INTRODUCTION TO BLUEPRINT RE	ADING	AIA Continuing Education Provider	
➤ INSTITUTE FOR FACILITIES MANAGEMENT ➤ NASHVILLE, TN	FACULTY: SADIE GR DIRECTOR, DESIGN	EINER, PE, LEEB AP NE CONSTRUCTION NIVERSITY OF IOWA	

### **AIA Credits**

Credit(s) earned on completion of this course will be reported to American Institute of Architects (AIA) Continuing Education Session (CES) for AIA members.

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Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.



## **CORE DESCRIPTION**

561 Introduction to Blueprint Reading APPAU201909

This hands-on fundamentals course is designed for individuals in facilities administration and operations who are responsible for reviewing design drawings for campus projects. Lear the techniques for reviewing and interpreting plans and elevations by envisioning three-dimensional space from a two-dimension representation. Review how architectural and engineering drawings, better known as "blueprints", once reproduced for review, are structured, layered, detailed, cross-referenced and more.

Faculty: Sadie Greiner

## LEARNING OBJECTIVES

- 1. Discuss the responsibilities for reviewing design drawings for campus project.
- 2. Learn the techniques for reviewing and interpreting plans by envisioning three-dimensional space from a two-dimension representation.
- 3. Review architectural and engineering drawings, are structured, layered, and more
- 4. Review how blue prints are cross referenced.

AIA Continuing Education Provider

## PRESENTATION OUTLINE

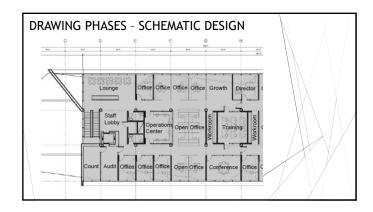
- ▶ DRAWINGS
  - ► COVER SHEET
  - ► SITE PLANS
  - ► ARCITECTURAL PLANS
  - ► ENGINEERING DRAWINGS
  - ► DETAILS / SECTIONS / SCHEDULES
- ► SPECIFICATIONS
  - ► 50 DIVISIONS
- ► ADDENDA
- ► SUPPLEMENTAL INSTRUCTIONS

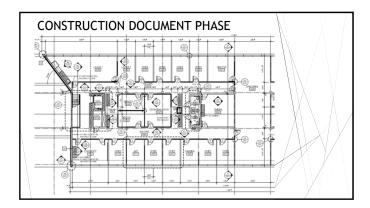


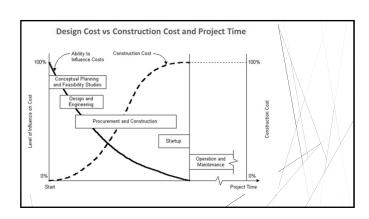
## WHY ARE DRAWINGS CALLED BLUEPRINTS?



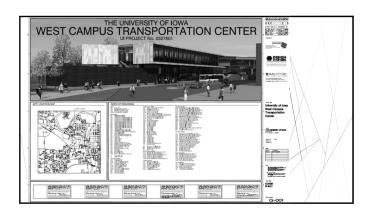


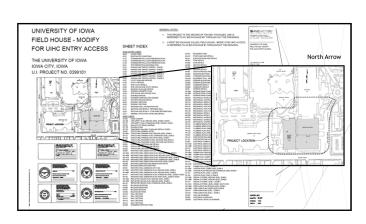


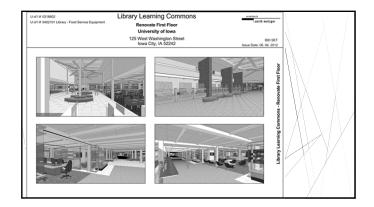


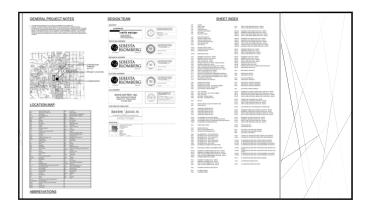


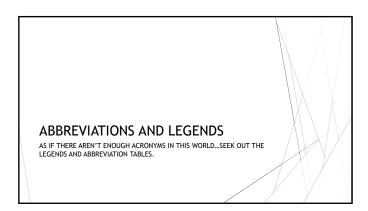
COVER SHEET  PROJECT TITLE, ARCHITECT/ENGINEER NAME(S), CONTACT INFORMATIO PROJECT LOCATION MAP, DATE (ISSUED/ BID) AND INDEX OF PLAN SHEET	

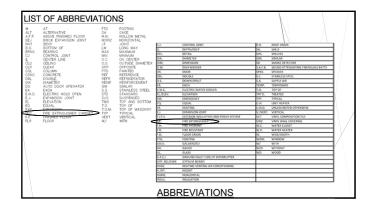


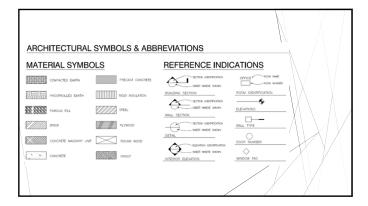












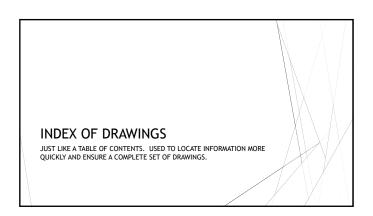
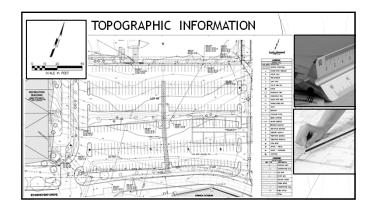
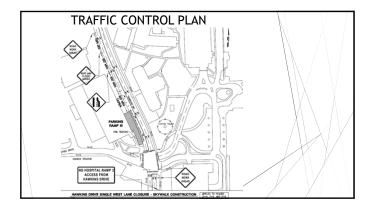


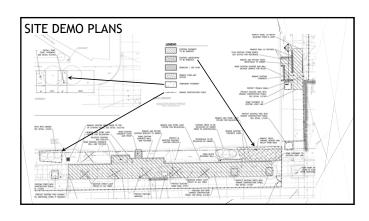
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C2.03 CONSTRUCTION PHASING AND TRAFFIC PLAN C2.04 CONSTRUCTION PHASING AND TRAFFIC PLAN	A-204 EXTERIOR ELEVATIONS A-211 BUILDING SECTIONS		
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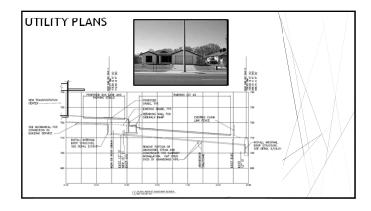
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	S301A M001A PD105A P100A P104A P105A P601A P602A	PARTIAL ROOF FRAMING PLAN MECHANICAL SYMBOLS AND ABBREVIATIONS THEOR A FIFTH FAR FLIMBING DEMO PLANS BASEMENT PLUMBING PLAN AND POTURE SCHEDULE FOURTH FLOOR PLUMBING PLAN FIFTH FLOOR PLUMBING PLAN FURBHOR RESERS PLUMBING RISERS PLUMBING RISERS PLUMBING RISERS	E001A EDL105A ED105A E101A EL105A EP100A EP105A ET105A E200A E201A	ELECTRICAL SYMBOL SCHEDULE FIFTH FLOOR LIGHTING DEMOLITION PLAN FIFTH FLOOR ELECTRICAL DEMOLITION PLAN FIFTH FLOOR SUITE 1031 ELECTRICAL PLANS FIFTH FLOOR FLOOR FLOOR FIFTH FLOOR FOWER AND SYSTEMS PLAN FIFTH FLOOR FOWER AND SYSTEMS PLAN FIFTH FLOOR FOWER AND SYSTEMS PLAN ELECTRICAL SCHEDULES AND DETAILS ELECTRICAL SCHEDULES AND DETAILS ELECTRICAL SCHEDULES AND DETAILS	
	F105A	FIFTH FLOOR FIRE PROTECTION			

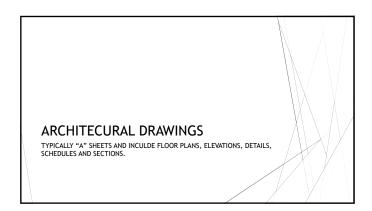
# SITE DRAWINGS TYPICALLY "C" SHEETS AND INCULDE TOPOGRAPHICAL INFORMATION, SOIL BORINGS, SITE DEMOLITION, SITE UTILITY PLANS AND BMP PLANS.

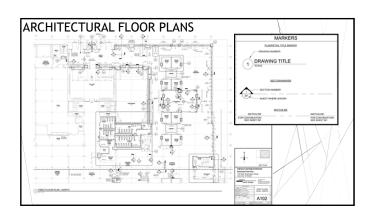


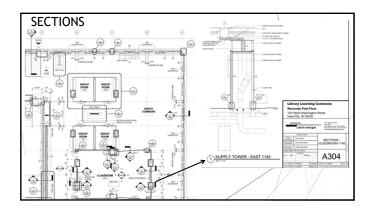


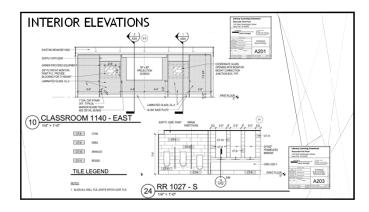


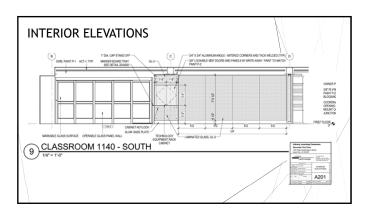


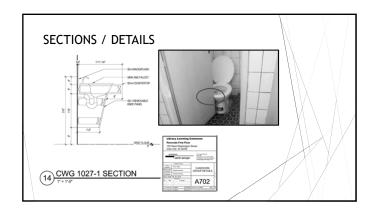


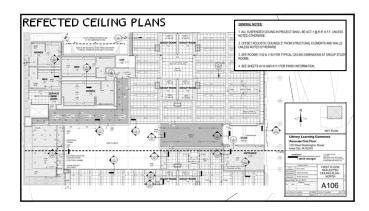


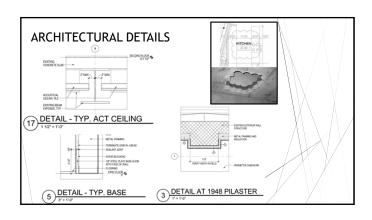








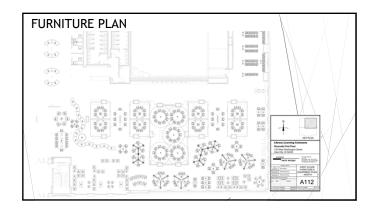


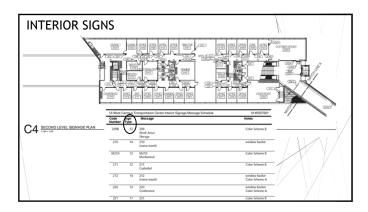


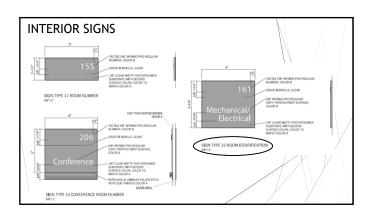
SCHEDULES  FINISH SCHEDULES, DOOR HARDWARE SCHEDULES, FURNITURE SCHEDULES, RESTROOM ACCESSORY SCHEDULES, ETC.	

	Manufacturer	Style/Pattern	Color	Number	Schedule	Description
Woods and Plastics						
Wood 1 (WD-1) Plastic Laminate 1 (PLAM-1)		magrie		092-60	wood doors, casework	match existing wood furniture
Plastic Laminate 1 (PLAM-1) Plastic Laminate 2 (PLAM-2)	Wilsonart	Dove Grey Twitight Zeohyr		092-60 4845-60	countertops	
Plastic Laminate 2 (PLAM-2) Solid Surface 1 (SS-1)	Wilsonart	Tweight Zephyr  Formica Classics	Sierra Mist	4845-60 319	cabinets, accent livindow sills, sink countertop	Sheige with black/red speckles
Solid Surface 1 (SS-1) Melamine	Formica	Formica Classics white	Sierra Mist	319	existing interiors	ibeige with bracking speckles
PVC Edge Banding	-		from manufacturer's finish		faminate countertop edges	match plam 1
rVC toge Banding	_	COROY TO DE SERECTIO	from manufacturers finish	selections	samiliane countertop ecges.	match plam 1
File and Masonry						
Deramic Tite 1 (CT-1)	FloorGress	Architech - matte texture	Forest	721895	break room, lactation room	116" x 16" tile
Deramic Title 2 (CT-2)	Dalitile	Keystones 1"x1" mesaic	Architectural Gray	D109	restroom floor	Sight beige, 1'x1' mosaic floor tile
Glazed Block 1 (GB-1)	Tremayth	Astroglaze SW+	Antique Lace		restroom wall	beige speckle
Flooring	_					
Carpet 1 (CPT-1)	Lees	Shirt	Pleat	GT011-408	administration office/open office areas	Idarkgray linear carpet tile, brick ashlar
Carpet 2 (CPT-2)	Lees	Shirt	Verit	GT011-308	tech service office/open office areas	Imedium gray linear carpet tile, brick ashli
VCT 1	Armstrong	Migrations - Biostride	Ine White	T3504	general	Sefrite vot
Polished Concrete (CONC-1)		polish existing o	oncrete floor		Preservation, Conservation	
Wall Base (WB-1)	Roppe	Pinnacle 4' rubber cove base	Black	100	general	black
# - N	_					
Ceiling Acoustic Ceiling Tile 1 (ACT-1)	Armstrong	Cirrus - Tegular - 2'x2'	white	5844	reneral .	115/16" Prelude grid, white
Acoustic Ceiling Title 2 (ACT-2)	Armstrong	Georgian - square - 2'x4'	white	763D	corridor coffered ceiting	lyerify match to existing tile
Acoustic Certify Title 2 (ACT-2)	Armstorg	Georgian - square - 2 x4-	whoe	7630	scornoor contened centing	Evenily match to existing tile
Paint						
P-1	Pittsburg Paint	eggshell	Moth Gray	515-4	general	off white
P-2	Pittsburg Paint	eggshell	Clive Gray	512-5	admin offices	light accent color
P-3	Pittsburg Paint	eggshell	Sweet Annie	411-5	tech services offices	medium accent color
P-4	Pittsburg Paint	eggshell	Green Briar	411-6	conservation, preservation	dark accent color
P-5	Pittsburg Paint	eggshell	Dark Ash	513-6	upper wall accent	dark gray
N-6	Sherwin Williams	gloss	Black Magic	SW6991	hollow metal door frames	black, match existing building frames
P-7	Pittsburg Paint	semi-gloss	Sharkskin	513-5	exposed structural columns	medium gray
P-8	-			not use		
	Pittsburg Paint	eggshell	match existing build	sing white color	corridor, rm. 5060	white, match existing building color
P-10		egovy - gloss	white		concrete floor drain	epoxy

									DOOR	SCHEDULE			
Door Number	Type	Width	Height	Thickness	Material	Fire Rating	Hardware	Type	Depth	Fra Material	Jamb	Head	Comments
		Terran	7,100	1.3/4"	нм					HM	4/4600 SIM	11/M600 SIM	
1025	-	3-0"	7-10"	13/4"	HM		06	1	5.34*	HM	4/A600 SIM	11/A600 SIM	
1027	-	3.47	7-10°	13/4"	HM		06-2	- 1		HM	2/A600 SIM	11/A600 SIM	
1030		3.6"	7-10"	13/4"	WD	-:-	128	- 1	5 3/4"	HM	2/A600 SIM	1/A600 SIM	
1067-4		3-0"	7-0*	1.3/4"	EX	-	128	- 1	234	EX	2/4600 SIM	1/A600 SIM	LOCKSET, MODEY DOOR SWING AS SHOWN
1068	-	3.0	7.0	1.3/4"	HM		08A	- 1	5.34*	HM	1/8600 SIM	1/M000 SIM	LUCASET, MODET DOOR STITING AS SHOTTIN
1101A	-	3-0"	7-100	1.34	HM		09	- 1	534	HM	1/A600 SM	11/A600 SIM	
1102A-1	-	3.0"	61-107	1.3/4"	WD	60 MN	07	- 1	5.34*	HM	3/M600 SIM	8/8600	
1102A-2	- 1	3.6"	7-101	1.3/4"	HM	60 MIN	08	- 1	5.34"	HM	1/A600	6/A600	
1103		3.0"	7-10"	1.3/4"	WD		07A	- 7	5 3/4"	HM	16/A600	9/8601	
1105		3.0"	7-101	1.3/4"	WD		07A	7	5.34*	HM	15/A600	9/A601 SIM	
1110	- 5	3.0"	7-73/4"	1.3/4"	ALUM		41.74	-	001	ALUM	100.000	201001012	MANUAL ICU DOOR
1111		3.0"	7-73/4"	1.3/4"	ALUM			-		ALUM			MANUAL ICU DOOR
1112	- 5	3.0"	7-73/4"	1.3/4"	ALUM					ALUM			MANUAL ICU DOOR
1113	- 5	3.0"	7-73/4"	1.3/4"	ALUM					ALUM			MANUAL ICU DOOR
1114	- 8	3.0"	7-73/4"	1.3/4"	ALUM					ALUM			MANUAL ICU DOOR
1115	- 5	3.0"	7-73/4"	1.3/4"	ALUM					ALUM			MANUAL ICU DOOR
1117	8	3.0"	7-73/4"	1 3/4"	ALUM					ALUM			MANUAL ICU DOOR
1118	- 5	3.0"	7-73/4"	1.3/4"	ALUM					ALUM			MANUAL ICU DOOR
1140-3	0	15'-8 1/2"	7-11/2	1.3/4"	ALUM		17	- :	v	ALUM	13/A500	7/8304	AUTOMATIC OPERABLE DOOR
1140-4	0	15'-6 1/2"	7-11/2"	1.3/4"	ALUM		17			ALUM	13/A500 S/M	7/A304 S/M	AUTOMATIC OPERABLE DOOR
1150	8	3.0"	7-7 3/4"	1.3/4"	ALUM	- :		-		ALUM	137000 000	73004 0100	MANUAL ICU DOOR
1151	8	3.0"	7-7 3/4"	1.3/4"	ALLIM	-		-		ALUM			MANUAL ICU DOOR
1152	- 5	31.00	7-73/4"	1.3/4"	ALUM			-		ALUM			MANUAL ICU DOOR
1153	8	3'-0"	7-73/4"	1.3/4"	ALUM			-		ALUM			MANUAL ICU DOOR
2065	- 1	31.07	7.0*	1.364*	HM	60 MIN	08	- 1	5.34*	HM	15/8600	17(A600	
3136A-1	F	3'-0"	7.0*	1.3/4"	HM	60 MN	08-1	- 1	5.34*	HM	5/A600 SIM	5/M(00 S/M	THRD FLOOR
8041-1	F	6-0"	7-2"	1 3/4"	HM		16	1	7 3/4"	HM	5/A600	5/A600 SIM	BASEMENT
B044A-1	F	3'-0"	7-2"	1.3/4"	HM		09A	- 1	7.3/4"	HM	5/A600	5/A600 SIM	BASEMENT
8047-1	F	3.0"	7-0*	1.3/4"	EX		17A	1	5.34*	EX	5/A600	5/A600 SIM	RELOCATED EXISTING DOOR, FRAME & HARDWARE - ALARM
ENT1	WG	3.0"	7-10 3/4"	1 3/4"	ALUM		03	-		ALUM	12/A601 SIM	16/A601 SIM	
ENT2	WG	3'-0"	7-10 3/4"	1.3/4"	ALUM		02			ALUM	12/A601 SIM	16/A601	
ENT3	WG	3'-0"	7-10 3/4"	1 3/4"	ALUM		01			ALUM	12/A601 SIM	16/A601	
ENT4	WG	3-0"	7-10 3/4"	1 3/4"	ALUM		03			ALUM	12/A601 SIM	16/A601 SIM	
ENT7	WG	3'-0"	7-10.34*	1.3/4"	ALUM		03			ALUM	12/A601 SIM	11/A601	

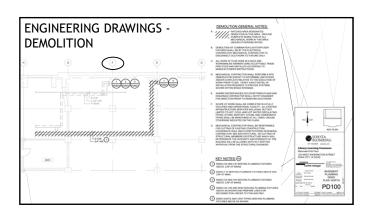


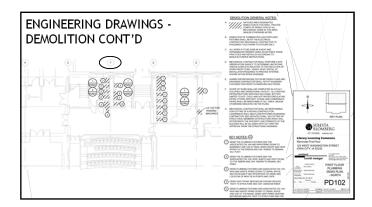


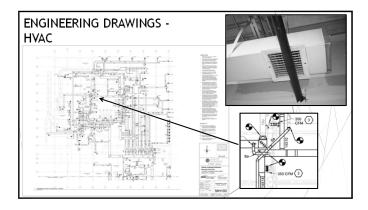


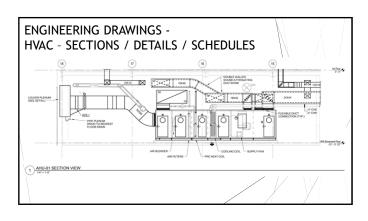
ENGINEERING DRAWINGS TYPICALLY M-E-P or M-E-P-T SHEETS	
MECHANICAL, PLUMBING, FIRE SUPPRESSION, HEATING, VENTILATION & AIR CONDITIONING, ELECTRICAL, TELECOM AND AUDIO/VISUAL	

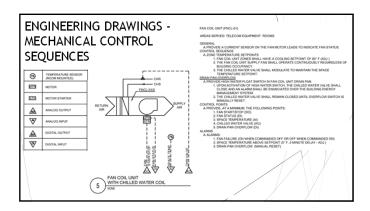
, ,	RING DRAWING		_	SEBESTA
ABBREVI	ATIONS AND L	EGEND:	5	BLOMBERG 877,706,8898 subsulacion
	PIPELINE SYMBOLS		ABBREVIATIONS	Library Learning Commons
PPE LINE SYMPOL	SERVICE	ABBREVIATION	DESCRIPTION	Renovate First Floor
- CA	COMPRESSED AR	DSN	DOWN SPOUT NOZZLE	125 WEST WASHINGTON STREET IOWA CITY, IA 52242
- 4	INSTRUMENT AIR	DF DF	DRINKING FOUNTAIN	101110111, 10 32242
FOR	FUEL OIL RETURN	00	DRY BAB	architects improved
F06	FUEL OIL SUPPLY	FLEC	ELECTRICAL	smith metzger
- roy -	FUEL OIL VENT	60	ELECTRICAL CONTRACTOR	Challe Section
- BFW	BOLER FEED WATER	EWC	ELECTRIC WATER COOLER	OTTO MECHANICAL
O6	OHILLED WATER SUPPLY	6.	ELEVATION	SYMBOLS AND
OR	CHILLED WATER RETURN	EAT	ENTERING AIR TEMPERATURE	11.741 Mana Burbay ABBREVIATIONS
	REFRIGERANT LIQUID	EWT	ENTERING WATER TEMPERATURE	hour Date 06.04.2012
	REFRIGERANT SUCTION	EQUP	EQUIPMENT	* to M001
	REFRIGERANT HOT GAS	tr.	EXHAUST FAN	
——crws——	COOLING TOWER SUPPLY	,	FAHRENHEIT	UNITED BY THE STATE OF THE STAT
CTWR	COOLING TOWER RETURN	FPM	FEET PER MINUTE	1 / 1 / / /
	HEATING WATER SUPPLY	FPS	FEET PER SECOND	
	HEATING WATER RETURN	FE	FRE EXTINGUISHER	
LPS	LOW PRESSURE STEAM (0-15 PSI)	DH	FIRE HYDRANT	
uc	LOW PRESSURE CONDENSATE	FLEX	FLEXIBLE	<b>—</b> / W //
MPS	MEDIUM PRESSURE STEAM (16-75 PSI)	FAT	FLOAT & THEFMOSTATIC	
	MEDIUM PRESSURE CONDENSATE	FL.	FLOOR	
	HIGH PRESSURE STEAM (76 PSI & UP)	FOF	FUEL OIL FILL	
	HIGH PRESSURE CONDENSATE	FOG	FUEL OIL GAUGE	
GLY	GLYCOL	GPH	GALLONS PER HOUR	
	CONDENSATE	OPM.	GALLONS PER MINUTE	
PC	PUMPED CONDENSATE	GALV	GALVANIZED	
CW	COLD WATER	GA	GAUGE	
	HOT WATER	GEN	GENERAL	
FMW	RECIRCULATING HOT WATER	60	GENERAL CONTRACTOR	

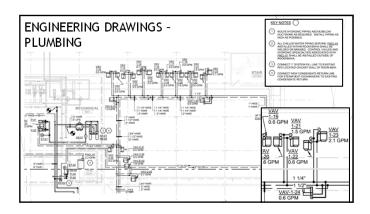


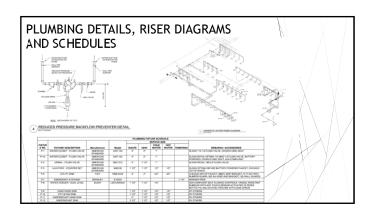


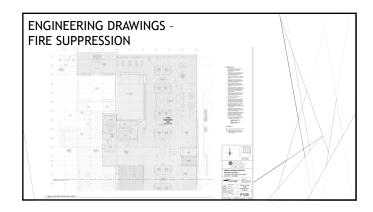


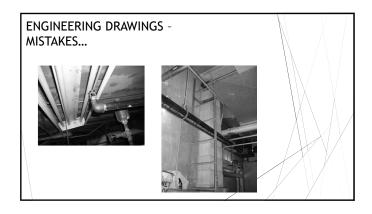


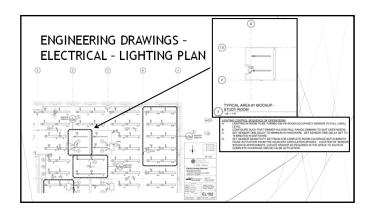


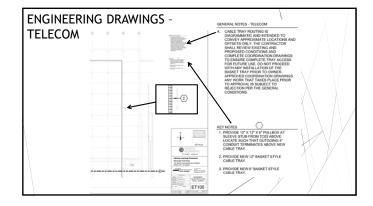


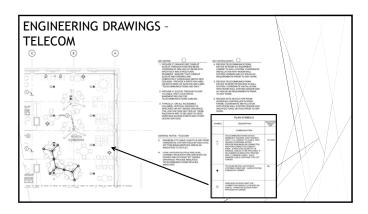


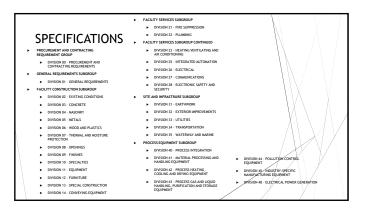












SPECIFICATIONS  PROCEDIFICATIONS  PROCEDITIONS  PROCEDIFICATIONS  PROCEDITIONS  PROCEDIFICATIONS  PROCEDIFICATIONS  PROCEDIFICATIONS  PROC	
ADDENDA ISSUED AFTER PROJECT HAS BEEN ADVERTISED BUT BEFORE BIDS ARE RECEIVED	
ADDENDA  FILD HOUSE MOOTY FOR DND ENTRY ACCESS  DOCUMENT OF IT IS ACCENDENT IS ACCENDENT IS ACCENDENT IS ACCENDENT IS ACCENDENT IS BID DATE: SEPTEMBER 13, 2012, 20 PM CENTRY ACCESS OUR ADDITION OF THE PROJECT MANUAL: The information contained in the Address modeles, apparents or replace information contained in the Project Manual and on the Orizony, and interview made a single of the Contract Operations. Acknowledge recogn of the Addressam by placing the appropriate addressam number in the blank on the Bid Form.  ADDENDATE TO THE PROJECT MANUAL:  Ben st I through time ROD inclusive.  APPLICABLE TO THE DRAWNOO:  Ben SCI through time ROD inclusive.  APPLICABLE TO THE DRAWNOO:  Lut of PIN In-Seets Softman Seets of the Addressam A	

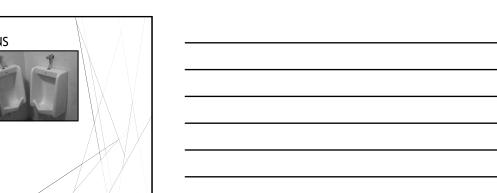
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ITEM#21	SHEET	#C4.02 – UTILITY PROFILES	Commission Commission (Commission Commission
	A.	ADD tracer wire and tracer wire terminal box to the profile, and several detail references to the call-out notes. Refer to attached Supplemental Drawing C.01.	SET FOR THE SET OF THE
ITEM #22	SHEET	#C5.01 - SITE UTILITY DETAILS	Conservations   Bu   7   720
	A.	REVISE the "steel plate" notes on the Typical Section of Detail 7 (Open-Throat Curb Intake Under Pavement) to read: "Steel plate by Bird Package #2 contractor as needed to accommodate staged construction."	STREET, STREET
	В.	<b>DELETE</b> the "Base by Bid Package #1 contractor" note on the Typical Section of Detail 7 (Open-Throat Curb Intake Under Pavement).	
	C.	ADD text (bolded, below) to the new water main assembly call-out of Detail 5 (IN-LINE ANCHOR BLOCK – SECTION) to read as follows:	1251 1756 1764 1765 1765 1765 1765 1765 1765 1765 1765
		"New RJ DIP water main with mechanical joint fittings, valve, and cap (use EBAA Iron Megalug Series 1100)"	50-90 51-90
			1 PROFILE VIEW: WATER MAIN
			SHIVEHATTERY MOON WORKER DESIGNATIONS V ACCOUNT
			A C

# SUPPLEMENTAL INSTRUCTIONS ISSUED AFTER CONTRACT HAS BEEN AWARDED TO A GENERAL CONTRACTOR...

## SUPPLEMENTAL INSTRUCTIONS

- ► ALSO KNOWN AS "ITC" OR "ASI" OR "ESI"
  - ► INSTRUCTIONS TO CONTRACTOR
  - ► ARCHITECT'S SUPPLEMENTAL INSTRUCTION
  - ► ENGINEER'S SUPPLEMENTAL INSTRUCTION
- ► ISSUED THROUGHOUT CONSTRUCTION PHASE
- ► MEANT TO:

  - ▶ PROVIDE CLARIFICATIONS
     ▶ CHANGE CONTRACT REQUIREMENTS











<b>ACTIVITY QUESTION</b>	٧Z	3
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- ► BOYD LAW / ECKSTEIN MEDICAL RESEARCH / CURRIER RESIDENCE
  - ▶ WHAT DOES THE SCOPE OF THE PROJECT COVER?
  - ► WHAT TYPE OF FLOORING IS GOING BACK IN?
  - ▶ DOES THE PROJECT INCLUDE ANY
    - ► BID ALLOWANCES?

      ► BID ALTERNATES?
  - ► UNIT PRICES? ► WERE PLANS CHANGED BY ADDENDA?
  - ► WHAT IS THE PROJECT DURATION?
  - ▶ WHAT SPECIALTY ITEMS ARE INCLUDED IN THE PROJECT?
  - ► IS LIGHTING BEING REPLACED?
  - ► IS HVAC BEING UPGRADED?
  - ➤ ARE DOOR AND DOOR FRAMES BEING REPLACED ALONG WITH ACCESS SECURITY UPGRADES?

This concludes The American Institute of Architects Continuing **Education Systems Course** 

Thank you	$\mathbb{N}$	
► SADIE GREINER, PE, LEED AP ► DESIGN & CONSTRUCTION ► UNIVERSITY OF IOWA	AP ION IWA	
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