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APPENDIX A

South County Infrastructure Project  
Detail Information Tables

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**Table A-1 Pipelines Associated with the South Yuba Infrastructure Project**

Facilities	Segment Boundaries	Approx. Length (feet)	Pipeline Type	Pipe Size (inches)	Pipeline Location	Trench Width (feet)	Max. Trench Depth	Associated Major Facilities	Potential for Utility Conflicts
<b>Component 1 SSO Reduction Measures</b>									
<i>Pump Station PS-1</i>	<i>See Tables A-2 and A-3</i>								
Olivehurst Ave.	11 <sup>th</sup> Ave. - 14 <sup>th</sup> Ave.	1,440	Force Main	16	Centerline of paved roadway	2.25	12	(Pump Station) PS-1	High
McGowan Parkway	PS-26 - East side of SR 70 Overcrossing	1,900	Force Main	12	Centerline of paved roadway	2.0	10	PS-2/PS-26	High
<i>SR 70 Crossing</i>	<i>See Tables A-4 and A-5</i>								
<i>McGowan Parkway – Existing Yuba County Constructed Segment</i>	<i>East Side of SR 70 Overcrossing – PS-2</i>	<i>470</i>	<i>Force Main</i>	<i>12</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>PS-2</i>	<i>See Tables A-2 and A-3</i>								
Mary Avenue	PS-26 - WWTP	4,100	Force Main	30	Within east/south paved travel lanes; in unpaved south ROW near WWTP	3.5	22	PS-26/ WWTP imps	Medium
<i>PS-26</i>	<i>See Tables A-2 and A-3</i>								
<b>Component 2 WWTP Improvements</b>									
No new pipelines in this component.									
<b>Components 3 &amp; 5 - South County / Wheatland Wastewater Collection Systems</b>									
Mary Avenue – see above									
<i>PS-26</i>	<i>See Tables A-2 and A-3</i>								
McGowan Parkway	PS-26 - East side of SR 70 Overcrossing	2,460	Force Main	24	Within paved east travel lane, diverging to the north to pass under SR 70	3.0	11	PS-26	High
<i>McGowan Parkway – Existing Yuba County Constructed Segment</i>	<i>East side of SR 70 Overcrossing – Olive Avenue</i>	<i>2,300</i>	<i>Force Main</i>	<i>24</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

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Facilities	Segment Boundaries	Approx. Length (feet)	Pipeline Type	Pipe Size (inches)	Pipeline Location	Trench Width (feet)	Max. Trench Depth	Associated Major Facilities	Potential for Utility Conflicts
<i>Olive Ave – Existing Yuba County Constructed Segment</i>	<i>McGowan Parkway – connection point to 24 inch Force Main</i>	100	Force Main	24	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Olive Avenue	End of County Constructed Segment – west SR 65 HDD tie-in	400	Force Main	24	Within northbound shoulder/unpaved easement	3.0	9	HDD crossing of SR 65	Low
<i>SR 65 Crossing</i>	<i>See Tables A-4 and A-5</i>								
Rancho Road	East SR 65 HDD tie-in – Reeds Creek Crossing	1,870	Force Main	24	Within southbound shoulder	3.0	6	HDD crossings of SR 65 and Reeds Creek	Medium
<i>Reeds Creek Crossing</i>	<i>See Table A-4 and A-5</i>								
Rancho Road	Reeds Creek Crossing – Hutchinson Creek Crossing	1,525	Force Main	24	Within southbound shoulder	3.0	10	HDD crossing of Reeds Creek	Medium
<i>Hutchinson Creek Crossing</i>	<i>See Tables A-4 and A-5</i>								
<i>Hutchinson Creek Crossing – PS-21</i>	<i>See Tables A-4 and A-5</i>								
<i>PS-21</i>	<i>See Tables A-2 and A-3</i>								
Rancho Road	PS-21 to Kimball Creek Crossing	4,330	Force Main	18	Within southbound travel lane	2.5	12	HDD Crossing of Kimball Creek, and PS-22	Medium
	PS-21 to Kimball Creek Crossing	4,000	Sanitary Sewer	10	Within southbound shoulder	2.0	20	HDD Crossing of Kimball Creek, and PS-22	Medium
	PS-21 to Kimball Creek Crossing	350	Force Main	6	Within southbound shoulder	1.5	5	HDD Crossing of Kimball Creek, and PS-22	Medium
<i>Kimball Creek Crossing</i>	<i>See Tables A-4 and A-5</i>								

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Facilities	Segment Boundaries	Approx. Length (feet)	Pipeline Type	Pipe Size (inches)	Pipeline Location	Trench Width (feet)	Max. Trench Depth	Associated Major Facilities	Potential for Utility Conflicts
Rancho Road	Kimball Creek Crossing – PS-22	160	Force Main	18	Within ROW adjacent to southbound lane	2.5	9.5	HDD Crossing of Kimball Creek, and PS-22	Medium
	Kimball Creek Crossing – PS-22	160	Force Main	6	Within ROW adjacent to southbound lane	1.5	9.5	HDD Crossing of Kimball Creek, and PS-22	Medium
<i>PS-22</i>	<i>See Tables A-2 and A-3</i>								
Rancho Road	PS-22 – Virginia Creek Crossing	5,600	Force Main	18	Within southbound travel lane	2.5	10	Pipe Ramming or Auger Boring at Virginia Creek	Low
	PS-22 – Virginia Creek Crossing	5,400	Sanitary Sewer	8	Within southbound shoulder	1.75	17	Pipe Ramming or Auger Boring at Virginia Creek	Low
	PS-22 – Virginia Creek Crossing	200	Force Main	6		1.5	15	Pipe Ramming or Auger Boring at Virginia Creek	Low
<i>Virginia Creek Crossing</i>	<i>See Tables A-4 and A-5</i>								
Rancho Road	Virginia Creek Crossing – LS-23	85	Force Main	6	Within southbound shoulder	1.5	6.5	LS-23	Low
<i>LS-23</i>	<i>See Tables A-2 and A-3</i>								
Rancho Road	Virginia Creek Crossing - Terminus	4,000	Force Main	18	Within southbound travel lane	2.5	11	None	Low
	LS-23 - terminus	4,000	Sanitary Sewer	8	Within southbound shoulder	1.75	16.5	LS-23	Low
Shimer Road	SR 65 to PS-21	1,460	Force Main	16	Within southbound travel lane	2.25	8	SR 65 Crossing / PS-21	Low
<i>PS-21</i>	<i>See Tables A-2 and A-3</i>								
<i>SR 65 Crossing</i>	<i>See Tables A-4 and A-5</i>								
Slaughter House Road	SR 65 Crossing to Forty Mile Road	1,020	Force Main	16	Within southbound shoulder	2.25	5.5	SR 65 Crossing	High

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Facilities	Segment Boundaries	Approx. Length (feet)	Pipeline Type	Pipe Size (inches)	Pipeline Location	Trench Width (feet)	Max. Trench Depth	Associated Major Facilities	Potential for Utility Conflicts
Forty Mile Road	Slaughter House Road – Kimball Creek Crossing	2,935	Force Main	16	Within northbound shoulder	2.25	5.5	Kimball Creek Crossing	Medium
<i>Kimball Creek Crossing</i>	<i>See Tables A-4 and A-5</i>								
Forty Mile Road	Kimball Creek Crossing – PS-25	105	Force Main	10	Within northbound travel lane/shoulder	2.0	16	PS-25	Medium
		130	Force Main	16	Within northbound travel lane/shoulder	2.25	5.5	PS-25	Medium
<i>PS-25</i>	<i>See Tables A-2 and A-3</i>								
Forty Mile Road	Forty Mile Road – PS-25	550	Sanitary Sewer	24	Within graded parking lot / equipment storage	3.0	17	PS-25	Slight
	Forty Mile Road – PS-25	550	Force Main	16	Within graded parking lot / equipment storage	2.25	17	PS-25	Slight
Forty Mile Road	PS-25 – LS-24	940	Sanitary Sewer	18	Within northbound travel lane/shoulder	2.5	15	LS-24	Medium
		4,450	Sanitary Sewer	15	Within northbound travel lane/shoulder	2.25	17	LS-24	Medium
<i>LS-24</i>	<i>See Tables A-2 and A-3</i>								
Forty Mile Road	LS-24 to MP 101+65	230	Sanitary Sewer	15	Within northbound travel lane/shoulder	2.25	12	LS-24	Medium
	MP 101+65 – Terminus	3,560	Sanitary Sewer	10	Within northbound shoulder	2.0	17	None	Medium
<b>Component 4 Water Plant and Water Distribution Pipelines</b>									
<i>SR 65 McGowan Crossing</i>	<i>See Table A-4</i>								
McGowan Parkway	SR 65 Crossing - Rancho Road	705	Water	18	Roadway Centerline	2.5	9	None	Medium
Rancho Road	McGowan Parkway intersection – Reeds Creek Crossing	120	Water	18	Outside of road prism/ Parallel to northbound lane	2.5	9	Reeds Creek Crossing	Low
<i>Reeds Creek Crossing</i>	<i>See Tables A-4 and A-5</i>								

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Facilities	Segment Boundaries	Approx. Length (feet)	Pipeline Type	Pipe Size (inches)	Pipeline Location	Trench Width (feet)	Max. Trench Depth	Associated Major Facilities	Potential for Utility Conflicts
Rancho Road	Reeds Creek Crossing - Hutchinson Creek Crossing	1,405	Water	18	Within northbound shoulder	2.5	10	Reeds Creek Crossing / Hutchinson Creek Crossing	Low
<i>Hutchinson Creek Crossing</i>	<i>See Tables A-4 and A-5</i>								
Rancho Road	Hutchinson Creek Crossing – Kimball Creek Crossing	5,905	Water	18	Within northbound shoulder	2.5	12	Hutchinson Creek Crossing / Kimball Creek Crossing	Low
<i>Kimball Creek Crossing</i>	<i>See Tables A-4 and A-5</i>								
Rancho Road	Kimball Creek Crossing – Virginia Creek Crossing	5,640	Water	18	Within northbound shoulder	2.5	10	Kimball Creek Crossing Virginia Creek Crossing	Low
<i>Virginia Creek Crossing</i>	<i>See Tables A-4 and A-5</i>								
Rancho Road	Virginia Creek Crossing – Terminus	4,475	Water	18	Within northbound shoulder	2.5	11	Virginia Creek Crossing	Low
Forty Mile Road	Forty Mile Road / Rancho Road Intersection – SR 65 Crossing	1,365	Water	18	Within northbound shoulder	2.5	5.5	SR 65 Crossing	Low
<i>SR 65 Forty Mile Road Crossing</i>	<i>See Table A-4</i>								
	SR 65 Crossing	350	Water	18	Northbound shoulder of existing overcrossing	2.5	n/a	None	Low
Forty Mile Road	SR 65 Crossing – Kimball Creek Crossing	3,705	Water	18	Within the southbound shoulder	2.5	5.5	Kimball Creek Crossing	Low
<i>Kimball Creek Crossing</i>	<i>See Tables A-4 and A-5</i>								
Water Plant	Forty Mile Road – WP	1,780	Water	24	Disturbed ground/parking lot	3.0	12	WP	Low

**Table A-1 Pipelines Associated with the South Yuba Infrastructure Project**

Facilities	Segment Boundaries	Approx. Length (feet)	Pipeline Type	Pipe Size (inches)	Pipeline Location	Trench Width (feet)	Max. Trench Depth	Associated Major Facilities	Potential for Utility Conflicts
Forty Mile Road	Kimball Creek Crossing - Terminus	8,045	Water	18	Within the southbound shoulder	2.5	5.5	None	Low

*Source: Jacobs/MHM 2023, Planning Partners 2023.*

*Note: Italicized text indicates existing facilities and/or references to other table(s) within this Appendix.*

**Table A-2 Pump Stations and Lift Stations Associated with the South Yuba Infrastructure Project**

Facility	PS-1 Olivehurst Ave/ 11 <sup>th</sup> Ave	PS-2 McGowan Pkwy/East of SR 70	PS-26 McGowan Pkwy/ Mary Ave	PS-21 Rancho Rd/ Shimer Rd	LS-22 Rancho Rd/ Kimball Crk	LS-23 Rancho Rd/ Virginia Crk	LS-24 40 Mile Rd	PS-25 40 Mile Rd
Site Area (approx. square feet)	8,215	n/a	20,400	10,260	4,330	5,075	6,160	10,220
Depth of Wet Well(s) (feet below ground surface)	24 - 33	To be determined	40.5	41.3	23.4	27.2	40.7	37.05
Height of Soundwall (feet)	11	To be determined	11	11	11	11	11	11
Existing Facilities to be Abandoned or Improved	Existing Sewer Lift Station	Improvements to be determined	Existing 8” sanitary sewer in McGowan Pkwy west of PS 26	Existing fence	Existing fence	None	None	None
Outside of Existing Roadway Prism (Travel Lane + Improved Shoulder)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Potential Conflict with Existing Utilities	High	Low*	High	Moderate	Moderate	Low	Moderate	Low
Serves Component Number	1	1	1/3/5	3/5	3	3	3	3

Source: Jacobs/Domenichelli & Associates 2022.

Note: \*- Potential improvements limited to existing disturbed area



**Table A-3 Facility Improvements**

Facility	PS-1 Olivehurst Ave / 11 <sup>th</sup> Ave	PS-2 McGowan Pkwy / East of SR 70	PS-26 McGowan Pkwy / Mary Ave	PS-21 Rancho Rd / Shimer Rd	LS-22 Rancho Rd / Kimball Crk	LS 23 Ranch- Rd / Virginia Crk	LS-24 Forty Mile Rd	PS-25 Forty Mile Rd
Wet Well and Pumps	✓	✓	✓	✓	✓	✓	✓	✓
Long Force Main	✓	✓	✓	✓			✓	
Short Force Main to Gravity System					✓	✓		✓
Diesel Generator		✓		✓	✓	✓	✓	✓
Security Fencing	✓	✓	✓	✓	✓	✓	✓	✓
Wash Down Pad	✓	✓	✓	✓	✓	✓	✓	✓
Odor Control		✓		✓			✓	
Flushing Station		✓		✓	✓	✓	✓	✓
Service Crane		✓		✓				
Flow Meter and Vault	Meter, no vault	✓	✓	✓	✓	✓	✓	✓

*Source: Jacobs Engineering 2022.*

**Table A-4 Stream and Roadway Pipeline Crossings Associated with the South Yuba Infrastructure Project**

Crossing Name	Utility	Length: Linear Feet	Casing Diameter Inches	Pipeline Diameter Inches	Crossing Type	Location Relative to Paved Section	Entry Location	Exit Location
SR 70 / McGowan Pkwy	Wastewater	180	n/a	10	Existing Bridge	North of existing McGowan Pkwy overcrossing	n/a	n/a
SR 70 west of Power Line Rd - Dan Ave	Wastewater	1,517	48	18/16	HDD	North of existing McGowan Pkwy overcrossing	Within paved turn lane / Centerline of McGowan Pkwy	Within westbound paved travel lane or shoulder
SR 65 between Olive Ave / Rancho Rd	Wastewater	742	48	18/16	HDD	North of existing McGowan Pkwy overcrossing	Within unpaved area	Within paved roadway and unpaved shoulder area
SR 65 / McGowan Parkway	Water	365	n/a	16	Existing Bridge	Centerline of McGowan Pkwy	n/a	n/a
Rancho Rd / Reeds Creek	Wastewater	1,500	n/a	24	HDD	Parallel to southbound lane	Outside of roadway prism	Outside of roadway prism
Rancho Rd / Reeds Creek	Water	1,500	n/a	18	HDD	Parallel to northbound lane	Outside of roadway prism	Outside of roadway prism
Rancho Rd / Hutchinson Creek	Wastewater	746	n/a	24	HDD	Parallel to southbound lane	Outside of roadway prism	Outside of roadway prism
Rancho Rd / Hutchinson Creek	Water	590	n/a	18	HDD	Parallel to northbound lane	Outside of roadway prism	Outside of roadway prism
Rancho Rd / Kimball Creek	Wastewater	519	n/a	6/18	HDD	Parallel to southbound lane	Outside of roadway prism	Outside of roadway prism
Rancho Rd / Kimball Creek	Water	477	n/a	18	HDD	Parallel to northbound lane	Outside of roadway prism	Outside of roadway prism
Rancho Rd / Virginia Creek	Wastewater	50	36	6/18	Pipe ramming/ auger boring	Parallel to southbound lane	Within southbound travel lane	Within southbound travel lane
Rancho Rd / Virginia Creek	Water	50	30	18	Pipe ramming/ auger boring	Parallel to northbound lane	Within unpaved shoulder	Within unpaved shoulder
SR 65 between Slaughterhouse Rd / Shimer Rd	Wastewater	748	36	10/12	HDD	North of 40 Mile Rd overcrossing	Outside of roadway prism	Within paved travel lane

**Table A-4 Stream and Roadway Pipeline Crossings Associated with the South Yuba Infrastructure Project**

Crossing Name	Utility	Length: Linear Feet	Casing Diameter Inches	Pipeline Diameter Inches	Crossing Type	Location Relative to Paved Section	Entry Location	Exit Location
SR 65 / 40 Mile Rd Overcrossing	Water	380	n/a	16	Existing bridge overcrossing	Northbound shoulder of existing overcrossing	n/a	n/a
40 Mile Rd / Kimball Creek	Wastewater	82	n/a	16	Pipe ramming/ auger boring	East side of road	Within or adjacent to developed roadway prism	Within or adjacent to developed roadway prism
40 Mile Rd / Kimball Creek	Water	82	n/a	18	Pipe ramming/ auger boring	Parallel to southbound lane	Within developed southbound roadway prism	Within developed southbound roadway prism

*Source: Jacobs/MHM 2023, Planning Partners 2023.*

**Table A-5 Boring at Crossings Associated with the South Yuba Infrastructure Project**

Crossing Name	Utility	Crossing Type	Surface Length: Linear Feet	Bore Length: Feet	Entry Location	Entry Work Area	Exit Location	Exit Work Area	Pipe String Area
SR 70 west of Power Line Rd - Dan Ave	Waste water	HDD	1,517	1,317	Within paved turn lane/centerline of McGowan Pkwy	Within paved turn lane/centerline of McGowan Pkwy	Within westbound paved travel lane or shoulder	Within westbound paved travel lane or shoulder	Within westbound unpaved shoulder
SR 65 between Olive Ave / Rancho Rd	Waste water	HDD	742	611	Within unpaved area / cultivated field	Within unpaved area / cultivated field	Within paved roadway and unpaved shoulder area	Within paved cul-de-sac	Within paved cul-de-sac / paved road
Rancho Rd / Reeds Creek	Waste water	HDD	1,500	1,468	Within unpaved area	Within unpaved area	Within unpaved area	Within unpaved area	Within unpaved area
Rancho Rd / Reeds Creek	Water	HDD	1,500	1,300	Within unpaved area	Within unpaved area	Within unpaved area	Within unpaved area	Within unpaved area
Rancho Rd / Hutchinson Creek	Waste water	HDD	746	532	Within unpaved area / cultivated field	Within unpaved area / cultivated field	Within unpaved area	Within unpaved area	Within unpaved area
Rancho Rd / Hutchinson Creek	Water	HDD	590	411	Within unpaved area	Within unpaved area	Within unpaved area	Within unpaved area	Within unpaved area
Rancho Rd / Kimball Creek	Waste water	HDD	519	467	Within unpaved area	Within unpaved area	Within unpaved area	Within unpaved area	Within unpaved area
Rancho Rd / Kimball Creek	Water	HDD	477	317	Within unpaved area	Within unpaved area	Within unpaved area	Within unpaved area	Within unpaved area
Rancho Rd / Virginia Creek	Waste water	Pipe ramming/ auger boring	50	50	Receiving Shaft: In paved area	Receiving Shaft: In paved area	Launch Shaft: Within unpaved shoulder area	Launch Shaft: Within unpaved shoulder area	n/a
Rancho Rd / Virginia Creek	Water	Pipe ramming/ auger boring	50	50	Receiving Shaft: Within unpaved area	Receiving Shaft: Within unpaved area	Launch Shaft: Within paved travel lane	Launch Shaft: Within paved travel lane	n/a

**Table A-5 Boring at Crossings Associated with the South Yuba Infrastructure Project**

Crossing Name	Utility	Crossing Type	Surface Length: Linear Feet	Bore Length: Feet	Entry Location	Entry Work Area	Exit Location	Exit Work Area	Pipe String Area
SR 65 between Slaughterhouse Rd / Shimer Rd	Waste water	HDD	748	601	Within unpaved area	Within unpaved area	Within paved cul-de-sac	Within paved cul-de-sac and paved travel lane	Within paved cul-de-sac and paved travel lane
40 Mile Rd / Kimball Creek	Waste water	Pipe ramming/ auger boring	82	82	Receiving Shaft: Within paved travel lane	Receiving Shaft: Within paved travel lane	Launch Shaft: Within paved travel lane	Launch Shaft: Within paved travel lane	n/a
40 Mile Rd / Kimball Creek	Water	Pipe ramming/ auger boring	82	82	Receiving Shaft: Within paved travel lane	Receiving Shaft: Within paved travel lane	Launch Shaft: Within paved travel lane	Launch Shaft: Within paved travel lane	n/a

*Source: Jacobs/MHM 2023, Planning Partners 2023.*