MTCCC Sprinkler Replacement

May 15, 2013

<u>Project No. 2 Description:</u> Remove and replace existing sprinkler heads throughout the building.

Potter Lawson No. 2013.07.00



PROJECT:	MTCCC
	SPRINKLER REPLACEMENT

OWNER: MONONA TERRACE COMMUNITY AND CONVENTION CENTER ONE JOHN NOLEN DRIVE MADISON, WISCONSIN 53703

ARCHITECT: POTTER LAWSON, INC. 15 ELLIS POTTER COURT (53711) P.O. BOX 44964 MADISON, WI 53744-4964 PHONE (608) 274-2741

CONSULTANTS:

PROFESSIONAL ENGINEERS: Mechanical

ARNOLD & O'SHERIDAN, INC. 1111 DEMING WAY MADISON, WI 53717 PHONE (608) 821-8500 FAX (608) 821-8501

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SECTION 21 00 00 - FIRE PROTECTION SYSTEM OUTLINE SPECIFICATION

1 2 3	SECTION 21 00 00 - FIRE PROTECTION SYSTEM OUTLINE SPECIFICATION		
4 5	PART ONE - GENERAL		
6			
7 8	SCOPE Drawings and general provisions of Contract, including General and Supplementary Conditions and		
8 9 10	Division 1 Specification Sections, apply to work of this Section.		
11	Fire Protection includes wet-pipe sprinkler protection of the entire building including sprinkler coverage at		
12 13	top and bottom of elevator shafts and elevator equipment rooms. This section includes the following topics:		
14 15 16	This is a design build project. The contractor shall follow scope documents for type of systems, materials and equipment to use.		
17	The contractor shall be the Engineer of Record and prepare, seal and submit drawings and calculations to		
18 19 20	obtain approval and building permit from State, Insurance company, and local authority. Submit drawings and calculations to authorities. Drawings shall be prepared using AutoCAD Version 2010 or newer.		
20	The scope documents, along with local regulations and codes, shall be the basis for the Fire Protection		
22	design and construction.		
23			
24 25	The contractor shall calculate, size and select systems as defined by the scope documents. This shall include coordination with other trade contractors.		
26			
27	GENERAL PROVISIONS		
28	The fire standpipe and sprinkler systems shall be designed and installed in conformance with NFPA 13,		
29 30	Wisconsin Building Code and Fire Code for City of Madison.		
31 32	Fees, permits and inspections shall be obtained and paid for by the Fire Protection Contractor.		
33 34	Include costs to cut and patch walls, floors, roof, and ceiling, affected by new work.		
35 36	Installation shall be warranted for one year after date of acceptance.		
37	Keep premises free from waste materials during construction .		
38 39	UNIT PRICES		
40	When submitting his cost for the project the contractor shall provide a list of man hour rates. These rate		
41	prices shall reflect the cost the contractor will either add or deduct from his base price, where the Owner		
42 43	decides to install or delete systems, piping, or equipment on an individual basis.		
44	DEMOLITION		
45	Where piping is removed and not reconnected with new work, ends of existing services shall be capped as if		
46 47	they were new work.		
48	Identify piping and equipment for removal by demolition contractor. Pipe, equipment, and similar items		
49	demolished, abandoned, or deactivated shall be removed from the site except as specifically noted otherwise		
50	by the Owner. Designated equipment is to be turned over to the Owner for their use at a place and time so		
51	designated. The condition of material and equipment that is to be reused shall be maintained to that		
52 53	existing before work began.		
55			

1	OCCUPANCY REQUIREMENTS
2	Contractor shall verify the planned occupancy and phasing of the building with the Architect and Owner
3	prior to design and construction. Contractor pricing shall reflect these requirements to the extent that fire
4	protection systems must be installed, located, segregated, operational, or otherwise planned to reflect
5	phasing and partial occupancy requirements.
6	
7	Coordinate disruptions for piping installation and system shut-down requirements with existing tenants and
8	with the building Owner.
9	
10	SYSTEM DESCRIPTION
11	Remove and replace existing sprinklers as indicated on the plans. New sprinklers shall match the existing
12	sprinkler types, including style, standard or extended coverage, escutcheon size and color, k-factor, and
13	temperature rating. Contractor shall verify all existing conditions prior to beginning any work.
14	
15	Coordinate schedule of work with owner. Some existing ceilings are scheduled to be re-finished and
16	sprinkler work shall coincide with ceiling work.
17	
18	Contractor shall be responsible for all patching of existing walls and ceiling required to replace the existing
19 20	sprinklers. Contractor shall be responsible for any scaffolding required to reach existing sprinklers.
20	
21	DADT TWO DDODUCTS
22 23	<u>PART TWO - PRODUCTS</u>
23 24	GENERAL
24 25	Items shall be UL listed or FM approved for the intended usage.
26	tems shan be of fisted of five approved for the intended usage.
20 27	PIPE AND FITTINGS
28	Carbon steel pipe, black, thickness per NFPA 13, conforming to ASTM A53, A135, A795. Malleable iron
29	fittings, screwed or mechanical coupling joints.
30	numgs, serewed of meenument coupling joints.
31	SPRINKLERS
32	
33	MANUFACTURERS
34	Central Sprinkler, Grinnel, Reliable, Star Sprinkler, Viking, or Tyco.
35	
36	Refer to plans for sprinkler head types and finishes in each area. Provide sprinkler guards in areas
37	where sprinklers may be subject to damage (i.e. mechanical rooms). Match existing sprinkler types
38	and finishes in all areas.
39	
40	Finished Areas
41	Chrome plated bronze body quick response pendent or concealed sprinklers with glass bulb heat
42	sensor. Semi-recessed sprinklers shall have adjustable recessed escutcheon. Concealed sprinklers
43	shall have adjustable cover plates.
44	
45	Unfinished Areas
46	Plain bronze body, upright or pendent, quick response sprinklers, with solder link or glass bulb for
47	wet system.
48	•
49	RATINGS
50	Use higher temperature-rated sprinkler heads in areas near heat sources, elevator equipment
51	rooms, and elevator shafts. Match existing sprinkler head temperature ratings.
52	
53	MISCELLANEOUS EQUIPMENT

1 Provide other equipment and accessories, for a sprinkler system installation in accordance with NFPA and EM requirements

2 FM requirements.3

PART THREE - EXECUTION

- 4 5
- 6 INSTALLATION
- Design and install sprinklers in conformance with requirements of NFPA 13, Wisconsin Building Code,
 Insurance regulations, and Local Fire Marshal Regulations.
- 9
- 10 Provide pressure and flow tests as required by NFPA and insurance company. Inform Owner, Architect,
- and Local Fire Department one day prior to performing the test so that if anyone desires, they may witnessthe test.
- 13
- 14 GENERAL
- 15 Maintain systems in clean condition internally during construction.
- 16
- 17 Coordinate shut-downs with owner.
- 18
- 19 SPRINKLERS
- 20 Locate sprinklers maintaining clearances from obstructions, ceilings and walls. Install sprinklers level in
- 21 locations not subject to spray pattern interference.
- 22
- 23 Sprinklers shall be centered in ceiling panels and tiles. A 1" tolerance for sprinkler placement is acceptable.
- 24
- 25 TESTING
- 26 Perform a flow test of the fire pump per NFPA 20. Inform the Architect and Owner of the scheduled date
- 27 for the fire pump flow test. Keep records of testing for submission in the Maintenance Manuals.

28

End of Section

FIRE PROTECTION SYMBOLS AND ABBREVIATIONS NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED NECESSARILY APPLY TO THIS PROJECT.

FIRE PROTECTION SYSTEMS SYMBOLS ABBREVIATION ABBREVIATION <u>DESCRIPTION</u> <u>SYMBOL</u> DRAIN LINE _____D_____ DRY STANDPIPE -DSP _____ DSP _____ RPBP DRY PIPE SPRINKLER DSPR FIRE PROTECTION WATER SERVICE F —— F —— DDCV PREACTION SPRINKLER PSPR DCVA SPR SPRINKLER PIPING WSP WET STANDPIPE FS FI EXISTING PIPING (SERVICE DESIGNATED) XSPR ------XSPR--------EXISTING PIPING TO BE REMOVED/ ABANDONED (SERVICE DESIGNATED) XSPR -FDC FPTC FI HYD FI TE -TF -UP DN CO WCO FCO FI YCO ΥÆ UN ----PRV -POC ------FFE

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		ABBREVIATIO
DESCRIPTION	SYMBOL	ABBREVIATION
SPRINKLER	•	AFF
SIDEWALL SPRINKLER		AP
REDUCED PRESSURE ZONE		BFF
BACKFLOW PREVENTER		BHP BLDG
DOUBLE DETECTOR CHECK VALVE ASSEMBLY		BOP
DOUBLE CHECK VALVE ASSEMBLY		BOS
FLOW SWITCH		Cl CL
ANGLE VALVE - FIRE HOSE		DIA
CONNECTION	ц Ц П	DWG
TEST AND DRAIN VALVE	Ę. ⊂	EA EC
FIRE DEPARTMENT CONNECTION	\$	EJ
FIRE PUMP TEST CONNECTION	<u>م</u> م	EQUIP
	۲ ۲	ETR EXIST
FIRE HYDRANT	Ö	°F
TEE (BRANCH TO SIDE)		FEC
TEE (BRANCH DOWN)		FPC FT
RISER UP	O	GAL
RISER DOWN		GC
CLEANOUT		GPM HC
WALL CLEANOUT	4	HG
FLOOR CLEANOUT		HP
YARD CLEANOUT		HTR IE
UNION		LBS
FLANGE	I	MAX
FLOW	>	MBH MECH
CHECK VALVE	<u> </u>	MEZZ
PRESSURE REGULATING VALVE		MIN
SOLENOID VALVE		MTR NIC
POINT OF CONNECTION		NTS
CAP		PC
SHUT-OFF VALVE	_	PRELIM PRESS
PIPE STRAINER		PS
VALVE IN RISER	≻ ⊖ 4 1	PSF
PRESSURE GAUGE	\odot	PSI PVC
CONTINUATION		RI
FINISHED FLOOR ELEVATION	∲	RPM
EQUIPMENT IDENTIFICATION	$\langle \bullet \rangle$	SF
KEYED NOTE		STRUCT TS
		VB
DRAWING REVISION	Δ	
BRANCH VALVE/ ROAD BOX	\otimes	
	(DETAIL NUMBER)	
TAG FOR CONTINUATION MATCH POINTS	X PX	
AND/OR DETAIL REFERENCE		

) (SHEET NUMBER)

ABBREVIATIONS

DESCRIPTION ABOVE FINISHED FLOOR ACCESS PANEL BELOW FINISHED FLOOR BRAKE HORSEPOWER BUILDING BOTTOM OF PIPE BOTTOM OF STRUCTURE CAST IRON CENTER LINE DIAMETER DRAWING EACH ELECTRICAL CONTRACTOR EXPANSION JOINT EQUIPMENT EXISTING TO REMAIN EXISTING DEGREES FAHRENHEIT FOOD EQUIPMENT CONTRACTOR FIRE PROTECTION CONTRACTOR FOOT OR FEET GALLON GENERAL CONTRACTOR GALLON PER MINUTE HVAC CONTRACTOR MERCURY HORSEPOWER HEATER INVERT ELEVATION POUNDS MAXIMUM 1000 BRITISH THERMAL UNITS/HOUR MECHANICAL MEZZANINE MINIMUM

METER NOT IN CONTRACT NOT TO SCALE PLUMBING CONTRACTOR PRELIMINARY PRESSURE PRESSURE SWITCH POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POLYVINYL CHLORIDE ROUGH-IN REVOLUTIONS PER MINUTE SQUARE FEET STRUCTURAL/STRUCTURE TAMPER SWITCH VACUUM BREAKER

PLI Project Number: 2013.07.00—2
Drawn By:



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Drawing No.

MADISON, WI



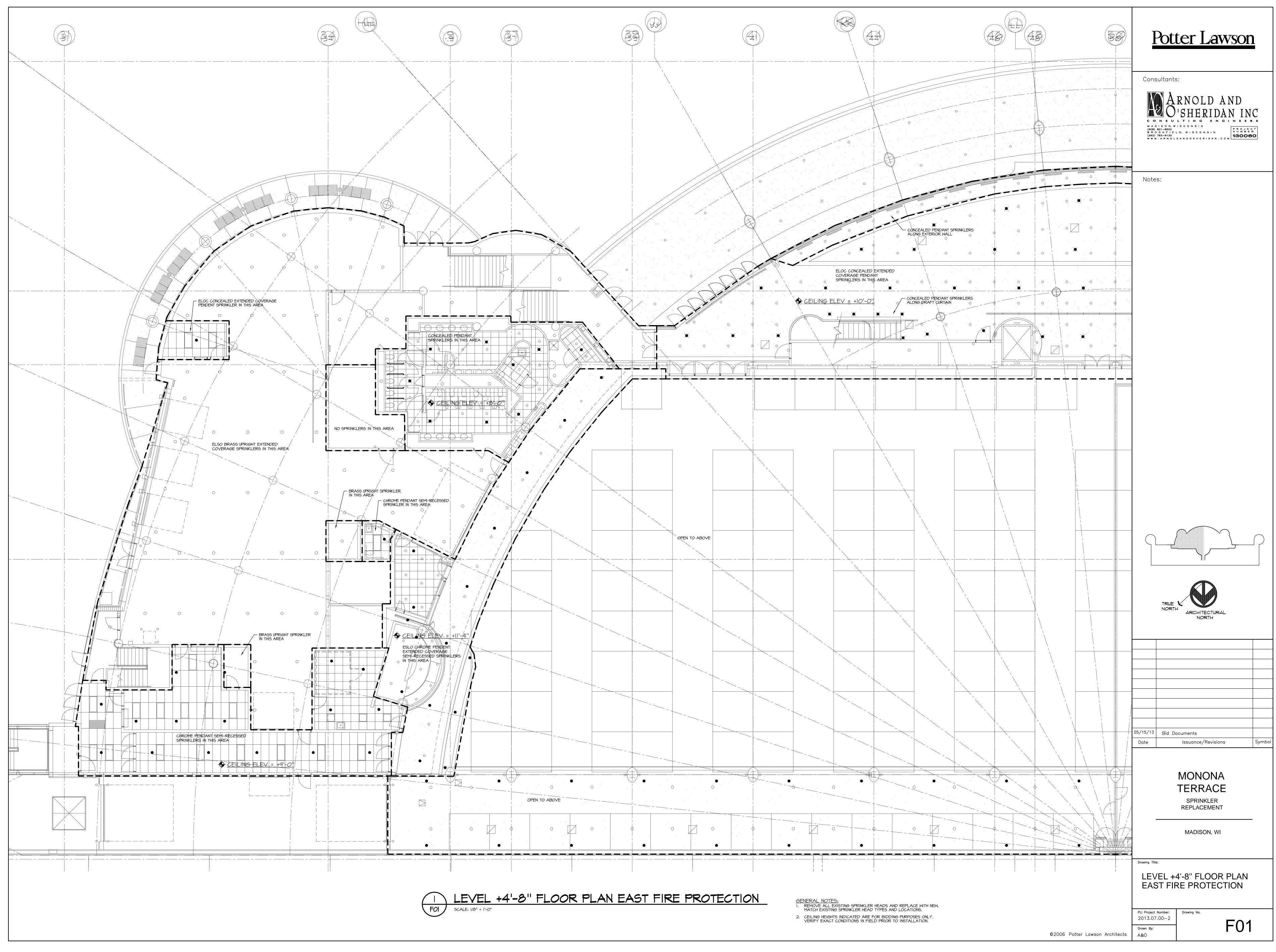
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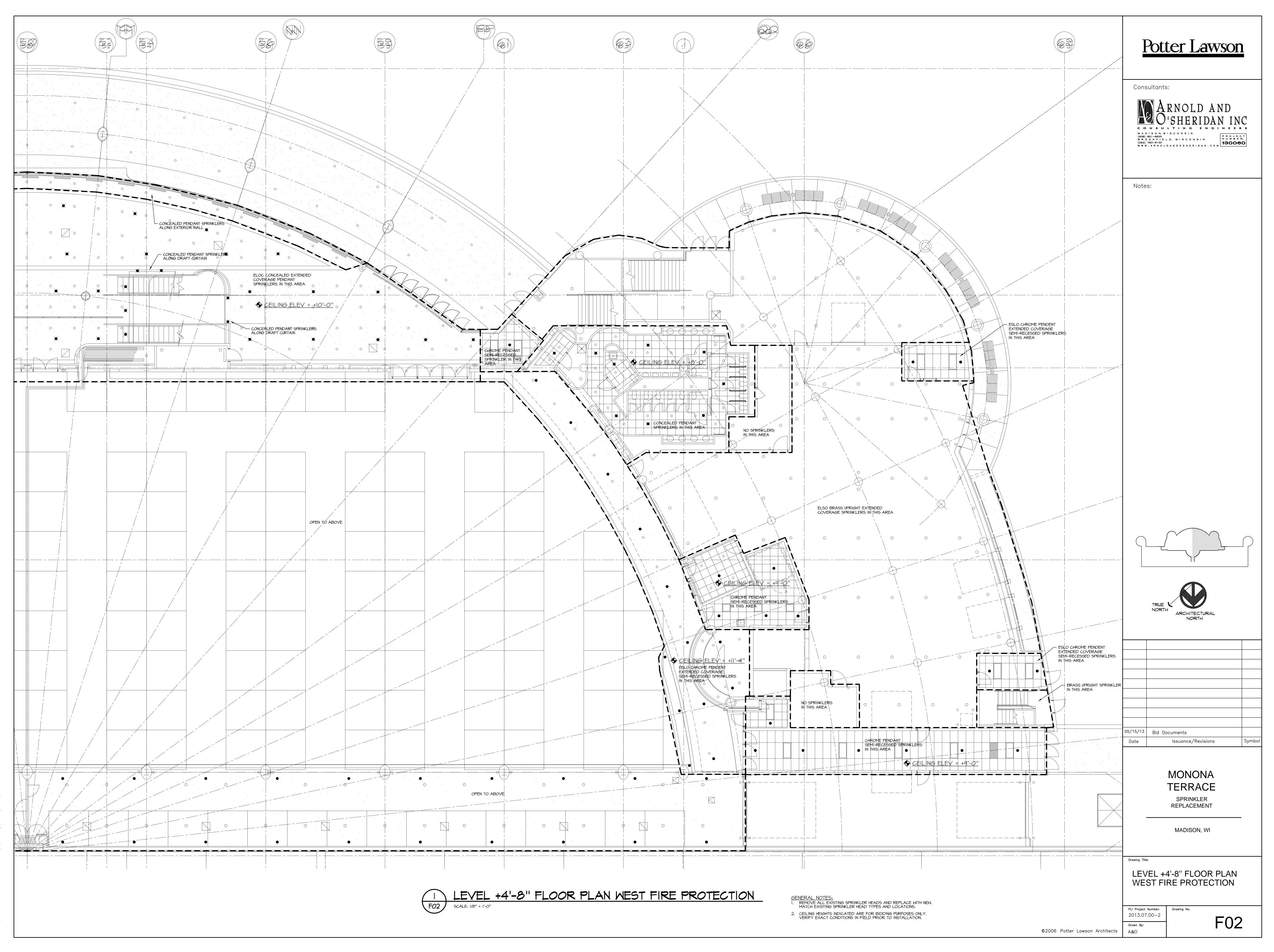
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Consultants: ARNOLD AND U'SHERIDAN INC CONSULTING ENGINEERS M A D I S O N, W I S C O N S I N (608) 821–8500 B R O O K F I E L D, W I S C O N S I N (262) 783–6130 W W W . A R N O L D A N D O S H E R I D A N . C O M

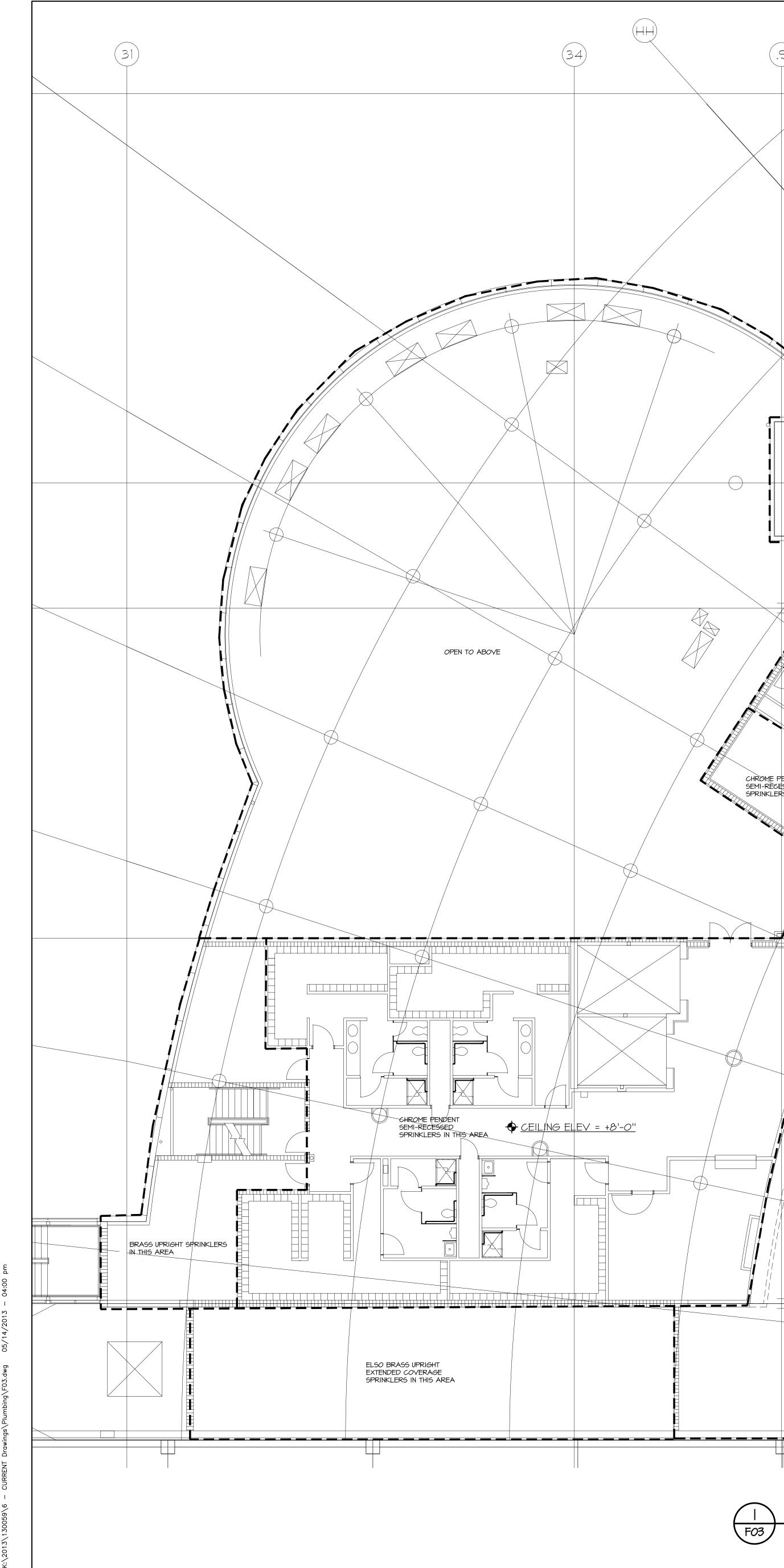
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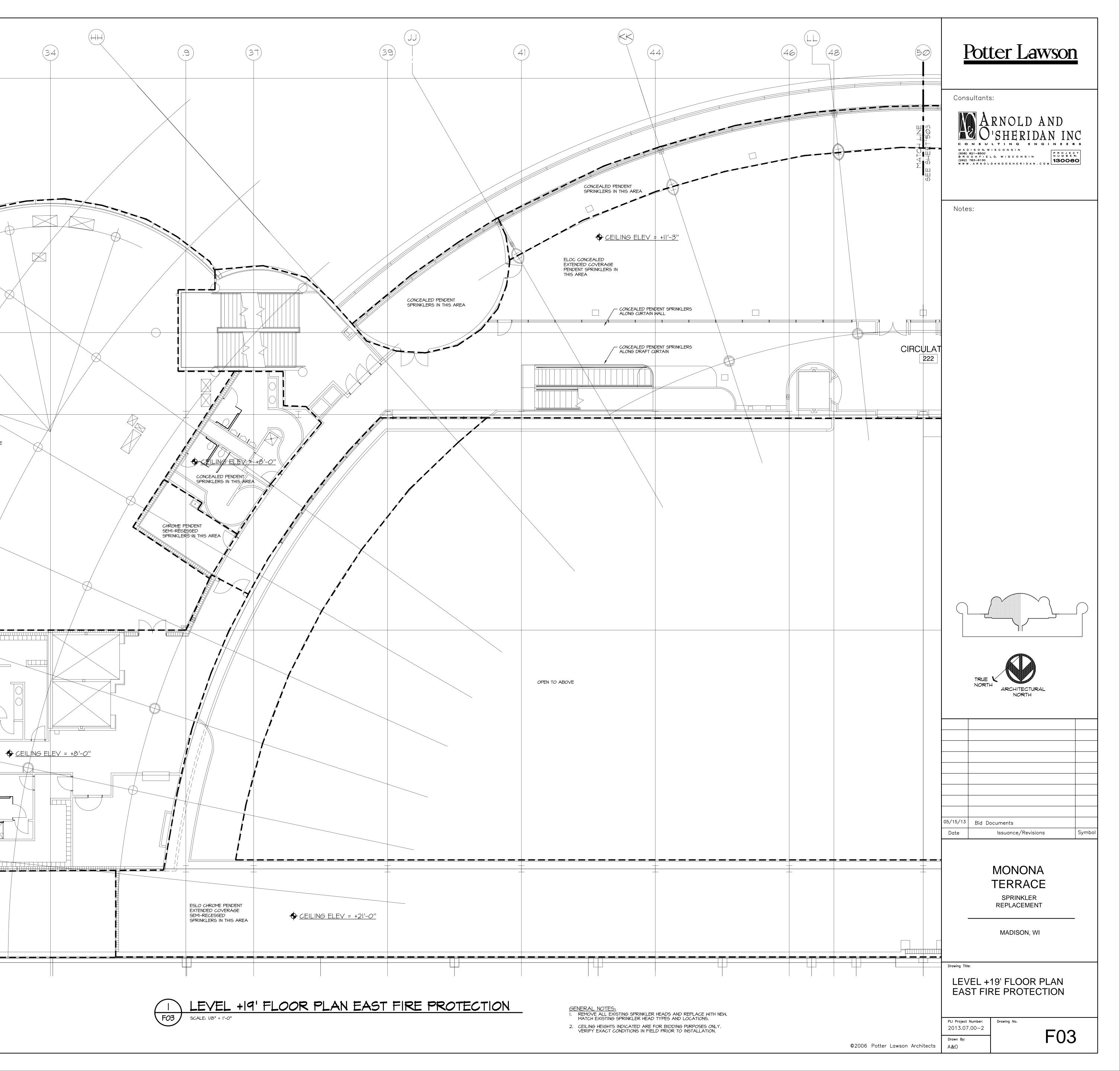
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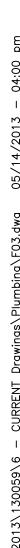


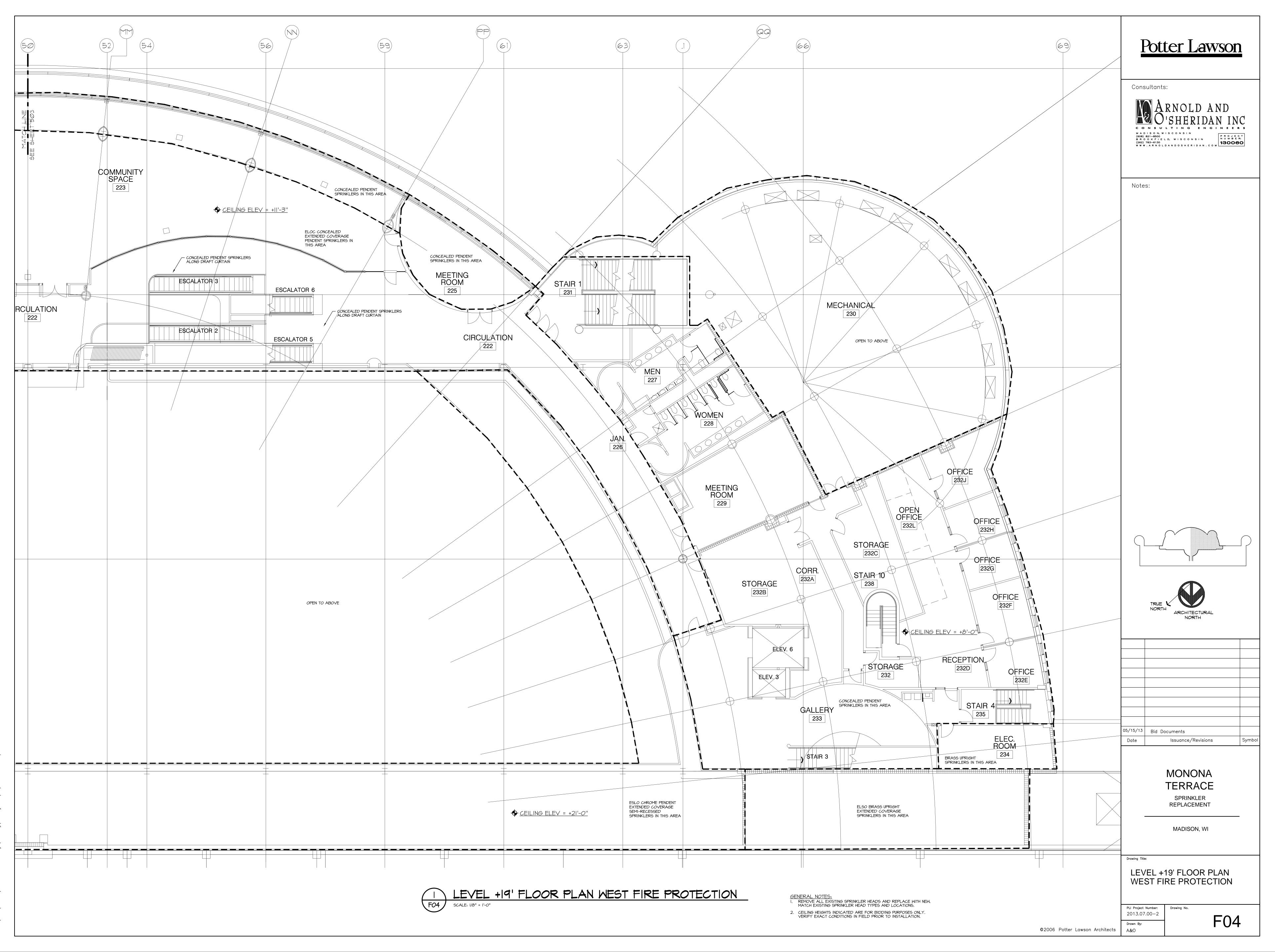


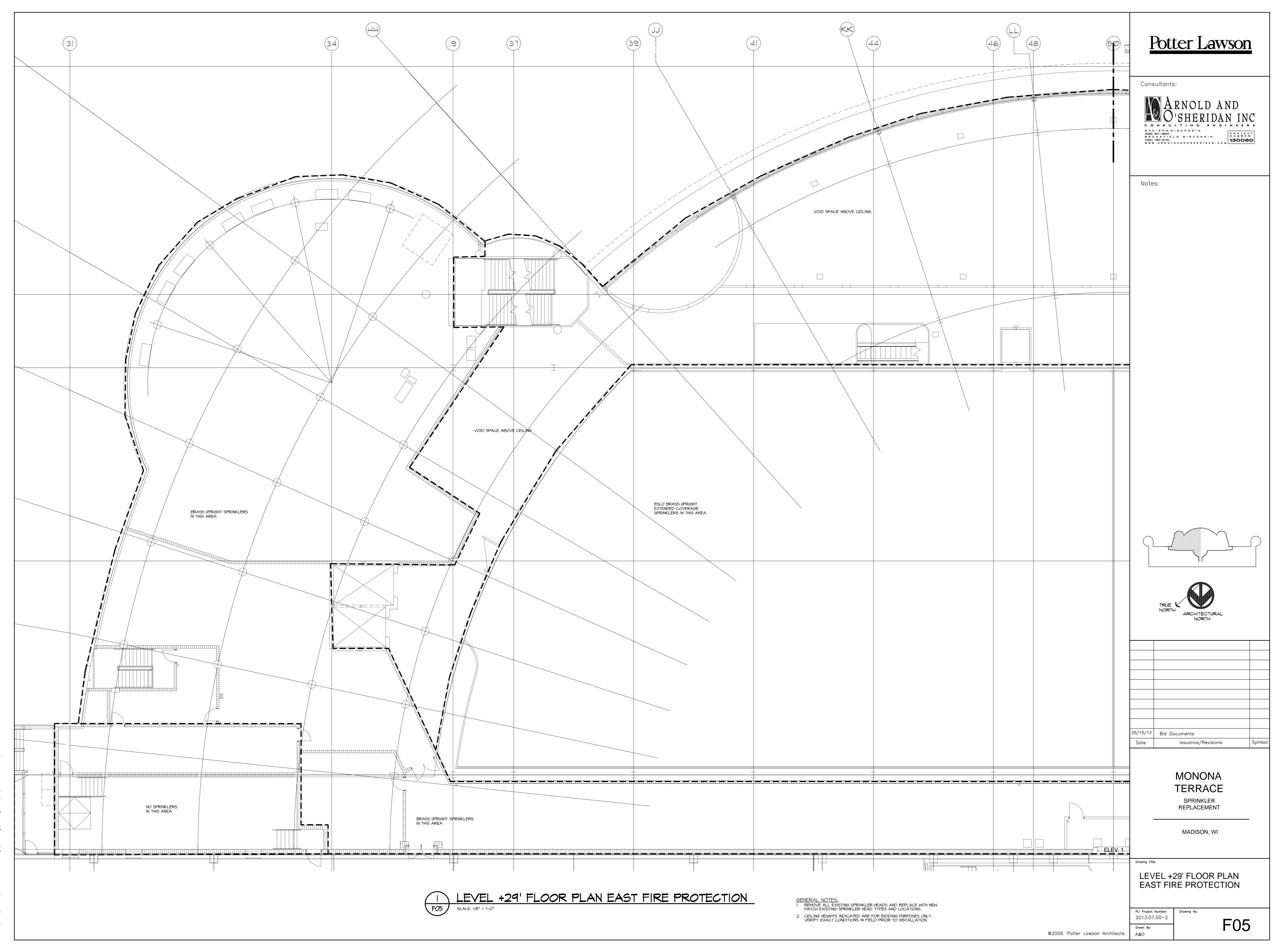
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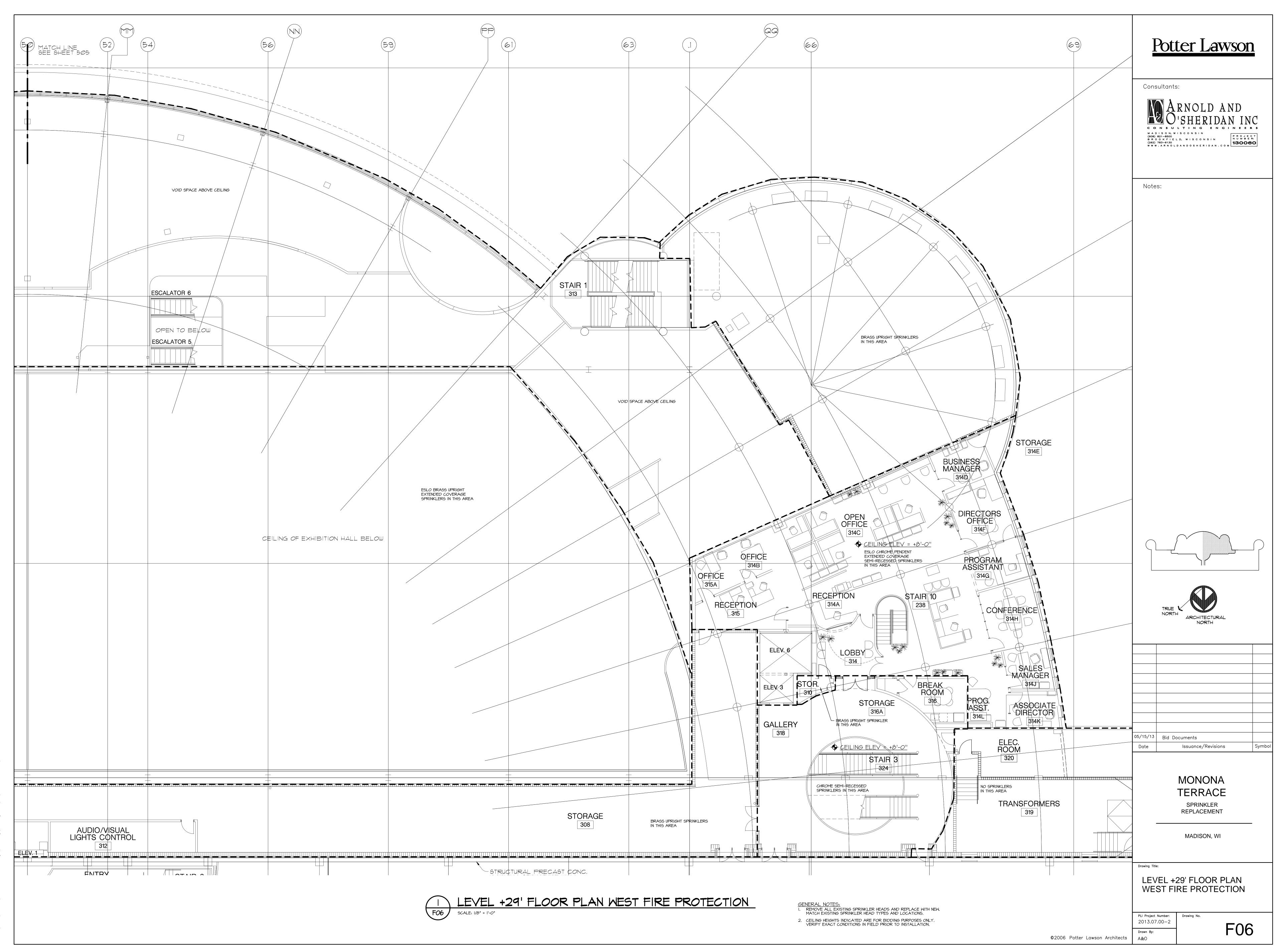


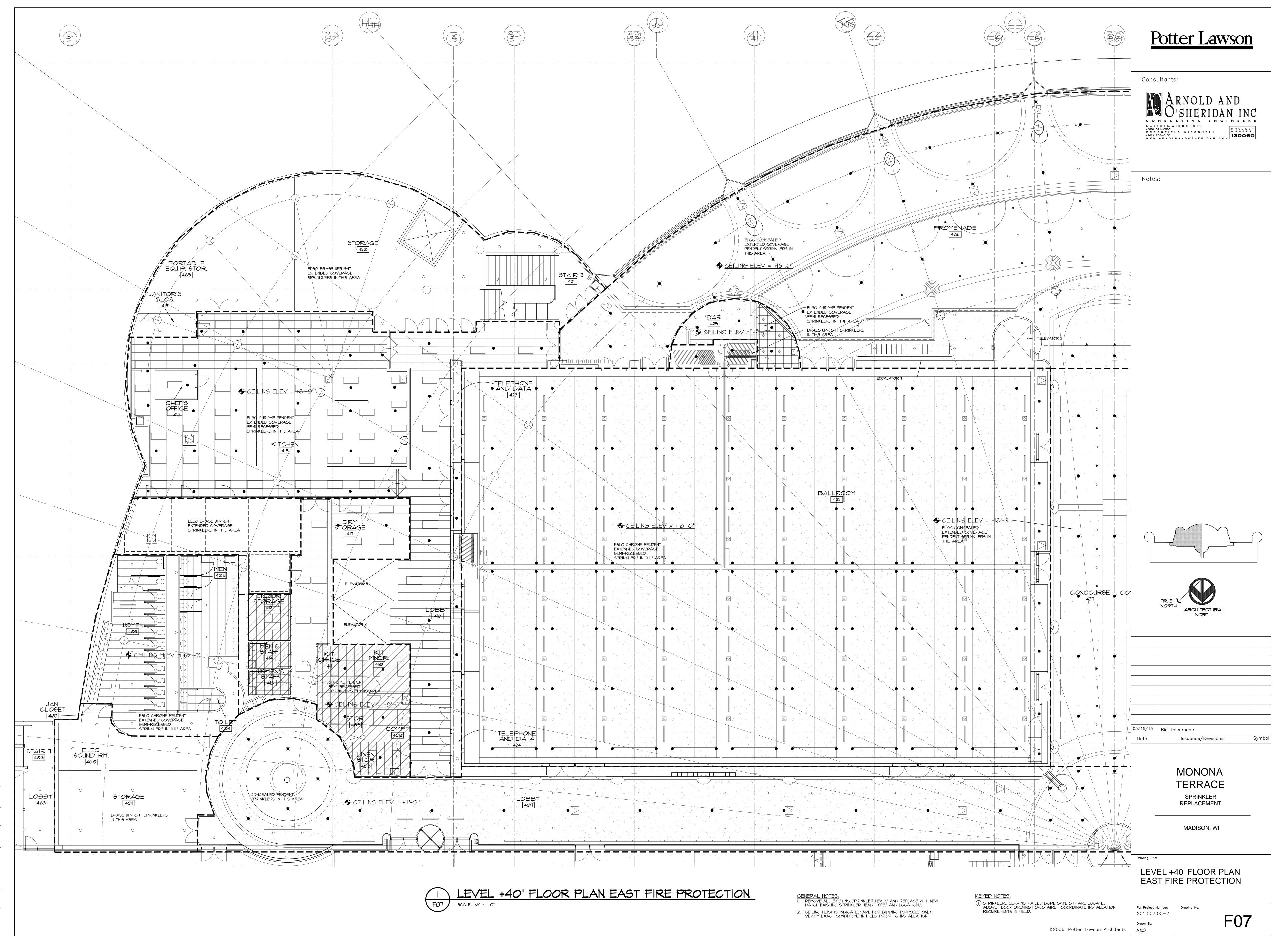




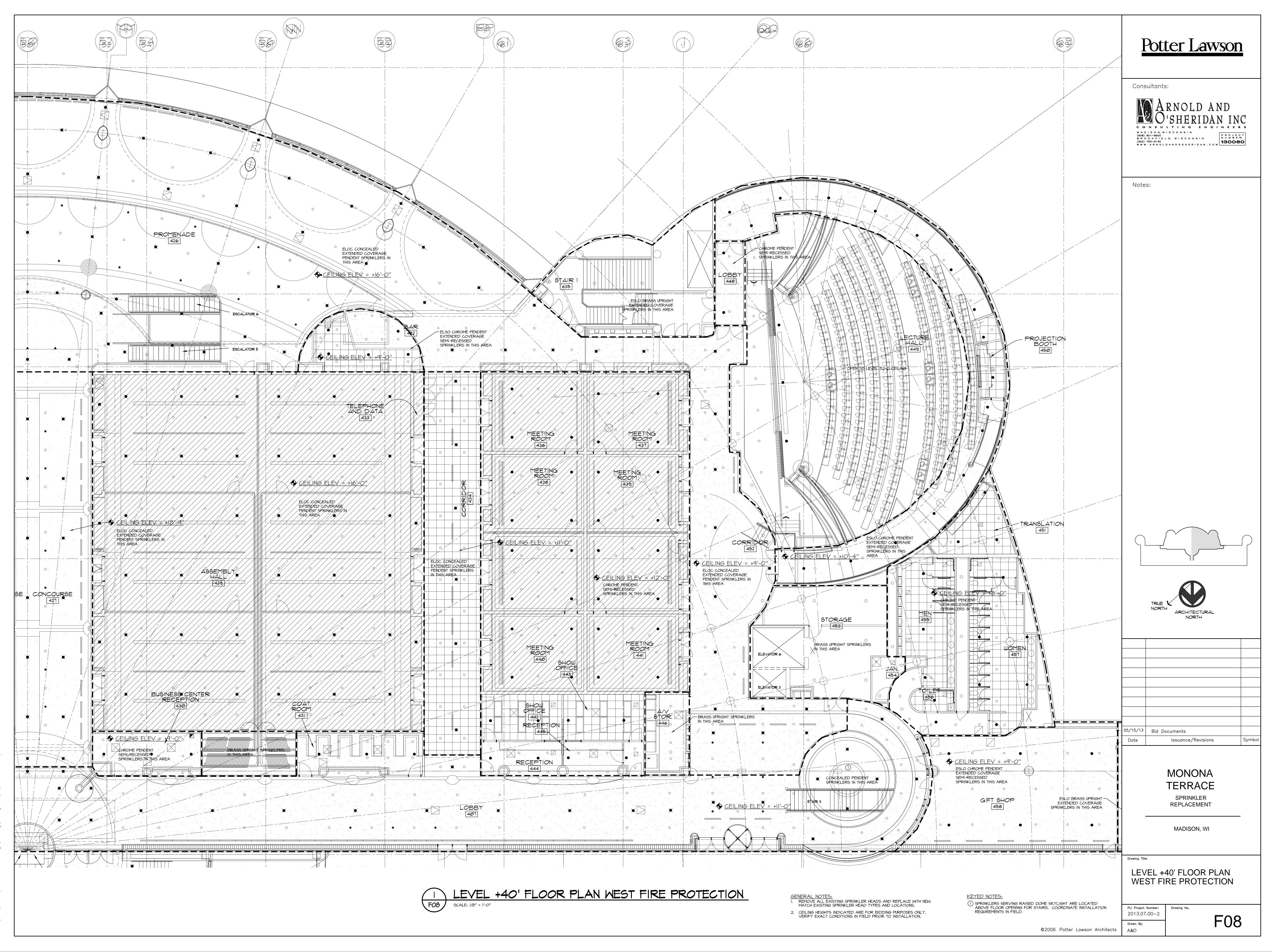


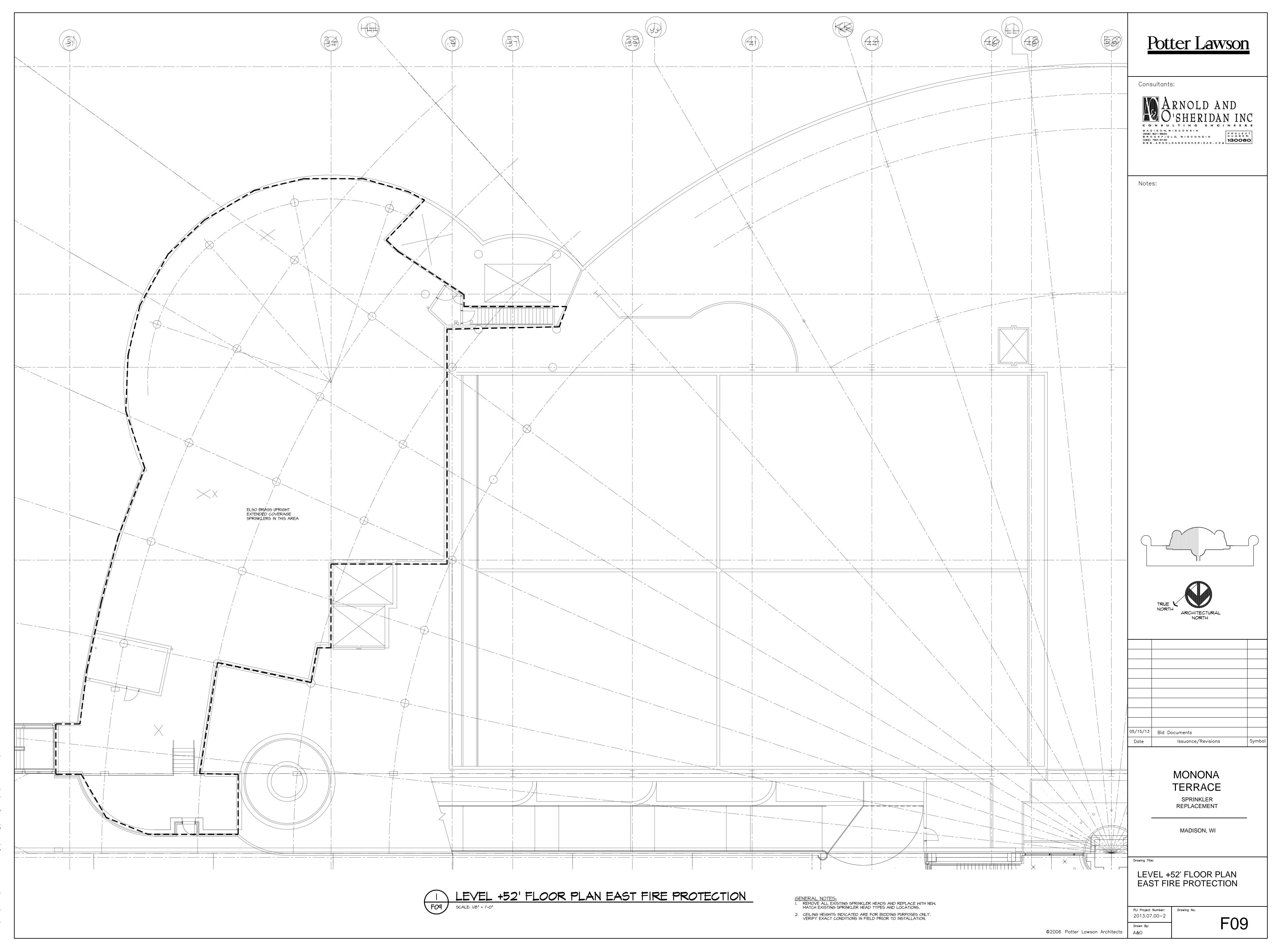
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