

July 10, 2020
File No. 07216156.00

Ms. Tamara Welty
Washington Department of Ecology – Toxics Cleanup Program
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, WA 98008

Subject: Work Plan for Repairs to the Landfill Gas Migration Control System at the Eastgate Landfill, Bellevue, Washington

Dear Ms.: Welty

The City of Bellevue is seeking the Department of Ecology review and approval for repair work to the landfill gas (LFG) migration control system at the former Eastgate Landfill, subject to a 2008 Environmental Covenant.

Landfill settlement and water (condensate) accumulating in the LFG pipes are restricting flow of LFG and causing loss of vacuum to the extraction wells in the southeast portion of the landfill, adjacent to the road (SE 30th Place). Repair of the LFG system in the area involves replacement of the existing LFG pipe with new alignment and grades. The pipe to be replaced is from condensate drain Trap CT-6R to cleanout access port CO-3 as shown on the attached drawings. This work also includes installation of a new condensate drain trap to replace the existing condensate drain trap CT-5R at the low point created with the new pipe alignment and grades.

The following presents SCS's work plan for repairs to the LFG system at the former Eastgate Landfill:

1. Secure permit authorization, including notification to proper parties: Public Health Seattle King County, Advanta, Boeing, Microsoft, Department of Ecology, and the City of Bellevue.
2. Secure the work area with the installation of temporary fence to encompass the entire work area and prevent unauthorized entry.
3. Install temporary erosion and sediment control (TESC) features. Construction activities located near any surface water features will be separated by silt fence and or other appropriate erosion and sediment control devices.
4. Survey the alignment and grade for new pipe and components.
5. Locate the existing utilities in the vicinity of the proposed work area.
6. Excavate trenches (1.5 feet to 6.0 feet) for inspection, repair and installation of new pipe.
 - a. Remove top layer of the final cover system soils and set aside the material for backfill. Excavate trench to required depth and grade. Soil within 3 feet of refuse will be considered to be waste and contained on site.
 - b. Remove any waste encountered and deposit in a 20- yard container located onsite.
 - c. Sample and analyze soil/waste/refuse to profile for disposal as MSW if needed.



- d. Dispose of waste at the proper disposal facility.
 - e. The waste will be managed to prevent generation of leachate by direct loading into a container and covering with a tarp during periods of precipitation.
7. Groundwater will not be encountered during the construction activities associated with the LFG migration control system.
8. Worker safety: The work zone will be monitored periodically with a photo ionization detector (PID) to check for volatile organic compounds (VOCs) during construction activities. Each worker will have a personal 4-gas meter on at all times. The gas system will be operating each day except for the pipe segment along the south side during construction. Each segment of gas conveyance pipe will be activated as soon as possible after the segment is completed. There will be a site-specific health and safety plan for the repair work activities which can be made available to the DOE upon request.
9. Installation of pipe, including:
 - a. 6-inch Dia. HDPE pipe along new alignment and grade (from CT-6 to CO-3).
 - b. 4-inch Dia. HDPE pipe along new alignment and grade (for gas extraction wells EW-4R, EW-3R, EW-2R, EW-18, EW-17 and EW-16).
 - c. 2-inch Dia. HDPE pipe for condensate discharge (in common trench with gas and air pipe).
 - d. 2-inch Dia. HDPE pipe for air supply (in common trench with gas and condensate pipe).
 - e. Decommission abandon HDPE pipe by cutting pipe and installing plugs with caps.
 - f. Relocate isolation valve and cleanout access ports to a new high point on pipe grade.
 - g. Install new condensate drain trap (CT-5R).
 - h. Connect to existing condensate drain trap.
 - i. 2-inch Dia. HDPE pipe for condensate discharge to nearby sewer manhole (south of EW-17).
 - j. Connection to existing sewer manhole.
10. Backfill pipe trenches and compact in lifts.
11. Import general fill for new high points near cleanout access ports CO-3 and CO-5R, as needed.
12. Restore area to grade and cover all disturbed areas with City of Bellevue standard seed mix and cover with straw mulch.
13. Installation of 2 pumps at the condensate drain traps including:
 - a. air supply valve trains.
 - b. condensate discharge valve trains.
 - c. low flow pneumatic pumps and associated hoses and fittings.
14. Provide a summary report to DOE upon completion of construction repair project.

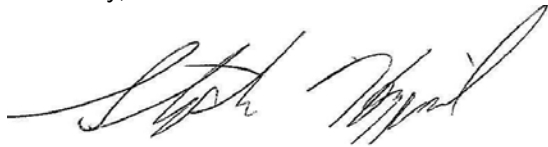
Additional responses to information requests from Ecology:

- The LFG migration control system repair project will start late July once all permits and notifications are completed.

- The proposed work does not clean up any additional contamination.
- The material removed to install the new condensate drain trap CT-5R will be evaluated by SCS Engineers, and anything above three feet of refuse and any refuse encountered will be placed in a drop box. The void created from the removal of this material will be backfilled with clean soil for that location. All material excavated at CT-6 will be handled the same as CT-5R.
- Refuse at the site is estimated to be seven to fourteen feet below grade. If encountered at a shallower depth, measures will be taken to contain material removed from the trenches.
- Currently there are no plans to change the property use and features for the next several years.
- SCS has a very comprehensive Health and Safety program that will incorporate a site specific health and safety plan for this project that includes job task safety analyses (JTSA's) for the work being performed during this repair project. Each worker will have a 4-gas meter and be in level D PPE protection. A hand help PID will be used on this project to check for unforeseen VOC's in trenches.
- Restoration of the final cover system will include stockpiling usable material from the excavation and importing additional soil if needed to bring the finished surface to the level encountered prior to initiating the work. The top layer of the pipe trench will consist of topsoil material to aid in surface restoration of vegetation.

SCS appreciates the opportunity to have this plan reviewed for this City of Bellevue, Eastgate Landfill gas system repair project. As you review the enclosed information, please contact Stephen Harquail at (503) 867-2369 or Ted Massart (425) 864-2146 if you have any questions or comments.

Sincerely,



Stephen Harquail
Project Manager
SCS Field Services



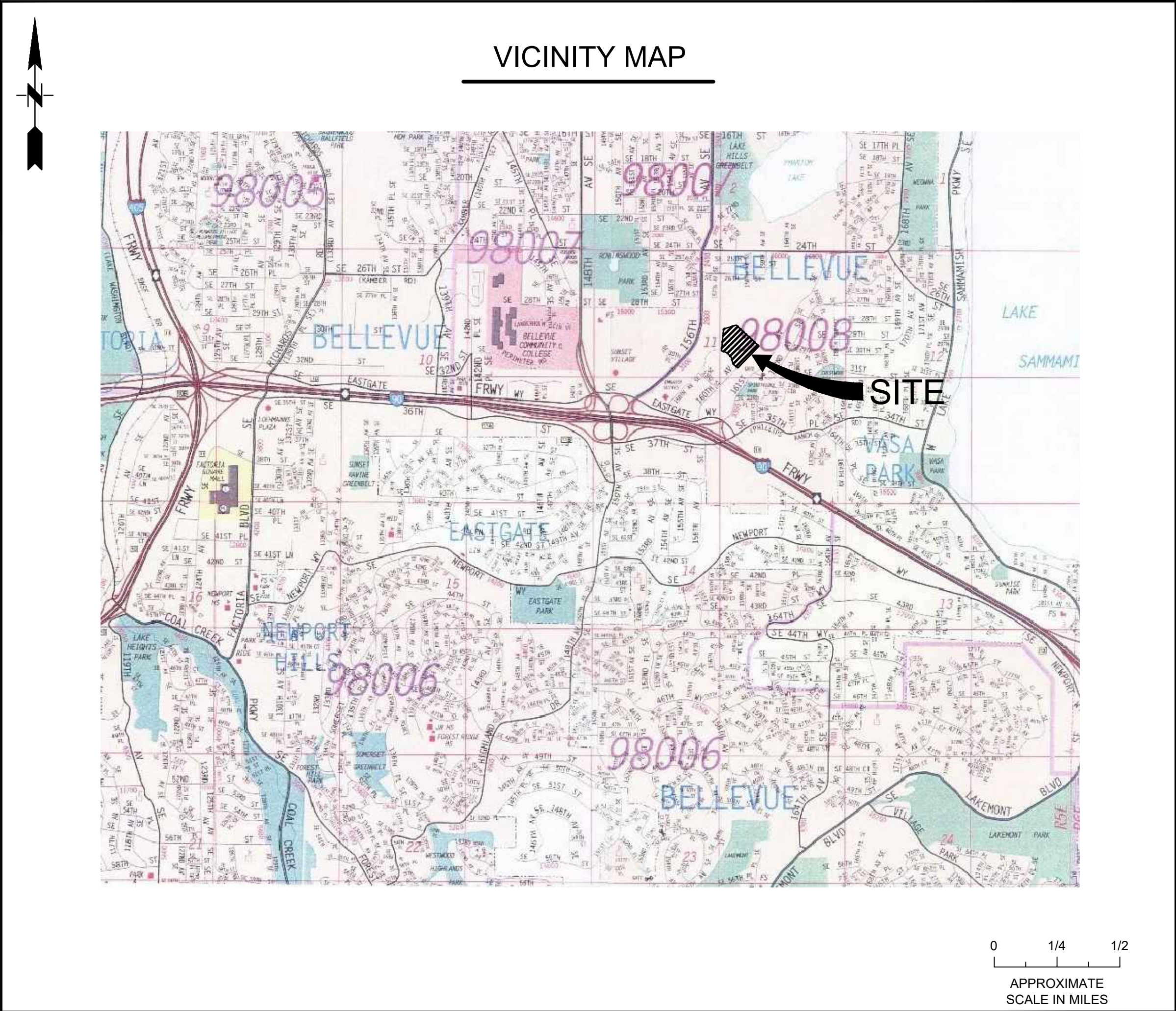
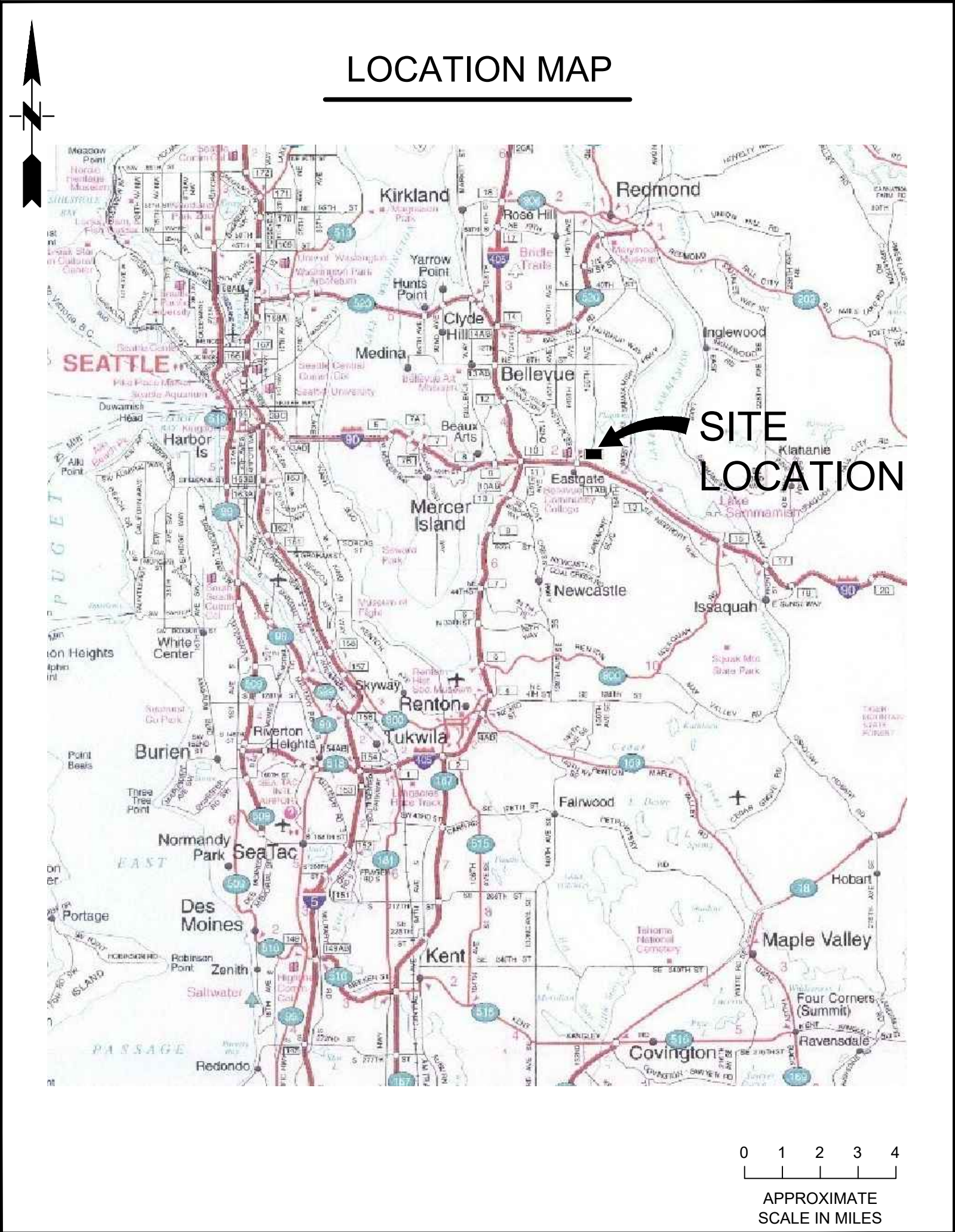
Ted Massart
Sr. Project Engineer
SCS Engineers

cc: Mark Schwisow – City of Bellevue
Tony Svorinich – SCS Field Services
Greg Helland – SCS Engineers
John Richards – SCS Engineers

Attachments:

Drawings – Landfill Gas Control System Modifications, Eastgate Landfill, June 25, 2020, SCS engineers

LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL



DRAWING INDEX

G1	COVER SHEET
C1	EXISTING LFG CONTROL SYSTEM
C2	GAS EXTRACTION NETWORK AND PIPING PLAN
C3	GAS AND CONDENSATE CONVEYANCE PIPE DETAILS
--	REFERENCE DRAWING (TOPOGRAPHIC SURVEY)

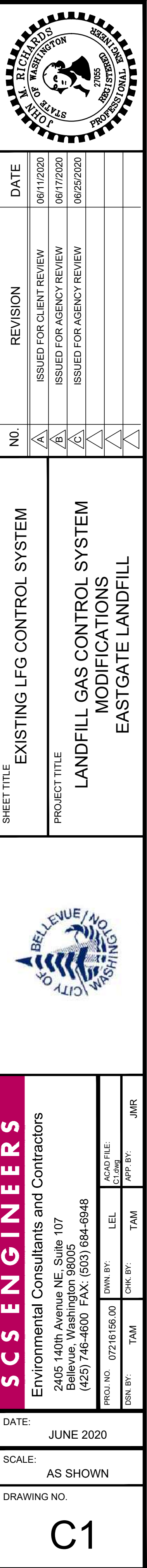
NOT FOR CONSTRUCTION

NO.	REVISION	DATE
A	ISSUED FOR CLIENT REVIEW	06/11/2020
B	ISSUED FOR AGENCY REVIEW	06/17/2020
C	ISSUED FOR AGENCY REVIEW	06/25/2020

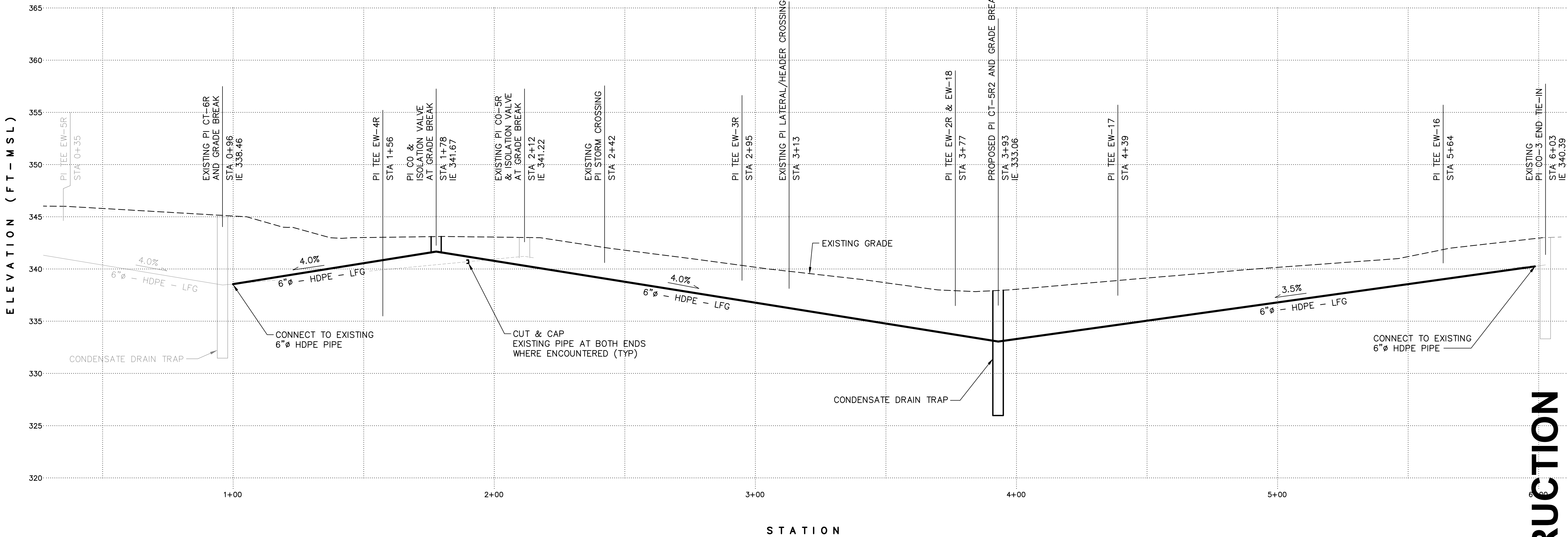
SHEET TITLE	COVER SHEET
PROJECT TITLE	LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL

SCS ENGINEERS Environmental Consultants and Contractors 2405 140th Avenue NE, Suite 107 Bellevue, Washington 98005 (425) 748-4600 FAX: (509) 684-6948	PROJ. NO.	DWN. BY:	CHK. BY:	JMR
	07216156.00	LEL	TAM	
	APP. BY:	TAM		

DATE:	JUNE 2020
SCALE:	AS SHOWN
DRAWING NO.	G1



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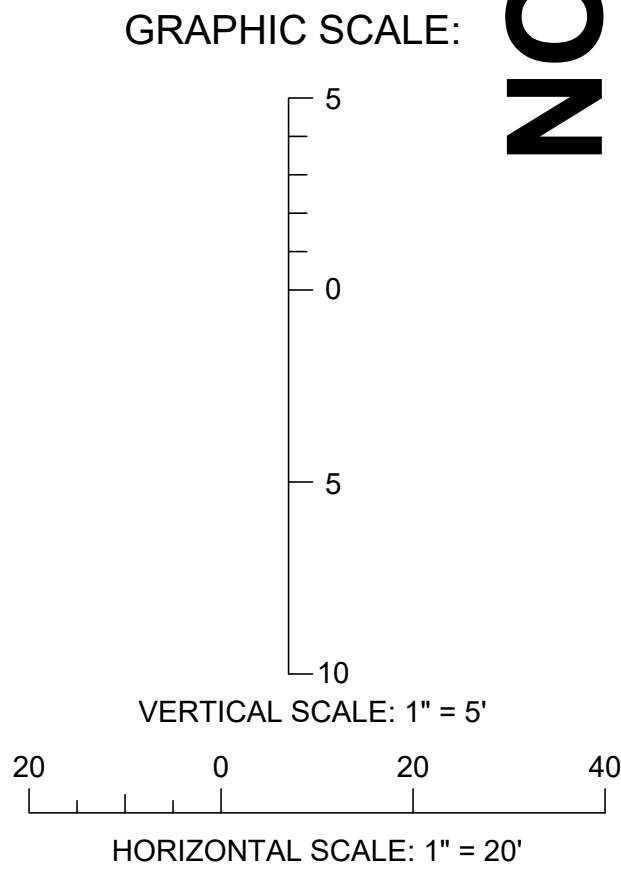


GAS HEADER PIPE PROFILE

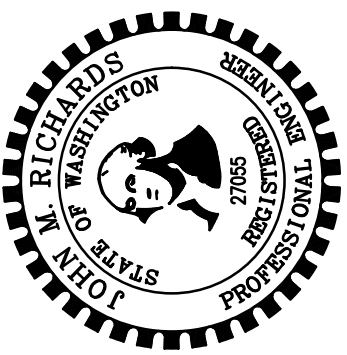
SCALE: HORIZ 1" = 20'
VERT 1" = 5'

NOTES:

- ALL GAS PIPE SHALL BE HDPE SDR 17.0 UNLESS NOTED OTHERWISE.
- ALL CONDENSATE DISCHARGE PIPE SHALL BE HDPE SDR 11.0 UNLESS NOTED OTHERWISE.
- ALL AIR SUPPLY PIPE SHALL BE HDPE SDR 9.0 UNLESS NOTED OTHERWISE.
- CONDENSATE DISCHARGE PIPE AND AIR SUPPLY PIPE TO BE INSTALLED IN A COMMON TRENCH WITH GAS CONVEYANCE PIPE. SEE DRAWING C2.
- SET ASIDE TOP 3 FEET OF SOIL FOR FINAL BACKFILL AND COVER SOIL RESTORATION.
- PROVIDE SHORING, BENCHING, AND/OR SLOPING FOR EXCAVATION DEEPER THAN 4 FEET IN COMPLIANCE WITH APPLICABLE REGULATIONS.
- REFUSE ENCOUNTERED DURING EXCAVATION SHALL BE PLACED IN A CONTAINED AREA FOR SAMPLING AND ANALYSIS.
- REFUSE SHALL BE HAULED OFF SITE TO AN APPROVED DISPOSAL FACILITY.



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SHEET TITLE
GAS AND CONDENSATE
CONVEYANCE PIPE PROFILE

PROJECT TITLE
LANDFILL GAS CONTROL SYSTEM
MODIFICATIONS
EASTGATE LANDFILL



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PROJ NO. 07216159.00

DWN BY: LEL

CHK BY: TAM

APP BY: JMR

ACAD FILE C3.dwg

DATE: JUNE 2020

SCALE: AS SHOWN

DRAWING NO. C3

