





Vicinity Map

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



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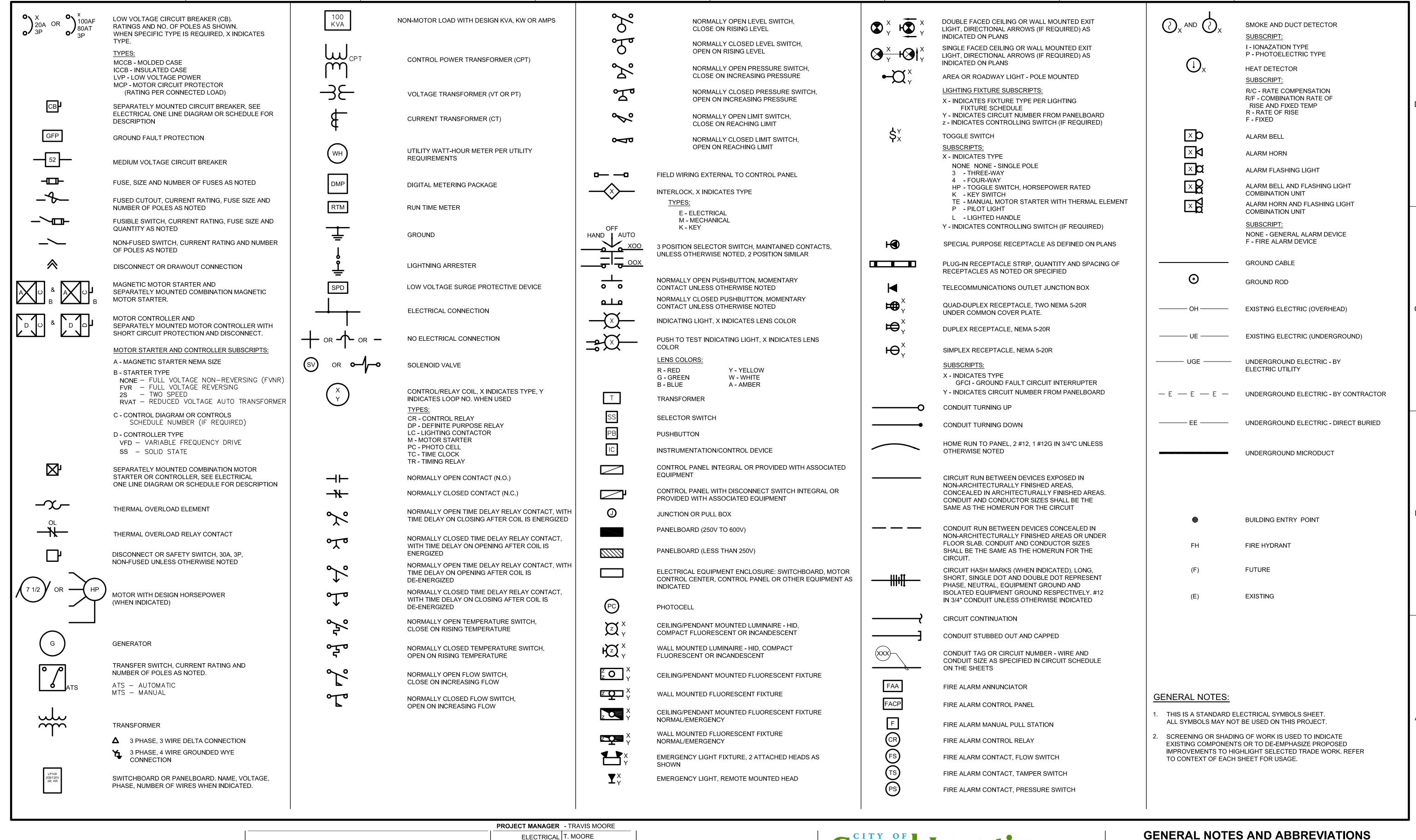
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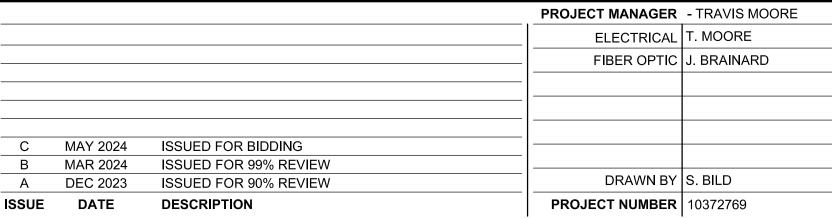
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2







PERSIGO WWTP

INTERNAL FIBER OPTIC LOOP

INSTALLATION PROJECT



FILENAME E-001.dwg

GENERAL NOTES:

1. GENERAL LOCATIONS OF UTILITIES SHOWN ON THE DRAWINGS ARE TO BE USED FOR GENERAL INFORMATION ONLY. NOTIFY THE APPROPRIATE UTILITY COMPANIES WHEN CONSTRUCTION MIGHT INTERFERE WITH NORMAL OPERATION OF ANY UTILITIES.

2. UTILITY SERVICE LINES AND OTHER UNDERGROUND SYSTEMS MUST BE FIELD LOCATED TO THE EXTENT THEY IMPACT THE WORK.

3. GENERAL SITE ACCESS IS LIMITED TO EXISTING EASEMENTS AND PUBLIC ROADWAYS.

4. DRAWINGS DO NOT INCLUDE ALL THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.

5. CONTRACTOR SHALL COMPLY WITH ALL CITY OF GRAND JUNCTION INSPECTION REQUIREMENTS AND STANDARDS.

6. DETAILS AND SECTIONS THAT ARE NOTED AS "TYP" ON DETAIL TITLES ARE TO BE APPLIED TO THE PROJECT CONSTRUCTION AS GENERAL CONSTRUCTION METHODS UNLESS NOTED OTHERWISE.

7. ANY KNOWN SEWERS, WATER MAINS, GAS MAINS, TELEPHONE CONDUITS, ELECTRIC CABLES, AND OTHER UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN ON THE DRAWINGS ONLY TO THE EXTENT SUCH INFORMATION HAS BEEN MADE AVAILABLE TO OR DISCOVERED BY THE ENGINEER. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION AND QUANTITIES OF BURIED UTILITIES AND STRUCTURES SHOWN. THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR BUT IS NOT GUARANTEED TO BE EITHER CORRECT OR COMPLETE AND ALL RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS THEREOF IS EXPRESSLY DISCLAIMED. THE CONTRACTOR SHALL MAKE SUCH INVESTIGATION AS NECESSARY TO VERIFY ITS CORRECTNESS AND COMPLETENESS. THE CONTRACTORS SHALL FIELD LOCATE AND PROTECT, AHEAD OF EXCAVATION, AND LOCATE ALL UNDERGROUND UTILITIES AND STRUCTURES SO THAT THEY WILL NOT BE ACCIDENTALLY CUT OR DAMAGED BY THE CONSTRUCTION OPERATION.

8. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING ANY EXISTING SURFACE FEATURES AND IMPROVEMENTS ENCOUNTERED DURING EXCAVATION OR DISTURBED BY CONSTRUCTION ACTIVITIES (FENCING, UTILITIES, ASPHALT OR GRAVEL PAVEMENT, RIP-RAP, ETC.) TO THE ORIGINAL CONDITION (OR BETTER), IN THE SAME LOCATION AND COORDINATING THIS ACTIVITY WITH THE APPROPRIATE PARTY. THIS SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER AND SHALL APPLY TO ALL EXISTING FEATURES WHETHER SHOWN ON THE PLANS OR NOT. CONTRACTOR IS ALSO RESPONSIBLE FOR PROTECTING EXISTING INFRASTRUCTURE FROM DAMAGE OR SETTLEMENT DUE TO CONSTRUCTION ACTIVITIES. CONTRACTORS SHALL REPAIR OR REPLACE ANY INFRASTRUCTURE DAMAGED TO ORIGINAL CONDITION WITHOUT ADDITIONAL COMPENSATION.

9. CONTRACTORS SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PROPERTY CORNER MARKERS AND SURVEY MONUMENTS. PROPERTY CORNER MARKERS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REESTABLISHED BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF COLORADO.

10. STRUCTURES SUCH AS CURBS AND GUTTERS, CONCRETE AND ASPHALT DRIVES AND WALKWAYS, PAVING BRICKS, FENCING, RETAINING WALLS, ETC., CROSSED BY THE FIBER LINE ARE NOT ALL INDICATED ON THE PLANS. CONTRACTOR SHALL RESTORE ANY EXISTING STRUCTURES THAT ARE DISTURBED, DAMAGED, OR REMOVED BY CONSTRUCTION. CONTRACTORS SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND INCLUDE ALL COSTS FOR THIS WORK.

11. CONTRACTOR SHALL ADHERE TO THE CITY OF GRAND JUNCTION WORKING DAYS AND HOURS OF CONSTRUCTION. NO CONSTRUCTION ACTIVITIES OCCUR OUTSIDE OF THE DESIGNATED DAILY HOURS UNLESS WRITTEN CONSENT IS APPROVED BY THE CITY.

12. INSTALL #10AWG TRACER WIRE WITH ALL UNDERGROUND MICRODUCTS IN ADDITION TO THE TRACER WIRE CONTAINED INSIDE THE MICRODUCT

EXISTING CONDITIONS:

1. NOTIFY ENGINEER IMMEDIATELY IF EXISTING CONDITIONS DO NOT MATCH OR SEEM IN CONFLICT WITH INFORMATION SHOWN IN THE DRAWINGS.

2. PROVIDE FULL ACCESS TO PUBLIC AND PRIVATE PREMISES AND FIRE HYDRANTS, AT STREET CROSSINGS, SIDEWALKS AND OTHER POINTS AS DESIGNATED BY OWNER TO PREVENT SERIOUS INTERRUPTION OF TRAVEL.

OPENINGS:

1. OPENINGS FOR PIPES, DUCTS, CONDUITS, ETC. ARE NOT ALL SHOWN ON THE DRAWINGS. COORDINATE AND PROVIDE OPENINGS AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. PROVIDE ALL ADDITIONAL FRAMING OR REINFORCING TO ACCOMMODATE OPENINGS AS REQUIRED BY THE APPLICABLE STANDARD DETAILS, SECTIONS AND NOTES AS SHOWN IN THE DRAWINGS.

SEEDING NOTES:

1. AFTER FINAL GRADING AND TOPSOIL PLACEMENT, SEED AND MULCH ALL AREAS WITHIN THE LIMITS OF CONSTRUCTION NOT INDICATED FOR OTHER SURFACING.

2. CONTRACTOR SHALL PROTECT ALL EXISTING TREES AND SHRUBS UNLESS OTHERWISE NOTED.

PAVEMENT

1. FOR ASPHALT PAVEMENT PATCHING SEE DETAIL 2 ON SHEET E-501 - TYPICAL TRENCHING DETAIL FROM CITY OF GRAND JUNCTION DEPARTMENT OF PUBLIC WORKS AND PLANNING ENGINEERING DIVISION.

TRENCHING, BACKFILLING AND COMPACTING

1. EXCAVATE TRENCHES BY OPEN CUT METHOD AS NECESSARY TO ACCOMMODATE WORK.

2. DIRECT BURIED MICRODUCT SHALL BE INSTALLED USING DIRECTIONAL BORE DRILLING WHERE POSSIBLE AND MICROTRENCHING WHERE NECESSARY. OTHER INSTALLATION METHODS SHALL BE APPROVED BY THE ENGINEER.

CONCRETE NOTES:

1. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 301 & ACI 318.

2. PRIOR TO INSTALLING POST-INSTALLED ANCHORS INTO CONCRETE, THE CONTRACTOR SHALL LOCATE REINFORCING. DO NOT DAMAGE CONCRETE REINFORCING.

3. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 'C=4000 PSI, WITH CEMENT TYPE V PER ASTM C150 WITH A MAXIMUM WATER/CEMENT RATIO OF 0.45 SLUMP OF 1 TO 4 INCHES, AIR CONTENT OF 5 TO 7 PERCENT, AGGREGATES ARE TO CONFORM TO ASTM C33, COARSE AGGREGATE SIZE - 3/4 INCH MAXIMUM.

4. WATER SHALL BE POTABLE, CLEAN, FREE OF OILS, ACIDS AND ORGANIC MATTER.

5. CONCRETE COVER REQUIREMENTS FOR REINFORCEMENT UNLESS NOTED OTHERWISE ON THE DETAILS OR SECTIONS:

- CONCRETE CAST AND PERMANENTLY EXPOSED TO EARTH: 3"
- FORMED CONCRETE EXPOSED TO EARTH OR WEATHER" 2"

6. REFER TO OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION FOR EMBEDDED ITEMS AND PENETRATIONS NOT SHOWN ON THE DRAWINGS AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT.

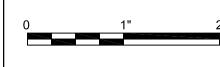




INTERNAL FIBER OPTIC LOOP

INSTALLATION PROJECT

SITE GENERAL NOTES AND DETAILS



FILENAME G-001.dwg

G-001



NEW SITE ENTRANCE

GREASE STRUCTURE

- FLOW EQ BUILDING

FLOW EQ BASIN

— ASPHALT ROAD

FB-HH-12

— SOLIDS STORAGE AREA

- DETENTION POND

DEWATERING

BUILDING ___

DEWATERING BUILDING

ELECTRICAL ROOM

FB-HH-17 -

FB-HH-16 —

FB-HH-14

FB-HH-13

AERATION

A-BASIN

FB-HH-11

BASIN

NEW 6' SECURITY FENCE AND 24'

SLIDE GATES

HEADWORKS

SEWAGE

PRIMARY

CLARIFIERS

- FB-HH-03

— FB-HH-15



- 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
- F. TYPICAL ASPHALT ROAD THICKNESS IN THE PLANT IS APPROXIMATELY 5 INCHES.

LOCATIONS. SEE GENERAL NOTES ON SHEET G-001

- 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: X

PATCH PANEL.

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

- 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 THI FIRE ALARM EQUIPMENT NEAR THE CENTER OF THI 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

			PROJECT MANAGER	- TRAVIS MOORE
			ELECTRICAL	T. MOORE
			FIBER OPTIC	J. BRAINARD
С	MAY 2024	ISSUED FOR BIDDING		
В	MAR 2024	ISSUED FOR 99% REVIEW		
Α	DEC 2023	ISSUED FOR 90% REVIEW	DRAWN BY	S. BILD
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	10372769

PLANT WATER

CLARIFIERS

FB-HH-01

FB-HH-02

ANAEROBIC

DIGESTERS

FB-HH-08 -

15' AGGREGATE SURFACE

DRIVEWAY

FB-HH-09

BLOWER BUILDING

BLOWER

BUILDING 2

FB-HH-10 -

SOUTH OFFICE

OPERATIONS BUILDING

FB-HH-04

FB-HH-05 -

FB-HH-07

FB-HH-06 -

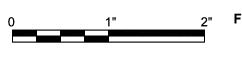
HEADWORKS ELECTRICAL





PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT

OVERALL SITE PLAN



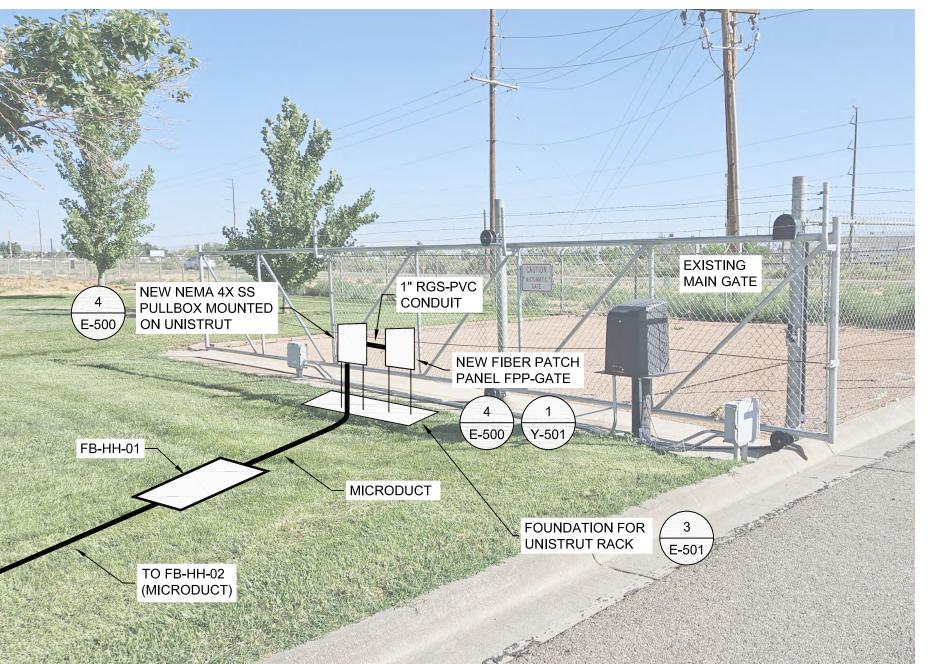
FILENAME E-100.dwg **SCALE** 1" = 100'

E-100

SHEET

SWITCHES.

- 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
 - C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH PANELS, PULLBOXES, AND 24-STRAND FIBER.
- D. CONTRACTOR TO PROVIDE UNISTRUT SUPPORT RACK AND CONCRETE FOUNDATION.
- 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.



EXISTING MAIN GATE SITE OVERVIEW SCALE: 1" = 50'

TO FB-HH-02 (MICRODUCT)

EXISTING SITE ENTRANCE

1 E-500 FB-HH-01 -



PROJECT MANAGER - TRAVIS MOORE ELECTRICAL T. MOORE FIBER OPTIC J. BRAINARD DRAWN BY S. BILD DEC 2023



PROJECT NUMBER 10372769

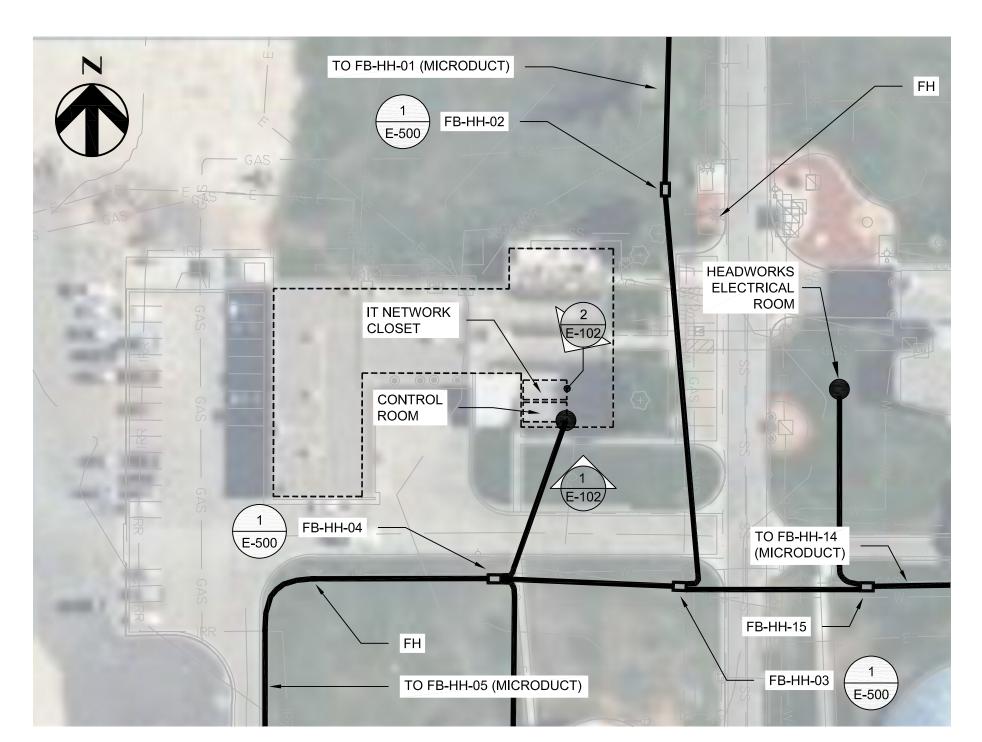


INSTALLATION PROJECT

EXISTING MAIN GATE

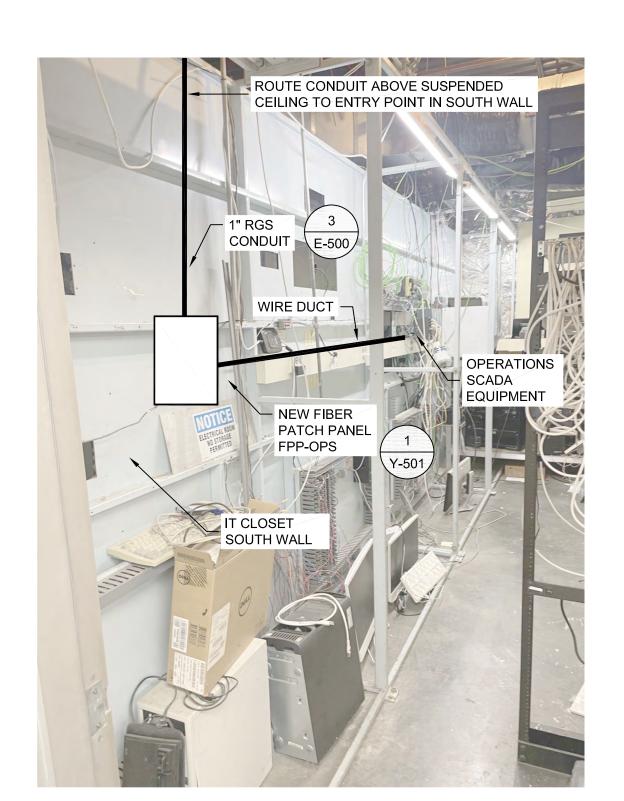
SCALE AS NOTED

2 5 5



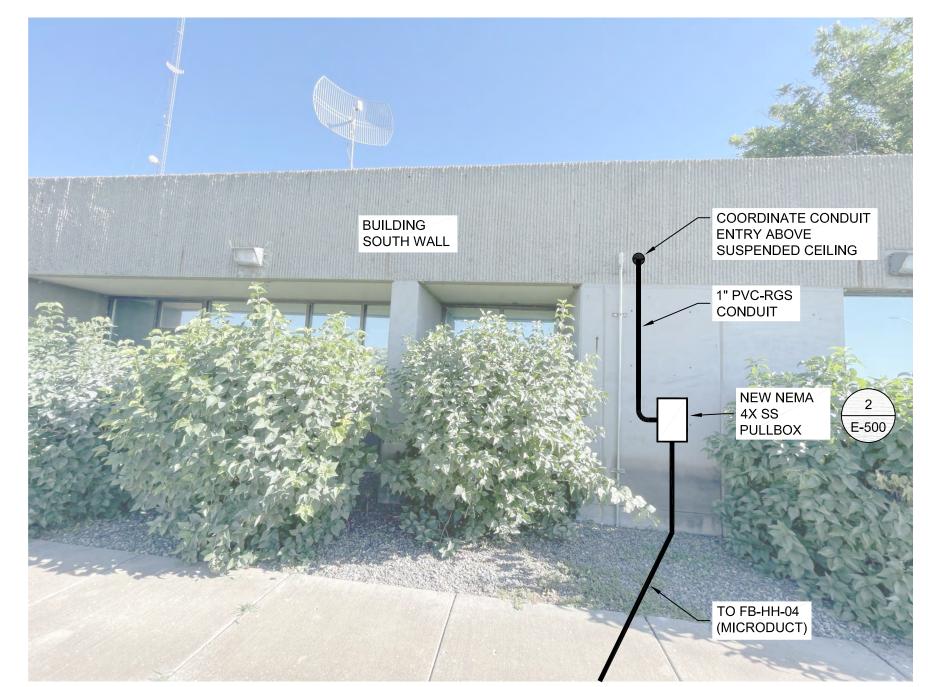
OPERATIONS BUILDING SITE OVERVIEW

SCALE: 1" = 50'



OPERATIONS IT NETWORK CLOSET
PLC & FIBER PANEL LOCATIONS

SCALE: NONE



OPERATIONS BUILDING EXTERIOR MICRODUCT/CONDUIT ROUTING

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
- C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH PANELS, PULLBOXES, AND 24-STRAND FIBER.

ETHERNET SWITCHES.

- 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
- G. CONDUIT ROUTING AND BOX LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH FIELD CONDITIONS.

ESTIMATED INDOOR CONDUIT RUN: 35FT.

| B

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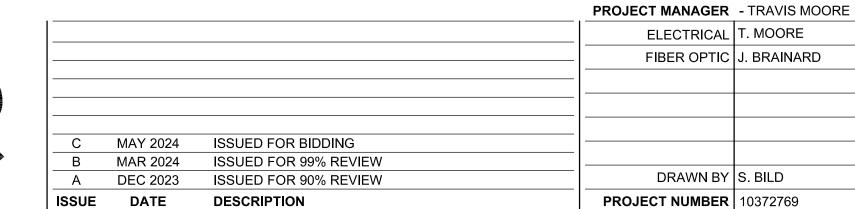
Grand Junction
COLORADO

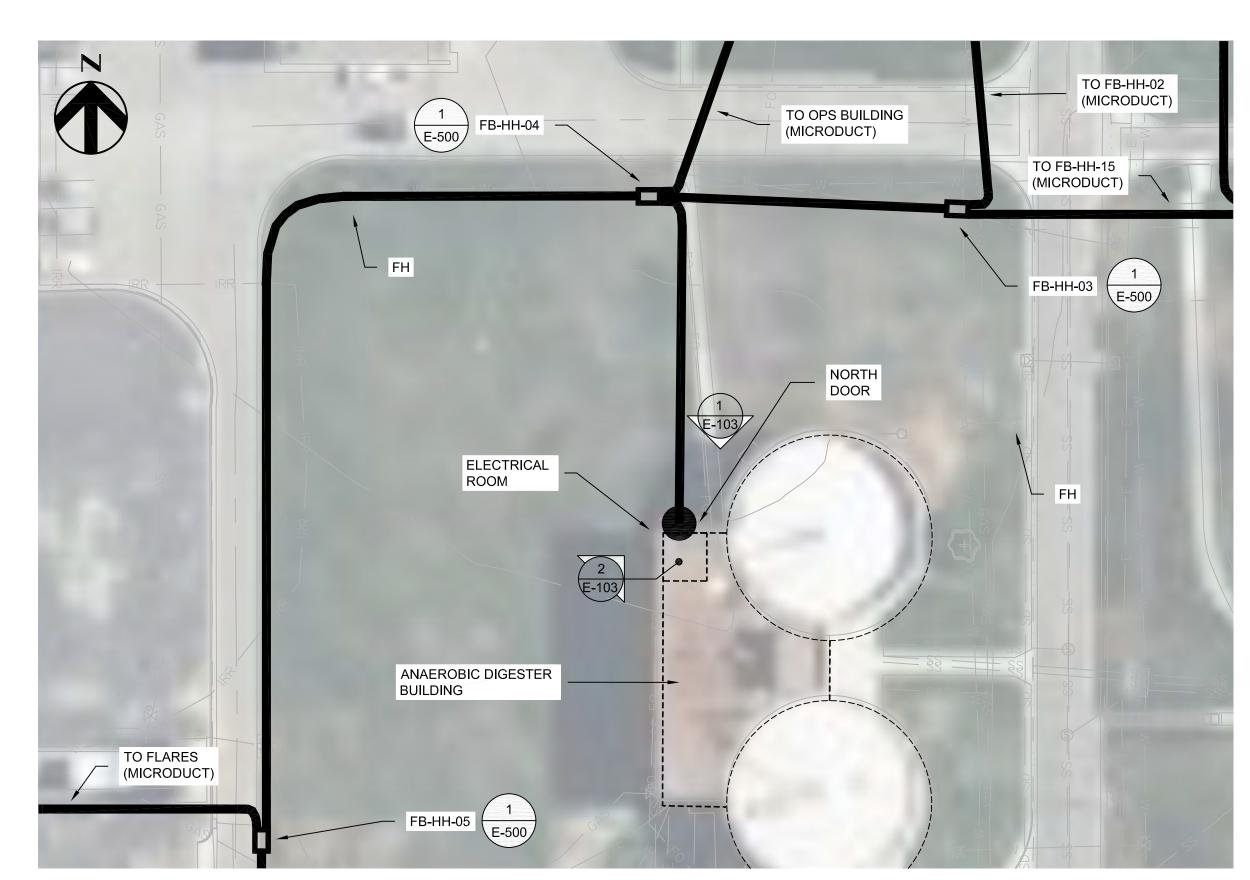
PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT

OPERATIONS BUILDING

0 1" 2" **FILENAME** E-102.dwg

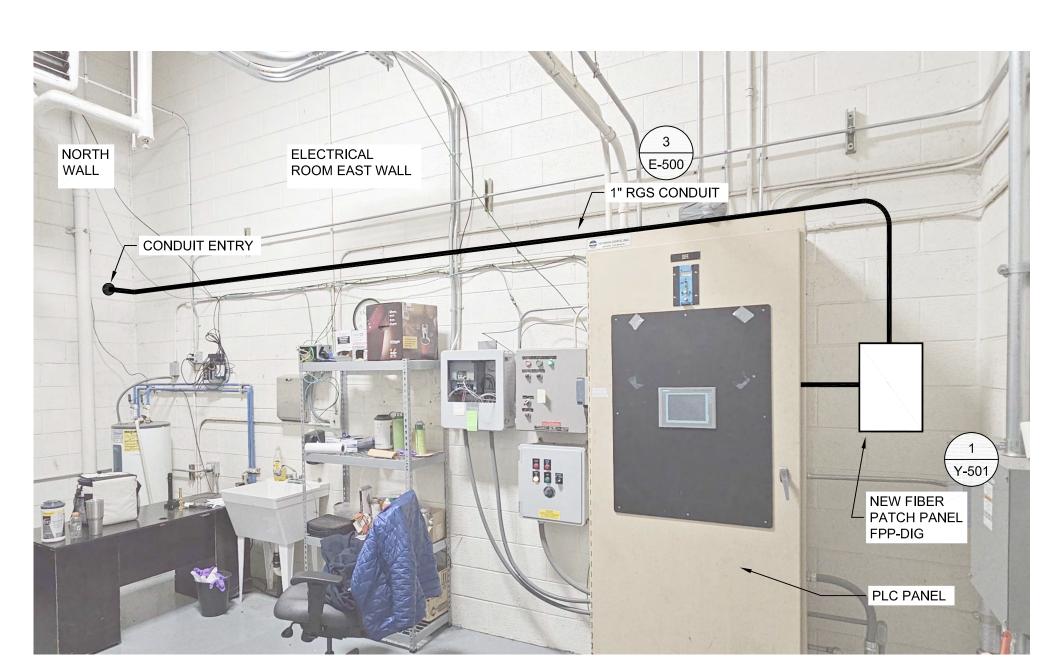
SCALE AS NOTED





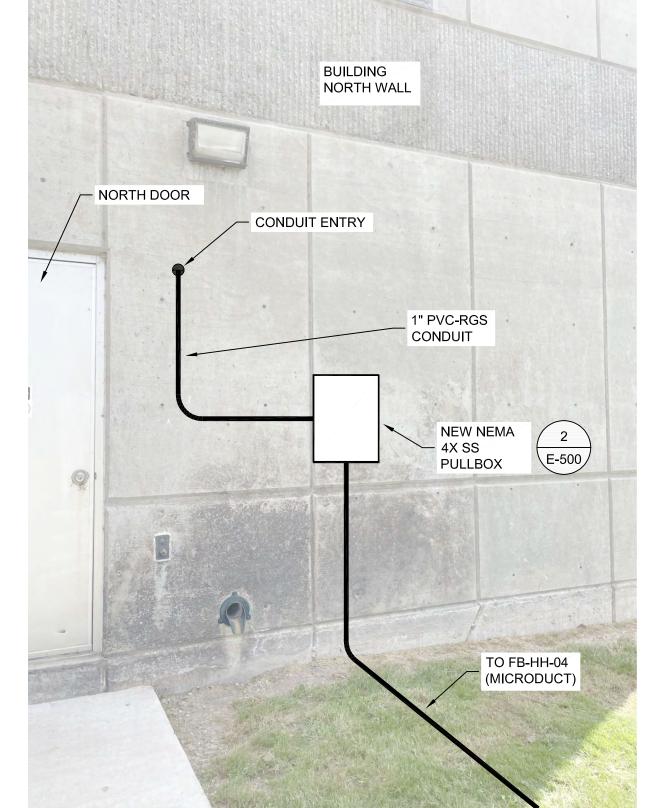
ANAEROBIC DIGESTER BUILDING SITE OVERVIEW

SCALE: 1" = 30'



ANAEROBIC DIGESTER PLC AND FIBER PANEL LOCATIONS

SCALE: NONE



ANAEROBIC DIGESTER BUILDING

1 EXTERIOR MICRODUCT/CONDUIT ROUTING

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
 - C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH PANELS, PULLBOXES, AND 24-STRAND FIBER.

ETHERNET SWITCHES.

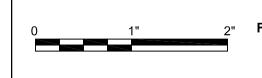
- D. ALL CONDUITS SHALL ENTER
 BOTTOM OR SIDE OF PULLBOX.
 CONDUITS SHALL NOT ENTER
 THE TOP OF PULLBOX. USE
 GASKETED MYERS HUBS ON
 ALL SIDE-ENTRY CONDUITS.
- E. USE ELBOWS. J-BOXES, OR CONDUIT FITTINGS TO MAINTAIN FIBER OPTIC BEND RADIUS.
- F. GROUND PULLBOX WITH GROUND ROD CONNECTED WITH MINIMUM #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.

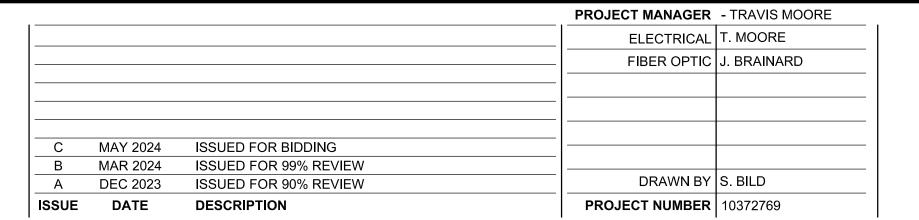
ESTIMATED INDOOR CONDUIT RUN: 20FT

ANAEROBIC DIGESTERS



2" **FILENAME** E-103.dwg **SCALE** AS NOTED







Grand Junction
C O L O R A D O

PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP

INSTALLATION PROJECT

TO SLUDGE

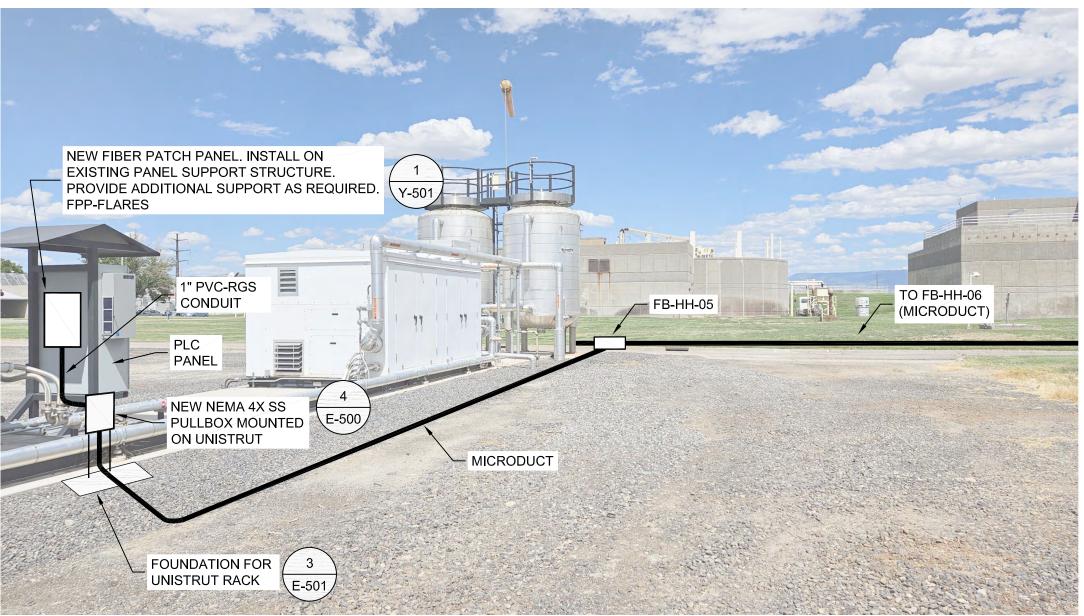
PROCESSING



E-500

TO FB-HH-07

(MICRODUCT)



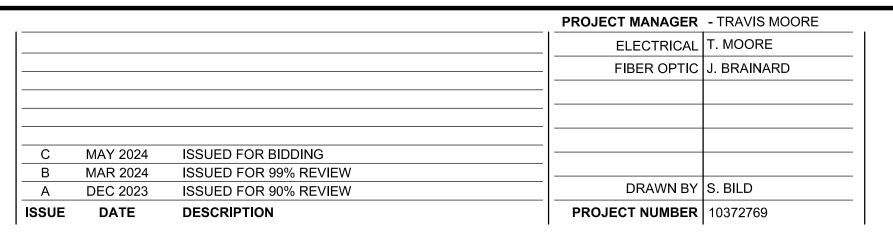
FLARES EXTERIOR MICRODUCT/CONDUIT ROUTING

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
- C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH PANELS, PULLBOXES, AND 24-STRAND FIBER.

ETHERNET SWITCHES.

- D. CONTRACTOR TO PROVIDE UNISTRUT SUPPORT RACK AND CONCRETE FOUNDATION.
- E. 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.
- 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 GROUDNING CONDUCTOR, PER REQUIREMENTS IN SECTION 26 05 26.
- H. CONDUIT ROUTING AND BOX LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH FIELD CONDITIONS.



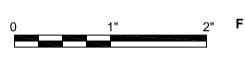




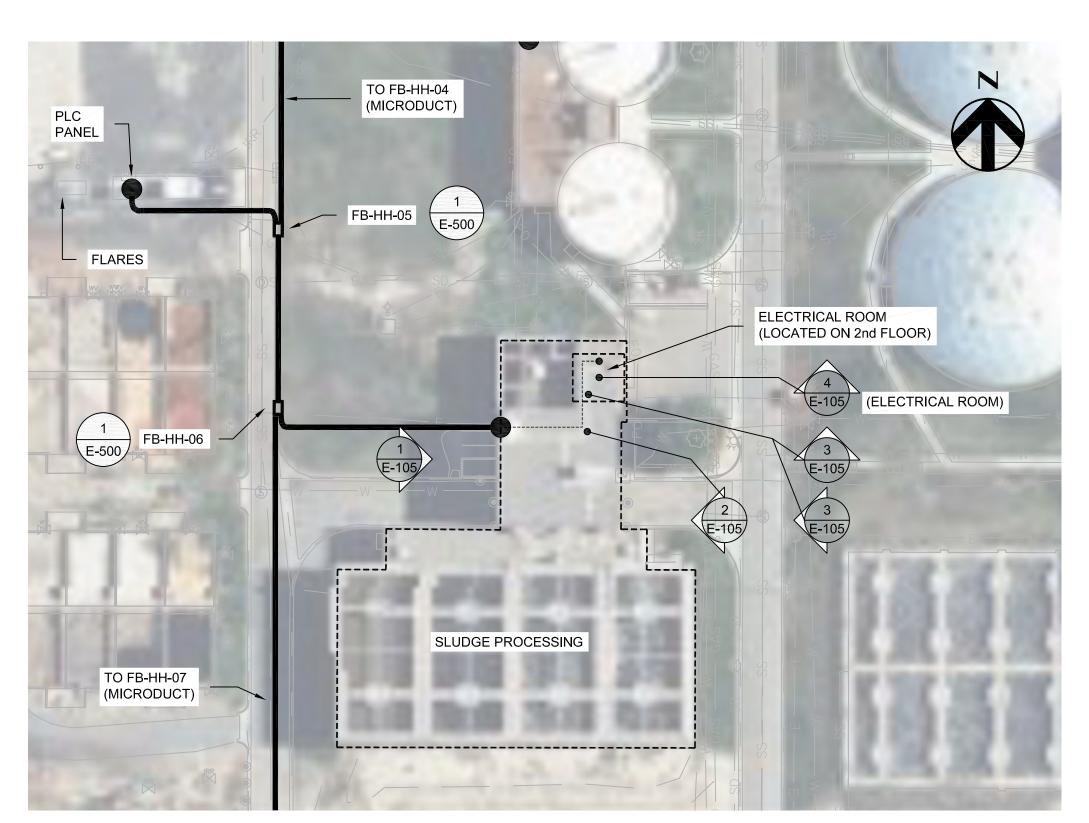
INSTALLATION PROJECT

FLARES

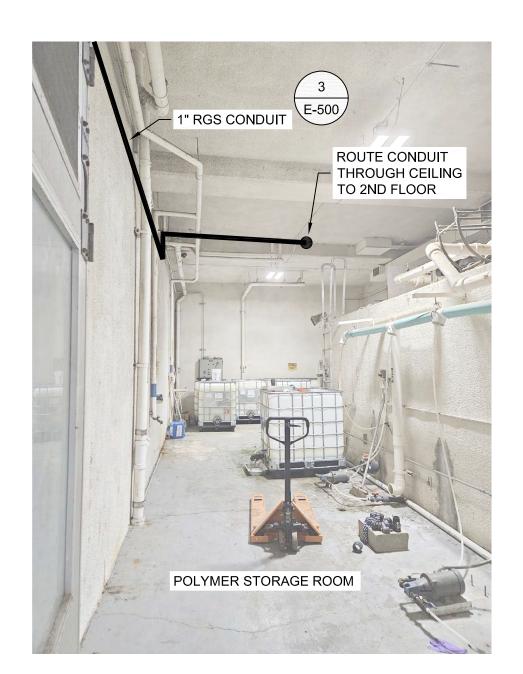
SCALE AS NOTED



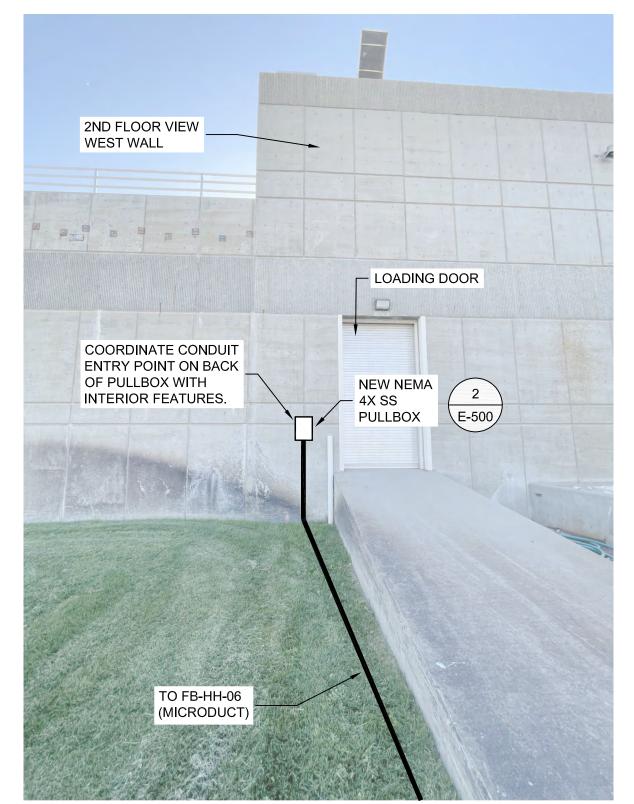
SHEET



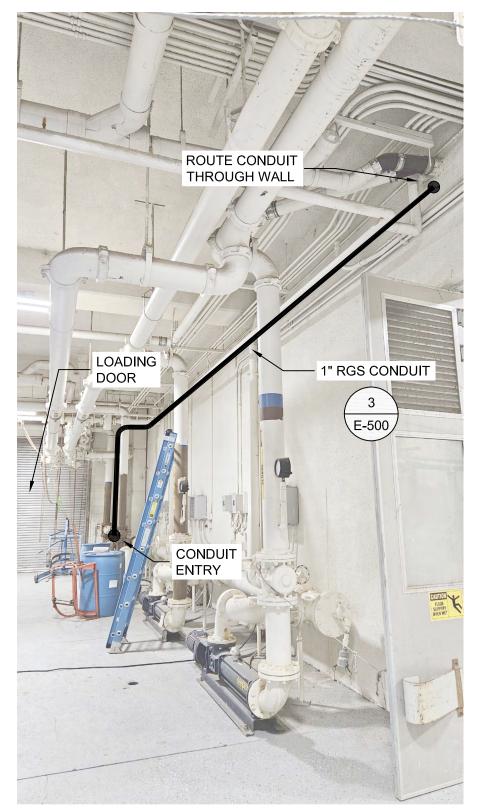
SLUDGE PROCESSING SITE OVERVIEW SCALE: 1" = 50'



SLUDGE PROCESSING INTERIOR CONDUIT ROUTING TO 2nd FLOOR



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

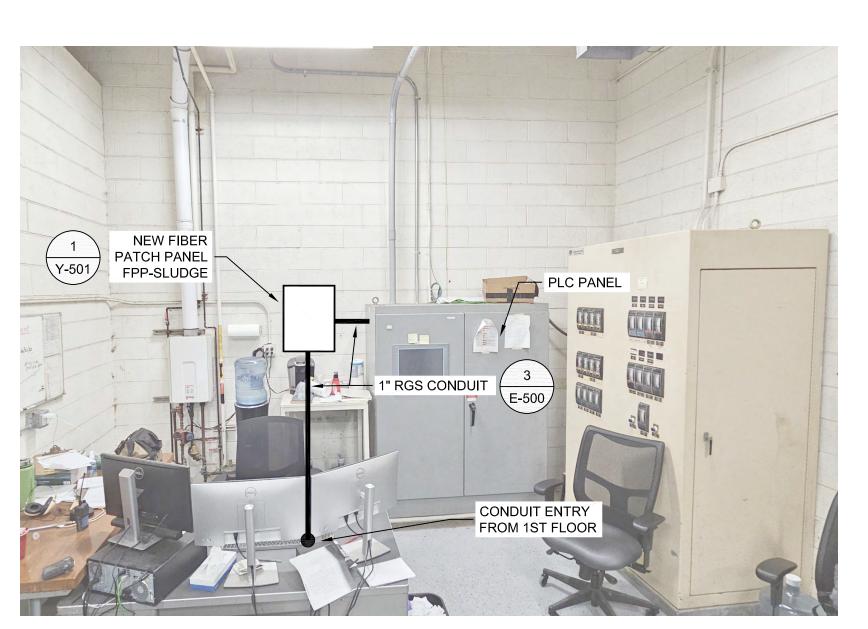
ETHERNET SWITCHES.

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

CONDUIT ROUTED THROUGH WALL

POLYMER STORAGE ROOM

1" RGS CONDUIT

			PROJECT MANAGER	- TRAVIS MOORE
			ELECTRICAL	T. MOORE
			FIBER OPTIC	J. BRAINARD
C	MAY 2024	ISSUED FOR BIDDING		
В	MAR 2024	ISSUED FOR 99% REVIEW		
Α	DEC 2023	ISSUED FOR 90% REVIEW	DRAWN BY	S. BILD
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	10372769





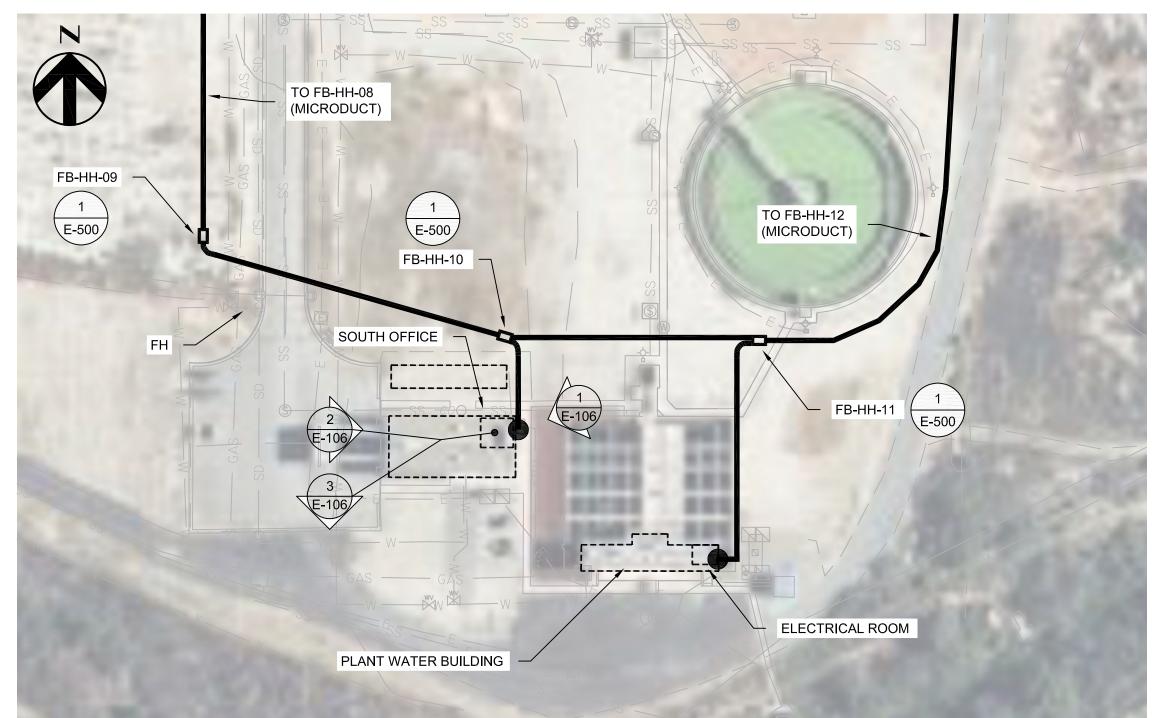
INTERNAL FIBER OPTIC LOOP

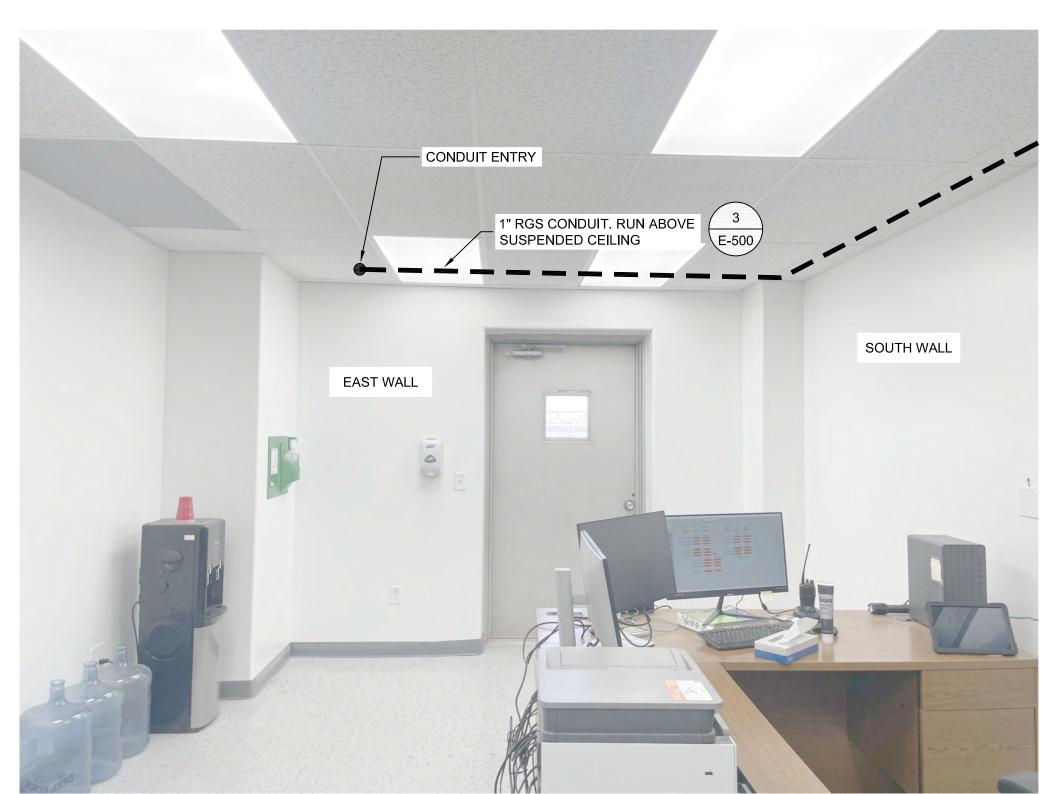
INSTALLATION PROJECT

SLUDGE PROCESSING

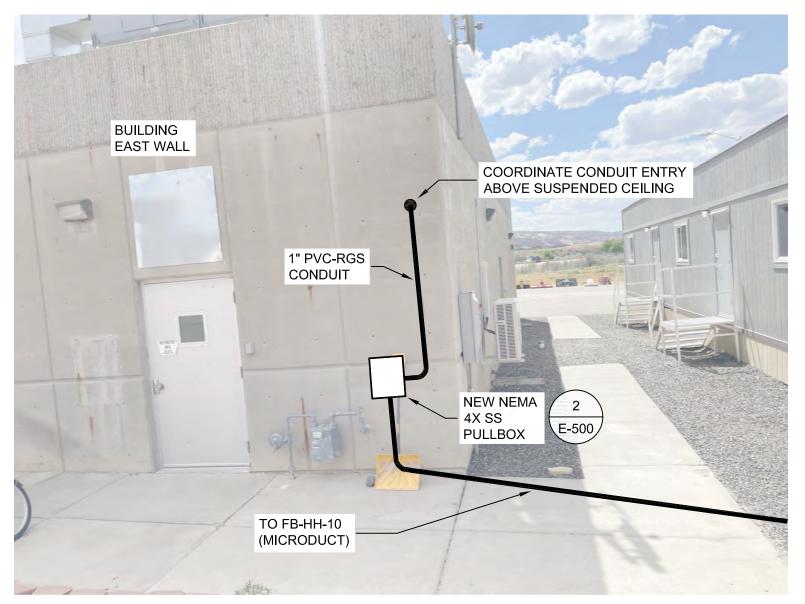
FILENAME E-105.dwg

SCALE AS NOTED





SOUTH OFFICE INTERIOR CONDUIT ROUTING



SOUTH OFFICE BUILDING EXTERIOR MICRODUCT/CONDUIT ROUTING

SCALE: NONE

1" RGS CONDUIT NEW FIBER ABOVE CEILING PATCH PANEL FPP-SOFFICE Y-501 SOUTH WALL 1" RGS CONDUIT

3 SOUTH OFFICE PLC AND FIBER PANEL LOCATIONS

PROJECT MANAGER - TRAVIS MOORE ELECTRICAL T. MOORE FIBER OPTIC J. BRAINARD ISSUED FOR BIDDING DRAWN BY S. BILD DEC 2023 PROJECT NUMBER 10372769





INSTALLATION PROJECT

SOUTH OFFICE

SCALE AS NOTED

FILENAME E-106.dwg

SHEET

E-106

SOUTH OFFICE BUILDING SITE OVERVIEW SCALE: 1" = 50'-0"

ETHERNET SWITCHES AND FIBER PATCH CORDS BETWEEN FIBER PATCH PANELS AND ETHERNET SWITCHES.

B. CITY IT TO PROVIDE MANAGED

A. UNSUPPORTED BEND RADIUS OF THE 4-WAY MICRODUCT IS 36 INCHES. MINIMUM BURY

DEPTH IS 30 INCHES.

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.

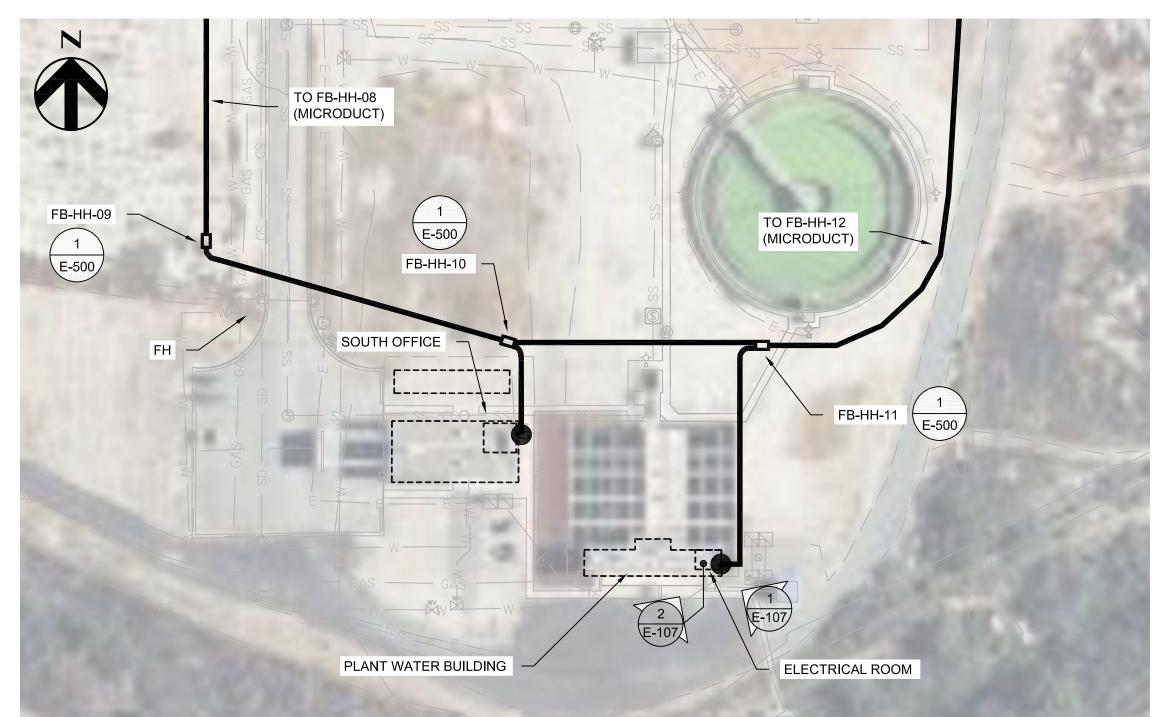
F. GROUND PULLBOX WITH GROUND ROD CONNECTED WITH MINIMUM #6AWG GROUNDING CONDUCTOR, PER REQUIREMENTS IN SECTION 26 05 26.

G. CONDUIT ROUTING AND BOX LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH FIELD CONDITIONS.

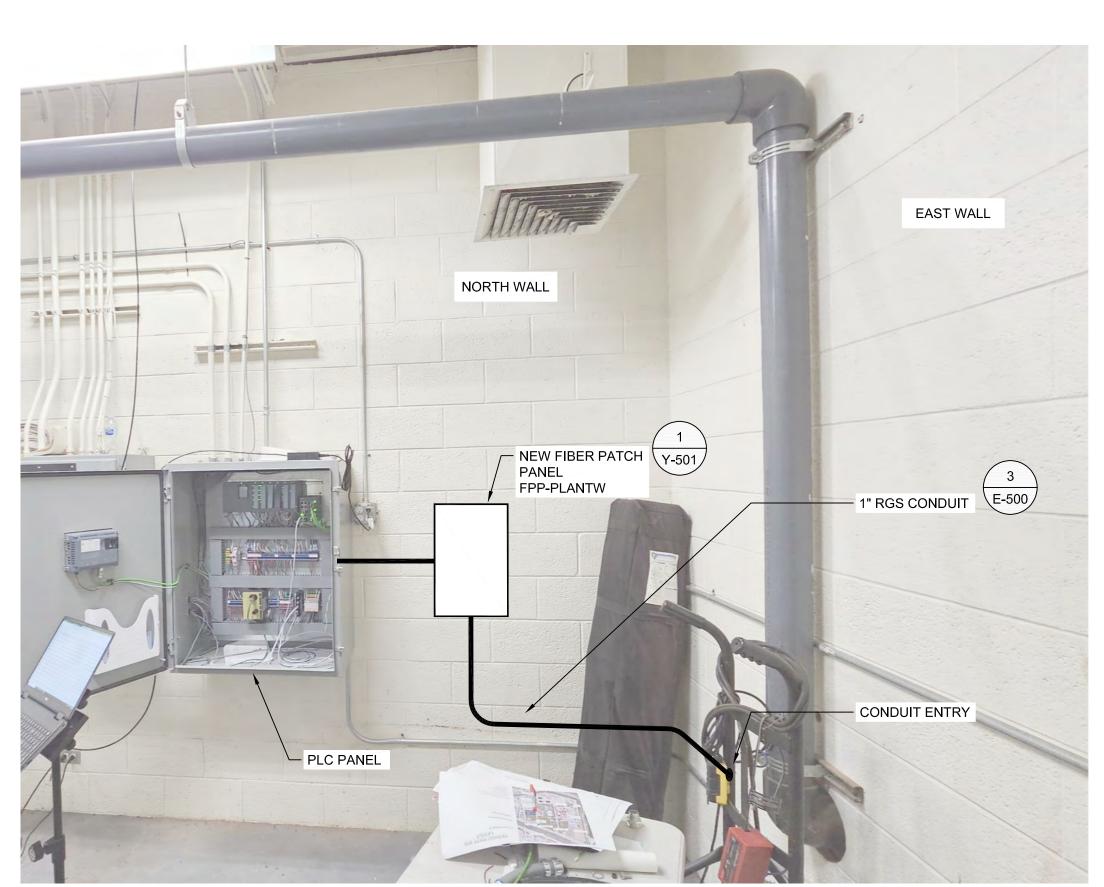
ESTIMATED INDOOR CONDUIT RUN: 35FT

BUILDING

SOUTH WALL



PLANT WATER BUILDING SITE OVERVIEW SCALE: 1" = 50'



2 PLANT WATER PLC AND FIBER PANEL LOCATIONS

PROJECT MANAGER - TRAVIS MOORE ELECTRICAL T. MOORE FIBER OPTIC J. BRAINARD ISSUED FOR BIDDING DRAWN BY S. BILD DEC 2023 PROJECT NUMBER 10372769





INSTALLATION PROJECT

BUILDING

CONDUIT

ENTRY POINT

1 PLANT WATER BUILDING EXTERIOR MICRODUCT/CONDUIT ROUTING

EAST WALL

1" PVC-RGS

CONDUIT

E-500

NEW NEMA 4X SS PULLBOX MOUNTED

ON UNISTRUT RACK

ATTACHED TO WALL

- MICRODUCT

FB-HH-11

- 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
- C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH PANELS, PULLBOXES, AND 24-STRAND FIBER.

FIBER PATCH PANELS AND ETHERNET SWITCHES.

- 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

PLANT WATER

SCALE AS NOTED

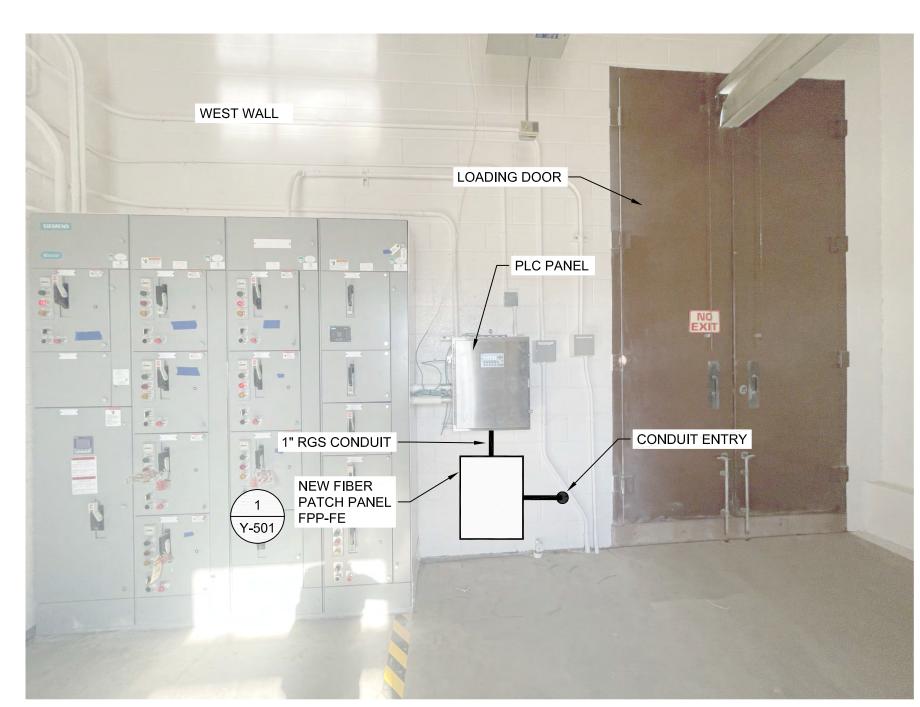
FILENAME E-107.dwg

SHEET

FLOW EQ BUILDING SITE OVERVIEW

SCALE: 1" = 30'

(MICRODUCT)

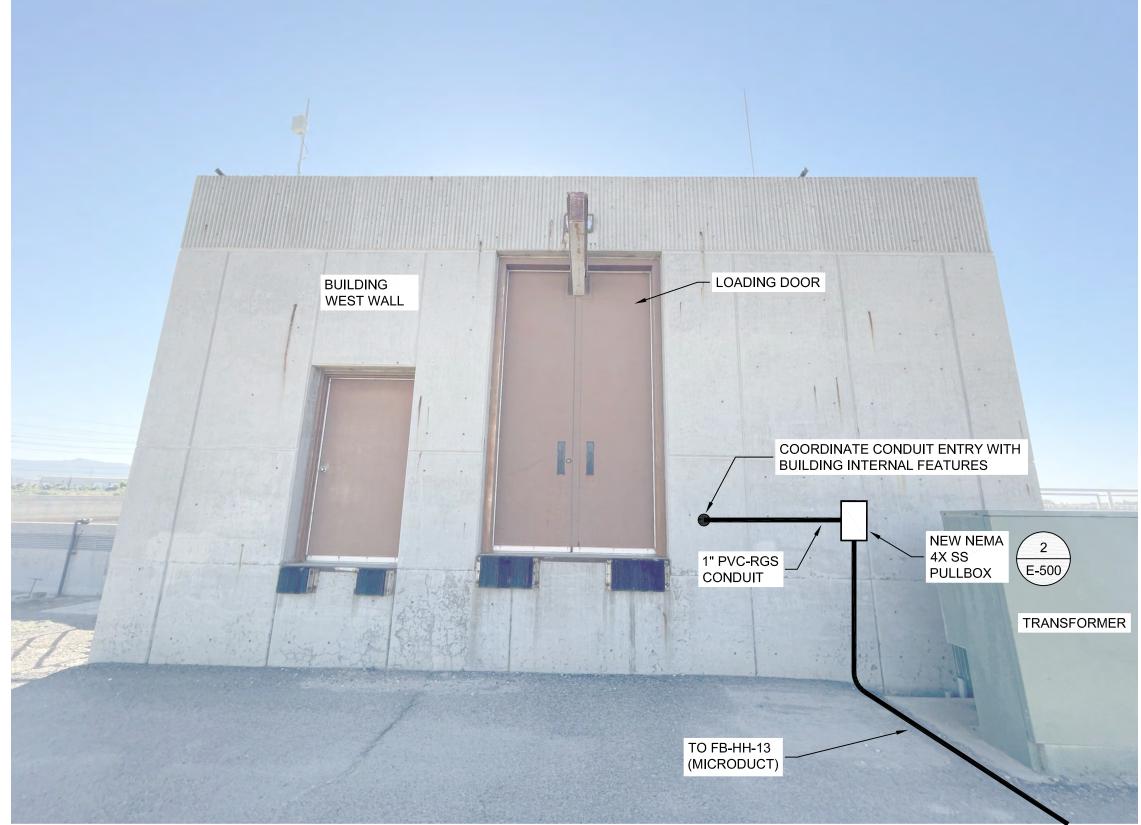


FLOW EQ BUILDING PLC AND FIBER PANEL LOCATIONS

SCALE: NONE

MAY 2024

DEC 2023



1 FLOW EQ EXTERIOR MICRODUCT/CONDUIT ROUTING

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. 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.

В

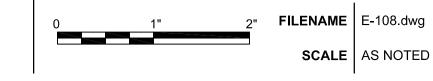
A

FLOW EQ BUILDING





INSTALLATION PROJECT



SHEET E-

E-108

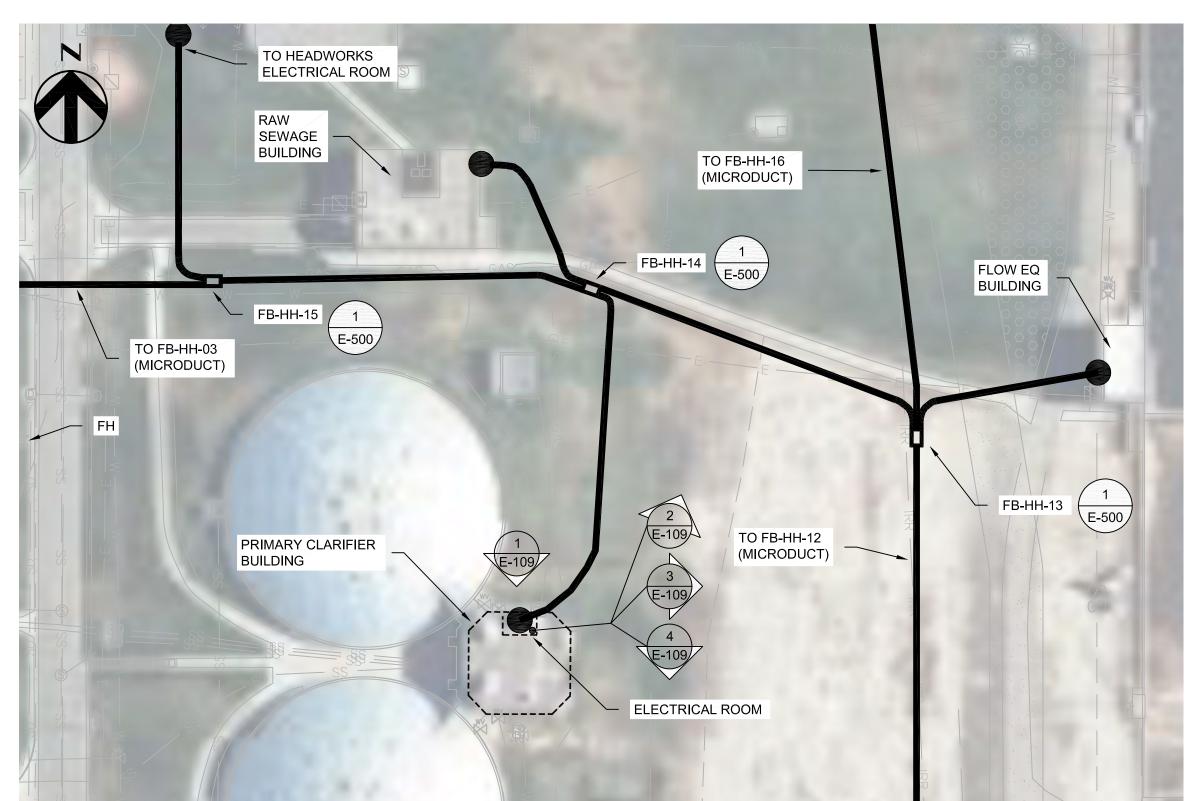


PROJECT MANAGER - TRAVIS MOORE

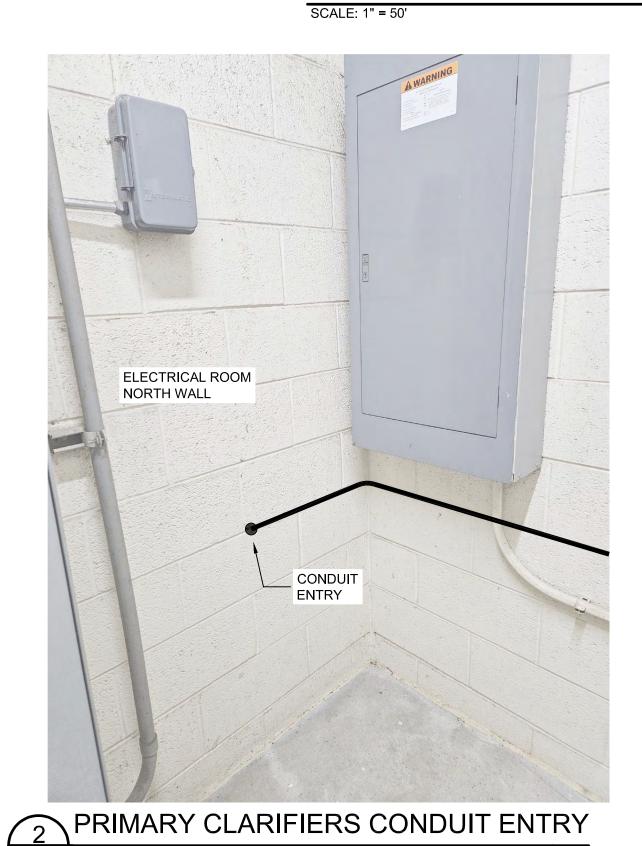
ELECTRICAL T. MOORE

FIBER OPTIC J. BRAINARD

ISSUED FOR BIDDING
ISSUED FOR 99% REVIEW
ISSUED FOR 90% REVIEW
DESCRIPTION
PROJECT NUMBER 10372769

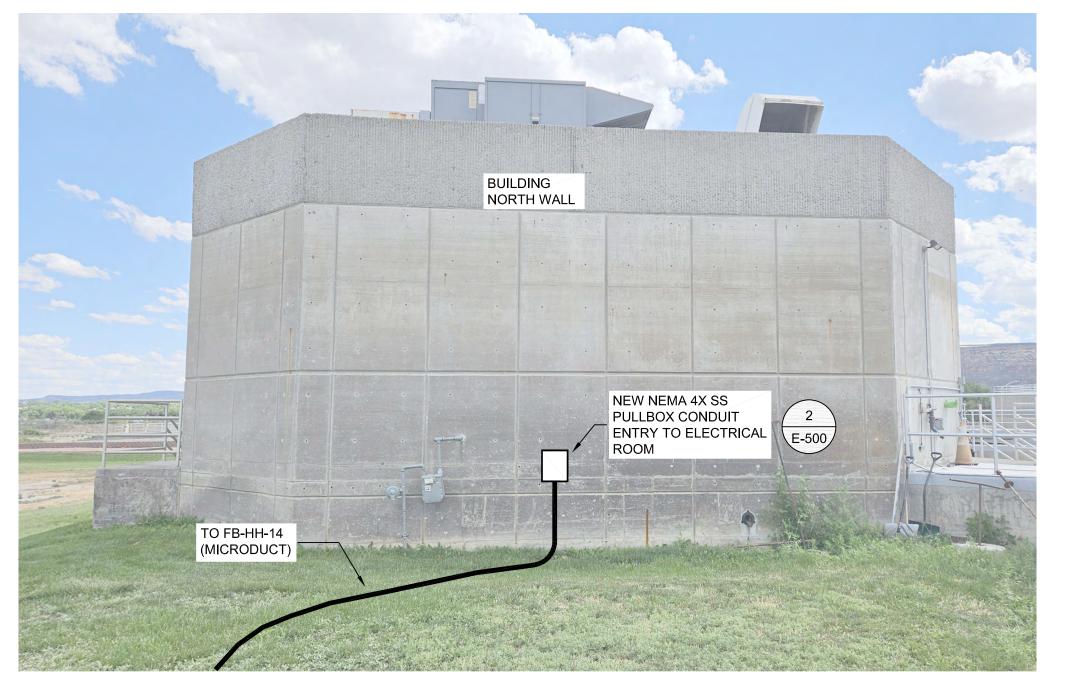


PRIMARY CLARIFIER BUILDING SITE OVERVIEW

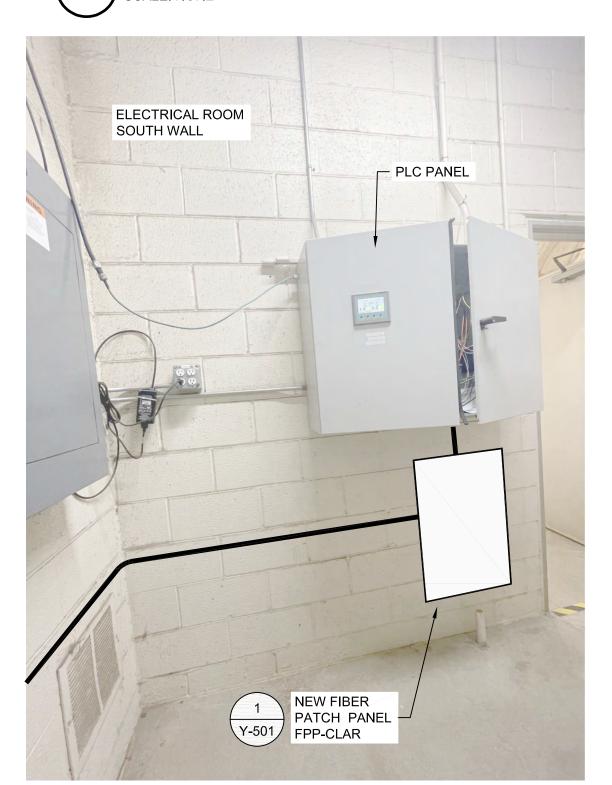




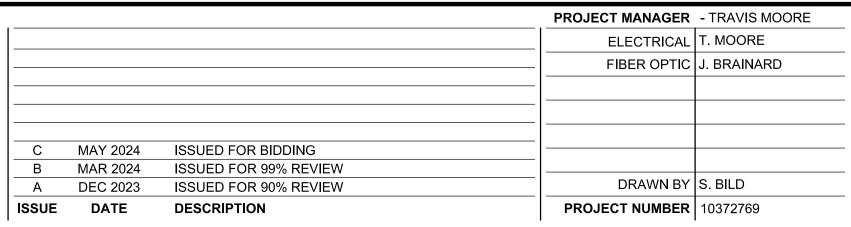
PRIMARY CLARIFIERS INTERIOR CONDUIT ROUTING SCALE: NONE



PRIMARY CLARIFIER BUILDING EXTERIOR MICRODUCT/CONDUIT ROUTING SCALE: NONE



PRIMARY CLARIFIERS PLC AND FIBER PANEL LOCATIONS SCALE: NONE







PERSIGO WWTP INTERNAL FIBER OPTIC LOOP INSTALLATION PROJECT

PRIMARY CLARIFIERS

FILENAME | E-109.dwg SCALE AS NOTED

GENERAL NOTES:

A. UNSUPPORTED BEND RADIUS

B. CITY IT TO PROVIDE MANAGED

FIBER PATCH PANELS AND ETHERNET SWITCHES.

C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH

PANELS, PULLBOXES, AND

D. ALL CONDUITS SHALL ENTER

PULLBOX. CONDUITS SHALL

BOTTOM OR SIDES OF

NOT ENTER THE TOP OF PULLBOXES. USE GASKETED

MYERS HUBS ON ALL SIDE-ENTRY CONDUITS.

RADIUS.

05 26.

CONDITIONS.

E. USE ELBOWS, J-BOXES, OR CONDUIT FITTINGS TO MAINTAIN FIBER OPTIC BEND

F. GROUND PULLBOX WITH

WITH MINIMUM #6AWG

G. CONDUIT ROUTING AND BOX LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE

FINAL LOCATIONS WITH FIELD

ESTIMATED INDOOR CONDUIT RUN: 15FT

GROUND ROD CONNECTED

GROUNDING CONDUCTOR, PER REQUIREMENTS IN SECTION 26

24-STRAND FIBER.

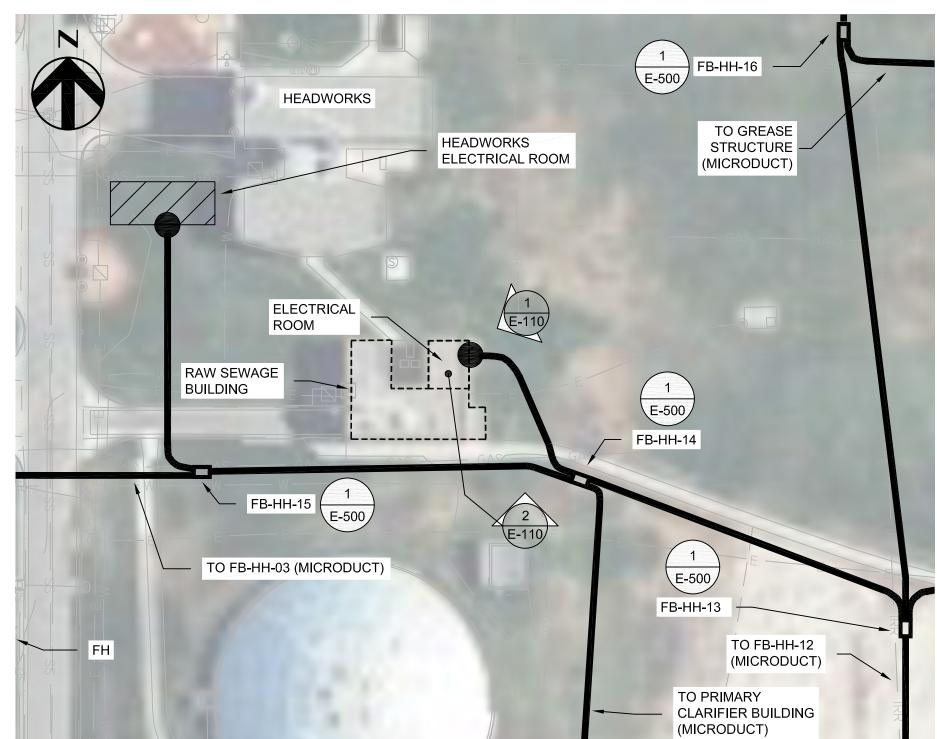
ETHERNET SWITCHES AND

FIBER PATCH CORDS BETWEEN

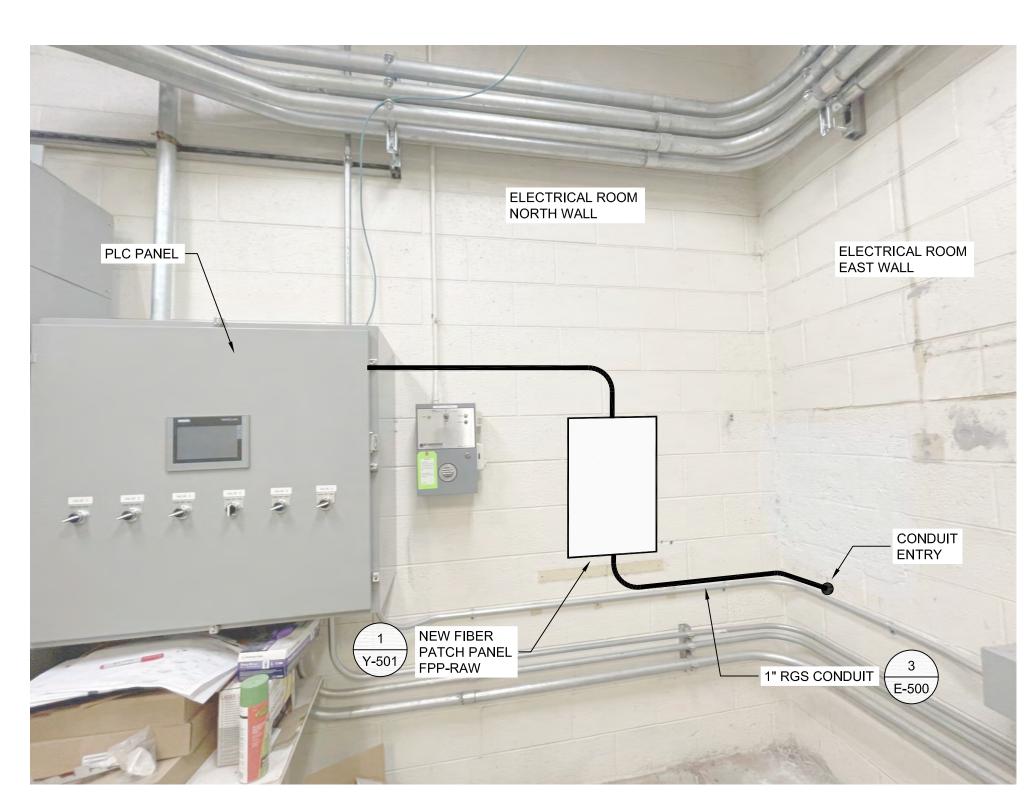
DEPTH IS 30 INCHES.

OF THE 4-WAY MICRODUCT IS 36 INCHES. MINIMUM BURY

GENERAL NOTES:



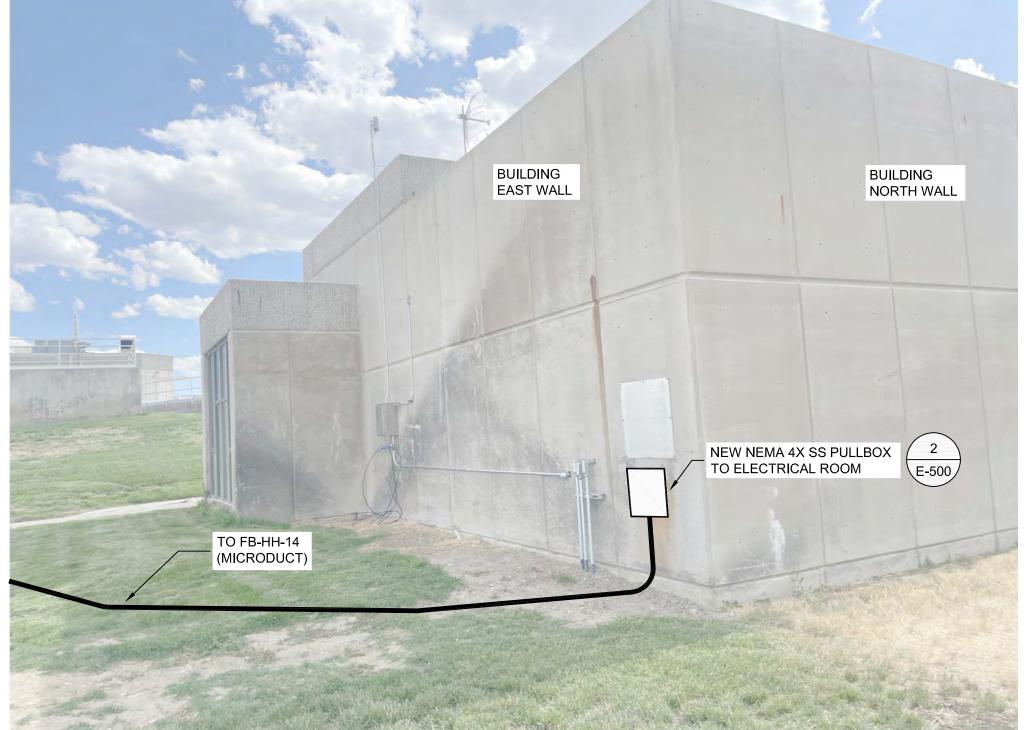
RAW SEWAGE BUILDING SITE OVERVIEW SCALE: 1" = 40'



2 RAW SEWAGE PLC AND FIBER PANEL LOCATIONS

ISSUED FOR BIDDING

DEC 2023



RAW SEWAGE BUILDING EXTERIOR MICRODUCT/CONDUIT ROUTING

- 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 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: 10FT

RAW SEWAGE

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







FILENAME | E-110.dwg SCALE AS NOTED

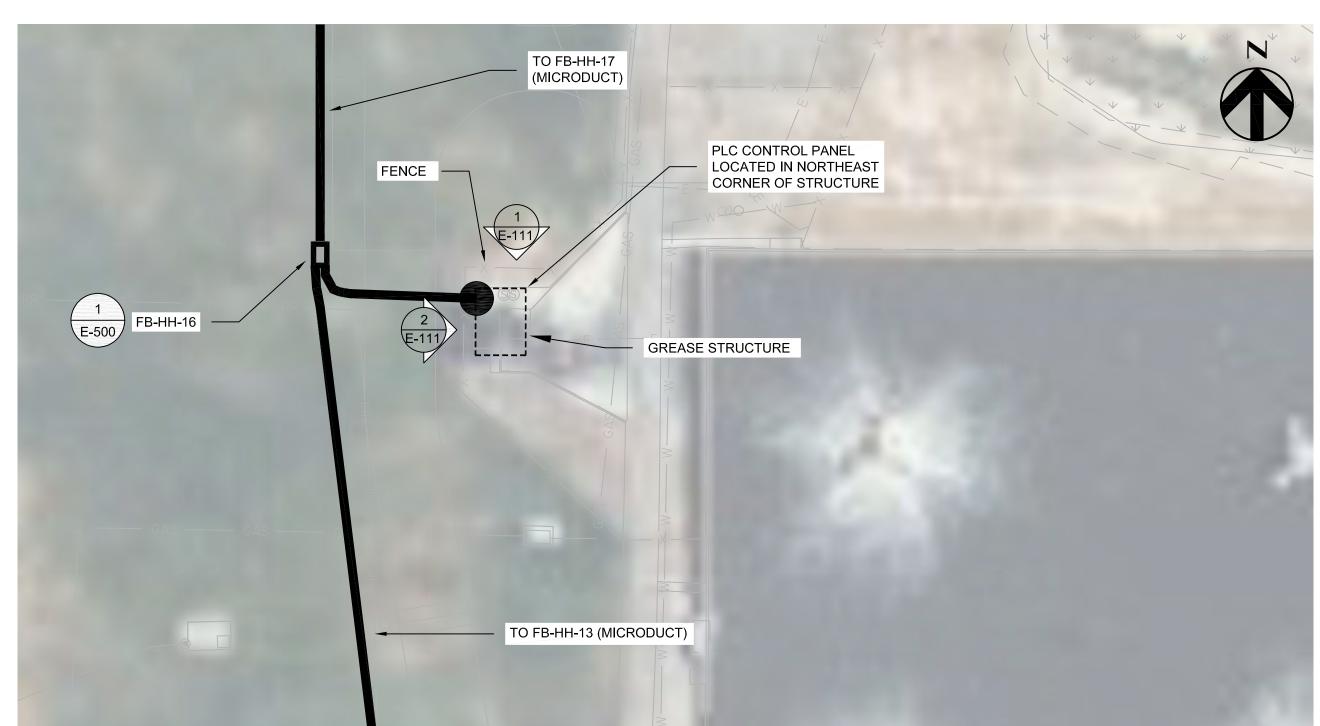


PLC PANEL -

NEW FIBER

LOCATION

PATCH PANEL



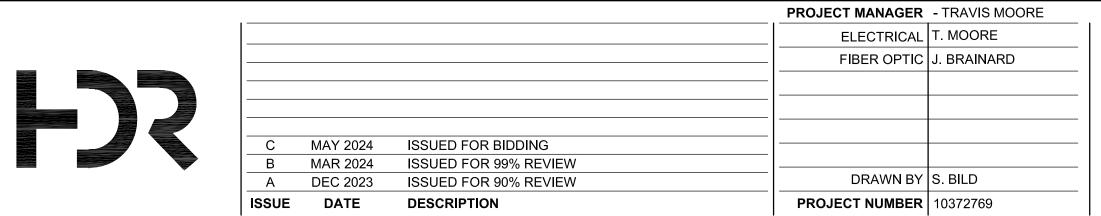
GREASE STRUCTURE SITE OVERVIEW SCALE: 1" = 30'

PLC PANEL 1" PVC-RGS CONDUIT NEW FIBER PATCH PANEL FPP-GREASE INSTALL ON EXISTING PANEL SUPPORT

STRUCTURE. PROVIDE

ADDITIONAL SUPPORT NEMA 4X SS -AS REQUIRED. - 1" PVC-RGS CONDUIT

GREASE STRUCTURE FIBER PATCH PANEL LOCATION







INSTALLATION PROJECT

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

ETHERNET SWITCHES.

C. CONTRACTOR TO INSTALL ALL CONDUIT, FIBER PATCH PANELS, PULLBOXES, AND 24-STRAND FIBER.

FIBER PATCH PANELS AND

- 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.

GREASE STRUCTURE

FILENAME E-111.dwg SCALE AS NOTED SHEET E-111



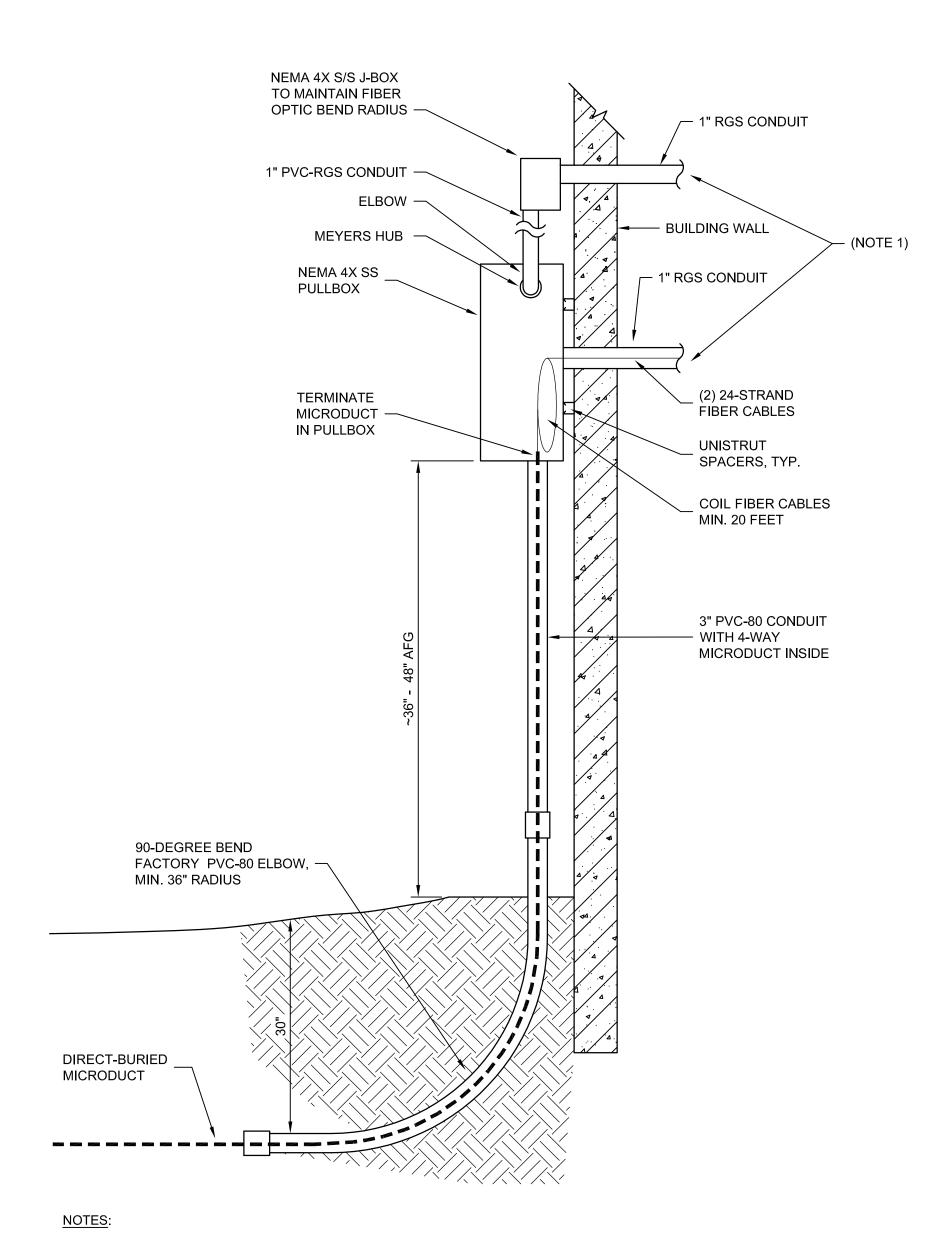
REPAIR CONCRETE FOLLOWING MICRODUCT INSTALLATION TO FB-HH-16 (MICRODUCT) ¬ GREASE STRUCTURE MICRODUCT/CONDUIT ROUTING

1" PVC-RGS

CONDUIT

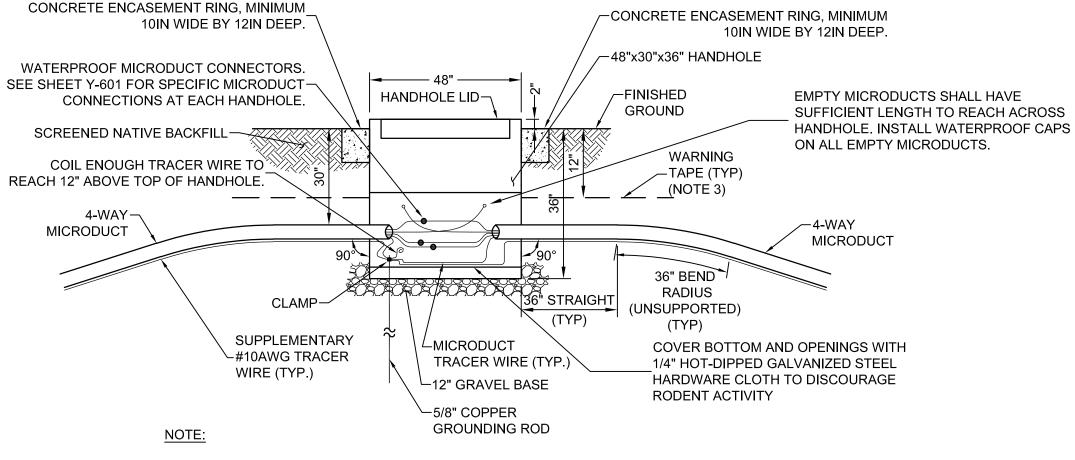
2 NEW NEMA 4X SS PULLBOX,

PROVIDE SUPPORT AS REQUIRED



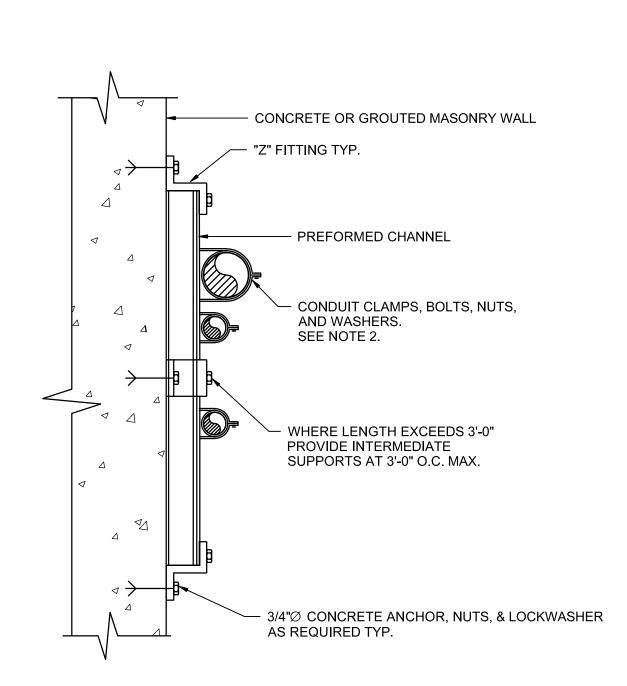
- 1. TOP OR SIDE CONDUIT ENTRY TO BUILDING AS INDICATED ON INDIVIDUAL BUILDING PLANS. SEE DETAIL 1 ON SHEET E-501 FOR CONDUIT WALL PENETRATION.
- 2. SUPPORT CONDUIT AS SHOWN IN DETAIL 3 ON SHEET E-500.
- 3. ALL CONDUITS SHALL ENTER BOTTOM OR SIDE OF PULLBOX. CONDUITS SHALL NOT ENTER THE TOP OF PULLBOX. USE GASKETED MYERS HUBS ON ALL SIDE-ENTRY
- 4. USE ELBOWS, J-BOXES, OR COUNDUIT FITTINGS TO MAINTAIN FIBER OPTIC BEND
- 5. GROUND PULLBOX WITH GROUND ROD CONNECTED WITH MINIMUM #6AWG GROUNDING CONDUCTOR, PER REQUIREMENTS IN SECTION 26 05 26.

UNDERGROUND CONDUIT - BUILDING ENTRY NOT TO SCALE



- 1. SEAL MICRODUCT TO JACKET TO MINIMIZE WATER OR FOREIGN BODY INTRUSION.
- 2. BOND TRACER WIRES FROM ALL MICRODUCTS TOGETHER.
- 3. INSTALL WARNING TAPE ON ALL LOCATIONS WHERE MICRODUCT IS EXPOSED DURING INSTALLATION.
- 4. INSTALL #10AWG SUPPLEMENTARY TRACER WIRE WITH ALL MICRODUCT, IN ADDITION TO THE TRACER WIRE INSIDE THE MICRODUCT ASSEMBLY.

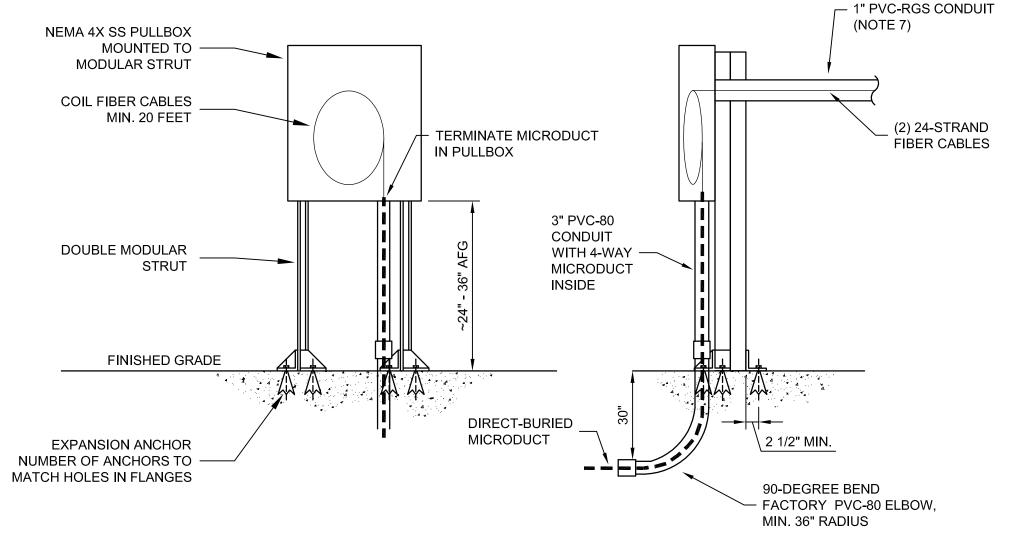




NOTES:

- 1. THIS DETAIL TYPICAL FOR BOTH VERTICAL AND HORIZONTAL MOUNTING.
- 2. MATERIAL FOR PREFORMED CHANNEL, FITTINGS, AND CLAMPS SHALL BE HOT-DIPPED GALVANIZED. PAINT ALL CUT ENDS OF METAL WITH TWO COATS OF ZINC-RICH PAINT.
- 3. SUPPORTS TO BE SPACED IN ACCORDANCE WITH NEC REQUIREMENTS FOR THE SMALLEST CONDUIT ATTACHED.





FRONT VIEW

SIDE VIEW

NOTES:

- 1. EQUIPMENT LOAD SHALL NOT EXCEED 200 LBS.
- 2. UNISTRUT RACK COMPONENTS SHALL BE HOT-DIPPED GALVANIZED.
- 3. MODULAR STRUT WIDTH: 1 5/8"
- 4. ANCHORS: STAINLESS STEEL, 3/8" DIAMETER, 3 1/2" EMBEDMENT.
- 5. PROTECT SURFACES WITH DISSIMILAR MATERIALS.
- 6. PAINT ALL CUT ENDS OF METAL WITH TWO HEAVY COATS OF ZINC-RICH PAINT.
- 7. BACK OR SIDE CONDUIT CONNECTIONS AS INDICATED ON INDIVIDUAL BUILDING PLANS.
- 8. CONCRETE FOUNDATIONS, WHERE REQUIRED, SHALL BE PER DETAIL (3/E-501).
- 9. 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.
- 10. USE ELBOWS, J-BOXES, OR COUNDUIT FITTINGS TO MAINTAIN FIBER OPTIC BEND RADIUS.
- 11. GROUND PULLBOX WITH GROUND ROD CONNECTED WITH MINIMUM #6AWG GROUNDING CONDUCTOR, PER REQUIREMENTS IN SECTION 26 05 26.





			PROJECT MANAGER	- TRAVIS MOORE
			ELECTRICAL	T. MOORE
			FIBER OPTIC	J. BRAINARD
С	MAY 2024	ISSUED FOR BIDDING		
В	MAR 2024	ISSUED FOR 99% REVIEW		
Α	DEC 2023	ISSUED FOR 90% REVIEW	DRAWN BY	S. BILD
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	10372769

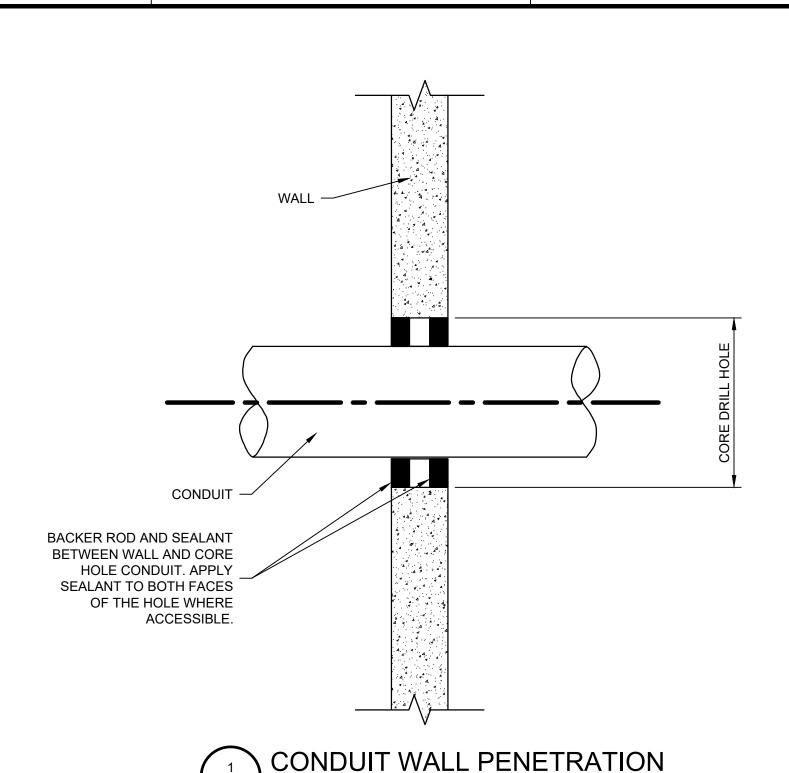




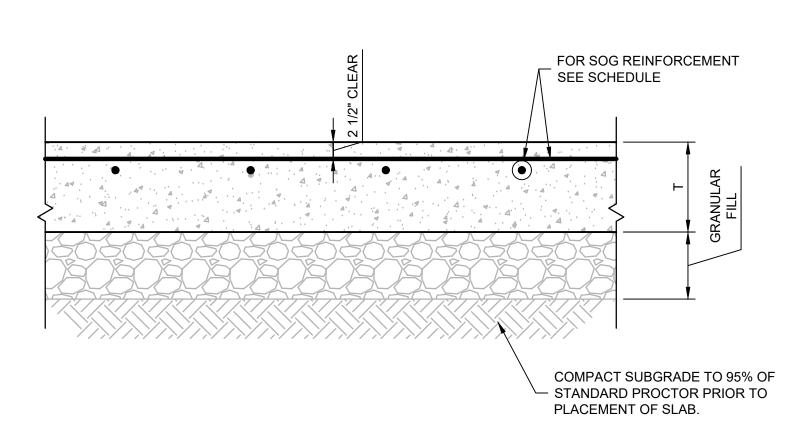
INSTALLATION PROJECT





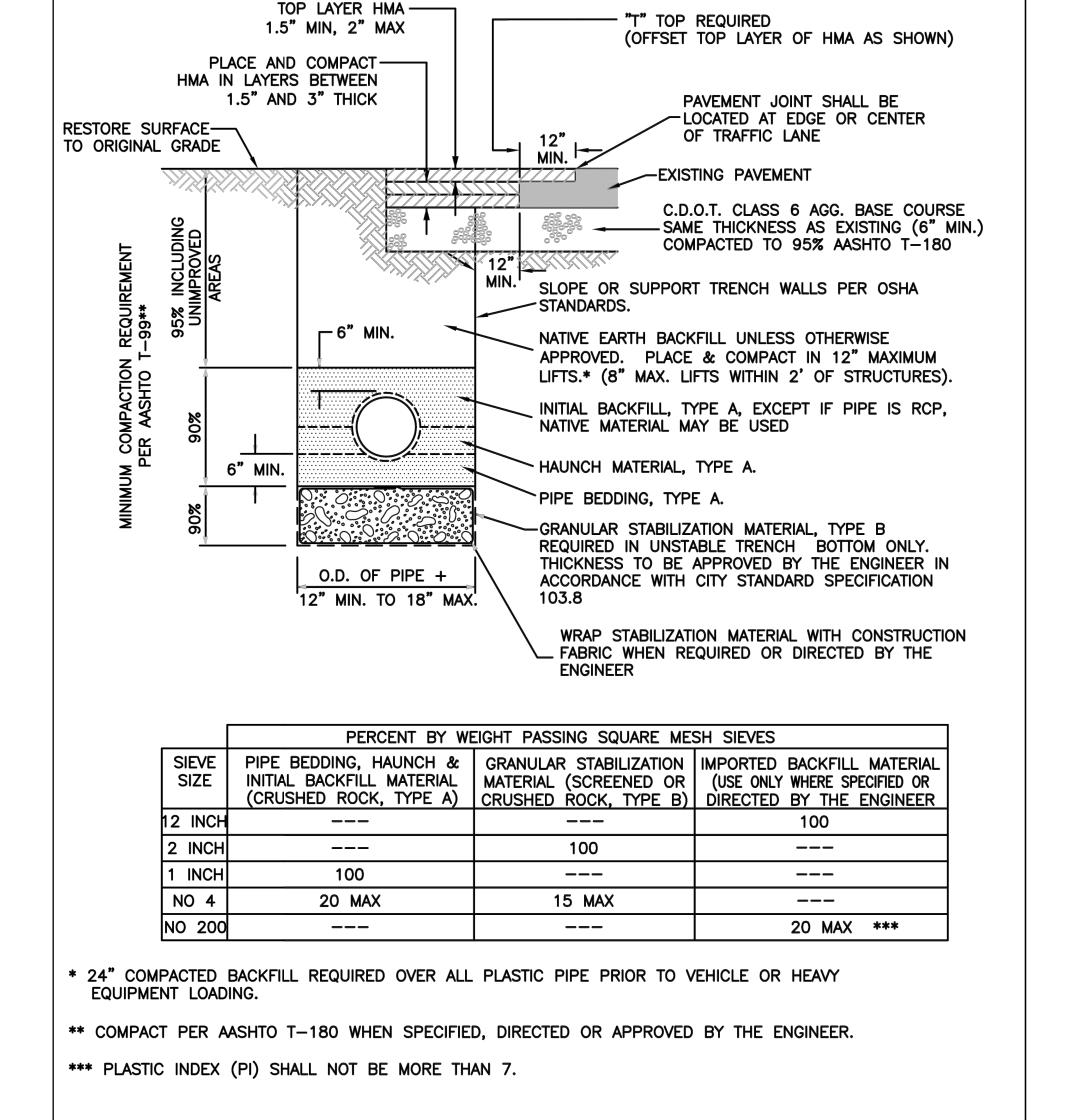


NOT TO SCALE



SLAB ON	GRADE REINFORCEMENT
Т	REINFORCEMENT
0'-6"	#4 @ 12" EACH WAY







ALL BACKFILL MATERIAL SHALL BE UNIFORMLY ADJUSTED TO WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT

TYPICAL TRENCH DETAIL

GENERAL UTILITY DETAIL



			PROJECT MANAGER	- TRAVIS MOORE
			ELECTRICAL	T. MOORE
			FIBER OPTIC	J. BRAINARD
С	MAY 2024	ISSUED FOR BIDDING		
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ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	10372769
		·		'





PRIOR TO PLACEMENT AND COMPACTION.

DEPARTMENT OF PUBLIC WORKS AND PLANNING ENGINEERING DIVISION CITY OF GRAND JUNCTION, COLORADO

PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT

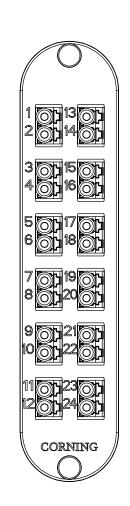




3 5 5

GENERAL NOTES:

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

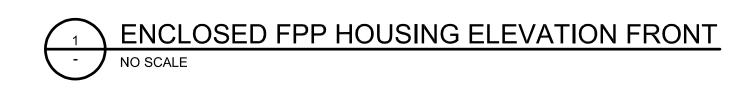


NOTES:

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



24-STRAND LC FIBER PATCH PANEL



FPP-XXX

ENCLOSED FPP HOUSING ELEVATION RIGHT

NO SCALE

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 OF THE PHASE- 1 EXPANSION PROJECT.

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)	

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

FIBER STRAND SCHEDULE

STRAND PAIR NO. FIBER PAIR FIBER CONNECTION DETAILS

6 FIBER STRAND SCHEDULE

NO SCALE

5	BILL OF MATERIALS
	NO SCALE



			PROJECT MANAGER	- TRAVIS MOORE
			ELECTRICAL	T. MOORE
			FIBER OPTIC	J. BRAINARD
С	MAY 2024	ISSUED FOR BIDDING		
В	MAR 2024	ISSUED FOR 99% REVIEW		
Α	DEC 2023	ISSUED FOR 90% REVIEW	DRAWN BY	S. BILD
SSUE	DATE	DESCRIPTION	PROJECT NUMBER	10372769

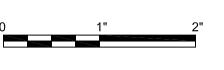




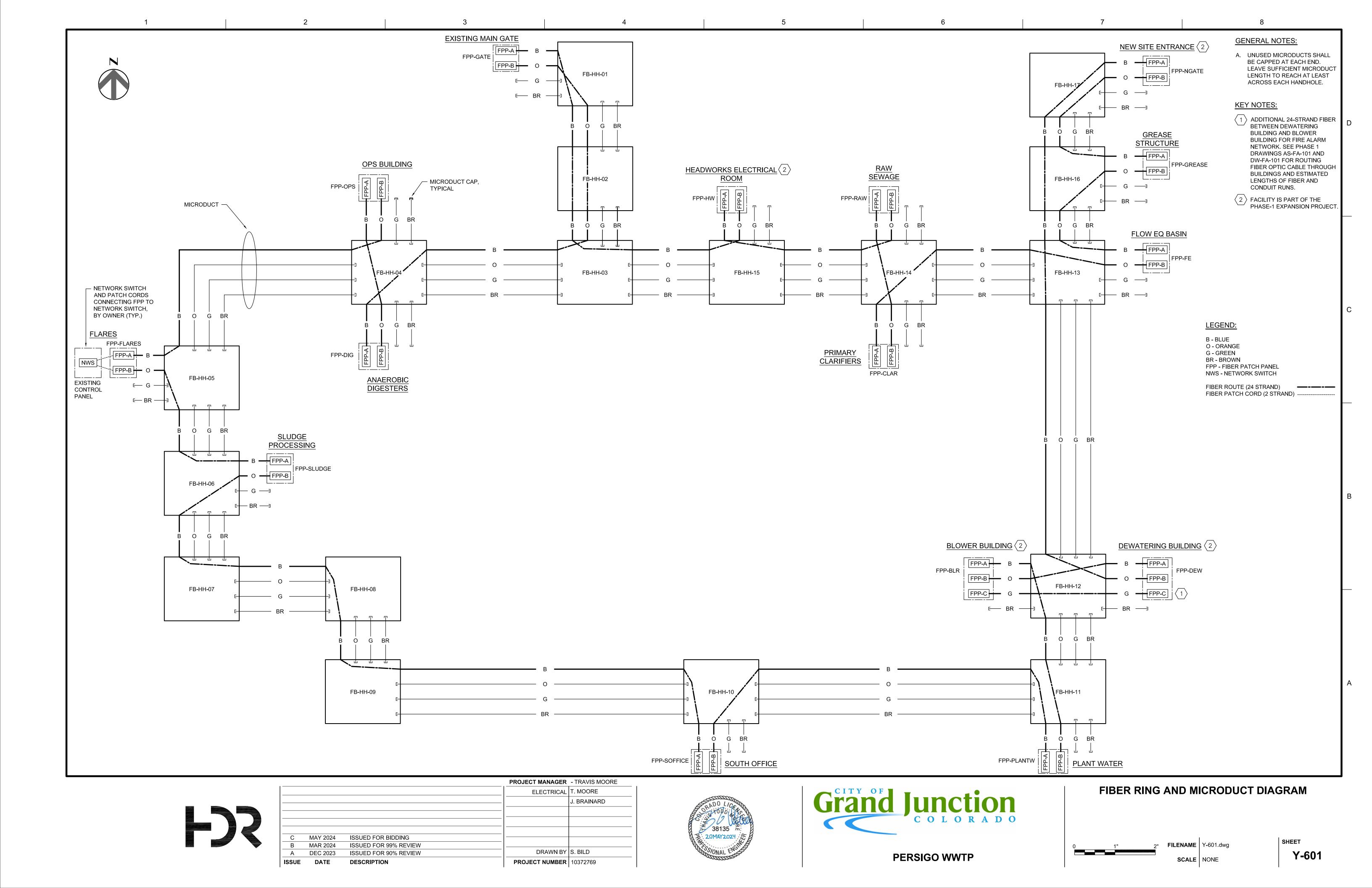
PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT



SCALE NONE



FILENAME Y-501.dwg







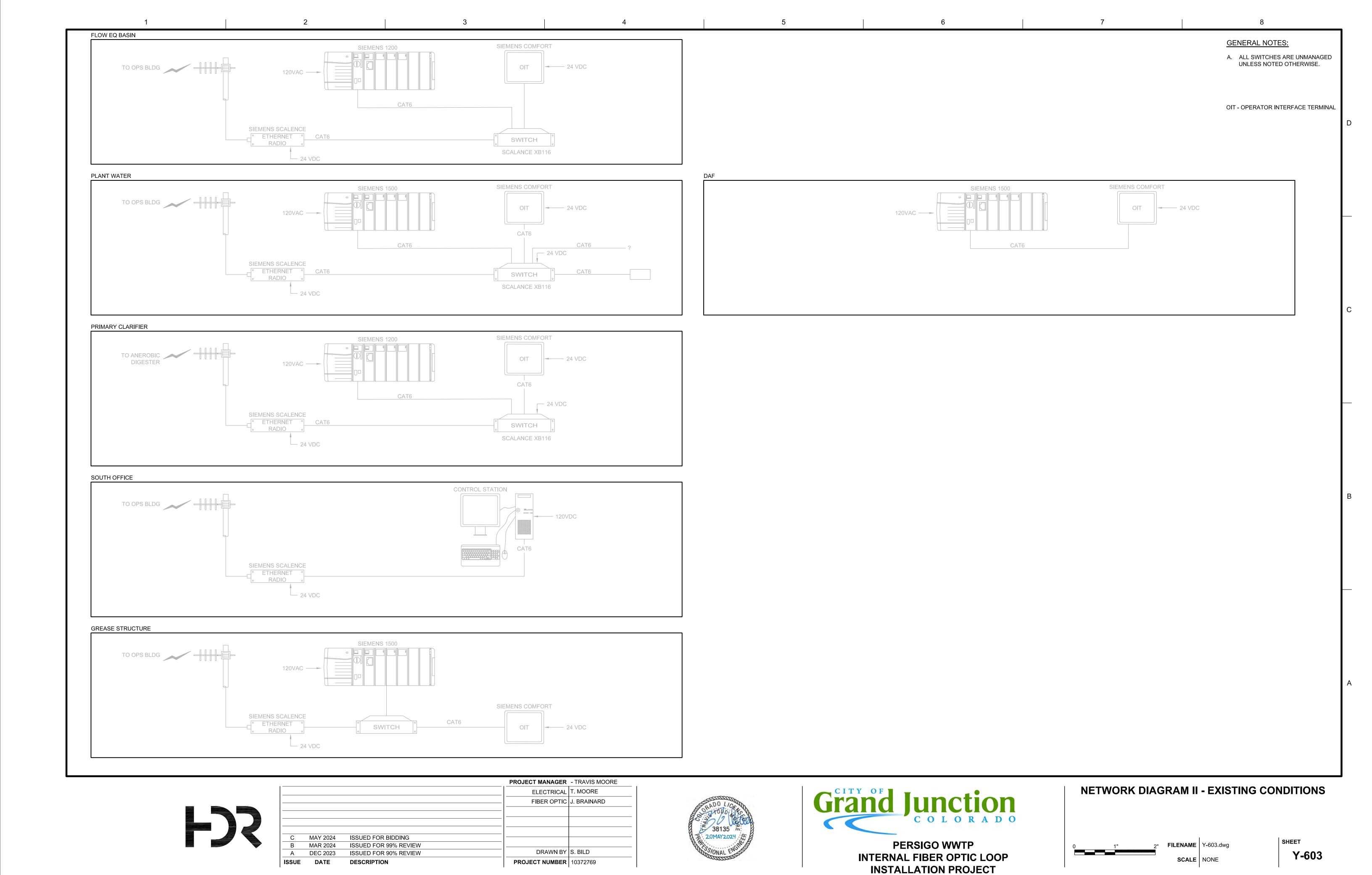


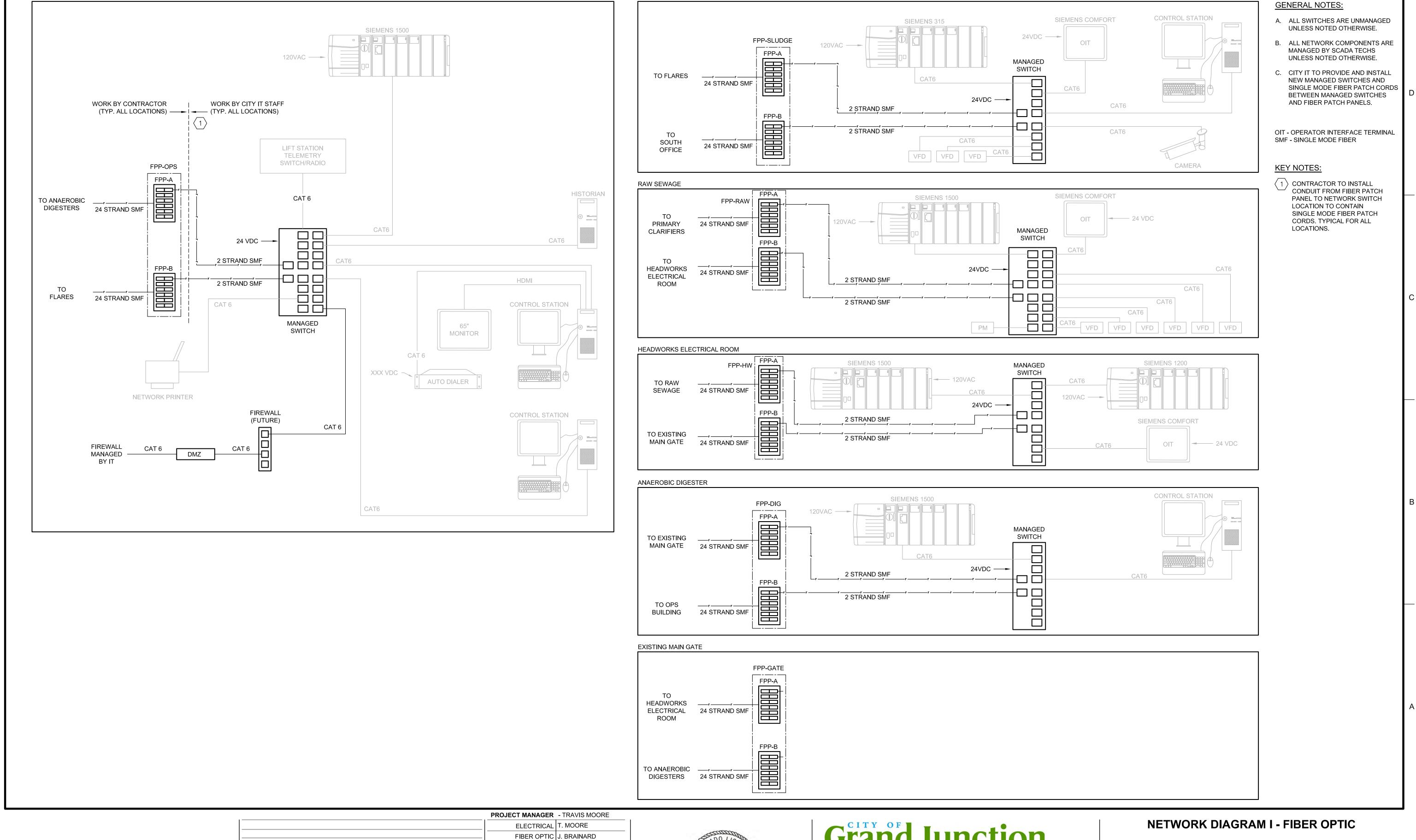




PERSIGO WWTP
INTERNAL FIBER OPTIC LOOP
INSTALLATION PROJECT



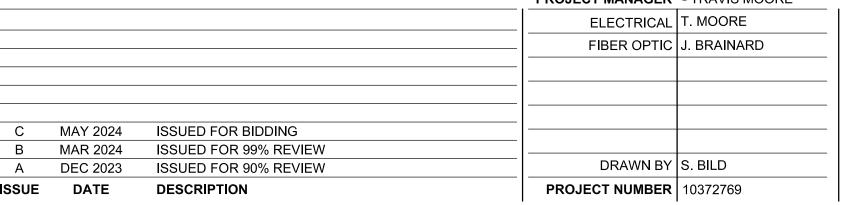




SLUDGE PROCESSING



OPERATIONS BUILDING



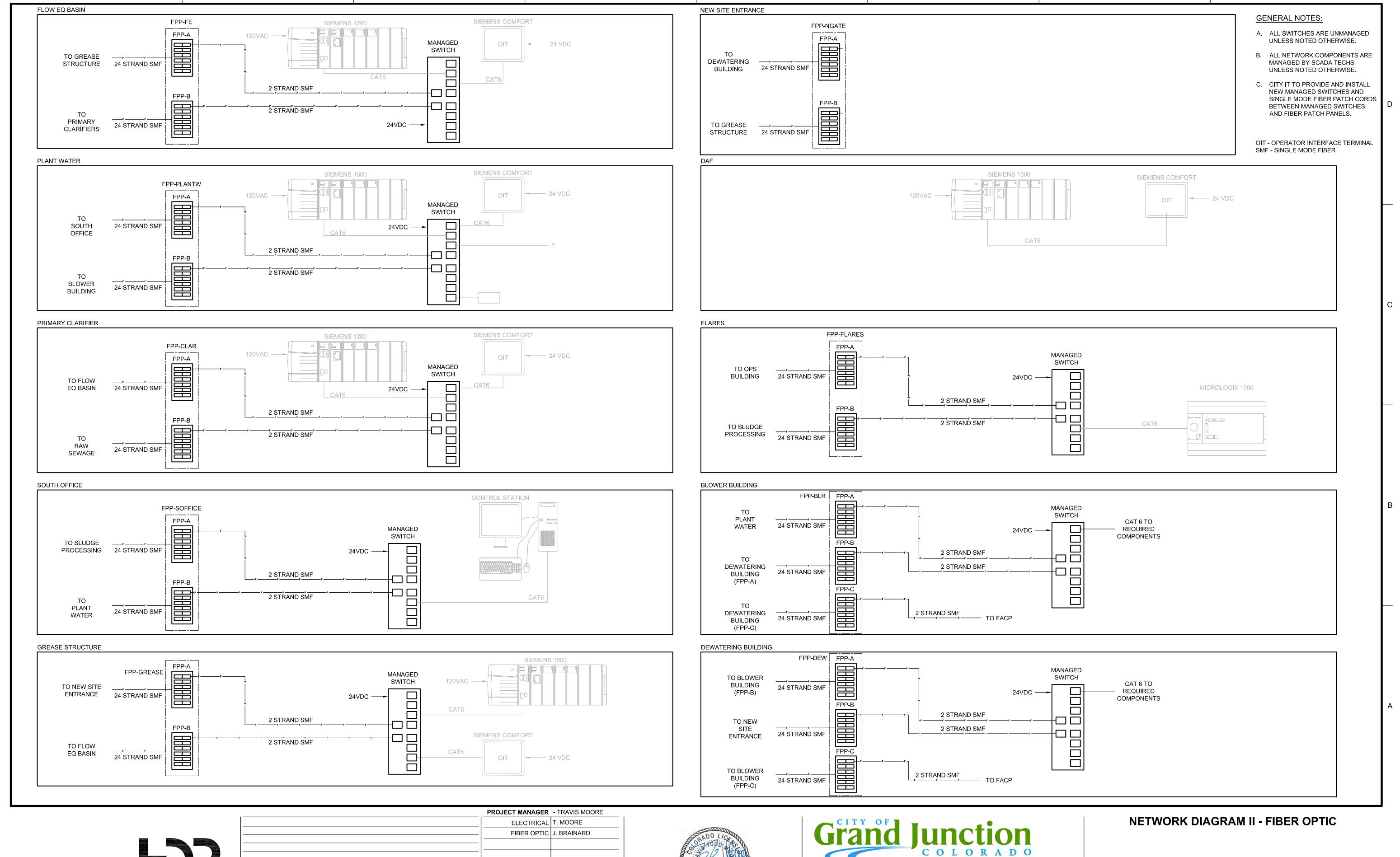


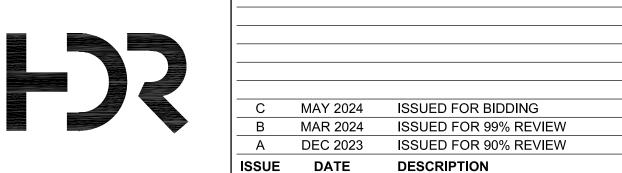


INTERNAL FIBER OPTIC LOOP

INSTALLATION PROJECT









DRAWN BY S. BILD

PROJECT NUMBER | 10372769



INSTALLATION PROJECT



SHEET