**Republic MO Wastewater Treatment Plant Project Summary**

Facing aging infrastructure, regulatory compliance concerns and an inability to accommodate additional flow from population and development growth, the Republic wastewater treatment facility was reaching the end of its useful life. The City collaborated with Burns & McDonnell throughout the life of the wastewater master plan project to set the foundation for the preferred facility expansion project sizing and process design based on their projected population growth, operation preferences and facility needs. The facility expansion project will convert an existing 3.2 MGD treatment facility to a 5 MGD average day and peak flow of 12 MGD. Coupled with the peak wet weather treatment system, the total facility will have a peak flow capacity of 16 MGD.

The wastewater treatment plant project involves significant unit process improvements including a new influent pump station, grit removal and fine screening, biological treatment basins with discrete anaerobic, anoxic, and aerobic zones, return pumping in the anoxic and aerobic zones, alum feed system for total phosphorus trimming, membrane bioreactors and ancillary equipment and RAS/WAS pumping. On the solids side, a fourth aerobic digester will be constructed and the existing three will be converted to diffused aeration system, a centrifuge will be installed for dewatering and sludge storage will be constructed. Existing aeration basins will be converted to wet weather holding and a new administration building and lab will be constructed.

Additional information on this project is available in the Facility Plan and is available upon request. Please contact Andrew Nelson at anelson@republicmo.com in the Builds Department if you are interested in learning more about this project.

**NOTES:**

1. REFER TO SHEET 0100CD101 FOR GENERAL DEMOLITION NOTES.
2. REFER TO ASBESTOS AND HAZARDOUS MATERIALS SURVEY REPORT DATED APRIL 26, 2023 FOR EXISTING CONDITIONS AT THE CLARIFIER AND CONTROL BUILDING.
3. REFER TO DEMOLITION SPECIFICATION 02 41 19.

| no. | date | by | ckd | description |
|---|---|---|---|---|
| A | 05/15/23 | MJC | CWK | ISSUED FOR REVIEW |
| B | 10/20/23 | MJC | CWK | ISSUED FOR REVIEW |

XIANG, LI
1718403071

CITY OF REPUBLIC
1718403003

CITY OF REPUBLIC
1718301001

420 MBR BUILDING
400 MBR TANKS
360 ELECTRICAL BUILDING
700 ADMINISTRATION BUILDING
050 FILTER BUILDING
060 DISINFECTION BUILDING
DRY BRANCH
460 MBR BLOWER PAD
330 SCUM PUMP STATION
300 PROCESS BASIN
350 RAS SPLITTER
320 PROCESS BASIN BLOWER PAD
310 PROCESS BASIN SPLITTER
340 CHEMICAL BUILDING
240 GRIT REMOVAL & FINE SCREEN BUILDING
370 GENERATOR PAD
600 WASTEWATER HOLDING BASINS
NEW OUTFALL 001 (FLARED END SECTION)
520 DIGESTER BLOWER PAD
540 DEWATERING BUILDING
500 DIGESTER NO. 4
METER
040 TRANSFER PUMP STATION
LAY DOWN AREA
560 SLUDGE STORAGE
210 INFLUENT SCREENING BUILDING
200 INFLUENT PUMP STATION
TRIPLE BARREL REINFORCED CONCRETE BOX CULVERT
CLARIFIER (TBR)
CONTROL BUILDING (TBR)
DEMOLITION (SEE NOTES 1, 2 AND 3)
N WEST AVE

CP #190
CP #191
CP #160
CP #104
CP #102
CP #105
CP #152
CP #153
CP #188
CP #187
CP #155
CP #156
CP #157
CP PK
TBM BONNET BOLT FH
CP 5/8" IP ORANGE CAP
CP 5/8" IP ORANGE CAP

HIGHLAND PARK TOWN CTR LLC
1718403052

KO STORAGE OF OZARK LLC
1718403051

FETTERS, RICK E
1718403008

PAGE, GABRIEL LEE TR
1718403007

LOUGH, ALBERT
1718301009

GARRISON, JOANNA ET AL
1718301008

CARUTHERS, YANCY W
1718403019

THOMASSEN, JOSHUA
1718403073

CAILEANU, LUCA
1718403074

**SITE PLAN**
0 100' 200'
SCALE IN FEET
NORTH


BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
LICENSEE NO. 000165


| date | detailed |
|---|---|
| APRIL 8, 2022 | M. TOOLEN |
| designed | checked |
| M. CANULL | |

GREENE COUNTY, MISSOURI

**WWTP EXPANSION**
CIVIL
OVERALL PROPERTY PLAN

| project | contract |
|---|---|
| 143573 | |

drawing **100C100** rev. **B**

sheet of sheets

file 143573_100C100_OVERALLSP_200.DWG

MICHAEL J. CANULL
PROFESSIONAL ENGINEER
PE-2017027401

Scale For Microfilming: Millimeters / Inches