STAIR SHAFT, NOT REQUIRED PER 1019.1 EXEPTION 9, 707.2.7 EXEPTION 2 AND STAIR WIDTH (E) + 3-7" (F.V.)

REQUIRED = 44" > O.L. 50, 36" OTHERWISE

EXIST. OCC - R-1

 $\overline{(E)}$  AND  $\overline{(P)}$  = V-B

CONSTRUCTION

-PROPOSED FIRE

HOSE CABINET

(FIRE SPRINKLED)

PROPOSED OCC. -

# CONSTRUCTION SET #2

#### DRAWING INDEX

- GENERAL NOTES, LEGENDS, PROJECT DATA, VICINITY MAP AND A/E CONTACT INFORMATION SITE PLAN
- FIRST FLOOR, SECOND FLOOR DEMOLITION PLAN FIRST FLOOR PLAN
- SECOND FLOOR PLAN, 1/4" PLANS REFLECTED CEILING PLAN
- ENVELOPE REPAIR PLAN
- DOOR SCHEDULE, HARDWARE SCHEDULE
- FIRST FLOOR, SECOND FLOOR ROOF PLAN STAIR SECTIONS, DETAILS
- MILLWORK ELEVATIONS
- STRUCTURAL FLOOR PLAN
- STRUCTURAL DETAILS MECHANICAL SCHEDULES AND DETAILS
- 1ST, 2ND FLOOR MECHANICAL DEMOLITION PLAN
- 1ST, 2ND FLOOR MECHANICAL FLOOR PLAN
- PLUMBING SCHEDULES AND DETAILS
- 1ST, 2ND FLOOR PLUMBING PLAN
- FIXTURE SCHEDULES, ONE LINE DETAILS ELECTRICAL PANNELS SCHEDULES
- 1ST, 2ND FLOOR LIGHTING PLAN
- 1ST, 2ND POWER PLAN

GENERAL NOTES

- 1.) The drawings indicate existing conditions that are believed to be reliable however the Architect does not guarantee its accuracy or completeness. All contractors shall verify conditions which may affect their work, prior to bidding & notify the Architect immediately if discrepancies or conflicts occur.
- 2.) Applicable Code: All work and materials shall be in accordance with the current edition of all governing
- 3.) Dimensions: Do not scale drawings. Written dimensions take precedence over scaled dimensions All dimensions are to face of stud or to face of framing unless otherwise noted. Verify all framing
- 4.) The intent of these drawings is to provide the basic nformation necessary to secure a building permit, they are not exhaustivly detailed, the contractor may be required to furnish additional technical information in order to obtiain a final building permit.
  - It is not the intent of these contract documents to indicate every condition wich may be encountered during the course of construction, any discrepancies wich may adversly effect the finished product as shown on the contract documents shall be brought to the immeiate attention of the architect prior to the commencement of any work. Failure to notify the architect of such discrepancies shall relieve the architect of any responsability for any consequences of such failure of
- 5.) Substitutions: No substitutions shall be made without the owner/architect's prior approval.
- 6.) Material Selection: Manufacturer, make, model number, color, etc. of finish materials, appliances, etc., shall be selected by owner or architect. Upon receipt of Product/Data submittals for approval.
- 7.) Equipment Selection: Coordinate with owner for selection and installation of all equipment
- 8.) Job Clean-Up: All trades shall keep the premises free from accumulation of waste and /or rubbish caused by their work. All rubbish, tools, and surplus materials shall be removed at the completion of work. Leave the job in a broom clean condition at the end of each day.
- 9.) Generally dashed lines indicate items to be removed overhangs, or equipment by owner.
- 10.) Where ever any conflicts occur on the plans or specifications, the most stringent of requirements or codes does apply in all conditions. Notify the architect immediately for clarification or interruption.
- 11.) NOTE TO THE GENERAL CONTRACTOR/BUILDER/TRADES: Contractor is responsible for: Dimensions which shall be confirmed and correlated at job site, fabrication process and techniques of construction, coordination of his work that of all other trades, furnishing all items required for the proper execution, completion and satisfactory performance of all work necessary, indicated, reasonably infered, or required by any code with jurisdiction to complete their scope of work for a complete and proper finished job. In case of any question or need for further clarification of information and/or details, contractor should contact the architect prior to further construction or fabrication of items in question.
- 12.) Architect is not responsible for changes to this plan unless

- Coordinate w/ the Electrical and Plumbing Contractor for Wiring Locations, Mechanical Ducts, and Specs of the Disconnects Reg'd, for Electrical System.
- and Colorado Springs Fire Department.

#### ARCHITECT

BRUCE W. BARR, AIA, ARCHITECT DBA ART C. KLIEN CONSTRUCTION INC. 3370 CHELTON LOOP SOUTH COLORADO SPRINGS, CO. 80919 (719) 570-6060 (OFFICE) (719) 570-9671 (FAX) email: bbarr@ackconstruction.com

#### MECHANICAL - PLUMBING

SOL CHAVEZ AND ASSOC. 119 W. CUCHARRAS ST. COLORADO SPRINGS, CO 80903 (719) 636-0021 DARRIN TIFFANY

email: darrin@solchavezpe.com

#### STRUCTURAL ENGINEER

G.M. NAGEL 1798 LAKE WOODMOOR DRIVE MONUMENT, CO 80132 719-577-9797 (PHONE) 719-488-1441 (FAX) **GREG NAGEL** 

email: peforcolo@aol.com

#### ELECTRICAL - DESIGN/BUILD

SECOND FLOOR

EXIST. OCC - R-1

(E) AND (P) = V-B

CONSTRUCTION

2,800s.f.

V-B

PROPOSED OCC. - E

(FIRE SPRINKLED FOR

HEIGHT + 2ND FLOOR

INTERIOR FIRE

**EXTERIOR WALL** 

**TOTAL CLASSROOM** 

OCCUPANT LOAD = 330

WITH EXISTING 18

EXTENSION @ 180°

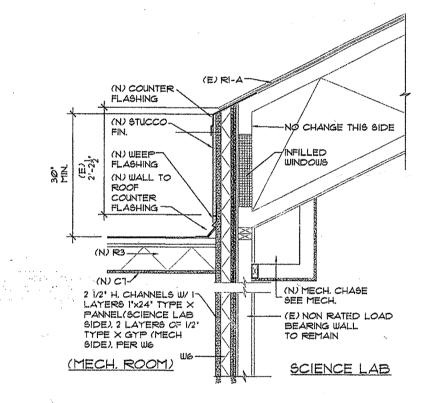
2HR WALL STOPS AT LOWER ROOF

WALL TERMINATES

SOL CHAVEZ AND ASSOC. 119 W CUCHARRAS ST. COLORADO SPRINGS, CO 80903 (719) 636-0021 **JOSH AARES** email: josh@solchavezpe.com

### TO EXT. 18' HOR. 30' VERTICALY -REMOVE (E) (N) STUCCO FIN (E) WALL NO REMOVE & INFILL (E) 24'x72'\_ CLASSROOM #2 2 1/2" H. CHANNELS W/ 2 LAYERS 5/8" TYPE X GYP. CLSS RM. SIDE AND 1"x24" TYPE X GYP PANELS

## 2 HOUR SHAFT WALL

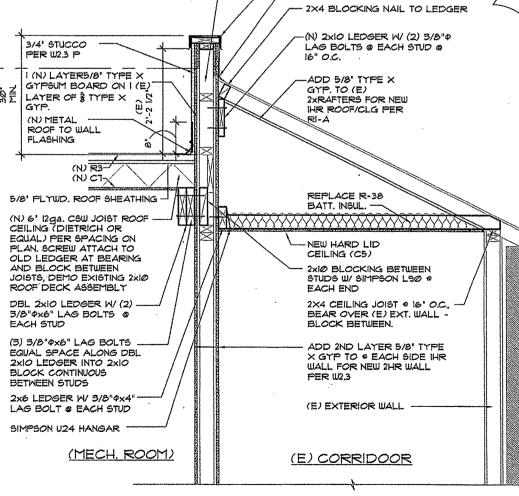


## ASI-1 (2 HOUR SHAFT WALL) T1 SCALE: 1/2" = 1'-0"

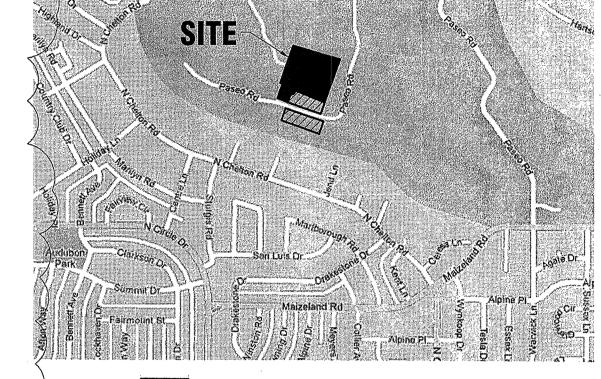
-CUT OUT RAFTER . WALL

-(N) CAP FLASHING (PAINT)

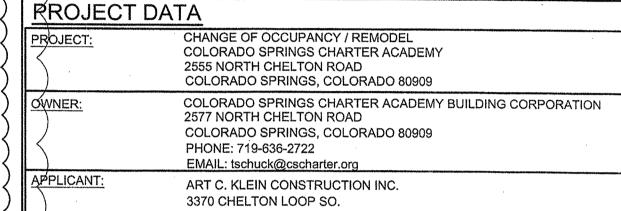
-(N) FLASHING ON (N) SHEET CLAD



**ASI 3 (2 HOUR WALL)** 



### **VICINITY MAP**



COLORADO SPRINGS, CO 80909 LÈGAL DESCRIPTION: LOT 1 BLOCK 1 BENET HILL FIL NO. 2

{	TAX SCHEDULE NO.:	6334304017		
3	EXISTING ZONE:	R1-6 CU		
<i>y</i>	PROPOSED ZONE:	R1-6000 / CU	(EDUCATIONAL)	CPC CU 10-00022

LOT 1 BLK 1: 527,078 SQ. FT. (12.10 ACRE) (E) FOOTPRINT 18,877 SQ. FT. (3.58% OF LOT) STRUCTURE: (PP) FOOTPRINT 15,371 SQ. FT. (2.91% OF LOT)

PARKING / WALKS: 46,835 SQ. FT. (8.88% OF LOT) 44,171 SQ. FT. (8.38% OF LOT) LANDSCAPE / OPEN: 461,366 SQ. FT. (87.53% OF LOT 467,536 SQ. FT. (88,70% OF LOT

(E) PAVEMENT

V-B, PARTIAL FIRE SPRINKLER FOR 2 STORY "E" OCCUPANCY VB (504.2 CODE: 2003 IBC, 2005 , CABO/ANSI A117.1 2003 PROPOSED MAXIMUM ALLOWABLE PROPOSED S OCCUPANCY (STORIES / AREA SF) F.A. #1 (V-B CONSTRUCTION) BASE: 18,500 SF F.A. #2 (V-B CONSTRUCTION) 9,500 SF SECOND FLOOR

TOTAL F.A. #2 TOTAL SUBTOTAL BUILDING HEIGHT (EXISTING)

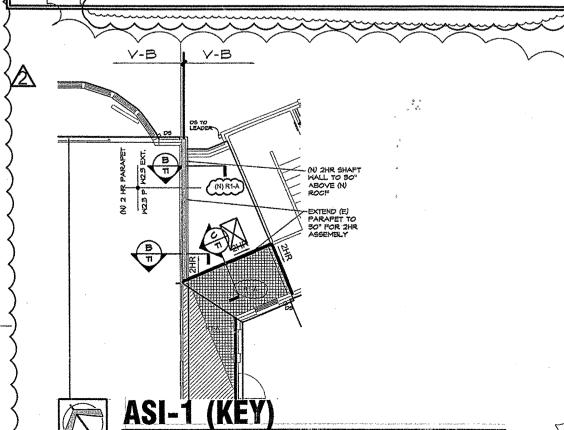
PARKING REQUIRED: 2 / 1 CLASS ROOM: (8 CLASSROOMS) SCHOOL PROVIDED PERSONAL PARKING RESIDENCE 2601 CHELTON ROAD. **PROVIDED** 2589 CHELTON ROAD PERSONAL PARKING RESIDENCE PROVIDED

ACCESSIBLE SPACES REQUIRED / PROVIDED FIRE FLOW:> 7642 SF @ V-B = 2250 GPM @ 2HR, (FIRE AREA #1 IS MAX) 2250 GPM = 2 F.H. @ 450' SPACING W/ 225' HOSE LAY EXISTING FDC + 3 FIREHOSE CABINETS + 1 NEW FIRE HOSE CABINET = 4 TOTAL

PROPOSED TO ADD 1-NEW FIRE HOSE CABINET TO EXTERIOR COURTYARD)

TOTAL REQUIRED

TOTAL PROVIDED





a c a a 

6 6

10,550

SCALE: AS NOTED

DRAWN BY: RO/BWB

DATE: 4-20-10 **REVISED: 5-5-10** 

SHEET

**ELECTRICAL NOTES:** 

All Work to be Done in Comformance with all Local Codes and Ordinances, See Arch. Sheets Other notes.

Coordinate w/ Fire Alarm, Fire Sprinkler Contractors

### **MECHANICAL NOTES:**

- 1.) Coordinate w/ the Electrical Contractor for Wiring Locations, Plumbing, Mechanical Ducts, and Specs of the Disconnects Reg'd, for HVAC System.
- 2.) All Work to be Done in Conformance w/ all Local Codes & Industry Standards.

### PLUMBING NOTES:

- 1.) All Work to be Done in Conformance with all Local
- See Civil or Development Plan for Water, Gas and
- 3.) Coordinate w/ the Electrical and Mechanical Contractor for Wiring Locations, Mechanical Ducts, and Specs of the Disconnects Reg'd. for Plumbing System.

- 1.) Provide Submittal package for fire sprinkler at Fire Area #2 in accordance with NFPA13 and CSFD.
- Provide submittal package for hose valve. A wall hydrant in accordance with figure A.7.3.2(d) NFPA14, 2007 code for wet stand pipe shall be provided.

#### WORK AND EQUIPMENT BY OWNER

- + DEMO AS NOTED
- + MARKER BOARDS AND VISUAL DISPLAYS
- + TELEPHONE, DATA, SOUND SYSTEMS + WINDOW COVERINGS
- + DOOR AND ROOM SIGNAGE OTHER THAN NOTED + PROJECTORS
- + BELL TOWER REPAIRS

ALTERNATE BIDS: 1) ENVELOPE REPAIRS PER SHEET A1.4 (2) EYEWASH @ 109, CLASSROOM #2 (LAB) 3) ACCESS PANELS AND CONDUIT SLEEVES FOR FUTURE I.T

V-1 hr Const 1 story Residence V-N Const 2 story @ north Residence V-N Const. 1 story @ south 2800 sf 2920 sf Total multi-story

• 1 hr Occy separation wall between A2.1 & R-1

F.A.1 School F.A.2 School \*\*2 story @ North

\*\* 2 Story Not Permitted in type V-N Construction for School Occy- Fire sprinkler for 2nd \*\*\* V-N only allows a maximum of 9,500 sf, existing is 13,362- propose converting existing Occy Separation wall into 2 hr Fire Wall for Area Separation. Area #1: old Chapel & South wing = 4550 sf + 3092 sf = 7642 sf - Allowed = 2920 sf + 2800 sf = 5720 sf- Allowed

• Fire Sprinkler required for North wing for 2 story (Table 503,504.2), Fire sprinkler required for 2 floor- no direct exit to exterior (903.2.2). • Elevator; not required for floor area < 3000sf (1104.4) 2nd floor = 2800 sf

• Exit width- corridors 72" where area served Occupant load > 100, 44" OTHERWISE.

**CODE STUDY** 

(E) F.D.C.-

STAIR SHAFT

(E) 1HR ASW. PROPOSED /

**ENCLOSURE NOT** 

REQUIRED PER 707.2.7

2 HOUR FIRE WALL

PER 705.4 & 705.6.1

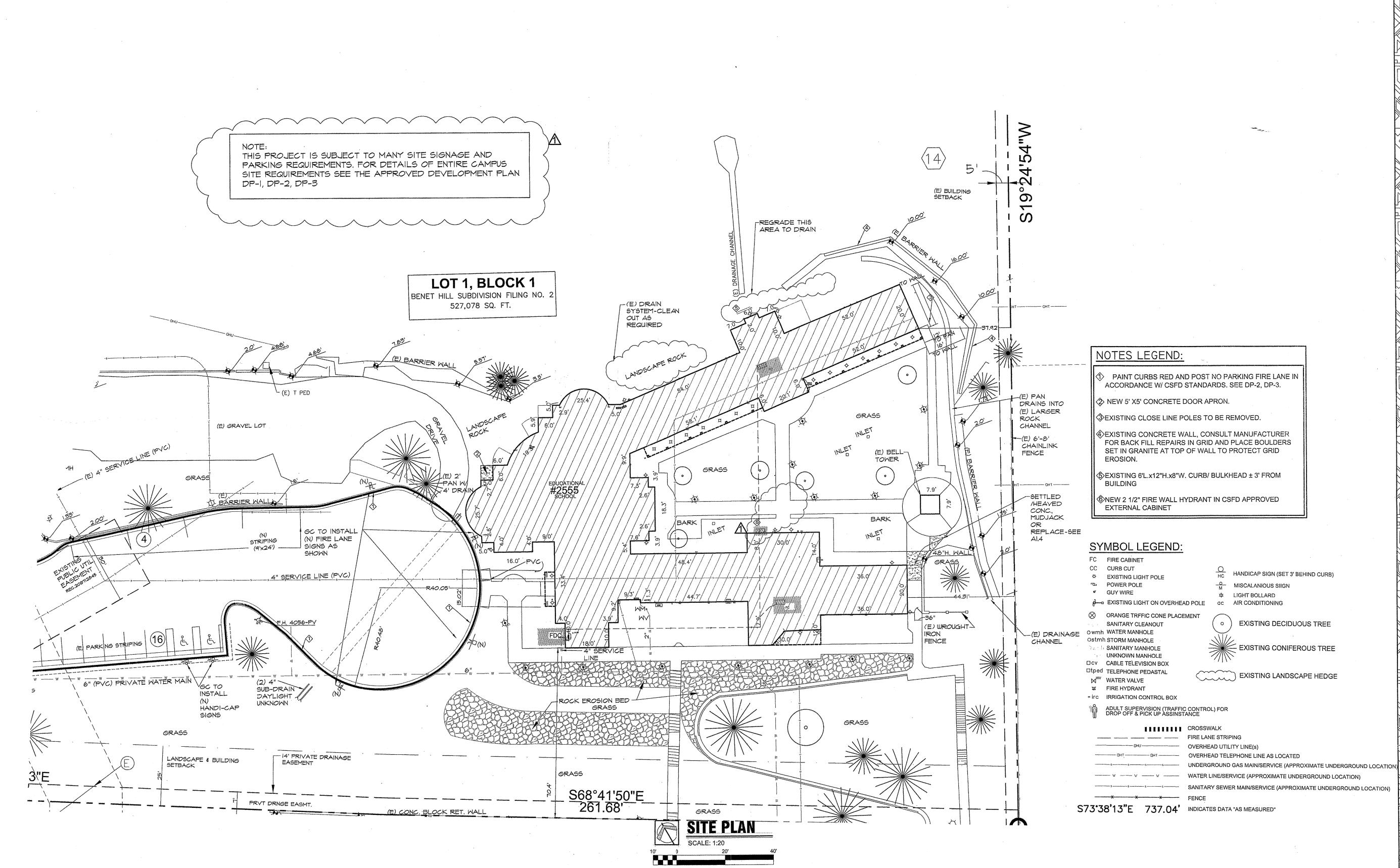
XIST. OCC - A-2

ROPOSED OCC. -

(E) AND (P) = V-A

ONTRUCTION

7,642 s.f.



COLORADO SPRINGS CHARTER ACADEMY

SCALE:
AS NOTED

DRAWN BY:

RO/BWB

DATE: 4-20-10 REVISED:

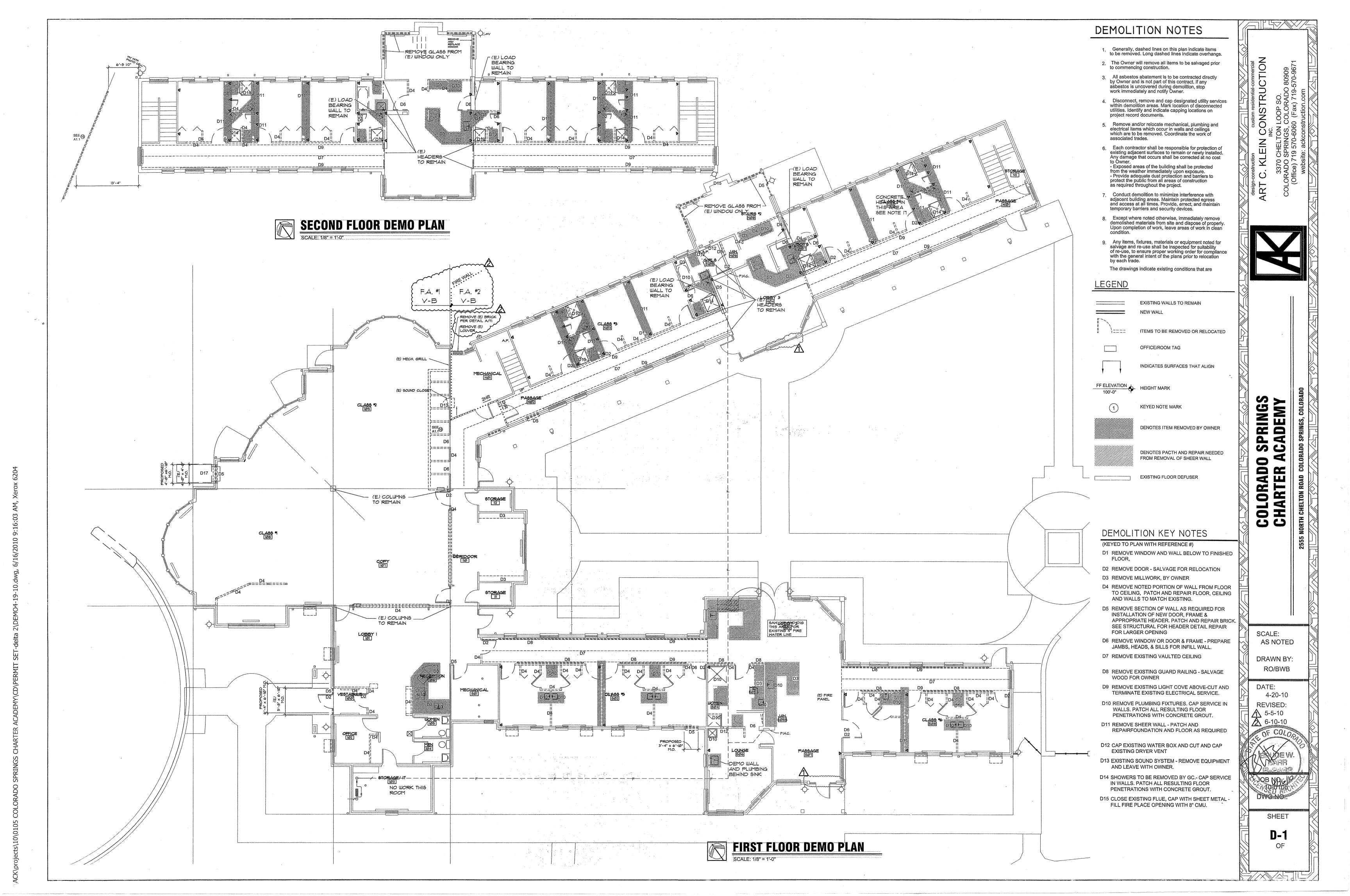
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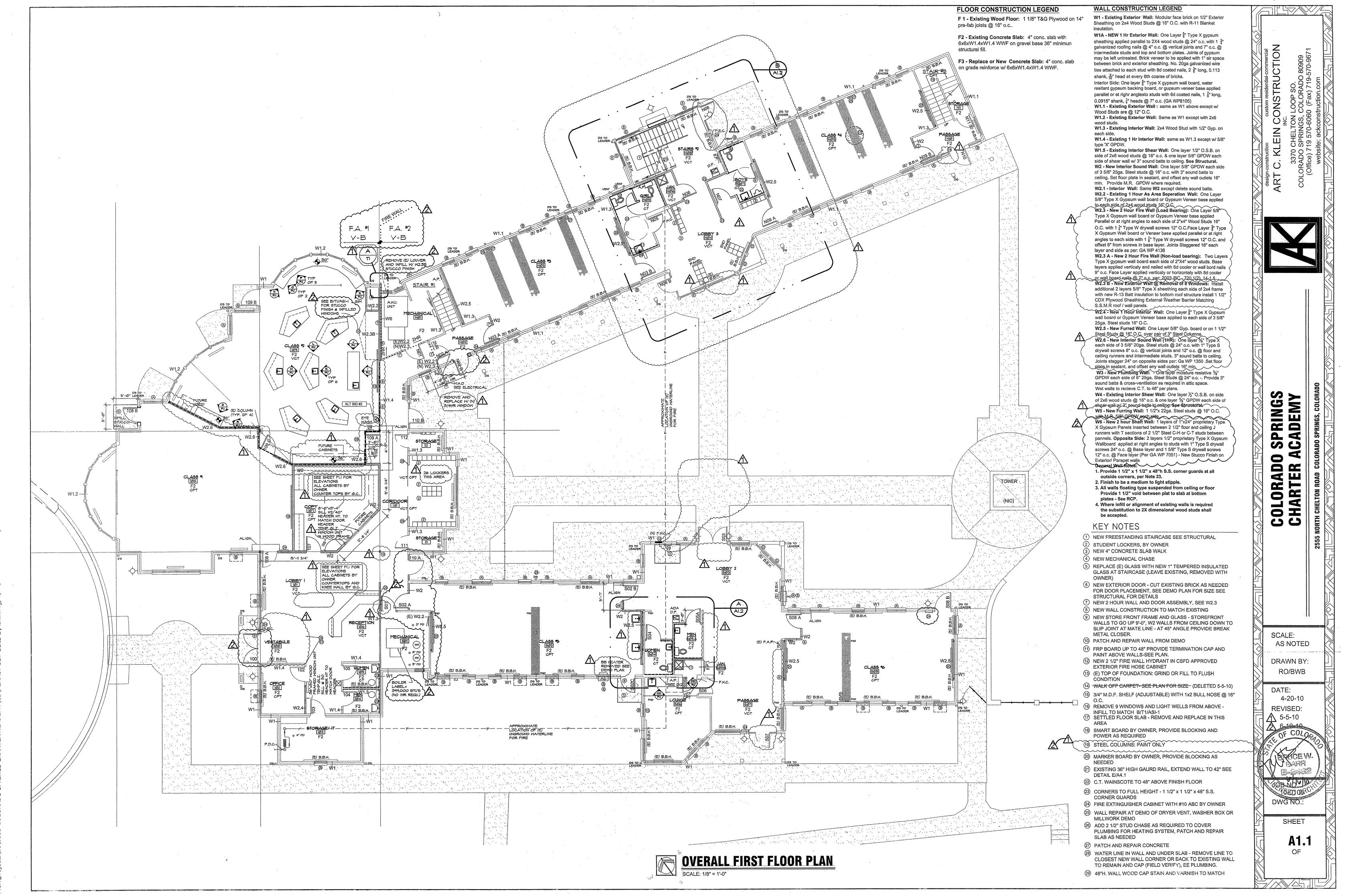
JOB NO. AT 10-0105

DWG NO.: SHEET

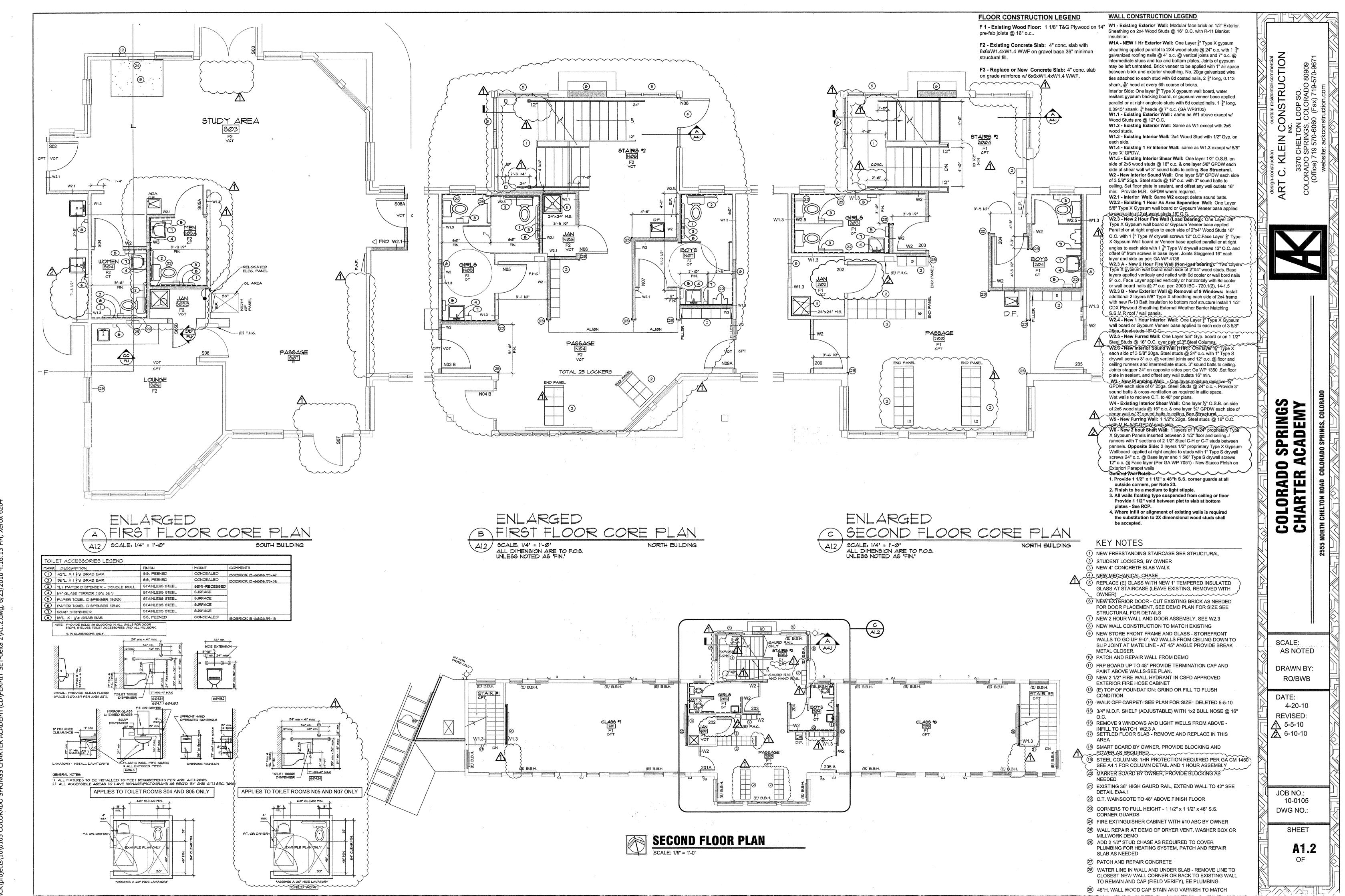
**A0.1** 

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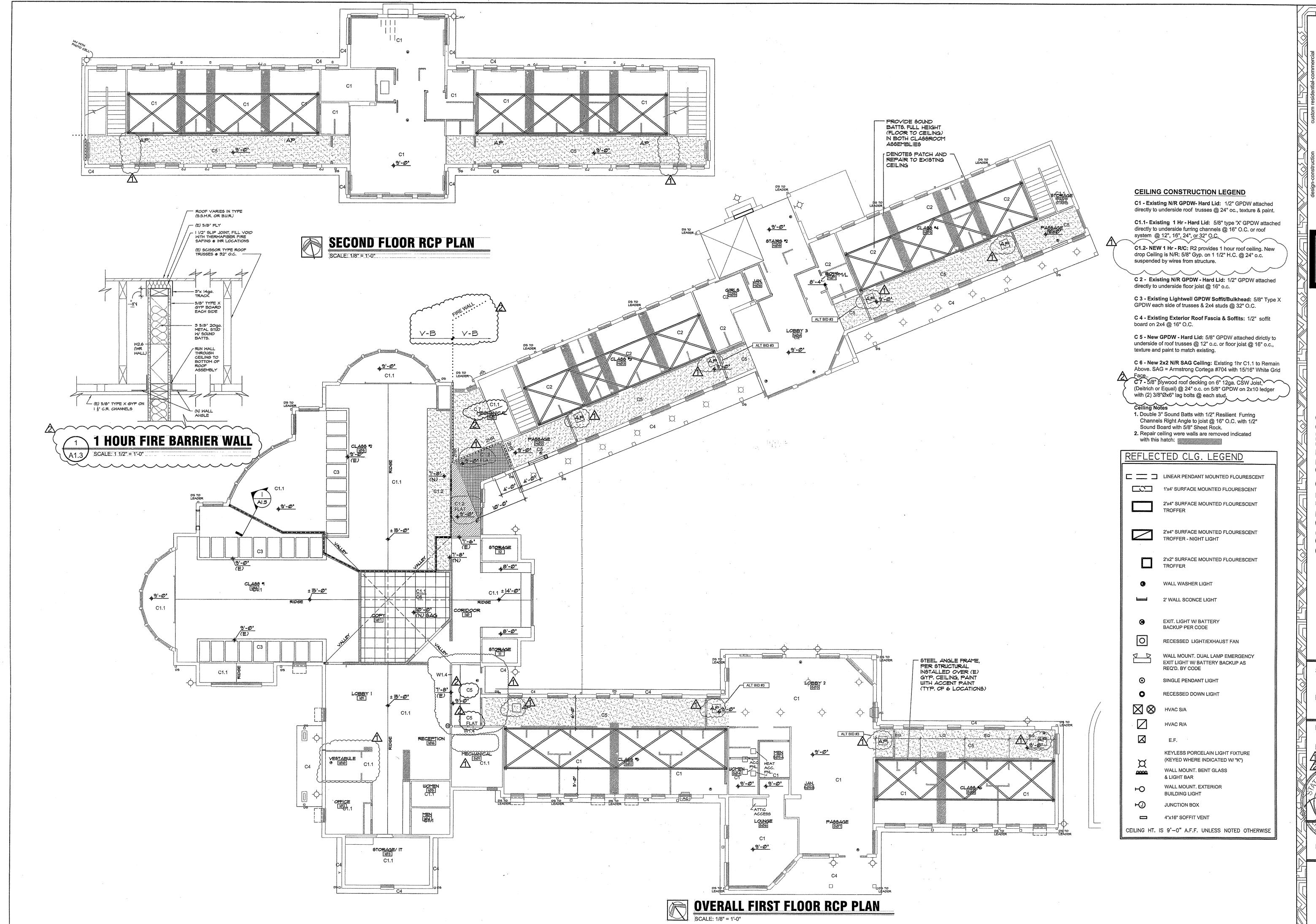




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SPRINGS CADEMY COLORAD( CHARTER

SCALE:

AS NOTED DRAWN BY: RO/BWB

DATE: 4-20-10 REVISED:

DWG NO.:

ects/10/0105 COLORADO SPRINGS CHARTER ACADEMY\CD\REVISION 5-5-10\A1.4 ENVELOPE.dwg, 5/21/2010 12:03:10 PM, Xerox 6204

LABEL REMARKS INSTALL 6'X54' GLASS IN EXISTING DOOR W/ 4"X25" GLAZING W/ 4"X24" GLAZING W/ 4"×25" GLAZING ADD PANIC HARDWARE SIGN-"BOILER ROOM" W/ 6"X54" GLAZING W/ 4"X25" GLAZING VERIFY LOCKING HARDWARE COMPLIANCE SIGN-"GIRLS" ADA SIGN-'BOYS' ADA SIGN-"JANITOR" NO WORK THIS DOOR ADD PANIC HARDWARE W/ 6 X54 GLAZING ADD PANIC HARDWARE REPLACE DOOR - SIGN-"ELECTRICAL ROOM" ADD NEW MAGNETIC HOLD OPEN W/ 4"X25" GLAZING W/ 6'X54' GLAZING W/ 6'X54" GLAZING ADD PANIC HARDWARE W/ 1/2" TEMP & INS. SIDELIGHT W/ 6"X54" GLAZING W/ 6"X54" GLAZING ADD PANIC HARDWARE & EXIT LIGHT W/ 6'X54' GLAZING W/ 6'X54' GLAZING W/ 6"X54" GLAZING W/ 6"X54" GLAZING

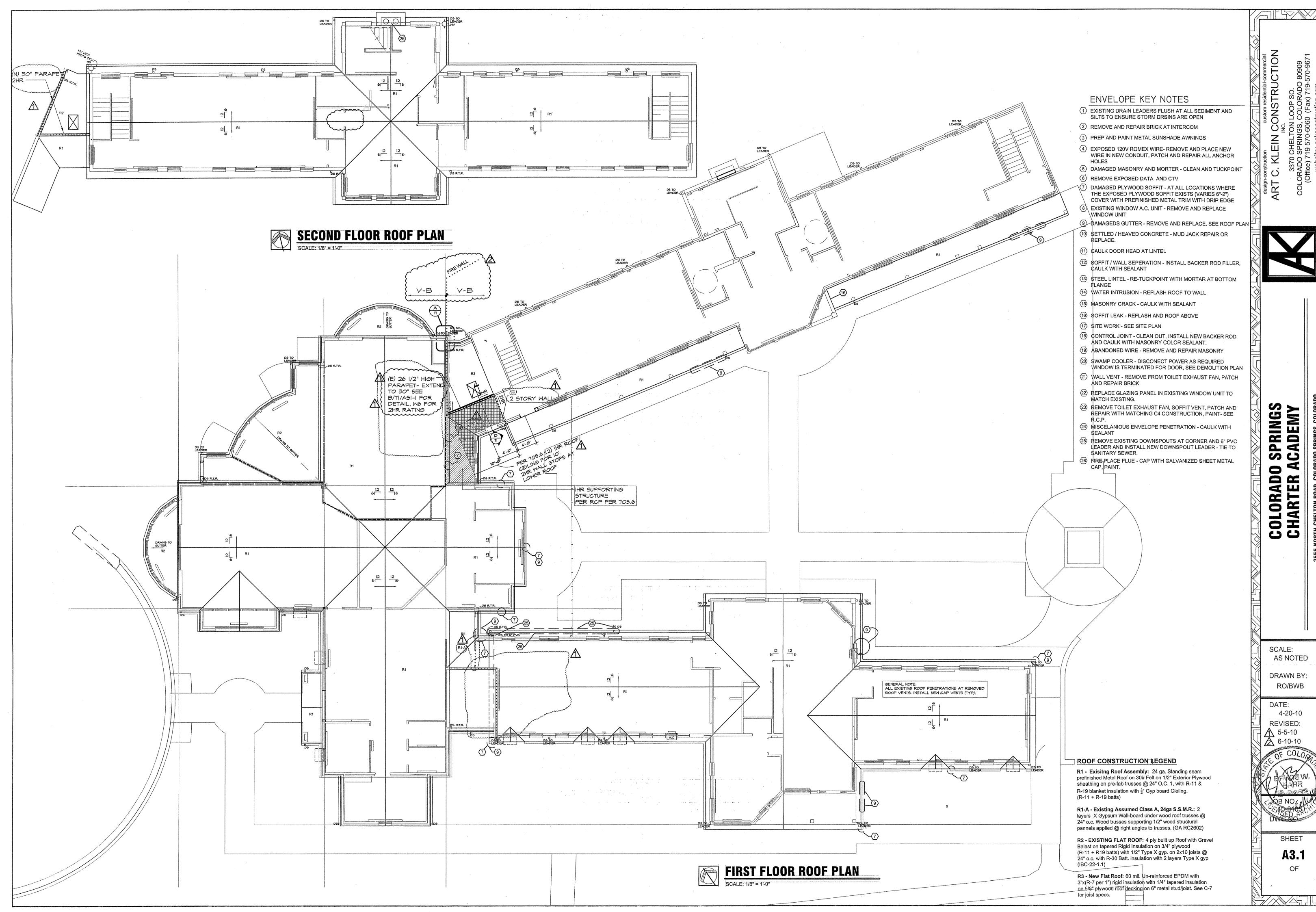
RINGS SO COLORADI CHARTER

SCALE: AS NOTED

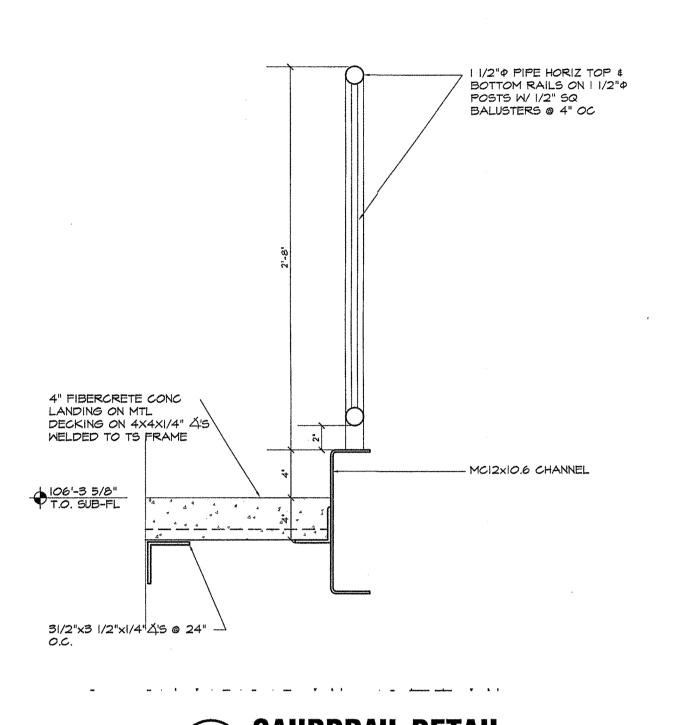
DRAWN BY:

DATE: 4-20-10

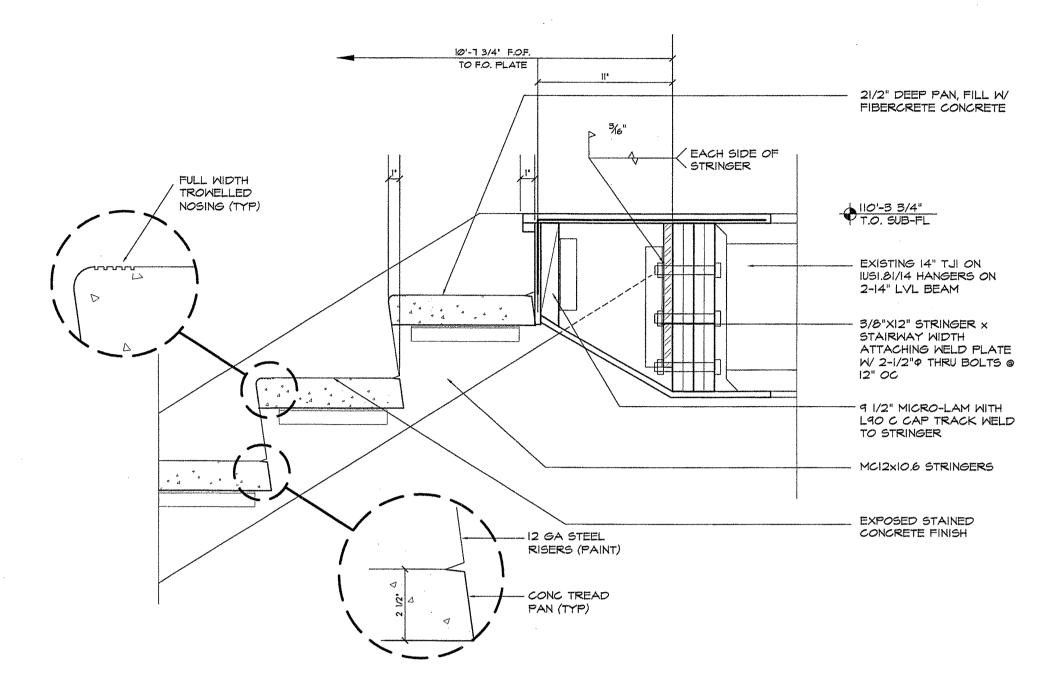
DWG NO .:



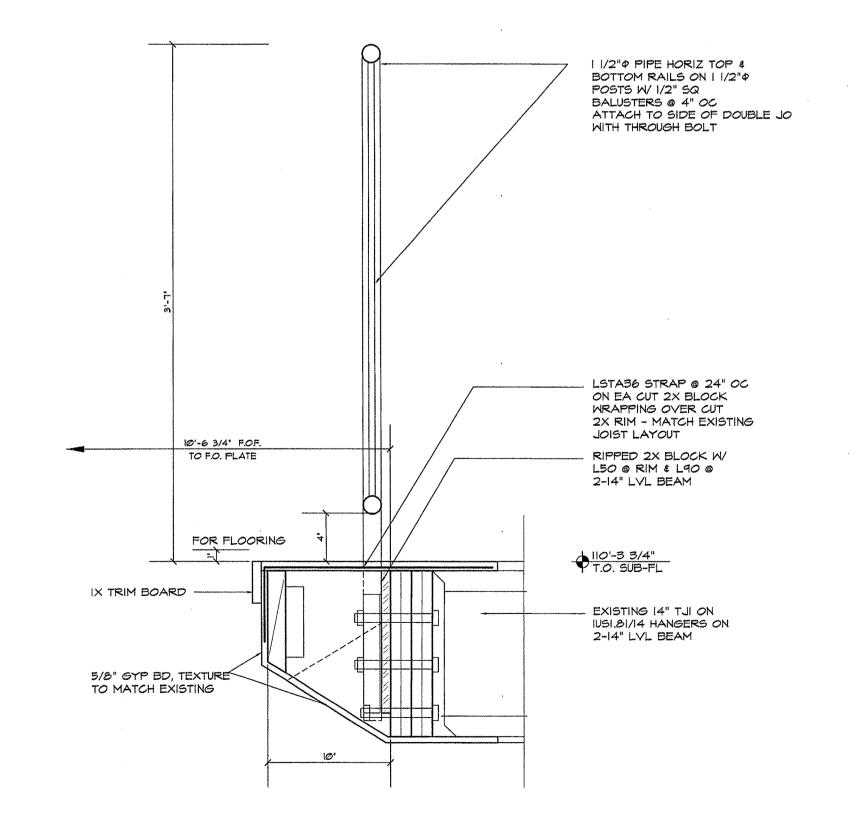
SCALE: 1/4" = 1'-0" NORTH BUILDING



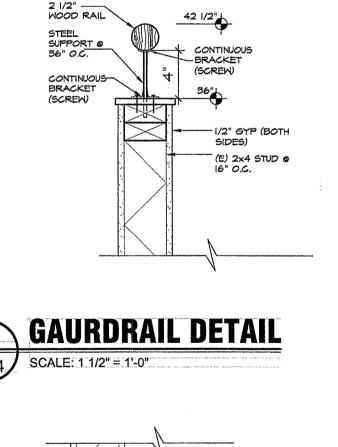
SCALE: 1/4" = 1'-0"

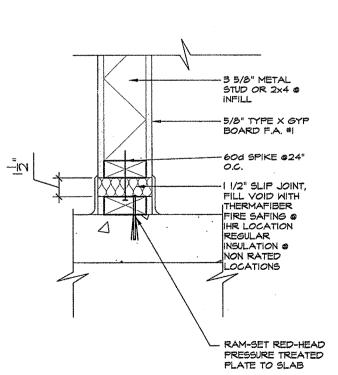












F SLIP JOINT DETAIL SCALE: 1 1/2" = 1'-0"

ART

SPRINGS CADEMY 0

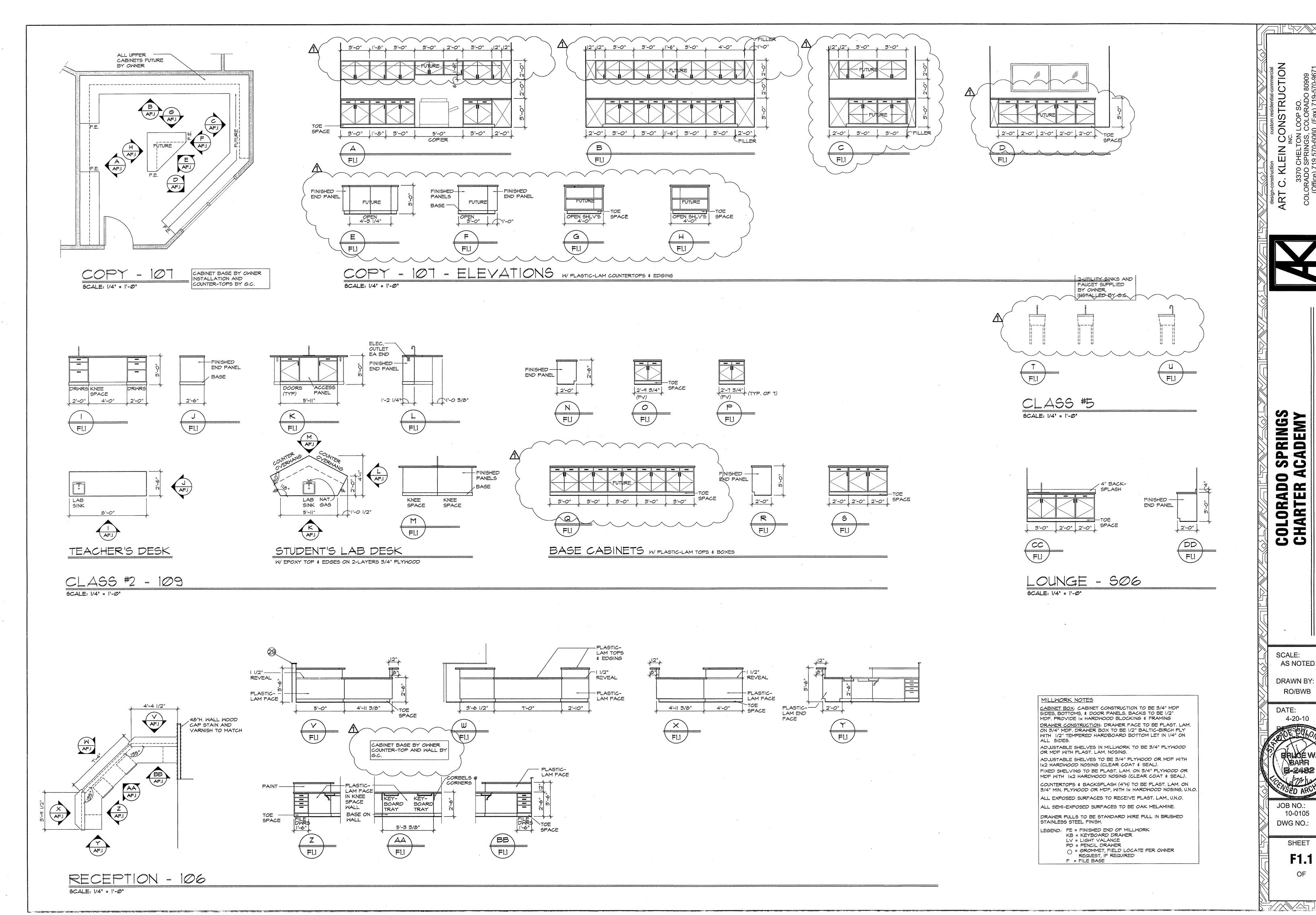
COLORAD CHARTER

SCALE:

AS NOTED DRAWN BY: RO/BWB

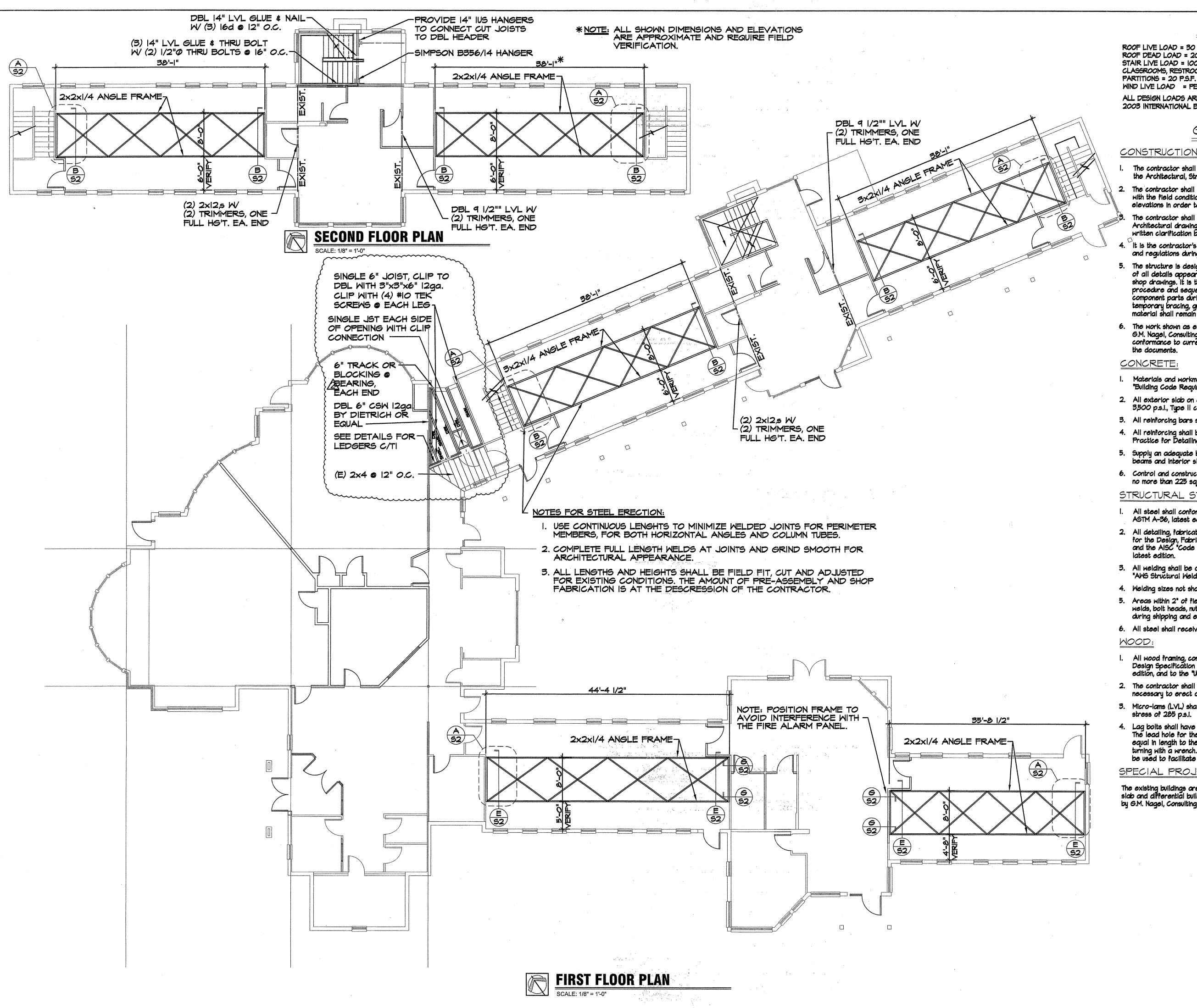
DATE: 3.22.10

> JOB NO.: 10-0105 DWG NO.:



4-20-10 10-0105

SHEET F1.1



DESIGN LOADS

ROOF LIVE LOAD = 30 P.S.F. ROOF DEAD LOAD = 20 P.S.F. STAIR LIVE LOAD = 100 P.S.F. CLASSROOMS, RESTROOMS = 50 P.S.F.

WIND LIVE LOAD = PER ASCE 7, BASIC WIND SPEED (3 SECOND GUST) 100 M.P.H.

ALL DESIGN LOADS ARE APPLIED IN CONFORMANCE WITH THE 2003 INTERNATIONAL BUILDING CODE.

#### GENERAL NOTES

#### CONSTRUCTION NOTES:

- The contractor shall coordinate the location of openings, inserts, etc., with the Architectural, Structural, and Shop Drawings.
- 2. The contractor shall check and verify all dimensions shown on the drawings with the field conditions, and supply the necessary field dimensions and elevations in order to complete the work.
- The contractor shall notify the Architect of any discrepancies between Architectural drawings, Structural drawings, and field conditions and receive written clarification before proceeding with the work.
- . It is the contractor's sole responsibility to follow all applicable safety codes and regulations during all phases of construction.
- 5. The structure is designed to be self-supporting and stable after completion of all details appearing on Architectural drawings, Structural drawings, and shop drawings. It is the contractors sole responsibility to determine erection procedure and sequence and to insure the safety of the building and it's component parts during erection. This includes the addition of whatever temporary bracing, guys, supports and scaffolds which might be necessary. Such material shall remain the contractor's property after completion of the project.
- 6. The work shown as existing conditions was taken from owner furnished information, 6.M. Nagel, Consulting Engineer, is not responsible for the adequacy, safety and conformance to current prevailing codes of any work shown as existing on the documents.
- Materials and workmanship shall conform to, (ACI 318-LATEST EDITION) "Building Code Requirements for Reinforced Concrete".
- 2. All exterior slab on grade concrete shall have a 28 day strength of 3,500 p.s.i., Type II coment, with 6% air entrainment.
- 3. All reinforcing bars shall conform to deformed billet steel A-615, gr. 60.
- 4. All reinforcing shall be detailed in accordance with the "Manual of Standard Practice for Detailing Reinforced Concrete Structures". (ACI 315, latest edition).
- 5. Supply an adequate bond breaker such as 30 lb. felt between walls or grade beams and interior slabs. 1/2" expansion joint at exterior paying slabs.
- 6. Control and construction joints in slabs on grade shall be spaced to enclose no more than 225 square feet with a maximum of 15 feet in any one direction.

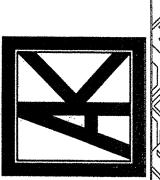
#### STRUCTURAL STEEL:

- All steel shall conform to the "Standard Specification for Structural Steel" ASTM A-36, latest edition.
- 2. All detailing, fabrication and erection shall conform to AISC "Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings", and the AISC "Code of Standard Practice for Steel Buildings and Bridges",
- 3. All welding shall be done by certified welding operators conforming to the "AWS Structural Welding Code" AWS DI.I, latest edition.
- 4. Welding sizes not shown shall be a minimum 1/4" fillet welds.
- 5. Areas within 2" of field welds shall not be painted until after welding Field welds, bolt heads, nuts and other surfaces not shop painted and finishes damaged during shipping and erection shall be field painted immediately after erection.
- 6. All steel shall receive one shop coat of red oxide metal primer.
- I. All wood framing, construction and materials shall conform to the "National Design Specification for Stress Grade Lumber and it's Fastenings", latest edition, and to the "Uniform Building Code", latest edition.
- 2. The contractor shall provide framing clips, hangers and framing anchors necessary to erect a rigid framework.
- 3. Micro-lams (LVL) shall have a min. fiber bending stress of 2,000 p.s.i., and shear
- 4. Lag boits shall have a prebored lead hole the same diameter of the boit shank. The lead hole for the threaded portion shall be 60 % of the shank diameter and equal in length to the threaded length. The threaded portion shall be installed by twrning with a wrench. Driving with a hammer is not allowed. Soap or lubricant may be used to facilitate installation.

#### SPECIAL PROJECT NOTE:

The existing buildings are constructed upon a site which has inherent risks of slab and differential building movement, reference report dated March 30, 2010, by G.M. Nagel, Consulting Engineer, for more information.

CONSTRUC KLEIN KLEIN



SPRINGS CADEMY 0 COLORAD( CHARTER

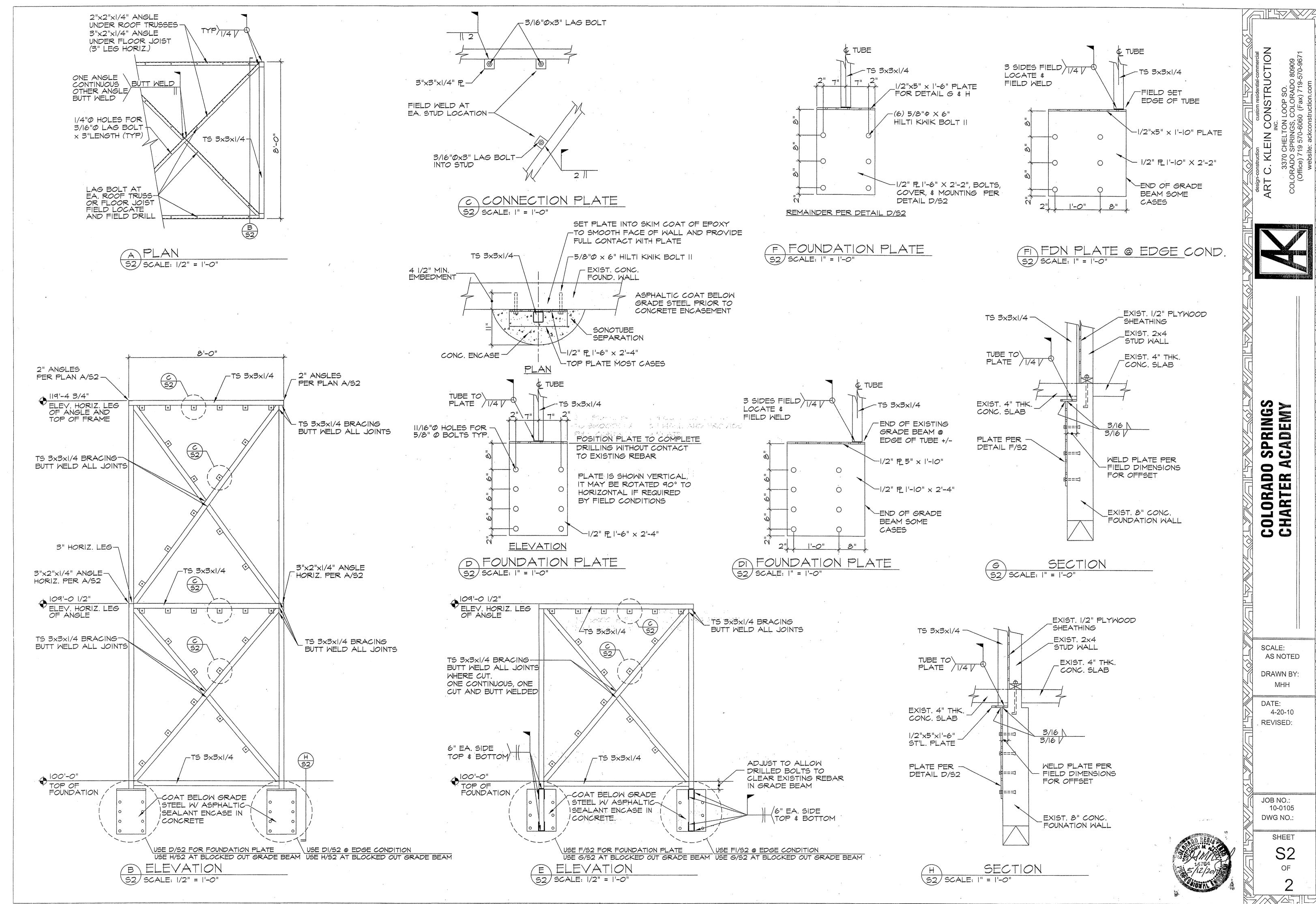
SCALE: AS NOTED

MHH

DRAWN BY:

DATE: 4-20-10 REVISED: 6-10-10

10-0105 DWG NO.:



CONSTRUCTION KLEIN  $\ddot{\circ}$ ART

SPRINGS COLORADI CHARTER

SCALE: AS NOTED DRAWN BY: MHH

DATE: 4-20-10 REVISED:

JOB NO.: 10-0105 DWG NO.:

> **S**2 OF

#### 2003 INTERNATIONAL ENERGY CONSERVATION CODE COMPLIANCE

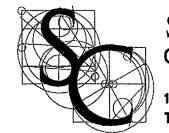
- 803.2.2 HVAC EQUIPMENT PERFORMANCE REQUIREMENTS. EQUIPMENT SHALL MEET THE MINIMUM EFFICIENCY REQUIREMENTS OF TABLES 803.2.2(1), 803.2.2(2), 803.2.2(3), 803.2.2(4) AND 803.2.2(5), WHEN TESTED AND RATED IN ACCORDANCE WITH THE APPLICABLE TEST PROCEDURE. THE EFFICIENCY SHALL BE VERIFIED THROUGH DATA FURNISHED BY THE MANUFACTURER OR THROUGH CERTIFICATION UNDER AN APPROVED CERTIFICATION PROGRAM. WHERE MULTIPLE RATING CONDITIONS OR PERFORMANCE REQUIREMENTS ARE PROVIDED, THE EQUIPMENT SHALL SATISFY ALL STATED REQUIREMENTS.
- 803.2.8 DUCT AND PLENUM INSULATION AND SEALING: ALL SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-5 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES WHEN LOCATED INSIDE THE BUILDING ENVELOPE AND OF R-8 INSULATION WHEN LOCATED OUTSIDE THE BUILDING ENVELOPE. WHEN LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY A MINIMUM OF R-8 INSULATION. ALL SUPPLY AIR DUCTS LOCATED WITHIN A RETURN AIR PLENUM SHALL BE INSULATED WITH A MINIMUM OF R-4.2 INSULATION.
- 803.3.3.3.1 THERMOSTATIC SETBACK CAPABILITIES. THERMOSTATIC SETBACK CONTROLS SHALL HAVE THE CAPABILITY TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).
- 803.3.3.3.2 AUTOMATIC SETBACK AND SHUTDOWN CAPABILITIES. AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR AT LEAST 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE: A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS: A MANUALLY OPERATED TIMER CAPABLE OF BEING ADJUSTED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.
- 803.3.4 COMPLEX MECHANICAL SYSTEMS SERVING MULTIPLE ZONES. SYSTEMS SERVING MULTIPLE ZONES SHALL BE VAV SYSTEMS WHICH, DURING PERIODS OF OCCUPANCY, ARE DESIGNED AND CAPABLE OF BEING CONTROLLED TO REDUCE PRIMARY AIR SUPPLY TO EACH ZONE TO A MINIMUM BEFORE REHEATING, RECOOLING, OR MIXING TAKES PLACE.
- 803.3.8 HVAC SYSTEM COMPLETION PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, THE FOLLOWING SHALL BE COMPLETED:
- 803.3.8.1 AIR SYSTEM BALANCING. EACH SUPPLY AIR OUTLET AND ZONE TERMINAL DEVICE SHALL BE EQUIPPED WITH MEANS FOR AIR BALANCING IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 6 OF THE INTERNATIONAL MECHANICAL CODE. DISCHARGE DAMPERS ARE PROHIBITED ON CONSTANT VOLUME FANS AND VARIABLE VOLUME FANS WITH MOTORS 25 HP AND LARGER.
- 803.3.8.3 THE CONSTRUCTION DOCUMENTS SHALL REQUIRE AN OPERATING AND MAINTENANCE MANUAL BE PROVIDED TO THE BUILDING OWNER BY THE MECHANICAL CONTRACTOR. THE MANUAL SHALL INCLUDE, AT LEAST, THE FOLLOWING:
  - 1. EQUIPMENT CAPACITY (INPUT AND OUTPUT) AND REQUIRED MAINTENANCE ACTIVITIES.
  - 2. EQUIPMENT OPERATION AND MAINTENANCE MANUALS.
  - 3. HVAC SYSTEM CONTROL MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SETPOINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS, AT CONTROL DEVICES, OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS.
  - 4. A COMPLETE WRITTEN NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE.

### **GENERAL NOTES**

- 1. FACTORY-MADE AIR DUCTS SHALL CONFORM TO UL181 IN ACCORDANCE WITH SECTION 603.6.1 OF THE INTERNATIONAL MECHANICAL CODE, 2003. LENGTH OF FLEX DUCT SHALL NOT EXCEED 10 FT.
- 2. ALL MECHANICAL EQUIPMENT SHALL BE LABELED AS TO THE AREA(S) SERVED IN ACCORDANCE WITH SECTION 304.11 OF THE 2003 INTERNATIONAL MECHANICAL
- 3. ALL SUPPLY AIR AND EXHAUST AIR DUCT JOINTS AND SEAMS SHALL BE SEALED WITH WATER BASED SEALANT EQUAL TO HARD CAST DS321.
- 4. PROVIDE ACCESS DOORS OR OTHER MEANS OF APPROVED ACCESS TO ALL FIRE DAMPERS AND FIRE/SMOKE DAMPERS. LABEL ACCESS DOORS AND PROVIDE ACCESS POINTS PER 2003 IBC SECTION 605.5.
- 5. ELECTRICAL CONTRACTOR SHALL PROVIDE 120V OUTLET WITHIN 25 FT. OF ALL MECHANICAL EQUIPMENT FOR MAINTENANCE.
- 6. ALL BIRD SCREENS SHALL BE 1/4" MESH.
- 7. PROVIDE BALANCING REPORT IN ACCORDANCE WITH IMC AND SUBMIT TO REGIONAL BUILDING DEPARTMENT FOR APPROVAL AT TIME OF HEAT FINAL.
- 8. ALL PIPING PENETRATIONS THROUGH RATED WALLS AND CEILINGS SHALL BE SEALED AROUND PIPE IN ACCORDANCE WITH 2003 IBC SECTION 712.3.
- 9. ALL LOW PRESSURE RECTANGULAR DUCTWORK SHALL BE GALVANIZED STEEL WITH DAMPERED SPIN-INS, ROUND DUCT, & FLEX DUCT RUNOUTS TO DIFFUSERS. DUCT FABRICATION SHALL CONFORM TO SMACNA STANDARDS.
- 10. MAINTAIN AT LEAST 10'-0" CLEARANCE BETWEEN FRESH AIR INTAKES AND EXHAUST OUTLETS.
- 11. DRAWINGS HAVE BEEN PREPARED ON THE BASIS OF "AS-BUILT" DRAWINGS AND FIELD OBSERVATION WHERE OBSERVATION WAS POSSIBLE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO FABRICATION OF OR INSTALLATION OF ANY MECHANICAL OR PLUMBING SYSTEMS.
- 12. CODES, RULES AND REGULATIONS: ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS, APPLICABLE TO THIS PROJECT:

2005 PIKES PEAK REGIONAL BUILDING CODE 2003 INTERNATIONAL BUILDING CODE 2003 INTERNATIONAL MECHANICAL CODE 2003 INTERNATIONAL PLUMBING CODE 2003 INTERNATIONAL ENERGY CONSERVATION CODE HEALTH DEPARTMENT RULES AND REGULATIONS

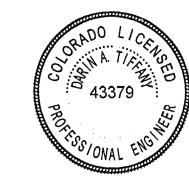
IN CASE OF CONFLICTS WITH CODE, DRAWINGS OR SPECIFICATION, THE MORE STRINGENT SHALL PREVAIL.



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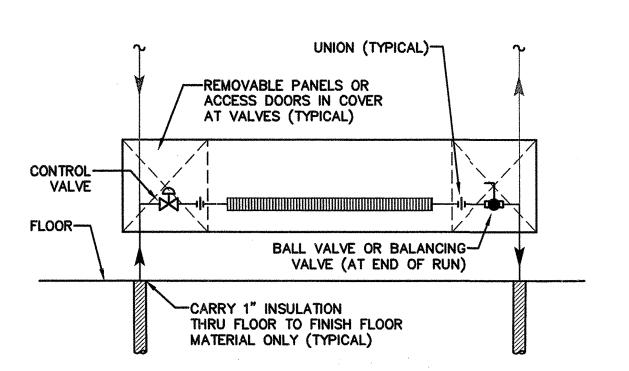
1						EXHAU	ST FAN SCHEDULE	
MARK	DESCRIPTION	CFM	SP (WG)	VOLTS/ø	HP/AMPS	FAN MODEL #	CONTROL	REMARKS
EF-1	POWER ROOF VENTILATOR	1940	0.5"	115V/1ø	3/4 HP	CARNES VEBK 12	RUNS CONTINUOUS DURING BUILDING OCCUPIED MODE	BACK DRAFT DAMPER, ROOF CURB
EF-2	CABINET UNIT FAN	95	0.25"	115V/1ø	1.1 A	BROAN L-100MG	SWITCH W/ LIGHTS	BACK DRAFT DAMPER, 60 TO EXISTING SOFFIT VENT
EF-3	CABINET UNIT FAN	150	0.25*	115V/1ø	2.0 A	BROAN L-100MG	SWITCH W/ LIGHTS	BACK DRAFT DAMPER, 60 TO EXISTING SOFFIT VENT

		GRILLE, I	REGISTER,	& DIFFU	SER SCHE	DULE
MARK	DESCRIPTION	CEILING	MODULE SIZE	ACCESSORIES	CARNES MODEL #	REMARKS
EG1	EXHAUST GRILLE	GYPSUM	SEE PLAN	OBD	RSLA	
LR1	LINEAR REGISTER (TOE-KICK)		SEE PLAN	OBD	CCGBD	-
RG1	LOUVERED RETURN AIR GRILLE	4004	SEE PLAN		RSLAH	
RG2	PERFORATED RETURN AIR GRILLE	T-BAR	24×24		SPJB	
TG1	LOUVERED TRANSFER AIR GRILLE		SEE PLAN		RSLAH	

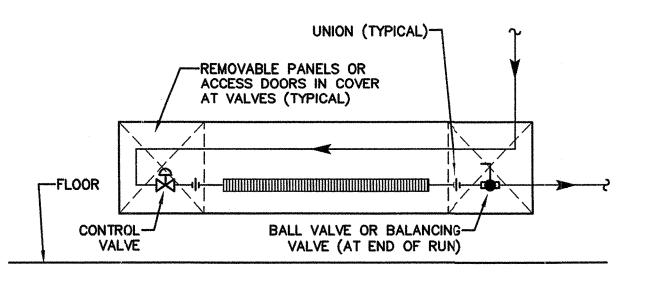
	H	IOT WA	TEF	R BA	SEBOA	RD RADIANT	HEATER	SCHEDULE
MARK	DESCRIPTION	BTUH/FT	AWT	GPM	ELEMENT TYPE	MAKE & MODEL	ELEM. LENGTH	REMARKS
BBH	BASEBOARD HEATER (MATCH EXISTING)	580	180F	1.0	¾" E−75	SLANT/FIN FINE/LINE 30	SEE PLAN	ACCESS END COVERS, MATCH EXISTING (COLOR AND STYLE)

	PUMP SCHEDULE													
MARK	DESCRIPTION	GPM	WPD	ELECTRICAL	POWER	MAKE & MODEL	REMARKS							
P-1	HWS LOOP REPLACEMENT PUMP	52.0	26'	115/1ø	3/4 HP	BELL & GOSSET SERIES 80-11/2x11/2x7B	COMPANION FLANGE SET							
P-2	HWS LOOP REPLACEMENT PUMP	52.0	26'	115/1ø	3/4 HP	BELL & GOSSET SERIES 80-11/2x11/2x7B	COMPANION FLANGE SET							
P-3	HOT WATER COIL PUMP	16.8	12'	115/1ø	1/12 HP	BELL & GOSSET PL-30	COMPANION FLANGE SET							

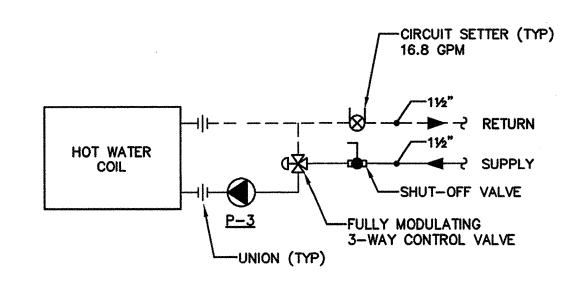
								HW	COIL SCH	EDULE
MARK	DESCRIPTION	CFM	FACE AREA	# OF ROWS	GPM	WPD	EWT	LWT	MAKE & MODEL	REMARKS
HWC-1	HOT WATER COIL	4700	10.5 SF	2	16.8	1.0'	180°F	150°F	MCQUAY 5WH1002A	REPLACES EXISTING HOT WATER COIL IN AH(E) (FIELD VERIFY INSTALLATION REQUIREMENTS)



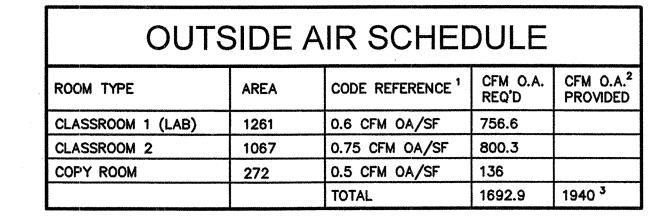
## **BASEBOARD HEATER DETAIL 2**



#### **BASEBOARD HEATER DETAIL 1** NO SCALE

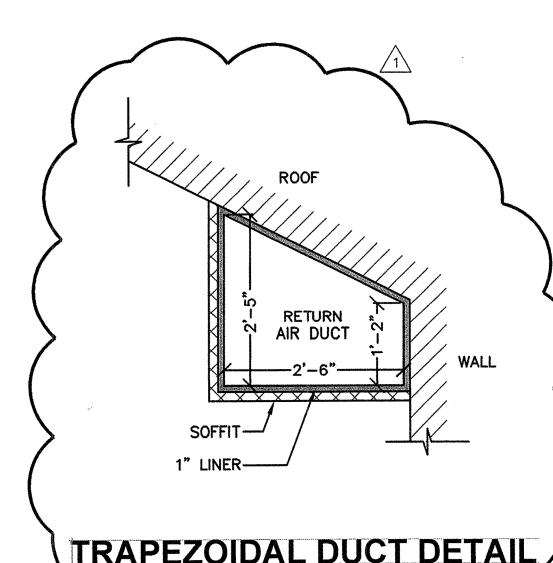


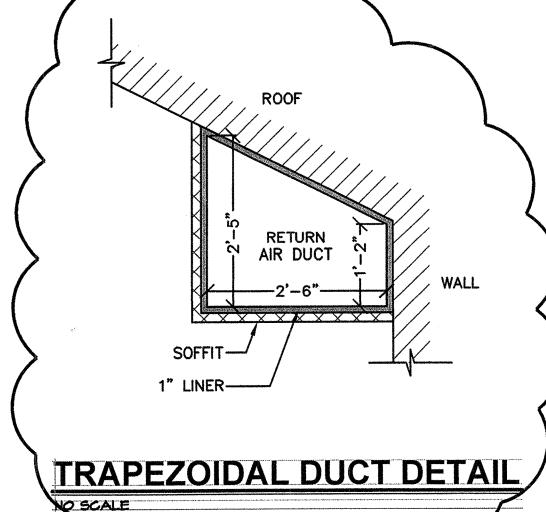
### **HW COIL PIPING DIAGRAM**



1. CODE REFERENCES BASED ON 2003 IMC TABLE 403.3 2. CFM OA SUFFICIENT FOR ZONE PER 2005 PIKES PEAK REGIONAL BUILDING CODE

SECTION 403.3.2.1 "ENRICHMENT" 3. EXISTING AIR HANDLER SET AT 1940 CFM OA DURING BUILDING OCCUPIED MODE 4. ALL OTHER AREAS USE NATURAL VENTILATION (2003 IMC SECTION 402.2)





ADEMY COLORAD CHARTER

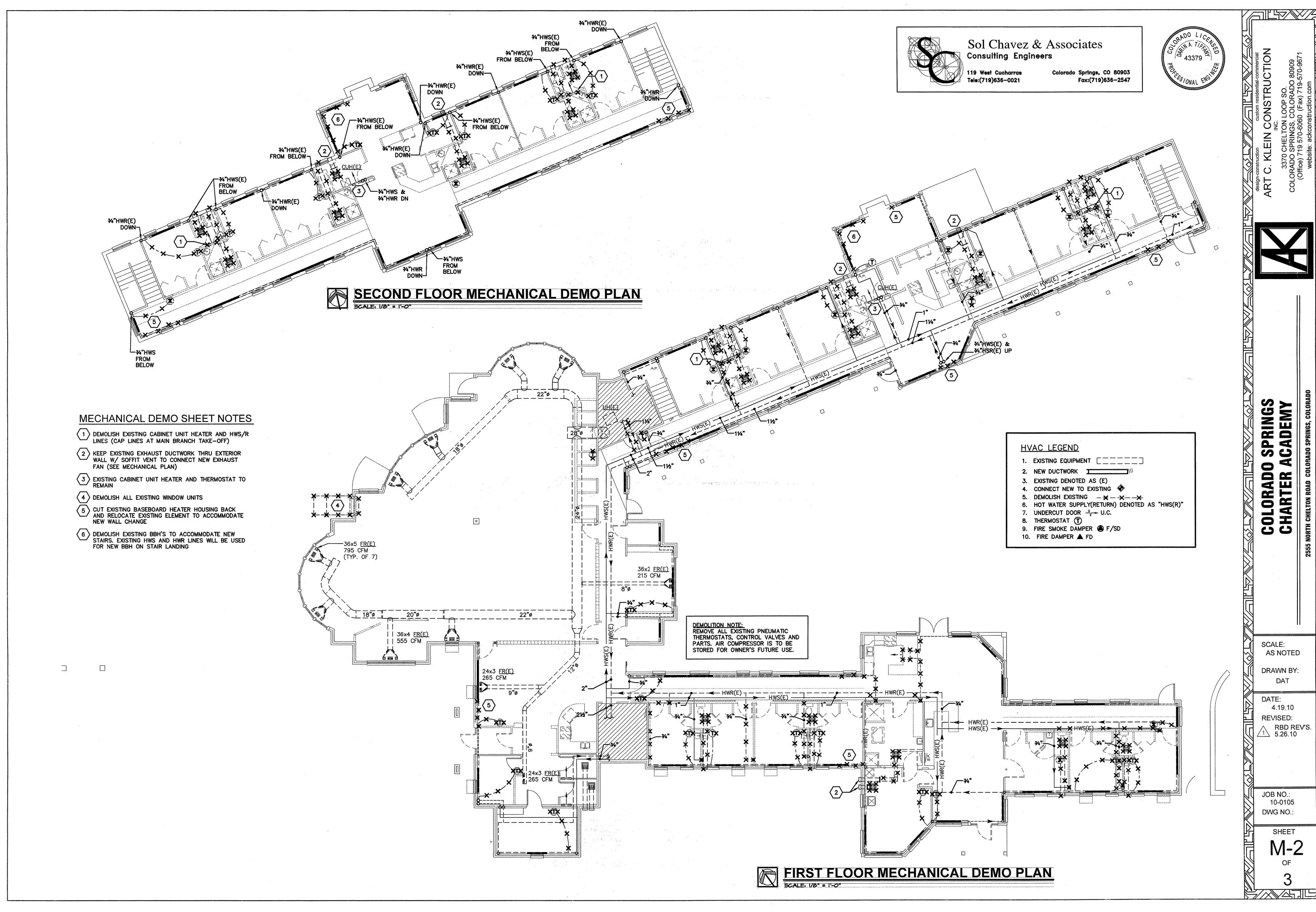
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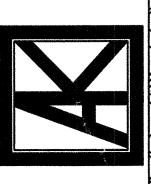
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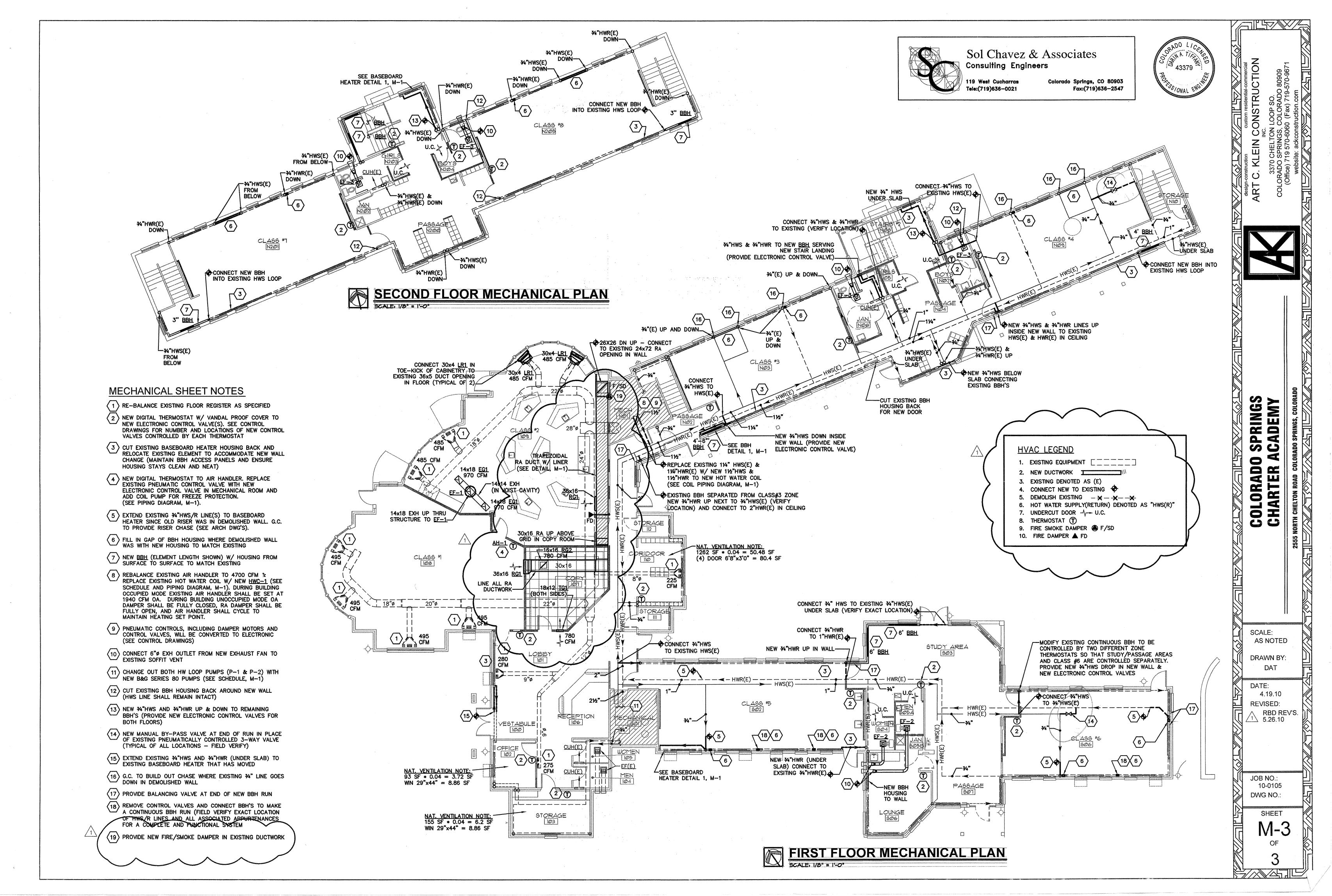
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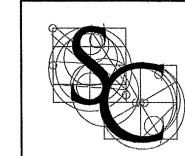
JOB NO.: 10-0105 DWG NO.:

SHEET









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**GENERAL PLUMBING NOTES** 

- 1. PROVIDE CLEANOUT AT ALL SINKS AND URINALS.
- 2. CLEANOUT REQUIRED ON ALL HORIZONTAL WASTE LINES OVER 5' IN
- 3. ALL DROPS SERVING MULTIPLE FIXTURES SHALL BE MINIMUM 34".
- 4. PLUMBING CONTRACTOR TO VERIFY EXACT LOCATIONS OF EXISTING PIPING.
- 5. ALLL PIPE SIZES, UNLESS OTHERWISE INDICATED, SHALL BE:

DOMESTIC COLD WATER "DCW"

DOMESTIC HOT WATER RETURN "DHWR"

44" WASTE "W"

- 6. ALL ADA FIXTURES SHALL COMPLY WITH THE LATEST EDITION OF STANDARD ICC/ANSI A117.1.
- ALL PIPING AND FITTING MATERIALS, AND METHODS AS APPROVED BY THE PIKES PEAK REGIONAL BUILDING DEPARTMENT FOR WATER, WASTE, AND VENT ARE APPROVED FOR THIS PROJECT.

PLUMB	ING SYMBOLS LEGEND
	SANITARY SEWER "SS" OR "W"
AS	ACID RESISTANT SANITARY SEWER "AS"
ministry operate garden spinosi stavino delenio delenio delenio delenio dell'ele dell'ele spinosi	SANITARY VENT "V"
	DOMESTIC COLD WATER "DCW"
	DOMESTIC HOT WATER "DHW"

CONNECT TO EXISTING

 DOMESTIC HOT WATER RETURN "DHWR" - GAS PIPING "G" GATE OR BALL VALVE

C.O. CLEANOUT VENT THRU ROOF VTR A.F.F. ABOVE FINISHED FLOOR **EXISTING** 

#### PLUMBING MATERIALS SCHEDULE

ALL PIPE AND FITTINGS LISTED ARE ONLY TO BE USED WHERE PERMITTED BY CODE.

SANITARY WASTE

PVC SCH 40 PIPE AND DWV FITTINGS, OR NO-HUB CAST IRON PIPE AND FITTINGS, OR SV CAST IRON PIPE AND FITTINGS.

DOMESTIC WATER

TYPE L COPPER PIPE AND FITTINGS, NO LEAD SOLDER, SOFT COPPER PIPE UNDERSLAB. BALL VALVES FOR SHUT OFF AND FLOW CONTROL, OR BUTTERFLY VALVES.

AND WASTE OIL, COMPRESSED AIR

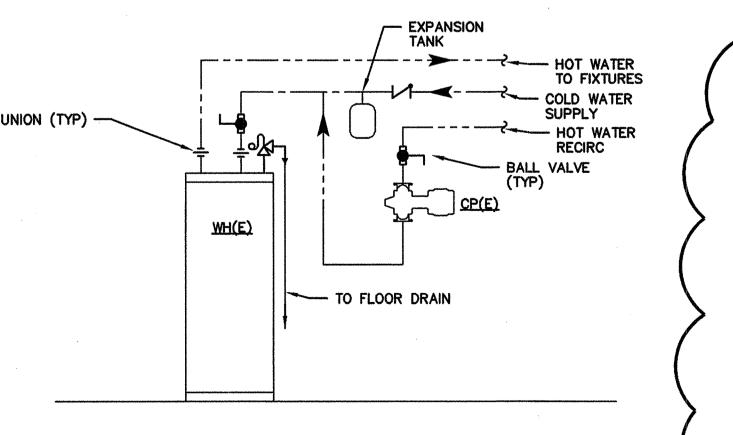
NATURAL GAS, PUMPED SCH 40 STEEL PIPE AND MALLEABLE FITTINGS 12" - 2" SIZES, WELD FITTINGS FOR LARGER SIZES. BALL VALVES FOR SHUT OFF, RATED FOR USE, OR BUTTERFLY VALVES, RATED FOR USE, OR GATE VALVES, RATED FOR USE, OR LUBRICATED PLUG VALVE, RATED FOR USE.

INSULATION

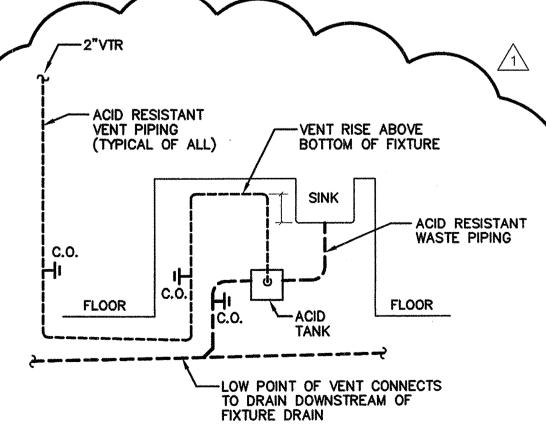
DOMESTIC WATER

1" THICK FIBERGLASS W/ PREFORMED PVC FITTING COVERS.

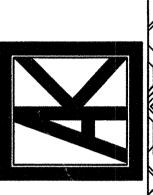
				MINIMUM :	SIZES (IN	.)
l	MARK	DESCRIPTION	WASTE	VENT	cw	н
•	WC1	WATER CLOSET (PROVIDED BY OWNER) EQUAL TO KOHLER MODEL# K-3422, FLOOR MOUNTED, FLUSH TANK TYPE TOILET. 1.6 GPF, WHITE, VITREOUS CHINA WITH ENLONGATED BOWL. PROVIDE OPEN FRONT SEAT LESS COVER, BOLT COVERS AND ANGLE SUPPLY WITH STOP.	<b>4"</b>	2"	1/2"	
7	WC2	WATER CLOSET (PROVIDED BY OWNER) — A.D.A. COMPLIANT EQUAL TO KOHLER MODEL# K—3481, FLOOR MOUNTED, FLUSH TANK TYPE TOILET. 1.6 GPF, WHITE, VITREOUS CHINA WITH ENLONGATED BOWL. PROVIDE OPEN FRONT SEAT LESS COVER, BOLT COVERS AND ANGLE SUPPLY WITH STOP. SEAT HEIGHT BETWEEN 17" AND 19" A.F.F. FOR A.D.A. COMPLIANCE.	4"	2*	1/2"	
١.	WC3	WATER CLOSET (PROVIDED BY OWNER) — A.D.A. COMPLIANT EQUAL TO KOHLER MODEL# K-3422, FLOOR MOUNTED, FLUSH TANK TYPE TOILET. 1.6 GPF, WHITE, VITREOUS CHINA WITH ENLONGATED BOWL. PROVIDE OPEN FRONT SEAT LESS COVER, BOLT COVERS AND ANGLE SUPPLY WITH STOP. SEAT HEIGHT AT 12" A.F.F. FOR A.D.A. COMPLIANCE FOR KIDS	4"	2"	1/2"	
	UR1	URINAL EQUAL TO KOHLER MODEL# K-4960-ET WITH SLOAN FLUSH VALVE MODEL#186, WALL HUNG, VITREOUS CHINA, SIPHON JET, 34" TOP SPUD. PROVIDE FLOOR MOUNTED CARRIER. SECURE ROUGH-INS TO WALL STRUCTURE.	2"	2"	¥4"	_
	L1	LAVATORY (PROVIDED BY OWNER) EQUAL TO KOHLER MODEL# K-2054 RECTANGULAR VITREOUS CHINA, WALL HUNG LAVATORY, 4" CENTER FAUCET HOLES W/ KOHLER MODEL# K-15592 SINGLE LEVER FAUCET WITH 6" LEVER HANDLE, VANDAL RESISTANT AERATOR. PROVIDE OPEN GRID STRAINER W/ OFFSET TAILPIECE, CAST BRASS "P" TRAP, TRAP ARM & 36" FLEX. SUPPLIES WITH STOPS. SECRURE ROUGH-INS TO WALL STRUCTURE. MAXIMUM HOT WATER OUTLET TEMPERATURE TO PUBLIC LAVATORIES TO BE 110 F.	11/2"	11/2"	1/2"	1/2"
	L2	LAVATORY (PROVIDED BY OWNER) — A.D.A. COMPLIANT  EQUAL TO KOHLER MODEL# K-2054 RECTANGULAR VITREOUS CHINA, WALL HUNG LAVATORY, 4"  CENTER FAUCET HOLES W/ KOHLER MODEL# K-15592 SINGLE LEVER FAUCET WITH 6" LEVER HANDLE,  VANDAL RESISTANT AERATOR. PROVIDE OPEN GRID STRAINER W/ OFFSET TAILPIECE, CAST BRASS "P"  TRAP, TRAP ARM & 36" FLEX. SUPPLIES WITH STOPS. SECRURE ROUGH-INS TO WALL STRUCTURE.  INSULATE EXPOSED DRAIN AND HOT WATER PIPING. MAXIMUM HOT WATER OUTLET TEMPERATURE TO  PUBLIC LAVATORIES TO BE 110' PER 92' MODEL ENERGY CODE.	11/2"	11/2**	1/2**	1/2"
	ED.	EMERGENCY FLOOR DRAIN EQUAL TO CAST IRON BODY, NICKEL-BRONZE STRAINER. PROVIDE CAST IRON P-TRAP. JAY R. SMITH MODEL# 2005-A. PROVIDE TRAP GUARD EQUAL TO PROSET.	SEE PLAN	2"	<b></b>	_
7	S1	SINGLE COMPARTMENT SINK SELF RIMMING STAINLESS STEEL COUNTERTOP SINK, SINGLE COMPARTMENT, EQUAL TO ELKAY MODEL# BPSR15. DUAL HANDLE GOOSENECK FAUCET EQUAL TO ELKAY MODEL #LKD20888. LK36 BASKET STRAINER, P-TRAP, 36" SUPPLIES AND STOPS.	2"	11/2"	1/2"	1/2"
7	<b>S2</b>	SINGLE COMPARTMENT SINK SELF RIMMING STAINLESS STEEL COUNTERTOP SINK, SINGLE COMPARTMENT, EQUAL TO ELKAY MODEL# DLR222210. DUAL HANDLE GOOSENECK FAUCET EQUAL TO ELKAY MODEL # LKD2432. PROVIDE CRUMB CUP STRAINER, P-TRAP, 36" SUPPLIES AND STOPS.	2"	11/2"	1/2"	1/2"
2	<u>S3</u>	SERVICE SINK PROVIDED BY OWNER) SINGLE COMPARTMENT SERVICE SINK W/ LEGS EQUAL TO SWANSTONE VERITEK, PROVIDE FAUCET EQUAL TO SWANSTONE CELCON.				
	EWC	ELECTRIC WATER COOLER (A.D.A. COMPLIANT) EQUAL TO ELKAY MODEL# EZS-8, STAINLESS STEEL WATER COOLER WITH FOUNTAIN CARRIER, PUSH BAR ACTIVATOR, 120V/1 PHASE, 3.7 AMPS	11⁄4"	11/4**	1/2"	
	MSB	MOP SERVICE BASIN  EQUAL TO FIAT MODEL# MSB2424, FLOOR OUTLET, 24"X24" MOLDED STONE BASIN, 3" DRAIN BODY, WALL MOUNTED SERVICE SINK FAUCET W/ WRIST BLADE HANDLES, INTEGRAL STOPS, VACUUM BREAKER, WALL BRACKET, HOSE AND CONNECTION	3"	2"	1/2"	1/2"
7	AI	ACID NEUTRALIZATION TANK EQUAL TO ORION MODEL# ORTO002, POLYETHYLENE HOUSING, BOLTED LID, CLEANOUT, SIDE VENT LOCATION	11/2"	11/2"	ages.	distr.
	GI	GAS TURRET EQUAL TO CHICAGO MODEL 980-WS909CAGCP, SINGLE BALL VALVE, AIR & GAS INDEX BUTTONS, E7TC	****	-	and the	



WATER HEATER DETAIL



**ISLAND VENT & WASTE DETAIL** 



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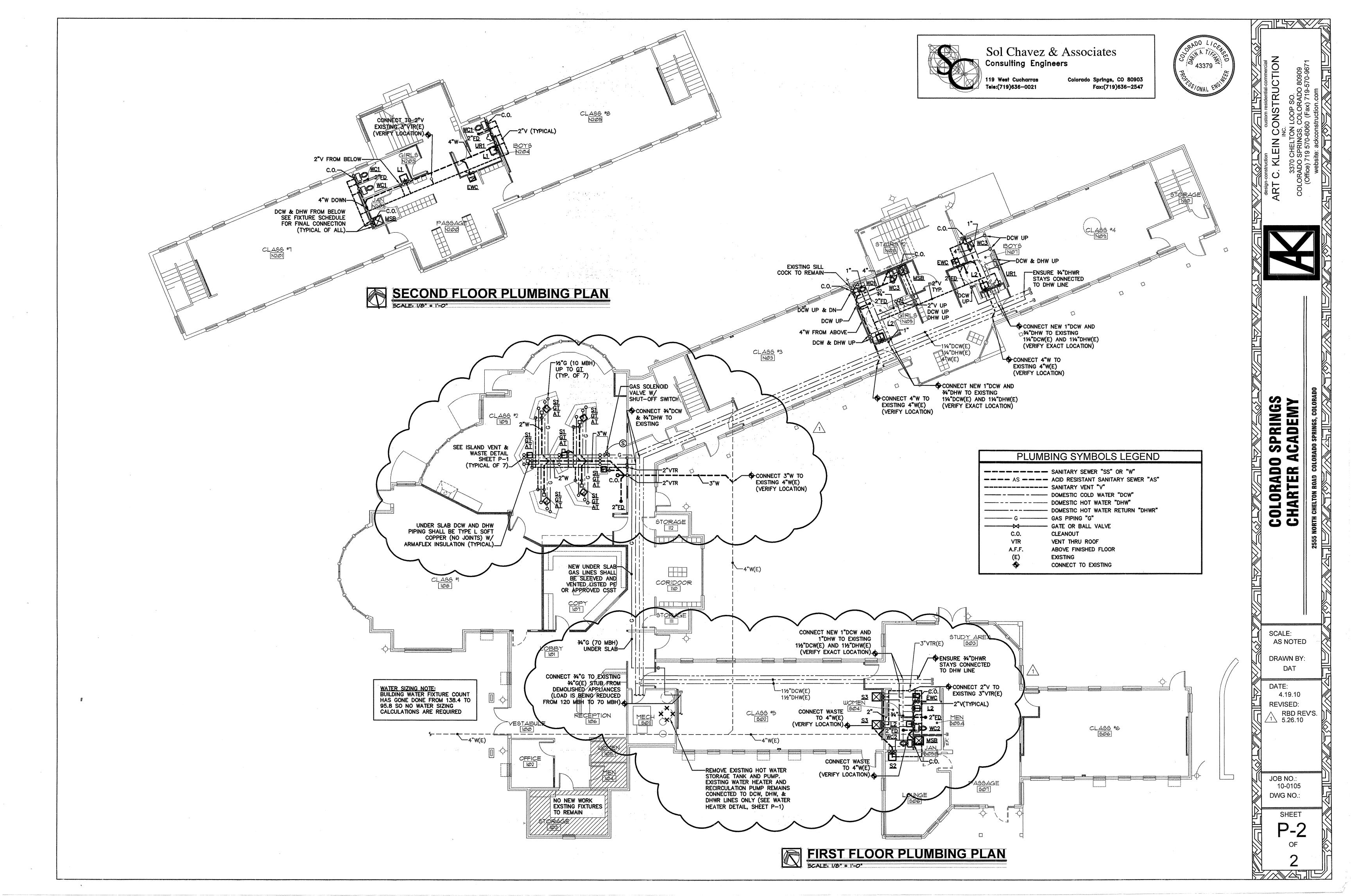
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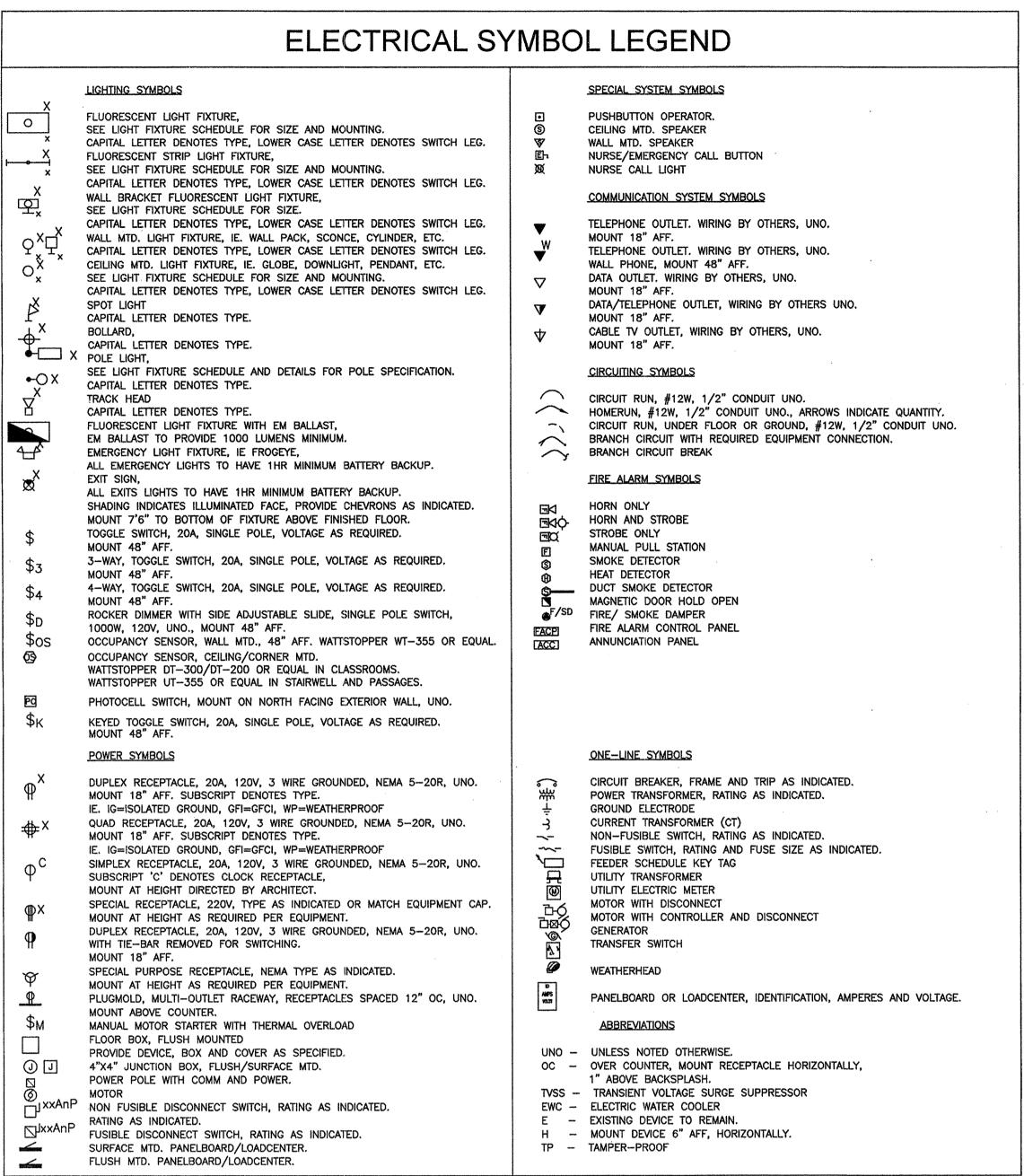
AS NOTED DRAWN BY: DAT

DATE: 4.19.10 REVISED:

RBD REV'S. 5.26.10

JOB NO.: 10-0105 DWG NO.:





NOTE: NOT ALL SYMBOLS ARE USED. VERIFY ALL CONNECTIONS AND RECEPTACLE TYPES FOR EQUIPMENT FROM APPROVED MECHANICAL AND EQUIPMENT SUBMITTALS PRIOR TO INSTALLATION.

GENERAL: THESE DRAWINGS REMAIN THE SOLE PROPERTY OF SOL CHAVEZ AND ASSOCIATES AND MAY BE USED ONLY FOR THE PROJECT AS INDICATED BY NAME AND LOCATION. ANY OTHER USE REQUIRES PRIOR, WRITTEN PERMISSION. THE CONTRACTOR WILL PROVIDE ALL MATERIALS, LABOR. EQUIPMENT, TOOLS, TRANSPORTATION. LICENSES. FEES. PERMITS. ETC. TO COMPLETE THE ELECTRICAL WORK DESCRIBED ON THE DRAWINGS. THE CONTRACTOR WILL WARRANT EQUIPMENT, MATERIAL AND WORKMANSHIP FOR A MINIMUM PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE. WARRANTY SHALL INCLUDE REPLACEMENTS OR REPAIRS WITHOUT COST TO THE OWNER DURING THE WARRANTY PERIOD.

ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) 2005 AND ALL OTHER APPLICABLE LOCAL CODES AND ORDINANCES.

ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.

USE OF DRAWINGS: DO NOT SCALE FROM THE ELECTRICAL DRAWINGS. FOR EXACT LOCATIONS USE ARCHITECT'S DIMENSIONED DRAWINGS, SHOP DRAWINGS AND FIELD MEASUREMENTS. VERIFY ALL LOCATIONS WITH THE ARCHITECT PRIOR TO ELECTRICAL

WIRING: ALL WIRING FOR LIGHTING AND POWER SYSTEMS WILL BE IN CONDUIT OR CABLE ASSEMBLIES APPROVED BY THE GOVERNING AUTHORITIES. CONDUCTOR SIZES SHOWN ARE BASED ON AMPACITIES FOR COPPER CONDUCTORS, UNLESS OTHERWISE NOTED. WHEN APPROVED BY ENGINEER, FEEDERS MAY BE ALUMINUM CONDUCTORS OF EQUIVALENT AMPACITIES. GROUNDING CONDUCTORS SHALL BE PROVIDED FOR ALL CIRCUITS SHOWN ON THE DRAWINGS. PROVIDE BLOCKING AND OTHER NECESSARY SUPPORTS IN WALLS AND CEILINGS FOR MATERIAL AND EQUIPMENT TO BE PROVIDED. BRANCH CIRCUIT NUMBERS SHOWN ON THE DRAWINGS MAY BE REARRANGED WITHIN A GIVEN PANELBOARD TO SUIT THE NEEDS OF THE INSTALLATION. ELECTRICAL BRANCH CIRCUITS SHALL BE BALANCED BETWEEN LINES AND PHASES.

UTILITY COORDINATION: PROVIDE ALL COORDINATION WITH THE UTILITY INCLUDING LOAD DATA FORMS AND APPLICATION FOR SERVICE AS APPLICABLE. INSTALLATION OF SERVICE, PRIMARY OR SECONDARY FEEDERS AND METERING SHALL BE PERFORMED IN ACCORDANCE WITH THE UTILITIY REQUIREMENTS.

GROUNDING: PROVIDE A COMPLETE GROUNDING SYSTEM AS REQUIRED BY THE NEC AND LOCAL AUTHORITIES HAVING JURISDICTION. ALL BRANCH CIRCUITS SHALL INCLUDE A GROUND CONDUCTOR. USE OF RACEWAY FOR GROUNDING IS NOT PERMITTED. GALVANIZED GROUND RODS ARE NOT PERMITTED.

PANELBOARDS: PROVIDE MINIMUM INTEGRATED EQUIPMENT SHORT CIRCUIT RATING AS INDICATED ON PANEL SCHEDULES. PROVIDE BOLT-ON BREAKERS UNLESS OTHERWISE NOTED. PROVIDE CIRCUIT BREAKERS SHOWN ON THE PANELBOARD SCHEDULES. ALL TERMINATIONS AND LUGS SHALL BE RATED FOR 75-DEGREE CONDUCTORS. PROVIDE TYPEWRITTEN CIRCUIT SCHEDULES TO IDENTIFY PANELBOARD AND EACH BRANCH BREAKER.

WIRING DEVICES: PROVIDE SPECIFICATION GRADE 15 AND 20- AMPERE SWITCH AND RECEPTACLE DEVICES, AS APPLICABLE. OTHER DEVICES SHALL BE PROVIDED AS INDICATED AND SHALL MATCH PLUG-CONNECTED EQUIPMENT FURNISHED FOR THE PROJECT. DEVICE WALL PLATES SHALL BE SMOOTH, NYLON TYPE AND SHALL BE OFFICE WHITE IN COLOR OR AS OTHERWISE SPECIFIED. DEVICE COLOR SHALL MATCH WALL PLATES.

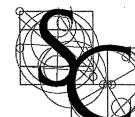
DISCONNECT SWITCHES: HEAVY DUTY QUICK-MAKE, QUICK-BREAK TYPE, NON-FUSED UNLESS OTHERWISE NOTED. PROVIDE MEANS TO LOCK SWITCH IN OFF POSITION WITH PAD-LOCK. ENCLOSURES SHALL BE NEMA TYPE 1 OR NEMA TYPE 3R FOR OUTDOOR INSTALLATION. PROVIDE PERMANENT LABELS FOR DISCONNECTS TO INDICATE EQUIMENT SERVED.

LIGHTING FIXTURES: SEE LIGHT FIXTURE SCHEDULE. PROVIDE ALL FIXTURES WITH LAMPS AS INDICATED. WHERE REQUIRED, FIXTURES SHALL BE WET OR DAMP LOCATION LABELED. VERIFY MOUNTING HEIGHTS PRIOR TO ELECTRICAL ROUGH-IN. ALTERNATES NOT ACCEPTABLE UNLESS NOTED AS "OR EQUAL" ON LIGHT FIXTURE SCHEDULE.

VOICE/DATA: RACEWAY SYSTEM BY CONTRACTOR. ALL RACEWAYS SHALL BE PROVIDED WITH PULLSTRINGS OF MINIMUM OF 400-LB. TEST STRENGTH. ALL EQUIPMENT, RECEPTACLES AND CABLING BY OTHERS. PROVIDE BLANK COVERS OVER ALL UNUSED OUTLETS. CABLES, DEVICES AND CABLE TERMINATION IS BY OTHERS.

FIRE ALARM: BY OTHERS, IF REQUIRED.

ACCEPTABLE MANUFACTURERS ARE SQUARE D, SIEMENS AND EATON.



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				LAM	PS			1		TOTA
TYPE	MFGR	CATALOG NO.	QUAN	WATT	TYPE	MTG	DESCRIPTION	NOTES	VOLTS	WATT
Α	DM LIGHTING	4595-SA-SBL-ELB	3	26	CF	SURFACE	CEILING GLOBE		120	86
B1	HALO	H272ICAT-405H	1	26	CF	RECESSED	RETROFIT 6" DOWNLIGHT		120	29
B2	HALO	H285EICAT-405H	1	26	CF	RECESSED	6" DOWNLIGHT		120	29
D	FC LIGHTING	FCSX1090-SA	2	26	CF	SURFACE	DRUM		120	57
E	SURELITE	ССЗ	2	5.4	INC	UNIVERSAL	EMERGENCY LIGHT W/ BATTERY BACKUP-		120	12
F	METALUX	2AC2-BI	2	24	T5	RECESSED	2'x2' INDIRECT TROFFER		120	58
G	DM LIGHTING	4585-SA-SBL-ELB	2.	13	CF	WALL 7' AFF	SCONCE		120	29
Н	DM LIGHTING	4746-ELB-SC-TPL	2	26	CF	WALL 7' AFF	STAIR SCONCE		120 <sup>-</sup>	57
K	GENERIC		1	60	INC	SURFACE	KEYLESS		120	60
L1	CORELITE	AB-WB-1C-AC48-ST-8-DL4	4	28	T5	10' AFF	8' SUSPENDED DIRECT/INDIRECT		120	11
L2	CORELITE	RB-WB-1C-8	4	28	T5	SURFACE	8' SURFACE DIRECT		120	11
L3	CORELITE	AB-WB-1D-AC48-ST-8-DL4	4	28	<b>T</b> 5	1	8' SUSPENDED DIRECT/INDIRECT W/ INTEGRAL DAYLIGHT SENSOR	1	120	11
L4	CORELITE	AB-WB-1C-AC48-ST-8-DL4	4	28	<b>T</b> 5	SURFACE	8' SURFACE DIRECT/INDIRECT W/ INTEGRAL OCC. SENSOR		120	11
M1	CORELITE	AB-WB-1C-AC48-ST-8-DL7	2	28	<b>T</b> 5	8' AFF	8' SUSPENDED INDIRECT/ DIRECT		120	62
M2	CORELITE	AB-WB-1C-AC48-ST-8-DL7	2	28	75		8' SUSPENDED INDIRECT/ DIRECT W/ INTEGRAL OCC. SENSOR		120	62
МЗ	CORELITE	AB-WB-1C-AC48-ST-8-DL2	2	28	<b>T</b> 5	8' AFF	8' SUSPENDED DIRECT/INDIRECT		120	62
N	CORELITE	L2W-WB-DL7	1	28	T5	WALL 7' AFF	4' WALL BRACKET LIGHT,		120	28
Р	DM LIGHTING	5192-SA-SBL-ELB	6	13	CF	SUSPENDED	PENDANT		120	86
X.	SURELITE	AP60			LED	UNIVERSAL	EXIT SIGN W/ BATTERY BACKUP		120	1

- 1. FLUORESCENTS SHALL HAVE 0.125" LENS & 10% PROGRAMMED RAPID START ELECTRONIC BALLASTS
- 2. FLUORESCENT LAMPS SHALL BE LOW-MERCURY, 3500K, 85 CRI OR BETTER.
- 3. COMPACT FLUORESCENT LAMPS SHALL BE 3500K, 82 CRI OR BETTER. 4. COMPACT FLUORESCENT BALLASTS SHALL INCLUDE AN END-OF-LIFE CIRCUIT OPTION.
- 5. EM BALLASTS SHALL PROVIDE 1000 LUMENS MINIMUM.

ELECTRICAL SERVICE LOAD SUMMARY 6.04 kVA

5.74 kVA

7.11 kVA

56.03 kVA @ 240V, 1Ø= 233 AMPS

NO. OF CONDUCTORS, ALUMINUM CONDUIT

KEY SETS NO. SIZE GND SIZE

2F150 1 3 1/0 6 1 1/2

2S500 2 3 250kcmil 1/0 (1) 2

2F250 1 3 250kcmil 4 2

(2) Types THWN and XHHW insulation and 75C terminations.

PANEL D- 30.42 kVA

AHU (5HP)— 6.72 kVA TOTAL— 56.03 kVA

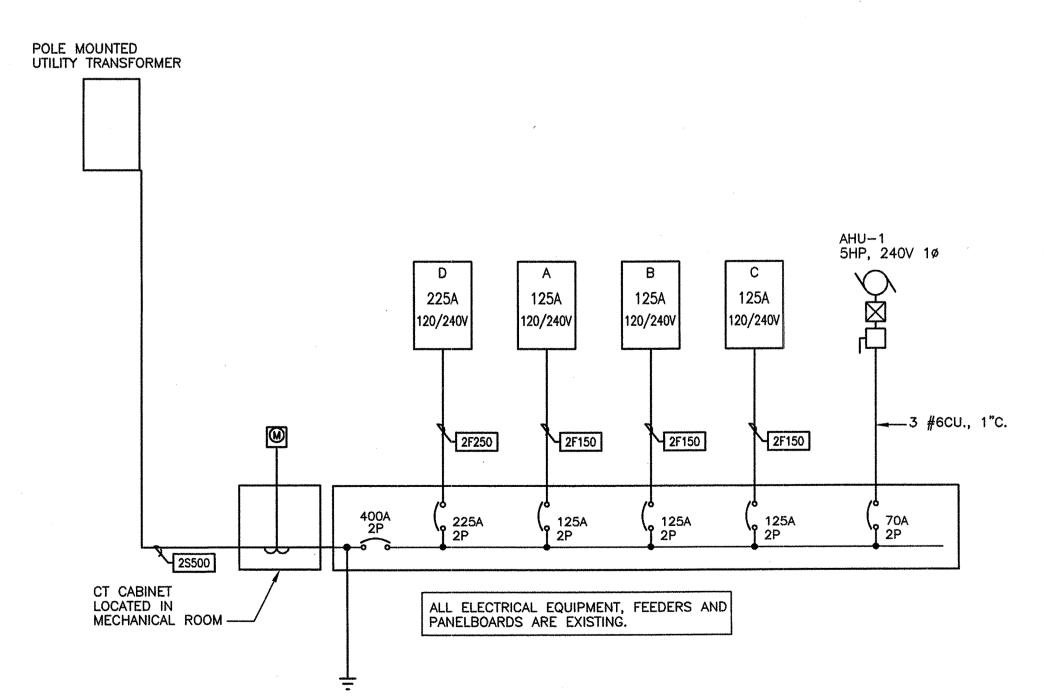
FEEDER SCHEDULE

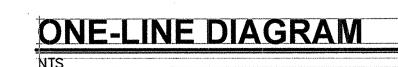
(1) Grounding electrode conductor.

PANEL B-

PANEL C-

1. LIGHT FIXTURE WITH DAYLIGHT SENSOR REQUIRES DIMMING BALLAST.





PRING OLORAD HARTER 50

SCALE: AS NOTED DRAWN BY

DATE: 4.20.10

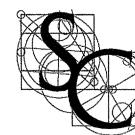
**REVISED:** 

JOB NO. 10-0105

DWG NO.:

PANEL: <b>D</b> LOCATION: <b>MES</b>				.TS: RATING				IPH 3W	FE	ATURES:		225A MLO PPER BUS
MOUNTING: <b>SURF</b> FED FROM: <b>MDP</b>	ada a da		i dinama				1900 P. C.					
DESCRIPTION	**	BRKR	Р	kVA	CKT	РН	CK1	kVA	Р	BRKR	**	DESCRIPTION
LIGHTS CLASS #1	E	20	1	0.90	1	А	2	1.26	1	20	E	CLASS #2 RECEPS
LIGHTS CLASS #2	TE	20	1	1.10	3	В	4	0.90	1	20	E	CLASS #2 RECEPS
CLASS #2 RECEPS	E	20	1	0.54	5	Α	6	0.72	1	20	E	CLASS #1 RECEPS
COPIER	E	20	1.1	1.00	7	В	8	1.26	1	20	E	CLASS #2 RECEPS
EF-1	E	20	1	1.59	9	A	10	0.54	1	20	E	CLASS #1 RECEPS
SPARE	TE	20	1	elek,mentrepenterandrada edistributekia	11	В	12	1.44	1	20	E	CLASS #2 RECEPS
LIGHTS	E	20	1	0.60	13	Α	14	0.54	1	20	E	OFFICE RECEPS
LIGHTS	E	20	1	1.30	15	В	16	0.90	1	20	E	LOBBY/ RECEPTION
STAIR LIGHTS	E	20	1	0.30	17	A	18	1.44	1	20	E	COPY ROOM
SPARE	E	20	1		19	В	20	1.20	1	20	E	EXTERIOR LIGHTS
SPACE					21	Ά	22	1.20	1	20	E	EXTERIOR LIGHTS
SPACE					<b>2</b> 3	В	24	1.00	1	20	E	EXTERIOR LIGHTS
SPACE					25	Α	26	1.40	1	20	E	EXTERIOR LIGHTS
SPACE			1		27	В	28	0.18	1	20	E	TELE. RECEPTACLE
CUH2	E	20	1	1.00		Α	30					SPACE
P3,4 UH1	E	20	1	1.84	31	В	32					SPACE
P-1	N	20	1	1.59	33	Α	34					SPACE
P-2	N	20	1	1.59	35	В	36					SPACE
COMPRESSOR	E	20	2	1.38	<u> </u>	A	38					SPACE
·				1.38	39	В	40				<u> </u>	SPACE
LOAD SUMMARY LOAD TYPE		KVA	FΔ	CTOR	DEM	ΔΝΩ		CONNE	CTE	D LOAD	(k\/ A	
LIGHTING		8.70			8.70			PHASE		15.00		
RECEPTACLES <= 10kVA		10.00		1.00	10.0			PHASE		15.09		
RECEPTACLES > 10kVA		0.72		0.50	0.36			y a 12 (Chillian		.5100	, , , , ,	•
MOTORS		6.61			6.61			**KEYE	D N	OTES:	E	EXISTING
LARGEST MOTOR		2.76		1.25	3.45			,s want (t.)hiii	1 4			NEW
ELECTRIC HEAT		1.00		1.00	1.00							SHUNT TRIP
KITCHEN	,	1.00								•		AFCI
(NON)CONTINUOUS		0.30			0.30							GFCI
TOTAL LOAD KVA		30.09	1	***************************************	30.4		1				•	<b>₩</b>
AMPERES @ 240V	L	125	1		127		1					
2.120	Ĺ		J				1					
PANEL NOTES:						Miller and appropriate						
ELECTRICAL CONTRACT	OR SL	IALL VEDI	FY TI	4E 1 () 4)	רא בי	EXIC	TNIC	BBANCI	J DE	EVKEDO	pp	IOR TO
CONNECTION OF NEW B							HAG	PLACHANI	1 Dr			OK 10

PANEL: C		\$0 <b>7</b>						IPH 3W	FE	ATURES:		125A MLO PPER BUS
MOUNTING: <b>SURF</b> FED FROM: <b>125A</b>	STATE OF THE PARTY		G 2 2 3 4			eses de la circula de la c		uniyasi (Antakilda s				
DESCRIPTION	**	BRKR	P	kVA	CKT	PH	CKT	kVA	P	BRKR	**	DESCRIPTION
CLASS #5 LIGHTS	E	20	1	1.00	1	Α	2		1	20	E	SPARE
CLASS #5 RECEPS	E	20	1	0.72	3	В	4	0.60	1	20	E	LIGHTS
CLASS #5 RECEPS	TE	20	1	0.72	5	Α	6		1	20	E	SPARE
SPARE	TE	20	1	***************************************	7	В	8		1	20	E	SPARE
CLASS #6 RECEPS	E	20	1	0.54	9	Α	10		1	20	E	SPARE
CLASS #6 LIGHTS	TE	20	1	1.10	11	В	12		1	20	E	SPARE
CLASS #6 RECEPS	E	20	1	0.72	13	Α	14	0.45	1	20	E	EWC
SPARE	E	20	1		15	В	16	-	1	20	E	SPARE
LOUNGE RECEPS	E	20	1	0.90	17	Α	18	0.36	1	20	E	RECEPTACLES
SPARE	E	20	1		19	В	20		***************************************			
SPARE	E	**************************************	1		21	A	22		<del></del>			
SPARE	TE		1		23	В	24		***************************************		<b></b>	
SPARE	E	***************************************	1		25	Α	26				<u> </u>	
SPARE	E	<del>ele de maria de la compansión de la comp</del>	1		27	В	28		-	**************	<u> </u>	
LOAD SUMMARY	aratelaria anamani			<del>leanninn marine an an an</del>				nilangangan maka persamangan terdi	# <del>}</del>			
LOAD TYPE		KVA	FA	CTOR	DEM	AND		CONNE	CTE	D LOAD	(kVA	A)
IGHTING	····	2.70		1.00	2.70		······································	PHASE	Α	4.69	kV/	<del>\</del>
RECEPTACLES <= 10kVA		4.41		1.00	4.41			PHASE	В	2.42	kV/	1
RECEPTACLES > 10kVA			3	0.50								
MOTORS				1.00				**KEYE	DN	OTES:	E	EXISTING
LARGEST MOTOR				1.25							N	NEW
ELECTRIC HEAT				1.00							S	SHUNT TRIP
KITCHEN											Α	AFCI
(NON)CONTINUOUS										•	G	GFCI
TOTAL LOAD KVA		7.11			7.11							
AMPERES @ 240V		30			30							
			•									
PANEL NOTES:												



## Sol Chavez & Associates Consulting Engineers

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PANEL SCHEDULE 125A MLO 120/240V 1PH 3W PANEL: A FEATURES: LOCATION: PASSAGE NOS AIC RATING: 10,000 A MOUNTING: SURFACE FED FROM: 125A MCB DESCRIPTION 

 E
 20
 1
 0.90
 1
 A
 2
 0.70
 1
 20
 E
 LIGHTS

 E
 20
 1
 0.72
 3
 B
 4
 1
 20
 E
 SPARE

 E
 20
 1
 0.72
 5
 A
 6
 0.18
 1
 20
 E
 RECEPTACLE

 CLASS #3 LIGHTS CLASS #3 RECEPS CLASS #3 RECEPS CLASS #3 RECEPS E 20 1 0.72 **7** B **8** 1 20 E SPARE E 20 1 0.54 9 A 10 0.36 1 20 E RECEPTACLES
E 20 1 0.90 11 B 12 1 20 E SPARE
E 20 1 13 A 14 1 20 E SPARE CLASS #3 RECEPS CLASS #4 LIGHTS SPARE E 20 1 0.30 15 B 16 20 E SPARE STAIR LIGHTS 17 A 18 1 20 E SPARE 19 B 20 21 A 22 23 B 24 25 A 26 1 20 E SPARE 1 20 E SPARE 27 B 28 LOAD SUMMARY KVA FACTOR DEMAND CONNECTED LOAD (kVA) LIGHTING PHASE A 3.40 kVA RECEPTACLES <= 10kVA PHASE B 2.64 kVA 1.98 1,00 1.98 RECEPTACLES > 10kVA 0.50 MOTORS 1.00 \*\*KEYED NOTES: E EXISTING LARGEST MOTOR 1.25 N NEW ELECTRIC HEAT 1.00 S SHUNT TRIP KITCHEN A AFCI (NON)CONTINUOUS G GFCI TOTAL LOAD KVA AMPERES @ 240V I. ELECTRICAL CONTRACTOR SHALL VERIFY THE LOAD ON EXISTING BRANCH BREAKERS PRIOR TO CONNECTION OF NEW EQUIPMENT AND/OR DEVICES.

PANEL: B			VOL	.TS:		120/2	40V 1	PH 3W				125A MLO
LOCATION: PASS MOUNTING: SURF FED FROM: 125A	AGE N	1200	AIC		i:	10,00	)0 A		FE	ATURES:		PPER BUS
DESCRIPTION	**	BRKR	Р	kVA	CKT	PH	ÇK T	kVA	Р	BRKR	**	DESCRIPTION
CLASS #7 LIGHTS	TE	20	1	0.90	1	A	2	0.70	1	20	E	LIGHTS
CLASS #7 RECEPS	E	20	1	0.72	3	В	4		1	20	E	SPARE
CLASS #7 RECEPS	E	20	1	0.72	5	Α	6	0.18	1	20	E	RECEPTACLE
CLASS #7 RECEPS	TE	20	1	0.72	7	В	8		1	20	E	SPARE
CLASS #7 RECEPS	E	20	1	0.54	9	Α	10	0.36	1	20	E	RECEPTACLES
CLASS #8 LIGHTS	E	20	1	0.90	11	В	12		1	20	E	SPARE
SPARE	E	20	1		13	A	14		1	20	E	SPARE
SPARE	TE	20	1		15	В	16		1	20	E	SPARE
SPARE	TE	20	1	***************************************	17	A	18		1	20	E	SPARE
		***************************************	1		19	В	20		1	20	E	SPARE
					21	Α	22		1	20	E	SPARE
					23	В	24		1	20	E	SPARE
		PO TROPEC NEW PROPERTY AND	1		25	Α	26			****		
					27	В	28					
LOAD SUMMARY LOAD TYPE		KVA	FA	CTOR	DEM	AND		CONNE	CTE	D LOAD	(kVA	<b>(</b> )
LIGHTING		2.50		1.00	2.50			PHASE	Α	3.40	kV/	4
RECEPTACLES <= 10kVA		1.98		1.00	1.98			PHASE	В	2.34	kV/	<i>†</i>
RECEPTACLES > 10kVA			(	0.50								
MOTORS				1.00				**KEYE	DN	OTES:	Ε	EXISTING
LARGEST MOTOR				1.25							Ν	NEW
ELECTRIC HEAT			,	1.00							S	SHUNT TRIP
KITCHEN											Ä	AFCI
(NON)CONTINUOUS		1.26			1.26		•				G	GFCI
TOTAL LOAD KVA	1	5.74			5.74	***************************************	1					
AMPERES @ 240V		24	1		24		l					

O SPRINGS ACADEMY 0 COLORAD( CHARTER

SCALE: AS NOTED

4.20.10 REVISED:

JOB NO.: 10-0105

