

NOTICE TO USERS

This report is intended to document the methodologies, findings, and conclusions of a Utility Study completed for the Matanuska-Susitna Borough. Changes frequently occur during evolution of the planning/design process. Persons who may rely on the information contained in this document should contact the following:

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63+56	21' LT	CROSSING	1" WATER SERVICE	ADJUST TO PROPOSED GRADE
63+43	21' LT	UNDERGROUND WATER	WATER VALVE	ADJUST TO PROPOSED GRADE
64+16	21' LT	UNDERGROUND WATER	8" WATER STUB	ADJUST TO PROPOSED GRADE
69+37	30' LT	UNDERGROUND WATER	WATER VALVE	RELOCATE CROSS, 35' OF 12 WATER LINE, VALVE, VALVE BOX AND FIRE HYDRANT
70+27-72+27	21' LT	UNDERGROUND WATER	16-inch WATER LINE	RELOCATE WATER LINE TO OBTAIN 10' BURIAL
71+70	19' LT	UNDERGROUND WATER	WATER STUB OUT	ADJUST TO PROPOSED GRADE
73+91	25' RT	UNDERGROUND WATER	FIRE HYDRANT	WORK AROUND OR RELOCATE
73+91	CROSSING	UNDERGROUND WATER	WATER VALVE	ADJUST TO PROPOSED GRADE

KIMBERLY STREET

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMEND ACTION
0+00-3+00	12' RT	UNDERGROUND WATER	INADEQUATED COVERAGE	RELOCATE WATER LINE TO OBTAIN 10' BURIAL
0+00-3+00	15' RT	UNDERGROUND WATER	INADEQUATED COVERAGE	RELOCATE WATER LINE TO OBTAIN 10' BURIAL
0+26	16' RT	UNDERGROUND WATER	WATER VALVE	ADJUST TO PROPOSED GRADE
0+29	19' RT	UNDERGROUND WATER	WATER VALVE	ADJUST TO PROPOSED GRADE
0+56	13' RT	UNDERGROUND WATER	WATER VALVE	WORK AROUND OR RELOCATE
0+56	19' RT	UNDERGROUND WATER	FIRE HYDRANT	WORK AROUND OR RELOCATE

3.0 ELECTRICAL – MEA

MEA is the major power distributor in the area. There utilities are all over head with an exception of a short underground run at the east end of the project. The majority of the conflicts is at the east end of the project and is listed in the table below:

MACHEN ROAD

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMENDED ACTION
3+03	CROSSING	OVERHEAD ELECTRIC	OVER HEAD WIRE	RAISE OVER HEAD WIRE FROM 382.2 TO 387.8 TO PROVIDE 20.5' CLEARANCE
63+05	24' LT	OVERHEAD ELECTRIC	POWER POLE	WORK AROUND OR RELOCATE
69+62	42' LT	OVERHEAD ELECTRIC	POWER POLE	WORK AROUND OR RELOCATE
72+11	28' LT	OVERHEAD ELECTRIC	POWER POLE	REMOVE POWER POLE AND RE-ROUTE LINE TO EXISTING OWER POLE 61' NORTH

SOUTHWAY STREET

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMENDED ACTION
0+41	24' LT	OVER HEAD ELECTRIC	POWER POLE	WORK AROUND OR RELOCATE
2+21-2+72	23' RT	OVER HEAD ELECTRIC	UNDER GROUND UTILTIY	RELOCATE TO MAINTAIN COVERAGE

DESKAS STREET

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMENDED ACTION
2+21	23' RT	OVER HEAD ELECTRIC	POWER POLE	WORK AROUND OR RELOCATE

4.0 TELEPHONE/TELEVISION/FIBER OPTIC- MTA

MTA utilities are underground and are present in several location of the Machen Road Extension project. The depth of these lines is assumed to be 2 feet below existing grade. Below is a list of conflict encountered:

MACHEN ROAD

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMENDED ACTION
1+09	20' RT	UNDERGROUND TELEPHONE CABLE	FIBER OPTIC MARKER	WORK AROUND OR RELOCATE
46+27	X-ING	UNDERGROUND TELEPHONE CABLE	CABLE (CROSSING CENTER LINE)	RELOCATE TO MAINTAIN COVERAGE
46+27	6' LT	UNDERGROUND TELEPHONE CABLE	TELEPHONE PEDESTAL	WORK AROUND OR RELOCATE
63+05-64+05	34' LT	UNDERGROUND TELEPHONE CABLE	TELEPHONE CABLE/FIBER	RELOCATE TO MAINTAIN COVERAGE
63+05	34' LT	UNDERGROUND TELEPHONE CABLE	TELEPHONE PEDESTAL	WORK AROUND OR RELOCATE
64+05 - 73+88	34' LT	UNDERGROUND TELEPHONE CABLE	TELEPHONE CABLE/FIBER	RELOCATE TO MAINTAIN COVERAGE
69+63	27' LT	UNDERGROUND TELEPHONE CABLE	TELEPHONE PEDESTAL	WORK AROUND OR RELOCATE

KIMBERLY STREET

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMENDED ACTION
0+00-3+00	23' L	UNDERGROUND TELEPHONE CABLE	TELEPHONE CABLE/FIBER	RELOCATE TO MAINTAIN COVERAGE
0+00-1+00	30' L	UNDERGROUND TELEPHONE CABLE	TELEPHONE CABLE/FIBER	RELOCATE TO MAINTAIN COVERAGE
0+33	X-ING	UNDERGROUND TELEPHONE CABLE	TELEPHONE CABLE/FIBER	RELOCATE TO MAINTAIN COVERAGE

SOUTHWAY STREET

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMENDED ACTION
0+41	X-ING	UNDERGROUND TELEPHONE CABLE	TELEPHONE CABLE/FIBER	RELOCATE LINE TO MAINTAIN COVERAGE

0+41-1+80	23' LT	UNDERGROUND TELEPHONE CABLE	TELEPHONE CABLE/FIBER	RELOCATE LINE TO MAINTAIN COVERAGE
1+80-3+00	23' LT	UNDERGROUND TELEPHONE CABLE	TELEPHONE CABLE/FIBER	RELOCATE LINE TO MAINTAIN COVERAGE

5.0 GAS - ENSTAR NATURAL GAS

Enstar Natural Gas utilities are underground and are present in several location of the Machen Road Extension project. The depths of these lines are assumed to be 2 feet below existing grade. The size of the pipes vary from 2-inch to 6_inch. Below is a table of conflicts within the Machen Road Extension Project:

MACHEN ROAD

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMENDED ACTION
46+18	X-ING	UNDERGROUND GAS LINE	6" PLASTIC GAS LINE (CROSSES CENTERLINE)	RELOCATE LINE TO MAINTAIN COVERAGE
63+57-65+00	13' L	UNDERGROUND GAS LINE	2" PLASTIC GAS LINE	RELOCATE LINE TO MAINTAIN COVERAGE
69+75-70+12	13'-85' L	UNDERGROUND GAS LINE	2" PLASTIC GAS LINE	RELOCATE LINE TO MAINTAIN COVERAGE

KIMBERLY STREET

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMENDED ACTION
0+47-0+53	X-ING	UNDERGROUND GAS LINE	2" PLASTIC GAS LINE	RELOCATE LINE TO MAINTAIN COVERAGE

SOUTHWAY STREET

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMENDED ACTION
0+00 - 1+80	3' RT	UNDERGROUND GAS LINE	2" PLASTIC GAS LINE	RELOCATE LINE TO MAINTAIN COVERAGE
0+15	X-ING	UNDERGROUND GAS LINE	2" PLASTIC GAS LINE	RELOCATE LINE TO MAINTAIN COVERAGE

6.0 MISCELLANEOUS

There are some miscellaneous conflicts within the Machen Road Extension project. These conflicts are listed below:

MACHEN ROAD

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMENDED ACTION
0+37	X-ING	MISC	44 LF 24" CMP CULVERT	REPLACE WITH 63 LF 24" CULVERT CMP
0+50	25' RT	MISC	STOP SIGN	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS
1+00	X-ING	MISC	45 LF 24" CMP CULVERT	REPLACE WITH 63 LF 24" CULVERT CMP
1+08	20' LT	MISC	STOP SIGN	WORK AROUND OR RELOCATE
1+26	31' LT	MISC	HUSKY LOG WORK SIGN	WORK AROUND OR RELOCATE
2+00-3+32	X-ING	MISC	32 LF 12" CMP CULVERT	REPLACE WITH 30 LF 24" CMP CULVERT
4+14	14' LT	MISC	ALL-AROUND TIRE SIGN	WORK AROUND OR RELOCATE
47+16	17' LFT	MISC	SPEED LIMIT SIGN	RELOCATE OUT OF CUT AND FILL LIMITS
60+04	X-ING	MISC	CHAIN LINK FENCE	TO BE REMOVED
60+04-63+21	30' LT	MISC	WOOD FENCE	TO BE REMOVED
61+71	15' RT	MISC	YARD LIGHT	RELOCATE OUT OF CUT AND FILL LIMITS
63+17	X-ING	MISC	GUARD RAIL	TO BE REMOVED
63+21	X-ING	MISC	CHAIN LINK FENCE	75' TO BE REMOVED

63+21	X-ING	MISC	90 LF 18" CMP CULVERT	REPLACE WITH 45 LF 24" CMP CULVERT
63+21	X-ING	MISC	DRAIN ROCK	TO BE REMOVED
63+58-64+14	X-ING	MISC	BOULDERS	TO BE REMOVED
72+03	29' LT	MISC	STREET SIGN	TO BE REMOVED

DAY ROAD

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMEND ACTION
2+08	X-ING	MISC	12" CMP CULVERT	REPLACE CULVERT WITH 40 LF 24" CMP CULVERT
3+25	X-ING	MISC	CMP CULVERT	REPLACE CULVERT WITH 40 LF 24" CMP CULVERT

KIMBERLY STREET

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMEND ACTION
0+41	2' LT	MISC	TRAFFIC SIGN	TO BE REMOVED
0+47	28' LT	MISC	ROCK	TO BE REMOVED
0+47	35' LT	MISC	ROCK	TO BE REMOVED
0+47	44' LT	MISC	ROCK	TO BE REMOVED

DESKAS STREET

STATION	OFFSET	UTILITY	DESCRIPTION	RECOMMEND ACTION
2+03	25' RT	MISC	TRAFFIC SIGN	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS

7.0 CONCLUSION

The above tables are list of known conflicts within the project area. Conflicts were determined based on locations done in summer of 2009, field survey, visual observation and information given by each utility company. With the exception of the City water line the depth of the utility lines are unknown are care should be used when digging in the area. The following pages are tables of all the known existing utilities within the project area. Please correct and deficiencies that may be found.

MACHEN ROAD

STATION	OFFSET	DESCRIPTION	RECOMMENDED ACTION
0+00-5+62	25' LT	6" PLASTIC GAS LINE (PARALLEL TO CENTERLINE)	NO ACTION REQUIRED
0+37	CROSSING	44 LF 24" CMP CULVERT	REPLACE WITH 63 LF 24" CULVERT CMP
0+50	25' RT	STOP SIGN	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS
1+00	CROSSING	45 LF 24" CMP CULVERT	REPLACE WITH 63 LF 24" CULVERT CMP
1+08	20' LT	STOP SIGN	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS
1+09	20' RT	FIBER OPTIC MARKER	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS
1+12	CROSSING	TELEPHONE/CABLE FIBER (CROSSING CENTER LINE)	NO ACTION REQUIRED
1+12	46' LT	TELEPHONE/CABLE FIBER (PARALLEL TO CENTER LINE)	NO ACTION REQUIRED
1+26	31' LT	HUSKY LOG WORK SIGN	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS
2+00-2+32	35' LT	32 LF 12" CMP CULVERT	TO BE REMOVED
3+03	CROSSING	OVERHEAD WIRE	RAISE OVERHEAD WIRE FROM 382.2 TO 387.8 TO PROVIDE 20.5' CLEARANCE
4+14	14' LT	ALL-AROUND TIRE SIGN	RELOCATE OUT OF CUT AND FILL LIMITS
46+18	CROSSING	6" PLASTIC GAS LINE (CROSSES CENTERLINE)	RELOCATE TO MAINTAIN COVERAGE
46+27	CROSSING	TELEPHONE/CABLE FIBER (CROSSING CENTER LINE)	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS
46+27	6' LT	TELEPHONE PEDISTAL	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS
46+37	19' LT	OVERHEAD UTILITIES	NO ACTION REQUIRED
47+16	17' LT	SPEED LIMIT SIGN	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS

60+04	CROSSING	CHAIN LINK FENCE	TO BE REMOVED
60+04-63.21	30' LT	WOOD FENCE	TO BE REMOVED
6011	CROSSING	16-INCH WATER LINE (SOUTH FROM BEND)	NO ACTION REQUIRED
60+11-70+27	21' LT	16-inch WATER LINE (EAST FROM BEND)	NO ACTION REQUIRED
60+19	11' LT	CONTINUITY TEST LEAD VALVE BOX	ADJUST TO PROPOSED GRADE
60+20	18' LT	AIR RELEASE VALVE	ADJUST TO PROPOSED GRADE
61+71	15' RT	YARD LIGHT	RELOCATE OUT OF CUT AND FILL LIMITS
62+73	21' LT	1" WATER SERVICE VALVE STUB	NO ACTION REQUIRED
63+05-74+00	41' LT	OVERHEAD UTILITIES	NO ACTION REQUIRED
63+05-64+05	34' LT	TELEPHONE CABLE/FIBER	RELOCATE TO MAINTAIN COVERAGE
63+17	CROSSING	GUARD RAIL	TO BE REMOVED
63+21	CROSSING	CHAIN LINK FENCE	TO BE REMOVED
63+21	CROSSING	90 LF 18" CMP CULVERT	REPLACE WITH 45 LF 24" CMP CULVERT
63+21	CROSSING	DRAIN ROCK	TO BE REMOVED
63+30	21' LT	WATER VALVE	ADJUST TO PROPOSED GRADE
63+43	21' LT	WATER VALVE	ADJUST TO PROPOSED GRADE
63+57-69+62	34' LT	TELEPHONE CABLE/FIBER	NO ACTION REQUIRED
63+58	21' LT	WATER VALVE	NO ACTION REQUIRED
63+58-64+14	CROSSING	BOULDERS	TO BE REMOVED
63+56	21' LT	1" WATER SERVICE VALVE STUB	ADJUST TO PROPOSED GRADE
63+57-65+00	13' LT	2" PLASTIC GAS LINE	RELOCATE TO MAINTAIN COVERAGE
64+05-73+88	34' LT	TELEPHONE	RELOCATE TO MAINTAIN COVERAGE
64+16	21' LT	8" WATER STUB	ADJUST TO PROPOSED GRADE
65+00-69+75	13'LT	2" PLASTIC GAS LINE	NO ACTION REQUIRED
66+60	40' LT	POWER POLE	NO ACTION REQUIRED

69+37	30' LT	WATER VALVE	RELOCATE CROSS, 35' OF 12 WATER LINE, VALVE, VALVE BOX AND FIRE HYDRANT
69+75-70+12	13'-85' LT	2" PLASTIC GAS LINE	RELOCATE TO MAINTAIN COVERAGE
70+07	CROSSING	16"X 12" CROSS	NO ACTION REQUIRED
70+12-74+00	85' LT	2" PLASTIC GAS LINE	NO ACTION REQUIRED
70+20-74+00	41' LT	TELEPHONE CABLE/FIBER	NO ACTION REQUIRED
70+27-72+27	21' LT	16-inch WATER LINE (EAST FROM BEND)	RELOCATE TO MEET 10' COVERAGE REQUIREMENTS
70+72	20' LT	AIR RELEASE VALVE	ADJUST TO PROPOSED GRADE
71+70	19' LT	WATER STUB OUT	ADJUST TO PROPOSED GRADE
72+03	29' LT	STREET SIGN	TO BE REMOVED
72+11	28' LT	POWER POLE	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS
73+52	18' LT	WATER VALVE	NO ACTION REQUIRED
73+52	18' LT	12" WATER STUB	NO ACTION REQUIRED
73+68-74+00	28' RT	UNDERGROUND UTILITY	WORK AROUND OR RELOCATE TO MAINTAIN COVERAGE
73+91	25' RT	FIRE HYDRANT	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS
73+91	CROSSING	WATER VALVE	ADJUST TO PROPOSED GRADE

DAY ROAD

STATION	OFFSET	DESCRIPTION	RECOMMEND ACTION
2+08	CROSSING	12" CMP CULVERT	REPLACE CULVERT WITH 40 LF 24" CMP CULVERT
2+42	CROSSING	TELEPHONE CABLE/FIBER	NO ACTION REQUIRED
3+25	CROSSING	CMP CULVERT	REPLACE CULVERT WITH 40 LF 24" CMP CULVERT
3+34	CROSSING	TELEPHONE CABLE/FIBER	NO ACTION REQUIRED

KIMBERLY STREET

STATION	OFFSET	DESCRIPTION	RECOMMEND ACTION
0+00-3+00	12' RT	24" WATER MAIN LINE	RELOCATE TO MEET 10' COVERAGE REQUIREMENTS

0+00-3+00	15' RT	12" WATER MAIN LINE	RELOCATE TO MEET 10' COVERAGE REQUIREMENTS
0+00-3+00	23' LT	TELEPHONE CABLE/FIBER	RELOCATE TO MAINTAIN COVERAGE
0+00-3+00	26' LT	OVERHEAD UTILITY	NO ACTION REQUIRED
0+00-1+00	30' LT	TELEPHONE CABLE/FIBER	RELOCATE TO MAINTAIN COVERAGE
0+26	16' RT	WATER VALVE	ADJUST TO PROPOSED GRADE
0+29	19' RT	WATER VALVE	ADJUST TO PROPOSED GRADE
0+33	CROSSING	TELEPHONE CABLE/FIBER	RELOCATE TO MAINTAIN COVERAGE
0+41	2' LT	TRAFFIC SIGN	TO BE REMOVED
0+41		OVER HEAD UTILITY	NO ACTION REQUIRED
0+43	26' LT	POWER POLE	TO BE REMOVED
0+47	28' LT	ROCK	TO BE REMOVED
0+47	35' LT	ROCK	TO BE REMOVED
0+47	44' LT	ROCK	TO BE REMOVED
0+47-0+53	CROSSING	2" PLASTIC GAS LINE	RELOCATE TO MAINTAIN COVERAGE
0+56	13' RT	WATER VALVE	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS
0+56	19' RT	FIRE HYDRANT	WORK AROUND OR RELOCATE OUT OF CUT AND FILL LIMITS

SOUTHWAY STREET

STATION	OFFSET	DESCRIPTION	RECOMMEND ACTION
0+00-1+80	3' RT	2" PLASTIC GAS LINE	RELOCATE TO MAINTAIN COVERAGE
0+15	CROSSING	2" PLASTIC GAS LINE	RELOCATE TO MAINTAIN COVERAGE
0+37	24' LT	UTILITY PED	WORK AROUND OR RELOCATED OUT OF CUT AND FILL LIMITS
0+39	CROSSING	OVERHEAD UTILITY	NO ACTION REQUIRED
0+41	CROSSING	TELEPHONE CABLE/FIBER	RELOCATE TO MAINTAIN COVERAGE
0+41	24' LT	POWER POLE	WORK AROUND OR RELOCATED OUT OF CUT AND FILL LIMITS
0+41-3+00	24' LT	OVER HEAD UTILITY	NO ACTION REQUIRED
0+41-1+80	23' LT	TELEPHONE CABLE/FIBER	RELOCATE TO MAINTAIN COVERAGE
1+80-3+00	3' RT	2" PLASTIC GAS LINE	NO ACTION REQUIRED
1+80-3+00	23' LT	TELEPHONE CABLE/FIBER	NO ACTION REQUIRED

DESKAS STREET

STATION	OFFSET	DESCRIPTION	RECOMMEND ACTION
0+00-2+21	23' R	OVER HEAD UTILITIES	NO ACTION REQUIRED
2+03	25' R	TRAFFIC SIGN	WORK AROUND OR RELOCATED OUT OF CUT AND FILL LIMITS
2+21	23'R	POWER POLE	WORK AROUND OR RELOCATED OUT OF CUT AND FILL LIMITS
2+21-2+72	23' R	UNDERGROUND UTILTIY	RELOCATED TO MAINTAIN COVERAGE

APPENDIX A - PRELIMINARY PLANS (LOCAL REVIEW)