ISFA GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET
CHICAGO, IL 60616

ABBREVIATIONS

ACW	AUTOMATIC CLOTHES WASHER
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AMP	AMPERE
ANB	ACID NEUTRALIZING BASIN
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AP	ACCESS PANEL
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASSE	AMERICAN SOCIETY OF SAFETY ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AV	ACID/CHEMICAL VENT
AVTR	ACID/CHEMICAL VENT THRU ROOF
AW	ACID/CHEMICAL WASTE
BASC	BUILDING AUTOMATION SYSTEMS CONTRACTOR
BFP	BACKFLOW PREVENTER
BOP	BOTTOM OF PIPE
BT	BATH TUB
CA	COMPRESSED AIR
CI	CAST IRON
CISPI	CAST IRON SOIL PIPE INSTITUTE
CLG	CEILING
CO	CLEANOUT
CONN	CONNECTION
CWS	CHICAGO WHITE SOX
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
DTW	DOMESTIC TEMPERED WATER
DBCV	DOUBLE CHECK VALVE
DCV	DUAL CHECK VALVE
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY
DDCV	DOUBLE-DETECTOR CHECK VALVE
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DIA	DIAMETER
DN	DOWN
DS	DOWNSPOUT
DSN	DOWNSPOUT NOZZLE
DT	DRAIN TILE
DW	DISHWASHER
DWH	DOMESTIC WATER HEATER
DWS	DOMESTIC WATER SOFTENER
EC	ELECTRICAL CONTRACTOR
EEW	EMERGENCY EYE AND FACE WASH
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
ET	EXPANSION TANK
ESH	EMERGENCY SHOWER
ESP	ELEVATOR SUMP PUMP
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FFB	FROM FLOOR BELOW
FOG	FATS, OILS AND GREASE
FPS	FEET PER SECOND
FS	FLOOR SINK
FT	FEET
G	NATURAL GAS
GC	GENERAL CONTRACTOR
GCO	GROUND CLEANOUT
GI	GREASE INTERCEPTOR
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GT	GREASE TRAP
GW	GARAGE WASTE
HB	HOSE BIBB
HD	HEAD
HP	HORSEPOWER
HX	HEAT EXCHANGER
IE	INVERT ELEVATION
ISFA	ILLINOIS SPORTS FACILITIES AUTHORITY
IWB	ICE MACHINE/REFRIGERATOR WALL BOX
KS	KITCHEN STACK
KEC	KITCHEN EQUIPMENT CONTRACTOR
KED	KITCHEN EQUIPMENT DESIGNER
KW	KITCHEN WASTE OR KILOWATT
L / LAV	LAVATORY
LS	LAB SINK
LT	LAUNDRY TUB
MB	MOP BASIN
MC	MECHANICAL CONTRACTOR
MSS	MANUFACTURERS STANDARDIZATION SOCIETY
NC	NEW CONNECTION OR NORMALLY CLOSED
NIC	NOT IN CONTRACT
NPS	NOMINAL PIPE SIZE
NPW	NON POTABLE WATER
NO	NORMALLY OPEN
NSF	NATIONAL SCIENCE FOUNDATION
NTS	NOT TO SCALE
OD	OVERFLOW DRAIN
OSD	OPEN SITE DRAIN
OS&Y	OUTSIDE STEM AND YOKE
P	PUMP
PA	PIPE ANCHOR
PC	PLUMBING CONTRACTOR
PD	PUMP DISCHARGE
PDI	PLUMBING & DRAINAGE INSTITUTE
PE	PROFESSIONAL ENGINEER
PH	PHASE
PIV	POST INDICATOR VALVE
PPM	PARTS PER MILLION
PRV	PRESSURE REDUCING VALVE
PS	PLUMBING STACK
PSI	POUNDS PER SQUARE INCH
ORD	OVERFLOW ROOF DRAIN
RCP	RECIRCULATION PUMP
RD	ROOF DRAIN
RH	ROOF HYDRANT
ROB	ROD OUT BASIN
RPDA	REDUCED PRESSURE DETECTOR ASSEMBLY
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
S / SAN	SANITARY WASTE
SC	SITE UTILITY CONTRACTOR
SE	SEWAGE EJECTOR
SH	SHOWER
SI	SOLIDS INTERCEPTOR
SK	SINK
SP	SUMP PUMP
SQ	SQUARE FEET
SS	SERVICE SINK
S.S.	STAINLESS STEEL
ST	STORM
SST	SECONDARY STORM (OVERFLOW)
TB	THRUST BLOCK
TD	TRENCH DRAIN
TMV	THERMOSTATIC MIXING VALVE
TPRV	TEMPERATURE AND PRESSURE REDUCING VALVE
TYP	TYPICAL
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WSB	WALL SUPPLY BOX
WSFU	WATER SUPPLY FIXTURE UNITS
YCO	YARD CLEANOUT
YH	YARD HYDRANT

NOTE: NOT ALL ABBREVIATIONS LISTED ABOVE MAY BE USED OR APPEAR IN THESE DRAWINGS.

PROJECT SCOPE OF WORK

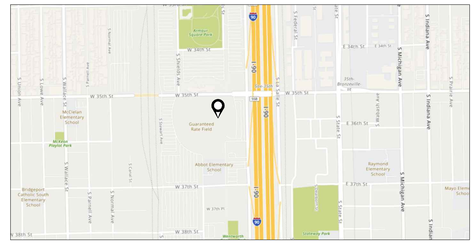
1. REPLACE STORM PIPING ON THE RAMPS AS DEFINED ON PLANS AND DETAILS.
2. REPLACE EXISTING SUBMERSIBLE PUMPS FOR VISITORS LOCKER ROOM, CENTER FIELD MECHANICAL ROOM AND HYDROTHERAPY DRAIN DOWN, INCLUDING NEW PIPING, VALVES, PUMPS, FLOATS, CONTROLS PANEL, BASIN TOP, ETC.
3. SANITARY AND VENT PIPING RISER REPLACEMENT FOR SECTION 03 FROM THE 400 LEVEL DOWN TO THE SERVICE LEVEL. PORTIONS OF THE CONCESSION STANDS DRAINAGE SHALL BE ACID RESISTANT WASTE (ARW) PIPING AS SODA AND BEER ARE ACIDIC AND ACID RESISTANT PIPING IS REQUIRED
4. FOR IDENTIFIED TOILETS, REPLACE EXISTING FLOOR MOUNTED WALL CARRIERS WITH NEW FLOOR MOUNTED WALL CARRIERS. THE EXISTING FLOOR MOUNTED WALL CARRIERS HAVE DEVELOPED CRACKS IN THE CARRIER PIPE FITTINGS.
5. PROVIDE VIDEO SCOPING OF THE IDENTIFIED AREAS OF UNDERGROUND PIPING THROUGHT THE BALL PARK.
6. ISOLATE AND DRAIN DOWN THE MAIN WATER HEATER STORAGE TANKS. OPEN MAN INSPECTION DOORS AND OBSERVE AND PROVIDE A REPORT ON THE CURREN OBSERVED EXISTING CONDITION STORAGE TANKS.
7. EPOXY LINING OF FLOOR SINKS AND FLOOR DRAINS THROUGHOUT THE 100 AND 500 LEVELS.
8. FLOOR DRAIN IN EMPLOYEE ENTRY AREA IS NON-FUNCTIONAL (I.E. DOES NOT DRAIN WATER THAT ENTERS THE DRAIN); PROVIDE CORRECTION OF THE FLOOR DRAIN AND DOWNSTREAM PIPING SO THE FLOOR DRAIN WILL FUNCTION AGAIN. PROVIDE VIDEO SCOPE OF THE DRAINAGE PIPE WHEN THE PIPING AT THE FLOOR DRAIN IS DEMOLISHED AND REPLACED.
9. EXISTING VERTICAL STORM MAIN TO BE LINED IN THE SERVICE LEVEL, SECTION 7.
10. REPLACE EXISTING QUADPLEX DOMESTIC WATER BOOSTER PUMP FOR THE BALL PARK, INCLUDING NEW PIPING, VALVES, PAD MODIFICATION (IF NECESSARY). PROVIDE NEW ISOLATION VALVES UPSTREAM AND DOWN STREAM OF THE EQUIPMENT SO LATER WHEN BOOSTER IS REPLACE A) THE BUILDING DRAINAGE WATER IS NOT REQUIRED TO FULLY DRAIN DOWN AND SO ONCE THE BOOSTER IS REPLACED SO THE SWITCH OVER IS AS MINIMUMAL OF TIME PERIOD AS POSSIBLE.

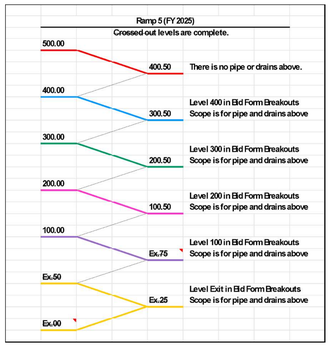
ELECTRICAL SCOPE OF WORK

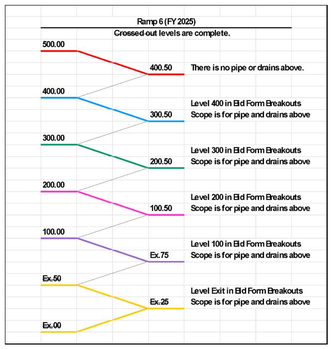
1. PROVIDE NEW WIRING FROM NEW CONTROL PANEL AND ASSOCIATED WITH NEW DUPLEX SUBMERSIBLE PUMPS IN VISITOR LOCKER ROOM, CENTER FIELD MECHANICAL ROOM AND HYDROTHERAPY POOL DRAIN DOWN.
2. DISCONNECT POWER AND RECONNECT POWER FOR IN-KIND REPLACEMENT FOR MAIN DOMESTIC WATER BOOSTER PUMP SKID.

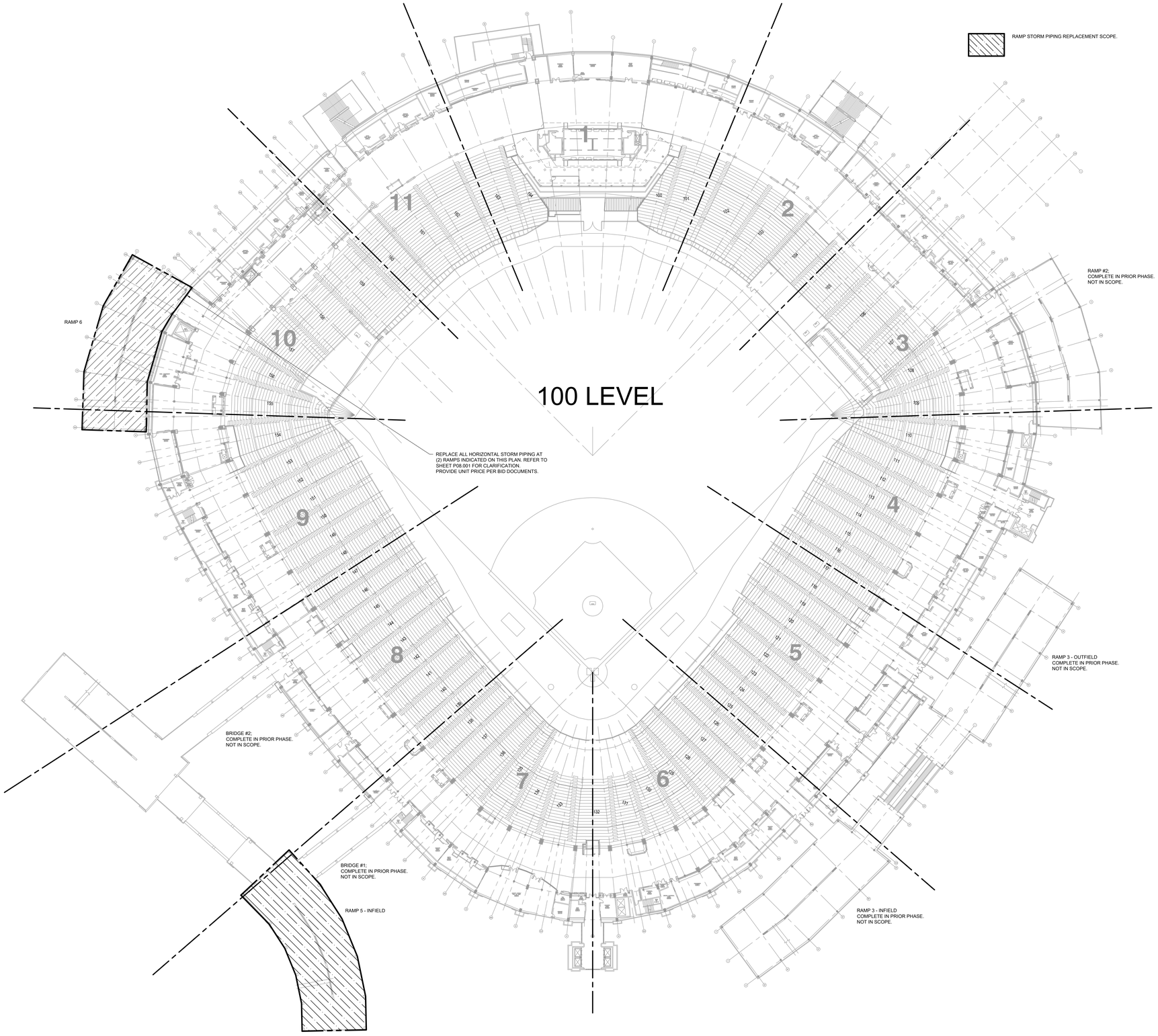
PROJECT REQUIREMENTS

1. ANY EXISTING EQUIPMENT TO DEMOLISHED SHALL BE COORDINATED WITH CHICAGO WHITE SOX SO THE CHICAGO WHITE SOX MAINTENANCE STAFF MAY SALVAGE EQUIPMENT, PARTS, COMPONENTS, ETC.
2. ANY PIPING MATERIAL AND ASSOCIATED COMPONENTS TO DEMOLISHED SHALL BE COORDINATED WITH CHICAGO WHITE SOX PRIOR TO DISPOSAL.
3. CONTRACTOR REMAINS FULLY RESPONSIBLE FOR ALL DEMOLISHED EQUIPMENT, PIPING MATERIALS, PARTS, COMPONENTS, ETC. THAT CHICAGO WHITE SOX DOES NOT SALVAGE.
4. VARIABLE FREQUENCY DRIVES SHALL BE MANUFACTURED BY "ABB" ONLY.
5. COORDINATE ACCESS TO SPACES NECESSARY TO PERFORM WORK WITH ISFA. PORTIONS OF THE BUILDING WILL BE SECURED REGULARLY AND ISFA REQUIRES NOTIFICATION TO PROVIDE ACCESS.
6. CONTRACTOR SHALL ENDEAVOR TO SUBMIT SUBMITTALS TIMELY FOR REVIEW AND COORDINATION PURPOSES.


W 35th St
S Wentworth Ave
S Princeton Ave
S Lituanica Ave
S Halsted St
S Union Ave
S Emerald Ave
S Peoria St
S Green St
S Morgan St
S Aberdeen St
S Racine Ave
S Ashland Ave
S Paulina St
S Hoyne Ave
S Leavitt St
S Damen Ave
S Western Ave
S Oakley Ave
S Ogden Ave
S Rockwell St
S Francisco Ave
S Kedzie Ave
S Homan Ave
S Sacramento Ave
S Kostner Ave
S Pulaski Rd
S Keeler Ave
S Central Park Ave
S Spaulding Ave
S Kilbourn Ave
S Kildare Ave
S Cicero Ave
S Lamon Ave
S Melvina Ave
S Austin Blvd
S Cicero Ave
S Laramie Ave
S Menard Ave
S Mason Ave
S Natoma Ave
S Nashville Ave
S Harlem Ave
S Oketo Ave
S Narragansett Ave
S Austin Ave
S Linder Ave
S Oriole Ave
S Nina Ave
S Norwood Park







1 100 LEVEL OVERALL PLAN - PLUMBING WORK
SCALE: 1/32" = 1'-0"

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

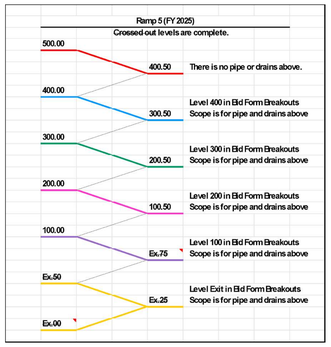
PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

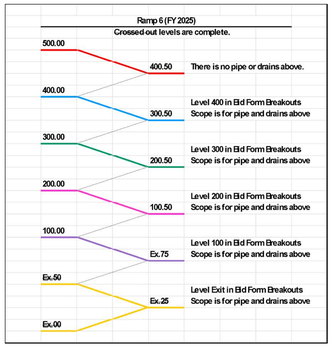
333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

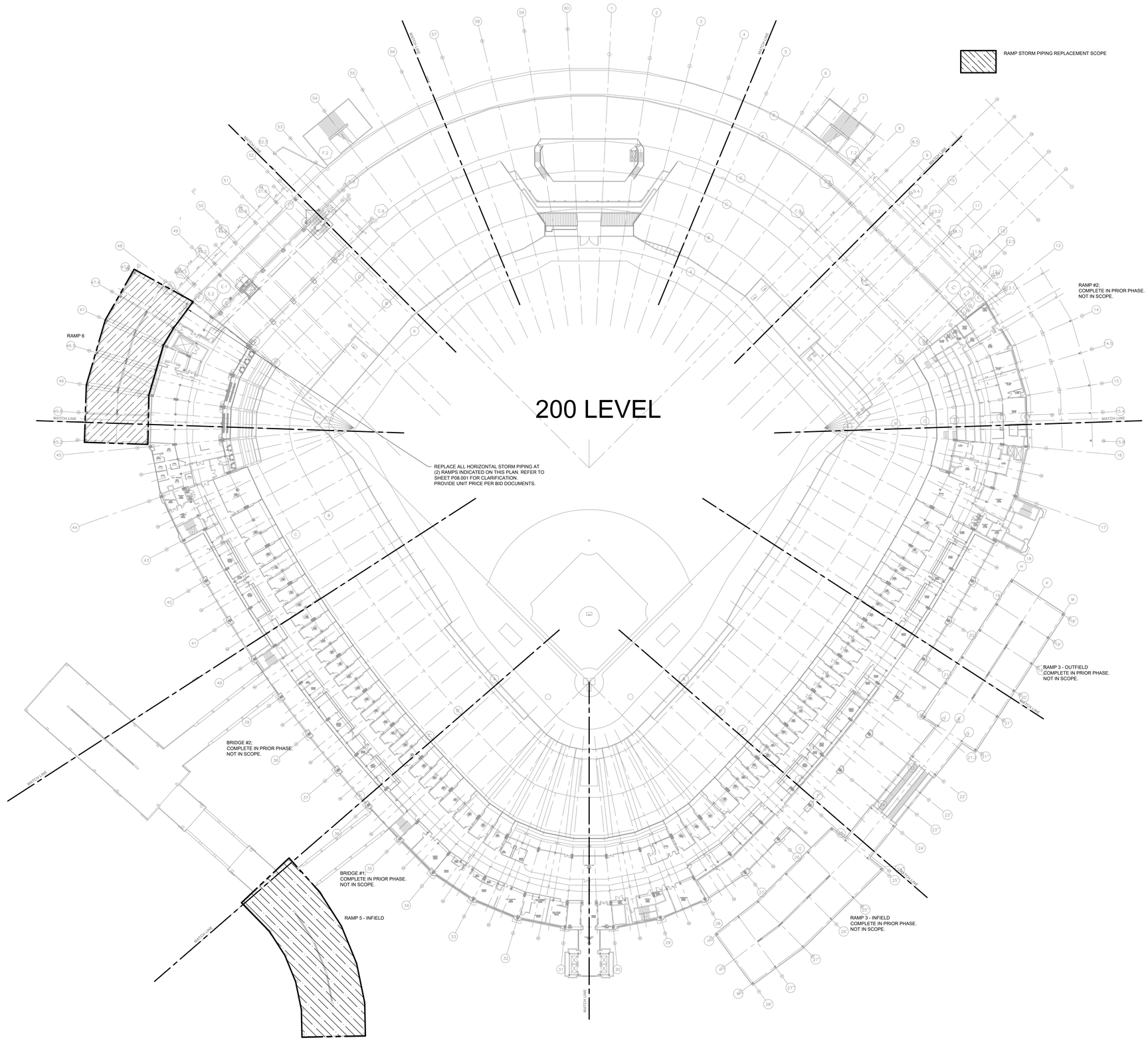
DRAWING TITLE:
PLUMBING NEW WORK PLAN - LEVEL 100 OVERALL

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/32" = 1'-0"

SHEET NO.
P01.100







1 200 LEVEL OVERALL PLAN - PLUMBING WORK
SCALE: 1/32" = 1'-0"

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

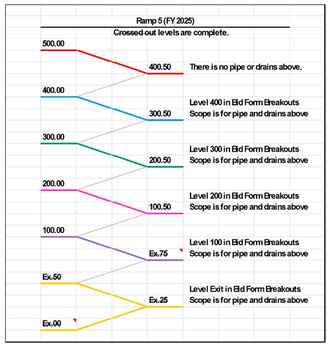
PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

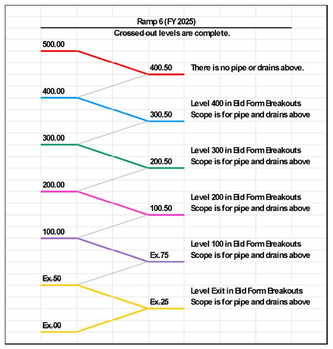
333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

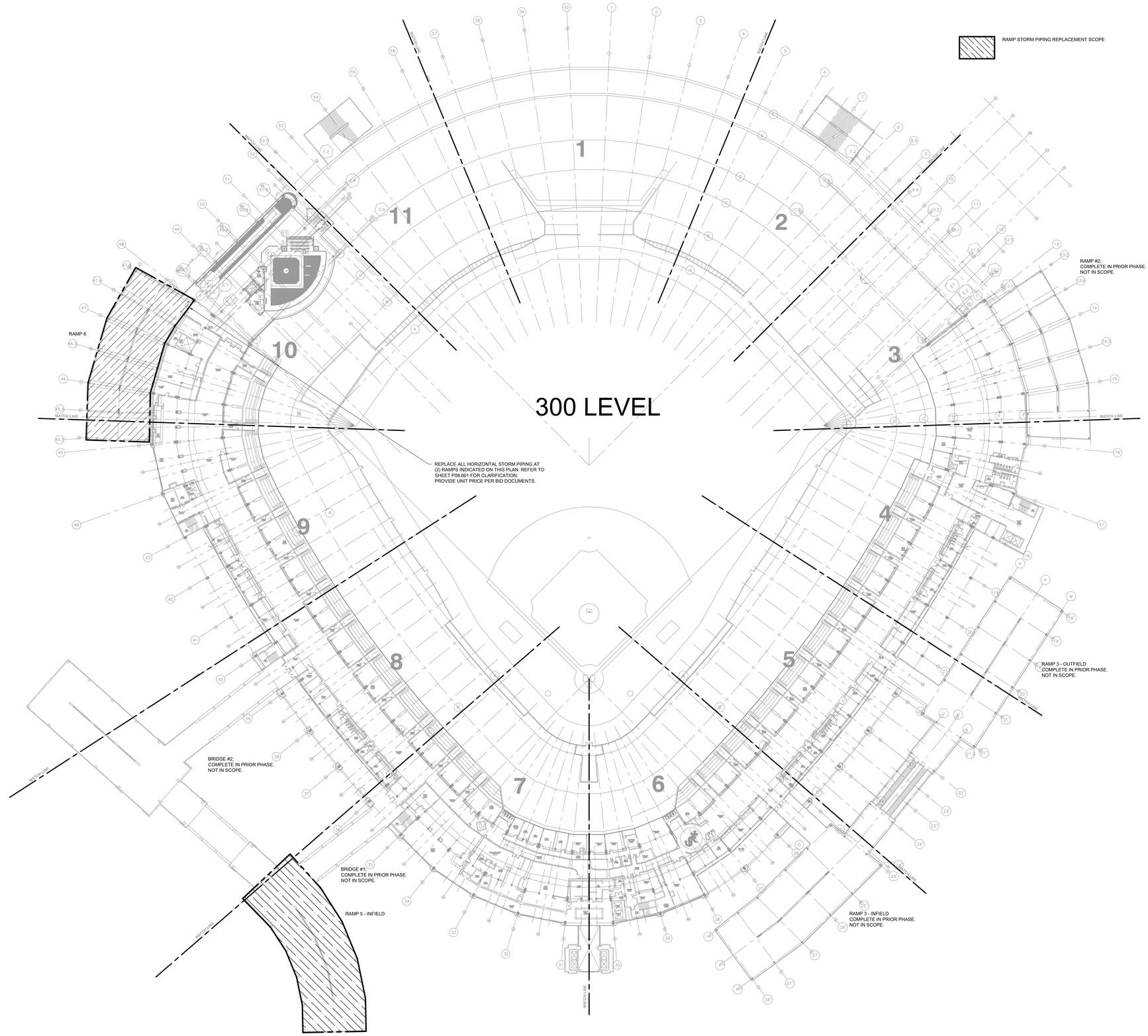
DRAWING TITLE:
PLUMBING NEW WORK PLAN - LEVEL 200 OVERALL

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/32" = 1'-0"

SHEET NO.
P01.200







1 300 LEVEL OVERALL PLAN - PLUMBING WORK
SCALE: 1/32" = 1'-0"

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

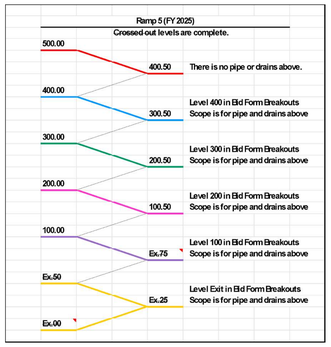
PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

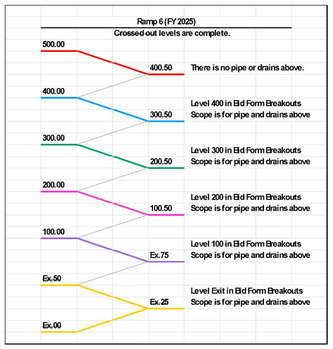
333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

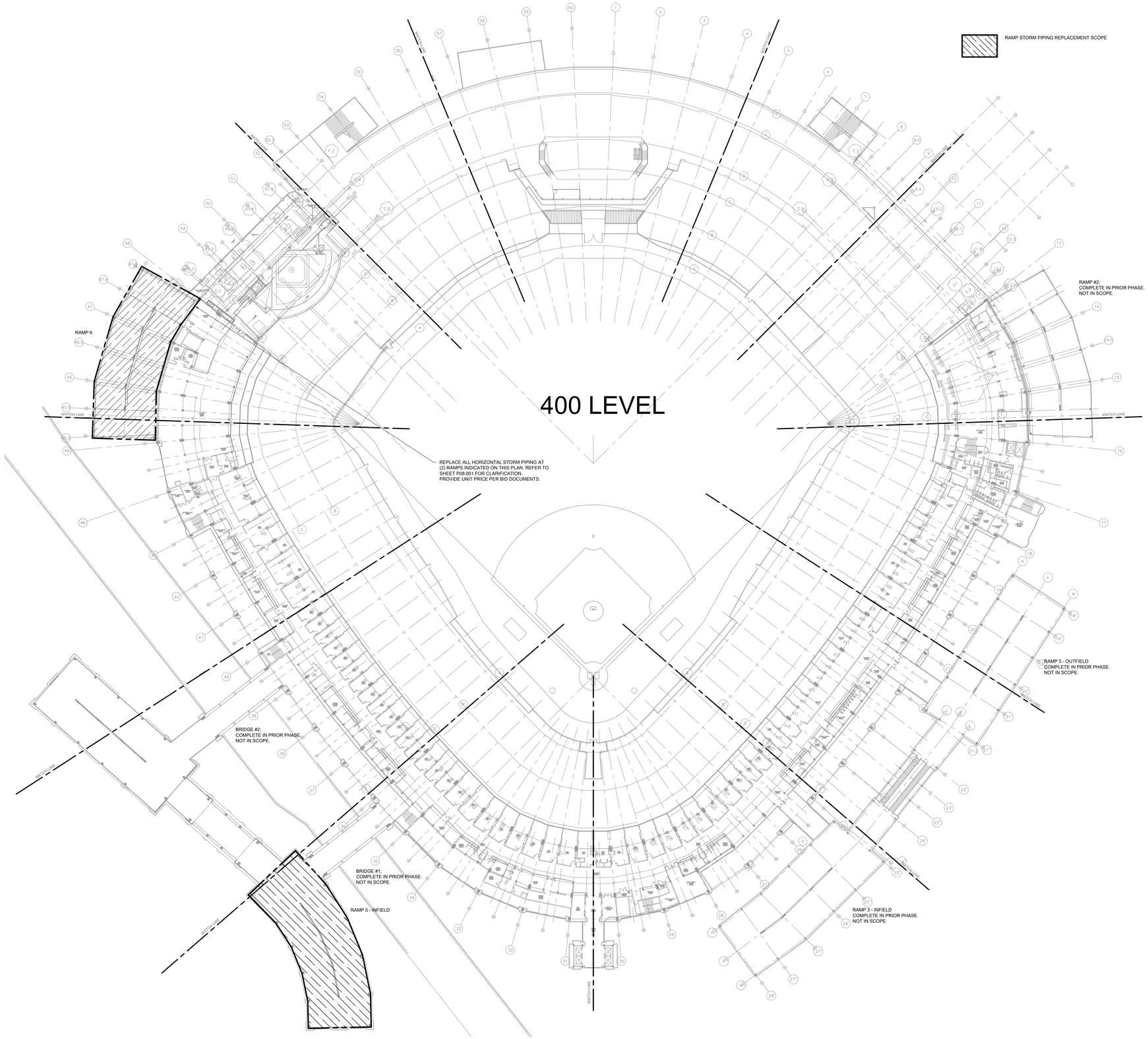
DRAWING TITLE:
PLUMBING NEW WORK PLAN - LEVEL 300 OVERALL

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/32" = 1'-0"

SHEET NO.
P01.300







1 400 LEVEL OVERALL PLAN - PLUMBING WORK
SCALE: 1/32" = 1'-0"

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

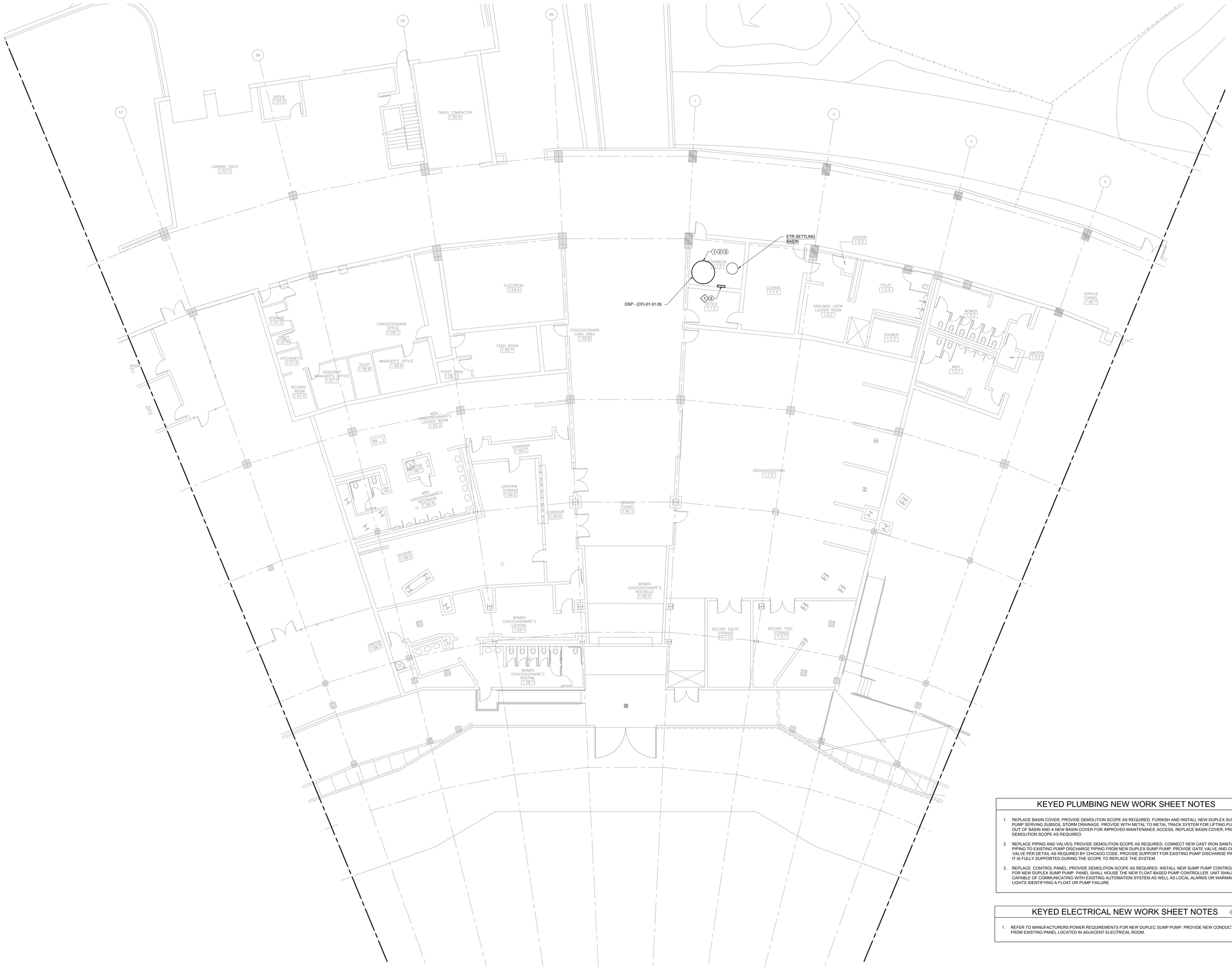
PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLAN - LEVEL 400 OVERALL

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/32" = 1'-0"

SHEET NO.
P01.400



1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 1 ENLARGED

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

KEYED PLUMBING NEW WORK SHEET NOTES

1. REPLACE BASIN COVER; PROVIDE DEMOLITION SCOPE AS REQUIRED. FURNISH AND INSTALL NEW DUPLEX SUMP PUMP SERVING SUBSOIL STORM DRAINAGE. PROVIDE WITH METAL TO METAL TRACK SYSTEM FOR LIFTING PUMPS OUT OF BASIN AND A NEW BASIN COVER FOR IMPROVED MAINTENANCE ACCESS. REPLACE BASIN COVER; PROVIDE DEMOLITION SCOPE AS REQUIRED.
2. REPLACE PIPING AND VALVES; PROVIDE DEMOLITION SCOPE AS REQUIRED. CONNECT NEW CAST IRON SANITARY PIPING TO EXISTING PUMP DISCHARGE PIPING FROM NEW DUPLEX SUMP PUMP. PROVIDE GATE VALVE AND CHECK VALVE PER DETAIL AS REQUIRED BY CHICAGO CODE. PROVIDE SUPPORT FOR EXISTING PUMP DISCHARGE PIPING SO IT IS FULLY SUPPORTED DURING THE SCOPE TO REPLACE THE SYSTEM.
3. REPLACE CONTROL PANEL; PROVIDE DEMOLITION SCOPE AS REQUIRED. INSTALL NEW SUMP PUMP CONTROL PANEL FOR NEW DUPLEX SUMP PUMP. PANEL SHALL HOUSE THE NEW FLOAT BASED PUMP CONTROLLER. UNIT SHALL BE CAPABLE OF COMMUNICATING WITH EXISTING AUTOMATION SYSTEM AS WELL AS LOCAL ALARMS OR WARNING LIGHTS IDENTIFYING A FLOAT OR PUMP FAILURE.

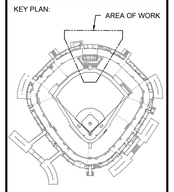
KEYED ELECTRICAL NEW WORK SHEET NOTES

1. REFER TO MANUFACTURERS POWER REQUIREMENTS FOR NEW DUPLEC SUMP PUMP. PROVIDE NEW CONDUCTORS FROM EXISTING PANEL LOCATED IN ADJACENT ELECTRICAL ROOM.

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

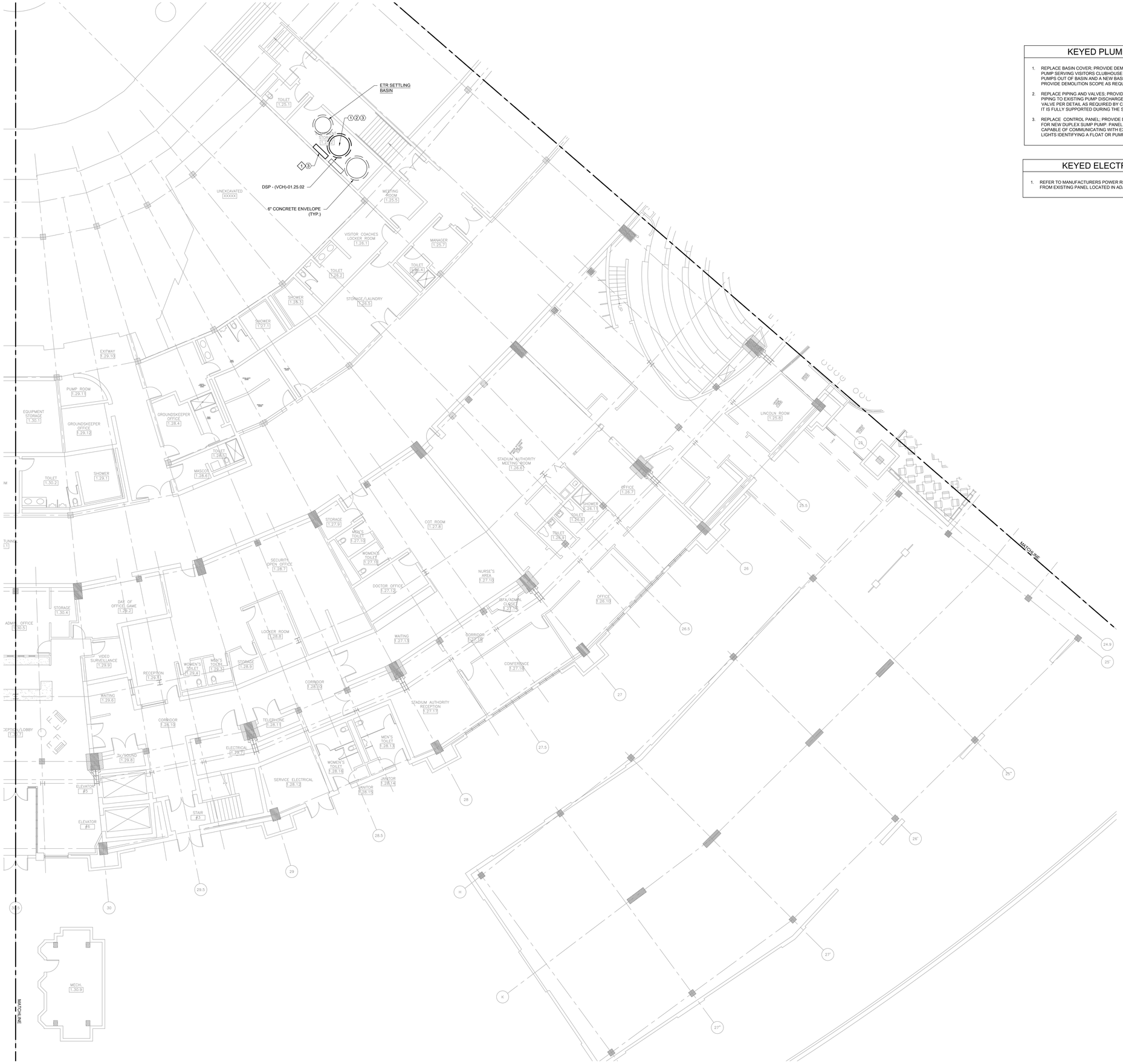
PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 1

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P02.S01



1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 6 ENLARGED

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

KEYED PLUMBING NEW WORK SHEET NOTES

1. REPLACE BASIN COVER; PROVIDE DEMOLITION SCOPE AS REQUIRED. FURNISH AND INSTALL NEW DUPLEX SUMP PUMP SERVING VISITORS CLUBHOUSE RESTROOM. PROVIDE WITH METAL TO METAL TRACK SYSTEM FOR LIFTING PUMPS OUT OF BASIN AND A NEW BASIN COVER FOR IMPROVED MAINTENANCE ACCESS. REPLACE BASIN COVER; PROVIDE DEMOLITION SCOPE AS REQUIRED.
2. REPLACE PIPING AND VALVES; PROVIDE DEMOLITION SCOPE AS REQUIRED. CONNECT NEW CAST IRON SANITARY PIPING TO EXISTING PUMP DISCHARGE PIPING FROM NEW DUPLEX SUMP PUMP. PROVIDE GATE VALVE AND CHECK VALVE PER DETAIL AS REQUIRED BY CHICAGO CODE. PROVIDE SUPPORT FOR EXISTING PUMP DISCHARGE PIPING SO IT IS FULLY SUPPORTED DURING THE SCOPE TO REPLACE THE SYSTEM.
3. REPLACE CONTROL PANEL; PROVIDE DEMOLITION SCOPE AS REQUIRED. INSTALL NEW SUMP PUMP CONTROL PANEL FOR NEW DUPLEX SUMP PUMP. PANEL SHALL HOUSE THE NEW FLOAT BASED PUMP CONTROLLER. UNIT SHALL BE CAPABLE OF COMMUNICATING WITH EXISTING AUTOMATION SYSTEM AS WELL AS LOCAL ALARMS OR WARNING LIGHTS IDENTIFYING A FLOAT OR PUMP FAILURE.

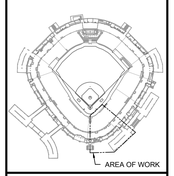
KEYED ELECTRICAL NEW WORK SHEET NOTES

1. REFER TO MANUFACTURERS POWER REQUIREMENTS FOR NEW DUPLEC SUMP PUMP. PROVIDE NEW CONDUCTORS FROM EXISTING PANEL LOCATED IN ADJACENT ELECTRICAL ROOM.

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 6

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P02.S06

KEYED PLUMBING NEW WORK SHEET NOTES

1. REPLACE BASIN COVER; PROVIDE DEMOLITION SCOPE AS REQUIRED. FURNISH AND INSTALL NEW DUPLEX POOL DRAINAGE SUBMERSIBLE PUMPS SERVING HYDROTHERAPY POOLS. PROVIDE WITH METAL TO METAL TRACK SYSTEM FOR LIFTING PUMPS OUT OF EXISTING BASIN AND A NEW BASIN COVER FOR IMPROVED MAINTENANCE ACCESS. REPLACE BASIN COVER; PROVIDE DEMOLITION SCOPE AS REQUIRED.
2. REPLACE PIPING AND VALVES; PROVIDE DEMOLITION SCOPE AS REQUIRED. CONNECT NEW COPPER PIPING FROM EXISTING DISCHARGE PIPING TO NEW DUPLEX POOL SUMP PUMPS . PROVIDE NEW ISOLATION VALVE AND CHECK VALVE PER DETAIL AND AS REQUIRED BY CHICAGO CODE. PROVIDE SUPPORT FOR NEW PUMP DISCHARGE PIPING SO IT IS FULLY SUPPORTED FOR THE SCOPE TO REPLACE THE SYSTEM.
3. REPLACE CONTROL PANEL; PROVIDE DEMOLITION SCOPE AS REQUIRED.INSTALL NEW DUPLEX POOL DRAINAGE SUBMERSIBLE PUMP CONTROL PANEL FOR NEW DUPLEX POOL DRAINAGE SUBMERSIBLE PUMP PANEL SHALL HOUSE THE NEW FLOAT BASED PUMP CONTROLLER. UNIT SHALL BE CAPABLE OF COMMUNICATING WITH EXISTING AUTOMATION SYSTEM AS WELL AS LOCAL ALARMS OR WARNING LIGHTS IDENTIFYING A FLOAT OR PUMP FAILURE.
4. REPLACE PUMP DISCHARGE (PD) PIPING; RUN (2) NEW 2" PD PIPES ALL THE WAY TO THE DRAINAGE MAIN AT THE FAR END OF THE POOL CRAWL SPACE. PROVIDE MODIFICATION OF EXISTING DRAINAGE MAIN WHERE EXISTING PUMP DISCHARGE CONNECTS TO ALLOW NEW CONNECTIONS.

KEYED ELECTRICAL NEW WORK SHEET NOTES

1. REFER TO MANUFACTURERS POWER REQUIREMENTS FOR NEW NEW DUPLEX POOL DRAINAGE SUBMERSIBLE PUMPS. PROVIDE NEW CONDUCTORS FROM EXISTING PANEL LOCATED.

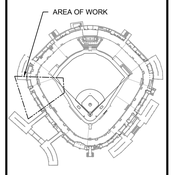
1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 9 ENLARGED

SCALE: 1/8" = 1'-0" 0 4' 8' 16'

ELARA
elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLANS - SERVICE LEVEL - SECTION 9

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P02.S09

KEYED PLUMBING DEMOLITION SHEET NOTES

1. DEMOLISH EXISTING PIPING AS IDENTIFIED. DEMOLISH ALL EXISTING HANGERS.

1 PLUMBING DEMOLITION PLAN - SERVICE LEVEL - SECTION 3 ENLARGED

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

0 4' 8' 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING DEMOLITION PLAN - SERVICE LEVEL - SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

PD03.S03

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW PIPING AS IDENTIFIED; PROVIDE NEW HANGERS. PROVIDE NEW CONNECTIONS TO EXISTING PIPING.
2. KITCHEN WASTE PIPE SHALL BE ARW BLUE PIPE. PROVIDE NEW CONNECTIONS TO EXISTING PIPING.

1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 3 ENLARGED

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

0 2 8' 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLANS - SERVICE LEVEL - SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P03.S03

KEYED PLUMBING DEMOLITION SHEET NOTES

1. DEMOLISH EXISTING PIPING AS IDENTIFIED. DEMOLISH ALL EXISTING HANGERS.

1 PLUMBING DEMOLITION PLAN - 100 LEVEL - SECTION 3 ENLARGED

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

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING DEMOLITION PLAN - LEVEL 100 - SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

PD03.103

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW PIPING AS IDENTIFIED; PROVIDE NEW HANGERS. PROVIDE NEW CONNECTIONS TO EXISTING PIPING.
2. KITCHEN WASTE PIPE SHALL BE ARW BLUE PIPE. PROVIDE NEW CONNECTIONS TO EXISTING PIPING.

1 PLUMBING NEW WORK PLAN - 100 LEVEL - SECTION 3 ENLARGED

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

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 100 - SECTION 3

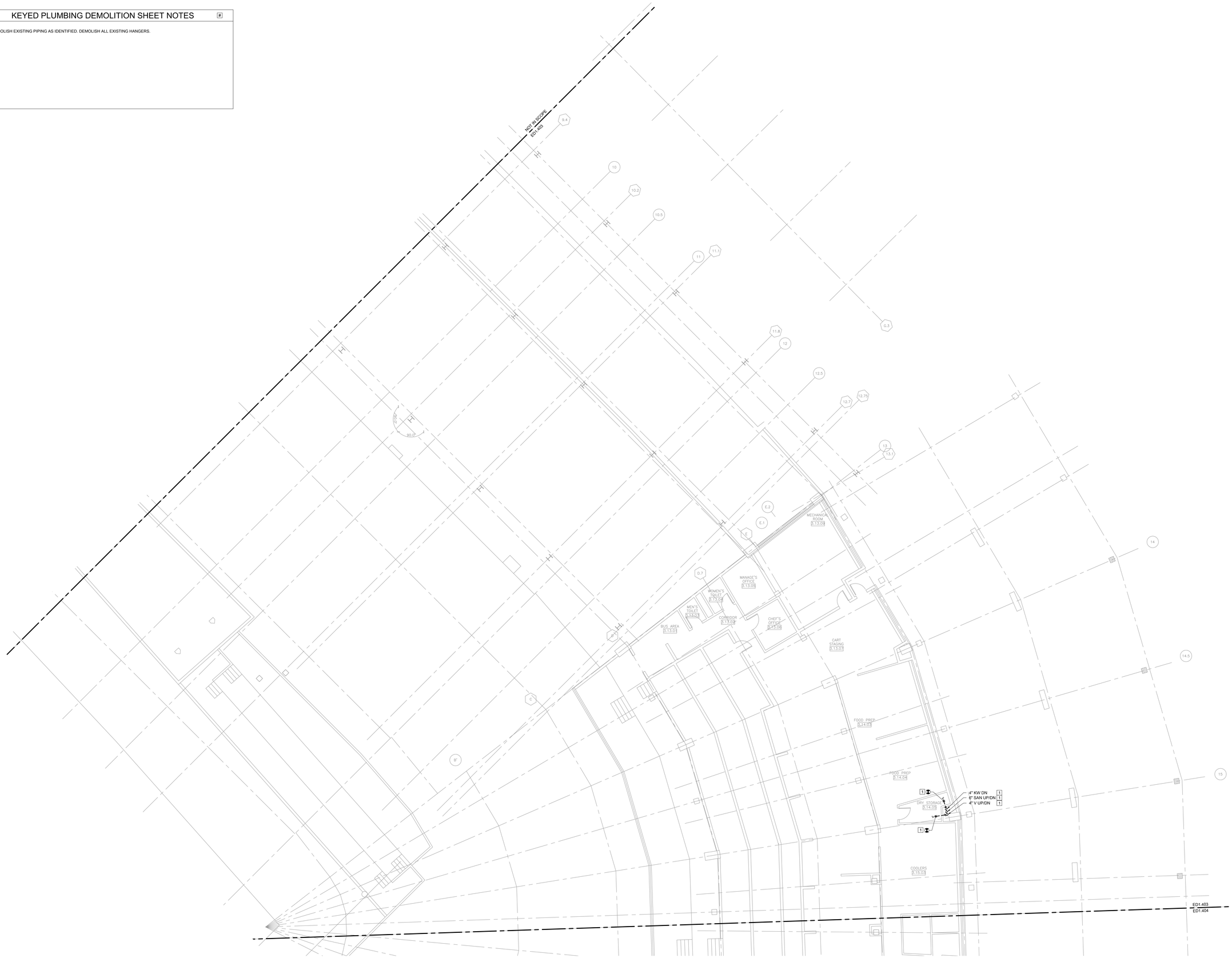
DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P03.103

KEYED PLUMBING DEMOLITION SHEET NOTES

1. DEMOLISH EXISTING PIPING AS IDENTIFIED. DEMOLISH ALL EXISTING HANGERS.



1 PLUMBING DEMOLITION PLAN - 200 LEVEL - SECTION 3 ENLARGED

SCALE: 1/8" = 1'-0" 0 4 8 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING DEMOLITION PLAN - LEVEL 200 - SECTION 3

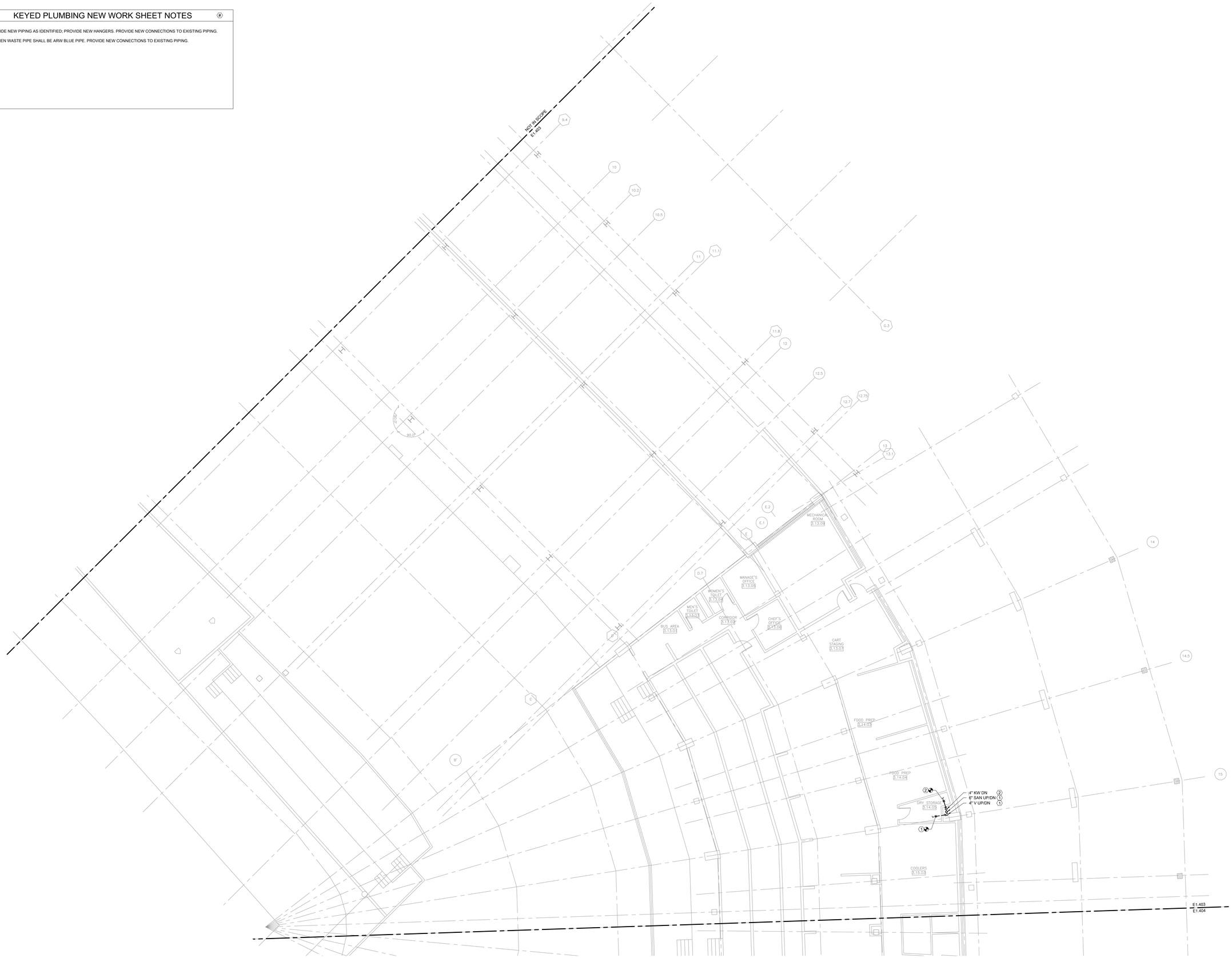
DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

PD03.203

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW PIPING AS IDENTIFIED; PROVIDE NEW HANGERS. PROVIDE NEW CONNECTIONS TO EXISTING PIPING.
2. KITCHEN WASTE PIPE SHALL BE ARW BLUE PIPE. PROVIDE NEW CONNECTIONS TO EXISTING PIPING.



1 PLUMBING NEW WORK PLAN - 200 LEVEL - SECTION 3 ENLARGED

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

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 200 - SECTION 3

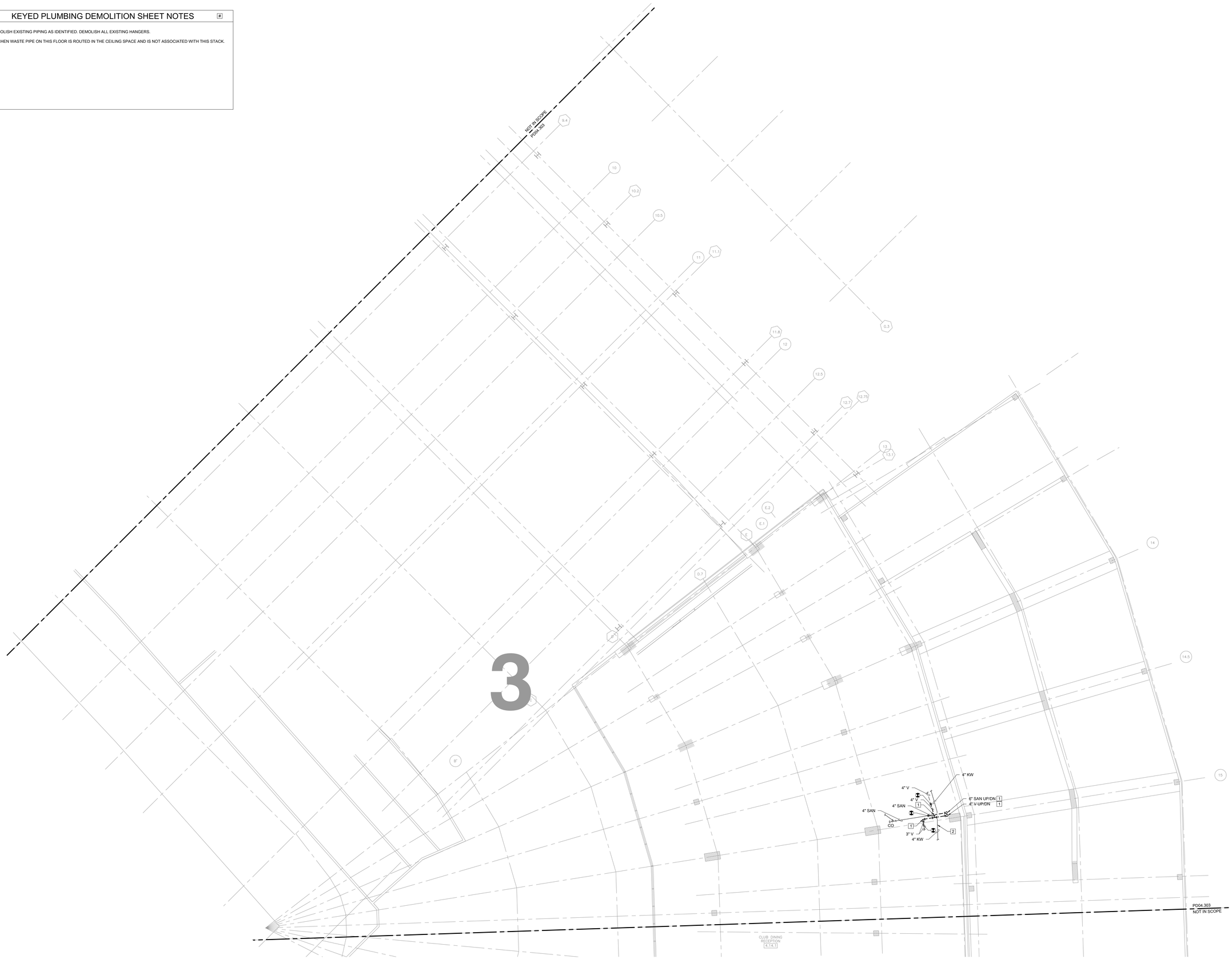
DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P03.203

KEYED PLUMBING DEMOLITION SHEET NOTES

1. DEMOLISH EXISTING PIPING AS IDENTIFIED. DEMOLISH ALL EXISTING HANGERS.
2. KITCHEN WASTE PIPE ON THIS FLOOR IS ROUTED IN THE CEILING SPACE AND IS NOT ASSOCIATED WITH THIS STACK.



1 PLUMBING DEMOLITION PLAN - 300 LEVEL - SECTION 3 ENLARGED

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

0 4' 8' 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING DEMOLITION PLAN - LEVEL 300 - SECTION 3

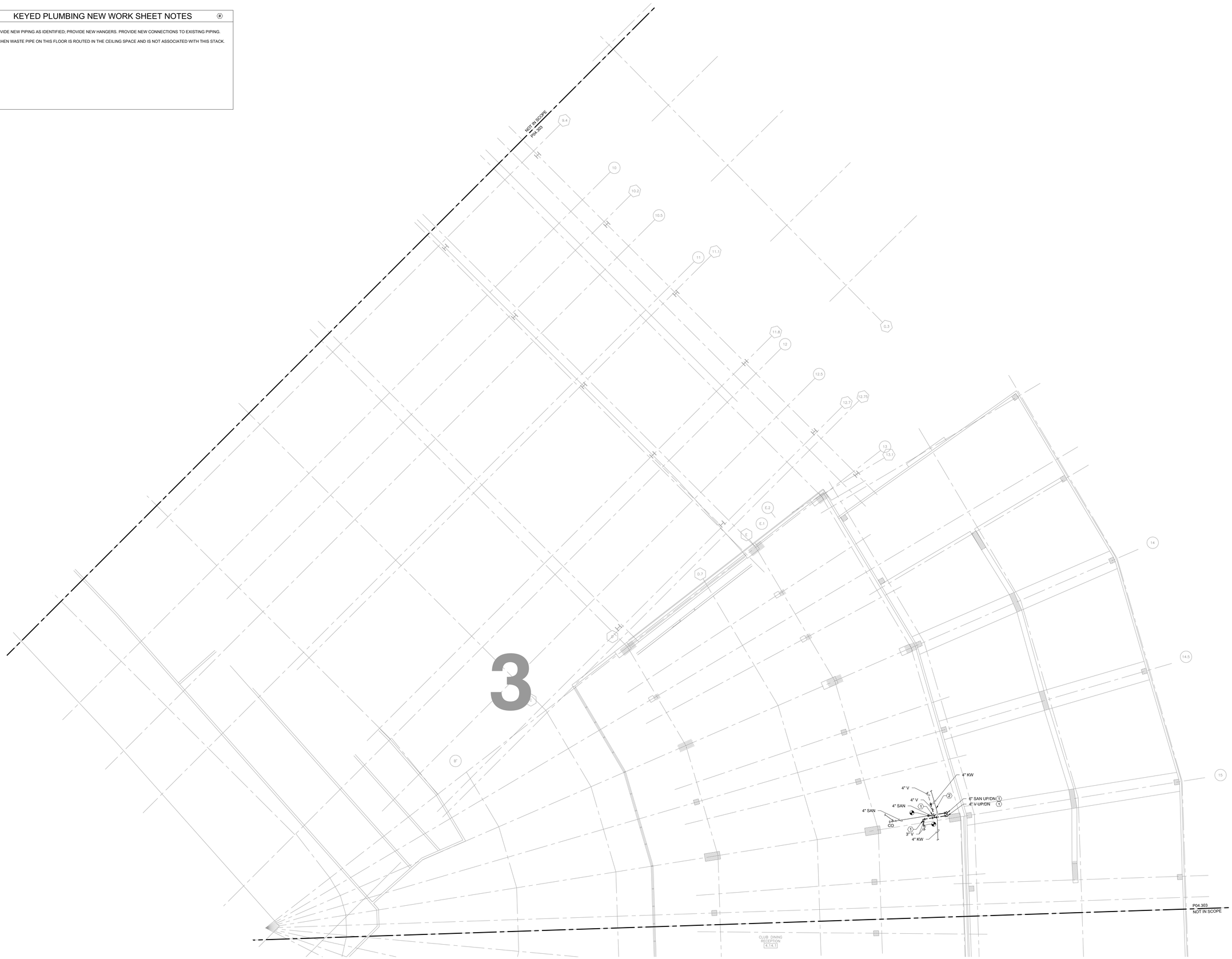
DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

PD03.303

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW PIPING AS IDENTIFIED; PROVIDE NEW HANGERS. PROVIDE NEW CONNECTIONS TO EXISTING PIPING.
2. KITCHEN WASTE PIPE ON THIS FLOOR IS ROUTED IN THE CEILING SPACE AND IS NOT ASSOCIATED WITH THIS STACK.



1 PLUMBING NEW WORK PLAN - 300 LEVEL - SECTION 3 ENLARGED

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

0 4' 8' 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 300 - SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P03.303

KEYED PLUMBING DEMOLITION SHEET NOTES

1. DEMOLISH EXISTING PIPING AS IDENTIFIED. DEMOLISH ALL EXISTING HANGERS.

1 PLUMBING DEMOLITION PLAN - 400 LEVEL - SECTION 3 ENLARGED

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

0 4' 8' 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING DEMOLITION PLAN - LEVEL 400 - SECTION 3

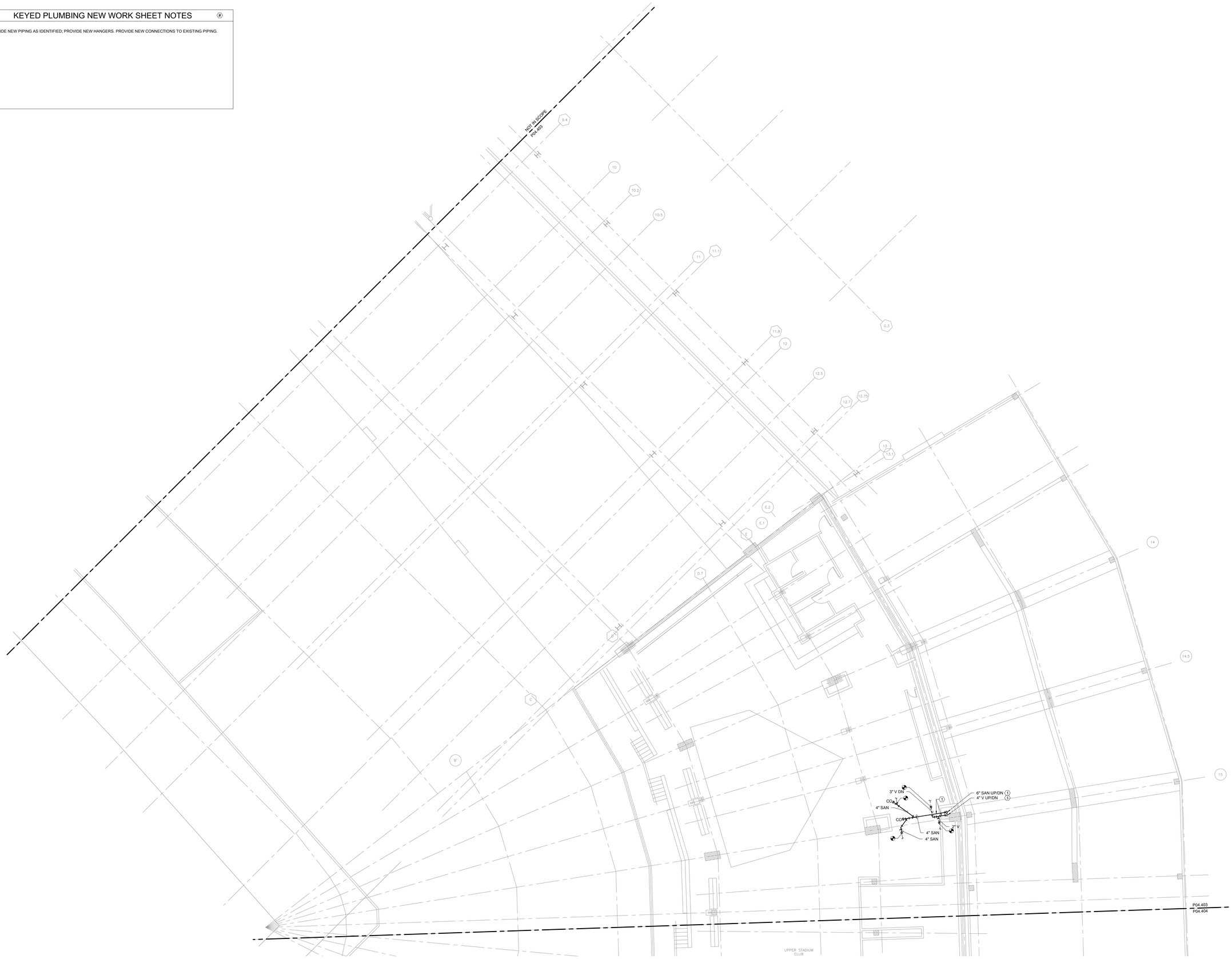
DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

PD03.403

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW PIPING AS IDENTIFIED; PROVIDE NEW HANGERS. PROVIDE NEW CONNECTIONS TO EXISTING PIPING.



1 PLUMBING NEW WORK PLAN - 400 LEVEL - SECTION 3 ENLARGED
SCALE: 1/8" = 1'-0"
0 4' 8' 16'

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

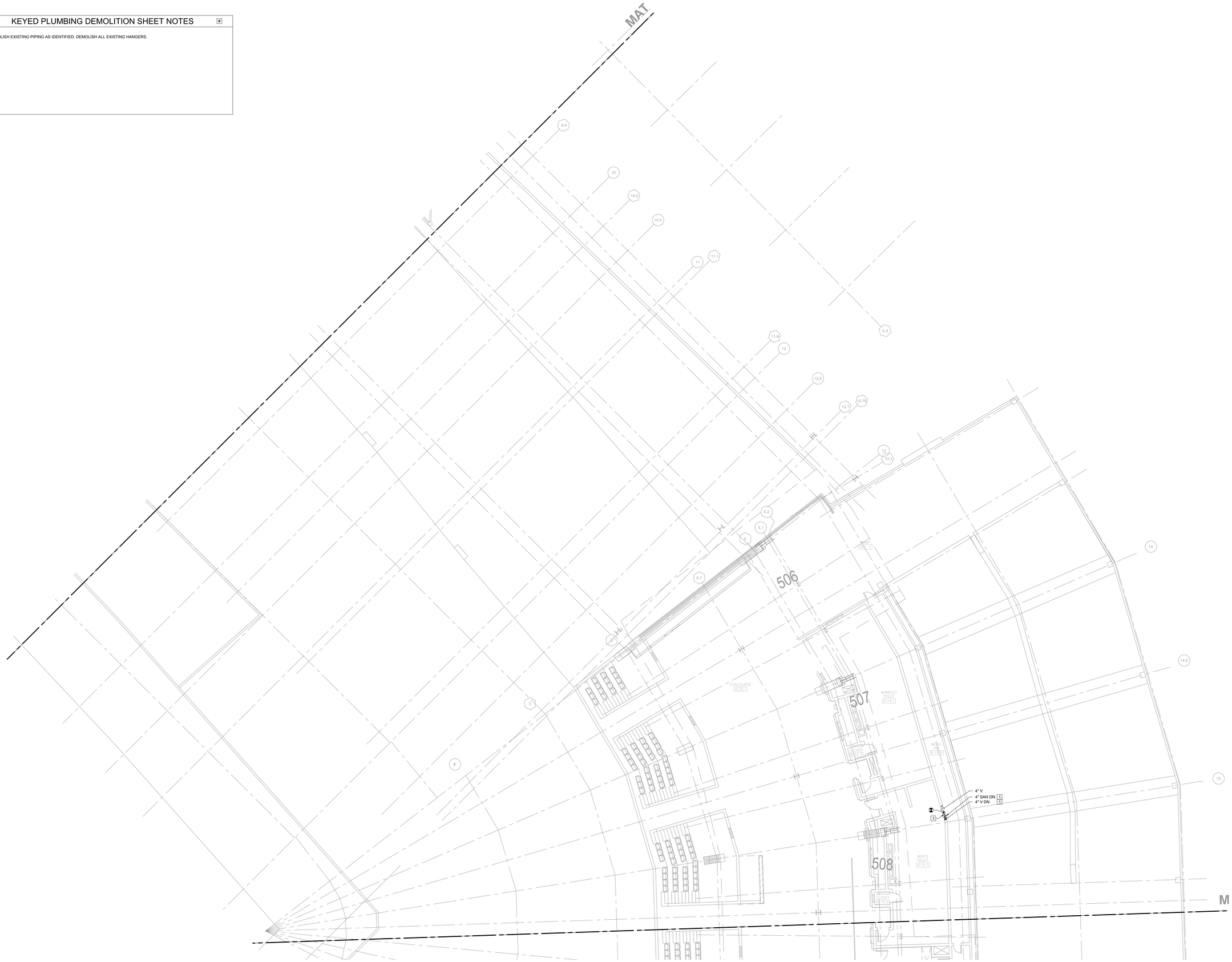
DRAWING TITLE:
PLUMBING NEW WORK PLAN - LEVEL 400 - SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P03.403

KEYED PLUMBING DEMOLITION SHEET NOTES

1. DEMOLISH EXISTING PIPING AS IDENTIFIED. DEMOLISH ALL EXISTING HANGERS.



1 PLUMBING DEMOLITION PLAN - 500 LEVEL - SECTION 3 ENLARGED
SCALE: 1/8" = 1'-0"

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING DEMOLITION PLAN - LEVEL 500 - SECTION 3

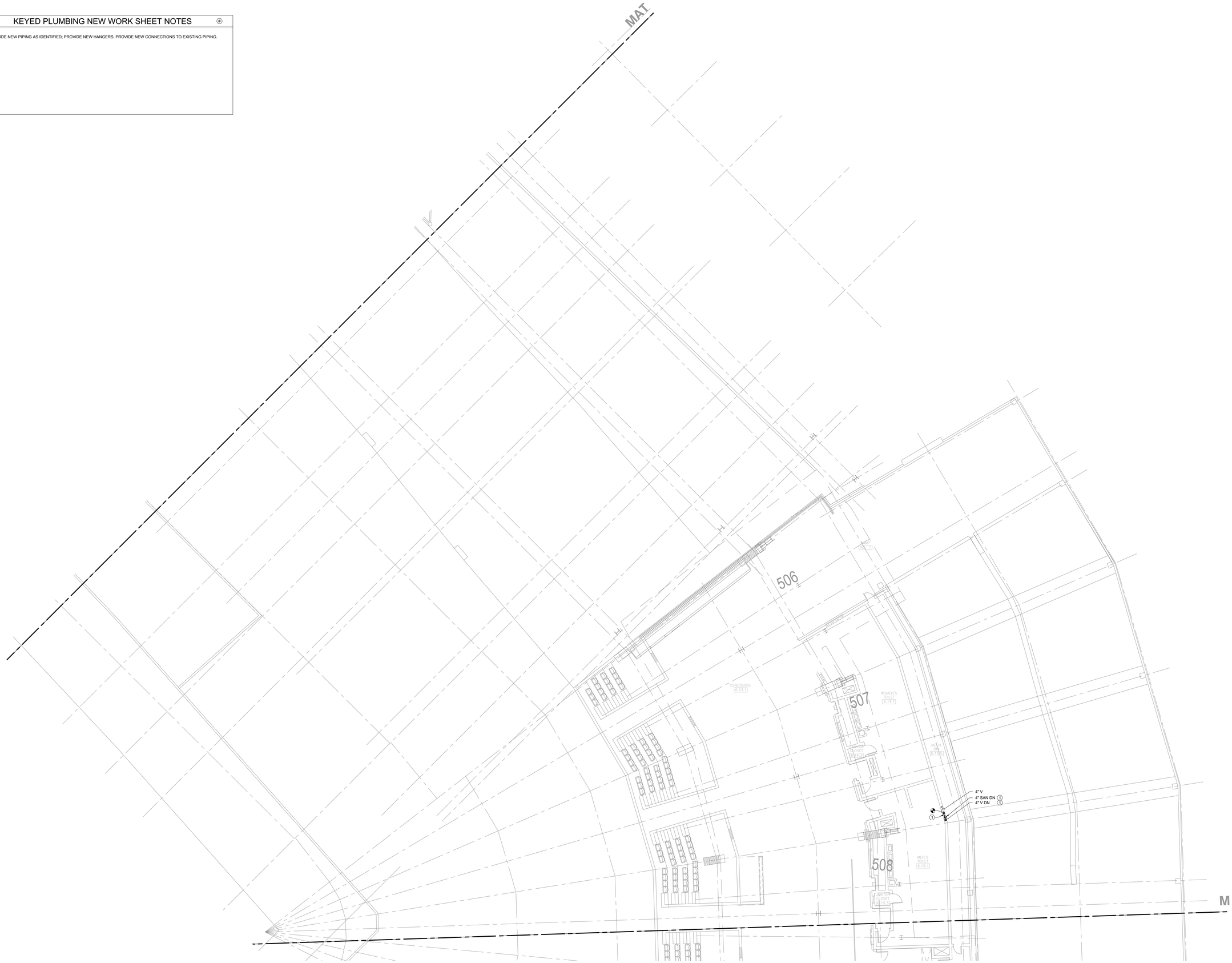
DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

PD03.503

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW PIPING AS IDENTIFIED; PROVIDE NEW HANGERS. PROVIDE NEW CONNECTIONS TO EXISTING PIPING.



1 PLUMBING NEW WORK PLAN - 500 LEVEL - SECTION 3 ENLARGED

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

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

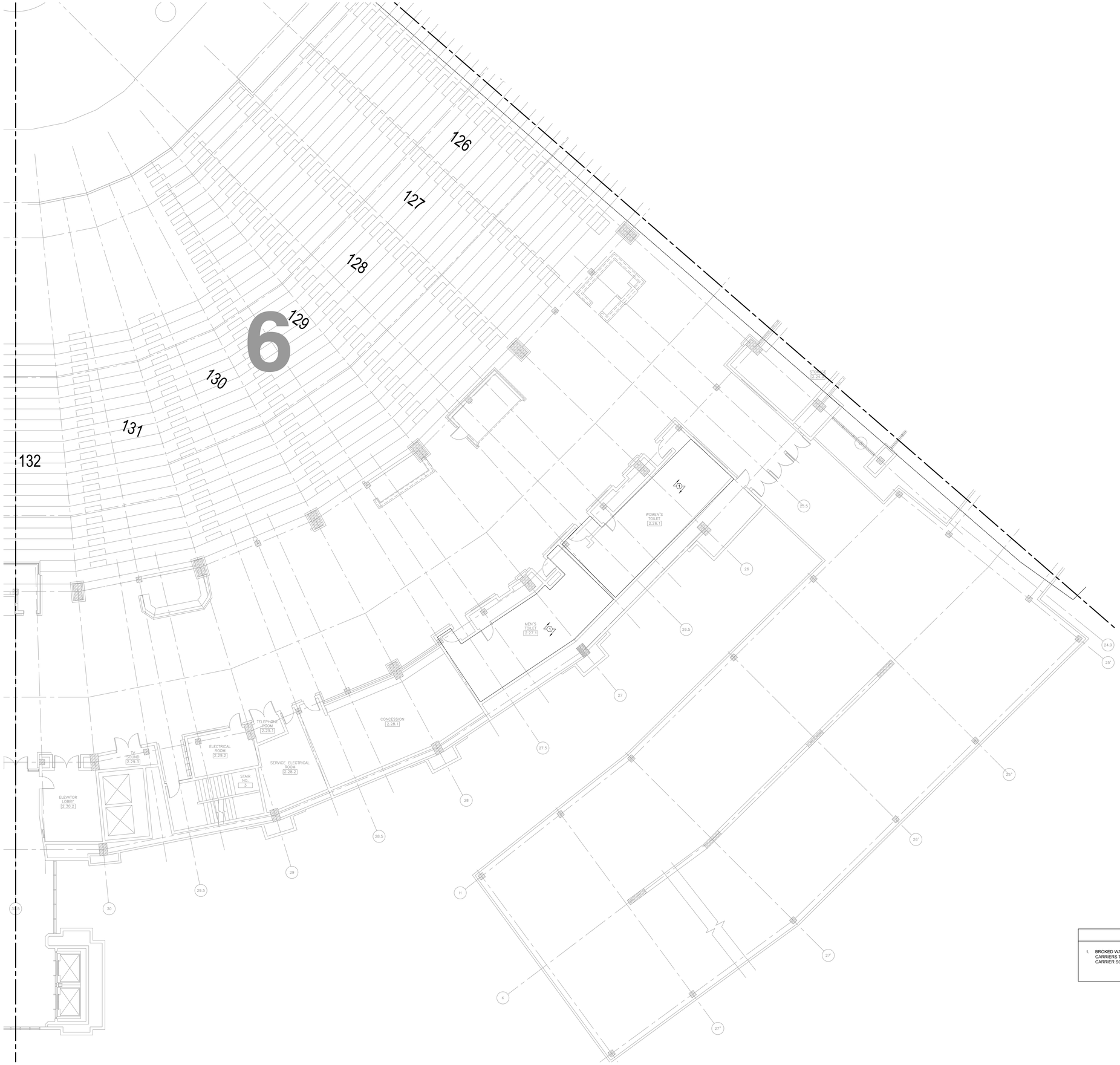
DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 500 - SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P03.503



1 PLUMBING NEW WORK PLAN - 100 LEVEL - SECTION 6 ENLARGED

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

0 4' 8' 16'

KEYED PLUMBING NEW WORK SHEET NOTES

1. BROKED WATER CLOSET WALL CARRIERS TO BE DISCONNECTED & REMOVED. PC TO FURNISH & INSTALL NEW WALL CARRIERS TO EXISTING WATER CLOSETS. INCLUDING DEMOLITION AND NEW PIPING ADJACENT TO THE WALL CARRIER SCOPE. THE QUANTITY IDENTIFIED TO BE REPLACED IS (2) WALL CARRIERS

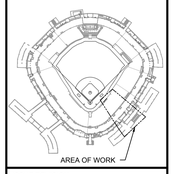
ELARA

elaraeng.com | (708) 236-0300

ISFA

ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 100 - SECTION 6

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P04.106

1 PLUMBING NEW WORK PLAN - 100 LEVEL - SECTION 9 ENLARGED

SCALE: 1/8" = 1'-0" 0 4' 8' 16'

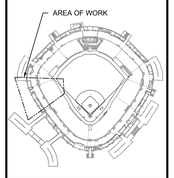
KEYED PLUMBING NEW WORK SHEET NOTES

1. BROKED WATER CLOSET WALL CARRIERS TO BE DISCONNECTED & REMOVED. PC TO FURNISH & INSTALL NEW WALL CARRIERS TO EXISTING WATER CLOSETS, INCLUDING DEMOLITION AND NEW PIPING ADJACENT TO THE WALL CARRIER SCOPE. THE QUANTITY IDENTIFIED TO BE REPLACED IS (2) WALL CARRIERS

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

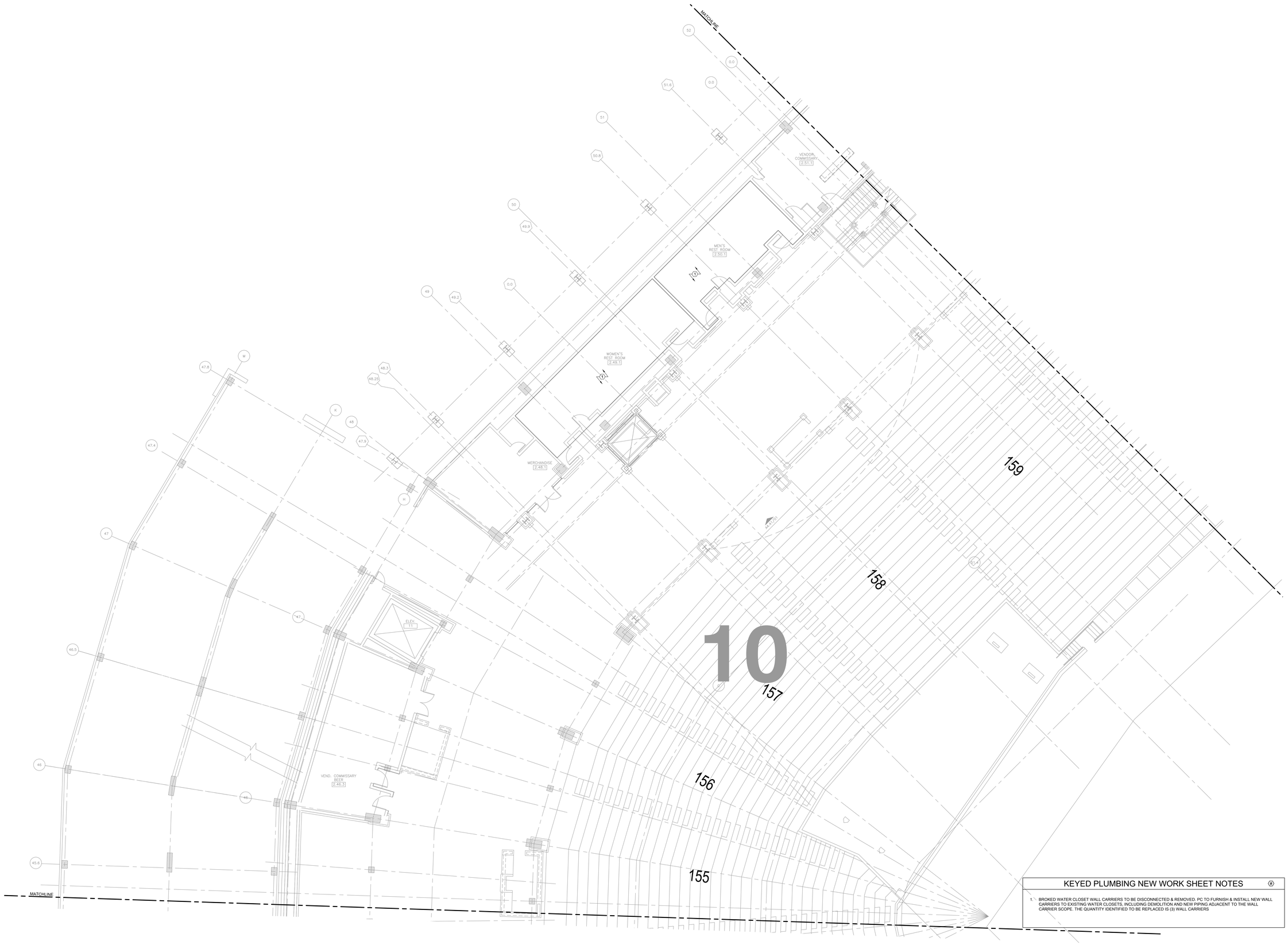
PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLAN - LEVEL 100 - SECTION 9

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P04.109



KEYED PLUMBING NEW WORK SHEET NOTES

1. BROKED WATER CLOSET WALL CARRIERS TO BE DISCONNECTED & REMOVED. PC TO FURNISH & INSTALL NEW WALL CARRIERS TO EXISTING WATER CLOSETS, INCLUDING DEMOLITION AND NEW PIPING ADJACENT TO THE WALL CARRIER SCOPE. THE QUANTITY IDENTIFIED TO BE REPLACED IS (3) WALL CARRIERS

1 PLUMBING NEW WORK PLAN - 100 LEVEL - SECTION 10 ENLARGED

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

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN: AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

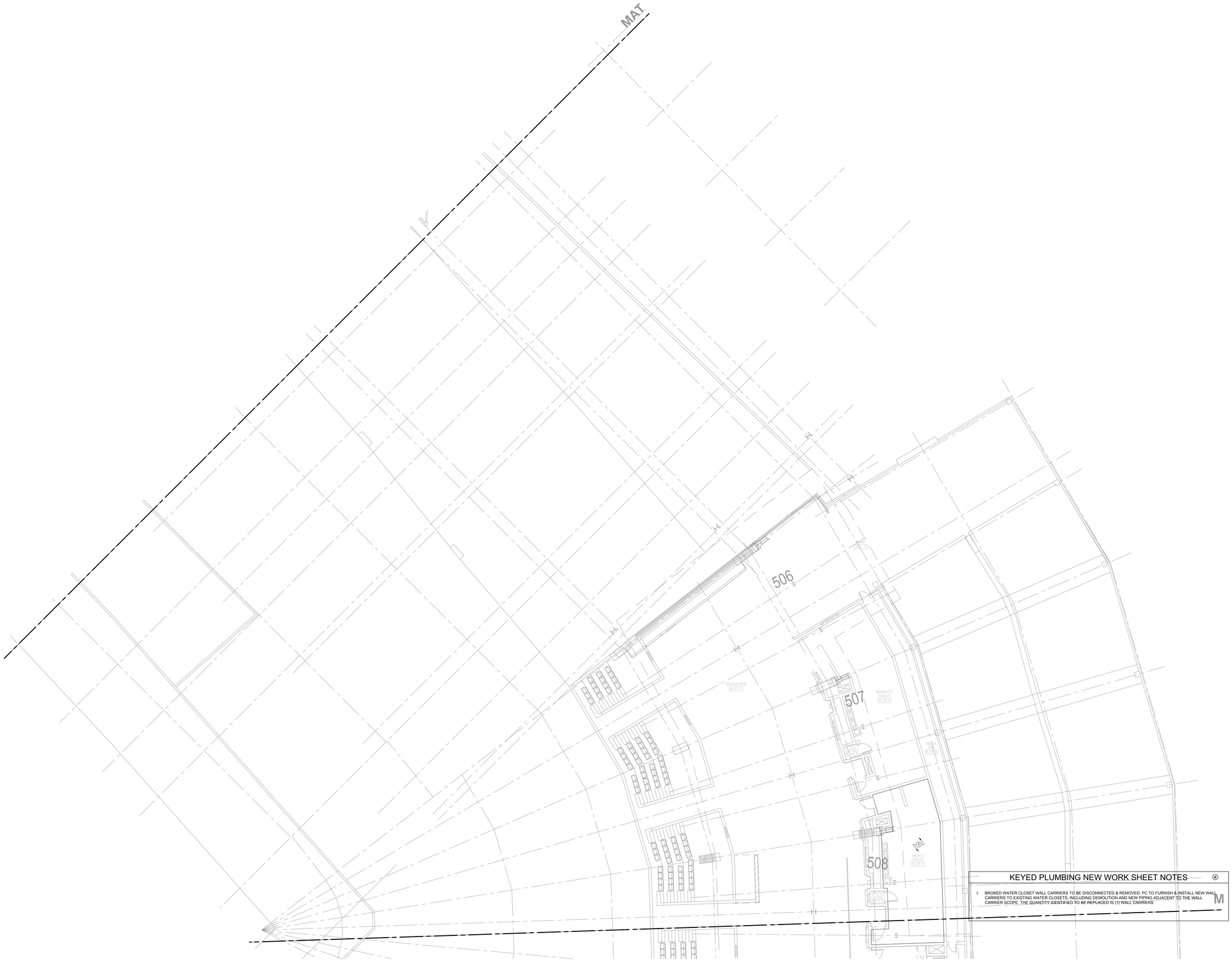
DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 100 - SECTION 10

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P04.110



KEYED PLUMBING NEW WORK SHEET NOTES

1. BROKED WATER CLOSET WALL CARRIERS TO BE DISCONNECTED & REMOVED. PC TO FURNISH & INSTALL NEW WALL CARRIERS TO EXISTING WATER CLOSETS, INCLUDING DEMOLITION AND NEW PIPING ADJACENT TO THE WALL CARRIER SCOPE. THE QUANTITY IDENTIFIED TO BE REPLACED IS (1) WALL CARRIERS

M

1 PLUMBING NEW WORK PLAN - 500 LEVEL - SECTION 3 ENLARGED

SCALE: 1/8" = 1'-0" 0 4 8 16

ELARA

elaraeng.com | (708) 236-0300

ISFA

ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

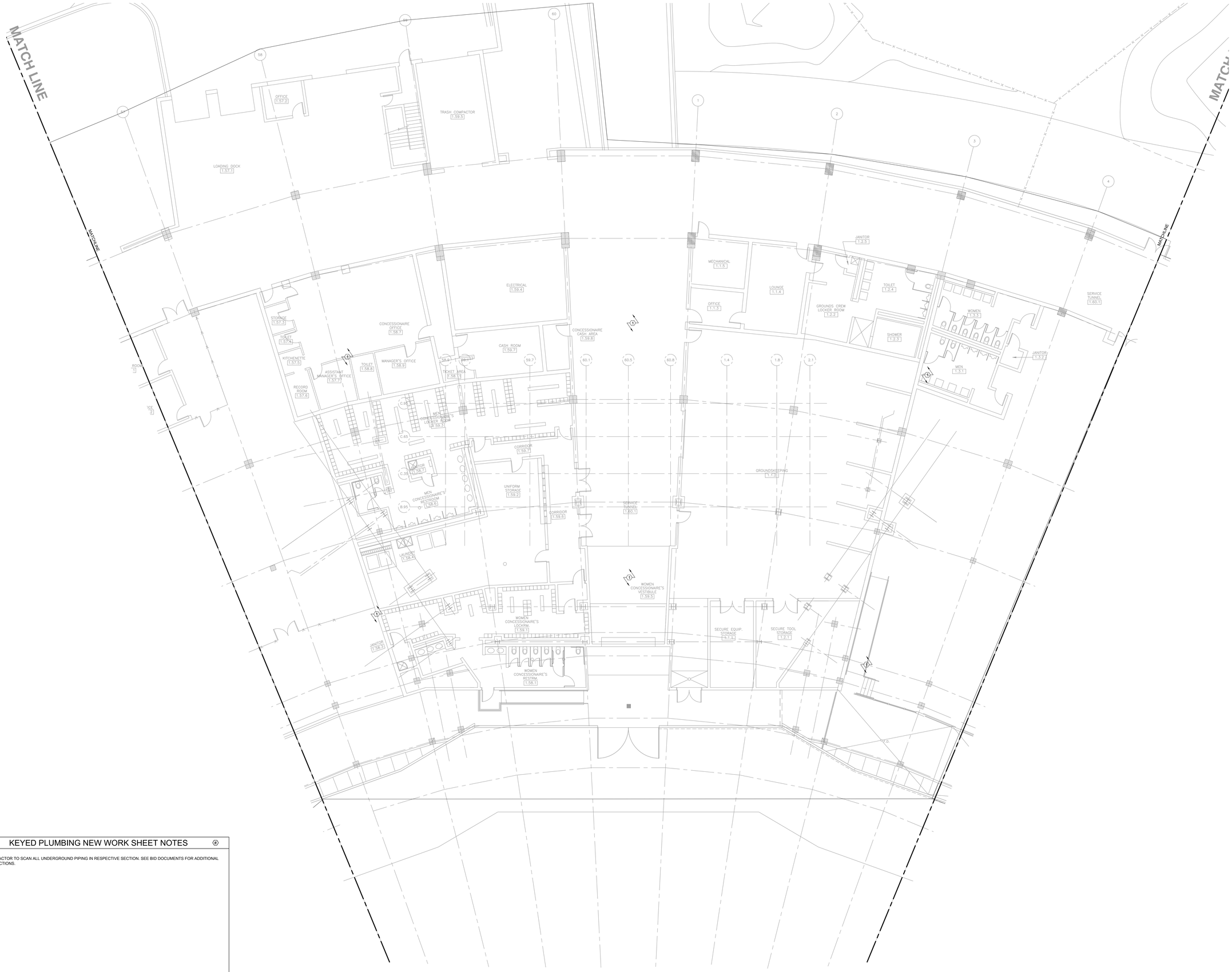
DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 500 - SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P04.503



1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 1 ENLARGED

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

0 4 8 16

KEYED PLUMBING NEW WORK SHEET NOTES

1. CONTRACTOR TO SCAN ALL UNDERGROUND PIPING IN RESPECTIVE SECTION. SEE BID DOCUMENTS FOR ADDITIONAL INSTRUCTIONS.

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

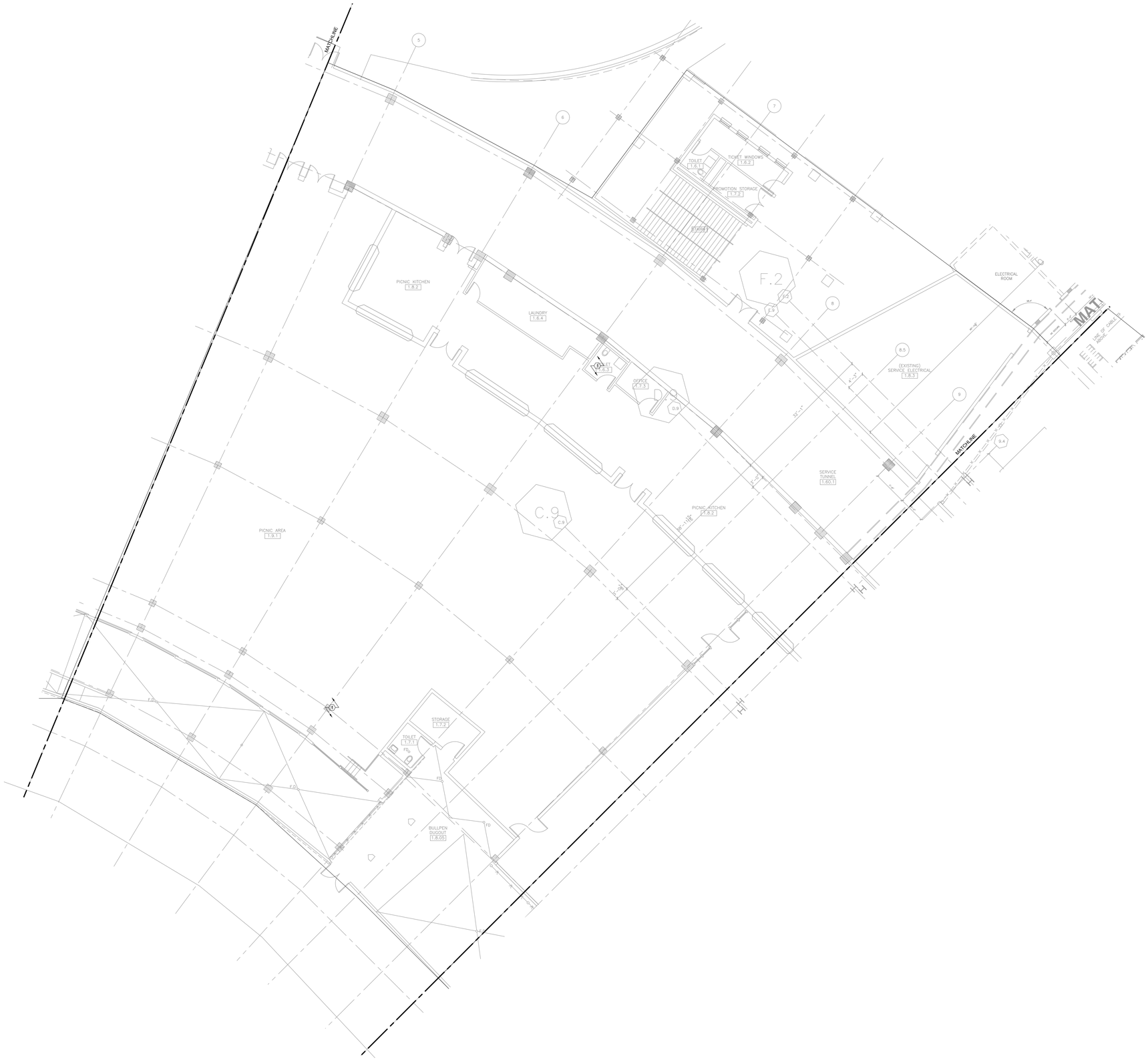
DRAWING TITLE:

PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 1

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P05.S01



KEYED PLUMBING NEW WORK SHEET NOTES

1. CONTRACTOR TO SCAN ALL UNDERGROUND PIPING IN RESPECTIVE SECTION. SEE BID DOCUMENTS FOR ADDITIONAL INSTRUCTIONS.

1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 2 ENLARGED

SCALE: 1/8" = 1'-0" 0 4 8 16

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 2

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P05.S02

KEYED PLUMBING NEW WORK SHEET NOTES

1. CONTRACTOR TO SCAN ALL UNDERGROUND PIPING IN RESPECTIVE SECTION. SEE BID DOCUMENTS FOR ADDITIONAL INSTRUCTIONS.

1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 3 ENLARGED

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

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P05.S03

KEYED PLUMBING NEW WORK SHEET NOTES

1. CONTRACTOR TO SCAN ALL UNDERGROUND PIPING IN RESPECTIVE SECTION. SEE BID DOCUMENTS FOR ADDITIONAL INSTRUCTIONS.

1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 4 ENLARGED

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

0 4' 8' 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 4

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P05.S04

1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 5 ENLARGED

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

0 4 8 16'

KEYED PLUMBING NEW WORK SHEET NOTES

1. CONTRACTOR TO SCAN ALL UNDERGROUND PIPING IN RESPECTIVE SECTION. SEE BID DOCUMENTS FOR ADDITIONAL INSTRUCTIONS.

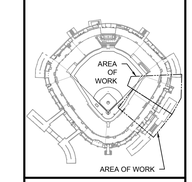
ELARA

elaraeng.com | (708) 236-0300

ISFA

ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

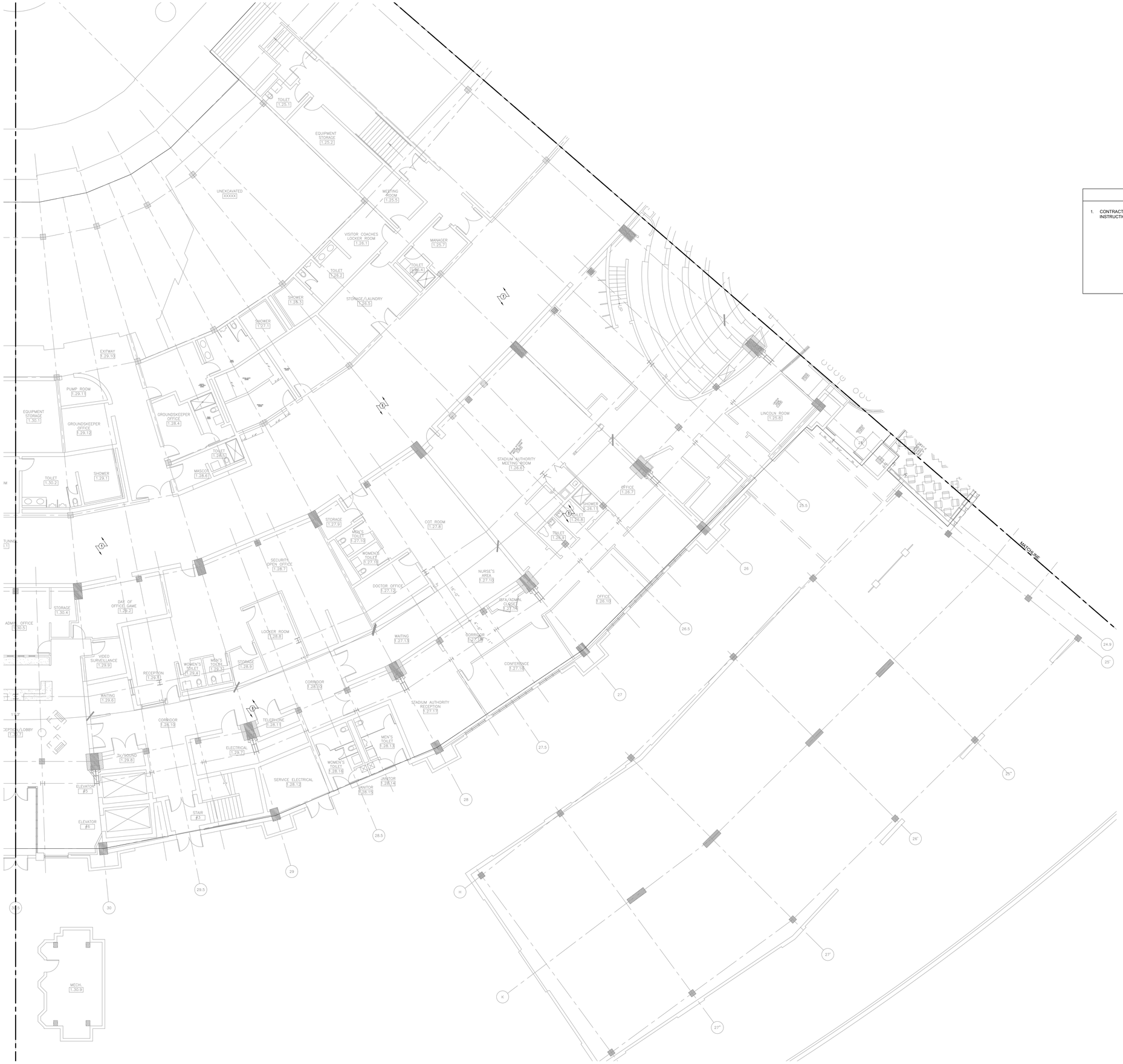
DRAWING TITLE:

PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 5

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P05.S05



1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 6 ENLARGED

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

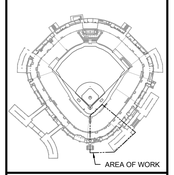
KEYED PLUMBING NEW WORK SHEET NOTES

1. CONTRACTOR TO SCAN ALL UNDERGROUND PIPING IN RESPECTIVE SECTION. SEE BID DOCUMENTS FOR ADDITIONAL INSTRUCTIONS.

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 6

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P05.S06

KEYED PLUMBING NEW WORK SHEET NOTES

1. CONTRACTOR TO SCAN ALL UNDERGROUND PIPING IN RESPECTIVE SECTION. SEE BID DOCUMENTS FOR ADDITIONAL INSTRUCTIONS.

1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 7 ENLARGED

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

0 4' 8' 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 7

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P05.S07

UNEXCAVATED
XXXX
TRAINER/ROAD TRUNK STORAGE
1.39.1
TRAINING ROOM REHABILITATION
1.39.2
MECHANICAL
1.38.5
PHOTO
1.37.2
PHOTO
1.32.2
TV
1.37.1
UNEXCAVATED
XXXX
DUGOUT
1.35.1
PITCHING/ BATTING TUNNEL
1.36.1
PITCHING/ BATTING TUNNEL
1.36.2
CORRIDOR
1.37.3
DRYING AREA
1.36.7
STEAM
1.36.5
COLD DIP
1.36.6
DRY SAUNA
1.36.4
JANITOR CLOSET
1.36.3
TOILET
1.37.4
SHOWERS
1.36.6
CONS. COACH
1.37.5
STAFF LOCKER ROOM
1.37.7
EXERCISE/ WEIGHT ROOM
1.38.2
STAIR
#10
SERVICE TUNNEL
1.60.1
OFFICE/ DUGAN
1.37.18
120
OFFICE/ KRIEG
1.37.17
145
INTERN
OPEN OFFICE
1.37.20
INTERN
INTERN
SALES
SALES
SALES

KEYED PLUMBING NEW WORK SHEET NOTES

1. CONTRACTOR TO SCAN ALL UNDERGROUND PIPING IN RESPECTIVE SECTION. SEE BID DOCUMENTS FOR ADDITIONAL INSTRUCTIONS.

1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 9 ENLARGED

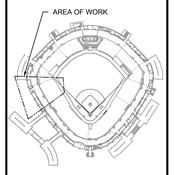
SCALE: 1/8" = 1'-0" 0 4' 8' 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

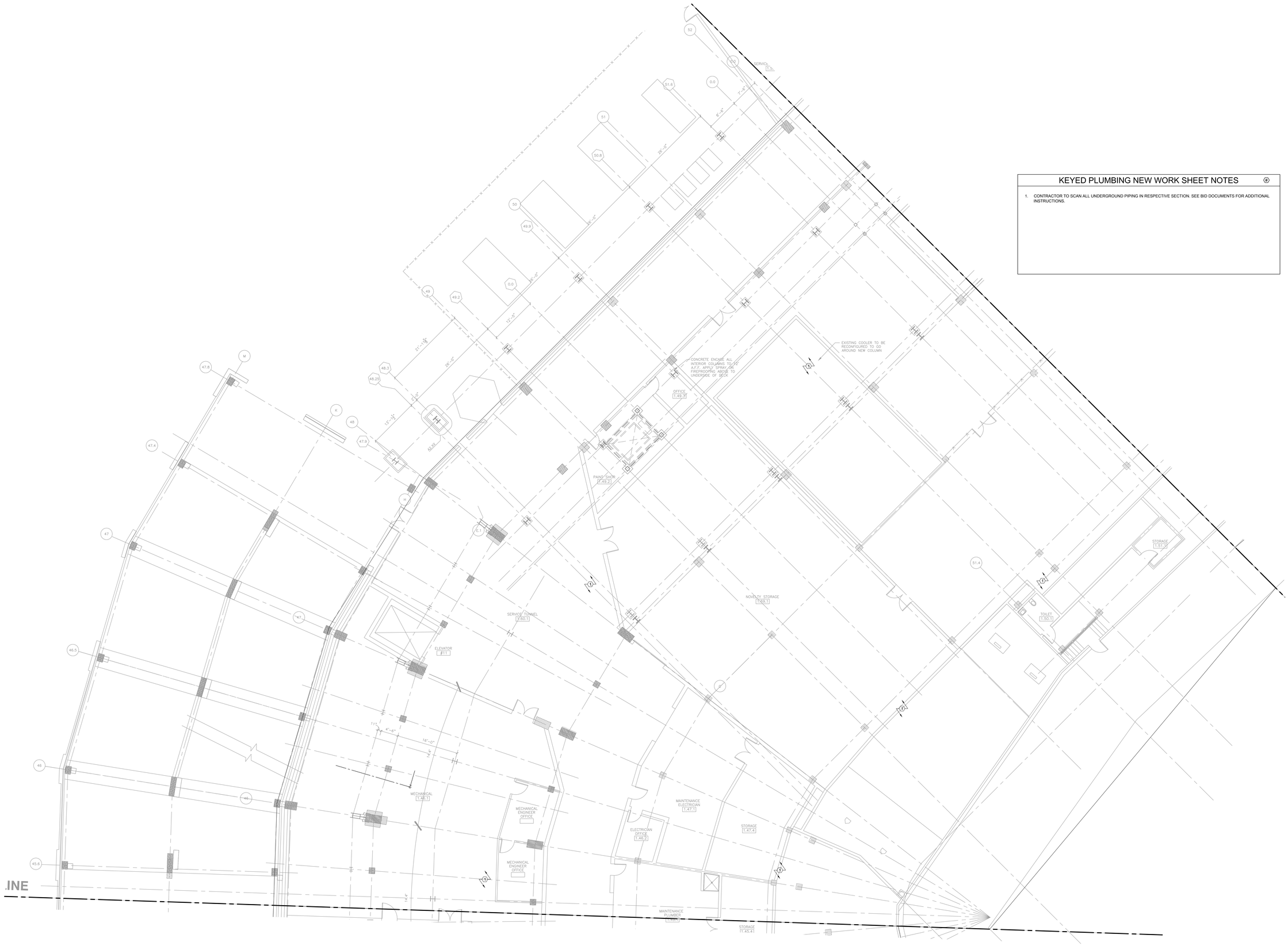
DRAWING TITLE:

PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 9

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P05.S09



1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 10 ENLARGED

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

KEYED PLUMBING NEW WORK SHEET NOTES

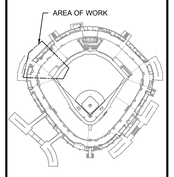
1. CONTRACTOR TO SCAN ALL UNDERGROUND PIPING IN RESPECTIVE SECTION. SEE BID DOCUMENTS FOR ADDITIONAL INSTRUCTIONS.

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

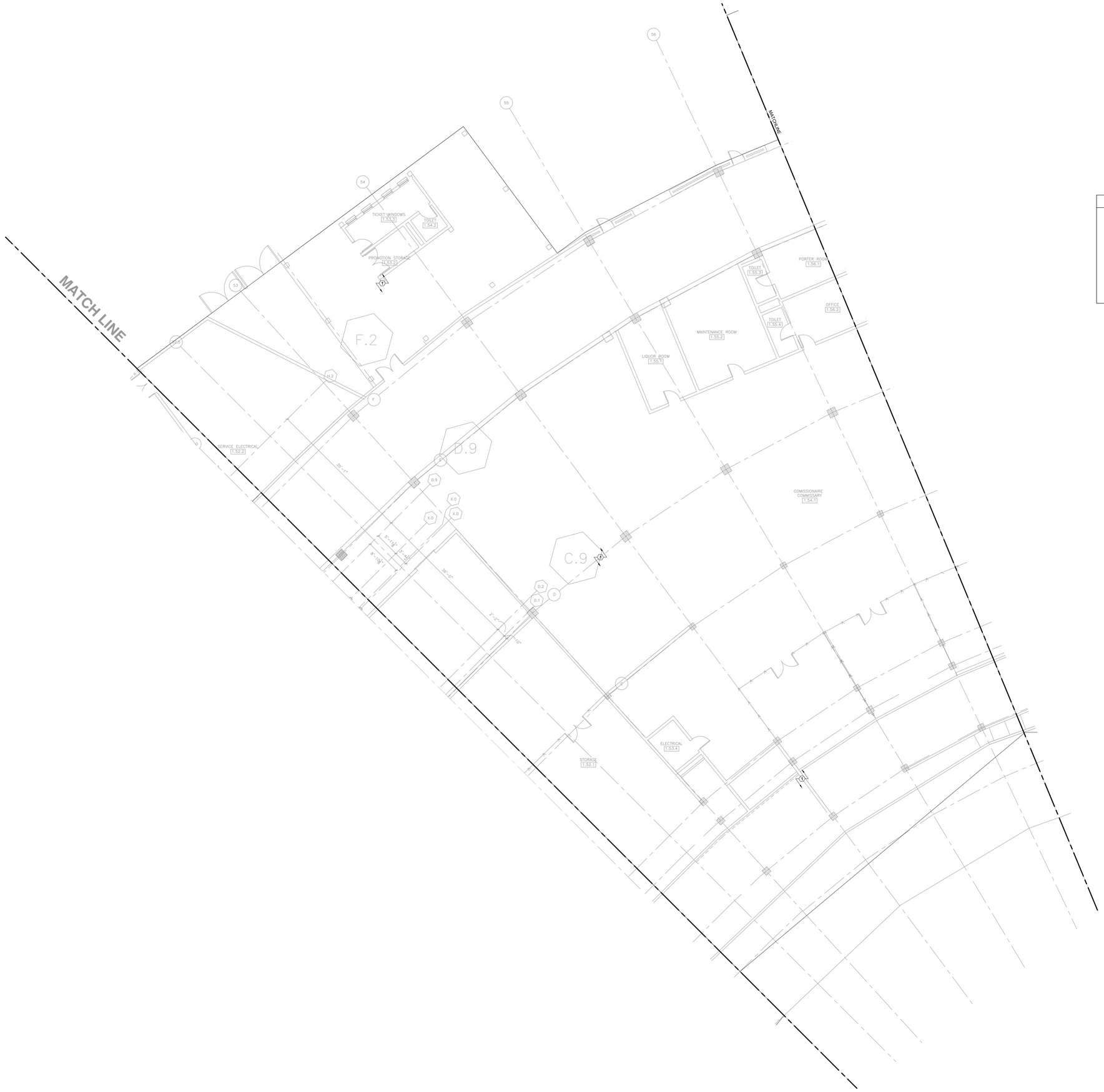
DRAWING TITLE:

PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 10

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P05.S10



1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 11 ENLARGED

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

0 4' 8' 16'

KEYED PLUMBING NEW WORK SHEET NOTES

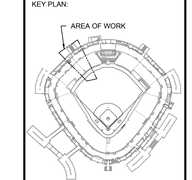
1. CONTRACTOR TO SCAN ALL UNDERGROUND PIPING IN RESPECTIVE SECTION. SEE BID DOCUMENTS FOR ADDITIONAL INSTRUCTIONS.

ELARA

elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 11

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P05.S11

KEYED PLUMBING NEW WORK SHEET NOTES

1. DRAIN DOWN EXISTING DOMESTIC HOT WATER STORAGE TANKS. PC TO ISOLATE DOMESTIC HOT WATER SUPPLY, DOMESTIC HOT WATER RETURN, MAKE-UP WATER (DOMESTIC COLD WATER), WATER HEATER GENERATOR CIRCULATION SUPPLY & RETURN VALVES. PC TO ISOLATE & DRAIN HOT WATER STORAGE TANKS SEQUENTIALLY & SEPARATELY. PC TO INFORM BUILDING ENGINEER IMMEDIATELY OF ANY ISOLATION VALVES THAT FULLY CLOSE.
2. OPEN MAN DOORS OF DOMESTIC HOT WATER STORAGE TANKS SEQUENTIALLY & SEPARATELY. PC TO PROVIDE INSPECTION REPORT. CONTRACTOR TO PROVIDE PICTURES & VIDEOS TO SUPPORT FINDINGS OF REPORT. COORDINATE WITH BUILDING ENGINEER TO RESULTS OF REPORT PRIOR TO CLOSING & RESEALING OF DHW STORAGE TANK DOORS

1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 3

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

0 4 8 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - SERVICE LEVEL- SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P06.S03

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW EPOXY COATING FOR INDICATED DRAIN. LINER SHALL BE COMPRISED OF ONE OF MORE LAYERS OF A FLEXIBLE NEEDLED FELT OR AN EQUIVALENT NONWOVEN OR WOVEN MATERIAL. REFER TO SPECIFICATION FOR ADDITIONAL DETAILS ON CRITERIA FOR ACCEPTABLE LINER PRODUCT. PC TO CONFIRM EXACT LOCATION OF FLOOR DRAIN TO BE LINED WITH OWNERS REPRESENTATIVE PRIOR TO INITIATING WORK.

1 PLUMBING NEW WORK PLAN - LEVEL 100 - SECTION 4 ENLARGED

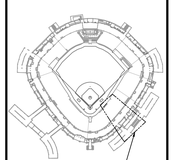
SCALE: 1/8" = 1'-0"

0 4 8 16

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 100 - SECTION 4

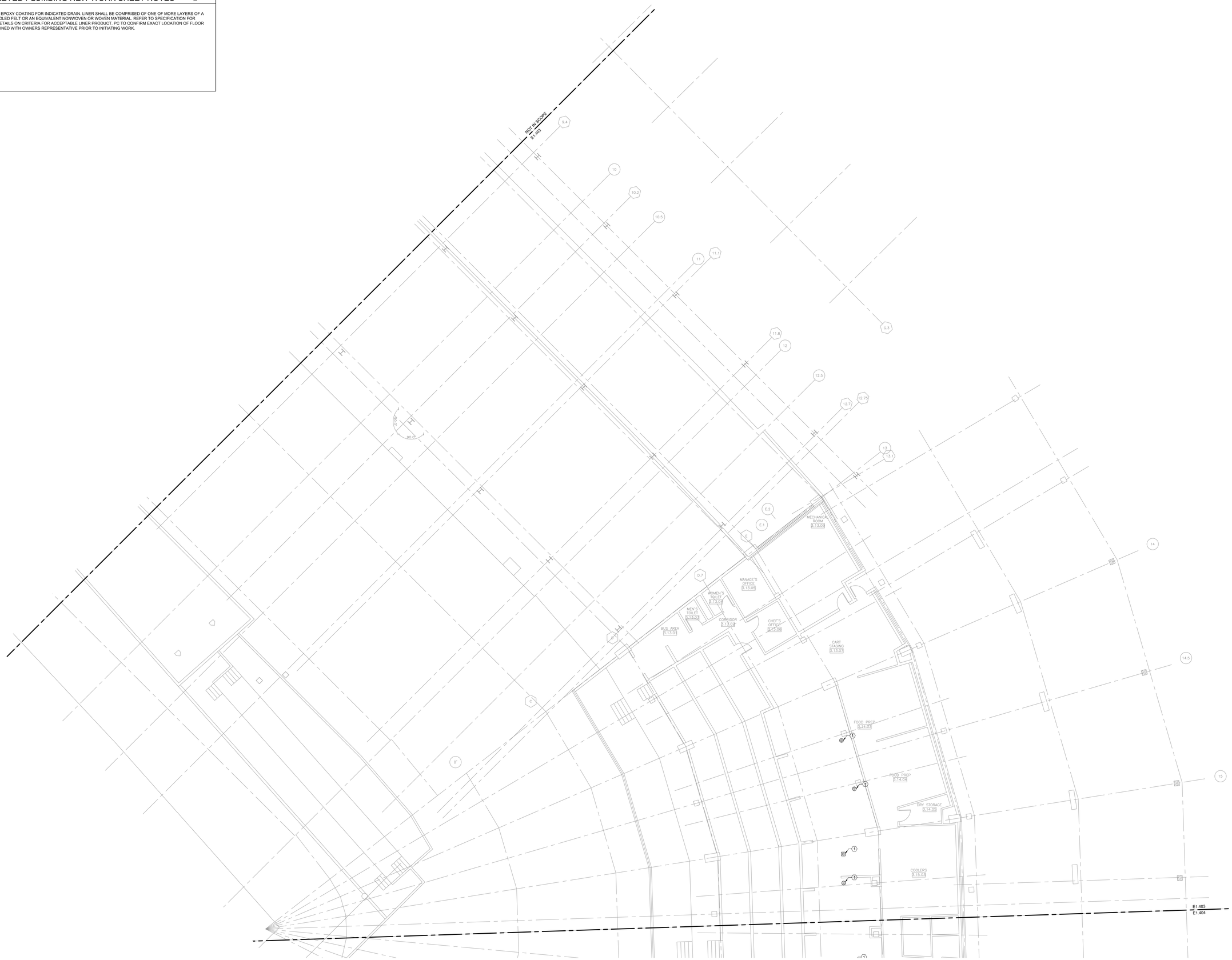
DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P07.104

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW EPOXY COATING FOR INDICATED DRAIN. LINER SHALL BE COMPRISED OF ONE OF MORE LAYERS OF A FLEXIBLE NEEDLED FELT OR AN EQUIVALENT NONWOVEN OR WOVEN MATERIAL. REFER TO SPECIFICATION FOR ADDITIONAL DETAILS ON CRITERIA FOR ACCEPTABLE LINER PRODUCT. PC TO CONFIRM EXACT LOCATION OF FLOOR DRAIN TO BE LINED WITH OWNERS REPRESENTATIVE PRIOR TO INITIATING WORK.



1 PLUMBING NEW WORK PLAN - 200 LEVEL - SECTION 3 ENLARGED
SCALE: 1/8" = 1'-0"

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLAN - LEVEL 200 - SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P07.203

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW EPOXY COATING FOR INDICATED DRAIN. LINER SHALL BE COMPRISED OF ONE OF MORE LAYERS OF A FLEXIBLE NEEDLED FELT OR AN EQUIVALENT NONWOVEN OR WOVEN MATERIAL. REFER TO SPECIFICATION FOR ADDITIONAL DETAILS ON CRITERIA FOR ACCEPTABLE LINER PRODUCT. PC TO CONFIRM EXACT LOCATION OF FLOOR DRAIN TO BE LINED WITH OWNERS REPRESENTATIVE PRIOR TO INITIATING WORK.

1 PLUMBING NEW WORK PLAN - 200 LEVEL - SECTION 4 ENLARGED

SCALE: 1/8" = 1'-0" 0 4' 8' 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 200 - SECTION 4

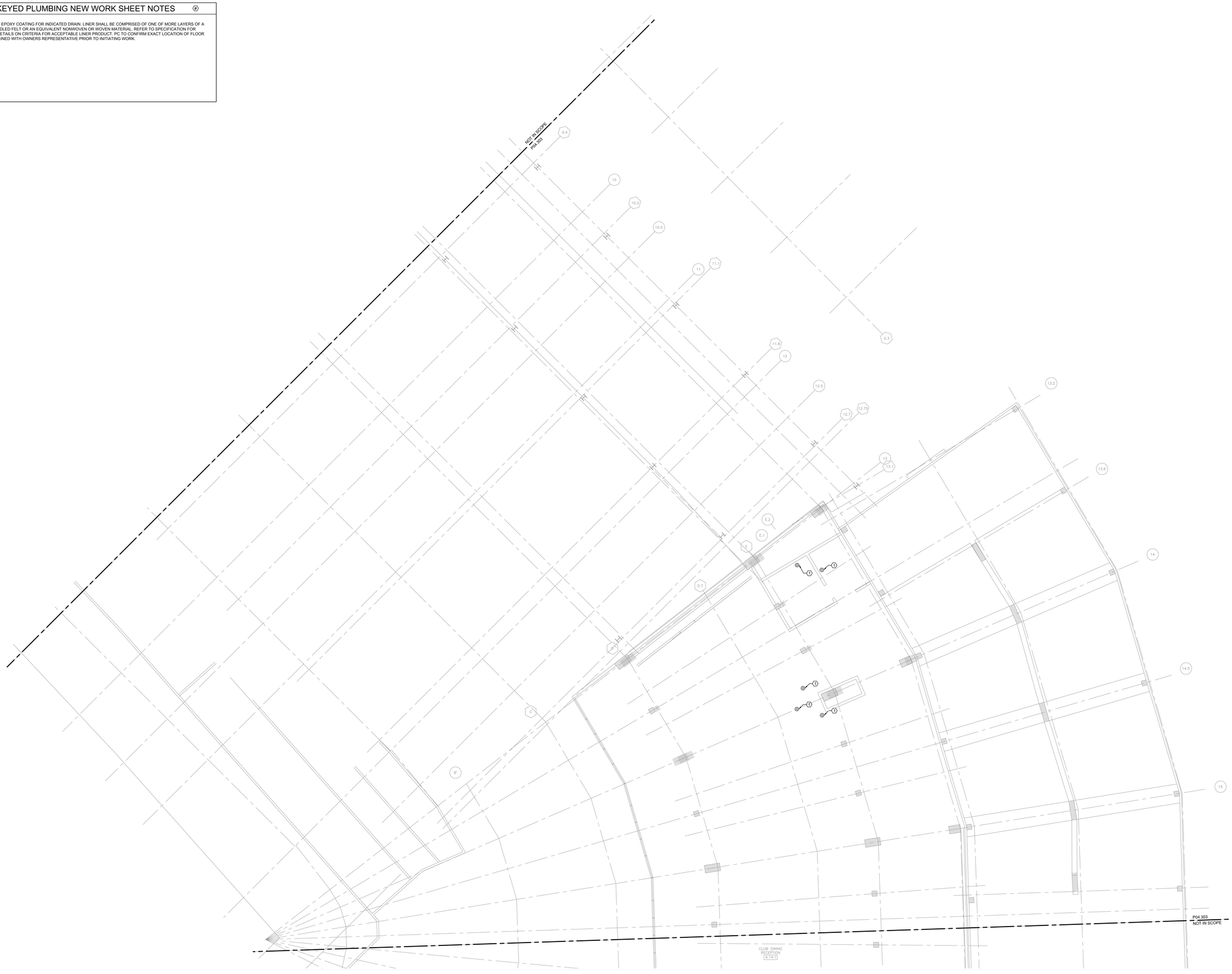
DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P07.204

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW EPOXY COATING FOR INDICATED DRAIN. LINER SHALL BE COMPRISED OF ONE OF MORE LAYERS OF A FLEXIBLE NEEDLED FELT OR AN EQUIVALENT NONWOVEN OR WOVEN MATERIAL. REFER TO SPECIFICATION FOR ADDITIONAL DETAILS ON CRITERIA FOR ACCEPTABLE LINER PRODUCT. PC TO CONFIRM EXACT LOCATION OF FLOOR DRAIN TO BE LINED WITH OWNERS REPRESENTATIVE PRIOR TO INITIATING WORK.



1 PLUMBING NEW WORK PLAN - 300 LEVEL - SECTION 3 ENLARGED

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

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 300 - SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P07.303

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW EPOXY COATING FOR INDICATED DRAIN. LINER SHALL BE COMPRISED OF ONE OF MORE LAYERS OF A FLEXIBLE NEEDLED FELT OR AN EQUIVALENT NONWOVEN OR WOVEN MATERIAL. REFER TO SPECIFICATION FOR ADDITIONAL DETAILS ON CRITERIA FOR ACCEPTABLE LINER PRODUCT. PC TO CONFIRM EXACT LOCATION OF FLOOR DRAIN TO BE LINED WITH OWNERS REPRESENTATIVE PRIOR TO INITIATING WORK.

1 PLUMBING NEW WORK PLAN - 300 LEVEL - SECTION 4 ENLARGED

SCALE: 1/8" = 1'-0" 0 4 8 16'

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLAN - LEVEL 300 - SECTION 4

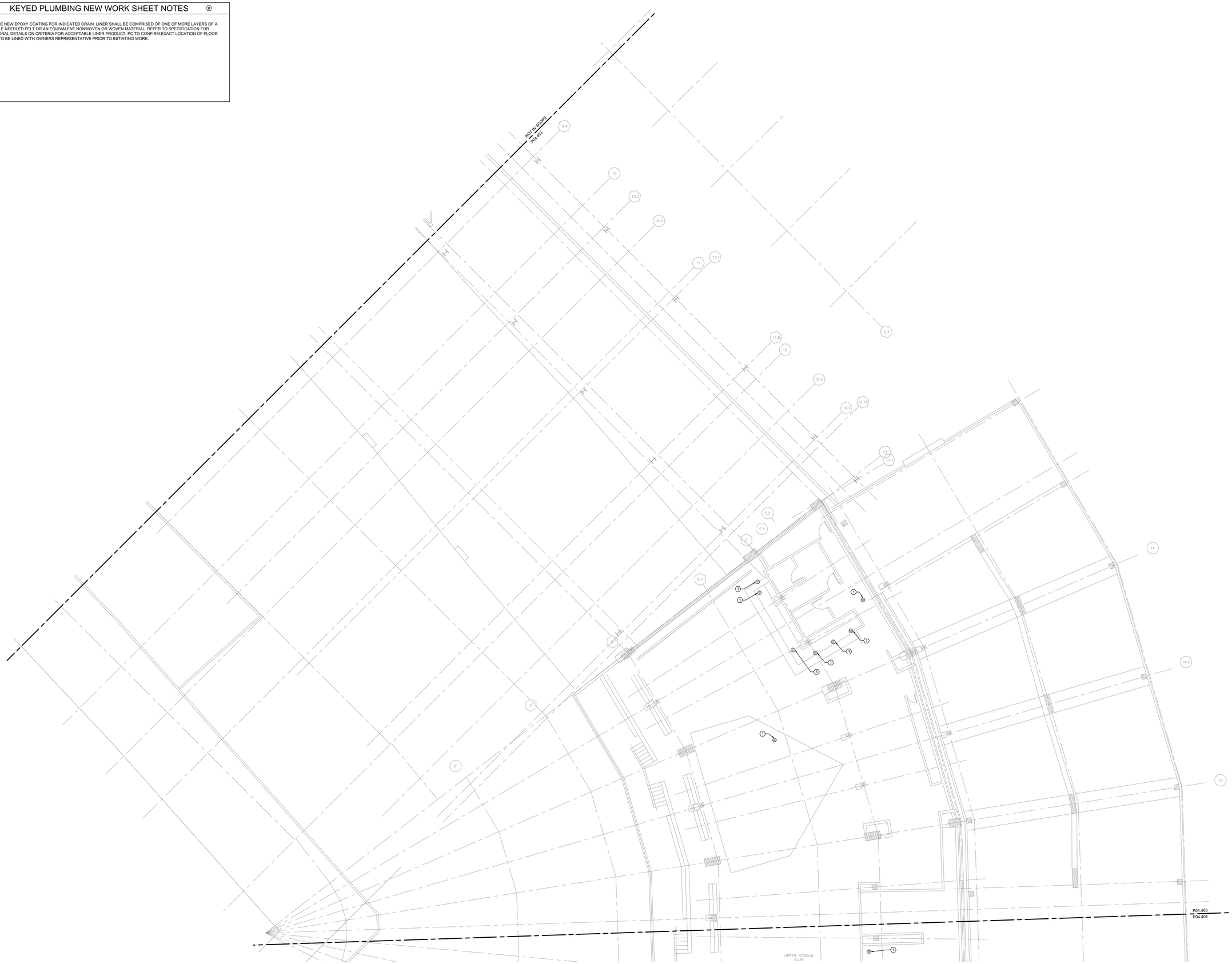
DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P07.304

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW EPOXY COATING FOR INDICATED DRAIN. LINER SHALL BE COMPRISED OF ONE OF MORE LAYERS OF A FLEXIBLE NEEDLED FELT OR AN EQUIVALENT NONWOVEN OR WOVEN MATERIAL. REFER TO SPECIFICATION FOR ADDITIONAL DETAILS ON CRITERIA FOR ACCEPTABLE LINER PRODUCT. PC TO CONFIRM EXACT LOCATION OF FLOOR DRAIN TO BE LINED WITH OWNERS REPRESENTATIVE PRIOR TO INITIATING WORK.

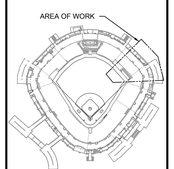


1 PLUMBING NEW WORK PLAN - 400 LEVEL - SECTION 3 ENLARGED
SCALE: 1/8" = 1'-0" 0 4' 8' 16'

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLAN - LEVEL 400 - SECTION 3

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P07.403

1 PLUMBING NEW WORK PLAN - 400 LEVEL - SECTION 4 ENLARGED

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

0 4 8 16

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW EPOXY COATING FOR INDICATED DRAIN. LINER SHALL BE COMPRISED OF ONE OF MORE LAYERS OF A FLEXIBLE NEEDLED FELT OR AN EQUIVALENT NONWOVEN OR WOVEN MATERIAL. REFER TO SPECIFICATION FOR ADDITIONAL DETAILS ON CRITERIA FOR ACCEPTABLE LINER PRODUCT. PC TO CONFIRM EXACT LOCATION OF FLOOR DRAIN TO BE LINED WITH OWNERS REPRESENTATIVE PRIOR TO INITIATING WORK.

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 400 - SECTION 4

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P07.404

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW EPOXY COATING FOR INDICATED DRAIN. LINER SHALL BE COMPRISED OF ONE OF MORE LAYERS OF A FLEXIBLE NEEDLED FELT OR AN EQUIVALENT NONWOVEN OR WOVEN MATERIAL. REFER TO SPECIFICATION FOR ADDITIONAL DETAILS ON CRITERIA FOR ACCEPTABLE LINER PRODUCT. PC TO CONFIRM EXACT LOCATION OF FLOOR DRAIN TO BE LINED WITH OWNERS REPRESENTATIVE PRIOR TO INITIATING WORK.

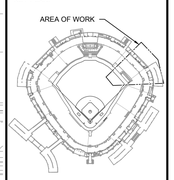
1 PLUMBING NEW WORK PLAN - 500 LEVEL - SECTION 7 ENLARGED
SCALE: 1/8" = 1'-0"
0 4' 8' 16'

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLAN - LEVEL 500 - SECTION 7

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P07.507

1 PLUMBING NEW WORK PLAN - 500 LEVEL - SECTION 8 ENLARGED

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

0 4' 8' 16'

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW EPOXY COATING FOR INDICATED DRAIN. LINER SHALL BE COMPRISED OF ONE OF MORE LAYERS OF A FLEXIBLE NEEDLED FELT OR AN EQUIVALENT NONWOVEN OR WOVEN MATERIAL. REFER TO SPECIFICATION FOR ADDITIONAL DETAILS ON CRITERIA FOR ACCEPTABLE LINER PRODUCT. PC TO CONFIRM EXACT LOCATION OF FLOOR DRAIN TO BE LINED WITH OWNERS REPRESENTATIVE PRIOR TO INITIATING WORK.

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

AREA OF WORK

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 500 - SECTION 8

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

P07.508

KEYED PLUMBING NEW WORK SHEET NOTES

1. PC TO SAW CUT AND DEMOLISH EXISTING FLOOR DRAIN & P-TRAP. VIDEO SCOPE MINIMUM 100-FT OF PIPE TO IDENTIFY ISSUE WITH EXISTING DRAIN LINE AS IT DOES NOT DRAIN CURRENTLY. REPORT FINDINGS TO BUILDING ENGINEER.
2. PC TO CORRECT AND REPLACE THE FLOOR DRAIN, P-TRAP, PIPING, VENT PIPING, ETC.

1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 4 ENLARGED

SCALE: 1/8" = 1'-0" 0 4 8 16'

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLANS - SERVICE LEVEL - SECTION 4

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P08.S04

2 VERTICAL RISER STACK
SCALE: NO SCALE

3 VERTICAL RISER STACK - ENLARGED VIEW
SCALE: NO SCALE

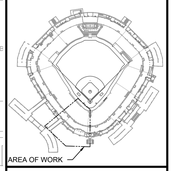
KEYED PLUMBING NEW WORK SHEET NOTES
1. EXISTING VERTICAL STACK TO BE LINED.

1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 7 ENLARGED
SCALE: 1/8" = 1'-0"

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLANS - SERVICE LEVEL - SECTION 7

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P09.S07

1 PLUMBING DEMOLITION PLAN - SERVICE LEVEL - SECTION 10 ENLARGED

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

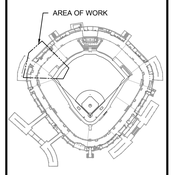
KEYED PLUMBING DEMOLITION SHEET NOTES

1. EXISTING DOMESTIC BOOSTER PUMP TO BE DISCONNECTED & REMOVED UP TO LOCATION INDICATED. EXISTING 6" HOUSEKEEPING PAD TO REMAIN & BE REUSED. PC TO DISCONNECT & REMOVE EXISTING ISOLATION VALVES AT PUMP INLET, OUTLET, BY-PASS, ETC.

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING DEMOLITION PLAN - SERVICE LEVEL - SECTION 10

DESIGNED BY:	MR
CHECKED BY:	BT
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
PD10.S10

1 PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 10 ENLARGED

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

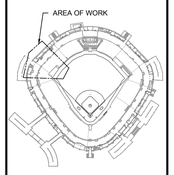
KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW DOMESTIC BOOSTER PUMP. PC TO RE-USE EXISTING 6" HOUSEKEEPING PAD; EXPAND CONCRETE PAD IF NECESSARY PER FINAL DIMENSIONS OF THE ORDER AND APPROVED EQUIPMENT. PROVIDE NEW ISOLATION VALVES AT BOOSTER PUMP SUCTION SIDE PIPE, DISCHARGE SIDE PIPE & BY-PASS PIPE. EXISTING VALVES AT THE EXISTING BOOSTER PUMP SHALL NOT BE REUSED. AND ADDITIONALLY NEW VALVES SHALL BE INCLUDED TO ALLOW THE NEW BOOSTER PUMP TO BE TAKEN OFF LINE AND UTILIZE THE BY-PASS LINE FOR EMERGENCY FUNCTION OF SERVICE LEVEL FIXTURES.

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING NEW WORK PLAN - SERVICE LEVEL - SECTION 10

DESIGNED BY:	MR
CHECKED BY:	BT
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P10.S10

KEYED PLUMBING DEMOLITION SHEET NOTES

1. REMOVE EXISTING DOMESTIC HOT WATER RETURN PIPING UP TO LOCATION INDICATED INCLUDING ALL VALVES, HANGERS & SUPPORTS.

1 PLUMBING NEW WORK PLAN - 200 LEVEL - SECTION 7 ENLARGED

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

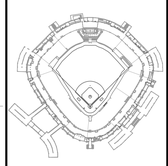
0 4' 8' 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

DRAWING TITLE:

PLUMBING DEMOLTION PLAN - LEVEL 200 - SECTION 7

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.

PD11.207

KEYED PLUMBING NEW WORK SHEET NOTES

1. PROVIDE NEW DOMESTIC HOT WATER RETURN PIPING IN LOCATIONS INDICATED. PROVIDE NEW BALANCING STATION FOR EACH HOT WATER RETURN LOOP.

1 PLUMBING NEW WORK PLAN - 200 LEVEL - SECTION 7 ENLARGED

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

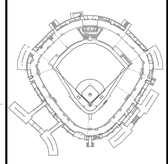
0 4' 8' 16'

ELARA

elaraeng.com | (708) 236-0300

ISFA ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:



ISSUE/REVISION:

REV	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:

GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET, CHICAGO, ILLINOIS 60616

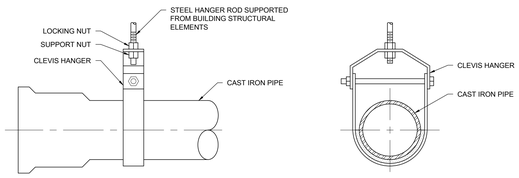
DRAWING TITLE:

PLUMBING NEW WORK PLAN - LEVEL 200 - SECTION 7

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

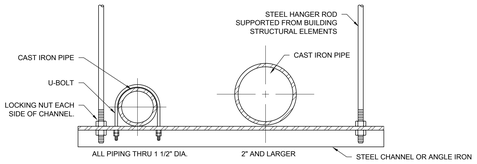
SHEET NO.

P11.207



NOTES:

1. CONFER WITH ARCHITECT AND REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON ACCEPTABLE METHODS AND LOCATIONS FOR HANGER SUPPORTS.



PIPE HANGERS AND SUPPORTS (HORIZONTAL STEEL AND COPPER PIPING)		
NOMINAL PIPE SIZE	DISTANCE BETWEEN SUPPORTS	HANGER ROD DIAMETERS
1/2"	6'	3/8"
3/4" TO 1-1/2"	6'	1/2"
2" TO 2-1/2"	10'	1/2"
3" AND 4"	12'	5/8"
6" TO 12"	14'	7/8"

NOTES:

PLACE HANGER WITHIN 1 FOOT OF EACH HORIZONTAL ELBOW. SUPPORT HORIZONTAL SOLID WASTE AND STORM PIPE NEAR EACH HUB, WITH 5 FEET MAXIMUM SPACING BETWEEN HANGERS.

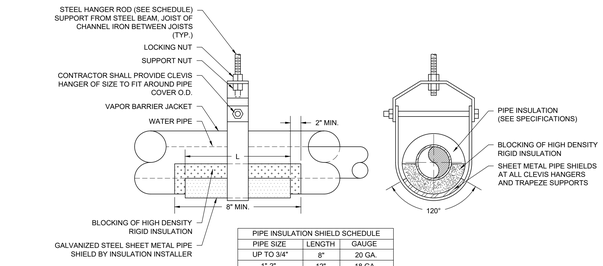
VERTICAL PIPING:

1. SUPPORT VERTICAL WATER PIPING AT EVERY FLOOR.
2. SUPPORT VERTICAL SOIL PIPE AT EACH FLOOR AT HUB.

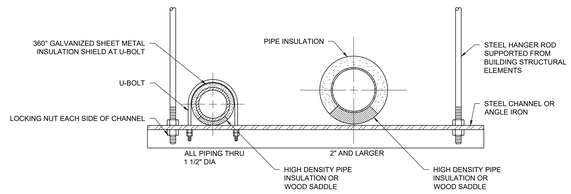
WHERE SEVERAL PIPES CAN BE INSTALLED IN PARALLEL AND AT SAME ELEVATION PROVIDE MULTIPLE OR TRAPEZE HANGERS.
WHERE PRACTICAL, SUPPORT RISER PIPING INDEPENDENTLY OF CONNECTED HORIZONTAL PIPING.

1 PIPE HANGER DETAILS (UN-INSULATED)

SCALE: NO SCALE



PIPE INSULATION SHIELD SCHEDULE		
PIPE SIZE	LENGTH	GAUGE
UP TO 3/4"	8"	20 GA.
1"-2"	12"	18 GA.
2 1/2"-4"	12"	16 GA.
5" & 6"	18"	16 GA.
8" & UP	24"	14 GA.



PIPE HANGERS AND SUPPORTS (HORIZONTAL STEEL AND COPPER PIPING)		
NOMINAL PIPE SIZE	DISTANCE BETWEEN SUPPORTS	HANGER ROD DIAMETERS
1/2"	6'	3/8"
3/4" TO 1-1/2"	6'	1/2"
2" TO 2-1/2"	10'	1/2"
3" AND 4"	12'	5/8"
6" TO 12"	14'	7/8"

NOTES:

HORIZONTAL PIPING:

1. PLACE HANGER WITHIN 1 FOOT OF EACH HORIZONTAL ELBOW. SUPPORT HORIZONTAL SOLID WASTE AND STORM PIPE NEAR EACH HUB, WITH 5 FEET MAXIMUM SPACING BETWEEN HANGERS.

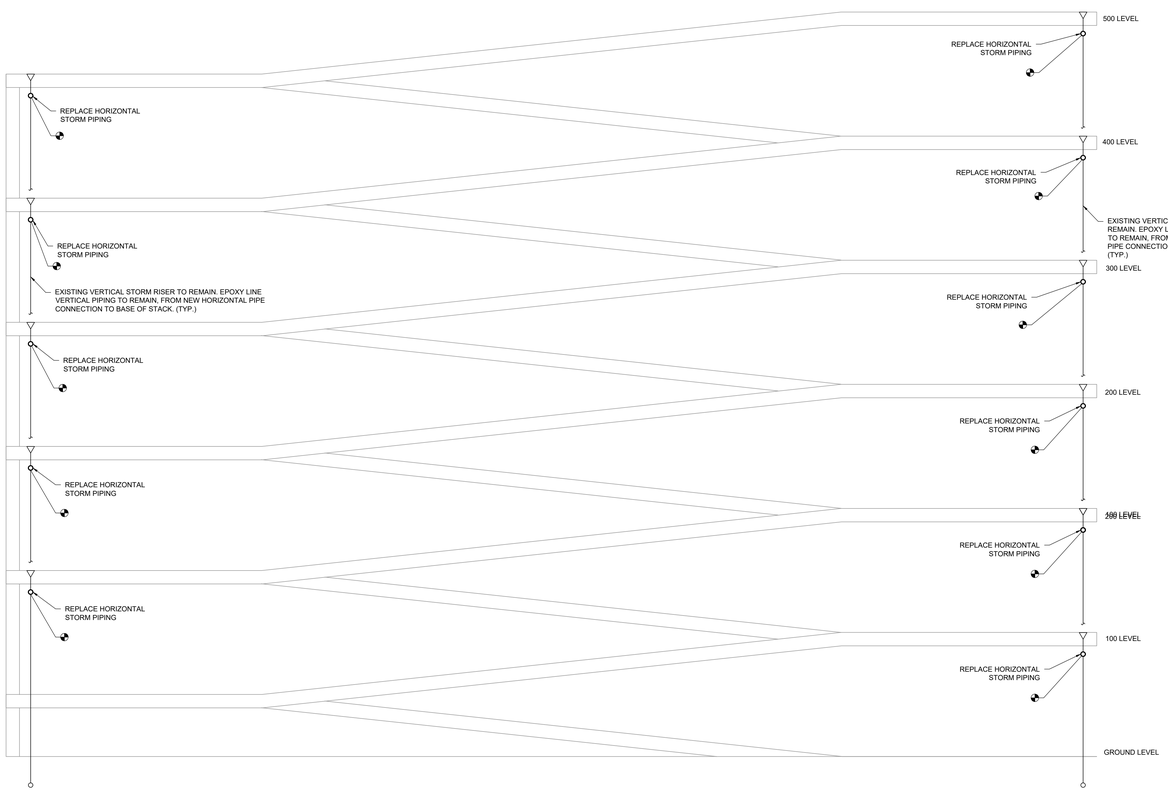
VERTICAL PIPING:

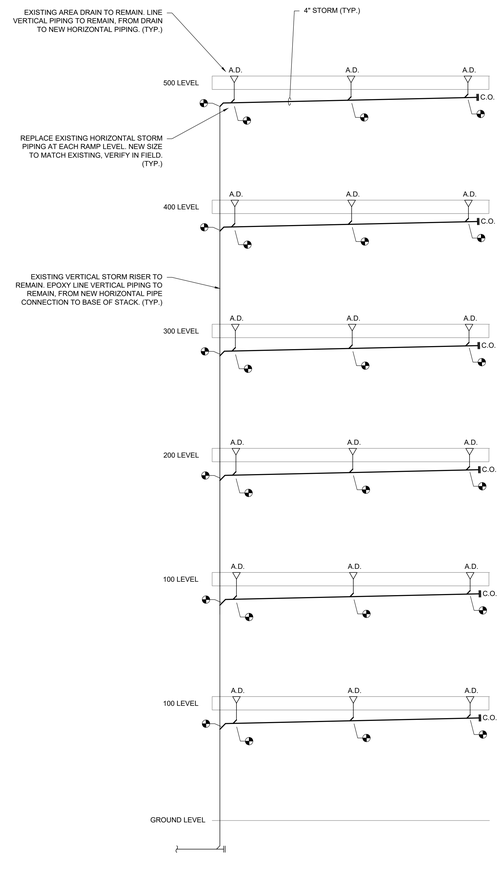
1. SUPPORT VERTICAL WATER PIPING AT EVERY FLOOR.
2. SUPPORT VERTICAL SOIL PIPE AT EACH FLOOR AT HUB.
3. WHERE SEVERAL PIPES CAN BE INSTALLED IN PARALLEL AND AT SAME ELEVATION PROVIDE MULTIPLE OR TRAPEZE HANGERS.
4. WHERE PRACTICAL, SUPPORT RISER PIPING INDEPENDENTLY OF CONNECTED HORIZONTAL PIPING.

2 PIPE HANGER DETAIL (INSULATED)

SCALE: NO SCALE

NOTE: CONTRACTOR RESPONSIBLE FOR OBTAINING ADMINISTRATIVE RELIEF PERMIT FROM CITY OF CHICAGO FOR ALL BRIDGE AND RAMP PIPING REPLACEMENT USING ACID WASTE POLYPROPYLENE PIPE AND FITTINGS.





NOTE: CONTRACTOR RESPONSIBLE FOR OBTAINING ADMINISTRATIVE RELIEF PERMIT FROM THE CITY OF CHICAGO FOR ALL BRIDGE AND RAMP PIPING REPLACEMENT USING ACID WASTE POLYPROPYLENE PIPE FITTINGS.

THE DRAIN PIPE DROP (UPSTREAM OF FIRST ELBOW) SHALL REMAIN BUT BE EPOXY LINED THRU ALL EXISTING PIPING AND 2-FT MINIMUM PAST TRANSITION FROM THE EXISTING AND NEW PIPING.

PC SHALL INSTALL NEW ELBOW AND DOWNSTREAM PIPING AND FITTINGS OF ACID-RESISTANT "GRAY" DRAINAGE PIPING.

THE VERTICAL RISER MAIN PIPING SHALL REMAIN BUT BE LINED THRU ALL EXISTING PIPING AND 2-FT MINIMUM PAST TRANSITION FROM EXISTING AND NEW PIPING.

REFERENCE PIPING INSTALLATION FROM PRIOR PHASES OF PAST WORK ALREADY COMPLETE.

3 TYPICAL STORM REPLACEMENT SCOPE AT RAMPS

SCALE: NO SCALE

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

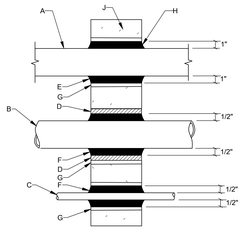
PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING DETAILS

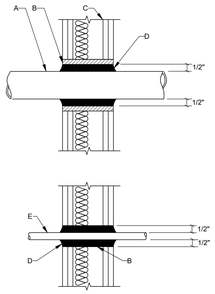
DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	NONE

SHEET NO.
P12.001



A. PENETRATING DUCT
B. PIPE OR CONDUIT, MINIMUM DIAMETER GREATER THAN OR EQUAL TO 1"
C. PIPE OR CONDUIT, MINIMUM DIAMETER LESS THAN 1"
D. METAL PIPE SLEEVE OR METAL STUD
E. 1" THICK, CLOSED CELL NEOPRENE SHEET INSULATION
F. 1/2" THICK, SELF-SEAL, CLOSED CELL NEOPRENE PIPE INSULATION
G. GROUT
H. FIRE-PROOF CAULKING, PACKED AIRTIGHT
J. CONCRETE MASONRY UNIT OR POURED CONCRETE WALL

MASONRY/CONCRETE PENETRATIONS DETAIL

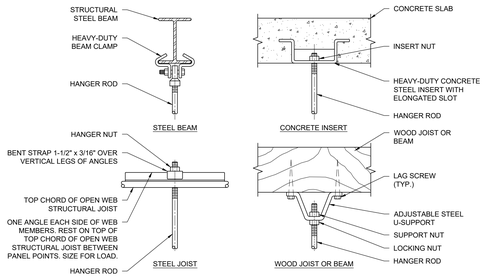


A. PENETRATING PIPE OR CONDUIT MINIMUM DIAMETER GREATER THAN OR EQUAL TO 1"
B. 1/2" THICK SELF-SEAL CLOSED CELL NEOPRENE PIPE INSULATION
C. METAL PIPE SLEEVE
D. FIRE-PROOF CAULKING, PACKED AIRTIGHT
E. PENETRATING PIPE OR CONDUIT MINIMUM DIAMETER LESS THAN 1"

DRY WALL PENETRATIONS DETAIL

NOTES:
1. PENETRATION DETAILS AT ACOUSTICALLY CRITICAL PARTITIONS - SEE ARCH. PLANS FOR WALL LOCATIONS AND SPECS. FOR MORE INFORMATION.
2. REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE DIMENSIONS AND ELEVATIONS.

1 PIPE PENETRATIONS DETAIL
SCALE: NO SCALE



PIPE HANGERS AND SUPPORTS (HORIZONTAL STEEL AND COPPER PIPING)		
NOMINAL PIPE SIZE	DISTANCE BETWEEN SUPPORTS	HANGER ROD DIAMETERS
1/2"	6'	3/8"
3/4" TO 1-1/2"	6'	1/2"
2" TO 2-1/2"	10'	1/2"
3" AND 4"	12'	5/8"
6" TO 12"	14'	7/8"

NOTES:

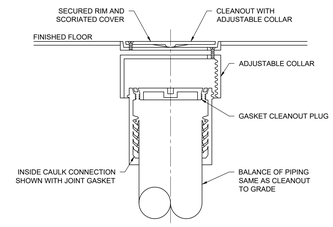
PLACE HANGER WITHIN 1 FOOT OF EACH HORIZONTAL ELBOW. SUPPORT HORIZONTAL SOLID WASTE AND STORM PIPE NEAR EACH HUB, WITH 5 FEET MAXIMUM SPACING BETWEEN HANGERS.

VERTICAL PIPING:

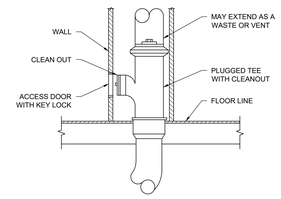
1. SUPPORT VERTICAL WATER PIPING AT EVERY FLOOR.
2. SUPPORT VERTICAL SOIL PIPE AT EACH FLOOR AT HUB.

WHERE SEVERAL PIPES CAN BE INSTALLED IN PARALLEL AND AT SAME ELEVATION PROVIDE MULTIPLE OR TRAPEZE HANGERS.
WHERE PRACTICAL, SUPPORT RISER PIPING INDEPENDENTLY OF CONNECTED HORIZONTAL PIPING.

2 PIPE HANGER DETAIL
SCALE: NO SCALE

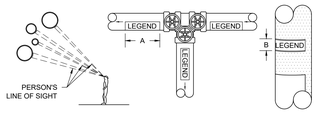


3 FLOOR CLEANOUT DETAIL
SCALE: NO SCALE



NOTES:
1. BALANCE OF PIPING SAME AS CLEANOUT TO GRADE
2. ACCESS DOOR SHALL BE CENTERED AT CLEANOUT TO PROVIDE FULL ACCESS TO CLEANOUT.

4 WALL CLEANOUT DETAIL
SCALE: NO SCALE

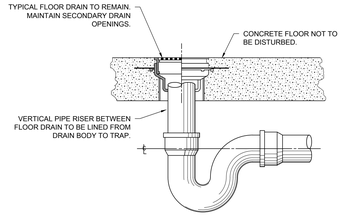


NOTES:
1. IDENTIFICATION MARKERS ARE TO BE PLACED ON ALL COVERED AND UNCOVERED PIPES AT 50'-0" INTERVALS. ADJACENT TO ALL VALVES OR BRANCHES, AND LOCATED AT BOTH SIDES OF A WALL/FLOOR PENETRATION. ARROWS OF SAME COLOR SHALL ALSO BE PLACED ON PIPES POINTING AWAY FROM MARKER INDICATING THE DIRECTION OF FLOW.

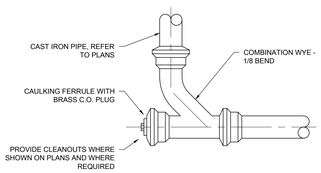
SIZE OF LEGEND LETTERS		
OUTSIDE DIAMETER OF PIPE OF COVERING	LENGTH OF COLOR FIELD "A"	SIZE OF LETTERS "B"
3/4" TO 1-1/4"	8"	1/2"
1-1/2" TO 2"	8"	3/4"
2"-1/2" TO 6"	12"	1-1/4"
8" TO 10"	24"	2-1/2"
OVER 10"	32"	3-1/2"

PLAN TAG	SERVICE	IDENTIFICATION MARKER
SAN	SANITARY	WHITE LETTERING ON GREEN BACKGROUND
V	VENT	WHITE LETTERING ON GREEN BACKGROUND
ST	STORM	WHITE LETTERING ON GREEN BACKGROUND
NP	NON-POTABLE COLD WATER	BLACK LETTERING ON YELLOW BACKGROUND
CW	DOMESTIC COLD WATER	WHITE LETTERING ON GREEN BACKGROUND
HW	DOMESTIC HOT WATER	BLACK LETTERING ON YELLOW BACKGROUND
HWR	DOMESTIC HOT WATER RETURN	BLACK LETTERING ON YELLOW BACKGROUND

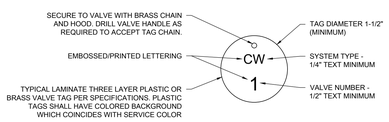
5 PIPE IDENTIFICATION DETAIL
SCALE: NO SCALE



6 FLOOR DRAIN LINING DETAIL
SCALE: NO SCALE



7 EXPOSED CLEANOUT DETAIL
SCALE: NO SCALE



TAG LEGEND (PLUMBING EXAMPLE)
CW = COLD / CITY WATER
HW = HOT WATER
HWR = HOT WATER RE-CIRCULATING
G = GAS
FP = FIRE PROTECTION

TAG LEGEND (HYDRONIC EXAMPLE)
HWS = HOT WATER SUPPLY
HWR = HOT WATER RETURN
CHWS = CHILLED WATER SUPPLY
CHWR = CHILLED WATER RETURN
G = GAS

NOTES:
1. ABBREVIATIONS SHALL BE INDICATED FOR EACH DESIGN SYSTEM AS THEY APPEAR ON THE DESIGN DRAWINGS.
2. VALVE TAGS SHALL BE INDICATED IN "VALVE CHARTS" AND ON "PROJECT RECORD" DRAWINGS AND SHALL CORRELATE WITH TAG I.D.'S.
3. ALL MAJOR SYSTEMS ON-OFF, CONTROL, AND BALANCING VALVES SHOULD HAVE AN ASTERIK***.
4. PROVIDE 8.5" x 11" VALVE TAG SHEETS IN A 3-RING BINDER FOR REPRODUCTION AND/OR FUTURE EDITING.
5. REFERENCE ALL "VALVE TAGS" TO "VALVE TAG CHARTS", "AS BUILT DRAWINGS", AND "O & M MANUAL DATA" (INDEX VALVES PER CHART). EXAMPLE VALVE TAG CHART BELOW:

VALVE TAG CHART FOR: XXXXXXX MOD: XXX AREA: XXX WING: XXX FLOOR: XXX

VALVE TAG #	LOCATION (ALSO SEE AS-BUILT DRAWINGS)	FUNCTION (WHAT IT DOES & WHAT/WHERE IT SERVICES)	TYPE	SIZE	MANUFACTURER	MODEL NUMBER
CW-1	RM. XXX - ABOVE CEILING	ON/OFF - FIXTURES IN RM. XXX & XXX...	BV	1"	BELL AND GOSSETT	XX-XXX-XX
CW-2	CORR. XXX - ABOVE DOOR @ RM. XXX	BALANCE - 2ND FLOOR, EAST SIDE, NORTH WING	BFV	1-1/2"	ALLEN BRADLEY	XX-XXX-XX
CW-3	BOILER RM. XXX - NE CORNER	ON/OFF - MAIN - BLDGS X, Y, & Z	GV	8"	BELL AND GOSSETT	XX-XXX-XX
CW-4	RM. XXX - BEHIND N. ACCESS PANEL	ON/OFF - EXTERIOR FIELD HOUSE - IRRIGATION	BV	3"	M & M	XX-XXX-XX
CW-5	RM. XXX - ABOVE CEILING	ON/OFF - MIXING VALVE - EYEWASH	BV	1"	GTM & S	XX-XXX-XX

8 VALVE TAG AND VALVE CHART SAMPLE DETAIL
SCALE: NO SCALE

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING DETAILS

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	NONE

SHEET NO.
P12.002

SUBMERSIBLE PUMP & BASIN SCHEDULE

EQUIP. TAG		SERVICE	SUBMERSIBLE PUMP(S)														BASIN						BASIN COVER							NOTES
									ELECTRICAL																					
ABB.	NO.		MANUFACTURER	MODEL	TYPE	PUMP QTY.	GPM	T.D.H (FT.)	MOTOR (HP)	VOLTS	PHASE	CYC.	RPM	NON-OVER-LOADING	COATING	OIL SENSING	MANUFACTURER	SIZE	MATERIAL	FLANGE	INLET(S)	OUTLET(S)	MANUFACTURER	DIAMETER	THICKNESS	MATERIAL	COATING	ACCESS TYPE / SIZE		
DSP	(VCH)-01.25.02	VISTOR CLUBHOUSE SUMP PUMP SYSTEM	METROPOLITAN	SB4SD750M HEAVY DUTY EJECTOR	SUBMERSIBLE STORM SUMP PUMP	2	400	35	7.5	480	3	60	1750	Y	N/A	NO	EXISTING TO REMAIN: 36" I.D. x 7'-0" DEEP (CONTRACTOR TO FIELD VERIFY PRIOR TO EQUIPMENT RELEASE)						METROPOLITAN	40"	MINIMUM 3/8"	STEEL	ENAMEL COATED	PUMP DISCHARGE (PD) VENT CONNECTIONS	(2) 4" PD N/A VENT	1, 2, 3, 4, 5, 6
																												ELECTRICAL CONNECTION(S) (GASKETED)	CORD GRIPS	
																												HINGED HATCH W/ HANDLE, SS HINGES AND HARDWARE, (GASKETED)	NA	
DSP	(CF)-01.01.05	CENTER FIELD SUMP PUMP SYSTEM	METROPOLITAN	S4M1000M HEAVY DUTY EJECTOR	SUBMERSIBLE STORM SUMP PUMP	2	400	40	10	480	3	60	1750	Y	N/A	NO	EXISTING TO REMAIN: 60" I.D. x 12'-5" DEEP (CONTRACTOR TO FIELD VERIFY PRIOR TO EQUIPMENT RELEASE)						METROPOLITAN	66"	MINIMUM 3/8"	STEEL	ENAMEL COATED	PUMP DISCHARGE (PD) VENT CONNECTIONS	(2) 4" PD N/A VENT	1, 2, 3, 4, 5, 6
																												ELECTRICAL CONNECTION(S) (GASKETED)	CORD GRIPS	
																												HINGED HATCH W/ HANDLE, SS HINGES AND HARDWARE, (GASKETED)	YES	
DSE	(HT)-01.41.01	HYDRO THERAPY EJECTOR PUMP SYSTEM	METROPOLITAN	SE4DM HEAVY DUTY EJECTOR	SUBMERSIBLE EJECTOR PUMP FOR HYDROTHERAPY POOL DRAIN DOWN	2	70	15	0.40	115	1	60	1750	Y	YES	NO	EXISTING TO REMAIN: 36" I.D. x 5' DEEP (CONTRACTOR TO FIELD VERIFY PRIOR TO EQUIPMENT RELEASE)						METROPOLITAN	40"	MINIMUM 3/8"	STEEL	POOL-RATED SPECIAL ENAMEL COATED	PUMP DISCHARGE (PD) VENT CONNECTIONS	(2) 2" PD (1) 2" VENT	2, 3, 4, 5, 7, 8
																												ELECTRICAL CONNECTION(S) (GASKETED)	CORD GRIPS	
																												HINGED HATCH W/ HANDLE, SS HINGES AND HARDWARE, (GASKETED)	N/A	

NOTES:

1. PROVIDE WITH NEW ION INTELLIPUMP FLOAT BASED LOGIC CONTROLLER AND ASSOCIATED NEMA-3R PANEL. INCLUDE DRY-CONTACT FOR FUTURE TIE-IN OF ALARM SIGNAL INTO BUILDING AUTOMATION SYSTEM. SEE SPECIFICATIONS FOR MORE DETAILS.
2. CONTROLLER TO INCLUDE FLOAT-FAILURE ALGORITHM AND PROVIDE UNINTERUPTED, FULL-FUNCTION, OPERATION SHOULD ONE, TWO, OR THREE OF THE LEVEL SWITCHES BECOME INOPERABLE.
3. CONTRACTOR SHALL FIELD VERIFY SYSTEM PARAMETERS WITH EQUIPMENT PROVIDER PRIOR TO RELEASE OF EQUIPMENT.
4. COORDINATE SUBMERSIBLE PUMP/BASIN LOCATION AVAILABILITY AND ACCESS WITH ISFA ADMINISTRATIVE COORDINATOR RUSSELL LEVINE. PROVIDE 2 WORKING DAYS NOTICE MINIMUM BEFORE REQUIRING ACCESS.
5. LOCAL FACTORY START-UP & TRAINING TO BE INCLUDED BY EQUIPMENT PROVIDER. THE ENTIRE SYSTEM SHALL BE MANUFACTURED, SERVICED, & WARRANTEED BY A "LOCAL" MANUFACTURER
6. THE SYSTEM SHALL BE PROVIDED WITH A "QUICK DISCONNECT" GUIDERAIL SYSTEM INCLUDING, BASE ELBOWS, UPPER & LOWER GUIDERAIL BRACKETS, 2" STAINLESS STEEL GUIDERAILS, AND PUMP MOUNTED SEALING FLANGE ASSEMBLIES. PROVIDE MOUNTING PLATE TO SECURE RAILS TO EXISTING BASIN.
7. PROVIDE WITH NEW ION INTELLIPUMP FLOAT BASED LOGIC CONTROLLER AND ASSOCIATED NEMA-4X FIBERGLASS PANEL WITH DEAD FRONT INNER DOOR. INCLUDE DRY-CONTACT FOR FUTURE TIE-IN OF ALARM SIGNAL INTO BUILDING AUTOMATION SYSTEM. SEE SPECIFICATIONS FOR MORE DETAILS.
8. SUBMERSIBLE PUMP MODEL SHALL BE APPROPRIATE FOR POOL CHEMICAL AND POOL-WATER TEMPERATURE APPLICATION.

DOMESTIC WATER BOOSTER PUMP SCHEDULE

EQUIP. TAG		DESCRIPTION	NOTES
ABB.	NO.		
DWBP	01.25.02	QUADRAPLEX DOMESTIC WATER PRESSURE BOOSTER PUMP SYSTEM PROVIDE A METROPOLITAN "METRO VARIPAC SYSTEM-2100" MODEL NO.VMS-MTIII-PRO-4000G-IPH-60B QUADRAPLEX VARIABLE SPEED PUMP SYSTEM. ALL WETTED COMPONENTS OF THE SYSTEM SHALL BE IN STRICT COMPLIANCE WITH ANSI/NSF-372, FOR LOW-LEAD CONTENT. THE SYSTEM SHALL BE DESIGNED TO PROVIDE THE SCHEDULED FLOW-RATE AT A DISCHARGE PRESSURE OF 60-PSI BASED ON A NET SUCTION PRESSURE OF 20-PSI. THE SYSTEM SHALL INCLUDE A METROTECH-III PRO LOGIC PANEL WITH A PROGRAMMABLE CONTROLLER, AND A 7" DIAGONAL 65,500-COLOR TOUCH-SCREEN OPERATOR INTERFACE PANEL. THE SCREEN SHALL SHOW SYSTEM STATUS AND PROVIDE FOR THE ENTRY OF SET-POINTS AND COMMANDS. THE PROGRAMMABLE CONTROLLER SHALL BE OF THE FIELD PROGRAMMABLE DESIGN. THE COLOR TOUCH-SCREEN SHALL INDICATE AUDIBLE AND VISUAL ALARMS WITH REMOTE ALARM CONTACT TERMINALS, FOR THE FOLLOWING CONDITIONS: HIGH SYSTEM PRESSURE; LOW SYSTEM PRESSURE; LOW SUCTION PRESSURE; AND A COMMON ALARM. IN ORDER TO ENSURE THE INTENDED OPERATION, A MINIMUM OF (1) 265-GAL/ON ASME-RATED HYDRO-PNEUMATIC TANK, ONE (1) LOCAL 'SYSTEM' PRESSURE TRANSDUCER, ONE (1) REMOTE PRESSURE TRANSDUCER, ONE (1) LOCAL 'SUCTION' PRESSURE TRANSDUCER, AND (4) DEDICATED VARIABLE FREQUENCY INVERTORS SHALL BE PROVIDED. THE CONTROLLER SHALL ALSO RAISE THE SET-POINT PRESSURE AT LOW FLOW PERIODS, CHARGE THE HYDRO-PNEUMATIC TANK, AND SHUT-DOWN THE PUMPS UNTIL FLOW RESUMES. EACH OF THE PUMPS SHALL BE THE CAST IRON STAINLESS-FITTED TYPE, WITH CAST IRON CASINGS, AND STAINLESS IMPELLERS, DIFFUSERS, AND SHAFTS. THE PUMPS SHALL BE DESIGNED WITH ONE-PIECE "CARTRIDGE-TYPE" MECHANICAL SEALS & REPLACEABLE ONE-PIECE STACK-KIT FOR EASE OF MAINTENANCE & SERVICEABILITY. EACH OF THE (4) PUMPS SHALL BE COUPLED TO A 40-HP, VARIABLE-RPM, 3-PH, 60-HZ, 460-VOLT MOTOR WITH A 1.15-SERVICE FACTOR, AND TEFC-ENCLOSURE, OF THE HIGH-EFFICIENCY TYPE. EACH PUMP SHALL BE DESIGNED TO PERFORM BOTH CONDITIONS OF SERVICE AS SCHEDULED BELOW: PUMP-1: 600-GPM @ 139-FT. TDH, 65% DUTY-POINT EFFICIENCY, 300-FT. MINIMUM SHUT OFF HEAD @ZERO-GPM. PUMP-2: 600-GPM @ 139-FT. TDH, 65% DUTY-POINT EFFICIENCY, 300-FT. MINIMUM SHUT OFF HEAD @ZERO-GPM. PUMP-3: 600-GPM @ 139-FT. TDH, 65% DUTY-POINT EFFICIENCY, 300-FT. MINIMUM SHUT OFF HEAD @ZERO-GPM. PUMP-4: 600-GPM @ 139-FT. TDH, 65% DUTY-POINT EFFICIENCY, 300-FT. MINIMUM SHUT OFF HEAD @ZERO-GPM. PUMPS WITH LOWER DUTY-POINT EFFICIENCIES, AND PUMPS WITH "FLAT" HEAD CURVES (LOWER SHUT-OFF HEAD), WHICH WILL WASTE ELECTRICAL ENERGY, TEND TO "HUNT" DURING FLOW CHANGES, AND CANNOT SUFFICIENTLY CHARGE THE HYDRO-PNEUMATIC TANK, ARE NOT ACCEPTABLE. THE PUMP PERFORMANCE CURVES SHALL NOT EXCEED THE PUBLISHED MOTOR NAMEPLATE HORSEPOWER AT ANY POINT ALONG THE ENTIRE CURVE. THE INDIVIDUAL PUMP BRANCH-PIPING SHALL BE 6-INCH SIZE WITH LUG-STYLE BUTTERFLY VALVES ON THE INLET & OUTLET OF EACH PUMP, AS WELL AS AND SILENT CHECK VALVES ON THE INLET AND OUTLET OF EACH PUMP. THE SYSTEM SHALL BE PRE FABRICATED AND PRE-WIRED, ON A COMMON STRUCTURAL-STEEL BASE, WITH 12-INCH SUCTION AND 12-INCH DISCHARGE HEADERS. ALL WETTED COMPONENTS OF THE SYSTEM SHALL BE ANSI/NSF-372 COMPLIANT. THE STRUCTURAL STEEL FRAMING SHALL BE FABRICATED OF STEEL, AND EPOXY-COATED AFTER ALL WELDING IS COMPLETE, TO ENSURE MAXIMUM CORROSION-RESISTANCE. PAINTED STEEL FRAMING IS NOT ACCEPTABLE. SYSTEM TO INCLUDE A SPLIT SKID DESIGN FOR EASE OF MANEUVERING AND INSTALLATION. THE SYSTEM SHALL BE FACTORY FLOW-TESTED IN THE MANUFACTURER'S TEST-LAB BEFORE SHIPMENT, TO ENSURE CORRECT OPERATION. THE FLOW-TEST SHALL BE CERTIFIED IN WRITING BY A REGISTERED PROFESSIONAL ENGINEER (P. E.). THE CLIENT'S CONSULTING ENGINEER SHALL BE PROVIDED THE OPPORTUNITY OF A FACTORY INSPECTION AND WITNESS-TESTING OF THE SYSTEM PRIOR TO SHIPMENT FROM THE MANUFACTURING PLANT, (NOT THE DISTRIBUTOR'S FACILITY), TO ENSURE QUALITY AND SPECIFICATION-COMPLIANCE. THE ENTIRE SYSTEM SHALL BE MANUFACTURED, SERVICED, AND WARRANTEED BY A "LOCAL" MANUFACTURER: METROPOLITAN INDUSTRIES, OF NEARBY ROMEOVILLE, ILLINOIS.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

NOTES:

1. FURNISH WITH NEMA PREMIUM EFFICIENCY MOTOR WITH SHAFT GROUND RING.
2. MOTORS SHALL BE NON-OVERLOADING.
3. PUMP SHALL BE CONTROLLED BY VARIABLE FREQUENCY DRIVE (VFD) WITH INTEGRAL DISCONNECT. REFER TO VARIABLE FREQUENCY DRIVE SCHEDULE FOR ADDITIONAL INFORMATION. VFD'S SHALL BE MANUFACTURED BY ABB.
4. SCHEDULED MANUFACTURER AND MODEL SHALL BE BASE BID.
5. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
6. PUMPS SHALL BE LEAD-FREE STAINLESS STEEL OR LEAD-FREE BRONZE CIRCULATOR FOR POTABLE WATER SYSTEMS.
7. PROVIDE (2) YEAR WARRANTY FROM DATE OF FACTORY-AUTHORIZED START-UP.
8. PROVIDE FACTORY-AUTHORIZED START-UP.
9. UNIT SHALL BE DISASSEMBLED AS NECESSARY SO THAT UNIT CAN BE TRANSPORTED INTO THE BUILDING'S MECHANICAL ROOM THROUGH THE FACILITY AND REASSEMBLED ONCE IN SPACE TO BE INSTALLED.
10. FACTORY-AUTHORIZED START-UP SHALL INCLUDE VERIFICATION PROPER PUMP REASSEMBLY.
11. PROVIDE A BACNET CARD/DEVICE TO THE BOOSTER PUMP PACKAGE TO BE CAPABLE OF TYING-INTO BACNET SYSTEM OF THE BUILDING.
12. PUMPS SHALL BE PROTECTED BY MECHANICAL-DEVICE THERMAL PURGE VALVES (OR OTHER EQUIVALENT FEATURE); HAND OPERATION SHALL NOT BY-PASS THIS SAFETY FEATURE.

ELARA
elaraeng.com | (708) 236-0300

ISFA
ILLINOIS SPORTS FACILITIES AUTHORITY

KEY PLAN:

ISSUE/REVISION:

REV.	DATE	DESCRIPTION
	11/12/2024	ISSUED FOR BID

PROJECT:
GUARANTEED RATE FIELD - WASTE/VENT PIPING FY2025

333 W 35TH STREET,
CHICAGO, ILLINOIS 60616

DRAWING TITLE:
PLUMBING SCHEDULES

DESIGNED BY:	CF
CHECKED BY:	JG
PROJECT NO:	24310
SCALE:	1/8" = 1'-0"

SHEET NO.
P13.001

I. GENERAL

A. THIS CONTRACTOR SHALL REVIEW THE ENTIRE SET OF CONTRACT DOCUMENTS, AS WELL AS ALL SPECIFICATIONS AND INSTRUCTIONS TO BIDDERS. THIS CONTRACTOR SHALL VISIT THE SITE AND MAKE A DETAILED INSPECTION OF THE SPECIFIED WORK TO DEVELOP KNOWLEDGE OF ALL CONDITIONS PERTINENT TO THE COMPLETION OF HIS WORK. THIS CONTRACTOR SHALL FULLY COORDINATE HIS WORK WITH THE WORK PERFORMED BY OTHER TRADES AND/OR CONTRACTORS, AND SHALL MAKE SUCH FIELD ADJUSTMENTS AS ARE REQUIRED TO ACCOMMODATE FIELD CONDITIONS. ALL OF THE ABOVE SHALL BE INCLUDED IN THE SCOPE OF WORK AT NO ADDITIONAL COST TO OWNER.

B. SHOULD THIS CONTRACTOR FIND DISCREPANCIES IN, OR OMISSIONS FROM, THE DRAWINGS, SPECIFICATIONS OR OTHER DOCUMENTS, OR DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THOSE REPRESENTED IN THE DRAWINGS, OR CONFLICTS BETWEEN HIS WORK AND THAT OF OTHER TRADES, OR BE IN DOUBT AS TO THE MEANING OF ANY CONTRACT DOCUMENTS, THIS CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND THE ENGINEER IN WRITING, AND SHALL OBTAIN CLARIFICATION PRIOR TO SUBMITTING ANY BID. LACK OF SUCH NOTIFICATION SHALL BE CONSTRUED AS THIS CONTRACTOR'S REPRESENTATION THAT NO DISCREPANCIES OR CONFLICTS EXIST. ADDITIONAL COMPENSATION WILL NOT BE GRANTED AFTER AWARD OF CONTRACT FOR ANY WORK REQUIRED TO COMPLY WITH THIS REQUIREMENT.

C. THE DRAWINGS INDICATE DIAGRAMMATICALLY THE INTENT, REQUIREMENTS FOR, AND LOCATION OF, THE WORK INCLUDED UNDER THIS CONTRACT. ALL WORK REQUIRED TO EFFECT THE INDICATED DESIGN, INCLUDING DETAILS NOT SHOWN BUT WHOSE INCLUSION WOULD BE DEEMED A REQUIREMENT BY A KNOWLEDGEABLE TRADESMAN, ENGINEER OR TECHNICIAN, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

D. IT IS THE INTENT OF THESE DOCUMENTS THAT THE CONTRACTOR PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS FOR THE COMPLETE INSTALLATION OF ALL WORK SHOWN ON THE PLANS AND/OR DESCRIBED HEREIN, INCLUDING ALL DEVICES, CONTROLS AND APPURTENANCES REQUIRED TO SET THE NEW SYSTEMS INTO OPERATION, UNLESS OTHERWISE NOTED.

E. THIS CONTRACTOR SHALL VERIFY ALL MOUNTING, ARRANGEMENTS, HEIGHTS AND LOCATIONS PRIOR TO ROUGH-IN. ANY MENTION OF A SPECIFIC MOUNTING ARRANGEMENT, WEIGHT OR LOCATION SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO VERIFY SPECIFIC REQUIREMENTS AND BASE HIS WORK ON THEM. THE SAME CARE SHALL BE TAKEN WITH RESPECT TO INFORMATION FURNISHED BY THIS CONTRACTOR TO HIS SUBCONTRACTORS OR TO OTHER CONTRACTORS EMPLOYED BY THE OWNER ON THIS PROJECT. THIS CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR ANY CHANGE ORDERS NECESSITATED BY INACCURATE OR INCORRECT INFORMATION FURNISHED TO OTHER CONTRACTORS. NO ADDITIONS TO THE CONTRACT AMOUNT WILL BE PERMITTED FOR ITEMS INSTALLED IN WRONG LOCATIONS OR IN CONFLICT WITH OTHER WORK.

F. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING FOR AND OBTAINING ALL APPLICABLE PERMITS. THIS CONTRACTOR SHALL PAY ALL PERMIT FEES, PLAN REVIEW FEES, LICENSE FEES AND INSPECTIONS APPLICABLE TO HIS WORK, AND SUCH COSTS SHALL BE INCLUDED IN HIS BASE BID UNLESS OTHERWISE NOTED. THIS CONTRACTOR SHALL ALSO INCLUDE IN HIS BID ALL FEES ASSOCIATED WITH THE SERVICES OF A PERMIT EXPEDITER AS MAY BE REQUIRED TO MEET THE PROJECT SCHEDULE.

G. THIS CONTRACTOR SHALL ESTABLISH SAFE WORKING PROCEDURES FOR THE PROTECTION OF THE WORKMEN IN ALL PHASES OF WORK, AND SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL SAFETY LAWS, INCLUDING THE REQUIREMENTS OF OSHA. HE SHALL ALSO PROVIDE ALL NECESSARY SIGNS, LIGHTS AND BARRICADES REQUIRED FOR THE SAFETY OF ALL OTHER PERSONS WHO MIGHT COME IN CONTACT WITH THE CONSTRUCTION BEING PERFORMED UNDER THIS CONTRACT.

H. ALL PUBLIC AND PRIVATE PROPERTY DAMAGED AS A RESULT OF WORK PERFORMED UNDER THIS CONTRACT SHALL BE REPAIRED AND REPLACED BY THIS CONTRACTOR, TO THE SATISFACTION OF REGULATIONS AND AUTHORITIES HAVING JURISDICTION.

I. THE PLUMBING CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH THE BUILDING OWNER'S REPRESENTATIVE REGARDING BUILDING SECURITY AND REGULATIONS, INCLUDING WORKING HOURS, REFUSE DISPOSAL, DUMPSTER LOCATION, SECURITY, INTERRUPTIONS OF BUILDING UTILITIES OR FUNCTIONS, OWNERSHIP OF SALVAGED MATERIALS, AND ANY OTHER ITEMS DEEMED TO BE OF MUTUAL INTEREST.

J. IT SHALL BE THE PLUMBING CONTRACTOR'S RESPONSIBILITY TO STORE HIS MATERIALS IN A MANNER THAT WILL MAINTAIN AN ORDERLY CLEAN APPEARANCE. IF STORED ON SITE IN OPEN OR UNPROTECTED AREAS, ALL EQUIPMENT AND MATERIAL SHALL BE KEPT OFF THE GROUND BY MEANS OF PALLETS OR RACKS, AND COVERED WITH TARPAULINS. EQUIPMENT AND MATERIAL, IF LEFT OUT IN THE OPEN AND DAMAGED, SHALL BE REPAINTED OR OTHERWISE REFURBISHED AT THE DISCRETION OF THE BUILDING OWNER'S REPRESENTATIVE. EQUIPMENT AND MATERIAL IS SUBJECT TO REJECTION AND REPLACEMENT IF, IN THE OPINION OF THE ENGINEER OR MANUFACTURER, THE EQUIPMENT HAS DETERIORATED OR BEEN DAMAGED TO THE EXTENT THAT ITS IMMEDIATE USE IS QUESTIONABLE, OR THAT ITS NORMAL LIFE EXPECTANCY HAS BEEN CURTAILED.

K. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL CHECK THE ENTIRE WORK AREA, AND SHALL CLEAN CONSTRUCTION DUST AND DEBRIS OFF ALL SURFACES, EQUIPMENT AND DEVICES. THIS CONTRACTOR SHALL REMOVE SURPLUS AND DEMOLISHED MATERIALS AND RUBBISH FROM THE PROPERTY AND LEAVE THE WORK AREA IN A NEAT AND CLEAN CONDITION. CONTRACTORS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY CARTONS, PACKING MATERIALS DEBRIS, AND SO ON, THAT HAVE BEEN BROUGHT TO THE SITE UNDER THIS CONTRACT. THIS REQUIREMENT APPLIES BOTH TO DEBRIS FROM EQUIPMENT AND WORK PROVIDED BY THIS CONTRACTOR AND TO DEBRIS ASSOCIATED WITH EQUIPMENT FURNISHED BY THE OWNER FOR INSTALLATION UNDER THIS CONTRACT.

L. EXISTING SYSTEMS TO BE SHUT DOWN A MINIMUM AMOUNT OF TIME. SHUTDOWN TO BE COORDINATED ON THE JOB SITE.

M. THIS CONTRACTOR SHALL BE PROPERLY LICENSED, BONDED AND INSURED AND CAPABLE OF PERFORMING QUALITY WORKMANSHIP ON THIS PROJECT.

N. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, AND SAFETY TO THE PUBLIC AND TO PROPERTY, BOTH PRIVATE AND PUBLIC.

II. GENERAL DEMOLITION NOTES

A. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION.

B. ALL DEMOLITION OF THE PLUMBING SYSTEM AS CALLED FOR ON THE DEMOLITION DRAWINGS SHALL BE UNDER THIS CONTRACTOR'S WORK.

C. CONTRACTOR SHALL VISIT THE BUILDING, BEFORE SUBMITTING HIS BID, TO VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS WHICH MAY AFFECT HIS WORK.

D. THE INTENT OF THE DEMOLITION IS TO REMOVE THE ITEMS IN THEIR ENTIRETY TO INCLUDE ALL ASSOCIATED SUPPORT BASES, FIXTURES, ANCHORS, FASTENERS, CLEANOUT LOCATIONS, ETC. AND CAP EXISTING SYSTEM TO REMAIN AT MAINS OR OTHER ACTIVE BRANCH LINES. MINIMIZE DEAD END LENGTHS.

E. BEFORE STARTING ANY DEMOLITION WORK ON PLUMBING EQUIPMENT WHICH HAS AN ELECTRICAL CONNECTION AND IS INDICATED TO BE REMOVED, THIS CONTRACTOR SHALL MEET WITH ELECTRICAL CONTRACTOR TO IDENTIFY ALL SUCH EQUIPMENT. ELECTRICAL CONTRACTOR SHALL DISCONNECT THE POWER TO EACH UNIT AND REMOVE CONDUIT, WIRING, DISCONNECT SWITCHES, AND STARTERS UNDER THIS CONTRACT. THIS CONTRACTOR SHALL REMOVE ALL EQUIPMENT, ELECTRICAL TEMPERATURE CONTROL WIRING, AND CONDUIT UNDER THIS CONTRACT.

F. CONTRACTOR IS RESPONSIBLE FOR SCANNING WALLS, FLOORS, ETC., TO LOCATE OBSTRUCTIONS (SUCH AS EXISTING ELECTRICAL CONDUIT, WIRING, PIPING, SLAB RE-INFORCING, ETC.) PRIOR TO MAKING ANY PENETRATIONS IN WALLS, FLOORS, ETC. CONTRACTOR TO LOCATE ALL SLAB REINFORCING PRIOR TO MAKING ANY SLAB PENETRATIONS. NO SLAB REINFORCING SHALL BE DAMAGED OR CUT. ANY DAMAGE RESULTING FROM CORING OR WALL AND/OR FLOOR PENETRATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.

G. CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN CLEANUP THROUGHOUT THE COURSE OF THE DEMOLITION WORK.

H. NOT ALL EXISTING PIPING,AND EQUIPMENT MAY BE SHOWN. CONTRACTOR TO VERIFY ALL PIPING AND EQUIPMENT PRIOR TO ANY DISCONNECTIONS.

I. CONTRACTOR TO VERIFY PIPE ROUTING INTERFERENCES AND ADJUST PIPE ROUTINGS AS REQUIRED. FIELD VERIFY PRIOR TO PROVIDING A BID TO ENSURE NO CHANGES TO PRICE DUE TO PIPE ROUTING ALTERATIONS.

J. NO EQUIPMENT, PIPING, VALVES, ETC. SHALL BE REMOVED, DISCONNECTED OR SHUT DOWN WITHOUT PRIOR REVIEW WITH THE OWNER AND/OR ENGINEER TO CONFIRM THAT AREAS TO REMAIN IN OPERATION WILL NOT BE AFFECTED. IF ANY AREAS NOT WITHIN THE SCOPE OF WORK ARE AFFECTED BY ANY SHUTDOWN, ONE (1) WEEK ADVANCE NOTICE SHALL BE GIVEN TO THE OWNER. SHUTDOWNS SHALL BE A MAXIMUM OF FOUR (4) HOURS UNLESS OTHERWISE INDICATED.

K. ALL EQUIPMENT, MATERIAL, ETC. THAT IS BEING DEMOLISHED WILL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED OR SPECIFIED BELOW. ALL SUCH ITEMS WILL BE REMOVED FROM THE BUILDING SITE BY THE CONTRACTOR IN A PROPER AND LEGAL MANNER. NO ITEM WHICH IS BEING REMOVED UNDER THE DEMOLITION CONTRACT MAY BE REUSED UNDER THE NEW WORK CONTRACT UNLESS NOTED ON THE DRAWINGS. ALL ITEMS TO BE TURNED OVER TO THE OWNER SHALL BE STORED PER THE OWNER'S INSTRUCTION.

L. SEQUENCE OF ALL DEMOLITION WORK SHALL BE IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS AND/OR AS DIRECTED BY THE ENGINEER. ALL SHUTDOWNS OF EXISTING SYSTEMS SHALL BE SCHEDULED AND APPROVED BY THE OWNER.

M. COORDINATE USE OF THE BUILDING ELEVATORS AND ALL MATERIAL DELIVERIES WITH THE OWNER.

N. IF ANY ISOLATION VALVES SHOULD FAIL DURING DEMOLITION, OTHER THAN THOSE CALLED OUT TO BE REPLACED, THIS CONTRACTOR SHALL REPAIR/REPLACE THE VALVE AND SUBMIT A CHANGE ORDER REQUEST FOR APPROVAL.

O. THE CONTRACTOR PERFORMING THE DEMOLITION WORK SHALL REMOVE NO MORE THAN 8" OF BUILDING MATERIAL AROUND EACH DEVICE BEING DEMOLISHED. PROVIDE PATCHING AS REQUIRED FOR FINISHED WORK. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM OWNER OR ENGINEER PRIOR TO PERFORMING REMOVAL OF MATERIAL FROM EXISTING BUILDING CONSTRUCTION.

P. CONTRACTOR SHALL PROTECT ALL WINDOWS AND SURFACES DURING DEMOLITION. ANY COSTS INCURRED BY DAMAGE FROM CUTTING TORCHES, SPARKS, HEAT, OR OTHER DEMOLITION PROCEDURES WILL NOT BE THE RESPONSIBILITY OF THE OWNER.

Q. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIAL REQUIRED TO PATCH ALL OPENINGS IN EXISTING WALLS, FLOORS, AND FIRE SEPARATIONS CREATED BY THE REMOVAL OF PLUMBING MATERIAL AND EQUIPMENT WHERE THESE OPENINGS ARE NOT TO BE REUSED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AT AREAS THAT PLUMBING EQUIPMENT WAS REMOVED BACK TO ITS ORIGINAL CONDITION INCLUDING ALL DRYWALL, PLASTER, PAINTING, ETC. CONTRACTOR SHALL EMPLOY TRADES EXPERIENCED IN GENERAL CONSTRUCTION TO PATCH ALL OPENINGS. TOOTH IN MASONRY USING WHOLE UNITS TO MATCH EXISTING MASONRY CONSTRUCTION.

R. EXISTING BUILDING SYSTEMS NOT SHOWN SHALL REMAIN UNLESS INDICATED TO BE DEMOLISHED ON THE PLANS. INSTALLATION OF NEW EQUIPMENT MAY NECESSITATE THE REROUTING OF EXISTING SYSTEMS TO REMAIN. COORDINATE WITH ENGINEER AND OWNER.

III. SHOP DRAWINGS, SUBMITTALS, AND AS-BUILTS

A. CONTRACTOR SHALL SUBMIT TO THE ENGINEER COORDINATED SHOP DRAWINGS. SHOP DRAWINGS SHALL BE 1/4" SCALE AND SHALL INDICATE LAYOUT OF ALL EQUIPMENT, PIPING, GAUGES, SENSORS, GRAPHICS, CONTROLS NETWORK ARCHITECTURE, CONTROL POINTS LIST, OPERATING SEQUENCES, CONTROL DEVICES WITH SETTINGS OR ADJUSTABLE RANGES, ETC. SHOP DRAWINGS SHALL INCLUDE ALL PIPE SIZES, PIPE SLOPES, CAPACITIES, ELEVATIONS, CLEANOUT LOCATIONS, VALVE LOCATIONS, DRAIN DOWN LOCATIONS, ACCESS PANEL LOCATIONS, FIXTURES, DRAINS, UNDERGROUND COMPONENTS, ETC. CONTRACTOR SHALL PROCEED WITH SITE WORK ONLY AFTER RECEIVING SHOP DRAWINGS MARKED REVIEWED.

B. SHOULD CONDITIONS NECESSITATE ANY REARRANGEMENTS, CONTRACTOR SHALL SUBMIT TO THE ENGINEER SHOP DRAWINGS SHOWING SUCH CHANGES. CONTRACTOR SHALL PROCEED WITH SITE WORK ONLY AFTER RECEIVING SHOP DRAWINGS MARKED REVIEWED.

C. CONTRACTOR SHALL SUBMIT TO THE ENGINEER MANUFACTURERS' SUBMITTALS FOR ALL EQUIPMENT AND ACCESSORIES. CONTRACTOR SHALL PROCEED WITH PROCUREMENT ONLY AFTER RECEIVING SUBMITTALS MARKED REVIEWED.

D. CONTRACTOR SHALL SUBMIT TO THE ENGINEER ONE (1) FULL-SIZE PAPER COPY AND AN ELECTRONIC FILE OF THE AS-BUILT DRAWINGS. RECORD LOCATIONS OF CONTROL COMPONENTS, INCLUDING CONTROL UNITS, GAUGES, AND SENSORS. REVISE SHOP DRAWINGS TO REFLECT ACTUAL INSTALLATION AND OPERATING SEQUENCES.

E. CONTRACTOR SHALL SUBMIT TO THE ENGINEER ONE (1) PAPER COPY AND AN ELECTRONIC FILE OF ALL EQUIPMENT INFORMATION. INCLUDE OPERATIONAL AND MAINTENANCE INSTRUCTIONS, PARTS LISTS, SUBMITTALS, AND DESCRIPTIVE LITERATURE.

IV. MATERIALS AND EQUIPMENT

A. ALL MATERIALS AND EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE NEW, UNLESS OTHERWISE STATED IN THESE CONTRACT DOCUMENTS, AND FREE FROM DEFECTS.

B. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.

C. CONTRACTOR IS REQUIRED TO REVIEW ALL DRAWINGS. MATERIALS AND EQUIPMENT SHOWN ON THE SCHEDULES AND DETAILS SHALL BE INCLUDED IN BASE BID. NO MATERIAL OR EQUIPMENT SUBSTITUTIONS WILL BE CONSIDERED AFTER THE AWARD OF CONTRACT. IF CONTRACTOR DESIRES TO SUBSTITUTE MATERIAL OR EQUIPMENT, CONTRACTOR MUST SUBMIT AS ALTERNATE WITH HIS BASE BID A LIST OF SUCH ITEMS INDICATING ITEM, MANUFACTURER, MODEL NUMBER, AND AMOUNT TO BE ADDED TO OR DEDUCTED FROM THE BASE BID. EACH SUCH MATERIAL OR EQUIPMENT SUBSTITUTION ITEM SHALL BE LISTED SEPARATELY.

D. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE PURCHASE, DELIVERY, RECEIVING, UNLOADING, UNCRATING, STORING, SETTING IN PLACE, AND PROTECTING OF ALL NEW EQUIPMENT FURNISHED BY THE CONTRACTOR OR PROVIDED TO THE CONTRACTOR BY THE OWNER, AND SHALL SECURE SUCH EQUIPMENT FROM DAMAGE UNTIL TIME OF FINAL ACCEPTANCE BY THE OWNER.

E. CONTRACTOR SHALL FURNISH AND INSTALL ALL STRUCTURE, SLEEVES, SHIMS, ETC. REQUIRED TO LEVEL AND SUPPORT EQUIPMENT AND MATERIALS. INSTALL NONMETALLIC NON-SHRINK GROUT FOR LEVELING EQUIPMENT BASES.

F. CONTRACTOR SHALL VERIFY ALL PHYSICAL, ELECTRICAL, INGRESS, ETC. REQUIREMENTS FOR ALL EQUIPMENT PRIOR TO ORDERING.

G. CONTRACTOR SHALL SUBMIT TO OWNER THE PROPOSED LABELS/IDENTIFICATION PRODUCT FOR EACH PIECE OF EQUIPMENT PRIOR TO ORDERING. EQUIPMENT LABELS/IDENTIFICATION SHALL CONFORM TO THE FOLLOWING:

1. MATERIAL AND THICKNESS: MULTILAYER, MULTICOLOR, PLASTIC LABELS FOR MECHANICAL ENGRAVING, 1/8 INCH THICK, AND HAVING PREDRILLED HOLES FOR ATTACHMENT HARDWARE.
2. LETTER COLOR: WHITE
3. BACKGROUND COLOR: BLUE.
4. MAXIMUM TEMPERATURE: ABLE TO WITHSTAND TEMPERATURES UP TO 160 DEG F.
5. MINIMUM LABEL SIZE: LENGTH AND WIDTH VARY FOR REQUIRED LABEL CONTENT, BUT NOT LESS THAN 2-1/2 BY 3/4 INCH.
6. MINIMUM LETTER SIZE: 1/4 INCH FOR NAME OF UNITS IF VIEWING DISTANCE IS LESS THAN 24 INCHES, 1/2 INCH FOR VIEWING DISTANCES UP TO 72 INCHES, AND PROPORTIONATELY LARGER LETTERING FOR GREATER VIEWING DISTANCES. INCLUDE SECONDARY LETTERING TWO-THIRDS TO THREE-FOURTHS THE SIZE OF PRINCIPAL LETTERING.
7. FASTENERS: STAINLESS-STEEL RIVETS OR SELF-TAPPING SCREWS.
8. ADHESIVE: CONTACT-TYPE PERMANENT ADHESIVE, COMPATIBLE WITH LABEL AND WITH SUBSTRATE.

H. EQUIPMENT DATA, LABELS, AND OTHER IDENTIFICATION SHALL NOT BE OBSTRUCTED.

I. CONTRACTOR SHALL PROVIDE FILTERS, STRAINER SCREENS, ETC. FOR ALL NEW EQUIPMENT DURING CONSTRUCTION. REPLACE FILTERS, STRAINERS SCREENS, ETC. WITH FINAL FILTERS, STRAINER SCREENS, ETC. AT COMPLETION OF PROJECT AND PRIOR TO TEST AND BALANCE.

J. ALL EQUIPMENT INCLUDING BUT NOT LIMITED TO WATER HEATERS, PUMPS, PRESSURE REDUCING VALVES, ETC. LOCATED ABOVE FINISHED CEILINGS TO BE PROVIDED WITH A REMOVABLE DRAIN PAN. DRAIN PAN DISCHARGE SHALL BE THROUGH AN INDIRECT WASTE PIPE BY MEANS OF AN AIR GAP OR WITH UL508 OVERFLOW SWITCH AND ALARM WHEN MEANS OF WASTE PIPE IS NOT POSSIBLE.

K. PROVIDE UNIONS OR FLANGES AT ALL PIPING CONNECTIONS TO EQUIPMENT, CONTROL VALVES, PRESSURE REDUCING VALVES, BACK FLOW PREVENTION, ETC. ARRANGE CONNECTIONS SO THAT EQUIPMENT SERVED MAY BE REMOVED WITHOUT DISTURBING PIPING OR VALVES.

V. OWNER TRAINING

A. THE CONTRACTOR SHALL PROVIDE DEMONSTRATION AND TRAINING TO OWNER'S PERSONNEL FOR NEW SYSTEMS AND EQUIPMENT. THE COSTS ASSOCIATED WITH THIS SHALL BE INCLUDED AS PART OF THE BASE BID UNLESS OTHERWISE NOTED.

B. ALL EQUIPMENT MANUALS, INSTALLATION OPERATION AND MAINTENANCE MANUALS, ETC. SHALL BE TURNED OVER TO THE OWNER PRIOR TO COMMENCING OWNER DEMONSTRATION AND TRAINING. REFER TO PROJECT CLOSEOUT DOCUMENT REQUIREMENTS FOR ADDITIONAL INFORMATION.

C. CONTRACTOR SHALL PROVIDE A MINIMUM OF 12 HOURS OF TRAINING OVER 3 SEPARATE VISITS ON SITE FOR OWNER PERSONNEL.

D. OWNER TRAINING SHALL BE CONDUCTED AFTER FUNCTIONAL TESTING IS COMPLETE AS APPROVED BY THE ENGINEER AND (WHERE APPLICABLE) COMMISSIONING AUTHORITY.

E. COORDINATE TRAINING WITH OWNER, ENGINEER & COMMISSIONING AUTHORITY.

VI. PIPING - POTABLE

A. GENERAL

1. COMPLY WITH PROVISIONS OF COPPER DEVELOPMENT ASSOCIATION'S "COPPER TUBE HANDBOOK". ALL POTABLE WATER PIPING AND SYSTEM COMPONENTS SHALL COMPLY WITH NSF/ANSI 61 AND NSF/ANSI 372.
2. SYSTEM COMPONENTS WHICH REQUIRE OBSERVATION, OPERATION, OR MAINTENANCE, SUCH AS VALVES, GAUGES, CONTROLS, STRAINERS, UNIONS, ETC., SHALL BE READILY ACCESSIBLE. THEY SHALL NOT BE CONCEALED IN CHASES OR ABOVE CEILINGS WITHOUT PROVISION FOR ACCESS. VALVES WHICH ARE NOT ACCESSIBLE FROM NORMAL WORKING LEVEL SHALL BE INSTALLED WITH CHAIN WHEELS OR EXTENSIONS.
3. INSTALL PIPING TO PERMIT COMPLETE SYSTEM DRAINING.
4. INSTALL INTERIOR AND EXTERIOR PIPING AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS. DIAGONAL RUNS ARE PROHIBITED, EXCEPT WHERE INDICATED OR APPROVED PRIOR TO INSTALLATION. RUN PIPING IN WALL CHASES, PIPE SHAFTS, HUNG CEILINGS, RECESSES, ETC. AS APPLICABLE. DO NOT RUN SERVICE PIPING IN FLOOR SLAB UNLESS SPECIFICALLY NOTED ON DRAWINGS. PIPING SHALL NOT BE COVERED OR CLOSED UNTIL TESTING IS COMPLETED.
5. INSTALL PIPING TO ALLOW APPLICATION OF INSULATION PLUS 1-INCH CLEARANCE AROUND INSULATION.
6. MECHANICAL FITTINGS WILL NOT BE ALLOWED. MECHANICAL FITTINGS MAY BE BID AS AN ALTERNATE WHERE EXPOSED AND ACCESSIBLE IN MECHANICAL ROOMS..

B. ABOVE GROUND PIPING

1. ALL PIPE SIZES: ALL PIPING SHALL BE TYPE 'L' HARD COPPER PIPING WITH 95/5 SOLDER JOINT FITTINGS.

C. INSULATION

1. FURNISH AND INSTALL ALL NEW PIPING, VALVES, FITTINGS, ETC. AND EXISTING PIPING AS INDICATED ON THE DOCUMENTS WITH FIBERGLASS MOLDED PIPE INSULATION APPLIED WITH AN ALL-SERVICE VAPOR BARRIER JACKET, STAPLED, WITH THE SEAMS, JOINTS, AND STAPLES PAINTED WITH VAPOR-PROOF MASTIC. ALL INSULATION MATERIALS SHALL COMPLY WITH CODE REQUIRED FLAME SPREAD RATINGS.
2. ALL DAMAGED INSULATION (RESULTING FROM IMPLEMENTATION OF THIS PROJECT) ON EXISTING PIPING TO REMAIN SHALL BE REPLACED.
3. MINIMUM INSULATION THICKNESS SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND ALL APPLICABLE CODES:
   a. DOMESTIC COLD WATER PIPING: 1"
   b. DOMESTIC HOT WATER PIPING (1.25 NPS AND SMALLER): 1"
   c. DOMESTIC HOT WATER PIPING (1.5 NPS AND LARGER): 1-1/2"
   d. TEPID WATER PIPING: 1"
4. VAPOR BARRIER JACKET SHALL HAVE FACTORY-APPLIED VAPOR RETARDER COMPOSED OF A WHITE KRAFT FACING REINFORCED WITH GLASS FIBER YARN AND BONDED TO ALUMINIZED FILM. LAP ADHESIVE SHALL BE COMPATIBLE WITH INSULATION.
5. FURNISH AND INSTALL PVC COVERS FOR ALL VALVES AND ALL PIPE FITTINGS.
6. FURNISH AND INSTALL ALL EXTERIOR INSULATED PIPING WITH 3M VENTURECLAD PLUS 1579 SERIES' MULTI-LAYERED ALUMINUM LAMINATE, SELF ADHESIVE, JACKETING SYSTEM. PROVIDE WITH EMBOSSED FINISH AND COLOR SELECTED BY OWNER.
7. ALL INSULATION SHALL BE APPLIED AFTER SUCCESSFUL PRESSURE TESTING OF PIPE.

D. VALVES

1. VALVES SHALL BE INSTALLED AS A MEANS OF ISOLATION FOR ALL EQUIPMENT, INDIVIDUAL FIXTURES, GROUPING OF FIXTURES, SEPARATE ROOMS, GROUPING OF ROOMS, PORTIONS OF THE SYSTEM AND RISERS. EACH INDIVIDUAL BATHROOM AND KITCHEN SHALL HAVE VALVES AS A MEANS OF ISOLATION. ALL REQUIRED VALVES ARE NOT SHOWN ON FLOOR PLANS OR RISER DIAGRAMS.
2. LOCATIONS WHERE NEW PIPING IS CONNECTED TO EXISTING SHALL BE PROVIDED WITH A NEW VALVE. PIPING THAT IS UNAFFECTED BY THIS PROJECT SHALL BE EXEMPT.
3. MAKE PROVISIONS FOR DRAINING ALL LOW POINTS OF ALL PIPING SYSTEMS WHETHER INDICATED ON THE DRAWINGS OR NOT, USING A BALL VALVE AND THREADED HOSE CONNECTION WITH CAP. DRAINS SHALL NOT BE LESS THAN 3/4".
4. INSTALL ALL VALVES WITH STEMS IN EITHER AN UPRIGHT (PREFERRED) OR HORIZONTAL POSITION. CONTROL VALVES SHALL BE INSTALLED WITH ACTUATOR UPWARD UNLESS NOTED OTHERWISE. OPEN VALVE HANDLE POSITION SHALL BE IN THE DIRECTION OF FLOW.
5. PROVIDE PRESSURE REDUCING VALVES TO NOT EXCEED THE MANUFACTURER RECOMMENDED PRESSURE RATING OF EQUIPMENT OR FIXTURE.
6. ISOLATION VALVES SHALL BE MSS SP-61, RATED FOR ZERO LEAKAGE.
7. BALL VALVES (4 NPS AND SMALLER)
   a. MSS SP-110
   b. 2 PIECE LEAD-FREE BRASS BODY 600# WOG RATED, FULL PORT
   c. LEAD-FREE FORGED BRASS BALL
   d. MINIMUM 2-1/4" VALVE EXTENSION OR GREATER TO ALLOW OPERATION OF VALVES WITHOUT BREAKING VAPOR SEALS OR DISTURBING INSULATION
   e. PTFE SEAT AND PACKING
   f. LEVER HANDLE
   g. THREADED ENDS
   h. ACCEPTABLE MANUFACTURERS:
      - APOLLO, LEGEND, MILWAUKEE, NIBCO
8. BUTTERFLY VALVES (5 NPS AND LARGER)
   a. MSS SP-67
   b. LUG TYPE WITH CAST IRON OR DUCTILE IRON BODY
   c. STAINLESS STEEL SHAFT
   d. PTFE SEAT/SEALS
   e. TEN POSITION LEVER HANDLE
   f. FLANGED ENDS
   g. ACCEPTABLE MANUFACTURERS:
      - APOLLO, NIBCO, MILWAUKEE
9. BUTTERFLY VALVES, HIGH PERFORMANCE (5 NPS AND LARGER)
   a. MSS SP-68
   b. LUG TYPE WITH LEAD FREE CARBON STEEL OR STAINLESS STEEL BODY
   c. STAINLESS STEEL SHAFT
   d. RTFE SEAT/SEALS
   e. TEN POSITION LEVER HANDLE
   f. FLANGED ENDS
   g. ACCEPTABLE MANUFACTURERS:
      - MILWAUKEE OR EQUAL
10. SWING CHECK VALVE (2 NPS AND SMALLER)
   a. MSS SP-80
   b. BRONZE BODY, BRONZE TRIM
   c. COMPOSITION SWING DISC
   d. THREADED ENDS
   e. ACCEPTABLE MANUFACTURERS:
      - APOLLO, NIBCO, MILWAUKEE
11. SPRING LOADED CHECK VALVE (2.5 NPS AND LARGER)
   a. MSS SP-125
   b. DUCTILE IRON BODY, BRONZE OR STAINLESS STEEL TRIM
   c. SPRING LOADED WAFER AND EPDM SEAT
   d. FLANGED ENDS
   e. ACCEPTABLE MANUFACTURERS:
      - APOLLO, NIBCO, MILWAUKEE
12. BALANCING VALVES (3 NPS AND SMALLER)
   a. BRASS BODY ASTM B584-844, BRASS BALL ASTM B16 C36000
   b. GLASS AND CARBON FILLED TFE SEAT RINGS
   c. BRASS WITH EPT CHECK VALVES FOR READOUT VALVES
   d. EPDM STEM "O" RING
   e. SHALL BE DESIGNED TO PRESET BALANCE POINTS FOR PROPORTIONAL SYSTEM BALANCE PRIOR TO SYSTEM START UP. VALVES TO HAVE MEMORY STOP FEATURE TO ALLOW VALVE TO BE CLOSED FOR SERVICE AND THEN RE-OPENED TO SET POINT WITHOUT DISTURBING THE BALANCE POSITION.
   f. THREADED CONNECTION
   g. MAXIMUM WORKING PRESSURE OF 300 PSIG
   h. ACCEPTABLE MANUFACTURERS:
      - BELL AND GOSSETT OR EQUAL

E. ACCESSORIES

1. STRAINERS (UP TO AND INCLUDING 3")
   a. THREADED BRASS BODY
   b. Y PATTERN WITH 20 MESH STAINLESS STEEL PERFORATED SCREEN
   c. ACCEPTABLE MANUFACTURERS:
      - KECKLEY, WATTS, APOLLO, NIBCO
2. STRAINERS (4" AND UP)
   a. FLANGED IRON BODY
   b. Y PATTERN WITH 20 MESH STAINLESS STEEL PERFORATED SCREEN
   c. ACCEPTABLE MANUFACTURERS:
      - KECKLEY, WATTS, APOLLO, NIBCO
3. THERMOMETERS
   a. SELECT INSTRUMENT RANGE SO THE ORDINARY OPERATING CONDITION IS IN THE MIDDLE AREA OF THE INSTRUMENT SCALE
   b. STRAIGHT STEM TYPE BE EXPEARABLE WELLS
   c. SWIVEL MOUNTING SET WITH POSITIVE LOCKING DEVICE, TO BE EASILY READ FROM THE FLOOR
   d. SIZE: 9" SCALE
   e. ACCEPTABLE MANUFACTURERS:
      - WATTS, WEISS
4. PRESSURE GAUGES
   a. SELECT INSTRUMENT RANGE SO THE ORDINARY OPERATING CONDITION IS IN THE MIDDLE AREA OF THE INSTRUMENT SCALE
   b. 3-1/2" DIAMETER, LIQUID FILLED, DIAL TYPE, PSI SCALE
   c. FRONT RE-CALIBRATION ADJUSTMENT
   d. MID SCALE ACCURACY. TWO PERCENT
   e. BLACK SCALE ON WHITE BACKGROUND
   f. ACCEPTABLE MANUFACTURERS:
      - WATTS, WEISS
5. PRESSURE GAUGE TAPPINGS
   a. GAGE COCK: TEE OR LEVER HANDLE, BRASS.
   b. BALL VALVE: BRASS, 1