RELOCATE CONTROL SEWER PUMP STATION

JOHN D. DINGELL VA MEDICAL CENTER

DETROIT, MICHIGAN

PROJECT TEAM

OWNER:

OFFICE OF CONSTRUCTION AND FACILITIES MANAGEMENT
DEPARTMENT OF VETERANS AFFAIRS
4646 JOHN R ST., DETROIT, MI 48201

ARCHITECTURE/LOW VOLTAGE/FIRE PROTECTION:

ALLIANCE | 7GAE JV
600 E. MICHIGAN AVENUE - SUITE B
KALAMAZOO, MI 49007
PHONE: 269.927.0144

1635 PRINCE STREET
ALEXANDRIA, VA 22314
PHONE: 202.617.8485

MECHANICAL/ELECTRICAL/PLUMBING ENGINEERING:

STEELHEAD ENGINEERING CO.
259 E. MICHIGAN AVENUE - SUITE 407
KALAMAZOO, MI 49007
PHONE: 269.585.2255

PROJECT INFORMATION

CONSTRUCTION TYPE:
N/A

BUILDING OCCUPANCY:
N/A

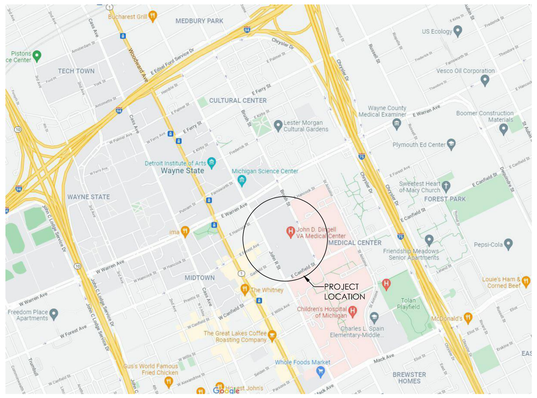
BUILDING HEIGHT:
N/A

BUILDING AREA SQUARE FOOTAGE:
N/A - SF

DRAWING SHEET INDEX

SHEET	DESCRIPTION	ISSUE DATE	NOTES
G001	COVER SHEET	NOVEMBER 05, 2021	
P101	SANITARY PUMP STATION DETAIL	NOVEMBER 05, 2021	
E101	ELECTRICAL POWER PLAN	NOVEMBER 05, 2021	

LOCATION MAP



DETROIT, MICHIGAN

NORTH

BASE BID AND DEDUCTIVE ALTERNATE #1

BASE BID: PROVIDE A NEW LIFT STATION PUMP CONTROLLER TO REPLACE THE EXISTING IN KIND AND RELOCATE IN MECHANICAL ROOM LL556. DISCONNECT EXISTING LIFT STATION PUMP CONTROLS POWER FROM THE EXISTING CONTROLLER, RE-UTILIZE AND REROUTE TO THE NEW CONTROLLER IN MECHANICAL ROOM LL556.

INCLUDE A WASHDOWN OF THE ENTIRE PIT AND EQUIPMENT BEFORE ANY WORK IS PERFORMED. REPLACE SEWER PUMPS P-5 AND P-6 ALONG WITH THE CORRESPONDING FLOATS TO BOTH PUMPS, ANY ASSOCIATED PIPING BETWEEN THE PUMPS AND THE DISCHARGE LINE BEFORE EXITING THE SUMP PIT AND REPLACE ANY INFRASTRUCTURE THAT IS IN DESPAIR; INCLUDING PIPE SUPPORTS, UNISTRUT AND ACCESS DOOR HARDWARE. REMOVE ANY MISCELLANEOUS ABANDONED MECHANICAL/CONTROL SYSTEMS.

DEDUCTIVE ALTERNATE #1: DO NOT REPLACE SEWER PUMPS P-5 AND P-6 AND THE CORRESPONDING FLOATS TO BOTH PUMPS.

65% CONSTRUCTION DOCUMENTS	11/5/2021
95% CONSTRUCTION DOCUMENTS	7/6/2022
100% CONSTRUCTION DOCUMENTS	9/2/2022
100% BID DOCUMENTS	10/19/2022
REVISED BID DOCUMENTS	2/16/2026
Revisions:	Date:

CONSULTANT
Steelhead
259 E. Michigan Avenue, Suite 407
Kalamazoo, MI 49007
P: 269.585.2255
www.steelheadengineeringco.com

ARCHITECT/ENGINEER OF RECORD
ALLIANCE | SEVEN GENERATIONS
Joint Venture
600 E. Michigan Ave, Suite B
Kalamazoo, MI 49007
P: 269.927.0144
www.7GenAE.com

1635 Prince Street,
Alexandria, VA 22314
P: 202.617.8485
www.alliance.us.com

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PRELIMINARY
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VA U.S. Department of Veterans Affairs

Drawing Title: COVER SHEET	Phase: 100% BID DOCUMENTS	Project Title: RELOCATE CONTROL SEWER PUMP STATION	Project Number: 553-21-204
			Building Number: -
Approved: Project Director	-	Location: 4646 JOHN R. STREET, DETROIT, MI 48201	Drawing Number: G001
		Issue Date: SEPTEMBER 2, 2022 / Checked: RW / Drawn: JDS	

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PUMP SCHEDULE

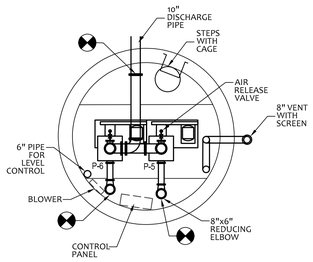
MARK	MANUFACTURER	MODEL	WATER FLOW RATE	TOTAL HEAD	PUMP	MOTOR		ELECTRICAL			ACCESSORIES	REMARKS
			GPM	FT. OF H_2O	RPM	BHP	MHP	V/PH	MCA	MOCP		
P-5	EBARA	ESP 6" SELF-PRIMING	850	42	1175	-	20	480/3	27	60	CG, CV, BFV, ARV	1, 2, 3
P-6	EBARA	ESP 6" SELF-PRIMING	850	42	1175	-	20	480/3	27	60	CG, CV, BFV, ARV	1, 2, 3

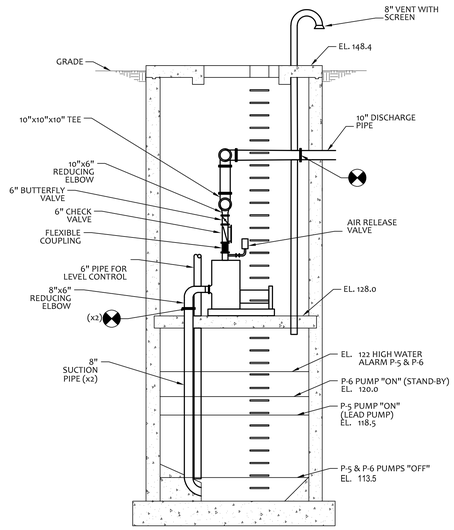
ACCESSORIES:

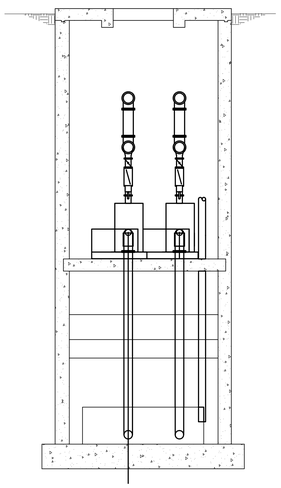
CG - COUPLING GUARD
CV - CHECK VALVE
BFV - BUTTERFLY VALVE
ARV - AIR RELEASE VALVE

REMARKS:

1. CONNECTIONS AS REQUIRED BY PIPING TYPE.
2. BID ALTERNATE #1: PROVIDE PUMPS AS SPECIFIED FOR BID ALTERNATE #1. BASE BID SHALL INCLUDE CONTROL MODIFICATIONS ONLY.
3. PROVIDE A XYLEM CENTRIPRO CDD32232 CONTROL PANEL WITH A NEMA 4 ENCLOSURE FOR CONTROL OF THE PUMPS.







PLUMBING GENERAL NOTES

A. VISIT THE SITE AND VERIFY CONDITIONS PRIOR TO BIDDING.

B. PAY ALL UTILITY FEES AND CHARGES AS PART OF BASE BID IN THE CONTRACT.

C. ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRIC RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT. DO NOT SCALE DRAWINGS. INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS OR DETAILS, BUT NOT SHOWN ON PLANS, AND VICE-VERSA, SHALL BE PROVIDED AS IF EXPRESSLY REQUIRED BY BOTH. SUBMIT A REQUEST FOR INFORMATION (RFI) IF INFORMATION CONFLICTS. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY CONTRACT DOCUMENTS. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND OTHER DRAWINGS FOR ADDITIONAL INFORMATION.

D. THE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS, THE SELECTION OF WHICH HAS IMPACTED THE DESIGNS OF OTHER TRADES (HVAC, ELECTRICAL, STRUCTURAL, ETC.). IF ALTERNATE MANUFACTURERS, FUEL SOURCES, SIZES, OR MODEL NUMBERS ARE SUBMITTED OR BID, IT IS THE RESPONSIBILITY OF THE CONTRACTOR(S) TO COORDINATE ALL DIFFERENCES PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR CHANGES REQUIRED TO OTHER TRADES IF ALTERNATE EQUIPMENT IS BID OR INSTALLED AT THE CONTRACTORS OPTION.

E. EXCEPT WHERE MODIFIED BY SPECIFIC NOTATION TO THE CONTRARY, IT SHALL BE UNDERSTOOD THAT THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN THE DRAWINGS OR SPECIFICATIONS OR BOTH, CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION.

F. COORDINATE WORK WITH THE WORK OF ALL TRADES ON THE PROJECT.

G. ALL WASTE PIPING BELOW GRADE SHALL BE SERVICE WEIGHT DUCTILE IRON WITH FLANGED BOLTED FITTINGS.

H. SLOPE 3" AND LARGER SANITARY SEWER LINES AT MINIMUM 1/8" FALL PER FT. VERIFY INVERTS WITH SITE UTILITY PLANS AND COORDINATE INSTALLATION TO ASSURE PROPER FLOW.

I. CONTRACTOR SHALL PROVIDE A ($10,000) TEN THOUSAND DOLLAR ALLOWANCE FO THE REPLACEMENT OF RUSTED, DETERIORATED OR OTHERWISE SUBSTANDARD PARTS.

SEQUENCE OF CONSTRUCTION

1. OBTAIN ALL REQUIRED PERMITTING THROUGH VA AND AHJ AND INSTALL NEW PUMP STATION CONTROL PANEL IN MECHANICAL ROOM PER ELECTRICAL DRAWINGS.
2. FOLLOWING WORK PROVIDED AS PART OF THE BID #1 ALTERNATE.
3. OBTAIN ALL REQUIRED PERMITTING INCLUDING CONFINED SPACE ENTRY IN ORDER TO ACCESS PUMP STATION 3 PIT, THROUGH VA AND AHJ.
4. STAGE ALL NECESSARY EQUIPMENT TO COMPLETE PROJECT AT SUMP PIT, IN ORDER TO MINIMIZE DOWN TIME AND REQUIRED VACUUM TRUCK SUPPORT. INCLUDING MATERIALS AND LIFTING EQUIPMENT.
5. INSTALL TEMPORARY SUPPORTS ON DISCHARGE PIPING TO ALLOW PUMP REMOVAL.
6. VACUUM TRUCK OPERATOR TO PUMP DOWN WET SIDE OF PIT BELOW LOW LEVEL INSTRUMENTATION FLOAT AND POWER WASH ALL WALLS AND INSTRUMENTATION IN WET SIDE FREE OF VISIBLE WASTE.
7. VACUUM TRUCK TO REMAIN ON STANDBY TO KEEP PIT PUMPED TO MINIMUM LEVEL DURING PUMP SWAP.
8. ISOLATE AND REMOVE BOTH PUMPS, MOTORS, CONTROL PANEL AND ASSOCIATED LEVEL INSTRUMENTATION (FLOATS).
9. INSTALL NEW PUMPS, MOTORS AND LEVEL INSTRUMENTATIONS. FIELD FIT.
10. SERVICE TEST SYSTEM, INCLUDING PUMPS AND INSTRUMENTATION.
11. REMOVE TEMPORARY PIPE SUPPORTS AND RE-ENERGIZE SYSTEM.

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CONSULTANT
Steelhead
THE STEELHEAD ENGINEERING COMPANY
259 E. Michigan Avenue, Suite 407
Kalamazoo, MI 49007
P: 269.585.2255
www.steelheadengineeringco.com

ARCHITECT/ENGINEER OF RECORD
ALLIANCE Alliance Consulting Group
SEVEN GENERATIONS architecture+engineering
Joint Venture
600 E. Michigan Ave, Suite B
Kalamazoo, MI 49007
P: 269.927.0144
www.7GenAE.com
1635 Prince Street,
Alexandria, VA 22314
P: 202.617.8485
www.alliance.us.com

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Drawing Title: SANITARY PUMP STATION DETAIL	Phase: 100% BID DOCUMENTS	Project Title: RELOCATE CONTROL SEWER PUMP STATION	Project Number: 553-21-204
			Building Number: -
Approved: Project Director	-	Location: 4646 JOHN R. STREET, DETROIT, MI 48201	Drawing Number: P101
		Issue Date: OCTOBER 20, 2022 / Checked: RW / Drawn: JM	

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ELECTRICAL SYMBOLS LEGEND

NOTE: ALL SYMBOLS MAY NOT APPEAR ON EVERY PLAN

- CONDUIT CONCEALED
- EXISTING CONDUIT CONCEALED
- CONDUIT BELOW THE SLAB
- EXISTING CONDUIT BELOW THE SLAB
- CONDUIT STUB UP
- CONDUIT STUB DOWN
- EXISTING MOTOR CONTROL CENTER
- NEW LIFT STATION CONTROL PANEL
- DEMOLISHED LIFT STATION CONTROL PANEL
- MOTOR CONNECTION (NO. DENOTES PHASE)

ELECTRICAL GENERAL NOTES

A. WORK SHALL COMPLY WITH THE N.E.C. AND ALL LOCAL, STATE AND NATIONAL CODES.

B. FIELD VERIFY THE EXISTING CONDITIONS.

C. SINGLE PHASE BRANCH CIRCUITS SHALL NOT SHARE NEUTRALS.

D. PROVIDE THE REQUIRED POWER FOR ALL EXISTING MECHANICAL OR PLUMBING EQUIPMENT SPECIFIED IN THE CONTRACT DOCUMENTS, EVEN IF NOT SHOWN ON THE POWER PLANS.

E. THE CONTRACTOR SHALL VERIFY THE POWER REQUIREMENTS OF ALL EXISTING MECHANICAL AND PLUMBING EQUIPMENT, WITH THE EQUIPMENT SUPPLIERS, PRIOR TO PREPARING SUBMITTALS OR ORDERING ANY SWITCHGEAR OR EQUIPMENT.

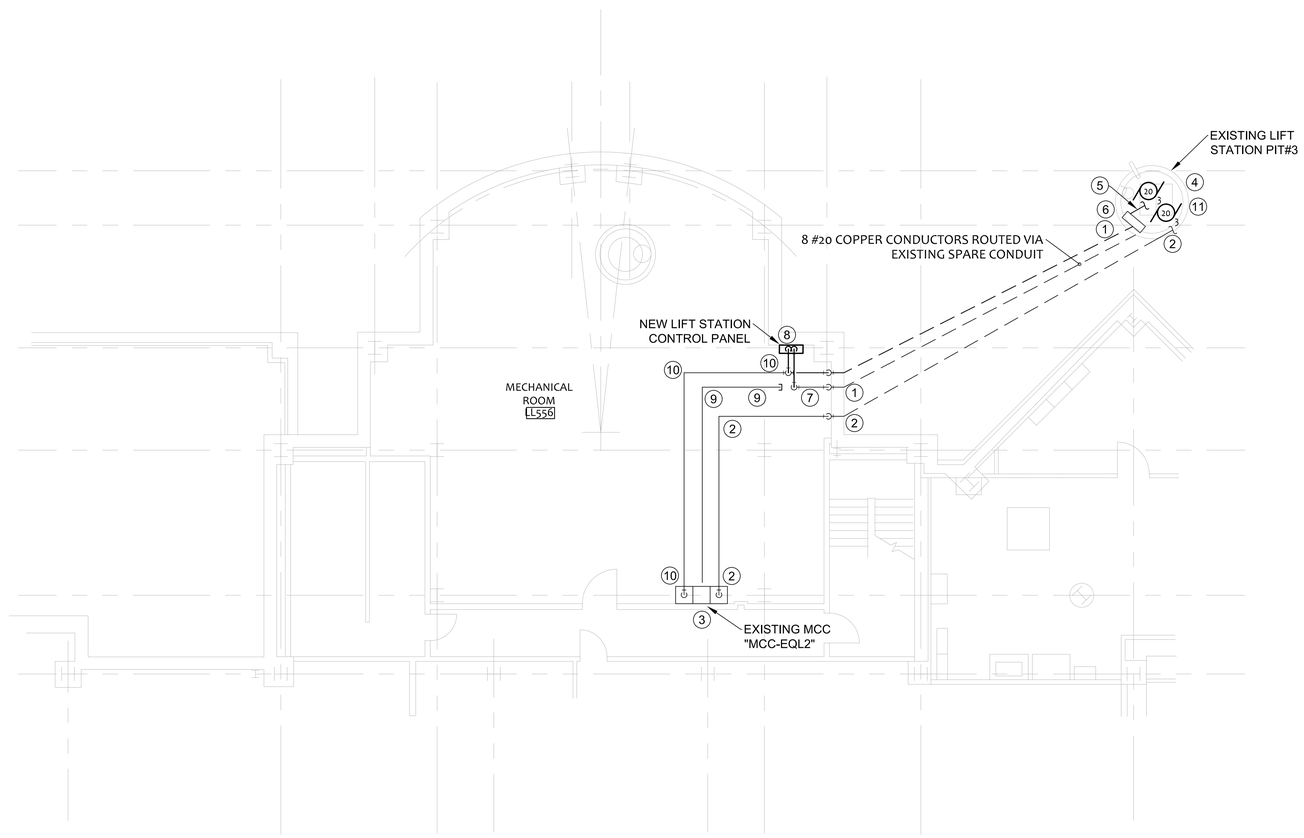
F. ALL RACEWAYS SHALL BE CONCEALED WHERE POSSIBLE, WHERE CONDITIONS REQUIRE EXPOSED ROUTING, ROUTE CONDUITS IN A NEAT MANNER PARALLEL WITH THE BUILDING LINES AND AS HIGH AS POSSIBLE.

G. PROVIDE A GROUNDING CONDUCTOR IN RACEWAYS, SIZED PER THE N.E.C.

H. REFER TO THE SPECIFICATIONS FOR MORE INFORMATION.

KEY NOTES

1. EXISTING SPARE CONDUIT SHALL BE UTILIZED FOR NEW FLOAT SWITCH CONTROL WIRING. FIELD VERIFY EXACT LOCATION AND ROUTING OF CONDUIT. PROVIDE A PULL STRING TO ROUTE CABLING THROUGH EXISTING CONDUIT. PROVIDE FINAL CONNECTIONS TO THE FLOAT SWITCHES.
2. EXISTING CONDUIT AND CIRCUITRY TO THE MOTORS SHALL REMAIN.
3. REUSE EXISTING LIFT STATION PUMP STATION NO. 3 MOTOR STARTER FOR NEW LIFT STATION PUMP CONTROL PANEL.
4. REUSE CIRCUITRY TO BOTH EXISTING 20HP PUMP MOTORS.
5. DEMOLISH CONTROL PANEL ASSOCIATED POWER AND CIRCUITRY ROUTED TO THE FLOAT SWITCHES.
6. DEMOLISH THE EXISTING LIFT STATION CONTROL PANEL AND ASSOCIATED WIRING. THE CONDUIT SHALL REMAIN AND MAY BE RE-USED. FIELD VERIFY CONDUIT CONDITIONS, SIZE, AND ROUTE.
7. ROUTE A NEW CONDUIT FROM THE INTERSECTION OF THE EXISTING SPARE CONDUIT TO THE NEW CONTROL PANEL. FIELD VERIFY CONDUIT SIZE, ROUTE AND CONNECTION REQUIREMENTS.
8. CONTRACTOR SHALL PROVIDE CONDUIT AND CIRCUITRY FROM THE ALARMS ON THE CONTROL PANEL TO THE EXISTING SIEMENS BUILDING MANAGEMENT SYSTEM. FIELD VERIFY THE BUILDING MANAGEMENT SYSTEM LOCATION AND CONNECTION REQUIREMENTS.
9. EXISTING SPARE CONDUIT, TO REMAIN, DISCONNECTED FROM THE NEW CONDUIT TO THE CONTROL PANEL, CAP FOR FUTURE USE.
10. EXISTING CONDUIT AND CIRCUITRY SHALL REMAIN.
11. FOR BID ALTERNATE #1, DISCONNECT THE EXISTING PUMP MOTORS AND RECONNECT THE NEW PUMP MOTORS.



1 POWER PLAN

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Drawing Title	Phase	Project Title	Project Number
ELECTRICAL POWER PLAN	100% BID DOCUMENTS	RELOCATE CONTROL SEWER PUMP STATION	553-21-204
			Building Number: -
Approved: Project Director	-	Location: 4646 JOHN R. STREET, DETROIT, MI 48201	Drawing Number
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