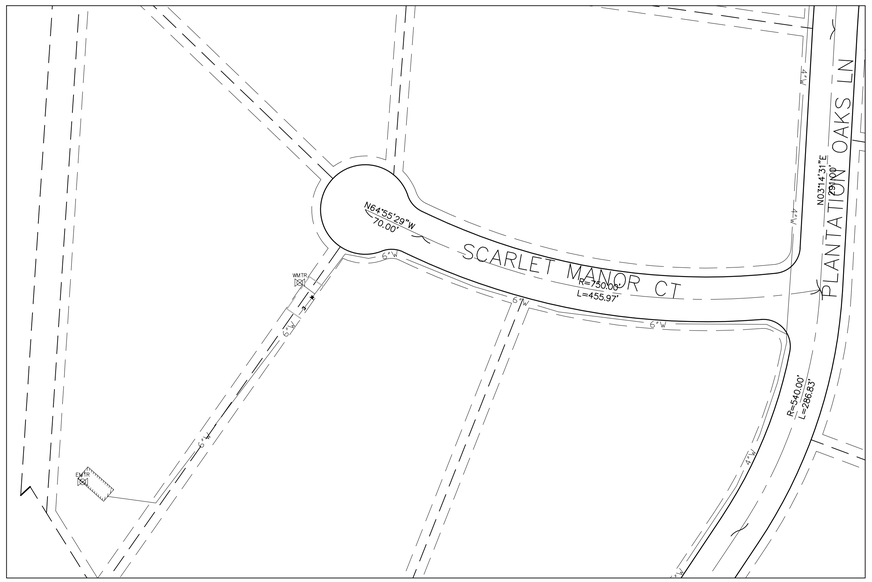
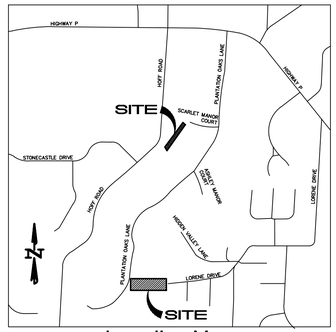
A SET OF CONSTRUCTION PLANS FOR
TARA OAKS MANOR
WATER MAIN EXTENSION
TRACTS OF LAND BEING PART OF SECTION 12 AND PART OF SECTION 13 TOWNSHIP 47 NORTH, RANGE 2 EAST OF THE FIFTH PRINCIPAL MERIDIAN ST. CHARLES COUNTY, MISSOURI

Plan View
SCALE: 1" = 60'



Plan View
SCALE: 1" = 80'



Location Map
NOT TO SCALE

Legend

- WV WATER VALVE
- FIRE HYDRANT
- S EX. SANITARY SEWER MANHOLE
- FLARED END SECTION
- POWER POLE
- GUY WIRE
- WV EX. WATER VALVE
- EX. FIRE HYDRANT
- AC AC UNIT
- CTV CABLE TV BOX
- EB ELECTRIC BOX
- ET ELECTRIC TRANSFORMER
- TP TELEPHONE CABLE PEDESTAL
- TB TELEPHONE BOX
- EMTR ELECTRIC METER
- WMTR WATER METER
- TREE
- BUSH
- MH MANHOLE
- FE FLARED END SECTION
- EP END PIPE
- CP CONCRETE PIPE
- RCP REINFORCED CONCRETE PIPE
- CMP CORRUGATED METAL PIPE
- CPP CORRUGATED PLASTIC PIPE
- PVC POLY VINYL CHLORIDE (PLASTIC)
- TBR TO BE REMOVED
- TBA TO BE ABANDONED

VEGETATION ESTABLISHMENT
For Urban Development Sites
APPENDIX A

SEEDING RATES:

PERMANENT:
- Tall Fescue – 150 lbs./ac.
- Smooth Brome – 100 lbs./ac.
- Combined – Fescue @ 75 lbs./ac. AND Brome @ 50 lbs./ac.

TEMPORARY:
- Wheat or Rye – 150 lbs./ac. (3.5 lbs. per 1,000 s.f.)
- Oats – 120 lbs./ac. (2.75 lbs. per 1,000 s.f.)

SEEDING PERIODS:
- Fescue or Brome – March 1 to June 1; August 1 to October 1
- Wheat or Rye – March 15 to November 1
- Oats – March 15 to September 15

MULCH RATES:
- 100 lbs. per 1000 sq. ft. (4,356 lbs. per ac.)

FERTILIZER RATES:
- Nitrogen 30 lbs./ac.
- Phosphate 30 lbs./ac.
- Potassium 30 lbs./ac.
- Lime 600 lbs./ac. ENM*

* ENM = effective neutralizing material as per State evaluation of quarried rock.

Drawing Index

Benchmarks

Project

REFERENCE BENCHMARK:
"C-149" ELEV=545.45 (NAVD88).
LOCATED 80 FEET WEST OF A TOWNSHIP ROAD CROSSING, 48 FEET NORTH OF THE CENTERLINE OF THE TRACK, 12 FEET WEST OF THE RIGHT-OF-WAY FENCE CORNER, AND 2 FEET SOUTH OF THE RIGHT-OF-WAY FENCE. A STANDARD DISK, STAMPED C 149 1935 AND SET IN THE TOP OF A CONCRETE POST PROJECTING 6 INCHES ABOVE GROUND.

Site

SITE BENCHMARK:
ELEV=524.40 SANITARY MANHOLE LOCATED IN THE LORENE DRIVE RIGHT-OF-WAY APPROXIMATELY 67 FEET FROM A FLARED END SECTION, 20 FEET EAST OF THE ASPHALT PAVEMENT AND 114 FEET FROM A POWER POLE.

Utility Contacts

Sanitary Sewers
City of O'Fallon
100 N. Main St.
O'Fallon, MO. 63366
Contact: 636-240-2000

Water
City of O'Fallon
100 N. Main St.
O'Fallon, MO. 63366
Contact: 636-240-2000

Storm Sewer
City of O'Fallon
100 N. Main St.
O'Fallon, MO. 63366
636-240-2000

Electric
Cuivre River Electric Co.
P.O. Box 160
Troy, MO. 63379-0160
1-800-392-3709

Ameren Missouri
200 Callahan Road
Wentzville, MO. 63385
636-639-8312

Gas
Spire Gas
6400 Graham Road
St. Louis, MO. 63134
314-522-2297

Telephone
CenturyLink
1151 Century Tel Dr.
Wentzville, MO. 63385
636-332-7261

Fire District
O'Fallon Fire Protection District
111 Laura K Dr.
O'Fallon, MO. 63366
636-272-3493

* City of O'Fallon Construction work hours per City Ordinance 3429 as shown in Section 500.420 of the Municipal Code of the City of O'Fallon are as follows:

October 1 through May 31
7:00 A.M. To 7:00 P.M. Monday Through Sunday
June 1 Through September 30
6:00 A.M. To 8:00 P.M. Monday Through Friday
7:00 A.M. to 8:00 P.M. Saturday and Sunday

* The area of land disturbance is 0.12 Acres.
* Per Flood Insurance Rate Map Panel Number 29183C0230G Dated January 20, 2016. This site is Zoned 'X', described as areas outside the 500-year floodplain.

City approval of any construction site plan does not mean that any building can be constructed on the lots without meeting the building setbacks as required by the zoning codes.

All installations and construction shall conform to the approved engineering drawings. However, if the developer chooses to make minor modifications in design and/or specifications during construction, they shall make such changes at their own risk, without any assurance that the City Engineer will approve the completed installation or construction. It shall be the responsibility of the developer to notify the City Engineer of any changes from the approved drawings. The developer may be required to correct the installed improvements so as to conform to the approved engineering drawings. The developer may request a letter from the Construction Inspection Division regarding any field changes approved by the City Inspector.

Lighting values will be reviewed on site prior to the final occupancy inspection.

CITY OF O'FALLON
ENGINEERING DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY:_____ DATE_____
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN

PROJECT TITLE:
TARA OAKS MANOR
WATER MAIN EXTENSION

Box Project # 22-18863 | Issue Date: 09/11/2023

ENGINEERING
PLANNING
SURVEYING
221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents intended to be authenticated by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

STATE OF MISSOURI
JEFFREY B SIMMONS
NUMBER PE-2007030831
PROFESSIONAL ENGINEER
12/11/23

JEFFREY B. SIMMONS
CIVIL ENGINEER
MO 2007030831

REVISIONS

09/25/23	CITY COMMENTS
11/27/23	CITY COMMENTS

Developer / Owner:
Tara Oaks Manor HOA
26 Plantation Oaks Lane
St. Paul, MO 63366

COVER SHEET

P+Z No. N/A
Approval Date: N/A
City No. N/A

GENERAL NOTES

1. Driveway locations shall not interfere with the sidewalk handicap ramps, or curb inlet sumps
2. Sidewalks, curb ramps, ramps and accessible parking spaces shall be constructed in accordance with the current approved "American with Disabilities Act Accessibility Guidelines" (ADAAG) along with the required grades, construction materials, specifications and signage. If any conflict occurs between the above information and the plans, the ADAAG guidelines shall take precedence and the contractor prior to any construction shall notify the Project Engineer.
   2.1. Truncated domes for curb ramps located in public right of way shall meet PROWAG requirements and shall be constructed using red pre-cast truncated domes per pavement details.
3. Any proposed pavilions or playground areas will need a separate permit from the Building Division.
4. The Contractor is responsible to call Missouri One Call and The City of O'Fallon for the location of utilities. Contact the City of O'Fallon (636) 379-3814 for the location of City maintained cable for street lights and traffic signals, all other utilities call Missouri One Call 1-800-DIG-RITE. 1-800-344-7483
5. All proposed utilities and/or utility relocations shall be located underground.
6. All proposed fencing requires a separate permit through the Building Safety Division.
7. All construction operations and work zone traffic control within the right of way will follow MoDOT or M.U.T.C.D. standards whichever is more stringent.
8. (INTENTIONALLY OMITTED)
9. All subdivision identification or directional sign(s) must have the locations and sizes approved and permitted separately through the Planning and Development Division.
10. Materials such as trees, organic debris, rubble, foundations, and other deleterious material shall be removed from the site and disposed of in compliance with all applicable laws and regulations. If the material listed previously are reused, a letter from a soil Engineer must clarify amount, location, depth. etc. and be approved with the construction plans. Landfill tickets for such disposal shall be maintained on file by the developer. Burning on site shall be allowed only by permit from the local fire district. If a burn pit is proposed the location and mitigation shall be shown on the grading plan and documented by the soils engineer.
11. Twenty-four (24) hours prior to starting any of the work covered by the above plans and after approval thereof, the developer shall make arrangements with the Construction Inspection Office to provide for inspection of the work, sufficient in the opinion of the City Engineer, to assure compliance with the plans and specifications as approved.
12. The City Engineer or their duly authorized representative shall make all necessary inspections of City infrastructure, escrow items or infrastructure located on the approved plans.
13. All installations and construction shall conform to the approved engineering drawings. However, if the developer chooses to make minor modifications in design and/or specifications during construction, he/she shall make such changes at his/her own risk, without any assurance that the City Engineer will approve the completed installation or construction. It shall be the responsibility of the developer to notify the City Engineer of any changes from the approved drawings. The developer may be required to correct the installed improvements so as to confirm to the approved engineering drawings. The developer may request a letter from the Construction Inspection Division regarding any field changes approved by the City inspectors.
14. City approval of the construction site plans does not mean that any building can be constructed on the lots without meeting the building setbacks as required by the zoning code.

Grading Notes

1. Developer must supply City Construction Inspectors with an Engineer's soil reports prior to and during site grading. The soil report will be required to contain the following information on soil test curves (Proctor reports) for projects within the City:
   1.1. Maximum dry density
   1.2. Optimum moisture content
   1.3. Maximum and minimum allowable moisture content
   1.4. Curve must be plotted to show density from a minimum of 90% Compaction and above as determined by the "Modified AASHTO T-180 Compaction Test" (A.S.T.M.-D-1157) or from a minimum of 95% as determined by the "Standard Proctor Test ASSHTO T-99, Method C" (A.S.T.M.-D-698). Proctor type must be designated on document.
   1.5. Curve must have at least 5 density points with moisture content and sample locations listed on document
   1.6. Specific gravity
   1.7. Natural moisture content
   1.8. Liquid limit
   1.9. Plastic limit

   Be advised that if this information is not provided to the City's Construction Inspector the City will not allow grading or construction activities to proceed on any project site.
2. All fill placed in areas other than proposed storm sewers, sanitary sewers, proposed roads, and paved areas shall be compacted from the bottom of the fill up in 8" lifts and compacted to 90% maximum density as determined by Modified AASHTO T-180 compaction test or 95% of maximum density as determined by the Standard Proctor Test AASHTO T-99. Ensure the moisture content of the soil in fill areas corresponds to the compactive effort as defined by the Standard or Modified Proctor Test. Optimum moisture content shall be determined using the same test that was used for compaction. Soil compaction curves shall be submitted to the City of O'Fallon prior to the placement of fill.
3. The surface of the fill shall be finished so it will not impound water. If at the end of a days work it would appear that there may be rain prior to the next working day, the surface shall be finished smooth. If the surface has been finished smooth for any reason, it shall be scarified before proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen ground, nor shall filling operations continue when the temperature is such as to permit the layer under placement to freeze.
4. All sediment and detention basins are to be constructed during the initial phase of the grading operation or in accordance with the approved SWPPP.
5. When grading operations are complete or suspended for more than 14 days, permanent grass must be established at sufficient density to provide erosion control on site. Between permanent grass seeding periods, temporary cover shall be provided according to Missouri Department of Natural Resources Protecting Water Quality – a field guide to erosion, sediment and stormwater best management practices for development sites in Missouri and Kansas.All finished grades (areas not to be disturbed by improvements) in excess of 20% slopes (5:1) shall be mulched and tacked at a rate of 100 pounds per 1000 square feet when seeded.
6. No slopes shall exceed 3 (horizontal): 1 (vertical) unless otherwise approved by the soils report and specifically located on the plans and approved by the City Engineer.
7. All low places whether on site or off shall be graded to provide drainage with temporary ditches.
8. Any existing wells and/or springs which may exist on the property must be sealed in a manner acceptable to the City of O'Fallon Construction Inspection Department and following Missouri Department of Natural Resources standards and specifications.
9. (INTENTIONALLY OMITTED)
10. All trench back fills under paved areas shall be granular back fill, and compacted mechanically. All other trench back fills may be earth material (free of large clods, or stones) and compacted using either mechanical tamping or water jetting, Granular material and earth material associated with new construction outside of pavements may be jetted, taking care to avoid damage to newly laid sewers. The jetting shall be performed with a probe route on not greater than 7.5 foot centers with the jetting probe centered over and parallel with the direction of the pipe. Trench widths greater than 10 feet will require multiple probes every 7.5 foot centers.
   10.1. Depth, Trench back fills less than 8 feet deep shall be probed to a depth extending half the depth of the trench back fill, but not less than 3 feet. Trench back fill greater than 8 feet in depth shall be probed to half the depth of the trench back fill but not greater than 8 feet.
   10.2. Equipment, The jetting probe shall be a metal pipe with an interior diameter of 1.5 to 2 inches.
   10.3. Method, Jetting shall be performed from the lowest surface topographic point and proceed toward the highest point, and from the bottom of the trench back fill toward the surface. The flooding of each jetting probe shall be started slowly allowing slow saturation of the soil. Water is not allowed to flow away from the trench without first saturating the trench.
   10.4. Surface Bridging, The contractor shall identify the locations of the surface bridging (the tendency for the upper surface to crust and arch over the trench rather than collapse and consolidate during the jetting process). The contractor shall break down the bridged areas using an appropriate method such as wheels or bucket of a backhoe. When surface crust is collapsed, the void shall be back filled with the same material used as trench back fill and re-jetted. Compaction of the materials within the sunken/jetted area shall be compacted such that no further surface subsidence occurs.
11. Site grading.
   11.1. Within City right-of-way. Material is to be placed in eight (8) inch to twelve (12) inch loose lifts and compacted per the approved compaction requirements. One (1) compaction test will be performed every two hundred fifty (250) feet along the centerline for each lift.
   11.2. Outside of City right-of-way. Material is to be placed in eight (8) inch to twelve (12) inch loose lifts and compacted per the approved compaction requirements. One (1) compaction test will be performed at two (2) foot vertical intervals and approximately every one thousand (1,000) cubic yards.
12. Access to the site from any other location other than the proposed construction entrance is strictly prohibited!

Erosion Control Notes

1. The Permittee shall assume complete responsibility for controlling all siltation and erosion of the project area. The Permittee shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/or siltation fabric fences (possible methods of control are detailed in the plan). Control shall commence with the clearing operations and be maintained throughout the project until acceptance of the work by City of O'Fallon and as needed by MoDOT. The Permittee's responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The City of O'Fallon and as required by MoDOT may at their option direct the Permittee in his methods as deemed fit to protect property and improvements. Any depositing of silt or mud on new or existing pavement shall be removed immediately. Any depositing of silts or mud in new or existing storm sewers and/or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the City of O'Fallon and as required by MoDOT."
2. All erosion control systems are to be inspected and corrected weekly, especially within 48 hours of any rain storm resulting in one-quarter inch of rain or more. Any silt or debris leaving the site and affecting public right of way or storm water drainage facilities shall be cleaned up within 24 hours after the end of the storm.
3. Erosion control devices (silt fence, sediment basin, etc.) shall be in accordance with Missouri Department of Natural Resources Protecting Water Quality – a field guide to erosion, sediment and stormwater best management practices for development sites in Missouri and Kansas.
4. This development is required to provide long term post construction BMP's such as; low impact design, source control and treatment controls that protects water quality and controls run off to maximum extent practical in compliance with Phase II Illicit Storm Water Discharge Guidelines. (Ord. 5082, section 405.245)
5. Graded areas shall be seeded and mulched (strawed) within 14 days of stopping land disturbance activities. Unless it can be shown to the City Engineer that weather conditions are not favorable, vegetative growth is to be established within 6 weeks of stopping grading work on the project. The vegetative growth established shall be sufficient to prevent erosion and the standard shall be as required by EPA and DNR. (70% coverage per square foot) Ord. 6496, Section 405.095
6. the Permittee shall assume complete responsibility for controlling all siltation and erosion of the project area. The Permittee shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/or siltation fabric fences (possible methods of control are detailed in the plan). Control shall commence with the clearing operations and be maintained throughout the project until acceptance of the work by the City of O'Fallon and as necessary by MoDOT. The Permittee's responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The City of O'Fallon and as required by MoDOT may at their option direct the Permittee in his methods as deemed fit to protect property and improvements. Any Depositing of silt or mud on new or existing pavement shall be removed immediately. Any depositing of silts or mud in new or existing storm sewers or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the City of O'Fallon and as required by MoDOT.
7. All erosion control systems are inspected and corrected weekly, especially within 48 hours of any rainstorm resulting in one-half inch of rain or more. Any silt or debris leaving the site and affecting public rights-of-ways or storm water drainage facilities shall be cleaned up within 24 hours after the end of the storm.

Water Notes

1. Fire hydrants shall be a maximum of 600' apart. Local fire district approval is required.
2. Coordinate with the water company on the location of water meters. For meters in the City's district, meters shall be in the right-of-way, otherwise an access easement from the right-of-way shall be provided.
3. All water main must have a minimum of 42" of cover. (City water mains)
4. Provide water valves to isolate the system.
5. All water mains shall be class C900 or equal with locator/tracer wires
6. If the excavations are made in the improved portion of the right-of-way, twelve inches of granular backfill will be placed over exposed facilities and controlled low strength material (CLSM) aka flowable fill will fill the hole with eight inches of the finished surface for concrete pavement. There will be a plastic membrane placed between the rock base and the CLSM to prevent the material from bleeding into the rock base. The remaining eight inches will be restored by placing a 28 day, 4,000 psd concrete mix.
7. DISINFECTING: Disinfecting shall be accomplished by placing sufficient hypo chlorite granule (HTH) in each section of pipe to achieve a chlorine residual in the pipeline, upon initial filling, of 50 mg/L (PPM). HT. tablets will not be allowed. Following completion of the pipeline, it shall be slowly filled with water and a sample will be taken immediately and the chlorine residual must be 50 mg/L or greater. The solution shall be allowed to stand for 24 hours and a sample shall then be taken. The chlorine residual after 24 hours shall be 30 mg/L or greater. If the piping shows insufficient chlorine residuals in either test, the piping shall be re-chlorinated by the injection of hypo chlorite solution until satisfactory results are achieved. All disinfecting shall be done by the contractor. Only the testing to determine the chlorine residual will be done by the City.
8. PRESSURE TESTING: Immediately following disinfection, the piping shall be pumped to a pressure (at the HIGHEST point in the project) of 150 psi or higher where the working pressure is higher than 150 PSI as determined by the City. In such cases, the pressure shall be as specified by the City and two pressure tests shall be conducted. The first test shall be with the fire hydrant auxiliary valve open and be to 50 PSI. The second test shall be with the fire hydrant auxiliary valve closed and be to the higher pressure as directed by the City. All pumping equipment and pressure gauges shall be provided by the contractor. After achieving the test pressure, the piping shall be left closed for a period of two (2) hours. At the end of this time the pressure drop shall not exceed 2 psi. In addition, if the pressure appears, in judgment of the City's representative, to be continuing to drop, the test shall be continued for another two (2) hours and if any further drops occur, the test shall be considered a failure. If the pressure test fails, the contractor will be required to find and correct the source of the leakage. If this requires draining of the pipeline, when the leakage is corrected, the pipeline must be re-disinfected and the pressure tested again until satisfactory result are achieved. Any MDNR required dechlorination will be performed by the contractor.
9. All tops for valves, meters, and manholes are to be constructed to within 1 inch (0.08') of finish grade. Grading around structure tops on slopes need to be accounted for.
10. BACTERIOLOGICAL TESTING: After satisfactory disinfection and pressure testing, a sample shall be taken by the contractor in the presence of a City representative and submitted to a laboratory approved by the Missouri Department of Natural Resources and the City for bacteriological analysis. After 24 hours, a second sample shall be taken in a like manner and submitted for analysis. The two samples taken on consecutive days ,a minimum of 24 hours apart, must be found to be "safe" by the testing laboratory, and copies of the test results must be supplied to the City. If the samples are not found to be "safe" further flushing and/or disinfection as directed by the City shall be conducted by the contractor until "safe" samples on two consecutive test days are achieved. Following successful bacteriological testing and a determination by the City that the samples are "safe", the mains may be placed into service.

PROJECT TITLE:

TARA OAKS MANOR
WATER MAIN EXTENSION

Bax Project # 22-18863 | Issue Date: 09/11/2023

ENGINEERING
PLANNING
SURVEYING
221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents intended to be authenticated by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

STATE OF MISSOURI
JEFFREY B SIMMONS
NUMBER PE-2007030831
PROFESSIONAL ENGINEER
11/29/23

JEFFREY B. SIMMONS
CIVIL ENGINEER
MO 2007030831

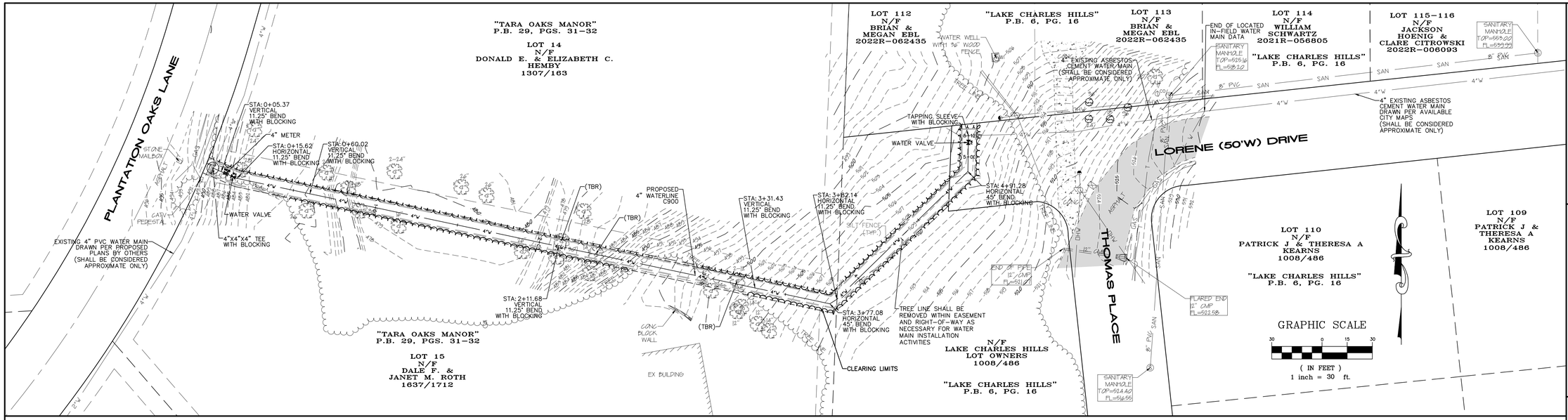
REVISIONS

09/25/23	CITY COMMENTS
11/27/23	CITY COMMENTS

Developer / Owner:
Tara Oaks Manor HOA
26 Plantation Oaks Lane
St. Paul, MO 63366

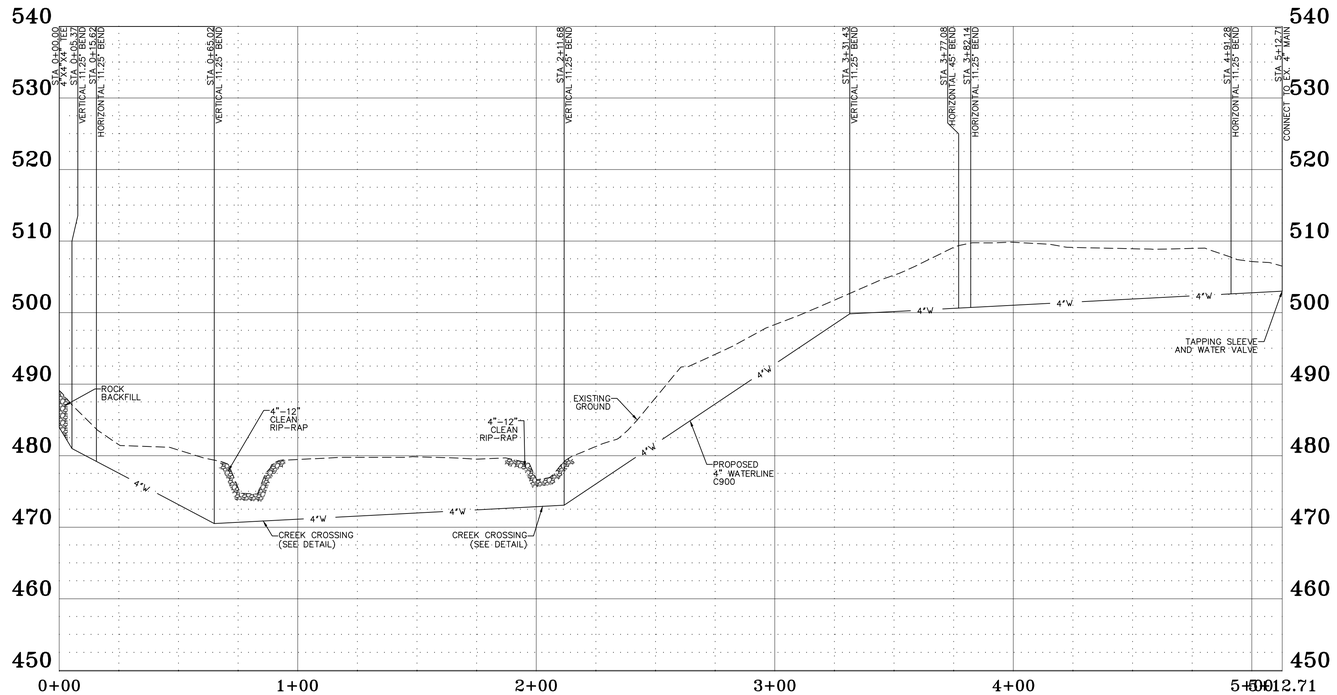
NOTES

P+Z No. N/A
Approval Date: N/A
City No. N/A



Note:

Provide Granualr Backfill to all water main trenches that cross the pavement, lie within ten (10) feet of the edge of pavement and/or the 1:1 shear plane of the road.



WATERMAIN PROFILE

SCALES:
HORIZ. 1"=30'
VERT. 1"=10'

Note: See water site plan for horizontal bends, valves, tees, and tapping sleeve locations

LEGEND:

- WV WATER VALVE
- FIRE HYDRANT
- (S) EX. SANITARY SEWER MANHOLE
- FLARED END SECTION
- POWER POLE
- GUY WIRE
- WV EX. WATER VALVE
- EX. FIRE HYDRANT
- AC AC UNIT
- CTV CABLE TV BOX
- EB ELECTRIC BOX
- ET ELECTRIC TRANSFORMER
- TP TELEPHONE CABLE PEDESTAL
- TB TELEPHONE BOX
- EMTR ELECTRIC METER
- WATR WATER METER
- TREE
- BUSH

MH	MANHOLE
FE	FLARED END SECTION
EP	END PIPE
CP	CONCRETE PIPE
RCP	REINFORCED CONCRETE PIPE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
PVC	POLY VINYL CHLORIDE (PLASTIC)
TBR	TO BE REMOVED
TBA	TO BE ABANDONED

PROJECT TITLE:

TARA OAKS MANOR
WATER MAIN EXTENSION

Box Project # 22-18863 | Issue Date: 09/11/2023

ENGINEERING
PLANNING
SURVEYING
221 Point Test Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1716

STATE OF MISSOURI
JEFFREY B SIMMONS
NUMBER PE-2007030831
PROFESSIONAL ENGINEER
12/14/23

JEFFREY B. SIMMONS
CIVIL ENGINEER
MO 2007030831

REVISIONS

09/25/23	CITY COMMENTS
11/27/23	CITY COMMENTS

Developer / Owner:
Tara Oaks Manor HOA
26 Plantation Oaks Lane
St. Paul, MO 63366

PLAN AND PROFILE

P+Z No. N/A
Approval Date: N/A
City No. N/A

Page No.
3 of 5

"TARA OAKS MANOR"
P.B. 29, PGS. 31–32

LOT 32
N/F
BRADLEY W & JOANNE M
FISCHER
6223/1406

"TARA OAKS MANOR"
P.B. 29, PGS. 31–32

LOT 33
N/F
JACOB & FAITH
HARRISON
2022/36000

"TARA OAKS MANOR"
P.B. 29, PGS. 31–32

LOT 31
N/F
IVAN & JULIE
DIEDRICH IRREVOC TRUST
7377/1640

N64°55'29"W
70.00'

SCARLET MANOR COURT

R=750.00'
L=455.97'

GRAPHIC SCALE

30 0 15 30

(IN FEET)
1 inch = 30 ft.

6"W

WATER METER

EXISTING 6" PVC WATER MAIN
DRAWN PER PROPOSED
PLANS BY OTHERS
(SHALL BE CONSIDERED
APPROXIMATE ONLY)

SILT FENCE
(TYP.)

CONTRACTOR SHALL LOCATE
EXISTING METER CONNECTION
TO 6" MAIN

CONTRACTOR SHALL INSTALL
FLUSHING HYDRANT
APPROXIMATELY 5' SOUTH
FROM LOCATED TEE
CONNECTION

EXISTING 6" PVC WATER MAIN
DRAWN PER PROPOSED
PLANS BY OTHERS
(SHALL BE CONSIDERED
APPROXIMATE ONLY)
(TBA)

CONTRACTOR SHALL INSTALL
CAP SOUTH OF FLUSHING
HYDRANT

"TARA OAKS MANOR"
P.B. 29, PGS. 31–32

LOT 30
N/F
STEVE L & MARY BETH
OLENDORFF
6802/1143

WELL HOUSE DRAWN PER
AERIAL IMAGE
(SHALL BE CONSIDERED
APPROXIMATE ONLY)

CONTRACTOR SHALL
ABANDON WELL IN
ACCORDANCE WITH DNR AND
COUNTY STANDARDS

WATER WELL HOUSE

"TARA OAKS MANOR"
P.B. 29, PGS. 31–32

LOT 29
N/F
DENOTHER LIVING TRUST
2484/444

4"W

PROJECT TITLE:

TARA OAKS MANOR
WATER MAIN EXTENSION

Box Project # 22-16863 | Issue Date: 09/11/2023

ENGINEERING
PLANNING
SURVEYING

221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents intended to be authenticated by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

STATE OF MISSOURI
JEFFREY B SIMMONS
NUMBER PE-2007030831
PROFESSIONAL ENGINEER
9/11/23

JEFFREY B. SIMMONS
CIVIL ENGINEER
MO 2007030831

REVISIONS

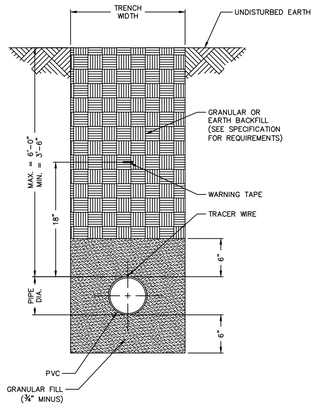
09/25/23	CITY COMMENTS
11/27/23	CITY COMMENTS

Developer / Owner:
Tara Oaks Manor HOA
26 Plantation Oaks Lane
St. Paul, MO 63366

PLAN

P+Z No. N/A
Approval Date: N/A
City No. N/A

NOTE: THIS DETAIL IS FROM PWSD#2

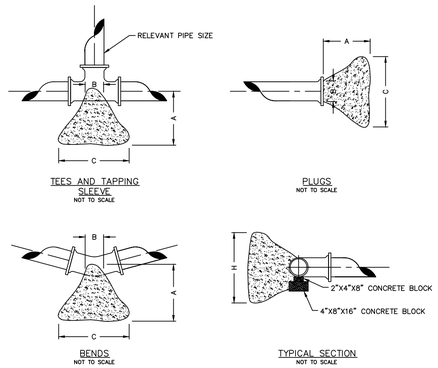


NOTES

1) SEE SPECIFICATIONS FOR ADDITIONAL DETAILS FOR BEDDING AND BACKFILL.

TYPICAL TRENCH SECTION FOR PVC PIPE
NOT TO SCALE
DETAIL "A"
PAGE 1 OF 2

NOTE: THIS DETAIL IS FROM PWSD#2

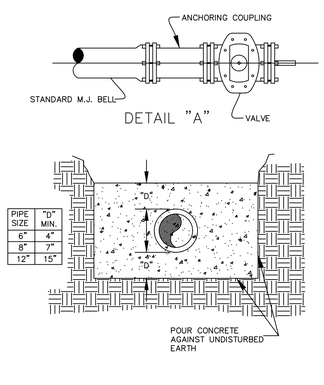


THRUST BLOCK DIMENSIONS - INCHES												
PIPE DIA.	ALL FTGS.		TEE PLUG TAPPING		90 DEGREE BEND		45 DEGREE BEND		22-1/2 BEND		11-1/4 BEND	
	A	B	C	H	C	H	C	H	C	H	C	H
4	14	4	24	12	26	15	18	12	12	12	12	12
6	16	6	36	18	36	24	30	18	24	12	12	12
8	20	8	36	30	42	36	36	24	24	18	18	12
10	20	10	48	36	66	36	36	36	28	24	18	18
12	24	12	68	36	82	42	52	36	40	24	28	18

NOTE

FOR FITTINGS LARGER THAN 12", SPECIAL RESTRAINT DESIGNS ARE REQUIRED.

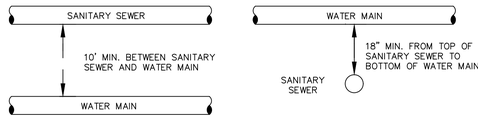
HORIZONTAL THRUST BLOCKING
DETAIL "C"



CROSS BLOCK DETAIL
NOT TO SCALE

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

CROSS BLOCK DETAILS



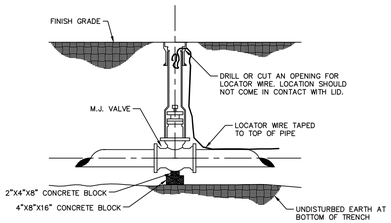
TYPICAL WATER AND SEWER SEPARATION
NOT TO SCALE

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

WATER AND SEWER SEPARATION DETAIL

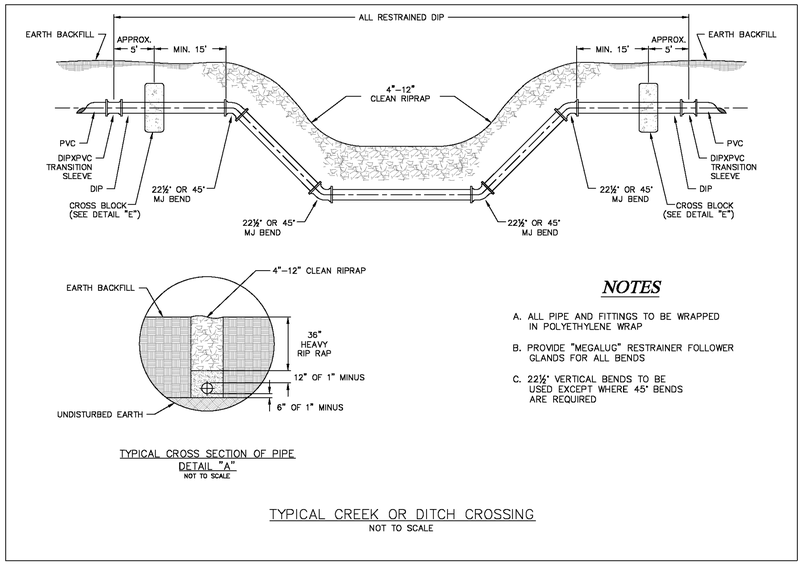
NOTE: THIS DETAIL IS FROM PWSD#2

Buffalo box is an acceptable product to use.
Tyler 562-S and 564-S are acceptable products.



GATE VALVE DETAIL
NOT TO SCALE
DETAIL "D"

The Installation of PVC Pipe shall follow the Uni-Bell PVC Pipe Association Handbook of PVC Design and Construction.



NOTES

A. ALL PIPE AND FITTINGS TO BE WRAPPED IN POLYETHYLENE WRAP

B. PROVIDE "MEGALUG" RESTRAINER FOLLOWER GLANDS FOR ALL BENDS

C. 22½° VERTICAL BENDS TO BE USED EXCEPT WHERE 45° BENDS ARE REQUIRED

TYPICAL CREEK OR DITCH CROSSING
NOT TO SCALE

TYPICAL CROSS SECTION OF PIPE
DETAIL "A"
NOT TO SCALE

www.invarion.com

616.8.4SD (TA-4SD) Short Duration Operation on a Shoulder

SPEED	SIGN SPACING (ft.)	TAPER LENGTH (ft.)		RECOMMENDED	CHANNELIZER SPACING (ft.)	
Permanent Posted (mph)	Undivided (S)	Shoulder (1) (T1)	Lane (2) (T2)	Buffer Length (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200	-	-	-	-	-
40-45	350	-	-	-	-	-
50-55	500	-	-	-	-	-
60-70	1000	-	-	-	-	-

1. Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2. Lane taper length based on 12 ft. (standard lane width) offset.

TYPE OF ROADWAY	SIGN HEIGHT (MINIMUM)	MAXIMUM WORK ZONE LENGTH (L)
URBAN	1' Portable 7' Post	1 Mi.
RURAL DIVIDED	1' Portable 7' Post	2 Mi.
RURAL UNDIVIDED	1' Portable 5' Post	3 Mi.
VEHICLE	48 Inches Recommended	-

Channelizer
Sign
Flashing Arrow Panel
Protective Vehicle
Truck/Trailer Mounted Attenuator (TMA)
Work Space

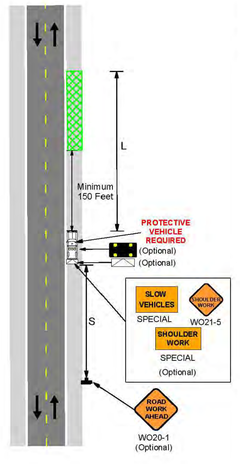
Date:

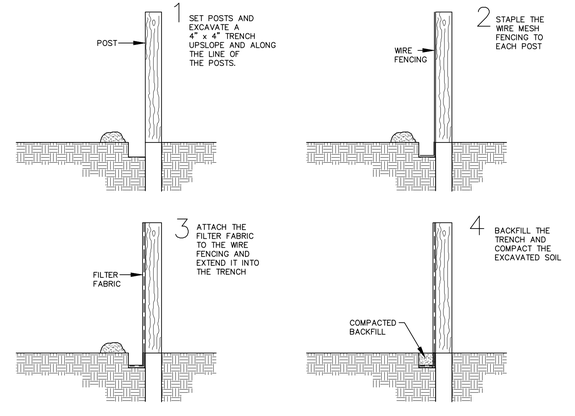
Type of Work:

Location:

Work Zone Specialist:

Field Notes:





1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY HALF THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

SILTATION FENCE DETAIL

PROJECT TITLE:
TARA OAKS MANOR
WATER MAIN EXTENSION

Bax Project # 22-18863 | Issue Date: 09/11/2023

ENGINEERING
PLANNING
SURVEYING
221 Point Test Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

REVISIONS

09/25/23	CITY COMMENTS
11/27/23	CITY COMMENTS

Developer / Owner:
Tara Oaks Manor HOA
26 Plantation Oaks Lane
St. Paul, MO 63366

DETAILS

P+Z No. N/A
Approval Date: N/A
City No. N/A

Page No.
5 of 5