

APPENDIX B – DRAFT UTILITY CONFLICT REPORT

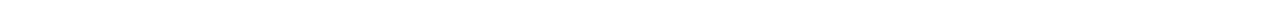


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1.0 PROJECT SUMMARY

The Municipality of Anchorage, in cooperation with the Alaska Department of Transportation and Public Facilities, proposes to rehabilitate 9th Avenue from L Street to Latouche Street. The project will consist of conversion of 9th Avenue from the present four-lane undivided cross section to a three-lane section with landscape and hardscape improvements to strengthen a pedestrian connection between Fairview and Downtown. This project improvements will include signalization, roadway and pedestrian level lighting, sidewalk/pathway improvements and landscaped medians. Approximately 7,630 feet of 9th Avenue will be affected by this work.

This project involves minor earthwork in areas of sidewalk/accessibility improvements and shallow utility trenching. No change in roadway profile is proposed. However, signalization and curb ramp improvements will require additional right-of-way in many intersections. Utilities encountered along 9th Avenue include a municipal storm drain trunk, municipal water lines, municipal sanitary sewer facilities, and municipal power, street lighting and traffic signalization. Other utilities include natural gas lines crossing and paralleling the roadway and telephone line (copper and fiber optic) and cable television line crossings. Design of improvements is scheduled for 2007 with construction scheduled to begin the summer of 2008.

1.1 Soils

Existing geotechnical boring data in the downtown area indicates good, sandy gravel subgrade material predominates. The pavement surface condition of 9th Avenue from L Street to Gambell Street does not indicate a problem with underlying material degradation or instability. Pavement cores were taken in this area to determine the existing pavement thickness along the project corridor to aid in selecting an appropriate pavement rehabilitation method. Supplemental geotechnical investigation of 9th Avenue from Gambell Street to Ingra Street recommended that this section of 9th Avenue be reconstructed with a more competent pavement section.

2.0 PURPOSE

This report presents conflicts found between proposed construction improvements and existing utilities within the corridor and discusses recommendations for resolution. Plan and profile drawings will be included in the plans-in-hand review package and should be referred to there. The plan sheets show proposed improvements over a base map compiled from field survey and as-built data. These same drawings, updated from the initial set, will be sent to individual utility companies for their use.

2.1 Scope

Utilities covered in this report include:

- City storm drainage
- City water lines
- City sewer lines
- City street lighting and signalization

- City electric lines
- Natural gas lines
- Telecommunication lines

Utility appurtenances that may remain because no major conflicts result from proposed improvements will be adjusted to final grade. Such appurtenances include manholes (sewer and storm drain), valve boxes, key boxes, junction boxes and pedestals.

3.0 FINDINGS BY UTILITY

The conflicts found between existing utilities and proposed improvements are presented here by utility starting at the west end of the project at L Street, working east to LaTouche Street. Section 4.0 lists these conflicts in tabular form by utility and by location of conflict. Traffic signal improvements will affect existing utilities in much the same way as curb ramp improvements. A proposed new lighting system will require removal of existing electroliers. Lighting and signal system work will require the addition of several load centers and service drops to each load center.

3.1 Municipality of Anchorage Storm Drain System

The Municipality of Anchorage owns and maintains a storm drain system with trunk lines that cross and parallel 9th Avenue. Four general drainage systems are included in the project area with drainage directed to one of two local outfalls as outlined below:

1. Drainage from E Street to L Street flows west along 9th Avenue to the Stolt Lane outfall draining into Cook Inlet.
2. Drainage from B Street to Eagle Street drains from the west and east, respectively, toward Cordova Street where it collects and flows south toward 19th Avenue/C Street and on into Chester Creek.
3. A storm drain line begins in the Fairbanks Street intersection with 9th Avenue, collecting drainage from the northeast quadrant of the intersection. Drainage flows south, winding its way into the Cordova line mentioned earlier and on to the Chester Creek outfall.
4. Drainage from Hyder Street to LaTouche Street collects at the Hyder Street intersection and flows south toward 10th Avenue/Gambell Street, then on to the same Chester Creek outfall mentioned earlier.

Proposed roadway improvements for 9th Avenue will typically conflict with the storm drain facilities in one of three ways: 1) Storm drain manholes (SDMHs) located within pavement will required adjustment to final grade of the new pavement surface. 2) SDMHs located within pavement, constructed with “block-type” cones will require replacement, or 3) Catch basin manholes or inlets will require additional structures, relocation, or adjustment based on improvements to the curb and gutter section.

3.2 Anchorage Water and Wastewater Utility (AWWU) Water Lines

The Municipality of Anchorage owns and operates a water system providing service in the project area. Several crossings of 9th Avenue and facilities within 9th Avenue occur as noted below:

- A 16-inch ductile iron (DI) water main crosses 9th Avenue along the eastern side of I Street, with a valve and hydrant leg located north of the proposed intersection work and a valve located within the proposed southern intersection work.
- An abandoned 6" wood stave water main crosses 9th Avenue at G Street, running under the west half of the roadway.
- A 12" C.I. water main crosses 9th Avenue along the western side of E Street, with a valve located within the proposed northern intersection work area and a fire hydrant located south of proposed intersection work.
- A 16-inch DI water main crosses 9th Avenue along the western side of A Street, with a valve and fire hydrant located within the proposed southern intersection work.
- An 8-inch asbestos cement (AC) water main crosses 9th Avenue along the west side of Cordova Street with a valve and fire hydrant located within the proposed northern intersection work area.
- An 8-inch AC water main tees into the Cordova Street crossing and continues easterly along 9th Avenue with a valve located east of the intersection. The 8-inch main continues easterly to Medfra Street.
- A fire hydrant, with valved leg stemming from the 9th Avenue main, is located in the northern sidewalk near Station 56+50.
- A fire hydrant, with valved leg stemming from the 9th Avenue main, is located in the northern sidewalk near Station 60+00.
- An 8-inch AC water main intersects the 9th Avenue main from the north, along the western side of Fairbanks Street, with valves located within the proposed northern intersection work area and on the western side of the 9th Avenue main.
- A 10-inch AC water main crosses along the eastern side of Gambell Street with a valve located north of the intersection and on both the western and eastern sides of the 9th Avenue main, all within the proposed work area.
- A fire hydrant, with valved leg stemming from the 9th Avenue main, is located in the northern sidewalk near Station 68+05.
- A 16-inch cast iron (CI) water main crosses along the western side of Ingra Street with a valve located north of the intersecting mains and one located on the eastern side of the 9th Avenue main, both located within the proposed work area.

Water mains will not be affected by the proposed improvements, but appurtenances such as valve boxes and hydrants will require adjustment or relocation based on final grade of the roadway pavement and final layout of pathways/sidewalks and bulb outs. Insulation board will be required where proposed storm drain work cannot provide adequate separation of facilities, such as within the I Street intersection.

3.3 AWWU Sanitary Sewer Lines

The Municipality of Anchorage owns and operates a sanitary sewer system providing service in the eastern portion of the project area. Several crossings of 9th Avenue and facilities within 9th Avenue occur as noted below:

- A sanitary sewer manhole (SSMH) is located right of Station 11+75 at the intersection of a sanitary line to the north and one to the east, extending to K Street. The sewer line ends at a cleanout near K Street.
- A sanitary sewer manhole is located in the southeast quadrant of the intersection of Cordova Street and 9th Avenue, near Station 53+40. The manhole is set at the intersection of two 8-inch concrete sanitary lines with one line continuing south and the other line running from the east.
- As-built drawings show a 6” sewer service teeing into the 9th Avenue main from the north side near Station 54+10. This sanitary line runs through a storm drain manhole.
- As-built drawings show another 6” sewer service teeing into the 9th Avenue main from the north side near Station 55+90. This sanitary line runs through a storm drain manhole.
- A sanitary manhole joins lines from the east and west on the south side of 9th Avenue at Station 56+90.
- As-built drawings show another 6” sewer service teeing into the 9th Avenue main from the north side near Station 57+70. This sanitary line runs through a storm drain manhole.
- Near Station 60+55 the 9th Avenue sanitary sewer main ties into an old service connection which angles northeast into the adjacent cemetery property.
- An 8-inch concrete sewer main crosses along the east side of Fairbanks Street, with a SSMH located near Station 64+10, right.
- A sewer main crosses along the east side of Hyder Street at a depth affected by proposed storm drain improvements. Insulation board will be required to mitigate the lack of standard separation between facilities.

Sanitary sewer mains may be in conflict with the preliminary storm drain design at the intersections of 9th Avenue and Denali Street, Eagle Street, Fairbanks Street and Hyder Street. Further analysis will determine if insulation is an option to continue with the present storm drain design. Furthermore, sanitary manholes and cleanouts will require adjustment to final grade of roadway pavement.

3.4 Municipality of Anchorage Street Lighting and Traffic Signalization System

Municipal Light and Power (ML&P) owns and operates street lighting along most of 9th Avenue. Traffic signalization systems and associated street lighting that serve major intersections are under the operation of the MOA Department of Planning, Development and Public Works. Lighting occurs on both the north and south sides of 9th Avenue from L Street to Gambell Street. Aluminum light poles typically occur within the sidewalk or immediately adjacent to the edge of sidewalk. Conductors for the lighting system are located in underground conduit runs. However, in several locations, failed connections in the underground system were supplemented with overhead cable. Proposed work for the 9th Avenue project includes replacement of the lighting system. Locations of proposed poles are coordinated to avoid conflict with sidewalk and reconstructed curb ramps. Proposed work also includes providing a new traffic signal system to replace signals located at the following intersections with 9th Avenue:

- L Street
- I Street
- G Street
- E Street
- C Street
- A Street
- Cordova Street
- Gambell Street
- Ingra Street

The municipal traffic signal system includes poles and signal arms with mast heads along with controller cabinets, junction boxes and load centers. Roadway and pedestrian improvements conflict with these components to varying degrees for each intersection. The proposed traffic signal system upgrade, including interconnect, is coordinated to avoid conflict with proposed improvements.

3.5 Municipal Light & Power (ML&P) Electric Lines

ML&P owns and operates primary power lines in addition to the street lighting system discussed in the previous section. Power lines cross or parallel 9th Avenue at the following locations:

- A single underground line crosses in line with the K/L Alley
- A single overhead line crosses along the west side of E Street
- A single underground line along the west side of C Street, north of 9th Avenue, crosses C Street to the northeast corner of the 9th Avenue/C Street intersection
- Two overhead lines cross along the west side of Gambell Street
- A single line runs along the west side of Ingra Street on the north side of 9th Avenue

The primary power lines provide feeds for street lighting and signal system circuits and for local power needs. Lightning and traffic signal system upgrades will require new power services and removal of existing load centers, as noted. In addition, removal of ML&P poles will be required.

- A new load center (LC “A”) is required in the southwest quadrant of 9th/L
- New LC “B” is required in the southwest quadrant of 9th/I
- New LC “C” is required in the southwest quadrant of 9th/G
- New LC “D” is required in the southwest quadrant of 9th/E
- The existing load center north and east of C Street should be removed from the sidewalk and replaced with proposed LC “E”, located in the southwest quadrant of the intersection
- New LC “F” is required in the southwest quadrant of 9th/A
- New LC “G” is required in the southwest quadrant of 9th/Cordova
- New LC “H” is required in the southwest quadrant of 9th/Gambell
- New LC “I” is required in the southwest quadrant of 9th/Ingra

Existing poles will need to be removed from the locations noted in table 4.9.

3.6 ENSTAR Natural Gas Lines

ENSTAR owns and operates natural gas lines crossing and paralleling 9th Avenue. The location of these lines is described below:

- A gas line is located within the K/L Alley, north of 9th Avenue.
- A gas line within the east side of H Street enters 9th Avenue from the north, turns east within the north side of the road, and turns again to the south near Station 22+60 where it crosses part of the 9th Avenue park strip. As-built data indicate a possible gas valve near station 21+00, left.
- Two gas lines tee in the southeast quadrant of the intersection of Cordova Street and 9th Avenue. The line within Cordova Street is located in the eastern section of the roadway, approximately 3 feet from curb and gutter. The gas line along 9th Avenue is located within the roadway, approximately 5 feet from curb and gutter. A gas valve is located east of the tee near station 53+52, right. The line continues east into the intersection with Fairbanks Street. Near Station 64+21 the line turns north along the east side of Fairbanks Street.

Proposed storm drain improvements for the intersections of H Street, Cordova Street, Denali Street, Eagle Street, and Fairbanks Street intersections with 9th Avenue may affect the above described gas lines. Existing valves located in the roadway will require adjustment to final grade as well as protection from construction activity.

3.7 Alaska Communications Systems Telecommunications

Alaska Communication Systems (ACS) owns and operates telecommunication facilities within the project area. No ACS facilities parallel 9th Avenue, but crossings occur at the following intersections:

- L Street, west of centerline
- E Street, immediately east of centerline
- Cordova Street, immediately east of centerline
- Hyder Street, immediately east of centerline
- Ingra Street, near the western edge

A telephone vault exists in the L Street intersection at station 9+94, slightly right of centerline. Proposed improvements for 9th Avenue will require adjustment of the telephone vault manhole and will require protection of facilities in the E Street, Cordova Street, Hyder Street, and Ingra Street intersections, where storm drain work crosses the telephone facilities. In areas where conduit runs for lighting and signal improvements may conflict with ACS facilities, the contractor will be required to work around and protect those facilities from damage during construction.

3.8 General Communications Inc. (GCI)

GCI owns and operates fiber optic (FO) cable and coaxial cable telecommunication lines crossing 9th Avenue. One overhead set of FO and trunk lines crosses along the west side of E Street. A second set of overhead FO and trunk lines crosses along the west side of Gambell

Street. A vault located between L Street and K Street is not within the project limits. Proposed improvements for 9th Avenue should not affect GCI's facilities.

4.0 SUMMARY OF UTILITY CONFLICTS AND POTENTIAL RESOLUTION

The following tables summarize utility conflicts assumed during preparation of this draft report. Recommended actions to resolve conflicts are preliminary, subject to review and revision. Tables are presented by type of facility.

Table 4.1 Storm Drain Improvements and Related Utility Conflicts

Station	Offset	SD Work	Description of Conflict	Recommended Action
10+25	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
17+45	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
17+45	RT	Install SDMH	Curb & Gutter	New SDMH Req'd
16+95	RT	Install SDMH	Curb & Gutter	New SDMH Req'd
17+00	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
20+60	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
21+10	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
24+20	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
24+45	RT	Install SDMH	Curb & Gutter	New SDMH Req'd
24+65	RT	Install SDMH	Curb & Gutter	New SDMH Req'd
27+80	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
28+20	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
31+50	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
31+90	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
32+10	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
42+20	LT	Install SDMH	Curb & Gutter	New SDMH Req'd
42+25	RT	Install SDMH	Curb & Gutter	New SDMH Req'd
42+60	LT	Install SDMH	Curb & Gutter	New SDMH Req'd

Table 4.2 Water Utility Conflicts

Station	Offset	Utility Conflict	Description of Conflict	Recommended Action
17+36	41 RT	Valve Box	Paving	Adjust to final grade
30+50	RT	Hydrant	Pathway	R&R Hydrant
31+48	29 LT	Valve Box	Paving	Adjust to final grade
45+81	44 RT	Hydrant	Pathway	R&R Hydrant
53+03	39 LT	Hydrant	Pathway	R&R Hydrant
53+40	LT	Hydrant	Pathway	R&R Hydrant
53+53	10 LT	Valve box	Paving	Adjust to final grade
56+42	20 LT	Hydrant	Pathway	R&R Hydrant
60+02	21 LT	Hydrant	Pathway	R&R Hydrant
63+72	9 LT	Valve Box	Paving	Adjust to final grade

63+91	30 LT	Valve Box	Paving	Adjust to final grade
67+31	9 LT	Valve Box	Paving	Adjust to final grade
67+73	30 LT	Valve Box	Paving	Adjust to final grade
67+92	10 LT	Valve Box	Paving	Adjust to final grade
68+03	21 LT	Hydrant	Pathway	R&R Hydrant
72+80	11 LT	Valve Box	Paving	Adjust to final grade
74+43	23 LT	Hydrant	Pathway	R&R Hydrant
74+77	15 LT	Valve Box	Paving	Adjust to final grade
75+14	13 LT	Valve Box	Paving	Adjust to final grade

Table 4.3 Sanitary Sewer Utility Conflicts

Station	Offset	Utility Conflict	Description of Conflict	Recommended Action
11+76.79	18.4 RT	SSMH	Paving	Adjust to final grade
13+57.34	19.6 RT	Cleanout	Paving	Adjust to final grade
53+36.55	12.1 RT	SSMH	Paving	Adjust to final grade
56+90.92	12.1 RT	SSMH	Paving	Adjust to final grade
60+53.58	12.3 RT	SSMH	Paving	Adjust to final grade
64+13.36	12.0 RT	SSMH	Paving	Adjust to final grade

Table 4.4 Lighting/Traffic Utility Conflicts

Station	Offset	Utility Conflict	Description of Conflict	Recommended Action
24+13	25 LT	J-Box	Paving	Adjust to final grade or remove
38+00	21 LT	J-Box	Paving	Adjust to final grade or remove

Table 4.5 Natural Gas Utility Conflicts

Station	Offset	Utility Conflict	Description of Conflict	Recommended Action
20+90	LT	Valve (gas)	Paving	Adjust to final grade
21+01	12 LT	Valve (gas)	Paving	Adjust to final grade
53+52	18 RT	Valve (gas)	Paving	Adjust to final grade

Table 4.6 Telephone Utility Conflicts

Station	Offset	Utility Conflict	Description of Conflict	Recommended Action
9+93.94	3.2 RT	Telephone vault	Paving	Adjust to final grade

Table 4.7 Electric Utility Conflicts

Station	Offset	Utility Conflict	Description of Conflict	Recommended Action
L Street		Load Center	New lighting	New Load Center
10+28.25	33.63 RT	Electrolier	New lighting	Remove, Replace w/ new
11+24.84	28.12 RT	Electrolier	New lighting	Remove, Replace w/ new
12+35.43	28.62 LT	Electrolier	New lighting	Remove, Replace w/ new
13+20.06	28.38 LT	Electrolier	New lighting	Remove, Replace w/ new
13+60.15	28.19 RT	Electrolier	New lighting	Remove, Replace w/ new
13+99.97	28.30 LT	Electrolier	New lighting	Remove, Replace w/ new
14+85.12	28.10 LT	Electrolier	New lighting	Remove, Replace w/ new
15+94.82	28.46 RT	Electrolier	New lighting	Remove, Replace w/ new
16+91.93	46.70 RT	Electrolier	New lighting	Remove, Replace w/ new
I Street		Load Center	New lighting	New Load Center
18+40.06	28.45 RT	Electrolier	New lighting	Remove, Replace w/ new
19+55.35	27.97 LT	Electrolier	New lighting	Remove, Replace w/ new
20+40.41	28.22 LT	Electrolier	New lighting	Remove, Replace w/ new
20+80.17	28.46 RT	Electrolier	New lighting	Remove, Replace w/ new
21+20.15	28.13 LT	Electrolier	New lighting	Remove, Replace w/ new
22+05.09	27.99 LT	Electrolier	New lighting	Remove, Replace w/ new
G Street		Load Center	New lighting	New Load Center
24+68.83	40.87 LT	Electrolier	New lighting	Remove, Replace w/ new
25+65.19	28.42 RT	Electrolier	New lighting	Remove, Replace w/ new
26+75.32	28.13 LT	Electrolier	New lighting	Remove, Replace w/ new
27+60.66	28.11 LT	Electrolier	New lighting	Remove, Replace w/ new
27+99.91	28.32 RT	Electrolier	New lighting	Remove, Replace w/ new
28+40.01	28.14 LT	Electrolier	New lighting	Remove, Replace w/ new
29+25.34	28.08 LT	Electrolier	New lighting	Remove, Replace w/ new
30+35.24	28.48 RT	Electrolier	New lighting	Remove, Replace w/ new
31+32.49	48.86 RT	Electrolier	New lighting	Remove, Replace w/ new
E Street		Load Center	New lighting	New Load Center
32+85.41	28.53 RT	Electrolier	New lighting	Remove, Replace w/ new
33+95.60	28.08 RT	Electrolier	New lighting	Remove, Replace w/ new
34+80.88	27.98 LT	Electrolier	New lighting	Remove, Replace w/ new
35+20.72	29.02 RT	Electrolier	New lighting	Remove, Replace w/ new
35+60.62	28.00 LT	Electrolier	New lighting	Remove, Replace w/ new
36+61.62	28.05 LT	Electrolier	New lighting	Remove, Replace w/ new
37+54.42	32.34 LT	Electrolier	New lighting	Remove, Replace w/ new
37+55.52	28.54 RT	Electrolier	New lighting	Remove, Replace w/ new
C Street	LT	UG power/Load Center	New lighting	New power/load center
39+08.89	38.86 LT	Electrolier	New lighting	Remove, Replace w/ new
40+05.63	28.61 RT	Electrolier	New lighting	Remove, Replace w/ new

Station	Offset	Utility Conflict	Description of Conflict	Recommended Action
41+15.41	28.00 LT	Electrolier	New lighting	Remove, Replace w/ new
42+00.87	27.97 LT	Electrolier	New lighting	Remove, Replace w/ new
42+40.46	28.38 RT	Electrolier	New lighting	Remove, Replace w/ new
42+80.11	27.83 LT	Electrolier	New lighting	Remove, Replace w/ new
43+65.71	28.43 RT	Electrolier	New lighting	Remove, Replace w/ new
45+60.55	28.12 LT	Electrolier	New lighting	Remove, Replace w/ new
45+68.07	32.53 RT	Electrolier	New lighting	Remove, Replace w/ new
46+46.02	29.93 LT	Electrolier	New lighting	Remove, Replace w/ new
A Street	RT	Load Center	New Signals & Lighting Design	New Load Center
47+25.82	28.62 RT	Electrolier	New lighting	Remove, Replace w/ new
48+35.49	28.04 LT	Electrolier	New lighting	Remove, Replace w/ new
49+21.20	27.95 LT	Electrolier	New lighting	Remove, Replace w/ new
49+41.26	28.73 RT	Electrolier	New lighting	Remove, Replace w/ new
50+01.13	28.20 LT	Electrolier	New lighting	Remove, Replace w/ new
50+85.80	28.61 RT	Electrolier	New lighting	Remove, Replace w/ new
51+96.00	27.98 LT	Electrolier	New lighting	Remove, Replace w/ new
Cordova Street		Load Center	New lighting	New Load Center
54+45.67	28.47 RT	Electrolier	New lighting	Remove, Replace w/ new
55+41.27	28.00 LT	Electrolier	New lighting	Remove, Replace w/ new
56+31.42	28.14 LT	Electrolier	New lighting	Remove, Replace w/ new
56+52.68	41.21 RT	Electrolier	New lighting	Remove, Replace w/ new
57+21.57	28.48 RT	Electrolier	New lighting	Remove, Replace w/ new
58+06.22	28.24 LT	Electrolier	New lighting	Remove, Replace w/ new
59+11.09	28.41 RT	Electrolier	New lighting	Remove, Replace w/ new
59+91.22	27.97 LT	Electrolier	New lighting	Remove, Replace w/ new
60+12.95	41.40 RT	Electrolier	New lighting	Remove, Replace w/ new
60+80.94	28.38 RT	Electrolier	New lighting	Remove, Replace w/ new
61+65.57	28.53 RT	Electrolier	New lighting	Remove, Replace w/ new
62+76.11	28.02 LT	Electrolier	New lighting	Remove, Replace w/ new
63+61.43	28.00 LT	Electrolier	New lighting	Remove, Replace w/ new
63+73.45	41.20 RT	Electrolier	New lighting	Remove, Replace w/ new
64+29.57	46.12 LT	Electrolier	New lighting	Remove, Replace w/ new
64+41.21	28.25 RT	Electrolier	New lighting	Remove, Replace w/ new
64+77.63	41.20 LT	Electrolier	New lighting	Remove, Replace w/ new
65+26.54	28.36 RT	Electrolier	New lighting	Remove, Replace w/ new
65+80.04	42.08 LT	Electrolier	New lighting	Remove, Replace w/ new
66+35.89	28.06 LT	Electrolier	New lighting	Remove, Replace w/ new
66+49.48	39.75 RT	Electrolier	New lighting	Remove, Replace w/ new
66+87.11	41.72 LT	Electrolier	New lighting	Remove, Replace w/ new
66+96.22	39.38 RT	Electrolier	New lighting	Remove, Replace w/ new

Station	Offset	Utility Conflict	Description of Conflict	Recommended Action
Gambell Street		Load Center	New lighting	New Load Center
68+04.78	32.84 RT	Electrolier	New lighting	Remove, Replace w/ new
68+30.79	32.87 RT	Electrolier	New lighting	Remove, Replace w/ new
68+56.28	32.95 RT	Electrolier	New lighting	Remove, Replace w/ new
68+82.34	32.95 RT	Electrolier	New lighting	Remove, Replace w/ new
69+08.59	32.84 RT	Electrolier	New lighting	Remove, Replace w/ new
72+97.43	28.99 RT	Electrolier	New lighting	Remove, Replace w/ new
Ingra Street	LT	Load Center	New signal & lighting system	New Load Center
74+44.71	27.66 RT	Electrolier	New lighting	Remove, Replace w/ new

5.0 PRELIMINARY COST ESTIMATES FOR RECOMMENDED RELOCATION WORK BY UTILITY

The following table presents preliminary cost estimates for utility work proposed in this report. The allocation of costs as reimbursable or non-reimbursable will be determined as utility relocation agreements are developed.

Table 5.1 Preliminary Costs for Utility Work

Utility	Estimated Costs
MOA Storm Drain System	\$ 437,000
AWWU Water System	\$ 48,000
AWWU Sewer System	\$ 38,000
ML&P Electric, Lighting	\$ 382,500
ACS Telephone	\$ 1,400
GCI Telephone and Cable	\$ 0
ENSTAR Natural Gas	\$ 600
TOTALS	\$ 907,500