STATE SYSTEM OF HIGHER EDUCATION COMMONWEALTH OF PENNSYLVANIA

SHIPPENSBURG, UNIVERSITY SHIPPENSBURG, PENNSYLVANIA 17257

MARTIN HOUSE RENOVATIONS

PROJECT NO. SU - 2010/6B MAY 09, 2014

CONSTRUCTION DOCUMENTS

MURPHY & DITTENHAFER ARCHITECTS

226 WEST MARKET STREET YORK, PENNSYLVANIA 17401 PH: (717)848-8627 FAX: (717)843-2449

CIVIL ENGINEERS

PENNONI ASSOCIATES INC. 1215 MANOR DRIVE, SUITE 100 MECHANICSBURG, PENNSYLVANIA 17055 PH: (717)975-6481 FAX: (717)975-6480

M.E.P. ENGINEERS

HOFFMAN BOROWSKI ASSOCIATES 73 E. FOREST AVE, SUITE 205 SHREWSBURY, PENNSYLVANIA 17361 PH: (717)227-2320 FAX: (888)281-1985

STRUCTURAL ENGINEERS

BAKER, INGRAM AND ASSOCIATES 1547 OREGON PIKE LANCASTER, PENNSYLVANIA 17601 PH: (717)290-7400 FAX: (717)290-7402

UNLESS NOTED OTHERWISE

LOCATION SHIPPENSBURG UNIVERSITY **1871 OLD MAIN DRIVE** SHIPPENSBURG, PENNSYLVANIA 17257 MARTIN HOUSE AT SHIPPENSBURG UNIVERSITY SHIPPENSBURG, PENNSYLVANIA 17257

SYMBOLS LEGEND			ABBREVIATIONS			
DRAWING	#	COMPACTED SUBGRADE	A/C AHU ALUM	AIR CONDITIONING AIR HANDLING UNIT ALUMINUM	LAV LH	LAVATORY LEFT HAND
SHEET #		SUDGINADE	@	AT	MACH MO	MACHINE MASONRY OPENING
▲ ELEVATIO	** ** ** *** *** *** *** *** *** *** *	CONCRETE	BSMT BC BITUM	BASEMENT BASE CABINET BITUMINOUS	MTL MAX MECH	METAL MAXIMUM MECHANICAL
DRAWING	#	C.M.U.	BD BLK	BOARD BLOCK	MIN MISC	MINIMUM MISCELLANEOUS
SHEET #		ROUGH	BLDG BLKD BP-X	BUILDING BULKHEAD BID PACKAGE #	NIC NO or #	NOT IN CONTRACT NUMBER
DETAIL DRAWING	#	WOOD	CLG	CEILING	NTS OC	NOT TO SCALE ON CENTER
SHEET #		PLYWOOD	CMU CONC	CENTER LINE CONCRETE MASONRY UNIT CONCRETE	OPNG PLAS LAM	OPENING I PLASTIC LAMINATE
()		FINISHED	CJ	CONTROL JOINT	PTD	PAINTED
INTERIOR ELEVATIO DRAWING		WOOD	DIM DN	DIMENSION DOWN	REFRIG REINF	REFRIGERATOR REINFORCED
SHEET #	"	RIGID INSULATION	DWG D	DRAWING DEEP	RH RM	RIGHT HAND ROOM
		BRICK	EJ ELEC ELEV	EXPANSION JOINT ELECTRICAL ELEVATION	SIM S	SHEET SIMILAR
——————————————————————————————————————	E LL .F)	PW/GWING	EL EQUIP	ELEVATION ELEVATOR EQUIPMENT	STD S	SPECIFICATION STANDARD STEEL
TAMANDOM.	卡三 子	EXISTING WALLS TO BE REMOVED	EXIST FIN	EXISTING FINISH	ST STL S	STAINLESS STEEL STORAGE
(SEE WINDOW SCHEDUL	IDOW	NEW PARTITION	FE FD FFE	FIRE EXTINGUISHER FLOOR DRAIN		TOP OF SLAB/STEEL THICK
		EXISTING	FL FT	FINISH FLOOR ELEVATION FLOOR FOOT		TYPICAL
DOOR NUM (SEE DOO SCHEDUL)	R	WALLS TO REMAIN	FVWA	FIELD VERIFY W/ARCHITECT		JNLESS NOTED OTHER /ERIFY IN FIELD
		EXISTING	GP BD GWB HDCP	GYPSUM BOARD GYPSUM WALL BOARD HANDICAPPED		ERIFY IN FIELD WITH ARCHITECT
NEW SUSP CEILING &		DOOR TO BE REMOVED	HVAC	HEATING/VENTILATION, AIR CONDITIONING	WC V	WALLBOARD WATER CLOSET
¥		EXISTING DOOR	HT HM HORIZ	HEIGHT HOLLOW METAL HORIZONTAL	W/O V WD V	VITH VITHOUT VOOD VIDE
NEW SUSP GYP. BD. CEILING O BULKHEAI	R	NEW DOOR	INSUL INT	INSULATION INTERIOR		

		in and a second			
DRA	AWING INDEX				UNIVERSI
CS 1	COVER SHEET	MECHAI	NICAL CONSTRUCTION		
CS 2	LIFE SAFETY AND ADA		ACT NO. SU-2010/6B.2		APPROVE
	AL CONSTRUCTION	MECHAI	NICAL		
CONTRA	ACT NO. SU-2010/6B .1	MO 1	COVED CHEET		ADDDOV
CIVIL		M0.1	COVER SHEET		APPROV
C 1.1	SITE PLAN	MD 1.1	DEMOLITION FLOOR		DRAWINGS LISTI
C 1.2	DETAILS	1.10 1.11	PLANS - HVAC		DRAWINGS LIST
1000		MD 1.2	사 보면 가게 없다. 하는데 사이를 보면 없다면 하는데 이번에 되었다. 나는데 나를 다 먹었다.		
ARCHIT	ECTURAL		PLANS - PIPING		
		M1.1	NEW FLOOR PLANS -		APPROVED :
A 1.1	DEMOLITION PLANS		HVAC		FOF
A 1.2	BASEMENT AND FIRST FLOOR PLANS	M1.2	NEW FLOOR PLANS -		
A 1.3	SECOND AND THIRD FLOOR PLANS		PIPING		
					TITL
A 2.1	BUILDING ELEVATIONS	M 3.1	MECHANICAL DETAILS		
			& ATC		
A 3.1	BUILDING SECTIONS	n			
	INTERIOR EL EVATIONO		NG CONSTRUCTION		DEVIEWED BY:
A 4.1	INTERIOR ELEVATIONS	CONTRA	ACT NO. SU-2010/6B.3		REVIEWED BY:
A 4.2	INTERIOR ELEVATIONS	PLUMBI	NC		
A 5.1	WALL SECTIONS	LLOMDI	NG		
A 3.1	WALL SECTIONS	P 0.1	COVER SHEET		DATE
A 6.1	DETAILS	1 0.1	COVERSILEI		
A 6.2	DETAILS	DP 1.1	DEMOLITION PLANS		
A 7.1	SCHEDULES	P 1.1	OVERALL PLANS		
STRUCT	URAL	P 2.1	PART PLANS	PRC	FESSIONAL SEAL:
S 1.1	STRUCTURAL NOTES	P 3.1	PLUMBING DETAILS		
S 2.1	FOUNDATION PLAN				
S 2.1	FIRST FLOOR FRAMING PLAN	БІ Б <u>С</u> ТР	ICAL CONSTRUCTION		
S 2.2	SECOND FLOOR/LOW ROOF		ACT NO. SU-2010/6B .4		
3 2.3	FRAMING PLAN	CONTIN	ICT NO. 30-2010/0D.4		
S 2.4	THIRD FLOOR FRAMING PLAN	ELECTR	ICAL		
		LLLGIII		RE\	/ISIONS
S 3.1	FOUNDATION SECTIONS	E 0.1	COVER SHEET	NO.	DATE
		DE 1.1	PART PLANS - DEMO		
S 4.1	FRAMING SECTIONS				
		E 1.1	OVERALL FLOOR PLANS		
S 6.1	TYPICAL DETAILS				
		E 4.1	PART PLANS - NEW		
· · · · · · · · · · · · · · · · · · ·					

E 6.1 SCHEDULES

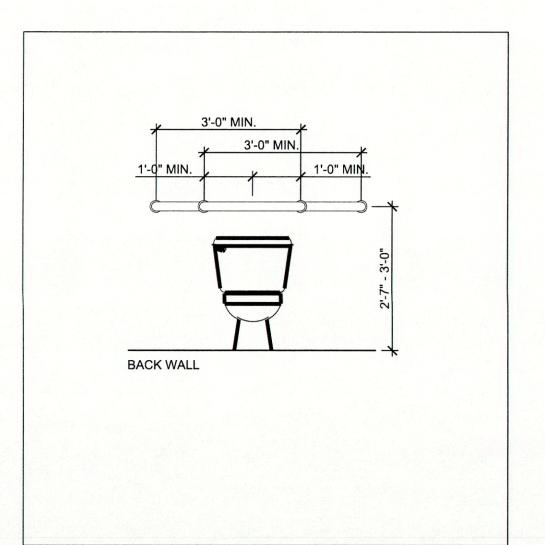


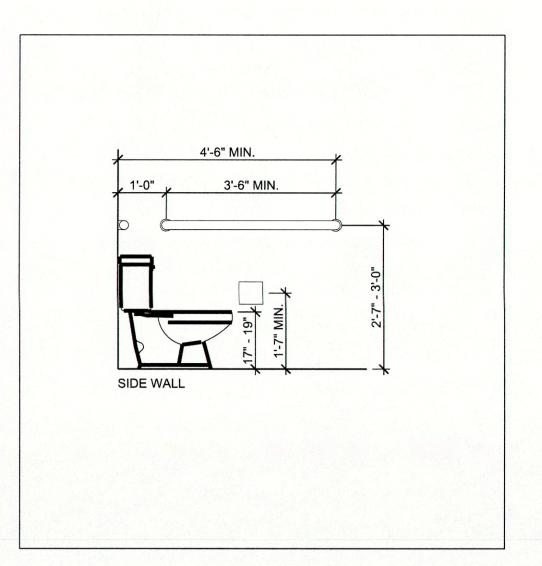
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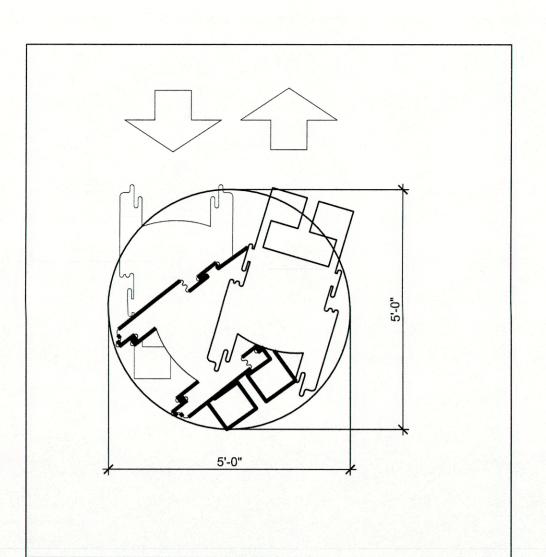
DRAWINGS SATISFACTORT TO.
ASSOCIATE DIRECTOR OF PLANNING, DESIGN & CONSTRUCTION
APPROVED:
DIRECTOR OF PUBLIC SAFETY :
APPROVED:
UNIVERSITY SAFETY COORDINATOR :
APPROVED:
MANAGER OF TELECOMMUNICATIONS :
APPROVED:
UNIVERSITY PRESIDENT:
APPROVED:
APPROVALS
DRAWINGS LISTED IN INDEX
APPROVED :FOR THE UNIVERSITY AND STATE SYSTEM
TITLE DATE
REVIEWED BY:
DATE PROFESSIONAL

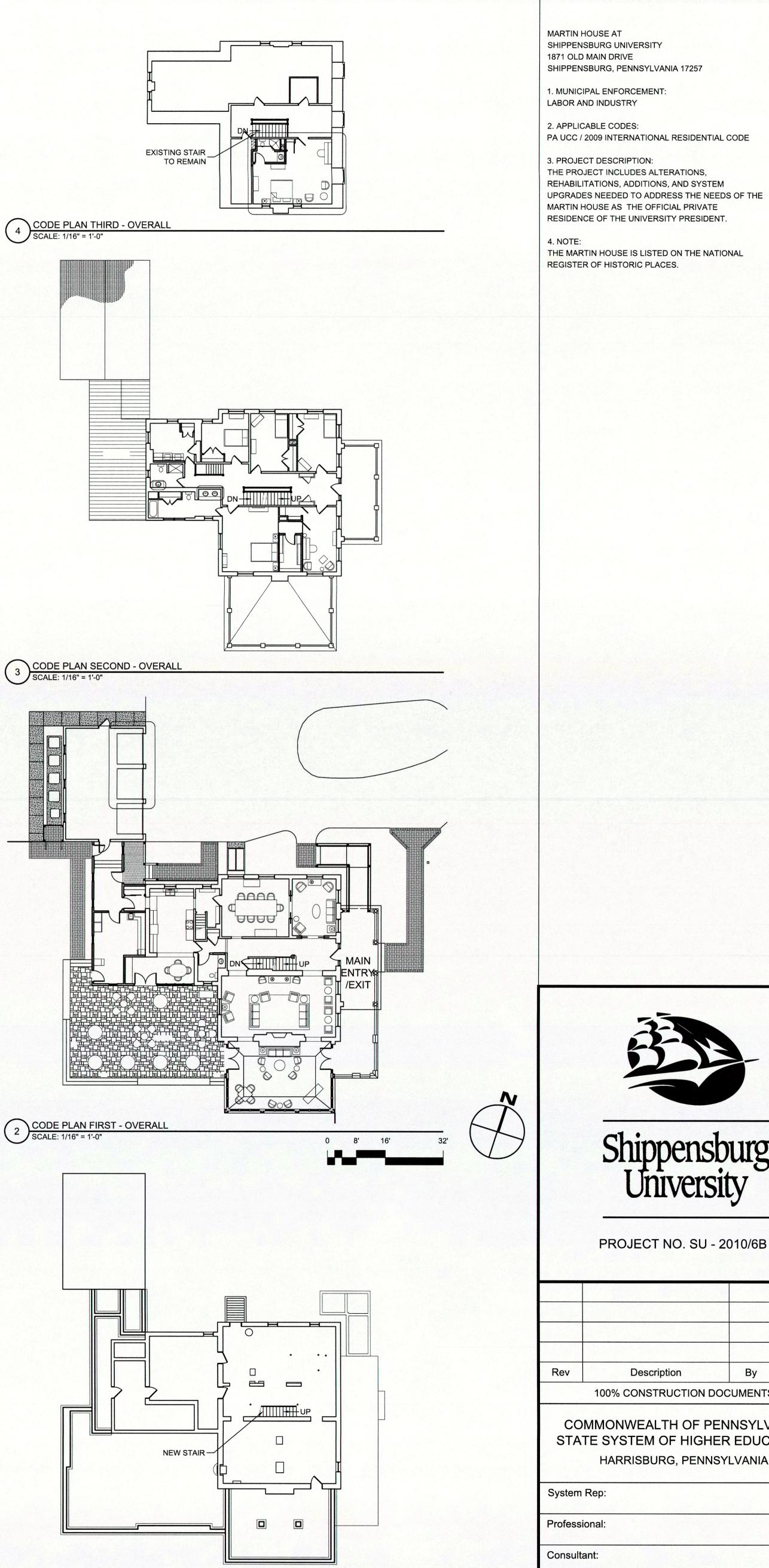
MAY 9, 2014

COVER SHEET









CODE PLAN BASEMENT - OVERALL

SCALE: 1/16" = 1'-0"

RESIDENCE OF THE UNIVERSITY PRESIDENT.

BUILDING CODE SUMMARY:

RENOVATIONS AND ADDITIONS
MARTIN HOUSE
SHIPPENSBURG, PENNSYLVANIA

PROJECT NO. SU - 2010/6B

Description 100% CONSTRUCTION DOCUMENTS

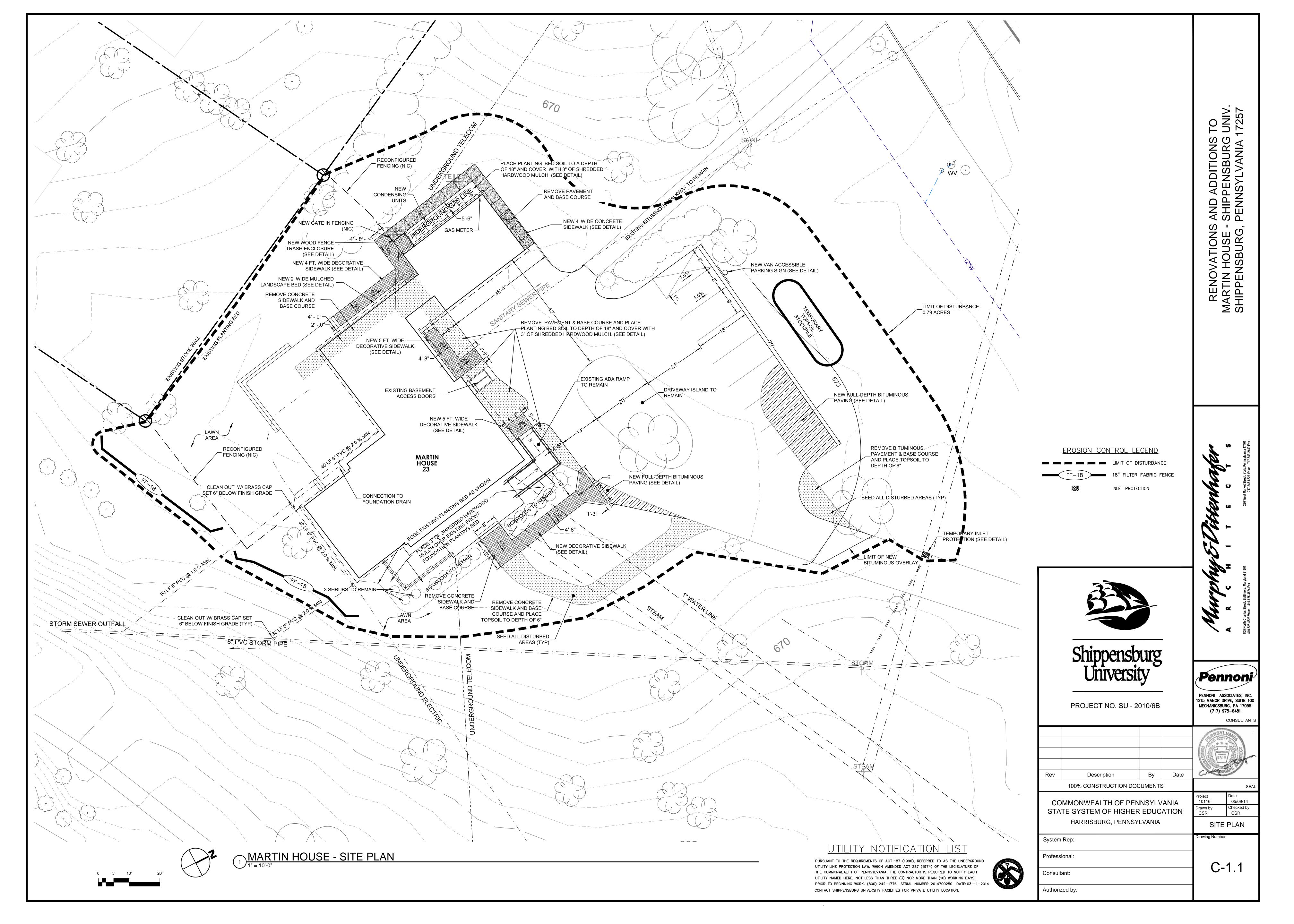
Project 10116 Drawn by DLR COMMONWEALTH OF PENNSYLVANIA 05/09/14 Checked by TRG STATE SYSTEM OF HIGHER EDUCATION HARRISBURG, PENNSYLVANIA

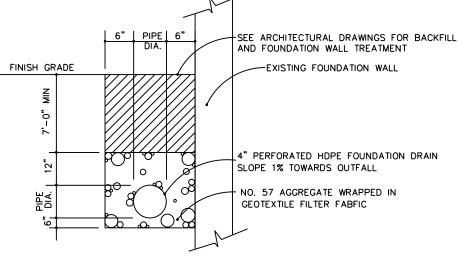
System Rep: Professional:

Authorized by:

Drawing Number BUILDING CODE SUMMARY

CS-2





NOTE:

1. SHORING REQUIRED FOR ALL TRENCHES IN ACCORDANCE WITH APPLICABLE REGULATIONS LAWS & SAFETY CODES

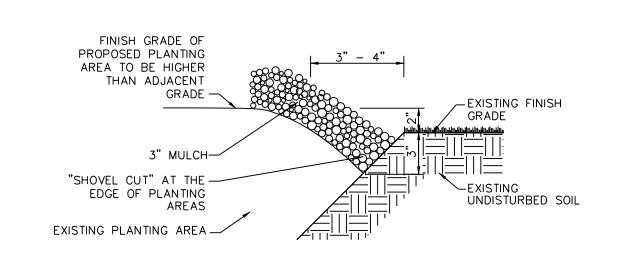
FOUNDATION DRAIN DETAIL

NO SCALE

PLANTING AREA — -SHOVEL CUT EDGE SIDEWALK OR DRIVEWAY

PLANTING BED AREA

TYPICAL PLANTING BED EDIGING DETAIL AT PAVING NO SCALE

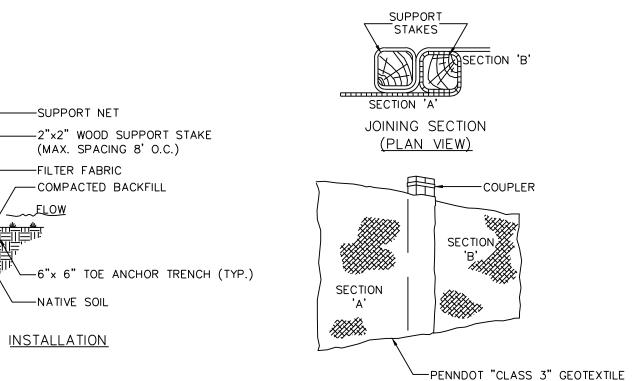


TYPICAL PLANTING BED EDGING DETAIL AT LAWN NO SCALE

NOTE: PROPOSED TURF AREA
TO MATCH GRADE OF
SURROUNDING TURF AREA

EROSION CONTROL NOTES

- 1. PERFORM ALL WORK IN ACCORDANCE WITH CHAPTER 102, EROSION CONTROL REGULATIONS.
- 2. INSTALL ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES PRIOR TO ANY DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAIN THEM UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- 3. PERMANENTLY SEED ALL EXPOSED AREAS IMMEDIATELY AFTER FINAL GRADING. MULCH AS NECESSARY UNTIL SEEDING IS
- 4. SPRINKLE OR APPLY DUST SUPPRESSOR OR OTHERWISE KEEP DUST WITHIN TOLERABLE LIMITS AT THE SITE.
- 5. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER INSPECTION AND UPKEEP, CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS ON SITE. THE PROPERTY OWNER WILL BE RESPONSIBLE FOR ALL PERMANENT EROSION CONTROLS ON SITE.
- 6. CLEAN SEDIMENTATION CONTROL DEVICES DURING CONSTRUCTION AS REQUIRED.
- 7. ALL SEDIMENT REMOVED FROM A DEVICE WILL BE DISPOSED OF BY THE CONTRACTOR.
- 8. THE CONTRACTOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL WASTE IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SE., 271.1 ET SEQ., AND 287.1 ET SEQ.
- 9. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED.
- 10. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BEST MANAGEMENT PRACTICES MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING AND REMULCHING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMP's FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP's OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- 11. DISTURBED AREAS SHALL BE CONSIDERED PERMANENTLY STABILIZED WHEN AREA HAS A COMPLETE AND UNIFORM 70 PERCENT VEGETATIVE COVER OR IS COVERED WITH AN ACCEPTABLE BEST MANAGEMENT PRACTICE (BMP) WHICH PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION. AFTER FINAL SITE HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF CONTROLS MUST BE STABILIZED IMMEDIATELY.
- 12. A COPY OF THIS PLAN SET MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
- 13. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.



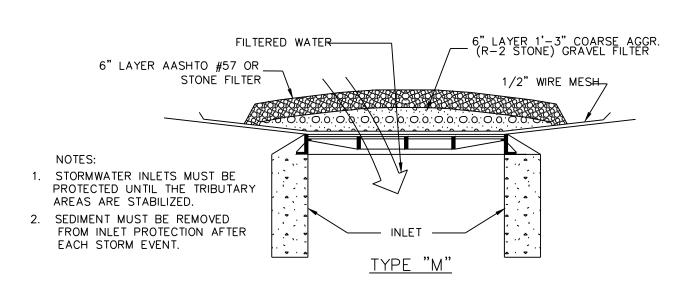
WITHOUT MESH SUPPORT 1. FREQUENT INSPECTION SHALL BE MADE ON THE FILTER FABRIC FENCE. DAMAGED FENCES SHALL BE IMMEDIATELY REPLACED. SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHTS OF FENCE. 2. SILT FENCE WHICH HAS BEEN TOPPED OR UNDERMINED IS TO BE REPLACED WITH A ROCK FILTER OUTLET.

3. FILTER FABRIC FENCE MUST BE INSTALLED AT LEVEL GRADE. BOTH ENDS OF EACH FENCE SECTION MUST EXTEND

FILTER FABRIC FENCE - 18" HGT.

AT LEAST 10 FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

NO SCALE



GRAVEL INLET PROTECTION

NO SCALE

CONCRETE TO EXTEND 3" BEYOND BRICK EDGE ----

2 5/8" BRICK PAVERS

(ASTM C270 TYPE M)

MORTOR EDGE SUPPORT

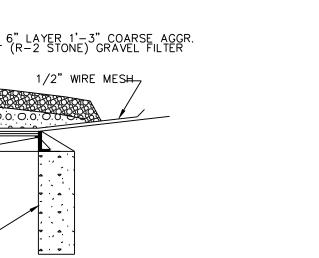
PREPARED SUBGRADE

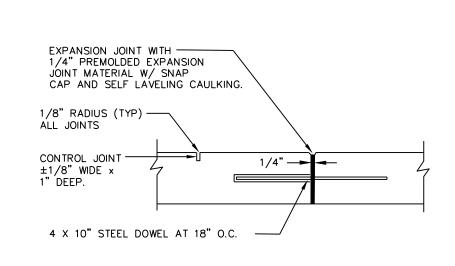
1/2" MORTER SETTING BED ----

LAWN, BITUMINOUS OR 1/4" -PREMOLDED EXPANSION

JOINT BETWEEN SIDEWALK

AND BUILDING OR WALL.





<u>JOINTS</u>

EXPANSION JOINT SPACING

EXPANSION AND CONTROL

JOINTS (5' MAX.)

Rev

System Rep:

Professional:

Consultant:

Authorized by:

PARKING SIGN

NO SCALE

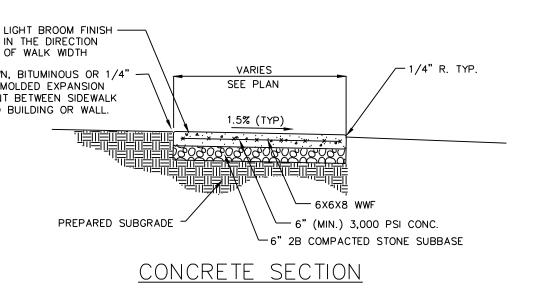


4" (MIN.) 3,000 PSI CONC.

 ackslash 6" 2B COMPACTED STONE SUBBASE

1.5% (TYP) BITUMINOUS PAVING

LAWN -



JOINT SPACING

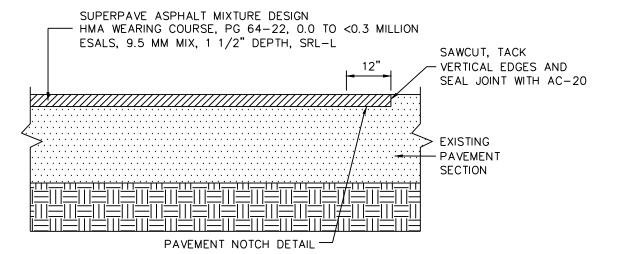
1. UTILIZE FIBER EXPANSION JOINT WITH SNAP CAP AND SELF LEVELING CAULKING (SIKAFLEX-ICLSL OR EQUAL) AT ALL EXPANSION JOINTS AND JUNCTION TO EXISTING WALKS. 2. INSTALL DOWELED JOINTS AT ALL INTERFACES WITH EXISTING CONCRTET. UTILIZE 3 X 18 SMOOTH 4. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PADOT PUB. 408.

SUPERPAVE ASPHALT MIXTURE DESIGN - HMA WEARING COURSE, PG 64-22, 0.0 TO <0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L SUPERPAVE ASPHALT MIXTURE DESIGN HMA BASE COURSE, PG 64-22, 0.0 TO <0.3 MILLION ESALS, 25 MM MIX, 2 1/2" DEPTH, SRL-L SAWCUT & TACK VERTICAL -EDGES AND SEAL JOINT 6" COMPACTED 2A STONE WITH PG 64-22

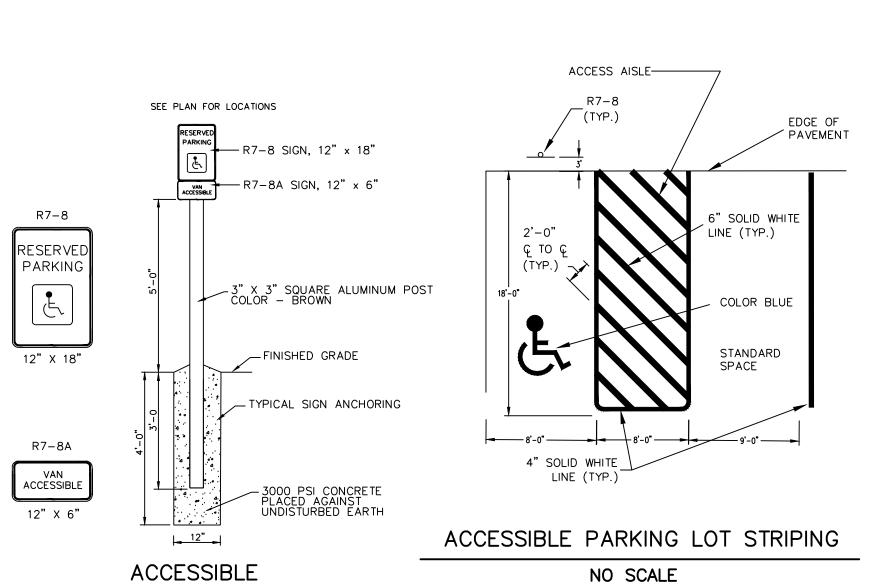
PAVING NOTES

1. PROVIDE MATERIALS AND CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE REQUIREMENTS OF PADOT PUBLICATION 408, LATEST EDITION, FOR SUBGRADE, AGGREGATE, AND FLEXIBLE PAVEMENT.

BITUMINOUS FULL DEPTH PAVING SECTION NO SCALE



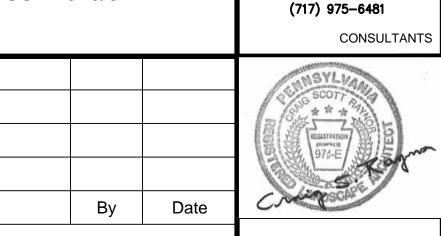
BITUMINOUS OVERLAY SECTION NO SCALE







PROJECT NO. SU - 2010/6B



Rev	Description	C TO STATE OF THE PARTY OF THE	CAF		
	100% CONSTRUCTION DOC				
CO	MMONWEALTH OF PEN	Project 10116	Date 05/09		
STATE SYSTEM OF HIGHER EDUCATION				Drawn by CSR	Checke CSR
		4			

HARRISBURG, PENNSYLVANIA SITE DETAILS

rawing Number

C-1.2

Pennoni

PENNONI ASSOCIATES, INC.

1215 MANOR DRIVE, SUITE 100

MECHANICSBURG, PA 17055

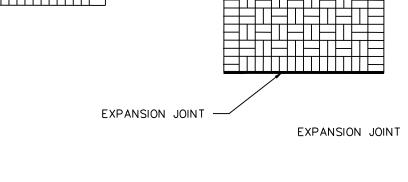
ANI-SH PEN

UTILITY NOTIFICATION LIST

PURSUANT TO THE REQUIREMENTS OF ACT 187 (1996), REFERRED TO AS THE UNDERGROUND UTILITY LINE PROTECTION LAW, WHICH AMENDED ACT 287 (1974) OF THE LEGISLATURE OF THE COMMONWEALTH OF PENNSYLVANIA, THE CONTRACTOR IS REQUIRED TO NOTIFY EACH UTILITY NAMED HERE, NOT LESS THAN THREE (3) NOR MORE THAN (10) WORKING DAYS PRIOR TO BEGINNING WORK. (800) 242-1776 SERIAL NUMBER 2014700250 DATE: 03-11-2014 CONTACT SHIPPENSBURG UNIVERSITY FACILITIES FOR PRIVATE UTILITY LOCATION.



EXPANSION JOINT



- EXPANSION JOINT

EXPANSION JOINT

EXPANSION JOINT

__ EXPANSION JOINT

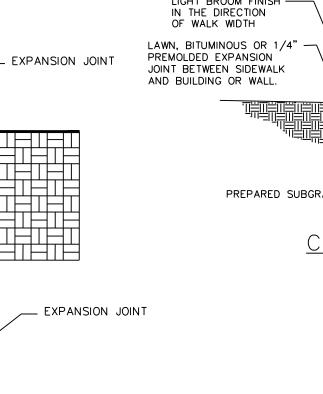
DECORATIVE WALKWAY PAVING PATTERNS NO SCALE

EXPANSION JOINT

EXPANSION JOINT

_ EXPANSION JOINT

EXPANSION JOINT

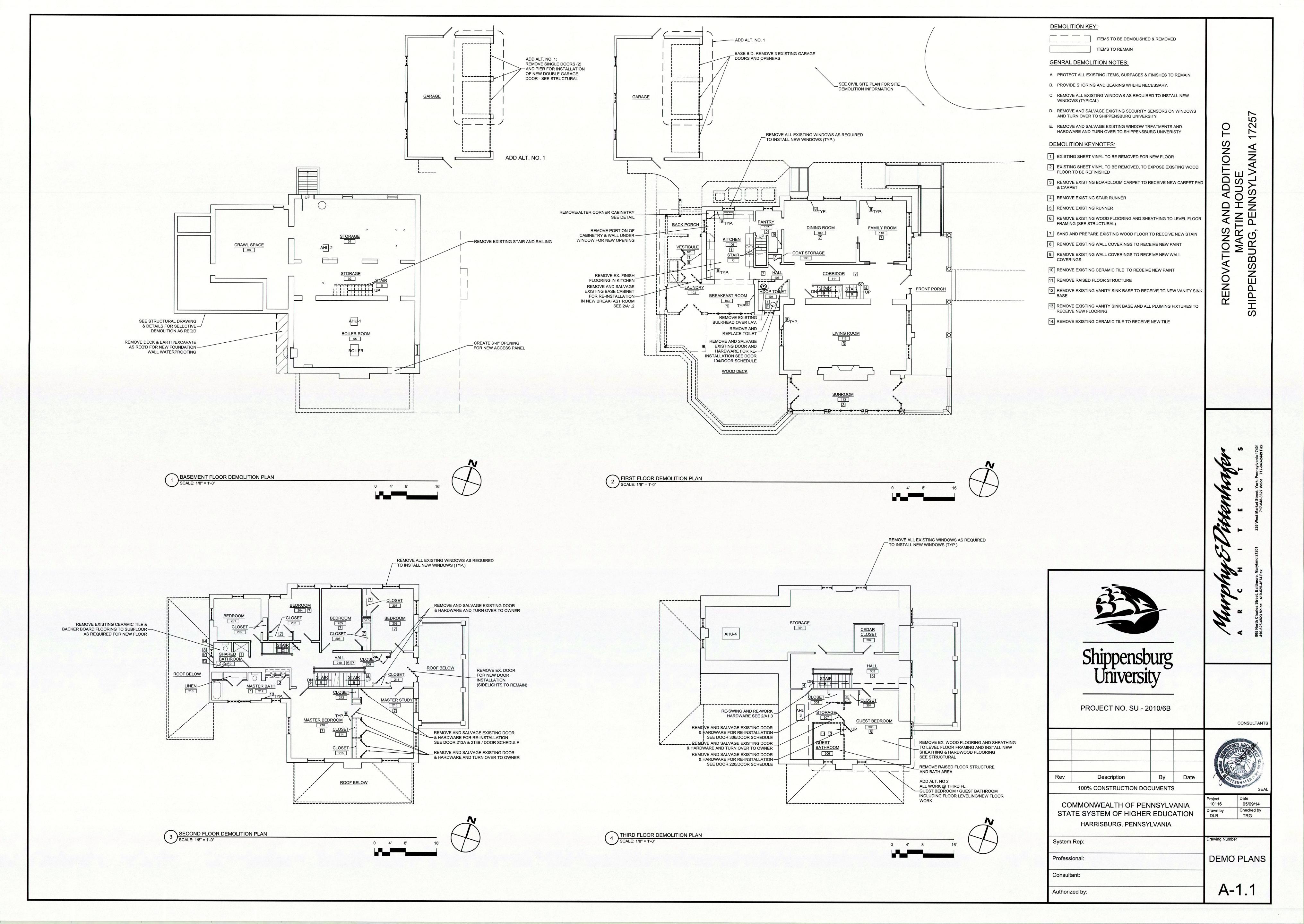


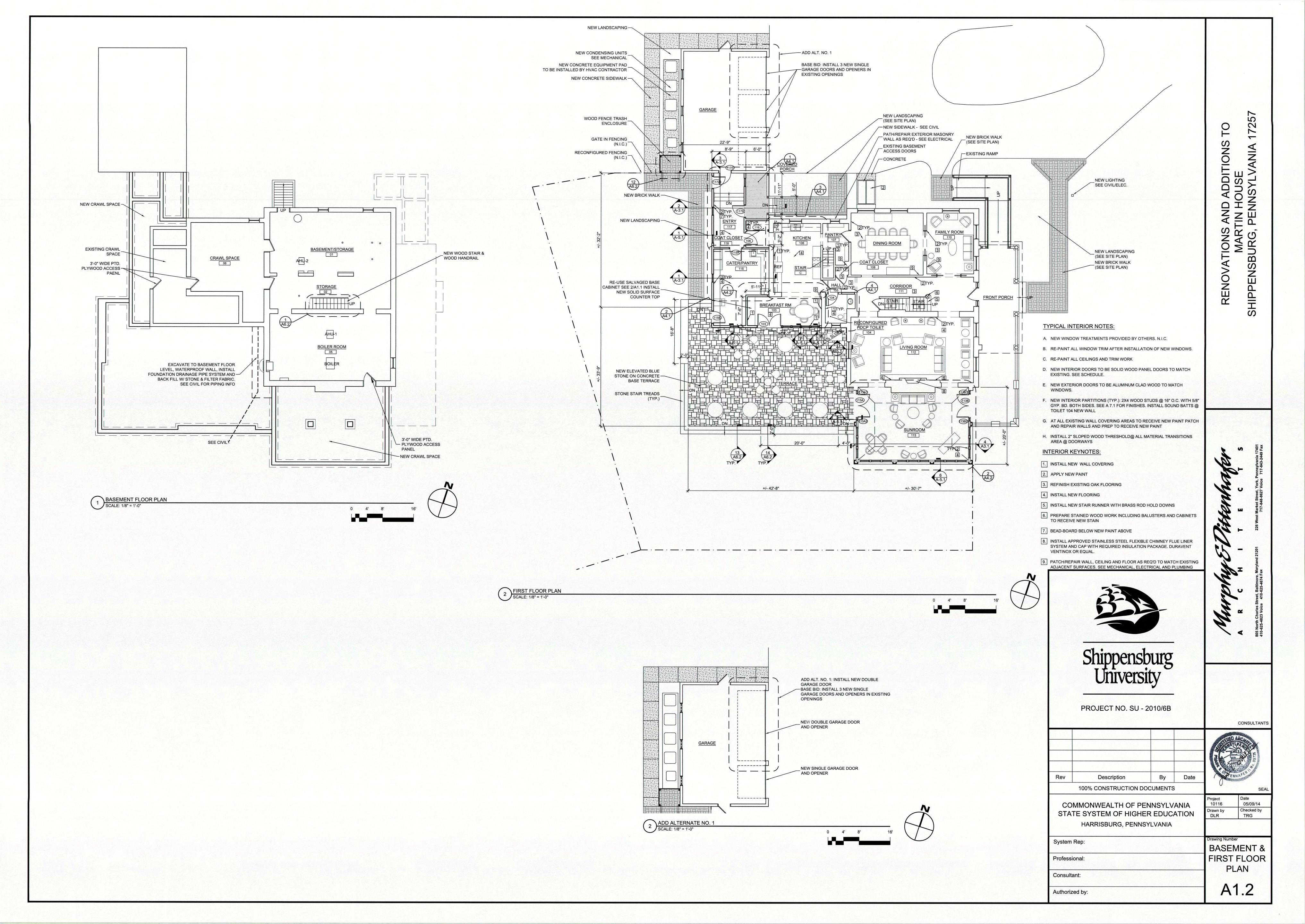
SIDEWALK CONSTRUCTION NOTES:

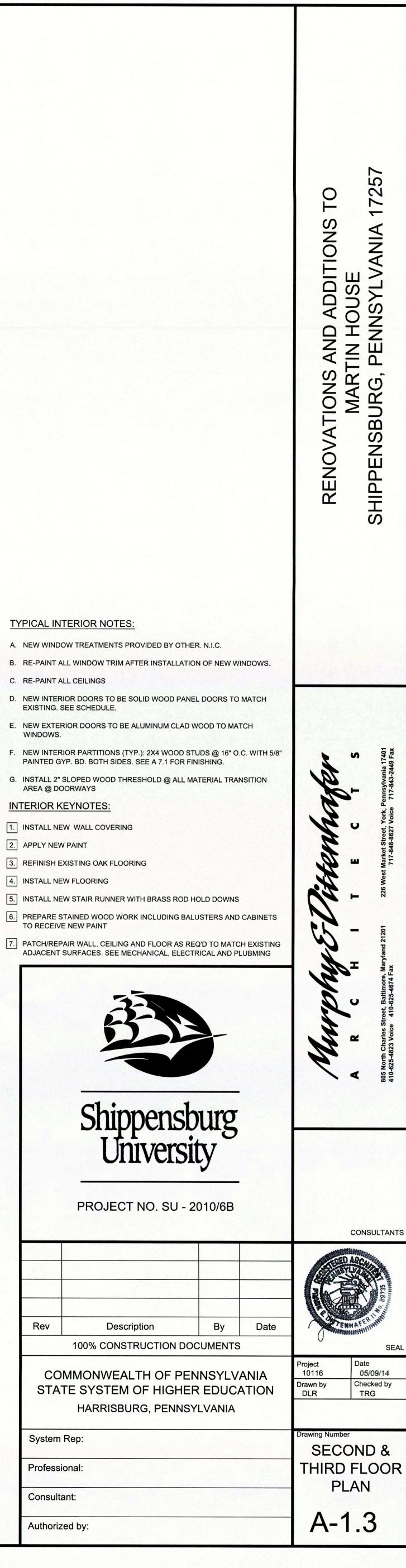
DOWELS @18" OC MAX. 3. IN LAWN AREAS, PROVIDE TOPSOIL TO TOP OF SIDEWALK AFTER FINAL GRADE AND COMPACTION. CONTRACTOR IS RESPONSIBLE FOR SETTLEMENT NEXT TO WALKS RESULTING IN GREATER THAN 1"

CONCRETE AND DECORATIVE SIDEWALK

NO SCALE







TYPICAL INTERIOR NOTES:

C. RE-PAINT ALL CEILINGS

AREA @ DOORWAYS

1. INSTALL NEW WALL COVERING

3. REFINISH EXISTING OAK FLOORING

INTERIOR KEYNOTES:

4. INSTALL NEW FLOORING

TO RECEIVE NEW PAINT

2. APPLY NEW PAINT

Rev

System Rep:

Professional:

Consultant:

Authorized by:

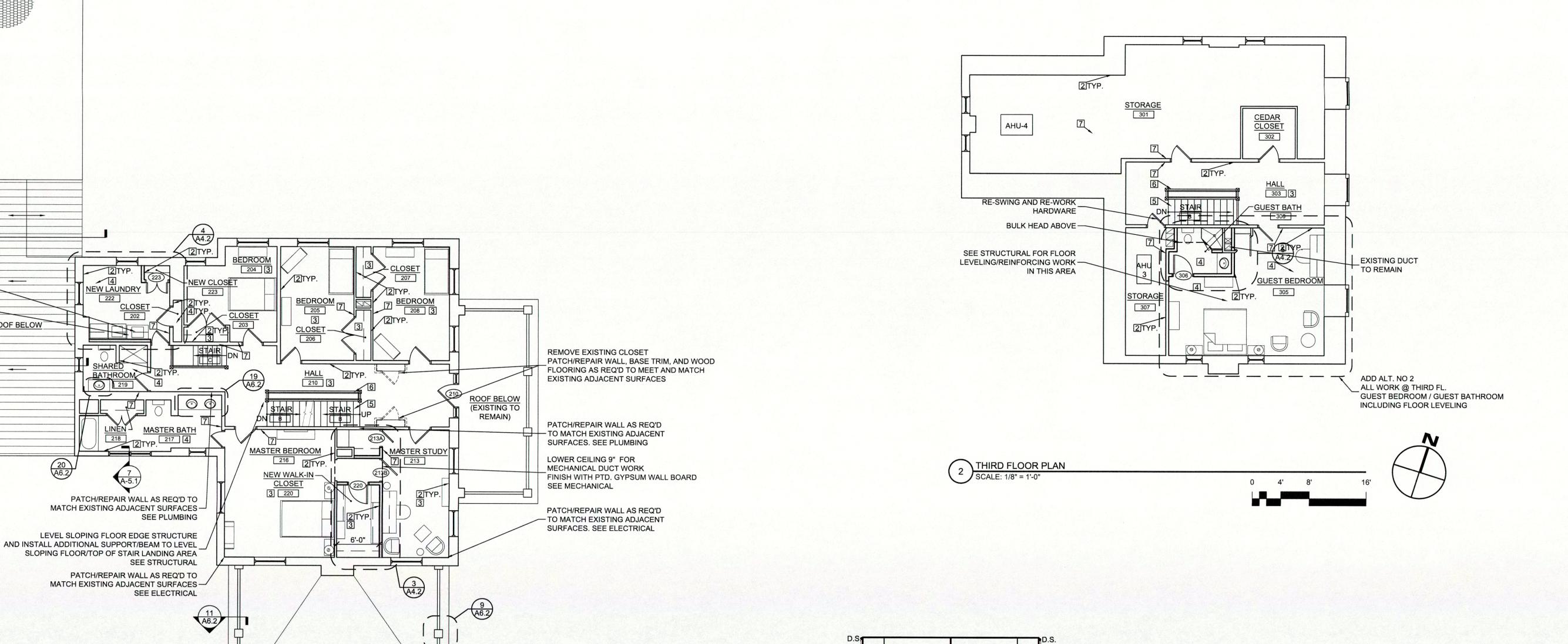
WINDOWS.

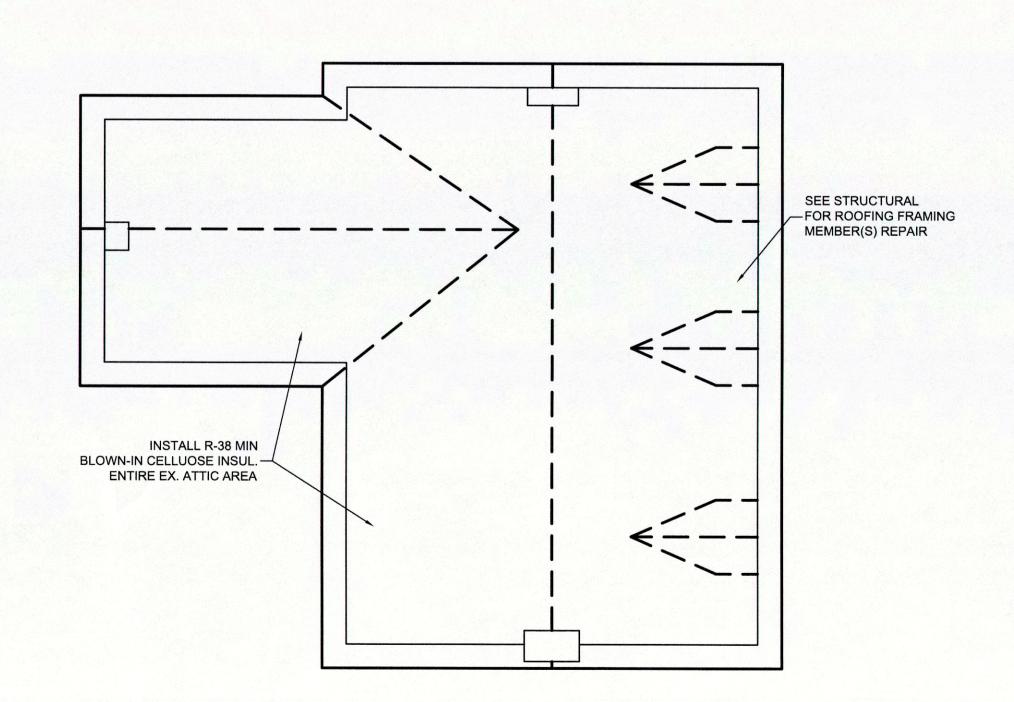
A. NEW WINDOW TREATMENTS PROVIDED BY OTHER. N.I.C.

PAINTED GYP. BD. BOTH SIDES. SEE A 7.1 FOR FINISHING.

PROJECT NO. SU - 2010/6B

Description



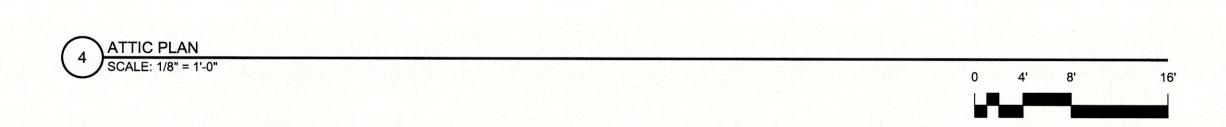


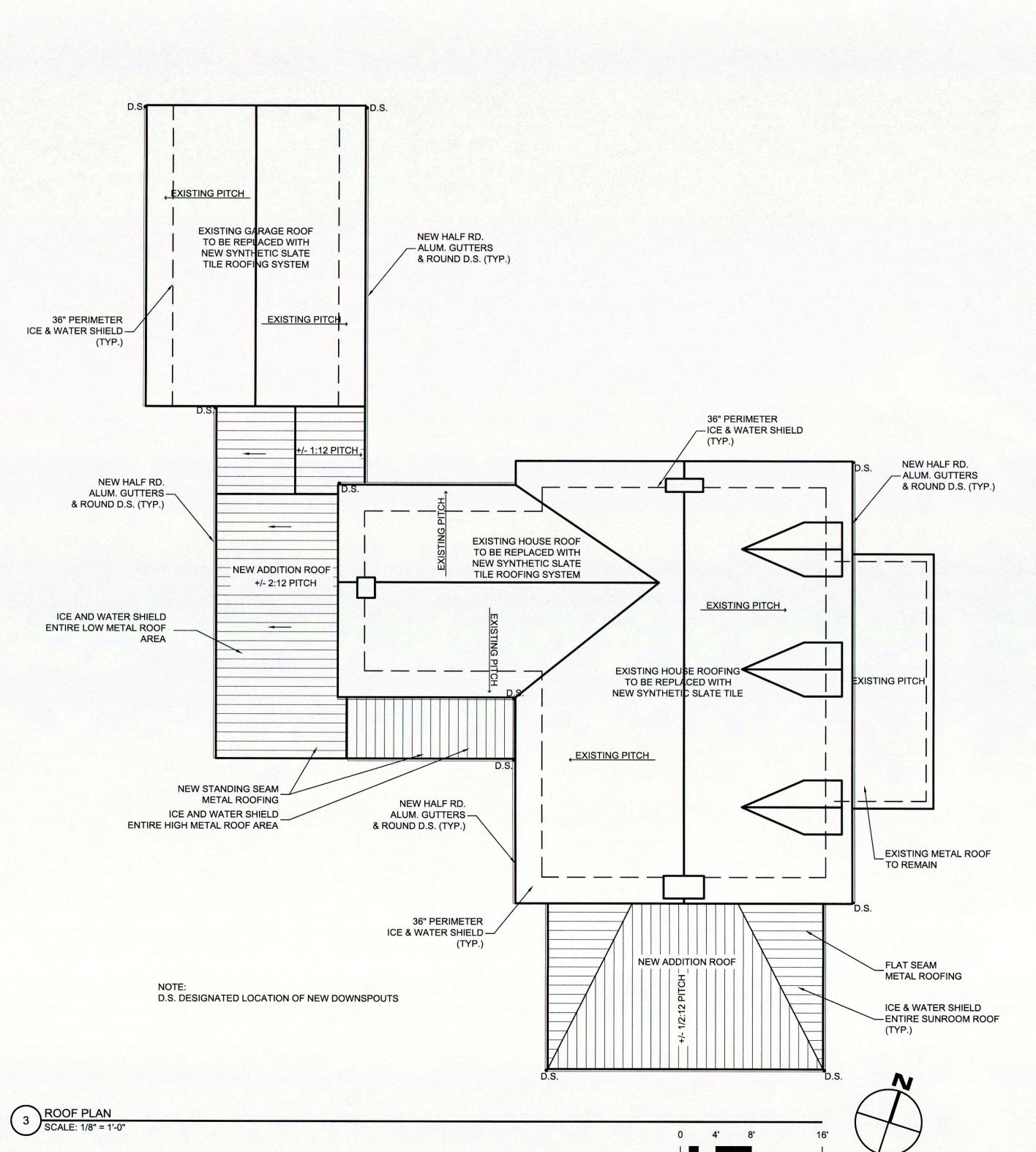
NEW LAUNDRY

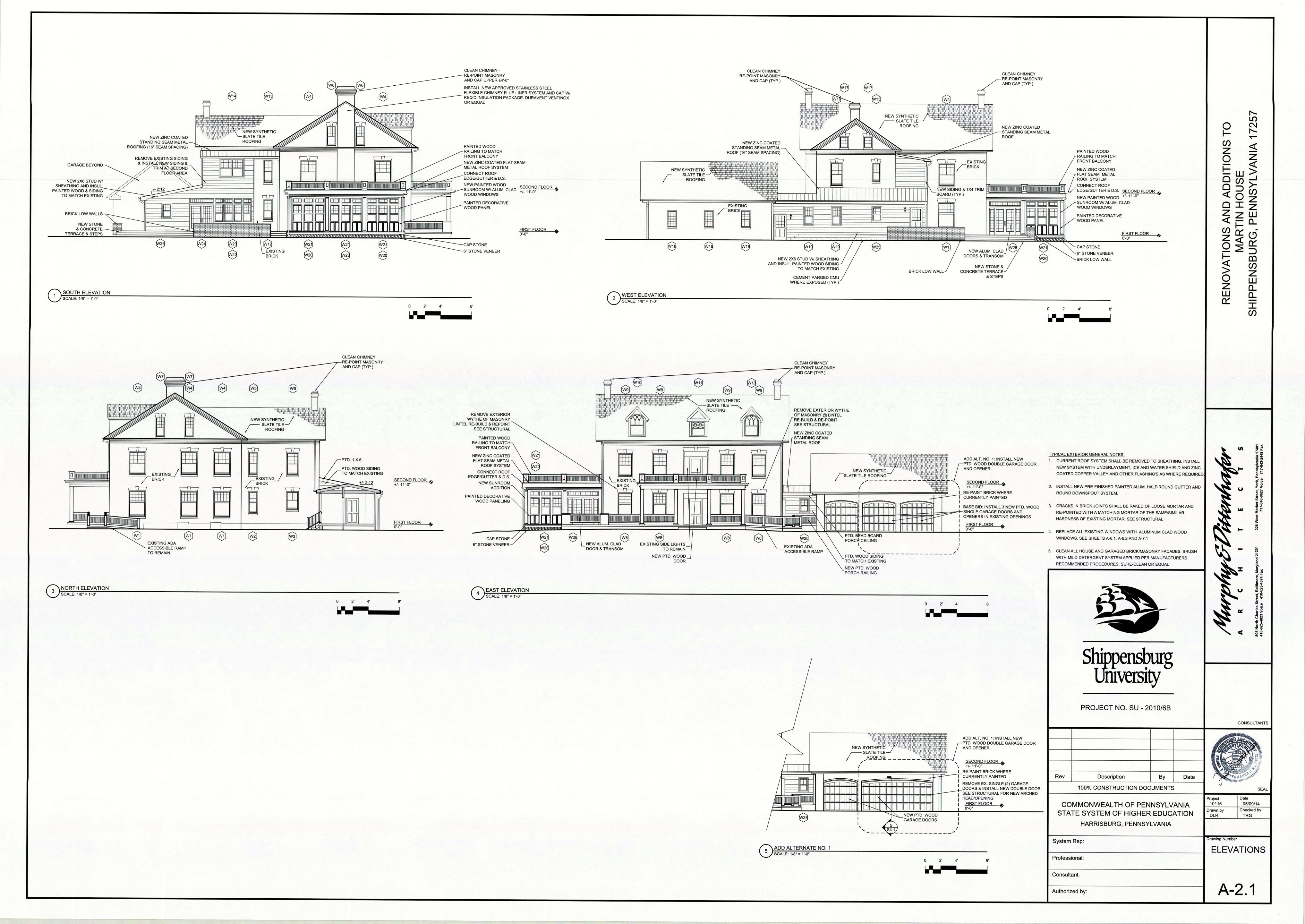
1 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

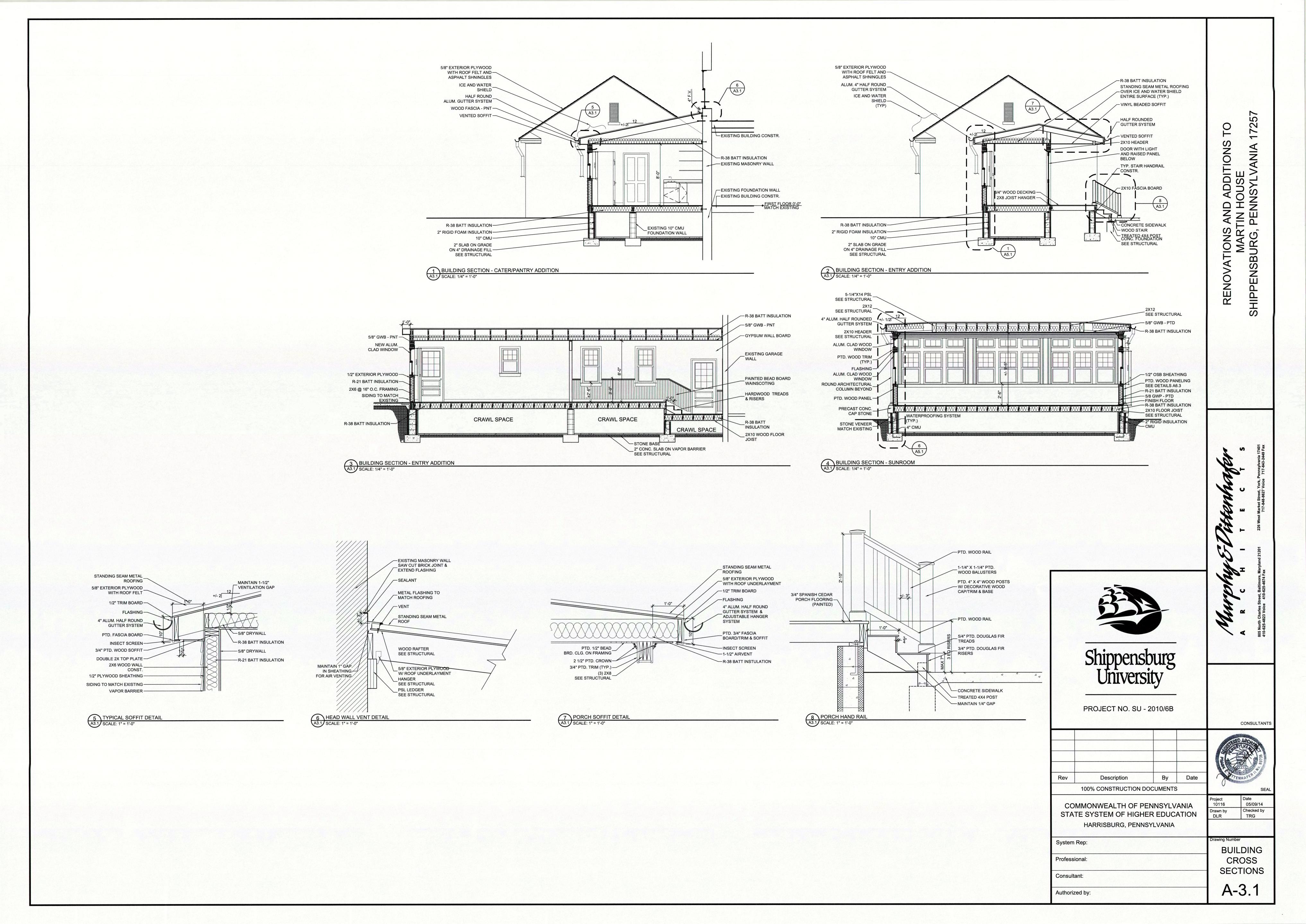
ROOF BELOW

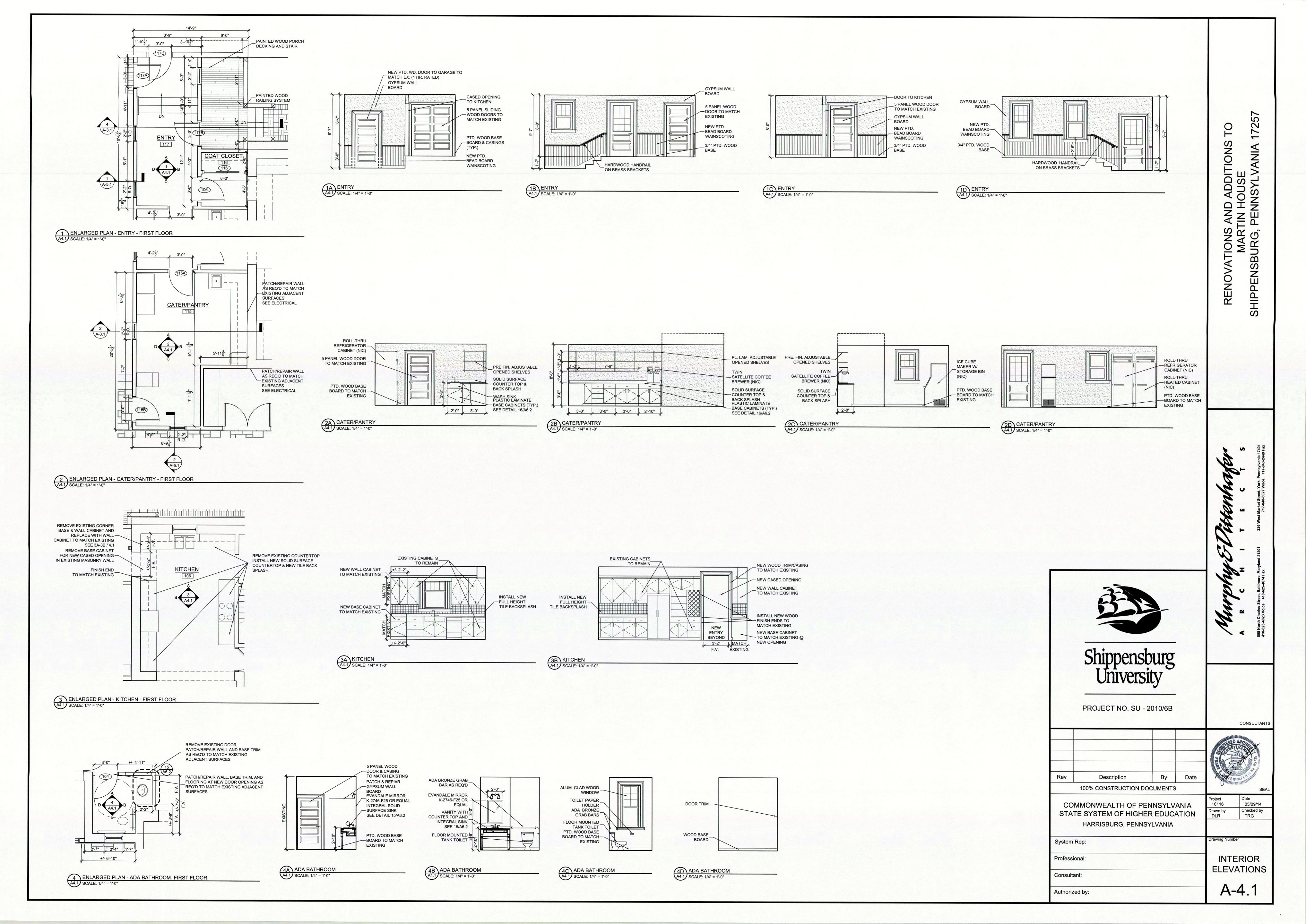
BASE CABINET WITH WALL CABINET ABOVE

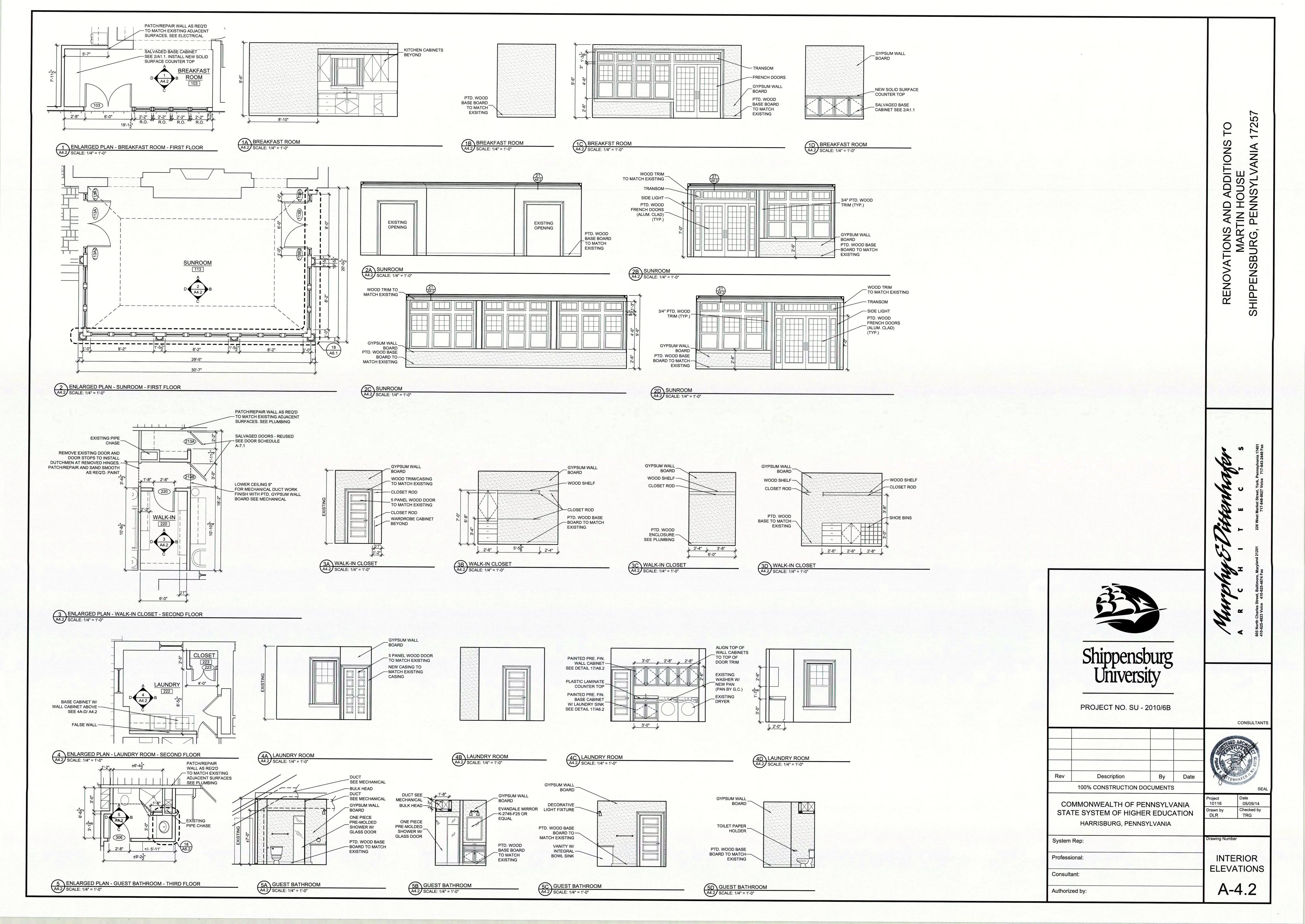


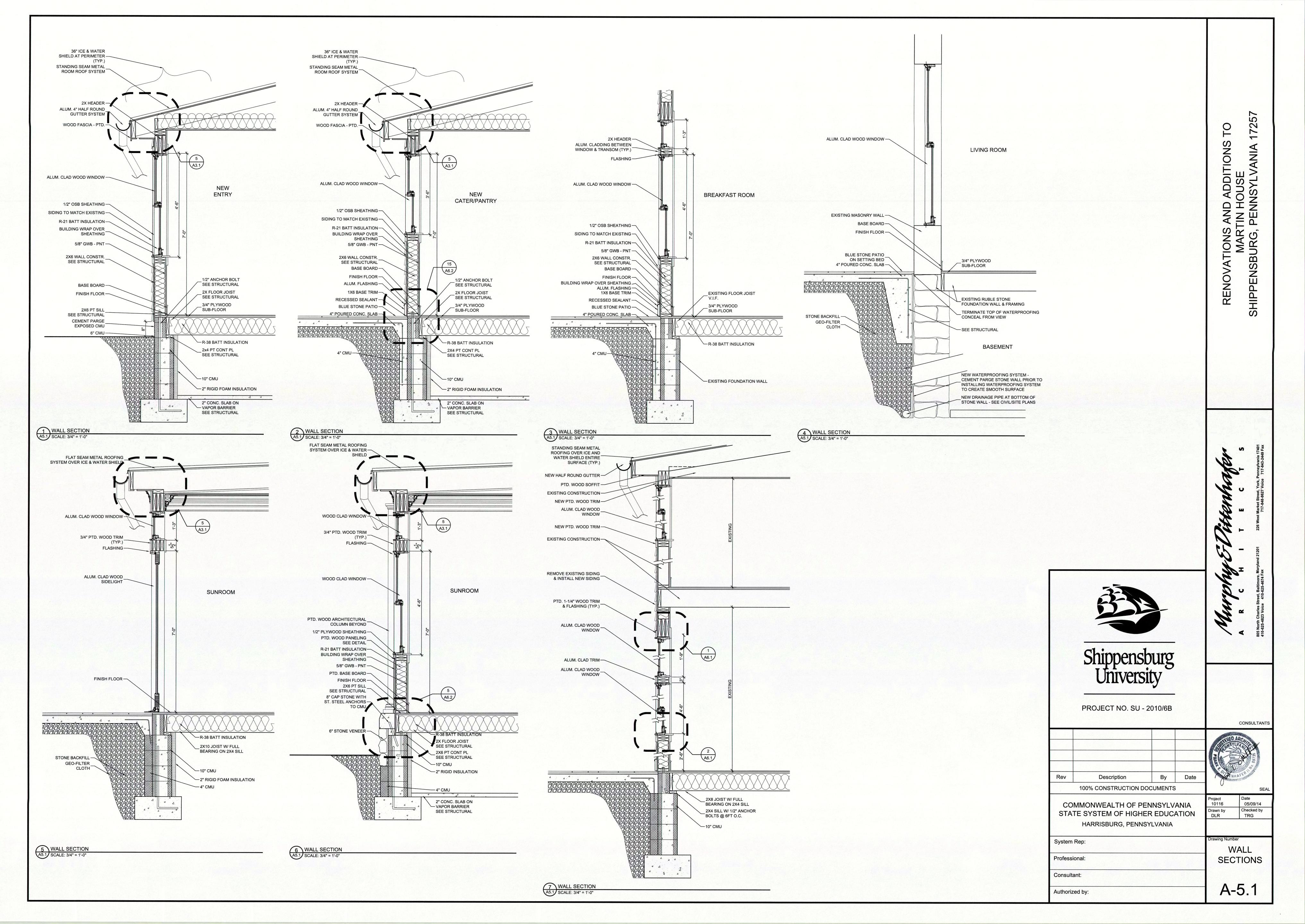


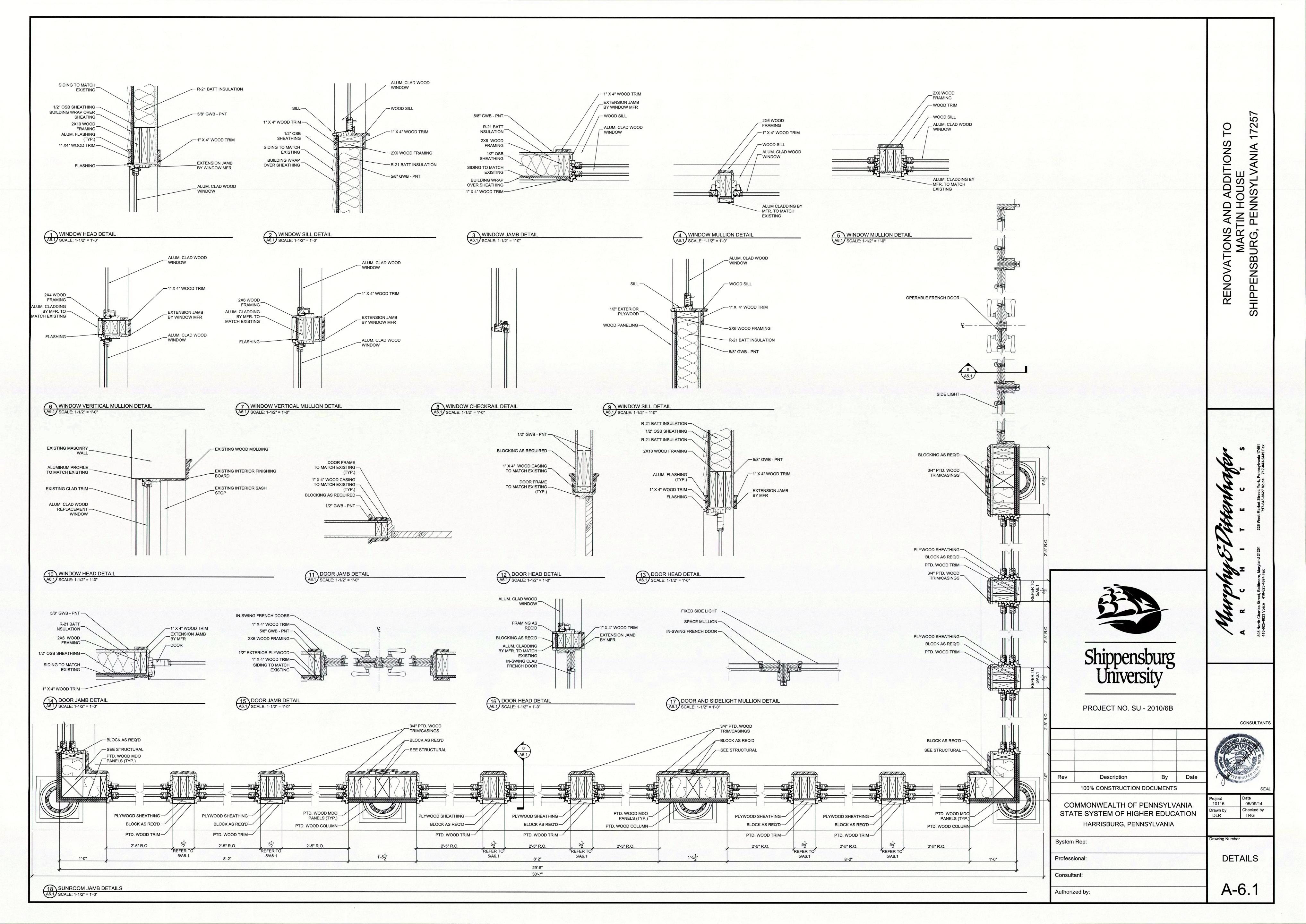


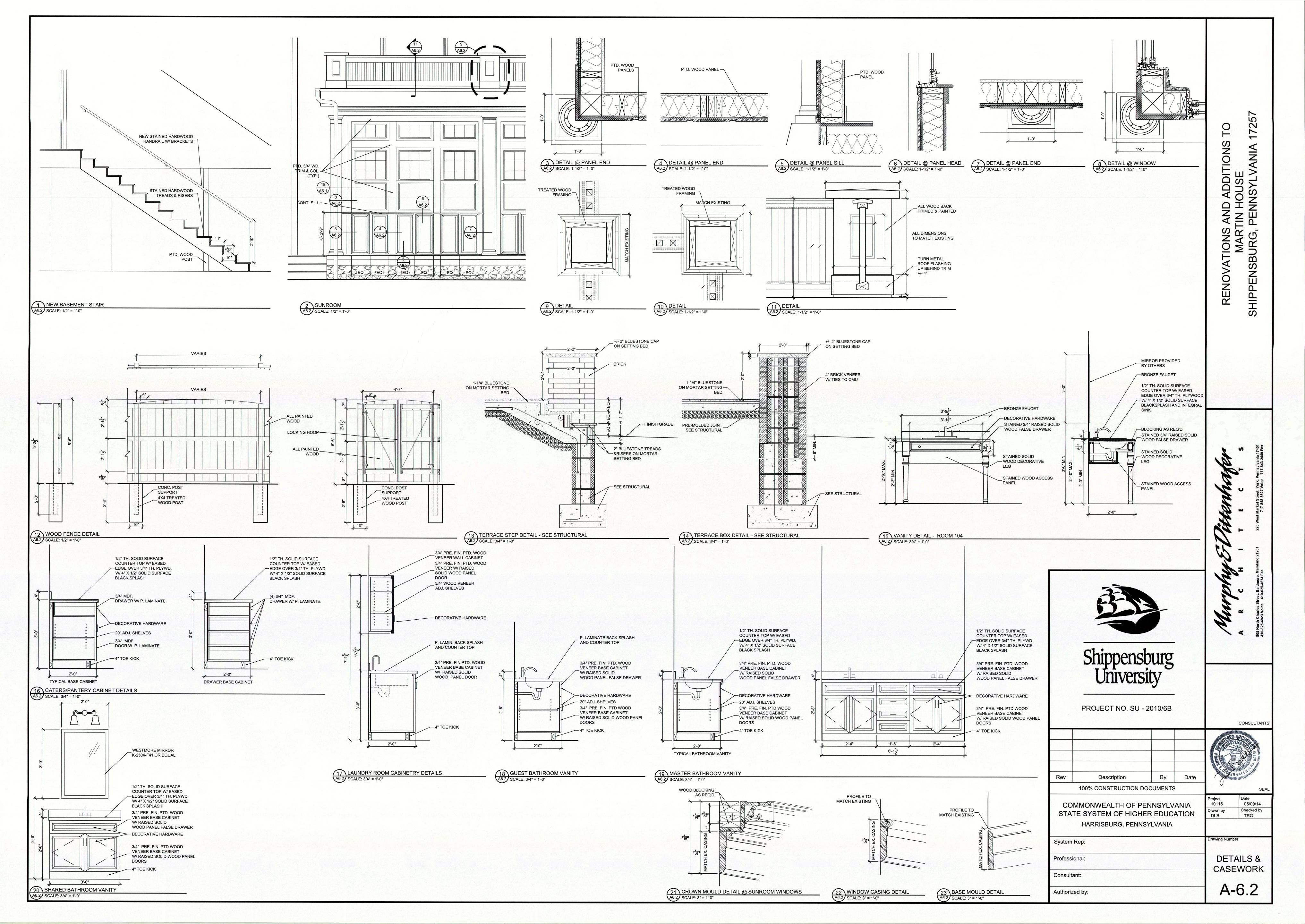


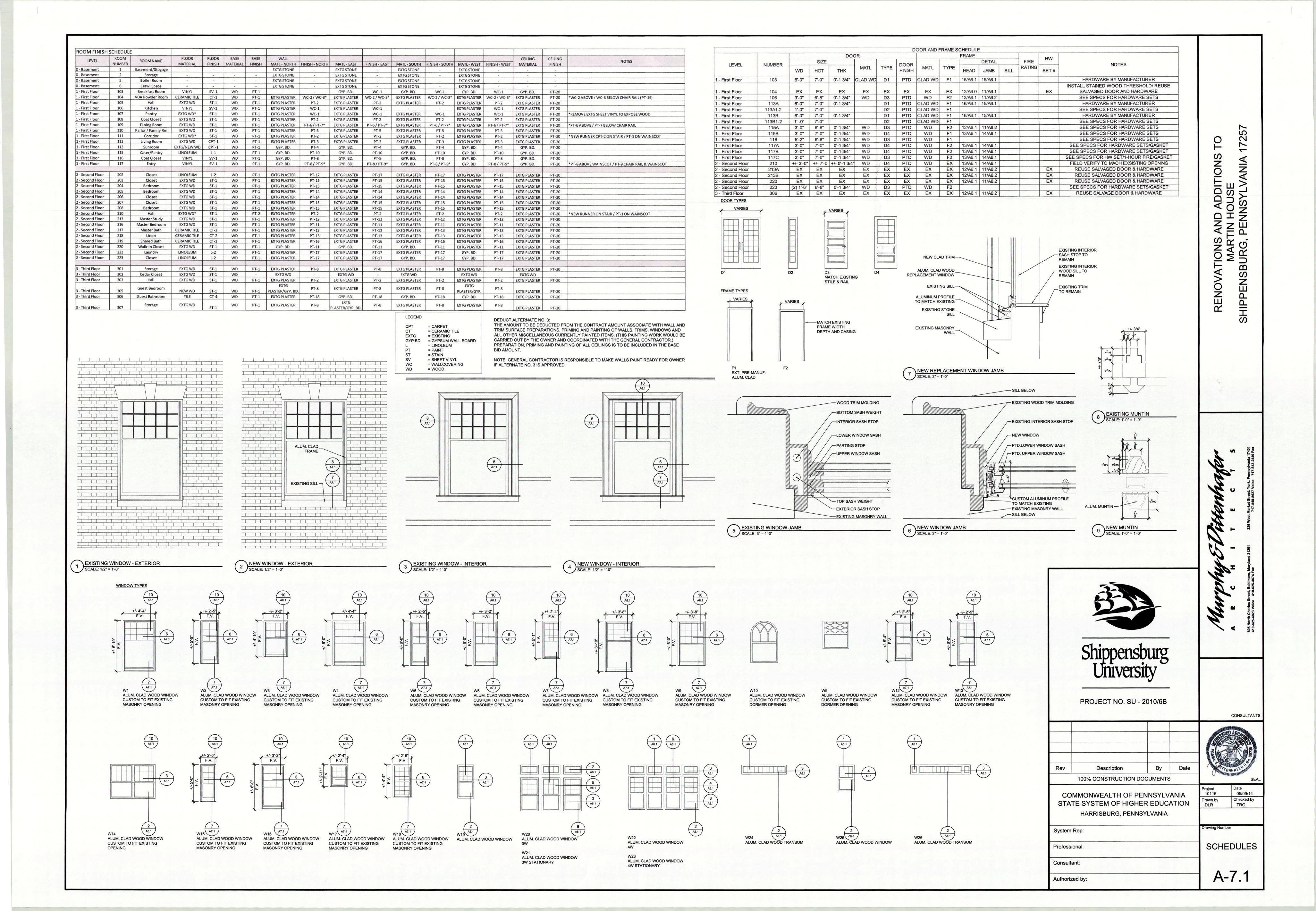












STRUCTURAL NOTES

<u>GENERAL</u>

- STRUCTURAL NOTES ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. FOR INCONSISTENCIES BETWEEN STRUCTURAL DRAWINGS, THE SPECIFICATIONS, AND ANY CODE OF STANDARD PRACTICE, THE STRICTER REQUIREMENT SHALL APPLY, AND THE ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE
- AFFECTED PORTION OF THE WORK. 2. STRUCTURAL CONSTRUCTION DOCUMENTS SHALL BE USED WITH OTHER CONSTRUCTION DOCUMENTS, INCLUDING ARCHITECTURAL, M/E/P, AND SITE DOCUMENTS. COORDINATE WITH THESE DOCUMENTS FOR LOCATIONS AND DIMENSIONS OF OPENINGS, CHASES, INSERTS, REGLETS, SLEEVES, DEPRESSIONS, ETC., NOT INDICATED ON THE STRUCTURAL DOCUMENTS. ALL DIMENSIONS AND CONDITIONS, EXISTING AND NEW, SHALL BE FIELD VERIFIED. THE ENGINEER SHALL BE NOTIFIED OF DISCREPANCIES PRIOR TO PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
- 3. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE STABILITY AND SAFETY DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF SHEETING, SHORING, TEMPORARY BRACING, GUYS, AND TIEDOWNS. THE CONTRACTOR SHALL PROVIDE SHORING AND BRACING NECESSARY TO PROTECT EXISTING AND ADJACENT STRUCTURES.
- 4. SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DOCUMENTS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS THAT DO NOT HAVE A SPECIFIC SECTION INDICATED, AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- 5. APPLICABLE FEDERAL, STATE AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OSHA. 6. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION
- LOAD IMPOSED ON THE STRUCTURE. CONSTRUCTION LOADS SHALL NOT EXCEED THE SPECIFIED DESIGN LIVE LOADS. CONCRETE SLABS AND TOPPINGS SHALL NOT BE LOADED UNTIL THE CONCRETE HAS REACHED AT LEAST 75% OF THE SPECIFIED DESIGN COMPRESSIVE STRENGTH.
- 7. THE CONTRACTOR'S CONSTRUCTION SEQUENCES SHALL ALLOW FOR THE EFFECTS OF THERMAL MOVEMENTS DURING THE CONSTRUCTION PERIOD, PRIOR TO THE BUILDING BEING ENCLOSED AND TEMPERATURE CONTROLLED. NEGATIVE EFFECTS OF SUCH THERMAL MOVEMENTS, SUCH AS MATERIAL CRACKING, FROST HEAVE, ETC., SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- DOCUMENTS, THE TRADE PRACTICES THAT ARE DEFINED IN ANY CODE OF STANDARD PRACTICE SHALL GOVERN. 9. DO NOT SCALE DRAWINGS TO DETERMINE DIMENSIONS, LOCATIONS, OR SIZES OF

8. IN THE ABSENCE OF SPECIFIC INSTRUCTIONS TO THE CONTRARY IN THE CONTRACT

- ANY ELEMENT. EXISTING CONDITIONS
- 1. EXISTING CONDITIONS INDICATED ARE OBTAINED FROM AVAILABLE SOURCES (EXISTING DRAWINGS, FIELD SURVEYS, ETC.) AND ARE NOT GUARANTEED TO BE TRUE AND EXACT. CONTRACTOR(S) SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO
- PROCEEDING WITH THE AFFECTED PORTION OF THE WORK. 2. SEE ARCHITECTURAL DRAWINGS FOR EXTENT OF DEMOLITION OF EXISTING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE DEMOLITION PROCEDURES AND SEQUENCE TO ENSURE STABILITY AND SAFETY DURING DEMOLITION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY SHORING AND BRACING NECESSARY TO SUPPORT AND PREVENT DAMAGE TO REMAINING CONSTRUCTION.

STRUCTURAL DESIGN CRITERIA

- 1. DESIGN LOADS ARE IN ACCORDANCE WITH THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) INCLUDING LOCAL CODES, WHERE APPLICABLE, AND THE FOLLOWING STANDARDS REFERENCED IN IBC 2009:
 - ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 530 - BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES ACI 530.1 - SPECIFICATIONS FOR MASONRY STRUCTURES AF&PA NDS - NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION ASCE 7 - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- 2. IBC BUILDING OCCUPANCY CATEGORY: 3. LIVE LOADS ARE AS FOLLOWS. LIVE LIJAD REDUCTIONS HAVE BEEN TAKEN
- WHERE APPLICABLE, UNO. ROOF LIVE LOAD 30 PSF ASSEMBLY AREAS 1*00* PSF RESIDENTIAL LIVING AREAS 40 PSF
- 30 PSF RESIDENTIAL SLEEPING AREAS 4. SNOW LOADING IS BASED ON THE FOLLOWING. DRIFTING OR SLIDING SNOW LOADS HAVE BEEN CONSIDERED WHERE APPROPRIATE. RAIN ON SNOW SURCHARGE N/A (Pa > 20 PSF) GROUND SNOW LOAD, Pq 30 PSF
- 21 PSF FLAT-ROOF SNOW LOAD, PF SNOW EXPOSURE FACTOR, Ce 1.0 SNOW THERMAL FACTOR, Ct 1.0 SNOW LOAD IMPORTANCE FACTOR, I 1.0 5. WIND LOADING IS BASED ON THE FOLLOWING:
 - BASIC WIND SPEED (3 SEC GUST) EXPOSURE CATEGORY IMPORTANCE FACTOR BUILDING CATEGORY: SIMPLE DIAPHRAGM, LOW-RISE, ENCLOSED, RIGID INTERNAL PRESSURE COEFF. ±0.18

+8.3, -51.5 PSF

- COMPONENTS & CLADDING +16.3, -18.1 PSF +16.2, -19.0 PSF WALL CORNERS ROOF ZONE 1 +8.3, -20.4 PSF ROOF ZONE +8.3, -34.2 PSF
- 6. LATERAL EARTH PRESSURES ON RETAINING AND BASEMENT WALLS ARE BASED ON THE FOLLOWING: [PRESUMPTIVE LOADING]: EQUIVALENT AT-REST FLUID PRESSURE (BASEMENT) 65 PCF EQUIVALENT ACTIVE FLUID PRESSURE (CANTILEVERED) 45 PCF EQUIVALENT PASSIVE FLUID PRESSURE 300 PCF 0.30 COEFFICIENT OF FRICTION

ROOF ZONE 3

TYPICAL DETAILS

- TYPICAL DETAILS APPLY AT ALL APPROPRIATE LOCATIONS.
- TYPICAL DETAILS ARE GENERALLY NOT CUT ON THE PLANS. 3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TYPICAL DETAIL APPLICATIONS.

- 1. FOUNDATIONS HAVE BEEN DESIGNED BASED UPON A PRESUMPTIVE BEARING
- CAPACITY. 2. SPREAD FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL HAVING A MINIMUM SAFE BEARING CAPACITY OF 2 KSF.
- 3. THE BOTTOMS OF EXTERIOR FOOTINGS SHALL BE 36 IN. MINIMUM BELOW FINISHED GRADE.
- 4. EDGES OF FOOTINGS SHALL NOT BE PLACED AT A GREATER THAN 1 (VERTICAL) TO 2 (HORIZ) SLOPE WITH RESPECT TO ANY ADJACENT FOOTING OR EXCAVATION. ADJACENT COLUMN FOOTINGS THAT ABUT SHALL BE SEPARATED BY A PAPER JOINT. . FOUNDATION CONCRETE SHALL BE NORMAL WEIGHT HAVING A MINIMUM 28
- DAY DESIGN COMPRESSIVE STRENGTH AS FOLLOWS: SPREAD FOOTINGS 3000 PSI WALLS & PIERS 4000 PSI SLAB-ON-GRADE (INTERIOR) 3500 PSI
- 7. PROVIDE AIR-ENTRAINMENT IN ALL CONCRETE EXPOSED TO FREEZE-THAW CONDITIONS DURING THE CONSTRUCTION PERIOD AND/OR IN THE COMPLETED STRUCTURE.
- 8. VERTICAL CRACK CONTROL AND/OR CONSTRUCTION JOINTS IN CONCRETE WALLS SHALL BE PROVIDED AT 30 FT. O/C MAX. CONSTRUCTION JOINTS SHALL BE PROVIDED AT 90 FT. O/C MAX.

FOUNDATION SUBGRADE PREPARATION REQUIREMENTS

SLAB-ON-GRADE (EXTERIOR) 4500 PSI, 0.45 W/C MAX.

- 1. A GEOTECHNICAL ENGINEER, LICENSED IN THE JURISDICTION WHERE THE PROJECT IS LOCATED, SHALL OBSERVE, REVIEW, AND APPROVE ALL WORK RELATED TO EXCAVATION, BACKFILL, COMPACTION, SUBGRADE AND SUBBASE PREPARATION, AND MATERIAL SELECTION.
- 2. THE BUILDING SITE SHALL BE STRIPPED OF ANY TOPSOIL, ORGANIC MATTER, VEGETATION FILL MATERIALS, AND OTHERWISE UNSUITABLE OR SOFT SUBGRADE MATERIALS. 3. UNSUITABLE MATERIALS SHALL BE EXCAVATED DOWN TO RESIDUAL SOIL ELEVATIONS. 4. SOIL BEARING ELEVATIONS SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR
- TO BACKFILLING EXCAVATIONS OR CONSTRUCTING FOUNDATIONS. 5. WHERE ROCK IS ENCOUNTERED WITHIN 2 FEET OF FOUNDATION BEARING ELEVATION (SUBGRADE SHALL BE PROBED TO DETERMINE THIS), UNDERCUT ROCK BY 2 FEET MIN.
- BELOW BEARING ELEVATION AND REPLACE WITH COMPACTED STRUCTURAL FILL 6. AT SLAB-ON-GRADE AREAS, FOLLOWING STRIPPING, THE SUBGRADES SHALL BE PROOFROLLED WITH A LOADED TANDEM AXLE DUMP TRUCK OR TEN-TON ROLLER UNDER OBSERVATION OF THE GEOTECHNICAL ENGINEER. AREAS WHICH EXHIBIT EXCESSIVE PUMPING OR WEAVING, AS DETERMINED BY THE GEOTECHNICAL ENGINEER, SHALL BE REMOVED AND REPLACED WITH NEW COMPACTED STRUCTURAL FILL.
- 7. COMPACTED FILL SHALL BE USED TO RAISE EXISTING GRADES TO THE PROPOSED NEW ELEVATION, WHERE REQUIRED.
- 8. UNDER-SLAB DRAINS, CONSISTING OF A 4-INCH WASHED GRAVEL OR CRUSHED STONE STONE DRAINAGE LAYER (CORRESPONDING TO PA DOT 2A), SHALL BE USED BENEATH THE CONCRETE SLAB-ON-GRADE.

CONCRETE REINFORCING

- . REINFORCED CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318. CONCRETE REINFORCING SHALL CONFORM TO THE FOLLOWING DESIGNATIONS: DEFORMED BARS ASTM A615, GRADE 60 ASTM A706 DEFORMED BARS (WELDABLE) WELDED WIRE FABRIC ASTM A185
- LAP DEFORMED BARS 40 DIA., UNO. PROVIDE CORNER AND L BARS AT CORNERS AND INTERSECTIONS. REINFORCING INDICATED AS CONTINUOUS SHALL BE LAPPED. HOOKS SHALL BE STANDARD HOOKS, UNO. LAP WELDED WIRE FABRIC SUCH THAT THE OVERLAP OF THE OUTERMOST CROSS-WIRES OF EACH ADJOINING SHEET IS NOT LESS THAN THE SPACING OF THE CROSS-WIRES PLUS TWO IN., UNO. PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE; SPLICE ONLY AS SHOWN OR APPROVED; STAGGER SPLICES WHERE POSSIBLE; USE TENSION SPLICE CLASS "B" UNO. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED REINFORCEMENT
- AND SHALL BE LAPPED WITH TENSION SPLICES. 4. CONCRETE PROTECTION FOR REINFORCEMENT: CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:
- CONCRETE EXPOSED TO EARTH OR WEATHER: NO. 6 THROUGH NO. 18 BARS: 2 IN. NO. 5 BAR AND SMALLER: 1-1/2 IN. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
- SLABS, WALLS, JOISTS: NO. 14 AND NO. 18 BARS 1-1/2 IN. NO. 11 BAR AND SMALLER: 3/4 IN. BEAMS, COLUMNS, PIERS: 1-1/2 IN.
- 5. REINFORGING FOR SLABS ON GRADE, WHERE NOT OTHERWISE SPECIFIED, SHALL BE AS FOLLOWS: REINFORCING BARS: SEE FOUNDATION AND TYPICAL DETAILS. AT SLAB

BLOCKOUT AND RE-ENTRANT CORNERS, PROVIDE 2#5 X 4'-0" DIAGONALS WIRE MESH: 6×6-W2.9 × W2.9 WWF. REINFORCING SHALL BE

- SUPPORTED AT MID-DEPTH OF SLAB. 6. WELDING, WELDING ELECTRODES AND FLUXES SHALL CONFORM TO AWS D1.4 "STRUCTURAL WELDING CODE - REINFORCED STEEL". ELECTRODES SHALL
- HAVE A MINIMUM TENSILE STRENGTH OF TO KSI. ASTM ATO6 BARS OR DBA'S SHALL BE USED IN ALL WELDED APPLICATIONS. 7. DETAILING OF CONCRETE REINFORCING AND ACCESSORIES SHALL CONFORM TO ACI DETAILING MANUAL SP-66, AND WITH ACI 315, MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.

DRILLED ANCHORS

- 1. EXPANSION ANCHORS SHALL BE (UNO): HILTI KWIK BOLT III, OR EQUIVALENT 3/4-INCH DIAMETER
- SUFFICIENT LENGTH TO PROVIDE 6-INCH MINIMUM EMBEDMENT 2. CHEMICAL ADHESIVE ANCHORS SHALL BE (UNO): HILTI RE-500 SYSTEM, OR EQUIVALENT
- SUFFICIENT LENGTH TO PROVIDE 7-INCH MINIMUM EMBEDMENT 3. GROUT CMU COURSES CONT AT ANCHORS FOR 8" MIN ABOVE & BELOW ANCHOR LINES. 4. ANCHORS IN EXTERIOR APPLICATIONS SHALL BE HOT-DIPPED GALV.

CONCRETE SLABS ON GRADE

- 1. GEOTECHNICAL ENGINEER SHALL OBSERVE AND APPROVE SUBGRADE BEFORE CONCRETE PLACEMENT.
- 2. DO NOT PLACE CONCRETE SLABS ON FROZEN GROUND. 3. CONTROL JOINTS ARE REQUIRED IN CONCRETE SLABS. REFER TO PLANS AND TYPICAL DETAILS FOR JOINT CONSTRUCTION AND LOCATIONS.
- 4. INSTALL (2) #4 x 5'-0" LONG BARS DIAGONALLY AT RE-ENTRANT CORNERS AND OPENINGS. 5. COORDINATE LOCATIONS AND DIMENSIONS OF RECESSED SLABS.

CONCRETE MASONRY

- 1. CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530 AND 530.1. 2. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MASONRY, F'M, SHALL BE 1500 PSI. (MIN NET AREA COMPRESSIVE STRENGTH OF UNIT = 1900 PSI.)
- 3. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90. 4. CONCRETE MASONRY REINFORCING SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60. DEFORMED BAR ANCHORS (DBA) SHALL CONFORM TO
- ASTM A496. DBA'S SHALL BE WELDED BY AUTOMATIC EQUIPMENT. 5. GROUT SHALL CONFORM TO THE PROPORTIONAL REQUIREMENTS OF ASTM C476. PROVIDE FINE AND COARSE GROUTS APPROPRIATE FOR SIZE OF VOID SPACE BEING FILLED. GROUT SHALL HAVE A MINIMUM SLUMP OF 8 INCHES PROVIDED BY
- SUFFICIENT WATER CONTENT. ADMIXTURES ARE NOT PERMITTED IN GROUT. 6. MORTAR SHALL CONFORM TO ASTM C270, TYPE M OR S, PCL OR MORTAR CEMENT USE OF MASONRY CEMENT IS NOT PERMITTED.
- 7. REINFORCED VOIDS, AND NON-REINFORCED VOIDS SPECIFIED TO BE GROUTED, IN CONCRETE MASONRY SHALL BE FILLED SOLID WITH GROUT IN 5 FT. MAXIMUM LIFTS STOP POURS 1-1/2 INCHES BELOW THE BED JOINT TO FORM A KEY AT POUR JOINTS. REINFORCING BARS SHALL BE FULLY ENCASED IN GROUT.
- 9. REINFORCING BARS SHALL BE TIED TO DOWELS AND HELD IN THE PROPER POSITION BY MECHANICAL BAR POSITIONERS DESIGNED FOR THAT PURPOSE.
- 10. REINFORCING SHALL NOT BE PLUNGED INTO WET GROUT. 11. LAP UNCOATED, DEFORMED BARS AS FOLLOWS:
 - BAR SIZE LAP LENGTH UP TO #4 22 INCHES 26 INCHES 40 INCHES 48 INCHES
- INCREASE SPECIFIED LAP LENGTHS 50% FOR EPOXY-COATED BARS. 12. CONCRETE MASONRY SHALL BE LAID IN RUNNING BOND, UNO. PILASTERS SHALL BE BONDED, UNO.
- 13. LOAD BEARING CMU SHALL HAVE FULL MORTAR BED JOINTS. 14. PROVIDE LADDER-TYPE, HORIZONTAL JOINT REINFORCEMENT AS FOLLOWS: TYPICAL: 16 IN C/C MAX, UNO.
- PROVIDE AT 8 IN. C/C. AT BELOW GRADE WALLS: AT PARAPETS: PROVIDE AT 8 IN. C/C.
- PROVIDE ADD'L REINF. NOT MORE THAN 8 AT WALL OPENINGS: IN. ABOVE AND BELOW OPENING. TERMINATE 2 FT. BEYOND OPENING.
- PROVIDE CONTINUITY AT INTERSECTIONS AND CORNERS USING PREFABRICATED T-SHAPED AND L-SHAPED UNITS, AND LAP ALL CONSECUTIVE SECTIONS OF TRUSS TYPE REINFORCING A MINIMUM OF 8".
- 15. PROVIDE VERTICAL CONTROL JOINTS IN WALLS AT 24 FT. O/C MAX, UNO. 16. ALL CMU WALLS SHALL BE DOWELED TO SUPPORTING SLABS WITH MINIMUM #4 @ 48 HOOKED DOWELS, UNO. ALL CMU WALLS SUPPORTED DIRECTLY ON STEEL MEMBERS SHALL BE ANCHORED WITH 1/2" DIAMETER x 4" STUDS AT 32" O/C, OR WITH #4 X 2'-0" DBA'S AT 48" O/C, UNO.
- 17. THE TOPS OF ALL NON-LOAD BEARING CMU WALLS SHALL BE BRACED ACCORDING TO SPECIFIC SECTIONS AND / OR TYPICAL DETAILS.

- 1. STRUCTURAL LUMBER SHALL CONFORM TO AF&PA'S NDS, "NATIONAL DESIGN
- SPECIFICATION FOR WOOD CONSTRUCTION." STRUCTURAL LUMBER SHALL BE NO. 2 S-P-F, VISUALLY GRADED, OR BETTER. 3. LAMINATED VENEER LUMBER (LVL) SHALL BE AS MANUFACTURED BY ILEVEL,
- OR EQUIVALENT. LYL'S SHALL NOT BE EXPOSED TO THE ENVIRONMENT IN THE COMPLETED STRUCTURE 4. PARALLEL STRAND LUMBER (PSL) SHALL BE AS MANUFACTURED BY ILEVEL, OR EQUIVALENT. PSL'S EXPOSED TO THE ENVIRONMENT SHALL BE
- WOLMANIZED. 5. PLYWOOD SHALL CONFORM TO APA'S "PANEL DESIGN SPECIFICATION", PDS-04, AND DOC'S PS 1, "CONSTRUCTION AND INDUSTRIAL PLYWOOD". ALL JOINTS SHALL BE STAGGERED. PANELS SHALL BE INSTALLED WITH THE LONG DIMENSION ACROSS SUPPORTS. NAILING SHALL COMPLY WITH MINIMUM APA REQUIREMENTS
- FOR PLYWOOD FLOOR/ROOF DIAPHRAGMS, AND IBC FASTENING SCHEDULE. 6. PLYWOOD ROOF SHEATHING SHALL BE APA STRUCTURAL I RATED SHEATHING, EXPOSURE 1, THICKNESS AS INDICATED. PROVIDE PANEL CLIPS AT
- UNSUPPORTED EDGES. 7. PLYWOOD WALL SHEATHING SHALL BE APA RATED SHEATHING, TYPE CDX,
- EXPOSURE 1 8. ROOF SHEATHING SHALL BE INSTALLED ON MAIN ROOF MEMBERS PRIOR TO THE INSTALLATION OF OVERFRAMING MEMBERS.
- 9. PLYWOOD SUB-FLOORING SHALL BE APA RATED STURD-I-FLOOR, EXPOSURE 1 THICKNESS AS INDICATED, WITH TONGUE AND GROOVE EDGES. FIELD-GLUE USING ADHESIVES MEETING APA SPECIFICATION AFG-01.
- 10. CONNECTIONS SHALL BE MADE USING PREFABRICATED CONNECTORS. CONNECTOR SIZE AND CAPACITY SHALL MATCH MEMBER SIZE AND CAPACITY. TOE-NAILING IS NOT PERMITTED.
- 11. MINIMUM FASTENING SHALL CONFORM TO IBC TABLE 2304.9.1, "FASTENING SCHEDULE".
- 12. HEADERS AT NON LOAD BEARING CONDITIONS SHALL BE AS FOLLOW: 2X4 WALLS: OPENINGS UP TO 9'-0" (2) 2X8 + 1/2" PLYWOOD
- 2X6 WALLS OPENINGS UP TO 9'-0" (3) 2X8 + 1/2" PLYWOOD (2 LAYERS) 13. PROVIDE CONTINUOUS SOLID BLOCKING OR CROSS-BRIDGING LINES AT 8'-0" O/C MAX., ONE LINE MINIMUM. PROVIDE ADDITIONAL BRIDGING FOR
- MANUFACTURED WOOD PRODUCTS (JOISTS, TRUSSES, ETC.) AS SPECIFIED BY MANUFACTURER. 14. PRESSURE PRESERVATIVE TREATED LUMBER SHALL BE PROVIDED WHERE LUMBER IS IN CONTACT WITH CONCRETE OR MASONRY, OR EXPOSED TO THE WEATHER. 15. ALL FASTENERS AND PREFABRICATED CONNECTORS USED WITH PRESERVATIVE

TREATED WOOD SHALL HAVE A HOT-DIP GALVANIZING 6185 COATING

FASTENERS AND CONNECTORS) 16. PROVIDE A SUFFICIENT NUMBER OF STUDS TO ACHIEVE FULL BEARING WIDTH FOR ALL BEAMS, TRUSS GIRDERS, AND POINT LOADS. MULTIPLE STUDS SHALL

ACCORDING TO ASTM A153 AND A123. (TYPE A304 OR 306 STAINLESS STEEL

BE NAIL LAMINATED TOGETHER. 17. ANCHOR BOLTS SHALL BE SPACED AT 4'-0" c/c,UNO AND 4" TO 12" MAX FROM ENDS OF WALLS WITH 2 BOLTS PER SILL BOARD.

BAKER, INGRAM, & ASSOCIATES STRUCTURAL ENGINEERS 1547 Oregon Pike Lancaster, PA 17601 717.290.7400 Ph 717.290.7402 Fax mail@bakeringram.com Haddon Heights, New Jersey Centreville, Maryland PROJECT NO. L8154



Lancaster, Pennsylvania

Dover, Delaware

Newark, Delaware

PROJECT NO. SU - 2010/6B

			CONSULTANT
Description 100% CONSTRUCTION DOC	By	Date	PROFESSIONAL LAWRENCE R. BAKER, JR. ENGINEER No. 28702-E SEA
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COMMONWEALTH OF PENNSYLVANIA STATE SYSTEM OF HIGHER EDUCATION HARRISBURG. PENNSYLVANIA

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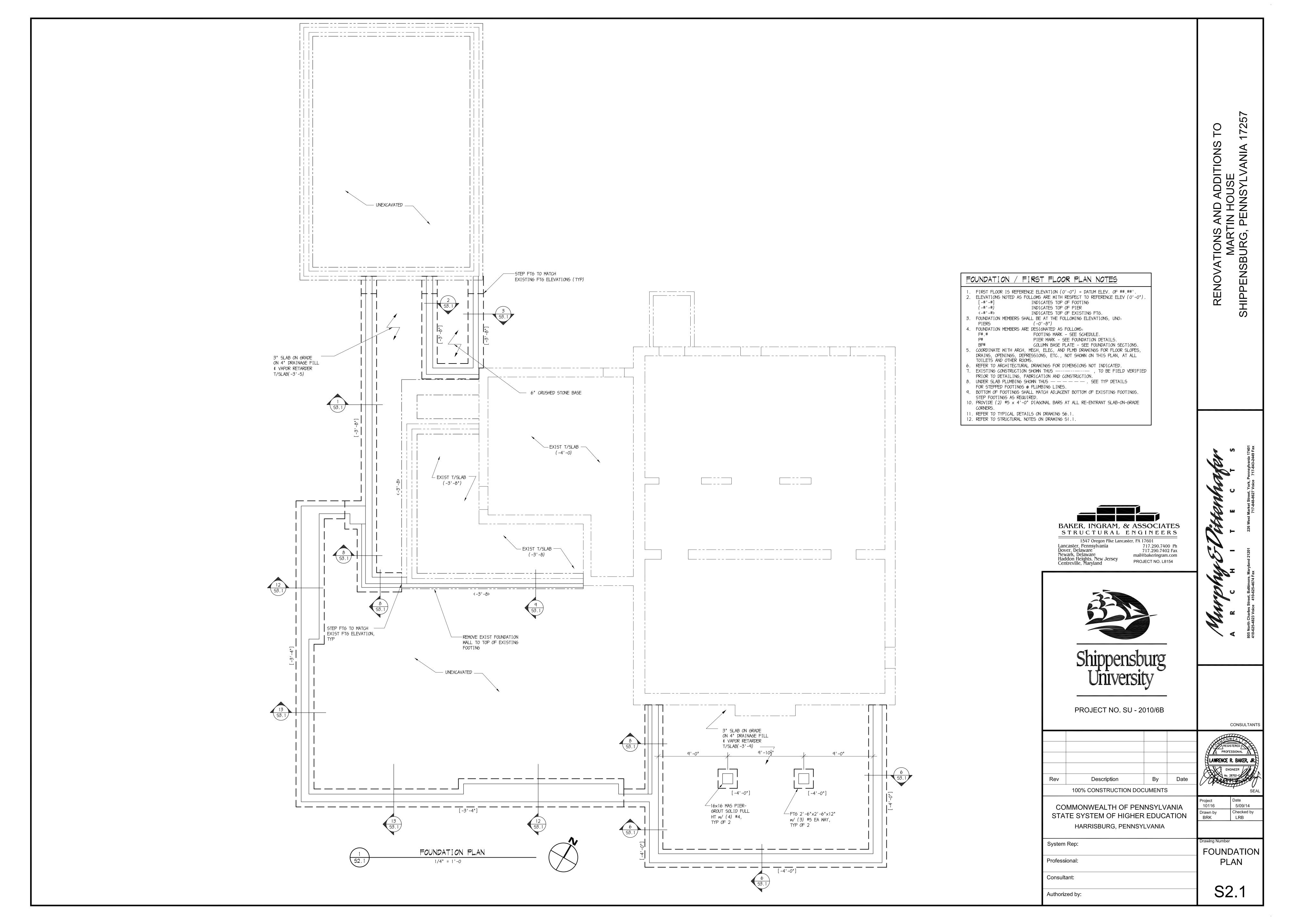
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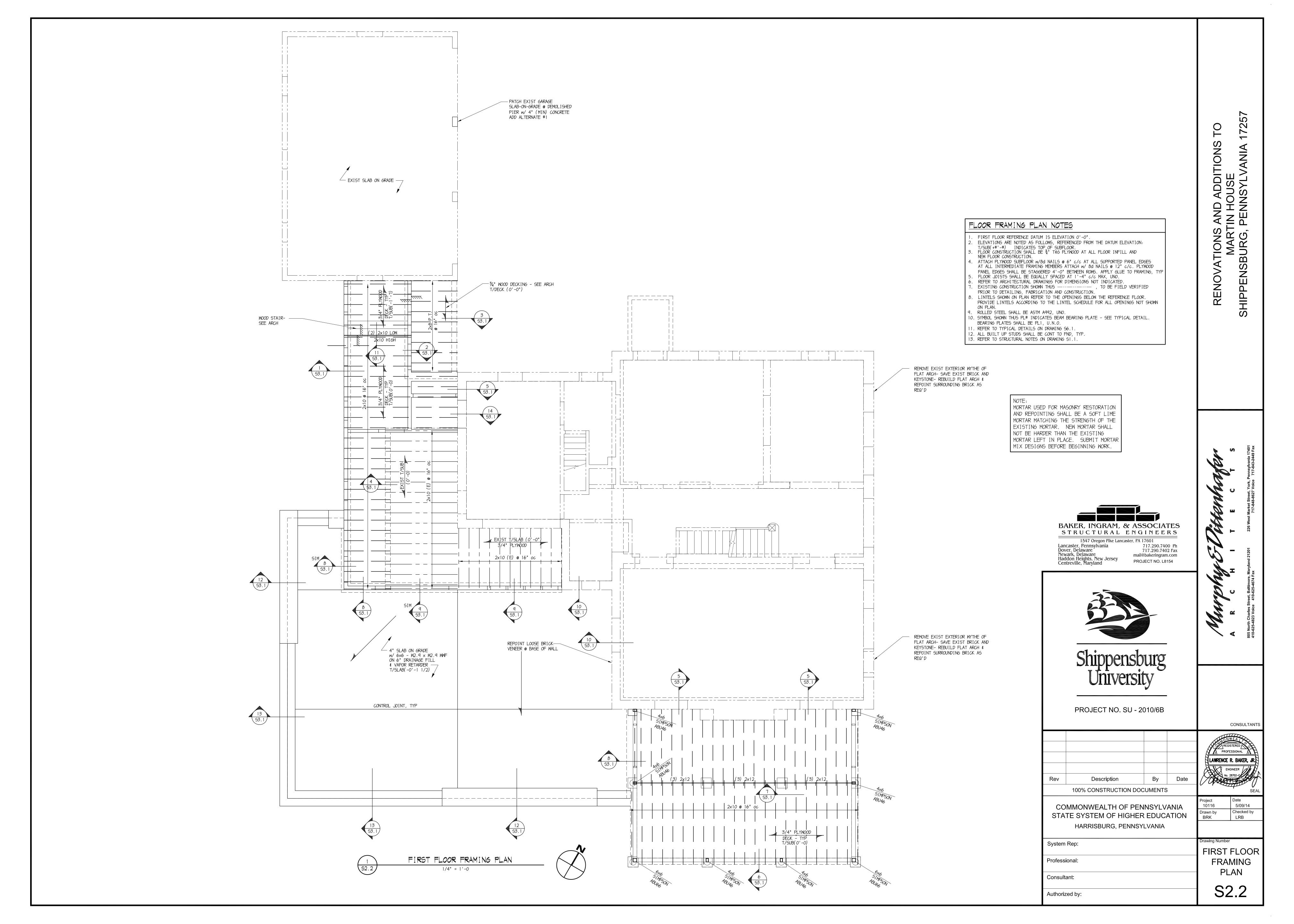
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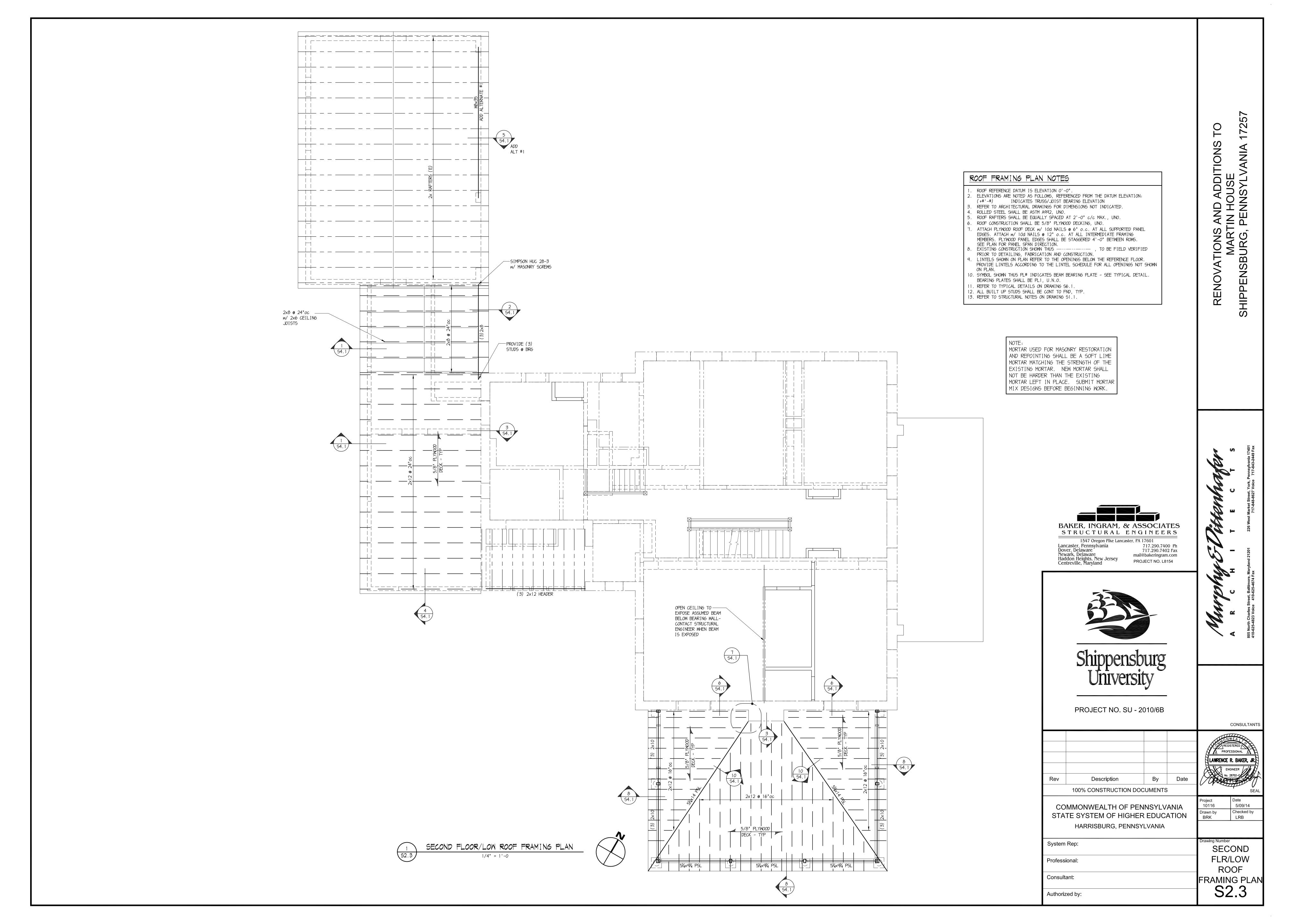
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STRUCTURAL

NOTES







PROJECT NO. SU - 2010/6B

CONSULTANTS PROFESSIONAL

5/09/14 Checked by LRB HARRISBURG, PENNSYLVANIA

System Rep: Professional: Consultant:

Authorized by:

______ NOTE: REPAIR ANY DAMAGED OR CRACKED EXISTING RAFTERS IN ACCORDANCE WITH SECTION 16/S6.1 CLEAN EXIST CHIMNEY & ---REPOINT ENTIRE CHIMNEY & CAPS _____ VIF EXIST STAIR STRINGER HAS DROPPED-CONNECT W/ SIMPSON U21*0*R ______ / ADD ALTERNATE #2 ______ REMOVE EXIST FLOOR \$ STOP 2x8 SISTERS @ FACE OF EXIST WALL BEAR 2x8 SISTERS ON-EXIST WALL- PROVIDE SHIMS AS REQ'D

THIRD FLOOR FRAMING PLAN

FLOOR FRAMING PLAN NOTES

CLEAN EXIST CHIMNEY &

_CLEAN EXIST CHIMNEY & REPOINT CHIMNEY & CAP ABOVE ROOF LINE

REPOINT ENTIRE CHIMNEY & CAPS

FIRST FLOOR REFERENCE DATUM IS ELEVATION 0'-0".

ELEVATIONS ARE NOTED AS FOLLOWS, REFERENCED FROM THE DATUM ELEVATION: T/SUB(+#'-#) INDICATES TOP_OF SUBFLOOR. FLOOR CONSTRUCTION SHALL BE 3" T&G PLYWOOD AT ALL FLOOR INFILL AND NEW FLOOR CONSTRUCTION.

ATTACH PLYWOOD SUBFLOOR w/8d NAILS @ 6" c/c AT ALL SUPPORTED PANEL EDGES AT ALL INTERMEDIATE FRAMING MEMBERS ATTACH w/ 8d NAILS @ 12" c/c. PLYWOOD PANEL EDGES SHALL BE STAGGERED 4'-0" BETWEEN ROWS. APPLY GLUE TO FRAMING, TYP FLOOR JOISTS SHALL BE EQUALLY SPACED AT 1'-4" c/c MAX, UNO. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT INDICATED.

EXISTING CONSTRUCTION SHOWN THUS ------, TO BE FIELD VERIFIED PRIOR TO DETAILING, FABRICATION AND CONSTRUCTION. LINTELS SHOWN ON PLAN REFER TO THE OPENINGS BELOW THE REFERENCE FLOOR. PROVIDE LINTELS ACCORDING TO THE LINTEL SCHEDULE FOR ALL OPENINGS NOT SHOWN

ON PLAN. ROLLED STEEL SHALL BE ASTM A992, UNO.). SYMBOL SHOWN THUS PL# INDICATES BEAM BEARING PLATE - SEE TYPICAL DETAIL.

BEARING PLATES SHALL BE PL1, U.N.O. . REFER TO TYPICAL DETAILS ON DRAWING S6.1.

12. ALL BUILT UP STUDS SHALL BE CONT TO FND, TYP. 13. REFER TO STRUCTURAL NOTES ON DRAWING S1.1.

> MORTAR USED FOR MASONRY RESTORATION AND REPOINTING SHALL BE A SOFT LIME MORTAR MATCHING THE STRENGTH OF THE EXISTING MORTAR. NEW MORTAR SHALL NOT BE HARDER THAN THE EXISTING MORTAR LEFT IN PLACE. SUBMIT MORTAR MIX DESIGNS BEFORE BEGINNING WORK.

> > BAKER, INGRAM, & ASSOCIATES STRUCTURAL ENGINEERS 1547 Oregon Pike Lancaster, PA 17601 Lancaster, Pennsylvania Dover, Delaware Newark, Delaware Haddon Heights, New Jersey Centreville, Maryland 717.290.7400 Ph 717.290.7402 Fax

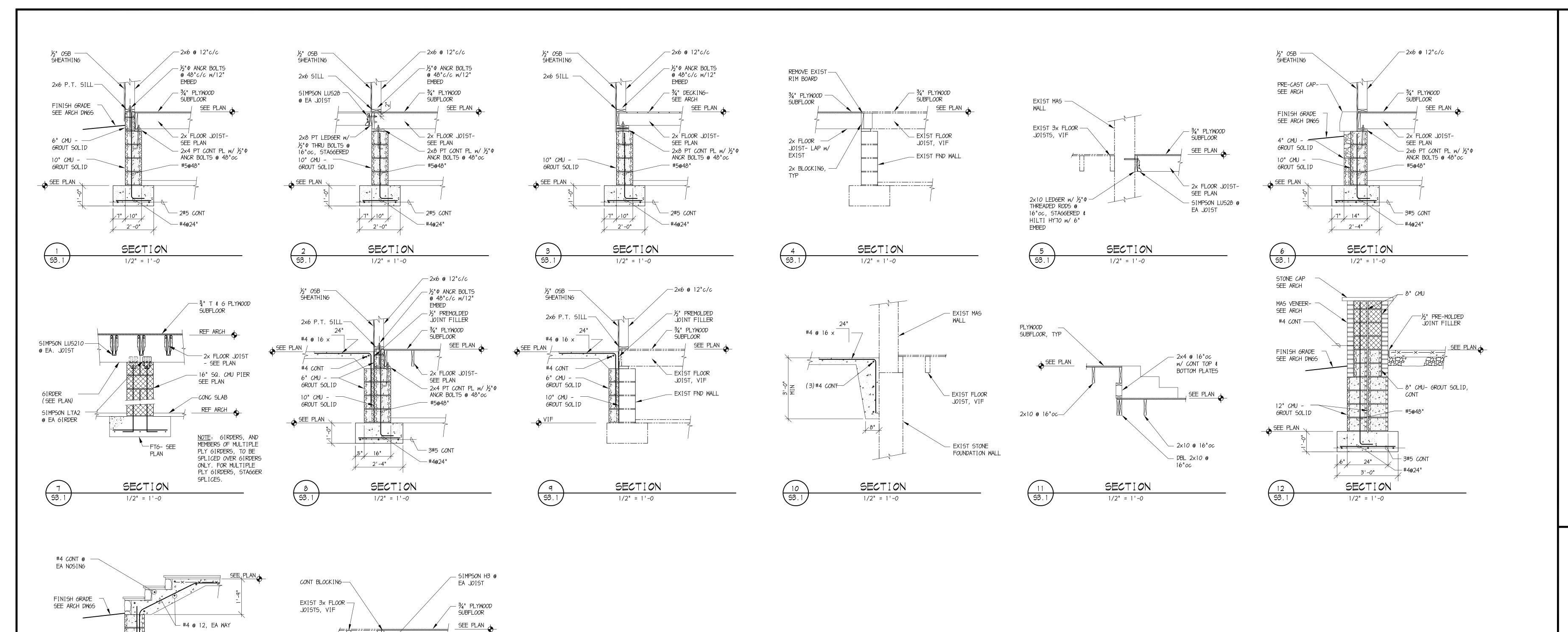
mail@bakeringram.com PROJECT NO. L8154



Rev Description 100% CONSTRUCTION DOCUMENTS COMMONWEALTH OF PENNSYLVANIA STATE SYSTEM OF HIGHER EDUCATION

> Drawing Number THIRD FLOOR

FRAMING PLAN



- 2x FLOOR JOIST-

- DEMO EXIST MAS

WALL @ OPENING

SEE PLAN

2x6 P.T CONT PLATE —

SECTION

1/2" = 1'-0

w/ ½" Ф THREADED

RODS @ 48"oc \$

HILTI HY70 W/ 6"

EMBED

14

53.1

12" CMU - — GROUT SOLID

1/2" = 1'-0



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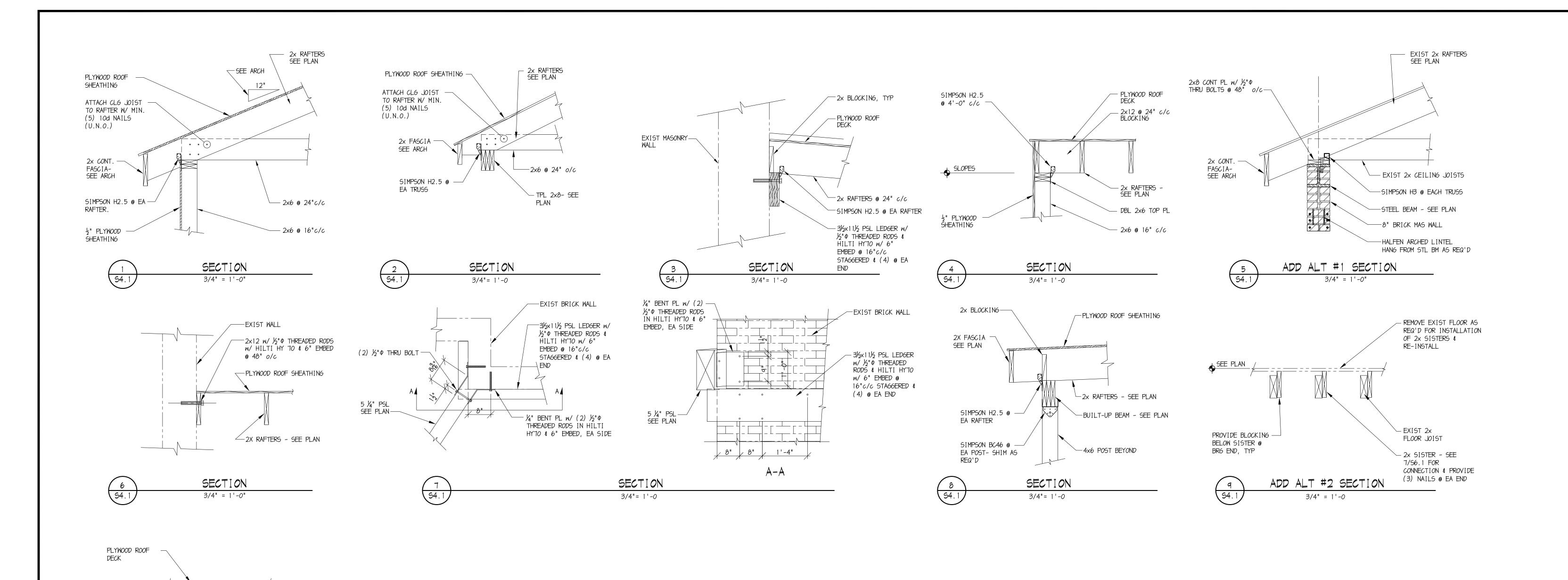
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STATE SYSTEM OF HIGHER EDUCATION				BRK	LRB	
	HARRISBURG, PENNSYLVANIA					

System Rep:

Authorized by:

FOUNDATION SECTIONS Professional: Consultant: S3.1



- SIMPSON HU210

@ EA RAFTER-SKEW AS REQ'D

SECTION 3/4" = 1'-0"

2X RAFTERS--SEE PLAN

51/4 PSL- -SEE PLAN



Shippensburg University

PROJECT NO. SU - 2010/6B

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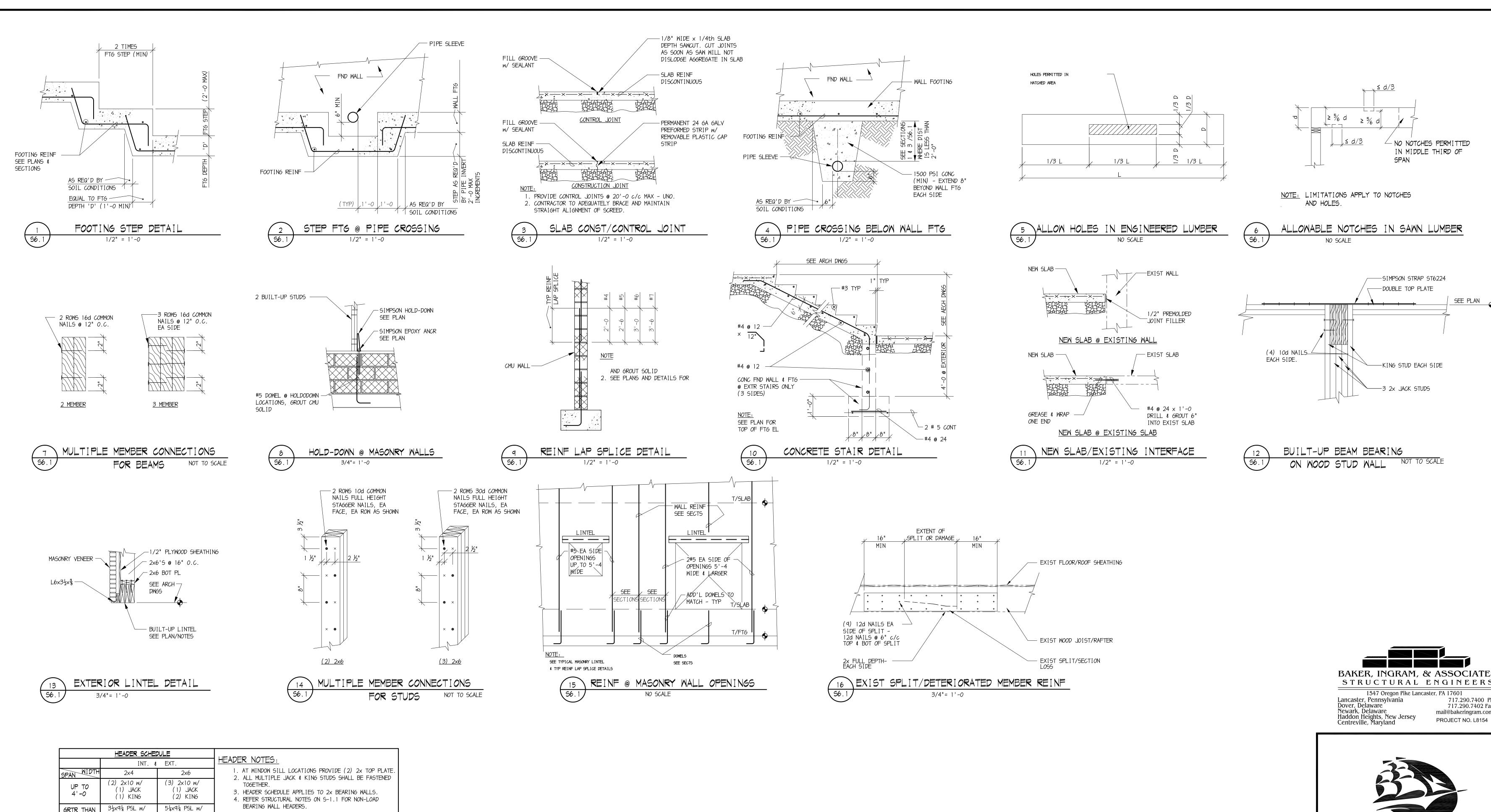
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FRAMING

SECTIONS



HEADER SCHEDULE					
	INT. & EXT.				
SPAN WIDTH	2x4	2x6			
UP TO 4'-0	(2) 2×10 m/ (1) JACK (1) KING	(3) 2x10 w/ (1) JACK (2) KING			
GRTR THAN 4'-0 TO 6'-0	3½×9¼ PSL w/ (1) JACK (1) KING	54x94 PSL w/ (1) JACK (2) KING			
GRTR THAN 6'-0 TO 10'-0	35×115 PSL W/ (2) JACK (1) KING	54x94 PSL w/ (2) JACK (2) KING			
GRTR THAN	SEE PLAN	SEE PLAN			

- 5. PROVIDE 2 JACK STUDS AND 2 KING STUDS AT HEADERS
- SHOWN ON PLAN.

BAKER, INGRAM, & ASSOCIATES STRUCTURAL ENGINEERS 1547 Oregon Pike Lancaster, PA 17601 717.290.7400 Ph 717.290.7402 Fax mail@bakeringram.com

SEE PLAN

 $\sum_{i=1}^{n} \sum_{j=1}^{n} a_{ij}$

PROJECT NO. SU - 2010/6B

System Rep:

Professional:

Consultant:

Authorized by:

					CONSULTANTS
Rev	Description	Ву	Date	LAWRENCE EN	WEA ISTERED ESSIONAL R. BAKER, JR.
	100% CONSTRUCTION DOC	:UMENTS	; 		SEAL
COMMONWEALTH OF PENNSYLVANIA				Project 10116	Date 5/09/14
STATE SYSTEM OF HIGHER EDUCATION				Drawn by BRK	Checked by LRB
	HARRISBURG, PENNSYI				

TYPICAL DETAILS

S6.1

MECHANICAL LEGEND

MECHANICAL LEGEND			<u>ABBREVIATIO</u>	<u>ONS</u>
SYMBOL	ABBREV	DESCRIPTION	BTU	BRITISH THERMAL UNIT
———н——	Н	HEATING WATER SUPPLY	CFM	CUBIC FEET MINUTE
——————————————————————————————————————	HR	HEATING WATER RETURN	CX DIFF	CONNECT TO EXISTING DIFFUSER
	RS	REFRIGERANT SUCTION		
——— RL ———	RL	REFRIGERANT LIQUID	DB EAT	DRY BULB ENTERING AIR TEMPERATURE
云		SHUTOFF VALVE	ESP	EXTERNAL STATIC PRESSURE
			EX	EXISTING (TO REMAIN UNLESS NOTED OTHERWISE
BWV Ø	D148.4	CHECK VALVE	EXH	EXHAUST
•	BWV	BACK WATER VALVE	GR	GRILLE
		FLOW METER FITTING	KW	KILOWATTS
		BALANCING VALVE	LAT	LEAVING AIR TEMPERATURE
		PRESSURE REDUCING VALVE	МВН	THOUSAND BTU/HR
		RELIEF VALVE	OA	OUTSIDE AIR
MAV A		AAAAH AAD AAAA (F	RA REG	RETURN AIR REGISTER
AAV 🗘	MAV	MANUAL AIR VALVE	RX	REMOVE EXISTING
	AAV	AUTOMATIC AIR VALVE	SA	SUPPLY AIR
		STRAINER	V-PH	VOLT-PHASE
——————————————————————————————————————		UNION		
FS '		FLOW SWITCH		
		THERMOMETER		
	TW	THERMOMETER WELL		
		PRESSURE GAUGE		
	TCV	TEMPERATURE CONTROL VALVE	(2-WAY)	
	TCV	TEMPERATURE CONTROL VALVE	(3-WAY)	
		PIPE TURNING UP		
		PIPE TURNING DOWN		
		TEE TURNED UP		
$\overline{\circ}$		TEE TURNED DOWN		
		DEMOLITION TO THIS POINT		
•		CONNECT TO EXISTING		
lacktriangle		THERMOSTAT		
		SUPPLY DUCT TURNED UP		
[]×(SUPPLY DUCT TURNED DOWN		
		RETURN, EXHAUST, OR OUTSIDE DUCT TURNED UP	AIR	
		RETURN, EXHAUST, OR OUTSIDE DUCT TURNED DOWN	AIR	
<u> </u>		FLEXIBLE DUCT CONNECTION		
MVD	MVD	MANUAL VOLUME DAMPER		
MOD	MOD	MOTOR OPERATED DAMPER		
FD	FD	FIRE DAMPER		
BDD	BDD	BACKDRAFT DAMPER		
R		INCLINED DUCT RISE		

<u>GENERAL NOTES (</u>	APPLY TO	<u>WORK P</u>	PROVIDED	<u>UNDER</u>	DIVISION	<u> 20)</u>	:
						-	

- 1. LOCATIONS OF DUCTWORK, AIR DEVICES, TEMPERATURE CONTROLS AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL LAYOUTS, EQUIPMENT CUTS AND PLUMBING/ELECTRICAL/STRUCTURAL PLANS. NO WORK SHALL BE INSTALLED UNTIL THE LOCATIONS HAVE BEEN VERIFIED. BRING ANY DISCREPANCY TO ARCHITECTS ATTENTION PRIOR TO MANUFACTURE OF DUCTWORK OR INSTALLATION 2. NORTH ARROWS ON THESE DRAWINGS INDICATE PLAN NORTH ONLY.
- 3. INSTALL A MANUAL VOLUME DAMPER IN EACH BRANCH DUCT THAT RUNS TO (1) AIR DEVICE.
- 4. PROVIDE PIPE SLEEVE FOR PIPING PENETRATIONS THROUGH RATED SLAB OR WALLS.
- 5. CLEARANCES FOR CONDENSING UNITS SHALL BASED ON MANUFACTURER'S SPECIFICATIONS.
- 6. SEAMS IN DUCTWORK SHALL BE FLAT SLIP SEAMS.
- 7. IN AREAS WHERE WORK IS INSTALLED IN CLOSE PROXIMITY TO WORK OF OTHER TRADES OR WITHIN TRADES COVERED BY THIS DIVISION OF THE SPECIFICATIONS PREPARE LARGER SCALE DRAWINGS CONSISTING OF PLANS AND SECTIONS TO SHOW HOW WORK IS TO BE INSTALLED IN RELATION TO WORK OF OTHER TRADES. 8. BEFORE BEGINNING WORK ON THE HEATING WATER SYSTEM, MEASURE THE FLOW RATE AT EACH HEATER/COIL THAT IS SERVED BY THE HEATING WATER DISTRIBUTION. PROVIDE A REPORT FOR APPROVAL BEFORE STARTING DEMOLITION WORK.

GENERAL DEMOLITION NOTES (APPLY TO WORK PROVIDED UNDER DIVISION 20):

1. DEMOLITION WORK IS GENERALLY INDICATED AS PART OF THESE NOTES AND THE NOTES INDICATED ON THE ARCHITECTURAL DEMOLITION PLANS. 2. VERIFY THAT EXISTING PIPING, EQUIPEMENT, ETC. THAT IS CALLED FOR REMOVAL IS NO LONGER IN SERVICE BEFORE BEGINNING DEMOLITION. 3. THE DEMOLITION NOTES INDICATE THE MAIN COMPONENTS OF SYSTEMS AND EQUIPMENT THAT SHALL BE REMOVED UNDER THIS CONTRACT. IF SYSTEMS AND EQUIPMENT ARE FOUND DURING CONSTRUCTION THAT THE OWNER AUTHORIZES FOR REMOVAL BUT HAVE NOT BEEN SPECIFICALLY CALLED FOR DEMOLITION, REMOVE THE SYSTEMS AND EQUIPMENT.

4. WHEN THE WORK SPECIFIED HEREUNDER CONNECTS TO ANY EXISTING EQUIPMENT, PIPING, ETC., PERFORM NECESSARY ALTERATIONS, CUTTING, FITTING, ETC. OF THE EXISTING WORK AS MAY BE NECESSARY OR REQUIRED TO MAKE SATISFACTORY CONNECTIONS BETWEEN THE NEW AND EXISTING WORK AND LEAVE THE COMPLETE WORK IN A FINISHED AND WORKMANLIKE

5. WHEN THE WORK SPECIFIED HEREUNDER OTHER DIVISIONS NECESSITATES RELOCATION OF EXISTING EQUIPMENT, PIPING, ETC. PERFORM WORK AND MAKE NECESSARY CHANGES TO EXISTING WORK AS MAY BE REQUIRED TO LEAVE THE COMPLETED WORK IN A FINISHED AND WORKMANLIKE CONDITION.

6. REMOVE FROM THE PREMISES AND DISPOSE OF EXISTING PIPING, MATERIAL, FIXTURES, EQUIPMENT, ETC. NOT REQUIRED FOR RE-USE OR RE-INSTALLATION.

7. DELIVER ON THE PREMISES WHERE DIRECTED EXISTING MATERIAL AND EQUIPMENT WHICH IS REMOVED AND IS DESIRED BY THE OWNER OR IS INDICATED TO REMAIN THE PROPERTY OF THE OWNER.

8. OTHER MATERIALS AND EQUIPMENT WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY HIM FROM THE PREMISES.

9. PIPING ABANDONED IN CONCRETE SLABS, WALLS, OR OTHER INACCESSIBLE LOCATIONS SHALL BE LEFT EMPTY.

	HOT WATER BASEBOARD SCHEDULE												
HEATING CAPACITY													
BB	AREA SERVED	EAT	EWT	LWT	TOTAL		MAX WPD		FINS	TUBE	ENCL HT	LENGTH	MFGR. / MODEL
NO.		(F)	(F)	(F)	MBH	GPM	(FT. HD.)	ROWS	PER FT	(IN)	(IN)	(FT)	
1 1	ENTRY	70	180	160	9.2	1	3	1	50	1	14	8	VULCAN VC SERIES
2	PANTRY	70	180	160	7	1	3	1	50	1	14	6	VULCAN VC SERIES
3	BREAKFAST	70	180	160	9.2	1	3	1	50	1	14	8	VULCAN VC SERIES
4	SUNROOM	70	180	160	4.6	0.5	3	1	50	1	14	4	VULCAN VC SERIES
5	SUNROOM	70	180	160	4.6	0.5	3	1	50	1	14	4	VULCAN VC SERIES
6	SUNROOM	70	180	160	4.6	0.5	3	1	50	1	14	4	VULCAN VC SERIES
7	SUNROOM	70	180	160	4.6	0.5	3	1	50	1	14	4	VULCAN VC SERIES
8	SUNROOM	70	180	160	4.6	0.5	3	1	50	1	14	4	VULCAN VC SERIES

PUMP SCHEDULE											
DESIG	LOCATION	SERVICE	FLUID	GPM	HEAD (FT)	RPM	ELECTRIC HP-V/PH/HZ	TYPE	MANUFACTURER		
P-1	BOILER ROOM	BASEBOARD RADIANT HEAT	WATER	32	40	VAR	1.5-120/1/60	IL	TACO SKV		
P-2	BOILER ROOM	BASEBOARD RADIANT HEAT	WATER	25	25	VAR	1.5-120/1/60	IL	TACO SKV		
YPE:				ļ.							
- IN-LIN	ΙΕ	HS – HORIZONTAL SPLIT CASE		CC- CLOSE COUPLED							
M — BASE	MOUNTED	VIL - VERTICAL IN-LINE									
OTES:											
. STANDBY		3. LEAD/ LAG		5. VARIABLE FREQUENCY DRIVE							
2. PARALLEL OPERATION 4. DUPLEX UNIT											

3. SPLIT SYS	TEM HEAT PUMP MUST HAVE A M	MINIMUM SEER R	RATING OF 15.				
DUCT MOUNTED HEATING COIL SCHEDULE							
DESIG.	SERVING	REQ.	FLOW RATE	WPD	AIRFLOW RATE	APD SIZE	

3.3

SPLIT SYSTEM HEAT PUMP SCHEDULE

 MOTOR
 EAT DB/WB AIR CAP. CAP. CAP. CAP.
 CAP. CAP. CAP. CAP.

 HP, VOLTS-PH
 (F)
 (F)
 (MBH)
 (MBH)
 (F)
 (MBH)

 3/4, 230-1
 75/62.5
 95
 37.2
 52.9
 70.0
 57.0

 1/2, 230-1
 75/62.5
 95
 29.7
 31.1
 70.0
 42.0

 3/4,230-1
 75/62.5
 95
 37.2
 52.9
 70.0
 57.0

 1/3, 230-1
 75/62.5
 95
 12.5
 16.1
 70.0
 17.7

INCLINED DUCT DOWN

DETAIL DESIGNATION

0.70 0.50

1,800

. REFRIGERANT PIPE SIZES SHALL BE AS RECOMMENDED BY EQUIPMENT MANUFACTURER.

2. COOLING AND HEATING CAPACITIES LISTED ARE CALCULATED REQUIRED CAPACITIES.

	SPLIT SYSTEM CONDENSING UNIT SCHEDULE									
	COOLING OUTDOOR UNIT ELECTRIC									
CU	SERVING		EAT	AMB.	SENS.	тот.	MCA	MOCP		MANUFACTURER
#		CFM	DB/WB	AIR	CAP.	CAP.			VOLTS-PH	
			(F)	(F)	(MBH)	(MBH)	(A)	(A)		
1	KITCHEN MAKEUP	600	80/67	95	20.5	32.9	26	40	230-1	AAON CBB036
NULL:										

2.9

NU LE:						
REFRIGERANT PIPE	SIZES SHALL	BE AS	RECOMMENDED	BY	EQUIPMENT	MANUFACTURER.

KITCHEN/DINING

C-2 KITCHEN MAKE UP

2ND/3RD FL BEDROOMS MASTERBEDROOM

	EXHAUST FAN SCHEDULE								
DESIG.	SERVING	CFM	E.S.P.	TYPE	DRIVE	ELECTRIC W / HP, VOLTS-PH	MANUFACTURER		ACCESSORIES
EF-1	GUESS BATHROOM	60	0.25	CEILING	DIRECT	15W, 115-1	NuTone	695	A, B, C, Q
					_				

A: DISCONNECT SWITCH B: BACKDRAFT DAMPER

MANUFACTURER - CARRIER OUTDOOR UNIT / INDOOR UNIT

230-1 25HCB5042/FX4C042 230-1 25HCB5060/FX4C060 230-1 25HCB5018/FX4C018

50.0 45.0 50.0 20.0

34.5 11.9

C: PREFAB ROOF CURB D: BIRDSCREEN

WITH VIBRATION ISOLATION

G: WALL MOUNTED PUSH BUTTON

FANS SHALL BE LISTED AND LABELED.

- I: WALL MOUNTED THERMOSTAT J: DISCHARGE HOOD E: ACOUSTICAL LINIING K: INTERLOCK WITH ROOM LIGHT SWITCH F: HANGING BRACKET
 - L: WL WALL LOUVER DISCHARGE M: RFC, ROOF CAP (FLAT ROOF) RL, ROOF CAP (PITCHED ROOF)

H: WALL MOUNTED SWITCH

(TIMER 0-4 HOUR)

N: WALL MOUNTING COLLAR O: MOTOR SIDE FAN GUARD P: 2" WASHABLE ALUMINUM FILTER Q: DUCT ADAPTER

R: EXHAUST GRILLE

S: UL 762

SWITCH / STARTER

2.FANS SHALL BE SUPPLIED BY ONE MANUFACTURER UNLESS NOTED OTHERWISE

Rev Date Description AS BUILT REVISIONS

PROJECT NO. SU - 2010/6B

OMMONWEALTH OF PENNSYLVANIA			
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HARRISBURG, PENNSYLVANIA			

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PROFESSIONAL PROFE
EisGin/ER No. PE-076726
WSYLVANI

5/09/14 Checked by

MECHANICAL COVER SHEET

DM1.1 DEMOLITION FLOOR PLANS - MECHANICAL DM1.2 DEMOLITION FLOOR PLANS - MECHANICAL PIPING

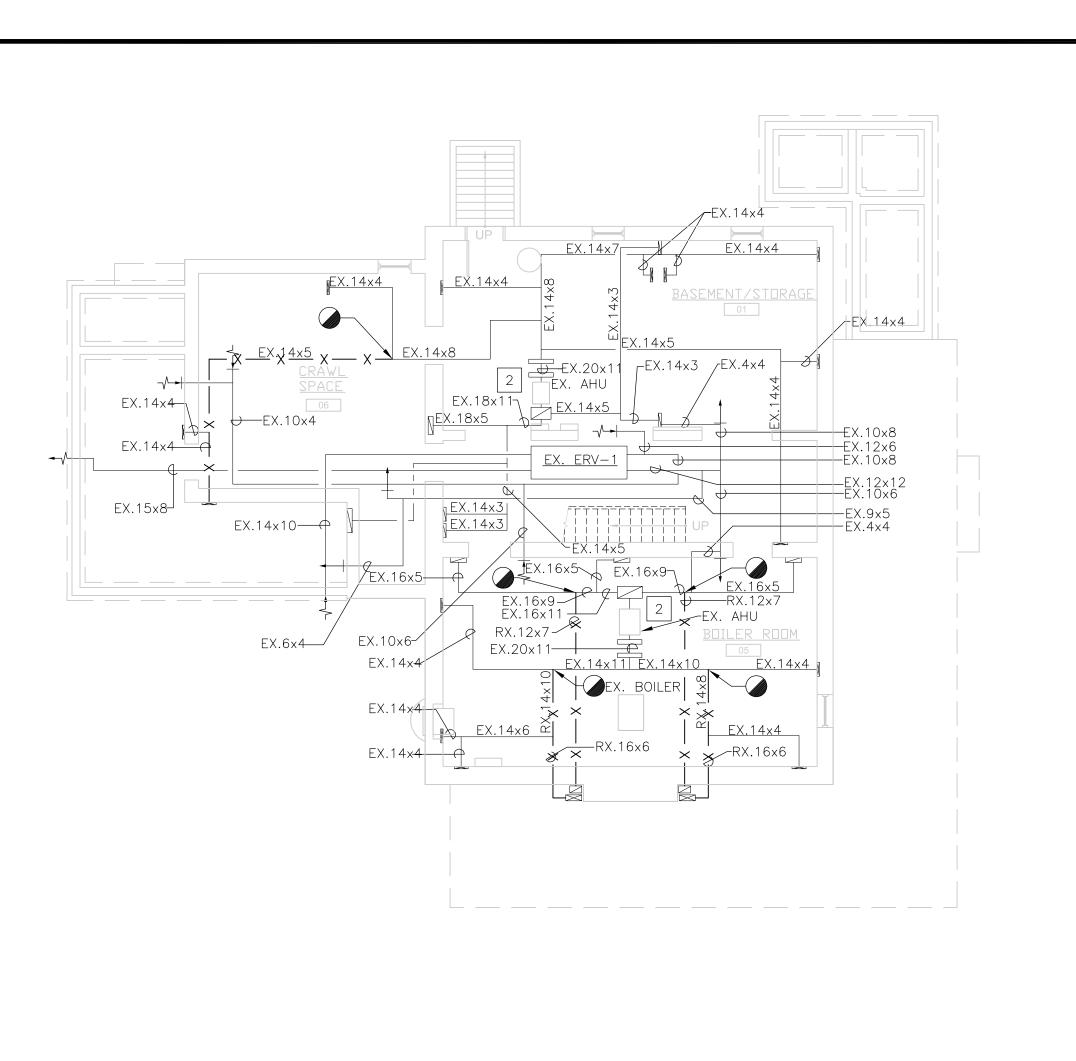
MECHANICAL DETAILS & ATC

M1.2 FLOOR PLANS - MECHANICAL PIPING

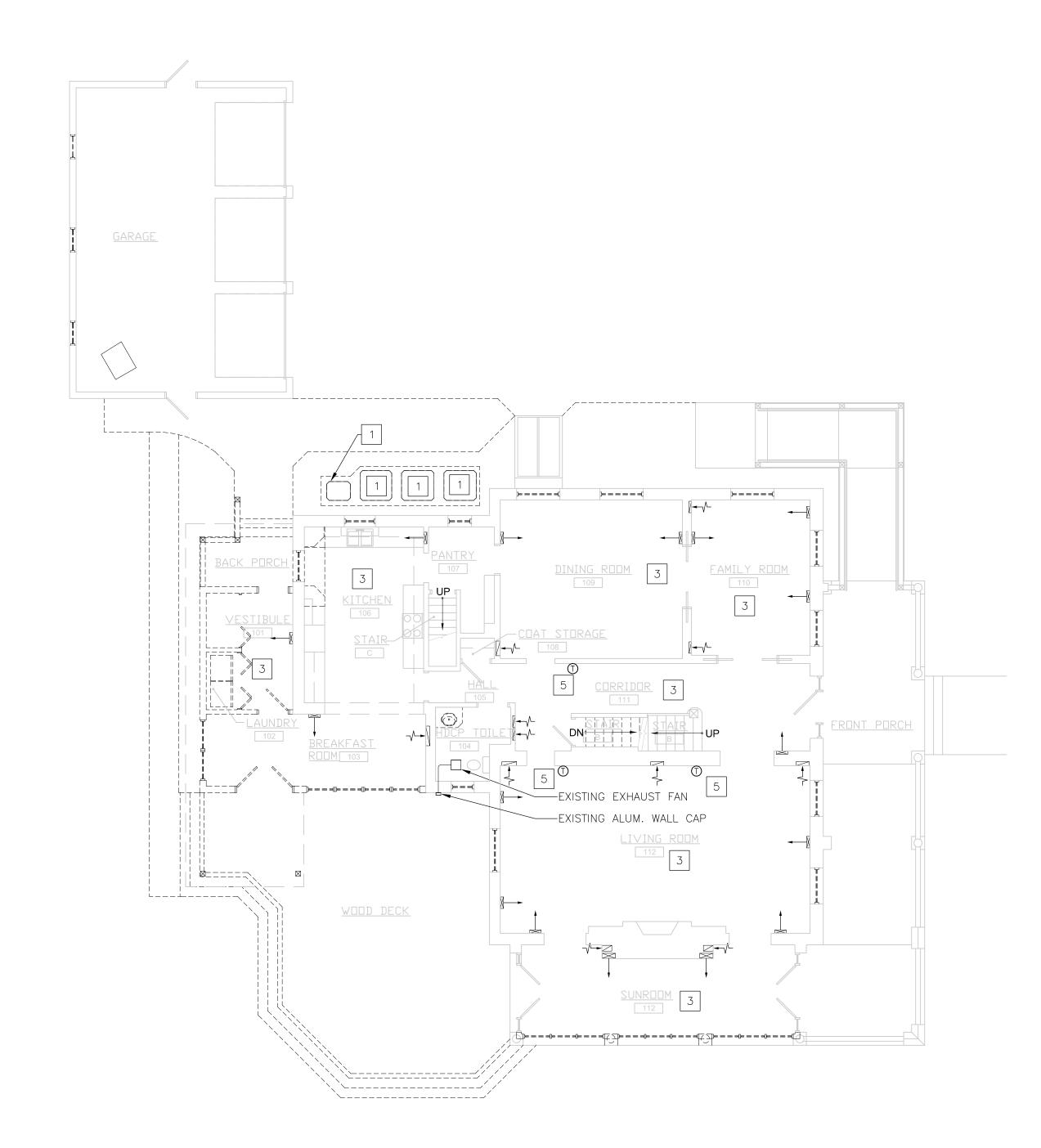
M1.1 FLOOR PLANS - MECHANICAL

MECHANICAL DRAWING LIST:

MO.1 MECHANICAL COVER SHEET

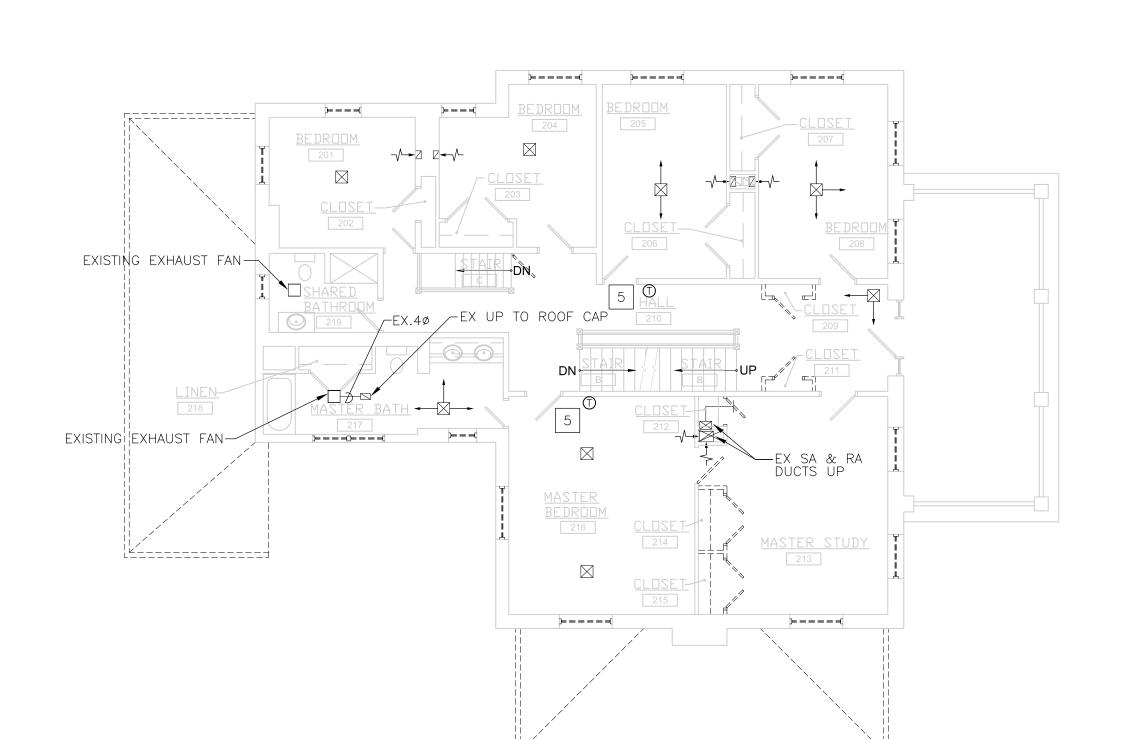


1 BASEMENT DEMOLOITION PLAN - HVAC

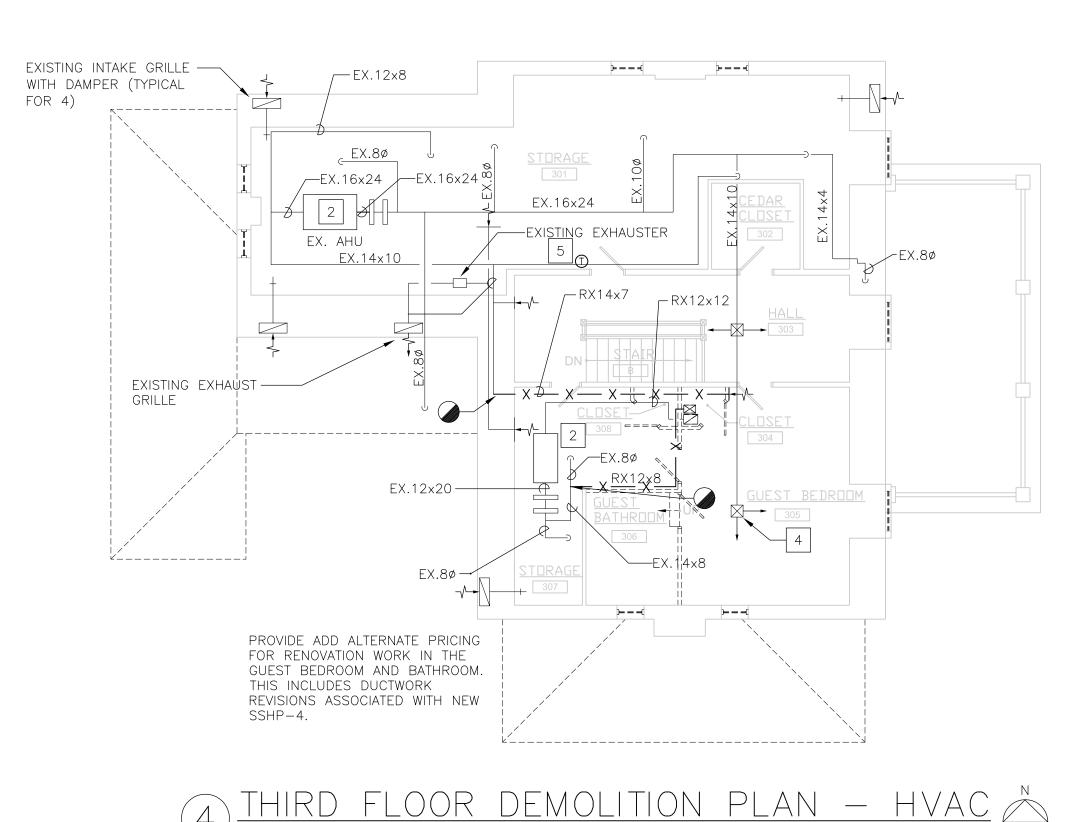


2 FIRST DEMOLITION FLOOR PLAN - HVAC

SCALE: 1/8" = 1'-0"

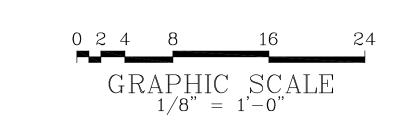


3 SECOND FLOOR DEMOLITION PLAN - HVAC



THIRD FLOOR DEMOLITION PLAN - HVAC

SCALE: 1/8" = 1'-0"



Rev

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Description

AS BUILT REVISIONS

COMMONWEALTH OF PENNSYLVANIA

STATE SYSTEM OF HIGHER EDUCATION

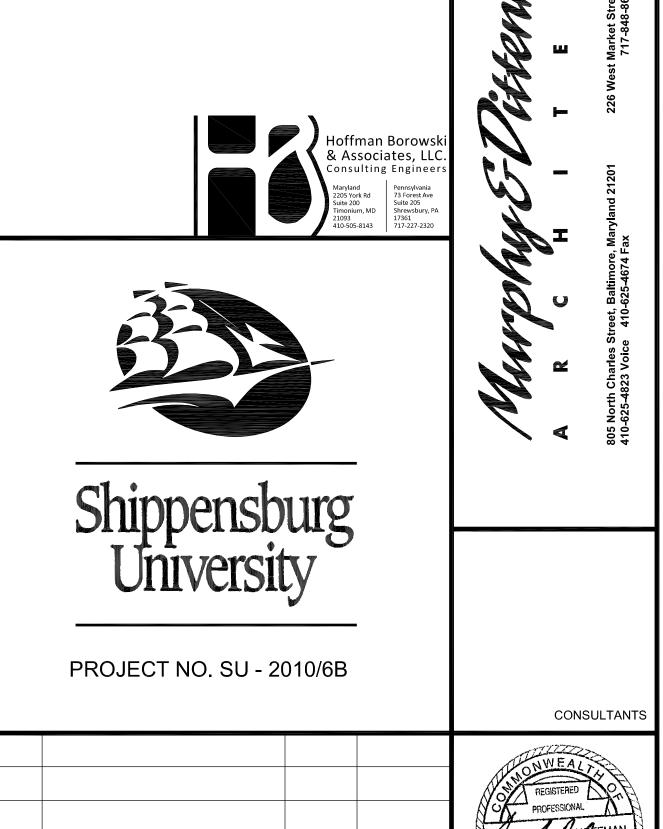
HARRISBURG, PENNSYLVANIA

DEMOLITION NOTES (APPLY TO THIS DRAWING WHERE INDICATED):

3 REMOVE EXISTING FLOOR AIR DEVICES IN THIS AREA.

5 REMOVE EXISTING THERMOSTAT AND REPLACE WITH NEW EMS THERMOSTAT.

4 REMOVE EXISTING SUPPLY AIR DEVICE.



Ву

Date

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DEMOLITION OVERALL

DM1.1

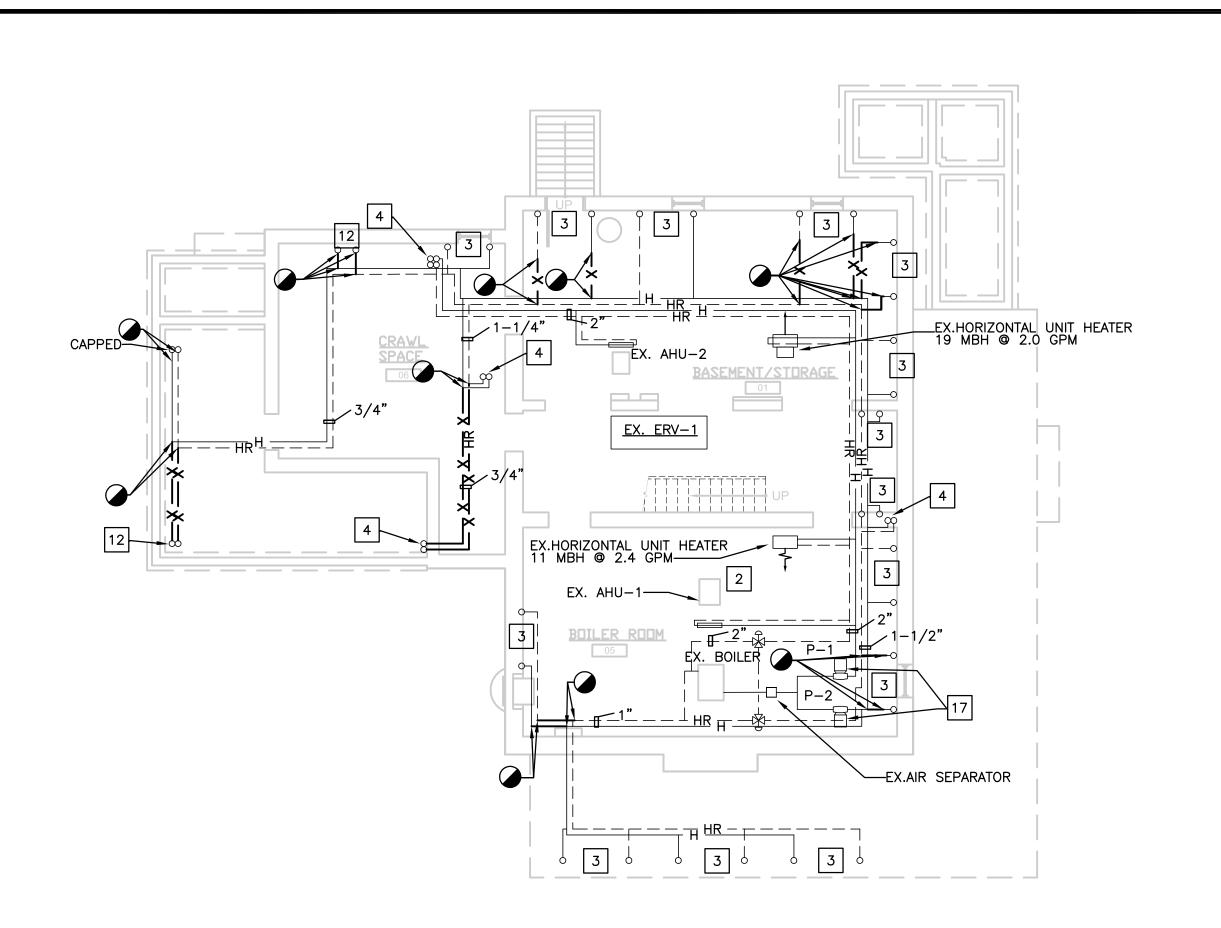
2 OF 6

FLOOR PLANS - MECHANICA

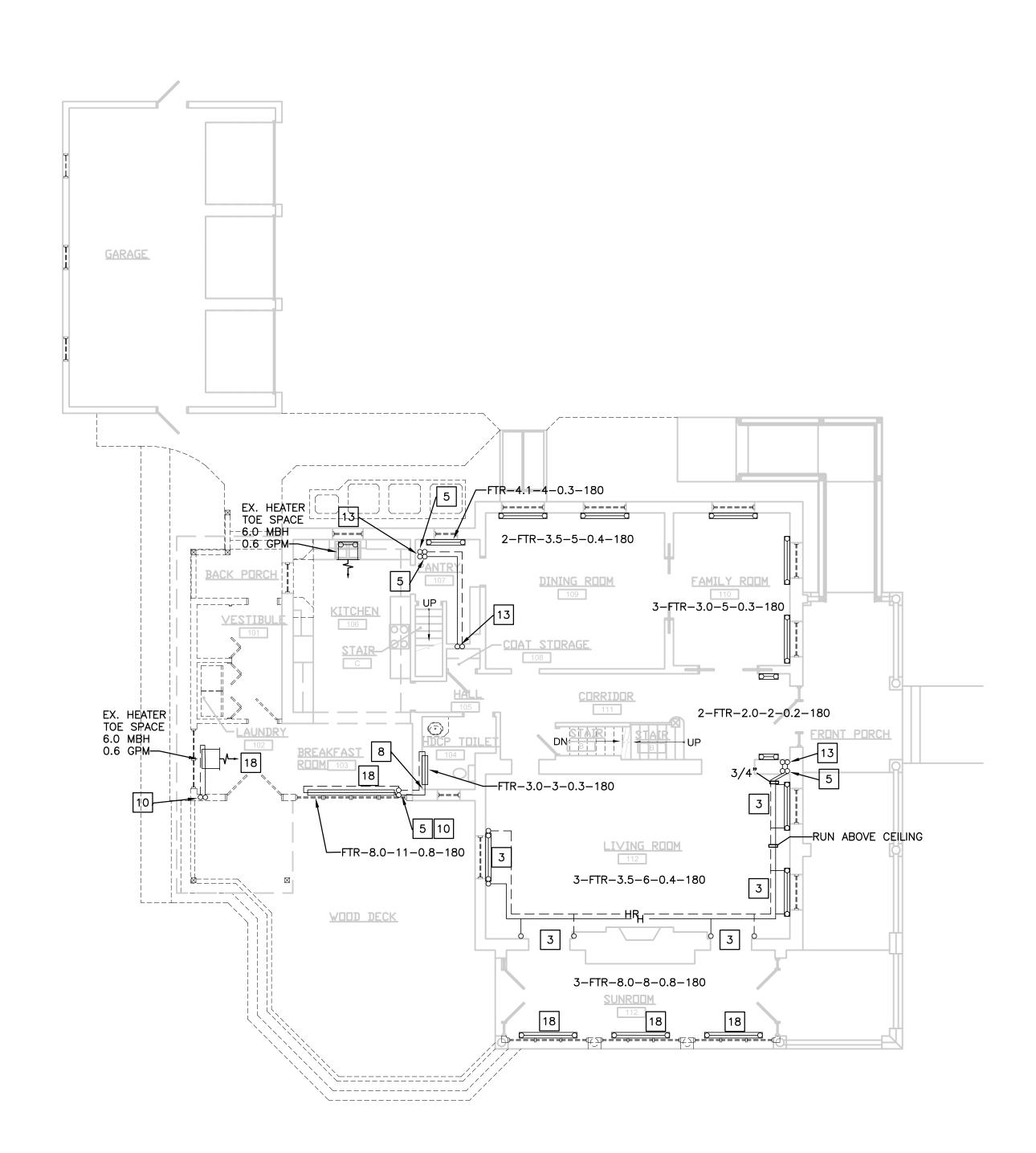
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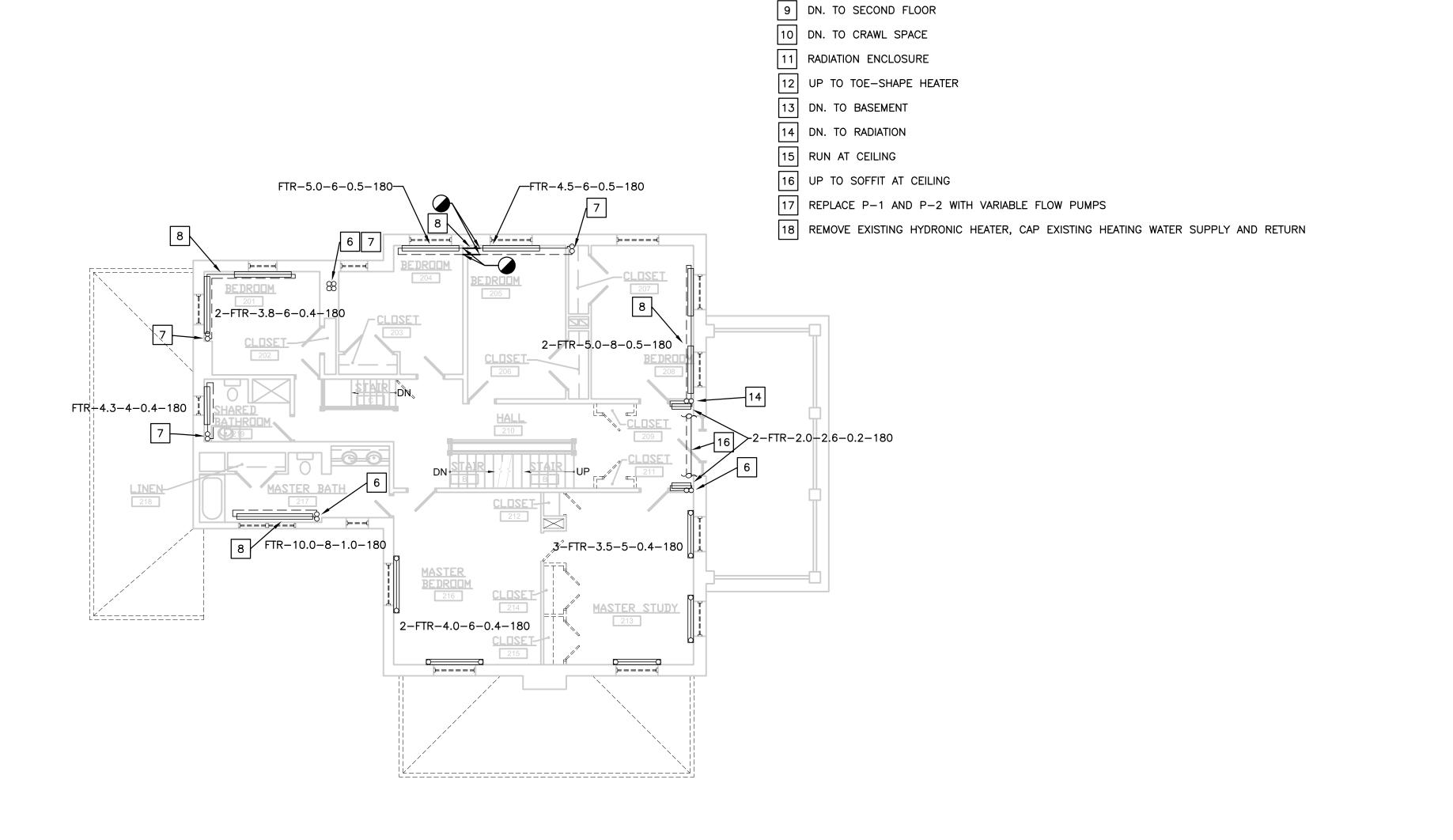
25



1 BASEMENT DEMOLOITION PLAN - PIPING N SCALE: 1/8" = 1'-0"



2 FIRST DEMOLITION FLOOR PLAN - PIPING SCALE: 1/8" = 1'-0"



DEMOLITION NOTES (APPLY TO THIS DRAWING WHERE INDICATED):

REMOVE EXISTING OUTDOOR HEAT PUMP AND ASSOCIATED REFRIGERANT LINES.

2 REMOVE EXISTING AIR HANDLING UNIT.

3 UP TO RADIATION

4 UP TO FIRST FLOOR

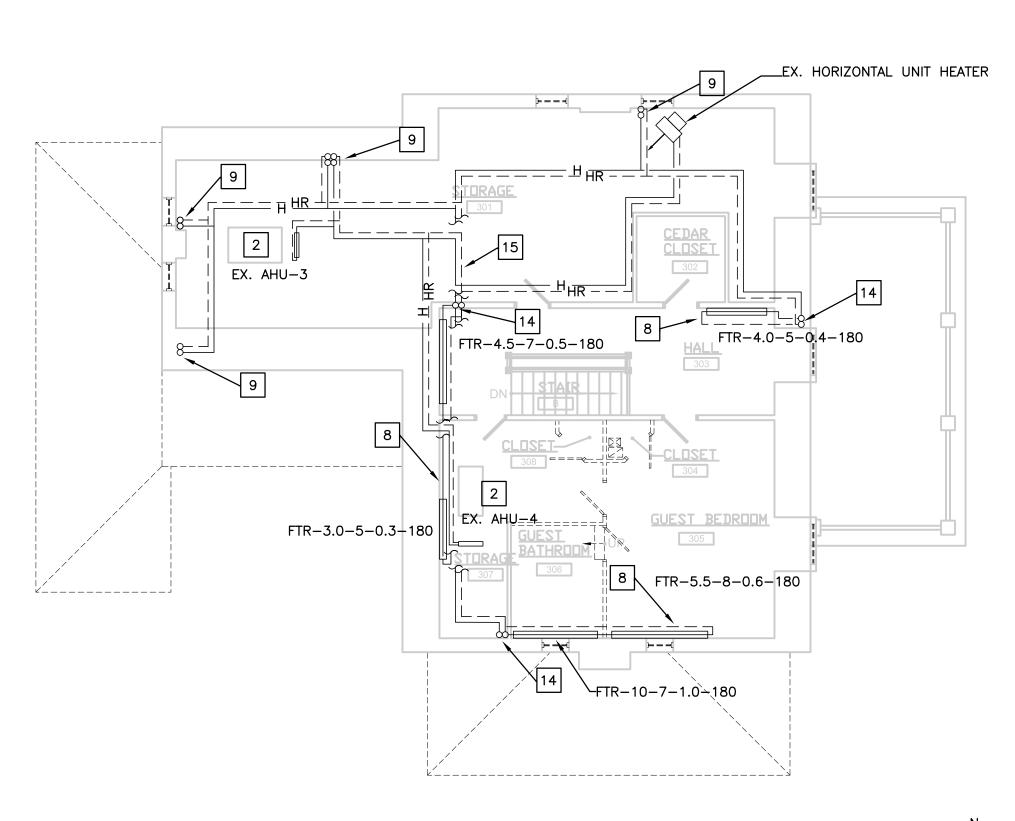
5 UP TO SECOND FLOOR

6 DN. TO FIRST FLOOR

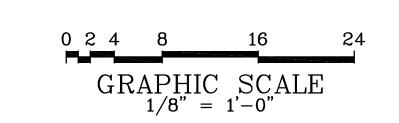
8 RUN IN ENCLOSURE

7 UP THIRD FLOOR

3 SECOND FLOOR DEMOLITION PLAN — PIPING SCALE: 1/8" = 1'-0"

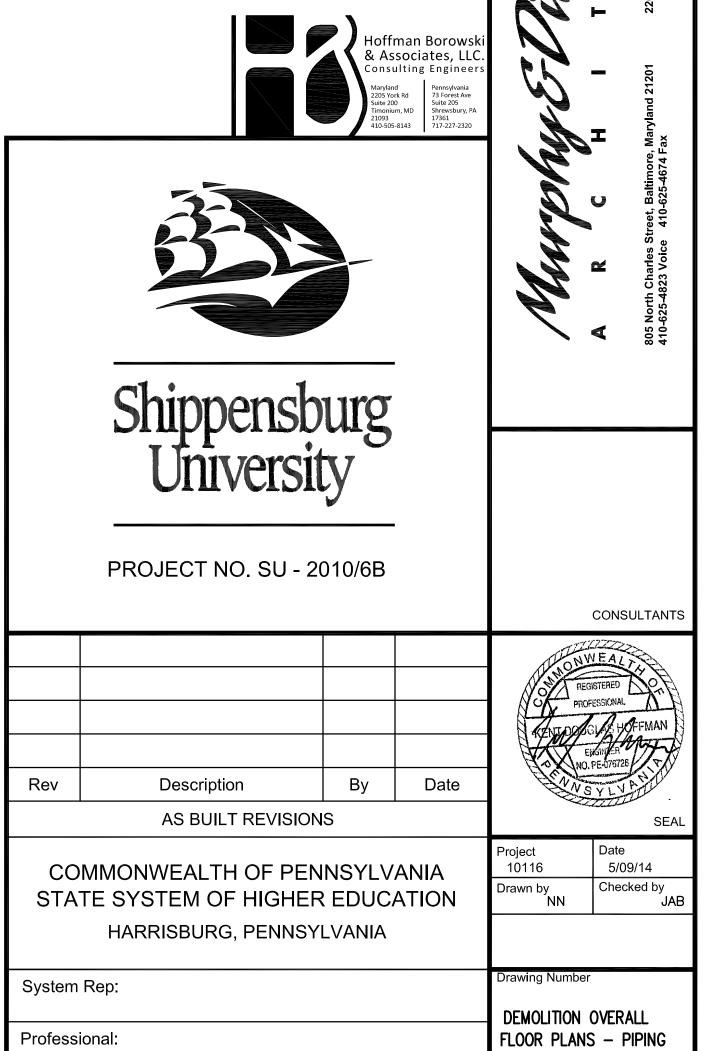


THIRD FLOOR DEMOLITION PLAN - PIPING SCALE: 1/8" = 1'-0"



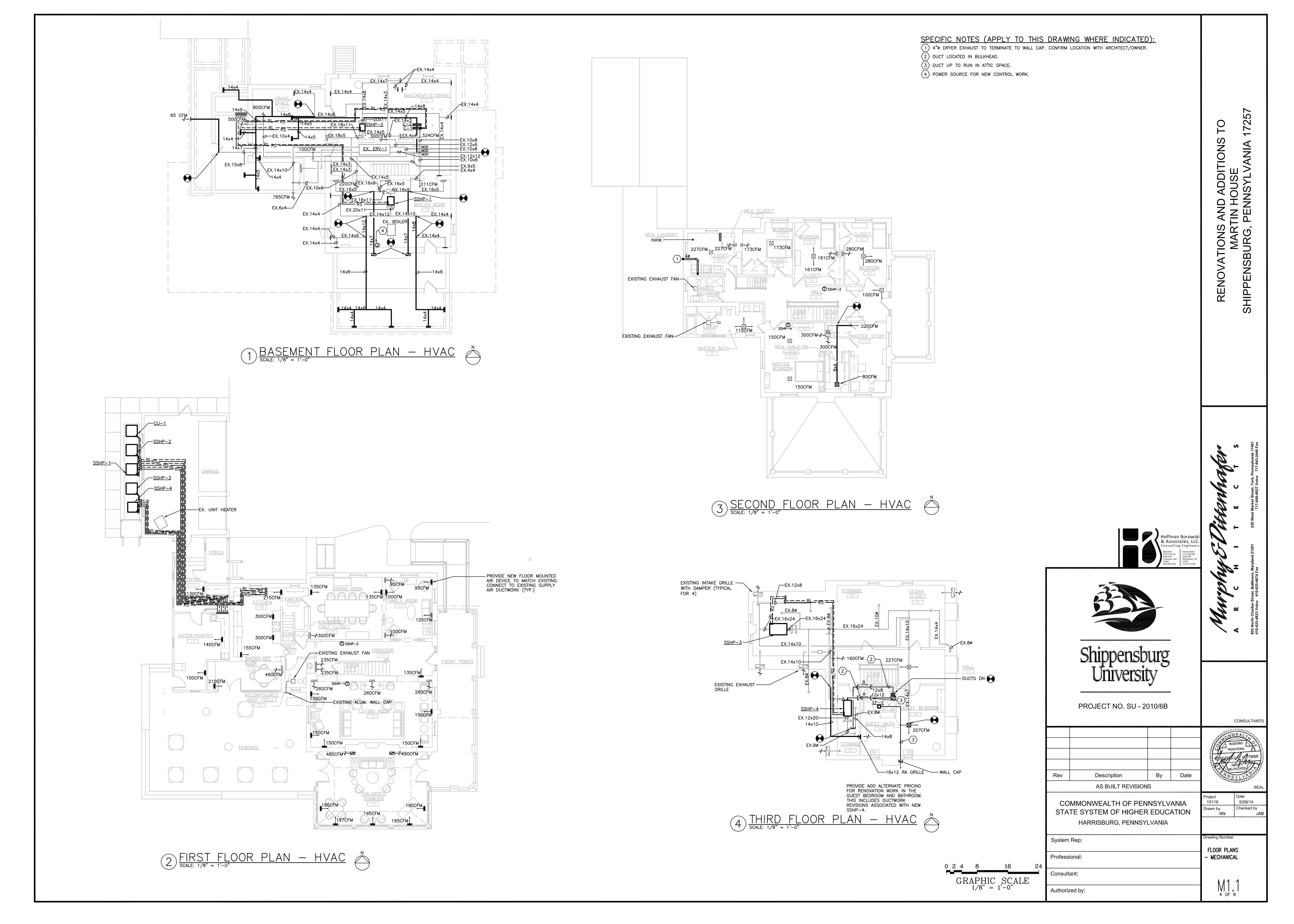
Consultant:

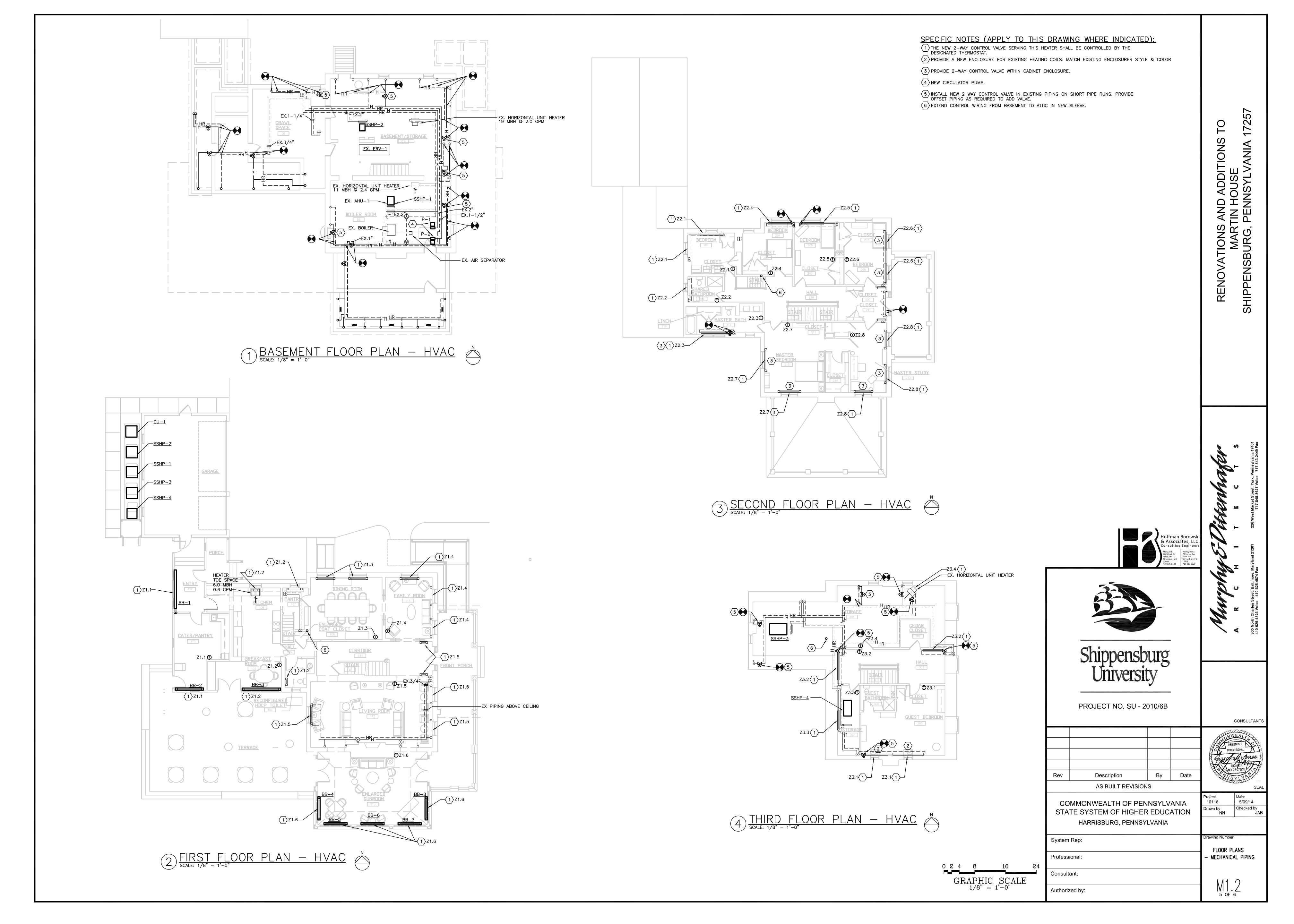
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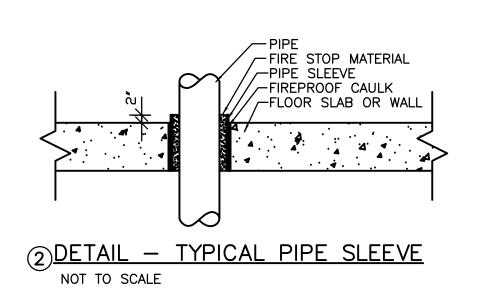
 $\lim_{2 \to 1} 2$

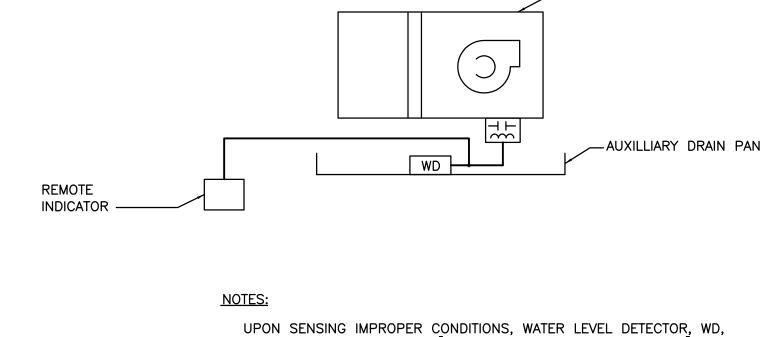
25





1 DETAIL - SECONDARY DRAIN PAN SCALE: NOT TO SCALE





— GATE VALVE

1. AT CONTRACTOR'S OPTION, COMBINATION

BE USED IN LIEU OF GATE VALVES.

BALANCING-SHUTOFF VALVES MAY

-2 WAY TEMPERATURE

FINNED RADIATION

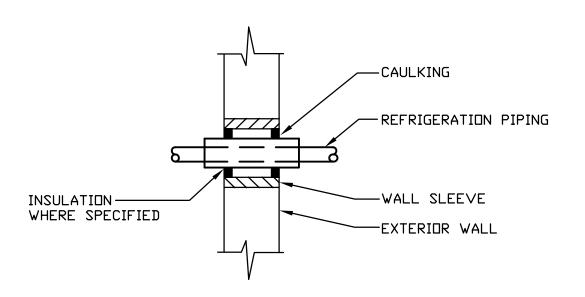
NEW FINNED TUBE RADIATION PIPING DIAGRAM NOT TO SCALE

CONTROL VALVE

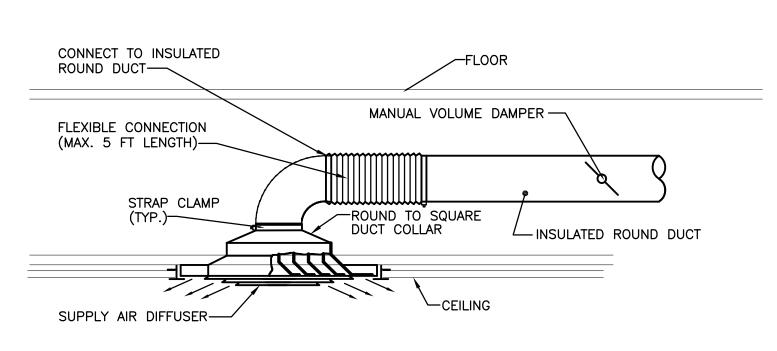
UPON SENSING IMPROPER CONDITIONS, WATER LEVEL DETECTOR, WD, SHALL STOP THE FAN AND [DE-ENERGIZE THE COOLING CYCLE] [STOP FLOW THROUGH THE COOLING COIL]. PROVIDE REMOTE INDICATOR FOR WATER LEVEL DETECTOR ON CEILING OR WALL NEAR UNIT LOCATION.

---FAN COIL UNIT

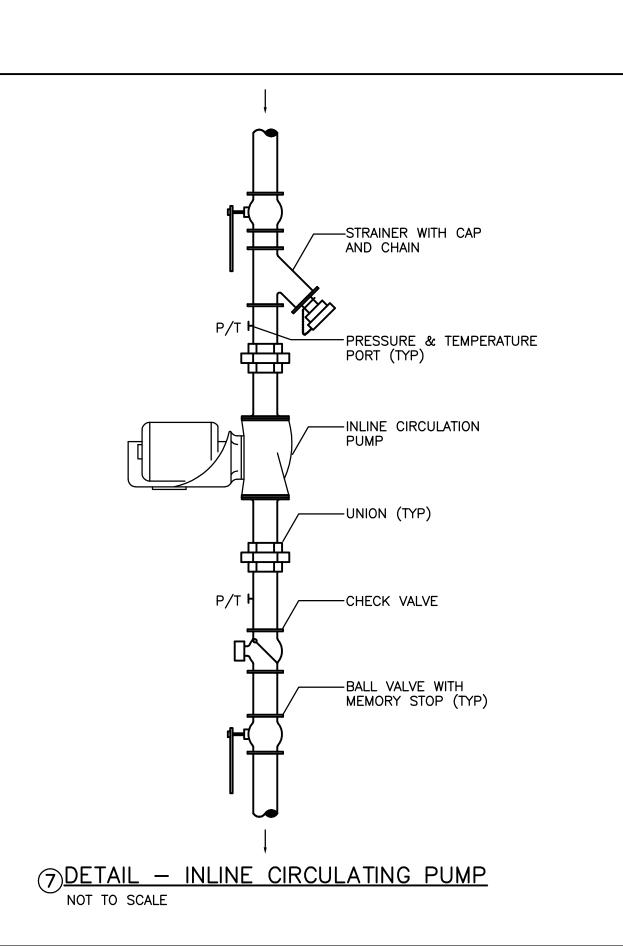
6 DETAIL - SSHP



3 DETAIL - PIPE THRU WALL
NOT TO SCALE



4 DETAIL - TYPICAL DIFFUSER CONNECTION
NOT TO SCALE



GENERAL:

1. THE EXISTING CONTROL SYSTEMS SHALL BE DELETED. REMOVE EXISTING CONTROL DEVICES AND REPLACE
WITH NEW CONTROLLERS, SENSORS, THERMOSTATS, ETC.

2. THE NEW CONTROL SYSTEM SHALL BE AN ENERGY MANAGEMENT SYSTEM AND SHALL BE INTEGRATED INTO
THE CAMPUS AUTOMATED LOGIC SYSTEM.

3.THE CONTROLS SHALL BE AUTOMATED LOGIC. PROVIDE A DEDUCT ALTERNATE PRICE TO USE AN ALTERNATE MANUFACTURER'S CONTROL SYSTEM. AN ALTERNATE MANUFACTURER SYSTEM SHALL BE FULLY INTEGRATED WITH THE CAMPUS AUTOMATED LOGIC SYSTEM.

4.POWER TO IMPLEMENT THE NEW CONTROL SEQUENCES SHALL BE EXTENDED FROM THE 20A DEDICATED CIRCUIT LOCATED IN THE BASEMENT.

5.THE NEW SSHPS AND CIRCULATING PUMPS SHALL TIE INTO THE NEW CONTROL SYSTEMS.
6.EXTEND NEW CONTROL WIRING TO CONTROL DEVICES BY FISHING WIRE THROUGH WALLS/CEILING ASSEMBLES.
COORDINATE PATCH AND REPAIR WORK WITH THE WORK COVED UNDER RELATED CONTRACTS BEFORE
BEGINNING WORK.

ALARM CONDITIONS:

1. THE NEW CONTROL SYSTEM SHALL PROVIDE THE FOLLOWING ALARM CONDITIONS WHICH SHALL NOTIFY CAMPUS PERSONNEL VIA THE INTEGRATION WITH THE CAMPUS AUTOMATED LOGIC SYSTEM:

a.A CIRCULATING PUMP IS NOT PROVIDING FLOW WHEN THE PUMP IS ENERGIZED.

b. WATER IS DETECTED IN A SECONDARY CONDENSATE PAN.
 c. SPACE TEMPERATURE OR HUMIDITY IS MORE THAN 5 DEGREES OR 10% RH FROM SET POINT (BOTH ADJUSTABLE) WHEN THE ASSOCIATED MODE IS ACTIVE.

EXISTING WINTER SEQUENCE:

1. UPON FALLING AMBIENT TEMPERATURE, VIA THE OUTDOOR AIR TEMPERATURE SENSOR/CONTROLLER (0-60°F ADJ.), THE BOILER WILL ENERGIZE AND MAINTAIN 180°F (ADJUSTABLE), P-2 WILL ENERGIZE TO CIRCULATE HOT WATER AND THE MAIN HOT WATER MIXING VALVE WILL ENERGIZE AND MODULATE THE WATER TEMPERATURE PROPORTIONAL TO RESET SCHEDULE (ADJUSTABLE). AN ADJUSTABLE WALL SWITCH WILL BE USED TO MANUALLY ADJUST RADIATION RESET SCHEDULES. OUTDOOR AIR SENSOR MAY BE MANUALLY OVERRIDDEN W/AN ON-OFF SWITCH. AHU STATS SHALL HAVE FAN ON-OFF SWITCH & SUMMER/WINTER/AUTO/OFF SWITCH. HEAT PUMPS SHALL LOCK OUT BELOW AN ADJUSTABLE AMBIENT TEMPERATURE & UPON LOCKOUT OF HEAT PUMPS AHU PUMP P-1 WILL ENERGIZE TO CIRCULATE HOT WATER & THE RESPECTIVE MIXING VALVE WILL ENERGIZE TO MAINTAIN WATER TEMPERATURE ACCORDING TO RESET SCHEDULE. INDIVIDUAL AHU ROOM STATS WILL MODULATE MIXING VALVE © HW COIL TO MAINTAIN SET POINT TEMPERATURE. HUMIDITY WILL BE CONTROLLED VIA DUCT MOUNTED HUMIDISTAT. FAN SWITCH AND HIGH LIMIT SWITCH WILL DISABLE THE HUMIDIFIER UPON SENSING NO AIR FLOW OR ELEVATED HUMIDITY. PUMP P-2 WILL STOP UPON RISING INDOOR TEMPERATURE.

EXISTING SUMMER SEQUENCE:
1.UPON RISING ROOM TEMPERATURES, THE ROOM STAT WILL CYCLE HEAT PUMP IN COOLING MODE.

EXISTING SPRING/FALL SEQUENCE:

1. THE AHU ROOM STAT WILL CYCLE THE HEAT PUMP HEATING MODE UPON FALLING TEMPERATURES. THE SPLIT HEAT PUMPS WILL ACT AS A TYPICAL HEAT PUMP SYSTEM UNTIL THE OUTDOOR SENSOR LISTED ABOVE LOCKS OUT THE HEAT PUMPS & INITIATES THE HYDRONIC SYSTEM.PROVIDE NEW PROGRAMMABLE THERMOSTAT WITH EACH HEAT PUMP TO REPLACE THE EXISTING IN THE SAME LOCATION. PROVIDE NEW CONTROL WIRING.

1. NEW THERMOSTATS SHALL BE PROVIDED TO CONTROL THE EXISTING AND NEW HYDRONIC BASEBOARD HEATERS. WHEN THE HYDRONIC HEATING SECTION IS ENABLED BY THE EXISTING CONTROLS, THE NEW THERMOSTATS SHALL BE ENABLED. DURING THIS MODE, ON A CALL FOR HEAT AS SENSED BY THE NEW WALL MOUNTED THERMOSTAT, THE ASSOCIATED TWO WAY CONTROL VALVE SHALL OPEN TO ALLOW HEATING WATER TO FLOW TO THE COIL(S).

2. THE NEW WALL STATS SHALL BE DIGITAL AND SHALL ALLOW FOR SET POINTS TO BE ADJUSTED ON THE FACEPLATE.

1. THE NEW DUCT TO BE INSTALLED OFF OF THE EXISTING ERV SHALL BE PROVIDED WITH A MOTORIZED DAMPER WHICH SHALL BE NORMALLY CLOSED. IN ADDITION, NEW MOTOR OPERATED DAMPERS SHALL BE INSTALLED IN THE EXISTING HVAC DUCTWORK, WHICH SHALL BE NORMALLY OPEN. WHEN THE KITCHEN EXHAUST HOOD IS SWITCHED ON, MOTORIZED DAMPERS IN THE EXISTING HVAC DUCTWORK SHALL CLOSE, AND THE MOTORIZED DAMPER IN THE NEW DUCT OFF THE ERV SHALL OPEN TO DIVERT AIR OFF OF THE ERV TO BE USED AS MAKE UP AIR TO THE KITCHEN. THE MAKEUP AIR DUCT SHALL BE PROVIDED WITH A HOT WATER COIL AND A DX COILING COIL TO TEMPER THE AIR TO A NEUTRAL DISCHARGE AIR TEMPERATURE BEFORE INTRODUCING IT INTO THE SPACE. CONTROL OF THE HOT WATER COIL AND THE DX COIL SHALL BE MODULATING FOR LEAVING AIR TEMPERATURE CONTROL.

AUTOMATIC TEMPERATURE CONTROLS

RENOVATIONS AND ADDITIONS
MARTIN HOUSE
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Shippensburg University

PROJECT NO. SU - 2010/6B

CONSULTANTS

5/09/14

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COMMONWEALTH OF PENNSYLVANIA STATE SYSTEM OF HIGHER EDUCATION HARRISBURG, PENNSYLVANIA

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Professional:

Consultant:

Authorized by:

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MECHANICAL DETAILS & ATC

Drawing Number

MECHANICAL LEGEND

ABBREVIATIONS

				_
SYMBOL	<u>ABBREV</u>	<u>DESCRIPTION</u>	BTU	BRITISH THERMAL UNIT
	SP,SAN	SANITARY PIPE	CFH	CUBIC FEET HOUR
	SW	STORM WATER	CFM	CUBIC FEET MINUTE
D	D	DRAIN	CX	CONNECT TO EXISTING
——— FDR ———	FDR	FOUNDATION DRAIN	EX	EXISTING
	СО	CLEANOUT	(FLOOR PLAN - P-1)	FOR CONTINUATION SEE FLOOR PLAN ON DRAWING $P-1$
	VP	VENT PIPE	GPM	GALLONS PER MINUTE
	CW	COLD WATER	KW	KILOWATTS
	HW	HOT WATER	МВН	THOUSAND BTU/HR
	HWC	HOT WATER CIRCULATING	RX	REMOVE EXISTING
G	G	GAS	V-PH VTR	VOLT-PHASE VENT THROUGH ROOF
		SHUTOFF VALVE		
`		GLOBE VALVE		
		CHECK VALVE		
BWV X	BW∨	BACK WATER VALVE		
		FLOW METER FITTING		
—————————————————————————————————————		BALANCING VALVE		
Å		RELIEF VALVE		
MAV A				
AAV A	MAV	MANUAL AIR VALVE		
	AAV	AUTOMATIC AIR VALVE		
		STRAINER		
——————————————————————————————————————		UNION		
□SA				
T	SA	SHOCK ABSORBER		
		PIPE TURNING UP		
		PIPE TURNING DOWN		
		TEE TURNED UP		
		TEE TURNED DOWN		
	WILL			
 wh	WH	WALL HYDRANT		
—————————————————————————————————————	НВ	HOSE BIBB		
		DEMOLITION TO THIS POINT		
$oldsymbol{\Theta}$		CONNECT TO EXISTING		
		GAS PRESSURE REGULATOR		
⊙ FDP	FDP	FLOOR DRAIN WITH TRAMP PRIM	ER	
X P-X		DETAIL DESIGNATION		

DESIG	DESCRIPTION	SAN	VENT	CW	HW	REMARKS
P-1A	WATER CLOSET	3"	2"	1/2"	-	ADA COMPLIANT
P-2A	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	ADA COMPLIANT
P-3A	NOT USED	-	-	_	-	
P-4A	NOT USED	_	-	_	-	
P-4B	SHOWER	2"	1-1/2"	1/2"	1/2"	
P-5	KITCHEN SINK	2"	1-1/2"	1/2"	1/2"	REMOVE SINK & REINSTALL INTO NEW COUNTERTOP. MAKE PIPING CONNECTIONS
P-6	NOT USED	_	-	_	-	
P-7	HAND SINK	1-1/2"	1-1/2"	1/2"	1/2"	
P-8	COFFEE MAKER ROUGH-IN BOX	_	-	1/2"	-	PROVIDED UNDER ANOTHER DIVISION, PROVIDE WITH AHJ APPROVED BACKFLOW PREVENTER
P-9	ICE MAKER ROUGH-IN BOX	_	-	1/2"	-	PROVIDED UNDER ANOTHER DIVISION, PROVIDE WITH AHJ APPROVED BACKFLOW PREVENTER & FILTER
P-10	WASHING MACHINE BOX	2"	1-1/4"	1/2"	1/2"	
P-11	LAUNDRY SINK	1-1/2"	1-1/4"	1/2"	1/2"	

GENERAL NOTES (APPLY TO WORK PROVIDED UNDER DIVISION 20):

- 1. SANITARY AND DRAINAGE PIPING SHALL RUN AT 1% SLOPE MINIMUM, UNLESS NOTED OTHERWISE.
- 2. LOCATIONS OF DRAINS AND CONNECTIONS TO FIXTURES AND EQUIPMENT SHALL BE COORDINATED WITH FLOOR PLANS, EQUIPMENT CUTS AND MECHANICAL/ELECTRICAL PLANS. NO WORK SHALL BE INSTALLED UNTIL THE LOCATIONS HAVE BEEN VERIFIED.
- 3. PLUMBING FIXTURES SHALL BE CAULKED TO THE ADJOINING FLOOR OR WALL SURFACE.
- 4. NORTH ARROWS ON THESE DRAWINGS INDICATE PLAN NORTH ONLY.
- 5. PROVIDE CLEANOUTS IN SANITARY AND DRAIN LINES EVERY 50 FEET OF PIPE UNLESS INDICATED AT CLOSER INTERVALS ON DRAWING AND AT CHANGE OF DIRECTION.
- 6. THE PLUMBING FIXTURE SCHEDULE AND SPECIFICATIONS SUPERCEDE THE SYMBOLS INDICATED ON THE FLOOR PLANS.
- 7. PIPE DROP IN EXTERIOR WALL SHALL BE INBOARD OF INSULATION.

GENERAL DEMOLITION NOTES (APPLY TO WORK PROVIDED UNDER DIVISION 20):

1. DEMOLITION WORK IS GENERALLY INDICATED AS PART OF THESE NOTES AND THE NOTES INDICATED ON THE ARCHITECTURAL DEMOLITION PLANS.

2. VERIFY THAT EXISTING PIPING, EQUIPEMENT, ETC. THAT IS CALLED FOR REMOVAL IS NO LONGER IN SERVICE BEFORE BEGINNING DEMOLITION.

3. THE DEMOLITION NOTES INDICATE THE MAIN COMPONENTS OF SYSTEMS AND EQUIPMENT THAT SHALL BE REMOVED UNDER THIS CONTRACT. IF SYSTEMS AND EQUIPMENT ARE FOUND DURING CONSTRUCTION THAT THE OWNER AUTHORIZES FOR REMOVAL BUT HAVE NOT BEEN SPECIFICALLY CALLED FOR DEMOLITION, REMOVE THE SYSTEMS AND EQUIPMENT.

4. WHEN THE WORK SPECIFIED HEREUNDER CONNECTS TO ANY EXISTING EQUIPMENT, PIPING, ETC., PERFORM NECESSARY ALTERATIONS, CUTTING, FITTING, ETC. OF THE EXISTING WORK AS MAY BE NECESSARY OR REQUIRED TO MAKE SATISFACTORY CONNECTIONS BETWEEN THE NEW AND EXISTING WORK AND LEAVE THE COMPLETE WORK IN A FINISHED AND WORKMANLIKE CONDITION.

5. WHEN THE WORK SPECIFIED HEREUNDER OTHER DIVISIONS NECESSITATES RELOCATION OF EXISTING EQUIPMENT, PIPING, ETC. PERFORM WORK AND MAKE NECESSARY CHANGES TO EXISTING WORK AS MAY BE REQUIRED TO LEAVE THE COMPLETED WORK IN A FINISHED AND WORKMANLIKE CONDITION.

6. REMOVE FROM THE PREMISES AND DISPOSE OF EXISTING PIPING, MATERIAL, FIXTURES, EQUIPMENT, ETC. NOT REQUIRED FOR RE—USE OR RE—INSTALLATION.

7. DELIVER ON THE PREMISES WHERE DIRECTED EXISTING MATERIAL AND EQUIPMENT WHICH IS REMOVED AND IS DESIRED BY THE OWNER OR IS INDICATED TO REMAIN THE PROPERTY OF THE OWNER.

8. OTHER MATERIALS AND EQUIPMENT WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY HIM FROM THE PREMISES

9. PIPING ABANDONED IN CONCRETE SLABS, WALLS, OR OTHER INACCESSIBLE LOCATIONS SHALL BE LEFT EMPTY.

RENOVATIONS AND ADDITIONS
MARTIN HOUSE
SHIPPENSBURG, PENNSYLVANIA

prowski es, LLC. ngineers nnsylvania Forest Ave

A R C H

Shippensburg University

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1 OF 5

PLUMBING COVER SHEET

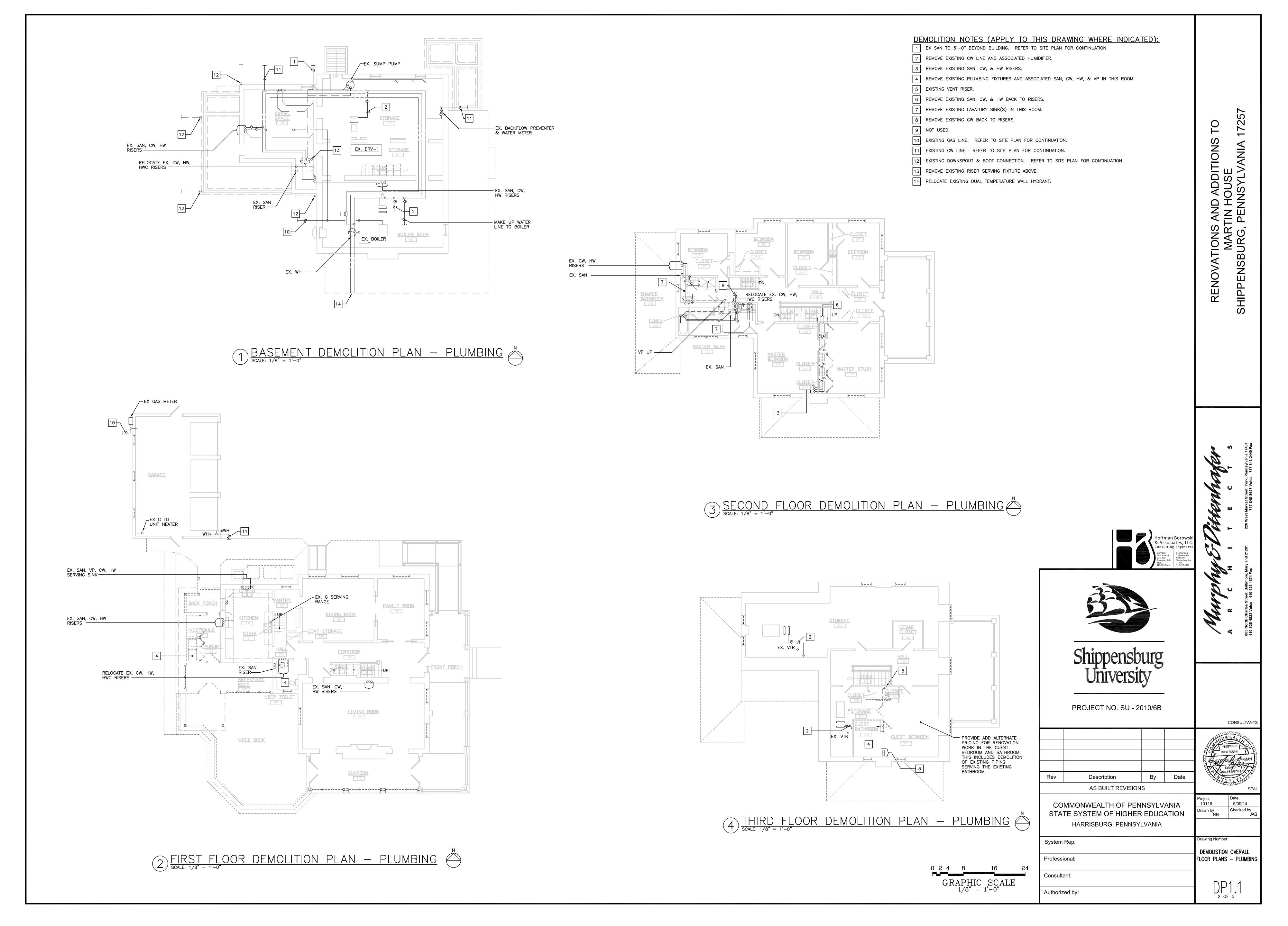
PO.1 PLUMBING COVER SHEET
DP1.1 DEMOLITION FLOOR PLANS — PLUMBING
P1.1 FLOOR PLANS — PLUMBING

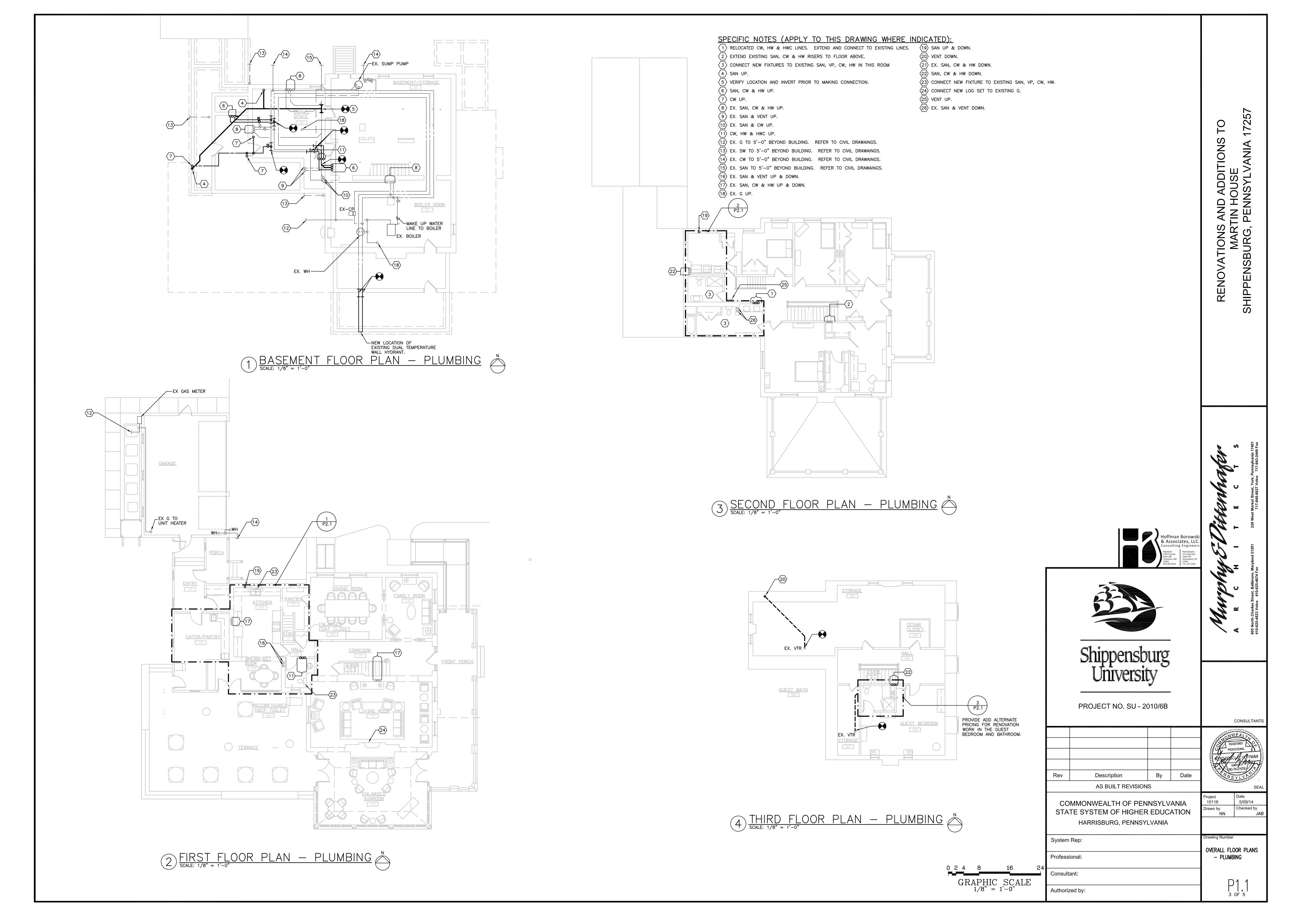
PLUMBING DRAWING LIST:

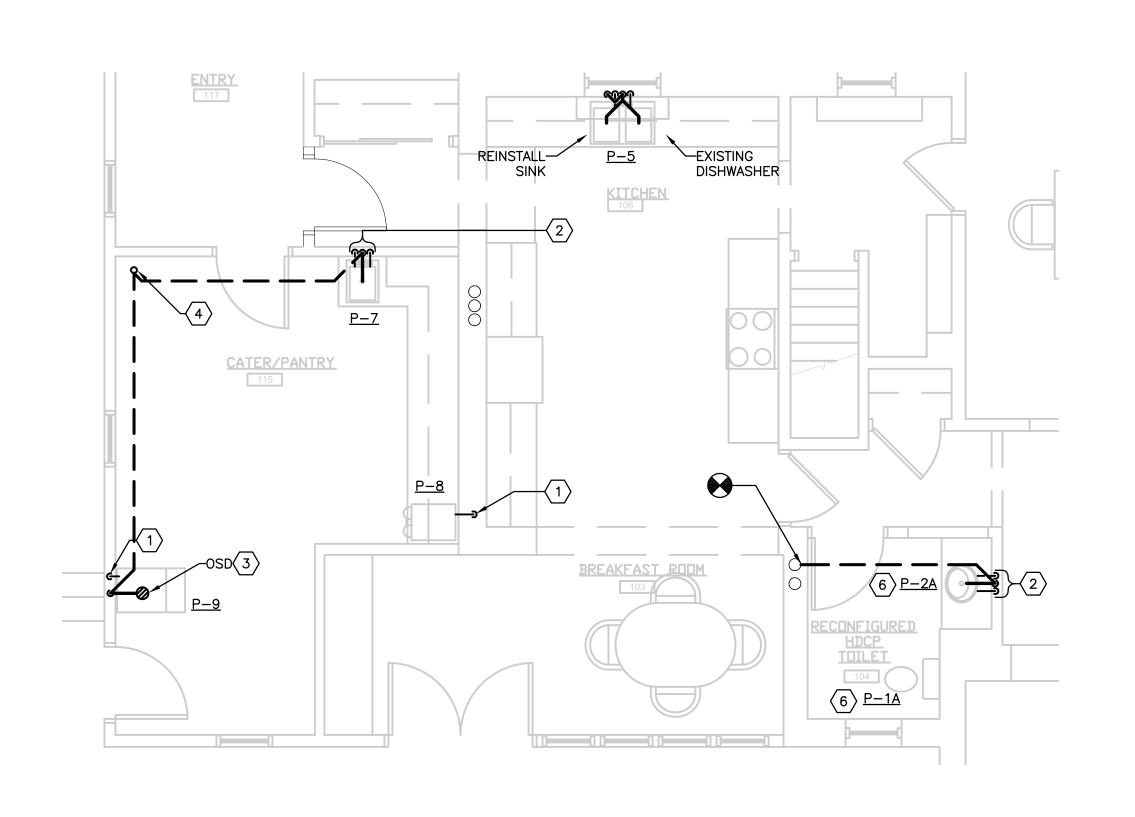
P2.1 PART PLANS — PLUMBING
P3.1 PLUMBING DETAILS & RISER DIAGRAMS

Authorized by:

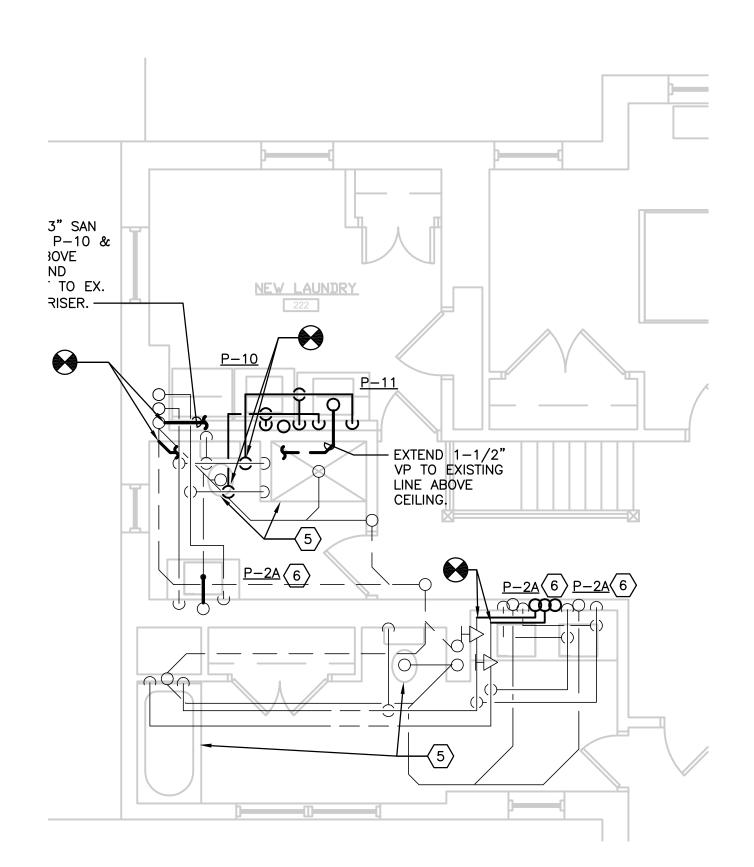
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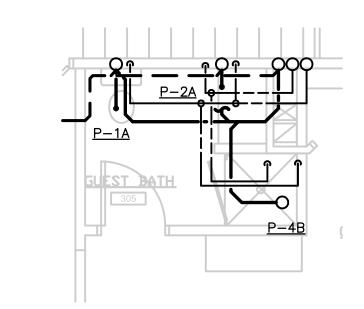




1 PART PLAN - NEW CATER/KITCHEN/HDCP TOILET SCALE: 1/4" = 1'-0"

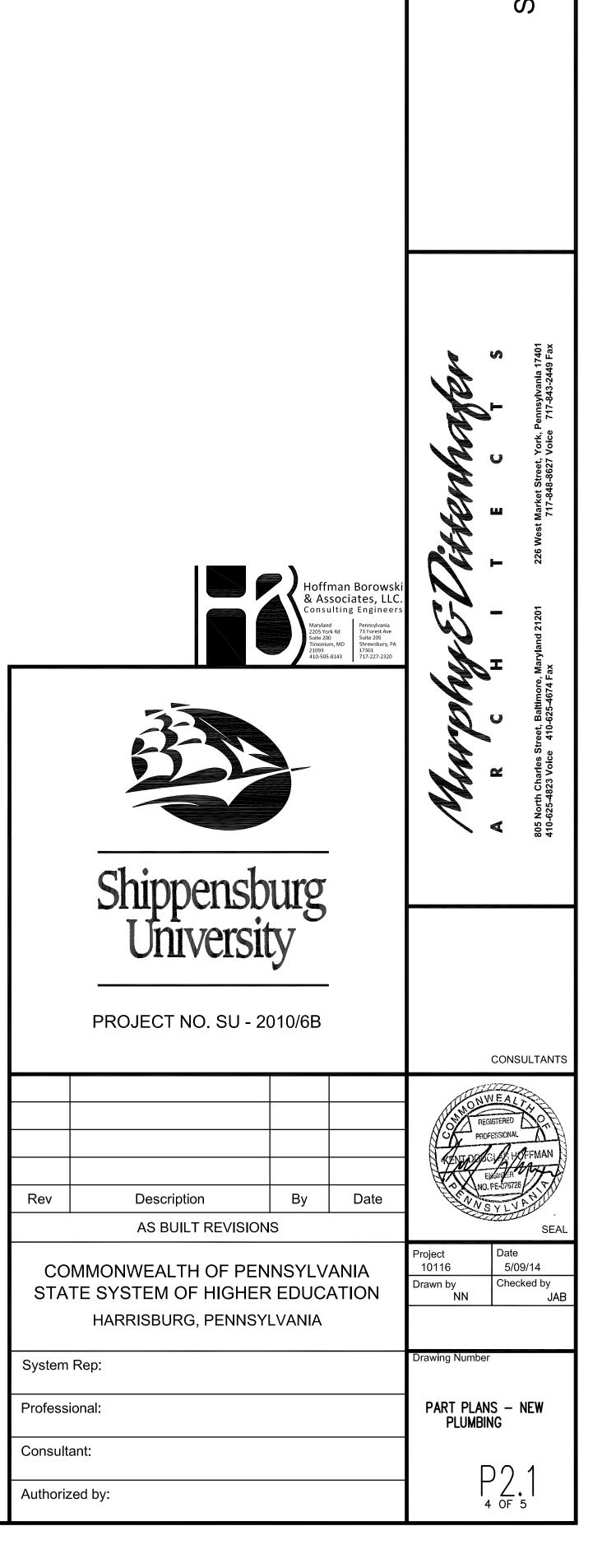


2 PART PLAN - NEW SECOND FLOOR LAUNDRY
SCALE: 1/4" = 1'-0"



3 PART PLAN - GUEST BATH

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



SPECIFIC NOTES (APPLY TO THIS DRAWING WHERE INDICATED):

1) CW DOWN

COORDINATE FINAL LOCATION OF OPEN SITE DRAIN WITH ICE MACHINE DRAIN LOCATION.

6 NEW PLUMBING FIXTURE, MAKE PIPING CONNECTIONS TO EXISTING ROUGH-INS.

 $\overline{2}$ CW, HW & SAN DOWN

5 EXISTING PLUMBING FIXTURE TO REMAIN

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

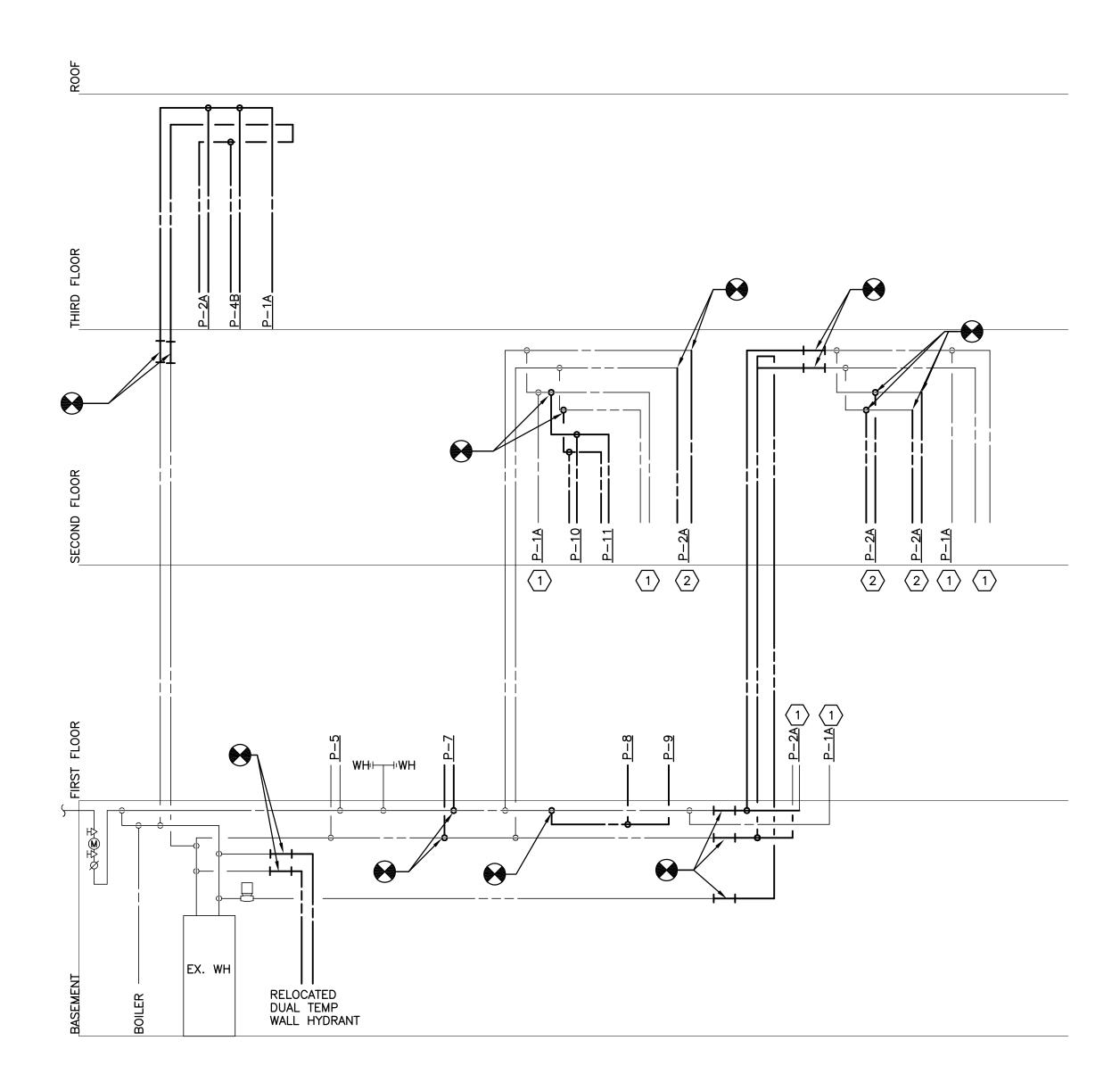


3 <u>DETAIL - TEMPERING VALVE PIPING</u>
SCALE: NOT TO SCALE

PROVIDE A NEW AND EXISTING TEMPERING VALVE AT EACH FIXTURE WITH A HOT WATER CONNECTION.

SPECIFIC NOTES (APPLY TO THIS DRAWING WHERE INDIC 1) EXISTING PLUMBING FIXTURE TO REMAIN

 $\stackrel{\frown}{2}$ NEW PLUMBING FIXTURE, MAKE PIPING CONNECTIONS TO EXISTING ROUGH-INS.



— CAULKING

-WALL SLEEVE

— EXTERIOR WALL

INSULATION
WHERE SPECIFIED——

1 DETAIL - PIPE SLEEVE SCALE: NOT TO SCALE - REFRIGERATION PIPING

DOMESTIC WATER RISER DIAGRAM SCALE: NOT TO SCALE

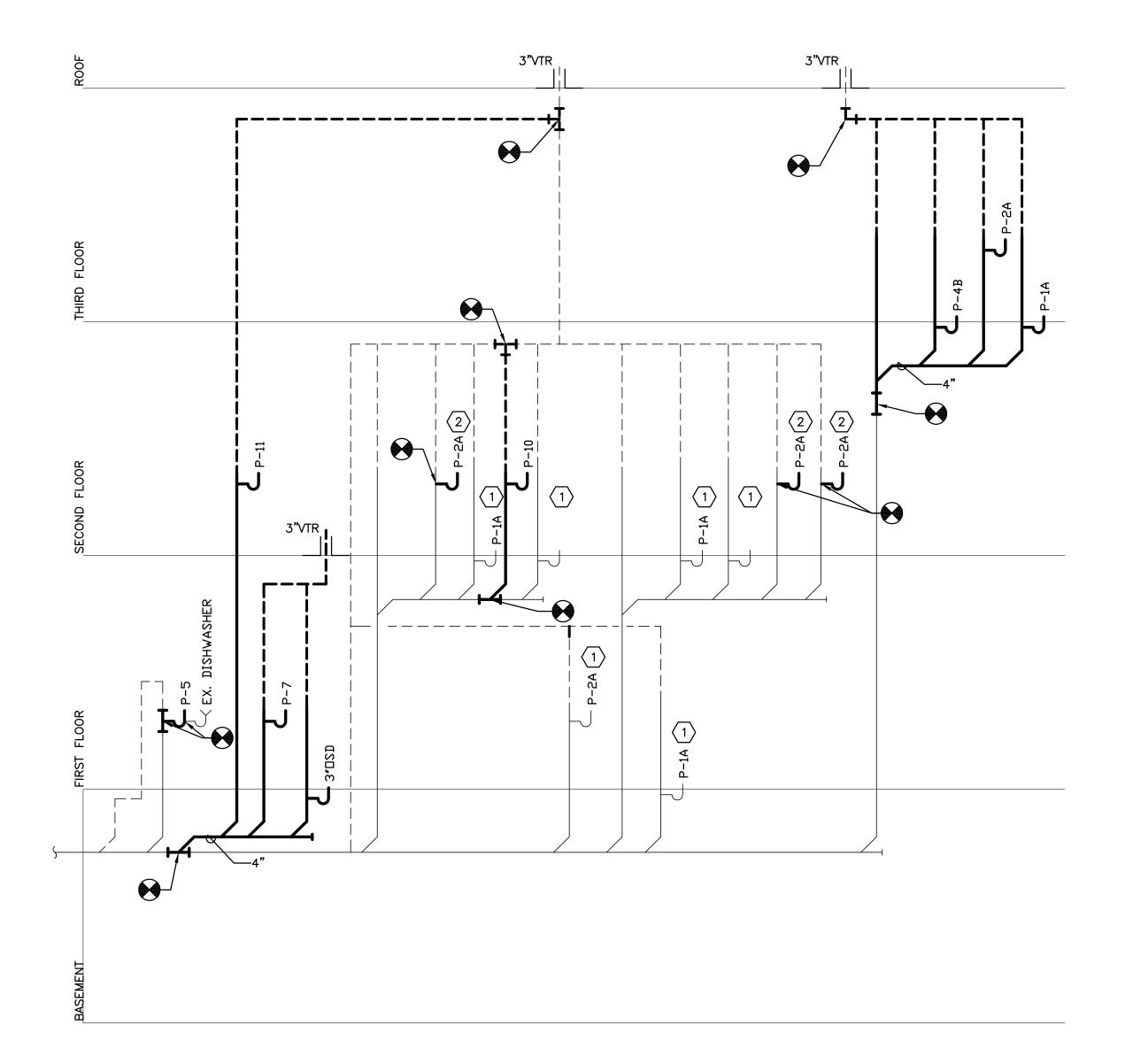
R RISER DIAGRAM

✓ DRAIN FROM FAN COIL UNITS

CAULK AROUND PIPE TO MAKE WATERTIGHT

---- DEEP SEAL 'P' TRAP

2 <u>DETAIL - TYPICAL OPEN SITE DRAIN</u> SCALE: NOT TO SCALE



SANITARY RISER DIAGRAM
SCALE: NOT TO SCALE



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HARRISBURG, PENNSYLVANIA

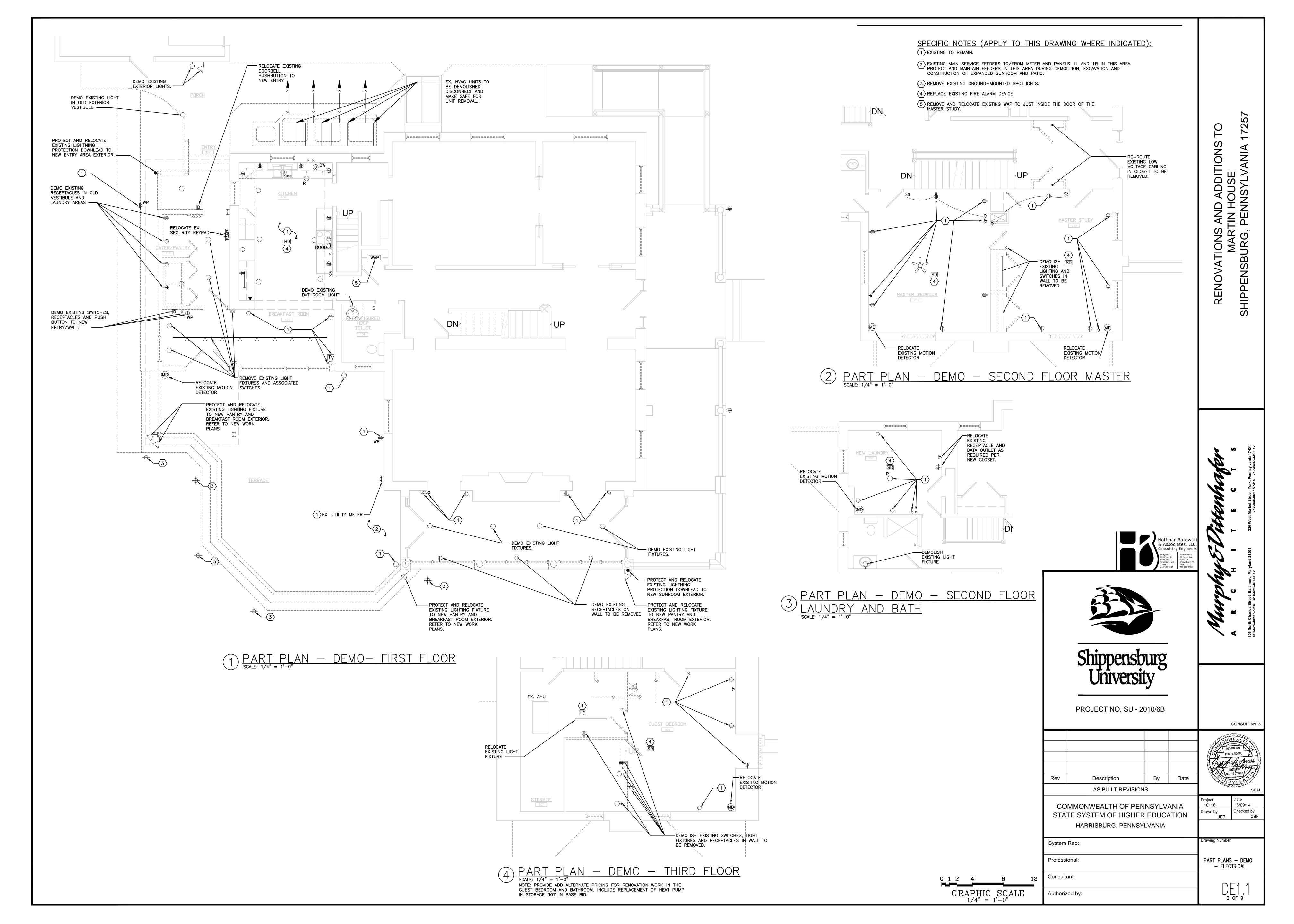
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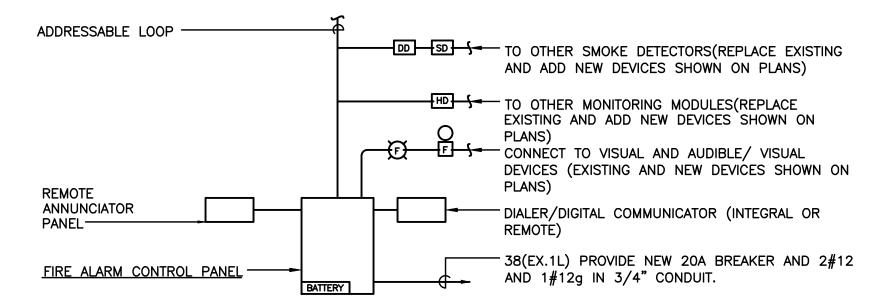
System Rep:

Professional:

PLUMBING DETAILS & RISER DIAGRAMS

P 3.1 5 OF 5





FIRE ALARM RISER DIAGRAM NOT TO SCALE

- 1. FIRE ALARM SYSTEM EQUIPMENT IS SHOWN ON THE RISER, HOWEVER, WIRING IS NOT SHOWN. WIRING VARIES BETWEEN MANUFACTURERS. THE WIRING AND CONDUIT SHALL BE INSTALLED IN ACCORDANCE
- 2. PROVIDE SMOKE DETECTOR AT FIRE ALARM CONTROL PANEL LOCATION.

WITH MANUFACTURER RECOMMENDATIONS.

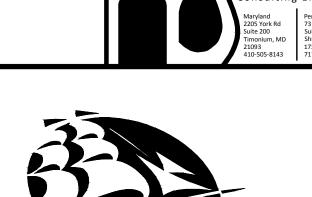
- 3. COORDINATE FINAL LOCATION OF ANNUNCIATOR WITH LOCAL FIRE MARSHAL. AS A BASIS OF DESIGN, ANNUNCIATOR SHALL BE LOCATED AT SIDE ENTRY (AS INDICATED ON PLANS).
- 4. PROVIDE (1) 4 PAIR CATSE TELEPHONE CABLE IN 3/4" CONDUIT FROM FIRE ALARM DIGITAL COMMUNICATOR TO MAIN TELEPHONE BACKBOARD LOCATION.
- 5. MINIMIZE DISTURBANCE TO WALLS AND CEILINGS WHERE INSTALLING NEW FIRE ALARM WIRING AND DEVICES. NOTIFY ARCHITECT OF ANY REQUIRED WALL, FLOOR OR CEILING CUTS PRIOR TO STRTING WORK.

ELE(

UNLESS OTH	EIGHTS SHALL BE TO THE CENTER OF THE DEVICE ABOVE FINISHED FLOOR IERWISE NOTED. SINGLE POLE SWITCH — M.H. 48" A.F.F.			ELECT abbrev.
S S3	THREE-WAY SWITCH - M.H. 48" A.F.F.	Ø □	MOTOR — HORSEPOWER INDICATED WHERE APPLICABLE NON-FUSED SAFETY DISCONNECT OR SWITCH. SIZE	A AFF
S4 SF	FOUR—WAY SWITCH — M.H. 48" A.F.F. FAN SWITCH — M.H. 48" A.F.F.		AS NOTED. M.H. 60" A.F.F.	AIC
ST ST	TIMER SWITCH(0 TO 15 MINUTES UNLESS NOTED OTHERWISE)	— E)	FUSED SAFETY DISCONNECT OR SWITCH. SIZE AS NOTED M.H. 60" A.F.F.	AWG C CKT
S D	M.H. 48" A.F.F. DIMMER SWITCH — M.H. 48" A.F.F.		ENCLOSED MAGNETIC MOTOR STARTER. NEMA SIZE 1 STARTER UNLESS OTHERWISE NOTED. M.H. 5'-6" A.F.F.	CLG DC
SM	MANUAL MOTOR STARTER WITH THERMAL OVERLOADS - M.H. 48" A.F.F.		ENCLOSED COMBINATION MAGNETIC MOTOR STARTER AND DISCONNECT. NEMA SIZE 1 STARTER UNLESS OTHERWISE NOTED	DE/TD DIAM
So	OCCUPANCY SENSOR WALL SWITCH. WATT STOPPER #WS-200 - M.H. 48" A.F.F.		M.H. 5'-6" A.F.F. PANELBOARD - SURFACEMOUNTED, RECESSED	E EF
SNL OC	WALL SWITCH WITH NIGHT LIGHT — M.H. 48" A.F.F. CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR.		MOUNTED — M.H. 6'—6" TO TOP TRANSFORMER	EMT F
R	WATT STOPPER #DT-355 RELAY FOR POWER TO OCCUPANCY SENSOR	$\Phi \widehat{\Phi}_{\nabla}$	MULTI OUTLET ASSEMBLY WITH TYPES AND	FLA FSS
()	JUNCTION BOX FLUSH OR SURFACE MOUNTED ON WALL	•	QUANTITIES OF OUTLETS AS SHOWN/NOTED. M.H. 42" A.F.F. OR 8" ABOVE COUNTER. DOORBELL PUSH BUTTON STATION — M.H. 48" A.F.F.	FT G OR GRD
0	JUNCTION BOX MOUNTED FLUSH IN FLOOR	▼	TELEPHONE OUTLET BOX WITH BLANK COVER PLATE AND 3/4" CONDUIT	H.I.D. H.O.A.
Ф	JUNCTION BOX FLUSH OR SURFACE MOUNTED ON WALL	ª ▼	UP TO NEARBY ACCESSIBLE CEILING SPACE. M.H.= 18" A.F.F. TELEPHONE OUTLET BOX WITH VISUAL FLASHING LIGHT	HP KV
	WIRING IN OR ON CEILINGS AND WALLS. FOR BRANCH CIRCUITS, HASH MARKS INDICATE THE NUMBER OF		WITH BLANK COVER PLATE AND 3/4" CONDUIT UP TO NEARBY ACCESSIBLE CEILING SPACE. M.H.= 24" A.F.F.	KVA KW
	CONDUCTORS IF MORE THAN THE DEFAULT OF 2 PLUS GROUND. SEE PANELBOARD SCHEDULE FOR WIRING METHOD, SIZES OF CONDUCTORS AND SIZES OF CONDUIT WHERE APPLICABLE.	₩W	TELEPHONE OUTLET BOX WITH BLANK COVER PLATE AND 3/4" CONDUIT UP TO NEARBY ACCESSIBLE CEILING SPACE. "W" INDICATES MOUNTING HEIGHT AT 54" A.F.F.	M.H. MCB
	WIRING IN OR UNDER FLOOR OR SLAB. FOR BRANCH CIRCUITS. HASH MARKS INDICATE THE NUMBER OF CONDUCTORS IF MORE	•	3-PORT TELEPHONE/DATA OUTLET BOX WITH COVER PLATE AND 3/4"	MH MLO
	THAN THE DEFAULT OF 2 PLUS GROUND. SEE PANELBOARD SCHEDULE FOR SIZES OF WIRING AND CONDUITS.		CONDUIT UP TO NEARBY ACCESSIBLE CEILING SPACE — M.H.= 18" A.F.F. (2) RG45 AND (1) TYPE F.	MTD N.C.
	HOMERUN TO PANEL. HASH MARKS INDICATE THE NUMBER OF CONDUCTORS IF MORE THAN THE DEFAULT OF 2 PLUS GROUND.	∇	DATA OUTLET BOX WITH BLANK COVER PLATE AND 3/4" CONDUIT UP TO NEARBY ACCESSIBLE CEILING SPACE — M.H.= 18" A.F.F.	NEC NFSS
	SEE PANELBOARD SCHEDULE FOR WIRING SIZES AND NUMBER OF CONDUCTORS.		ELECTRIC DOOR STRIKE	NL P
\rightarrow{\right	FIRE ALARM AUDIBLE APPLIANCE WITH TOP 6" BELOW CEILING OR 90" A.F.F. MINIMUM.	PO BO	PROGRAM BELL DOORBELL CHIME	PH PVC
Ē	FIRE ALARM MANUAL PULL STATION — M.H. 48" A.F.F.		DOORBELL LIGHT	PWR REC
5 O E	FIRE ALARM AUDIBLE AND VISUAL SIGNALING APPLIANCE. SUBSCRIPT DENOTES CANDELLA RATING — M.H. 80" A.F.F. TO BOTTOM OF LENS.	S FS	SPEAKER — FLUSH CEILING MOUNTED SPEAKER — WALL MOUNTED	RM UL
_ 5 ©	FIRE ALARM VISUAL APPLIANCE. SUBSCRIPT DENOTES CANDELLA RATING. M.H. 80" A.F.F. TO BOTTOM OF LENS.	T √	TELEVISION OUTLET (SINGLE TAP) AT 18" A.F.F.	W W/
FACP	FIRE ALARM CONTROL PANEL - M.H. 6'-6" TO TOP	SP	TELEVISION SYSTEM CABLE SPLITTER	w/ WH WP
FAAP HD	FIRE ALARM ANNUNCIATOR PANEL — M.H. 54" A.F.F. THERMAL (HEAT) DETECTOR — CEILING MOUNTED	C CR	P.A. SYSTEM CALL—IN STATION AT 48" A.F.F. CARD READER AT 48" A.F.F.	***
HD	THERMAL (HEAT) DETECTOR — CEILING MOUNTED THERMAL (HEAT) DETECTOR — WALL MOUNTED	<u> </u>	GROUND - SUBSCRIPT DENOTES SIZE	
SD SD	SMOKE DETECTOR — CEILING MOUNTED SMOKE DETECTOR — WALL MOUNTED	—∓#X PS	POWER SUPPLY	
	DUCT TYPE SMOKE DETECTOR	DL	DOOR LOCK	
TS	VALVE TAMPER SWITCH	DDL DC	DOUBLE DOOR LOCK DOOR CONTACT	
FS MM	WATER FLOW SWITCH MONITOR MODULE	MD	MOTION DETECTOR	
CM	CONTROL MODULE	KP	KEY PAD	
	DOOR HOLD OPEN DEVICE - M.H. 6'-0" A.F.F.	KL REX	KEY LOCK REQUEST TO EXIT DEVICE	
	EMERGENCY SHUT DOWN PUSH BUTTON STATION WITH COVER MOUNTED AT 54" A.F.F.	MON	MONITOR	
99 99	SINGLE STATION SMOKE DETECTOR — CEILING MOUNTED SINGLE STATION SMOKE DETECTOR — WALL MOUNTED	MXP	MULTIPLEXER	
Y	4" BELOW CEILING TO TOP OF DETECTOR	□□□	CAMERA	
0	LIGHTING FIXTURE – 2'X4' FLUORESCENT FIXTURE TYPE AS SPECIFIED	PP	"KNOX BOX" PUSH PAD	
0	LIGHTING FIXTURE - 2'X2' FLUORESCENT FIXTURE TYPE AS SPECIFIED	ECAP	EMERGENCY CALL ANNUNCIATOR PANEL - M.H. 6'-6" TO TOP	
— —	LIGHTING FIXTURE - FLUORESCENT STRIP - TYPE AS SPECIFIED	DVR	DIGITAL VIDEO RECORDER	
0	LIGHTING FIXTURE - RECESSED OR	DH	MULTIMEDIA CABINET	
Q	SURFACE MOUNTED — TYPE AS SPECIFIED LIGHTING FIXTURE — WALL MOUNTED — TYPE AS	EK WAP	ELECTRONIC KNOB WITH HINGES WIRELESS ACCESS POINT. CAT-6 CABLE FROM LOCATION INDICATED TO BASE	MENT SERVER
	SPECIFIED LIGHTING FIXTURE — 1'X4' FLUORESCENT — TYPE	ER	UL 924 EMERGENCY TRANSFER RELAY. BODINE GTD SERIES OR EQUAL	
	AS SPECIFIED LIGHTING FIXTURE — WALL MOUNTED	$\boxed{\bigcirc} \ \varphi$	DEVICES AND CIRCUITRY SHOWN AS LIGHT LINEWEIGHT	
	FLUORESCENT - TYPE AS SPECIFIED	п	ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.	
	TRACK LIGHTING — TYPE AS SPECIFIED	Ď M	DEVICES AND CIRCUITRY SHOWN AS LIGHT LINEWEIGHT	
X	CEILING FAN - TYPE AS SPECIFIED	L¥ M	AND WITH "X" DESINGATES EXISTING TO BE REMOVED UNLESS OTHERWISE NOTED.	
	EXHAUST FAN AND LIGHT COMBO - TYPE AS SPECIFIED			
	EMERGENCY LIGHT - TYPE AS SPECIFIED			
	EXIT SIGN — UNIVERSAL MOUNTING. NUMBER OF SHADED AREAS INDICATE NUMBER OF FACES. ARROWS INDICATED DIRECTIONAL FACE.			
•	LIGHTING FIXTURE — TYPE AS SPECIFIED — FILLED CIRCLE DENOTES ON EMERGENCY CIRCUIT, ON NIGHTLIGHT			•
<u> </u>	CIRCUIT OR WITH EMERGENCY BALLAST. LIGHTING FIXTURE — SPOT — TYPE AS SPECIFIED			
r $\langle 1 \rangle$	SPECIFIC NOTE - REFER TO SPECIFIC NOTES			5
Δ	REVISION NOTE — REFER TO REVISION BLOCK			
$\sqrt{1}$				
•	SPECIFIC AREA NOTE — REFER TO SPECIFIC NOTES DUPLEX RECEPTACLE — NEMA 5—20R CONFIGURATION —			
YY Ma	M.H. 24" A.F.F. DUPLEX RECEPTACLE — 5—20R NEMA CONFIGURATION			Chi
P	GROUND FAULT INTERRUPT — M.H. 24" A.F.F			SIII
#	DOUBLE DUPLEX RECEPTACLE — NEMA CONFIGURATION — 5—20R — M.H. 24" A.F.F.			T
$oldsymbol{\Phi}$	SINGLE RECEPTACLE — NEMA L14—20R, 240V 20 AMP — M.H. 24" A.F.F.			U
P	DUPLEX RECEPTACLE $-$ 5-20R NEMA CONFIGURATION M.H. 24" A.F.F HALF CONTROLLED BY SWITCH.			
^С Ф	FLUSH CEILING MOUNTED DUPLEX RECEPTACLE. NEMA 5-20R CONFIGURATION.			PROJE
WP P	"WP" SUBSCRIPT INDICATES RECEPTACLE WITH WEATHERPROOF COVER PLATE.			
 PP	DIAGONAL LINE DENOTES RECEPTACLE MOUNTED AT 42" A.F.F. OR 8" ABOVE COUNTER			
" @	MOTION DETECTOR (SECURITY SYSTEM)			
WR	CEILING MOUNTED WIRELESS REPEATER			
				1
			Rev	De
				AS
				OMMONWE
			STA	TE SYSTE
				HARRIS
			ELECTRICAL DRAWING LIST: System	n Rep:

ELECTRICAL ABBREVIATIONS ABBREV. **DESCRIPTION** ERE APPLICABLE AMPERE WITCH. SIZE ABOVE FINISHED FLOOR AFF AMPS INTERRUPTING CURRENT AWG AMERICAN WIRE GAUGE . SIZE AS NOTED CONDUIT CKT CIRCUIT NEMA SIZE 1 M.H. 5'-6" A.F.F. CLG CEILING DIRECT CURRENT OR STARTER AND DE/TD DUAL ELEMENT/ TIME DELAY UNLESS OTHERWISE NOTED DIAM DIAMETER **EMERGENCY** CESSED EXHAUST FAN ELECTRIC METALIC TUBING EMT FUSED OR FUSIBLE FLA FULL LOAD AMPS FSS FUSED SAFETY SWITCH I.H. 48" A.F.F. G OR GRD GROUND HIGH INTENSITY DISCHARGE COVER PLATE AND 3/4" CONDUIT H.O.A. HAND-OFF-AUTOMATIC PACE. M.H.= 18" A.F.F. HORSEPOWER FLASHING LIGHT CONDUIT KILOVOLTS KILO-VOLT-AMPERE PACE. M.H.= 24" A.F.F. KILOWATTS COVER PLATE AND 3/4" CONDUIT PACE. "W" INDICATES M.H. MOUNTING HEIGHT MCB MAIN CIRCUIT BREAKER METAL HALIDE WITH COVER PLATE AND 3/4" MLO MAIN LUGS ONLY CEILING SPACE - M.H.= 18" A.F.F. MTD MOUNTED NORMALLY CLOSED NEC NATIONAL ELECTRIC CODE PLATE AND 3/4" CONDUIT NFSS NON FUSED SAFETY SWITCH PACE - M.H. 18" A.F.F. NIGHT LIGHT POLE PHASE POLYVINYL CHLORIDE POWER RECEPTACLE ROOM UNDERWRITERS LAB VOLTS WATTS B" A.F.F. WITH WATER HEATER WEATHER-PROOF A.F.F.







PROJECT NO. SU - 2010/6B

Date Rev Description AS BUILT REVISIONS

COMMONWEALTH OF PENNSYLVANIA STATE SYSTEM OF HIGHER EDUCATION HARRISBURG, PENNSYLVANIA

E0.1 ELECTRICAL COVER SHEET PART PLANS — DEMO ELECTRICAL OVERALL FLOOR PLANS — ELECTRICAL PART PLANS — NEW ELECTRICAL ELECTRICAL RISERS AND SCHEDULES E6.1

System Rep: Professional: Consultant: Authorized by:

5/09/14 10116 Drawn by JEB Checked by

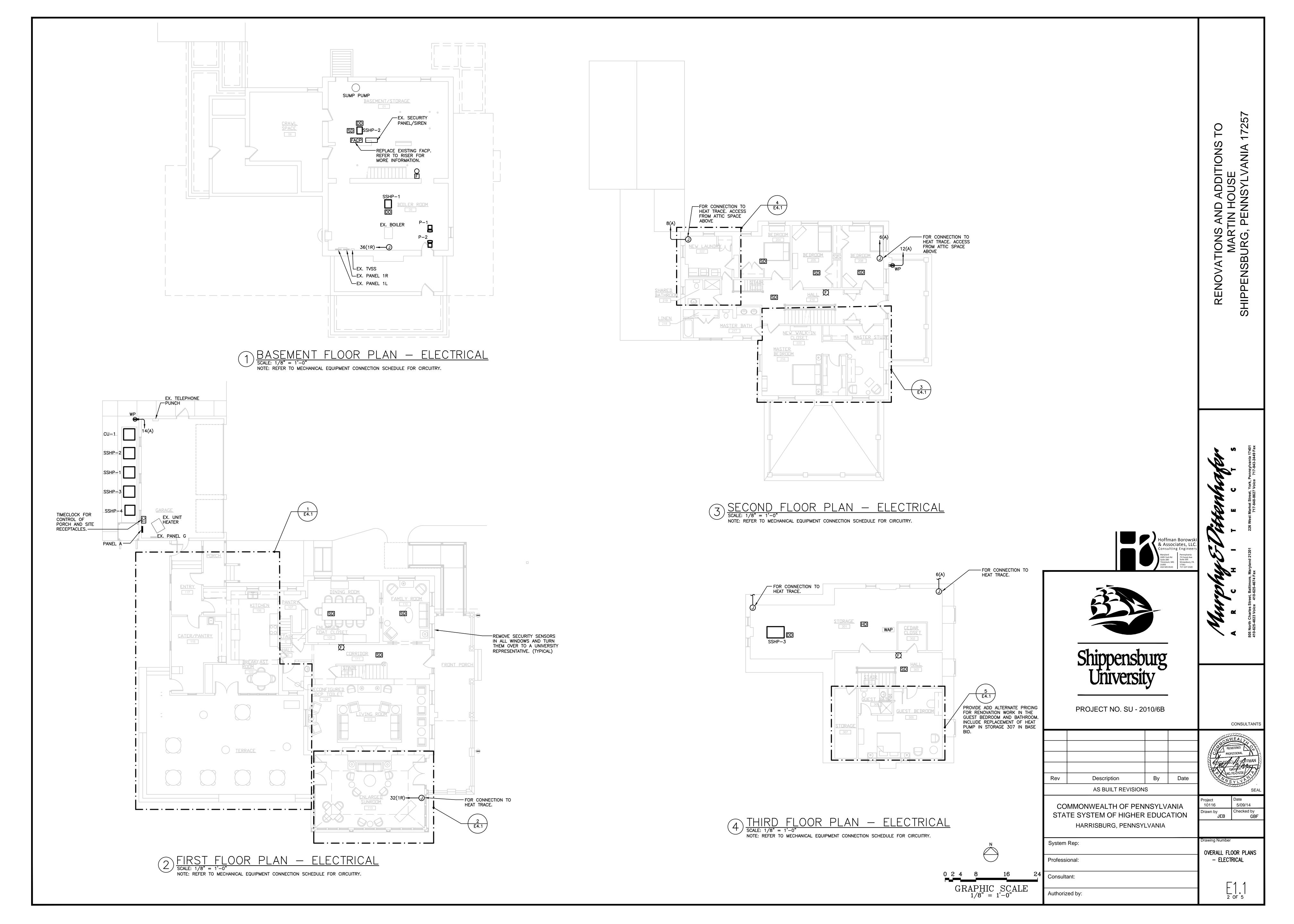
CONSULTANTS

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TIONS MART URG,

rawing Number **ELECTRICAL** COVER SHEET

E 0.1



1 PART PLAN - NEW CATER/PANTRY/ENTRY/KITCHEN

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

UTILITY METER -

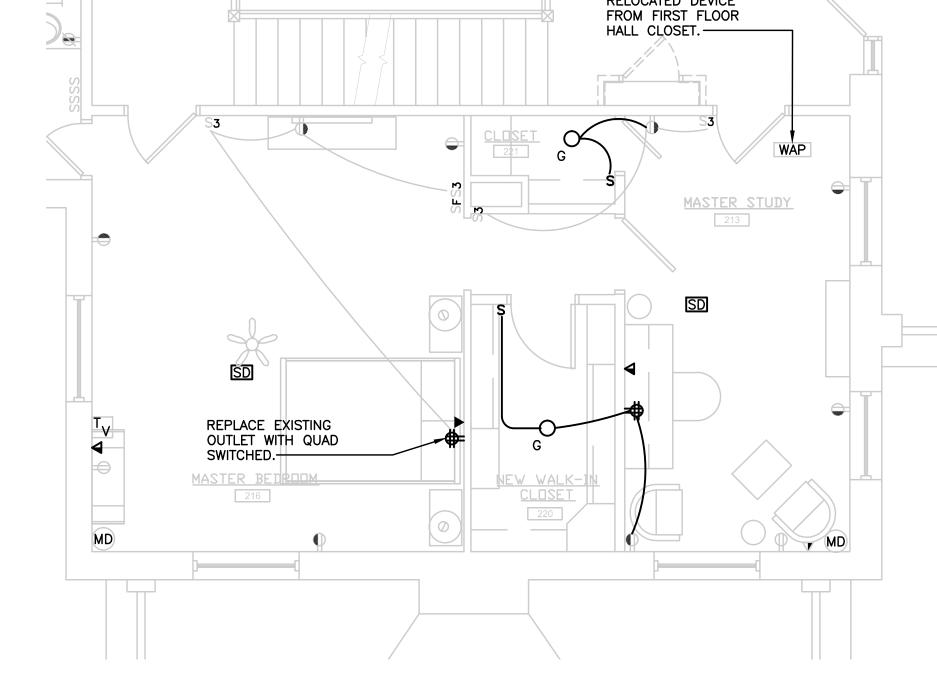
HD

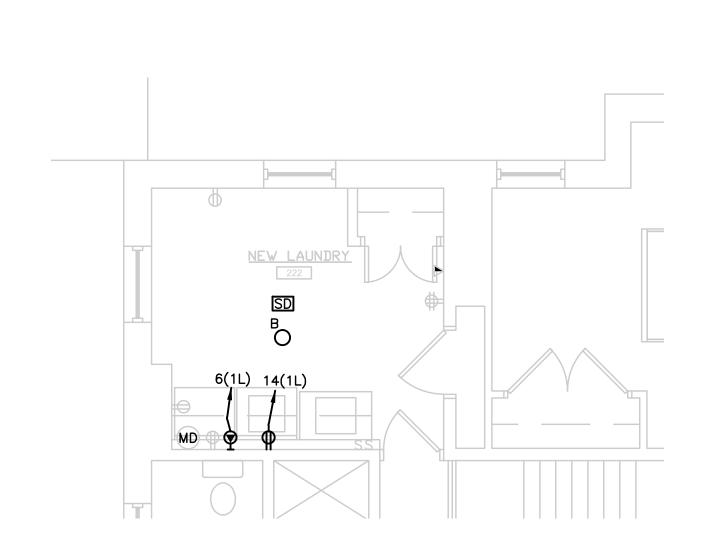
CONNECT TO EXISTING LOCAL LIGHTING CIRCUIT.

WAP

5 PART PLAN - THIRD FLOOR SCALE: 1/4" = 1'-0" NOTE: PROVIDE ADD ALTERNATE PRICING FOR RENOVATION WORK IN THE GUEST BEDROOM AND BATHROOM. INCLUDE REPLACEMENT OF HEAT PUMP IN STORAGE 307 IN BASE BID.







GRAPHIC SCALE 1/4" = 1'-0" Authorized by:

0 1 2 4

	Shippens Univers	burg sity	-	
	PROJECT NO. SU	- 2010/6B	Т	CONSI
				REGISTERED PROFESSIONAL ENGINEER
Rev	Description	Ву	Date	WSYLV
	AS BUILT REVIS	IONS		Project Date
	MMONWEALTH OF P E SYSTEM OF HIGH HARRISBURG, PENN	ER EDUC		10116 5/09 Drawn by JEB Check
System F	Rep:			Drawing Number
Professio	nal:			PART PLANS — N ELECTRICAL
Consulta	nt:			1
Authorize	d by:			- L4.

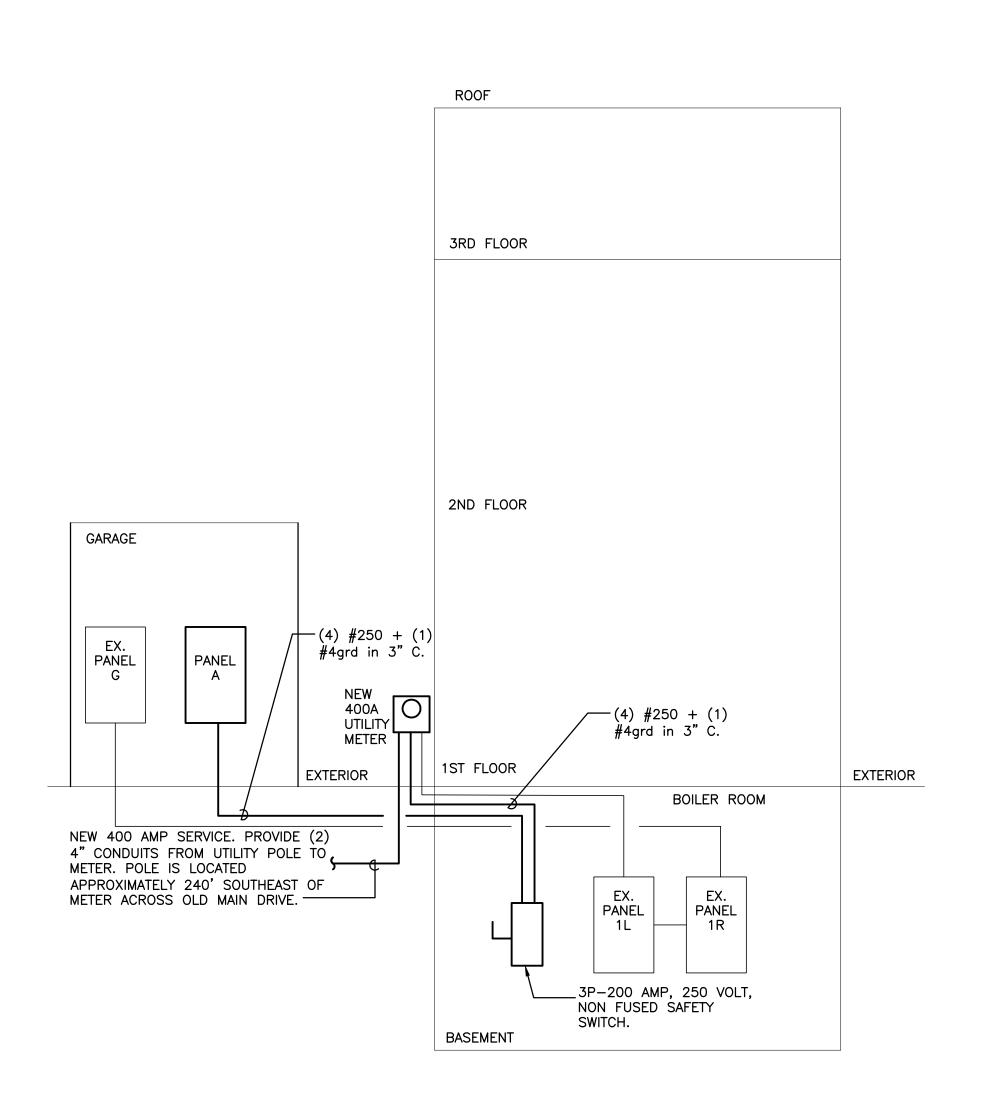
4 PART PLAN - NEW SECOND FLOOR LAUNDRY SCALE: 1/4" = 1'-0"

		E	QUIPME	ENT CO	DNNECT	TION S	CHEDU	LE		
							FSS @ UNIT	Γ		
DESIG.	TONS	LOAD	UNIT	VOLTS	PHASE	POLE	FRAME	FUSE	CIRCUIT	REMARKS
AHU-1 (OUTDOOR)	5	34.5	Α	208	1	2	60	50	1(A)	
AHU-1 (INDOOR)		3/4	HP	208	1	2	30	20	1(1R)	
AHU-2 (OUTDOOR)	3.5	29.2	Α	208	1	2	60	45	5(A)	
AHU-2 (INDOOR)		1/2	HP	208	1	2	30	20	2(1R)	
AHU-3 (OUTDOOR)	2	34.5	Α	208	1	2	60	50	9(A)	
AHU-3 (INDOOR)		3/4	HP	208	1	2	30	20	5(1R)	
AHU-4 (OUTDOOR)	4	11.9	Α	208	1	2	30	20	13(A)	
AHU-4 (INDOOR)		1/3	HP	208	1	2	30	20	6(1R)	
CU-1	3	26	A	208	1	2	60	40	2(A)	
EF-1	 	80	w	120	1 1	MMS		1 40	(4)	
P-1	+	1-1/2	HP	120	1 1	1	30	30	9(1L)	
P-2	+	1-1/2	HP	120	1 1	1 1	30	30	9(1L)	
4	+	1-1/2	111	120	 '	 	1 30	30	3(12)	
1	1		I	1	1	I	I	1	11	I

(1) PROVIDE WP/GFI RECEPTACLE ON WITHIN 25' OF UNIT. CONNECT TO CIRCUIT INDICATED (2) COMBINATION STARTER UNLESS NOTED OTHERWISE

(3)	INDOOR UNIT	POWERED AND	CONTROLLED VIA OUTDOOR UNIT.	
(4)	CONNECT TO	LOCAL LIGHTING	CIRCUIT. CONTROL VIA WALL SWITCH.	

OTE:	VERIFY CEILING AND WALL CONSTRUCTION AND FINISH	ES WITH THE A	RCHITECT'		FINISH SCH		
	MOUNTING FRAMES, BRACKETS AND HARDWARE AS RE INDICATED ARE TO BOTTOM OF FIXTURE	QUIRED TO BE	COMPATIE	LE WITH ARCHITE	CTURAL FINIS	HES. MOUNTING HEIC	GHTS
YPE	DESCRIPTION	VOLTS	LAMP NO.	S TYPE	MAX W.	MOUNTING	MANU. / MODEL No. (OR APPROVED EQUAL)
A	6" RECESSED LED DOWNLIGHT. VERIFY FINISH OPTIONS WITH ARCHITECT. 3000K COLOR TEMP. INTEGRAL DRIVER.	120	1	LED	18	RECESSED	LIGHTOLIER C6L OR FOAL POINT FL6D OR VANTAGE A6VOPLED
В	DECORATIVE SURFACE MOUNTED FIXTURE FOR BREAKFAST ROOM AND LAUNDRY ROOM. PENDANT MOUNT, EMPIRE BRASS FINISH,	120	3	100W A19	300	PENDANT	QUOIZEL HA2820ER SERIES
С	DECORATIVE BATH WALL SCONCE 22-1/2" WIDE, EMPIRE BRASS FINISH.	120	3	100W A19	300	WALL/SURFACE	QUOIZEL HA8603ER SERIES
D	SURFACE MOUNTED SHOWER LIGHT UL LISTED FOR WET LOCATION. VERIFY FINISH OPTIONS WITH ARCHITECT. 3000K COLOR TEMP. INTEGRAL DRIVER.	120	1	LED	34	SURFACE	STONCO VR2LED OR PRISMA MAGICLICK 20 OR TERON TV
F	DECORATIVE SURFACE MOUNTED FIXTURE FOR NEW ENTRY. FLUSH MOUNT, GEORGIAN BRONZE FINISH.	120	1	75W A19	75	SURFACE	QUOIZEL BO182GN SERIES
G	DECORATIVE SURFACE MOUNTED FIXTURE FOR CLOSETS. 16", EMPIRE BRASS FINISH	120	3	75W A19	225	SURFACE	QUOIZEL BU1617ER SERIES
Н	DECORATIVE PENDANT LANTERN FIXTURE FOR PORCH. UL LISTED FOR WET LOCATIONS. 20", SATIN ANTIQUE BRASS FINISH, ETCHED GLASS PANELS.	120	1	42W CLF	42	PENDANT	BRASS LIGHT GALLERY LONDON 8" EXT PENDANT SERIES
J	DECORATIVE WALL LANTERN FIXTURE FOR EXTERIOR. UL LISTED FOR WET LOCATIONS. 16", SATIN ANTIQUE BRASS FINISH, ETCHED GLASS PANELS.	120	1	42W CLF	42	WALL/SURFACE	BRASS LIGHT GALLERY LONDON 8" EXT WALL LIGH SERIES
K	LOUVERED STEPLIGHT MOUNTED IN DECKING. UL LISTED FOR WET LOCATIONS. VERIFY FINISH WITH ARCHITECT. 4000K COLOR TEMP. INTEGRAL DRIVER.	120	1	LED	20	RECESSED	HADCO RSS2 OR GARDCO 941L OR LUCIFER SSL—ALED



(1)	ELECTRICAL NOT TO SCALE	RISER	DIAGRAM
	NOT TO SCALE		

V:	120/240		Bus:	200A		Rema	rks:	NEW	PANEL I	N GA	RAGE		1	Conn.	KVA	Amps		DEI	M. KVA:	3:
Ph:	1		Main:	MCB									Sun	n/Avg	31.9	89		DEM.	AMPS:	
W:	3		Mtg:	SURF.	ACE									Α	16.1	134		S	PARE%:	
AIC:	10k		Poles:	24										В	15.9	132			MCA:	
кт Т	FOR	Notes	<u> </u>	CI	RCUITING		1	СВ	LOAD	СКТ	FOR	Notes		CIF	RCUITING		Ι	СВ	LOAD	
			SETS	NO	SIZE	C.	Р	Α	KVA				SETS	NO	SIZE	C.	Р	Α	KVA	
1	AHU-1 (OUTDOOR)		1	2/1	8/10	3/4"	2	50	3.59	2	CU-1		1	2/1	8/10	3/4"	2	35	2.7	
3							\vdash		3.59	4							$\vdash \exists$		2.7	
5	AHU-2 (OUTDOOR)		1	2/1	8/10	3/4"	2	45	3.04	6	HEAT TRACE (GUTTERS)	(3)	1	2/1	12/12	3/4"	1	20	1	
7							\vdash		3.04	8	HEAT TRACE (GUTTERS)	(3)	1	2/1	12/12	3/4"	1	20	1	
9	AHU-3 (OUTDOOR)		1	2/1	8/10	3/4"	2	50	3.59	10	REC: SITE	(1)(2)	1	2/1	12/12	3/4"	1	20	0.54	
					-		\vdash	-	3.59	12	REC: FRONT PORCH	(2)	1	2/1	12/12	3/4"	1	20	0.54	
13	AHU-4 (OUTDOOR)		1	2/1	8/10	3/4"	2	45	1.24	14	REC: EXT GARAGE		1	2/1	12/12	3/4"	1	20	0.36	
15					-		\vdash	-	1.24	16	REC: SIDE PORCH		1	2/1	12/12	3/4"	1	20	0.18	ı
	SPARE				-		1	20		18	SPARE						1	20		ı
	SPARE						1	20		20	SPARE						1	20		
	SPARE						1	20		22	SPARE						1	20		
23	SPARE						1	20		24	SPARE						l 1 l	20		

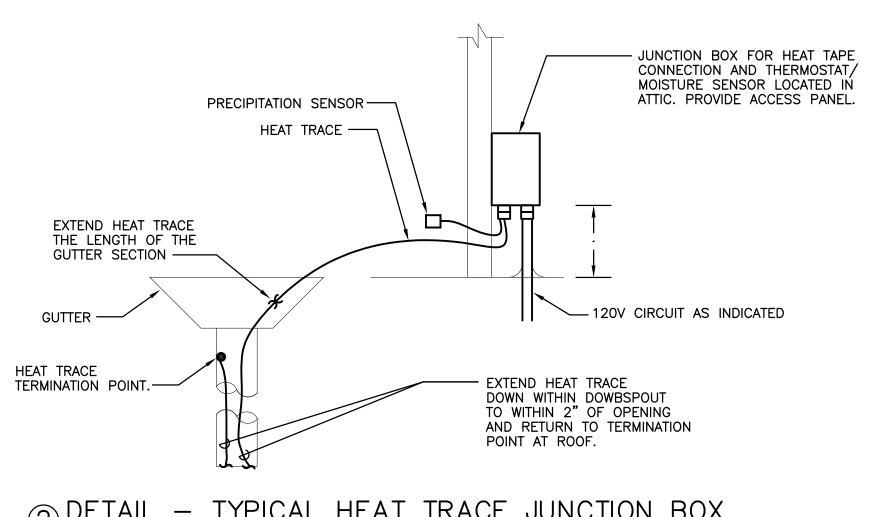
(1) COORDINATE LOCATION WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
(2) CONTROL VIA TIMECLOCK.

-)	COI	IIIOL	V I/	HIVILCEOCK
3)	GFI	BREA	KER.	

V:	120/240		Bus:	225A		Remar	rks:	EXISTI	NG PAN	IEL IN	BASEMENT			Conn.	KVA	Amps		DEN	И. KVA:	
Ph:	·		Main:	мсв									Sun	n/Avg	13.4	3 7			AMPS:	
W:	3		Mtg:	SURF.	ACE									Á	9.7	81		S	PARE%:	
AIC:	10k		Poles:											В	3.7	31			MCA:	
KT	FOR	Notes	<u> </u>	CI	RCUITING		ī	СВ	LOAD	СКТ	FOR	Notes		C	RCUITING		1	СВ	LOAD	
Νī	TOK	Notes	SETS	NO	SIZE	C.	Р	A	KVA	I CKI	I TOK	Notes	SETS	NO	SIZE	C.	Р	Δ	KVA	
1	EX. BASEMENT LTG		EX	EX	EX	EX	1	20	1000	2	REC: SUNROOM		1	2/1	12/12	3/4"	1	20	0.2	
	EX. BASEMENT REC		EX	EX	EX	EX	1	20		4	EX. FIRE & SECURITY		EX	EX	EX	EX	1	20	"	
	EX. WASHER		EX	EX	EX	EX	1	20		6	NEW DRYER		1	3/1	10/10	3/4"	1	30	2.5	
7	EX. BOILER		EX	EX	EX	EX	1	20		8						<u> </u>	F-I		2.5	
9	NEW PUMPS		1	3/1	8/10	3/4"	1	50	4.8	10	EX. WATER HEATER		EX	EX	EX	EX	2	30		
11	EX. AHU UNIT		EX	EX	EX	EX	2	20		12							\vdash			
3								-		14	REC: NEW LAUNDRY		1	2/1	12/12	3/4"	1	20	0.2	
	EX. GARBAGE DISP		EX	EX	EX	EX	1	20		16	EX. BASEMENT HEAT		EX	EX	EX	EX	1	20		
	EX. KITCHEN LTG		EX	EX	EX	EX	1	20		18	EX. LIVING/PORCH LTG		EX	EX	EX	EX	1	20		
	SPARE						1	20		20	EX. LIVING REC		EX	EX	EX	EX	1	20		
	SPARE						1	20			EX. LIVING REC		EX	EX	EX	EX	1	20		
	EX. BREAKFAST RM REC		EX	EX	EX	EX	1	20	0.4	4	EX LIVING/PORCH REC		EX	EX	EX	EX	1	20		
	REC: TERRACE		1	2/1	12/12	3/4"	1	20	0.5	26	EX. FAMILY REC		EX	EX	EX	EX	1	20		
	EX. KITCHEN REC		EX	EX	EX	EX	1	20		28	EX. DINING REC		EX	EX	EX	EX	1	20		
	EX. KITCHEN REC		EX	EX	EX	EX	1	20		30	EX. VEST CLOSET REC		EX	EX	EX	EX	1	20		
	EX VEST CLOSET REC		EX	EX	EX	EX	1	20			EX RANGE TOP		EX	EX	EX	EX	1	20		
	EX. OVEN		EX	EX	EX	EX	2	30		34	REC: PANTRY EQUIP		1	2/1	12/12	3/4"	1	20	0.2	
	EX. DISHWASHER		EX	ΕX	EX	EX	\vdash			36	EX. KITCHEN REC		EX	EX	EX	EX	1	20		
	REC: PANTRY EQUIP		1	2/1	12/12	3/4"	1	20	0.2		FACP		1	2/1	10/10	3/4"	1	25	0.5	
	REC: PANTRY EQUIP		1	2/1	12/12	3/4"	1	20	0.2		REC: PANTRY		1	2/1	12/12	3/4"	1	20	0.6	
1 1	REC: PANTRY EQUIP		I 1	2/1	12/12	3/4"	I 1 I	20	0.2	42	REC: PANTRY	I	1 1	2/1	12/12	3/4"	I 1 l	20	l 0.4 l	

V: 120/240 Bus: 225A						Remarks: EXISTING PANEL IN BASEMENT								Conn. KVA			DEM. KVA:			15
Ph: 1 Main: MCB													Sum/Avg 14.5			40		DEM.	AMPS:	62
W:	3		Mtg:	SURF	ACE									Α	7.3	60		S	PARE%:	1:
AIC:	10k		Poles:	42										В	7.3	60			MCA:	71.
CKT	FOR	FOR Notes CIRCUITING		RCUITING	CB LOAD CKT FOR						Notes	CIRCUITING					СВ	LOAD	•	
			SETS		SIZE	C.	Р	A	KVA				SETS		SIZE	C.	Р	Α	KVA	
1	AHU-1(INDOOR)		1	2/1	12/12	3/4"	2	20	0.79	2	AHU-2(INDOOR)		1	2/1	12/12	3/4"	2	20	0.56	a
3					<u> </u>				0.79	4									0.56	b
5	AHU-3(INDOOR)		1	2/1	12/12	3/4"	2	20	0.42	6	AHU-4(INDOOR)		1	2/1	12/12	3/4"	2	20	0.79	a
7							\vdash		0.42	8	 - -						F-		0.79	b
9	EX. EXT REC						1	20		10	EX. HALL LTG						1	20		а
11	EX. MASTER BATH LTG						1	20		12	EX. BATH LTG						1	20		Ь
13	EX. MASTER BATH REC						1	20		14	EX. BEDROOM REC/LTG						1	20		а
	EX. MASTER BATH REC						1	20		16	EX. BEDROOM REC/LTG						1	20		b
	EX. MASTER BED REC						1	20			EX. BEDROOM REC/LTG						1	20		а
	EX. MASTER STUDY REC						1	20			EX. BEDROOM REC/LTG						1	20		b
	EX. GUEST BATH REC		1	2/1	12/12	3/4"	2	20	0.2		EX. AHU						2	20		а
	EX. STORAGE REC						1	20		24							\vdash			b
	EX. GUEST LTG/REC						1	20			EX. DOORBELL						1	20		а
	EX. GUEST LTG/REC		1	2/1	12/12	3/4"	2	20	0.2		EX. CIRC PUMP						1	20		b
	GUEST BATH LTG		1	2/1	12/12	3/4"	2	20	0.2		EX. TVSS						1	20		а
	EX.						2	15			HEAT TRACE (GUTTERS)	(1)	1	2/1	12/12	3/4"	1	20	1	b
33							┢┪				SPARE						1	20	1	а
	EX.						2	15			MECH CONTROLS		1	2/1	12/12	3/4"	2	20	0.2	<u>b</u>
37							ᆸ				SPARE						1	20		а
	EX.						2	30			EX GARAGE PANEL						2	100	3.3	b
41	-						\vdash \dashv			42							\vdash \dashv		3.3	а

										EX.	G									
V:	120/240		Bus:	100A		Rema	rks:	EXIST	ING PAN	VEL IN	GARAGE		(Conn.	KVA	Amps		DEN	Л. KVA:	5.75
Ph:	1	Main: MCB									Sum/Avg 6.6		18	DEM. AMPS: SPARE%:		24				
W:	W: 3 Mtg: SURFACE									A 3.3		28	15							
AIC: 10k			Poles: 30										В	3.3	28			MCA:	27.6	
														С						
CKT	FOR	Notes		CI	RCUITING			СВ	LOAD	CKT	FOR	Notes		CIF	RCUITING			СВ	LOAD	•
			SETS	NO	SIZE	C.	Р	Α	KVA	1			SETS	NO	SIZE	C.	Р	Α	KVA	
1	EX. POST LTG						1	20	0.5	2	EX. GARAGE DOOR					T	1	20	1	а
3	EX. GARAGE DOOR						1	20	1	4	EX. GARAGE REC						1	20	0.4	b
5	EX. GARAGE REC						1	20	0.4	6	EX. GARAGE REC						1	20	0.4	а
7	EX. GARAGE REC						1	20	0.4	8	EX. GARAGE REC						1	20	0.4	b
9	EX. GARAGE REC		-				1	20	0.4	10	EX. EXT REC						1	20	0.2	а
	EX. EXT REC						1	20	0.2	12	EX. EXT REC						1	20	0.2	b
	EX. EXT REC		-		-	-	1	20	0.2		EX. EXT REC			-			1	20	0.2	а
	EX. EXT REC						1	20	0.2		EX. POST LTG						1	20	0.5	b
17	EX.						3	70		18	SPARE						1	20		а
19							<u> </u>			20	SPARE						1	20		b
21							<u> </u>			-	SPARE						1	20		а
23	SPACE						上			24	SPACE						ဌ			b
	SPACE						上			26	SPACE						ဌ			а
	SPACE						<u> </u>	<u> </u>		-	SPACE						너			b
29	SPACE						 			30	SPACE			I			⊢⊣			а



2 DETAIL - TYPICAL HEAT TRACE JUNCTION BOX SCALE: NOT TO SCALE

	()	Hoffman	Borows
		& Associ Consulting Maryland 2205 York Rd Suite 200 Timonium, MD 21093 410-505-8143	ates, LL0
3			



PROJECT NO. SU - 2010/6B

(00201140.00 2	2010/08		CONSULTANT
Description AS BUILT REVISIO	By	Date	REGISTERED PROFESSIONAL Epidin/ER NO. PE-076726 VSYL SEA
·		·	

COMMONWEALTH OF PENNSYLVANIA STATE SYSTEM OF HIGHER EDUCATION HARRISBURG, PENNSYLVANIA

System Rep: Professional:

Rev

Consultant:

Authorized by:

ELECTRICAL RISERS AND SCHEDULES

'ATIONS MART

S AND ADDITIONS RTIN HOUSE , PENNSYLVANIA

		Republic
🕻 & Associa	Borowski ates, LLC. Engineers Pennsylvania 73 Forest Ave Suite 205 Shrewsbury, PA 17361 717-227-2320	

Project 10116 5/09/14 Checked by GBF Drawn by JEB

E6.1