The Project Manual and Drawings shall be supplemented or amended as specified herein.

This Addendum contains changes to the requirement of the Project Manual. Such changes shall be incorporated into the Contract Documents and shall apply to work with the same meaning and force as if they had been included in the original Documents. Whenever this Addendum modifies a portion of a paragraph of the Project Manual, the remainder of the paragraph affected shall remain in force. Added information is shown as **Bold,** deleted information is shown as ~~strikethrough~~**.**

This Addendum contains changes to the requirement of the Drawings. Such changes shall be incorporated into the Contract Documents and shall apply to work with the same meaning and force as if they had been included in the original Documents. Whenever this Addendum modifies a portion of any drawing, the remainder of the drawing affected shall remain in force. Added, deleted or revised information is shown as "clouded".

The conditions and terms of the basic Contract Documents shall govern work unless otherwise described in this Addendum. Whenever the conditions of work, and the quality or quantity of materials, or workmanship are not fully described in this Addendum, the conditions of work included in the basic Contract Documents for similar items of work shall apply to the work described in this Addendum.

If no similar items of work are included in the basic Contract Document, the best quality of material and workmanship shall apply and all work shall be subject to the written acceptance of the Architect.

THE BID OPENING DATE WAS CHANGED. ALL BIDS ARE DUE AT THE POLYTECH SCHOOL DISTRICT OFFICE, NO LATER THEN 2:00 PM ON WEDNESDAY, 12 DECEMBER 2012. DO NOT DELIVER YOUR PROPOSALS TO THE POLYTECH HIGH SCHOOL OFFICE.

ANOTHER SITE VISIT IS SCHEDULED FOR WEDNESDAY 5 DECEMBER 2012 AT 2:30 PM.

THE LAST DAY FOR QUESTIONS IS WEDNESDAY 5 DECEMBER 2012.

BIDDERS ARE ADVISED THAT THE ONLY RELIABLE SOURCE OF DOCUMENTS FOR THIS SOLICITATION IF THE EDIS FTP SITE. BIDDERS THAT RELY ON INFORMATION PUBLISHED ON ANY OTHER WEBSITES DO SO AT THEIR OWN RISK.

Addendum No. 1 – Consists of the following:

I. Responses to Bidders' Questions

II. Revisions to Project Manual/Specifications:

Section 000115 List of Drawings
Section 002113 Instructions to Bidders
Section 011100 Summary of Work
Section 012100 Allowances
Section 024119 Selective Demolition
Section 086300 Metal-Framed Skylights
Section 087100 Door Hardware
Section 088000 Glazing
Section 099113 Exterior Painting
Section 095124 Wood Tile Ceilings
Section 101100 Visual Display Surfaces
Section 114860 Gymnasium Protection Accessories
Section 133413 Greenhouse & Related Accessories
Section 260601 Lightning Protection Systems
Section 260721 Fire Alarm and Detection Systems

III. Revisions to Drawings

G1.2	INDEX OF DRAWINGS
AA1.0.2	DEMOLITION PLAN; CORRIDOR, EXISTING GYM
AA6.1	ROOM FINISH, DOOR & ALUM. ASSY. SCHEDULES
AB6.1	ROOM FINISH, DOOR, AND WINDOW SCHEDULES
AC6.2	DOOR & FRAME ELEVATIONS AND SCHEDULES
AD1.11	REFLECTED CEILING PLAN, AREA 'B'
AD6.2	DOOR SCHEDULE
M1.4	DETAILS: MECHANICAL
E1.1	ELECTRICAL SCHEDULES
E1.2	ELECTRICAL SCHEDULES
E1.3	SINGLE LINE DIAGRAM & LEGEND ELECTRICAL
E1.4	SINGLE LINE DIAGRAM & LEGEND ELECTRICAL
E-300	SITE UTILITY PLAN ELECTRICAL
E-302	PUMP STATION ELECTRICAL SITE PLAN
EC1.2	FIRST FLOOR POWER PLAN
ELD1.1	LIGHTING PLAN AREA "A"
EPD1.1	POWER PLAN AREA "A"
EPD1.2	POWER PLAN AREA "B"
EPD1.3	POWER PLAN AREA "C"

I. RESPONSES TO BIDDERS' QUESTIONS

A copy of the responses to RFI's 1, 2, 3, 4, 5, 6, 7, 8, 10, 13, 14, 15, 16, 17, 19, 21, 22, 23, 24, 25, 26, and 27 are attached hereto.

II. REVISIONS TO PROJECT MANUAL/SPECIFICATIONS

A. Section 000115 List of Drawings

1. REVISE the Latest Revision Date for drawings M1.4, E1.1, E1.2, E1.3, E1.4, E300, E302, EC1.2, ELD1.1, EPD1.1, EPD1.2, and EPD1.3 to read 28 Nov 12.
2. REVISE the Latest Revision Date for drawings AA6.1, AB6.1, and AD6.2 to read 21 Nov 12.
3. REVISE the Latest Revision Date for drawings AC6.2 to read 29 Nov 12.
4. REVISE the Latest Revision Date for drawings AD1.11 to read 15 Nov 12.
5. REVISE the list of Bid Packs for drawing E-302 from 'A' to 'A,B'.

B. Section 002113 Instructions to Bidders

1. INSERT the following sentence to the end of paragraph 4.2.1:
   "The bids shall be delivered to the Polytech School District Offices NOT the Polytech High School Administrative Office. See the attached map to show the location of the Polytech School District Offices."

2. INSERT page 002113-13 showing the map of where the bids are to be delivered.

C. Section 011100 Summary of Work

1. Contract B-5 Carpentry and General Work.
   a. DELETE item 5-9 on page 011000-27. The permanent cores are being furnished by the owner per the response to RFI#1.
   b. ADD the following NEW items after item 'aa.' at the bottom of page 011100-32:
      "ab. The demolition of the existing roofs in areas AC, AG, AW, AM, AR, and at the connection of the additions for areas B and D are assigned to contract B-7 Roofing. The demolition of the roof at Area C Environmental Sciences is the responsibility of contract B-5 Carpentry and General Work."

      5-46 Provide adjacent to Area C – Environmental Sciences, ROTC physical fitness equipment: 2 push up bars, 1 uneven bar, and 1 pull up bar by Outdoor-Fitness or equivalent. Install in bed of shredded mulch (6" deep) bordered with recycled plastic border timbers 4" x 8" section by Mansion Athletics or equivalent. See sheet C-201 in bid package 'A'."

2. Contract B-7 Roofing
   a. ADD the following NEW item after item 7-18 on page 011100-35:
      "7-19 The demolition of the existing roofs in areas AC, AG, AW, AM, AR, and at the connection of the additions for areas B and D is the responsibility of contract B-7

Roofing. The demolition of the roof at Area C Environmental Sciences is the responsibility of contract B-5 Carpentry and General Work."

3. Contract B-13 Terrazzo Flooring
   a. DELETE item 13-11 on page 011100-45.
   b. DELETE item 13-12 on page 011100-45 and REPLACE it with the following item:
      "13-12 Apply Masterguard MVR1 moisture resistant epoxy primer to all slabs receiving terrazzo."
   c. ADD the following NEW items after item 13-12 on page 011100-45:
      "13-13 Provide in the base bid $5,000 allowance for work as directed by the Construction Manager.

      13-14 Provide an allowance for a logo based on size 10'-0"x 7'-0"with clear plastic chips utilizing a maximum of 8 colors in Area 'D'."

4. Contract B-19 Mechanical and Plumbing
   a. ADD the following NEW items after item 19-42 on page 011100-56:
      "19-43 This contractor will provide camera inspection of the below slab sanitary and storm drain systems per note DN-4 on drawing DPC1.1.

      19-44 This contractor will be responsible for disconnecting and safing off the existing mechanical and plumbing systems prior to any demolition work performed by Contract B-5 Carpentry and General Work."

5. Contract B-21 Electrical, Fire Alarm & Special Systems.
   a. DELETE bullet 21-34 on page 011000-61. The security system is being furnished by others.
   b. ADD the following NEW item after item 21-37 on page 011100-61:
      "21-38 This contractor will be responsible for disconnecting and safing off the existing electrical, fire alarm, and other special systems prior to any demolition work performed by Contract B-5 Carpentry and General Work."

D. Section 012100 Allowances

1. REVISE the amount of the allowance for Contract B-13 Terrazzo Flooring from $10,000 to $5,000.
2. ADD the following item to Contract B-13 Terrazzo Flooring:
   "2. Provide an allowance for a logo based on size 10'-0"x 7'-0"with clear plastic chips utilizing a maximum of 8 color in Area 'D'.

E. Section 024119 Selective Demolition - DELETE this section in its entirety and INSERT revised Section 024119, annotated Addendum No.1, dated 29 November 2012. The section was revised as follows:

1. Page 024119-1, Paragraph 1.1.A; Added:
   "4. Patching and repairing of adjacent finishes."

2. Page 024119-5, Paragraph 3.4; Added in entirety:
   " F. Patching and Repairing: (Add.1)

   1. Where damage to existing materials to remain is unavoidable, or where removal of selected items requires that existing adjacent finishes must be extended, provide new finish materials that duplicate the composition, texture, level and appearance of the existing surfaces. New finish materials shall be compatible with the applicable substrate, and appropriate for the anticipated conditions.
   2. Patching and repairing is to be performed by persons trained and qualified for such Work."

F. Section 086300 Metal-Framed Skylights

1. ADD approved manufacturer after paragraph 2.1.A.1 on page 086300-4:

"2. Imperial Glass Structures, 2120 South Foster Ave., Wheeling, IL 60090, Telephone: 847-253-6150"

G. **Section 087100 Door Hardware -** DELETE pages 087100-16, 19, 20, 22, 23, 24, 25, 26 and 28 in their entirety and INSERT revised pages 087100-16, 19, 20, 22, 23, 24, 25, 26 and 28, annotated Addendum No.1, dated 29 November 2012. The door hardware was revised as follows:

1. Page 087100-16, Paragraph 3.8; Hardware Set 3.0: Changed door number "D3031" to "3031".
2. Page 087100-19, Paragraph 3.8; Hardware Set 10.0: Added door number "2021".
3. Page 087100-20, Paragraph 3.8; Hardware Set 12.0: Deleted door number "302L1".
4. Page 087100-22, Paragraph 3.8; Hardware Set 17.0: Added door number "C853C"
5. Page 087100-23, Paragraph 3.8; Hardware Set 19.0: Deleted doors number "A826, A827, B835A, B843A, C853C".
6. Page 087100-23, Paragraph 3.8; Hardware Set 19.1: Added entire Set for doors "A826, A827, B835A, B843A".
7. Page 087100-23, Paragraph 3.8; Hardware Set 20.0: Deleted doors number "A816C, B833A, B834B, 1031A".
8. Page 087100-24, Paragraph 3.8; Hardware Set 20.1: Added entire Set for doors "A816C, B833A, B834B".
9. Page 087100-25, Paragraph 3.8; Hardware Set 23.0: Deleted door number "B849". Set is not used.
10. Page 087100-25, Paragraph 3.8; Hardware Set 24.0: Deleted door number "B841".
11. Page 087100-26, Paragraph 3.8; Hardware Set 27.0: Added doors number "A813, B849".
12. Page 087100-28, Paragraph 3.8; Hardware Set 36.0: Deleted door number "A813". Added door number "B841".

H. Section 088000 Glazing

1. DELETE paragraph 2.1.C on page 088000-7. The windborne-debris-impact resistance is not required per the response to RFI#8.

I. Section 099113 Exterior Painting - DELETE this section in its entirety and INSERT revised Section 099113, annotated Addendum No.1, dated 29 November 2012. The section was revised as follows:

1. Page 099113-1, Paragraph 1.1.A; Added:
   "5. New and previously coated masonry surfaces."

2. Page 099113-3, Paragraph 2.6 and 2.7; Added in entirety:
   "2.6 MASONRY FILLER/PRIMER
   A. High-build 100 % Acrylic: MPI #3.
      1. Volume Solids: 24.0% or greater.
      2. Dry Film Thickness: 1.0 mil/coat.
      3. VOC Content: 97 gms./l.

   2.7 EXTERIOR MASONRY PAINT
   A. 100% Acrylic (Low Lustre): MPI #15 (Gloss Level 10-15).
      1. Volume Solids: 43.0% or greater.
      2. Dry Film Thickness: 2.3mil/coat.
      3. VOC Content: 50 gms./l."

3. Page 099113-4, Paragraph 3.3; Added in entirety:
   "B. Exterior Masonry & Stucco:
      1. 100% Acrylic System:
         a. Prime Coat: High-build Masonry Filler/Primer.
         b. Intermediate Coat: Quick-drying Masonry Paint matching topcoat.
         c. Topcoat: Quick-drying tinted Masonry Paint (low lustre)."

J. **Section 095124 Wood Tile Ceilings**

1. ADD approved manufacturer after paragraph 2.1.A.2 on page 095124-4:

   "3. Norton Industries Inc., 1366 West 117th St, Lakewood, OH 44107, Telephone: 216-228-6650"

K. Section 101100 Visual Display Surfaces

1. ADD approved manufacturer after paragraphs 2.1.A.1.d, 2.1.A.2.d, and 2.1.A.3.d on page 101100-3

   "e. Aarco Products, Inc."

L. Section 114860 Gymnasium Protection Accessories

1. ADD approved manufacturer after paragraph 2.1.B on page 114860-1

   "C. Aalco Manufacturing"

M. Section 133413 Greenhouse & Related Accessories

1. ADD approved manufacturer after paragraph 2.01.C on page 133413-2:

   "D. Crystal Structures, a division of Sunshine Rooms, Inc., 3333 N. Mead
   Wichita, KS 67219, Telephone: 316-838-0033

N. Section 260601 Lightning Protection Systems

1. ADD approved manufacturer after paragraph 2.1.A on page 260601-2:

   "ERICO INC.
   34600 Solon Rd
   Solon, OH 44139"

O. Section 260721 Fire Alarm and Detection Systems

1. Page 260721-2, Paragraph 1.1.G: Revise to read as:

   "G. The system as specified shall be furnished, installed, tested and approved by the local Authority Having Jurisdiction, and shall be turned over to the owner in an operational condition. In the interest of job coordination and responsibility the installing contractor shall contract with a single supplier for fire alarm equipment, engineering, programming, inspection, and tests for the complete system."

2. Page 260721-2, Paragraph 1.2.D: Delete in its entirety.

III. <u>REVISIONS TO DRAWINGS</u>

A. G1.2 INDEX OF DRAWINGS – Add drawing AC6.6 Window and Door Details to the list of drawings for Area C Environmental Sciences. Annotate this change as Addendum No. 1, dated 28 Nov 12.

B. AA1.0.2 DEMOLITION PLAN; CORRIDOR, EXISTING GYM – REVISE the description on Plan 1/AA1.0.2 from "AREA AG" to "AREA B".

C. AA6.1 ROOM FINISH, DOOR & ALUM. ASSY. SCHEDULES - DELETE this drawing in its entirety and INSERT revised drawing AA6.1, dated 21 November 2012.

D. AB6.1 ROOM FINISH, DOOR, AND WINDOW SCHEDULES - DELETE this drawing in its entirety and INSERT revised drawing AB6.1, dated 21 November 2012.

E. **AC6.2 DOOR & FRAME ELEVATIONS AND SCHEDULES** - DELETE this drawing in its entirety and INSERT revised drawing AC6.2, annotated Addendum No.1, dated 29 November 2012.

F. **AD1.11 REFLECTED CEILING PLAN, AREA 'B'** - DELETE this drawing in its entirety and INSERT revised drawing AD1.11, dated 15 November 2012.

G. **AD6.2 DOOR SCHEDULE** - DELETE this drawing in its entirety and INSERT revised drawing AD6.2, dated 21 November 2012.

H. **M1.4 DETAILS: MECHANICAL** – DELETE this drawing in its entirety and INSERT revised drawing M1.4, annotated Addendum No.1, dated 28 November 2012. The drawing was revised as follows:

   1. Add notes and details for seismic bracing. See revised Drawing M1.4**.**

I. **E1.1 SCHEDULES ELECTRICAL -** DELETE this drawing in its entirety and INSERT revised drawing E1.1, annotated Addendum No.1, dated 28 November 2012. The drawing was revised as follows:

   1. Add additional lighting manufactures to the equivalents and Revise Legend

J. **E1.2 SCHEDULES ELECTRICAL –** DELETE this drawing in its entirety and INSERT revised drawing E1.2, annotated Addendum No.1, dated 28 November 2012. The drawing was revised as follows:

   1. Revise wire size and remarks notes.

K. **E1.3 SINGLE LINE DIAGRAM & LEGEND ELECTRICAL -** DELETE this drawing in its entirety and INSERT revised drawing E1.3, annotated Addendum No.1, dated 28 November 2012. The drawing was revised as follows:

   1. Revise the Single Line Diagrams wire sizes, breakers and disconnects.

L. **E1.4 SINGLE LINE DIAGRAM & LEGEND ELECTRICAL -** DELETE this drawing in its entirety and INSERT revised drawing E1.4, annotated Addendum No.1, dated 28 November 2012. The drawing was revised as follows:

   1. Revise the Single Line Diagrams wire sizes, breakers and disconnects.

M. **E300 SITE UTILITY PLAN ELECTRICAL -** DELETE this drawing in its entirety and INSERT revised drawing E300, annotated Addendum No.1, dated 28 November 2012. The drawing was revised as follows:

1. Items were added after Bid Pack "A" was issued.

N. E302 PUMP STATION ELECTRICAL SITE PLAN - INSERT drawing E302, annotated Addendum No.1, dated 28 Nov 12, which shows the Revised Light Fixture Schedule.

O. EC1.2 FIRST FLOOR POWER PLAN - DELETE this drawing in its entirety and INSERT revised drawing EC1.2, annotated Addendum No.1, dated 28 November 2012. The drawing was revised as follows:

1. Toned down the AV equipment to allow view of associated electrical work.

P. ELD1.1 LIGHTING PLAN AREA 'A' - DELETE this drawing in its entirety and INSERT revised drawing ELD1.1, annotated Addendum No.1, dated 28 November 2012. The drawing was revised as follows:

1. Revise light switch in Boys Dressing Room.

Q. EPD1.1 POWER PLAN AREA 'A' - DELETE this drawing in its entirety and INSERT revised drawing EPD1.1, annotated Addendum No.1, dated 28 November 2012. The drawing was revised as follows:

1. Revise transformer conflicts.

R. EPD1.2 POWER PLAN AREA 'B' - DELETE this drawing in its entirety and INSERT revised drawing EPD1.2, annotated Addendum No.1, dated 28 November 2012. The drawing was revised as follows:

1. Revise transformer conflicts.

S. EPD1.3 POWER PLAN AREA 'C' - DELETE this drawing in its entirety and INSERT revised drawing EPD1.3, annotated Addendum No.1, dated 28 November 2012. The drawing was revised as follows:

1. Revise transformer conflicts.

END OF ADDENDUM NO. 1

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 1

FROM: CHRISTIAN J. MCCONE DATE: 15 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

1. Under bid contract B-5, scope of work paragraph 5-9 it states to provide permanent cores to the owner. However under spec section 87100 all of the hardware sets state final cores by owner. Please confirm the owner is responsible for the final core.

Submitted By: Tom Wilson, Dover Building Supply, Inc. Date: 14 NOV 12

RESPONSE:
The scope of work by EDIS states that the cores are by hardware supplier. The hardware spec which is correct states cores by owner.

Response By: Martin Dusbiber Date: 11/19/2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 2

FROM: CHRISTIAN J. MCCONE DATE: 16 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

1. Please find attached a Request for Approval letter, along with information on Norton Industries Wood Panel Ceilings that are equivalent to the Armstrong product specified for this project. If you require any additional information for forwarding to the architect, please contact me and I will be glad to assist you.

Submitted By: Jennifer Bentley, Norton Industries Date: 15 NOV 12

RESPONSE:

This manufacturer is an acceptable substitution. Provided products must met the intent of the drawings and related specifications.

Response By: Martin Dusbiber Date: 11/21/2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 3

FROM: CHRISTIAN J. MCCONE DATE: 16 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

We would like to submit the attached for review and approval for substitution on the Greenhouse

Submitted By: Lynn Madden, Kent Construction Company Date: 16 NOV 12

RESPONSE:
The attached manufacturer is an approved substitution providing the greenhouse can be supplied as indicated on the drawings and in the specifications including all indicated equipment, HVAC, electrical, accessories and intended construction.

Response By: Martin Dusbiber Date: 11/19/2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 4

FROM: CHRISTIAN J. MCCONE DATE: 19 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

1. Base Bid:
   a. Auditorium [Area C] is to receive sprinkler protection, as indicated;
   b. Environmental Services [Area B] is not to receive sprinkler protection. Please confirm.

2. Alternates:
   a. #1: Multi-purpose addition [Area B] is to receive sprinkler protection, as indicated.
   b. #2: Existing corridor [Area AC] has existing sprinkler system at the existing Gym but not any farther into the building. Is the entire renovated corridor to receive sprinkler protection?
   c. #3: Existing Gym [Area AG]. The roof has work but no sprinkler work. Please confirm.
   d. #4: Existing Medical Education Rooms [Area AM] does not have existing sprinkler protection. Is this area to get sprinkler protection?
   e. #5: Existing Radio & TV Rooms [Area AR] does not have existing sprinkler protection. Is this area to receive new sprinkler protection?
   f. #6: Existing Weight and Locker Rooms [Area AW] does not have existing sprinkler protection. Note that drawing FPD1.2 / Note 5 indicates that the existing sprinkler heads area to be removed and new heads are to be installed at the proper spacing. Is this area to receive new sprinkler protection?

3. Specification Section 21 01 70:
   a. Part 2.8.F - please confirm that concealed type sprinkler heads/escutcheon plates are to be provided.

   b. Part 3.1.I & J – are there any attic spaces or concealed combustible spaces on the project?

   c. Part 3.2.D – states that we can use Schedule 10 pipe. Please confirm, as I believe Furlow Associates requires only Schedule 40 pipe be used on their projects.

d. Part 3.3.A – temporary strainer; What is the purpose and is this going to be required as have not seen this before on a project.

4. Existing non-sprinkler protected areas as indicated on drawing FP1.2: These do not receive new sprinkler protection, correct?

Submitted By: Charles Johnston, Bear Industries Date: 19 NOV 12

RESPONSE:

NOTE: Existing Building Area A is not sprinklered.

1a. Yes.
1b. No Sprinklers.
2a. Yes. Fully Sprinklered.
2b. No. Existing Corridor
2c. No Sprinkler work.
2d. No Sprinklers
2e. Existing TV & Radio Room has Sprinklers. Relocate to suit new work.
NOTE: This area of work is in Area "A", not Area "D".
2f. No Sprinkler work in this area.
3a. Concealed heads.
3b. No concealed spaces, No Attic spaces.
3c. Schedule 10 Pipe allowed.
3d. Provide temporary strainer under Section 3.13A. If Site Main has not been flushed prior to system connection to incoming water.
4. Correct. All non-sprinklered areas are not to be sprinklered.

Response By: Michael L Panco
furlow associates, Inc. Date: November 21, 2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 5

FROM: CHRISTIAN J. MCCONE DATE: 19 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: 086300 PAGE: 4

REQUEST:

Imperial Glass Structures would like to submit the attached for review and approval as another supplier of the skylights.

Submitted By: Krys Tischer, Imperial Glass Structures Company Date: 16 NOV 12

RESPONSE:
The manufacturer is approved providing the product submitted prior to construction meets the intent of the contract drawings and specifications including all required design criteria and size.

Response By: Martin Dusbiber _____ Date: 11/20/2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 6

FROM: CHRISTIAN J. MCCONE DATE: 20 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: 260601 PAGE: _____

REQUEST:

I am trying to bid the above mentioned project and noticed that there are only a few lightning protection manufactures listed in the spec. VFC is a lightning protection installation company with offices in 7 states including New Jersey. We do not deal with any of the listed manufactures in the current spec for our supplies and I was hoping you would accept ERICO as an approved manufacture for this and future projects. I have attached all of Erico's information regarding their standing with UL. I originally called Furlow and Associates and spoke with Bill Slusser regarding this issue, he directed me to you. Thank you for your time and consideration of my request! Please call with any questions!

Regards
Jeff Horner
Northeast Regional Sales Manager

Submitted By: Jeff Horner, VFC Inc. Date: 16 NOV 12

RESPONSE:

VFC is approved as Lightning Protection Installation Company. ERICO is an approved Lightning Protection Manufacturer for this project.

Response By: William J Slusser
furlow associates, Inc. Date: November 21, 2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 7

FROM: CHRISTIAN J. MCCONE DATE: 20 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: EA1.1 SPEC. SECTIONS: PAGE:

REQUEST:

1. Drawing EA1.1 areas A, AC and AG are not broke out on the drawing? Please specify which area coordinates to which alternate?
2. Drawing EA1.1 area "A" is listed as an alternate and there is no alternate "A" listed on the bid form? Please specify.
3. Alternate # 4 on bid form states area "AM" not shown on one of the drawings? Please specify?

Submitted By: Debbie Woodin, T.C. Electric Inc. Date: 20 NOV 12

RESPONSE:

1. The tag should read "Areas "B", "AC", & "AG"- ALTERNATE". See drawing AB1.1 for the limits of Area "B". See drawing AA1.0.2 for the limits of Area "AC". See drawing AA1.4.2 for the limits of Area "AG".
2. The tag should read "Areas "B", "AC", & "AG"- ALTERNATE". Area "B" is the new multipurpose room and the adjacent connecting area.
3. The bid form is correct. Area "AM" is the renovation of the existing Medical and Nursing rooms. See drawing AA1.0.3 for the limits of Area "AM".

Response By: William J Slusser
furlow associates, Inc. Date: November 21, 2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 8

FROM: CHRISTIAN J. MCCONE DATE: 20 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: Multiple PAGE: _____

REQUEST:

1. Details at the interior vestibule storefronts and curtain wall show insulated glass units. Is this correct or should ¼" clear glass be included?
2. There are no aluminum frame details that indicate that any of the windows are the type specified in 085113. Are all the windows storefront construction as detailed?
3. "windborne debris impact resistance" requirement is included in 088000, 2.1, C. Confirm that this is not required.
4. The mirrored walls shown on AA4.1 and specified in 088300 are not included in our scope of work. Are we to provide those? If so, is ¼" clear, annealed mirror with a safety film backing acceptable?
5. The aluminum doors are specified as medium stile, 3 ½" nominal width in paragraph 2.3 or 084113 but are shown on the door types drawings as wide stile with 10" bottom rails. Which is correct?
6. Please provide a specification for the 120 minute glazing assembly at door # C864C in frame H10.
7. There are three aluminum doors on AC6.2 that are scheduled as half-glass. If correct provide the specification for flush aluminum doors.

Submitted By: Alan Wood, Charles Brown Glass Co. Inc. Date: 20 NOV 12

RESPONSE:

1. Interior assemblies at all entry Vestibules should receive ¼" clear tempered glazing.
2. The windows, operable and fixed, are all storefront-type aluminum assemblies.
3. This is not required
4. The mirrors are assigned to contract B-5 Carpentry and General Work
5. The 10" bottom rails are required for Accessibility compliance, and are available as a regular Option. Stiles should be 5" wide, as shown.
6. The glazing is to be 90 minute in doors indicated to be in 2 hour walls.
7. The panels are to be a 1" smooth aluminum faced insulated panels to match door finish.

Response By: Martin Dusbiber, DALLC Date: 20 NOV 12

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 10

FROM: CHRISTIAN J. MCCONE DATE: 26 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

1. Request roof demolition be removed from Contract B-5 and added to Contract B-7. The roofer is better equipped to handle this demolition, and replacement will be much simpler.
2. Dwg AC1.0 – I can't find the location of tags 7 or 20.

Submitted By: Peter Kramer, J.S. Kramer Inc. Date: 20 NOV 12

RESPONSE:

1. The demolition of the existing roofs in areas AC, AG, AW, AM, AR, and at the connection of the additions for areas B and D will be assigned to the contract B-7 Roofing. The demolition of the roof at Area C will remain with contract B-5 Carpentry and General Work.
2. The Demolition Notes are standardized throughout this Project. Not all notes apply to all Areas.

Response By: Martin Dusbiber Date: 11/27/2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 13

FROM: CHRISTIAN J. MCCONE DATE: 26 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: 275115 PAGE: _____

REQUEST:

1. In the above mentioned specification section there is no mention of tie in to the existing pa/intercom system for the new addition. I would imagine that the new addition and renovated areas will have to be tied into the existing pa/intercom system.
2. Please also verify the manufacturer of the existing pa/intercom system.

Submitted By: Luis Colon, Project Manager / Estimator, Baltimore Sound Engineering, Inc.
Date: 21 NOV 12

RESPONSE:
There is no requirement for connection to the existing PA/Intercom section. The new PA/Intercom equipment is part of the owners phone system and is NIC.

Response By: Martin Dusbiber Date: 11/26/2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 14

FROM: CHRISTIAN J. MCCONE DATE: 26 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

1.) Ref. specification section 011100, Page 45, Scope of Work, extruded aluminum thresholds. Thresholds are typically supplied and installed by the door hardware contractor. Please confirm this is to be excluded from this bid package.
2.) Ref. specification section 096623, Page 2, Terrazzo logo. Can you please provide a better detail of the logo for our review?
3.) Ref. specification section 096623, page 7, paragraph 3.3.B, Special primer application. This paragraph indicates that the moisture vapor primer is to be applied to all slabs on grade under the terrazzo flooring; however specification section 012100 indicates a $10,000.00 allowance for moisture primer if required. Please clarify if the moisture vapor primer is to be included in the base bid per the 096623 specification or excluded and only provided per the 012100 specification.
4.) Ref. drawings AD6.1, Room Finish Schedule. The finish schedule is indicating that rooms A825, A853, C854 & C865 are scheduled to receive precast terrazzo base, however the elevations 1, 2 & 3 on drawing AD4.11 do not indicate terrazzo base. Please confirm these rooms are to receive terrazzo base.

Submitted By: Preston Harsh, Roman Mosaic and Tile Company Date: 21 NOV 12

RESPONSE:

1. The extruded aluminum thresholds will be deleted from the scope.
2. Provide an allowance for logo based on size 10'-0"x 7'-0"with clear plastic chips utilizing a maximum of 8 color, art work to be provided by Polytech School District, as noted on Drawing AD1.22
3. Moisture Vapor Primer to be provided as part of Base Bid per 096623 specification. The scope of work will be modified.
4. Per the Room Finished Schedule, Drawing AD6.1, Rooms A825, C853, C854 & C865 to receive terrazzo base.

Response By: Harry Pettoni Date: 11/28/12

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 15

FROM: CHRISTIAN J. MCCONE DATE: 26 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: 101100 PAGE: _____

REQUEST:

We would like to submit the attached for review and approval for substitution on the Visual Display Surfaces for Aarco Products.

Submitted By: Lynn Madden, Kent Construction Company Date: 21 NOV 12

RESPONSE:

AARCO products are an approved substitution providing the intent of the drawings are met and all requirements of the project specifications.

Response By: Martin Dusbiber Date: 11/26/2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 16

FROM: CHRISTIAN J. MCCONE DATE: 26 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Reference: Alternate #3 - Renovations to Existing Gym

Project Information: The existing roof assembly consists of a steel roof deck, 4 1/2" of EPS insulation, topped with 1 1/2" light weight concrete and ballast rubber roofing.

Question: What is the extent of the demo for the roofing - Is it down to the steel dunnage OR down to the light weight concrete?

Submitted By: Buck High, Tri-State the Roofers Date: 21 NOV 12

RESPONSE:

The existing roofing is to be removed down to the existing concrete.

Response By: Martin Dusbiber Date: 11/26/2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 17

FROM: CHRISTIAN J. MCCONE DATE: 26 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: E-1.3 SPEC. SECTIONS: PAGE:

REQUEST:

On the single line drawing E-1.3 under notes, it references drawing E-105 for existing panels to be retrofitted. I have looked in packages A&B and cannot find E-105. Any insight would be appreciated.

Submitted By: Harry Rhodes, Jr., Estimator, The Tri-M Group, LLC Date: 21 NOV 12

RESPONSE:

Responses part of Addendum #1

General notes are removed from plan. Also, removed "MCC EQUIPMENT SCHEDULE"

Response By: William J Slusser
Furlow Associates, Inc. Date: 11/28/12

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 19

FROM: CHRISTIAN J. MCCONE DATE: 27 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: 114000 PAGE: _____

REQUEST:

Please provide details for the stainless steel casework listed in the schedule on AC1.5.

Submitted By: Chris McCone, EDiS Company Date: 27 NOV 12

RESPONSE:
The details for the casework are indicated on the interior elevations and the floor plans provided for bid.

Response By: Martin Dusbiber Date: 11/27/2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 21

FROM: CHRISTIAN J. MCCONE DATE: 27 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: 114860 PAGE: _____

REQUEST:

Aalco Manufacturing was approved to bid on the gym equipment in section #116623. We are seeking approval on wall pads in section #114860.

Submitted By: Shannon Baum, Aalco Manufacturing Date: 26 NOV 12

RESPONSE:
Aalco Manufacturing is approved to bid on the wall pads providing their product meets the intent of the drawings and all related materials and accessories as specified.

Response By: Martin Dusbiber Date: 11/27/2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 22

FROM: CHRISTIAN J. MCCONE DATE: 27 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: SPEC. SECTIONS: 042113 PAGE: 8

REQUEST:

Section 042113, paragraph 2.1.C.5 calls for "Intergral Water Repellant". Is all CMU to have a water repellent sprayed on or integrated into the block during the manufacturing processed?

If this is the case the block may not be paintable..

Submitted By: Gregg Furtaw, Enterprise Masonry Date: 26 NOV 12

RESPONSE:

The Design Team has spent time developing the CMU spec over a period of time and years of experience and feel it is good practice to provide the specified Integral Water Repellent as specified. To date we have not had any issues with paint adhesion to the finished surface or a request for the material to be deleted. We recommend the specification be followed as issued.

Response By: Harry Pettoni Date: 11/28/12

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 23

FROM: CHRISTIAN J. MCCONE DATE: 27 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

1) On drawings E 1.4 (the single line) Feeder #17 is showing a 4/0 feed to a 100 amp safety switch that is feeding the primary side of T-9 transformer. I believe it should be only #2 wire for the primary. Clarify!
2) T-9 transformer is located in the mech. Room and feeding the studio dimmer board . Is this where T-9 is to be located.
3) Drawing EPD1.2 shows the T-6 transformer as well as EDP1.1. Where should it be.
4) Drawing E-300 and the single line are in conflict as to where is the new transformer going, who is installing the primary duct bank, who is supplying the cable and who is terminating the transformer and how many conduits for the primary duct bank and how many for the secondary.

We would like to get these clarifications on the above questions as soon as possible.

Submitted By: Barry Miller, Tri-M Group Date: 26 NOV 12

RESPONSE:

All Responses are part of Addendum #1.

1. Feeder #17: Change circuit breaker from 250 AF, 225 AT, 3/P to 225 AF, 100 AT 3/P. Change wire size from 4#4/0+#4 ground in 2-1/2" conduit to 3#2+1#8 ground to 1-1/2" conduit.
2. Transformer TX-9: Relocate to Stage B832, mark unidentified box to the left of "TX-7"as "TX-9" on Drawing EPD1.2.
3. Transformer TX-6: Located on Drawing EPD1.2 Stage D832. Remove from Drawings EPD1.1 and EPD1.3.
4. Drawing E300 is part of Bid Pac "A". There was a revisions to the service under this package. Refer to revised plan.
   Drawing E1.4: Revise note for Primary cables and conductors by Utility Company removed pole. Refer to revised plan.

Response By: William J. Slusser Furlow Associates, Inc. Date: 11/28/12

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 24

FROM: CHRISTIAN J. MCCONE DATE: 27 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

1. EC1.2 – Devices are blotted out (is this a misprint). What are we to do?
2. E300 – What is the fixture type for the last fixture at the west entrance?
   What are the two 1"c spare in the site lighting trenching, do they connect to each base?
3. E301 – Per general notes #1 where is drawing E302?
4. ELD1.1 - Is there a switch missing in the boy dressing A820?
   How are the D fixtures controlled in A822 & A823?
5. ELD1.2 – Is the Data and Power receptacles in the center of rooms, A808, 812, 807 and 821 located in the Ceiling or in the floor?
6. E1.3 – Is panel HVCOR a new or existing panel?
   Is panel schedule GH-1 the same as shown on E1.3 as GH?
7. E1.4 – Clarify Main Distribution SWB grounding conductors?
   Feeder #15 from MDS has no conduit or feeder size?
   Why is feeder #17 the same size for primary and secondary of the transformer?
   Is supplying and installing the Generator part of Contact B, there is no specification. E1.4 notes refers to Generator specifications.
   What type of switches is to be used for the Mech. Room Boiler shut down (4)?
8. E1.2 - Mechanical equipment schedule CH-1 form MDS/3 is different form one-line for MDS#32-21/2" visa 1-4", which is correct?
   What is the purpose of Note #2 on E1.2 when all the equipment is on the roof?
9. EPD1.2 – Where do you find the location of the electric strip over the Auditorium seating per note #13?
   Where on the one-line is the 800 amp disconnect that is shown on corridor wall of the stage?
   Transformer Tx-9 is shown in the Mech. room on EPD1.3 for the AV Dimmer Rank in the Storage Room B837 is it the intent for the secondary feeder to run that far?
10. EDP1.3- Mech room has a TX-6 and EDP1.2 has a TX-6, which is correct?

Submitted By: Vernon Roberts, John W. Tieder Electrical Date: 27 NOV 12

RESPONSE:

1. Drawing will be reissued with bold items toned down.
2. See revised plan E-300.
3. Drawing E302 is part of bid package 'A'. A copy will be provided in Addendum No. 1.
4. a. Switch is added to plan.
   b. Control switch is located at entrance of Restroom.
5. Drawing EPD1.1 Data and Power receptacles are located in the ceiling.
6. a. Drawing E1.3 – Panel "HVCOR" is being removed from plan. Refer to revised drawing E1.3.
   b. Revised Panel "GH" to "GH-1".
7. a. Drawing E1.4: Removed "WITH (1) #6 ISOLATED GROUND GROUND CONDUCTOR IN (1) 1-1/4" PVC CONDUIT."
   b. Added feeder & conduit size to #15 of the Single Line Diagram
   c. Revised feeder size and circuit breaker for circuit #17 from 1-1/2" conduit and the circuit breaker from 250 AF, 255AT to 250 AF, 100 AT.
   d. The Generator is existing. Contract documents only indicate revision to the wiring distribution.
   e. Switch type shall be emergency shut-off switch with red cover plate.
8. a. Drawing E1.2: Mechanical Equipment schedule item CH-1: Revise wiring from (2) 3#250 MCM +#2 GND in 2-1/2" conduit to (2) 3#4/0+# G in 2-1/2" conduit.
   Drawing E1.4: Revise wiring from 3#500 MCM+1#3 Ground in 4" conduit to (2) 3#4/0+# G in 2-1/2" conduit. Revise tag under panel from "CH-1B" to CH-1".
   b. Change "NOTE 2" in remarks to "NOTE 3" for units RTU-A1, RTU-A3, RTU-A4, RTU-B1, RTU-B2, RTU-C2, RAHU-D1, RAHU-D2, RAHU-D3, RAHU-D4, RAHU-D5, RAHU-D6, RAHU-D7, RAHU-D8, RAHU-D9, RAHU-D10, RHP-1, RHP-2, and RHP-5. Add "NOTE 4" and "NOTE 6" to the remarks column for units RTU-A1, RTU-A3, RTU-A4, RTU-B1, RTU-B2, RTU-C2, RAHU-D1, RAHU-D2, RAHU-D3, RAHU-D4, RAHU-D5, RAHU-D6, RAHU-D7, RAHU-D8, RAHU-D9, RAHU-D10, RHP-1, RHP-2, and RHP-5.
9. a. Add Note to Floor Plan for Note 13.
   b. Drawing E1.4, Circuit 2: See revised Drawing E1.4.
   c. See revised Drawing EPD1.2, Stage B832 for location of "TX-9." Delete "TX-9" on Drawing EPD1.1.
   d. Feeder will run from stage B832 to Storage Room B837.
10. See revised Drawings EPD1.1 & EPD1.3: Remove Transformer "TX-6". Refer to Drawing EPD1.2 for location of Transformer "TX-6".

Response By: William J. Slusser
Furlow Associates, Inc.

Date: 11-28-12

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 25

FROM: CHRISTIAN J. MCCONE DATE: 27 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

1. Door A813, hardware set 36.0; door B849, hardware set 23.0; doors A807B and D3031, hardware set 3.0, are scheduled as wood doors with hollow metal frames. Both hardware sets indicate that the installation is by the aluminum door supplier. Should these be changed to aluminum doors and frames or should the hardware schedule be amended?

Submitted By: Alan Wood, Charles Brown Glass Date: 27 NOV 12

RESPONSE:
See revised door hardware specification sections and schedules issued as an addendum

Response By: Martin Dusbiber Date: 11/28/2012

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 26

FROM: CHRISTIAN J. MCCONE DATE: 27 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

1. The fixture schedule on drawing E1.1 shows fixture types Y and U, neither of these fixtures are showing on any of the drawings? Please clarify.

Submitted By: Debbie Woodin, T.C. Electric Inc. Date: 27 NOV 12

RESPONSE:

All responses are part of Addendum #1.

- Type "Y" Fixture: Refer to Drawing EPD1.2 Auditorium B831 Path lighting for walk-way in Auditorium.

- Type "U" Fixture: Refer to Drawing E300 Flag Pole Lights. Refer to revised plan.

- Will add Note to Drawing E1.1 in fixtures types as to location of fixture.

Response By: William J. Slusser
Furlow Associates, Inc Date: 11/28/12

REQUEST FOR INFORMATION

TO: MARTIN DUSBIBER, DALLC RFI#: 27

FROM: CHRISTIAN J. MCCONE DATE: 27 NOV 12

PROJECT: POLYTECH HIGHSCHOOL RENOVATIONS & ADDITIONS – BID PACK 'B'

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

1. Sheet AC4.2, elevations 1, 3, 4, 6 & 7 need considerably more detail to be able to accurately quote the stainless steel casework. The wall units and tables are the only things that can be figured out from the elevations and subsequent descriptions. Any of the bases and the free standing sink are overly vague and ambiguous. These would include items #20, #69, #70, #71, #73 & #74. Additionally the description for the tables and base unit #20 refers to them as "rolling", but the elevations appear to show bullet feet. Which is required?

2. Sheet AC4.3, elev. 5: Cubbies on the corridor wall are elevated but never scheduled. Are these existing to remain or possibly owner supplied? Please advise.

3. Sheet AD4.4, elev. Q: Brochure rack is shown but not scheduled. Please advise who owns these?

Submitted By: Jeff Foster, Modular Concepts Inc. Date: 27 NOV 12

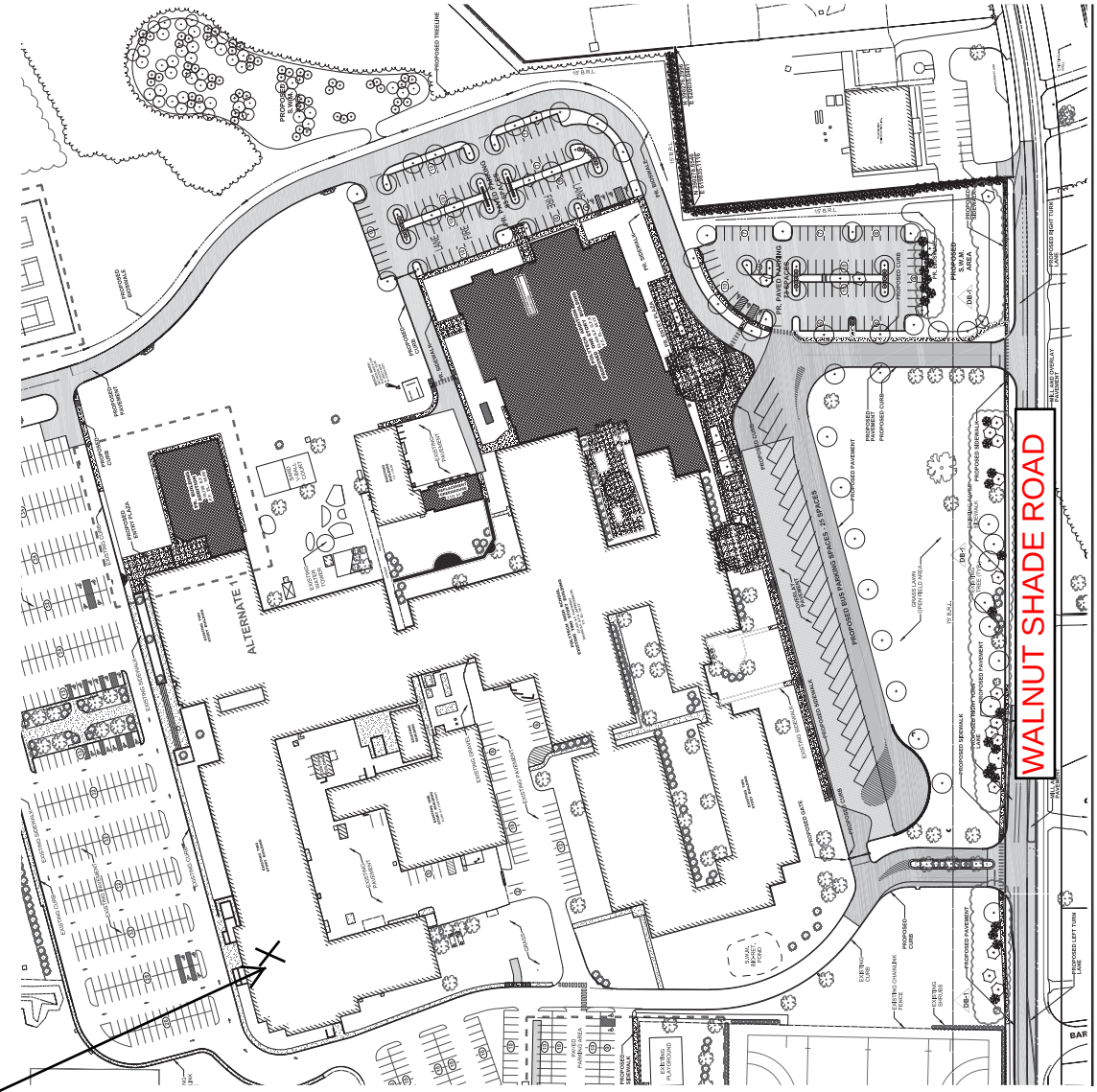
RESPONSE:

1. The detail for the stainless steel cabinets is as indicated on the drawings and the specifications. Units are to be provided as scheduled. All wall and base cabinets are to have 2 adjustable s/s shelves in each cabinet. All hardware is to be stainless steel.

2. The 16 new cubbies in Classroom 302H are 26"w x 16"d x 54" h. They are to be heavy-duty, ¾" plywood or particleboard construction; with high-pressure plastic laminate on all exposed surfaces and edges, and low-pressure melamine on concealed surfaces and edges. Each cubbie has an open front; full side, top & back panels; and a 4" high recessed toekick. The upper compartment is 15" high by the inside width of the cabinet, with the lower remainder divided vertically into 2 equal compartments. Joints are to be rabbeted and fully glued. The pattern and color of the laminate is to be selected by us.
3. The brochure rack is to be supplied and installed by the owner as indicated.

Response By: Martin Dusbiber Date: 11/28/2012

MAP SHOWNG THE LOCATION WHERE BIDS ARE TO BE DELIVERED



POLYTECH SCHOOL DISTRICT OFFICES

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.
4. ***Patching and repairing of adjacent finishes. (Add.1)***

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner for reuse.

C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 PRECONSTRUCTION MEETINGS

A. Pre-demolition Conference: Conduct conference at Project site prior to commencement of operations.

B. Coordinate with the Owner for the location of dumpsters, route of removal of materials, methods and locations for stored items, and hours of operation.

1.4 INFORMATIONAL SUBMITTALS

A. Demolition Plan describing the methods and sequence of Work, and disposition of items to be removed from the Project Area.

B. Certificate of Insurance covering personal liability, property damage and loss of use of the facility, in the form and amount acceptable to the Owner.

1.5 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. The use of the facility in the Project Area will be suspended during the Contract Period. The Area will be secured during non-working hours.

C. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

1. Before selective demolition, Owner will remove the following items:

a. Movable furniture; including desks, chairs, filing cabinets, etc.
b. Movable equipment; including computers and electronics, video monitors, etc.
c. Certain dental equipment, as shown on the Drawings.

D. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

E. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

F. Storage or sale of removed items or materials on-site is not permitted.

G. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.
2. Coordinate with the Owner for temporary shut-off during transfer of electric power to new panel locations. Prepare work to minimize downtime during transfer.

1.6 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped in the Project Area before starting selective demolition operations.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

D. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or videotapes.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components where indicated to be removed.

    a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
    c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
    e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
    f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
    g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Comply with requirements for access and protection.

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain. Coordinate placement of barricades with the Owner.

C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during operations.
4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
5. Dispose of demolished items and materials promptly.

B. The use of explosives is not permitted.

C. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to storage area designated by Owner
5. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.

4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

F. ***Patching and Repairing: (Add.1***)

1. Where damage to existing materials to remain is unavoidable, or where removal of selected items requires that existing adjacent finishes must be extended, provide new finish materials that duplicate the composition, texture, level and appearance of the existing surfaces. New finish materials shall be compatible with the applicable substrate, and appropriate for the anticipated conditions.

2. Patching and repairing is to be performed by persons trained and qualified for such Work.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved manner.

1. Do not allow demolished materials to accumulate on-site. Clear major debris daily.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property daily and legally dispose of them.

1. The Owner will not be responsible for items placed in or removed from the Contractor’s dumpsters by other persons.
2. It will be the Contractor’s responsibility to remove any such debris from the Owner’s property at no additional charge.

3.6 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

Set: 2.0
Pair Doors: A825B, C853A, C853B, C854A, 1030D

2	Continuous Hinge	MCK-12HD x LAR	CL	MK
1	Exit Device	ED4200 x P1050 x M52	630	RU
1	Exit Device	ED4200 x P1057 x M52	630	RU
1	Mullion	808	628	RU
3	Cylinder	3040 Rim or 1040 Mortise as req.	626	BE
3	Core Only	Final Core by Owner	626	BE
2	Door Closer	UNIJ7500H 7786	689	NO
1	Threshold	2005AT x LAR MSES25SS		PE
2	Sweep	3452CNB x LAR		PE
2	Door Contact	DPS-M-GY	Gray	SU

Note: Above supplied by Finish Hardware supplier, Installation by Aluminum Door supplier, Access Control Contractor and Electrical Contractor. Card Access system by others. Perimeter and meeting stile gasket by door / frame manufacturer.

Set: 3.0
Pair Doors: A807B, ~~D~~3031***(Add.1)***

2	Continuous Hinge	MCK-12HD SER-12 x LAR	CL	MK
1	Exit Device (exit only)	ED5200 x EO x M92 x M52	630	RU
1	Exit Device (night latch)	ED5200 x PR957 x M92 x M52	630	RU
2	Latch retraction	LR100CR Motorized Electric Latch Retraction		SD
1	Mullion	907	600	RU
3	Cylinder	3040 Rim or 1040 Mortise as req.	626	BE
3	Core Only	Final Core by Owner	626	BE
2	Door Closer	CPS7500H	689	NO
2	Kick Plate	K1050 10” x 1” LDW B4E	US32D	RO
1	Threshold	2005AT x LAR MSES25SS		PE
2	Sweep	3452CNB x LAR		PE
2	eLynx Frame Harness	QC-C1500P		MK
2	eLynx Door Harness	QC-C*** (Length / Type as Required)		MK
1	Card Reader	Furnished by others		
2	Door Contact	DPS-M-GY	Gray	SU
1	Wiring Diagram	Complete with point to point drawing		

Notes: Above supplied by Finish Hardware supplier, Installation by Aluminum Door supplier, Access Control Contractor and Electrical Contractor. Electronic opening to operate as follows: Outside, Wall mounted keypad signals power supply to retract exit device latch at active door allowing entry by pull. Inside, free egress at all times by exit device. Key override.

Set: 9.0
Single Doors: 302H4

1	Continuous Hinge	MCK-12HD SER-12 x LAR	CL	MK
1	Exit Device (night latch)	ED5200 x PR957 x M92 x M52	630	RU
1	Latch retraction	LR100CR Motorized Electric Latch Retraction		SD
2	Cylinder	3040 Rim or 1040 Mortise as req.	626	BE
2	Core Only	Final Core by Owner	626	BE
1	Door Closer	UNI7500H	689	NO
1	Kick Plate	K1050 10” x 1” LDW B4E	US32D	RO
1	Threshold	2005AT x LAR MSES25SS		PE
1	Sweep	3452CNB x LAR		PE
1	Gasket	303AS (Head & Jambs)		PE
1	eLynx Frame Harness	QC-C1500P		MK
1	eLynx Door Harness	QC-C*** (Length / Type as Required)		MK
1	Card Reader	Furnished by others		
2	Door Contact	DPS-M-GY	Gray	SU
1	Wiring Diagram	Complete with point to point drawing		

Notes: Electronic opening to operate as follows: Outside, Wall mounted keypad signals power supply to retract exit device latch at active door allowing entry by pull. Inside, free egress at all times by exit device. Key override.

Set: 10.0
Single Doors: ***2021(Add.1)***, 302P2, 3002

3	Hinge (heavy weight)	T4A3386 NRP 4-1/2" x 4-1/2"	US26D	MK
1	Exit Device (exit only)	ED5200 x EO	630	RU
1	Door Closer	UNI7500H	689	NO
1	Kick Plate	K1050 10” x 1” LDW B4E	US32D	RO
1	Threshold	2005AT x LAR MSES25SS		PE
1	Sweep	3452CNB x LAR		PE
1	Gasket	303AS (Head & Jambs)		PE
1	Door Contact	DPS-M-GY	Gray	SU

Set: 11.0
Single Doors: C866A

1	Continuous Hinge	MCK-12HD x LAR	CL	MK
1	Mortise Deadlock	MS1850S	628	AD
1	Thumb Turn Cylinder	4066	628	AD
1	Mortise Cylinder	1040-114-A03	626	BE
1	Core Only	Final Core by Owner	626	BE
2	Door Pull	BF169 BTB	US32D	RO
1	Door Closer	7500	689	NO
1	Threshold	271A x LAR MSES25SS		PE
1	Sweep	3452CNB x LAR		PE
1	Door Contact	DPS-M-GY	Gray	SU

Notes: Above supplied by Finish Hardware supplier, Installation by Aluminum Door supplier. Perimeter gasket by frame manufacturer.

Set: 12.0
Pair Doors: 302P1, ~~302L1~~***(Add.1)***

2	Continuous Hinge	MCK-12HD x LAR	CL	MK
2	Manual Flush Bolt	555	US26D	RO
1	Dust Proof Strike	570	US26D	RO
1	Mortise Deadlock	MS1850S	628	AD
1	Thumb Turn Cylinder	4066	628	AD
1	Mortise Cylinder	1040-114-A03	626	BE
1	Core Only	Final Core by Owner	626	BE
2	Door Pull	BF169 BTB	US32D	RO
2	Door Closer	UNIJ7500H x 7786	689	NO
1	Threshold	2005AT x LAR MSES25SS		PE
2	Sweep	3452CNB x LAR		PE
2	Door Contact	DPS-M-GY	Gray	SU

Notes: Above supplied by Finish Hardware supplier, Installation by Aluminum Door and/or Greenhouse supplier. Perimeter and meeting stile gasket by door / frame manufacturer.

Set: 16.0
Pair Doors: 1031B, A801B

6	Hinge (heavy weight)	T4A3386 NRP 4-1/2" x 4-1/2"	US26D	MK
2	Manual Flush Bolt	555	US26D	RO
1	Dust Proof Strike	570	US26D	RO
1	Mortise Lock (storeroom)	ML2057 x PSA x LC	628	RU
1	Cylinder	1040 Mortise as req.	626	RU
1	Core Only	Final Core by Owner	626	BE
2	Surface Closer	CPS7500T	689	NO
2	Kick Plate	K1050 10" x 2 " LDW 4BE	US32D	RO
1	Threshold	2005AT x LAR MSES25SS		PE
1	Gasket	303AS (Head & Jambs)		PE
1	Sweep	3452CNB x LAR		PE
2	Door Contact	DPS-M-GY	Gray	SU

Note: Astragal by Door Mfg.

Set: 17.0
Pair Doors: A807A, B832A, B832B, B839A, ***C853C (Add.1)***

6	Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Exit Device (exit only	ED5470 (B) x EO x M55	630	RU
1	Exit Device (classroom)	ED5470 (B) x PR955 x M55	630	RU
1	Cylinder	3040 Rim or 1040 Mortise as req.	626	BE
1	Core Only	Final Core by Owner	626	BE
2	Surface Closer	PR8501	689	NO
2	Kick Plate	K1050 10" x 1" LDW 4BE	US32D	RO
2	Door Stop	406	US32D	RO
2	Silencer	608		RO

Set: 18.0
Pair Doors: B829A, B829B, 1032A, 1032B

6	Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Exit Device (exit only	ED5470 (B) x EO x M55	630	RU
1	Exit Device (classroom)	ED5470 (B) x PR955 x M55	630	RU
1	Cylinder	3040 Rim or 1040 Mortise as req.	626	BE
1	Core Only	Final Core by Owner	626	BE
2	Electromechanical Closer-Holder	7220MPO	689	NO
2	Kick Plate	K1050 10" x 1" LDW 4BE	US32D	RO
2	Door Stop	406	US32D	RO
2	Silencer	608		RO

Set: 19.0
Pair Doors: ~~A826, A827, B835A, B843A, C853C~~***(Add.1)*** C865, 1032C

6	Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Exit Device (exit only)	ED5470 (B) x EO x M55	630	RU
1	Exit Device (classroom)	ED5470 (B) x PR955 x M55	630	RU
1	Cylinder	3040 Rim or 1040 Mortise as req.	626	RU
1	Core Only	Final Core by Owner	626	BE
2	Surface Closer	CLP8501	689	NO
2	Electromagnetic Door Holder	998	689	RF
2	Kick Plate	K1050 10" x 1" LDW 4BE	US32D	RO
2	Silencer	608		RO

Set: 19.1 (Add.1)
Pair Doors: A826, A827, B835A, B843A

8	***Hinge (heavy weight)***	***T4A3786 4-1/2" x 4-1/2"***	***US26D***	***MK***
1	***Exit Device (exit only)***	***ED5470 (B) x EO x M55***	***630***	***RU***
1	***Exit Device (classroom)***	***ED5470 (B) x PR955 x M55***	***630***	***RU***
1	***Cylinder***	***3040 Rim or 1040 Mortise as req.***	***626***	***RU***
1	***Core Only***	***Final Core by Owner***	***626***	***BE***
2	***Surface Closer***	***CLP8501***	***689***	***NO***
2	***Electromagnetic Door Holder***	***998***	***689***	***RF***
2	***Kick Plate***	***K1050 10" x 1" LDW 4BE***	***US32D***	***RO***
2	***Silencer***	***608***		***RO***

Set: 20.0
Pair Doors: A801A, ~~A816C, B833A~~, B834A, ~~B834B, 1031A~~***(Add.1)***, 1031C

6	Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Coordinator	1600 series x 1601	USP	RO
1	Auto Flush Bolt Set	1942	US26D	RO
1	Dust Proof Strike	570	US26D	RO
1	Mortise Lock (storeroom)	ML2057 x PSA x LC	626	
1	Cylinder	1040 Mortise as req.	626	RU
1	Core Only	Final Core by Owner	626	BE
2	Surface Closer	8501	689	NO
2	Kick Plate	K1050 10" x 1" LDW 4BE	US32D	RO
2	Silencer	608		RO

Set: 20.1 (Add.1)
Pair Doors: A816C, B833A, B834B

8	***Hinge***	***TA2714 4-1/2" x 4-1/2"***	***US26D***	***MK***
1	***Coordinator***	***1600 series x 1601***	***USP***	***RO***
1	***Auto Flush Bolt Set***	***1942***	***US26D***	***RO***
1	***Dust Proof Strike***	***570***	***US26D***	***RO***
1	***Mortise Lock (storeroom)***	***ML2057 x PSA x LC***	***626***	
1	***Cylinder***	***1040 Mortise as req.***	***626***	***RU***
1	***Core Only***	***Final Core by Owner***	***626***	***BE***
2	***Surface Closer***	***8501***	***689***	***NO***
2	***Kick Plate***	***K1050 10" x 1" LDW 4BE***	***US32D***	***RO***
2	***Silencer***	***608***		***RO***

Set: 21.0

Pair Doors: B836B, B839B

6	Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
2	Manual Flush Bolt	555	US26D	RO
1	Dust Proof Strike	570	US26D	RO
1	Mortise Lock (passage)	ML2010 x PSA	626	RU
2	Mortise Lock (half dummy)	CL3350 PSA	626	RU
2	Surface Overhead Holder	10-036	630	RF
2	Kick Plate	K1050 10" x 1 " LDW 4BE	US32D	RO
1	Threshold	2750A x LAR MSES25SS @ B363B only.	PE	
1	Gasket	332CS (Head & Jambs)		PE
1	Astragal	375CR x LAR		PE
1	Sweep	411ARL x LAR		PE

Note: Lock heights at Doors B836B at 38” AFF, Doors B839B at 41” AFF.

Set: 22.0
Single Doors: 302H2, 302H3, 302H6, 303A1, A803, A809A, A809B, A814, B828B, B830B, B838A, B840, B845A, B845B, B847, B848, C859, C869, C870

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Mortise Lock (storeroom)	ML2057 x PSA x LC	626	RU
1	Cylinder	1040 Mortise as req.	626	RU
1	Core Only	Final Core by Owner	626	BE
1	Surface Closer	8501	689	NO
1	Kick Plate	K1050 10" x 2 " LDW 4BE	US32D	RO
1	Door Stop	406	US32D	RO
3	Silencer	608		RO

Set: 23.0
Single Door: ~~B849~~ ***Not Used (Add.1)***

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Mortise Deadlock	MS1850S	628	AD
1	Thumb Turn Cylinder	4066	628	AD
1	Mortise Cylinder	1040-114-A03	626	BE
1	Core Only	Final Core by Owner	626	BE
2	Door Pull	BF169 BTB	US32D	RO
1	Surface Closer	8501	689	NO
1	Kick Plate	K1050 10" x 2 " LDW 4BE	US32D	RO
1	Door Stop	406 as req.	US32D	RO
3	Silencer	608		RO

Notes: Above supplied by Finish Hardware supplier, Installation by Aluminum Door supplier. Perimeter and meeting stile gasket by door / frame manufacturer.

Set: 24.0
Single Doors: A815A, A815B, ~~B841~~***(Add.1)***, C857, C861, C868

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Mortise Lock (passage)	ML2010 x PSA	626	RU
1	Door Stop	406	US32D	RO
3	Silencer	608		RO

Set: 25.0
Single Doors: A805, A806

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Mortise Lock (passage)	ML2010 x PSA	626	RU
1	Threshold	271A x LAR MSES25SS		
1	Door Bottom	434ARL x LAR		PE
1	Sound Gasket	350CSR (Head & Jambs)		PE
1	Door Stop	406	US32D	RO

Set: 26.0
Single Doors: B851

1	Continuous Hinge	MCK-12HD x LAR	CL	MK
2	Door Pull	BF169 BTB	US32D	RO
1	Closer	J8501	689	NO

Notes: Above supplied by Finish Hardware supplier, Installation by Aluminum Door supplier. Perimeter and meeting stile gasket by door / frame manufacturer.

Set: 27.0
Single Doors: ***A813, B849(Add.1)***, C864A, C864C

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Mortise Lock (classroom)	ML2055 x PSA x LC	626	RU
1	Cylinder	1040 Mortise as req.	626	RU
1	Core Only	Final Core by Owner	626	BE
1	Surface Closer	8501	689	NO
1	Door Stop	406	US32D	RO
3	Silencer	608		RO

Set: 28.0
Single Doors: C862, 302Q1, A802

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Electric Strike	1006 x KM x LBM	630	HE
1	Mortise Lock (storeroom)	ML2057 x PSA x LC	626	RU
1	Cylinder	1040 Mortise as req.	626	RU
1	Core Only	Final Core by Owner	626	BE
1	Closer	8501	689	NO
1	Door Stop	406	US32D	RO
3	Silencer	608		RO
1	Door Contact	DPS-M-GY	Gray	SU

Notes: Above supplied by Finish Hardware supplier, Installation by Finish Carpenter, Access Control Contractor and Electrical Contractor. Electronic opening to operate as follows: Outside, Wall mounted Card Reader signals power supply to release electric strike allowing entry. Inside, free egress at all times by mortise lock. Key override. 24volt central power supply provided by owner/card access provider.

Set: 29.0
Single Doors: 302H1, A808, A812, A816A, A816B, A821A, A821B, B836A, B874, 3001

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Mortise Lock (classroom)	ML2052 x PSA x LC	626	RU
2	Cylinder	1040 Mortise as req.	626	RU
2	Core Only	Final Core by Owner	626	BE
1	Surface Closer	8501	689	NO
1	Kick Plate	K1050 10" x 2 " LDW 4BE	US32D	RO
1	Door Stop	406 as req.	US32D	RO
3	Silencer	608		RO

Set: 34.0
Single Doors: 304B1, 306B1

3	Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Push Plate	70C	US32D	RO
1	Pull Plate	110x70C	US32D	RO
1	Surface Closer	CLP8501	689	NO
1	Kick Plate	K1050 10" x 2 " LDW 4BE	US32D	RO
3	Silencer	608		RO

Set: 35.0
Single Doors: 302H5, 304B2, 306B2, A804A, A810, A811, B842, B846A, C858A, C860, C863, C864B, C867A

3	Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Mortise Lock (office)	ML2051 x PSA x LC	626	RU
1	Cylinder	1040 Mortise as req.	626	RU
1	Core Only	Final Core by Owner	626	BE
1	Surface Closer	8501	689	NO
1	Kick Plate	K1050 10" x 2 " LDW 4BE	US32D	RO
1	Gasketing	S88D (Head & Jambs)		PE
1	Door Bottom	234APK x LAR		PE

Set: 36.0
Single Doors: ~~A813~~, ***B841(Add.1)***

1	Continuous Hinge	MCK-12HD x LAR	CL	MK
1	Mortise Deadlock	MS1850S	628	AD
1	Thumb Turn Cylinder	4066	628	AD
1	Mortise Cylinder	1040-114-A03	626	BE
1	Core Only	Final Core by Owner	626	BE
2	Door Pull	BF169 BTB	US32D	RO
1	Surface Closer	J8501	689	NO

Notes: Above supplied by Finish Hardware supplier, Installation by Aluminum Door supplier. Perimeter and meeting stile gasket by door / frame manufacturer.

Set: 37.0
Single Doors: 302E1, 302R1

1	Mortise Lock (storeroom)	ML2057 x PSA x LC	626	RU
1	Cylinder	1040 Mortise as req.	626	RU
1	Core Only	Final Core by Owner	626	BE
1	Surface Closer	8501	689	NO

Notes: Existing Door, Reuse all other hardware.

SECTION 099113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes surface preparation and the application of paint systems on the following exterior substrates:

1. Hollow metal doors and frames
2. Exposed mechanical piping and ductwork
3. Unfinished materials as indicated on drawings
4. Exposed unfinished electrical equipment
5. ***New and previously coated masonry surfaces (Add.1)***

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For each finish and for each color and texture required.

1.3 QUALITY ASSURANCE

A. MPI Standards:

1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.

1.4 EXTRA MATERIALS

A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.

1. Quantity: Furnish an additional 5 percent, but not less than 1 gal. of each material and color applied.

PART 2 - PRODUCTS

2.1 PAINT, GENERAL

A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.

2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. Colors: As selected by Architect from manufacturer's full range.

2.2 PRIMERS/SEALERS

A. Alkali-Resistant Primer: MPI #3.

1. VOC Content: E Range of E1 or greater type.

B. Bonding Primer (Water Based): MPI #17.

1. VOC Content: E Range of E1or greater type.

C. Bonding Primer (Solvent Based): MPI #69.

1. VOC Content: E Range of E1or greater type.

2.3 METAL PRIMERS

A. Alkyd Anticorrosive Metal Primer: MPI #79.

1. VOC Content: E Range of E1 or greater type.

B. Quick-Drying Alkyd Metal Primer: MPI #76.

1. VOC Content: E Range of E1or greater type.

2.4 EXTERIOR ALKYD PAINTS

A. Exterior Alkyd Enamel (Flat): MPI #8 (Gloss Level 1).

1. VOC Content: E Range of E1.

B. Exterior Alkyd Enamel (Semigloss): MPI #94 (Gloss Level 5).

1. VOC Content: E Range of E1 or greater type.

C. Exterior Alkyd Enamel (Gloss): MPI #9 (Gloss Level 6).

1. VOC Content: E Range of E1 or greater type.

2.5 QUICK-DRYING ENAMELS

A. Quick-Drying Enamel (Semigloss): MPI #81 (Gloss Level 5).

1. VOC Content: E Range of E1 or greater type.

B. Quick-Drying Enamel (High Gloss): MPI #96 (Gloss Level 7).

1. VOC Content: E Range of E1 or greater type.

2.6 MASONRY FILLER/PRIMER (Add.1)

A. High-build 100 % Acrylic: MPI #3.

1. Volume Solids: 24.0% or greater.

2. Dry Film Thickness: 1.0 mil/coat.

3. VOC Content: 97 gms./l..

2.7 EXTERIOR MASONRY PAINT (Add.1)

A. 100% Acrylic (Low Lustre): MPI #15 (Gloss Level 10-15).

1. Volume Solids: 43.0% or greater.

2. Dry Film Thickness: 2.3mil/coat.

3. VOC Content: 50 gms./l..

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.

B. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

C. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.

D. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION AND APPLICATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

B. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.

C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

D. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

E. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.3 EXTERIOR PAINTING SCHEDULE

A. Steel Substrates:

1. Quick-Drying Enamel System: MPI EXT 5.1A.

a. Prime Coat: Quick-drying alkyd metal primer.
b. Intermediate Coat: Quick-drying enamel matching topcoat.
c. Topcoat: Quick-drying enamel (semigloss).

2. Alkyd System: MPI EXT 5.3B.

a. Prime Coat: Cementitious galvanized-metal primer.
b. Intermediate Coat: Exterior alkyd enamel matching topcoat.
c. Topcoat: Exterior alkyd enamel (semigloss).

B. Exterior Masonry & Stucco: (Add.1)

1. 100% Acrylic System:

a. Prime Coat: High-build Masonry Filler/Primer.
b. Intermediate Coat: Quick-drying Masonry Paint matching topcoat.
c. Topcoat: Quick-drying tinted Masonry Paint (low lustre).

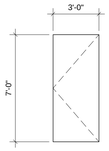
END OF SECTION 099113

DOOR AND FRAME SCHEDULE															
			DOOR		SIZE WIDTH			FRAME							
										DETAILS					
AREA	OPENING NUMBER	DOOR & FRAME U.L. RATING	DOOR TYPE	DOOR MATERIAL	LEAF 1	LEAF 2	HEIGHT	FRAME TYPE	FRAME MATERIAL	HEAD	JAMB	SILL	HARDWARE SET	SPECIAL DETAIL	NOTE
AW	3031		PHG	EXT. H.M.	3' - 0"	3' - 0"	7' - 0"	L	H.M.	5/AA6.2	10/AA6.2	11/AA6.3	3.0		1, 2
AW	303A1	45 MIN.	F	H.M.	3' - 0"		7' - 0"	B	H.M.	1/AA6.2	6/AA6.2	11/AA6.2	22.0		
AW	304B1		F	H.M.	3' - 0"		7' - 0"	B	H.M.	1/AA6.3	6/AA6.3	11/AA6.3	34.0		
AW	304B2		HG	H.M.	3' - 0"		7' - 0"	B	H.M.	1/AA6.2	6/AA6.2	11/AA6.2	35.0		
AW	306B1		F	H.M.	3' - 0"		7' - 0"	B	H.M.	1/AA6.3	6AA6.3	11/AA6.3	34.0		
AW	306B2		HG	H.M.	3' - 0"		7' - 0"	B	H.M.	1/AA6.2	6/AA6.2	11/AA6.2	35.0		
AW	3091		HGS	H.M.	3' - 0"	2' - 4" SIDELITE	7' - 0"	M	H.M.	1/AA6.3	6/AA6.3	11/AA6.3	40.0		10
AW	3092		OHR	STL.	14' - 0"		8' - 0"	NONE	NONE	NONE	NONE	NONE	42.0		1
AR	2021		HG	H.M.	3' - 0"		7' - 0"	N	H.M.	2/AA6.3	7/AA6.3	12/AA6.3	10.0		

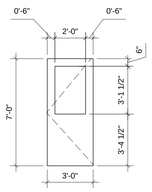
NOTES:

1. WITH DOOR CONTACT
2. WITH CARD READER/ KEYPAD
3. ADD DEADBOLT
4. TO BE PROVIDED BY GREENHOUSE MANUFACTURER
5. MANUAL OPERATION
6. EXISTG. TO REMAIN
7. UNCHANGED
8. SECTIONAL OVERHEAD TRACK AND HDWR
9. 14" SIDELIGHT
10. BLIND TRANSOM TO MATCH DOOR PANEL
11. ELECTRO-MAGNETIC DOOR HOLD-OPEN

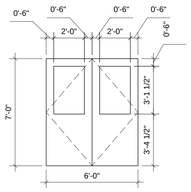
DOOR TYPES:



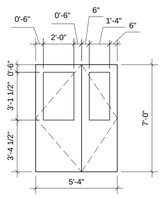
DOOR TYPE F



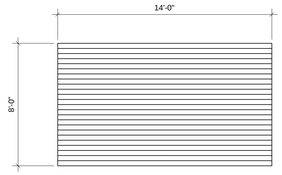
DOOR TYPE HG



DOOR TYPE PHG

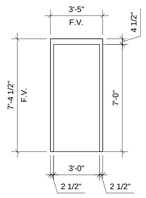


DOOR TYPE HGS

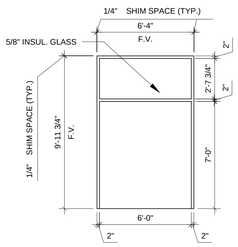


DOOR TYPE OHR

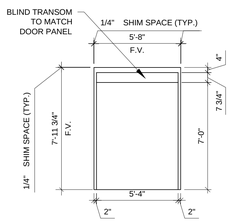
FRAME TYPES:



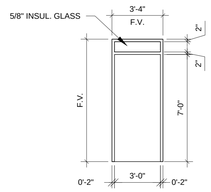
FRAME TYPE B



FRAME TYPE L

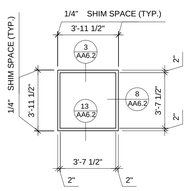


FRAME TYPE M

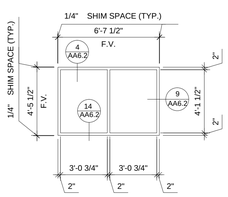


FRAME TYPE N

ALUMINUM ASSEMBLY TYPES:



ASSEMBLY AA



ASSEMBLY AB

NOTE:

1. FIELD VERIFY ALL EXISTING MASONRY OPENINGS.

FINAL DRAWINGS
FOR BIIDDING

ROOM SCHEDULE								
AREA	ROOM NUMBER	NAME	FLOOR FINISH	BASE	WALL FINISH	CEILING FINISH	CEILING HEIGHT	NOTES
AW	303	WEIGHT / CARDIO ROOM	RUBBER FLOORING	6" RUBBER	PAINT CMU	SAP 1	9' - 0"	1
AW	303A	STORAGE	EXISTG. TO REMAIN	NONE	PAINT CMU	SAP 1	9' - 0"	
AW	304	MEN'S LOCKER ROOM	RESINOUS 3	INTEGRAL COVED BASE	PAINT CMU	SAP 1	9' - 0"	
AW	304A	MEN'S SHOWER / BATHROOM	RESINOUS 3	SEE SHEET AA1.4.1	EXISTG. TO REMAIN	SAP 3	9' - 0"	2, 3
AW	304B	OFFICE	RESINOUS 3	4" RUBBER	PAINT CMU	SAP 1	9' - 0"	
AW	304C	MEN'S STAFF SHOWER / BATH	RESINOUS 3	INTEGRAL COVED BASE	PAINT CMU	SAP 3	9' - 0"	3, 4
AW	304D	MEN'S STAFF LOCKER	RESINOUS 3	4" RUBBER	PAINT CMU	SAP 1	9' - 0"	
AW	305	CUSTODIAN STORAGE	EXISTG. TO REMAIN	EXISTG. TO REMAIN	EXISTG. TO REMAIN	REPAINT EXISTG.		
AW	306	WOMEN'S LOCKER ROOM	RESINOUS 3	INTEGRAL COVED BASE	PAINT CMU	SAP 1	9' - 0"	
AW	306A	WOMEN'S SHOWER / BATHROOM	RESINOUS 3	SEE SHEET AA1.4.1	EXISTG. TO REMAIN	SAP 3	9' - 0"	2, 3
AW	306B	OFFICE	RESINOUS 3	4" RUBBER	PAINT CMU	SAP 1	9' - 0"	
AW	306C	WOMEN'S STAFF SHOWER / BATH	RESINOUS 3	INTEGRAL COVED BASE	PAINT CMU	SAP 3	9' - 0"	3, 4
AW	306D	WOMEN'S STAFF LOCKER	RESINOUS 3	4" RUBBER	PAINT CMU	SAP 1	9' - 0"	
AC	303B	CORRIDOR	EXISTG. TO REMAIN	EXISTG. TO REMAIN	EXISTG. TO REMAIN	SAP 1	EXISTING	
AG	320	GYM	REFINISH EXISTG.	EXISTG. TO REMAIN	EXISTG. TO REMAIN	REPAINT EXISTG.		
AR	202	RADIO / TV	RESINOUS 2	4" RUBBER	PAINT EXISTG. CMU	SAP 1	9' - 0"	
AR	204	FOREIGN LANGUAGE	EXISTG. TO REMAIN	EXISTG. TO REMAIN	EXISTG. TO REMAIN	SAP 1	EXISTING	
AR	206	SCIENCE CLASSROOM	EXISTG. TO REMAIN	EXISTG. TO REMAIN	EXISTG. TO REMAIN	SAP 1	EXISTING	
AM	201	MEDICAL ASSISTING	EXISTG. TO REMAIN	EXISTG. TO REMAIN	EXISTG. TO REMAIN	SAP 1	EXISTING	
AM	203	MEDICAL ASSISTING	EXISTG. TO REMAIN	EXISTG. TO REMAIN	EXISTG. TO REMAIN	SAP 1	EXISTING	
AM	205	NURSING ASSISTING	EXISTG. TO REMAIN	EXISTG. TO REMAIN	EXISTG. TO REMAIN	SAP 1	EXISTING	

NOTE:

1. NO CEILING IN WEST PORTION OF THIS ROOM. SEE AA1.3.1
2. PROVIDE NEW 5/8" MOISTURE RESISTANT GYP. BD. CEILING, PAINTED, IN SHOWERS.
3. EXISTG. CERAMIC FLOOR TILE TO REMAIN IN SHOWERS.
4. EXISTG. GWB CEILINGS IN SHOWERS TO REMAIN.

NO.	REV. DOOR 3092	REVISION	DATE
1			11/21/2012

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Architects
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Mechanicsburg, Pennsylvania 17055
phone: (717) 458-0272 - fax: (717) 458-0047

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550 S. DUPONT BLVD, SUITE E - MILFORD, DE 19963
Office - 302-491-6047 Fax - 302-491-6048

POLYTECH HIGH SCHOOL
RENOVATIONS AND ADDITIONS
POLYTECH SCHOOL DISTRICT
823 WALNUT SHADE ROAD WOODSIDE, DELAWARE

EXISTING AREAS
ROOM FINISH,
DOOR & ALUM.
ASSY.
SCHEDULES

SCALE:	As indicated
DESIGN BY:	MDD
DRAWN BY:	DGT
CHECKED BY:	PEP
DALLC FILE:	011-032
DATE:	8/15/2012

AA6.1

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FINAL DRAWINGS
FOR BIDDING

DOOR AND FRAME SCHEDULE

OPENING NUMBER	DOOR & FRAME U.L. RATING	DOOR TYPE	DOOR MATERIAL	DOOR SIZE WIDTH LEAF 1	DOOR SIZE WIDTH LEAF 2	DOOR SIZE HEIGHT	FRAME TYPE	FRAME MATERIALS	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	HARDWARE SET	SPECIAL DETAIL	NOTES
1030A		PF	EXT. H.M.	3' - 0"	3' - 0"	7' - 0"	G	HOLLOW METAL	1 / AB6.2	6 / AB6.2	11 / AB6.2	13.0		
1030B		PF	EXT. H.M.	3' - 0"	3' - 0"	7' - 0"	G	HOLLOW METAL	1 / AB6.2	6 / AB6.2	11 / AB6.2	13.0		
1030C		F	EXT. H.M.	3' - 0"		7' - 0"	K	HOLLOW METAL	1 / AB6.2	6 / AB6.2	11 / AB6.2	14.0		
1030D		PFG	ALUMINUM & GLASS	3' - 0"	3' - 0"	7' - 0"	ALUM. ASSY. BD	ALUMINUM	3 / AB6.2	8 / AB6.2	15 / AB6.2	2.0		
1030E		PFG	ALUMINUM & GLASS	3' - 0"	3' - 0"	7' - 0"	ALUM. ASSY. BD	ALUMINUM	3 / AB6.2	8 / AB6.2	15 / AB6.2	1.0		1, 2
1031A		CAGE	WD. & WIRE MESH	2' - 0"	2' - 0"	7' - 0"	NONE					- - -		12
1031B		PF	EXT. H.M.	3' - 0"	3' - 0"	7' - 0"	G	HOLLOW METAL	1 / AB6.2	6 / AB6.2	11 / AB6.2	16.0		
1031C	45 MIN.	PF	H.M.	3' - 0"	3' - 0"	7' - 0"	G	HOLLOW METAL	1 / AB6.2	6 / AB6.2	11 / AB6.2	20.0		
1032A	45 MIN.	PHG	H.M.	3' - 0"	3' - 0"	7' - 0"	G	HOLLOW METAL	1 / AB6.2	6 / AB6.2	11 / AB6.2	18.0		
1032B	45 MIN.	PHG	H.M.	3' - 0"	3' - 0"	7' - 0"	G	HOLLOW METAL	1 / AB6.2	6 / AB6.2	11 / AB6.2	18.0		
1032C	90 MIN.	PNL90	H.M.	3' - 0"	3' - 0"	7' - 0"	L	HOLLOW METAL	2 / AB6.2	7 / AB6.2	12 / AB6.2	19.0		11
1034A		PFG	ALUMINUM & GLASS	3' - 0"	3' - 0"	7' - 0"	ALUM. ASSY. BE	ALUMINUM	4 / AB6.2	9 / AB6.2		6.0		
1034B		PFG	ALUMINUM & GLASS	3' - 0"	3' - 0"	7' - 0"	ALUM. ASSY BE	ALUMINUM	4 / AB6.2	9 / AB6.2		6.0		

NOTES:

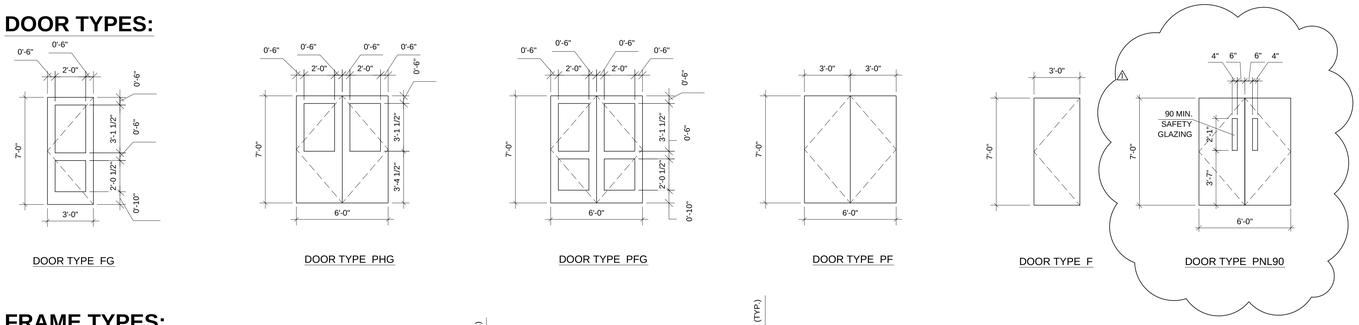
1. WITH DOOR CONTACT
2. WITH CARD READER/ KEYPAD
3. ADD DEADBOLT
4. TO BE PROVIDED BY GREENHOUSE MANUFACTURER
5. MANUAL OPERATION
6. EXISTG. DOOR TO RECEIVE NEW FIN. HARDWARE
7. UNCHANGED
8. SECTIONAL OVERHEAD TRACK AND HDWR, ELEC. OPERATED
9. 14" SIDELIGHTS
10. BLIND TRANSOM TO MATCH DOOR PANEL
11. ~~ELECTROMAGNETIC HOLD-OPEN~~
12. ROUGH HARDWARE ONLY; 6 STRAP HINGES, 1 PADLOCK HASP. PADLOCK BY OWNER.

ROOM SCHEDULE

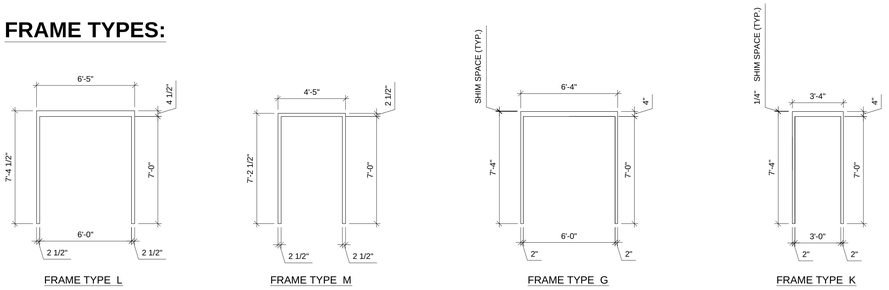
ROOM NUMBER	NAME	FLOOR FINISH	BASE	WALL	CEILING	CEILING HEIGHT	COMMENTS
1030	MULTI-PURPOSE ROOM	SPORT COURT	8" SPORT COURT	PAINTED CMU	EXPOSED, PAINTED		1
1031	MP STORAGE	PAINTED CONCRETE	NONE	PAINTED CMU	EXPOSED, PAINTED		
1032	MP LOBBY	RESINOUS-3	4" INTEGRAL	PAINTED CMU	SAP 1	9' - 0"	
1033	STORAGE CAGE	PAINTED CONCRETE	NONE	PAINTED CMU	EXPOSED, PAINTED		
1034	VESTIBULE	RESINOUS-3	4" INTEGRAL	PAINTED CMU	SAP 1	9' - 0"	

NOTE:
1. SEE AB1.4 FOR COURT STRIPING

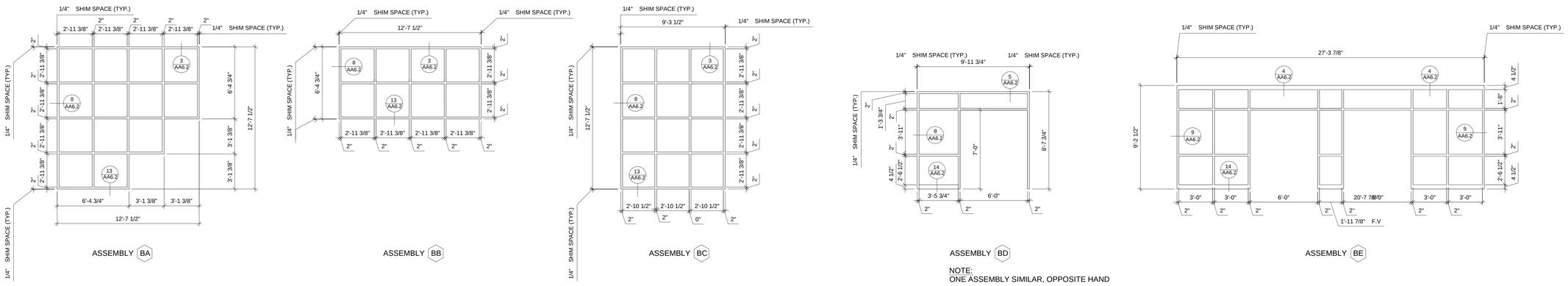
DOOR TYPES:



FRAME TYPES:



ALUMINUM ASSEMBLY TYPES:



NOTE:
ONE ASSEMBLY SIMILAR, OPPOSITE HAND

NO.	REV. DR. SCHED., ADD DR. 1031A, TYPE PNL90	DATE
1		11/21/2012

POLYTECH HIGH SCHOOL
RENOVATIONS AND ADDITIONS
POLYTECH SCHOOL DISTRICT
823 WALNUT SHADE ROAD WOODSIDE, DELAWARE

MULTIPURPOSE ROOM FINISH, DOOR AND WINDOW SCHEDULES

SCALE:	1/4" = 1'-0"
DESIGN BY:	MDD
DRAWN BY:	DGT
CHECKED BY:	PEP
DALLC FILE:	011-032
DATE:	8/15/2012

AB6.1

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FINAL DRAWINGS
FOR BIDDING

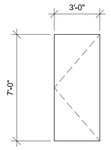
DOOR AND FRAME SCHEDULE

OPENING NUMBER	DOOR & FRAME U.L. RATING	DOOR: DOOR TYPE	DOOR: DOOR MATERIAL	SIZE: WIDTH: LEAF 1	SIZE: WIDTH: LEAF 2	HEIGHT	FRAME: FRAME TYPE	FRAME: FRAME MATERIAL	FRAME: DETAILS: HEAD	FRAME: DETAILS: JAMB	FRAME: DETAILS: SILL	HARDWARE SET	GLAZING	NOTE
FIRST FLOOR														
300A1		F	EXT. H.M.	3' - 0"		7' - 0"	B	H.M.	3 / AC6.3 SIM.	5 / AC6.3	9 / AC6.3	15.0		
300B1		PFG	ALUMINUM & GLASS	3' - 0"	3' - 0"	7' - 0"	E	ALUM.	1 / AC6.6	5 / AC6.6		6.0	1" TEMP. INSUL.	
302A1		PFG	ALUMINUM & GLASS	3' - 0"	3' - 0"	7' - 0"	ALUM. ASSY. CA	ALUM.	3 / AC6.5	7 / AC6.5	12 / AC6.3	1.0	1" TEMP. INSUL.	
302B1		PF	EXT. H.M.	3' - 0"	3' - 0"	7' - 0"	F	H.M.	2 / AC6.4	5 / AC6.3	9 / AC6.3	13.0		
302B2		HG	ALUMINUM & GLASS	3' - 0"		7' - 0"	C	ALUM.	2 / AC6.5	6 / AC6.3	11 / AC6.4	30.0	5/8" TEMP. INSUL.	
302C1		HG	ALUMINUM & GLASS	3' - 0"		7' - 0"	B	ALUM.	3 / AC6.4	7 / AC6.4	11 / AC6.4	30.0	5/8" TEMP. INSUL.	
302C2		F	H.M.	2' - 10"		7' - 0"	H	H.M.	4 / AC6.5	8 / AC6.3		33.0		
302C3		F	H.M.	2' - 10"		7' - 0"	H	H.M.	4 / AC6.5	8 / AC6.3		33.0		
302E1		EXISTING										37.0		6
302F1		EXISTING												7
302H1		F	H.M.	3' - 0"		7' - 0"	D	H.M.	1 / AC6.4	5 / AC6.4		29.0		9
302H2	45 MIN	F	H.M.	3' - 0"		7' - 0"	J	H.M.	1 / AC6.4	5 / AC6.4		22.0		
302H3	45 MIN	F	H.M.	3' - 0"		7' - 0"	J	H.M.	1 / AC6.4	5 / AC6.4		22.0		
302H4		HG	EXT. H.M.	3' - 0"		7' - 0"	B	H.M.	3 / AC6.3	7 / AC6.3	9 / AC6.3	9.0	5/8" TEMP. INSUL.	
302H5		HG	H.M.	3' - 0"		7' - 0"	J	H.M.	1 / AC6.4	5 / AC6.4		35.0	5/8" TEMP. INSUL.	
302H6	45 MIN	F	H.M.	3' - 0"		7' - 0"	J	H.M.	1 / AC6.4	5 / AC6.4		22.0		
302K1		OHS	INSUL. STL.	11' - 6"		10' - 0"	NONE		4 / AC6.3	EXISTING		42.0 △1		8
302L1		PHG	ALUMINUM & GLASS	3' - 0"	3' - 0"	7' - 0"	GHSE	ALUM.				△2		4
302L2		PHG	ALUMINUM & GLASS	3' - 0"	3' - 0"	7' - 0"	GHSE	ALUM.						4
302M1		F	EXT. H.M.	3' - 0"		7' - 0"	A	H.M.	1 / AC6.3	5 / AC6.3	9 / AC6.3	15.0		
302P1		PHG	ALUMINUM & GLASS	3' - 0"	3' - 0"	7' - 0"	G	ALUM.	1 / AC6.5	5 / AC6.5	11 / AC6.4	12.0	5/8" TEMP. INSUL.	
302P2		HG	EXT. H.M.	3' - 0"		7' - 0"	B	H.M.	4 / AC6.4	6 / AC6.4	11 / AC6.3	10.0	5/8" TEMP. INSUL.	
302Q1		F	H.M.	3' - 0"		7' - 0"	J	H.M.	1 / AC6.4	5 / AC6.4		28.0		
302R1	45 MIN	EXISTING										37.0		6
3001		F	H.M.	3' - 0"		7' - 0"	D	H.M.	1 / AC6.4	5 / AC6.4		29.0		9
3002		HG	EXT. H.M.	3' - 0"		7' - 0"	B	H.M.	3 / AC6.3 SIM	5 / AC6.3	9 / AC6.3	10.0	5/8" TEMP. INSUL.	

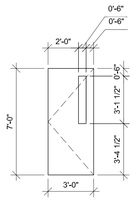
NOTES:

1. WITH DOOR CONTACT
2. WITH CARD READER/ KEYPAD
3. ADD DEADBOLT
4. TO BE PROVIDED BY GREENHOUSE MANUFACTURER
5. MANUAL OPERATION
6. EXISTG. DOOR TO RECEIVE NEW FIN. HARDWARE
7. UNCHANGED
8. SECTIONAL OVERHEAD TRACK AND HDWR, ELEC. OPERATED
9. 14" SIDELIGHTS
10. BLIND TRANSOM TO MATCH DOOR PANEL
11. ELECTRO-MAGNETIC HOLD-OPEN

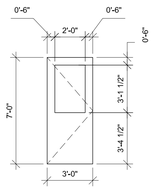
DOOR TYPES:



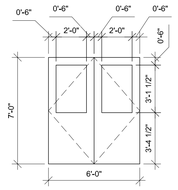
DOOR TYPE F



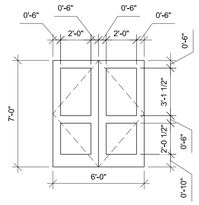
DOOR TYPE NL



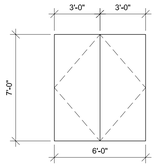
DOOR TYPE HG



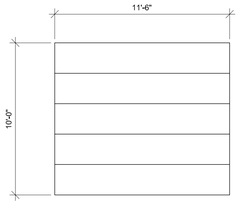
DOOR TYPE PHG



DOOR TYPE PFG

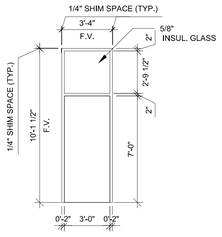


DOOR TYPE PF

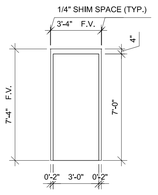


DOOR TYPE OH

FRAME TYPES:



FRAME TYPE A



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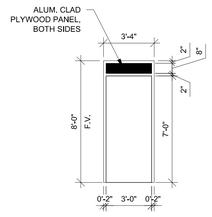
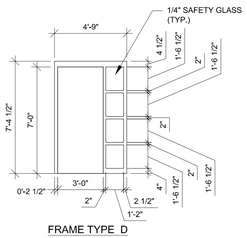
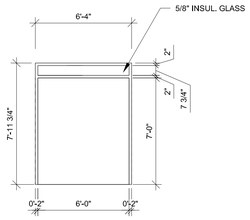


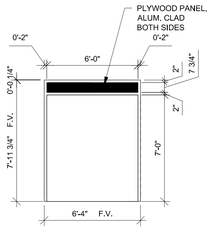
FRAME TYPE C



FRAME TYPE D



FRAME TYPE E



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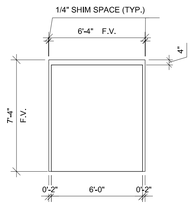
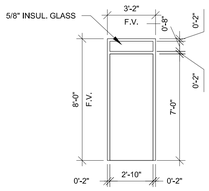
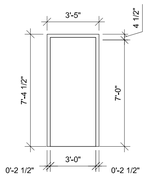


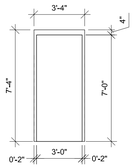
FRAME TYPE G



FRAME TYPE H



FRAME TYPE J



FRAME TYPE K

NO.	REVISION	DATE
1	REV. DOOR 302L1 ADDENDUM NO. 1	29 NOV 12
1	REV. DOOR 302K1 ADDENDUM NO. 1	29 NOV 12

POLYTECH HIGH SCHOOL
RENOVATIONS AND ADDITIONS
POLYTECH SCHOOL DISTRICT
823 WALNUT SHADE ROAD WOODSIDE, DELAWARE

ENVIRONMENTAL SCIENCES

DOOR AND FRAME ELEVATIONS AND SCHEDULES

SCALE:	As indicated
DESIGN BY:	MDD
DRAWN BY:	DGT
CHECKED BY:	PEP
DALLC FILE:	011-032
DATE:	8/15/2012

AC6.2

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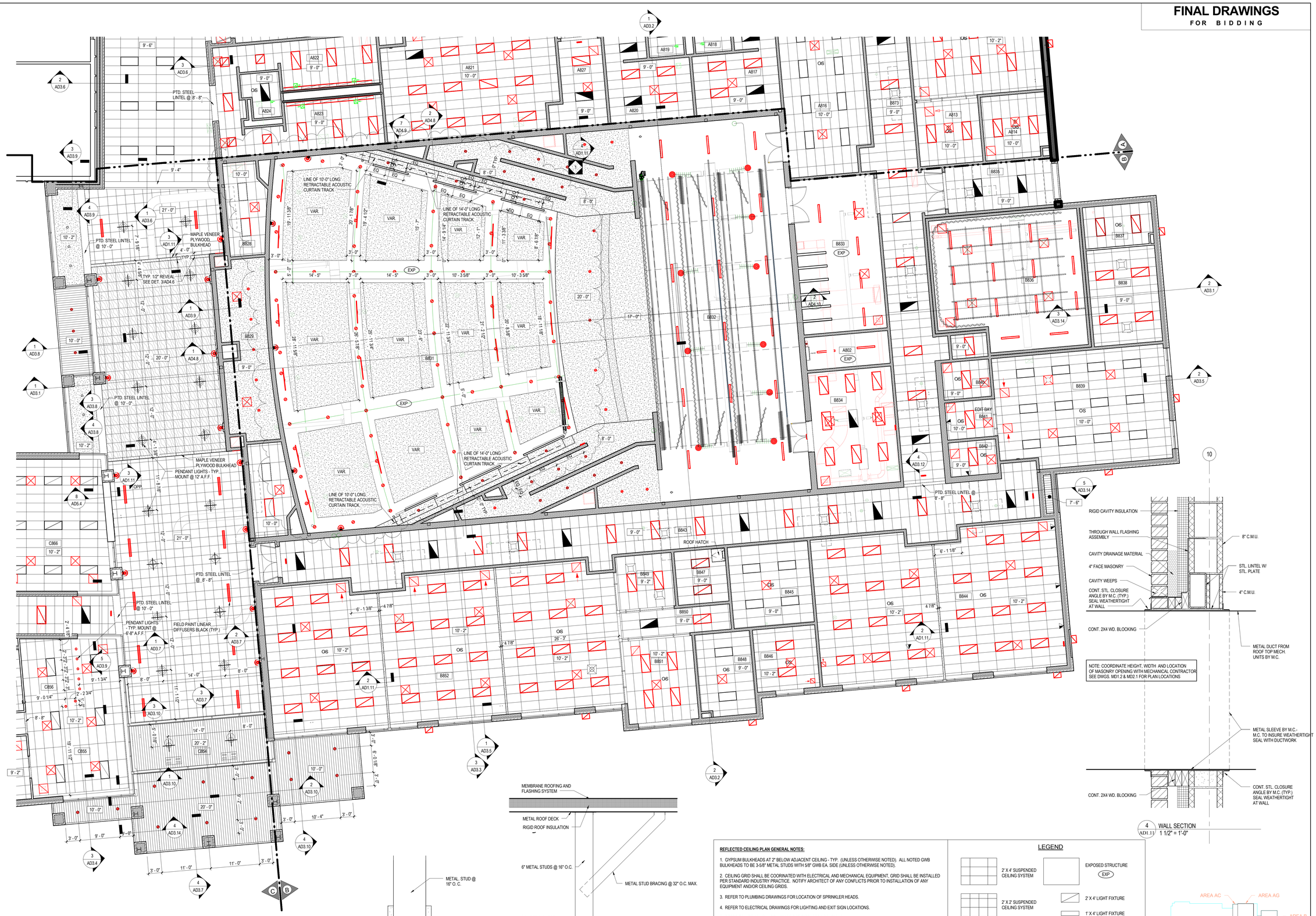
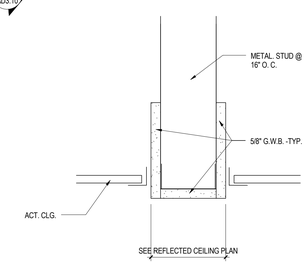
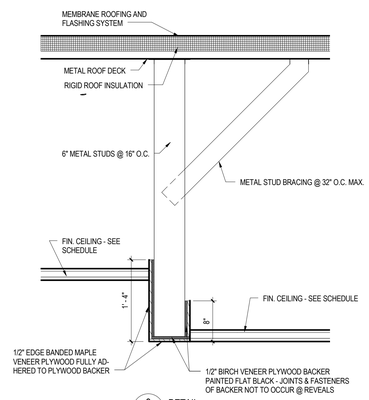
FINAL DRAWINGS
FOR BIDDING



1 AD1.11 REFLECTED CEILING PLAN - AREA B
1/8" = 1'-0"



2 AD1.11 BULKHEAD DETAIL
3" = 1'-0"



3 AD1.11 DETAIL
1" = 1'-0"

NOTE: COORDINATE HEIGHT, WIDTH AND LOCATION OF MASONRY OPENING WITH MECHANICAL CONTRACTOR SEE DWGS. MD1.2 & MD2.1 FOR PLAN LOCATIONS

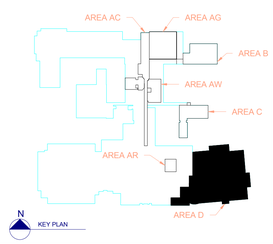
4 AD1.11 WALL SECTION
1 1/2" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES:

1. GYPSUM BULKHEADS AT 2" BELOW ADJACENT CEILING - TYP. (UNLESS OTHERWISE NOTED). ALL NOTED GWB BULKHEADS TO BE 3-5/8" METAL STUDS WITH 5/8" GWB EA. SIDE (UNLESS OTHERWISE NOTED).
2. CEILING GRID SHALL BE COORINATED WITH ELECTRICAL AND MECHANICAL EQUIPMENT, GRID SHALL BE INSTALLED PER STANDARD INDUSTRY PRACTICE. NOTIFY ARCHITECT OF ANY CONFLICTS PRIOR TO INSTALLATION OF ANY EQUIPMENT AND/OR CEILING GRIDS.
3. REFER TO PLUMBING DRAWINGS FOR LOCATION OF SPRINKLER HEADS.
4. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING AND EXIT SIGN LOCATIONS.
5. REFER TO MECHANICAL DRAWINGS FOR DIFFUSER LOCATIONS.
6. THIS DRAWING INDICATES GENERAL ARRANGEMENTS OF LIGHTING FIXTURES, REFER TO ELECTRICAL AND HVAC DRAWINGS FOR DIFFUSERS AND LIGHTINGS FIXTURE THAT ARE NOT SHOWN.
7. FIXTURES NOT SHOWN AT EXPOSED STRUCTURES - SEE ELECTRICAL DRAWINGS FOR FIXTURE TYPE.
8. REFER TO ROOM FINISH SCHEDULE FOR FINAL VERIFICATION OF ALL FINISHES AND/OR FURTHER DETAILED EXPLINATION OF FINISH.
9. WHERE HEAT PUMPS ARE ABOVE AN ACOUSTICAL CEILING, GRID BELOW TO BE REMOVABLE TO PROVIDE ACCCES TO HEAT PUMPS. WHERE HEAT PUMPS ARE LOCATED ABOVE A GYPSUM BULKHEAD PROVIDE ACCESS PANELS, SEE SPECIFICATIONS.
10. GC TO NOTIFY ARCHITECT OF FINAL CEILING HEIGHTS PRIOR TO INSTALLATION. CEILING HEIGHT MAY VARY DUE TO ACTUAL FIELD CONDITIONS AND HVAC COORDINATION.
12. EXTERIOR LIGHTING TO BE COORDINATED WITH ELECTRICAL DRAWINGS.

LEGEND

- 2' X 4' SUSPENDED CEILING SYSTEM
- 2' X 2' SUSPENDED CEILING SYSTEM
- GYPSUM WALLBOARD
- LINEAR METAL SOFFIT
- WOOD CEILING SYSTEM
- EXPOSED STRUCTURE (EXP)
- 2' X 4' LIGHT FIXTURE
- 1' X 4' LIGHT FIXTURE
- 1' X 8' LIGHT FIXTURE
- 2' X 2' LIGHT FIXTURE
- SEE MEP DRAWINGS
- SEE MEP DRAWINGS
- RECESSED DOWN LIGHT
- PENDANT LIGHT FIXTURES



NO.	REVISION	DATE
1	Addendum 1	11/15/12

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550 S. DUPONT BLVD. SUITE E - MILFORD, DE 19963
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POLYTECH HIGH SCHOOL
RENOVATIONS AND ADDITIONS
POLYTECH SCHOOL DISTRICT
832 WALNUT SHADE ROAD WOODSIDE, DELAWARE

BUILDING AREA D

REFLECTED CEILING PLAN AERA 'B'

SCALE:	As indicated
DESIGN BY:	Designer
DRAWN BY:	Author
CHECKED BY:	Checker
DALLC FILE:	2477
DATE:	8/15/2012

AD1.11

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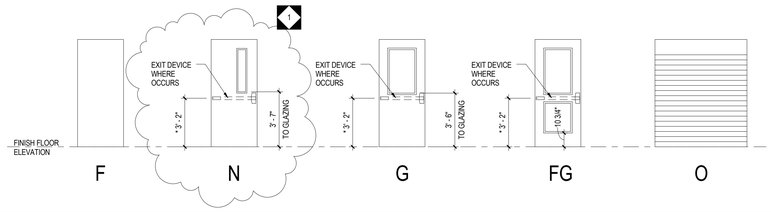
FINAL DRAWINGS
FOR BIDDING

DOOR AND FRAME SCHEDULE

OPENING NUMBER	DOOR & FRAME U.L. RATING	DOOR TYPE	DOOR MATERIAL	DOOR SIZE WIDTH LEAF 1	DOOR SIZE WIDTH LEAF 2	DOOR SIZE HEIGHT	FRAME TYPE	FRAME MATERIAL	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	HARDWARE SET	SPECIAL DETAIL	REMARKS
FIN. FLOOR														
A801A		F	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 20.0		
A801B		F	HM	3' - 0"	3' - 0"	7' - 2"	H1	HM	19/AD6.6	20/AD6.6	-	SET 16.0		
A802	45 MIN.	F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 28.0		
A803		G	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		
A804A		G	WD	3' - 0"		7' - 2"	H1	HM	6/AD6.6	13/AD6.6	-	SET 35.0		
A804B							H4	HM	1/AD6.6	8/AD6.6	15/AD6.6			
A804C							H9	HM	6/AD6.6	13/AD6.6	17/AD6.6			
A805		G	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 25.0		
A806		G	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 25.0		
A807A		G	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 17.0		
A807B		F	HM	3' - 0"	3' - 0"	7' - 2"	H1	HM	19/AD6.6	20/AD6.6	-	SET 3.0		
A808		F	WD	3' - 0"		7' - 2"	H2	HM	1/AD6.6	8/AD6.6	-	SET 29.0		
A809A		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		
A809B		G	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		DUTCH DOOR WITH SHELF INTERIOR ROOM SIDE
A810		G	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 35.0		
A811		G	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 35.0		
A812		F	WD	3' - 0"		7' - 2"	H2	HM	1/AD6.6	8/AD6.6	-	SET 29.0		
A813		F	WD	3' - 0"		7' - 2"	H6	HM	3/AD6.6	8/AD6.6	21/AD6.6	SET 27.0		
A814		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		
A815A		G	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 24.0		
A815B		G	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 24.0		
A816A	45 MIN.	F	WD	3' - 0"		7' - 2"	H2	HM	1/AD6.6	8/AD6.6	-	SET 29.0		
A816B	45 MIN.	F	WD	3' - 0"		7' - 2"	H2	HM	1/AD6.6	8/AD6.6	-	SET 29.0		
A816C	45 MIN.	F	WD	3' - 4"	3' - 4"	8' - 0"	H1	HM	6/AD6.6	13/AD6.6	-	SET 20.1		
A817	45 MIN.	F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 31.0		
A818		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 33.0		
A819	45 MIN.	F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 33.0		
A820		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 31.0		
A821A		F	WD	3' - 0"		7' - 2"	H2	HM	1/AD6.6	8/AD6.6	-	SET 29.0		
A821B		F	WD	3' - 0"		7' - 2"	H2	HM	1/AD6.6	8/AD6.6	-	SET 29.0		
A824		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 33.0		
A825A		FG	ALUM	3' - 0"		7' - 2"	D1	ALUM	-	-	-	SET 4.0		
A825B		FG	ALUM	3' - 0"	3' - 0"	7' - 2"	D1	ALUM	-	-	-	SET 2.0		
A825C		FG	ALUM	3' - 0"		7' - 2"	D36	ALUM	-	-	-	SET 7.0		
A825D		FG	ALUM	3' - 0"	3' - 0"	7' - 2"	D36	ALUM			-	SET 6.0		
A826		F	WD	3' - 4"	3' - 4"	8' - 0"	H1	HM	4/AD6.6	11/AD6.6	-	SET 19.1		
A827		F	WD	4' - 0"	4' - 0"	8' - 0"	H1	HM	1/AD6.6	8/AD6.6	-	SET 19.1		
B828A		O	STL	8' - 0"		4' - 8"	-	STL	2/AD5.3	3/AD6.7	2/AD5.3	SET 42.0		
B828B		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		
B829A		F	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	7/AD6.6	14/AD6.6	-	SET 18.0		
B829B		F	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	7/AD6.6	14/AD6.6	-	SET 19.0		
B830A		O	STL	8' - 0"		4' - 8"	-	STL	2/AD5.3	3/AD6.7	2/AD5.3	SET 42.0		
B830B		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		
B832A	45 MIN	F	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	6/AD6.6	13/AD6.6	-	SET 17.0		
B832B	45 MIN	F	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	6/AD6.6	13/AD6.6	-	SET 17.0		
B833A	45 MIN.	F	WD	4' - 0"	4' - 0"	8' - 0"	H1	HM	6/AD6.6	13/AD6.6	-	SET 20.1		
B833B	45 MIN.	O	STL	8' - 0"		8' - 0"	-	STL	1/AD6.7	2/AD6.7	-	SET 42.0		
B834A	45 MIN.	F	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 20.0		
B834B	45 MIN.	F	WD	3' - 4"	3' - 4"	8' - 0"	H1	HM	6/AD6.6	13/AD6.6	-	SET 20.1		
B835A		F	WD	4' - 0"	4' - 0"	8' - 0"	H1	HM	1/AD6.6	8/AD6.6	-	SET 19.1		
B835B		O	STL	8' - 0"		8' - 0"	-	STL	33/AD6.6	34/AD6.6	-	SET 42.0		
B836A		G	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.7	8/AD6.6	-	SET 29.0		
B836B		F	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	25/AD6.6	26/AD6.6	-	SET 21.0		USE EXTERIOR WEATHER STRIPPING
B836C		F	WD	3' - 0"		7' - 2"	H1	HM	25/AD6.6	26/AD6.6	-	SET 38.0		
B836D		F	WD	3' - 0"		7' - 2"	H1	HM	25/AD6.6	26/AD6.6	-	SET 38.0		
B836E							H11	WD	4/AD6.7		5/AD6.7			
B836F							H11	WD	4/AD6.7		5/AD6.7			
B836G							H12	WD	4/AD6.7		5/AD6.7			
B837		F	WD	3' - 0"		7' - 2"	H1	HM	25/AD6.6	26/AD6.6	-	SET 39.0		
B838A		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		
B838B		F	WD	3' - 0"		7' - 2"	H1	HM	25/AD6.6	26/AD6.6	-	SET 39.0		
B838C							H3	HM	25/AD6.6	26/AD6.6	27/AD6.6			
B838D							H3	HM	25/AD6.6	26/AD6.6	27/AD6.6			
B839A		G	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 17.0		
B839B		F	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	25/AD6.6	26/AD6.6	-	SET 21.0		USE EXTERIOR WEATHER STRIPPING
B839C							H4	HM	25/AD6.6	26/AD6.6	27/AD6.6			
B839D							H4	HM	1/AD6.6	8/AD6.6	15/AD6.6			
B840		G	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		
B841		FG	ALUM	3' - 0"		7' - 2"	D38	ALUM	-	-	-	SET 36.0		
B842		G	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 35.0		
B843A		F	WD	3' - 4"	3' - 4"	8' - 0"	H1	HM	4/AD6.6	11/AD6.6	-	SET 19.1		
B843B		FG	ALUM	3' - 0"	3' - 0"	7' - 2"	D26	ALUM	-	-	-	SET 1.0		
B844A		F	WD	3' - 0"		7' - 2"	H2	HM	1/AD6.6	8/AD6.6	-	SET 41.0		WITH PANIC HARDWARE
B844B		F	WD	3' - 0"		7' - 2"	H2	HM	1/AD6.6	8/AD6.6	-	SET 41.0		WITH PANIC HARDWARE
B844C		F	HM	3' - 0"	3' - 0"	7' - 2"	H1	HM	19/AD6.6	20/AD6.6	-	SET 13.0		
B845A		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		
B845B		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		
B846A		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 35.0		
B846B							H3	HM	1/AD6.6	8/AD6.6	15/AD6.6			
B847		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		
B848		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 22.0		
B849		FG	WD	3' - 0"		7' - 2"	H8	HM	3/AD6.6	8/AD6.6	8/AD6.7, 9/AD6.7	SET 27.0		
B851		FG	WD	3' - 0"		7' - 2"	H7	HM	3/AD6.6	8/AD6.6, 25/AD6.6	21/AD6.6, 7/AD6.7	SET 26.0		
B852A		F	WD	3' - 0"		7' - 2"	H2	HM	1/AD6.6	8/AD6.6	-	SET 41.0		WITH PANIC HARDWARE
B852B		F	WD	3' - 0"		7' - 2"	H2	HM	1/AD6.6	8/AD6.6	-	SET 41.0		WITH PANIC HARDWARE
B852C		F	WD	3' - 0"		7' - 2"	H2	HM	1/AD6.6	8/AD6.6	-	SET 41.0		WITH PANIC HARDWARE
B873		FG	ALUM	3' - 0"	3' - 0"	7' - 2"	D26	ALUM	-	-	-	SET 1.0		
B874		F	WD	3' - 0"		7' - 2"	H1	HM	1/AD6.6	8/AD6.6	-	SET 29.0		
C853A		FG	ALUM	3' - 0"	3' - 0"	7' - 2"	D11	ALUM	-	-	-	SET 2.0		
C853B		FG	ALUM	3' - 0"	3' - 0"	7' - 2"	D11	ALUM	-	-	-	SET 2.0		
C853C	90 MIN	N	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	*	*	-	SET 17.0		* HEAD DTL. SIM. TO 25/AD6.6 * JAMB DTL. SIM. TO 26/AD6.6
C854A		FG	ALUM	3' - 0"	3' - 0"	7' - 2"	A1	ALUM	-	-	-	SET 2.0		
C854B		FG	ALUM	3' - 0"	3' - 0"	7' - 2"	A1	ALUM	-	-	-	SET 1.0		ADA ACCESS CONTROL (3) LOCATIONS CONNECTED WITH C854D
C854C		FG	ALUM	3' - 0"	3' - 0"	7' - 2"	A3	ALUM	-	-	-	SET 6.0		
C854D		FG	ALUM	3' - 0"	3' - 0"	7' - 2"	A3	ALUM	-	-	-	SET 1.0		ADA ACCESS CONTROL (3) LOCATIONS CONNECTED WITH C854B
C855		FG	ALUM	3' - 0"		7' - 2"	D34	ALUM	-	-	-	SET 5.0		
C856		FG	WD	3' - 0"		7' - 2"	D34	ALUM	-	-	-	SET 5.0		
C857		G	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 24.0		
C858A		G	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 35.0		
C858B						5' - 0"	H5							
C859		F	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 22.0		
C860		G	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 35.0		
C861		G	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 24.0		
C862	90 MIN.	F	WD	3' - 0"		7' - 2"	H1	HM	2/AD6.6	9/AD6.6	-	SET 28.0		
C863		G	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 35.0		
C864A		G	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 27.0		
C864B		G	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 35.0		
C864C	90 MIN.	FG	STL	3' - 0"		7' - 2"	H10	STL	28/AD6.6	29/AD6.6	30/AD6.6	SET 27.0		90 MIN. GLAZING ASSEMBLY - SEE FIRE GLAZING SPEC
C865	90 MIN	N	WD	3' - 0"	3' - 0"	7' - 2"	H1	HM	4/AD6.6	11/AD6.6	-	SET 19.0		90 MIN. GLAZING IN DOOR-100 SQ. IN. MAX.-SEE FIRE GLAZ. SPEC
C866A		FG	WD	3' - 0"		7' - 2"	D32	ALUM	-	-	-	SET 11.0		
C866B		FG	ALUM	3' - 0"		7' - 2"	D13	ALUM			-	SET 8.0		
C867A		G	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 35.0		
C867B		FG	ALUM	3' - 0"		7' - 2"	D16	ALUM	-	-	-	SET 8.0		
C868		G	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 24.0		
C869		F	WD	3' - 0"		7' - 2"	H1	HM	4/AD6.6	11/AD6.6	-	SET 22.0		
C870		F	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 22.0		
C871		F	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 32.0		
C872		F	WD	3' - 0"		7' - 2"	H1	HM	3/AD6.6	10/AD6.6	-	SET 32.0		
EX1		FG	ALUM	3' - 0"		7' - 2"	D27	ALUM	-	-	-	SET 8.0		

DOOR TYPES

* - RECOMMENDED MOUNTING HEIGHT FROM FINISHED FLOOR TO CENTER LINE OF FIRE EXIT DEVICE
** - COORDINATE WITH DOOR MANUFACTURE REQUIREMENTS



NO.	REVISION	DATE
1	Addendum 1	11/21/12

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POLYTECH HIGH SCHOOL
RENOVATIONS AND ADDITIONS
POLYTECH SCHOOL DISTRICT
832 WALNUT SHADE ROAD WOODSIDE, DELAWARE

BUILDING AREA D
DOOR SCHEDULE

SCALE:	1/4" = 1'-0"
DESIGN BY:	Designer
DRAWN BY:	Author
CHECKED BY:	Checker
DALLC FILE:	2477
DATE:	8/15/2012

AD6.2

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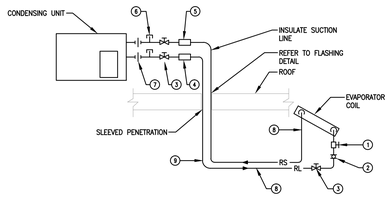
FINAL DRAWINGS
FOR BIDDING

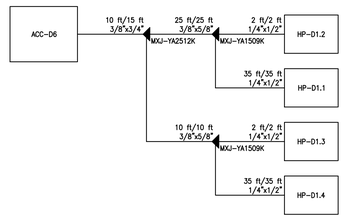


REFRIGERATION PIPING DETAIL
NOT TO SCALE

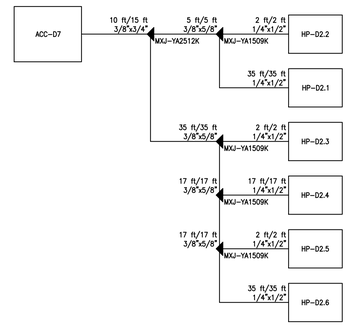
COMPONENTS LIST

1. THERMOSTATIC EXPANSION VALVE
2. MOISTURE INDICATOR/SIGHT GLASS
3. DIAPHRAM PACKLESS VALVE
4. FILTER DRIER (REPLACEABLE CORE)
5. SUCTION LINE FILTER
6. PURGE/CHARGE CONNECTION
7. QUICK COUPLING
8. LINE SIZE AS PER MANUFACTURER'S REQUIREMENT.
9. INSULATE LIQUID LINE IF METERING DEVICE IS MOUNTED IN CONDENSING UNIT.

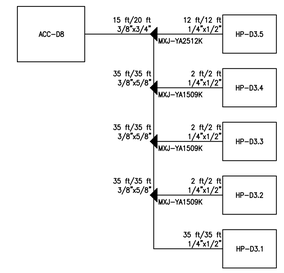
ACC-D6 REFRIGERANT PIPING DIAGRAM

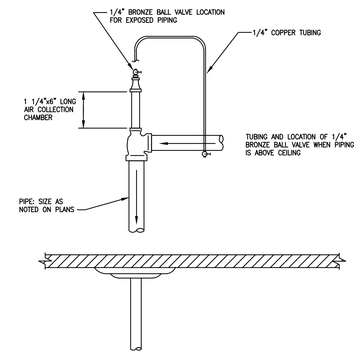


ACC-D7 REFRIGERANT PIPING DIAGRAM

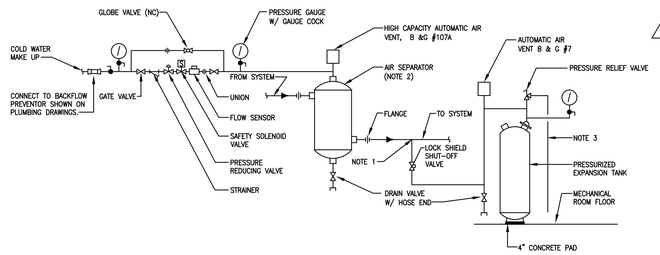


ACC-D8 REFRIGERANT PIPING DIAGRAM





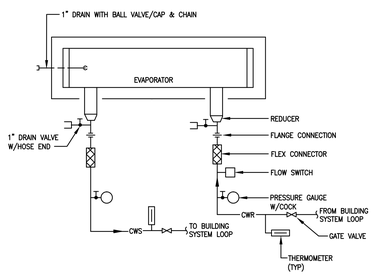
MANUAL AIR VENT WATER PIPING DETAIL
NOT TO SCALE



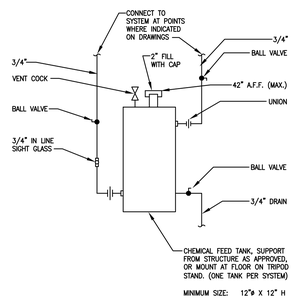
PRESSURIZED EXPANSION TANK DETAIL
NOT TO SCALE

NOTES:

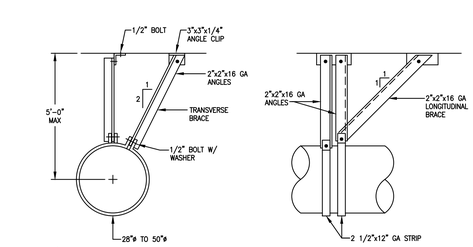
1. BRANCH PIPING TO THE TANK SHALL BE ATTACHED TO THE MAIN PIPING WITH SIDE CONNECTION.
2. SUPPORT AIR SEPARATOR WITH PIPE LEGS 18 INCHES, MINIMUM, ABOVE FLOOR.
3. EXTEND VENT LINE DOWN TO 6 INCHES ABOVE FLOOR FULL SIZE OF VALVE OUTLET.
4. TYPICAL FOR CHILLED WATER SYSTEM AND HEATING HOT WATER SYSTEM.

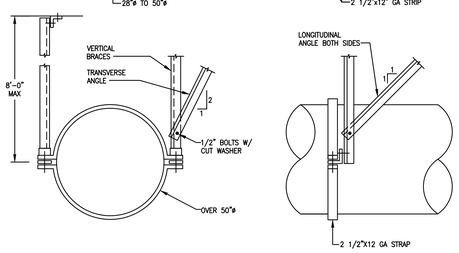


CHILLER PIPING DETAIL
NOT TO SCALE



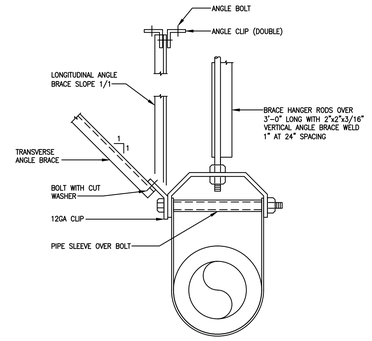
WATER TREATMENT FEEDER DETAIL
NOT TO SCALE





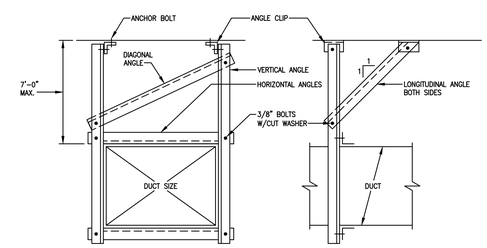
MAX. DUCT DIAMETER	ANGLE CLIP	CONC. ANCHOR OR INSERT	BRACING ANGLES
60"	5"x3"x1/2"	1/2"	4"x4"x12GA
84"	5"x3"x1/2"	5/8"	4"x4"x12GA

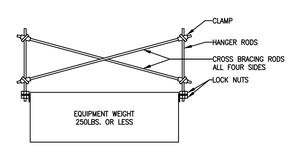
SEISMIC BRACING FOR ROUND/OVAL DUCTS
NOT TO SCALE



PIPE SIZE	*ANGLE BRACE	BOLT TO ANGLE	ANGLE CLIP	ANCHOR BOLT OR INSERT
2 1/2"	2"x2" 16GA	3/8"	3"x3"x1/4"	3/8"
3,4	2 1/2"x2 1/2" 16GA	3/8"	3"x3"x1/4"	1/2"
5,6	2 1/2"x2 1/2" 16GA	1/2"	5"x3"x1/2"	3/4"
8	3"x3" 12GA	5/8"	2-5"x3"x1/2"	2 5/8"
10	3"x3" 12GA	3/4"	2-5"x3"x1/2"	2 3/4"
* 1 5/8"x1 5/8"x12 GAGE CHANNEL MAY BE USED.				

TYPICAL SEISMIC BRACING FOR PIPE
NOT TO SCALE



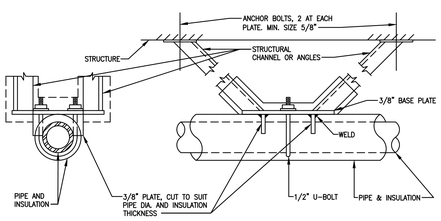


SEISMIC BRACING FOR LIGHT SUSPENDED EQUIPMENT
NOT TO SCALE

NOTE: NOT REQUIRED FOR AIR TERMINAL UNITS.

MAX. DUCT DIMENSION	BRACING ANGLES		ANGLE CLIP	CONC. ANCHOR OR INSERT
	VERTICAL	ALL OTHERS		
UP TO 60"	4"x4"x12GA	3"x3"x16GA	3"x3"x1/4"	1/2"
84"	4"x4"x1/4"	4"x4"x12GA	4"x4"x1/2"	5/8"
96"	5"x3"x1/4"	4"x4"x12GA	4"x4"x1/2"	5/8"

SEISMIC BRACING FOR RECTANGULAR DUCTS
NOT TO SCALE



HORIZONTAL PIPE ANCHOR DETAIL
NOT TO SCALE

NOTE: INSULATE ANCHOR AS INDICATED FOR COLD PIPING.

NOTES FOR SEISMIC BRACING

GENERAL

1. NO BRACING IS REQUIRED IF THE TOP OF THE DUCT OR PIPE IS SUSPENDED 12" OR LESS FROM THE SUPPORTING STRUCTURAL MEMBER.
2. WALLS, INCLUDING DRYWALL PARTITIONS, MAY REPLACE REQUIRED TRANSVERSE OR VERTICAL BRACING FOR DUCTWORK OR PIPING.
3. ATTACHMENT TO STRUCTURAL MEMBERS SHALL USE DEVICES INCLUDED IN MSS SP-58 OR BE BOLTED/WELDED AS APPROVED BY THE STRUCTURAL ENGINEER. BRACES SHALL BE CONNECTED TO THE HANGERS/SUPPORTS FOR DUCTS, PIPING AND SUSPENDED EQUIPMENT.
4. SEE THE SPECIFICATIONS FOR REQUIRED STRENGTH OF BRACING.
5. LATERAL SEISMIC FORCE SHALL BE CONSIDERED TO ACT CONCURRENTLY WITH DEAD LOAD. THE SLENDERNESS RATIO (L/R) OF BRACES SHALL NOT EXCEED 200, WHERE (L) IS THE LENGTH OF THE BRACE AND (R) IS THE LEAST RADIUS OF GYRATION, BOTH IN INCHES.

DUCTWORK

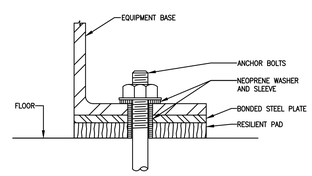
1. BRACE ALL RECTANGULAR DUCTS OF 6 SQ. FT. CROSS SECTIONAL AREA AND LARGER.
2. BRACE ALL ROUND/OVAL DUCTS 28" IN DIAMETER AND LARGER.
3. TRANSVERSE AND VERTICAL BRACING SHALL OCCUR AT 30' INTERVALS, MAXIMUM. LONGITUDINAL BRACING SHALL OCCUR AT 60' INTERVALS, MAXIMUM.

PIPING

1. BRACE ALL PIPES 2 1/2" DIAMETER AND LARGER. IN MECHANICAL ROOMS ALSO 1 1/4", 1 1/2" AND 2" PIPING AS FOR 2 1/2" PIPING.
2. TRANSVERSE AND VERTICAL BRACING SHALL OCCUR AT 40' INTERVALS, MAXIMUM. LONGITUDINAL BRACING SHALL OCCUR AT 80' INTERVALS, MAXIMUM.
3. AT PIPE RISERS, WHENEVER POSSIBLE, SUPPORT THE WEIGHT OF THE RISER AT A POINT OR POINTS ABOVE THE CENTER OF GRAVITY OF THE RISER.
4. DO NOT FASTEN ONE RIGID PIPING SYSTEM TO TWO DISSIMILAR PARTS OF THE BUILDING THAT MAY RESPOND IN A DIFFERENT MODE DURING AN EARTHQUAKE; FOR EXAMPLE, A WALL AND A ROOF.
5. DO NOT USE BRANCH LINES TO BRACE MAIN LINES.

EQUIPMENT:

REFER TO SPECIFICATIONS SECTIONS 230200 & 230300.



EQUIPMENT RESTRAINED BY RESILIENT PADS
NOT TO SCALE

furlow associates
consulting engineers
1206 society drive · claymont, de 19703

NO.	REVISION ADDENDUM #1	DATE 11/29/12
1		

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POLYTECH SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS TO POLYTECH HIGH SCHOOL

DETAILS
MECHANICAL

SCALE:	NONE
DESIGN BY:	RLL
DRAWN BY:	RLL
CHECKED BY:	SAJ
DALLC FILE:	Project Number
DATE:	08/15/2012

M1.4

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FINAL DRAWINGS
FOR BIDDING

FIXTURE SCHEDULE

NOTES:

1. EQUIVALENT MANUFACTURERS: FIXTURES BY MANUFACTURERS LISTED AS EQUIVALENTS SHALL BE OF THE SAME TYPE, PERFORMANCE AND QUALITY OF THOSE SPECIFIED. EQUIVALENT MANUFACTURERS MUST MEET ALL CRITERIA OF THE BASE FIXTURE SPECIFIED. ANY DEVIATIONS WHICH DO NOT REFLECT THE BASE FIXTURE MAY RESULT IN A REJECTED SHOP DRAWING (DURING SUBMITTAL PERIOD). LISTED EQUIVALENTS DO NOT AUTOMATICALLY MEAN APPROVED. NO SUBSTITUTES ARE TO BE MADE WITHOUT PRIOR APPROVAL. REQUEST FOR SUBSTITUTIONS SHALL BE SUBMITTED IN ACCORDANCE WITH THE SPECIFICATIONS.
2. BODINE GTD – GENERATOR TRANSFER DEVICE SHALL BE INSTALLED IN SHADED FIXTURES ONLY. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A 277 VOLT CIRCUIT FROM LOCAL EMERGENCY PANEL TO THE BODINE GTD – GENERATOR TRANSFER DEVICE LOCATED IN FIXTURE INDICATED. ALL OTHER FIXTURES LABELED WITH THE SAME TAG SHALL BE CONNECTED TO THE NORMAL POWER CIRCUIT INDICATED.

TYPE: "A"
MFGR.: COLUMBIA
CAT. #: 2PT 24-2-28-G-FCBS-EPU
LAMPS: (2) 28W T5HO, 3500K
MOUNTING: RECESSED CEILING
EQUIV. MFGRS.: DAY-O-LIGHT
REMARKS: 2' X 4' ZERO PLENUM TROFFER, DIE-FORMED COLD ROLLED STEEL HOUSING, FLUSHED CURVED BAFFLE, BAKED WHITE POLYESTER FINISH, NEC COMPLIANT BALLAST DISCONNECT, 277 VOLT ELECTRONIC BALLAST. DUE TO HEIGHT RESTRICTIONS THE FIXTURE SHALL NOT EXCEED 2 1/2" IN HEIGHT ABOVE CEILING GRID RAIL.

TYPE: "A1"
MFGR.: COLUMBIA
CAT. #: 2PT-24-2-28-G-FCBS-EPU
LAMPS: (2) 28W T5, 3500K
MOUNTING: RECESSED CEILING
EQUIV. MFGRS.: DAY-O-LITE
REMARKS: 2' X 4' ZERO PLENUM TROFFER, DIE-FORMED COLD ROLLED STEEL HOUSING, FLUSHED CURVED BAFFLE, BAKED WHITE POLYESTER FINISH, NEC COMPLIANT BALLAST DISCONNECT, 277 VOLT ELECTRONIC BALLAST (SYLVANIA – QUICKTRONIC POWERSENSE T5 DIMMING UNV SYSTEMS). DUE TO HEIGHT RESTRICTIONS THE FIXTURE SHALL NOT EXCEED 2 1/2" IN HEIGHT ABOVE CEILING GRID RAIL.

TYPE: "A2"
MFGR.: COLUMBIA
CAT. #: 2PT 24-2-54-G-FCBS-EPU
LAMPS: (2) 54W T5, 3500K
MOUNTING: RECESSED CEILING
EQUIV. MFGRS.: DAY-O-LITE
REMARKS: 2' X 4' ZERO PLENUM TROFFER, DIE-FORMED COLD ROLLED STEEL HOUSING, FLUSHED CURVED BAFFLE, BAKED WHITE POLYESTER FINISH, NEC COMPLIANT BALLAST DISCONNECT, 277 VOLT ELECTRONIC BALLAST.

TYPE: "B"
MFGR.: COLUMBIA
CAT. #: 2PT 22-2-14-G-FCBD-EPU
LAMPS: (2) 14W T5, 3500K
MOUNTING: RECESSED CEILING
EQUIV. MFGRS.: DAY-O-LITE
REMARKS: 2' X 2' ZERO PLENUM TROFFER, DIE-FORMED COLD ROLLED STEEL HOUSING, FLUSHED CURVED BAFFLE, BAKED WHITE POLYESTER FINISH, NEC COMPLIANT BALLAST DISCONNECT, 277 VOLT ELECTRONIC BALLAST. DUE TO HEIGHT RESTRICTIONS THE FIXTURE SHALL NOT EXCEED 2 1/2" IN HEIGHT ABOVE CEILING GRID RAIL.

TYPE: "C"
MFGR.: DAY-BRIGHT LIGHTING
CAT. #: HCF642/CU-D6 AR22CF WGA22
LAMPS: (6) 42W T8, 3500K
MOUNTING: SURFACE CEILING
EQUIV. MFGRS.: METALUX, HUBBELL
REMARKS: 22 1/4" DIAMETER COMPACT FLUORESCENT HIGH BAY FIXTURE WITH CAST ALUMINUM HOUSING AND LID, POLYCARBONATE PRISMATIC DOME, (4) ELECRONTIC BALLASTS FOR 4 LEVEL SWITCHING, PREMIUM ARCHITECTURALLY SELECTED FINISH, 277V.

TYPE: "D"
MFGR.: COOPER LIGHTING
CAT. #: 576RF-275-XX-2EB-SI
LAMPS: (2) 28 WATT T-5 LAMPS, 3500K
MOUNTING: RECESSED CEILING
EQUIV. MFGRS.: PRESCOLITE, LITHONIA, DAY-O-LITE
REMARKS: PARABOLIC BAFFLE PERIMETER LIGHTING SYSTEM PROVIDE WALL WASH LIGHTING, STEEL HOUSING, WHITE BOLD BAFFLE WITH SEMI-SPECULAR ALUMINUM PARABOLIC BAFFLE, STAGGERED LAMPS, 277V ELECTRONIC BALLAST.

TYPE: "E"
MFGR.: DUALLITE
CAT. #: LXURWD
LAMPS: FURNISHED W/FIXTURE
MOUNTING: UNIVERSAL MOUNTED
EQUIV. MFGRS.: PRESCOLITE, LITHONIA, EVENLITE
REMARKS: UNIVERSAL SINGLE/DOUBLE FACE EXIT SIGN WITH EVEN ILLUMINATED LEDS, WHITE THERMOPLASTIC HOUSING, RED LETTERS, DIRECTIONAL ARROWS, HINGED FACE PLATE, NICKLE-CADMIUM BATTERY WITH FULL AUTO CHARGING, 277V.

TYPE: "E1"
MFGR.: DUALLITE
CAT. #: SEWLSRWE-HTR-4X
LAMPS: FURNISHED W/FIXTURE
MOUNTING: UNIVERSAL MOUNTED
EQUIV. MFGRS.: PRESCOLITE, LITHONIA, EVENLITE
REMARKS: SINGLE FACE EXIT SIGN WITH EVEN ILLUMINATED LEDS, GASKETED DIE-CAST ALUMINUM HOUSING, RED LETTERS, WHITE HOUSING, DIE-CAST ALUMINUM CANOPY, DIRECTIONAL ARROWS, HINGED FACE PLATE, POLYCARBONATE VANDEL SHIELD, INTERNAL HEATER, NEMA 4X RATING, NICKLE-CADMIUM BATTERY WITH FULL AUTO CHARGING, 120V.

TYPE: "E2"
MFGR.: DUALITE
CAT. #: LTURWD
LAMPS: FURNISHED W/FIXTURE
MOUNTING: UNIVERSAL MOUNTED
EQUIV. MFGRS.: PRESCOLITE, LITHONIA, EVENLITE
REMARKS: UNIVERSAL SINGLE/DOUBLE FACE COMBINATION EXIT SIGN AND EMERGENCY LIGHTING UNIT WITH 5 WATT HALOGEN LAMPS, WHITE THERMOPLASTIC HOUSING, RED LETTERS, DIRECTIONAL ARROWS, HINGED FACE PLATE, NICKLE-CADMIUM BATTERY WITH FULL AUTO CHARGING, 277V.

TYPE: "F"
MFGR.: COLUMBIA
CAT. #: 4PS24-328G-FAA12.125-EPU-F5835
LAMPS: (2) 28W T5, 3500K
MOUNTING: RECESSED CEILING
EQUIV. MFGRS.: METALUX, COOPER LIGHTING, DAYBRITE
REMARKS: 2' X 4' RECESSED TROFFER, POWDER STEEL HOUSING, FLUSH ALUMINUM DOOR, PATTERN 12 ACRYLIC LENSE 0.125" NOMINAL, UNIVERSAL VOLTAGE ELECTRONIC BALLAST.

TYPE: "F1"
MFGR.: COLUMBIA
CAT. #: 4PS22-214G-FAA12.125-EPU-F5835
LAMPS: (2) 14W T5, 3500K
MOUNTING: RECESSED CEILING
EQUIV. MFGRS.: METALUX, COOPER LIGHTING, DAYBRITE
REMARKS: 2' X 2' RECESSED TROFFER, POWDER STEEL HOUSING, FLUSH ALUMINUM DOOR, PATTERN 12 ACRYLIC LENSE 0.125" NOMINAL, UNIVERSAL VOLTAGE ELECTRONIC BALLAST.

TYPE: "G"
MFGR.: METALUX
CAT. #: DI-232-277-EB81
LAMPS: (2) 32 WATT T-8 (3500K)
MOUNTING: SURFACE MOUNT
EQUIV. MFGRS.: COLUMBIA, LITHONIA, DAYBRITE
REMARKS: 13 1/2" WIDE X 4' LONG INDUSTRIAL FLUORESCENT FIXTURE WITH COLD ROLLED STEEL HOUSING, DIE FORMED CHANNELS, HEAVY DUTY APERTURE REFLECTOR, PRESSURE LOCK LAMP HOLDERS, BAKED WHITE ENAMEL FINISH, (1) 2-LAMP ELECTRONIC BALLAST, 277V.

TYPE: "H"
MFGR.: DAY-BRITE (NITE BRITES)
CAT. #: BS18WLXX-BLA-GEC-QU-GY
LAMPS: LED
MOUNTING: PENDANT, CEILING
EQUIV. MFGRS.: CANLITE, HUBBELL
REMARKS: 18 WATT LED VAPOR TIGHT FIXTURE WITH CLEAR GLOBE AND GUARD, 120 VOLT DRIVER.

TYPE: TYPE "I"
MFGR.: NOT USED

TYPE: "J"
MFGR.: COOPER LIGHTING
CAT. #: LDWP-FC-4A-ED-BK/PE/EMLED-CD
LAMPS: LED
MOUNTING: SURFACE WALL
EQUIV. MFGRS.: COLUMBIA, HUBBELL, LITHONIA, DAYBRITE
REMARKS: 40 LED FULL CUT OFF WALL CONSOLE TWO PIECE DIE-CAST ALUMINUM HOUSING, DIE-CAST WITH CLEAR TEMPERED GLASS LENS.

TYPE: "K"
MFGR.: COOPER LIGHTING
CAT. #: AIM-100-MH-277-SG16-W-I-P-XX
LAMPS: (1) 100 WATT METAL HALIDE LAMP
MOUNTING: PENDANT CEILING
EQUIV. MFGRS.: PATHWAY LIGHTING, ABOLITE, HI-LITE
REMARKS: AVID SERIES PENDANT MOUNTED FIXTURE WITH INTEGRAL BALLAST HOUSING, CAST ALUMINUM WIDSECTION, FIELD ADJUSTABLE SOCKET BRACKET WITH MULTI SETTING FOR THE OPTICAL SYSTEM, WITH CAST ALUMINUM TOP WITH A 1 1/2" PIPE FOR PENDANT MOUNTING. COLOR SELECTION BY ARCHITECT.

TYPE: "K1"
MFGR.: COOPER LIGHTING
CAT. #: AIM-100-MH-277-SG16-W-I-P-XX-EM/SC
LAMPS: (1) 100 WATT METAL HALIDE LAMP
MOUNTING: PENDANT CEILING
EQUIV. MFGRS.: PATHWAY LIGHTING, ABOLITE, HI-LITE
REMARKS: SAME AS TYPE "I" WITH EMERGENCY SEPARATE CIRCUIT WIRING.

GENERAL LIGHTING NOTES:

1. ALL FIXTURE COLORS SHALL BE VERIFIED WITH ARCHITECT PRIOR TO APPROVAL OF SHOP DRAWINGS.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE PRICING IN BASE BID TO FURNISH, INSTALL AND WIRE 10 EXTRA TYPE "E" FIXTURES. THESE FIXTURES SHALL BE INSTALLED AS REQUIRED FOR THE FIRE MARSHAL'S OFFICE. SHOULD NONE BE REQUIRED, TURN ALL OR REMAINING FIXTURES OVER TO OWNER AS "ATTIC STOCK".

TYPE: "L"
MFGR.: BRUCK LIGHTING
CAT. #: 222-151-MC-MP
LAMPS: LED 3 WATT
MOUNTING: PENDANT
EQUIV. MFGRS.: TECH LIGHTING, PRIMA
REMARKS: ZARAE PENDANT, STANDARD CABLE 59" FIELD-CUT TO DESIERED LENGTH, WHIDE SHADE, MATTE CROM FINISH, 4" KISS CANOPY.

TYPE: "M"
MFGR.: CREE LIGHTING
CAT. #: ESAC10P56DUBKSSDC7003500
LAMPS: 56 LED ARRAY
MOUNTING: PENDANT
EQUIV. MFGRS.: PRESCOLITE, OCEAN STATE LIGHTING
REMARKS: ARCHITECTURAL 10" DIAMETER CYLINDER DOWNLIGHT, 6" AXIAL AND TILTED AXIAL OPTIC ON EACH LED, WIDE DISTRIBUTION BEAM SPREAD, EXTRUDED ALUMINUM HEAT SINK, ALUMINUM HOUSING,

TYPE: "N"
MFGR.: PROGRESS LIGHTING
CAT. #: P3070-15
LAMPS: (8) 60 WATT INCANDESCANT G-LAMPS
MOUNTING: SURFACE WALL
EQUIV. MFGRS.: KITCHLER
REMARKS: BROADWAY LIGHTS, MIRRORED GLASS POLISHED CHROME BACK, SOCKETS ON 7 1/2" CENTERS, MEDIUM BASED G-LAMP, MEASURES 60 1/2" LONG X 4 3/4" HIGH, FIXTURE HOLDS (8) MEDIUM BASE G-LAMPS, AT 60 WATTS EACH, 120 VOLT OPERATION.

TYPE: "N1"
MFGR.: PROGRESS LIGHTING
CAT. #: P3069-15
LAMPS: (8) 60 WATT INCANDESCANT G-LAMPS
MOUNTING: SURFACE WALL
EQUIV. MFGRS.: KITCHLER
REMARKS: BROADWAY LIGHTS, MIRRORED GLASS POLISHED CHROME BACK, SOCKETS ON 7 1/2" CENTERS, MEDIUM BASED G-LAMP, MEASURES 48 1/2" LONG X 4 3/4" HIGH, FIXTURE HOLDS (8) MEDIUM BASE G-LAMPS, AT 60 WATTS EACH, 120 VOLT OPERATION.

TYPE: TYPE "O"
MFGR.: NOT USED

TYPE: "P"
MFGR.: RUUD LIGHTING
CAT. #: INT-EDR-40-PD-04-D-UL-WH-350-TL1
LAMPS: LED LAMPS
MOUNTING: PENDANT CEILING
EQUIV. MFGRS.: HUBBELL, LITHONIA
REMARKS: THE EDGE LED INTERIOR ROUND LIGHT – 40' FLOOD, CAST ALUMINUM HOUSING, LED DRIVER, SPUM ALUMMUM COVER WITH HEAT SINKS, FIXTURE MOUNTED FROM 3/8" Ø PENDANT (COORDINATED FINAL ELEVATION WITH ARCHITECT).

TYPE: "Q"
MFGR.: SELUX CORPORATION
CAT. #: SA90-MR-026-XX-277
LAMPS: (2) 26 WATT QUAD FLUORESCENT LAMPS
MOUNTING: SURFACE WALL
EQUIV. MFGRS.: AAL LIGHTING, LOUIS POULSEN
REMARKS: DECORATIVE WALL MOUNTED LUMINAIRE, DIE-CAST ALUMINUM COVERS, FORMED ALUMINUM SHADES, INJECTED MOLDED ACRYLIC MULTI-PRISMS, ALUMINUM SUPPORT RODS, CAST ALUMINUM WALL ARM MOUNTS, AND EXTRUDED ALUMINUM COLUMN. (COORDINATED FINAL ELEVATION WITH ARCHITECT).

TYPE: "R"
MFGR.: PHILIPS LIGHTING (OMEGA)
CAT. #: OM6LED27277-R6LED35WDCSS
LAMPS: LED LAMPS
MOUNTING: RECESSED CEILING
EQUIV. MFGRS.: COOPER LIGHTING, LITHONIA, PRESCOLITE
REMARKS: 6" LED RECESSED WIDER BEAM DOWNLIGHT, LED ARRAY, DIE CAST ALUMINUM 1 1/2" DEEP COLLAR, UNIVERSAL MOUNTING BRACKET, 277 VOLT OPERATION.

TYPE: "R1"
MFGR.: PHILIPS LIGHTING (OMEGA)
CAT. #: OM6LED27120-R6LED35WDCSS
LAMPS: LED LAMPS
MOUNTING: RECESSED CEILING
EQUIV. MFGRS.: COOPER LIGHTING, LITHONIA, PRESCOLITE
REMARKS: SAME AS TYPE "R" EXCEPT 120 VOLT OPERATION.

TYPE: "S"
REMARKS: EXISTING FIXTURE REINSTALLED ON NEW BASE

TYPE: "S1"
MFGR.: COOPER LIGHTING
CAT. #: OVG-25-M-C-8-3-D-L
LAMPS: (1) 250 WATT MEDAL HALIDE
MOUNTING: 25'-0" POLE RTABLE2SAAS16
EQUIV. MFGRS.: SPAULDING, LITHONIA, PAL
REMARKS: DIE-CAST ALUMINUM HOUSING, REMOVABLE LOW PROFILE GLASS LENS, HYDROFORMED ANODIZED ALUMINUM REFRACTOR, STANDARD GRAY POLYESTER POWDER COAT FINISH, MOUNT ON 25'-0" H X 6" ROUND STEEL POLE WITH DARK PLATINUM FINISH, TYPE III DISTRIBUTION, HPF BALLAST, 480V. POLE SHALL BE GRAY POLYESTER POWDER COAT FINISH, 25'-0" TALL WITH ROUND SINGLE ELLIPTICAL ARM.

TYPE: "S2"
MFGR.: COOPER LIGHTING
CAT. #: OVG-25-M-C-8-3-D-L
LAMPS: (2) 250 WATT MEDAL HALIDE
MOUNTING: 25'-0" POLE RTABLE2SAAD
EQUIV. MFGRS.: SPAULDING, LITHONIA, PAL
REMARKS: SIMILAR TO TYPE "S1" EXCEPT WITH TWO FIXTURES MOUNTED ON A COMMON POLE 180°. POLE SHALL BE GRAY POLYESTER POWDER COAT FINISH, 25'-0" TALL WITH ROUND TWIN ELLIPTICAL ARM.

TYPE: "T"
MFGR.: LSI INDUSTRIES
CAT. #: LS-F-N-FP-150-MH-F-MT-XXX-SQN
LAMPS: (1) 150 WATT METAL HALIDE LAMP
MOUNTING: PENDANT POLE
EQUIV. MFGRS.: LUMEC LIGHTING, KIM LIGHTING
REMARKS: DECORATIVE EXTERIOR LIGHTING FIXTURE WITH DIE CAST ALUMINUM SHADE AND CROWN, NON-LUMINOUS TRANSITIONS, EXTRUDED AND CAST ALUMINUM BRACKETS, FLAT TEMPERED GLASS LENS, TYPE FORWARD THROW OPTICS, METAL HALIDE LAMP.

TYPE: "U"
MFGR.: HYDREL
CAT. #: M9810A-250ME-277-MTL-FLC-34S-LP-DNA
LAMPS: (1) 250 WATT METAL HALIDE
MOUNTING: RECESSED, GROUND
EQUIV. MFGRS.: COOPER, KIM, LSI, BRONZELITE
REMARKS: INGRADE UPLIGHT, POLYMER CYLINDER WITH INTEGRAL JUNCTION BOX, ADJUSTMENT RING 360° AIM ROTATION AND LOCK, POLYCARBONATE COVER, 277 VOLT ELECTRONIC BALLAST. FIXTURES LOCATED ON DRAWING E-300.

TYPE: "V"
MFGR.: KENALL
CAT. #: RG441/1228RS11/GZWLPF
LAMPS: (2) 28W T5, 3500K
MOUNTING: RECESSED CEILING
EQUIV. MFGRS.: MORLITE
REMARKS: 1' X 4' RECESSED TROFFER, DIE FORMED FORMED STEEL HOUSING, DIE FORMED FORMED STEEL DOOR, PATTERN 12 ACRYLIC INNER LENSE 0.125" NOMINAL, CLEAR POLYCARBONATE OUTER LENSE 0.125" NOMINAL, PLASTER FROM MOUNT, UNIVERSAL VOLTAGE ELECTRONIC BALLAST, WET LOCATION LISTED.

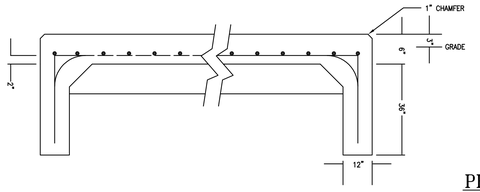
TYPE: "W"
MFGR.: COOPER LIGHTING (NEO-RAY)
CAT. #: 6DP1X27SST122EBSIEMS14
LAMPS: (3) 28W T5, 3500K PER 4'-0" SECTION
MOUNTING: PENDANT CEILING
EQUIV. MFGRS.: LITHONIA, ALERA, DAY-O-LITE
REMARKS: 6" DIAMETER TUBE FIXTURE, EXTRUDED ALUMINUM HOUSING, DIE CAST ALUMINUM END CAPS, CONTOURED BAFFLE SHIELDING, PENDANT MOUNT, ELECTRONIC BALLAST, AND EMERGENCY PACK.

TYPE: "X"
MFGR.: ALCKO LIGHTING
CAT. #: ARS-41-301-120-PRL-AMB41
LAMPS: 20 LED LAMPS PER 4'-0" SECTION
MOUNTING: SURFACE WALL
EQUIV. MFGRS.: LITHONIA, COOPER LIGHTING, i2
REMARKS: LOW PROFILE LED DISPLAY CASE LIGHT FIXTURE, EXTRUDED ALUMINUM HOUSING, POLYCARBONATE END CAPS, EXTRUDED CLEAR POLYCARBONATE LENS, 120 VOLT OPERATION.

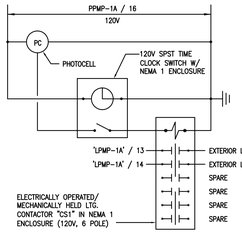
TYPE: "Y"
MFGR.: TEMPO INDUSTRIES
CAT. #: 2012 BK 1 XXT LED LAMPS
LAMPS: SURFACE FLOOR
MOUNTING: WEDMARK LIGHTING, CELESTIA LIGHTING, TIVOLI
EQUIV. MFGRS.: GUARDIAN SERIES 2000 LED PATHWAY LIGHTING FOR CARPET TO FLAGGE ASLE LIGHING, SOCKETT TYPE, FINAL WIRING UTILIZING CLASS 2 POWER SUPPLY WHICH ALLOWES EACH LIGHT TO OPERATE INDERPENTLY, FIELD CUTTABLE AND LAYOUT. XX EQUALS LED LIGHT COLOR SELECTED BY ARCHITECT. FIXTURES ARE LOCATED ON DRAWING EFD1.2.

NOTES FOR TRANSFORMER PAD:

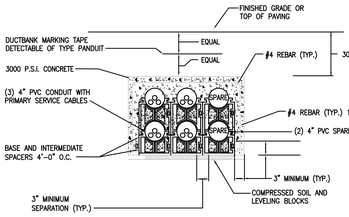
1) CONCRETE SHALL HAVE A MIN. 28 DAY COMPRESSIVE STRENGTH OR 3,000 PSI AND SHALL CONTAIN 3% TO 6% ENTRANED AIR BY VOLUME.
2) RODS SHALL BE No. 4 BAR AND CONFORM TO THE LATEST REVISION OF ASTM A-615, GR. 50. BARS TO FORM 6" x 6" MAT.
3) PAD SHALL BE SET ON A 6" THK. CRUSHED STONE (MAX STONE SIZE SHALL
4) THE SOIL BENEATH THE CRUSHED STONE SHALL BE WELL COMPACTED.



TRANSFORMER PAD DETAIL
NOT TO SCALE

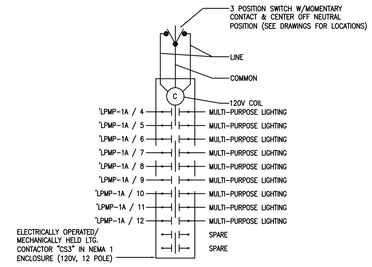


PHOTO/TIME CLOCK CONTROL DIAGRAM "CS1"
NOT TO SCALE — MULTI-PURPOSE ROOM

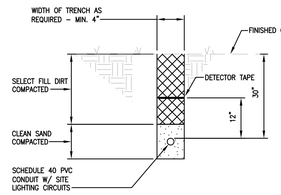


NOTES:
1. DETAIL SHOWN ABOVE SHALL BE APPLIED FOR CONCRETE DUCTBANK UNDERNEATH PAVED AREAS. ALL OTHER PORTIONS OF THE DUCTBANK SHALL NOT BE STEEL REINFORCED AND CONCRETE ENCASED.

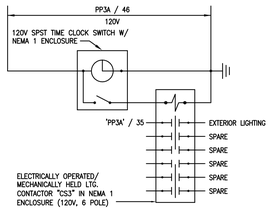
DETAIL OF PRIMARY SERVICE DUCTBANK
NOT TO SCALE



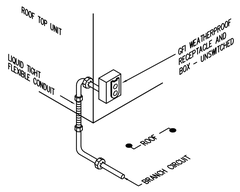
LIGHTING CONTROL DIAGRAM "CS2"
NOT TO SCALE — MULTIPURPOSE ROOM



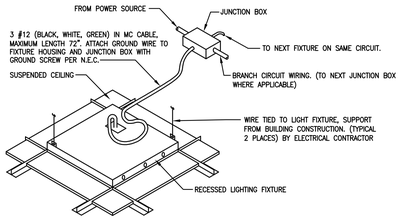
UNDERGROUND DIRECT BURIED CONDUIT
NOT TO SCALE



TIME CLOCK CONTROL DIAGRAM "CS3"
NOT TO SCALE — ENVIROMENTAL SCIENCE

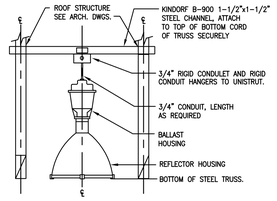


DETAIL OF ROOF RECEPTACLE ON ROOF
NOT TO SCALE



TYPICAL LAY-IN TROFFER DETAIL
NOT TO SCALE

TIME CLOCK CONTROL DIAGRAM "CS4"
NOT TO SCALE — ENVIROMENTAL SCIENCE



NOTE:
LOCATION OF FIXTURES & CHANNEL IS DIAGRAMMATIC. ACTUAL LOCATION OF CHANNEL NEEDS TO BE VERIFIED WITH NEW STRUCTURE.

FIXTURE MOUNTING DETAIL
NOT TO SCALE — FIXTURE TYPE "C"

LEGEND

- FIXTURE CONNECTED TO EMERGENCY CIRCUIT OR CONTAINS EMERGENCY BALLAST.
- SURFACE OR LAY-IN FLUORESCENT FIXTURE
- PERIMETER FLUORESCENT SLOT FIXTURE
- 2 X 2 LAY-IN INDIRECT FLUORESCENT FIXTURE
- RECESSED OR SURFACE MOUNTED DOWNLIGHT OR HIGH BAY
- FLUORESCENT COVE LIGHT STRIP OR INDUSTRIAL
- EXIT SIGN, SINGLE OR DOUBLE FACE
- (1) EMERGENCY BATTERY UNIT W/NUMBER OF HEADS INDICATED ON PLANS, NUMBER NEXT TO UNIT RELATES TO CORRESPONDING REMOTE HEADS.
- (1) (1) REMOTE EMERGENCY HEADS (SINGLE OR DOUBLE) NUMBER NEXT TO HEAD RELATES TO CORRESPONDING BATTERY UNIT.
- S SINGLE POLE WALL SWITCH CONTROL, 48" A.F.F.
- S3 3-WAY WALL SWITCH CONTROL, 48" A.F.F.
- S4 4-WAY WALL SWITCH CONTROL, 48" A.F.F.
- SD DIMMER SWITCH CONTROL, 48" A.F.F.
- SE EMERGENCY SHUT-OFF SWITCH CONTROL, 48" A.F.F.
- SM MANUAL MOTOR STARTER, 48" A.F.F.
- ST MANUAL MOTOR STARTER W/THERMAL OVERLOAD, 48" A.F.F.
- SK KEY OPERATED WALL SWITCH, 48" A.F.F.
- OS DUAL TECHNOLOGY, INFRARED AND ULTRASONIC CLASSROOM OCCUPANCY SENSOR, 96" A.F.F.
- DUPLEX RECEPTACLE, 18" A.F.F. UNLESS NOTED OTHERWISE
- DUPLEX RECEPTACLE WITH GROUND FAULT PROTECTION, HEIGHT AS DIRECTED BY ARCHITECT
- DOUBLE DUPLEX RECEPTACLE, 18" A.F.F. UNLESS NOTED OTHERWISE
- HEAVY DUTY RECEPTACLE, 18" A.F.F. UNLESS NOTED OTHERWISE
- FLOOR OUTLET WITH DOUBLE DUPLEX RECEPTACLE AND BLANK COMPARTMENTS FOR DATA OUTLETS BY OTHERS. PROVIDE ALL REQUIRED ACCESSORIES TO SUPPORT THE SERVICES TO BE STUBBED UP IN WALL.
- TELE/DATA OUTLET CONSISTING OF A 1900 SERIES BOX, 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL CORD. MOUNT 18" A.F.F. UNLESS NOTED OTHERWISE. REFER TO ARCHITECTURAL DRAWING FOR DEVICE QUANTITY AT EACH LOCATION.
- JUNCTION BOX
- ELECTRIC PANELBOARD
- BRANCH WIRING LOCATED BELOW THE SLAB
- CIRCUIT HOMERUN LOCATED BELOW THE SLAB
- BRANCH WIRING CONCEALED WITHIN THE BUILDING
- CIRCUIT HOMERUNS CONCEALED WITHIN THE BUILDING
- MOTOR OUTLET
- MOTOR STARTER
- COMBINATION MOTOR STARTER / DISCONNECT SWITCH
- NON-FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- F FIRE ALARM PULL STATION, 48" AFF
- FIRE ALARM COMBINATION HORN/SPEAKER AND STROBE. 80" AFF
- F FIRE ALARM CEILING MTD SPEAKER/STROBE
- F FIRE ALARM CEILING MTD STROBE
- FIRE ALARM CEILING MTD HORN/STROBE
- D FIRE ALARM DUCT DETECTOR
- RM FIRE ALARM RELAY MODULE
- M FIRE ALARM MAGNETIC HOLD OPEN
- FACP FIRE ALARM CONTROL PANEL
- FSA FIRE ALARM ANNUNICATOR PANEL
- PAD POWER SUPPLY – AUXILARY
- ECS PROWATCH ECS INTERFACE
- MIC REMOTE MICROPHONE
- FA FIRE FIGHTER HAND SET STATION
- NR NETWORK REPEATER
- PC PROCETIVE COVER
- WP WEATHERPROOF
- E.C. ELECTRICAL CONTRACTOR
- ER EXISTING TO REMAIN
- NL INDICATES FIXTURE ON UNSWITCHED NITE LIGHT CIRCUIT
- C.B. CIRCUIT BREAKER
- A.F.F. ABOVE FINISHED FLOOR
- A.F.G. ABOVE FINISHED GRADE
- WG WIRE GUARD
- GFI GROUND FAULT INTERRUPTING
- * OR + MOUNT ABOVE COUNTER

NO.	REVISION ADDENDUM #1	DATE 11/28/12

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POLYTECH SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS TO POLYTECH HIGH SCHOOL

SCHEDULES
ELECTRICAL

fa furlow associates
consulting engineers
1206 society drive · claymont, de 19703

SCALE:	NONE
DESIGN BY:	WJS
DRAWN BY:	WJS
CHECKED BY:	SAJ
DALLC FILE:	Project Number
DATE:	08/15/2012

E1.1

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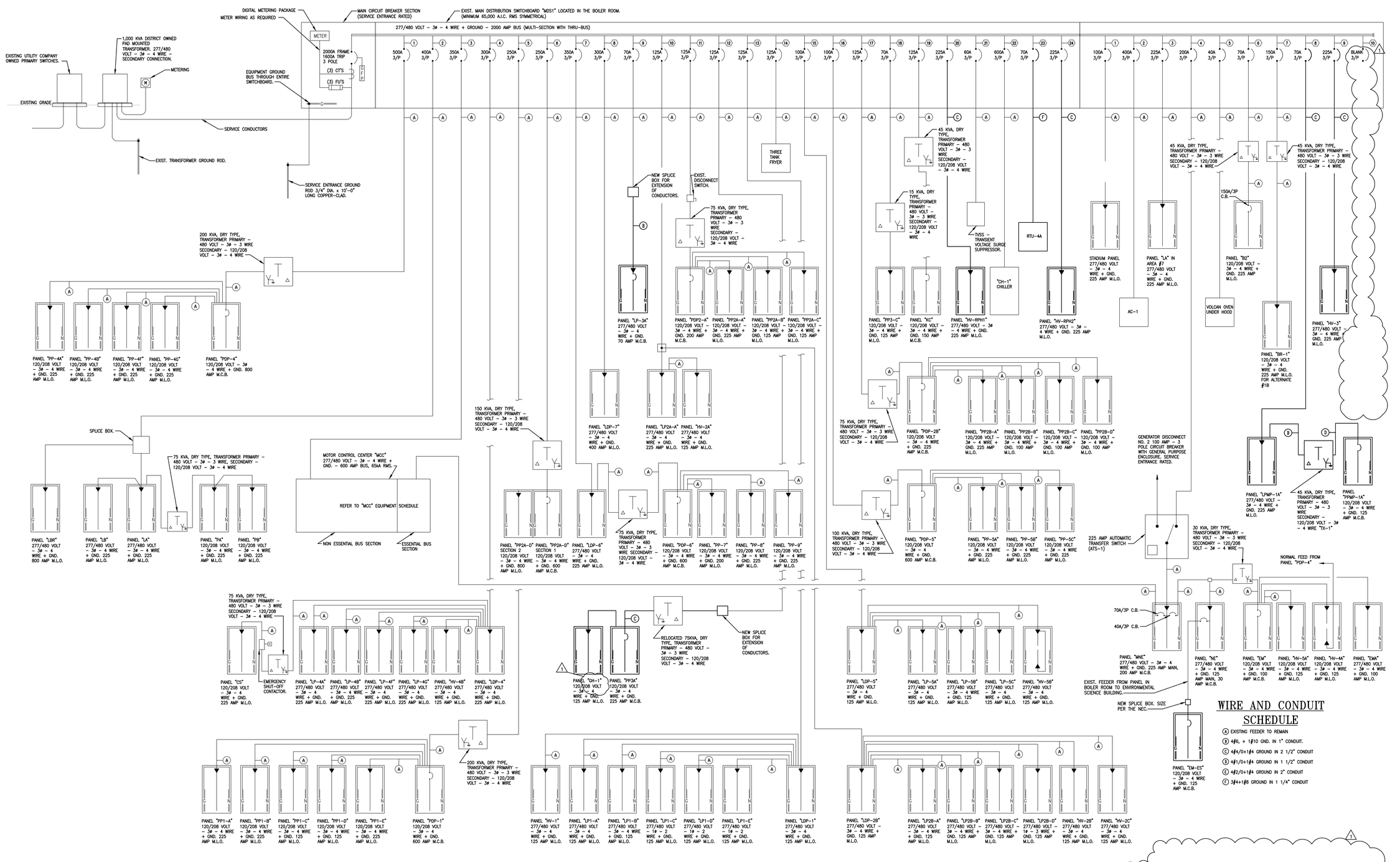
MECHANICAL EQUIPMENT ELECTRICAL REQUIREMENTS

PLAN SYMBOL	ITEM	DESCRIPTION	HP	VOLTAGE	LOAD (A)	CIRCUIT BREAKER	WIRING	DISCONNECT SWITCH	COMBINATION STARTER AND/OR DISCONNECT SWITCH	PANEL-CIRCUIT NUMBER	REMARKS
	RTU-A1	PACKAGED ROOF TOP UNIT	1.5	460V-3ø	18.2A	25A/3P	3#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		HV-1 / 3	(3) (4) (6)
	RTU-A2	PACKAGED ROOF TOP UNIT	1.5	460V-3ø	14.3A	20A/3P	3#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		HV-1 / 5	
	RTU-A3	PACKAGED ROOF TOP UNIT	1.5	460V-3ø	18.2A	25A/3P	3#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		LDP-4 / 31, 33, 35	(3) (4) (6)
	RTU-A4	PACKAGED ROOF TOP UNIT	(1) 7.5 (1) 5.0	460V-3ø	61A	70A/3P	3#6 + #8 GND. IN 1" CONDUIT	FURNISHED WITH UNIT		MDP / 23.	(3) (4) (6)
	RTU-B1	PACKAGED ROOF TOP UNIT	5.0	460V-3ø	38.3A	50A/3P	3#8 + #10 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		LPA-1A / 15, 17, 19	(3) (4) (6)
	RTU-B2	PACKAGED ROOF TOP UNIT	5.0	460V-3ø	38.3A	50A/3P	3#8 + #10 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		LPA-1A / 16, 18, 20	(3) (4) (6)
	RTU-C1	PACKAGED ROOF TOP UNIT	10.0	460V-3ø	58.5A	70A/3P	3#4 + #10 GND. IN 1" CONDUIT	FURNISHED WITH UNIT		LP-3A / 15, 17, 19	(3) (4) (6)
	RTU-C2	PACKAGED ROOF TOP UNIT	1.5	460V-3ø	14.3A	20A/3P	3#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		LP-3A / 16, 18, 20	
	EF-A1	EXHAUST FAN	1/6	115V-1ø	2.7A	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 16	
	EF-C1	EXHAUST FAN	1/6	115V-1ø	2.7A	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PP3A / 47	
	EF-C2	EXHAUST FAN	1/6	115V-1ø	2.7A	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PP3A / 47	
	EF-D1	EXHAUST FAN	1/6	115V-1ø	2.7A	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-3 / 41	
	EF-D2	SUPPLY FAN	1/6	115V-1ø	2.7A	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 16	
	EF-D3	EXHAUST FAN	1/6	115V-1ø	2.7A	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 16	
	EF-D4	EXHAUST FAN	1/3	115V-1ø	7.2A	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 16	
	EF-D5	EXHAUST FAN	1/6	115V-1ø	2.7A	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 16	
	WH-1	WATER HEATER	–	277V-1ø	21.6	30A/1P	1#10 + #10 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A 30 AMP 2 POLE DISCONNECT SWITCH		HVAUD-1 / 12	
	WH-2	WATER HEATER	–	277V-1ø	21.6	30A/12P	1#10 + #10 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A 30 AMP 2 POLE DISCONNECT SWITCH		LP-3A – 20	
	UH-D1	UNIT HEATER	–	120V-1ø	0.7	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 21.	
	EFR-D1	ELECTRIC FIN RADIATION	–	277V-1ø	13.5	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		LPAUD-3 / 9	
	EFR-D2	ELECTRIC FIN RADIATION	–	277V-1ø	10.8	30A/1P	2#12 + #12 GND. IN 1 1/4" CONDUIT	FURNISHED WITH UNIT		LPAUD-3 / 10	
	EFR-D3	ELECTRIC FIN RADIATION	–	277V-1ø	10.8	–	2#12 + #12 GND. IN 1 1/4" CONDUIT	FURNISHED WITH UNIT		LPAUD-3 / 25.	(1)
	B-1	BOILER	–	120V-1ø	19.3	25A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	PROVIDE LOCKABLE FUSED DISCONNECT SWITCH		PPAUD-1B / 19	
	B-2	BOILER	–	120V-1ø	19.3	25A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	PROVIDE LOCKABLE FUSED DISCONNECT SWITCH		PPAUD-1B / 20	
	CUH-D1	CABINET UNIT HEATER	1/15	120V-1ø	–	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		PPAUD-1B / 17.	
	CUH-D2	CABINET UNIT HEATER	1/15	120V-1ø	–	–	2#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		PPAUD-1B / 17.	(1)
	CUH-D3	CABINET UNIT HEATER	1/15	120V-1ø	–	–	2#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		PPAUD-1B / 17.	(1)
	CUH-D4	CABINET UNIT HEATER	1/15	120V-1ø	–	–	2#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		PPAUD-1B / 17.	(1)
	CUH-D5	CABINET UNIT HEATER	1/10	120V-1ø	–	20A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		PPAUD-1B / 22.	
	CUH-D6	CABINET UNIT HEATER	1/10	120V-1ø	–	–	2#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		PPAUD-1B / 22.	(1)
	CUH-D7	CABINET UNIT HEATER	1/10	120V-1ø	–	–	2#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		PPAUD-1B / 22.	(1)
	P-1	HEATING WATER PUMP	5.0	460V-3ø	7.8A	15A/3P	3#12 + #12 GND. IN 3/4" CONDUIT	PROVIDE COMBINATION STARTER/DISCONNECT		MDS / 10	
	P-2	HEATING WATER PUMP	5.0	460V-3ø	7.8A	15A/3P	3#12 + #12 GND. IN 3/4" CONDUIT	PROVIDE COMBINATION STARTER/DISCONNECT		MDS / 11	
	P-3	CHILLED WATER PUMP	10.0	460V-3ø	14.0A	30A/3P	3#10 + #10 GND. IN 3/4" CONDUIT	PROVIDE COMBINATION STARTER/DISCONNECT		MDS / 12	
	P-4	CHILLED WATER PUMP	10.0	460V-3ø	14.0A	30A/3P	3#10 + #10 GND. IN 3/4" CONDUIT	PROVIDE COMBINATION STARTER/DISCONNECT		MDS / 13	
	P-B1	INLINE BOILER CIRC PUMP	3/4	460V-3ø	1.4A	15A/3P	3#12 + #12 GND. IN 3/4" CONDUIT	PROVIDE COMBINATION STARTER/DISCONNECT		MDS / 14	
	P-B2	INLINE BOILER CIRC PUMP	3/4	460V-3ø	1.4A	15A/3P	3#12 + #12 GND. IN 3/4" CONDUIT	PROVIDE COMBINATION STARTER/DISCONNECT		MDS / 15	
	CH-1	SCREW CHILLER (COMPR/CONDR)	–	460V-3ø	325A	450A/3P	(2) 3#4/0 + #4 GND. IN 2 1/2" CONDUIT	FURNISHED WITH UNIT		MDS / 3	
	EDH-A1	ELECTRIC COIL DUCT HEATER	–	460V-3ø	12.0A	15A/3P	3#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A 30 AMP 3 POLE DISCONNECT SWITCH		HV-4B / 11, 13, 15	
	EDH-A2	ELECTRIC COIL DUCT HEATER	–	460V-3ø	7.2	15A/3P	3#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A 30 AMP 3 POLE DISCONNECT SWITCH		HV-4B / 12, 14, 16	
	SF-D1.1	OA INTAKE SUPPLY FAN	0.4	120V-1ø	0.4A	15A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 14	
	SF-D1.2	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 14	(1)
	SF-D1.3	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 14	(1)
	SF-D1.4	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 14	(1)
	SF-D2.1	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 14	(1)
	SF-D2.2	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 14	(1)
	SF-D2.3	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 14	(1)
	SF-D2.4	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 14	(1)
	SF-D2.5	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 14	(1)
	SF-D2.6	OA INTAKE SUPPLY FAN	0.4	120V-1ø	0.4A	15A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 45	
	SF-D3.1	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 45	(1)
	SF-D3.2	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 45	(1)
	SF-D3.3	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 45	(1)
	SF-D3.4	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 45	(1)
	SF-D3.5	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 45	(1)
	SF-D3.6	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 45	(1)
	SF-D3.7	OA INTAKE SUPPLY FAN	0.4	–	0.4A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 45	(1)
	BCU-D1	BLOWER COIL AIR HANDLING UNIT	1/6	120V-1ø	2.7	15A/1P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 18.	
	HE-D3	HEAT EXCHANGER	1/4	480V-3ø	1.2	15A/3P	3#12 + #12 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		LPAUD-1A / 26, 28, 30	(5)

MECHANICAL EQUIPMENT ELECTRICAL REQUIREMENTS

PLAN SYMBOL	ITEM	DESCRIPTION	HP	VOLTAGE	LOAD (A)	CIRCUIT BREAKER	WIRING	DISCONNECT SWITCH	COMBINATION STARTER AND/OR DISCONNECT SWITCH	PANEL-CIRCUIT NUMBER	REMARKS
	HP-1.1	HEAT PUMP	–	208V-1ø	0.47A	15A/2P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 19	
	HP-1.2	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 19	(1)
	HP-1.3	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 19	(1)
	HP-1.4	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 19	(1)
	ACC-1	AIR COOLED CONDENSING UNIT	–	460V-3ø	37.6A	50A/3P	3#8 + #10 GND. IN 1" CONDUIT	E.C. SHALL PROVIDE A 60 AMP 3 POLE DISCONNECT SWITCH		LA / 31, 33, 35	
	HP-2.1	HEAT PUMP	–	208V-1ø	0.47A	15A/2P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 20	
	HP-2.2	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 20	(1)
	HP-2.3	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 20	(1)
	HP-2.4	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 20	(1)
	HP-2.5	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 20	(1)
	HP-2.6	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 20	(1)
	ACC-2	AIR COOLED CONDENSING UNIT	–	460V-3ø	37.6A	50A/3P	3#8 + #10 GND. IN 1" CONDUIT	E.C. SHALL PROVIDE A 60 AMP 3 POLE DISCONNECT SWITCH		LA / 26, 28, 30	
	HP-3.1	HEAT PUMP	–	208V-1ø	0.27A	15A/2P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 21	
	HP-3.2	HEAT PUMP	–	208V-1ø	0.27A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 21	(1)
	HP-3.3	HEAT PUMP	–	208V-1ø	0.27A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		B1 / 21	(1)
	ACC-3	AIR COOLED CONDENSING UNIT	–	460V-3ø	37.6A	50A/3P	3#8 + #10 GND. IN 1" CONDUIT	E.C. SHALL PROVIDE A 60 AMP 3 POLE DISCONNECT SWITCH		LA / 32, 34, 36	
	HP-D1.1	HEAT PUMP	–	208V-1ø	0.47A	15A/2P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 13, 15	
	HP-D1.2	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 13, 15	(1)
	HP-D1.3	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 13, 15	(1)
	HP-D1.4	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 13, 15	(1)
	ACC-D6	AIR COOLED CONDENSING UNIT	–	460V-3ø	37.6	50A/3P	3#8 + #10 GND. IN 1" CONDUIT	E.C. SHALL PROVIDE A 60 AMP 3 POLE DISCONNECT SWITCH		HVD-1A / 21	
	HP-D2.1	HEAT PUMP	–	208V-1ø	0.47A	15A/2P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 13, 15	(1)
	HP-D2.2	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 13, 15	(1)
	HP-D2.3	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 13, 15	(1)
	HP-D2.4	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 13, 15	(1)
	HP-D2.5	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 13, 15	(1)
	HP-D2.6	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-1B / 13, 15	(1)
	ACC-D7	AIR COOLED CONDENSING UNIT	–	460V-3ø	37.6A	50A/3P	3#8 + #10 GND. IN 1" CONDUIT	E.C. SHALL PROVIDE A 60 AMP 3 POLE DISCONNECT SWITCH		HVD-1A / 22	
	HP-D3.1	HEAT PUMP	–	208V-1ø	0.47A	15A/2P	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 56, 58	(1)
	HP-D3.2	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 56, 58	(1)
	HP-D3.3	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 56, 58	(1)
	HP-D3.4	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 56, 58	(1)
	HP-D3.5	HEAT PUMP	–	208V-1ø	0.47A	–	2#12 + #12 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		PPAUD-2A / 56, 58	(1)
	ACC-D8	AIR COOLED CONDENSING UNIT	–	460V-3ø	37.6A	50A/3P	3#8 + #10 GND. IN 1" CONDUIT	E.C. SHALL PROVIDE A 60 AMP 3 POLE DISCONNECT SWITCH		HVD-1A / 23	
	ECH-B1	ELECTRIC HEATER	–	277V-1ø	18.1	30A/1P	2#10 + #10 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		LPA-1A / 21	
	ECH-B2	ELECTRIC HEATER	–	277V-1ø	18.1	30A/2P	2#10 + #10 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		LPA-1A / 22	
	EWH-C1	ELECTRIC HEATER	–	277V-1ø	16.4	30A/2P	2#10 + #10 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		HV-3 / 8	
	EWH-C2	ELECTRIC HEATER	–	277V-1ø	16.4	30A/2P	2#10 + #10 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		HV-3 / 9	
	CU-C1	INDOOR COOLING UNIT	–	208V-1ø	–	–	–	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		–	(1)
	ACC-C1	OUTDOOR CONDENSING UNIT	–	208V-1ø	17.7	30A/2P	2#10 + #10 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A 30 AMP 3 POLE DISCONNECT SWITCH		PP3A / 43, 45	
	CU-D1	INDOOR COOLING UNIT	–	208V-1ø	–	–	–	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		–	(1)
	ACC-D1	OUTDOOR CONDENSING UNIT	–	208V-1ø	17.7	30A/2P	2#10 + #10 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A 30 AMP 3 POLE DISCONNECT SWITCH		PPAUD-2 / 47, 49	
	CU-D2	INDOOR COOLING UNIT	–	208V-1ø	–	–	–	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		–	(1)
	ACC-D2	OUTDOOR CONDENSING UNIT	–	208V-1ø	21.0	35A/2P	2#10 + #10 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A 30 AMP 3 POLE DISCONNECT SWITCH		PPAUD-2 / 48, 50	
	CU-D3	INDOOR COOLING UNIT	–	208V-1ø	–	–	–	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		–	(1)
	ACC-D3	OUTDOOR CONDENSING UNIT	–	208V-1ø	21.0	35A/2P	2#10 + #10 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A 30 AMP 3 POLE DISCONNECT SWITCH		PPAUD-2 / 49, 51	
	CU-D4	INDOOR COOLING UNIT	–	208V-1ø	–	–	–	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		–	(1)
	ACC-D4	OUTDOOR CONDENSING UNIT	–	208V-1ø	21.0	35A/2P	2#10 + #10 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A 30 AMP 3 POLE DISCONNECT SWITCH		PPAUD-2 / 52, 54	
	CU-D5	INDOOR COOLING UNIT	–	208V-1ø	–	–	–	E.C. SHALL PROVIDE A MANUAL MOTOR STARTER WITHOUT OVER LOADS		–	(1)
	ACC-D5	OUTDOOR CONDENSING UNIT	–	208V-1ø	21.0	35A/2P	2#10 + #10 GND. IN 3/4" CONDUIT	E.C. SHALL PROVIDE A 60 AMP 3 POLE DISCONNECT SWITCH		PPAUD-2 / 53, 55	
	RAHU-D1	ROOFTOP AIR HANDLING UNIT	(1) 7.5 (1) 5.0	480V-3ø	–	25A/3P 15A/3P	3#12 + #12 GND. IN 3/4"C 3#12 + #12 GND. IN 3/4"C	VFD FURNISHED WITH UNIT FOR EACH MOTOR		LPAUD-1 / 12, 14, 16 LPAUD-1 / 17, 19, 21	(3) (4) (6)
	ACC-D9	AIR COOLED CONDENSING UNIT	–	480V-3ø	32.2	40A-3P	3#10 + #10 GND. IN 3/4" CONDUIT	FURNISHED WITH UNIT		LPAUD-3 / 14	(3) (4) (6)
	RAHU-D2	ROOFTOP AIR HANDLING UNIT	(1) 10.0 (1) 7.5	480V-3ø	–	30A/3P 25A/3P	3#8 + #10 GND. IN 3/4"C 3#12 + #12 GND. IN 3/4"C	PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH		HVAUD-1 / 3 HVAUD-1 / 4	(3) (4) (6)
	RAHU-D3	ROOFTOP AIR HANDLING UNIT	(1) 15.0 (1) 10.0	480V-3ø	–	50A/3P 30A/3P	3#8 + #10 GND. IN 3/4"C 3#10 + #10 GND. IN 3/4"C	VFD FURNISHED WITH UNIT FOR EACH MOTOR		HVAUD-1 / 5 HVAUD-1 / 6	(2) (3) (4) (6) (5)
	RAHU-D4	ROOFTOP AIR HANDLING UNIT	(1) 7.5 (1) 3.0	480V-3ø	–	25A/3P 15A/3P	3#12 + #12 GND. IN 3/4"C 3#12 + #12 GND. IN 3/4"C	PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH		HVAUD-1 / 7 HVAUD-1 / 8	(3) (4) (6)
	RAHU-D5	ROOFTOP AIR HANDLING UNIT	(1) 5.0 (1) 3.0	480V-3ø	–	15A/3P 15A/3P	3#12 + #12 GND. IN 3/4"C 3#12 + #12 GND. IN 3/4"C	PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH		HVAUD-1 / 9 HVAUD-1 / 10	(3) (4) (6)
	RAHU-D6	ROOFTOP AIR HANDLING UNIT	(1) 5.0 (1) 2.0	480V-3ø	–	15A/3P 15A/3P	3#12 + #12 GND. IN 3/4"C 3#12 + #12 GND. IN 3/4"C	PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH		HVAUD-1 / 11 HVAUD-1 / 12	(3) (4) (6)
	RAHU-D7	ROOFTOP AIR HANDLING UNIT	(1) 5.0 (1) 1.5	480V-3ø	–	15A/3P 15A/3P	3#12 + #12 GND. IN 3/4"C 3#12 + #12 GND. IN 3/4"C	PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH		HVAUD-1 / 13 HVAUD-1 / 14	(3) (4) (6)
	RAHU-D8	ROOFTOP AIR HANDLING UNIT	(1) 5.0 (1) 3.0	480V-3ø	–	15A/3P 15A/3P	3#12 + #12 GND. IN 3/4"C 3#12 + #12 GND. IN 3/4"C	PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH		HVAUD-1 / 15 HVAUD-1 / 16	(3) (4) (6)
	RAHU-D9	ROOFTOP AIR HANDLING UNIT	(1) 5.0 (1) 3.0	480V-3ø	–	15A/3P 15A/3P	3#12 + #12 GND. IN 3/4"C 3#12 + #12 GND. IN 3/4"C	PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH		HVAUD-1 / 17 HVAUD-1 / 18	(3) (4) (6)
	RAHU-D10	ROOFTOP AIR HANDLING UNIT	(1) 5.0 (1) 1.5	480V-3ø	–	15A/3P 15A/3P	3#12 + #12 GND. IN 3/4"C 3#12 + #12 GND. IN 3/4"C	PROVIDE A COMBINATION STARTER/ DISCONNECT SWITCH PROV

FINAL DRAWINGS
FOR BIDDING



WIRE AND CONDUIT SCHEDULE

- (A) EXISTING FEEDER TO REMAIN
- (B) 4#6, + 1#10 GND. IN 1" CONDUIT.
- (C) 4#4/0+1#4 GROUND IN 2 1/2" CONDUIT
- (D) 4#1/0+1#4 GROUND IN 1 1/2" CONDUIT
- (E) 4#2/0+1#4 GROUND IN 2" CONDUIT
- (F) 3#4+1#8 GROUND IN 1 1/4" CONDUIT

EXISTING BUILDING SINGLE LINE DIAGRAM

N.T.S.

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NO.	REVISION ADDENDUM #1	DATE 11/29/12
1		

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POLYTECH SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS TO POLYTECH HIGH SCHOOL

SINGLE LINE DIAGRAM & LEGEND ELECTRICAL

SCALE:	NONE
DESIGN BY:	WJS
DRAWN BY:	WJS
CHECKED BY:	SAJ
DALLC FILE:	Project Number
DATE:	08/15/2012

E1.3

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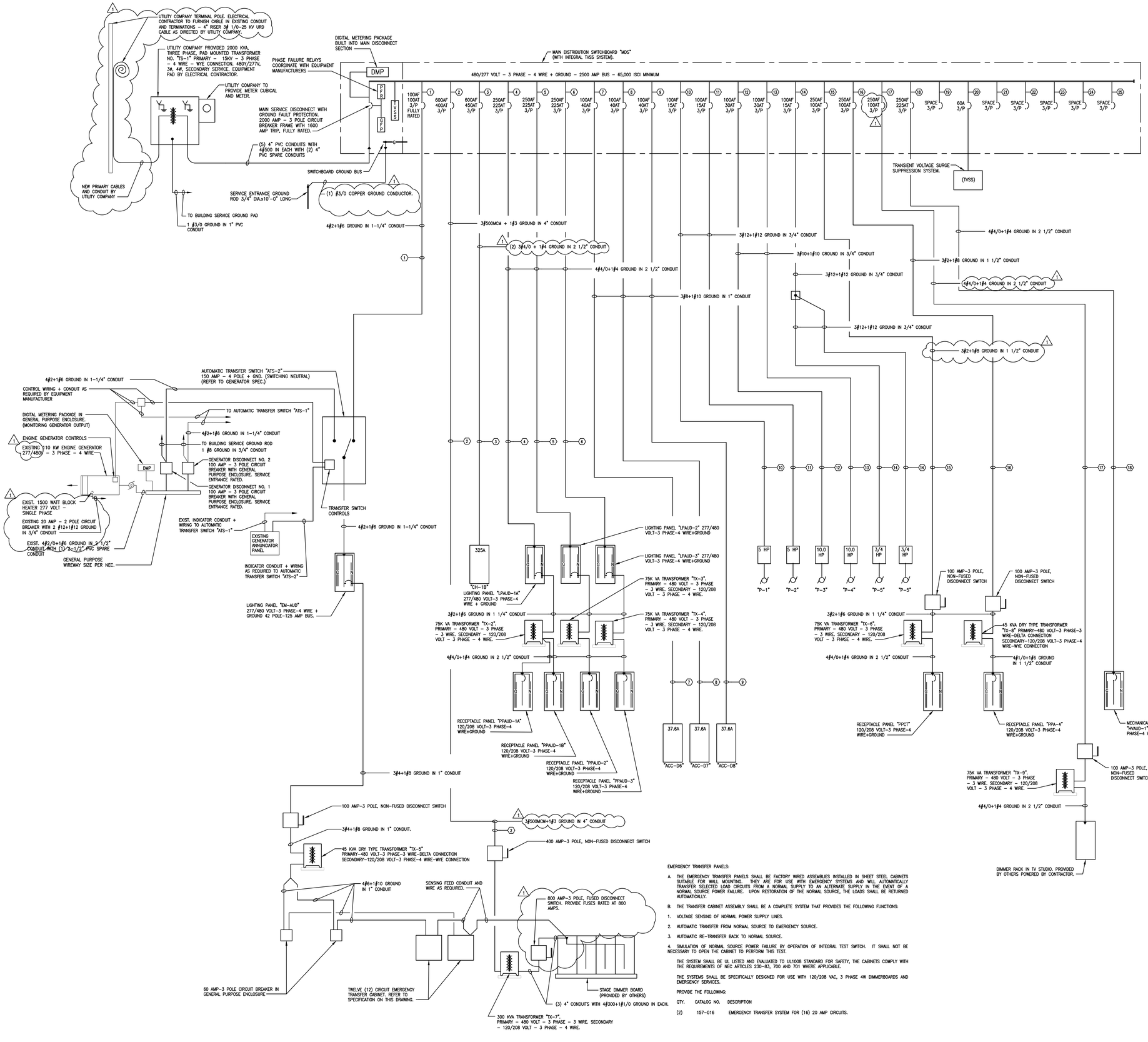
FINAL DRAWINGS
FOR BIDDING



NEW PANEL SCHEDULE

"LPAUD–1A" – 277/480V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS M.L.O., 18,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(1) 125A–3/P C.B. (TX–2)
(1) 15A–3/P C.B. (HE–D3)
(18) 20A–1/P C.B.
(6) 20A–1/P C.B. (NACTIVE)

"LPAUD–2" – 277/480V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS M.L.O., 18,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(1) 125A–3/P C.B. (TX–3)
(10) 20A–1/P C.B.
(5) 20A–1/P C.B. (NACTIVE)

"LPAUD–3" – 277/480V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS M.L.O., 18,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(1) 70A–3/P C.B. (TX–5)
(1) 40A–3/P C.B. (ACC–D9)
(1) 25A–3/P C.B. (RAHU–D1) (S)
(1) 15A–3/P C.B. (RAHU–D1) (R)
(9) 20A–1/P C.B. (ACTIVE)
(5) 20A–1/P C.B. (NACTIVE)

"LPMP–1A" – 277/480V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS M.L.O., 18,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(1) 70A–3/P C.B. (TX–1)
(2) 50A–3/P C.B. (RTU'S)
(2) 20A–1/P C.B. (ECH–B1& B2)
(14) 20A–1/P C.B.
(5) 20A–1/P C.B. (NACTIVE)

"LP–3A" – 277/480V–3 PHASE – 4 WIRE + GND. 18 POLE, 125A BUS, 70A M.C.B., 18,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(12) 20A–1/P C.B.
(5) 20A–1/P C.B. (NACTIVE)

"HVAUD–1" – 277/480V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS, 250A M.C.B., 18,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(1) 50A–3/P C.B.
(2) 30A–3/P C.B.
(2) 25A–3/P C.B.
(13) 15A–3/P C.B.

"HV–3" – 277/480V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS, 250A M.C.B., 18,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(1) 70A–3/P C.B. (RTU–C1)
(1) 20A–3/P C.B. (RTU–C2)
(1) 20A–1/P C.B. (WH–2)
(2) 25A–1/P C.B. (EWH–1 & 2)
(5) 20A–1/P C.B. (NACTIVE)

"HV–RPH–1" – 277/480V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS, 18,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(1) 80A–3/P C.B. (RPH–3)
(1) 70A–3/P C.B. (RPH–4)
(1) 50A–3/P C.B. (RPH–5)

"HV–RPH–2" – 277/480V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS, 18,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(2) 80A–3/P C.B. (RPH–1 & 2)

"PPAUD–1A" – 120/208V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS, 250A M.C.B., 18,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(38) 20A–1/P C.B. (ACTIVE)
(4) 20A–1/P C.B. (INACTIVE)

"PPAUD–1B" – 120/208V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS, 250A M.C.B., 18,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(1) 15A–2/P C.B. (ACTIVE)
(17) 20A–1/P C.B. (ACTIVE)
(2) 25A–1/P C.B. (ACTIVE)
(8) 20A–1/P C.B. (INACTIVE)

"PPAUD–2A" – 120/208V–3 PHASE – 4 WIRE + GND. 54 POLE, 225A BUS, 250A M.C.B., 18,000 AIC, FLUSH MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(6) 20A–2/P C.B. (ACTIVE)
(1) 15A–2/P C.B. (ACTIVE)
(28) 20A–1/P C.B. (ACTIVE)
(8) 20A–1/P C.B. (INACTIVE)

"PPAUD–3" – 120/208V–3 PHASE – 4 WIRE + GND. 54 POLE, 225A BUS, 150A M.C.B., 18,000 AIC, FLUSH MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(37) 20A–1/P C.B. (ACTIVE)
(5) 20A–1/P C.B. (INACTIVE)

"PPCT" – 120/208V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS M.L.O., 18,000 AIC, FLUSH MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(20) 20A–1/P C.B. (ACTIVE)
(8) 20A–1/P C.B. (SPARE)

"PP3A" – 120/208V–3 PHASE – 4 WIRE + GND. 54 POLE, 225A BUS M.L.O., 18,000 AIC, FLUSH MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(1) 20A–2/P C.B. (ACC–1/CU–C1)
(46) 20A–1/P C.B. (ACTIVE)
(8) 20A–1/P C.B. (INACTIVE)

"PPA–4" – 120/208V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS, 150A M.C.B., 18,000 AIC, FLUSH MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(29) 20A–1/P C.B. (ACTIVE)
(8) 20A–1/P C.B. (INACTIVE)

"PPMP–1A" – 120/208V–3 PHASE – 4 WIRE + GND. 30 POLE, 125A BUS. 125A M.C.B., 18,000 AIC, FLUSH MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(19) 20A–1/P C.B. (ACTIVE)
(8) 20A–1/P C.B. (SPARE)

"GH–1" – 120/208V–3 PHASE – 4 WIRE + GND. 42 POLE, 225A BUS M.L.O., 18,000 AIC, FLUSH MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(5) 25A–1/P C.B. (ACTIVE)
(7) 20A–1/P C.B. (ACTIVE)
(8) 20A–1/P C.B. (SPARE)

"EM–AUD" – 120/208V–3 PHASE – 4 WIRE + GND. 18 POLE, 125A BUS M.L.O., 10,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(10) 20A–1/P C.B. (ACTIVE)
(8) 20A–1/P C.B. (SPARE)

"EM–ES" – 120/208V–3 PHASE – 4 WIRE + GND. 18 POLE, 125A BUS M.L.O., 10,000 AIC, SURFACE MTD. WITH THE FOLLOWING CIRCUIT BREAKERS:
(5) 20A–1/P C.B. (ACTIVE)
(2) 20A–1/P C.B. (SPARE)

EMERGENCY TRANSFER PANELS:

A. THE EMERGENCY TRANSFER PANELS SHALL BE FACTORY WIRED ASSEMBLIES INSTALLED IN SHEET STEEL CABINETS SUITABLE FOR WALL MOUNTING. THEY ARE FOR USE WITH EMERGENCY SYSTEMS AND WILL AUTOMATICALLY TRANSFER SELECTED LOAD CIRCUITS FROM A NORMAL SUPPLY TO AN ALTERNATE SUPPLY IN THE EVENT OF A NORMAL SOURCE POWER FAILURE. UPON RESTORATION OF THE NORMAL SOURCE, THE LOADS SHALL BE RETURNED AUTOMATICALLY.

B. THE TRANSFER CABINET ASSEMBLY SHALL BE A COMPLETE SYSTEM THAT PROVIDES THE FOLLOWING FUNCTIONS:

1. VOLTAGE SENSING OF NORMAL POWER SUPPLY LINES.
2. AUTOMATIC TRANSFER FROM NORMAL SOURCE TO EMERGENCY SOURCE.
3. AUTOMATIC RE–TRANSFER BACK TO NORMAL SOURCE.
4. SIMULATION OF NORMAL SOURCE POWER FAILURE BY OPERATION OF INTEGRAL TEST SWITCH. IT SHALL NOT BE NECESSARY TO OPEN THE CABINET TO PERFORM THIS TEST.

THE SYSTEM SHALL BE UL LISTED AND EVALUATED TO UL1008 STANDARD FOR SAFETY, THE CABINETS COMPLY WITH THE REQUIREMENTS OF NEC ARTICLES 230–83, 700 AND 701 WHERE APPLICABLE.

THE SYSTEMS SHALL BE SPECIFICALLY DESIGNED FOR USE WITH 120/208 VAC, 3 PHASE 4W DIMMERBOARDS AND EMERGENCY SERVICES.

PROVIDE THE FOLLOWING:

QTY.	CATALOG NO.	DESCRIPTION
(2)	157–016	EMERGENCY TRANSFER SYSTEM FOR (16) 20 AMP CIRCUITS.

NEW ADDITION SINGLE LINE DIAGRAM

NOT TO SCALE

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NO.	REVISION ADDENDUM #1	DATE 11/28/12

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POLYTECH SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS TO POLYTECH HIGH SCHOOL

SINGLE LINE DIAGRAM & LEGEND ELECTRICAL

SCALE:	NONE
DESIGN BY:	WJS
DRAWN BY:	WJS
CHECKED BY:	SAJ
DALLC FILE:	Project Number
DATE:	08/10/2012

E1.4

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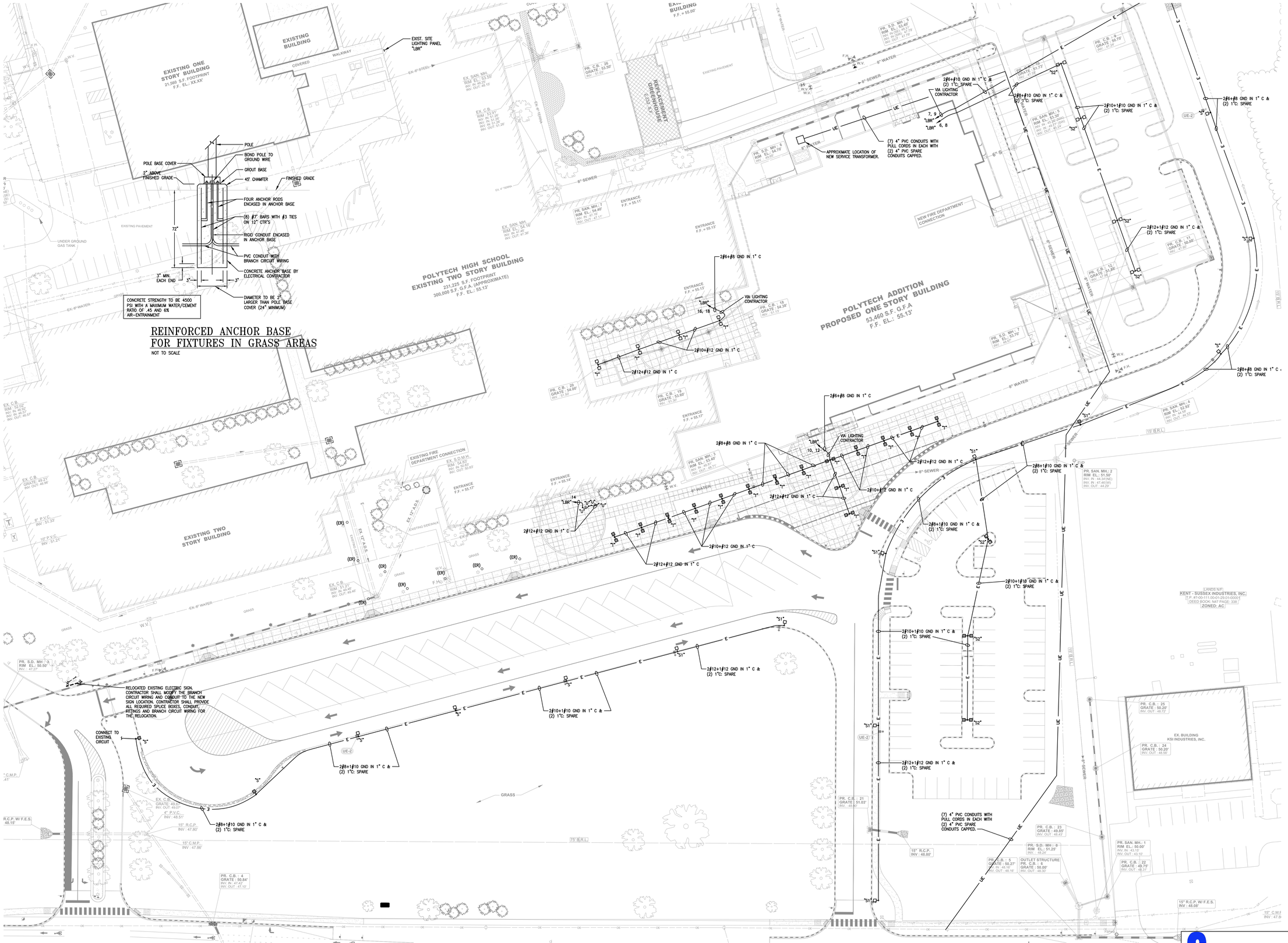

REINFORCED ANCHOR BASE FOR FIXTURES IN GRASS AREAS

NOT TO SCALE

POLE
BOND POLE TO GROUND WIRE
POLE BASE COVER
GROUT BASE
2" ABOVE FINISHED GRADE
45° CHAMFER
FINISHED GRADE
FOUR ANCHOR RODS ENCASED IN ANCHOR BASE
(8) #7" BARS WITH #3 TIES ON 12" CTR'S
RIGID CONDUIT ENCASED IN ANCHOR BASE
PVC CONDUIT WITH BRANCH CIRCUIT WIRING
CONCRETE ANCHOR BASE BY ELECTRICAL CONTRACTOR
DIAMETER TO BE 2" LARGER THAN POLE BASE COVER (24" MINIMUM)
72"
3" MIN. EACH END
3"
3"

CONCRETE STRENGTH TO BE 4500 PSI WITH A MAXIMUM WATER/CEMENT RATIO OF .45 AND 6% AIR-ENTRAINMENT

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NO.	REVISION	DATE
1	ADDENDUM #1	11/28/12

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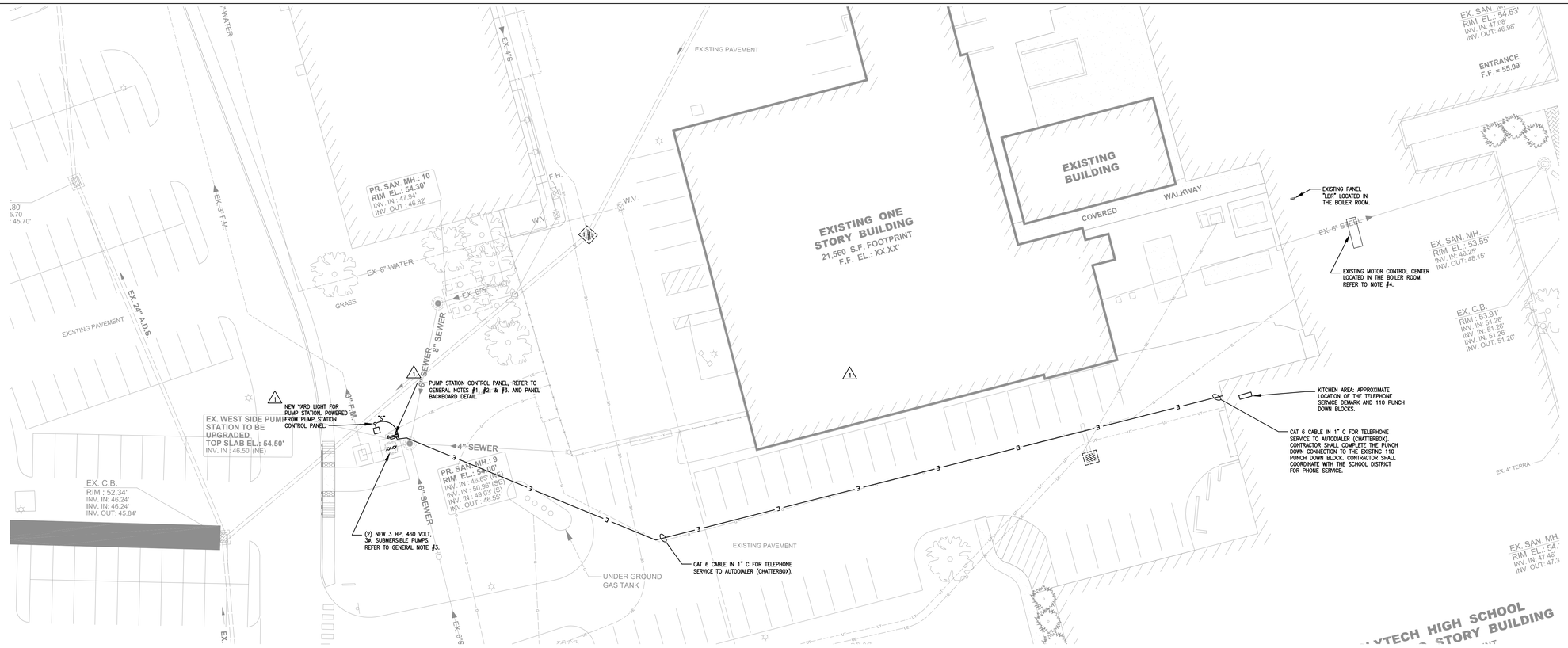
POLYTECH SCHOOL DISTRICT ADDITIONS AND RENOVATIONS TO POLYTECH HIGH SCHOOL

SITE UTILITY PLAN ELECTRICAL

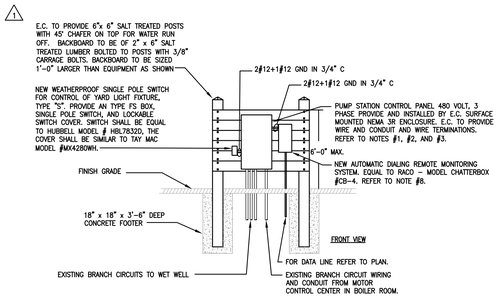
SCALE:	1"=30'
DESIGN BY:	WJS
DRAWN BY:	WJS
CHECKED BY:	RAJ
DALC FILE:	Project Number
DATE:	06-08-12

E300



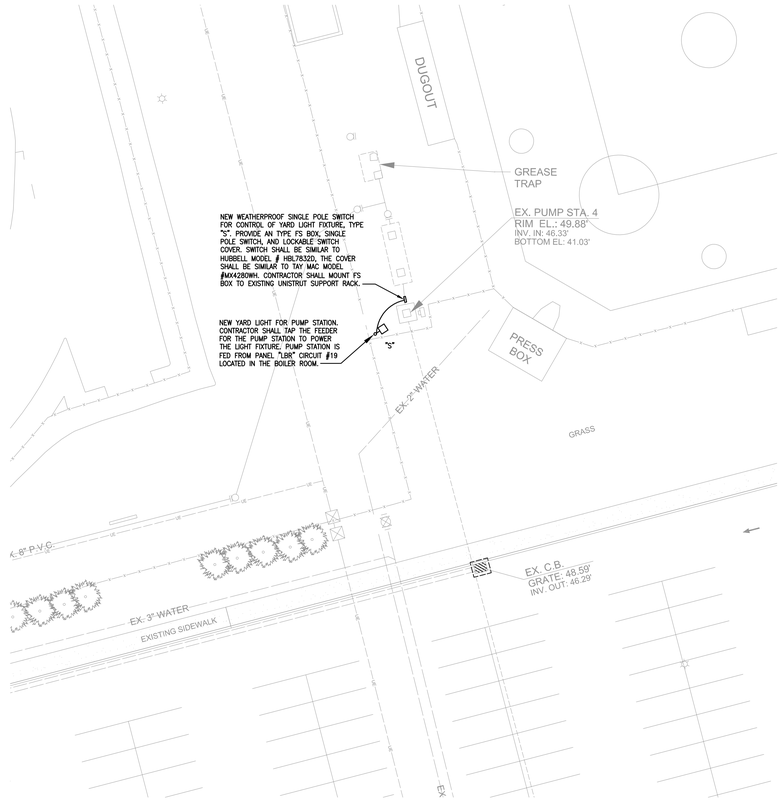
WEST PUMP STATION SITE PLAN – ELECTRICAL

1" = 20'



PANEL BACKBOARD DETAIL

NONE



NORTH PUMP STATION SITE PLAN – ELECTRICAL

1" = 20'

LIGHT FIXTURE SCHEDULE

NOTES:

1. REFER TO DRAWING E1.1 FOR LIGHT FIXTURE SCHEDULE.

GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE WITH THE SITE CONTRACTOR FOR RENOVATION TO THE EXISTING PUMP STATION. CONTRACTOR SHALL DISCONNECT, SAFE–OFF, AND RETAIN THE EXISTING ELECTRICAL FEEDERS, BRANCH CIRCUIT WIRING, AND CONDUIT ASSOCIATED WITH THE EXISTING CONTROL PANEL AND PUMPS. CONTRACTOR SHALL REMOVE PANEL AND SUPPORT BRACKET.
2. THE NEW PUMP CONTROL PANEL AND PUMPS ARE SUPPLIED BY OTHERS AND INSTALLED BY ELECTRICAL CONTRACTOR (E.C.). E.C. SHALL COMPLETE ALL FINAL CONNECTIONS TO THE CONTROL PANEL. E.C. SHALL UTILIZE THE EXISTING CONDUITS FOR THE PUMP POWER CABLES AND CONTROL WIRING.
3. CONTRACTOR SHALL RECONNECT THE EXISTING FEEDER CONDUCTORS AND CONDUIT TO THE NEW CONTROL PANEL AND PUMPS. CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUIT, FITTINGS, AND BRANCH CIRCUIT WIRING TO EXTEND THE ELECTRICAL CONNECTIONS TO THE NEW PUMP STATION.
4. PUMP STATION IS FED FROM THE MOTOR CONTROL CENTER LOCATED IN THE BOILER ROOM.
5. THE PANEL WILL BE SUPPLIED WITH: MAIN DISCONNECT CIRCUIT BREAKERS; ALARM CIRCUIT BREAKER; TWO IEC–RATED MOTOR CONTACTORS; TWO SETS OF START AND RUN CAPACITORS (SINGLE–PHASE ONLY); TWO PLUG–IN CONTROL RELAYS; ALTERNATOR RELAY; TWO PUMP HAND–OFF–AUTO SWITCHES; RED ALARM LIGHT; AUDIBLE ALARM; ALARM SILENCE SWITCH; ENCLOSED WIRE WAY; TERMINAL BLOCKS; GROUND LUG; PORTABLE GENERATOR RECEPTACLE; AND ALL NECESSARY WIRING. TERMINAL STRIPS MUST HAVE A MINIMUM 3" CLEARANCE TO THE INSIDE WALL OF THE ENCLOSURE FOR EASE OF WIRING.
6. THE CONTROL PANEL IS FITTED WITH A RED LEXAN ALARM LIGHT. THE LIGHT SHALL REMAIN SOLIDLY ILLUMINATED FOR MOISTURE DETECTION IN THE LOWER SEAL CHAMBER OF THE PUMP. THE ALARM LIGHT SHALL FLASH, INDICATING A HIGH WATER ALARM CONDITION IN THE BASIN. THE LIGHT SHALL BE APPROXIMATELY 3" HIGH BY 2" DIAMETER, MOUNTED ON THE TOP SURFACE OF THE ENCLOSURE, VISIBLE FROM 360 DEGREES. THE BULB SHALL BE 40–WATT MINIMUM, HIGH INTENSITY, MEDIUM BASE TYPE. THE BULB OR LENS SHALL BE EASILY REPLACED BY REMOVING A THREADED SETSCREW AND LOCKING WASHER ON THE INTERIOR OF THE PANEL. THE LENS SHALL BE MOUNTED ON TOP OF THE ENCLOSURE WITH A NEOPRENE GASKET AND MUST MAINTAIN THE NEMA 4X RATING.
7. THE ALARM CONDITION WILL PRODUCE A BRIGHT GLOWING ALARM LIGHT AND AUDIBLE BUZZER. THE AUDIBLE BUZZER CAN BE SILENCED BY MEANS OF THE SILENCE SWITCH INSIDE THE FRONT PANEL. THE RED INDICATOR LIGHT WILL REMAIN ILLUMINATED AS LONG AS THE ALARM CONDITION PERSISTS. BOTH FLASHING ALARM LIGHT AND AUDIBLE BUZZER WILL STOP WHEN THE WATER LEVEL DROPS TO NORMAL OPERATING CONDITIONS.
8. CONTRACTOR SHALL PROVIDE A NEW AUTOMATIC DIALING REMOTE MONITORING SYSTEM. EQUAL TO RACO – MODEL CHATTERBOX #CB–4. UNIT SHALL ALSO BE PROVIDED WITH A NEMA 4X ENCLOSURE, ONE ANALOG CHANNEL, 24 HOUR BATTERY BACK, THERMOSTSTICALLY CONTROLLED HEATER, LOCAL DATA LOGGER, AND LOCAL ALARM RELAY OUTPUT.

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NO.	REVISION	DATE
1	ADDENDUM #2	08/03/2012
2	ADDENDUM #1 BID PACK "B"	7/12/2012

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POLYTECH SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS TO
POLYTECH HIGH SCHOOL

PUMP STATION
ELECTRICAL
SITE PLAN

SCALE:	1"=20'
DESIGN BY:	WJS
DRAWN BY:	WJS
CHECKED BY:	SAJ
DALLC FILE:	Project Number
DATE:	06-06-12

E302

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FINAL DRAWINGS
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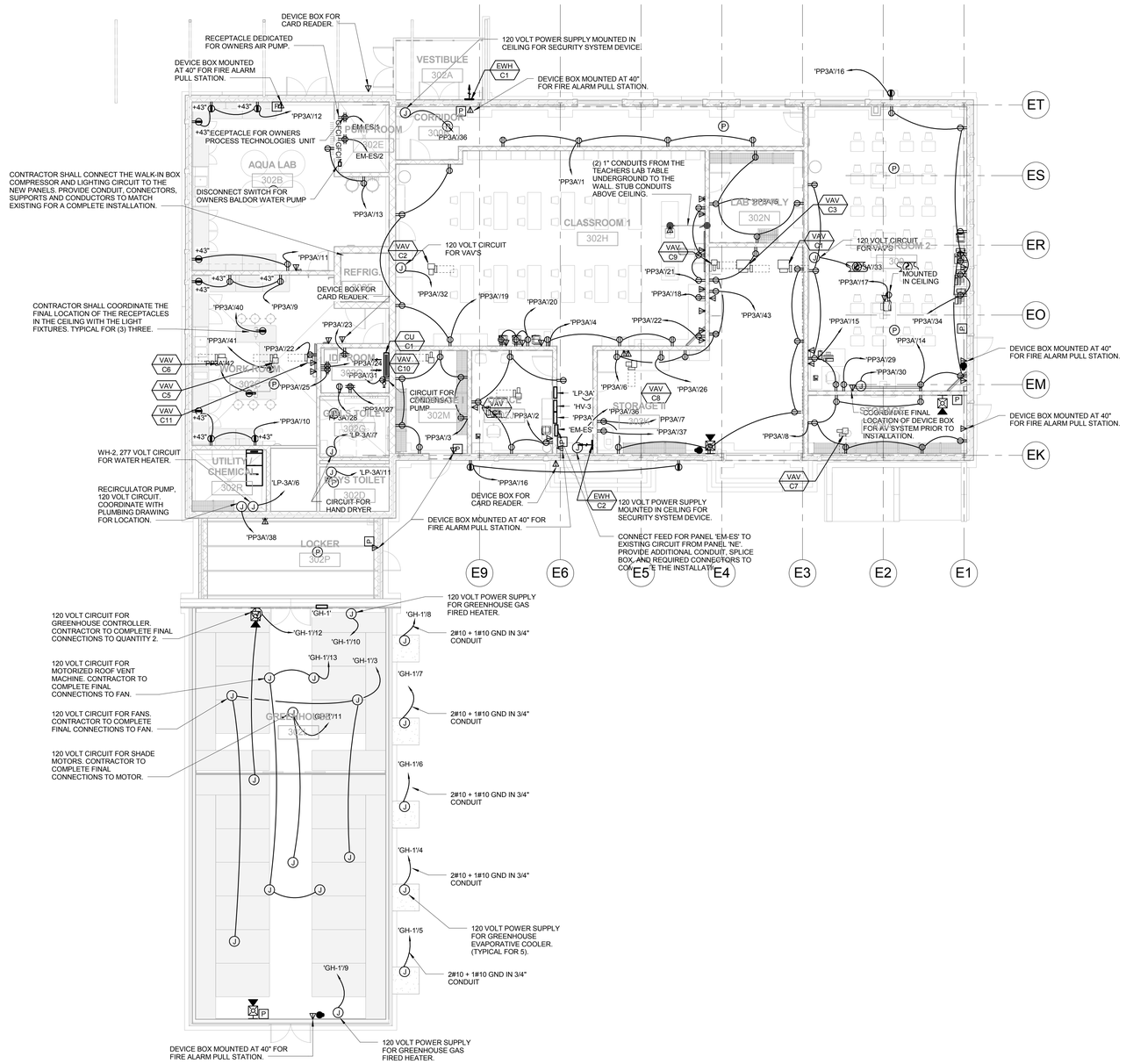
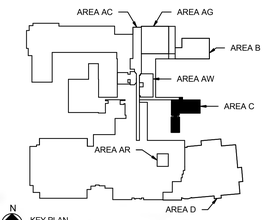


1 FIRST FLOOR - POWER
1/8" = 1'-0"



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NO.	REVISION	DATE
1	ADDENDUM #1 REVISED AV LINE WEIGHT	11/28/12

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POLYTECH HIGH SCHOOL
RENOVATIONS AND ADDITIONS
823 WALNUT SHADE ROAD WOODSIDE, DELAWARE

FIRST FLOOR
POWER PLAN

SCALE:	1/8" = 1'-0"
DESIGN BY:	Designer
DRAWN BY:	CC
CHECKED BY:	Checker
DALLC FILE:	
DATE:	08/15/2012

EC1.2

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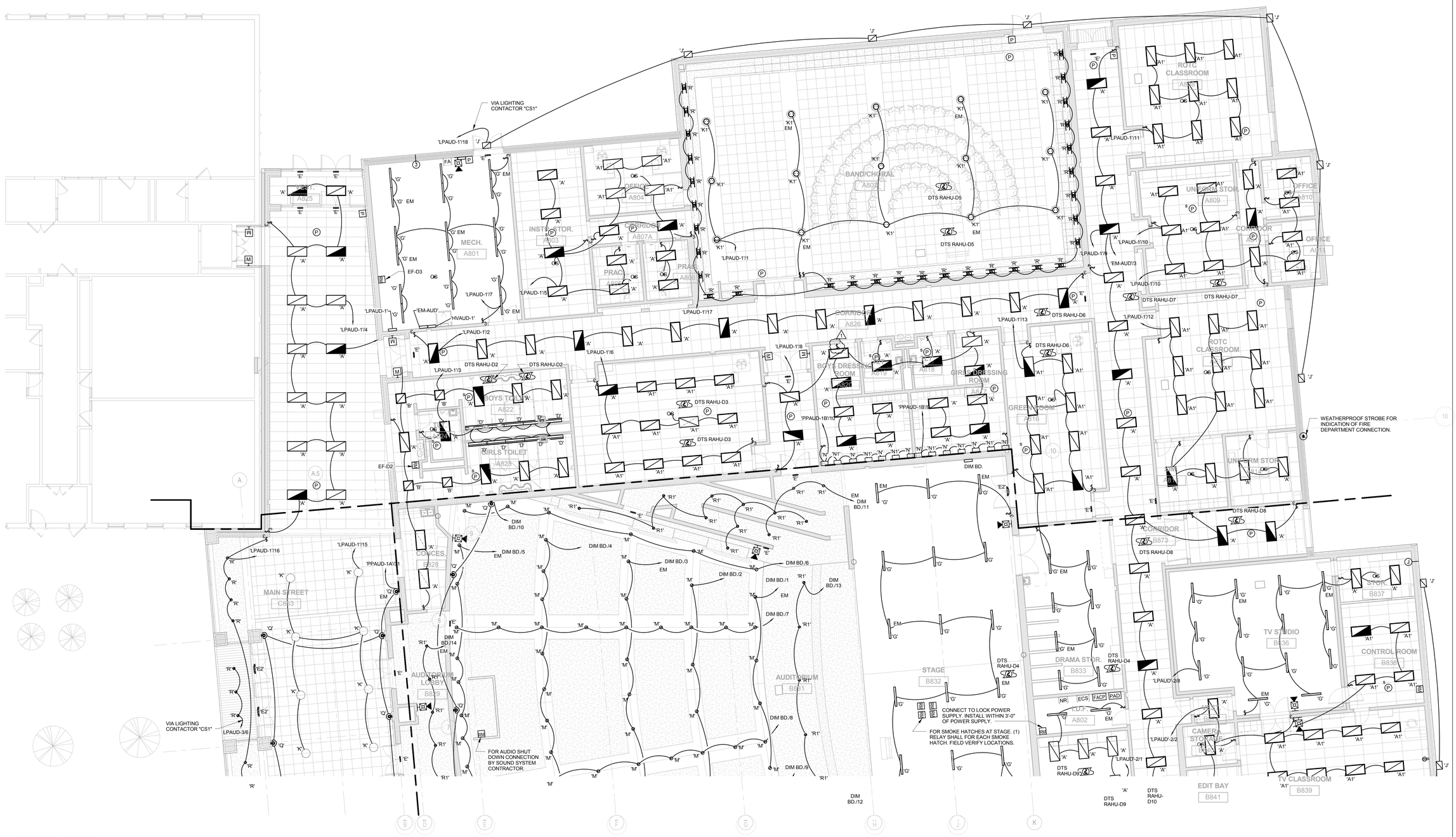
FINAL DRAWINGS
FOR BIDDING



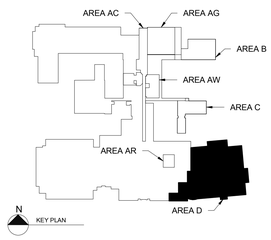
1 LIGHTING PLAN AREA 'A'
1/8" = 1'-0"

FIRE ALARM NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED FIRE ALARM VENDOR IN THE STATE OF DELAWARE TO INDICATE THE REQUIRED ITEMS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM AS RECOGNIZED BY THE NFPA, STATE FIRE MARSHAL'S OFFICE, AND THE ADA. THIS RESPONSIBILITY SHALL ALSO INCLUDE ANY COORDINATION WITH FIRE PROTECTION INTERFACE AND MECHANICAL SHUTDOWN.
2. THE FIRE ALARM DEVICES AND EQUIPMENT SHOWN ON THE FLOOR PLANS IS INDICATED STRICTLY TO SHOW INTENT AND COORDINATION WITH OTHER TRADES, AND SHALL NOT BE TAKEN TO INDICATE A COMPLETE FIRE ALARM AND DETECTION LAYOUT; MEETING ALL NFPA, STATE AND LOCAL CODES FOR THIS PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR'S SUB-CONTRACTOR/VENDOR AND THEIR FIRE PROTECTION ENGINEER TO PRODUCE A COMPLETE SET OF DRAWINGS INDICATING ALL REQUIRED EQUIPMENT, DEVICES, WIRING DIAGRAMS AND COMPONENTS NEEDED TO MEET AND FULFILL THE REQUIREMENTS OF THE NFPA, STATE OF DELAWARE'S OFFICE OF THE FIRE MARSHAL AND THE AUTHORITY HAVING JURISDICTION.
3. THE SYSTEM SHALL INCLUDE ALL REQUIRED HARDWARE, RACEWAY'S, INTERCONNECTING WIRING AND SOFTWARE TO ACCOMPLISH THE INTENT OF THE SPECIFICATION AND THE CONTRACT DRAWINGS, WHETHER OR NOT SPECIFICALLY ITEMIZED HEREIN.
4. THE HVAC UNITS ARE TO BE SHUT DOWN BY SIGNAL FROM THE FIRE ALARM PANEL VIA THE DDC CONTROL SYSTEM. THE HVAC SYSTEM WILL INCLUDE A SMOKE MANAGEMENT CONTROL PANEL LOCATED IN THE MECHANICAL ROOM A801. THIS UNIT WILL PROVIDE MANUAL CONTROL OF THE HVAC SYSTEM RETURN/RELIEF FANS OR EXHAUST FANS. COORDINATE ASSOCIATED WORK WITH DIVISION 22 MECHANICAL.
5. THE EXISTING FIRE ALARM PANELS ARE TO BE REPLACED THROUGHOUT THE FACILITY WITH NEW NETWORKED FIRE ALARM NODES AS SPECIFIED IN THE SPECIFICATIONS.
6. FIRE ALARM NODE 1 IS TO FUNCTION AS THE DACT FOR THE ENTIRE SYSTEM. OWNER SHALL PROVIDE TELEPHONE SERVICE OR INTERNET SERVICE, IF IP COMMUNICATOR IS USED AT NODE 1. FOR NODES 2, 3, & 4 TRACE AND CONVERT EXISTING SLC'S OR IDC'S TO SLC'S ON THE FIRE ALARM NODE. REPLACE ALL EXISTING INITIATING DEVICES, MONITOR/INPUT MODULES, CONTROL/RELAY MODULES WITH NEW ADDRESSABLE DEVICES AS SPECIFIED.
7. THE CONTRACTOR SHALL TRACE AND CONVERT ALL EXISTING NAC'S TO NEW FIRE ALARM NODES. DETERMINE CURRENT DRAW AND LINE LOSS. IF NECESSARY INSTALL ADDITIONAL POWER SUPPLIES AND BATTERIES TO ENSURE PRIMARY AND SECONDARY POWER REQUIREMENTS ARE MET PER NFPA 72 AS CURRENTLY ADOPTED BY DSFPR. REPLACE END-OF-LINE RESISTORS WITH MODEL COMPATIBLE WITH THE SPECIFIED FIRE ALARM NODE.
8. THE CONTRACTOR SHALL VERIFY QUANTITY AND LOCATIONS OF ALL TAMPER, FLOW, AND EXTERIOR STROBE LIGHTS AT ALL THREE (3) FIRE DEPARTMENT CONNECTIONS WITH THE SPRINKLER CONTRACTOR. ONE (1) ADDRESSABLE MONITOR MODULE SHALL BE REQUIRED FOR EACH TAMPER AND FLOW SWITCH.
9. THE CONTRACTOR SHALL PROVIDE A CEILING MOUNTED DUCT DETECTOR TEST SWITCH FOR EACH DUCT DETECTOR. LOCATIONS OF TEST SWITCHES SHALL BE COORDINATED IN FIELD DURING CONSTRUCTION.
10. THE DRAWINGS AND SPECIFICATIONS INDICATE THE ARCHITECTURE OF THE FARENHYT IFP-2000-VIP PRODUCT. REFER TO SPECIFICATIONS FOR DETAILED VENDORS THE SCHOOL DISTRICT HAS SELECTED TO PROVIDE THE SYSTEM.

EMERGENCY LIGHTING NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL HAVE A BODINE GTD - GENERATOR TRANSFER DEVICE INSTALLED IN THE SHADED FIXTURES AND FIXTURES IDENTIFIED WITH - EM NEXT TO THE FIXTURE CALL OUT. THE CONTRACTOR SHALL PROVIDE A 277 VOLT CIRCUIT FROM THE LOCAL EMERGENCY PANEL TO THE BODINE GTD DEVICE - GENERATOR TRANSFER DEVICE LOCATED IN THER FIXTURE INDICATED. ALL OTHER FIXTURES WITH THE SAME TAG SHALL BE CONNECTED TO THE NORMAL POWER CIRCUIT INDICATED.
2. THE LIGHTING IN THE AUDITORIUM AND STAGE IS POWERED VIA THE DIMMER RACK LOCATED ON THE STAGE. THE DIMMER RACK IS POWERED VIA THE MAIN DISTRIBUTION SWITCHBOARD UNDER NORMAL SOURCE OPERATIONS OF THE FACILITY. DURING A NORMAL SOURCE POWER OUTAGE DESIGNATED CIRCUITS IN THE DIMMER RACK WILL BE POWERED VIA THE EXISTING GENERATOR THROUGH EMERGENCY TRANSFER PANELS. UPON RESTORATION OF NORMAL SOURCE, THE LOADS SHALL BE RETURNED AUTOMATICALLY. REFER TO DRAWING E1.4 OF THIS DESIGE PACKAGE FOR DETAILED ELECTRIC CONNECTIONS AND EQUIPMENT.
3. LIGHTING FOR THE STAGE IS DESIGNED AND PROVIDED BY OTHERS IN THE DESIGN PACKEGE. COORDINATION FOR THE REQUIRED POWER FROM THE DIMMER RACK TO FIXTURES SHALL BE COMPLETED BY THE ELECTRICAL CONTRACTOR. LIGHTING FOR THE AUDITORIUM IS INDICATED ON THESE PLANS AND SHALL BE COORDINATED WITH THE DIMMING SYSTM VENDIR FOIR FINAL CONNECTIONS TO THE DIMMER RACK.



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NO.	REVISION	DATE
1	ADDENDUM #1	11/28/12

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POLYTECH SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS TO
POLYTECH HIGH SCHOOL

LIGHTING PLAN
AREA 'A'

SCALE:	1/8" = 1'-0"
DESIGN BY:	WJS
DRAWN BY:	WJS
CHECKED BY:	SAJ
DALLC FILE:	-
DATE:	08/15/2012

ELD1.1

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FINAL DRAWINGS
FOR BIDDING

NOTES:

1. CONTRACTOR SHALL PROVIDE A FLOOR BOX SIMILAR TO WIREMOLD EVOLUTION SERIES EFB8S-OG FLOOR BOX. THE FLOOR BOX SHALL CONSIST OF (2) EFB6SM MODULES FOR POWER AND COMMUNICATIONS AND (1) EFB6108TBS FLUSH STYLE COVER WITH SOLID LID. CONTRACTOR SHALL ROVIDE ALL REQUIRED DEVICE PLATES, DIVIDER PLATES, AND LEVELING LEGS. CONTRACTOR SHALL INSTALL FLOOR BOX SUCH THAT POWER IS ON ONE SIDE AND COMMUNICATION DEVICES ARE ON THE OTHER. EACH FLOOR BOX SHALL BE PROVIDED WITH (4) 1" CONDUITS, (2) FOR POWER AND (2) FOR DATA WIRING. CONDUIT SHALL RUN PARALLEL TO THE BUILDING FRAMING AND RUN TO THE INTERIOR WALL AND STUB MINIMUM 1'-0" ABOVE CEILING. PROVIDE A JUNCTION BOX ON END OF EACH STUB. PROVIDE A PULL CORD IN THE CONDUITS DESIGNATED FOR COMMUNICATIONS.
2. CONTRACT SHALL PROVIDE A 1" CONDUIT WITH A PULL CORD STUBBED ABOVE CEILING FROM THE PROJECTOR TO THE SINGLE GANG DEVICE BOX IDENTIFIED AS COMMUNICATION DEVICE.
3. CONTRACTOR SHALL PROVIDE A 1" CONDUIT WITH A PULL CORD FROM THE DEVICE BOX TO THE AUDITORIUM AV RACK. COORDINATE WITH THE ARCHITECTURAL PLANS FOR FINAL LOCATION OF EQUIPMENT.
4. CONTRACTOR SHALL PROVIDE A 1" CONDUIT WITH A PULL CORD FROM THE DEVICE BOX TO THE AV RACK LOCATED IN THE ROOM. COORDINATE WITH THE ARCHITECTURAL PLANS FOR FINAL LOCATION OF EQUIPMENT.
5. CONTRACTOR SHALL PROVIDE (2) 1" CONDUITS AND (1) 1 1/4" CONDUIT WITH PULL CORDS FROM EACH OF THE FLOOR POCKETS TO THE AUDITORIUM AV RACK. COORDINATE WITH THE ARCHITECTURAL PLANS FOR FINAL LOCATION OF EQUIPMENT.
6. CONTRACTOR SHALL PROVIDE A 1" CONDUIT WITH A PULL CORD FOR THE DEVICE BOX TO THE AV RACK LOCATED IN THE ROOM. COORDINATE THE FINAL LOCATION OF THE DEVICE BOX WITH THE AV RACK.
7. CONTRACTOR SHALL PROVIDE A 1" CONDUIT WITH A PULL CORD FOR THE SPEAKERS LOCATED IN MAIN STREET, DEVICE BOX LOCATED IN TICKET BOOTH (B834) TO THE AUDITORIUM EQUIPMENT RACK.
8. CONTRACTOR SHALL PROVIDE A 3/4" CONDUIT FROM THE DEVICE BOXMOUNTED 48" A.F.F. LOCATION TO THE FINAL LOCATION OF THE MOTORIZED PROJECTION SCREEN. COORDINATE FINAL LOCATION WITH THE ARCHITECTURAL DRAWINGS.
9. CONTRACTOR SHALL PROVIDE A 1" CONDUIT, 1 1/4" CONDUIT, AND 1 1/2" CONDUIT FROM EACH FLOOR POCKET TO THE AUDITORIUM AV RACKS.
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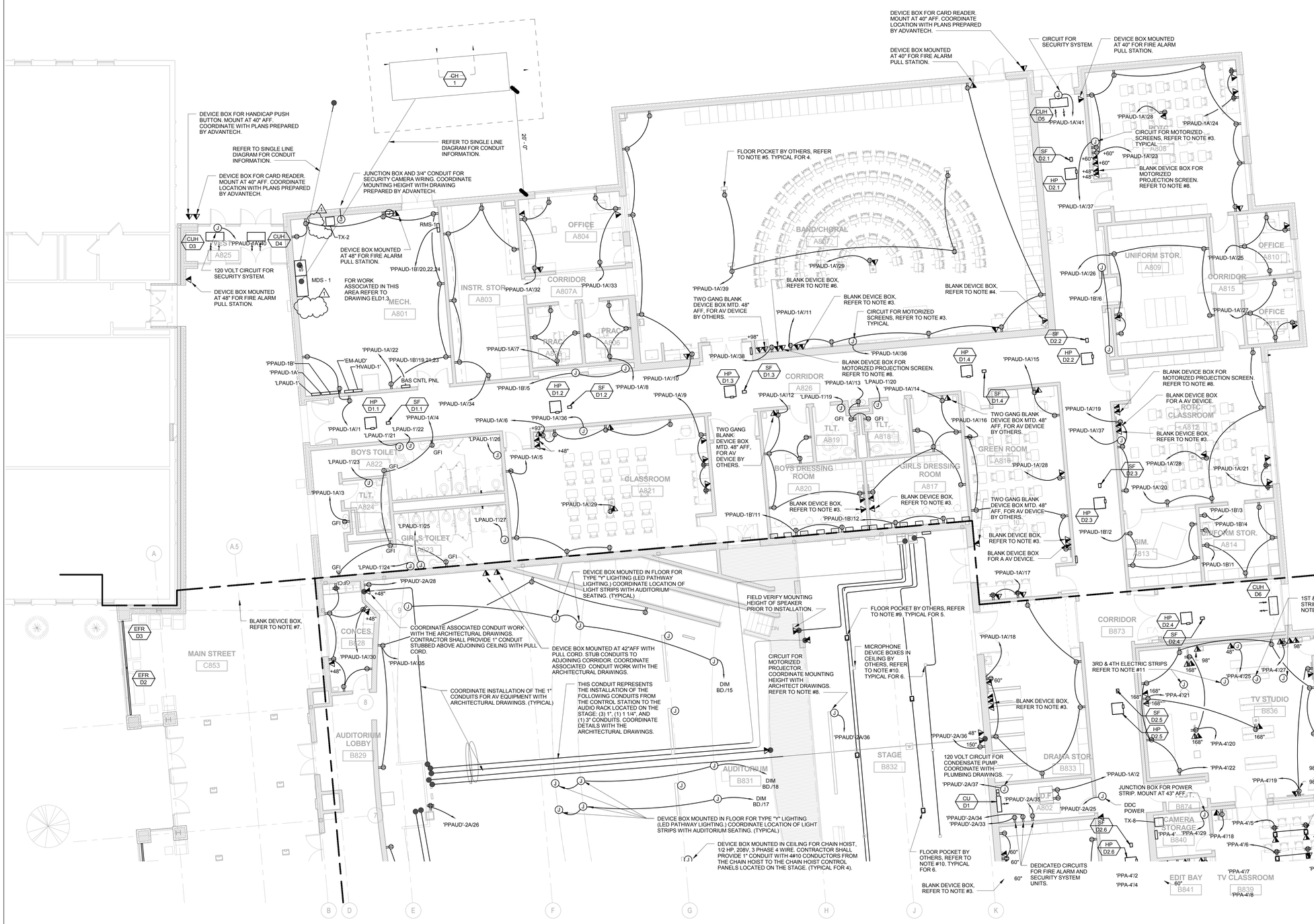
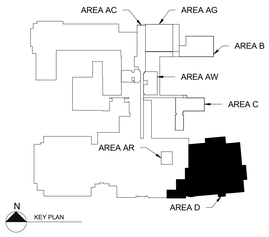
11. CONTRACTOR SHALL PROVIDE (4) 2" CONDUITS EACH WITH (18) #12 CONDUCTORS FROM THE DIMMER RACK TO THE 1ST, 2ND, 3RD AND 4TH ELECTRIC STRIPS IN THE TV STUDIO.
12. CONTRACTOR SHALL PROVIDE A 2" CONDUIT WITH (22) #12 CONDUCTORS FROM THE DIMMER RACK TO THE 1ST ELECTRIC STRIP. PROVIDE A 1 1/2" CONDUIT WITH (18) #12 CONDUCTORS FROM THE DIMMER RACK TO THE 2ND ELECTRIC STRIP. AND A 1 1/2" WITH (10) #12 CONDUVCTORS FROM THE DIMMER RACK TO THE 3RD ELECTRIC STRIP.
13. CONTRACTOR SHALL PROVIDE (3) 2" CONDUITS EACH WITH (22) #12 CONDUCTORS FROM THE DIMMER RACK TO THE 1ST ELECTRIC STRIP OVER THE AUDITORIUM SEATING AREA.



1 POWER PLAN AREA 'A'
1/8" = 1'-0"



NO.	REVISION	DATE
1	ADDENDUM #1	11/28/12

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POLYTECH SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS TO POLYTECH HIGH SCHOOL

POWER PLAN AREA 'A'

SCALE:	1/8" = 1'-0"
DESIGN BY:	WJS
DRAWN BY:	WJS
CHECKED BY:	SAJ
DALLC FILE:	-
DATE:	08/15/2012

EPD1.1

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FINAL DRAWINGS
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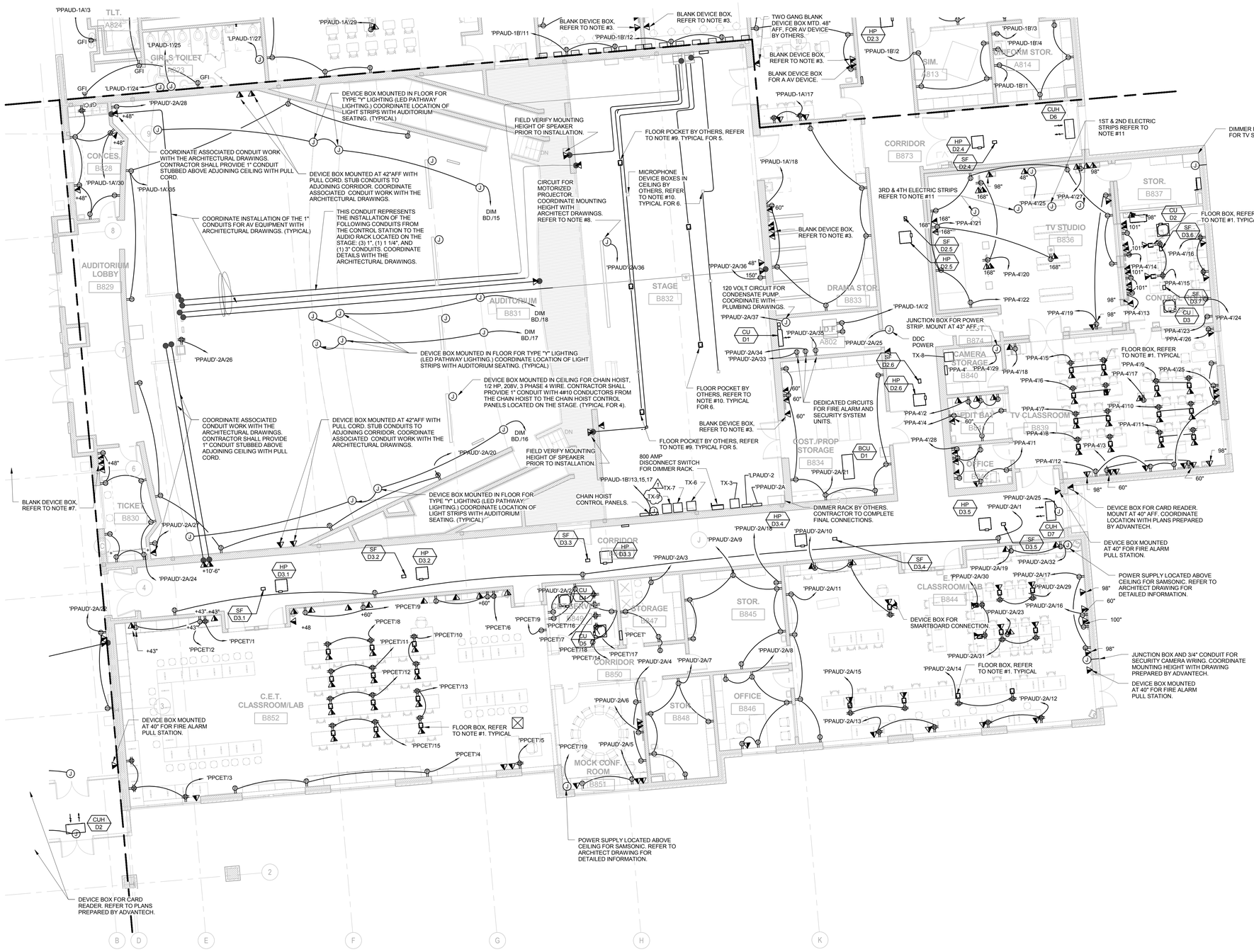

1 POWER PLAN AREA 'B'
1/8" = 1'-0"

NOTES:

1. CONTRACTOR SHALL PROVIDE A FLOOR BOX SIMILAR TO WIREMOLD EVOLUTION SERIES EFB6S-OG FLOOR BOX. THE FLOOR BOX SHALL CONSIST OF (2) EFB6SM MODULES FOR POWER AND COMMUNICATIONS AND (1) EFB610BTBS FLUSH STYLE COVER WITH SOLID LID. CONTRACTOR SHALL ROVIDE ALL REQUIRED DEVICE PLATES, DIVIDER PLATES, AND LEVELING LEGS. CONTRACTOR SHALL INSTALL FLOOR BOX SUCH THAT POWER IS ON ONE SIDE AND COMMUNICATION DEVICES ARE ON THE OTHER. EACH FLOOR BOX SHALL BE PROVIDED WITH (4) 1" CONDUITS, (2) FOR POWER AND (2) FOR DATA WIRING. CONDUIT SHALL RUN PARALLEL TO THE BUILDING FRAMING AND RUN TO THE INTERIOR WALL AND STUB MINIMUM 1'-0" ABOVE CEILING. PROVIDE A JUNCTION BOX ON END OF EACH STUB. PROVIDE A PULL CORD IN THE CONDUITS DESIGNATED FOR COMMUNICATIONS.
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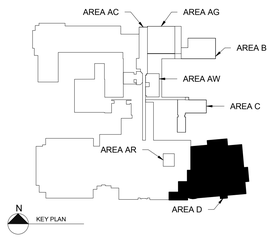
13. CONTRACTOR SHALL PROVIDE (3) 2" CONDUITS EACH WITH (22) #12 CONDUCTORS FROM THE DIMMER RACK TO THE ELECTRIC STRIP OVER THE AUDITORIUM SEATING AREA.



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NO.	REVISION	DATE
1	ADDENDUM #1	11/28/12

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POLYTECH SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS TO POLYTECH HIGH SCHOOL

POWER PLAN AREA 'B'

SCALE:	1/8" = 1'-0"
DESIGN BY:	WJS
DRAWN BY:	WJS
CHECKED BY:	SAJ
DALLC FILE:	-
DATE:	08/15/2012

EPD1.2

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FINAL DRAWINGS
FOR BIDDING

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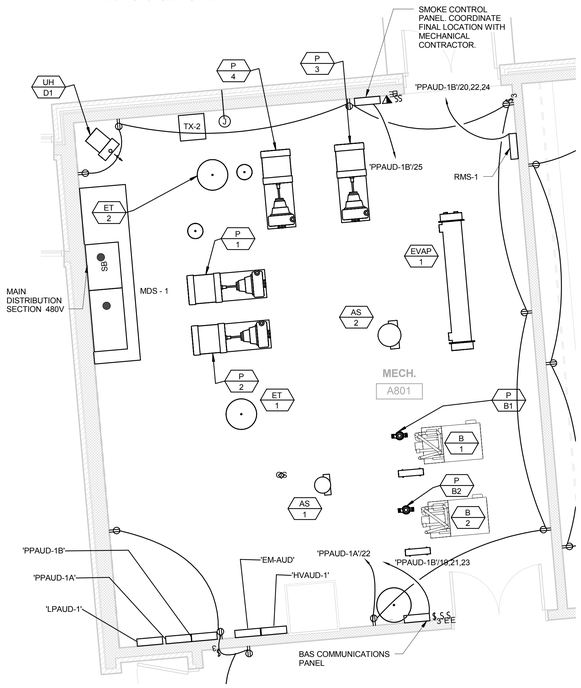
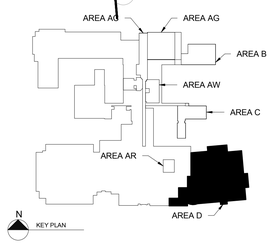


ENLARGED MECHANICAL ROOM - POWER
2 1/4" = 1'-0"

1 POWER PLAN AREA 'C'
1/8" = 1'-0"



NO.	REVISION	DATE
1	ADDENDUM #1	11/28/12

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POLYTECH SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS TO POLYTECH HIGH SCHOOL

POWER PLAN AREA 'C'

SCALE:	As indicated
DESIGN BY:	WJS
DRAWN BY:	WJS
CHECKED BY:	SAJ
DALLC FILE:	-
DATE:	08/15/2012

EPD1.3

furlow associates
CONSULTING ENGINEERS
1260 Valley Ville · Elsmere, DE 19805

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