

**APPENDIX A  
CONSTRUCTION PLAN**



**North End Sewage Treatment Plant  
(NEWPCC) Hauled Liquid Waste Facility  
Phase II Upgrade**

**Construction Plan  
(Rev 3)**

March 2016

**Prepared By**

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Rob Gillis, P.Eng.

**Approved By**

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Project Manager

*The Construction Plan was prepared for The City of Winnipeg as a part of the North End Sewage Treatment Plant (NEWPCC) Hauled Liquid Waste Facility Phase II Upgrade project. Any use of this report by a third party, or any reliance on or decisions made based on it, are the responsibility of such third parties. Stantec accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions undertaken based on this report.*

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# The City of Winnipeg North End Sewage Treatment Plant (NEWPCC) Hauled Liquid Waste Facility Phase II Upgrade

## 1.0 INTRODUCTION

The North End Water Pollution Control Centre (NEWPCC) is the largest of the three wastewater treatment plants servicing the City of Winnipeg. The NEWPCC was originally commissioned in 1937 and has undergone a series of process upgrades and expansion over the years. The current plant receives wastewater from approximately 70% of Winnipeg, servicing mostly the older parts of the City of Winnipeg (City). The liquid stream unit processes at the NEWPCC consist of raw wastewater pumping, 12 mm bar screens, aerated grit removal tanks, primary clarification, high purity oxygen reactors, secondary clarification and UV disinfection. The treated effluent is discharged to the Red River.

The NEWPCC receives HLW in the form of septage, holding tank wastewater, commercial wastewater and industrial wastewater for treatment and processing. The City has been handling trucked HLW generated both from within the City and surrounding municipalities at the NEWPCC and the SEWPCC only since the WEWPCC HLW facility closed in 2007. The NEWPCC also receives landfill leachate from the City and other regional landfills. The current HLW facility was upgraded in 2012 and comprises of 4 paved vehicle lanes that are dedicated as follows:

- Lane No. 1: HLW
- Lane No. 2: HLW
- Lane No. 3: Leachate
- Lane No. 4: Sludge (future)

Lane Nos. 1 and 2 are served by a common HLW building (Building No. 1) which includes flow monitoring, automatic sampling, two (2) HLW storage tanks (Holding Tank No. 1 and 2) which provide a capacity of 21,000L each. The tank contents are subsequently discharged to the NEWPCC interceptor via an automatic discharge valve. A PLC system monitors the liquid level of each holding tank and opens the discharge valve – only if hydrocarbon vapors are not detected - when the holding tank reaches a level of approximately one third the volume of the largest hauler. A similar arrangement is in place for Lane No. 3 which is designed to receive two (2) leachate trucks simultaneously and is served by a Leachate building (Building No. 2) which is similar in design to the HLW building. Due to significant operational issues related to high Lower Explosive Limit (LEL) levels and foaming, the leachate receiving system has not been used following start-up.

The City has also made a decision to close the existing HLW receiving station at the SEWPCC following the BNR upgrades currently in progress. With the closure of the SEWPCC HLW station, there will be a 50% increase in HLW traffic volumes at the NEWPCC. To meet this increased HLW truck traffic, the City intends to convert the existing Lane 3 previously dedicated to leachate to a third (3rd) HLW lane. As a part of the proposed upgrades, the City has also decided to add a new Leachate Sampling Building adjacent to Lane 4. Leachate will be received via a camlock or quick connect type hose connection in Lane 4 and discharged directly to the sewer. The building will house the sampling station. Also, Lane 4 is designed to serve both as a leachate and HLW lane with the leachate trucks having the priority for its use.

The City of Winnipeg North End Sewage Treatment Plant (NEWPCC)  
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**2.0 PROJECT CONTACT PERSONNEL**

Communication during construction will involve coordination with various personnel from several different organizations within the City of Winnipeg’s Water and Waste Department, along with personnel from Stantec Consulting Ltd., and the successful contractor. Table 2.1 listing personnel that would be involved in the project construction phase are attached. Specific personnel names and contact information will be filled in once the construction phase begins.

**TABLE 2.1 - PERSONNEL**

<b>Title</b>	<b>Name</b>	<b>Office</b>	<b>Cell</b>
<b>Water and Waste Department (WWD)</b>			
North End Water Pollution Control Centre			
Police/Fire/Ambulance		911	
Police Non-emergency		204-986-6222	
Emergency Services		204-986-2626	
Customer Services – WWD		311	
<b>City of Winnipeg</b>			
City Project Engineer	Reetu Dewitt, P.Eng.	(204) 986-7455	(204) 619-2218
City Site Representative	Larry Norris		(204) 794-4545
Technical Advisor, Operational Protocol Review	John Amos	(204) 986-4845	
Plant Manager - NEWPCC	John Amos	(204) 986-4845	
Plant Supervisor – NEWPCC	John Amos	(204) 986-4845	
Senior Plant Operator	Shane Westover	(204) 986-3463	(204) 619-1265
Supervisor of Electrical/Instrumentation Maintenance - NEWPCC	Ron Greening	(204) 986-4155	(204) 782-6988
<b>Stantec Consulting Ltd.</b>			
Contract Administrator	Jamie Brewster	(204) 489-5900	(204) 298-0614

The City of Winnipeg North End Sewage Treatment Plant (NEWPCC)  
Hauled Liquid Waste Facility Phase II Upgrade

<b>Title</b>	<b>Name</b>	<b>Office</b>	<b>Cell</b>
Building Mechanical – Utilities & HVAC	Bruce Haugh, P.Eng.	(204) 489-5900	(204) 296-3769
Process Mechanical – Flushing Water & Leachate Receiving	Rob Gillis, P.Eng.	(204) 489-5900	(204) 296-3769
Electrical/Instrumentation & Controls	Darcy Robinson, P.Eng.	(204) 489-5900	(204) 894-8714
<b>Contractor</b>			
Site Superintendent	TBD		
Site Office	TBD		
Office Contact	TBD		

### **3.0 CONSTRUCTION SCHEDULE OVERVIEW**

The Contractor shall prepare a schedule that meets the critical dates in the Bid Opportunity, including but not limited to the Substantial and Total Performance dates.

### **4.0 SEQUENCE OF WORK & PROCESS SHUTDOWNS**

The sequence of work and process shutdowns anticipated during the course of construction are shown in table format below. The first table shows the recommended sequential order of tasks that must be completed. The first column in this table shows sequential numbering for each task. The second column briefly describes each task. Bold items in this column indicate the system to which the following tasks fall under. The next columns indicate what portion of the hauled liquid waste and leachate receiving facilities will be shut down for all tasks. The overall facility is categorized into the two Dewatering Building Truck Bays, Lane 1 HLW, Lane 2 HLW, Lane 3 HLW, and Lane 4 HLW and Lane 4 Leachate. When any one of these six categories is shaded green, that area of the facilities will be available for regular operation. Red shading indicates that area will be out of service. In order to minimize disturbance to the ongoing operation of the facility, any planned work requiring temporary shut down of other systems already in operation (ie. underground pipe tie ins) shall be scheduled during off-peak hours. Peak hours are defined as being Monday to Friday from 8:00 am to 5:00 pm, local time.

The second table shows some of the same information as the first table, but organizes it differently. As a whole, the tasks in this table are not organized sequentially, but by the system they fall under. As a result, the first column showing the sequence of work appears somewhat random. Within each system categorization, however, the tasks are indeed sequential. But tasks listed under other systems may need to be completed prior to the completion of all tasks under any given system.

The City of Winnipeg North End Sewage Treatment Plant (NEWPCC)  
Hauled Liquid Waste Facility Phase II Upgrade

The City of Winnipeg shall be provided a notice of seven (7) days as a minimum prior to any planned shutdowns of active equipment or systems.

ORDER	NEWPCC HLW PHASE 2 UPGRADES CONSTRUCTION WORK PLAN	DEWATERING BLDG. TRUCK BAY LANE 2	DEWATERING BLDG. TRUCK BAY LANE 1	LANE 1	LANE 2	LANE 3	LANE 4 HLW	LANE 4 LEACHATE
	Organized by Sequence of Construction							
	<b>STARTING CONDITIONS</b>	OPEN	OPEN	OPEN	OPEN	CLOSED	CLOSED	CLOSED
	<b>HAULED WASTEWATER BUILDING 2 INTERIOR</b>							
1	Decommission and remove all piping, fittings, and pumps from HLW 2 building lower level							
2	Install holding tank access cover support/lift system for Hauled Wastewater Building 2 Tank 3							
3	Install holding tank access cover support/lift system for Hauled Wastewater Building 2 Tank 4							
4	Install 300 discharge piping and fittings in lower level for Hauled Wastewater Building 2 Tank 4							
	<b>HAULED WASTEWATER BUILDING 2 PLUMBING UPGRADES</b>							
5	Clean the interior of Hauled Wastewater Building Tanks 3 & 4							
6	Remove ex. Sanitary piping from within Hauled Wastewater Building Tanks 3 & 4, leaving floor drains in place							
7	Install revised sanitary piping, connecting to ex. Floor drains and including coring through walls							
8	Seal all potential leak paths into dual containment pipe system as per drawings							
9	Install sanitary piping and associated modifications in stairwell area and lower level							
10	Install suction piping from tank discharge up to ground level for truck hook up, for both Tanks 3 & 4							
	<b>HAULED WASTEWATER BUILDING 2 TANK VENT SYSTEM</b>							
11	Patch and seal existing openings in concrete divider wall between HLW Tank 3 & Tank 4							
12	Remove HLW tank supply and exhaust ducts from Hauled Wastewater Building 2; patch and seal as per drawings							
	<b>HAULED WASTEWATER BUILDING 2 FLUSHING WATER SYSTEM</b>							
13	Decommission and remove potable water pipe and fittings connected to ex. Flushing water system							
14	Install interior flushing water piping in Hauled Wastewater Building 2							
	<b>UNDERGROUND SITE WORKS</b>							
15	Shut off fan in Sludge Dewatering Building that draws foul air from Hauled Wastewater Buildings							
16	Excavate and remove buried vent low point MH; excavate south of Hauled Wastewater Building 2 for other endpoint of trenchless duct installation							
17	Excavate south of Hauled Wastewater Building 1 and disconnect Tank 1 & 2 vent from ex. Main duct branch							
18	Install 200 buried main duct via trenchless methods; connect to ex. 200 duct at previous low point MH location							
19	Excavate to expose new 200 duct installed by trenchless methods south of Hauled Wastewater Building 1 and connect ex. Tank 1 & 2 vent pipe to this duct for temporary operation during construction							
20	Turn on fan in Sludge Dewatering Building to resume air removal from Tanks 1 & 2							
21	Excavate and remove ex. Supply and return ducts for Hauled Wastewater Building 2, Tanks 3 & 4							
22	Core holes in Tanks 3 & 4 for supply and return air ducts							
23	Install return air ducts from Tanks 3 & 4 to buried main duct							
24	Install Tanks 3 & 4 supply air ducts and goosenecks							
25	Install bottomless MH on 300 WWS discharge upstream of MH 6							
26	Core new hole in north concrete wall of Hauled Wastewater Building 2 for Tank 3 discharge							
27	Install 300 discharge piping and fittings in lower level for Hauled Wastewater Building 2 Tank 3							
28	Install 300 WWS from Hauled Wastewater Building 2, Tank 3 discharge to bottomless MH upstream of MH 6							
29	Excavate on south side of Hauled Wastewater Building 2 and remove 300 WWS connected to MH 4, from east side of Lane 3 to entrance into Tank 4; take precautions not to disturb ex. In-ground glycol heating system around MH 4							
30	Install new 300 WWS connecting MH 4 to ex. 300 WWS entering Tank 3 from MH 5; a tee is to be incorporated to allow land drainage from MH 5							
31	Demolish ex. Truck lane surrounding MH 7 and add drop structure to MH 7							
32	Install 300 WWS from MH 7 to Tank 4							



NEWPCC HLW PHASE 2 UPGRADES CONSTRUCTION WORK PLAN								
ORDER	Organized by Sequence of Construction	DEWATERING BLDG. TRUCK BAY LANE 2	DEWATERING BLDG. TRUCK BAY LANE 1	LANE 1	LANE 2	LANE 3	LANE 4 HLW	LANE 4 LEACHATE
<b>FLUSHING WATER SYSTEM</b>								
33	Install flushing water pipe extension from ex. Piping to area above proposed floor penetration; ensure isolation valve for new piping is closed							
34	Close Lane 1 & Truck Bay Lane 1 inside Sludge Dewatering Building		CLOSED	CLOSED				
35	Excavate in truck lane of Sludge Dewatering Building truck bay at location of proposed floor penetration							
36	Excavate at proposed Leachate Sampling Building and trenchlessly install flushing water line under all lanes up to excavation in the Sludge Dewatering Building truck bay							
37	Connect buried flushing water piping to above ground flushing water pipe in Sludge Dewatering Building truck bay							
38	Backfill and restore concrete floor inside building							
39	Reopen Lane 1 and Truck Bay Lane 1 inside Sludge Dewatering Building		OPEN	OPEN				
40	Expose new flushing water line south of Hauled Wastewater Building 2 and install flushing water line from this main line into the equipment room of Hauled Wastewater Building 2; enter building through ex. Return duct penetration							
41	Install influent pipe FW piping from 100 connection inside Hauled Wastewater Building 2 equipment room to proposed wye on Tank 3 & 4 influent lines; core wall openings and seal as per drawings							
42	Install temporary plug on flushing water main line east of Lane 4							
43	Open flushing water isolation valve located in Sludge Dewatering Building; Hauled Wastewater Building 2 now has complete flushing capability							
<b>ELECTRICAL</b>								
44	Replace existing and install new vehicle loop sensors in lanes 3 & 4; install entrance pin keypads							
45	Replace wiring as required for access control and snow melt systems in lanes 3 & 4							
<b>LEACHATE SAMPLING BUILDING</b>								
46	Construct Leachate Sampling Building concrete foundation, including 300 WWS pipe stubs for leachate gravity discharge							
<b>UNDERGROUND SITE WORKS</b>								
47	Install 50 sanitary WWS from Leachate Sampling Building to 300 WWS downstream of MH 7							
48	Install hydronic heating pad surrounding MH 7 and associated hydronic piping to Hauled Wastewater Building 2							
49	Close flushing water isolation valve in Sludge Dewatering Building							
50	Remove temporary plug from flushing water pipe south of Leachate Sampling Building and install flushing water line into Leachate Sampling Building; install flushing water isolation valve in building and leave it closed							
51	Reopen flushing water isolation valve in Sludge Dewatering Building							
52	Expose existing buried potable water line east of Hauled Wastewater Building 2							
53	Install potable water connection from Hauled Wastewater Building 2 supply pipe to Leachate Sampling Building, minimizing disturbance to ex. Lane 4 in the process							
54	Backfill around Hauled Wastewater Building 2 and Leachate Sampling Building							
55	Backfill and restore lane 4 to original condition, including pouring new concrete							
56	Open Lanes 3 & 4 to receive hauled wastewater					OPEN	OPEN	

ORDER	NEWPCC HLW PHASE 2 UPGRADES CONSTRUCTION WORK PLAN Organized by Sequence of Construction	DEWATERING BLDG. TRUCK BAY LANE 2	DEWATERING BLDG. TRUCK BAY LANE 1	LANE 1	LANE 2	LANE 3	LANE 4 HLW	LANE 4 LEACHATE
57	<b>HAULED WASTEWATER BUILDING 1 INTERIOR</b> Close Lanes 1 & 2			CLOSED	CLOSED			
58	Install holding tank access cover support/lift system for Hauled Wastewater Building Tank 1							
59	Install holding tank access cover support/lift system for Hauled Wastewater Building Tank 2							
60	Clean the interior of Hauled Wastewater Building Tanks 1 & 2							
61	Remove ex. Sanitary piping from within Hauled Wastewater Building Tanks 1 & 2, leaving floor drains in place							
62	Install revised sanitary piping, connecting to ex. Floor drains and including coring through walls							
63	Seal all potential leak paths into dual containment pipe system as per drawings							
64	Patch and seal existing openings in concrete divider wall between Hauled Wastewater Building Tank 1 & Tank 2							
65	Remove tank supply and exhaust ducts from Hauled Wastewater Building 1; patch and seal as per drawings							
66	Decommission and remove potable water pipe and fittings connected to ex. Flushing water system							
67	Install interior flushing water piping in Hauled Wastewater Building 1							
68	Install sanitary piping and associated modifications in stairwell area and lower level							
69	Install suction piping from tank discharge up to ground level for truck hook up, for both Tanks 1 & 2							
70	<b>UNDERGROUND SITE WORKS</b> Demolish and remove ex. Return vent for Hauled Wastewater Building 1							
71	Core holes in Hauled Wastewater Building 1 Tanks 1 & 2 for supply and return air ducts							
72	Install return air ducts from Tanks 1 & 2 to buried main duct							
73	Install Tanks 1 & 2 supply air ducts and goosenecks							
74	Expose new flushing water line south of Hauled Wastewater Building 1 and install flushing water line from this main line into the equipment room of Hauled Wastewater Building 1; enter building through ex. Return duct penetration							
75	Install influent pipe FW piping from 100 connection inside Hauled Wastewater Building 1 equipment room to proposed wye on Tank 1 & 2 influent lines; core wall openings and seal as per drawings							
76	Backfill around Hauled Wastewater Building 1							
77	<b>ELECTRICAL</b> Replace existing and install new vehicle loop sensors in lanes 1 & 2; install entrance pin keypads							
78	Replace wiring as required for access control and snow melt systems in lanes 1 & 2							
79	Resume operation of Lanes 1 & 2 for hauled liquid waste			OPEN	OPEN			
80	<b>LEACHATE HANDLING UPGRADES</b> Construct Leachate Sampling Building superstructure							
81	Install leachate receiving piping inside Leachate Sampling Building and 150 hose for connection to leachate trucks							
82	Install interior mechanical and electrical systems associated with the Leachate Sampling Building							
83	<b>FLUSHING WATER SYSTEM</b> Install interior flushing water piping in Leachate Sampling Building							
84	<b>UNDERGROUND SITE WORKS</b> Install 300 WWS from Leachate Sampling Building up to ex. 300 WWS downstream of MH 6, using trenchless methods to avoid disturbing Lane 4; install plug on wye for future connection of additional leachate line							
85	Set up temporary overland bypass pumping from MH 6 to downstream interceptor and block flow in 300 WWS; capacity of temporary pump setup and number of hauled liquid waste lanes to remain open TBD							
86	Connect new leachate 300 WWS to ex. 300 WWS downstream of MH 6							
87	Stop temporary pumping and resume regular flow from Hauled Wastewater Buildings through 300 WWS							
88	<b>LEACHATE HANDLING UPGRADES</b> Start operation of Lane 4 for leachate							OPEN

**NEWPCC HLW PHASE 2 UPGRADES CONSTRUCTION WORK PLAN**

ORDER	Organized by System	
<b>CONVERSION OF LEACHATE BUILDING TO HLW BUILDING 2</b>		
1	Decommission and remove all piping, fittings, and pumps from HLW 2 building lower level	
4	Install 300 discharge piping and fittings in lower level for Hauled Wastewater Building 2 Tank 4	
26	Core new hole in north concrete wall of Hauled Wastewater Building 2 for Tank 3 discharge	
27	Install 300 discharge piping and fittings in lower level for Hauled Wastewater Building 2 Tank 3	
56	Open Lanes 3 & 4 to receive hauled wastewater	
<b>MISCELLANEOUS</b>		
2	Install holding tank access cover support/lift system for Hauled Wastewater Building 2 Tank 3	
3	Install holding tank access cover support/lift system for Hauled Wastewater Building 2 Tank 4	
10	Install suction piping from tank discharge up to ground level for truck hook up, for both Tanks 3 & 4	
<b>HAULED WASTEWATER BUILDING 2 PLUMBING UPGRADES</b>		
5	Clean the interior of Hauled Wastewater Building Tanks 3 & 4	
6	Remove ex. Sanitary piping from within Hauled Wastewater Building Tanks 3 & 4, leaving floor drains in place	
7	Install revised sanitary piping, connecting to ex. Floor drains and including coring through walls	
8	Seal all potential leak paths into dual containment pipe system as per drawings	
9	Install sanitary piping and associated modifications in stairwell area and lower level	
<b>HAULED WASTEWATER BUILDING 2 TANK VENT SYSTEM</b>		
11	Patch and seal existing openings in concrete divider wall between HLW Tank 3 & Tank 4	
12	Remove HLW tank supply and exhaust ducts from Hauled Wastewater Building 2; patch and seal as per drawings	

	<b>HAULED WASTEWATER BUILDING 2 FLUSHING WATER SYSTEM</b>	
13	Decommission and remove potable water pipe and fittings connected to ex. Flushing water system	
14	Install interior flushing water piping in Hauled Wastewater Building 2	
	<b>UNDERGROUND TANK VENT SYSTEM</b>	
15	Shut off fan in Sludge Dewatering Building that draws foul air from Hauled Wastewater Buildings	
16	Excavate and remove buried vent low point MH; excavate south of Hauled Wastewater Building 2 for other endpoint of trenchless duct installation	
17	Excavate south of Hauled Wastewater Building 1 and disconnect Tank 1 & 2 vent from ex. Main duct branch	
18	Install 200 buried main duct via trenchless methods; connect to ex. 200 duct at previous low point MH location	
19	Excavate to expose new 200 duct installed by trenchless methods south of Hauled Wastewater Building 1 and connect ex. Tank 1 & 2 vent pipe to this duct for temporary operation during construction	
20	Turn on fan in Sludge Dewatering Building to resume air removal from Tanks 1 & 2	
21	Excavate and remove ex. Supply and return ducts for Hauled Wastewater Building 2, Tanks 3 & 4	
22	Core holes in Tanks 3 & 4 for supply and return air ducts	
23	Install return air ducts from Tanks 3 & 4 to buried main duct	
24	Install Tanks 3 & 4 supply air ducts and goosenecks	
70	Demolish and remove ex. Return vent for Hauled Wastewater Building 1	
71	Core holes in Hauled Wastewater Building 1 Tanks 1 & 2 for supply and return air ducts	
72	Install return air ducts from Tanks 1 & 2 to buried main duct	
73	Install Tanks 1 & 2 supply air ducts and goosenecks	
	<b>CONVERT LANE 3 TO HLW</b>	
25	Install bottomless MH on 300 WWS discharge upstream of MH 6	
28	Install 300 WWS from Hauled Wastewater Building 2, Tank 3 discharge to bottomless MH upstream of MH 6	
29	Excavate on south side of Hauled Wastewater Building 2 and remove 300 WWS connected to MH 4, from east side of Lane 3 to entrance into Tank 4; take precautions not to disturb ex. In-ground glycol heating system around MH 4	
30	Install new 300 WWS connecting MH 4 to ex. 300 WWS entering Tank 3 from MH 5; a tee is to be incorporated to allow land drainage from MH 5	

	<b>CONVERT LANE 4 TO HLW</b>	
31	Demolish ex. Truck lane surrounding MH 7 and add drop structure to MH 7	
32	Install 300 WWS from MH 7 to Tank 4	
48	Install hydronic heating pad surrounding MH 7 and associated hydronic piping to Hauled Wastewater Building 2	
55	Backfill and restore lane 4 to original condition, including pouring new concrete	
	<b>SLUDGE DEWATERING BUILDING FLUSHING WATER EXTENSION</b>	
33	Install flushing water pipe extension from ex. Piping to area above proposed floor penetration; ensure isolation valve for new piping is closed	
34	Close Lane 1 & Truck Bay Lane 1 inside Sludge Dewatering Building	
35	Excavate in truck lane of Sludge Dewatering Building truck bay at location of proposed floor penetration	
37	Connect buried flushing water piping to above ground flushing water pipe in Sludge Dewatering Building truck bay	
38	Backfill and restore concrete floor inside building	
39	Reopen Lane 1 and Truck Bay Lane 1 inside Sludge Dewatering Building	
43	Open flushing water isolation valve located in Sludge Dewatering Building; Hauled Wastewater Building 2 now has complete flushing capability	
49	Close flushing water isolation valve in Sludge Dewatering Building	
51	Reopen flushing water isolation valve in Sludge Dewatering Building	
	<b>UNDERGROUND FLUSHING WATER SYSTEM</b>	
36	Excavate at proposed Leachate Sampling Building and trenchlessly install flushing water line under all lanes up to excavation in the Sludge Dewatering Building truck bay	
40	Expose new flushing water line south of Hauled Wastewater Building 2 and install flushing water line from this main line into the equipment room of Hauled Wastewater Building 2; enter building through ex. Return duct penetration	
41	Install influent pipe FW piping from 100 connection inside Hauled Wastewater Building 2 equipment room to proposed wye on Tank 3 & 4 influent lines; core wall openings and seal as per drawings	
42	Install temporary plug on flushing water main line east of Lane 4	
50	Remove temporary plug from flushing water pipe south of Leachate Sampling Building and install flushing water line into Leachate Sampling Building; install flushing water isolation valve in building and leave it closed	
54	Backfill around Hauled Wastewater Building 2 and Leachate Sampling Building	
74	Expose new flushing water line south of Hauled Wastewater Building 1 and install flushing water line from this main line into the equipment room of Hauled Wastewater Building 1; enter building through ex. Return duct penetration	
75	Install influent pipe FW piping from 100 connection inside Hauled Wastewater Building 1 equipment room to proposed wye on Tank 1 & 2 influent lines; core wall openings and seal as per drawings	
76	Backfill around Hauled Wastewater Building 1	

	<b>LANE 3 &amp; 4 ELECTRICAL</b>	
44	Replace existing and install new vehicle loop sensors in lanes 3 & 4; install entrance pin keypads	
45	Replace wiring as required for access control and snow melt systems in lanes 3 & 4	
	<b>LEACHATE SAMPLING BUILDING</b>	
46	Construct Leachate Sampling Building concrete foundation, including 300 WWS pipe stubs for leachate gravity discharge	
80	Construct Leachate Sampling Building superstructure	
81	Install leachate receiving piping inside Leachate Sampling Building and 150 hose for connection to leachate trucks	
82	Install interior mechanical and electrical systems associated with the Leachate Sampling Building	
83	Install interior flushing water piping in Leachate Sampling Building	
88	Start operation of Lane 4 for leachate	
	<b>UNDERGROUND LEACHATE SAMPLING BUILDING CONNECTIONS</b>	
47	Install 50 sanitary WWS from Leachate Sampling Building to 300 WWS downstream of MH 7	
52	Expose existing buried potable water line east of Hauled Wastewater Building 2	
53	Install potable water connection from Hauled Wastewater Building 2 supply pipe to Leachate Sampling Building, minimizing disturbance to ex. Lane 4 in the process	
84	Install 300 WWS from Leachate Sampling Building up to ex. 300 WWS downstream of MH 6, using trenchless methods to avoid disturbing Lane 4; install plug on wye for future connection of additional leachate line	
85	Set up temporary overland bypass pumping from MH 6 to downstream interceptor and block flow in 300 WWS; capacity of temporary pump setup and number of hauled liquid waste lanes to remain open TBD	
86	Connect new leachate 300 WWS to ex. 300 WWS downstream of MH 6	
87	Stop temporary pumping and resume regular flow from Hauled Wastewater Buildings through 300 WWS	
	<b>HAULED WASTEWATER BUILDING 1 UPGRADES</b>	
57	Close Lanes 1 & 2	
58	Install holding tank access cover support/lift system for Hauled Wastewater Building Tank 1	
59	Install holding tank access cover support/lift system for Hauled Wastewater Building Tank 2	
60	Clean the interior of Hauled Wastewater Building Tanks 1 & 2	
61	Remove ex. Sanitary piping from within Hauled Wastewater Building Tanks 1 & 2, leaving floor drains in place	
62	Install revised sanitary piping, connecting to ex. Floor drains and including coring through walls	
63	Seal all potential leak paths into dual containment pipe system as per drawings	
64	Patch and seal existing openings in concrete divider wall between Hauled Wastewater Building Tank 1 & Tank 2	
65	Remove tank supply and exhaust ducts from Hauled Wastewater Building 1; patch and seal as per drawings	
66	Decommission and remove potable water pipe and fittings connected to ex. Flushing water system	
67	Install interior flushing water piping in Hauled Wastewater Building 1	
68	Install sanitary piping and associated modifications in stairwell area and lower level	
69	Install suction piping from tank discharge up to ground level for truck hook up, for both Tanks 1 & 2	
79	Resume operation of Lanes 1 & 2 for hauled liquid waste	
	<b>LANE 1 &amp; 2 ELECTRICAL</b>	
77	Replace existing and install new vehicle loop sensors in lanes 1 & 2; install entrance pin keypads	
78	Replace wiring as required for access control and snow melt systems in lanes 1 & 2	