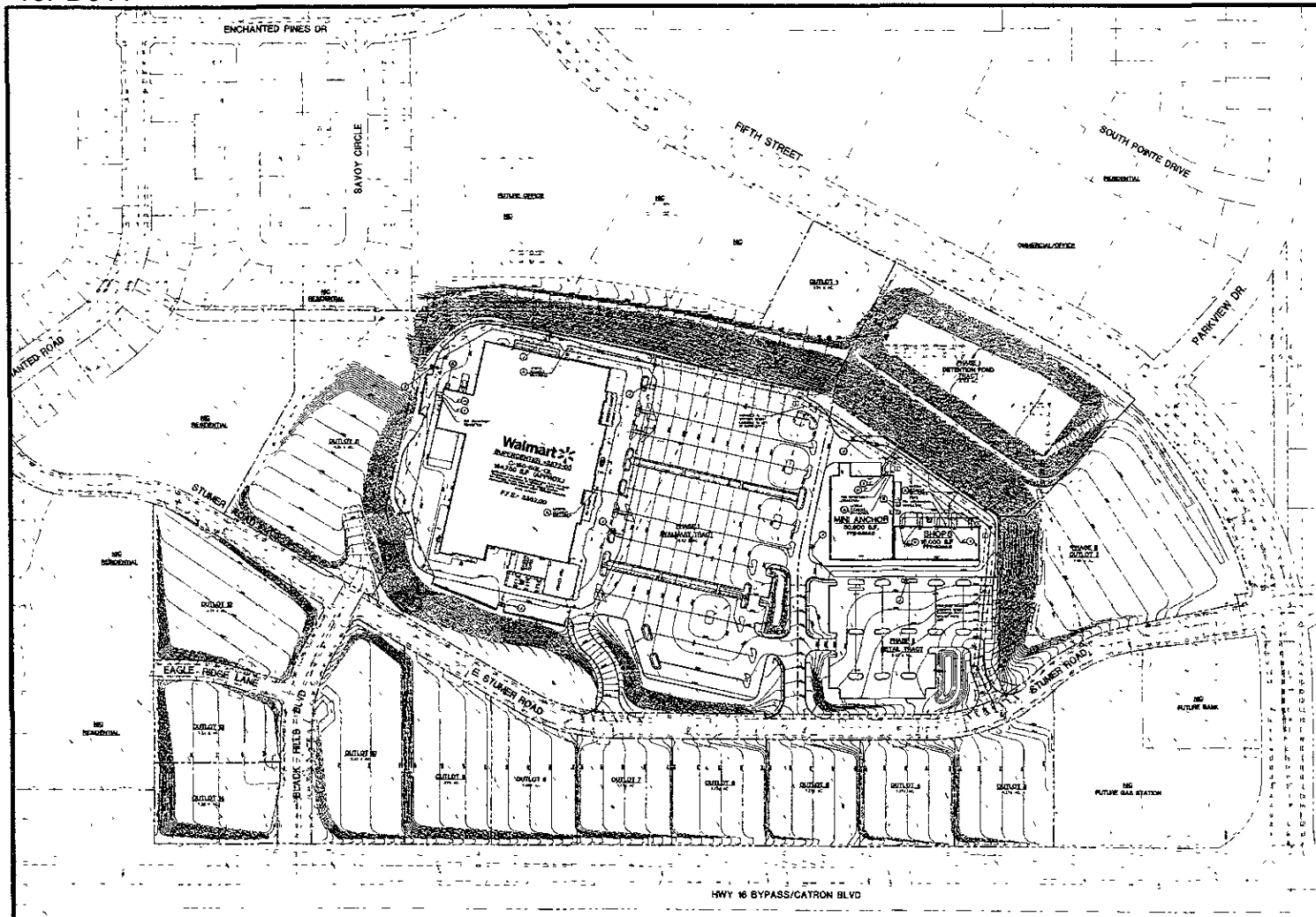
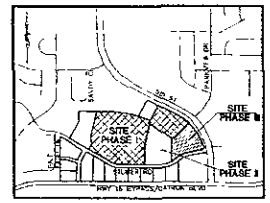
10PD011





LOCATION MAP
NOT TO SCALE

SITE UTILITY NOTES

1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
3. SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
   8" PVC SEWER PER ASTM D 3034, FOR PIPES LESS THAN 10' DEEP.
   8" PVC SEWER PER D 3034, FOR PIPES MORE THAN 10' DEEP.
   8" PVC SCHEDULE 40.
   SHOWN AND PER ASTM D1785
4. WATER LINES SHALL BE AS FOLLOWS:
   A. PIPE SIZES LESS THAN 4 INCHES SHALL NOT BE INSTALLED WITH LESS THAN 3 FEET OF COVER AND SHALL COMPLY WITH ONE OF THE FOLLOWING:
      1. SEAMLESS COPPER TUBING ASTM B 88, SOFT COPPER ASTM B 88, ANNEALED TEMPER
      2. HIGH-DENSITY, CROSS-LINKED POLYETHYLENE (PEX) TUBING ASTM F 876
      3. POLYETHYLENE (PE) PLASTIC PIPE (SIDR-PR) BASED ON OUTSIDE DIAMETER ASTM D 2737
      4. POLYVINYL CHLORIDE (PVC) PLASTIC PIPE (DR 18) ASTM D 2241
   B. PIPE SIZES 4 INCHES TO 12 INCHES SHALL NOT BE INSTALLED WITH LESS THAN 4 FEET OF COVER AND SHALL COMPLY WITH ONE OF THE FOLLOWING:
      1. DUCTILE IRON PIPE (DIP) ANSI A21.51
      2. POLYVINYL CHLORIDE (PVC) PLASTIC PIPE (DR 18) ASTM D 2241
   C. PIPE SIZES 16 INCHES TO 24 INCHES SHALL NOT BE INSTALLED WITH LESS THAN 5 FEET OF COVER AND SHALL COMPLY WITH ONE OF THE FOLLOWING:
      1. DUCTILE IRON PIPE (DIP) ANSI A21.51
      2. POLYVINYL CHLORIDE (PVC) PLASTIC PIPE (DR 18) ASTM D 2241
5. MINIMUM TRENCH WIDTH SHALL BE 3 FEET.
6. ALL WATER LINES ARE TO BE MECHANICAL JOINTS, WITH JOINTS RESTRAINED AS CALLED OUT IN SPECIFICATIONS.
7. ALL BURIED VALVES SHALL BE KEPT TURNED (NOT APART UNNECESSARILY) OR FROM OPERATING 180° APART (OUTSIDE DIAMETER OF PIPE TO BE OUTSIDE EDGE OF PAD).
8. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3'-0" COVER ON ALL INSTALLATIONS.
9. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES, AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AS CALLED OUT IN THE SPECIFICATIONS. THE WATER LINE SHALL HAVE A MINIMUM OF 18" CLEARANCE MEETING WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO ENSURE A MINIMUM OF 18" CLEARANCE MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI A21.11 WHERE CLASS 350 PIPE IS USED.
10. LINES UNDER PAVEMENT SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
11. BODY OF ELECTRIC MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED ELEVATIONS, AND TO BE NOT LESS ABOVE FINISHED ASPHALT ELEVATIONS WITH WITH TOPS FLUSH.
12. ALL EASEMENTS FOR ENCROACHMENT, SHALL HAVE A MINIMUM 24 DAY COMPRESSIVE STRENGTH OF 3000 P.S.I.
13. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
14. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
15. REFER TO INTERIOR PLUMBING DRAWINGS FOR RE-RUN OF GAS UTILITY.
16. CONTRACTOR IS RESPONSIBLE FOR COMPARING TO THE UNDERSTANDING OF THE LOCAL AUTHORITIES WITH REGARDS TO WATER, SANITARY, STORM, GAS, ELECTRIC, TELEPHONE AND SEWER LINES.
17. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODE AND/OR UTILITY SERVICE COMPANIES SHALL BE ACCOMPLISHED PRIOR TO APPROPRIATE BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
18. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
19. CONTRACTOR TO PROVIDE REQUIRING CONDUIT PULL WIRE AND BACKFILL FOR TELEPHONE AND ELECTRIC LINES.
20. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE EXACT LOCATION, SIZE, AND ELEVATION OF ALL UTILITIES ALONG WITH SUFFICIENT SAFETY PRECAUTIONS FOR CONSTRUCTION OF SITE BY THIS PROJECT. THE RELOCATION OF ANY MISPLACED FACILITY REQUIRED TO ALLOW ANY PART OF THIS DEVELOPMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.
21. ALL CONSTRUCTION TO CONFORM TO APPROPRIATE CITY/COUNTY SPECIFICATIONS AND BE IN ACCORDANCE WITH CITY ORDINANCES.
22. TRENCHES 20 (6) FEET OR GREATER REQUIRED SHORING, DESIGN TO BE COMPLETED BY A PROFESSIONAL ENGINEER. TRENCH SAFETY REQUIREMENTS WILL BE STRICTLY ENFORCED. CONTRACTOR TO MEET OR EXCEED ALL OSHA STANDARDS.
23. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING AND ELECTRICAL PLANS.

SANITARY SEWER SCHEDULE

STRUCTURE NUMBER	STRUCTURE TYPE	RIM ELEVATION	INVERT IN	INVERT OUT	PIPE LENGTH (LINEAR FEET)	PIPE TYPE	PIPE DIAMETER
S-1	MANHOLE	1034.0	1024.0	1024.00			
S-1.1	EJECTOR			1024.0	111	8" PVC	0.795
S-2	MANHOLE	1042.00	1034.76	1034.66			
S-2.1					333	8" PVC	1.795
S-3	MANHOLE	1042.00	1034.20	1041.46			
S-3.1					38	8" PVC	0.795
S-4	MANHOLE	1034.90	1034.87	1034.87			
S-4.1					335	8" PVC	1.795
S-5	MANHOLE	1050.00	1042.79	1042.79			
S-5.1					384	8" PVC	1.795
S-6	MANHOLE	1031.00	1040.54	1040.26			
S-6.1					335	8" PVC	0.795
S-7	MANHOLE	1042.00	1034.26	1044.16 (E)			
S-7.1				1044.1051 (E)	296	8" PVC	0.795
S-8	MANHOLE	1042.00	1030.67	1030.67 (E)			
S-9					79	8" PVC	1.000
OUT	TERMINUS	1044.00	1032.00				

UTILITY LEGEND

(A) 6" LINE MIN. SERVICE LATERAL AT MINIMUM 1.00% SLOPE (TYPICAL) OF NEW PROPERTY TRANSFORMER

(B) PROPOSED LOCATION OF TRANSFORMER PAD. CONTRACTOR TO VERIFY EXACT LOCATION AND SIZE W/ UTILITY COMPANY PRIOR TO INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONDUITS AND CONCRETE PAD PER SPECIFICATIONS AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR OF SHALL COORDINATE SAME WORK WITH THE ELECTRIC COMPANY.

(C) CONTRACTOR IS RESPONSIBLE TO COORDINATE WORK WITH STREET LIGHT COMPANY FOR THE INSTALLATION OF OVERHEAD/UNDERGROUND ELECTRIC AND STREET LIGHT SERVICE. CONTRACTOR SHALL COORDINATE THE TYPE OF LIGHTING AND SPECIFIC LOCATION WITH THE UTILITY COMPANY. SEE E - 1, E - 2 FOR ADDITIONAL NOTES AND MARKS TO ELECTRIC AND SLEEVING LINES.

(D) PROPOSED WATER LINE. CONTRACTOR TO COORDINATE WITH COMPANY INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AIR RELEASE VALVES ON ALL DEADEND MAIN, GATE VALVES AT 500' TO 800' SPACING OR AS SPECIFIED BY LOCAL REGULATIONS. GATE VALVES SHALL NOT BE REQUIRED.

(E) WHEN UTILITY CONFLICTS SHALL BE REQUIRED TO INSTALL ANY WATER MAINLINE, ON THE SHALLOW LINE SIDE ALL BELOW NOT LIMITED TO, STORMWATER DETENTION SHEET SHOWN FOR PROTECTION BELOW. IN STORES WITH A GOOD VALVE GATE VALVES, ETC., MEETING WATER COMPANY SPECIFICATIONS. CONTRACTOR SHALL COORDINATE WITH GROUND/FLOOR PLANS.

(F) PROPOSED FIRE HYDRANT AND HYDRANT TYPICAL AS HERE. CONTRACTOR TO PROVIDE PIPE BALLAST PROTECTION WHEN FIRE HYDRANT IS LOCATED IN PAVED AREA OR WHERE SHOWN.

UTILITY PLAN LEGEND

UGE — ELECTRICAL CONDUIT	TAPPING SLEEVE & VALVE
UGT — TELEPHONE CONDUIT	WATER VALVE
6"SS — SANITARY SEWER PIPE	FIRE HYDRANT
8"W — WATER MAIN PIPE	TRAFFIC BOLLARD
2"W — DOMESTIC WATER PIPING	SANITARY SEWER MANHOLE
GAS — GAS PIPE	UTILITY POLE
TS — TRANSFER SWITCH CONDUIT	GAS METER

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Rapid City Growth Management Department

PRELIMINARY OVERALL UTILITY PLAN

GRAPHIC SCALE
(IN FEET)
1 inch = 300 ft.

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8140 Ward Parkway, Suite 100, Kansas City, Missouri 64114
Phone: (816) 941-6666 Fax: (816) 941-6671
www.wolvertonassoc.com

PROPOSED BLACK HILLS CENTER
Walmart SUPERCENTER #3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY: DMN/CRP
CHECKED BY: KJW
DATE: 02/04/2010
SCALE: 1" = 100'
JOB NO.: 08-140
SHEET NUMBER: C-3
OF SHEETS