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UTILITY PLAN

50 0 50 150

Scale 1" = 50 ft

UTILITY PLAN LEGEND		
DESCRIPTION	PROPOSED	EXISTING
AIRIAL ELECTRIC	AE	AE
UNDERGROUND ELECTRIC	UE	UE
UTILITY POLE	•	•
GAS LINE	G	G
GUARD POST	GP	GP
SANITARY SEWER	SS	SS
SANITARY MANHOLE	•	•
STORM SEWER	==	==
CATCH BASIN	■	■
JUNCTION BOX	•	•
FLARED END SECTION	◁	◁
CLEANOUT	•	•
GRADED INLET	■	■
GUARD RAIL	—	—
CHAINLINK FENCE	—	—
WATERLINE	W	W
WATER VALVE	•	•
FIRE HYDRANT	•	•
EASEMENT	—	—

UTILITY NOTES:

- The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is to be relied on being exact or complete. The Contractor must call the appropriate utility company to request exact field location of utilities. It shall be the responsibility of the Contractor to relocate all existing utilities which conflict with the proposed improvements shown on plans.
- North derived from bearing of record for a final plat of Wakarusa Place Addition recorded in the office of the Douglas County Register of Deeds on April 1, 2002 in plat book P-17, page 402.
- Contractor shall verify elevation of temporary benchmarks based on the elevation of the primary benchmark, prior to the start of construction. Contractor shall notify engineer if elevations differ from those shown on these plans.
- This site scales within Zone X, as per Federal Emergency Management Agency Flood Insurance Rate Map, Community Panel No. 204500017C dated November 7, 2001.
- All trenches under paved areas shall be backfilled with granular material and compacted to meet compaction requirements for the parking lot. Granular material shall be placed and compacted to a level equal to the trench depth at the time of the utility installation.
- All unsurfaced areas are to receive six inches of topsoil. Contractor to seed, mulch, fertilize, and maintain all areas outside of paved areas that were disturbed during construction until an acceptable stand of grass is established. Contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
- Contractor shall contact telephone, electric, gas, cable, and water companies to have underground utilities located on this site and adjacent to this site prior to doing any excavating.
- Contractor shall refer to architectural plans for exact locations and dimensions of vestibules, exit porches, ramps, truck docks, downspouts, roof drains, precise building dimensions, exact building utility entrance locations and exact number and location of downspouts.
- All parking lot lighting poles and fixtures with lamps and point will be provided by Owner and installed by the electrical Contractor. The electrical Contractor shall provide Owner a one-year warranty certificate. All incurred costs for receiving, storage, liability and warranty labor shall be included in the installation and contract price. Refer to architectural plans for location and layout of conduit and wiring.
- The Contractor is responsible for keeping storm water run-off and sediment under control during construction. All contractors shall refer to Erosion and Sediment Control Plans throughout construction.
- All survey monuments disturbed during construction shall be replaced at the Contractors expense, by a surveyor licensed in the state in which this project is located, at the Contractors expense.
- The sitework for this project shall meet or exceed the "Owners Standard Sitework Specifications."
- The Contractor shall verify and/or perform all necessary inspections and/or certifications required by codes and/or utility companies prior to the announced building possession date and the final connections of utility services. All fees shall be paid by the contractor.
- Contractor shall notify utility authorities inspectors at least 72 hours before connecting to any existing line. Underground utilities shall be installed, inspected and approved prior to backfilling.
- Sanitary sewer pipe shall be _____
- Water lines shall be _____ and shall have a minimum of 42 inches of cover below finish grade, unless otherwise indicated on plans.
- All required utilities serving the Owners building shall be coordinated and constructed to within five (5) feet of each Owners building utility entrance location. All required connection fees, for the Owners building only, shall be paid by the Owners building Contractor. Any necessary extensions, relocations or corrections five (5) feet beyond the Owners building to complete connection of utilities to the building shall be made by the Owners site Contractor.
- Pylon sign shall be constructed by others. Contractor shall stub conduit and wiring to pylon sign location as part of the contract.
- Contractor shall provide all waterline tees, valves, bends, tapping sleeves, meters, meter pits, fire hydrants, etc. necessary to construct the waterlines as shown on these plans. Thrust blocking shall be provided at all tees, bends and fire hydrants.
- All flared end sections shall be RCP or CMP. Flared end sections that are CPP will not be allowed. Connections must be soil tight.
- Utility Contractor shall provide a 2'x2'x8" thick concrete apron at all water valves and cleanouts outside the building. See detail.
- Contractor shall obtain and follow installation requirements for storm sewer from pipe manufacturers for each type of piping material.
- Contractor shall coordinate adjustments to existing utilities with appropriate utility company as work progresses. All costs shall be paid by the Contractor.
- Utility Contractor shall be responsible for all taping and tie-in fees, as well as cost of service connections.
- Unless indicated otherwise, all waterline and sanitary sewer crossings shall have a minimum 18 inch vertical separation and 10 feet horizontal separation. The Contractor shall note that the depths of existing utilities have been plotted from information provided by various utility companies and is to be considered approximate. If the minimum separations cannot be constructed as shown the Contractor shall notify the Wal-Mart Construction Manager and appropriate modifications will be issued.
- Verify location of all existing utilities to be crossed and identify potential conflicts prior to starting construction.
- All public sanitary sewer improvements, public waterline improvements and public storm sewer will require submittal of public improvement plans.

STORM DRAINAGE STRUCTURE SCHEDULE

STRUCTURE NUMBER	STRUCTURE TYPE	TOP/GRATE ELEVATIONS	FLOWLINE ELEVATIONS
CS-1	CONTROL STRUCTURE	991.00	976.00
FES-3	FLARED END SECTION	-	976.00
JB-5	JUNCTION BOX	992.75	983.04
JB-6	JUNCTION BOX	995.75	983.85
JB-7	JUNCTION BOX	992.60	984.74
CB-8	CATCH BASIN	993.60/992.80	986.25
CB-9	CATCH BASIN	997.25/996.80	N=991.32 OUT=990.82
CB-10	CATCH BASIN	999.80/998.80	N=996.53 OUT=994.78
CB-11	CATCH BASIN	1001.40/1000.40	996.00
AI-12	AREA INLET	1002.00/1001.00	N=998.00 OUT=996.50
AI-13	AREA INLET	1002.50/1001.50	998.20
CB-14	CATCH BASIN	997.10/991.10	984.91
CB-15	CATCH BASIN	992.10/991.10	985.15
CB-16	CATCH BASIN	993.40/992.40	986.46
CB-17	CATCH BASIN	997.10/996.70	991.90
CB-18	CATCH BASIN	997.80/996.80	992.46
CB-19	CATCH BASIN	1002.00/1001.00	995.78
CB-20	CATCH BASIN	1003.75/1002.75	997.75
CB-21	CATCH BASIN	997.15/996.15	992.64
CB-22	CATCH BASIN	999.10/998.10	992.51
CB-23	CATCH BASIN	1003.40/1002.40	995.95
CB-24	CATCH BASIN	1002.25/999.25	996.71

STORM DRAINAGE STRUCTURE SCHEDULE

STRUCTURE NUMBER	STRUCTURE TYPE	TOP/GRATE ELEVATIONS	FLOWLINE ELEVATIONS
CB-25	CATCH BASIN	993.00/1001.50	998.17
CB-26	CATCH BASIN	993.00/992.00	986.98
CB-27	CATCH BASIN	994.35/993.35	989.24
CB-28	CATCH BASIN	996.50/995.50	991.50
CB-29	CATCH BASIN	992.50/991.50	987.18
FES-30	FLARED END SECTION	-	978.00
FES-31	FLARED END SECTION	-	978.00
CI-32	CURB INLET	993.00/992.50	N=988.00 OUT=983.18
CB-33	CATCH BASIN	994.50/993.50	983.97
CB-34	CATCH BASIN	996.50/995.50	985.15
CB-35	CATCH BASIN	994.50/993.50	N=990.00 OUT=986.32
DGI-36	DOUBLE GRADED INLET	993.90	987.20
DGI-37	DOUBLE GRADED INLET	993.90	N=988.28 OUT=987.78
DGI-38	DOUBLE GRADED INLET	993.90	N=989.39 OUT=988.89
DGI-39	DOUBLE GRADED INLET	993.90	990.00
CI-40	CURB INLET	996.50/996.00	N=989.79 OUT=989.29
JB-41	JUNCTION BOX	997.50	990.66
CB-42	CATCH BASIN	996.50/995.50	N=991.00 OUT=991.00
CB-43	CATCH BASIN	1002.50/1001.50	997.05
CB-44	CATCH BASIN	1002.10/1001.10	997.88
CB-45	CATCH BASIN	1002.00/1001.00	995.25

SANITARY MANHOLE SCHEDULE

STRUCTURE NUMBER	STRUCTURE TYPE	RIM ELEVATION	FLOWLINE ELEVATIONS
MH-1	MANHOLE	993.50	N=982.28 OUT=982.06
MH-2	MANHOLE	995.65	N=983.55 OUT=983.35
MH-3	MANHOLE	999.50	N=984.84 OUT=984.64
MH-4	MANHOLE	998.80	N=990.20 OUT=990.00
MH-5	MANHOLE	996.35	N=986.32 OUT=986.12
MH-6	MANHOLE	996.35	N=988.20 OUT=988.00
MH-7	MANHOLE	1001.00	N=993.57 OUT=993.37
MH-8	MANHOLE	1005.65	N=988.04 OUT=987.84
MH-9	MANHOLE	1005.95	N=991.58 OUT=991.38

PRELIMINARY DEVELOPMENT PLAN

FOR REVIEW PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

UTILITY PLAN
LAWRENCE, DOUGLAS COUNTY, KS

E-Mail: mail@buescher.com Telephone: (636) 238-4751
BUESCHER FRANKENBERG ASSOCIATES, INC.
consultants & engineers WASHINGTON, MISSOURI 63090

103+ ELM STREET DATE: 07-11-07 PROJ. NO. 02-2667
OWN. BY: K.M.M. SCALE: 1"=50' BKG. NO. 4 OF 5

Three working days prior to the start of any excavation on this site the Contractor shall contact 1-800-XXX-XXXX for utility location information.

All O.S.H.A. rules and regulations established for the type of construction required by these plans shall be strictly followed (i.e. Trenching, Blasting, etc.)

NO.	REVISION	BY	DATE	APP'D