CONSTRUCTION PLANS
Proposed Office Building

OF A TRACT OF LAND BEING PART OF SECTION 21, TOWNSHIP 47 NORTH, RANGE 3 EAST ST. CHARLES COUNTY, MISSOURI

INSTALLATION OF WATER MAINS

"ALWAYS KEEP THE WATER MAIN ON EASEMENT"

1. The Pipe should have a Minimum Pressure Rating (PR) of 200 PSI or SDR-21 for 8" and C-900 class 150 or SDR 18 for 12" or larger pipes. All water mains of PVC Material shall be certified by NFS and listed in NFS Standard 61. NFS stands for NSF International which is an agency that certifies materials, such as pipe, valves, etc., for use in potable water systems among other things. Standards 61 is the (ANSI/NSF Standard 61) is a listing of certified drinking water components. The Missouri DNR requires that products which come in contact with drinking water be listed in NSF Standard 61. If the pipe is NFS certified, it will have a stamp on the pipe that says "NSF-pw".

2. Fire Hydrants must be Mueller Steamer Centurion and painted yellow in color and all valves must be Mueller Mechanical joint resilient wedge gate valve. A fire hydrant is required at the end of all dead end waterlines, including those which may be extended at a later date.

3. All fire hydrants are to have valves flanged to the tee and (with a total length of 38" or less) hydrants swivel anchored to the valve. Clean 1" rock should be used to backfill above the weep holes of the fire hydrant.

4. The contractor shall place all fire hydrants between 1.5 feet and 3 feet from the Parking lot curb (measured from the edge of the fire hydrant). The buryline should be set 6" higher in elevation than the top of curb.

5. These water bends (45 degrees, 22 1/2 degrees, 11 1/4 degrees), are to be made with mechanical joint fittings using mega lugs up to 10" diameter, 12" or larger requires mega lugs and concrete blocking. Concrete not to be on nuts or bolts. Ninety degree bends are not allowed. The first slip joint, up and down stream after fittings, should be restrained per pipe manufacturer specs.

6. Tees, 4-ways, etc. shall have concrete blocking. Concrete not to be on nuts or bolts.

7. Rocky soils shall require bedding 6" under and 6" over water pipe.

8. Concrete encasement required, to DNR Specification, when crossing storm or sanitary sewers. Sanitary: Vertical is 18", horizontal is 10' Storm: vertical is 12", horizontal is 3'.

9. Must attach coated solid core, 12 gauge copper tracer wire, taped to the top of pipe. All copper wire must run up the outside of the PVC SDR 21 valve box and I to be tucked inside the valve box under the water lid.

10. Use 3M waterproof splice kits for all splicing of tracer wire.

11. A chlorine test is required. It must initially test at 25 PPM, or greater, and 24 hours later 10 PPM must be present. It must be tested by the City of O'Fallon Water Department Inspector, and have 24 hours notice prior to that inspection. The main will be tested for CL2 every 1,200' of pipe.

12. If chlorine test fails then the main must be re-chlorinated.

13. Coliform samples should be collected every 1,200'.

14. Final Pressure Test: The water main must be pumped up to 125 PSI . and maintain this pressure for one hour without any drop in pressure. City of O'Fallon Water Department may require higher pressure test if deemed necessary.

15. All waterline construction shall conform to current City of O'Fallon Water Standards and Specifications.

16. The contractor shall place the "streamer" outlet of a fire hydrant towards the street.

17. Backfill no debris larger than 6" in diameter.

18. City of O'Fallon Water Department shall be notified at least 48 hours prior to the construction of water mains for coordination and inspections.

19. All open mains should be properly capped when the main is unattended for more than 4 hours. Duct tape the end closed so it is visually seen.

20. Notify City of O'Fallon Water Department when work stops and when the Contractor will not be continuing work. Twenty-four (24) hour notice is required notifying when work will continue.

21. All water mains are to be installed in a straight line (no bends in individual pipes). A 5% deflection in joints is allowed. Bends around cul-de-sacs are to be made with 22 1/2 degree elbows.

22. Small field changes may be made by City of O'Fallon Inspector. Larger changes have to be resubmitted by the Developer's Engineer for approval.

23. As-Built drawings must be sent to City of O'Fallon Water Company. before the project can be considered Final. (Ex. Showing location changes of elbows, elevations, easements, etc.)

NOTE: 24 HOUR NOTICE REQUIRED ON ALL INSPECTIONS

DEVELOPMENT NOTES

1. Owner/Developer/Prepared For:
   McKelvey Properties
   2310 Hwy 94 S. Outer Rd.
   St. Charles, MO 63303
   (636) 928-9111
2. Area of Tract= 3.44 Acres
3. Present Zoning - C-2 (Commercial) & R-1 (Residential)
4. Proposed Use - Retail
5. Setback Requirements:
   Front Yard Setback Twenty Five (25) feet
   Side Yard Setback- None
   Rear Yard Setback - Ten (10) feet
6. All utilities are located underground.
7. Parking Calculations:
   Proposed use: Retail space
   10 plus 1 for every 400 sq. ft. over 2,000 sq. ft.
   Development
   Required-40
   Provided - 64 including 2 handicapped
9. Pavement shall be 3" Type C mix over 8" Type 1 aggregate.
10. Utilities
    Water: City of O'Fallon
    Sanitary: City of O'Fallon
    Electric: Ameren UE
    Gas: St. Charles Gas Company
    School: Fort Zumwalt
    Fire: O'Fallon
11. Acording to FIRM Map Panel Number 29183C0230E Dated 1996 this parcel is located within zone A of the 100-yr floog plain.
12. Additional Calculations
    Building Coverage 14,000 sq. ft.
    Landscaping Area within parking 1,381 sq. ft.
    Pavement Area 18,460 sq. ft.
13. [redacted]
14. There are no current plans for the remaining residential property.
15. The site will tie into the existing sanitary electric and water lines located along North Main the storm water will discharge into the existing creek.
16. All Storm Sewer Construction must meet the current standards and specifications of the City of O'Fallon.
17. All Sanitary Sewer Construction must meet the current standards and specifications of the City of O'Fallon.
18. All sign locations and sizes must be approved separately through the Planning Division.
19. Electric will be served underground.
20. The detention basin is not in the 100 year flood plain.

GENERAL NOTES

1. All corrugated steel pipe shall conform to the requirements of AASHTO M-36 and shall be fully coated with bituminous material conforming to the requirements of AASHTO M-190. Corrugated steel pipe shall be helical pipe with reformed ends. Pipes shall be joined using either hugger bands with rubber o-ring gaskets or universal corrugated bands with sponge neoprene gaskets. All gasket materials shall conform to ASTM D-1056.

2. All standard curb inlets are to have front-of-inlet 2' (two feet) behind curb, within public right-of-way, unless otherwise noted.

3. Concrete Pipe Joints shall be M.S.D. Type "A" Approved Compression Joints and shall conform to the requirements of the Specification for Joints and Circular Concrete Sewer and Culvert Pipe, using flexible, watertight, rubber-type gaskets A.S.T.M. C-443. Band-Type Gaskets depending entirely on cement for adhesion and resistance to displacement during jointing shall not be used.

4. All pipes shall have positive drainage through manholes. No flat base structures are allowed.

5. All trench backfills under paved areas shall be granular backfill, and water jetted. All other trench backfills may be earth material (free of large clods or stones) and shall be water jetted.

6. Easements shall be provided for storm sewers, sanitary sewers, and all utilities.

7. Gas, water, and other underground utilities shall not conflict with the depth or horizontal location of existing and proposed sanitary and storm sewers including house laterals.

8. The contractor shall place all fire hydrants within (2') feet of the street curb.

9. The contractor shall place the "steamer" outlet of the fire hydrant toward the street.

10. Gas, water, and other underground utilities shall not conflict in depth of horizontal location of existing and proposed sanitary and storm sewers including house laterals.

11. Seeding and Mulching will be required if work is suspended for more than 30 days or if work is within 30 days of finished grading.

12. All Sanitary laterals to be installed must meet City of O'Fallon Sanitary Sewer District guidelines.

13. The Developer must supply City Construction Inspectors with soil reports prior to or during site soil testing.

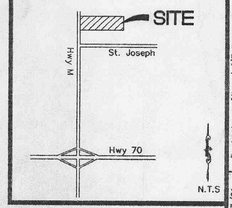
14. The contractor shall assume complete responsibility for controlling all siltation and erosion of the project area. The Contractor shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/or siltation fabric fences(possible methods of control are detailed in the plan). Control shall commence with grading and be maintained throughout the project until acceptance of the work be the Owner and/or the City of O'Fallon and/or MODOT. The contractor's responsibilities include all design and imple as required to prevent erosion and the depositing of silt. The owner and/or the City of O'Fallon and /Or MODOT may at their option direct the Contractor in his methods as deemed fit to protect property and improvements. Any depositing of silts or mud on new or existing pavement or in new or existing storm sewers or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the Owner and/or the City of O'Fallon and/or MODOT."

15. Lighting Values will be reviewed on site prior to the final occupancy inspection. Corrections will need to be made if not in compliance with City Standards.

16. All filled places under proposed storm and sanitary sewer, proposed roads and/or paved areas shall be compacted to 90% of maximum density as determined by the Modified AASHTO T-180 Compaction Test or 95% of maximum density as determined by the Standard Protor Test AASHOT T-99. All tests shall be verified by a soils engineer concurrent with grading and backfilling operations.

17. No slopes shall be steeper than 3:1.

LOCATION MAP



08/03/01	Revised per City of O'Fallon
09/17/01	Revised per City of O'Fallon
11/15/01	Revised per City of O'Fallon

INDEX

LEGEND

MH	SANITARY STRUCTURE	C.O.	CLEAN OUT
SD	STORM STRUCTURE	T.B.R.	TO BE REMOVED
TH	TEST HOLE	T.B.R.&R.	TO BE REMOVED & RELOCATED
PP	POWER POLE	T.B.P.	TO BE PROTECTED
LS	LIGHT STANDARD	T.B.A.	TO BE ABANDONED
C.I.	CURB INLET	B.C.	BASE OF CURB
D.C.I.	DOUBLE CURB INLET	T.C.	TOP OF CURB
G.I.	GRATE INLET (EXISTING)	T.W.	TOP OF WALL
A.I.	AREA INLET (EXISTING)	TYP.	TYPICAL
D.A.I.	DOUBLE AREA INLET	U.N.O.	UNLESS NOTED OTHERWISE
F.E.	FLARED END SECTION	U.I.P.	USE IN PLACE
E.P.	END PIPE	572	EXISTING CONTOUR
E.D.	ENERGY DISSIPATOR	578	PROPOSED CONTOUR
M.H.	MANHOLE		TREE LINE
R.C.P.	REINFORCED CONCRETE PIPE	8" PVC	SAN. SEWER (EXISTING)
C.M.P.	CORRUGATED METAL PIPE		SAN. SEWER (PROPOSED)
C.I.P.	CAST IRON PIPE	24" CMP	STORM DRAIN (EXISTING)
PVC	POLYVINYL CHLORIDE		STORM DRAIN (PROPOSED)
VCP	VITRIFIED CLAY PIPE		PHONE BOX
	GUY WIRE	IP	IRON PIPE
	SIGN	8"W	WATER LINE, SIZE
	POST		HYDRANT
	WATER METER		CONCRETE PAVEMENT
WV	WATER VALVE		PLACED RIP-RAP W/UNDERLAIN FABRIC
	WATER SHUT OFF		SWALE
GV	GAS VALVE		

2-4-02
APPROVED
as noted

DEVELOPER

MCKELVEY PROPERTIES
2310 Highway 94
South Outer Road
St. Charles, MO 63303
(636) 928-9111

STATE OF MISSOURI
DAVID L. DWYER
E-20[illegible]
REGISTERED ENGINEER

ENGINEERS AUTHENTICATION

The responsibility for the professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in the project and specifically excludes revisions after this date unless reauthenticated.

SITE BENCHMARK: RM 69 Elevation = 456.02 Chissled "L" on top of wingwall in northeast corner of Old Highway 79, bridge over Belleau Creek.

SHOPS ON MAIN

Bldg. Inspector

TITLE PAGE
CONSTRUCTION PLANS

T.L. DWYER DESIGN
1208 MISSOURI AVENUE
ST. LOUIS, MO 63104
TEL:(314) 494-5565 FAX (418)602-0392

RECEIVED
JAN 30 2002
CITY OF O'FALLON, MO

ORDER NO.
ORD-NUM
DATE
7/07/01

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