

Contract Drawings For

Persigo Wastewater Treatment Plant

INTERNAL FIBER OPTIC LOOP INSTALLATION PROJECT

ISSUED FOR BIDDING

HDR Project No.
 10372769

2145 River Road, Grand Junction, CO
 May 2024

INDEX OF DRAWINGS

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Vicinity Map





GENERAL NOTES:

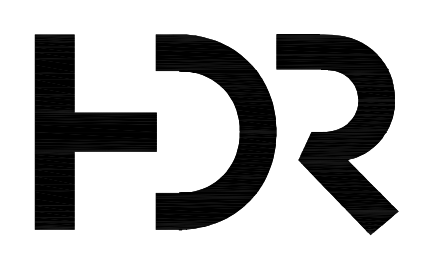
- A. HANDHOLES ARE NOT SHOWN TO SCALE. ORIENTATION OF HANDHOLES AND MICRODUCT ENTRY SIDES ARE REPRESENTED.
- B. ALL MICRODUCT SHALL ENTER HANDHOLES FROM THE 30" ENDS ONLY.
- C. HANDHOLE LOCATIONS ARE APPROXIMATE, MEASURED TO THE CENTER OF HANDHOLES, AND MUST BE COORDINATED BY CONTRACTOR WITH CITY AND FIELD CONDITIONS.
- D. HANDHOLE APPROXIMATE NORTHINGS AND EASTINGS ARE BASED ON THE SURVEY CONTROL PLAN SHEET C-100 FROM THE PERSIGO WWTP EXPANSION PROJECT (BY OTHERS).
- E. LOCATIONS SHOWN FOR ALL UNDERGROUND PIPE, UTILITY, AND OTHER UNDERGROUND SYSTEMS ARE APPROXIMATE. CONTRACTOR SHALL FIELD-VERIFY LOCATIONS OF UNDERGROUND SYSTEMS IN THE VICINITY OF MICRODUCT OR HANDHOLE LOCATIONS. SEE GENERAL NOTES ON SHEET G-001.
- F. TYPICAL ASPHALT ROAD THICKNESS IN THE PLANT IS APPROXIMATELY 5 INCHES.
- G. FACILITIES DESCRIBED IN THE KEY NOTES BELOW WILL BE CONSTRUCTED BY OTHERS IN THE PERSIGO WWTP EXPANSION PROJECT. DETAILED SITE/BUILDING PLANS FOR THESE LOCATIONS ARE NOT PROVIDED IN THIS DRAWING SET. OVERALL REQUIREMENTS FOR EACH LOCATION ARE DESCRIBED IN THE KEY NOTES. COORDINATE FINAL LOCATIONS AND SYSTEM INSTALLATION WITH OWNER AND PERSIGO WWTP EXPANSION PROJECT.
- H. ALL HORIZONTAL FIBER OPTIC PATHS SHALL BE MICRODUCT.
- I. USE ELBOWS, J-BOXES, OR CONDUIT FITTINGS TO MAINTAIN FIBER OPTIC BEND RADIUS.

KEY NOTES:

1. HEADWORKS ELECTRICAL ROOM: INSTALL EXTERNAL FIBER OPTIC PULLBOX (DETAIL 2/E-500) ON SOUTH WALL OF BUILDING WEST OF THE ENTRY DOOR. INSTALL FIBER PATCH PANEL INSIDE THE BUILDING ADJACENT TO THE NETWORK EQUIPMENT ON THE WEST END OF THE BUILDING. INSTALL APPROXIMATELY 40FT OF 1-IN RGS CONDUIT BETWEEN EXTERIOR PULLBOX AND INTERIOR FIBER PATCH PANEL.
2. BLOWER BUILDING: INSTALL EXTERNAL FIBER OPTIC PULLBOX (DETAIL 2/E-500) ON SOUTH WALL OF BLOWER BUILDING. INSTALL CONTROL SYSTEM FIBER PATCH PANEL INSIDE THE BUILDING ADJACENT TO THE NETWORK EQUIPMENT AT THE NORTH END, AND INSTALL FIRE ALARM FIBER PATCH PANEL INSIDE THE BUILDING ADJACENT TO THE FIRE ALARM EQUIPMENT AT THE SOUTHEAST CORNER OF THE BUILDING. INSTALL APPROXIMATELY 180FT OF 1-IN RGS CONDUIT BETWEEN THE EXTERIOR PULLBOX AND CONTROL SYSTEM FIBER PATCH PANEL, AND APPROXIMATELY 30FT OF 1-IN RGS CONDUIT BETWEEN EXTERIOR PULLBOX AND FIRE ALARM FIBER PATCH PANEL.
3. DEWATERING BUILDING: INSTALL EXTERNAL FIBER OPTIC PULLBOX (DETAIL 2/E-500) ON SOUTH WALL OF DEWATERING BUILDING. INSTALL CONTROL SYSTEM FIBER PATCH PANEL INSIDE THE BUILDING ADJACENT TO THE NETWORK EQUIPMENT AT THE WEST END OF THE SECOND FLOOR, AND INSTALL FIRE ALARM FIBER PATCH PANEL ADJACENT TO THE FIRE ALARM EQUIPMENT NEAR THE CENTER OF THE SECOND FLOOR. INSTALL APPROXIMATELY 80FT OF 1-IN RGS CONDUIT BETWEEN THE EXTERIOR PULLBOX AND CONTROL SYSTEM FIBER PATCH PANEL, AND APPROXIMATELY 100FT OF 1-IN RGS CONDUIT BETWEEN EXTERIOR PULLBOX AND FIRE ALARM FIBER PATCH PANEL.
4. NEW SITE ENTRANCE: INSTALL FIBER OPTIC PULLBOX ON UNISTRUT RACK (DETAIL 5/E-500) INSIDE NEW GATE NEAR THE GATE ACTUATOR. INSTALL FIBER PATCH PANEL ON THE UNISTRUT RACK NEXT TO THE PULLBOX. MOUNT RACK ON CONCRETE FOUNDATION. INSTALLATION IS SIMILAR TO THE EQUIPMENT LOCATED AT THE EXISTING MAIN GATE.

HANDHOLE LOCATIONS		
HANDHOLE NUMBER	APPROX. NORTHING	APPROX. EASTING
FB-HH-01	53270.57	64964.53
FB-HH-02	52860.57	54898.83
FB-HH-03	52653.91	64906.29
FB-HH-04	52657.87	64809.89
FB-HH-05	52456.63	64688.85
FB-HH-06	52363.70	64688.80
FB-HH-07	52049.04	64701.62
FB-HH-08	52049.04	64883.71
FB-HH-09	51737.41	64897.21
FB-HH-10	51684.92	65054.32
FB-HH-11	51683.00	65186.66
FB-HH-12	52041.31	65298.51
FB-HH-13	52588.59	65296.97
FB-HH-14	52650.53	65161.47
FB-HH-15	52653.72	65003.74
FB-HH-16	52837.02	65271.19
FB-HH-17	53051.04	65302.75

APPROXIMATE HANDHOLE LOCATIONS



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C	MAY 2024	ISSUED FOR BIDDING
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PROJECT MANAGER - TRAVIS MOORE	
ELECTRICAL	T. MOORE
FIBER OPTIC	J. BRAINARD
DRAWN BY S. BILD	
PROJECT NUMBER	10372769



CITY OF
Grand Junction
COLORADO

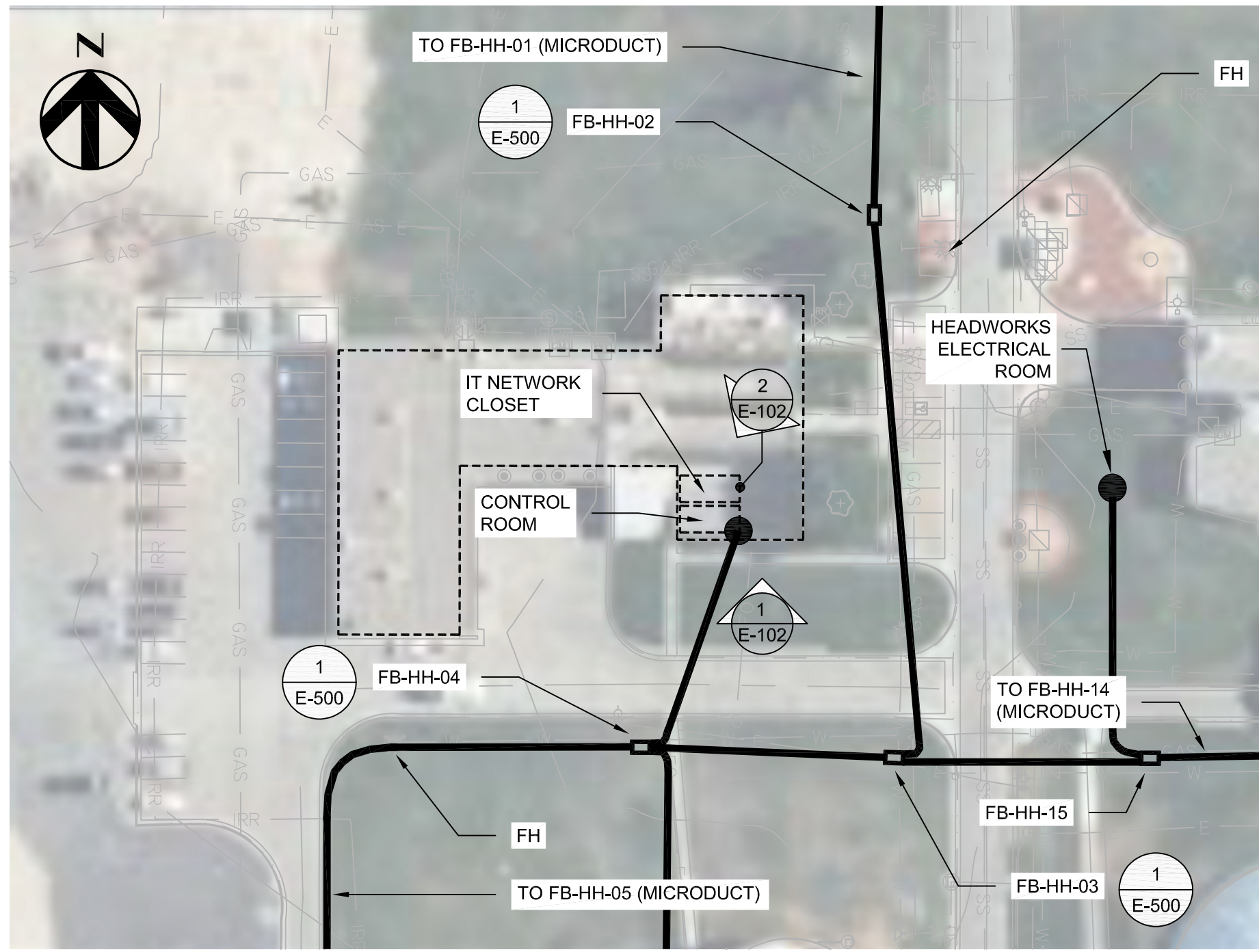
PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT

OVERALL SITE PLAN

0 1" 2"

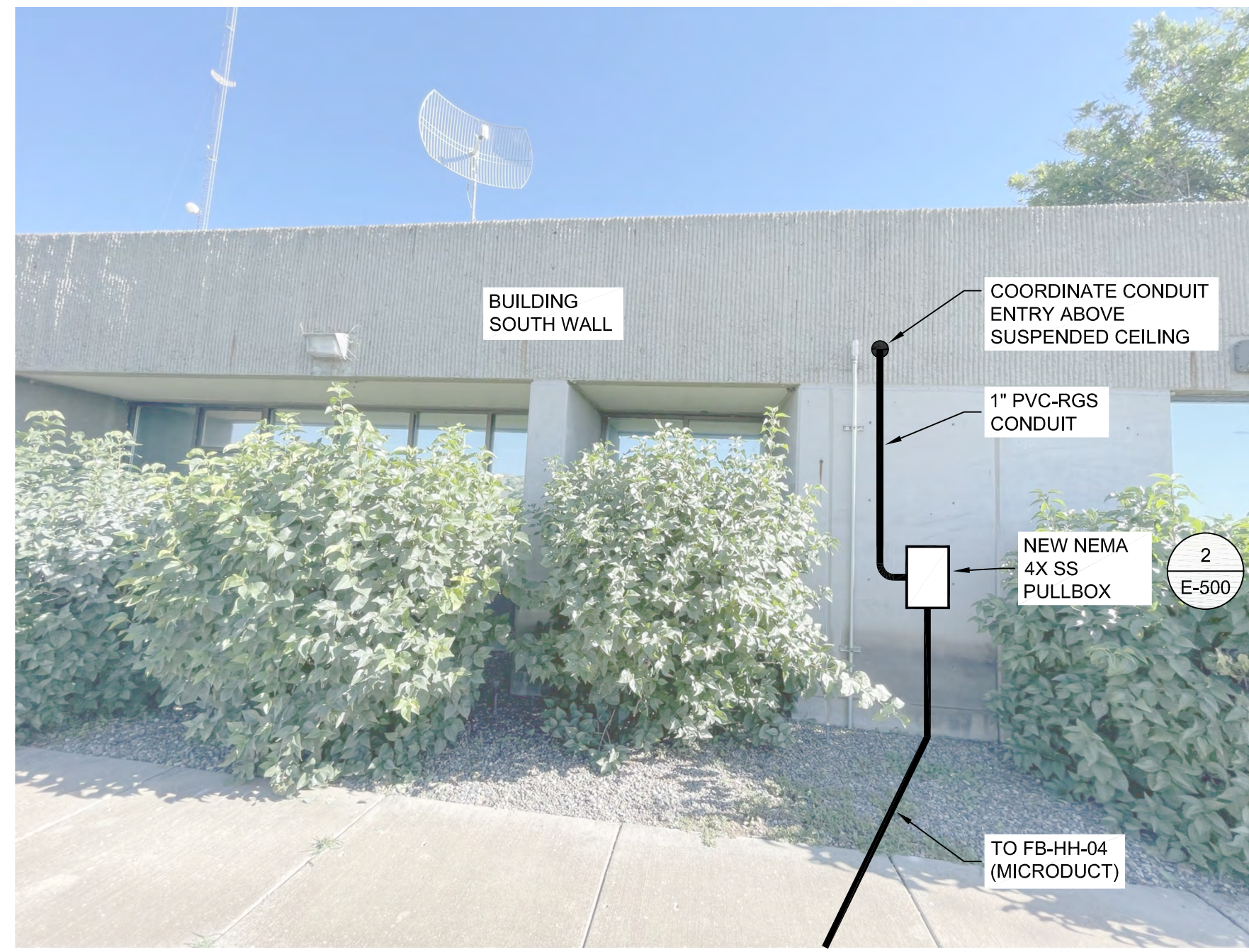
FILENAME | E-100.dwg
SCALE | 1" = 100'

SHEET
E-100



OPERATIONS BUILDING SITE OVERVIEW

SCALE: 1" = 50'



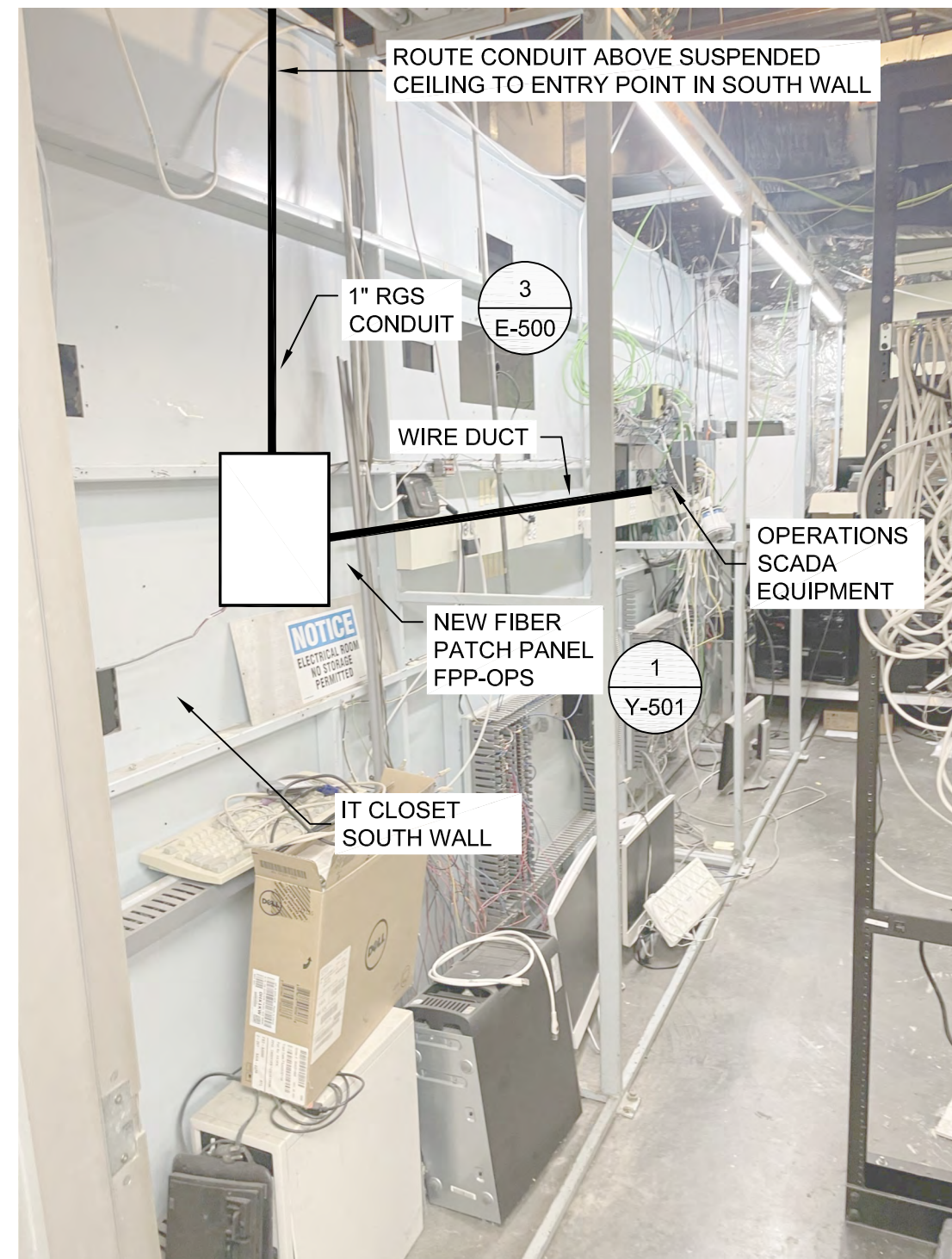
OPERATIONS BUILDING EXTERIOR MICRODUCT/CONDUIT ROUTING

SCALE: NONE

GENERAL NOTES:

- A. UNSUPPORTED BEND RADIUS OF THE 4-WAY MICRODUCT IS 36 INCHES. MINIMUM BURY DEPTH IS 30 INCHES.
- B. CITY IT TO PROVIDE MANAGED ETHERNET SWITCHES AND FIBER PATCH CORDS BETWEEN FIBER PATCH PANELS AND ETHERNET SWITCHES.
- C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH PANELS, PULLBOXES, AND 24-STRAND FIBER.
- D. ALL CONDUITS SHALL ENTER BOTTOM OR SIDE OF PULLBOX. CONDUITS SHALL NOT ENTER THE TOP OF PULLBOX. USE GASKETED MYERS HUBS ON ALL SIDE-ENTRY CONDUITS.
- E. USE ELBOWS, J-BOXES, OR CONDUIT FITTINGS TO MAINTAIN FIBER OPTIC BEND RADIUS.
- F. GROUND PULLBOX WITH GROUND ROD CONNECTED WITH MINIMUM #6AWG GROUNDING CONDUCTOR, PER REQUIREMENTS IN SECTION 26 05 26.
- G. CONDUIT ROUTING AND BOX LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH FIELD CONDITIONS.

ESTIMATED INDOOR CONDUIT RUN: 35FT.



OPERATIONS IT NETWORK CLOSET

PLC & FIBER PANEL LOCATIONS

SCALE: NONE



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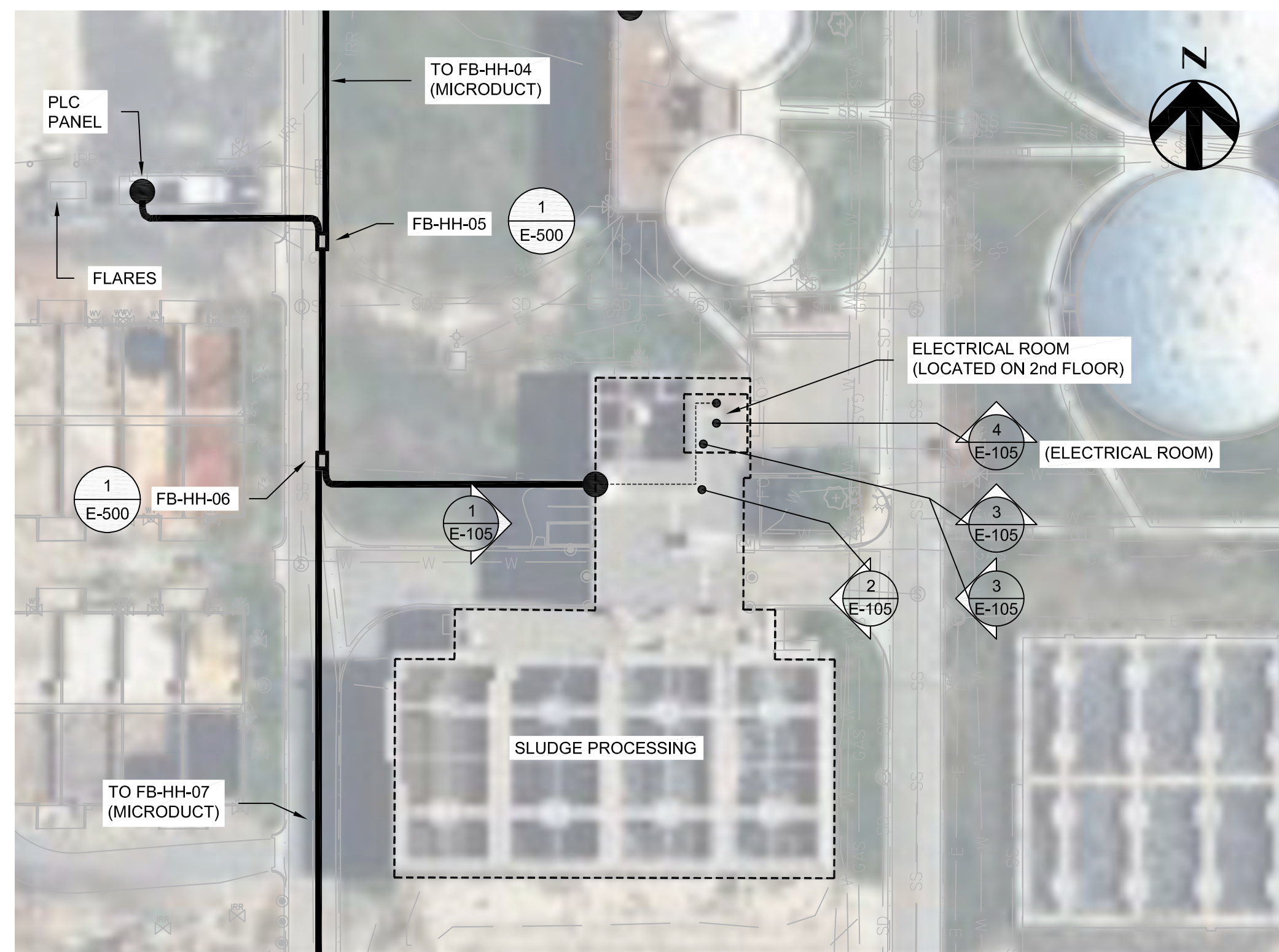
**PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT**

OPERATIONS BUILDING



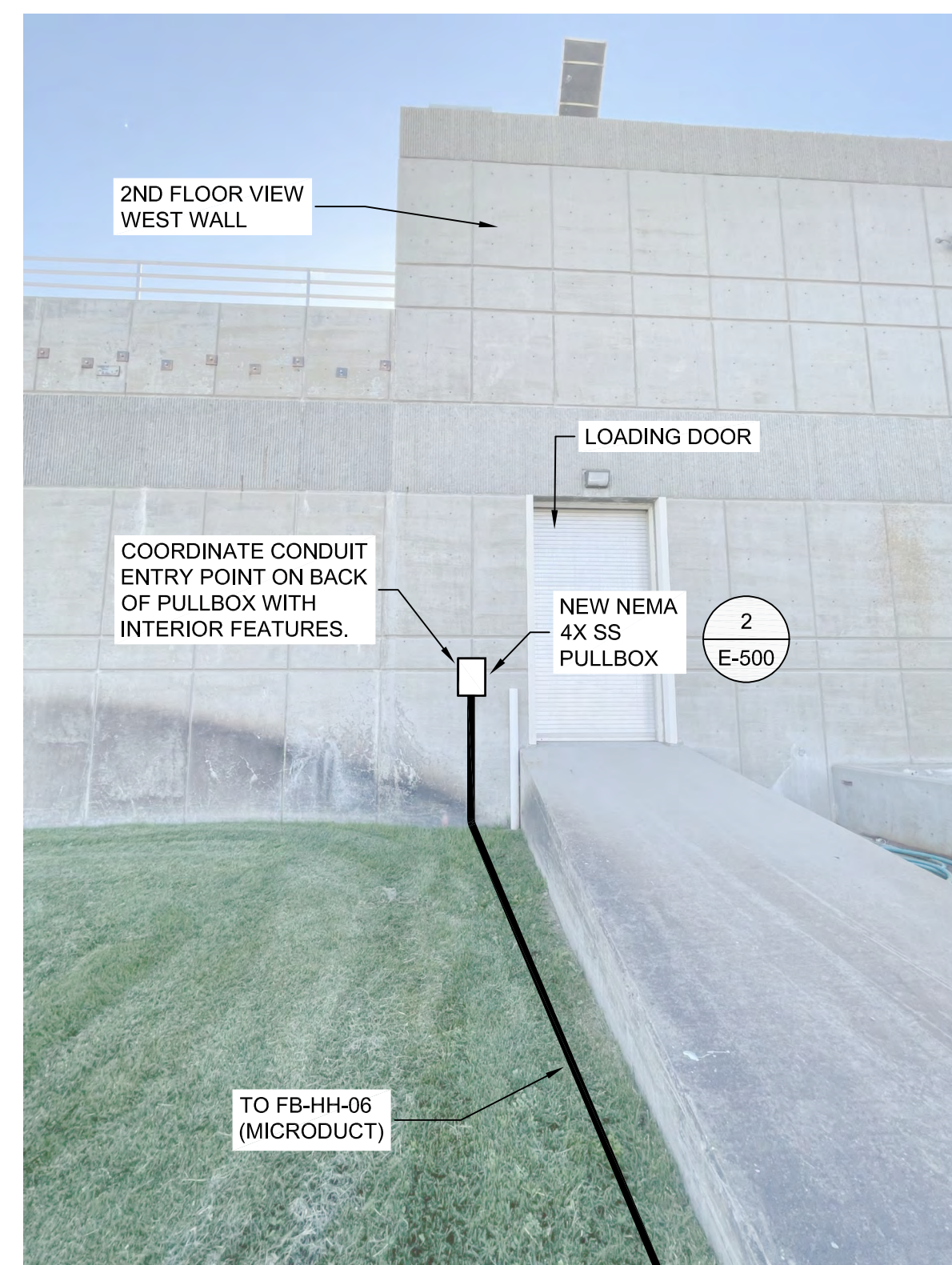
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SHEET
E-102



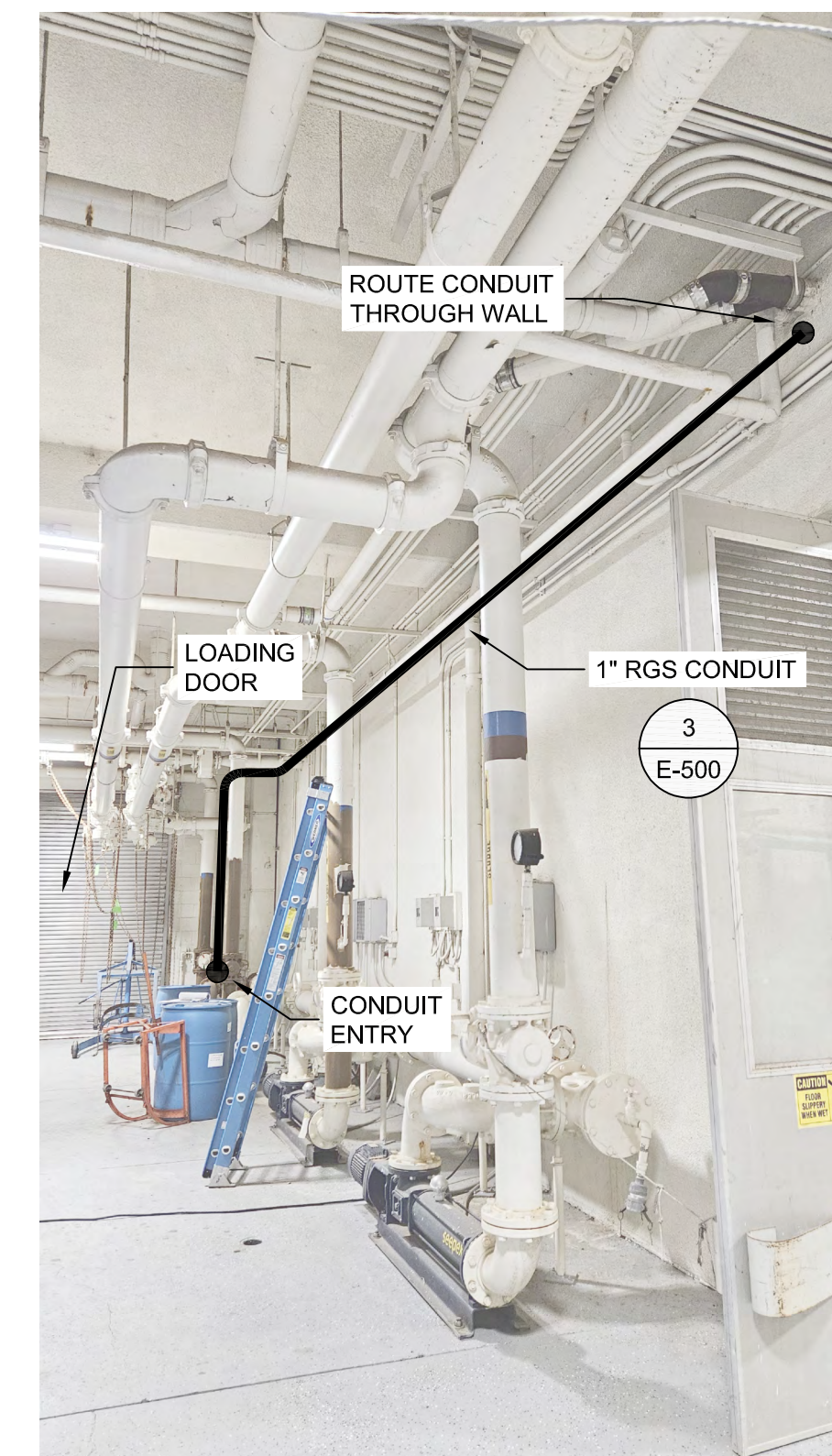
SLUDGE PROCESSING SITE OVERVIEW

SCALE: 1" = 50'



SLUDGE PROCESSING EXTERIOR MICRODUCT/CONDUIT ROUTING

SCALE: NONE



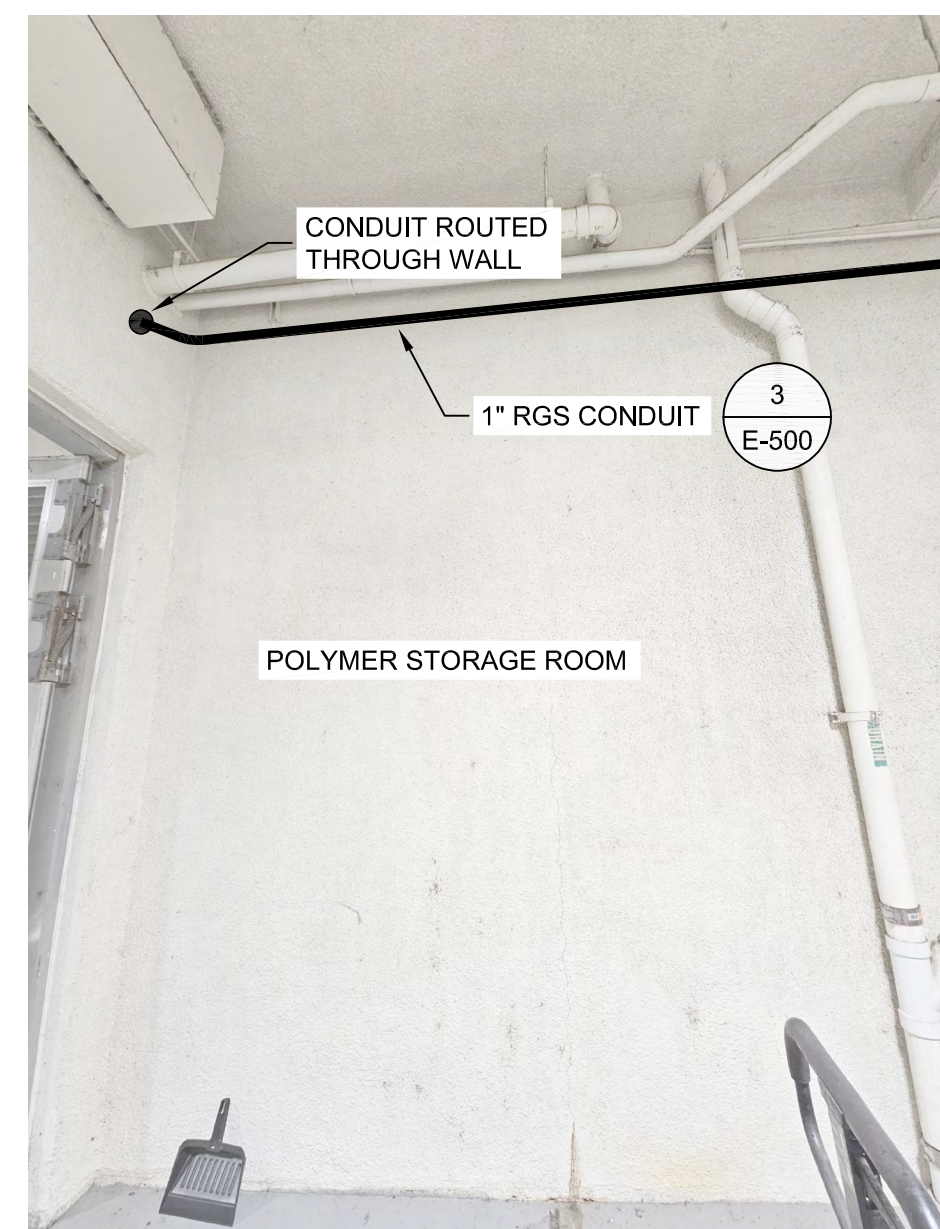
SLUDGE PROCESSING CONDUIT ENTRY

SCALE: NONE

GENERAL NOTES:

- A. UNSUPPORTED BEND RADIUS OF THE 4-WAY MICRODUCT IS 36 INCHES. MINIMUM BURY DEPTH IS 30 INCHES.
- B. CITY IT TO PROVIDE MANAGED ETHERNET SWITCHES AND FIBER PATCH CORDS BETWEEN FIBER PATCH PANELS AND ETHERNET SWITCHES.
- C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH PANELS, PULLBOXES, AND 24-STRAND FIBER.
- D. ALL CONDUITS SHALL ENTER BOTTOM OR SIDE OF PULLBOX. CONDUITS SHALL NOT ENTER THE TOP OF PULLBOX. USE GASKETED MYERS HUBS ON ALL SIDE-ENTRY CONDUITS.
- E. USE ELBOWS, J-BOXES, OR CONDUIT FITTINGS TO MAINTAIN FIBER OPTIC BEND RADIUS.
- F. GROUND PULLBOX WITH GROUND ROD CONNECTED WITH MINIMUM #6AWG GROUNDING CONDUCTOR, PER REQUIREMENTS IN SECTION 26 05 26.
- G. CONDUIT ROUTING AND BOX LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH FIELD CONDITIONS.

ESTIMATED INDOOR CONDUIT RUN: 110 FT.



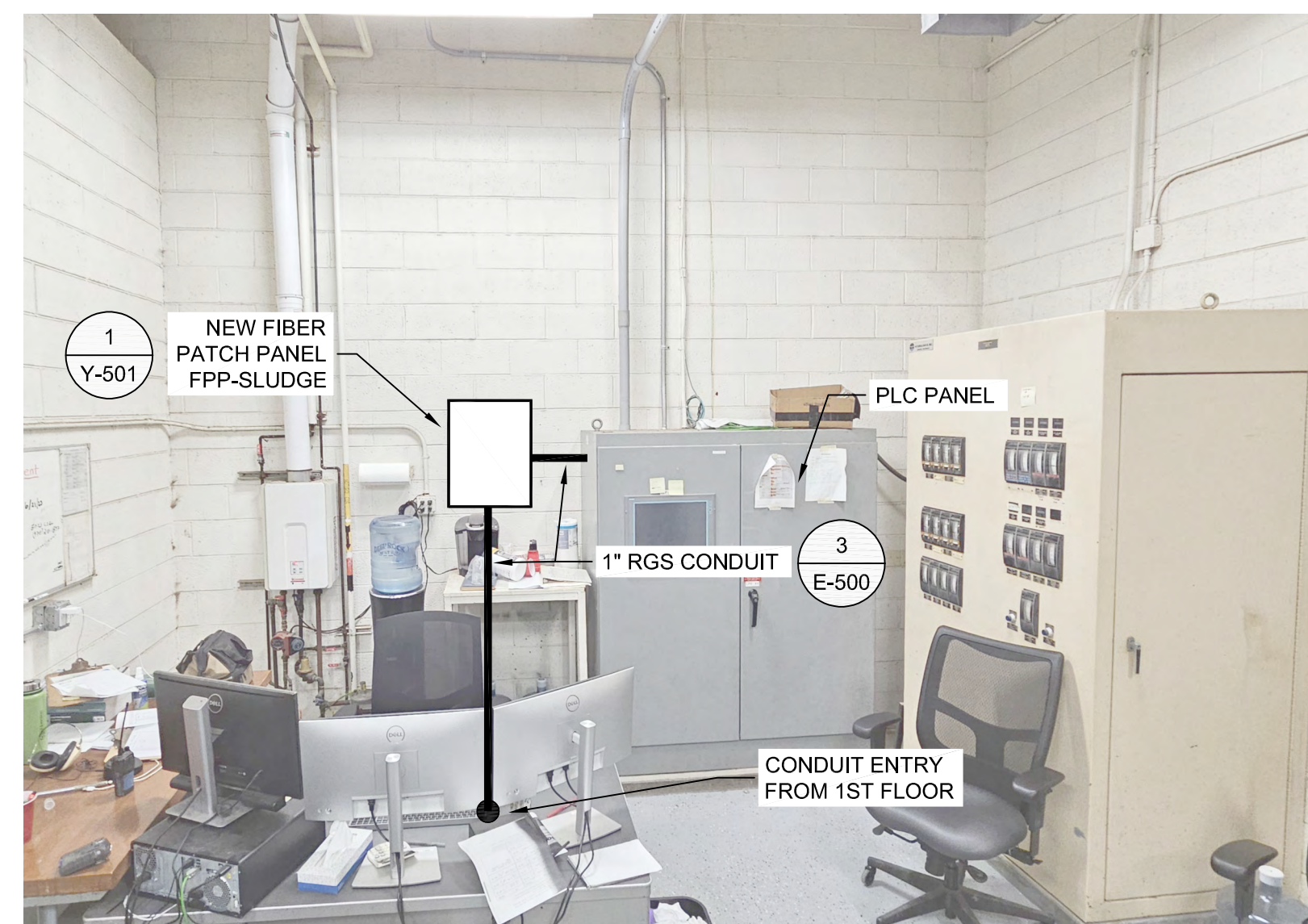
SLUDGE PROCESSING INTERIOR CONDUIT ROUTING TO 2nd FLOOR

SCALE: NONE



SLUDGE PROCESSING PLC AND FIBER PANEL LOCATIONS (SLUDGE PROCESSING 2nd FLOOR)

SCALE: NONE



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ELECTRICAL T. MOORE
FIBER OPTIC J. BRAINARD

DRAWN BY S. BILD
PROJECT NUMBER 10372769



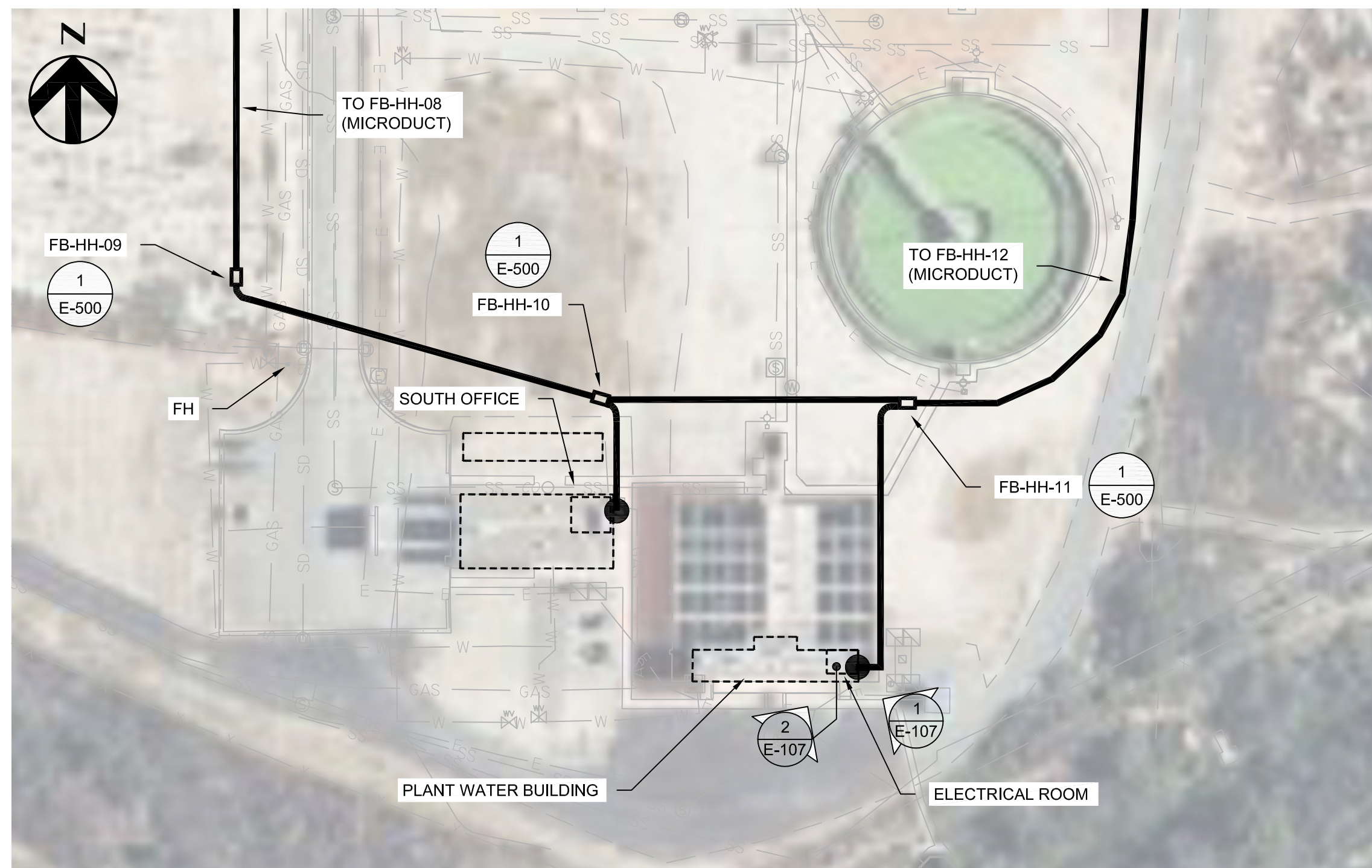
**PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT**

SLUDGE PROCESSING



FILENAME E-105.dwg
SCALE AS NOTED

SHEET
E-105



PLANT WATER BUILDING SITE OVERVIEW

SCALE: 1" = 50'



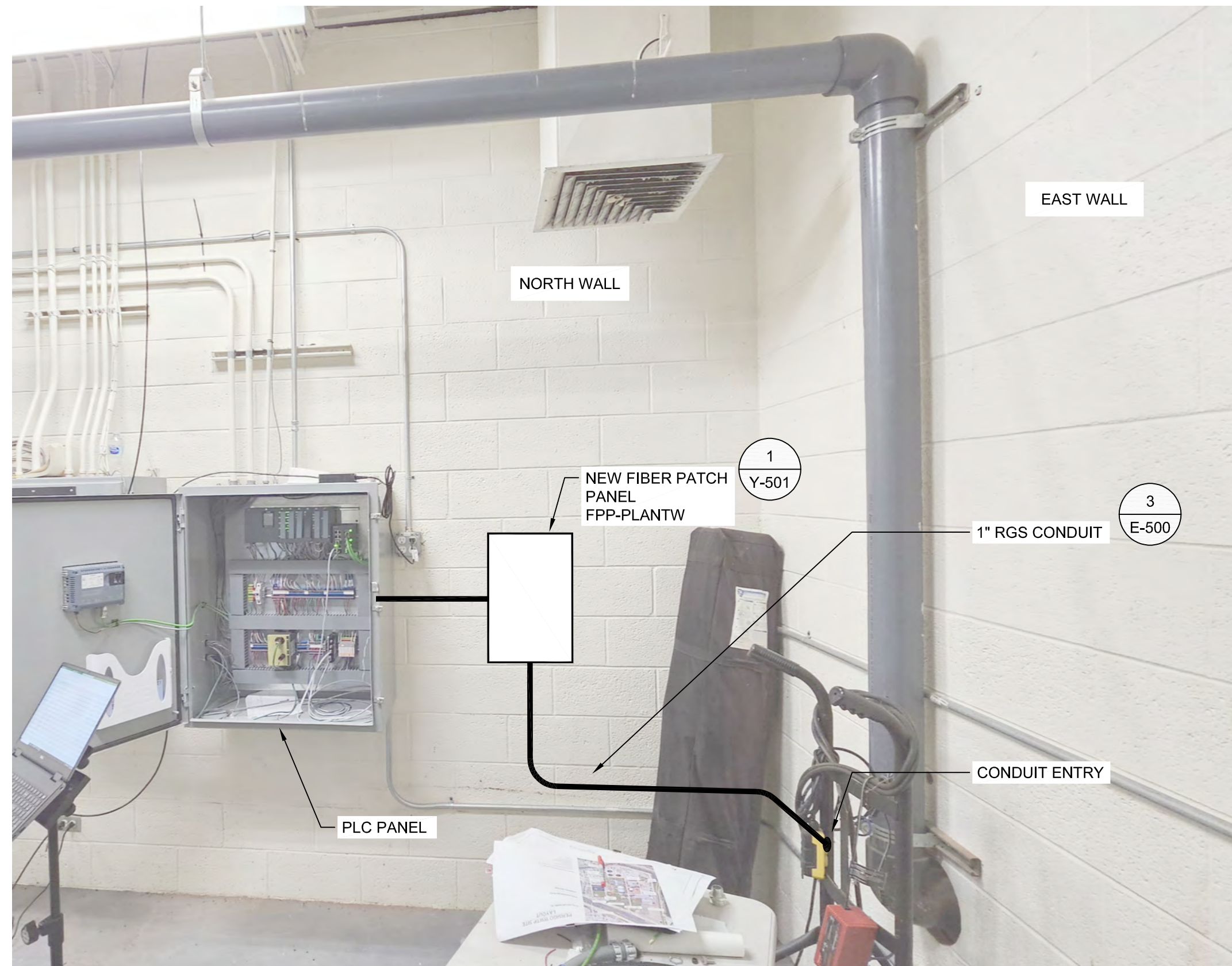
1 PLANT WATER BUILDING EXTERIOR MICRODUCT/CONDUIT ROUTING

SCALE: NONE

GENERAL NOTES:

- A. UNSUPPORTED BEND RADIUS OF THE 4-WAY MICRODUCT IS 36 INCHES. MINIMUM BURY DEPTH IS 30 INCHES.
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- C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH PANELS, PULLBOXES, AND 24-STRAND FIBER.
- D. CONTRACTOR TO PROVIDE UNISTRUT SUPPORT RACKS.
- E. ALL CONDUITS SHALL ENTER BOTTOM OR SIDE OF PULLBOX. CONDUITS SHALL NOT ENTER THE TOP OF PULLBOX. USE GASKETED MYER HUBS ON ALL SIDE-ENTRY CONDUITS.
- F. USE ELBOWS, J-BOXES, OR CONDUIT FITTINGS TO MAINTAIN FIBER OPTIC BEND RADIUS.
- G. GROUND PULLBOX AND RACK WITH GROUND ROD CONNECTED WITH MINIMUM #6AWG GROUNDING CONDUCTOR, PER REQUIREMENTS IN SECTION 26 05 26.
- H. CONDUIT ROUTING AND BOX LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH FIELD CONDITIONS.

ESTIMATED INDOOR CONDUIT RUN: 10FT



2 PLANT WATER PLC AND FIBER PANEL LOCATIONS

SCALE: NONE



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FIBER OPTIC J. BRAINARD

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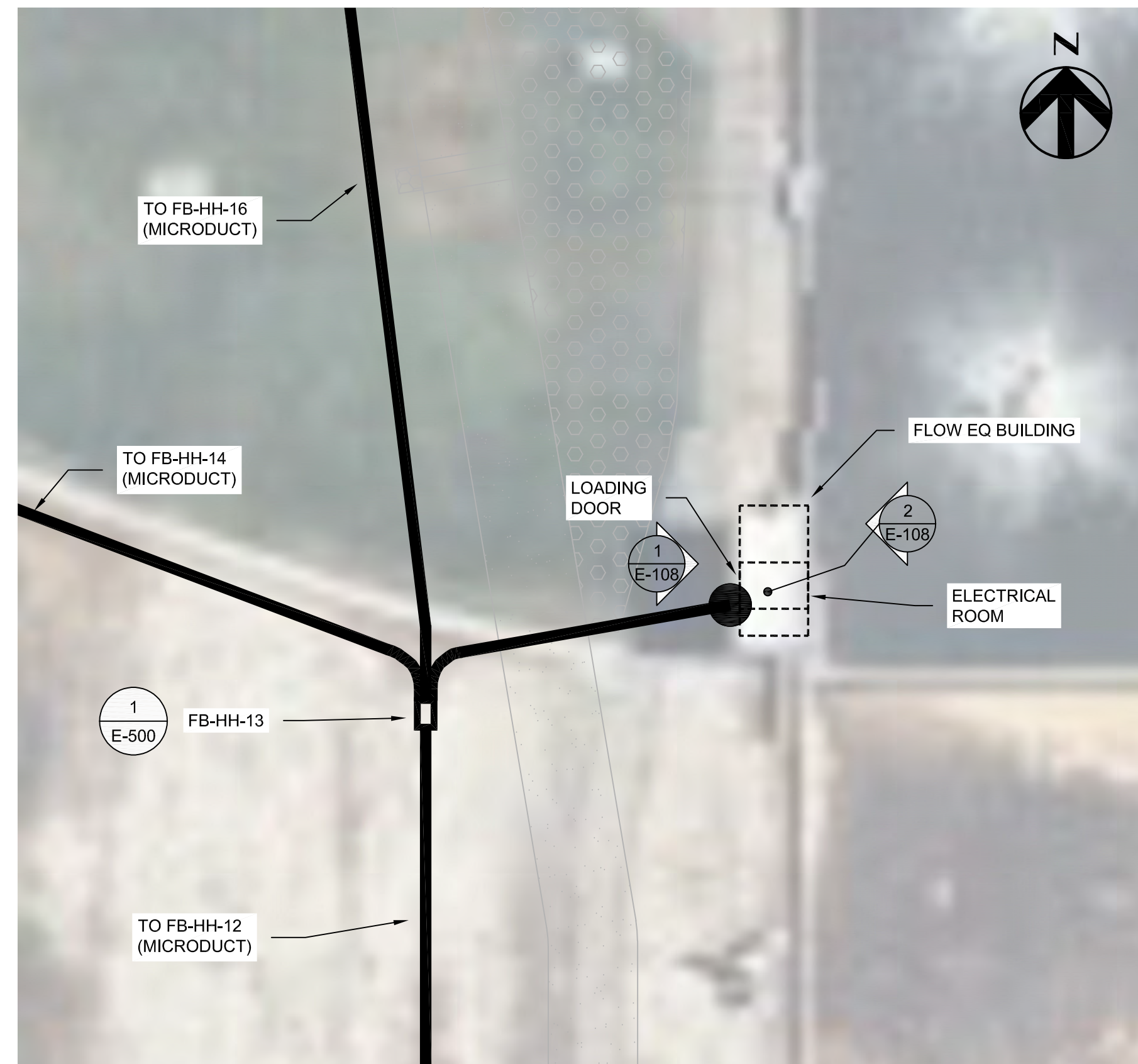
**PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT**



PLANT WATER

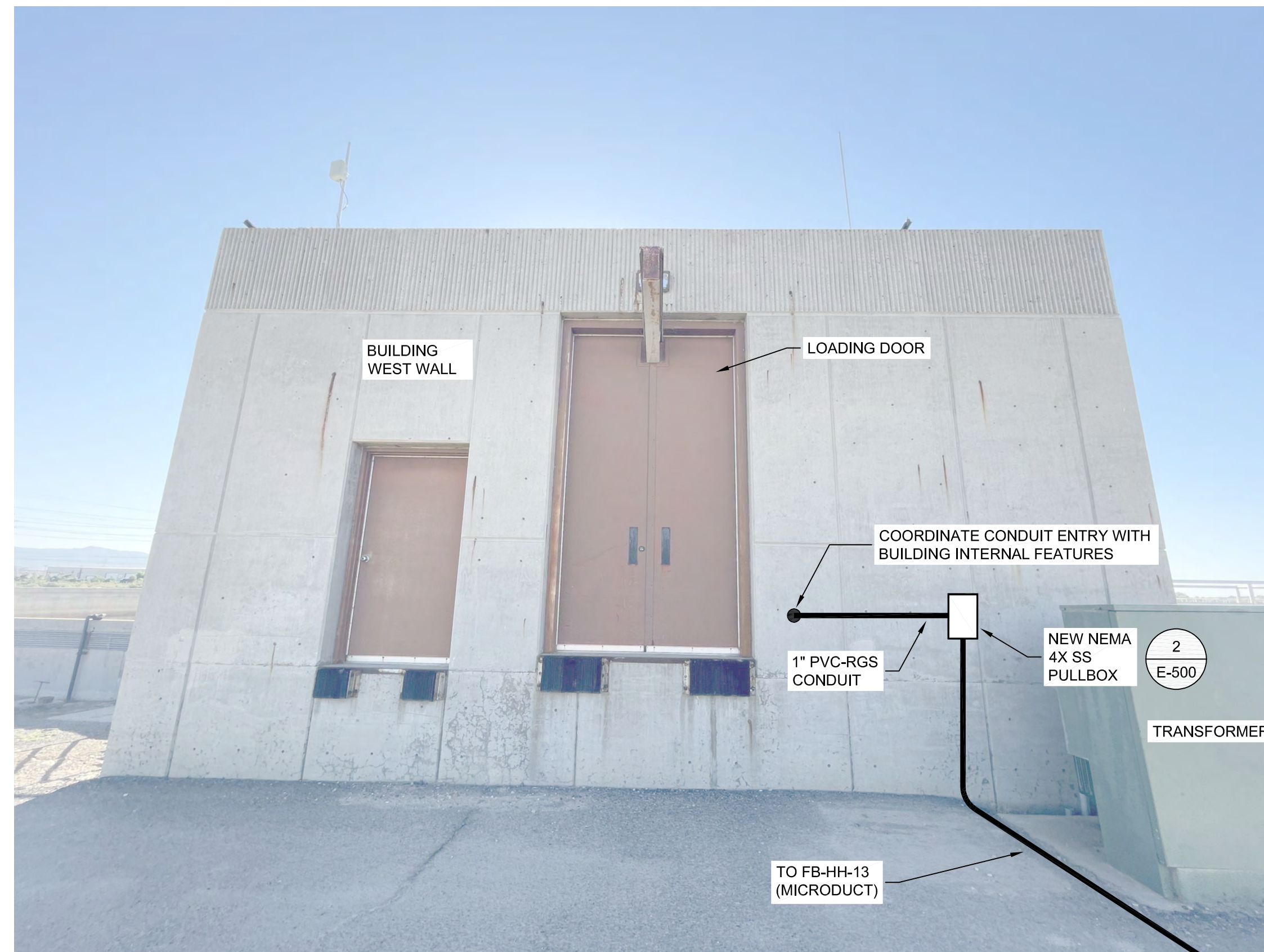
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SCALE AS NOTED

SHEET
E-107



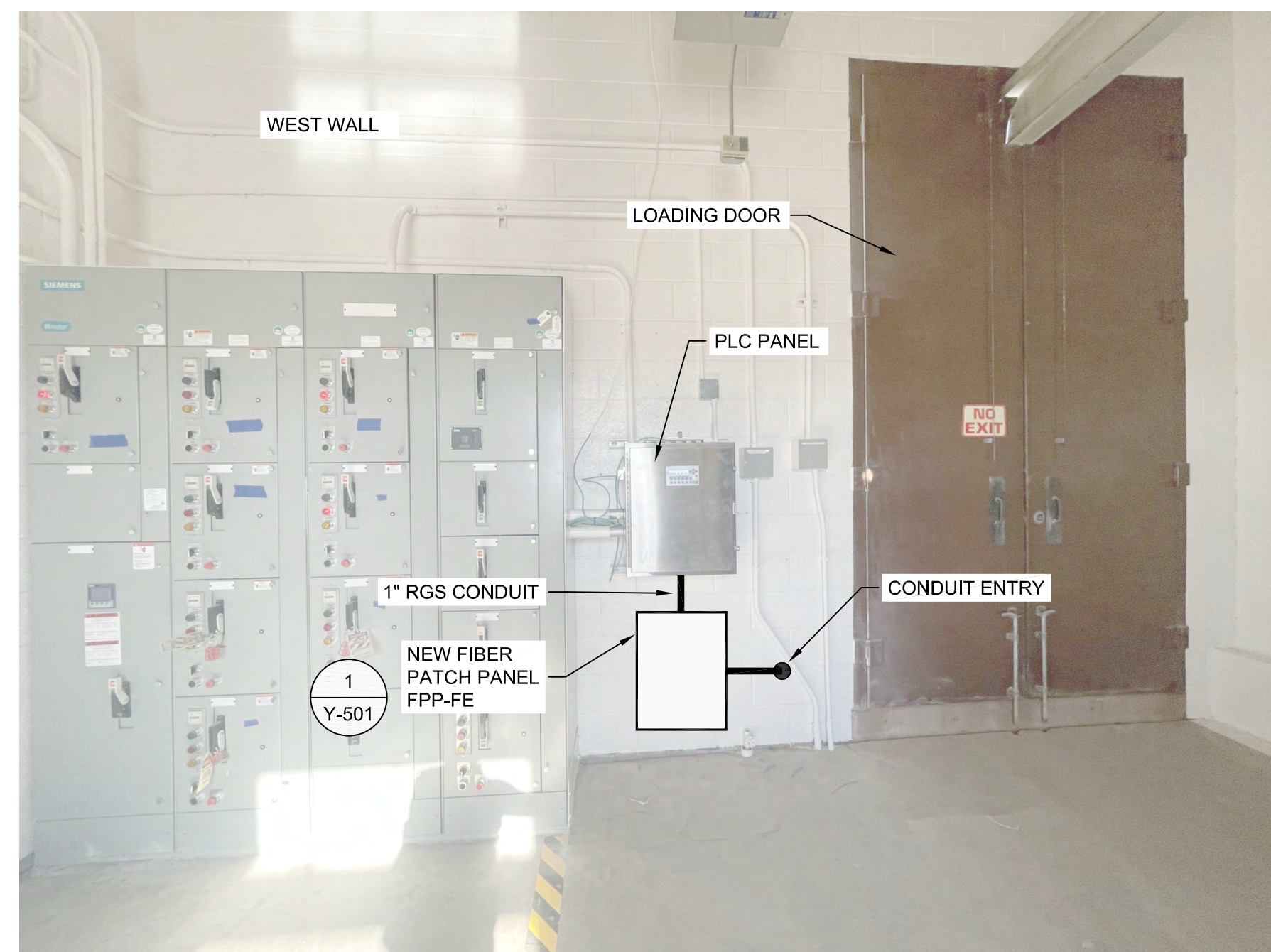
FLOW EQ BUILDING SITE OVERVIEW

SCALE: 1" = 30'



1 FLOW EQ EXTERIOR MICRODUCT/CONDUIT ROUTING

SCALE: NONE



2 FLOW EQ BUILDING PLC AND FIBER PANEL LOCATIONS

SCALE: NONE

GENERAL NOTES:

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- B. CITY IT TO PROVIDE MANAGED ETHERNET SWITCHES AND FIBER PATCH CORDS BETWEEN FIBER PATCH PANELS AND ETHERNET SWITCHES.
- C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH PANELS, PULLBOXES, AND 24-STRAND FIBER.
- D. CONTRACTOR TO PROVIDE UNISTRUT SUPPORT RACKS.
- E. ALL CONDUITS SHALL ENTER BOTTOM OR SIDE OF PULLBOX. CONDUITS SHALL NOT ENTER THE TOP OF PULLBOX. USE GASKETED MYER HUBS ON ALL SIDE-ENTRY CONDUITS.
- F. USE ELBOWS, J-BOXES, OR CONDUIT FITTINGS TO MAINTAIN FIBER OPTIC BEND RADIUS.
- G. GROUND PULLBOX AND RACK WITH GROUND ROD CONNECTED WITH MINIMUM #6AWG GROUNDING CONDUCTOR, PER REQUIREMENTS IN SECTION 26 05 26.
- H. CONDUIT ROUTING AND BOX LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH FIELD CONDITIONS.



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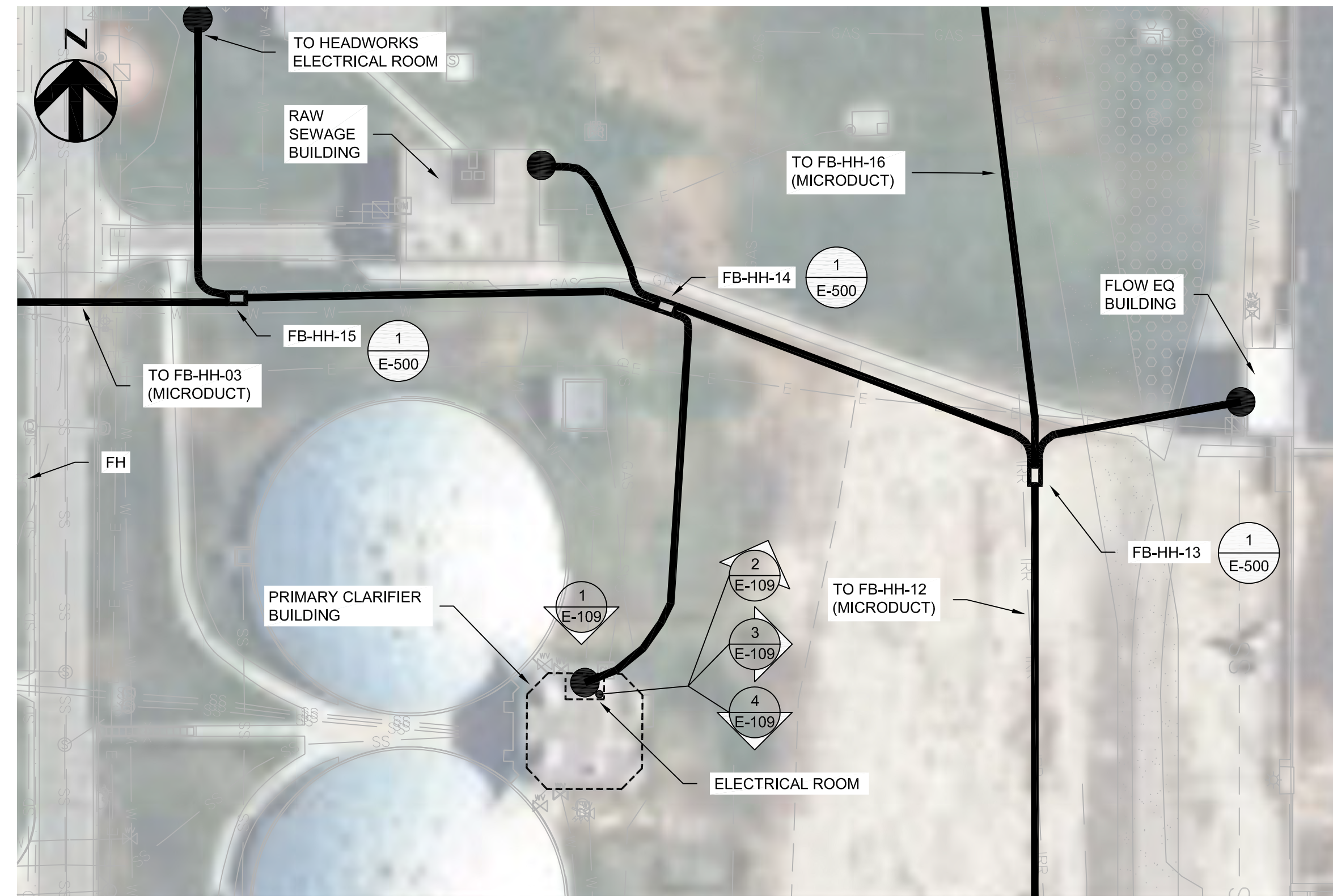
**PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT**

FLOW EQ BUILDING



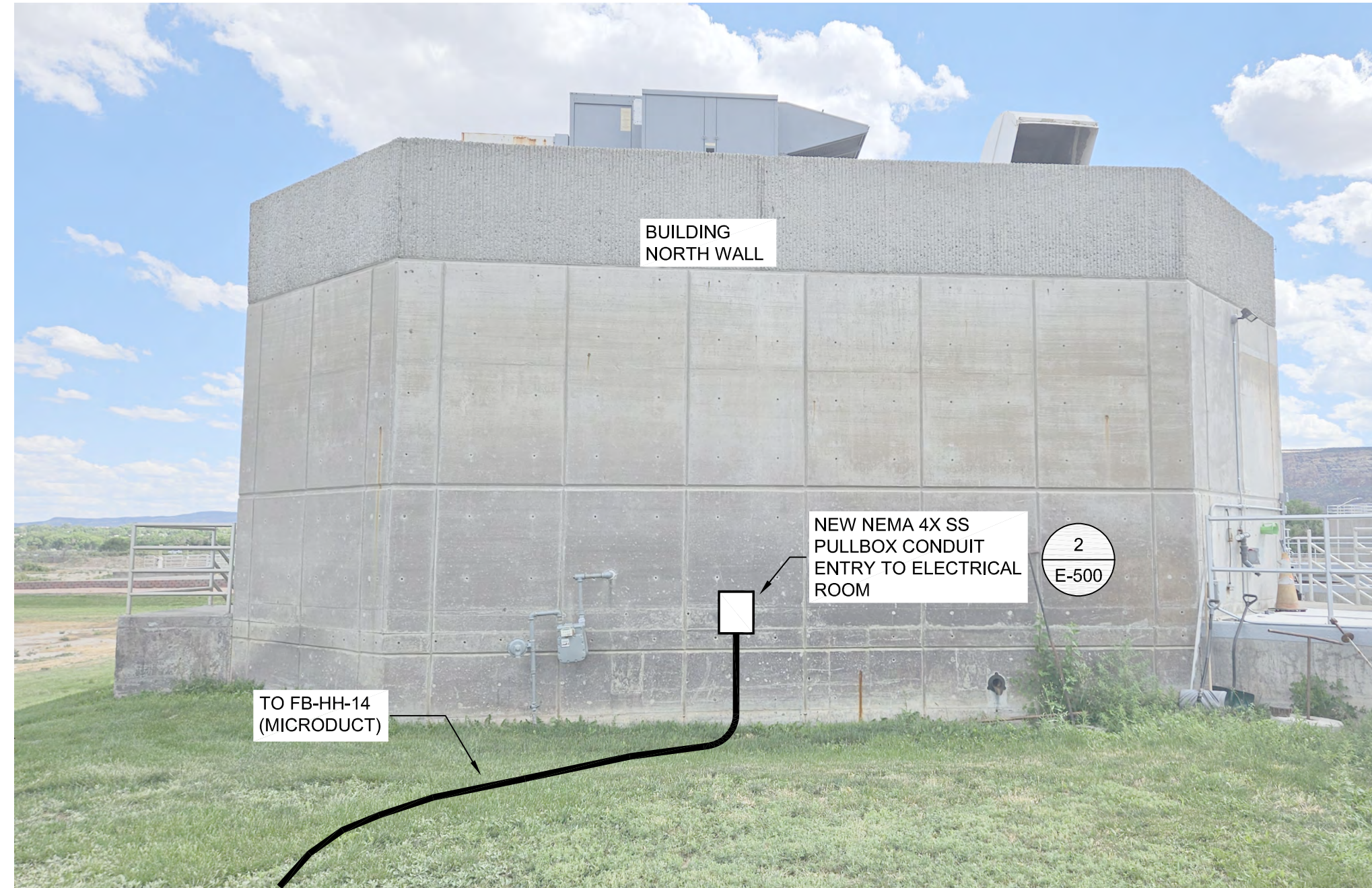
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E-108



PRIMARY CLARIFIER BUILDING SITE OVERVIEW

SCALE: 1" = 50'



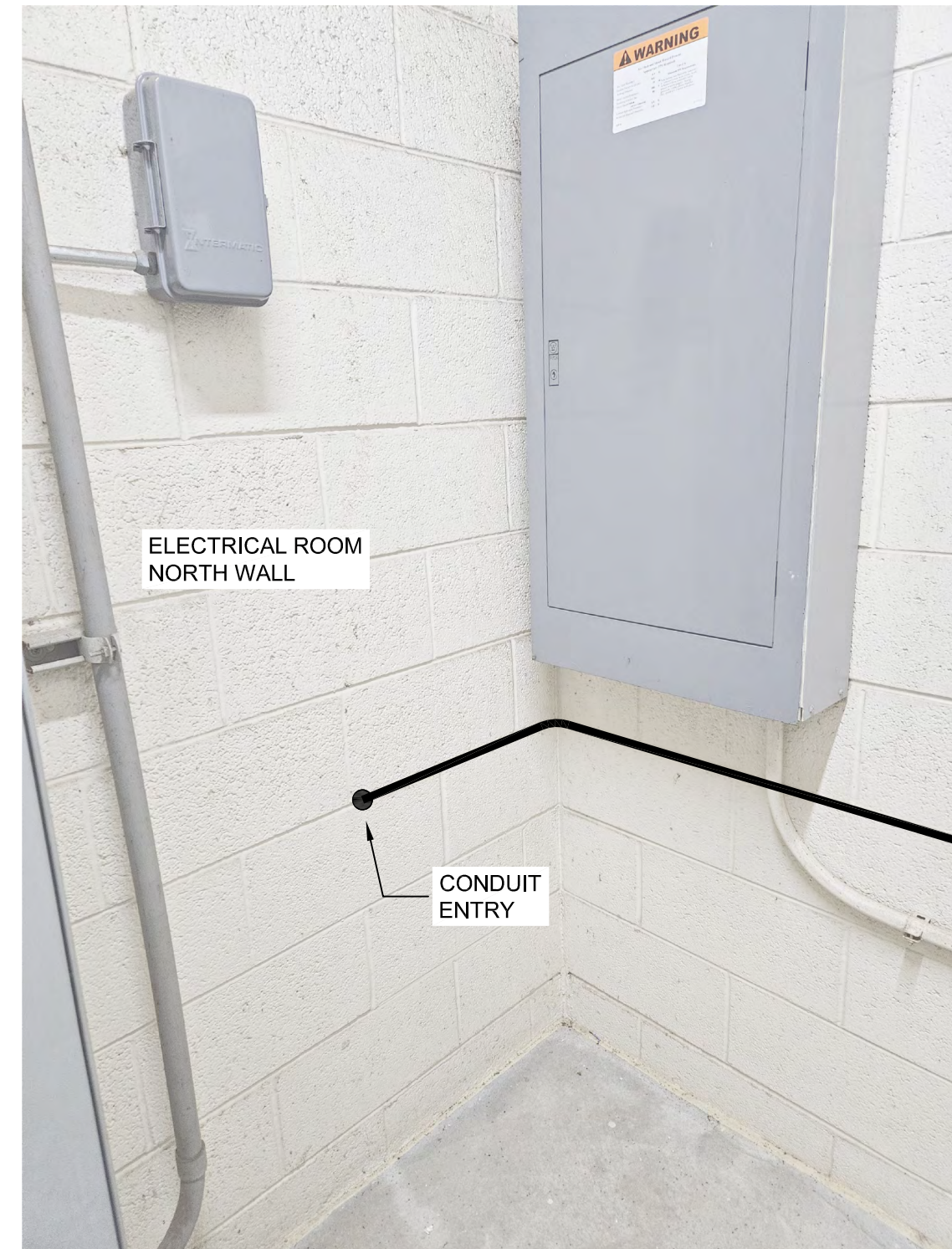
1 PRIMARY CLARIFIER BUILDING EXTERIOR MICRODUCT/CONDUIT ROUTING

SCALE: NONE

GENERAL NOTES:

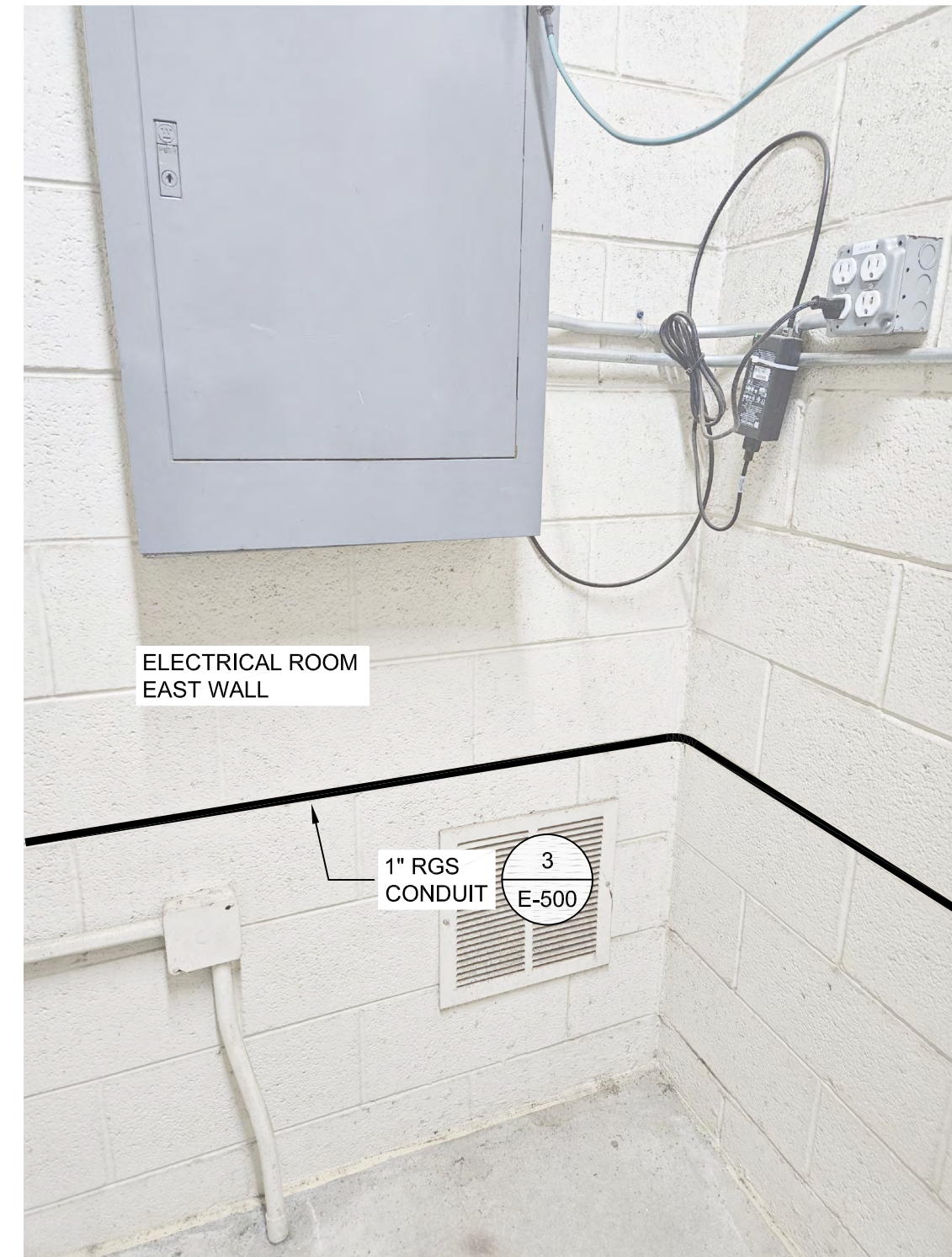
- A. UNSUPPORTED BEND RADIUS OF THE 4-WAY MICRODUCT IS 36 INCHES. MINIMUM BURY DEPTH IS 30 INCHES.
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- C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH PANELS, PULLBOXES, AND 24-STRAND FIBER.
- D. ALL CONDUITS SHALL ENTER BOTTOM OR SIDES OF PULLBOX. CONDUITS SHALL NOT ENTER THE TOP OF PULLBOXES. USE GASKETED MYERS HUBS ON ALL SIDE-ENTRY CONDUITS.
- E. USE ELBOWS, J-BOXES, OR CONDUIT FITTINGS TO MAINTAIN FIBER OPTIC BEND RADIUS.
- F. GROUND PULLBOX WITH GROUND ROD CONNECTED WITH MINIMUM #6AWG GROUNDING CONDUCTOR, PER REQUIREMENTS IN SECTION 26 05 26.
- G. CONDUIT ROUTING AND BOX LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH FIELD CONDITIONS.

ESTIMATED INDOOR CONDUIT RUN: 15FT



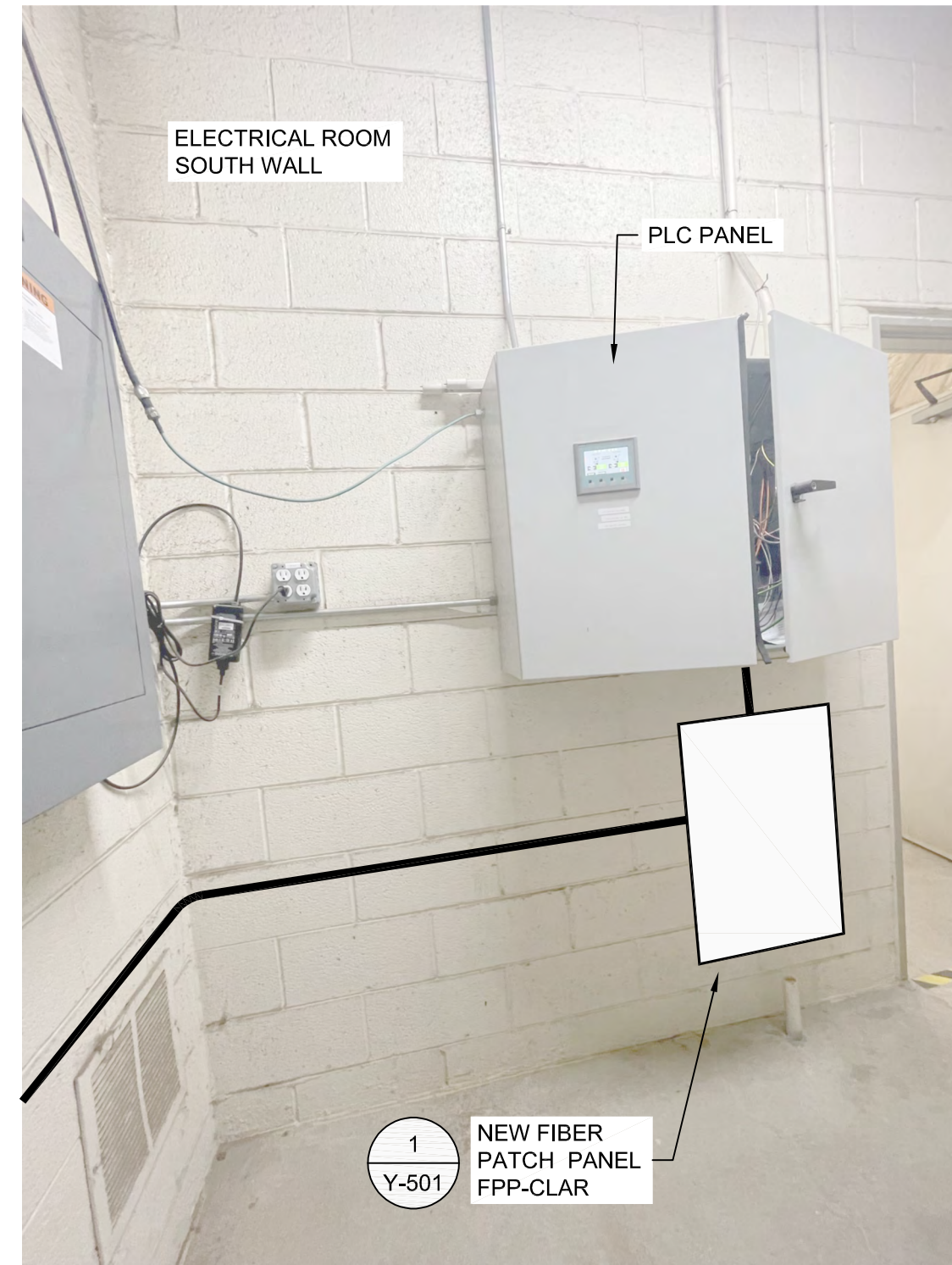
2 PRIMARY CLARIFIERS CONDUIT ENTRY

SCALE: NONE



3 PRIMARY CLARIFIERS INTERIOR CONDUIT ROUTING

SCALE: NONE



4 PRIMARY CLARIFIERS PLC AND FIBER PANEL LOCATIONS

SCALE: NONE



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**PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
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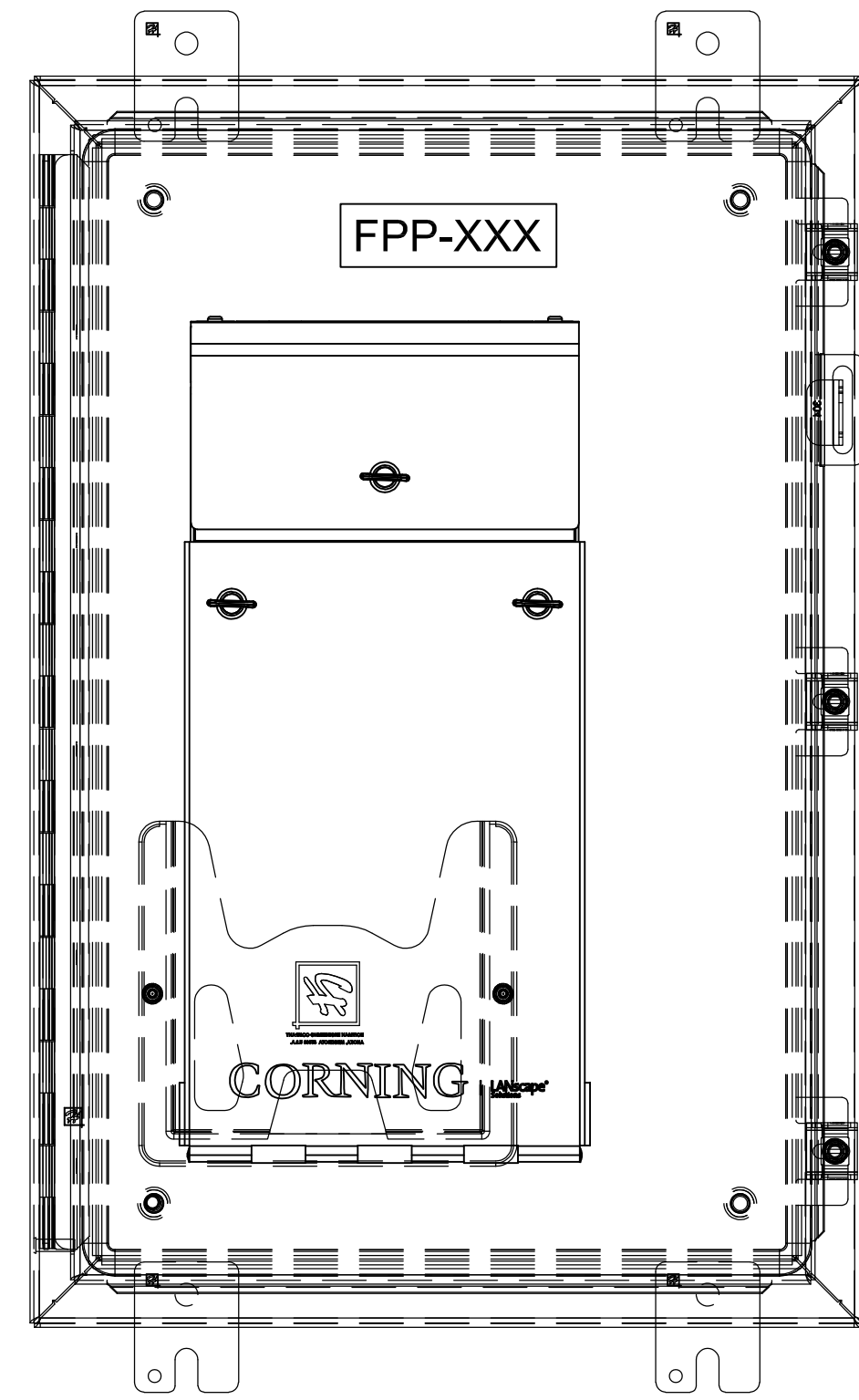


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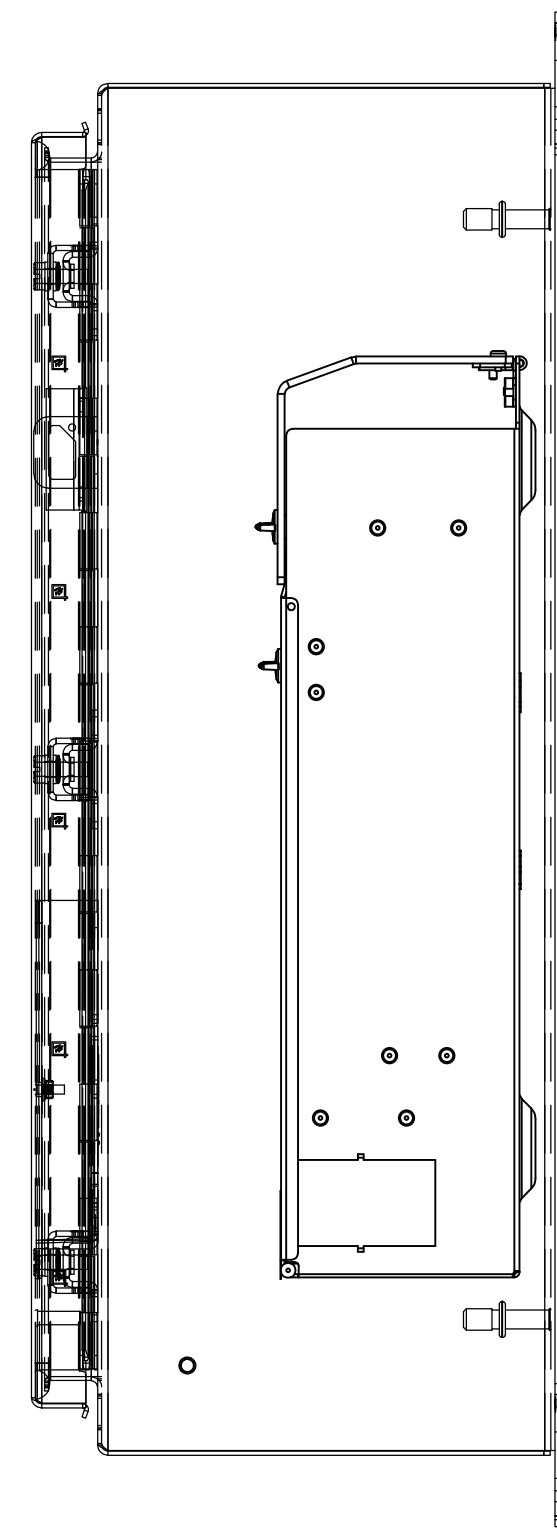
SHEET
E-109

PRIMARY CLARIFIERS

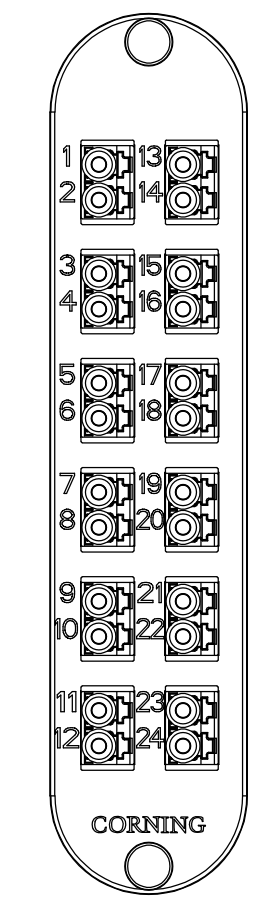
GENERAL NOTES:
 A. QUANTITIES PROVIDED ARE ESTIMATED. CONTRACTOR SHALL CONFIRM QUANTITIES OF COMPONENTS AND MATERIALS.



1 ENCLOSED FPP HOUSING ELEVATION FRONT
NO SCALE



2 ENCLOSED FPP HOUSING ELEVATION RIGHT
NO SCALE



3 24-STRAND LC FIBER PATCH PANEL
NO SCALE

NOTES:
 1. SEE DRAWING Y-601 FOR DETAILS ON FIBER CABLE ROUTING BETWEEN THE PLANT'S BUILDINGS.

FIBER PATCH PANEL SCHEDULE	
FPP-GATE	FPP-DEW*
FPP-OPS	FPP-FE
FPP-DIG	FPP-GREASE
FPP-FLARES	FPP-NGATE*
FPP-SLUDGE	FPP-CLAR
FPP-SOFFICE	FPP-RAW
FPP-PLANTW	FPP-HW*
FPP-BLR*	

* - INSTALLATION LOCATION IS PART OF THE PHASE- 1 EXPANSION PROJECT.

4 FIBER PATCH PANEL SCHEDULE
NO SCALE

BILL OF MATERIALS					
ITEM	QTY	DESCRIPTION	MANUFACTURER	MODEL NUMBER	NOTES
1	17	MICRODUCT HANDHOLE 48"X30"X36" VAULT	HUBBELL-QUAZITE	PG3048BA36	
2	AS REQ	FUTUREPATH 4-WAY 16/12 MICRODUCT - THICKER OVERSHEATH	DURALINE	FUTUREPATH 4-WAY 16/12mm	APPROXIMATELY 5,700 FT TOTAL, INCLUDES INTEGRAL 20AWG TRACER WIRE
3	AS REQ	10AWG TRACER WIRE			APPROXIMATELY 5,700 FT TOTAL
4	AS REQ	MICRODUCT STRAIGHT COUPLER	DURALINE	20001517	
5	AS REQ	MICRODUCT END CAP	DURALINE	20001908	
6	AS REQ	24-STRAND SINGLE-MODE FIBER	AFL "OSP MICROCORE"	LM0249C6101NS	APPROXIMATELY 9,500 FT TOTAL
7	15	WALL MOUNTED ENCLOSURE, NEMA 4X, 24X16X8	HOFFMAN	A24H1608SSLP	FIBER PULLBOXES
8	4	WALL MOUNTED ENCLOSURE, NEMA 4X, 24X16X8	HOFFMAN	A24H1608SSLP	OUTDOOR FIBER PATCH PANEL ENCLOSURES
9	4	24X16 BACKPANEL	HOFFMAN	A24P16	
10	9	WALL-MOUNTED ENCLOSURE, NEMA 12, 24X16X8	HOFFMAN	A241608LP	INDOOR FIBER PATCH PANEL ENCLOSURES
11	9	24X16 BACKPANEL	HOFFMAN	A24P16G	
12	2	WALL-MOUNTED ENCLOSURE, NEMA 12, 24X20X10	HOFFMAN	A242010LP	INDOOR FIBER PATCH PANEL ENCLOSURES FOR DEWATERING BUILDING AND BLOWER BUILDING
13	2	24X20X10 BACKPANEL	HOFFMAN	A24P20G	
14	AS REQ	1" RGS CONDUIT			APPROXIMATELY 750 FT TOTAL
15	AS REQ	1" PVC-RGS CONDUIT			APPROXIMATELY 75 FT TOTAL
16	AS REQ	3" PVC-80 CONDUIT			APPROXIMATELY 60 FT TOTAL
17	AS REQ	DIN RAIL	PHOENIX CONTACT	08 01 73 3	
18	13	WALL-MOUNTABLE CONNECTOR HOUSING - 2 CONNECTOR PANELS	CORNING	WCH-02P	FIBER PATCH PANEL HOUSINGS
19	2	WALL-MOUNTABLE CONNECTOR HOUSING - 4 CONNECTOR PANELS	CORNING	WCH-04P	FIBER PATCH PANEL HOUSINGS FOR DEWATERING BUILDING AND BLOWER BUILDING
20	32	CLOSET CONNECTOR PANEL, 24 STRAND, LC ADAPTERS, SM (OS2)	CORNING	CCH-CP24-A9	FIBER PATCH PANELS (2 PER LOCATION, 3 IN DEWATERING BUILDING AND BLOWER BUILDING)

5 BILL OF MATERIALS
NO SCALE

FIBER STRAND SCHEDULE		
STRAND PAIR NO.	FIBER PAIR	FIBER CONNECTION DETAILS
1	1,2	SCADA NETWORK - OT NETWORK SWITCH
2	3,4	SPARE
3	5,6	SPARE
4	7,8	SPARE
5	9,10	SPARE
6	11,12	SPARE
7	13,14	IT NETWORK - IT NETWORK SWITCH (FUTURE)
8	15,16	CCTV CAMERAS (FUTURE)
9	17,18	SPARE
10	19,20	SPARE
11	21,22	SPARE
12	23,24	SPARE

6 FIBER STRAND SCHEDULE
NO SCALE

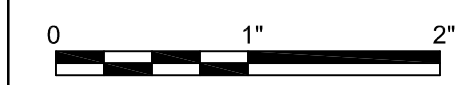


ISSUE	DATE	DESCRIPTION
C	MAY 2024	ISSUED FOR BIDDING
B	MAR 2024	ISSUED FOR 99% REVIEW
A	DEC 2023	ISSUED FOR 90% REVIEW

PROJECT MANAGER - TRAVIS MOORE	
ELECTRICAL	T. MOORE
FIBER OPTIC	J. BRAINARD
DRAWN BY S. BILD	
PROJECT NUMBER	10372769



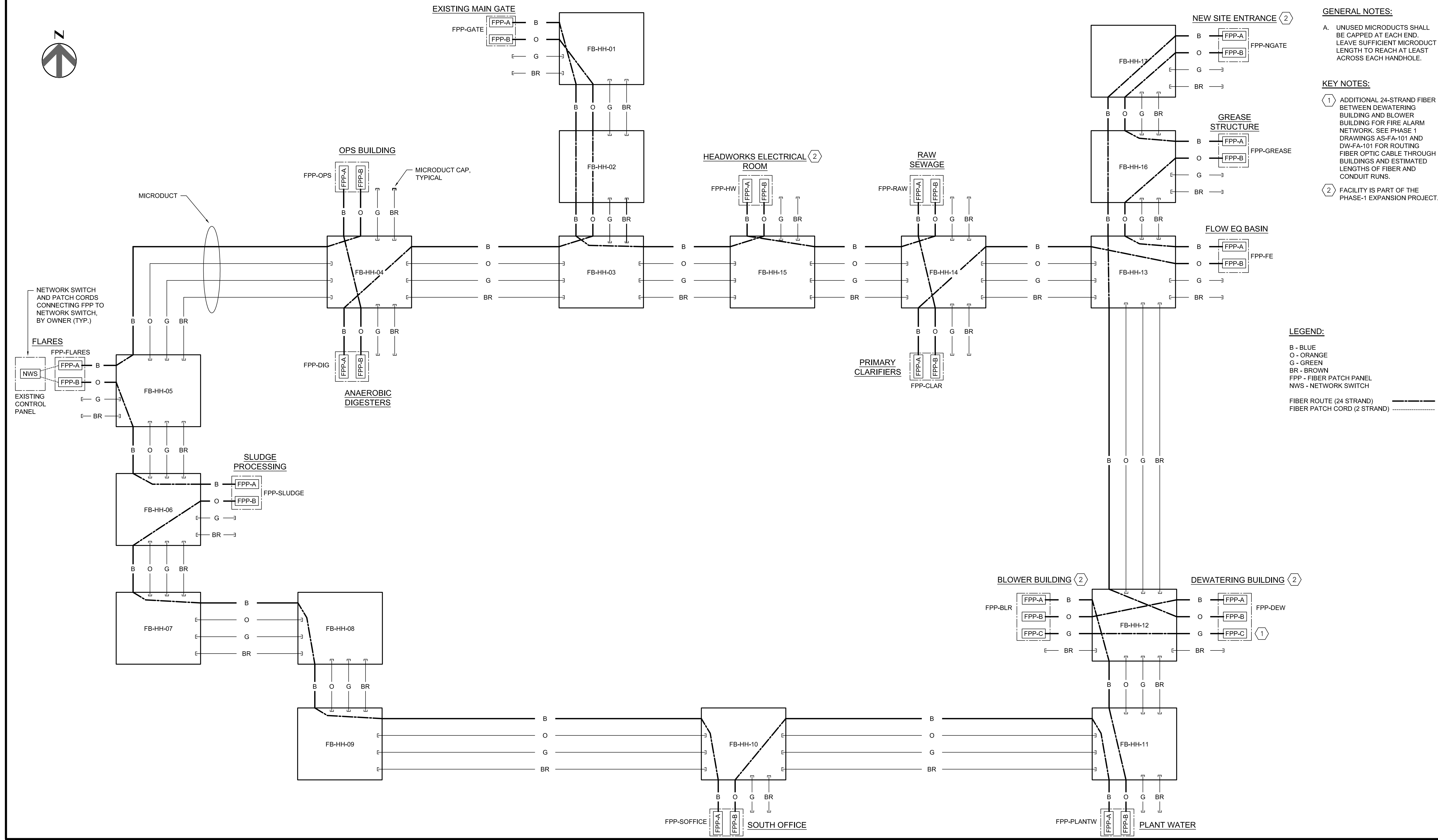
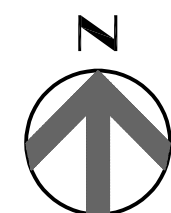
**PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT**



FILENAME | Y-501.dwg
SCALE | NONE

SHEET
Y-501

**FIBER PANEL DETAILS
AND SCHEDULES**



GENERAL NOTES:

A. UNUSED MICRODUCTS SHALL BE CAPPED AT EACH END. LEAVE SUFFICIENT MICRODUCT LENGTH TO REACH AT LEAST ACROSS EACH HANDHOLE.

KEY NOTES:

① ADDITIONAL 24-STRAND FIBER BETWEEN DEWATERING BUILDING AND BLOWER BUILDING FOR FIRE ALARM NETWORK. SEE PHASE 1 DRAWINGS AS-FA-101 AND DW-FA-101 FOR ROUTING FIBER OPTIC CABLE THROUGH BUILDINGS AND ESTIMATED LENGTHS OF FIBER AND CONDUIT RUNS.

② FACILITY IS PART OF THE PHASE-1 EXPANSION PROJECT.

LEGEND:

B - BLUE
 O - ORANGE
 G - GREEN
 BR - BROWN
 FPP - FIBER PATCH PANEL
 NWS - NETWORK SWITCH

FIBER ROUTE (24 STRAND) ———
 FIBER PATCH CORD (2 STRAND) - - - - -

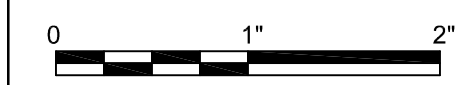


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ELECTRICAL	T. MOORE
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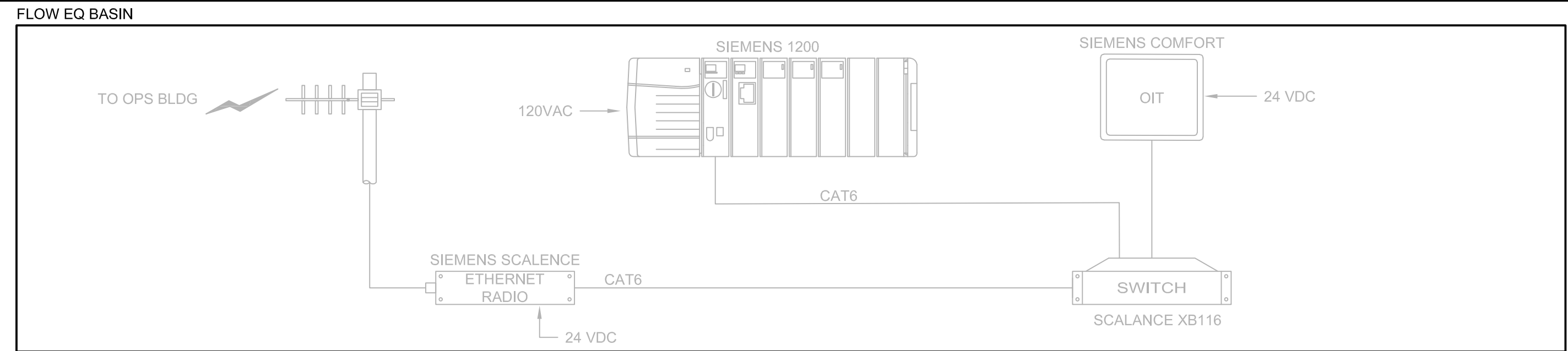
PERSIGO WWTP



FIBER RING AND MICRODUCT DIAGRAM

FILENAME | Y-601.dwg
 SCALE | NONE

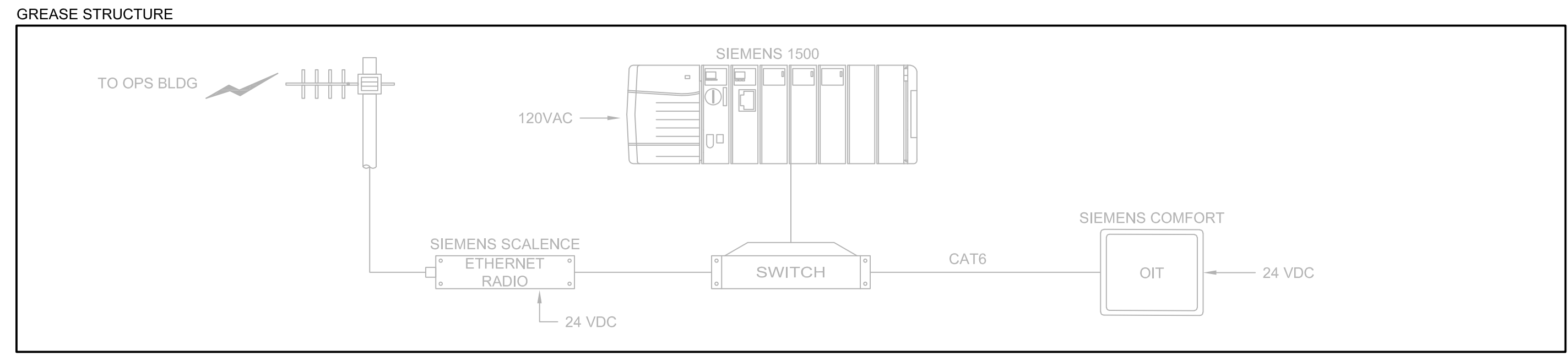
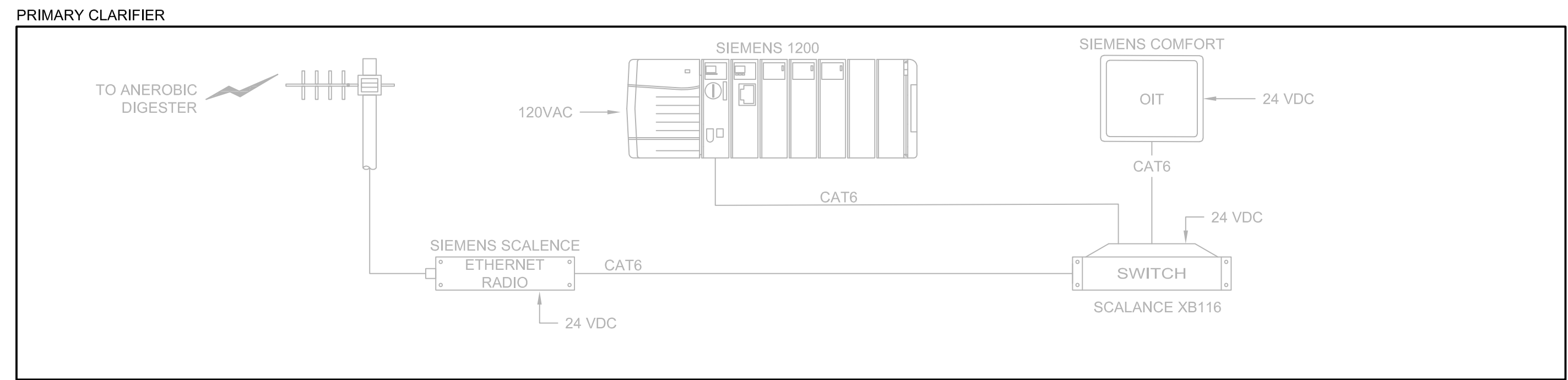
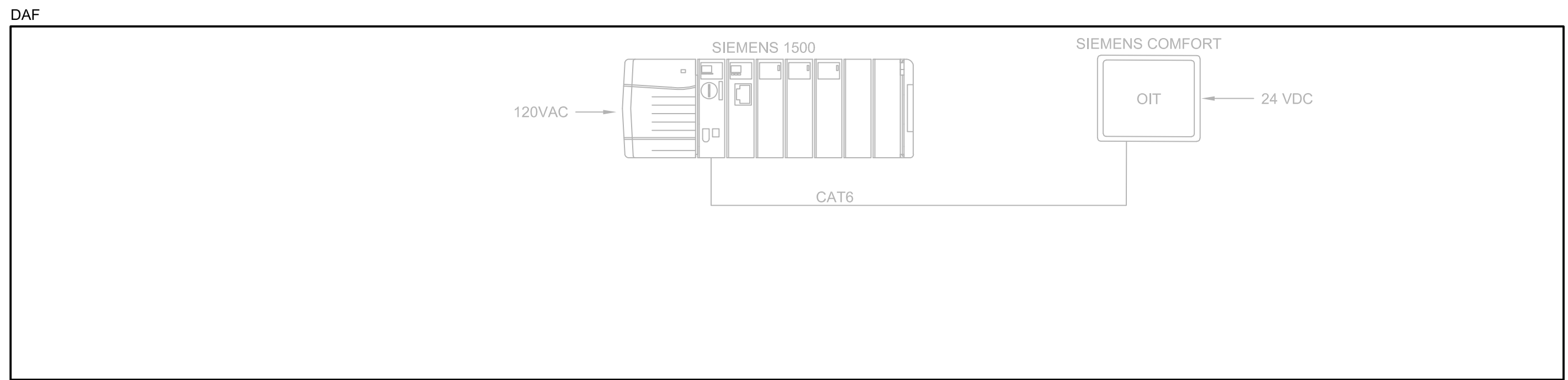
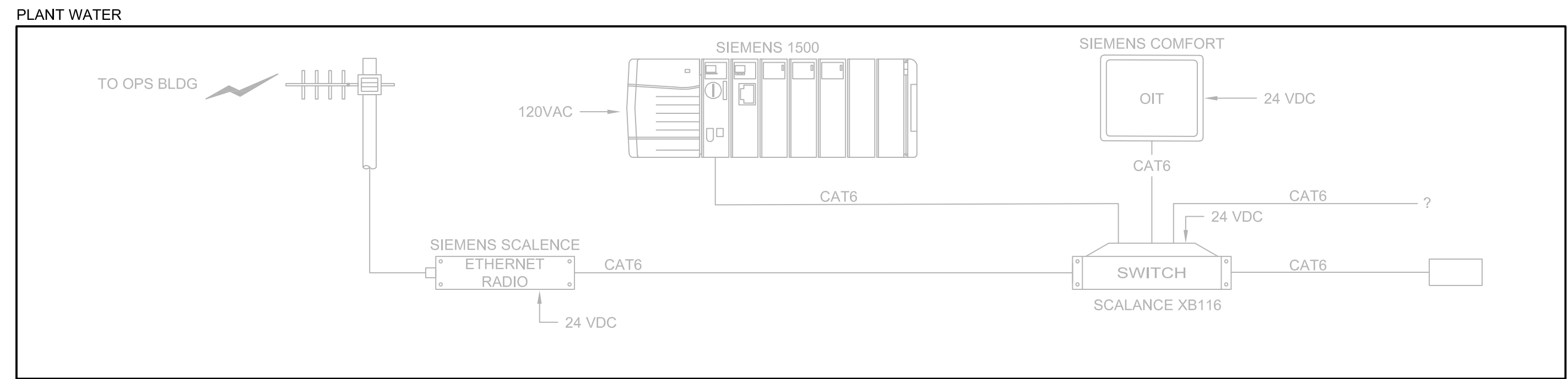
SHEET
Y-601



GENERAL NOTES:

A. ALL SWITCHES ARE UNMANAGED UNLESS NOTED OTHERWISE.

OIT - OPERATOR INTERFACE TERMINAL



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PROJECT MANAGER - TRAVIS MOORE	
ELECTRICAL	T. MOORE
FIBER OPTIC	J. BRAINARD
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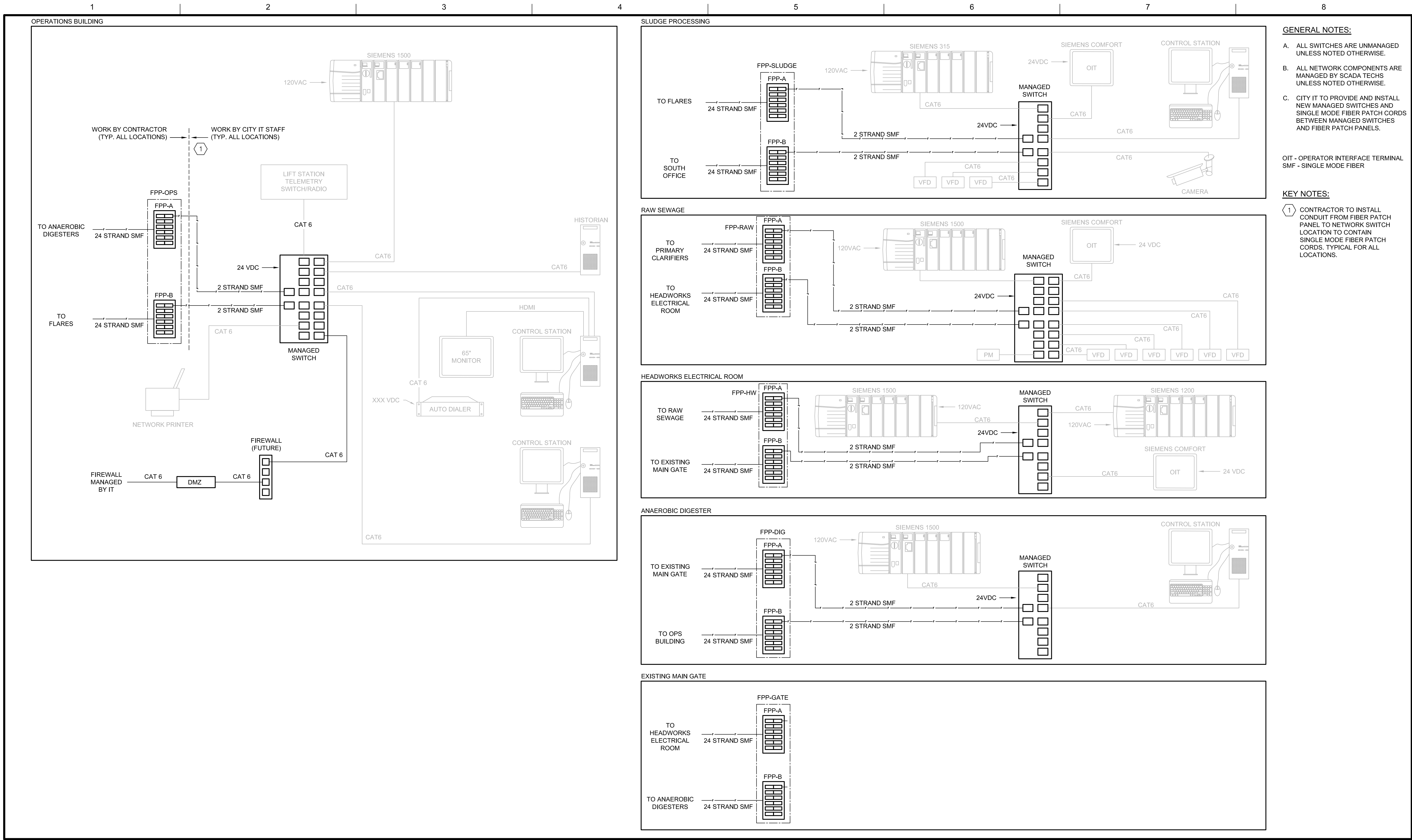
**PERSIGO WWTP
INTERNAL FIBER OPTIC
INSTALLATION PROJECT**

NETWORK DIAGRAM II - EXISTING CONDITIONS

0 1" 2"

FILENAME | Y-603.dwg
SCALE | NONE

SHEET | Y-603



- GENERAL NOTES:**
- A. ALL SWITCHES ARE UNMANAGED UNLESS NOTED OTHERWISE.
 - B. ALL NETWORK COMPONENTS ARE MANAGED BY SCADA TECHS UNLESS NOTED OTHERWISE.
 - C. CITY IT TO PROVIDE AND INSTALL NEW MANAGED SWITCHES AND SINGLE MODE FIBER PATCH CORDS BETWEEN MANAGED SWITCHES AND FIBER PATCH PANELS.

OIT - OPERATOR INTERFACE TERMINAL
SMF - SINGLE MODE FIBER

- KEY NOTES:**
- 1) CONTRACTOR TO INSTALL CONDUIT FROM FIBER PATCH PANEL TO NETWORK SWITCH LOCATION TO CONTAIN SINGLE MODE FIBER PATCH CORDS. TYPICAL FOR ALL LOCATIONS.



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ELECTRICAL	T. MOORE
FIBER OPTIC	J. BRAINARD
DRAWN BY	S. BILD
PROJECT NUMBER	10372769



CITY OF Grand Junction COLORADO

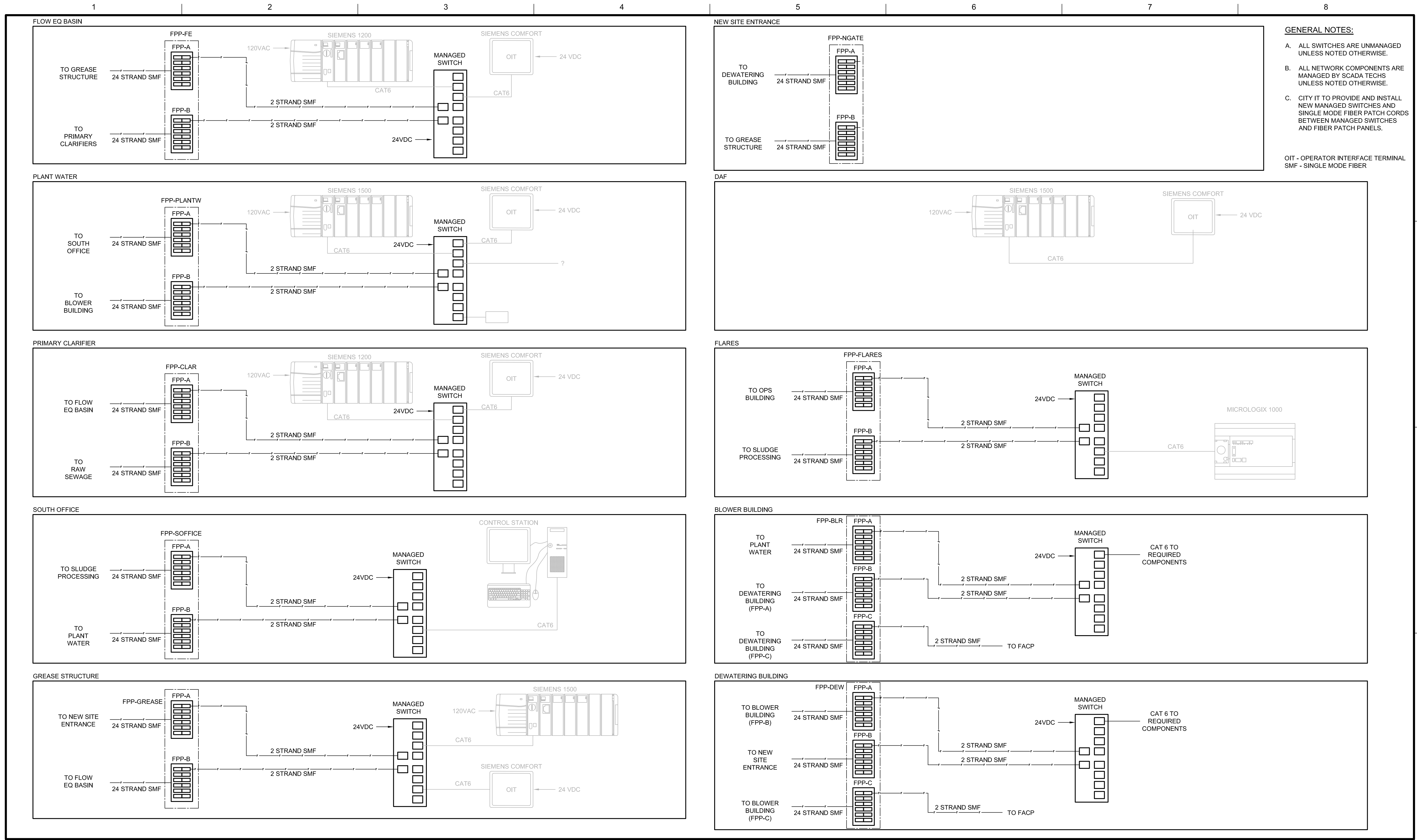
**PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT**

NETWORK DIAGRAM I - FIBER OPTIC

0 1" 2"

FILENAME | Y-604.dwg
SCALE | NONE

SHEET | Y-604



GENERAL NOTES:

- A. ALL SWITCHES ARE UNMANAGED UNLESS NOTED OTHERWISE.
- B. ALL NETWORK COMPONENTS ARE MANAGED BY SCADA TECHS UNLESS NOTED OTHERWISE.
- C. CITY IT TO PROVIDE AND INSTALL NEW MANAGED SWITCHES AND SINGLE MODE FIBER PATCH CORDS BETWEEN MANAGED SWITCHES AND FIBER PATCH PANELS.

OIT - OPERATOR INTERFACE TERMINAL
SMF - SINGLE MODE FIBER



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PROJECT MANAGER - TRAVIS MOORE	
ELECTRICAL	T. MOORE
FIBER OPTIC	J. BRAINARD
DRAWN BY	S. BILD
PROJECT NUMBER	10372769



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Grand Junction
COLORADO

PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT

NETWORK DIAGRAM II - FIBER OPTIC

0 1" 2"

FILENAME | Y-605.dwg
SCALE | NONE

SHEET
Y-605