

SUBJECT	ISSUED BY	EFFECTIVE DATE	REVISION
Public Works Policy on Snow & Ice Removal	Board of County Commissioners	11.27.2019	1.0

A. OVERVIEW

The Public Works Department facilitates the removal of snow and ice from the roadways of Leavenworth County to provide passage for emergency responders and access for residents during periods of inclement winter weather. This plan is to be used as a guideline for inclement winter weather operations, but is implemented and executed under the direction of the Director, Road & Bridge Superintendent, and Operations Supervisor. The plans, routes, and procedures will be modified by the Operations Supervisors to best accomplish the mission in the most effective and safe manner possible under the current weather conditions. The department understands that Snow and Ice Removal is expensive, and therefore will exercise an economy of effort to maximize the efficiency and effectiveness of the operation.

B. MISSION

The Public Works Department will utilize its fleet of Trucks, Motor Graders, and other Heavy Equipment to remove the ice and snow from the road surface to facilitate the passage of residents, motorists, and emergency responders. Economy of effort will be utilized to maximize limited resources in order to facilitate the Snow and Ice Removal Mission

C. EXECUTION

Intent: It is the intent of the Public Works Director to provide the most effective, yet safe, removal of snow and ice from the roadways of Leavenworth County during inclement winter weather. This is to allow for emergency responders to react to calls, the residents to access their homes and work, and traveling motorists to use the roadways according to the seasonal weather conditions. Economy of effort will be utilized to effectively provide adequate service while conserving limited resources. This policy is intended to provide guidance, however real-world conditions are variable and random. Operations Supervisors will have the authority to make decisions based upon their judgment and experience and adjust this plan as needed during operations.

Concept of Operations: The Road and Bridge Superintendent will initially assess each winter weather event and outline the operations to the Operations Supervisors (North, South, and/or Bridge-Culvert Supervisor). Coordination will be made with the Director and/or Emergency Manager who will keep the County Administrator and BOCC informed as to the status of Inclement Weather Operation. The Superintendent will determine effort and need of the crew, and will designate an Operations Supervisor. The Operations Supervisors will have tasking authority over all crews designated for each shift. In the event the severity of the storm increases or decreases, the Operations Supervisors can increase or decrease crew size as needed, and as outlined their direction from the Superintendent and outlined in this plan. (Note: In the event of Emergency Declaration, the Emergency Manager will stand up the Emergency Operations Center (EOC), which will be staffed by the Director/Deputy Director and coordinate with the Superintendent/Operations Supervisor). Snow and Ice Removal Operations will be directed from and coordinated from the County Shop.

Decision Criteria: Snow and Ice Removal Operations effort will be determined upon the following factors. The County does not have a bare pavement policy.

Forecast Snowfall Amounts – This will affect initial response and route clearing.

- Minor snowfall (amounts less than 1” on hard surface roads and 3” on gravel roads) - Limited Operations will be in effect.
- Moderate to heavy snowfall (amounts with estimated range of 2” – 8”) - Full Operations will be in effect.
- Extremely heavy snowfall (8 inches or more occurring in a period of 24 hours or less or whiteout conditions) can cause life-threatening conditions to occur and cause danger to snow/ice control operators. Operations will be terminated (upon direction of the Road & Bridge Superintendent) pending weather improvement.

Icy Conditions – In the event of freezing rain and/or Ice Storm Conditions, the need for additional effort and chemical treatment may exist. County road crews will be conducting limited operations.

Drifting Snow – The routes and effort may be altered to account for potential problem areas.

Storm Intensity in response to peak travel times – The snow removal effort will increase to account for the peak travel times to include, but not limited to, morning commute (6am - 9am), evening commute (3pm - 7pm), etc...

Hard Surface Priority Snow Route System: As shown on the Attachment B, the roadways of Leavenworth County have been assigned designations as to priority.

Primary Routes (annotated in **Red**) consist of the mostly Arterial and Major Collector Roads that provide the connectivity between cities and towns, State/Federal Routes, and which typically have the highest traffic volumes.

Secondary Routes (annotated in **Blue**) - Mostly Minor Collector type roads that provide connectivity between the Local Roads and the Primary Roads. Secondary roads are cleared once snow/ice event has stopped and the primary routes are fully open

Tertiary Routes -Local and subdivision roads that will be cleared once secondary routes are fully open. The last roads to be cleared will be subdivision and dead end roads.

Essential County Parking Lots: See Attachment A for list of county parking lots for department responsibility. Parking lots and sidewalks (to front door) will plowed and chemically treated prior to open hours.

Operation Levels:

Snow Preparation Operations: At the discretion of the Road and Bridge Superintendent, high intensity areas such as bridges, hill, intersections, etc... and primary routes will receive chemical treatment prior to a snow event to reduce icy roadways during an event. Additional treatment of secondary and tertiary roads will occur at the direction of the Road and Bridge Superintendent

Limited Operations: Limited operations will focus primarily on high intensity areas such as bridges, hills, intersections etc... Focus will remain primarily on the primary routes with the fleet equipped with plows, spreaders and chemical tanks.

Limited operations will occur mainly during off-peak hours (overnight, holidays, etc...) and/or during minor snow fall events.

Full Operations: Primary and Secondary routes will be the area of emphasis. All available equipment will be deployed, to include plows only (if dry) or plows equipped with spreaders and chemical tanks (if wet), and full snow routes will be manned as outlined in the attached

Snow Routes Map. Once all primary routes and secondary routes are paved, tertiary routes will then receive priority.

Full operations will occur mainly during moderate to heavy snow fall events and approximately 2 hours prior to peak travel times when road conditions warrant. These operations will be reduced once all hard pave roads have been cleared and chemically treated.

Motor Grader Operations: The *approximately* 500 miles of local gravel roads are maintained by the motor grader fleet. Motor graders will not plow roadways with less than 3" of snow in a snow fall event. To maximize grader efficiency, grader operations are to begin approximately one hour prior to sunrise and last a maximum of 12 hours as per the operator safety guidelines. This maximized the available daylight and provides the most efficient and effective utilization of equipment.

Motor grader operations as outlined above *will* continue until all gravel roads have been plowed a minimum of one time. This includes weekends and holidays as required.

Monitoring: After a snow event is *finished* and full operations have completed, the Road & Bridge Superintendent and Operations Supervisors will monitor roadway conditions for additional plowing or treatment.

Timeframe: Every storm event is different, and some may create greater needs due to high winds and drifting snow, but the Road & Bridge department expects to have all roads clear in the following timeframe after the end of the storm

- Minor snowfall – 36 hours
- Moderate snow fall (amounts with estimated range of 2"-6") – 48 hours
- Heavy snow fall (amounts with estimated range of 6" or more) - all routes may not be cleared within 60 hours, as grader routes can be shifted to focus on harder hit areas. However, crews expect to have all roads clear within 72 hours.

D. OPERATIONAL SUPPORT

Fuel and De-Icing Material: Primary fueling of equipment will be performed at the County Shop fuel point. Adequate fuel supplies will be kept on site with supplemental deliveries made to sustain up to 72 hours of Snow and Ice Removal Operations. Salt and Sand mixture will be staged at four locations (Lowemont, Sherman Township Fire Station, Tonganoxie Quarry, County Shop) with adequate supply to sustain up to 72 hours of Snow and Ice Removal Operations. Wheel loaders will be staged at salt/sand piles to load equipment during de-icing operations

Equipment Repair and Service: Snow and Ice Removal Operations are very equipment intensive, and often lead to equipment breakdowns due to the high level of utilization. The mechanic crew will be re-organized to provide repair and service to any down equipment while operations are commencing. The service truck will be placed into ready status and should be able to deploy to recover any vehicle in need of repair. Snow and Ice removal equipment will take priority over all other, and mechanic schedule will be adjusted to allow for equipment maintenance and repair when vehicles are taken out of service.

E. COMMAND & COMMUNICATIONS

Command Structure: The Road & Bridge Superintendent directs all Snow and Ice Removal Operations. The Superintendent will designate Supervisors as Operations Supervisors and give instructions as to the scheme of operations. Operations Supervisors will have authority to assess and evaluate changing road conditions and modify the level of effort based upon their judgment and experience. There will be no deviation from the attached snow route without authorization from Road & Bridge Superintendent or notification of emergency from the Sheriff's Office, EMS, Emergency Management or Public Works Director.

Coordination: Snow and Ice Removal Operations will require coordination between various departments (Sheriff's Office, EMS, Emergency Management, Etc...) The Operations Supervisors will be expected to make periodic coordination with these departments. In the event that a State of Emergency is declared by the BOCC and Emergency Manager, and the Emergency Operations Center (EOC) is activated, the Director and his staff will facilitate that coordination, with the Operations Supervisors focusing on directing and managing operations.

Communications: Communications between vehicles, operators, and other departments is critical. FM radio communication will be the primary link between the crew and the Operations Supervisors at the County Shop. Communication between the Shop and the EOC will be via

land-line telephone. Cell phone communication should be considered secondary, and utilized as an alternate in the event primary communication means are unavailable.

F. DOCUMENTATION

All Snow and Ice Removal Operations will be documented on daily tickets, and will be tracked in the Pubworks database. Daily tickets must be accurately filled out to include township, equipment and kind of work. If operations are in relation to a major snow/ice event, tickets will be coded for each the individual incident to track separately.

G. SHIFT SCHEDULE

Maximum continued operations by an operator shall not exceed 12 hours. The intense nature of Snow and Ice Removal Operations cause significant stress upon the operators. This prolonged period of intensity leads to fatigue, which leads to poor judgment and carelessness. Operators are encouraged to rest as much as possible during off times, and to report for duty ready to work. (Exception: The Road & Bridge Superintendent may authorize up to two additional hours (maximum of 14 hours) if the additional work is in preparation for follow on shifts and not in actual snow and ice removal, e.g. preparing vehicles, making minor repairs, mixing salt/sand, etc...) This exception must be documented on the event form.

If first snow shift, employee should report to county shop early for any vehicle preparation needed in order to have all vehicles on the road during peak hours. Employees should return to the county shop 30 minutes prior for the vehicle fueling, maintenance, and exchange at clock-in/clock-out time.

Typical shift hours will be as follows:

Day Shift: 5am – 5pm

Night Shift: 5pm – 5am

After full operations are complete (all roads are plowed and treated) if the weather is not forecasted to change (rain, additional snow, temperature changes, etc...) crews can be sent home at the discretion of the Road & Bridge Superintendent.

In the event that the Road & Bridge Superintendent has sent crews home and they must be called back during their 12-hour shift, the Emergency Callback Policy would apply.

H. CONTACT INFORMATION

Road & Bridge County Shop (Daytime) (913) 727-1800

Buildings & Grounds (Daytime) (913) 684-0790

Sherriff's Office (Off-hours) (913) 682-5724

BOCC Chairmen

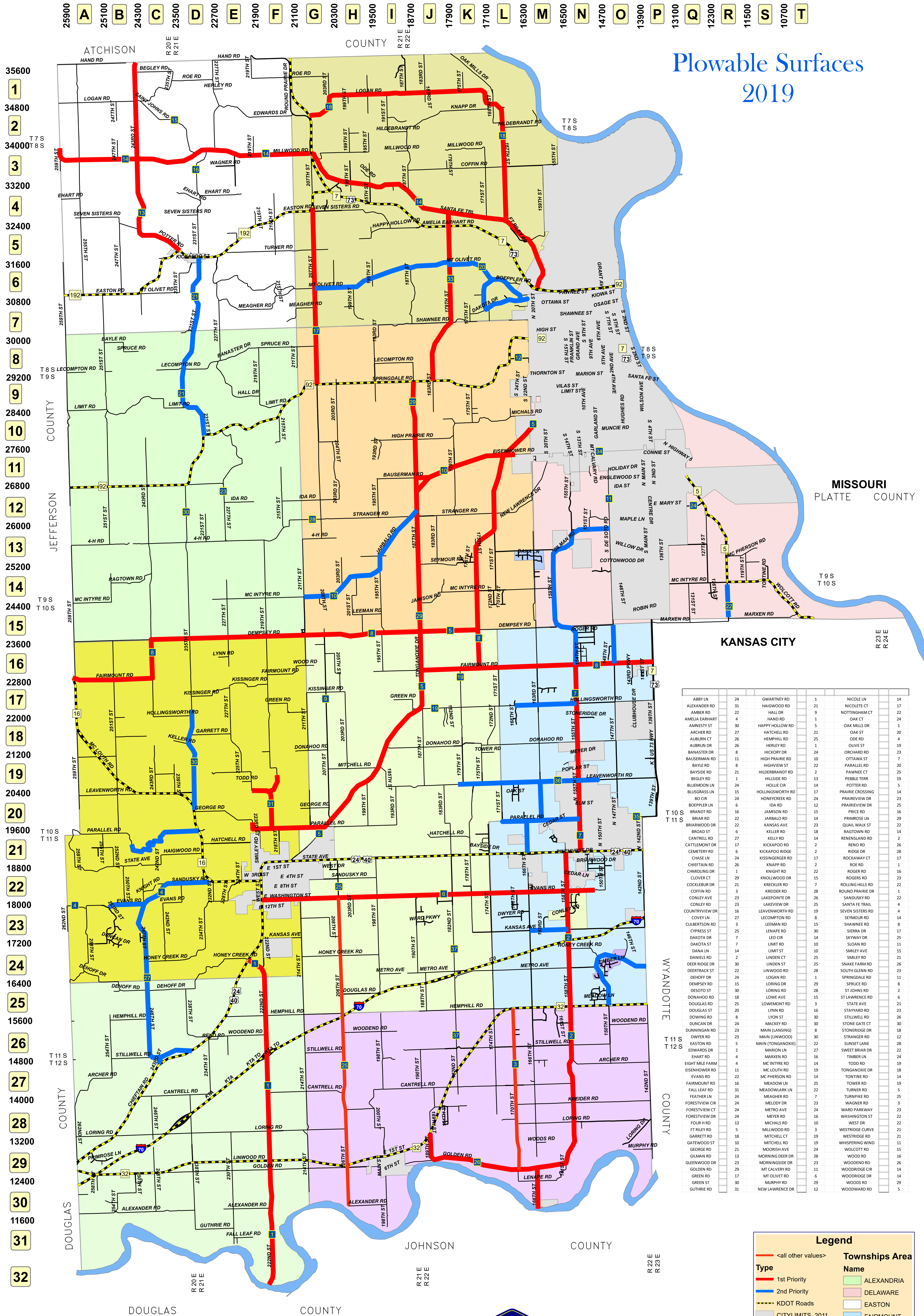
11.27.2019
Date of Adoption

ATTACHEMENT A: ESSENTIAL COUNTY PARKING LOTS

Building Name	Building Address	Responsibility
Health Department	500 Eisenhower Road	Buildings & Grounds
Court House	300 Walnut Street	Buildings & Grounds
Justice Department	601 S. 3rd Street	Buildings & Grounds
Juvenile Detention Center	520 S. 2nd Street	Buildings & Grounds
Leavenworth County Annex	725 Laming Road	Road & Bridge
EMS Headquarters	5175 Hughes Road	Buildings & Grounds
EMS South	425 Laming Road	Road & Bridge
EMS North	1050 N 16th Street	Buildings & Grounds
EMS 4	2624 155th Street	City Maintained
Council on Aging	1830 Broadway Street	Owner Maintained

Leavenworth County Kansas

Plowable Surfaces 2019



24	ABBY LN	24	GWARTNEY RD	1	NICOLE LN	14
25	ALEXANDER RD	31	HAIGWOOD RD	21	NICOLETTE CT	17
26	AMBER RD	22	HALL DR	9	NOTTINGHAM CT	22
27	AMELIA BARBART	4	HAND RD	5	OAK CT	24
28	ANNEXITY ST	30	HAPPY HOLLOW RD	10	OAK MILLS DR	1
29	ARCHER RD	27	HATCHELL RD	21	OAK ST	20
30	AUBURN CT	26	HEMPHILL RD	25	ODE RD	4
31	AUBURN DR	26	HERLEY RD	1	OLIVE ST	23
32	BANASTER DR	8	HICKORY DR	24	ORCHARD RD	19
33	BAUSEMAN RD	11	HIGH PRAIRIE RD	10	STAWA ST	24
34	BAYLEY RD	8	HIGHVIEW ST	22	PASADALE RD	20
35	BAYSIDE RD	21	HILDBRANDT RD	2	PAWNEE CT	25
36	BEGLEY RD	1	HILLSIDE RD	13	PEBBLE TERR	19
37	BLEU MOON LN	24	HOLLIE CIR	14	POTTER RD	5
38	BULGASS LN	15	HOLLINGSWORTH RD	17	PRAIRIE CROSSING	23
39	BO CIR	24	HONEYCREEK RD	24	PRAIRIEVIEW DR	14
40	BOEPLER LN	6	IDA RD	12	PRAIRIEWOOD DR	25
41	BRANDT RD	16	JAMISON RD	15	PRICE RD	16
42	BRIAR DR	22	JARBALO RD	14	PRIMROSE LN	29
43	BRIARWOOD DR	22	KANSAS AVE	23	QUAIL WALK ST	22
44	BROAD ST	6	KELLER RD	18	RAGTOWN RD	14
45	CANTRELL RD	27	KELLY RD	14	REINSLAND RD	2
46	CATTLEHORN DR	17	KICKAPOO RD	7	RENO RD	26
47	CEMETERY RD	6	KICKAPOO RIDGE	2	RIDGE DR	28
48	CHASE LN	24	KISSINGER RD	17	ROCKAWAY CT	17
49	CHEFTAIN RD	26	KNAPP DR	2	ROE RD	1
50	CHIMBLING DR	1	KNIGHT RD	22	ROGER RD	23
51	CLOVER CT	29	KNOLLWOOD DR	15	RODGERS RD	16
52	COCKLEBUR DR	21	KREICLER RD	7	ROLLING HILLS RD	22
53	COFFIN LN	3	KREIDER RD	28	ROUND PRAIRIE DR	1
54	CONLEY AVE	23	LAKEPOINTE DR	26	SANDUSKY RD	22
55	CONLEY DR	16	LAKEVIEW DR	25	SANTA FE TRAIL	4
56	COUNTRYVIEW DR	23	LEAVENWORTH RD	19	SEVEN SISTERS RD	4
57	COVEY LN	27	LECOMPTON RD	8	SEYMOUR RD	14
58	CULBERTSON RD	7	LEEMAN RD	15	SHAWNEE RD	8
59	CYPRESS ST	25	LENAPE RD	30	SHERMAN DR	17
60	DAKOTA ST	7	LEO CIR	14	SKYWAY DR	25
61	DANA LN	14	LIMIT ST	10	SLOAN RD	11
62	DANIELS RD	2	LINDEN CT	25	SMILEY AVE	15
63	DEER RIDGE DR	30	LINDEN ST	25	SMILEY RD	21
64	DIERTRICK ST	22	LINWOOD RD	28	SOUTH GLEN RD	23
65	DEHOFF DR	24	LOGAN RD	1	SPRINGDALE RD	11
66	DEMPSY DR	15	LORING DR	29	SPRUE RD	8
67	DESOTO ST	30	LORING RD	28	ST JOHNS RD	2
68	DONAHOO RD	18	LOWE AVE	15	ST LAWRENCE RD	6
69	DOUGLAS ST	20	LYNN RD	16	STATE AVE	21
70	DOWING RD	8	LYON ST	30	STAYARD RD	8
71	DUNCAN DR	24	MACKEY RD	30	STILLWELL RD	26
72	DUNNINGAN RD	23	MAIN (LANSING)	8	STONE GATE CT	30
73	DWYER RD	23	MAIN (LUNWOOD)	8	STONERIDGE DR	18
74	EASTON DR	5	MAIN (TONGANOXIE)	22	SUNSET LANE	12
75	EDWARDS DR	2	MARKON LN	16	SWEET BRIER DR	28
76	EHART DR	4	MARXEN RD	16	TIMBER LN	24
77	EIGHT MILE FARM	4	MC INTYRE RD	14	TODD RD	19
78	EISENHOWER DR	11	MCINTYRE RD	19	TONGANOXIE DR	18
79	EVANS RD	22	MC PHERSON RD	14	TONTINE RD	19
80	FAIRMOUNT RD	16	MEADOW LN	25	TOWER DR	14
81	FALL LEAF RD	31	MEADOWLARK LN	22	TURNER RD	5
82	FEATHER LN	24	MEAGHER DR	7	TURNPIKE RD	25
83	FORESTVIEW CIR	24	MELROY DR	23	WAGNER RD	3
84	FORESTVIEW CT	24	METRO AVE	24	WARD PARKWAY	23
85	FORESTVIEW DR	24	MEYER RD	16	WASHINGTON ST	22
86	FOUR HRD	13	MICHAELS RD	10	WEST DR	22
87	FT MEYER RD	5	MILLWOOD RD	3	WESTROSE CURVE	21
88	GARRETT RD	18	MITCHELL CT	19	WESTRIDGE RD	14
89	GATEWOOD ST	10	MITCHELL RD	19	WHISPERING WIND	11
90	GEORGE RD	21	MOORSHIRE AVE	24	WILCOTT RD	15
91	GILMAN RD	13	MORNING DEER DR	28	WOOD RD	16
92	GLENWOOD DR	23	MORNINGSIDES DR	23	WOODEND RD	26
93	GOLDEN RD	29	MT CALVARY RD	11	WOODRIDGE CIR	14
94	GREEN RD	17	MT OLIVET DR	6	WOODRIDGE DR	24
95	GREEN ST	30	MURPHY RD	29	WOODS DR	19
96	GUTHRIE RD	31	NEW LAWRENCE DR	12	WOODWARD RD	5

Legend

Type

- Red line: <all other values>
- Blue line: 1st Priority
- Yellow line: 2nd Priority
- Dashed yellow line: KDOT Roads
- Grey outline: CITY LIMITS_2011
- Black outline: <all other values>

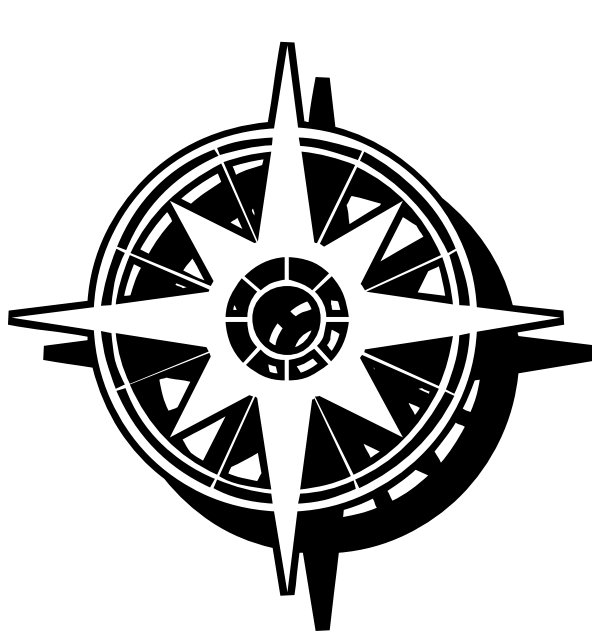
SURFACE

- Black line: Paved
- Grey line: Soil
- Green line: Gravel
- Yellow line: Minimum Maintenance

Townships Area Name

- Green: ALEXANDRIA
- Pink: DELAWARE
- White: EASTON
- Light Blue: FAIRMOUNT
- Orange: HIGH PRAIRIE
- Yellow: KICKAPOO
- Light Green: RENO
- Purple: SHERMAN
- Light Purple: STRANGER
- Dark Green: TONGANOXIE

Map Prepared By Tim Urban



LEAVENWORTH COUNTY
DEPARTMENT OF
PUBLIC WORKS
300 WALNUT
LEAVENWORTH KANSAS