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SCS ENGINEERS

November 17, 2015
Project No. 04215047.00

Ms. Chelsea McCann
Principal
Walker Macy
111 S.W. Oak Street, Suite 200
Portland, OR 97204

Subject: Assessment of Existing Landfill Gas Control System, Bellevue Airfield Park (former Eastgate Landfill), Bellevue, WA

Dear Chelsea:

This letter presents SCS Engineers' (SCS') assessment of the existing landfill gas (LFG) control system at the former Eastgate Landfill located within the proposed Bellevue Airfield Park in Bellevue, Washington.

PROJECT BACKGROUND

The Bellevue Airfield Park is a 27 acre site with historical uses as both an airfield and a landfill. The City of Bellevue (City) plans to redevelop the site based on a previously completed master plan. The master plan includes synthetic athletic fields, a concession and restroom facility, play area, picnic area, pedestrian trails, parking, a spray deck, landscaping, and upgrades to the existing drainage ponds. Figure 1 shows the proposed master plan for the park.

A portion of the project will include development over an old closed landfill referred to as the Eastgate Landfill. The Eastgate Landfill operated from approximately 1951 to 1964. The landfill occupies approximately 9 acres of the 27 acre site. Development of the site will require modifications, upgrades, and/or replacement of the environmental monitoring networks for groundwater, stormwater, and subsurface LFG. Development will also need to include modifications, upgrades, and/or replacement of the environmental control systems for LFG and stormwater management.

The LFG control system was originally installed in 1986 in response to subsurface LFG migration into soils adjacent to the landfill. The LFG control system was designed, constructed, and operated to extract LFG from the waste mass and dispose of it by thermal oxidation (i.e., flaring). Ongoing, routine, operations and maintenance has controlled and prevented subsurface migration of landfill gas. Like all municipal solid waste landfills, the buried waste (in the absence of oxygen) creates an anaerobic decomposition process that generates LFG, which consists primarily of methane and carbon dioxide. When left uncontrolled, the LFG can migrate laterally out of the waste into surrounding soils. Uncontrolled migration of subsurface LFG is a concern due to the combustion hazard of methane and the asphyxiation hazard of both carbon dioxide and methane.

DESCRIPTION OF EXISTING LFG CONTROL SYSTEM

The existing LFG control system is designed to extract LFG from the refuse mass to minimize emissions to the atmosphere and migration into the soils surrounding the landfill. The existing LFG control system at the site has the following components:

- An extraction network consisting of gas extraction wells.
- A conveyance system consisting of branch pipes, lateral pipes, sub-header pipes, and perimeter header pipe to convey the collected LFG from the extraction network to the LFG extraction plant (blower station).
- A condensate disposal system consisting of condensate dropout tees, condensate drain pipes and condensate drain traps to remove condensate from the conveyance pipe and discharge it into the refuse.
- A LFG extraction plant (i.e., blower station, gas mover equipment or gas handling facility) consisting of blowers, ancillary equipment, associated piping and controls.
- LFG disposal equipment consisting of activated carbon vessels to treat the LFG prior to discharging to the atmosphere.

The LFG system consists of collection points (wells) located throughout the landfill. The gas extraction wells are installed in the refuse mass and connected to the conveyance pipe system, which are connected to the blowers. The blowers induce a vacuum on the pipeline, which pulls LFG from the extraction wells through the pipeline to the blowers. The blowers push the LFG through the activated carbon vessels for treatment before discharging the LFG to the atmosphere. The activated carbon vessels absorb (remove) harmful trace compounds from the LFG.

There have been minor modifications to the LFG system since initial installation with the most notable modifications occurring in 2006/2007 and 2011. In the fall of 2006 and spring of 2007, there were modifications made to replace gas wells, gas probes, and gas conveyance pipe on the south end of the landfill to accommodate a new access road (30th Place SE) and property development to the south (Advanta Business Complex). In 2011, the blower flare station was modified to abandon the flare and install LFG treatment equipment consisting of activated carbon vessels. The existing LFG collection system is shown on Figure 2 and consists of the following:

- A blower station with two (2) blowers (vacuum pumps), associated piping, controls, electrical service, and two (2) activated carbon vessels (for treatment of LFG prior to discharge to atmosphere)
- Approximately 4,300 feet of buried gas conveyance pipe (8″, 6″, and 4″ diameter high density polyethylene [HDPE] pipe)
- 20 gas extraction wells with an average depth of 35 feet (EW-2 through EW-21)
- 13 condensate drain traps (CT-1 through CT-13)
- Eight (8) dual cleanout access ports with isolation valves (CO-1 through CO-8)

- Two (2) single cleanout access ports (C0-9 and C0-10)
- Two (2) isolation valves (IV-9 and IV-10)
- 14 subsurface gas detection wells or "gas probes" (MW-2 through MW-6, MW-8 through MW-10, and MW- 12 through MW-17)

The record drawings for the LFG control system can be found in Exhibits 1, 2 and 3. The record drawings are from the initial construction in 1986 (Exhibit 1) and subsequent modifications in 2007 (Exhibit 2) and 2011 (Exhibit 3). Subsequent surveys conducted in 2002 and 2009 have been used to update the LFG system site plan as shown in Figure 2. These surveys are provided in Exhibits 4 and 5, respectively.

GENERAL LFG CONTROL SYSTEM OPERATIONS

Operation of the LFG extraction plant, LFG disposal equipment, conveyance system, extraction network, and condensate disposal system consists of monitoring and maintaining the equipment on a routine basis to provide reliable and consistent extraction, conveyance, and treatment/disposal of LFG and condensate.

Objectives for the LFG extraction network are as follows:

- Prevent and/or minimize emissions of LFG to the atmosphere.
- Prevent and/or minimize emission of LFG into native soils surrounding the landfill.
- Maintain an anaerobic (i.e., methane producing) environment within each extraction zone (as indicated by low residual nitrogen with well temperatures generally less than 55 degrees Celsius [°C] or 131 degrees Fahrenheit [°F]).
- Maintain methane concentrations below 5 percent by volume at the perimeter gas probes.

Operation of the gas probes requires vigilant monitoring to assess the performance of the extraction network in order to meet the control objectives and be compliant with applicable regulations.

Achieving the objectives described above is accomplished by carefully monitoring and controlling the flow and/or vacuum from each extraction well. Ideally, for the LFG extraction, the wells would be operated by extracting LFG at the same rate of production. However, there are many factors that do not allow this ideal condition to develop. Operation of the LFG extraction wells is very dynamic. The effectiveness of each LFG extraction well is influenced by.

- The heterogeneous and anisotropic nature of the waste mass.
- The limited number of wells in the landfill.
- Well location and design.
- The absence or presence of a bottom liner system in the landfill.

- Varied air infiltration potential due to a condition and variation of the soil cover system between wet and dry seasons.
- Varied air infiltration potential due to landfill geometry.
- Permeable geologic strata around the site.
- The varying age of refuse in the landfill.
- The influence of fluctuating barometric pressure.
- The nature of changing gas composition dependent on the anaerobic/aerobic state.

The characteristics listed above make the LFG extraction wells at the landfill sensitive to operations. This makes it is necessary to continually adjust the system on a routine basis to match gas production levels and control objectives.

CURRENT OPERATING CONDITIONS

The following presents SCS's findings based on review of the past 10 months of system monitoring results, LFG System Design, and historical operations of the LFG system.

Findings from review of the past 10 months of system monitoring results are as follows:

- Gas probes show the presence of LFG (i.e., methane) at gas probes MW-2, MW-3 and MW-4.
- The methane content at these gas probe locations is below the regulatory threshold limit of 5 percent by volume.

Findings from review of the LFG system design and historical operations are as follows:

- The design of the original 1986 well head control assemblies provide no device for measuring flow. This inhibits the ability to adequately assess the extraction performance of an individual well.
- The location/orientation of the flow meters at the blower station do not allow for accurate flow measurement due to the lack of sufficient straight run of pipe to develop a velocity profile through the measurement device. This makes it difficult to assess the overall performance of the system.
- The original 1986 condensate drain traps are prone to damage and malfunction due to the type of pipe connections.
- The condensate drain traps are prone to flooding during the wet season due to seasonal high water levels. This can cause partial or complete blockage of the gas pipes (and gas extraction) during the wet season.

Note that the gas extraction well monitoring results showed vacuum being applied to all gas extraction wells during 2015. This is a result of experiencing very low precipitation throughout 2015. Historically, the vacuum has been disrupted at some of the gas wells. This was due to

flooding of the condensate drain traps. Continued operations of the LFG system should focus on correcting this issue to increase the consistency of operations.

The condition of the gas conveyance pipe is not known at this time. It should be noted that differential settlement has occurred over a long period of time at the landfill. This can potentially cause problems as subsidence of the gas pipe can cause condensate to accumulate at low points or "bellies" in the conveyance pipe. This can lead to partial or complete blockage of the gas pipes (and gas extraction) in the future.

FUTURE LANDFILL GAS MANAGEMENT

LFG generation from waste decay occurs over a long period of time. The peak gas generation generally occurs a year or two after cessation of landfilling. It then slowly declines exponentially over time. Previous site estimates show a peak LFG generation of approximately 330 standard cubic feet per minute (scfm) occurring in 1987. The LFG generation rate then declines exponentially to approximately 30 scfm in 2000; 20 scfm in 2010; and 10 scfm in 2015. The exact amount of gas generation is unknown. Operation of the LFG system confirms that gas is still being generated in small amounts. Monitoring results of the perimeter gas probes indicate that operation of the LFG control system is still necessary to prevent off-site migration of LFG. SCS believes that operations of the LFG system will need to be continued into the future. This will require operations during any work associated with future development. This will also require upgrades, and or replacement, to the LFG control system infrastructure impacted by future development.

CONSIDERATIONS FOR DEVELOPMENT OF MASTER PLAN

The proposed master plan layout indicates development will occur over the majority of the LFG control system area (see Exhibit 6). Installation of the sports field, and other features will require relocation of gas wells, gas conveyance pipe and condensate drain traps. Access to LFG system components will need to be installed at locations that do not interfere with other site features. The LFG system access points will also need to be concealed below ground in secured vaults. Upgrades to the LFG system should also address the deficiencies identified during review of the LFG system design and historical operations findings presented above. Specific deficiencies and items for consideration during site development include:

- Continue to operate the LFG control system on a routine basis to maintain methane concentrations in the gas probes below the regulatory threshold limit of 5 percent by volume.
- Upgrades and/or replacement of well head control assemblies should include a monitoring device for measuring flow at each gas well.
- The flow meters at the blower station should be replaced to allow for accurate flow measurement. This will better flow data for assessing the overall performance of the system.

- The condensate drain traps should be replaced with condensate pump stations to eliminate the possibility of flooding, which can occur in the existing condensate drain traps.
- The gas conveyance pipe should be replaced using pipe slopes greater than 3 percent to accommodate for long term differential settlement.
- One of the two blowers should be replaced due to the age and capacity beyond the expected service life. A variable frequency drive (VFD) should be included with the new blower.
- The blower controls should be replaced due to age, serviceability, advances in technology, and integration of both VFD operated blowers.
- Remove and recycle the abandoned LFG flare at the blower station compound.

The proposed development is anticipated to consolidate the waste to reduce the potential for significant differential settlement after installation of the new facilities. Currently a pre-load or surcharge load plan is being developed to address this. Preloading areas with LFG system components will likely damage the LFG system in that area. There will need to be considerations for allowing continued LFG system operations during the preloading process and during the subsequent construction of the new facilities. Interim, ongoing operations of the LFG system should focus on maintaining operations of the gas wells in the southern and south eastern perimeter. It is likely that the LFG system components along the southern perimeter and west of the landfill will not require preloading and can be incorporated into the schematic design for site development.

For future site development and upgrades to the LFG system, additional plans, permits, testing may be required including the following:

- Solid waste permit plan review
- Waste testing/designation and handling of solid waste
- Environmental Monitoring Plan
- Notice of Intent to Construct wells
- Variance request to construct wells
- Testing of LFG condensate
- Permit to discharge LFG condensate to sewer
- Revision to Restrictive Covenant

CLOSING

We trust you find this information of value. If you have any questions or desire any additional information, please contact Mr. Sonsthagen at (425) 289-5441, or Mr. Massart at (425) 289-5457.

Sincerely,

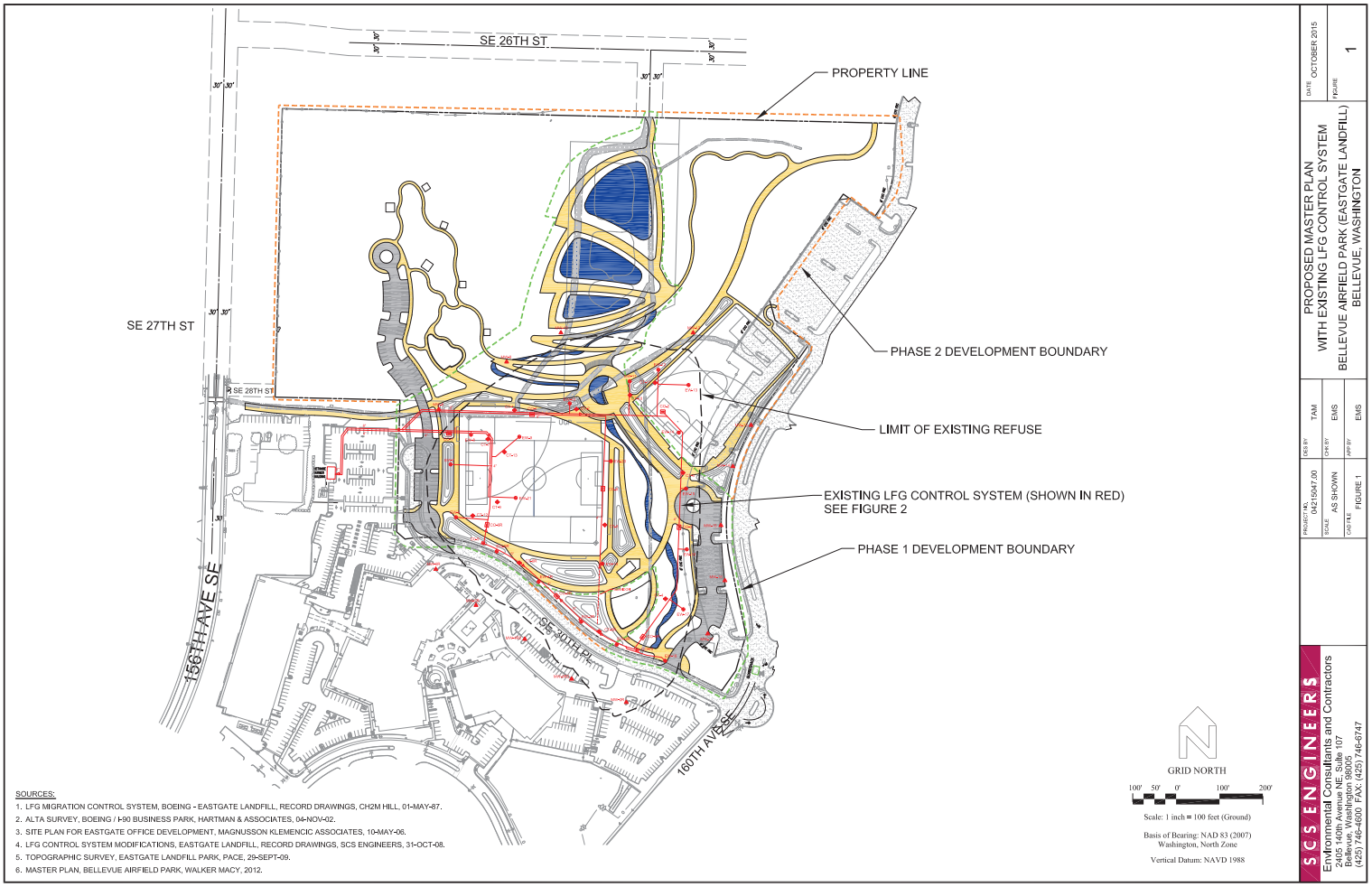
Ted Massart
Senior Project Engineer
SCS ENGINEERS

Eric M. Sonsthagen, P.E.
Senior Project Engineer
SCS ENGINEERS

Attachments:

Figures 1 and 2
Exhibits 1 through 6

FIGURES



SOURCES:

1. LFG MIGRATION CONTROL SYSTEM, BOEING - EASTGATE LANDFILL, RECORD DRAWINGS, CH2M HILL, 01-MAY-87.
2. ALTA SURVEY, BOEING / I-90 BUSINESS PARK, HARTMAN & ASSOCIATES, 04-NOV-02.
3. SITE PLAN FOR EASTGATE OFFICE DEVELOPMENT, MAGNUSSON KLEMENCIC ASSOCIATES, 10-MAY-06.
4. LFG CONTROL SYSTEM MODIFICATIONS, EASTGATE LANDFILL, RECORD DRAWINGS, SCS ENGINEERS, 31-OCT-08.
5. TOPOGRAPHIC SURVEY, EASTGATE LANDFILL PARK, PACE, 29-SEPT-09.
6. MASTER PLAN, BELLEVUE AIRFIELD PARK, WALKER MACY, 2012.

PROPOSED MASTER PLAN
WITH EXISTING LFG CONTROL SYSTEM
BELLEVUE AIRFIELD PARK (EASTGATE LANDFILL)
BELLEVUE, WASHINGTON

DATE: OCTOBER 2015
FIGURE: 1

PROJECT NO.: 04215047.00
SCALE: AS SHOWN
DATE: FIGURE 1
DES BY: TAM
CHK BY: EMS
APP BY: EMS

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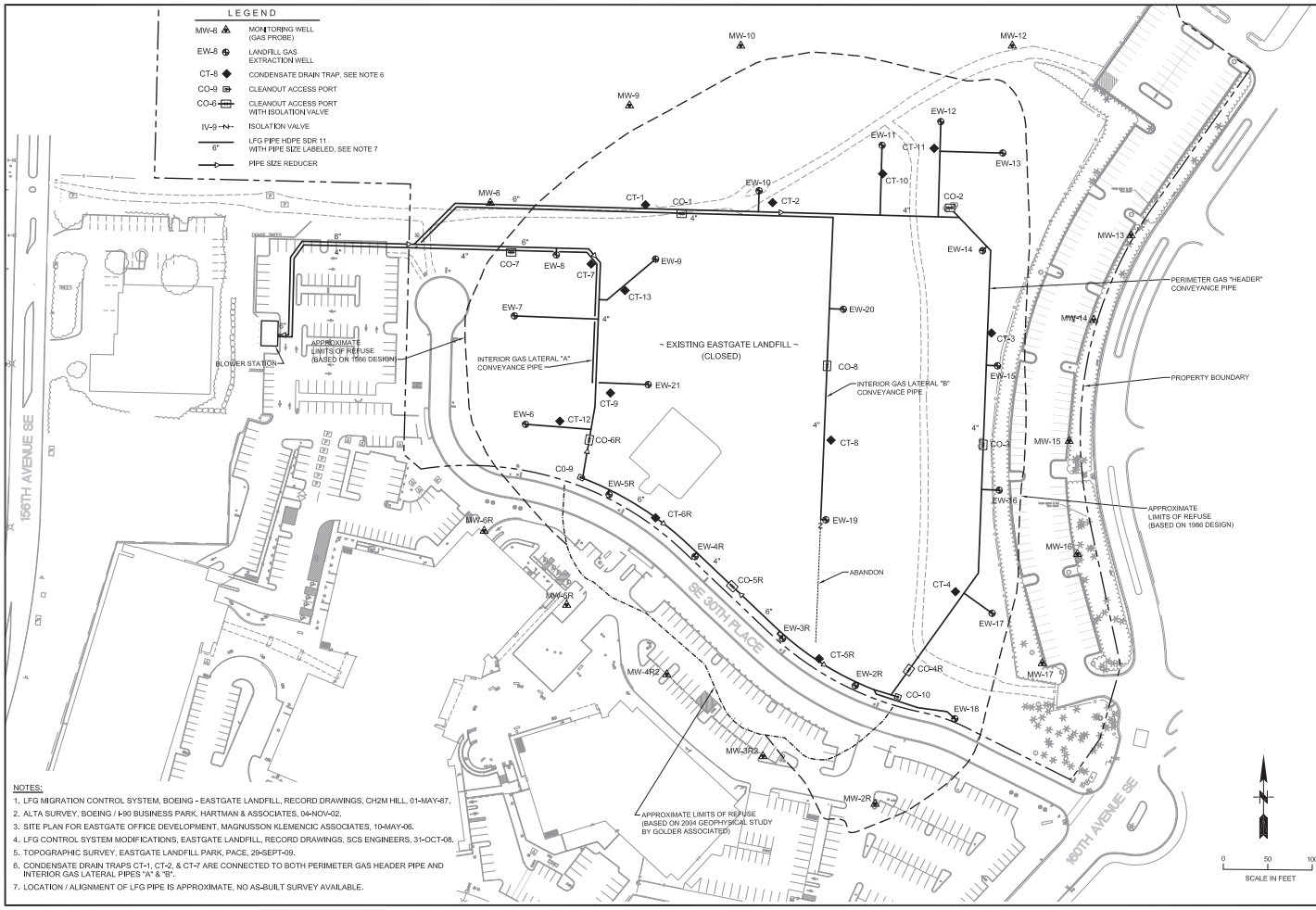

NOTES:

1. LFG MIGRATION CONTROL SYSTEM, BOEING - EASTGATE LANDFILL, RECORD DRAWINGS, CH2M HILL, 01-MAY-87.
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4. LFG CONTROL SYSTEM MODIFICATIONS, EASTGATE LANDFILL, RECORD DRAWINGS, SCS ENGINEERS, 31-OCT-08.
5. TOPOGRAPHIC SURVEY, EASTGATE LANDFILL PARK, PACE, 29-SEPT-09.
6. CONDENSATE DRAIN TRAPS CT-1, CT-2, & CT-7 ARE CONNECTED TO BOTH PERIMETER GAS HEADER PIPE AND INTERIOR GAS LATERAL PIPES "A" & "B".
7. LOCATION / ALIGNMENT OF LFG PIPE IS APPROXIMATE, NO AS-BUILT SURVEY AVAILABLE.

EXISTING LFG CONTROL SYSTEM
BELLEVUE AIRFIELD PARK (EASTGATE LANDFILL)
BELLEVUE, WASHINGTON

DATE: OCTOBER 2015
FIGURE: 2

PROJECT NO.: 0421504.7.00
SCALE: AS SHOWN
DATA FILE: FIGURE 2
DES BY: TAM
DRN BY: EMS
CHK BY:
APP BY: EMS

SCS ENGINEERS
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EXHIBITS

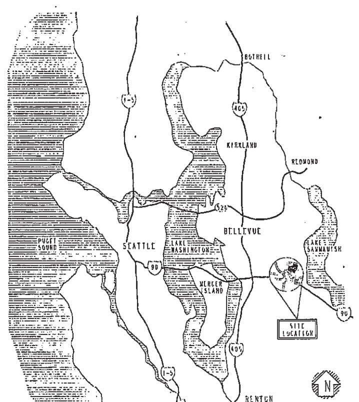
Exhibit 1

BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM

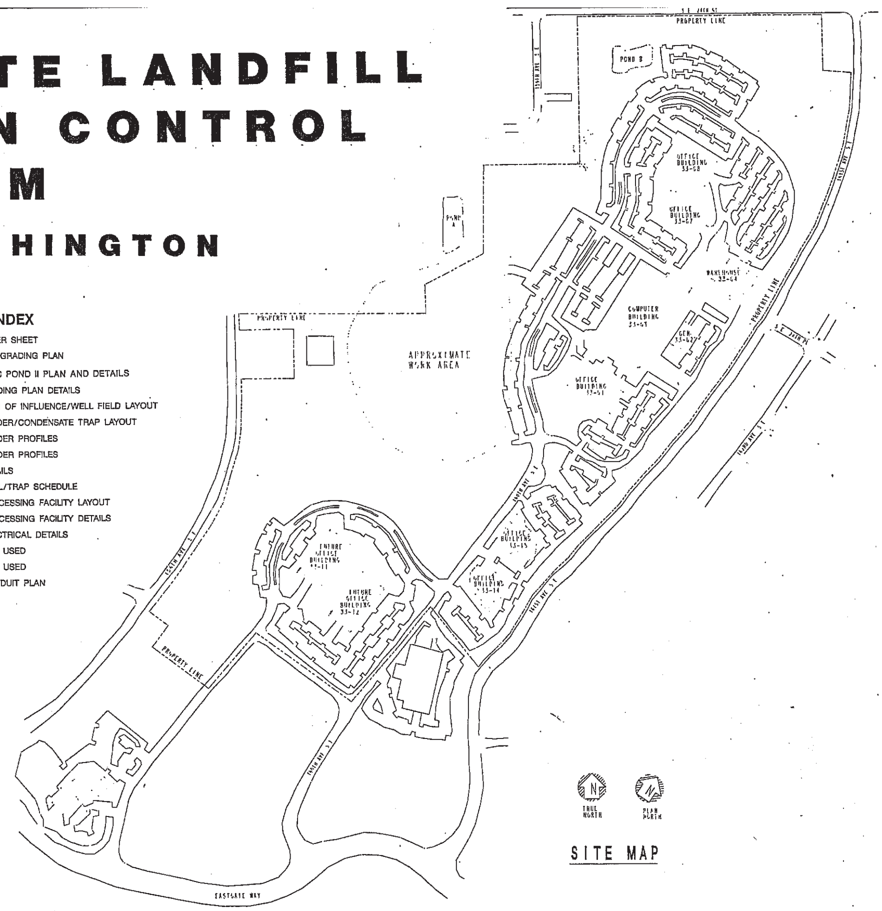
BELLEVUE, WASHINGTON

SHEET INDEX

C-1	COVER SHEET
C-2	SITE GRADING PLAN
C-2A	TESC POND II PLAN AND DETAILS
C-3	GRADING PLAN DETAILS
C-4	RADII OF INFLUENCE/WELL FIELD LAYOUT
C-5	HEADER/CONDENSATE TRAP LAYOUT
C-6	HEADER PROFILES
C-7	HEADER PROFILES
C-8	DETAILS
C-9	WELL/TRAP SCHEDULE
C-10	PROCESSING FACILITY LAYOUT
C-11	PROCESSING FACILITY DETAILS
E-1	ELECTRICAL DETAILS
E-2	NOT USED
E-3	NOT USED
E-4	CONDUIT PLAN



VICINITY MAP



SITE MAP

SYM	REVISION	BY	APPROVED	DATE
1	AS-BUILTS PER BOEING			5-1-87

BOEING FACILITIES DEPARTMENT

☐ AUBURN, WA. 98002
☐ EVERETT, WA. 98201
☐ KENT, WA. 98031
☐ PORTLAND, OR. 97220
☐ RENTON, WA. 98055
☐ SEATTLE, WA. 98124
■ BELLEVUE, WA. 98004

STARR J. DEHN — PROFESSIONAL ENGINEER

CH2M HILL

DRAWN BY: G. PERRIO
CHECKED
ENGR: R. CONRAD
APPROVED
APPROVED

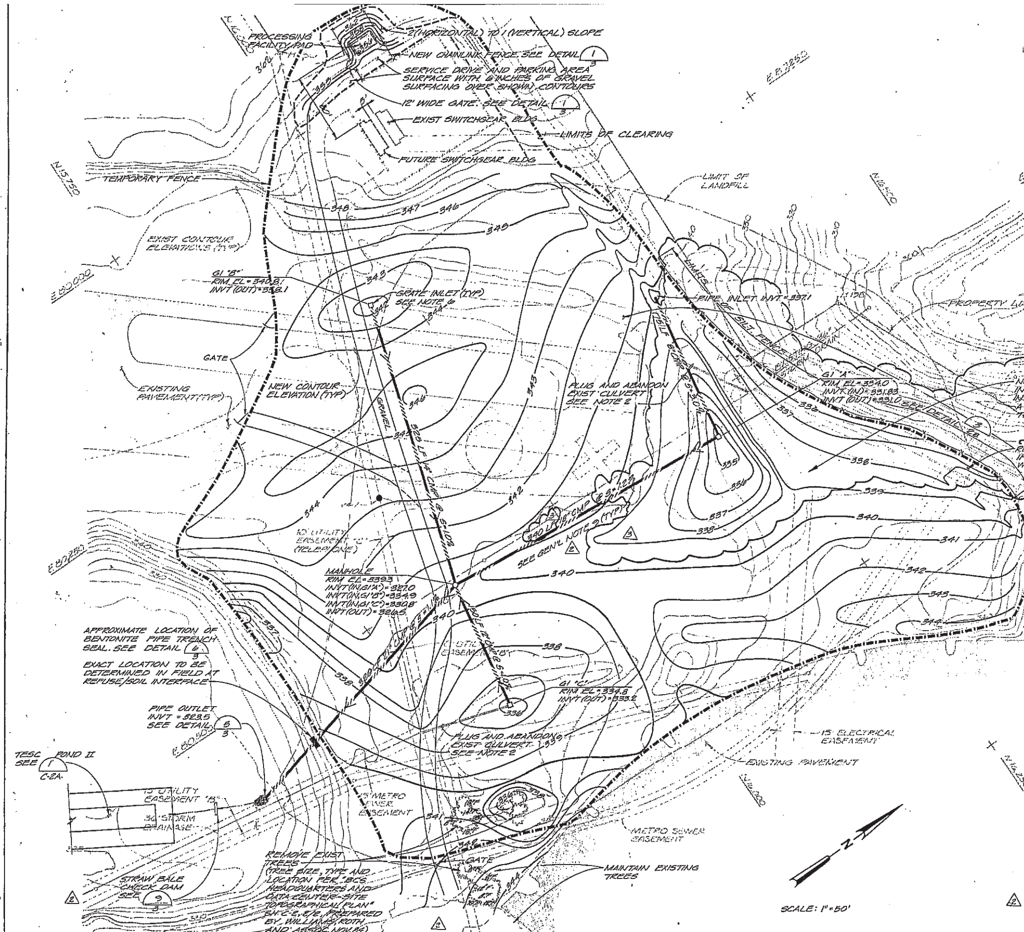
SUBTITLE: COVER SHEET

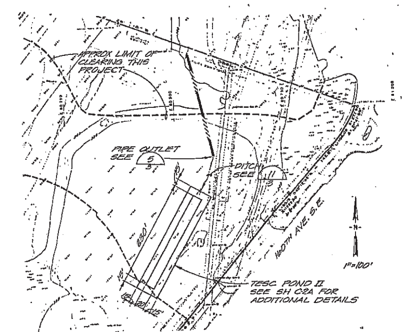
TITLE: BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM

SHEET: C-1

DWG NO. 33-00-YD-1012-C1

K&E


PROCESSING FACILITY PAD
2(HORIZONTAL) TO 1 (VERTICAL) SLOPE
NEW CHAINLINK FENCE. SEE DETAIL
SERVICE DRIVE AND PARKING AREA SURFACE WITH 6 INCHES OF GRAVEL SURFACING OVER SHOWN CONTOURS
12' WIDE GATE. SEE DETAIL
EXIST SWITCHGEAR BLDG
LIMITS OF CLEARING
FUTURE SWITCHGEAR BLDG
TEMPORARY FENCE
LIMIT OF LANDFILL
EXIST CONTOUR ELEVATIONS (TYP)
GRATE INLET (TYP) SEE NOTE 4
PIPE INLET
PROPERTY LINE (TYP)
GATE
EXISTING PAVEMENT (TYP)
NEW CONTOUR ELEVATION (TYP)
PLUG AND ABANDON EXIST CULVERT SEE NOTE 2
NOTE: SLIGHT MODIFICATIONS IN GRADE MAY BE REQ'D IN SOME LOCATIONS TO MAINTAIN A MINIMUM COVER OF 36" OVER TOP OF EXIST. CONC CAP
RETAIN EXISTING GRADED ROADWAY. IF DISTURBED, REGRADE AND SURFACE WITH 6 INCHES OF GRAVEL SURFACING.
LIMITS OF CLEARING - INSTALL TEMPORARY CHAIN LINK FENCE ALONG CLEARING LIMITS DO NOT DISTURB EXIST LOGGING PATH
SEE GEN'L NOTE 3 (TYP)
MANHOLE
APPROXIMATE LOCATION OF BENTONITE PIPE TRENCH SEAL. SEE DETAIL
EXACT LOCATION TO BE DETERMINED IN FIELD AT REFUSE/SOIL INTERFACE
PIPE OUTLET SEE DETAIL
TESC POND II SEE C-2A
PLUG AND ABANDON EXIST CULVERT SEE NOTE 2
15' ELECTRICAL EASEMENT
EXISTING PAVEMENT
METRO SEWER EASEMENT
STRAW BALE CHECK DAM SEE
REMOVE EXIST TREES (TREE SIZE, TYPE AND LOCATION PER "BCS HEADQUARTERS AND DATA CENTER-SITE TOPOGRAPHICAL PLAN" SH C-2, E/E, PREPARED BY WILLIAMS, ROTH AND ASSOC, NOV.84)
MAINTAIN EXISTING TREES
GATE
SCALE: 1"=50'



TESC POND II (1)

CONSTRUCTION SEQUENCE

1. CALL 455-6937 48 HOURS PRIOR TO ANY WORK FOR REQUIRED PRECONSTRUCTION MEETING.
2. INSTALL TEMPORARY CHAIN LINK FENCE.
3. INSTALL TEMPORARY EROSION CONTROL SYSTEM
   A. CONSTRUCT SEDIMENTATION POND.
   B. CONSTRUCT DITCH WITH STRAW BALE CHECK DAMS TO POND. SEE 11/3
   C. PERFORM GRADING REQUIRED TO INSTALL STORM DRAINAGE SYSTEM.
   D. INSTALL STORM DRAINAGE SYSTEM.
   E. PLACE STRAW BALES AROUND PIPE INLETS AND GRATE INLETS TO MINIMIZE SILT MIGRATION. REMOVE AFTER HYROSEEDED VEGETATION IS ESTABLISHED. SEE 10/3
4. PERFORM REMAINING SITE GRADING AND INSTALL NEW PROCESS FACILITY PAD.
5. INSTALL LFG COLLECTION SYSTEM.
6. HYDROSEED SITE.
7. INSTALL PERMANENT CHAIN LINK FENCES.

GENERAL NOTES:

1. CONTOURS SHOWN ARE FOR FINISHED GRADES (TOP OF PAVEMENT, TO BE DONE LATER BY OTHERS) INITIAL GRADING SHALL BE PERFORMED BY CONTRACTOR TO BRING SITE 9 INCHES BELOW CONTOURS SHOWN (-0.75 FEET) EXCEPT FOR PROCESSING FACILITY PAD AND SERVICE ROAD CONTOURS. MAINTAIN PIPE INVERTS, MANHOLE AND GRATE INLET RIM ELEVATIONS AS SHOWN.
2. PLUG AND ABANDON EXIST PIPE SECTIONS WHERE SHOWN ON PLAN. PLUG LINES BY FILLING EACH END W/ CONCRETE TO A MINIMUM DEPTH INTO THE PIPE OF 2 PIPE DIAMETERS.
3. SEE DETAIL SHEET FOR TYPICAL PIPE BACKFILL SECTION.
4. GRATE INLETS ARE WSDOT GRATE INLETS-TYPE 2. CONFORM TO ALL REQUIREMENTS OF WSDOT STANDARD PLAN B-4C AND WSDOT STANDARD SPECIFICATIONS. SEE 8/3
5. MANHOLE IS CITY OF BELLEVUE TYPE I 48". CONFORM TO CITY OF BELLEVUE DEVELOPMENT STANDARDS. SEE 7/3.
6. GRADE AREA AROUND INLETS TO DRAIN TOWARD INLETS.
7. PLACE 24 INCHES OF GRANULAR FILL UNDER ALL GRATE INLETS AND MANHOLES
8. FERTILIZE AND HYDROSEED ALL GRADED AREAS NOT RECEIVING CRUSHED GRAVEL SURFACING IN ACCORDANCE WITH SPECIFICATIONS.
9. (2) ALL CMP PIPE SHALL BE HELICALLY CORRUGATED WITH ANNULAR ENDS.

SYM	REVISION	BY	APPROVED	DATE
1	REV. PER CITY OF BELLEVUE REVIEW			7-3-86
2	RAISED GRADE OVER UTILITY DUCT	TNT		9-2-86
3	AS-BUILTS PER BOEING			5-1-87

BOEING FACILITIES DEPARTMENT
BELLEVUE, WA. 98004

☐ AUBURN, WA. 98002
☐ EVERETT, WA. 98201
☐ KENT, WA. 98031
☐ PORTLAND, OR. 97220
☐ RENTON, WA. 98055
☐ SEATTLE, WA. 98124

CH2M HILL

RESPOND TO SUBMITTAL REQ'MTS

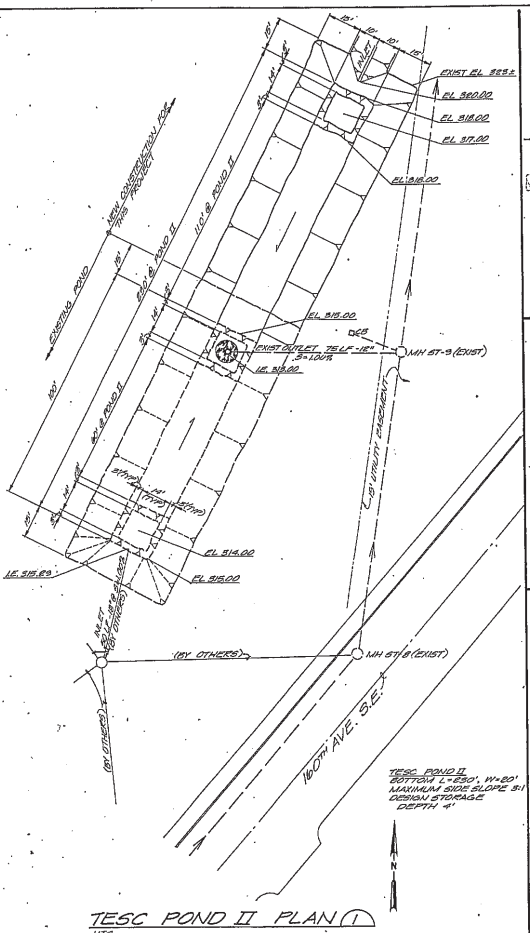
SUBTITLE: SITE GRADING AND TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN

TITLE: BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM

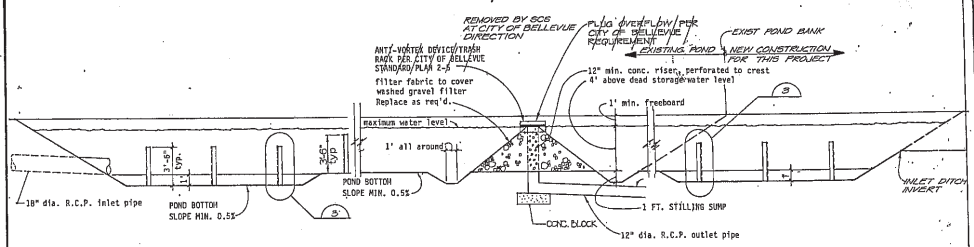
SHEET: C-2

DWG NO. 33-00-YD-1012-C2

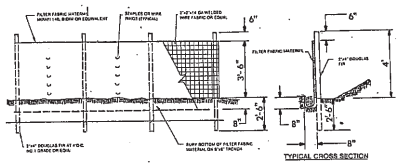
DG 6000 4075 REV. 7/83



TESC POND II PLAN (1)
NTS



TESC POND II SECTION (2)
NTS



SILT FENCE DETAIL (3)
NTS

TESC POND II NOTES

1. AS CONSTRUCTION PROGRESSES AND SEASONAL CONDITIONS DICTATE, MORE SILTATION CONTROL FACILITIES MAY BE REQUIRED TO ENSURE COMPLETE SILTATION CONTROL. THEREFORE, DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES OVER AND ABOVE THE MINIMUM REQUIREMENTS AS MAY BE NEEDED.
2. TOTAL TEMPORARY SEDIMENTATION CONTROL POND VOLUME PROVIDED 31,400 CU.FT. AND 31,300 CU.FT. IS THE TOTAL REQUIRED.
3. AT CONSTRUCTION VEHICLE ENTRANCE/EXIT POINTS, CONSTRUCT 4" TO 6" QUARRY SPALLS, 1' DEEP 35' WIDE BY 100' LONG AT LOCATION AS DIRECTED BY ENGINEER.
4. THIS STRUCTURE SHALL BE PART OF THE PERMANENT STORM SYSTEM BUT WILL REMAIN PLUGGED UNTIL THE DRAINAGE FACILITIES ARE OPERATIONAL AND THE NEED FOR EROSION CONTROL HAS PASSED.

SYM	REVISION	BY	APPROVED	DATE
1	AS-BUILTS PER BOEING			5-1-97

BOEING
FACILITIES DEPARTMENT
■ BELLEVUE, WA. 98004

□ AUBURN, WA. 98002
□ EVERETT, WA. 98201
□ KENT, WA. 98031
□ PORTLAND, OR. 97220
□ RENTON, WA. 98055
□ SEATTLE, WA. 98124

CH2M-HILL

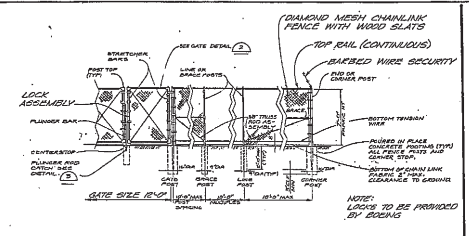
DRAWN BY	E. DEL RIO	5/15/96
CHECKED		
DES'D BY	J. CONRAD	6/14/96
CHECKED		
APPROVED		
APPROVED		

SUBTITLE: TESC POND II PLAN AND DETAILS

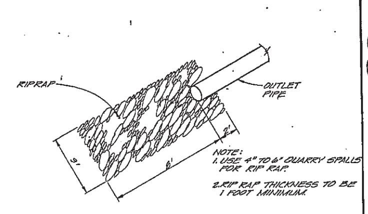
TITLE: BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM

LAST REVISION	SYMBOL	DATE
SHEET	C-2A	OF
JOB NO.		
DWG NO.	53-00-YD-1012-02A	

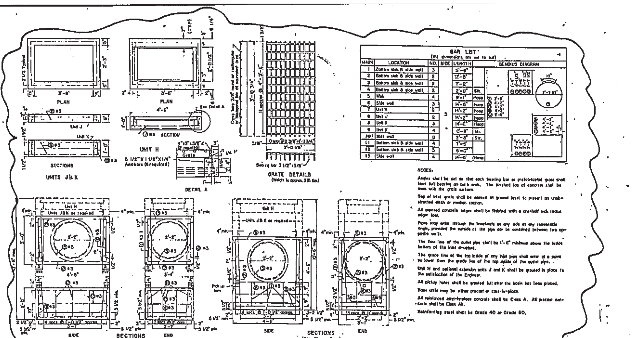
K&E 72



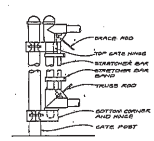
TYPICAL FENCE DETAIL 1
NO SCALE



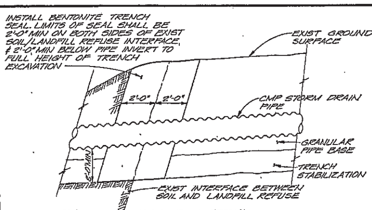
OUTFALL DETAIL 5
NO SCALE



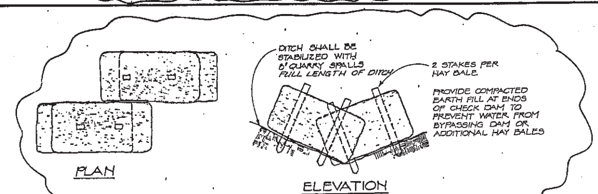
GRATE INLET DETAIL 8



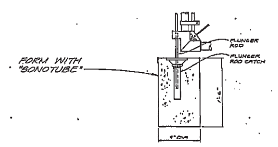
GATE DETAIL 2
NO SCALE


INSTALL BENTONITE TRENCH SEAL. LIMITS OF SEAL SHALL BE 2'-0" MIN ON BOTH SIDES OF EXIST SOIL/LANDFILL REFUSE INTERFACE, & 2'-0" MIN BELOW PIPE INVERT TO FULL HEIGHT OF TRENCH EXCAVATION
EXIST GROUND SURFACE
CMP STORM DRAIN PIPE
GRANULAR PIPE BASE
TRENCH STABILIZATION
EXIST INTERFACE BETWEEN SOIL AND LANDFILL REFUSE
SOIL
EXIST LANDFILL REFUSE

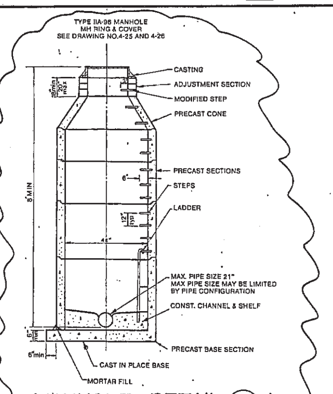
BENTONITE TRENCH SEAL 6
NTS



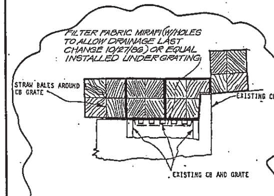
CHECK DAM DETAIL 9
NO SCALE



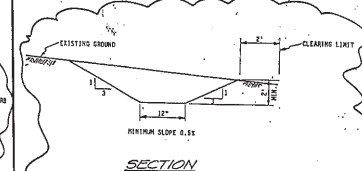
PLUNGER ROD DETAIL 3
NO SCALE


TYPE IIA-96 MANHOLE MH RING & COVER SEE DRAWING NO.4-25 AND 4-26
CASTING
ADJUSTMENT SECTION
MODIFIED STEP
PRECAST CONE
PRECAST SECTIONS
STEPS
LADDER
MAX. PIPE SIZE 21" MAX PIPE SIZE MAY BE LIMITED BY PIPE CONFIGURATION
CONST. CHANNEL & SHELF
PRECAST BASE SECTION
CAST IN PLACE BASE
MORTAR FILL

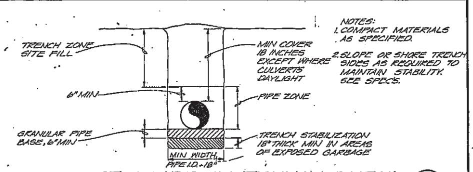
MANHOLE DETAIL 7
NTS



HAY BALES AT GRATE INLET DETAIL 10



TYPICAL DITCH DETAIL 11


TRENCH ZONE SITE FILL
MIN COVER 18 INCHES EXCEPT WHERE CULVERTS DAYLIGHT
NOTES:
1. COMPACT MATERIALS AS SPECIFIED.
2. SLOPE OR SHORE TRENCH SIDES AS REQUIRED TO MAINTAIN STABILITY. SEE SPECS.
6" MIN
PIPE ZONE
GRANULAR PIPE BASE, 6" MIN
TRENCH STABILIZATION 18" THICK MIN IN AREAS OF EXPOSED GARBAGE
MIN WIDTH, PIPE I.D.+18"

TYPICAL STORMDRAIN TRENCH DETAIL 4
NTS

SYM	REVISION	BY	APPROVED	DATE
1	REV PER CITY OF BELLEVUE REVIEW			7-3-86
2	AS-BUILTS PER BOEING			5-1-87

BOEING
FACILITIES DEPARTMENT
■ BELLEVUE, WA. 98004

☐ AUBURN, WA. 98002
☐ EVERETT, WA. 98201
☐ KENT, WA. 98031
☐ PORTLAND, OR. 97220
☐ RENTON, WA. 98055
☐ SEATTLE, WA. 98124

CH2M HILL

SUBTITLE: GRADING PLAN DETAILS.

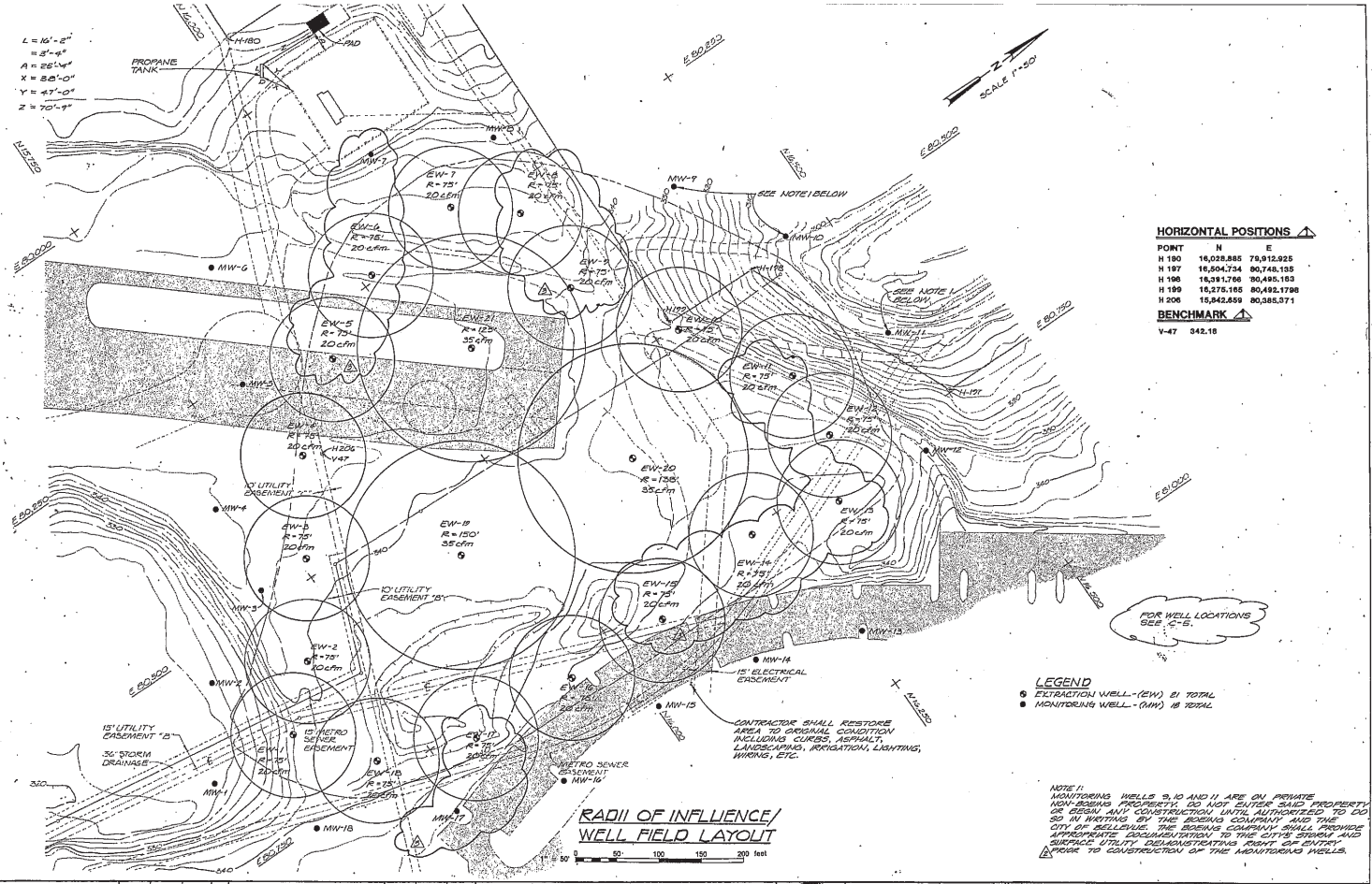
TITLE: BOEING-EASTGATE LANDFILL
LFG MIGRATION CONTROL SYSTEM

DRAWN BY / CHECKED / ENGR. / CHECKED / APPROVED / APPROVED

RESPOND TO SUBMITTAL COMMENTS

SHEET C-3

DWG NO. 33-00-YD-1012-C3



SYM	REVISION	BY	APPROVED	DATE
1	REV. PER CITY OF BELLEVUE REVIEW	TNT		7-3-86
2	RELOCATED WELLS	TNT		8-29-86
3	AS-BUILTS PER BOEING			5-1-87

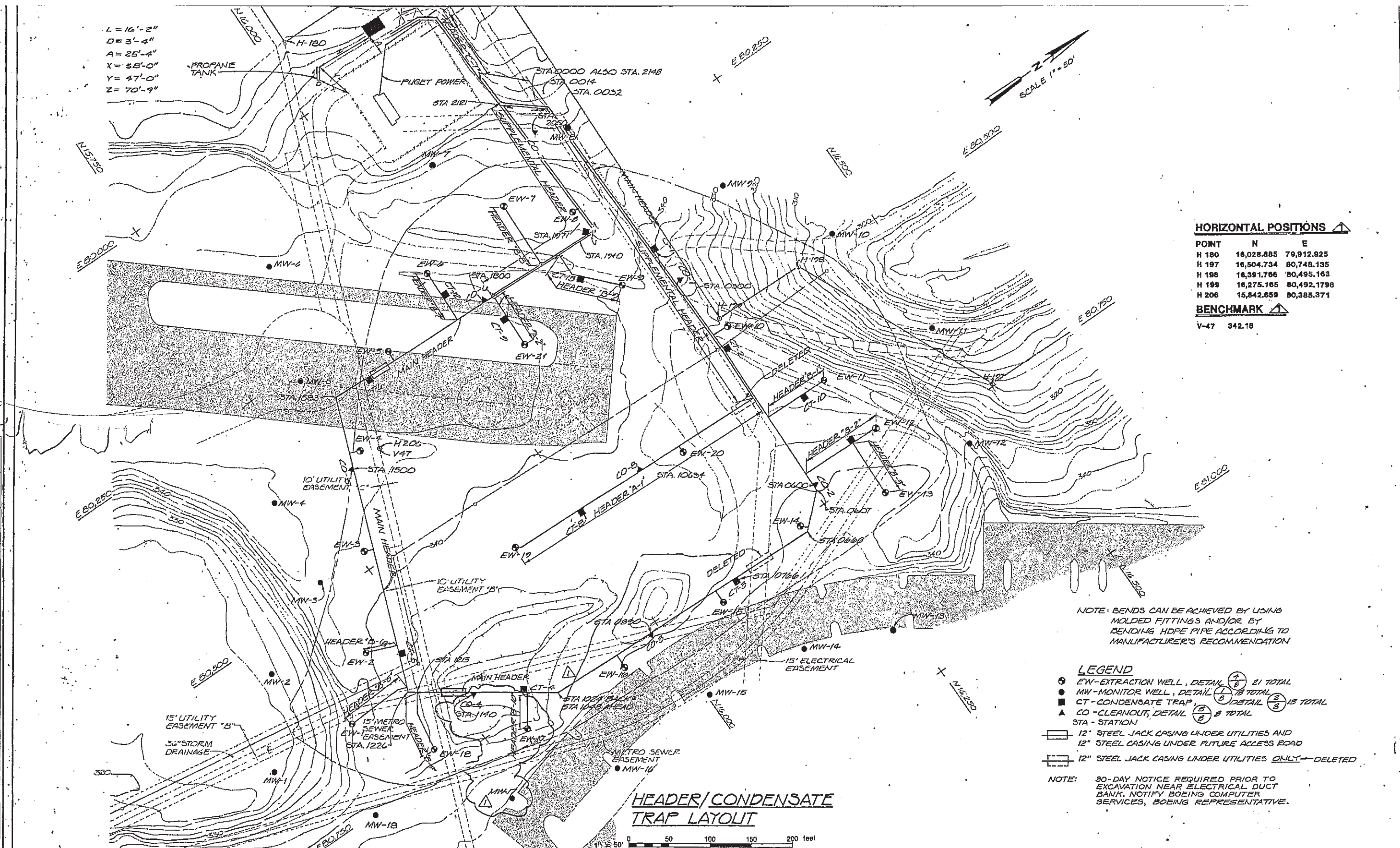
BOEING
FACILITIES-DEPARTMENT
■ BELLEVUE, WA. 98004

- ☐ AUBURN, WA. 98002
- ☐ EVERETT, WA. 98201
- ☐ KENT, WA. 98031
- ☐ PORTLAND, OR. 97220
- ☐ RENTON, WA. 98055
- ☐ SEATTLE, WA. 98124

GRAPHICS: D. DETRIO 5/16/86
DESIGN:
ISSUE: D. CONRAD 5/16/86
CHECKED:
APPROVED:
APPROVED:

SUBTITLE: RADII OF INFLUENCE/WELL FIELD LAYOUT
TITLE: BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM

LAST REVISION | SYMBOL | DATE
SHEET C-4 OF
JOB NO.
DWG NO. 93-00-YD-1012-C4


HEADER/CONDENSATE TRAP LAYOUT
L = 16'-2"
D = 3'-4"
A = 25'-4"
X = 38'-0"
Y = 47'-0"
Z = 70'-9"
PROPANE TANK
PUGET POWER
MAIN HEADER
SUPPLEMENTAL HEADER
SCALE 1" = 50'
HORIZONTAL POSITIONS
POINT N E
H 180 16,028.885 79,912.925
H 197 16,504.734 80,748.135
H 198 16,391.766 80,495.163
H 199 16,275.165 80,492.1798
H 206 15,842.659 80,385.371
BENCHMARK
V-47 342.18
NOTE: BENDS CAN BE ACHIEVED BY USING MOLDED FITTINGS AND/OR BY BENDING HDPE PIPE ACCORDING TO MANUFACTURER'S RECOMMENDATION
LEGEND
EW - EXTRACTION WELL, DETAIL 4/8 21 TOTAL
MW - MONITOR WELL, DETAIL 1/8 18 TOTAL
CT - CONDENSATE TRAP, DETAIL 2/8 13 TOTAL
CO - CLEANOUT, DETAIL 5/8 8 TOTAL
STA - STATION
12" STEEL JACK CASING UNDER UTILITIES AND
12" STEEL CASING UNDER FUTURE ACCESS ROAD
12" STEEL JACK CASING UNDER UTILITIES ONLY ← DELETED
NOTE: 30-DAY NOTICE REQUIRED PRIOR TO EXCAVATION NEAR ELECTRICAL DUCT BANK. NOTIFY BOEING COMPUTER SERVICES, BOEING REPRESENTATIVE.
0 50 100 150 200 feet

SYM	REVISION	BY	APPROVED	DATE
1	RELOCATIONS PER BOEING	TNT		8-25-86
2	AS-BUILTS PER BOEING			5-1-87

BOEING
FACILITIES DEPARTMENT
■ BELLEVUE, WA. 98004

☐ AUBURN, WA. 98002
☐ EVERETT, WA. 98201
☐ KENT, WA. 98031
☐ PORTLAND, OR. 97220
☐ RENTON, WA. 98055
☐ SEATTLE, WA. 98124

STARR J. DEHN — PROFESSIONAL ENGINEER

CH2M HILL

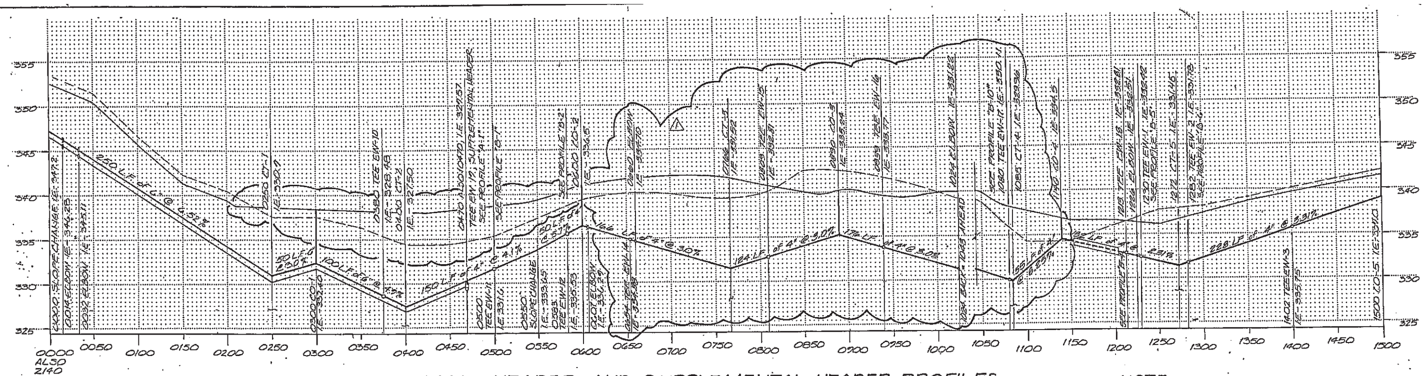
DRAWN BY G. DELRIO, DATE 5/16/86
ENGR. D. CONRAD 5/16/86
CHECKED
APPROVED
APPROVED

SUBTITLE: HEADER/CONDENSATE TRAP LAYOUT

TITLE: BOEING-EASTGATE LANDFILL
LFG MIGRATION CONTROL SYSTEM

SHEET C-5

DWG NO. 33-00-YD-1012-C5



MAIN HEADER AND SUPPLEMENTAL HEADER PROFILES

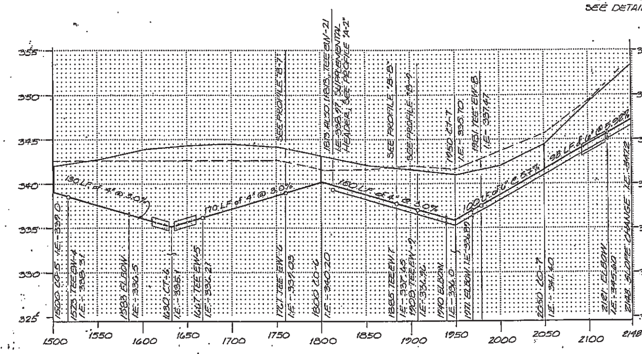
SCALE: HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

NOTE: INVERT ELEVATIONS AND PIPE SIZES CORRESPOND TO MAIN HEADER ONLY. INVERT ELEVATIONS FOR SUPPLEMENTAL HEADER ARE 10" BELOW MAIN HEADER. ALL SUPPLEMENTAL HEADER PIPE SIZE IS 4" DIAMETER. SEE DETAIL #4 FOR CLARIFICATION.

NOTE: CHECK EACH PROFILE FOR HORIZONTAL AND VERTICAL SCALE (MAY VARY)

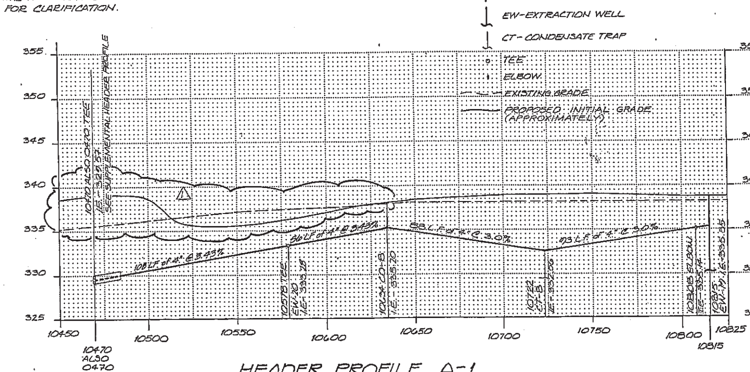
LEGEND:

- CO - CLEANOUT/MANHOLE
- EW - EXTRACTION WELL
- CT - CONDENSATE TRAP
- TEE
- ELBOW
- EXISTING GRADE
- PROPOSED INITIAL GRADE (APPROXIMATELY)



HEADER PROFILES (CONTINUED)

SCALE: HORIZONTAL 1" = 50'
VERTICAL 1" = 5'



HEADER PROFILE A-1

SCALE: HORIZONTAL 1" = 25'
VERTICAL 1" = 5

NOTE: INVERT ELEVATIONS CORRESPOND TO SUPPLEMENTAL HEADER. SEE DETAIL #7

SYM	REVISION	BY	APPROVED	DATE
1	RELOCATED EWs PER BOEING & RAISED GRADE OVER UTILITY DUCT	TNT		9-2-86
2	AS-BUILTS PER BOEING			5-1-87

BOEING
FACILITIES DEPARTMENT
■ BELLEVUE, WA. 98004

☐ AUBURN, WA. 98002
☐ EVERETT, WA. 98201
☐ KENT, WA. 98031
☐ PORTLAND, OR. 97220
☐ RENTON, WA. 98055
☐ SEATTLE, WA. 98124

STARR J. DEHN — PROFESSIONAL ENGINEER

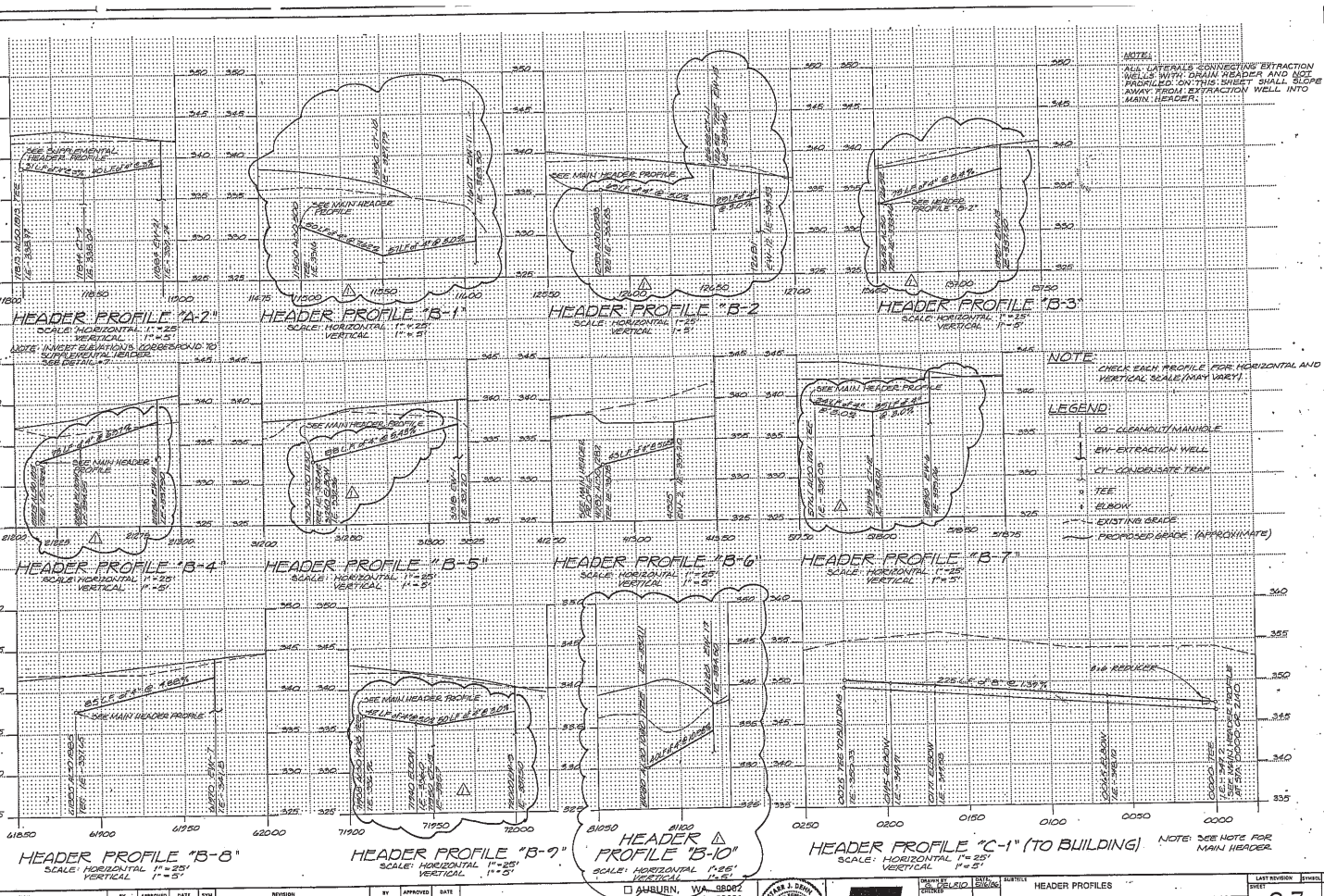
CH2M HILL

DRAWN BY G. DELRIO DATE 5/16/86
ENGR. D. CONRAD 5/16/86

SUBTITLE: HEADER PROFILES
TITLE: BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM

SHEET C-6
DWG NO. 33-00-YD-1012-C6

DG 9000 4075 REV. 7/83



SYM	REVISION	BY	APPROVED	DATE
1	RELOCATED EWS PER BOEING 6			
	RAISED GRADE OVER UTILITY DUCT	TNT		9-2-86
2	AS-BUILTS PER BOEING			5-1-87

SYM	REVISION	BY	APPROVED	DATE

BOEING
FACILITIES DEPARTMENT
BELLEVUE, WA. 98004

- AUBURN, WA. 98002
- EVERETT, WA. 98201
- KENT, WA. 98031
- PORTLAND, OR. 97220
- RENTON, WA. 98055
- SEATTLE, WA. 98124

GRANT J. DENNIS — REGISTERED PROFESSIONAL ENGINEER

CH2MHILL

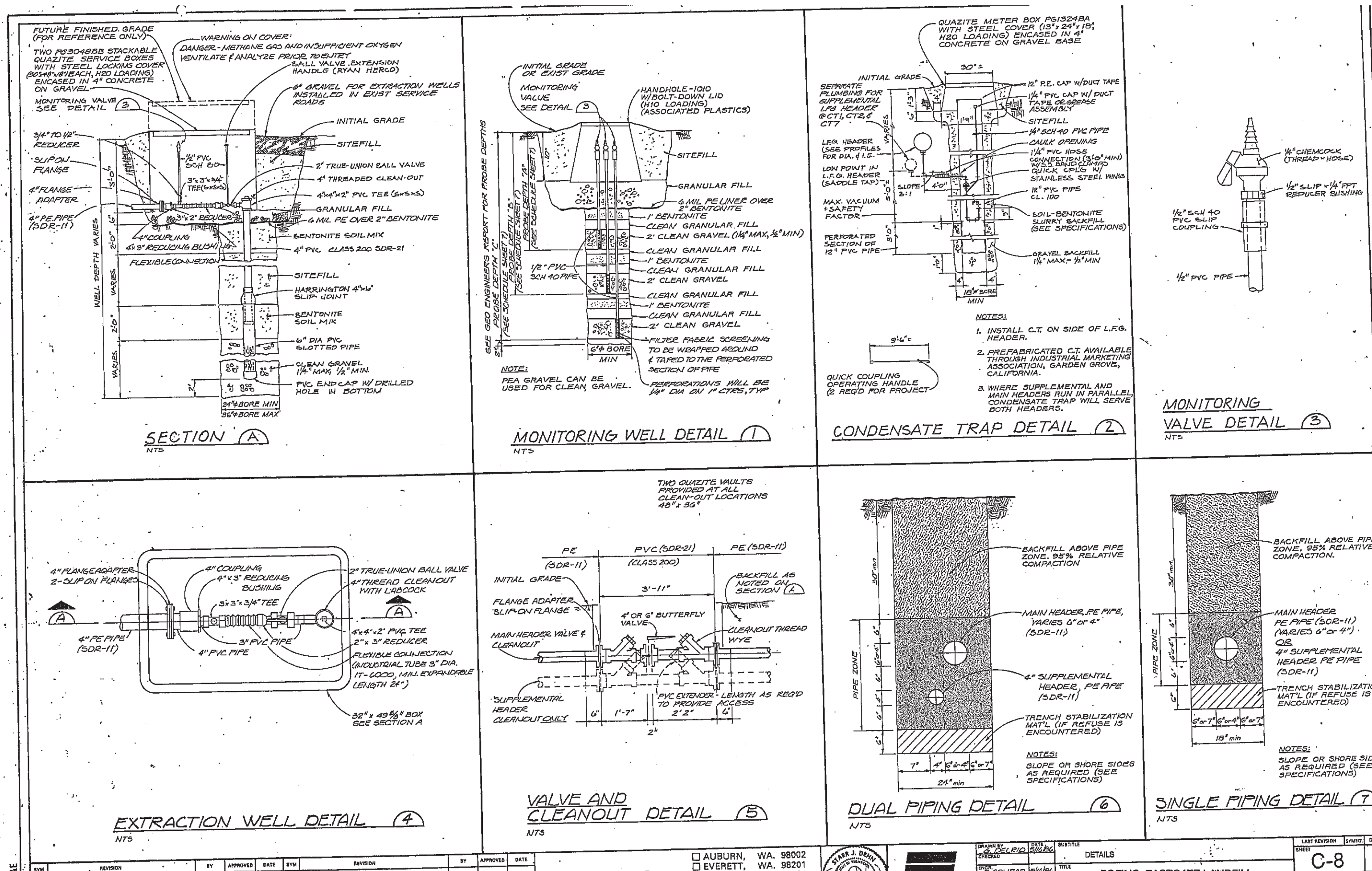
DRAWN BY	D. CONRAD	5/14/86
CHECKED		
APPROVED		
APPROVED		

SUBTITLE: HEADER PROFILES

TITLE: BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM

LAST REVISION: SYMBOL 2
SHEET: C-7
JOB NO.:
DWG NO.: 93-00-YD-1012-0

K&E


FUTURE FINISHED GRADE (FOR REFERENCE ONLY)
WARNING ON COVER: DANGER - METHANE GAS AND INSUFFICIENT OXYGEN VENTILATE & ANALYZE PRIOR TO ENTRY
TWO PG3048BB STACKABLE QUAZITE SERVICE BOXES WITH STEEL LOCKING COVER (30"x48"x18" EACH, H20 LOADING) ENCASED IN 4" CONCRETE ON GRAVEL
BALL VALVE EXTENSION HANDLE (RYAN HERCO)
6" GRAVEL FOR EXTRACTION WELLS INSTALLED IN EXIST SERVICE ROADS
MONITORING VALVE SEE DETAIL 3
INITIAL GRADE
SITEFILL
2" TRUE-UNION BALL VALVE
4" THREADED CLEAN-OUT
GRANULAR FILL
6 MIL PE OVER 2" BENTONITE
BENTONITE SOIL MIX
4" PVC CLASS 200 SDR-21
FLEXIBLE CONNECTION
HARRINGTON 4"x4" SLIP JOINT
6" DIA PVC SLOTTED PIPE
CLEAN GRAVEL 1¼" MAX, ½" MIN
PVC END CAP W/ DRILLED HOLE IN BOTTOM
24" BORE MIN
36" BORE MAX
WELL DEPTH VARIES
SECTION A
NTS
INITIAL GRADE OR EXIST GRADE
MONITORING VALVE SEE DETAIL 3
HANDHOLE-1010 W/BOLT-DOWN LID (H10 LOADING) (ASSOCIATED PLASTICS)
SITEFILL
GRANULAR FILL
6 MIL PE LINER OVER 2" BENTONITE
1" BENTONITE
CLEAN GRANULAR FILL
2' CLEAN GRAVEL (1¼" MAX, ½" MIN)
½" PVC SCH 40 PIPE
FILTER FABRIC SCREENING TO BE WRAPPED AROUND & TAPED TO THE PERFORATED SECTION OF PIPE
PERFORATIONS WILL BE ¼" DIA ON 1" CTRS, TYP
NOTE: PEA GRAVEL CAN BE USED FOR CLEAN GRAVEL.
MONITORING WELL DETAIL 1
NTS
QUAZITE METER BOX PG1324BA WITH STEEL COVER (13"x24"x18", H20 LOADING) ENCASED IN 4" CONCRETE ON GRAVEL BASE
INITIAL GRADE
SEPARATE PLUMBING FOR SUPPLEMENTAL LFG HEADER @ CT1, CT2, & CT7
L.F.G. HEADER (SEE PROFILES FOR DIA. & I.E.)
LOW POINT IN L.F.G. HEADER (SADDLE TAP)
MAX. VACUUM + SAFETY FACTOR
PERFORATED SECTION OF 12" PVC PIPE
SITEFILL
SOIL-BENTONITE SLURRY BACKFILL (SEE SPECIFICATIONS)
GRAVEL BACKFILL 1½" MAX - ½" MIN
QUICK COUPLING OPERATING HANDLE (2 REQ'D FOR PROJECT)
NOTES:
1. INSTALL C.T. ON SIDE OF L.F.G. HEADER.
2. PREFABRICATED C.T. AVAILABLE THROUGH INDUSTRIAL MARKETING ASSOCIATION, GARDEN GROVE, CALIFORNIA.
3. WHERE SUPPLEMENTAL AND MAIN HEADERS RUN IN PARALLEL, CONDENSATE TRAP WILL SERVE BOTH HEADERS.
CONDENSATE TRAP DETAIL 2
¼" CHEMCOCK (THREAD x HOSE)
½" SLIP x ¼" FPT REDUCER BUSHING
½" SCH 40 PVC SLIP COUPLING
½" PVC PIPE
MONITORING VALVE DETAIL 3
NTS
4" FLANGE ADAPTER
2-SLIP ON FLANGES
4" COUPLING
4"x3" REDUCING BUSHING
2" TRUE-UNION BALL VALVE
4" THREAD CLEANOUT WITH LABCOCK
4" PE PIPE (SDR-11)
4" PVC PIPE
3" PVC PIPE
4"x4"x2" PVC TEE
2"x3" REDUCER
FLEXIBLE CONNECTION (INDUSTRIAL TUBE 3" DIA. IT-6000, MIN. EXPANDABLE LENGTH 24")
EXTRACTION WELL DETAIL 4
NTS
TWO QUAZITE VAULTS PROVIDED AT ALL CLEAN-OUT LOCATIONS 48"x 96"
PE (SDR-11)
PVC (SDR-21) (CLASS 200)
PE (SDR-11)
INITIAL GRADE
FLANGE ADAPTER SLIP-ON FLANGE
4" OR 6" BUTTERFLY VALVE
BACKFILL AS NOTED ON SECTION A
CLEANOUT THREAD WYE
MAIN HEADER VALVE & CLEANOUT
SUPPLEMENTAL HEADER CLEANOUT ONLY
PVC EXTENDER - LENGTH AS REQ'D TO PROVIDE ACCESS
3'-11"
VALVE AND CLEANOUT DETAIL 5
NTS
BACKFILL ABOVE PIPE ZONE. 95% RELATIVE COMPACTION
MAIN HEADER, PE PIPE, VARIES 6" or 4" (SDR-11)
4" SUPPLEMENTAL HEADER, PE PIPE (SDR-11)
TRENCH STABILIZATION MAT'L (IF REFUSE IS ENCOUNTERED)
PIPE ZONE
24" min
NOTES: SLOPE OR SHORE SIDES AS REQUIRED (SEE SPECIFICATIONS)
DUAL PIPING DETAIL 6
NTS
MAIN HEADER PE PIPE (SDR-11) (VARIES 6" or 4") OR 4" SUPPLEMENTAL HEADER PE PIPE (SDR-11)
18" min
SINGLE PIPING DETAIL 7
NTS

SYM	REVISION	BY	APPROVED	DATE
1	AS-BUILTS FOR BOEING			5-1-87

BOEING FACILITIES DEPARTMENT
■ BELLEVUE, WA. 98004
□ AUBURN, WA. 98002
□ EVERETT, WA. 98201
□ KENT, WA. 98031
□ PORTLAND, OR. 97220
□ RENTON, WA. 98055
□ SEATTLE, WA. 98124

MARK J. DENN — PROFESSIONAL ENGINEER

CH2M HILL

DRAWN BY C. DELRIO
CHECKED
ENGR. D. CONRAD
CHECKED
APPROVED
APPROVED

SUBTITLE: DETAILS
TITLE: BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM

SHEET C-8
DWG NO. 33-00-YD-1012-C8

EXTRACTION WELL SCHEDULE:

WELL DESIGNATION	COORDINATES N	COORDINATES E	DRILLED DEPTH (ft)	SLOTTED DEPTH (ft)	SLIP-JOINT DEPTH (ft)
EW-1	15618	80645	38	15	12
EW-2	15680	80583	35	15	12
EW-3	15749	80480	41	18	14
EW-4	15817	80375	40	18	14
EW-5	15921	80295	42	18	14
△2 EW-6	16014	80242	40	18	14
EW-7	16136	80229	42	18	14
EW-8	16203	80278	40	16	12
△2 EW-9	16201	80390	37	15	12
EW-10	16278	80506	31	15	12
EW-11 △2	16337	80628	36	19	16
EW-12	16356	80711	35	15	12
EW-13 △2	16319	80782	38	15	12
EW-14	16210	80756	39	15	12
EW-15	16080	80778	38	15	12
EW-16	15940	80778	37	15	12
△2 EW-17	15800	80770	39	15	12
EW-18	15681	80727	38	15	12
EW-19	15906	80581	36	20	14
EW-20	16144	80602	33	18	12
EW-21	16059	80383	40	20	14

SEE EXTRACTION WELL DETAIL 4 ON SHEET 8

MONITORING WELL SCHEDULE:

WELL DESIGNATION	COORDINATES N	COORDINATES E	DRILLED DEPTH (ft)	PROBE DEPTHS (ft) A	PROBE DEPTHS (ft) B	PROBE DEPTHS (ft) C
MW-1	15503	80641	34	8	16	31
MW-2	15569	80539	35	6	13	26
MW-3	15684	80478	43½	11	19	41
MW-4	15693	80369	44½	8	21	36
MW-5	15805	80264	31	6	15	24
MW-6	15854	80127	45	6	15	24
MW-7 △2	16096	80122	41½	6	15	30
MW-8	16257	80195	48	10	25	40
MW-9	16373	80361	27	6	16	24
MW-10	16440	80486	12½	5	10	—
MW-11	16484	80651	12	5	10	—
MW-12	16440	80792	41	6	17	32
MW-13	16232	80927	48	15	30	45
MW-14	16126	80883	45	12	27	42
MW-15	15998	80864	41	8	20	33
MW-16	15852	80873	46½	14	29	44
△2 MW-17	15735	80829	44½	12	27	42
MW-18	15574	80754	41½	9	24	39

SEE MONITORING WELL DETAIL 1 ON SHEET 8

CONDENSATE TRAP SCHEDULE:

TRAP DESIGNATION	COORDINATES N	COORDINATES E	BORE DEPTH (ft)
CT-1	16262	80376	18
CT-2	16257	80528	15
△2 CT-3	16110	80765	20
CT-4	15811	80733	20
CT-5	15712	80606	17
CT-6	15876	80307	21
CT-7	16198	80308	16
CT-8	15997	80587	18
CT-9	16061	80344	16
CT-10	16305	80626	17
△2 CT-11	16321	80705	16
CT-12	16017	80278	18
CT-13	16163	80355	17

SEE CONDENSATE TRAP DETAIL 2 ON SHEET 8

PROCESSING FACILITY PAD:

COORDINATE LOCATION	COORDINATES N	COORDINATES E
NW CORNER	16130	79950
SW CORNER	16105	79950
NE CORNER	16130	79965
SE CORNER	16105	79965

STORM DRAINAGE SCHEDULE:

STRUCTURE DESIGNATION	COORDINATES N	COORDINATES E
△2 GI "A"	16196	80542
GI "B"	15955	80207
MANHOLE	15856	80517
GI "C"	15828	80664
OUTLET	15544	80590
INLET	16230	80370

SYM	REVISION	BY	APPROVED	DATE
△2	RELOCATED STRUCTURES PER BOEING	TNT		8-29-86
△3	AS-BUILTS PER BOEING			5-1-87

BOEING FACILITIES DEPARTMENT

■ BELLEVUE, WA. 98004

☐ AUBURN, WA. 98002
☐ EVERETT, WA. 98201
☐ KENT, WA. 98031
☐ PORTLAND, OR. 97220
☐ RENTON, WA. 98055
☐ SEATTLE, WA. 98124

STARR J. DEHN — PROFESSIONAL ENGINEER

CH2M HILL

DRAWN BY G. DELRIO — DATE 5/16/86
ENGR. D. CONRAD — 5/16/86
CHECKED
APPROVED
APPROVED

SUBTITLE: WELL/TRAP SCHEDULE

TITLE: BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM

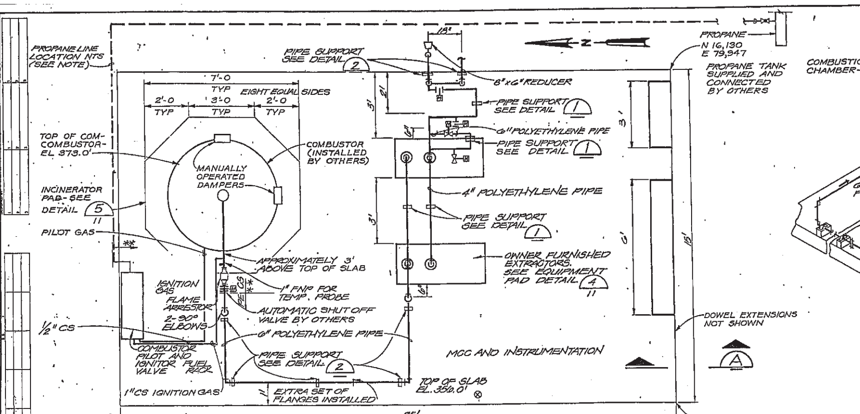
RESPOND TO SUBMITTAL REQM'TS

LAST REVISION

SHEET C-9

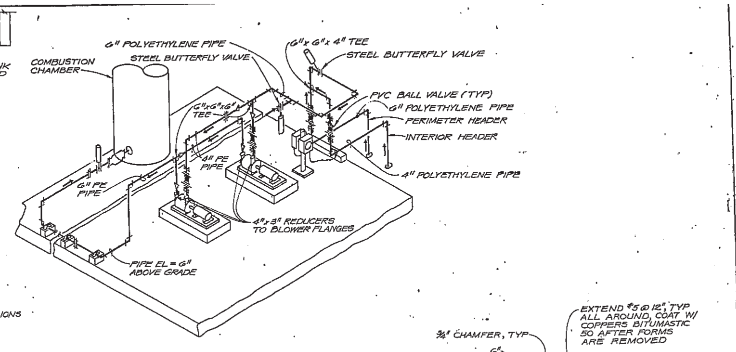
JOB NO.

DWG NO. 33-00-YD-101

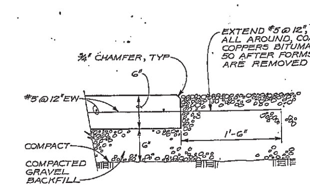

PROPANE LINE LOCATION NTS (SEE NOTE)
PIPE SUPPORT SEE DETAIL 2
7'-0 TYP
EIGHT EQUAL SIDES
2'-0 TYP
3'-0 TYP
TOP OF COMBUSTOR EL 373.0'
COMBUSTOR (INSTALLED BY OTHERS)
MANUALLY OPERATED DAMPERS
INCINERATOR PAD-SEE DETAIL 5
PILOT GAS
6"x6" REDUCER
PIPE SUPPORT SEE DETAIL 1
6" POLYETHYLENE PIPE
4" POLYETHYLENE PIPE
OWNER FURNISHED EXTRACTORS. SEE EQUIPMENT PAD DETAIL 4
APPROXIMATELY 3' ABOVE TOP OF SLAB
1" FNP FOR TEMP. PROBE
AUTOMATIC SHUT OFF VALVE BY OTHERS
IGNITION GAS
FLAME ARRESTOR
2-90° ELBOWS
1/2" CS
COMBUSTOR PILOT AND IGNITOR FUEL VALVE RACK
1"CS IGNITION GAS
EXTRA SET OF FLANGES INSTALLED
TOP OF SLAB EL. 356.0'
MCC AND INSTRUMENTATION
DOWEL EXTENSIONS NOT SHOWN
PROPANE
N 16,130
E 79,947
PROPANE TANK SUPPLIED AND CONNECTED BY OTHERS
N 16,130
E 79,962
25'
15'

** INSTALLED BY COMBUSTOR SUPPLIER

PLAN
1/2" = 1'-0"


COMBUSTION CHAMBER
6" POLYETHYLENE PIPE
STEEL BUTTERFLY VALVE
6"x 6"x 4" TEE
STEEL BUTTERFLY VALVE
PVC BALL VALVE (TYP)
6" POLYETHYLENE PIPE
PERIMETER HEADER
INTERIOR HEADER
4" POLYETHYLENE PIPE
6"x6"x6" TEE
4" PE PIPE
6" PE PIPE
4"x 8" REDUCERS TO BLOWER FLANGES
PIPE EL = 6" ABOVE GRADE

ISOMETRIC
NTS

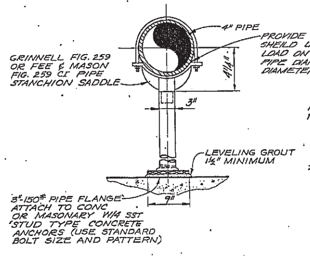


SECTION (A)
1 1/2" = 1'-0

EXTRACTOR INSTALLATION
THE SYSTEM COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE SUPPLIERS WRITTEN INSTALLATION INSTRUCTIONS, AS APPROVED BY THE CONSTRUCTION MANAGER.

INSTALLED TESTS
PRIOR TO PLANT STARTUP, ALL EQUIPMENT SHALL BE INSPECTED FOR PROPER INSTALLATION. THE MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE WRITTEN CERTIFICATION THAT THE EQUIPMENT HAS BEEN INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S APPROVED METHOD AND IS READY FOR OPERATION.

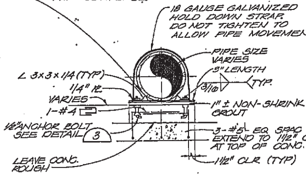
PROPANE LINE PROPANE LINE INSTALLED UNDERGROUND AT AN APPROX DEPTH OF 6" TO 12". LINE LOCATED APPROX 3' N OF EXST PAD EDGE AND 8' E OF EXST PAD EDGE. LINE REMAINS BELOWGRADE UNTIL REACHING THE TANK WHICH IS APPROX 85'S OF THE EXST PAD SOUTH EDGE.



PROVIDE GALVANIZED PROTECTION SHEILD UNDER PIPE TO AVOID CONCENTRATED LOAD ON PIPE WALL. LENGTH SHALL BE 1 PIPE DIAMETER. WIDTH SHALL BE 1.1 PIPE DIAMETER.

NOTE:
1. PROVIDE NEOPRENE WAFFLE INSULATION PAD, SIMILAR TO MASON TYPE 'W' OR KORFUND KORPAD 40 UNDER SUPPORT FOOT.
2. PREPARE METAL SURFACE FOR PAINTING USING ABRASIVE OR CENTRIFUGAL WHEEL (SP-6); APPLY ONE COAT RUST-INHIBITIVE PRIMER AT 2 MILS MINIMUM DRY FILM THICKNESS (MDFT); APPLY 2 COATS ALKYD ENAMEL AT 4 MILS TOTAL MDFT.

PIPE SUPPORT (1)
NTS


18 GAUGE GALVANIZED HOLD DOWN STRAP. DO NOT TIGHTEN TO ALLOW PIPE MOVEMENT.
PIPE SIZE VARIES
3" LENGTH
3/16
TYP.
L 3x3x1/4 (TYP)
1/4" PL VARIES
1-#4
1/2" ANCHOR BOLT SEE DETAIL 3
1" ± NON-SHRINK GROUT
3-#4 EQ. SPAC EF. EXTEND TO 1 1/2" CLR. AT TOP OF CONC.
LEAVE CONC. ROUGH
1 1/2" CLR (TYP)

PIPE SUPPORT (2)
NTS

CONCRETE AND REINFORCING STEEL

1. **CONCRETE**
READY MIX CONFORMING TO ASTM C 94, ALTERNATE 2 AND THESE SPECIFICATIONS. PORTLAND CEMENT TYPE I. AGITATE CONCRETE MINIMUM OF 70 REVOLUTIONS OF MIXING DRUM, NOT TO EXCEED 270 REVOLUTIONS. NON-AGITATING EQUIPMENT WILL NOT BE ALLOWED. PLACE CONCRETE WITHIN 1-1/2 HOURS AFTER ADDITION OF CEMENT TO MIX. MINIMUM ALLOWABLE 28-DAY COMPRESSIVE FIELD STRENGTH TO BE 3000 PSI, TEST IN CONFORMANCE WITH ASTM C31 AND C39. SIZE OF COURSE AGGREGATE TO BE 1-1/2". SLUMP RANGE TO BE 2 TO 4 INCHES.

2. **REINFORCING STEEL**
DEFORMED BARS OF SIZES SHOWN, CONFORMING TO ASTM A 615, GRADE 40. PLACE IN ACCORDANCE WITH DRAWINGS AND RECOMMENDED CRSI PRACTICE FOR INSTALLATION OF REINFORCING BARS.

3. **PLACING CONCRETE**
PRIOR TO PLACEMENT, MAKE SURE ALL DEBRIS AND FOREIGN MATTER ARE REMOVED AND WATER IS NOT TRAPPED IN THE FORMS. PLACE CONCRETE TO LINES AND GRADES AS SHOWN. PROTECT FRESH CONCRETE FROM DIRECT RAYS OF THE SUN, DRYING WINDS, AND WASH BY RAIN.

4. **CURING COMPOUND**
CURING COMPOUND TO CONFORM TO THE REQUIREMENTS OF ASTM C 309 WITH THE ADDITIONAL REQUIREMENT THAT PERMEABILITY NOT EXCEED 0.039 GM/SQ CM/72 HRS MASTERSEAL, MANUFACTURED BY MASTER BUILDERS CO., CLEVELAND, OH; EUCO FLOOR COAT, MANUFACTURED BY EUCLID CHEMICAL CO., CLEVELAND, OH; OR EQUAL. THE MANUFACTURER SHALL SUBMIT CERTIFICATION THAT THE PRODUCT MEETS ASTM C 309 AND THE ADDITIONAL PERMEABILITY REQUIREMENT, AND SHALL SPECIFICALLY STATE THE COVERAGE REQUIRED TO MEET THESE REQUIREMENTS.

5. DEPRESSIONS IN THE SLAB SHALL NOT BE MORE THAN 1/4 INCH WHEN A 10 FOOT STRAIGHT EDGE IS PLACED UPON THE HIGH POINTS IN ANY DIRECTION.

6. GIVE THE SLAB SURFACE A STEEL TROWEL FINISH TO PRODUCE A SMOOTH IMPERVIOUS SURFACE, FREE FROM TROWEL MARKS.

SYM	REVISION	BY	APPROVED	DATE
1	AS-BUILTS PER BOEING			5-1-87

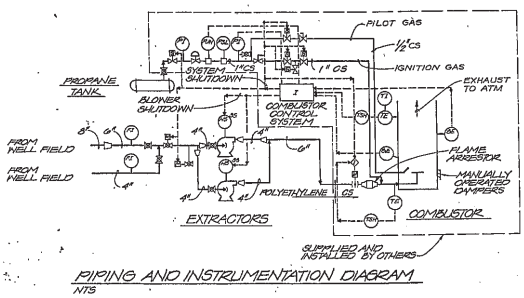
BOEING FACILITIES DEPARTMENT
■ BELLEVUE, WA. 98004
☐ AUBURN, WA. 98002
☐ EVERETT, WA. 98201
☐ KENT, WA. 98031
☐ PORTLAND, OR. 97220
☐ RENTON, WA. 98055
☐ SEATTLE, WA. 98124

CH2M HILL

DRAWN BY D. BIEKER 6/4/86
ENGR. M. DAVIS 6/4/86
CHECKED
APPROVED
APPROVED

SUBTITLE: PROCESSING FACILITY LAYOUT
TITLE: BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM

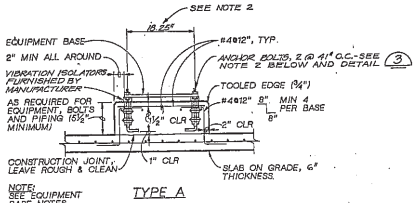
SHEET C-10
DWG NO. 33-00-YD-1012-C10



PIPING AND INSTRUMENTATION DIAGRAM
NTS

LEGEND

- (PI) FLOW INDICATOR
- (HS) HAND SWITCH, START/STOP
- (PCV) PRESSURE CONTROL VALVE
- (PI) PRESSURE INDICATOR
- (TI) TEMPERATURE INDICATOR
- (BE) BURNER EYE
- (TSH) HIGH TEMPERATURE SWITCH
- (PSH) HIGH PRESSURE SWITCH
- (PSL) LOW PRESSURE SWITCH
- (TE) TEMPERATURE ELEMENT (THERMOCOUPLE)



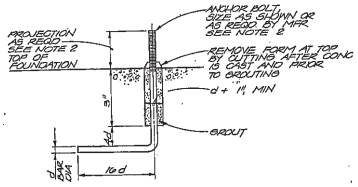
NOTE:
SEE EQUIPMENT BASE NOTES.

TYPE A

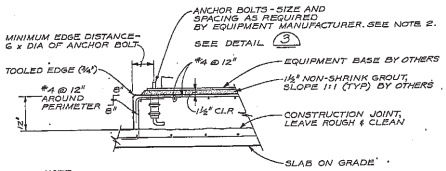
EQUIPMENT PAD (4)
NTS

EQUIPMENT BASE NOTES:

1. PAD SIZE SHALL BE MINIMUM INDICATED OR AS SHOWN ON THE PLANS OR AS DETERMINED BY THE EQUIPMENT MANUFACTURER AND APPROVED BY THE ENGINEER.
2. THE SIZE, NUMBER, TYPE, LOCATION AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE VERIFIED BY THE EQUIPMENT MANUFACTURER, AND SHALL BE AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A TEMPLATE WHILE AND IS BEING POURED.(TEMPLATE WAS NOT FURNISHED. BOLTS SET TO JOHN ZINK DRAWING)
3. A.B. SLEEVES SHALL BE USED TO PROVIDE THE ANCHOR BOLT A MINIMUM MOVEMENT OF 1½" IN ALL DIRECTIONS. THE MINIMUM SLEEVE LENGTH SHALL BE 4 TIMES THE BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT.
4. A.B. SLEEVES SHALL HAVE A MINIMUM INTERNAL DIAMETER 1" GREATER THAN BOLT DIAMETER AND A MAXIMUM INTERNAL DIAMETER 2" GREATER THAN ANCHOR BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT.
5. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS SPECIFIED OTHERWISE.
6. WEDGES OR SHIMS SHALL BE USED TO SUPPORT THE BASE PLATE WHILE NON-SHRINK GROUT IS PLACED. TEMPORARY LEVELING NUTS SHALL BE BACKED OFF. IF LEFT IN, THE WEDGES OR SHIMS SHALL NOT BE EXPOSED TO VIEW.
7. VERIFY PAD ELEVATIONS WITH EQUIPMENT MFR.
8. NON-SHRINK GROUT SHALL BE "SET NON-SHRINK GROUT" BY MASTER BUILDER CO., CLEVELAND, OHIO.



ANCHOR BOLT DETAIL (3)
NTS



NOTE:
SEE EQUIPMENT BASE NOTES.

INCINERATOR PAD (5)
¾" = 1'-0

SYM	REVISION	BY	APPROVED	DATE
1	AS-BUILTS PER BOEING			5-1-97

BOEING
FACILITIES DEPARTMENT
BELLEVUE, WA. 98004

- ☐ AUBURN, WA. 98002
- ☐ EVERETT, WA. 98201
- ☐ KENT, WA. 98031
- ☐ PORTLAND, OR. 97220
- ☐ RENTON, WA. 98055
- ☐ SEATTLE, WA. 98124

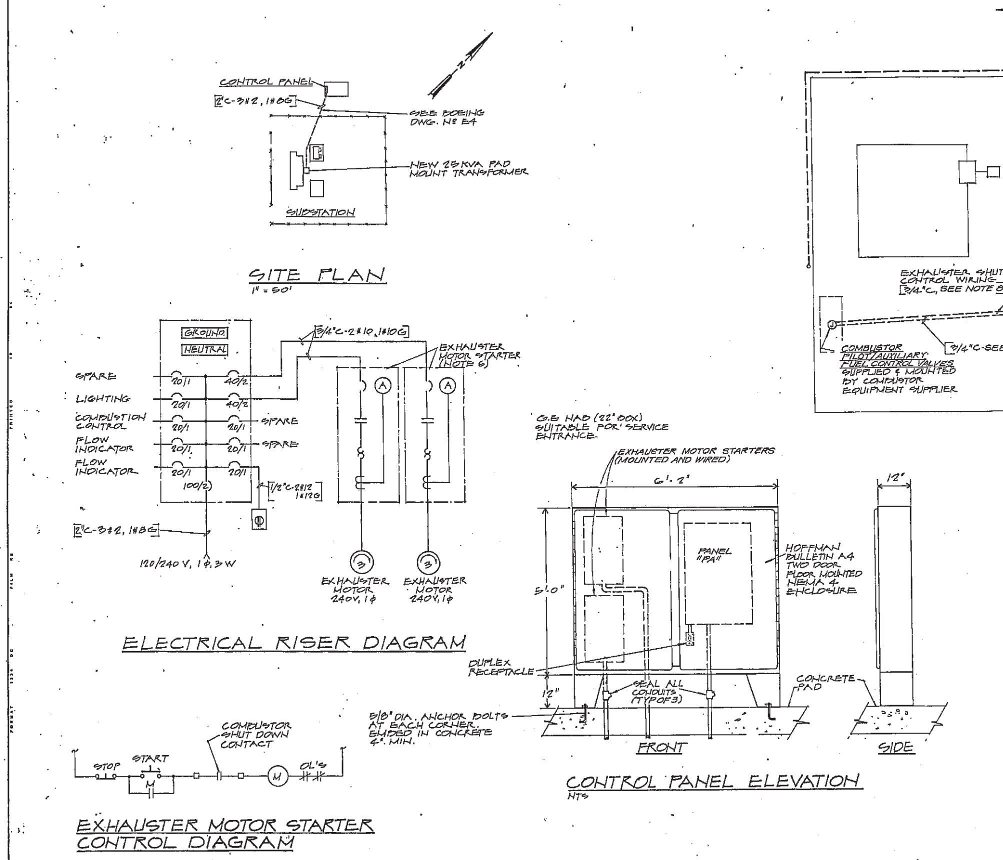
CH2M HILL

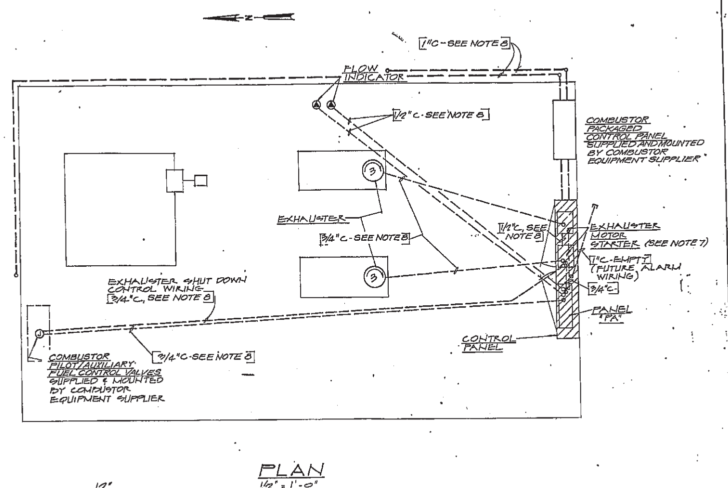
DRAWN BY	DATE
A. BIEKER	6/4/96
CHECKED	
M. DAVIS	6/4/96
APPROVED	
APPROVED	

SUBTITLE: PROCESSING FACILITY DETAILS
TITLE: BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM

LAST REVISION | BY/REQ. | DATE
SHEET C-1.1
JOB NO.
BWD NO. 33-00-YD-1012-C11

K&E


SITE PLAN
1" = 50'
CONTROL PANEL
[2"C-3#2, 1#8G]
SEE BOEING DWG. NO E4
NEW 25 KVA PAD MOUNT TRANSFORMER
SUBSTATION
ELECTRICAL RISER DIAGRAM
GROUND
NEUTRAL
[3/4"C-2#10, 1#10G]
EXHAUSTER PILOT MOTOR STARTER (NOTE 6)
SPARE
LIGHTING
COMBUSTION CONTROL
FLOW INDICATOR
FLOW INDICATOR
SPARE
SPARE
100/2
[2"C-3#2, 1#8G]
120/240 V, 1Φ, 3W
EXHAUSTER MOTOR 240V, 1Φ
EXHAUSTER MOTOR 240V, 1Φ
EXHAUSTER MOTOR STARTER CONTROL DIAGRAM
COMBUSTOR SHUT DOWN CONTACT
STOP
START
OL'S
G.E. NAB (22" BOX) SUITABLE FOR SERVICE ENTRANCE
EXHAUSTER MOTOR STARTERS (MOUNTED AND WIRED)
6'-2"
12"
PANEL "PA"
HOFFMAN BULLETIN A4 TWO DOOR FLOOR MOUNTED NEMA 4 ENCLOSURE
5'-0"
DUPLEX RECEPTACLE
SEAL ALL CONDUITS (TYP OF 3)
5/8" DIA. ANCHOR BOLTS AT EACH CORNER. EMBED IN CONCRETE 4" MIN.
CONCRETE PAD
FRONT
SIDE
CONTROL PANEL ELEVATION
NTS


[1"C-SEE NOTE 8]
FLOW INDICATOR
[1/2"C-SEE NOTE 8]
COMBUSTOR PACKAGED CONTROL PANEL SUPPLIED AND MOUNTED BY COMBUSTOR EQUIPMENT SUPPLIER
EXHAUSTER
[3/4"C-SEE NOTE 8]
[1 1/2"C, SEE NOTE 8]
EXHAUSTER MOTOR STARTER (SEE NOTE 7)
[1"C-EMPTY] (FUTURE ALARM WIRING)
[3/4"C]
PANEL "PA"
EXHAUSTER SHUT DOWN CONTROL WIRING [3/4"C, SEE NOTE 8]
COMBUSTOR PILOT/AUXILIARY FUEL CONTROL VALVES SUPPLIED & MOUNTED BY COMBUSTOR EQUIPMENT SUPPLIER
[3/4"C-SEE NOTE 8]
CONTROL PANEL

PLAN
1/2" = 1'-0"

NOTES:

1. ALL ELECTRICAL EQUIPMENT SHALL BE UL LISTED AND SHALL MEET THE NEC AND OTHER STATE AND LOCAL CODES.
2. ALL CONDUITS SHALL BE GALVANIZED RIGID STEEL W/CAST STEEL BOXES. PAINT ALL BURIED GRS CONDUITS WITH A MINIMUM OF 2 COATS OF BITUMASTIC CORROSION RESISTANT PAINT.
3. ALL CONDUCTORS SHALL BE THW OR THWN.
4. RECEPTACLES SHALL BE GFI NEMA CONFIGURATION 5-20R MEETING FEDERAL SPEFICATION W-C-596.
5. ALL CIRCUIT BREAKERS SHALL HAVE MINIMUM INTERRUPTING RATING OF 10,000 RMS SYMMETRICAL AMPERES.
6. EXHAUSTER MOTOR STARTERS WILL BE SUPPLIED WITH THE EXHAUSTER EQUIPMENT.
7. EXHAUSTER MOTOR STARTERS INSTALLED VERTICALLY RELATIVE TO EACH OTHER.
8. WIRING INSTALLED BY OTHERS. SEE DETAILS PROVIDED BY JOHN ZINK CO AND HOLMES ELECTRIC.

SYM	REVISION	BY	APPROVED	DATE
1	AS-BUILTS PER BOEING			5-1-87

BOEING
FACILITIES DEPARTMENT
☐ AUBURN, WA. 98002
☐ EVERETT, WA. 98201
☐ KENT, WA. 98031
☐ PORTLAND, OR. 97220
■ BELLEVUE, WA. 98004
☐ RENTON, WA. 98055
☐ SEATTLE, WA. 98124

CH2M HILL

DRAWN BY: BENDSNEYDER — DATE: 6/4/86
ENGR: B. TOOLE — 6/4/86
CHECKED
APPROVED
APPROVED

SUBTITLE: ELECTRICAL DETAILS
TITLE: BOEING-EASTGATE LANDFILL LFG MIGRATION CONTROL SYSTEM
SHEET: E-1
DWG NO. 33-00-YD-2003-E1

K&E

Exhibit 2

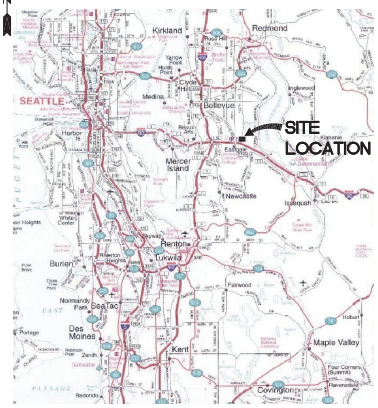
LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL

BOEING

RECORD DRAWING

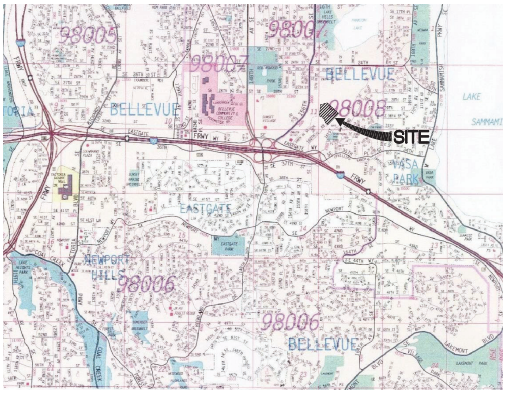
THIS DRAWING IS A RECORD COMPILING THE DESIGN INFORMATION, FIELD CHANGES, AND SURVEY INFORMATION USED DURING CONSTRUCTION OF THE FACILITY. THE INTENT IS TO PROVIDE THE OWNER WITH A DOCUMENT TO FACILITATE THE OPERATION, MAINTENANCE, AND POSSIBLE FUTURE MODIFICATIONS DURING THE LIFE OF THE FACILITY. THIS RECORD DRAWING MAY NOT BE AN EXACT AND PRECISE DEPICTION OF THE FACILITY. NEITHER SCS NOR THE PROFESSIONAL ENGINEER ASSUMES LIABILITY OR RESPONSIBILITY FOR ANY ACTION OR ACTIVITY BASED UPON THIS DRAWING. IF NECESSARY, FIELD VERIFY THE FEATURES ON THIS DRAWING.

LOCATION MAP



0 1 2 3 4
APPROXIMATE SCALE IN MILES

VICINITY MAP



0 1/4 1/2
APPROXIMATE SCALE IN MILES

DRAWING INDEX

G1	COVER SHEET
G2	LEGEND
G3	SITE PLAN
C1	TEMPORARY EROSION AND SEDIMENT CONTROL PLAN
C2	DEMOLITION PLAN
C3	GAS EXTRACTION NETWORK AND PIPING PLAN (BY PAGE)
C3	GAS EXTRACTION NETWORK AND PIPING PLAN
C4	WELL PROFILES
C5	GAS AND CONDENSATE CONVEYANCE PIPE PROFILES
C6	WELL DETAILS
C7	WELL HEAD DETAILS
C8	GAS AND CONDENSATE CONVEYANCE PIPE DETAILS
C9	PROPANE TANK RELOCATION PLAN AND DETAILS

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	5/22/06
B	ISSUED FOR AGENCY REVIEW	6/06/06
C	ISSUED FOR BIDDING	6/29/06
D	RECORD DRAWING	10/31/08

SHEET TITLE: COVER SHEET

PROJECT TITLE: LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL

THE BOEING COMPANY

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.

PROJ. NO. 04206007.00 | DSN. BY: LEL | ACAD FILE: G1
DRN. BY: TAM | CHK. BY: | APP. BY: EEC

DATE: MAY 2006

SCALE: AS SHOWN

DRAWING NO. G1

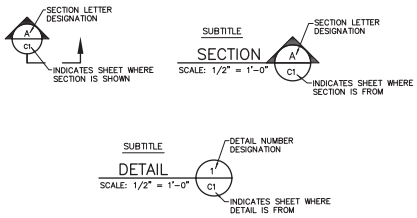
TOPOGRAPHIC SYMBOLS

PROPOSED	EXISTING	
		CENTERLINE
		GRAVEL ROAD
		PAVED ROAD
		DITCH
		APPROXIMATE LIMITS OF DENSE TREES
		PROPERTY LINE
		CULVERT
		FENCE
	R/W	RIGHT OF WAY
		POWER LINE / POLE
		HIGH VOLTAGE POWER LINE / POLE
250	250	CONTOUR ELEVATION
	250	APPROXIMATE CONTOUR ELEVATION IN DENSE TREES
4:1	4:1	EMBANKMENT SLOPE INDICATOR 4 HORIZONTAL TO 1 VERTICAL
	MH-2	MANHOLE MH-2
	20 201.67	CONTROL POINT WITH NUMBER ELEVATION
	× 165.7	SPOT ELEVATION
		1/4 CORNER NOT FOUND
	9 16	1/4 CORNER FOUND
EW-2		GAS EXTRACTION WELL (IN-REFUSE)
CT-6R		CONDENSATE DRAIN TRAP
CO-9		CLEANOUT ACCESS PORT
	MW-12	SOIL/GAS MONITORING WELL (GAS PROBE)
	GW EL-106	GROUNDWATER MONITORING WELL
2		POINT LOCATION REFERENCE DESIGNATION

SOIL/AGGREGATE SYMBOLS

- EMBEDMENT MATERIAL
- AGGREGATE SURFACE COURSE
- FOUNDATION MATERIAL
- BENTONITE
- BENTONITE GROUT
- PREPARED SUBGRADE
- EXISTING GRADE
- CONCRETE
- SAND
- POROUS ROUND ROCK

SECTION AND DETAIL DESIGNATIONS



GEOSYNTHETIC SYMBOLS

- MEMBRANE
- TEXTILE

PIPING SYMBOLS

- FLANGE CONNECTION
- GATE VALVE
- GLOBE VALVE
- BALL VALVE
- BUTTERFLY VALVE
- 4"ø – HDPE – LFG — PIPE LINE DESIGNATION SIZE–MATERIAL–SERVICE
- PIPE CAP
- PIPE PLUG
- SLOTTED PIPE
- ELBOW DOWN
- ELBOW UP
- LINE SIZE REDUCTION

ABBREVIATIONS

&	AND
@	AT
℄	CENTERLINE
CLR	CLEARANCE
CPVC	CHLORINATE POLYVINYL CHLORIDE
CONC	CONCRETE
COND	CONDENSATE
CPE	CORRUGATE POLYETHYLENE
CPS	COPPER PIPE SIZE
CS	CARBON STEEL
DEG OR °	DEGREES
D, DIA OR ø	DIAMETER
DWG	DRAWING
E	EAST
EL OR ELEV	ELEVATION
EQ	EQUAL
EXIST	EXISTING
EW	EACH WAY
FPT	FEMALE PIPE THREAD
FT OR '	FEET
GALV	GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IPS	IRON PIPE SIZE
IE	INVERT ELEVATION
IN OR "	INCH
LFG	LANDFILL GAS
MAX	MAXIMUM
MSL	MEAN SEA LEVEL
MIL	1/1000
MFR	MANUFACTURER
MIN	MINIMUM
MPT	MALE PIPE THREAD
MSW	MUNICIPAL SOLID WASTE
N	NORTH
# OR NO.	NUMBER
NTS	NOT TO SCALE
NW	NON WOVEN
OC	ON CENTER
OD	OUTSIDE DIAMETER
OZ	OUNCE
%	PERCENT
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PP	POLYPROPYLENE
PT	POINT OF TANGENCY OR POINT
PVC	POLYVINYL CHLORIDE
℄	PROPERTY LINE
R	RADIUS
SCH	SCHEDULE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SFFJT	SQUARE FORM FLUSH JOINT THREAD
SIM	SIMILAR
SOC	SOCKET
SPG	SPIGOT
SQ	SQUARE
SS	STAINLESS STEEL
STA	STATION
STD	STANDARD
SY	SQUARE YARD
TEL	TELEPHONE/COMMUNICATIONS
THK	THICK
TOC	TOP OF CONCRETE
TYP	TYPICAL
TOG	TOP OF GRATE
VERT	VERTICAL
W/	WITH

RECORD DRAWING

THIS DRAWING IS A RECORD COMPRISING THE DESIGN INFORMATION, FIELD CHANGES, AND SURVEY INFORMATION USED DURING CONSTRUCTION OF THE FACILITY. THE INTENT IS TO PROVIDE THE OWNER WITH A DOCUMENT TO FACILITATE THE OPERATION, MAINTENANCE, AND POSSIBLE FUTURE MODIFICATIONS DURING THE LIFE OF THE FACILITY. THIS RECORD DRAWING MAY NOT BE AN EXACT AND PRECISE DEPICTION OF THE FACILITY. NEITHER SCS NOR THE PROFESSIONAL ENGINEER ASSUMES LIABILITY OR RESPONSIBILITY FOR ANY ACTION OR ACTIVITY BASED UPON THIS DRAWING. IF NECESSARY, FIELD VERIFY THE FEATURES ON THIS DRAWING.

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	5/22/06
B	ISSUED FOR REVIEW	6/08/06
C	ISSUED FOR INDEXING	6/29/06
D	RECORD DRAWING	10/31/08

SHEET TITLE: LEGEND

PROJECT TITLE: LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL

THE BOEING COMPANY

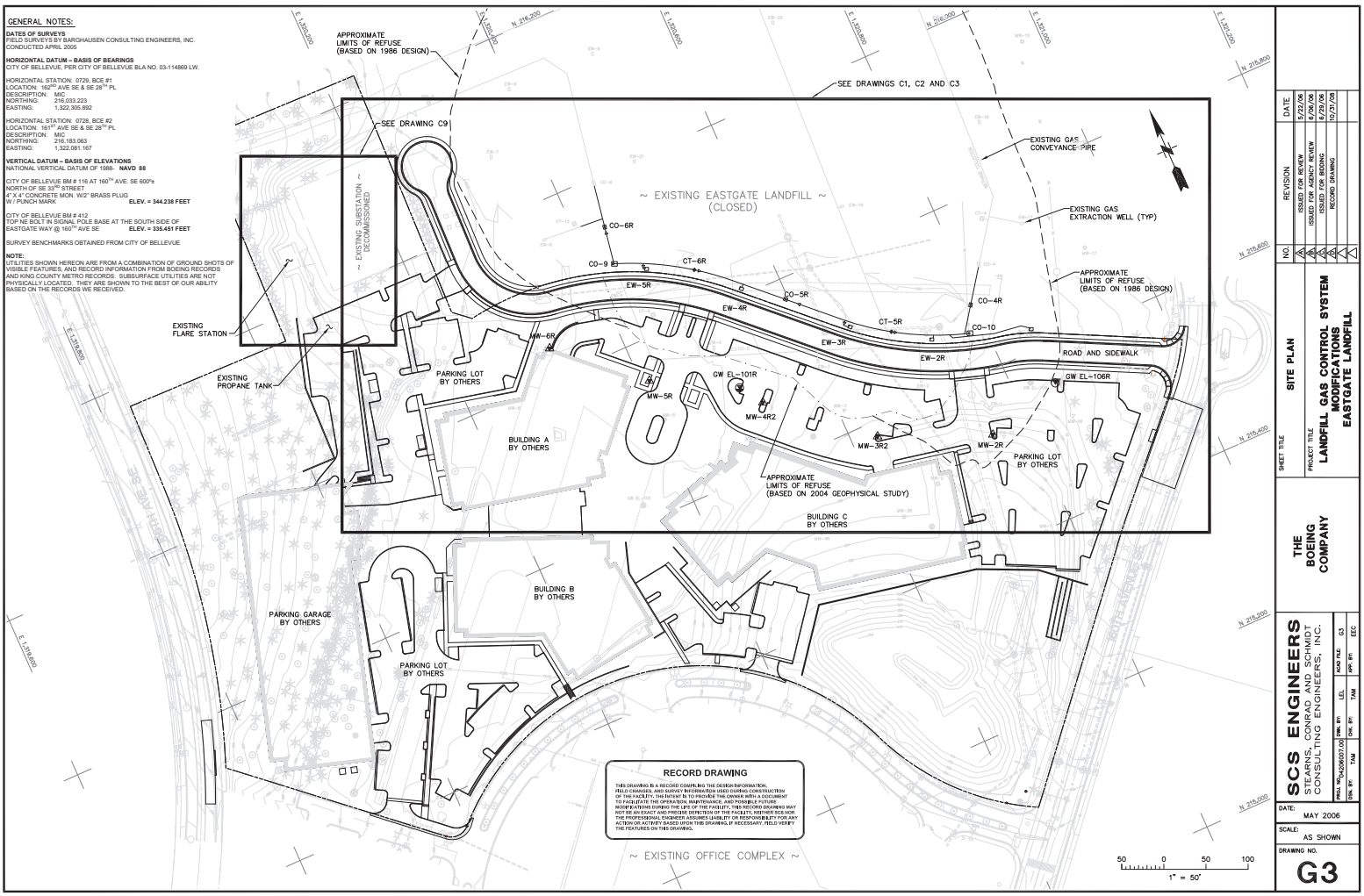
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.

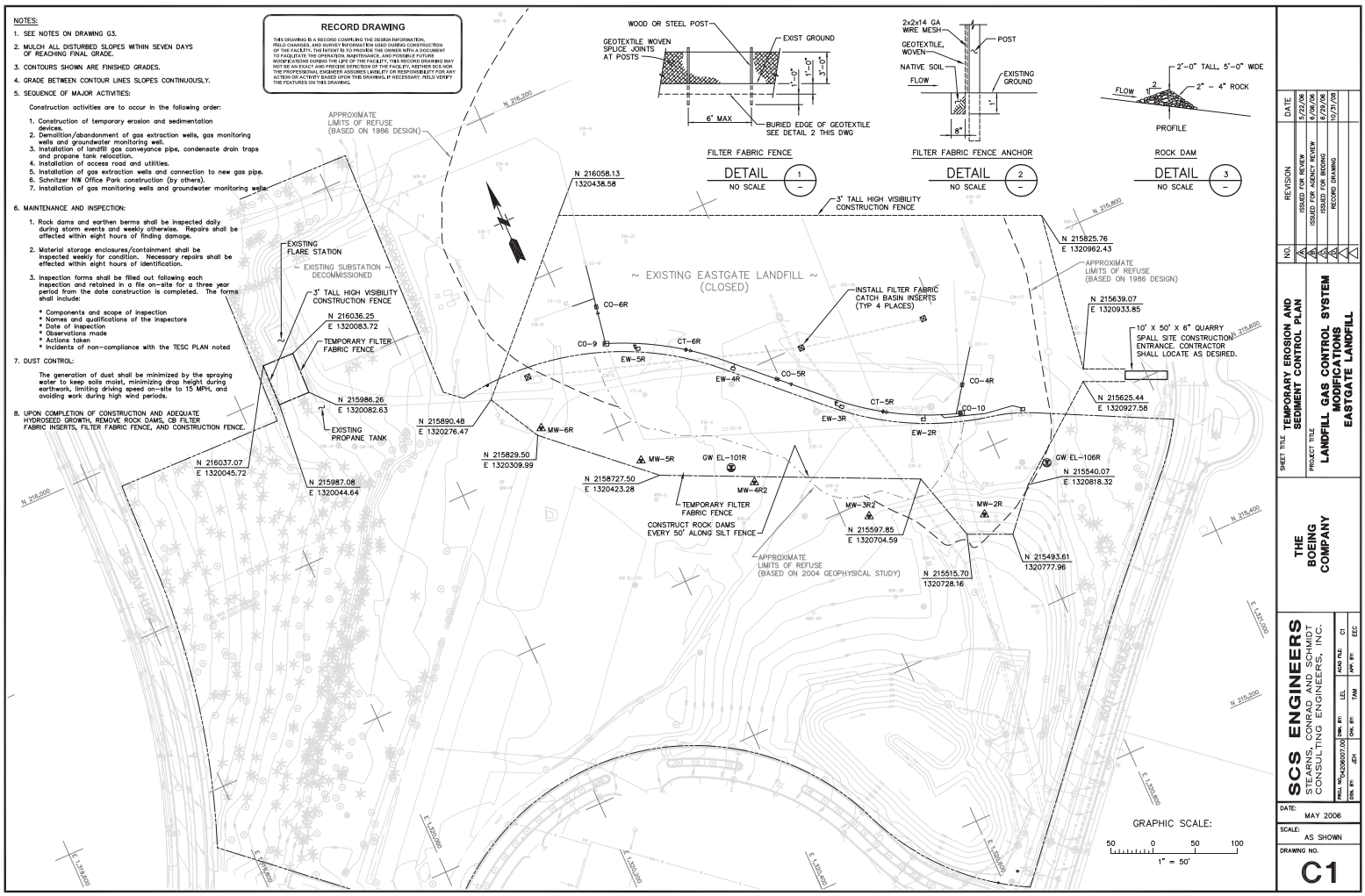
PROJ. NO.	DSN. BY:	CHK. BY:	APP. BY:
01426060.00	LEL	TAM	EEC
DSN. BY: TAM	ACAD FILE: G2		

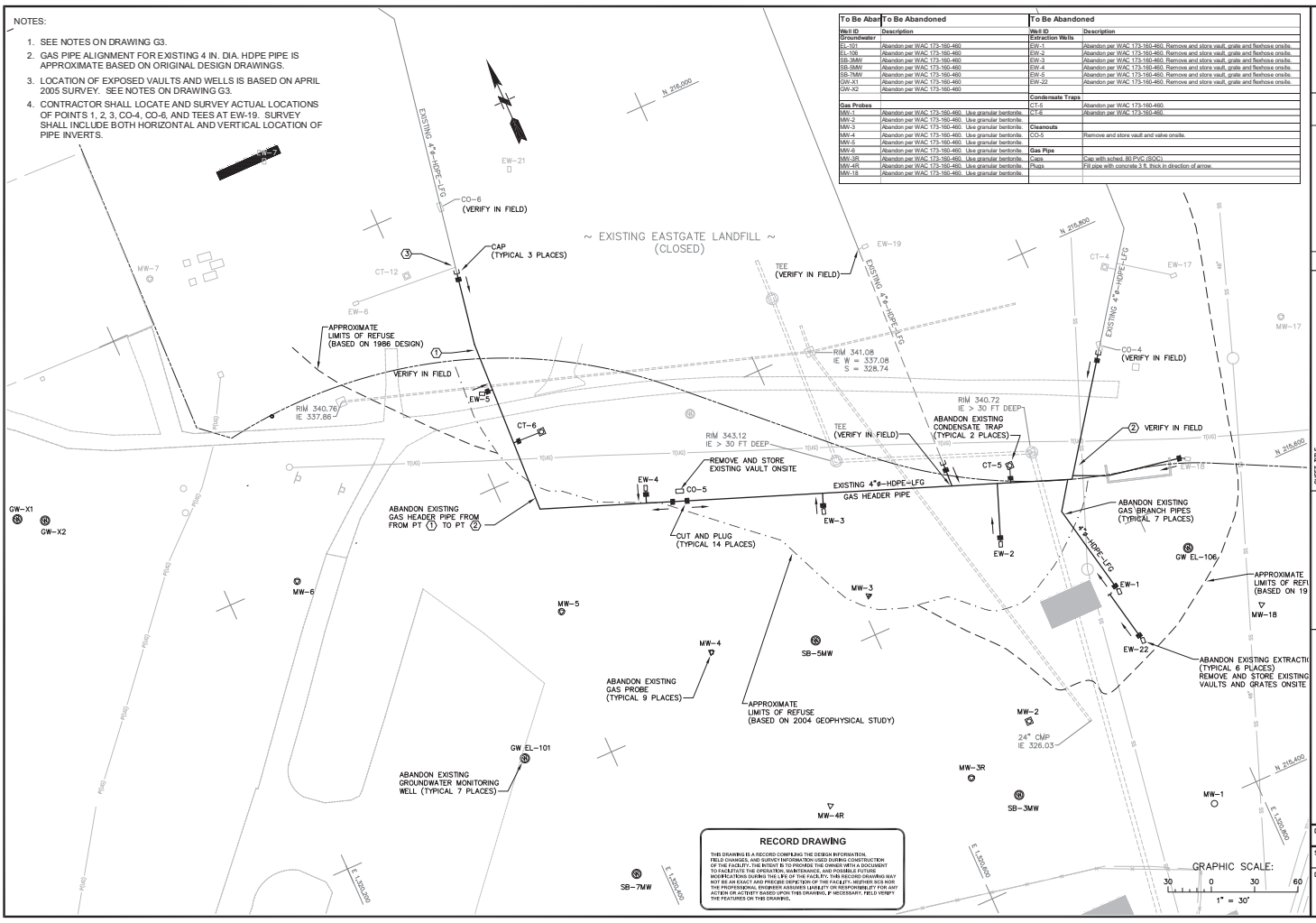
DATE: MAY 2006

SCALE: AS SHOWN

DRAWING NO. G2


GENERAL NOTES:
DATES OF SURVEYS
FIELD SURVEYS BY BARGHAUSEN CONSULTING ENGINEERS, INC. CONDUCTED APRIL 2005
HORIZONTAL DATUM – BASIS OF BEARINGS
CITY OF BELLEVUE, PER CITY OF BELLEVUE BLA NO. 03-114869 LW.
HORIZONTAL STATION: 0729, BCE #1
LOCATION: 162ND AVE SE & SE 28TH PL
DESCRIPTION: MIC
NORTHING: 216,033.223
EASTING: 1,322,305.892
HORIZONTAL STATION: 0728, BCE #2
LOCATION: 161ST AVE SE & SE 28TH PL
DESCRIPTION: MIC
NORTHING: 216,183.063
EASTING: 1,322,081.167
VERTICAL DATUM – BASIS OF ELEVATIONS
NATIONAL VERTICAL DATUM OF 1988- NAVD 88
CITY OF BELLEVUE BM # 116 AT 160TH AVE. SE 600'± NORTH OF SE 33RD STREET
4" X 4" CONCRETE MON. W/2" BRASS PLUG W / PUNCH MARK ELEV. = 344.238 FEET
CITY OF BELLEVUE BM # 412
TOP NE BOLT IN SIGNAL POLE BASE AT THE SOUTH SIDE OF EASTGATE WAY @ 160TH AVE SE ELEV. = 335.451 FEET
SURVEY BENCHMARKS OBTAINED FROM CITY OF BELLEVUE
NOTE:
UTILITIES SHOWN HEREON ARE FROM A COMBINATION OF GROUND SHOTS OF VISIBLE FEATURES, AND RECORD INFORMATION FROM BOEING RECORDS AND KING COUNTY METRO RECORDS. SUBSURFACE UTILITIES ARE NOT PHYSICALLY LOCATED. THEY ARE SHOWN TO THE BEST OF OUR ABILITY BASED ON THE RECORDS WE RECEIVED.
APPROXIMATE LIMITS OF REFUSE (BASED ON 1986 DESIGN)
SEE DRAWINGS C1, C2 AND C3
SEE DRAWING C9
~ EXISTING SUBSTATION ~ DECOMMISSIONED
~ EXISTING EASTGATE LANDFILL ~ (CLOSED)
EXISTING GAS CONVEYANCE PIPE
EXISTING GAS EXTRACTION WELL (TYP)
APPROXIMATE LIMITS OF REFUSE (BASED ON 1986 DESIGN)
CO-6R
CO-9
CT-6R
EW-5R
CO-5R
EW-4R
CT-5R
CO-4R
CO-10
EW-3R
EW-2R
ROAD AND SIDEWALK
EXISTING FLARE STATION
EXISTING PROPANE TANK
PARKING LOT BY OTHERS
MW-6R
MW-5R
GW EL-101R
MW-4R2
GW EL-106R
MW-3R2
MW-2R
BUILDING A BY OTHERS
APPROXIMATE LIMITS OF REFUSE (BASED ON 2004 GEOPHYSICAL STUDY)
BUILDING C BY OTHERS
BUILDING B BY OTHERS
PARKING GARAGE BY OTHERS
PARKING LOT BY OTHERS
RECORD DRAWING
THIS DRAWING IS A RECORD COMPILING THE DESIGN INFORMATION, FIELD CHANGES, AND SURVEY INFORMATION USED DURING CONSTRUCTION OF THE FACILITY. THE INTENT IS TO PROVIDE THE OWNER WITH A DOCUMENT TO FACILITATE THE OPERATION, MAINTENANCE, AND POSSIBLE FUTURE MODIFICATIONS OF THE FACILITY. THE INFORMATION ON THIS DRAWING MAY NOT BE AN EXACT AND PRECISE DEPICTION OF THE FACILITY, AND HENCE SCS AND THE PROFESSIONAL ENGINEER ASSUMES LIABILITY OR RESPONSIBILITY FOR ANY ACTION OR ACTIVITY BASED UPON THIS DRAWING. IF NECESSARY, FIELD VERIFY THE FEATURES ON THIS DRAWING.
~ EXISTING OFFICE COMPLEX ~
50 0 50 100
1" = 50'
NO. REVISION DATE
A ISSUED FOR REVIEW 5/22/06
B ISSUED FOR REVIEW 6/9/06
C ISSUED FOR BIDDING 6/29/06
D RECORD DRAWING 10/31/08
SHEET TITLE SITE PLAN
PROJECT TITLE LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL
THE BOEING COMPANY
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.
PROJ. NO. 04206007.00 DWN. BY: LEL ACAD FILE: G3
DSN. BY: TAM CHK. BY: TAM APP. BY: EEC
DATE: MAY 2006
SCALE: AS SHOWN
DRAWING NO. G3


NOTES:
1. SEE NOTES ON DRAWING G3.
2. MULCH ALL DISTURBED SLOPES WITHIN SEVEN DAYS OF REACHING FINAL GRADE.
3. CONTOURS SHOWN ARE FINISHED GRADES.
4. GRADE BETWEEN CONTOUR LINES SLOPES CONTINUOUSLY.
5. SEQUENCE OF MAJOR ACTIVITIES:
Construction activities are to occur in the following order:
1. Construction of temporary erosion and sedimentation devices.
2. Demolition/abandonment of gas extraction wells, gas monitoring wells and groundwater monitoring well.
3. Installation of landfill gas conveyance pipe, condensate drain traps and propane tank relocation.
4. Installation of access road and utilities.
5. Installation of gas extraction wells and connection to new gas pipe.
6. Schnitzer NW Office Park construction (by others).
7. Installation of gas monitoring wells and groundwater monitoring wells.
6. MAINTENANCE AND INSPECTION:
1. Rock dams and earthen berms shall be inspected daily during storm events and weekly otherwise. Repairs shall be affected within eight hours of finding damage.
2. Material storage enclosures/containment shall be inspected weekly for condition. Necessary repairs shall be effected within eight hours of identification.
3. Inspection forms shall be filled out following each inspection and retained in a file on-site for a three year period from the date construction is completed. The forms shall include:
* Components and scope of inspection
* Names and qualifications of the inspectors
* Date of inspection
* Observations made
* Actions taken
* Incidents of non-compliance with the TESC PLAN noted
7. DUST CONTROL:
The generation of dust shall be minimized by the spraying water to keep soils moist, minimizing drop height during earthwork, limiting driving speed on-site to 15 MPH, and avoiding work during high wind periods.
8. UPON COMPLETION OF CONSTRUCTION AND ADEQUATE HYDROSEED GROWTH, REMOVE ROCK DAMS, CB FILTER FABRIC INSERTS, FILTER FABRIC FENCE, AND CONSTRUCTION FENCE.
RECORD DRAWING
THIS DRAWING IS A RECORD COMPILED FROM THE DESIGN INFORMATION, FIELD CHANGES, AND AS-BUILT SURVEY DATA FOLLOWING CONSTRUCTION OF THIS FACILITY. THE INTENT IS TO PROVIDE THE OWNER WITH A DOCUMENT TO FACILITATE THE OPERATION, MAINTENANCE, AND POSSIBLE FUTURE MODIFICATIONS DURING THE LIFE OF THE FACILITY. THIS RECORD DRAWING MAY NOT BE AN EXACT AND PRECISE DEPICTION OF THE FACILITY. NEITHER SCS NOR THE PROFESSIONAL ENGINEER ASSUMES LIABILITY OR RESPONSIBILITY FOR ANY ACTION OR ACTIVITY BASED UPON THIS DRAWING. IF NECESSARY, FIELD VERIFY THE FEATURES ON THIS DRAWING.
WOOD OR STEEL POST
GEOTEXTILE WOVEN SPLICE JOINTS AT POSTS
EXIST GROUND
6" MAX
BURIED EDGE OF GEOTEXTILE SEE DETAIL 2 THIS DWG
FILTER FABRIC FENCE
DETAIL 1
NO SCALE
2x2x14 GA WIRE MESH
POST
GEOTEXTILE, WOVEN
NATIVE SOIL
FLOW
EXISTING GROUND
8"
FILTER FABRIC FENCE ANCHOR
DETAIL 2
NO SCALE
2'-0" TALL, 5'-0" WIDE
2" – 4" ROCK
FLOW
PROFILE
ROCK DAM
DETAIL 3
NO SCALE
APPROXIMATE LIMITS OF REFUSE (BASED ON 1986 DESIGN)
N 216200
N 216058.13
1320438.58
3' TALL HIGH VISIBILITY CONSTRUCTION FENCE
EXISTING FLARE STATION
~ EXISTING SUBSTATION ~ DECOMMISSIONED
3' TALL HIGH VISIBILITY CONSTRUCTION FENCE
N 216036.25
E 1320083.72
TEMPORARY FILTER FABRIC FENCE
N 215986.26
E 1320082.63
EXISTING PROPANE TANK
N 215987.08
E 1320044.64
N 216037.07
E 1320045.72
N 216000
~ EXISTING EASTGATE LANDFILL ~ (CLOSED)
CO-6R
CO-9
CT-6R
EW-5R
EW-4R
CO-5R
EW-3R
CT-5R
EW-2R
CO-4R
CO-10
INSTALL FILTER FABRIC CATCH BASIN INSERTS (TYP 4 PLACES)
N 215890.48
E 1320276.47
MW-6R
N 215829.50
E 1320309.99
MW-5R
GW EL-101R
N 2158727.50
E 1320423.28
MW-4R2
TEMPORARY FILTER FABRIC FENCE
CONSTRUCT ROCK DAMS EVERY 50' ALONG SILT FENCE
MW-3R2
N 215597.85
E 1320704.59
MW-2R
N 215515.70
1320728.16
N 215493.61
1320777.96
APPROXIMATE LIMITS OF REFUSE (BASED ON 2004 GEOPHYSICAL STUDY)
N 215825.76
E 1320962.43
APPROXIMATE LIMITS OF REFUSE (BASED ON 1986 DESIGN)
N 215639.07
E 1320933.85
10' X 50' X 6" QUARRY SPALL SITE CONSTRUCTION ENTRANCE. CONTRACTOR SHALL LOCATE AS DESIRED.
N 215625.44
E 1320927.58
GW EL-106R
N 215540.07
E 1320818.32
N 215600
N 215400
N 215200
E 1321000
E 1320800
E 1320600
E 1320400
E 1320200
E 1320000
E 1319800
GRAPHIC SCALE:
50 0 50 100
1" = 50'
NO.
REVISION
DATE
1 ISSUED FOR REVIEW 5/22/06
2 ISSUED FOR REVIEW 6/09/06
3 ISSUED FOR BIDDING 6/29/06
4 RECORD DRAWING 10/31/08
SHEET TITLE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN
PROJECT TITLE LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL
THE BOEING COMPANY
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.
PROJ. NO. 04206007.00
DSN. BY: LEL
DRN. BY: TAM
CHK. BY: JEH
ACAD FILE: C1
APP. BY: EEC
DATE: MAY 2006
SCALE: AS SHOWN
DRAWING NO. C1



To Be Abandoned		To Be Abandoned	
Well ID	Description	Well ID	Description
Groundwater		Extraction Wells	
EL-101	Abandon per WAC 173-160-460	EW-1	Abandon per WAC 173-160-460. Remove and store vault, grate and flexhose onsite.
EL-106	Abandon per WAC 173-160-460	EW-2	Abandon per WAC 173-160-460. Remove and store vault, grate and flexhose onsite.
SB-3MW	Abandon per WAC 173-160-460	EW-3	Abandon per WAC 173-160-460. Remove and store vault, grate and flexhose onsite.
SB-5MW	Abandon per WAC 173-160-460	EW-4	Abandon per WAC 173-160-460. Remove and store vault, grate and flexhose onsite.
SB-7MW	Abandon per WAC 173-160-460	EW-5	Abandon per WAC 173-160-460. Remove and store vault, grate and flexhose onsite.
GW-X1	Abandon per WAC 173-160-460	EW-22	Abandon per WAC 173-160-460. Remove and store vault, grate and flexhose onsite.
GW-X2	Abandon per WAC 173-160-460		
		Condensate Traps	
Gas Probes		CT-5	Abandon per WAC 173-160-460.
MW-1	Abandon per WAC 173-160-460. Use granular bentonite.	CT-6	Abandon per WAC 173-160-460.
MW-2	Abandon per WAC 173-160-460. Use granular bentonite.		
MW-3	Abandon per WAC 173-160-460. Use granular bentonite.	Cleanouts	
MW-4	Abandon per WAC 173-160-460. Use granular bentonite.	CO-5	Remove and store vault and valve onsite.
MW-5	Abandon per WAC 173-160-460. Use granular bentonite.		
MW-6	Abandon per WAC 173-160-460. Use granular bentonite.	Gas Pips	
MW-3R	Abandon per WAC 173-160-460. Use granular bentonite.	Caps	Cap with sched. 80 PVC (SOC)
MW-4R	Abandon per WAC 173-160-460. Use granular bentonite.	Plugs	Fill pipe with concrete 3 ft. thick in direction of arrow.
MW-18	Abandon per WAC 173-160-460. Use granular bentonite.		

RECORD DRAWING

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NO.	REVISION	DATE
1	ISSUED FOR REVIEW	5/22/06
2	ISSUED FOR REVIEW	6/14/06
3	ISSUED FOR BIDDING	6/29/06
4	RECORD DRAWING	10/31/08

SHEET TITLE: DEMOLITION PLAN

PROJECT TITLE: LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL

THE BOEING COMPANY

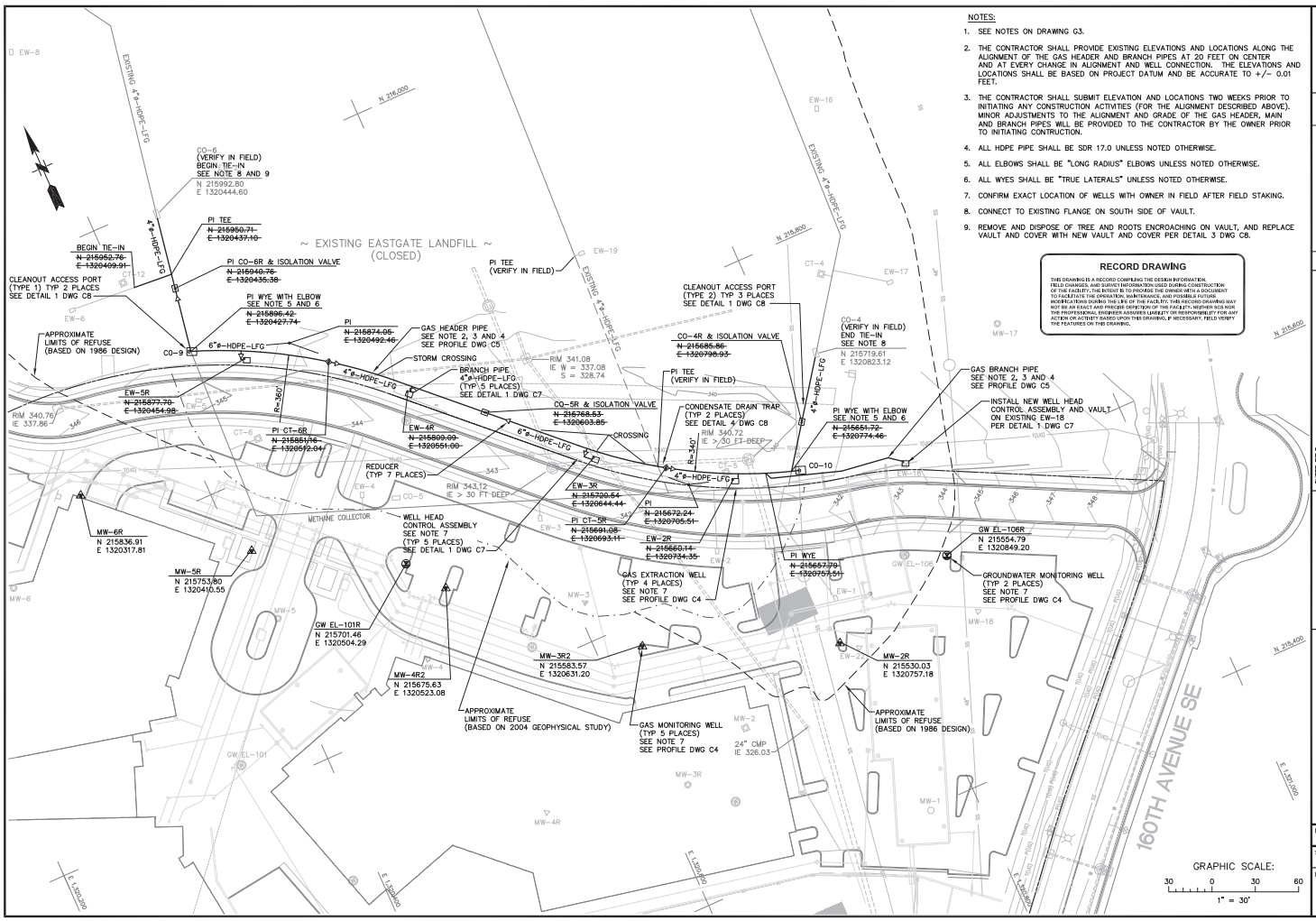
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.

PROJ. NO. 02426060.00 | DSN. BY: LEL | ACAD FILE: C2
DRN. BY: TAM | CHK. BY: TAM | APP. BY: EEC

DATE: MAY 2006

SCALE: AS SHOWN

DRAWING NO. C2



NOTES:

1. SEE NOTES ON DRAWING G3.
2. THE CONTRACTOR SHALL PROVIDE EXISTING ELEVATIONS AND LOCATIONS ALONG THE ALIGNMENT OF THE GAS HEADER AND BRANCH PIPES AT 20 FEET ON CENTER AND AT EVERY CHANGE IN ALIGNMENT AND WELL CONNECTION. THE ELEVATIONS AND LOCATIONS SHALL BE BASED ON PROJECT DATUM AND BE ACCURATE TO +/- 0.01 FEET.
3. THE CONTRACTOR SHALL SUBMIT ELEVATION AND LOCATIONS TWO WEEKS PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITIES (FOR THE ALIGNMENT DESCRIBED ABOVE). MINOR ADJUSTMENTS TO THE ALIGNMENT AND GRADE OF THE GAS HEADER, MAIN AND BRANCH PIPES WILL BE PROVIDED TO THE CONTRACTOR BY THE OWNER PRIOR TO INITIATING CONTRUCTION.
4. ALL HDPE PIPE SHALL BE SDR 17.0 UNLESS NOTED OTHERWISE.
5. ALL ELBOWS SHALL BE "LONG RADIUS" ELBOWS UNLESS NOTED OTHERWISE.
6. ALL WYES SHALL BE "TRUE LATERALS" UNLESS NOTED OTHERWISE.
7. CONFIRM EXACT LOCATION OF WELLS WITH OWNER IN FIELD AFTER FIELD STAKING.
8. CONNECT TO EXISTING FLANGE ON SOUTH SIDE OF VAULT.
9. REMOVE AND DISPOSE OF TREE AND ROOTS ENCROACHING ON VAULT, AND REPLACE VAULT AND COVER WITH NEW VAULT AND COVER PER DETAIL 3 DWG C8.

RECORD DRAWING

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NO.	REVISION	DATE
A	ISSUED FOR REVIEW	5/22/06
B	ISSUED FOR REVIEW	6/29/06
C	ISSUED FOR RECORD	10/31/08
D	RECORD DRAWING	

SHEET TITLE: GAS EXTRACTION NETWORK AND PIPING PLAN

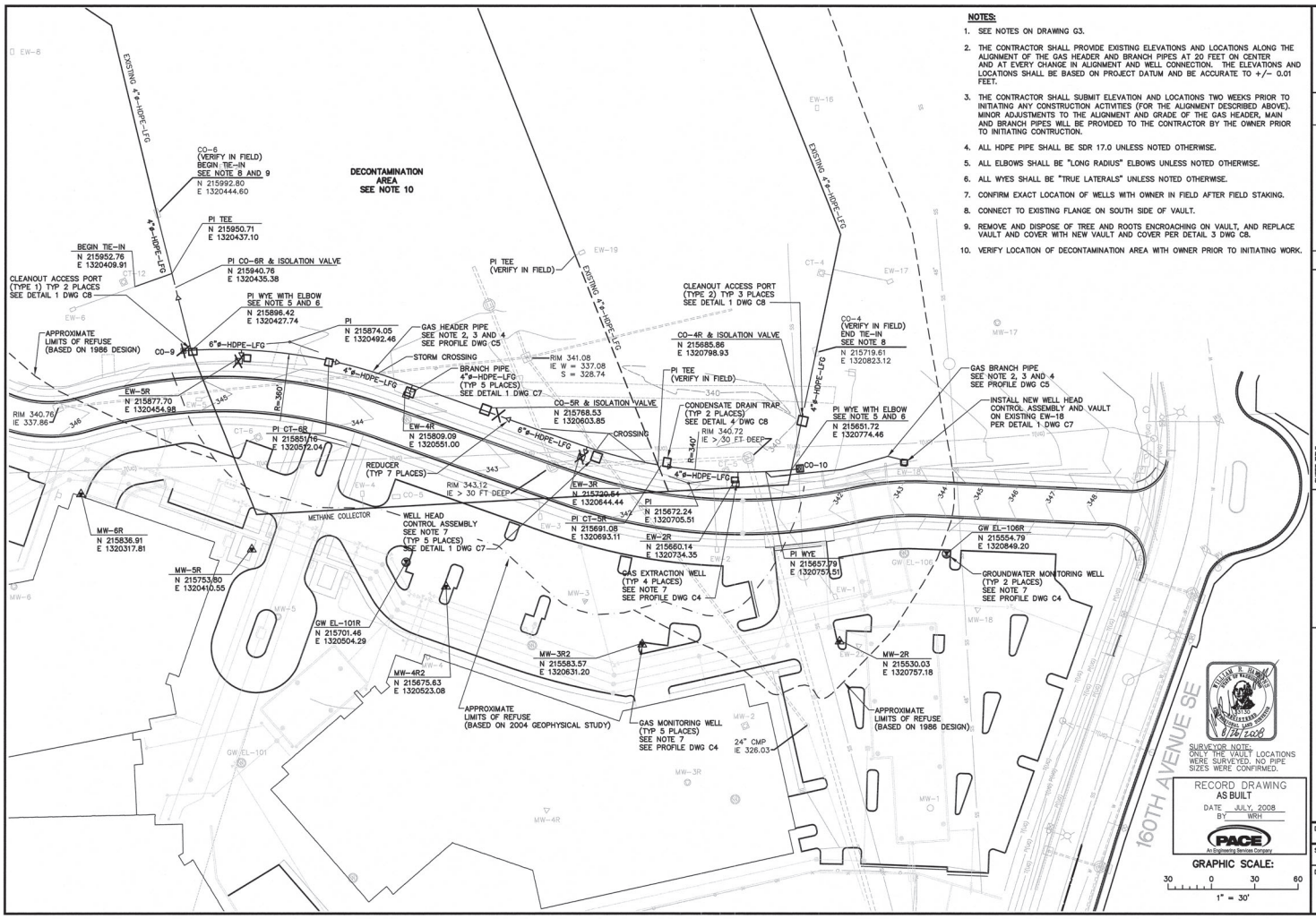
PROJECT TITLE: LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL

THE BOEING COMPANY

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.

PROJ. NO. 04206007.00 | DWN. BY: LEL | ACAD FILE: C3
DSN. BY: TAM | APP. BY: EEC
CHK. BY: TAM
CERT. BY:

DATE: MAY 2006
SCALE: AS SHOWN
DRAWING NO. C3



NOTES:

1. SEE NOTES ON DRAWING G3.
2. THE CONTRACTOR SHALL PROVIDE EXISTING ELEVATIONS AND LOCATIONS ALONG THE ALIGNMENT OF THE GAS HEADER AND BRANCH PIPES AT 20 FEET ON CENTER AND AT EVERY CHANGE IN ALIGNMENT AND WELL CONNECTION. THE ELEVATIONS AND LOCATIONS SHALL BE BASED ON PROJECT DATUM AND BE ACCURATE TO +/- 0.01 FEET.
3. THE CONTRACTOR SHALL SUBMIT ELEVATION AND LOCATIONS TWO WEEKS PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITIES (FOR THE ALIGNMENT DESCRIBED ABOVE). MINOR ADJUSTMENTS TO THE ALIGNMENT AND GRADE OF THE GAS HEADER, MAIN AND BRANCH PIPES WILL BE PROVIDED TO THE CONTRACTOR BY THE OWNER PRIOR TO INITIATING CONTRUCTION.
4. ALL HDPE PIPE SHALL BE SDR 17.0 UNLESS NOTED OTHERWISE.
5. ALL ELBOWS SHALL BE "LONG RADIUS" ELBOWS UNLESS NOTED OTHERWISE.
6. ALL WYES SHALL BE "TRUE LATERALS" UNLESS NOTED OTHERWISE.
7. CONFIRM EXACT LOCATION OF WELLS WITH OWNER IN FIELD AFTER FIELD STAKING.
8. CONNECT TO EXISTING FLANGE ON SOUTH SIDE OF VAULT.
9. REMOVE AND DISPOSE OF TREE AND ROOTS ENCROACHING ON VAULT, AND REPLACE VAULT AND COVER WITH NEW VAULT AND COVER PER DETAIL 3 DWG C8.
10. VERIFY LOCATION OF DECONTAMINATION AREA WITH OWNER PRIOR TO INITIATING WORK.

NO.	REVISION	DATE
	ISSUED FOR REVIEW	5/22/06
	ISSUED FOR AGENCY REVIEW	6/06/06
	ISSUED FOR BIDDING	6/29/06

SHEET TITLE: GAS EXTRACTION NETWORK AND PIPING PLAN

PROJECT TITLE: LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL

THE BOEING COMPANY

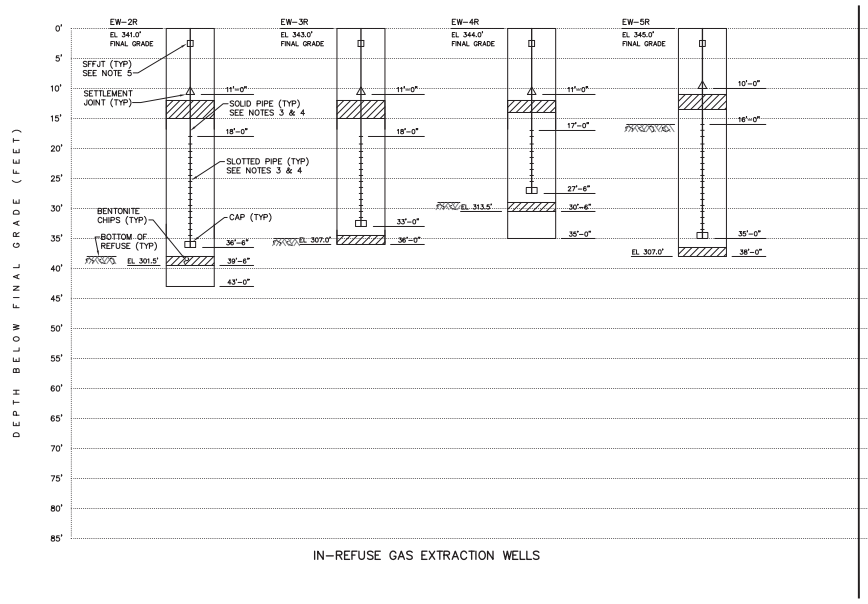
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.

PROJ. NO. 04250007.00 | DWN. BY: TAM | CHK. BY: TAM | APP. BY: EEC | ACAD FILE: C3 | LEL

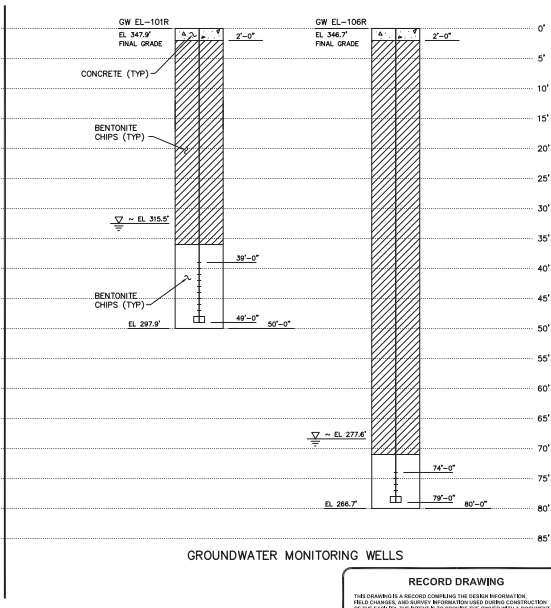
DATE: MAY 2006

SCALE: AS SHOWN

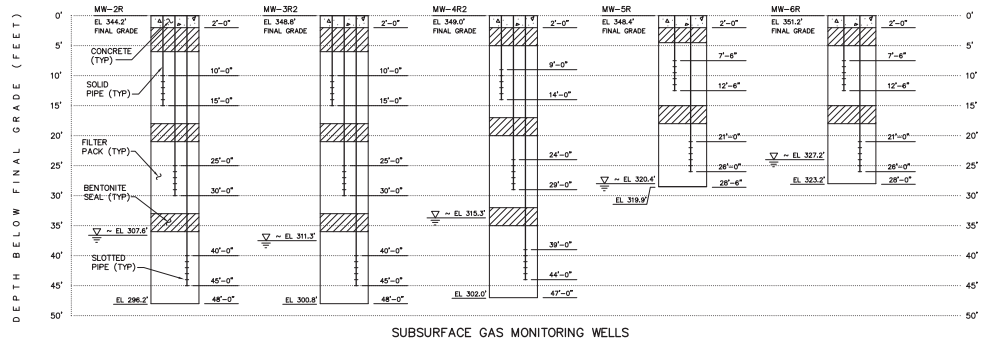
DRAWING NO. C3



IN-REFUSE GAS EXTRACTION WELLS



GROUNDWATER MONITORING WELLS



SUBSURFACE GAS MONITORING WELLS

RECORD DRAWING

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NOTES:

1. FOR ADDITIONAL WELL DETAILS SEE DRAWING C6.
2. BORING DEPTHS SHOWN ARE APPROXIMATE AND INTENDED ONLY FOR BIDDING PURPOSES. CONTRACTOR SHALL INSTALL ALL WELLS TO DEPTH DIRECTED BY OWNER.
3. SOLID AND SLOTTED PIPE SHALL BE SUPPLIED IN STANDARD LENGTHS OF 5'-0", 10'-0" AND 20'-0".
4. FIELD ADJUSTMENTS IN PIPE LENGTH SHALL BE DONE ONLY BY CUTTING OFF THE LOWEST PORTION OF THE LOWEST SECTION OF SLOTTED PIPE.
5. PROVIDE PIPE JOINT (SFFJT) IN THIS SEGMENT OF PIPE USING 5'-0" AND 10'-0" SECTIONS.

GRAPHIC SCALE:

5 0 5 10 15 20

1/8" = 1'-0"

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	5/22/06
B	ISSUED FOR AGENCY REVIEW	6/06/06
C	ISSUED FOR BIDDING	6/29/06
D	RECORD DRAWING	10/31/06

SHEET TITLE: WELL PROFILES

PROJECT TITLE: LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL

THE BOEING COMPANY

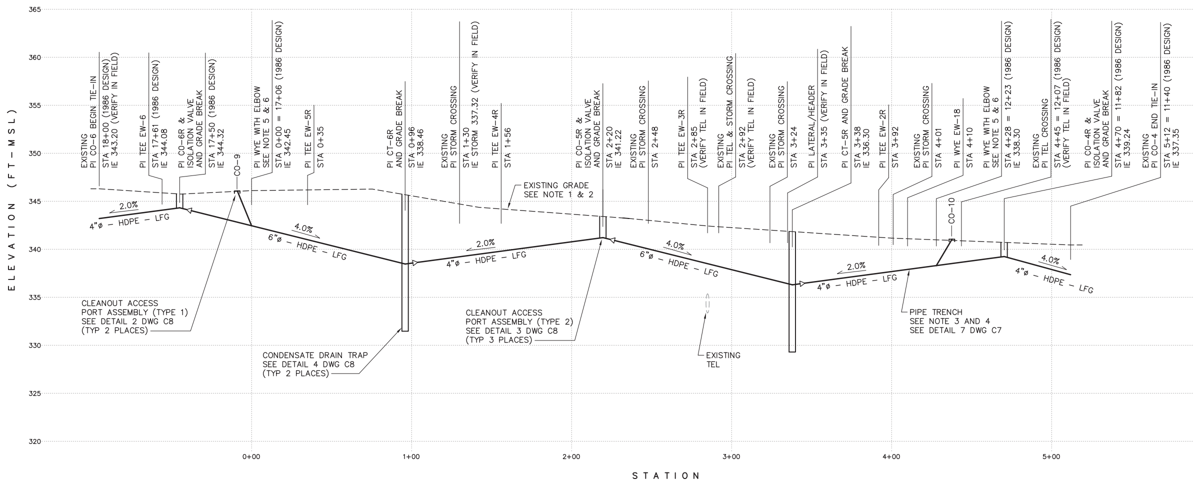
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.

PROJ. NO. 04208007.00 | DWN. BY: LEL | CHK. BY: TAM | APP. BY: TAM | CAD FILE: C4 | EEC

DATE: MAY 2006

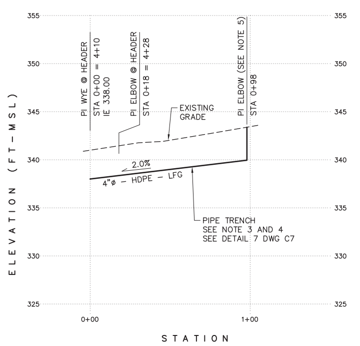
SCALE: AS SHOWN

DRAWING NO. C4



GAS HEADER PIPE PROFILE

SCALE: HORIZ 1" = 30'
VERT 1" = 5'



GAS BRANCH PIPE PROFILE (EW-18)

SCALE: HORIZ 1" = 30'
VERT 1" = 5'

RECORD DRAWING

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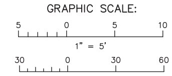
NOTES:

1. THE CONTRACTOR SHALL PROVIDE EXISTING ELEVATIONS AND LOCATIONS ALONG THE ALIGNMENT OF THE GAS HEADER AND BRANCH PIPES AT 20 FEET ON CENTER AND AT EVERY CHANGE IN ALIGNMENT AND WELL CONNECTION. THE ELEVATIONS AND LOCATIONS SHALL BE BASED ON PROJECT DATUM AND BE ACCURATE TO +/- 0.01 FEET.
2. THE CONTRACTOR SHALL SUBMIT ELEVATION AND LOCATIONS TWO WEEKS PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITIES (FOR THE ALIGNMENT DESCRIBED ABOVE). MINOR ADJUSTMENTS TO THE ALIGNMENT AND GRADE OF THE GAS HEADER, MAIN AND BRANCH PIPES WILL BE PROVIDED TO THE CONTRACTOR BY THE OWNER PRIOR TO INITIATING CONTRUCTION.
3. ALL PVC PIPE SHALL BE SCH 80 UNLESS NOTED OTHERWISE.
4. ALL HDPE PIPE SHALL BE SDR 17.0 UNLESS NOTED OTHERWISE.
5. ALL ELBOWS SHALL BE "LONG RADIUS" ELBOWS UNLESS NOTED OTHERWISE.
6. ALL WYES SHALL BE "TRUE LATERALS" UNLESS NOTED OTHERWISE.

GRAPHIC SCALE:



NO.	REVISION	DATE
A	ISSUED FOR REVIEW	5/22/06
B	ISSUED FOR AGENCY REVIEW	6/06/06
C	ISSUED FOR BIDDING	6/29/06
D	RECORD DRAWING	10/31/08

SHEET TITLE **GAS AND CONDENSATE CONVEYANCE PIPE PROFILES**

PROJECT TITLE **LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL**

THE BOEING COMPANY

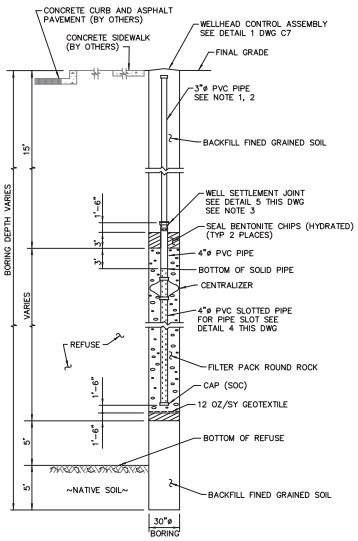
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.

PROJ. NO. 04206007.00 | DWN. BY: LEL | ACAD FILE: C5
DSN. BY: TAM | CHK. BY: TAM | APP. BY: EEC

DATE: MAY 2006

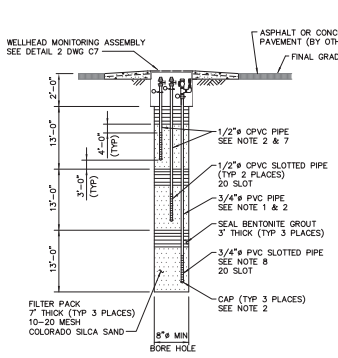
SCALE: AS SHOWN

DRAWING NO. **C5**



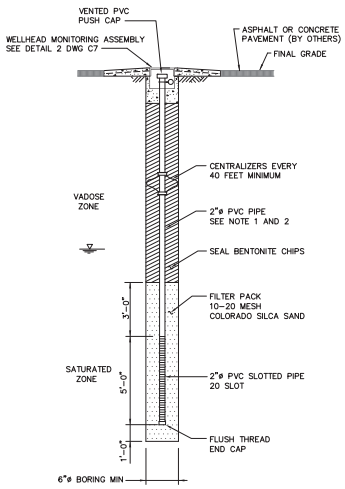
IN-REFUSE GAS EXTRACTION WELL

DETAIL 1 – SCALE: NTS



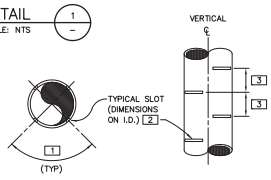
SUBSURFACE GAS MONITORING WELL (GAS PROBE)

DETAIL 2 – SCALE: NTS



GROUNDWATER MONITORING WELL

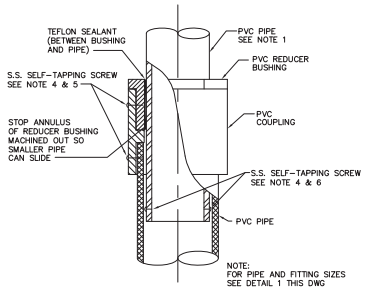
DETAIL 3 – SCALE: NTS



VERTICAL PIPE SLOT SCHEDULE			
PIPE DIA	SLOT ORIENTATION 1	SLOT DIM 2	SLOT SPACING O.C. 3
4"	90°	1/4" x 1"	1"

VERTICAL SLOTTED PIPE

DETAIL 4 – SCALE: NTS



WELL SETTLEMENT JOINT

DETAIL 5 – SCALE: NTS

NOTES:

1. ALL PVC PIPE SHALL BE SCHEDULE 80 UNLESS NOTED OTHERWISE.
2. ALL JOINTS SHALL BE SQUARE FORM-FLUSH JOINT THREADS WITH VITON -O- RINGS.
3. SECTION OF SOLID PIPE BELOW EACH SETTLEMENT JOINT SHALL HAVE A LENGTH OF 7'-6".
4. SIX SS SELF-TAPPING SCREWS SHALL BE SPACED EQUAL DISTANCE AROUND PIPE CIRCUMFERENCE AT EACH LOCATION.
5. SCREWS SHALL BE OF SUFFICIENT LENGTH FOR JOINT STRENGTH AND ALLOW FREE MOVEMENT OF THE SMALLER DIAMETER PIPE.
6. SCREWS SHALL EXTEND THROUGH PIPE WALL NOT MORE THAN 1/16 INCH. HEAD OF SCREW SHALL ALLOW FREE MOVEMENT OF PIPE.
7. ALL CPVC PIPE SHALL BE SDR 11.0 COPPER PIPE SIZE, UNLESS NOTED OTHERWISE.
8. DEEPEST PIPE FOR GAS PROBES SHALL BE 3/4"ø PVC. ALL OTHER GAS PROBE PIPES SHALL BE 1/2"ø CPVC SDR 11.0.

RECORD DRAWING

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NO.	REVISION	DATE
A	ISSUED FOR REVIEW	5/22/06
B	ISSUED FOR REVIEW	6/29/06
C	ISSUED FOR PERMITTING	8/29/06
D	RECORD DRAWING	10/31/08

SHEET TITLE: WELL DETAILS

PROJECT TITLE: LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL

THE BOEING COMPANY

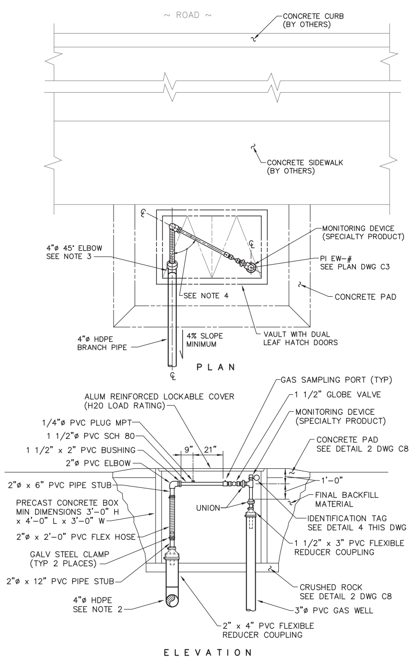
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.

PROJ. NO. 04206007.00 | DSN. BY: LEL | ACAD FILE: C6 | DSN. BY: TAM | APP. BY: EEC | CHK. BY: TAM | DRWG. BY: TAM

DATE: MAY 2006

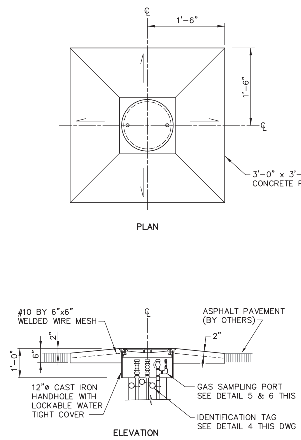
SCALE: AS SHOWN

DRAWING NO. C6


~ ROAD ~
CONCRETE CURB (BY OTHERS)
CONCRETE SIDEWALK (BY OTHERS)
MONITORING DEVICE (SPECIALTY PRODUCT)
4"ø 45° ELBOW SEE NOTE 3
PIPEW-#
SEE PLAN DWG C3
SEE NOTE 4
CONCRETE PAD
4"ø HDPE BRANCH PIPE
4% SLOPE MINIMUM
VAULT WITH DUAL LEAF HATCH DOORS
P L A N
GAS SAMPLING PORT (TYP)
1 1/2" GLOBE VALVE
ALUM REINFORCED LOCKABLE COVER (H20 LOAD RATING)
MONITORING DEVICE (SPECIALTY PRODUCT)
1/4"ø PVC PLUG MPT
1 1/2"ø PVC SCH 80
1 1/2" x 2" PVC BUSHING
9" 21"
CONCRETE PAD SEE DETAIL 2 DWG C8
2"ø PVC ELBOW
1'-0"
2"ø x 6" PVC PIPE STUB
FINAL BACKFILL MATERIAL
PRECAST CONCRETE BOX MIN DIMENSIONS 3'-0" H x 4'-0" L x 3'-0" W
UNION
IDENTIFICATION TAG SEE DETAIL 4 THIS DWG
2"ø x 2'-0" PVC FLEX HOSE
1 1/2" x 3" PVC FLEXIBLE REDUCER COUPLING
GALV STEEL CLAMP (TYP 2 PLACES)
2"ø x 12" PVC PIPE STUB
CRUSHED ROCK SEE DETAIL 2 DWG C8
4"ø HDPE SEE NOTE 2
3"ø PVC GAS WELL
2" x 4" PVC FLEXIBLE REDUCER COUPLING
E L E V A T I O N

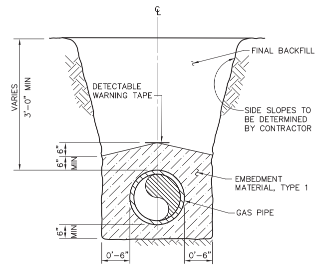
WELL HEAD CONTROL ASSEMBLY

DETAIL 1
SCALE: NTS



WELLHEAD MONITORING ASSEMBLY

DETAIL 2
SCALE: NTS



(FOR GAS AND CONDENSATE CONVEYANCE)

PIPE TRENCH – TYPE 1

DETAIL 7
SCALE: NTS

NOTES:

1. ALL PVC PIPE SHALL BE SCHEDULE 80 UNLESS NOTED OTHERWISE.
2. ALL HDPE PIPE SHALL BE SDR 17.0 UNLESS NOTED OTHERWISE.
3. ALL HDPE ELBOWS SHALL BE LONG RADIUS UNLESS NOTED OTHERWISE.
4. ORIENTATION VARIES SEE PLAN.
5. ALL THREADED FITTING (IPT) SHALL HAVE TEFLON SEALANT.
6. ALL CPVC PIPE SHALL BE SDR 11.0 COPPER SIZE UNLESS NOTED OTHERWISE.

RECORD DRAWING

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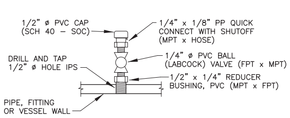
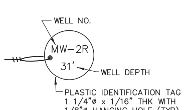


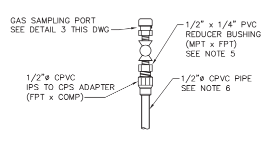
GAS SAMPLING PORT

DETAIL 3
SCALE: NTS



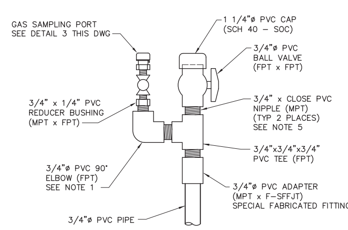
IDENTIFICATION TAG

DETAIL 4
SCALE: NTS



GAS SAMPLING PORT CONNECTION (TYPE 1)

DETAIL 5
SCALE: NTS


GAS SAMPLING PORT SEE DETAIL 3 THIS DWG
1 1/4"ø PVC CAP (SCH 40 – SOC)
3/4"ø PVC BALL VALVE (FPT x FPT)
3/4" x 1/4" PVC REDUCER BUSHING (MPT x FPT)
3/4" x CLOSE PVC NIPPLE (MPT) (TYP 2 PLACES) SEE NOTE 5
3/4"ø PVC 90° ELBOW (FPT) SEE NOTE 1
3/4"x3/4"x3/4" PVC TEE (FPT)
3/4"ø PVC ADAPTER (MPT x F-SFFJT) SPECIAL FABRICATED FITTING
3/4"ø PVC PIPE

GAS SAMPLING PORT CONNECTION (TYPE 2)

DETAIL 6
SCALE: NTS

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	5/22/06
B	ISSUED FOR AGENCY REVIEW	6/06/06
C	ISSUED FOR BIDDING	6/29/06
D	RECORD DRAWING	10/31/08

SHEET TITLE: **WELL HEAD DETAILS**

PROJECT TITLE: **LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL**

THE BOEING COMPANY

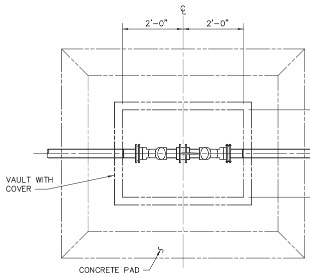
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.

PROJ. NO. 04206007.00	DWN. BY: LEL	ACAD FILE: C7
DSN. BY: TAM	CHK. BY: TAM	APP. BY: EEC

DATE: MAY 2006

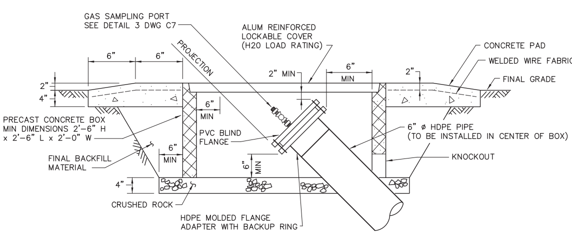
SCALE: AS SHOWN

DRAWING NO. **C7**



CLEANOUT ACCESS PORT PLAN – TYPE 2 (TYPE 1 SIM)

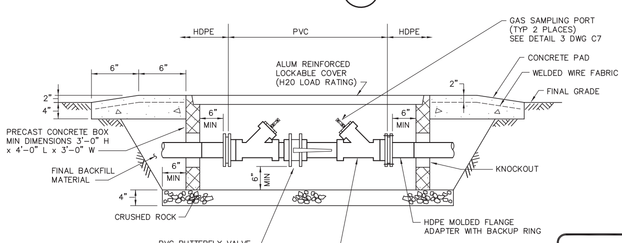
DETAIL 1 / –
SCALE: NTS



GAS SAMPLING PORT SEE DETAIL 3 DWG C7
PROJECTION
ALUM REINFORCED LOCKABLE COVER (H20 LOAD RATING)
CONCRETE PAD
WELDED WIRE FABRIC
FINAL GRADE
PRECAST CONCRETE BOX MIN DIMENSIONS 2'-6" H x 2'-6" L x 2'-0" W
PVC BLIND FLANGE
6" ø HDPE PIPE (TO BE INSTALLED IN CENTER OF BOX)
FINAL BACKFILL MATERIAL
KNOCKOUT
CRUSHED ROCK
HDPE MOLDED FLANGE ADAPTER WITH BACKUP RING

CLEANOUT ACCESS PORT (TYPE 1)

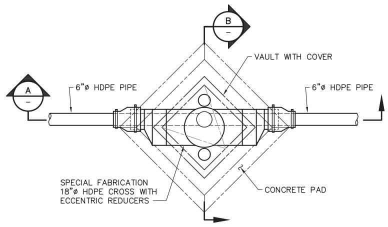
DETAIL 2 / –
SCALE: NTS



HDPE
PVC
HDPE
GAS SAMPLING PORT (TYP 2 PLACES) SEE DETAIL 3 DWG C7
ALUM REINFORCED LOCKABLE COVER (H20 LOAD RATING)
CONCRETE PAD
WELDED WIRE FABRIC
FINAL GRADE
PRECAST CONCRETE BOX MIN DIMENSIONS 3'-0" H x 4'-0" L x 3'-0" W
FINAL BACKFILL MATERIAL
KNOCKOUT
CRUSHED ROCK
HDPE MOLDED FLANGE ADAPTER WITH BACKUP RING
PVC BUTTERFLY VALVE
CLEANOUT WYE

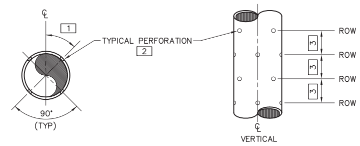
CLEANOUT ACCESS PORT (TYPE 2)

DETAIL 3 / –
SCALE: NTS



CONDENSATE DRAIN TRAP

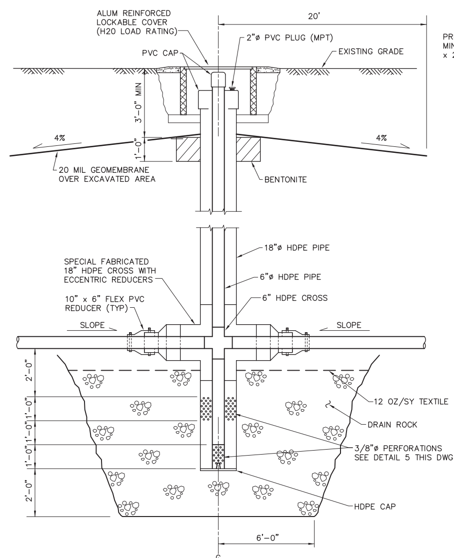
DETAIL 4 / –
SCALE: NTS



HDPE PERFORATION SCHEDULE				
PIPE DIA	ORIENTATION (FROM VERT ℄) 1		DIM 2	SPACING O.C. 3
	ROWS 1 & 3	ROWS 2 & 4		
6 IN	45°	90°	1/2" DIA	3 IN
18 IN	45°	90°	1/2" DIA	3 IN

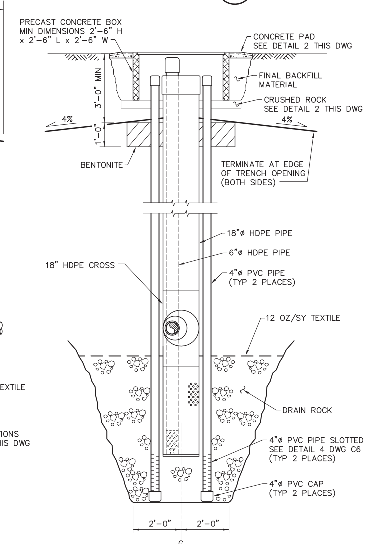
PERFORATED PIPE

DETAIL 5 / –
NO SCALE



ALUM REINFORCED LOCKABLE COVER (H20 LOAD RATING)
20'
PVC CAP
2"ø PVC PLUG (MPT)
EXISTING GRADE
4%
20 MIL GEOMEMBRANE OVER EXCAVATED AREA
BENTONITE
18"ø HDPE PIPE
SPECIAL FABRICATED 18" HDPE CROSS WITH ECCENTRIC REDUCERS
6"ø HDPE PIPE
10" x 6" FLEX PVC REDUCER (TYP)
6" HDPE CROSS
SLOPE
12 OZ/SY TEXTILE
DRAIN ROCK
3/8"ø PERFORATIONS SEE DETAIL 5 THIS DWG
HDPE CAP
6'-0"

SECTION A / –
SCALE: NTS



PRECAST CONCRETE BOX MIN DIMENSIONS 2'-6" H x 2'-6" L x 2'-6" W
CONCRETE PAD SEE DETAIL 2 THIS DWG
FINAL BACKFILL MATERIAL
CRUSHED ROCK SEE DETAIL 2 THIS DWG
4%
BENTONITE
TERMINATE AT EDGE OF TRENCH OPENING (BOTH SIDES)
18" HDPE CROSS
18"ø HDPE PIPE
6"ø HDPE PIPE
4"ø PVC PIPE (TYP 2 PLACES)
12 OZ/SY TEXTILE
DRAIN ROCK
4"ø PVC PIPE SLOTTED SEE DETAIL 4 DWG C6 (TYP 2 PLACES)
4"ø PVC CAP (TYP 2 PLACES)
2'-0"
2'-0"

SECTION B / –
SCALE: NTS

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NOTES:

1. ALL HDPE PIPE SHALL BE SDR 17.0 UNLESS NOTED OTHERWISE.
2. ALL PVC PIPE SHALL BE SCHEDULE 80 UNLESS NOTED OTHERWISE.

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	5/22/06
B	ISSUED FOR AGENCY REVIEW	6/06/06
C	ISSUED FOR BIDDING	6/29/06
D	RECORD DRAWING	10/31/08

SHEET TITLE: **GAS AND CONDENSATE CONVEYANCE PIPE DETAILS**

PROJECT TITLE: **LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL**

THE BOEING COMPANY

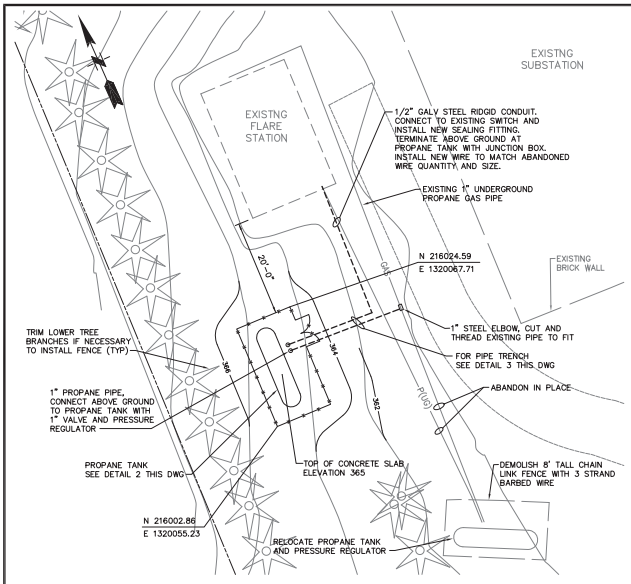
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.

PROJ. NO. 04206007.00 | DWN. BY: LEL | ACAD FILE: C8
DSN. BY: TAM | CHK. BY: TAM | APP. BY: EEC

DATE: MAY 2006

SCALE: AS SHOWN

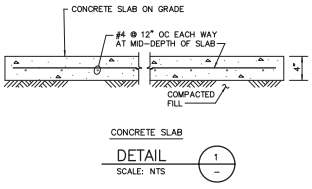
DRAWING NO. **C8**



FLARE STATION PROPANE TANK RELOCATION

PIPING PLAN

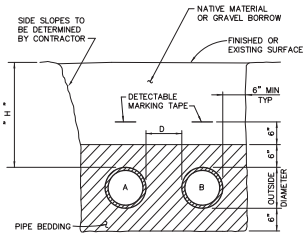
SCALE: 1" = 10'



CONCRETE SLAB

DETAIL 1

SCALE: NTS



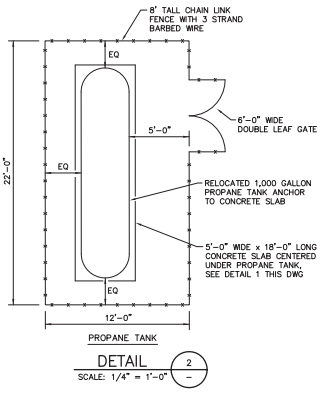
PIPE TRENCH – TYPE 2

DETAIL 3

NO SCALE

PIPE TYPE	MINIMUM BURIAL DEPTH "H" (FT)
PROPANE	2
ELECTRIC	2

PIPE A	PIPE B	MINIMUM SPACING "D" (FT)
PROPANE	ELECTRIC	2



DETAIL 2

SCALE: 1/4" = 1'-0"

RECORD DRAWING

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GRAPHIC SCALE:

1 0 5 10

1/4" = 1'-0"

10 0 10 20

1" = 10'

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	5/22/06
B	ISSUED FOR PERMITTING	6/29/06
C	RECORD DRAWING	10/31/08

SHEET TITLE: PROPANE TANK RELOCATION PLAN AND DETAILS

PROJECT TITLE: LANDFILL GAS CONTROL SYSTEM MODIFICATIONS EASTGATE LANDFILL

THE BOEING COMPANY

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC.

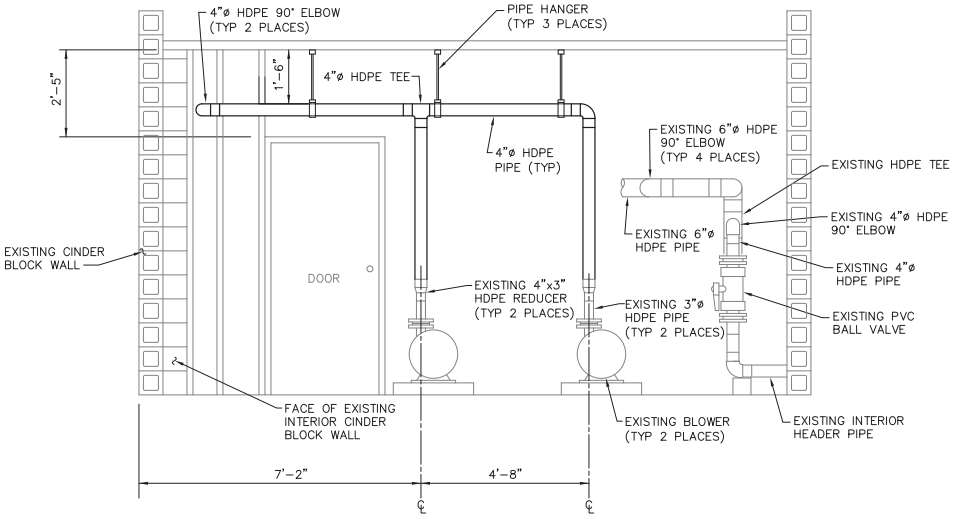
PROJ. NO. 04206007.00 | DSN. BY: LEL | CAD FILE: C9
DSN. BY: TAM | APP. BY: EEC
CHK. BY: JEH
DBL. BY:

DATE: MAY 2006

SCALE: AS SHOWN

DRAWING NO. C9

Exhibit 3



NOTE: INLET PIPES TO BLOWER NOT SHOWN.

NO. | REVISION | DATE
- | ISSUED FOR REVIEW | 05-04-11
- | ISSUED FOR CONSTRUCTION | 09-04-11

SHEET TITLE: ELEVATION VIEW INSIDE

PROJECT TITLE: FLARE STATION UPGRADE
EASTGATE LANDFILL

CITY OF BELLEVUE

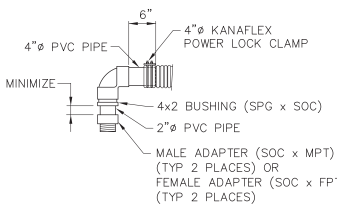
SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4800 FAX: (425) 746-8747

PROJECT NO. 04210015.00 | DRAWN BY: UEL | ASSISTANT: CHZ
DESIGNED BY: EMS | CHECKED BY: TAM | APPROVED BY: JMR

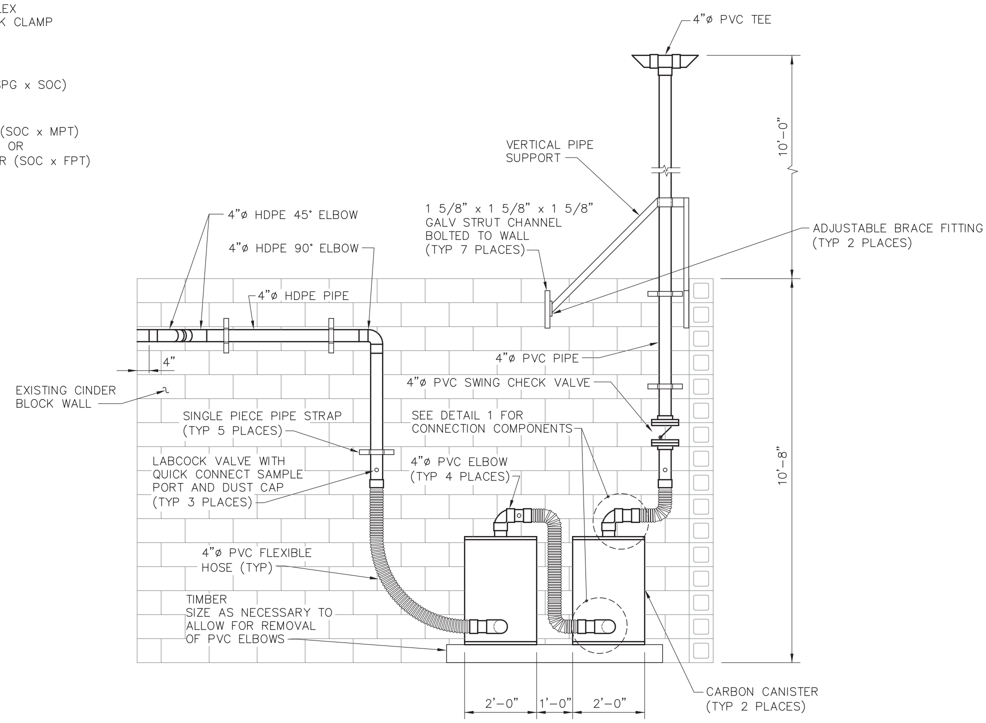
DATE: SEPTEMBER 2011

SCALE: 3/4" = 1'-0" (22X34 SHEET)

DRAWING NO.
C1



DETAIL 1
NO SCALE


4"ø PVC TEE
VERTICAL PIPE SUPPORT
1 5/8" x 1 5/8" x 1 5/8" GALV STRUT CHANNEL BOLTED TO WALL (TYP 7 PLACES)
ADJUSTABLE BRACE FITTING (TYP 2 PLACES)
10'-0"
10'-8"
4"ø HDPE 45° ELBOW
4"ø HDPE 90° ELBOW
4"ø HDPE PIPE
4"
EXISTING CINDER BLOCK WALL
4"ø PVC PIPE
4"ø PVC SWING CHECK VALVE
SINGLE PIECE PIPE STRAP (TYP 5 PLACES)
SEE DETAIL 1 FOR CONNECTION COMPONENTS
LABCOCK VALVE WITH QUICK CONNECT SAMPLE PORT AND DUST CAP (TYP 3 PLACES)
4"ø PVC ELBOW (TYP 4 PLACES)
4"ø PVC FLEXIBLE HOSE (TYP)
TIMBER SIZE AS NECESSARY TO ALLOW FOR REMOVAL OF PVC ELBOWS
2'-0"
1'-0"
2'-0"
CARBON CANISTER (TYP 2 PLACES)

ERIC MORGAN SONSTHAGEN, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER 44817
9/21/11

NO.	REVISION	DATE
A	ISSUED FOR REVIEW	09-28-10
0	ISSUED FOR CONSTRUCTION	09-21-11

SHEET TITLE: ELEVATION VIEW OUTSIDE

PROJECT TITLE: FLARE STATION UPGRADE EASTGATE LANDFILL

CITY OF BELLEVUE

SCS ENGINEERS
Environmental Consultants and Contractors
2405 140th Avenue NE, Suite 107
Bellevue, Washington 98005
(425) 746-4600 FAX: (425) 746-6747

PROJ. NO. 04210016.00 | DWN. BY: LEL | ACAD FILE: C1-2
DSN. BY: EMS | CHK. BY: TAM | APP. BY: JMR

DATE: SEPTEMBER 2011

SCALE: 3/4" = 1'-0" (22x34 SHEET)

DRAWING NO.
C2

Exhibit 4

EXHIBIT "B"
BOEING CAMPUS–PROPERTY INCLUDING NE PARKING LOT

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 11, TOWNSHIP 24 NORTH, RANGE 5 EAST OF THE WILLAMETTE MERIDIAN IN KING COUNTY WASHINGTON, DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 11; THENCE ALONG THE SOUTH LINE THEREOF SOUTH 88°37'24" EAST 287.87 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID SOUTH LINE SOUTH 88°37'24" EAST 377.97 FEET TO THE SOUTHEAST CORNER OF SAID SUBDIVISION; THENCE ALONG THE EAST LINE THEREOF NORTH 1°28'15" EAST 116.64 FEET; THENCE LEAVING SAID EAST LINE NORTH 65°58'27" EAST 276.97 FEET TO A POINT BEING 250.00 FEET EASTERLY OF, AS MEASURED AT RIGHT ANGLES TO, THE WEST LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 11, AND ALSO BEING 430.00 FEET SOUTHERLY OF, AS MEASURED AT RIGHT ANGLES TO, THE NORTH LINE OF THE SAME SUBDIVISION;
THENCE PARALLEL WITH SAID WEST LINE NORTH 1°28'15" EAST 430.00 FEET TO THE NORTH LINE OF SAID SUBDIVISION; THENCE ALONG SAID NORTH LINE SOUTH 88°37'01" EAST 416.40 FEET TO THE NORTHEAST CORNER THEREOF; THENCE ALONG THE EASTERLY PROLONGATION OF SAID NORTH LINE SOUTH 88°37'01" EAST 83.37 FEET; THENCE SOUTH 2°28'22" WEST 10.94 FEET; THENCE SOUTH 5°53'15" WEST 10.98 FEET; THENCE SOUTH 2°47'53" WEST 83.50 FEET TO A POINT OF CURVATURE OF A 175.35 FOOT RADIUS CURVE TO THE RIGHT; THENCE SOUTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 32°10'44", SUBTENDED BY AN ARC LENGTH OF 98.48 FEET TO A POINT OF TANGENCY; THENCE SOUTH 34°58'37" WEST 20.50 FEET; THENCE PERPENDICULAR SOUTH 55°01'23" EAST 46.05 FEET; THENCE SOUTH 35°12'43" WEST 519.07 FEET TO A POINT OF CURVATURE OF A 444.00 FOOT RADIUS CURVE TO THE LEFT; THENCE SOUTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 47°15'00", SUBTENDED BY AN ARC LENGTH OF 366.15 FEET TO A POINT OF TANGENCY; THENCE SOUTH 12°02'17" EAST 170.41 FEET; THENCE SOUTH 15°50'46" WEST 85.48 FEET; THENCE SOUTH 35°17'26" WEST 56.30 FEET; THENCE NORTH 63°25'31" WEST 131.49 FEET TO A POINT OF CURVATURE OF A 200.00 FOOT RADIUS CURVE TO THE LEFT; THENCE NORTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 15°05'35", SUBTENDED BY AN ARC LENGTH OF 52.68 FEET TO A POINT OF REVERSE CURVATURE OF A 350.00 FOOT RADIUS CURVE TO THE RIGHT; THENCE NORTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 31°58'00", SUBTENDED BY AN ARC LENGTH OF 195.27 FEET TO A POINT OF TANGENCY; THENCE NORTH 46°33'07" WEST 135.06 FEET TO A POINT OF CURVATURE OF A 350.00 FOOT RADIUS CURVE TO THE LEFT; THENCE NORTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 52°14'18", SUBTENDED BY AN ARC LENGTH OF 319.11 FEET; THENCE NORTH 49°30'25" WEST 25.31 FEET TO A POINT BEING 287.87 FEET EASTERLY OF, AS MEASURED AT RIGHT ANGLES TO, THE WEST LINE OF THE NORTHEAST QUARTER OF SECTION 11; THENCE PARALLEL WITH SAID WEST LINE NORTH 1°25'22" EAST 304.00 FEET TO THE TRUE POINT OF BEGINNING, AND THERE ENDING, ALL IN KING COUNTY, WASHINGTON.
CONTAINING 677,989 SQUARE FEET OR 15.56 ACRES.

EXHIBIT "B-1" BOEING CAMPUS–PROPERTY EXCLUDING NE PARKING LOT

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 11, TOWNSHIP 24 NORTH, RANGE 5 EAST OF THE WILLAMETTE MERIDIAN IN KING COUNTY WASHINGTON, DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 11;
THENCE ALONG THE SOUTH LINE THEREOF SOUTH 88°37'24" EAST 287.87 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID SOUTH LINE SOUTH 88°37'24" EAST 377.97 FEET TO THE SOUTHEAST CORNER OF SAID SUBDIVISION; THENCE ALONG THE EAST LINE THEREOF NORTH 1°28'15" EAST 116.64 FEET; THENCE LEAVING SAID EAST LINE NORTH 65°58'27" EAST 276.97 FEET TO A POINT BEING 250.00 FEET EASTERLY OF, AS MEASURED AT RIGHT ANGLES TO, THE WEST LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 11, AND ALSO BEING 430.00 FEET SOUTHERLY OF, AS MEASURED AT RIGHT ANGLES TO, THE NORTH LINE OF THE SAME SUBDIVISION; THENCE PARALLEL WITH SAID WEST LINE NORTH 1°28'15" EAST 430.00 FEET TO THE NORTH LINE OF SAID SUBDIVISION; THENCE ALONG SAID NORTH LINE SOUTH 88°37'01" EAST 416.40 FEET TO THE NORTHEAST CORNER THEREOF; THENCE ALONG THE EASTERLY PROLONGATION OF SAID NORTH LINE SOUTH 88°37'01" EAST 83.37 FEET; THENCE SOUTH 2°28'22" WEST 10.94 FEET; THENCE SOUTH 5°53'15" WEST 10.98 FEET; THENCE SOUTH 2°47'53" WEST 83.50 FEET TO A POINT OF CURVATURE OF A 175.35 FOOT RADIUS CURVE TO THE RIGHT; THENCE SOUTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 32°10'44", SUBTENDED BY AN ARC LENGTH OF 98.48 FEET TO A POINT OF TANGENCY; THENCE SOUTH 34°58'37" WEST 20.50 FEET; THENCE PERPENDICULAR NORTH 55°01'23" WEST 89.00 FEET; THENCE SOUTH 35°11'14" WEST 296.31 FEET; THENCE SOUTH 15°34'05" EAST 50.37 FEET; THENCE SOUTH 55°03'51" EAST 95.89 FEET; THENCE SOUTH 35°12'43" WEST 190.82 FEET TO A POINT OF CURVATURE OF A 444.00 FOOT RADIUS CURVE TO THE LEFT; THENCE SOUTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 47°15'00", SUBTENDED BY AN ARC LENGTH OF 366.15 FEET TO A POINT OF TANGENCY; THENCE SOUTH 12°02'17" EAST 170.41 FEET; THENCE SOUTH 15°50'46" WEST 85.48 FEET; THENCE SOUTH 35°17'26" WEST 56.30 FEET; THENCE NORTH 63°25'31" WEST 131.49 FEET TO A POINT OF CURVATURE OF A 200.00 FOOT RADIUS CURVE TO THE LEFT; THENCE NORTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 15°05'35", SUBTENDED BY AN ARC LENGTH OF 52.68 FEET TO A POINT OF REVERSE CURVATURE OF A 350.00 FOOT RADIUS CURVE TO THE RIGHT; THENCE NORTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 31°58'00", SUBTENDED BY AN ARC LENGTH OF 195.27 FEET TO A POINT OF TANGENCY; THENCE NORTH 46°33'07" WEST 135.06 FEET TO A POINT OF CURVATURE OF A 350.00 FOOT RADIUS CURVE TO THE LEFT; THENCE NORTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 52°14'18", SUBTENDED BY AN ARC LENGTH OF 319.11; THENCE NORTH 49°30'25" WEST 25.31 FEET TO A POINT BEING 287.87 FEET EASTERLY OF, AS MEASURED AT RIGHT ANGLES TO, THE WEST LINE OF THE NORTHEAST QUARTER OF SECTION 11; THENCE PARALLEL WITH SAID WEST LINE NORTH 1°25'22" EAST 304.00 FEET TO THE TRUE POINT OF BEGINNING, AND THERE ENDING, ALL IN KING COUNTY, WASHINGTON.
CONTAINING 634,303 SQUARE FEET OR 14.56 ACRES.

BASIS OF BEARING: WASHINGTON COORDINATE SYSTEM OF 1983, NORTH ZONE, NAD 83/91

SPECIAL EXCEPTIONS: SCHEDULE B
PER TRANSNATION TITLE INSURANCE ORDER NO. 800-10040051
FOURTH COMMITMENT, NOVEMBER 6, 2002 AMENDED

(1.) REAL ESTATE EXCISE TAX PURSUANT TO THE AUTHORITY OF RCW CHAPTER 82.45 AND SUBSEQUENT AMENDMENTS THERETO.
AS OF THE DATE HEREIN, THE TAX RATE FOR SAID PROPERTY IS 1.78%.
(AFFECTS PARCEL, NOT PLOTTABLE)

(A) UNPATENTED MINING CLAIMS; (B) RESERVATIONS OR EXCEPTIONS IN PATENTS OR IN ACTS AUTHORIZING THE ISSUANCE THEREOF; (C) INDIAN TREATY OR ABORIGINAL RIGHTS, INCLUDING, BUT NOT LIMITED TO, EASEMENTS OR EQUITABLE SERVITUDES; OR (D) WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT THE MATTERS EXCEPTED UNDER (A), (B), (C), OR (D) ARE SHOWN BY THE PUBLIC RECORDS.
(AFFECTS PARCEL, NOT PLOTTABLE)

TITLE TO ANY PROPERTY BEYOND THE LINES OF THE LAND EXPRESSLY DESCRIBED HEREIN, OR TITLE TO STREETS, ROADS, AVENUES, LANES, WAYS OR WATERWAYS ON WHICH SAID LAND ABUTS, OR THE RIGHT TO MAINTAIN VAULTS, TUNNELS, RAMPS OR ANY OTHER STRUCTURE OR IMPROVEMENT; OR ANY RIGHTS OR EASEMENTS THEREIN UNLESS SUCH PROPERTY RIGHTS OR EASEMENTS ARE EXPRESSLY AND SPECIFICALLY SET FORTH IN THE LAND DESCRIBED HEREIN.
(AFFECTS PARCEL, NOT PLOTTABLE)

(2.) GENERAL PROPERTY TAXES AND SERVICE CHARGES, AS FOLLOWS, TOGETHER WITH INTEREST, PENALTY AND STATUTORY FORECLOSURE COSTS, IF ANY, AFTER DELINQUENCY: (1ST HALF DELINQUENT ON MAY 1; 2ND HALF DELINQUENT ON NOVEMBER 1)

TAX ACCT. NO.	YEAR	BILLED	PAID	BALANCE
112405-9004-01	2002	$875,741.98	$437,870.99	$437,870.99

TOTAL AMOUNT DUE, NOT INCLUDING INTEREST AND PENALTY: $875,741.98 LEVY CODE: 0730
ASSESSED VALUE LAND: $28,671,600.00 ASSESSED VALUE IMPROVEMENTS: $69,328,400.00
(AFFECTS PARCEL, NOT PLOTTABLE)

(3.) NOTICE OF TAP OR CONNECTION CHARGES WHICH HAVE BEEN OR WILL BE DUE IN CONNECTION WITH DEVELOPMENT OR RE-DEVELOPMENT OF THE LAND AS DISCLOSED BY RECORDED INSTRUMENT. INQUIRIES REGARDING THE SPECIFIC AMOUNT OF THE CHARGES SHOULD BE MADE TO THE CITY/COUNTY/AGENCY.
CITY/COUNTY/AGENCY: CITY OF BELLEVUE
RECORDED: NOVEMBER 9, 1977 RECORDING NO.: 7711090948
(AFFECTS PARCEL, NOT PLOTTABLE)

(4.) NOTICE OF CHARGES BY WATER, SEWER, AND STORM AND SURFACE WATER UTILITIES:
CITY/COUNTY/AGENCY: CITY OF BELLEVUE
RECORDED: DECEMBER 20, 1996 RECORDING NO.: 9612200938
(AFFECTS PARCEL, NOT PLOTTABLE)

(5.) EASEMENT AND THE TERMS AND CONDITIONS THEREOF:
PURPOSE: A TRUNK SEWER LINE SYSTEM AREA AFFECTED: AS DESCRIBED IN THE INSTRUMENT RECORDING NO.: 5570601
AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:
RECORDED: JULY 30, 1981 RECORDING NO.: 8107300655 REGARDING: CONSENT TO THE CROSSING OF A METRO EASEMENT WITH ELECTRIC SERVICE LINES.
(AFFECTS PARCEL, PLOTTED)

(6.) EASEMENT AND THE TERMS AND CONDITIONS THEREOF:
PURPOSE: UNDERGROUND ELECTRIC SYSTEM AREA AFFECTED: 10 FOOT STRIP, THE DESCRIPTION CONTAINED THEREIN IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION WITHIN THE PROPERTY HEREIN DESCRIBED RECORDING NO.: 8112110348
(DOES NOT AFFECT PARCEL, PLOTTED)

(7.) EASEMENT AND THE TERMS AND CONDITIONS THEREOF:
PURPOSE: STORM WATER DRAINAGE PIPELINES AREA AFFECTED: AS DESCRIBED THEREIN RECORDING NO.: 8112150228.
(AFFECTS PARCEL, PLOTTED)

(8.) EASEMENT AND THE TERMS AND CONDITIONS THEREOF:
PURPOSE: RECREATIONAL TRAIL AREA AFFECTED: AS DESCRIBED THEREIN RECORDING NO.: 8201210656
(AFFECTS PARCEL, PLOTTED)

(9.) EASEMENT AND THE TERMS AND CONDITIONS THEREOF:
PURPOSE: SANITARY SEWER INTERCEPTOR RECORDED: MAY 5, 1983 RECORDING NO.: 8305050458
(AFFECTS PARCEL, PLOTTED)

(10.) EASEMENT AND THE TERMS AND CONDITIONS THEREOF:
PURPOSE: WATER PIPELINES AREA AFFECTED: AS DESCRIBED THEREIN RECORDING NO.: 8201200548
(DOES NOT AFFECT PARCEL)

(11.) PREVIOUSLY DELETED

(12.) EASEMENT AND THE TERMS AND CONDITIONS THEREOF:
PURPOSE: SANITARY SEWER INTERCEPTOR AREA AFFECTED: AS DESCRIBED THEREIN RECORDING NO.: 8403050801
(AFFECTS PARCEL, PLOTTED)

(13.) EASEMENT AND THE TERMS AND CONDITIONS THEREOF:
PURPOSE: UNDERGROUND ELECTRIC SYSTEM RECORDED: JANUARY 23, 1989 RECORDING NO.: 8901230704
(AFFECTS PARCEL, PLOTTED)

(14.) EASEMENT AND THE TERMS AND CONDITIONS THEREOF:
PURPOSE: UTILITIES AREA AFFECTED: A PORTION OF SAID PREMISES ALONG THE SOUTH LINE OF THE PROPERTY TO BE CONVEYED RECORDING NO.: 8602120512
(AFFECTS PARCEL, PLOTTED)

(15.) ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS, OR OTHER SERVITUDES, IF ANY, DISCLOSED BY BOUNDARY LINE ADJUSTMENT NO. BLA 91-5283 AND RECORDED UNDER RECORDING NO. 9202149001.
RIGHTS OR BENEFITS, IF ANY, WHICH MAY BE DISCLOSED BY THE RECORDED DOCUMENT(S) ABOVE AFFECTING LAND OUTSIDE THE BOUNDARY DESCRIBED.
(AFFECTS PARCEL, PLOTTED)

(16.) COVENANTS, CONDITIONS AND RESTRICTIONS IMPOSED BY INSTRUMENT RECORDED ON MAY 13, 1980, UNDER RECORDING NO. 8005130448, AND AMENDED BY INSTRUMENT RECORDED UNDER RECORDING NOS. 8110150240 AND 8403220558, INCLUDING, BUT NOT LIMITED TO, LIABILITY FOR ASSESSMENTS LEVIED BY THE COMMUNITY ASSOCIATION, AND RIGHTS OR BENEFITS WHICH MAY BE DISCLOSED AFFECTING LAND OUTSIDE THE BOUNDARY DESCRIBED IN SCHEDULE A.
(MAY AFFECT PARCEL AND SOME ITEMS ARE PLOTTED)

(17.) AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:
RECORDED: AUGUST 28, 1981 RECORDING NO.: 8108280987 REGARDING: CONCOMITANT AGREEMENT
(MAY AFFECT PARCEL AND SOME ITEMS ARE PLOTTED)

(18.) AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:
RECORDED: MARCH 12, 1980 RECORDING NO.: 8003120648 REGARDING: CONCOMITANT ZONING.
(MAY AFFECT PARCEL AND SOME ITEMS ARE PLOTTED)

(19.) PREVIOUSLY DELETED

(20.) PREVIOUSLY DELETED

(21.) EXCEPTIONS AND RESERVATIONS CONTAINED IN DEED FROM WEYERHAEUSER TIMBER COMPANY, A WASHINGTON CORPORATION, RECORDED UNDER RECORDING NO. 1755257, WHEREBY THE FIRST PARTY EXPRESSLY SAVES, EXCEPTS AND RESERVES OUT OF THE GRANT HEREBY MADE UNTO ITSELF, ITS SUCCESSORS AND ASSIGNS FOREVER, ALL ORES AND MINERALS OF ANY NATURE WHATSOEVER IN OR UPON SAID LANDS, INCLUDING COAL, OIL AND GAS, TOGETHER WITH THE RIGHT TO ENTER UPON SAID LANDS FOR THE PURPOSE OF EXPLORING THE SAME FOR SUCH ORES AND MINERALS, AND FOR THE PURPOSE OF DRILLING, OPENING, DEVELOPING AND WORKING MINES AND WELLS THEREON, AND TAKING OUT AND REMOVING THEREFROM ALL SUCH ORES AND MINERALS, AND TO OCCUPY AND MAKE USE OF SO MUCH OF THE SURFACE OF SAID LAND AS MAY BE REASONABLY NECESSARY FOR SAID PURPOSE; PROVIDED THAT THE SECOND PARTY, THEIR HEIRS, REPRESENTATIVES, SUCCESSORS OR ASSIGNS SHALL BE PAID JUST AND REASONABLE COMPENSATION FOR ANY INJURY OR DAMAGE TO THE SURFACE OF SAID LAND, TO THE CROPS OR TO THE IMPROVEMENTS THEREON BY THE EXERCISE OF ANY RIGHTS HEREIN RESERVED; BUT PROVIDED FURTHER THAT THE EXERCISE OF SUCH RIGHT BY THE FIRST PARTY SHALL NOT BE POSTPONED OR DELAYED PENDING REASONABLE EFFORTS TO AGREE UPON OR HAVE DETERMINED SUCH JUST AND REASONABLE COMPENSATION. COVERS NORTHEASTERLY PORTION OF PROPERTY HEREIN DESCRIBED.
(AFFECTS PARCEL, NOT PLOTTABLE)

(22.) AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:
RECORDED: SEPTEMBER 11, 1957 RECORDING NO.: 4832212 REGARDING: SEWER SERVICE
(AFFECTS PARCEL, PLOTTED)

(23.) CITY OF BELLEVUE RESOLUTION NO. 3773, DATED JUNE 4, 1981 IMPOSED BY INSTRUMENT RECORDED ON JANUARY 13, 1982, UNDER RECORDING NO. 8201130375.
(AFFECTS PARCEL, NOT PLOTTABLE)

(24.) TERMS AND CONDITIONS OF CITY OF BELLEVUE COMPREHENSIVE DEVELOPMENT PLAN IMPOSED BY INSTRUMENT RECORDED ON NOVEMBER 5, 1984, UNDER RECORDING NO. 8411050290.
(AFFECTS PARCEL, NOT PLOTTABLE)

(25.) NOTICE IMPOSED BY INSTRUMENT RECORDED ON APRIL 25, 1985, UNDER RECORDING NO. 8504250469.
(AFFECTS PARCEL, NOT PLOTTABLE)

(26.) NOTICE IMPOSED BY INSTRUMENT RECORDED ON JANUARY 17, 1986, UNDER RECORDING NO. 8601170846.
(AFFECTS PARCEL, NOT PLOTTABLE)

(27.) ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY, DISCLOSED BY THE SURVEY RECORDED UNDER RECORDING NO. 8501039003.
(AFFECTS PARCEL, PLOTTED)

(28.) ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY, DISCLOSED BY THE SURVEY RECORDED UNDER RECORDING NO. 20000804900002.
(AFFECTS PARCEL, PLOTTED)

(29.) ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY, DISCLOSED BY THE SURVEY RECORDED UNDER RECORDING NO. 20001107900003.
(AFFECTS PARCEL, PLOTTED)

(30.) PREVIOUSLY DELETED

LEGEND

METHANE MONITOR WELL
METHANE EXTRACTION WELL
METHANE BORING WELL
METHANE CONDENSATE TRAP
METHANE CLEANOUT
HYDRANT
WATER VALVE
WATER METER
SPRINKLER HEAD
SPRINKLER VALVE
DOWN SPOUT
STAND PIPE
CATCH BASIN
STORM DRAIN MANHOLE
CULVERT
ELECTRIC MANHOLE
UTILITY POLE
POWER VAULT
JUNCTION BOX
YARD LIGHT
STREET LIGHT W/ POLE
DUAL LIGHT W/ POLE
TELEPHONE MANHOLE
TELEPHONE RISER
ROCKERY
SIGN
PK NAIL
IRON PIPE
FOUND MONUMENT IN CASE
DECIDUOUS TREE

LINETYPES

WOOD FENCE
VEGETATION LINE
EXISTING BOUNDARY LINE
MIGRATION PIPELINE
EDGE OF WATER
UGP — UNDERGROUND POWER
UGT — UNDERGROUND TELEPHONE
SD — STORM DRAIN W/FLOW ARROWS
SS — SANITARY SEWER
CW — WATER LINE
CALCULATED CITY OF BELLEVUE PROPERTY LINE

NOTES

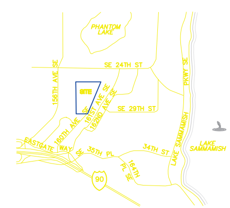
BASIS OF BEARING: WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83(91)

THIS SURVEY COMPLIES WITH ALL STANDARDS AND GUIDELINES OF THE SURVEY RECORDING ACT AS PER CHAPTER 58.09 RCW AND CHAPTER 332-130 WAC.

ALL MONUMENTS VISITED DURING OCTOBER 2002, UNLESS OTHERWISE NOTED.
EQUIPMENT: THE PRIMARY MEASUREMENT EQUIPMENT UTILIZED IN THE PERFORMANCE OF THIS SURVEY WAS A SOKKIA 3100 TOTAL STATION, SN# 19802.
ALL PRIMARY MEASUREMENT EQUIPMENT UTILIZED HAS BEEN COMPARED TO AND ADJUSTED AGAINST A NATIONAL GEODETIC SURVEY CALIBRATED BASELINE WITHIN THE PAST ONE YEAR.

TO THE CITY OF BELLEVUE,
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE (i)IN ACCORDANCE WITH "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND ADOPTED BY ALTA, ACSM AND NSPS IN 1999, (ii)PURSUANT TO THE ACCURACY STANDARDS (AS ADOPTED BY ALTA AND ACSM AND IN EFFECT ON THE DATE OF THIS CERTIFICATION) OF AN URBAN SURVEY.

DATE: 11/05/2002



VICINITY MAP : NOT TO SCALE

SYM	REVISION	BY	APPROVED	DATE	SYM	REVISION	BY	APPROVED	DATE
	REVISION 1	SDO		10/02/2002					
	REVISION 2	SDO		10/07/2002					
	REVISION 3	SDO		10/29/2002					
	SUPPLEMENTAL NO. 2 TO FOURTH TITLE COMMITMENT NO.10040051	SDO		11/04/2002					

DUANE HARTMAN & ASSOCIATES, INC.
Surveyors
16928 WOODINVILLE-REDMOND ROAD, B-107
WOODINVILLE, WASHINGTON 98072
(425) 483-5355
FAX (425) 483-4650

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

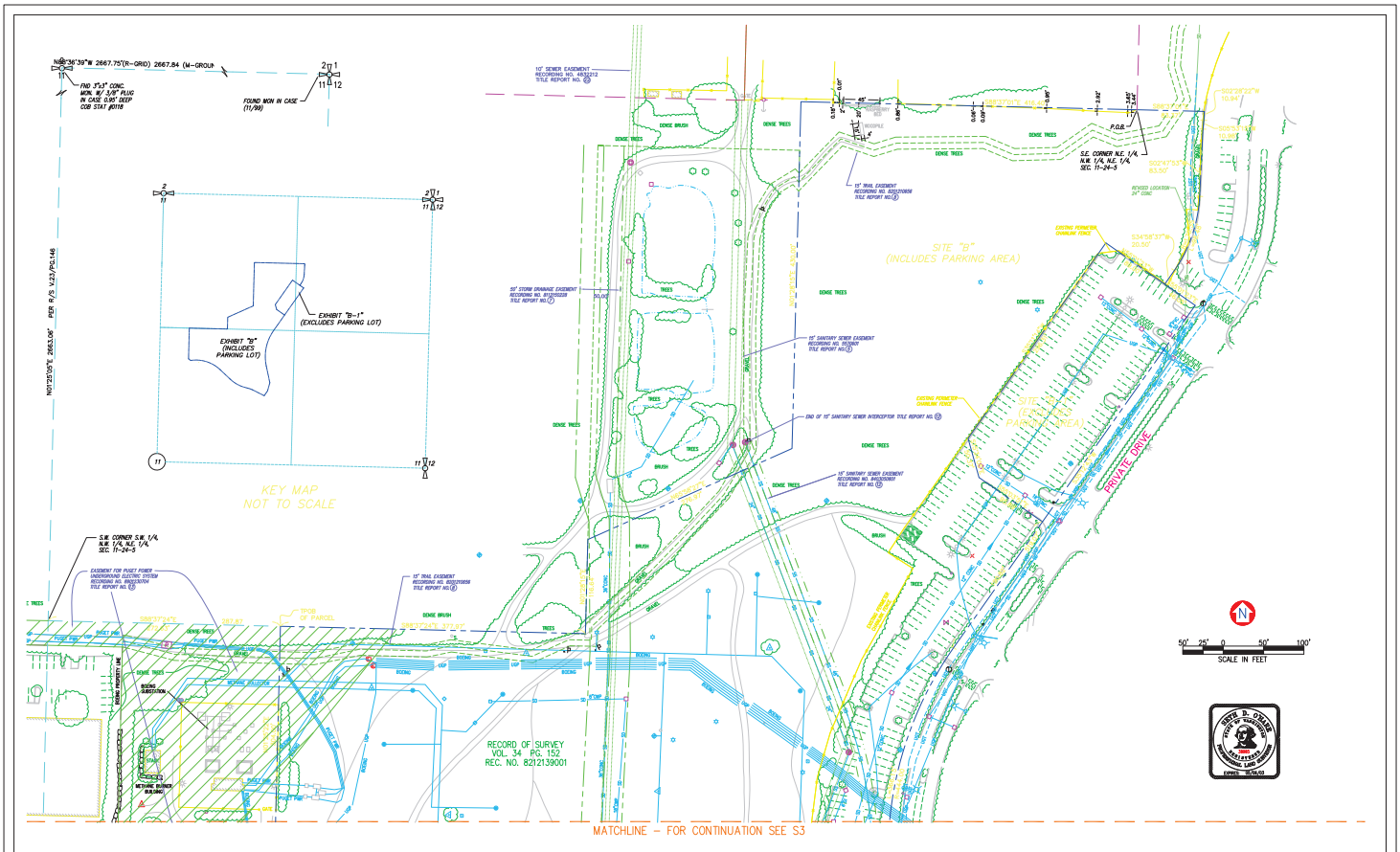
APPROVED BY	DEPT.	DATE

DRAWN BY GRB	DATE 08/14/02
CHECKED SDO	09/30/02
ENGR.	
CHECKED	
APPROVED	
APPROVED	

SUBTITLE: ALTA SURVEY
TITLE: BELLEVUE/I-90 BUSINESS PARK
BOEING FOCUS AREA PARCEL
BELLEVUE WASHINGTON

LAST REVISION	SYMBOL	DATE
SHEET S1		1 OF 3

JOB NO. 02-371
DWG. NO. 02-371FINAL.DWG



SYM	REVISION	BY	APPROVED	DATE	SYM	REVISION	BY	APPROVED	DATE
	REVISION 1	SDO		10/02/2002					
	REVISION 2	SDO		10/07/2002					
	REVISION 3	SDO		10/29/2002					
	SUPPLEMENTAL NO. 2 TO FOURTH TITLE COMMITMENT NO.1004051	SDO		11/04/2002					

DUANE HARTMAN & ASSOCIATES, INC.
Surveyors
16908 WOODINVILLE-REDMOND ROAD, B-107
WOODINVILLE, WASHINGTON 98072
(425) 483-5355
FAX (425) 483-4650

ACCEPTABILITY
THIS DESIGN, MAP, OR SPECIFICATION IS APPROVED

APPROVED BY	DEPT.	DATE

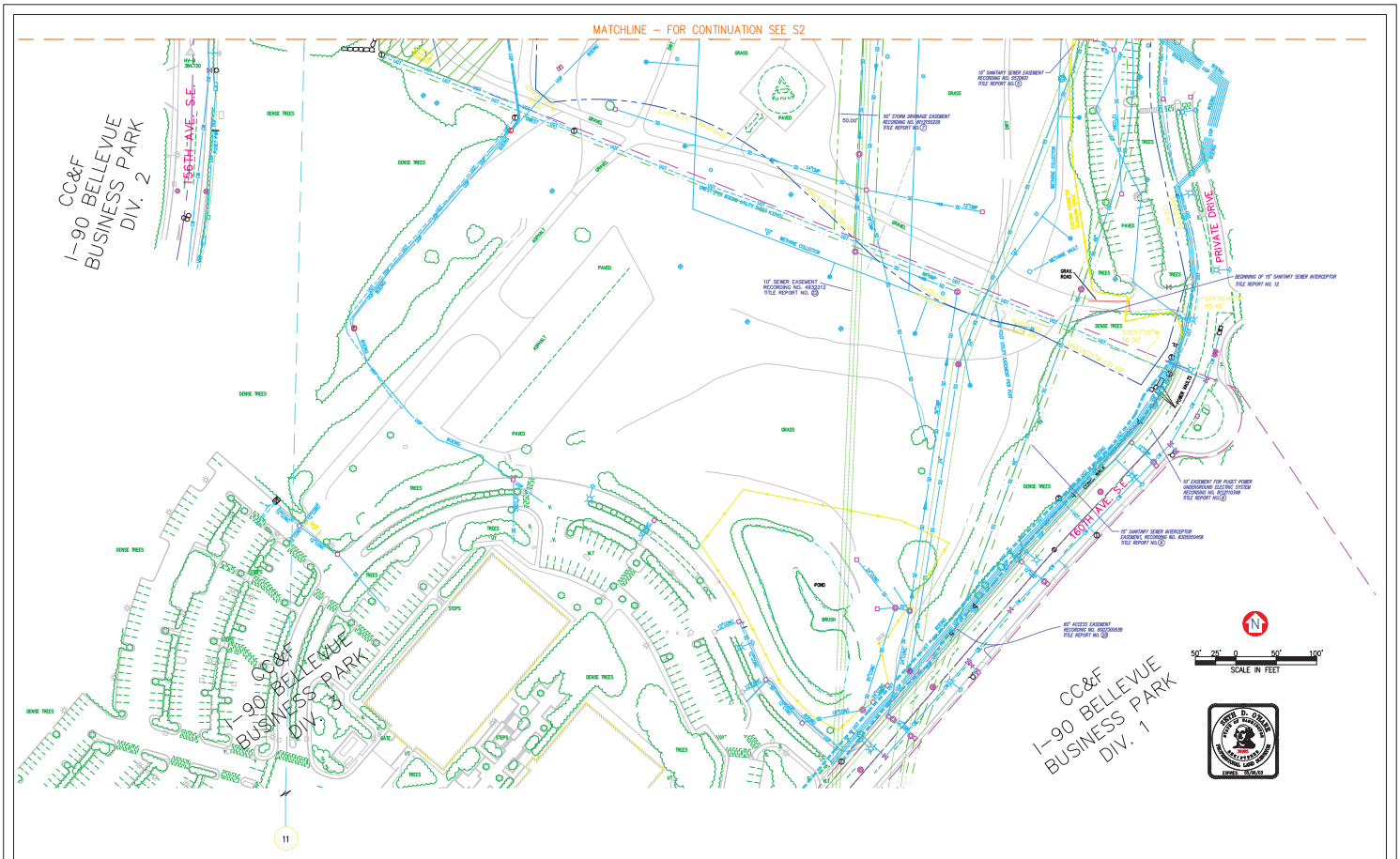
DRAWN BY	SDO	09/14/02
CHECKED	SDO	09/30/02
CHK'R		
CHECKED		
APPROVED		
APPROVED		

SUBTITLE: ALTA SURVEY

TITLE: BELLEVUE/I-90 BUSINESS PARK
BOEING FOCUS AREA PARCEL

BELLEVUE WASHINGTON

LAST REVISION	
SHEET	S2
SYMBOL	2
OF	3
DATE	
JOB NO.	02-371
DWG. NO.	02-371FINAL.DWG



SYM	REVISION	BY	APPROVED	DATE	SYM	REVISION	BY	APPROVED	DATE
	REVISION 1	SDO		10/02/2002					
	REVISION 2	SDO		10/07/2002					
	REVISION 3	SDO		10/29/2002					
	SUPPLEMENTAL NO. 2 TO FOURTH TITLE COMMITMENT NO.1004055	SDO		11/04/2002					

DUANE HARTMAN & ASSOCIATES, INC.
Surveyors
16926 WOODINVILLE-REDMOND ROAD, B-107
WOODINVILLE, WASHINGTON 98072
(425) 483-5355
FAX (425) 483-4650

ACCEPTABILITY			DRAWN BY	DATE
THIS DESIGN AND/OR SPECIFICATION IS APPROVED			GRB	08/14/02
			CHECKED	09/30/02
APPROVED BY	DEPT.	DATE	SDO	
			CHECKED	
			APPROVED	
			APPROVED	

SUBTITLE: ALTA SURVEY

TITLE: BELLEVUE/I-90 BUSINESS PARK
BOEING FOCUS AREA PARCEL

BELLEVUE WASHINGTON

LAST REVISION	SYMBOL	DATE
SHEET	S3	1 OF 3
JOB NO.	02-371	
DWG. NO.	02-371FINAL.DWG	

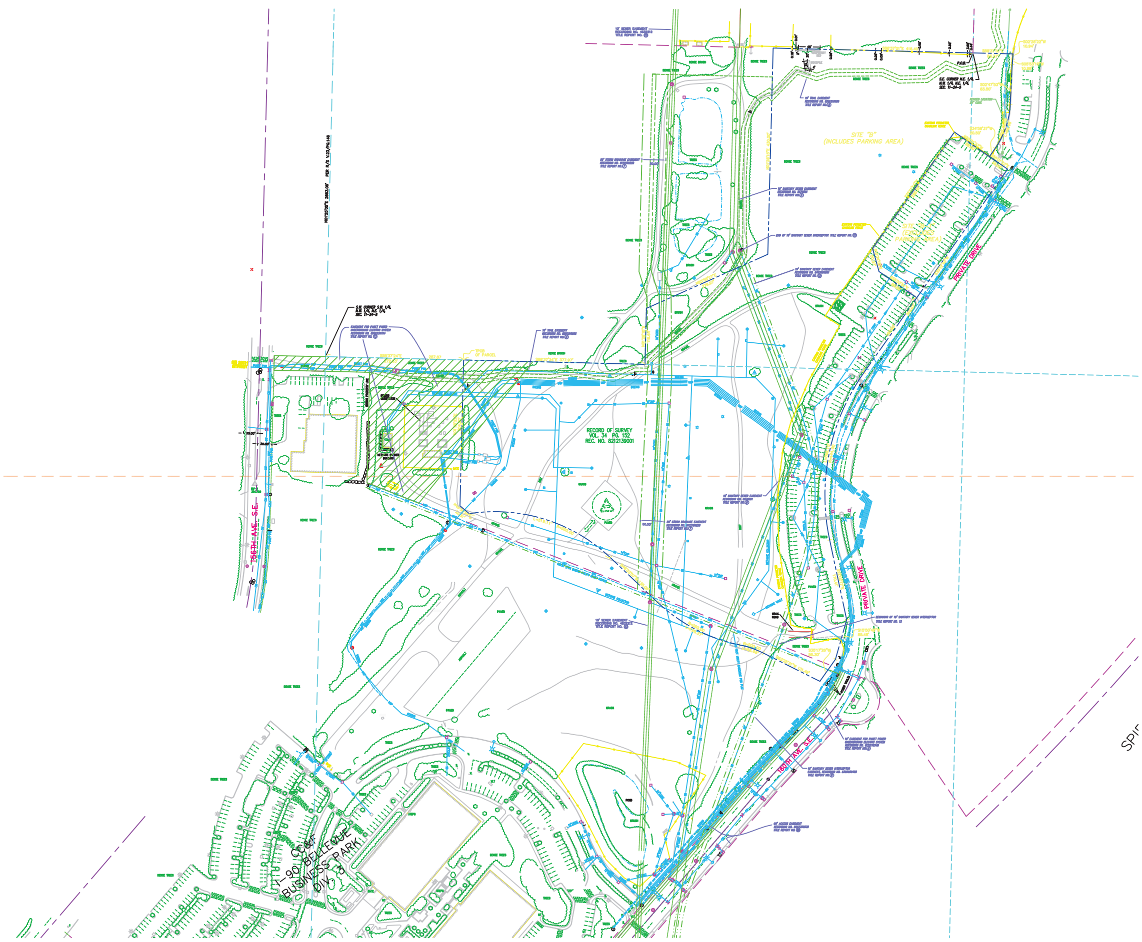
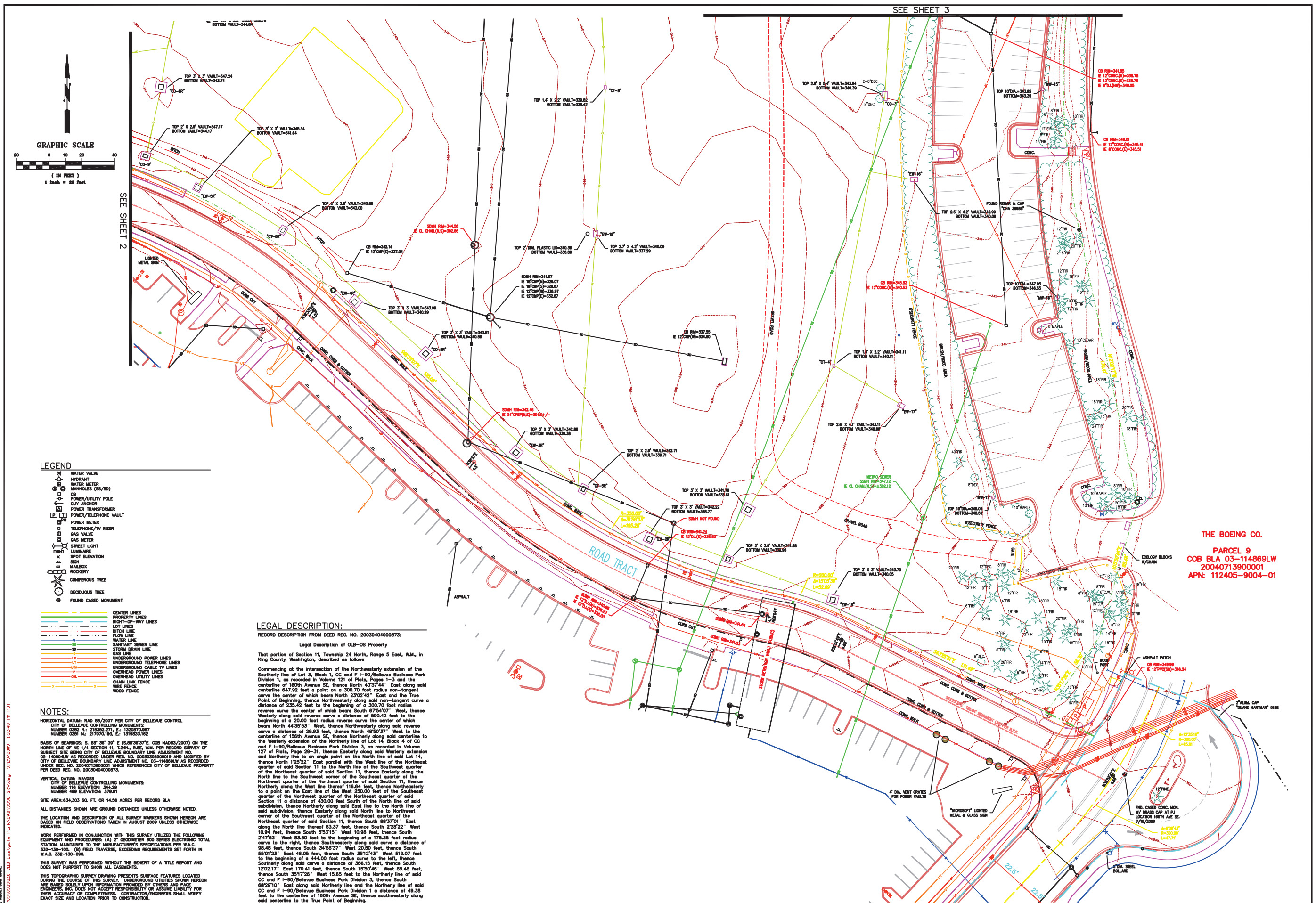

SITE "B"
(INCLUDES PARKING AREA)
RECORD OF SURVEY
VOL. 34 PG. 152
REC. NO. 8212139001
PRIVATE DRIVE
CC&F
I-90 BELLEVUE
BUSINESS PARK
DIV. 3

Exhibit 5



LEGAL DESCRIPTION:

RECORD DESCRIPTION FROM DEED REC. NO. 20030404000873:

Legal Description of OLB-OS Property

That portion of Section 11, Township 24 North, Range 5 East, W.M., in King County, Washington, described as follows

Commencing at the intersection of the Northwesterly extension of the Southerly line of Lot 3, Block 1, CC and F I-90/Bellevue Business Park Division 1, as recorded in Volume 121 of Plats, Pages 1-3 and the centerline of 160th Avenue SE, thence North 40°37'44" East along said centerline 647.92 feet a point on a 300.70 foot radius non-tangent curve the center of which bears North 23°02'42" East and the True Point of Beginning, thence Northwesterly along said non-tangent curve a distance of 235.42 feet to the beginning of a 300.70 foot radius reverse curve the center of which bears South 67°54'07" West, thence Westerly along said reverse curve a distance of 590.42 feet to the beginning of a 20.00 foot radius reverse curve the center of which bears North 44°35'53" West, thence Northwesterly along said reverse curve a distance of 29.93 feet, thence North 48°50'37" West to the centerline of 156th Avenue SE, thence Northerly along said centerline to the Westerly extension of the Northerly line of Lot 14, Block 4 of CC and F I-90/Bellevue Business Park Division 3, as recorded in Volume 127 of Plats, Page 29-31, thence Easterly along said Westerly extension and Northerly line to an angle point on the North line of said Lot 14, thence North 1°25'22" East parallel with the West line of the Northeast quarter of said Section 11 to the North line of the Southwest quarter of the Northeast quarter of said Section 11, thence Easterly along the North line to the Southwest corner of the Southeast quarter of the Northwest quarter of the Northeast quarter of said Section 11, thence Northerly along the West line thereof 116.64 feet, thence Northeasterly to a point on the East line of the West 250.00 feet of the Southeast quarter of the Northwest quarter of the Northeast quarter of said Section 11 a distance of 430.00 feet South of the North line of said subdivision, thence Northerly along said East line to the North line of said subdivision, thence Easterly along said North line to Northwest corner of the Southwest quarter of the Northeast quarter of the Northeast quarter of said Section 11, thence South 88°37'01" East along the North line thereof 83.37 feet, thence South 2°28'22" West 10.94 feet, thence South 5°53'15" West 10.98 feet, thence South 2°47'53" West 83.50 feet to the beginning of a 175.35 foot radius curve to the right, thence Southwesterly along said curve a distance of 98.48 feet, thence South 34°58'37" West 20.50 feet, thence South 55°01'23" East 46.05 feet, thence South 35°12'43" West 519.07 feet to the beginning of a 444.00 foot radius curve to the left, thence Southerly along said curve a distance of 366.15 feet, thence South 12°02.17" East 170.41 feet, thence South 15°50'46" West 85.48 feet, thence South 35°17'26" West 15.65 feet to the Northerly line of said CC and F I-90/Bellevue Business Park Division 3, thence South 68°29'10" East along said Northerly line and the Northerly line of said CC and F I-90/Bellevue Business Park Division 1 a distance of 49.38 feet to the centerline of 160th Avenue SE, thence southwesterly along said centerline to the True Point of Beginning.

NOTES:

HORIZONTAL DATUM: NAD 83/2007 PER CITY OF BELLEVUE CONTROL
CITY OF BELLEVUE CONTROLLING MONUMENTS:
NUMBER 0382 N.: 215352.271, E.: 1320870.967
NUMBER 0381 N.: 217070.193, E.: 1319833.162

BASIS OF BEARINGS: S. 88° 36' 39" E (S.88°36'37"E. COB NAD83/2007) ON THE NORTH LINE OF NE 1/4 SECTION 11, T.24N., R.5E, W.M. PER RECORD SURVEY OF SUBJECT SITE BEING CITY OF BELLEVUE BOUNDARY LINE ADJUSTMENT NO. 02-149004LW AS RECORDED UNDER REC. NO. 20030305900019 AND MODIFIED BY CITY OF BELLEVUE BOUNDARY LINE ADJUSTMENT NO. 03-114869LW AS RECORDED UNDER REC. NO. 20040713900001 WHICH REFERENCES CITY OF BELLEVUE PROPERTY PER DEED REC. NO. 20030404000873.

VERTICAL DATUM: NAVD88
CITY OF BELLEVUE CONTROLLING MONUMENTS:
NUMBER 116 ELEVATION: 344.29
NUMBER 499 ELEVATION: 379.61

SITE AREA:634,303 SQ. FT. OR 14.56 ACRES PER RECORD BLA

ALL DISTANCES SHOWN ARE GROUND DISTANCES UNLESS OTHERWISE NOTED.

THE LOCATION AND DESCRIPTION OF ALL SURVEY MARKERS SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS TAKEN IN AUGUST 2009 UNLESS OTHERWISE INDICATED.

WORK PERFORMED IN CONJUNCTION WITH THIS SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES: (A) 2" GEODIMETER 600 SERIES ELECTRONIC TOTAL STATION, MAINTAINED TO THE MANUFACTURER'S SPECIFICATIONS PER W.A.C. 332-130-100. (B) FIELD TRAVERSE, EXCEEDING REQUIREMENTS SET FORTH IN W.A.C. 332-130-090.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT PURPORT TO SHOW ALL EASEMENTS.

THIS TOPOGRAPHIC SURVEY DRAWING PRESENTS SURFACE FEATURES LOCATED DURING THE COURSE OF THIS SURVEY. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED SOLELY UPON INFORMATION PROVIDED BY OTHERS AND PACE ENGINEERS, INC. DOES NOT ACCEPT RESPONSIBILITY OR ASSUME LIABILITY FOR THEIR ACCURACY OR COMPLETENESS. CONTRACTOR/ENGINEERS SHALL VERIFY EXACT SIZE AND LOCATION PRIOR TO CONSTRUCTION.

CALL FOR LOCATE: UTILITY LOCATION SERVICE: 1-800-424-5555.

P:\P09\09398.10 COB Eastgate Park\CAD\9398-SRV.dwg 9/29/2009 1:32:48 PM PDT

CAD/CALC JD					
DRAWN DB					
XXX XXX	SYM	REVISION	DATE	BY	APP'D

PACE An Engineering Services Company
11255 Kirkland Way, Suite 300
Kirkland, WA 98033
p. 425.827.2014 | f. 425.827.5043
Civil | Structural | Planning | Survey
paceengrs.com

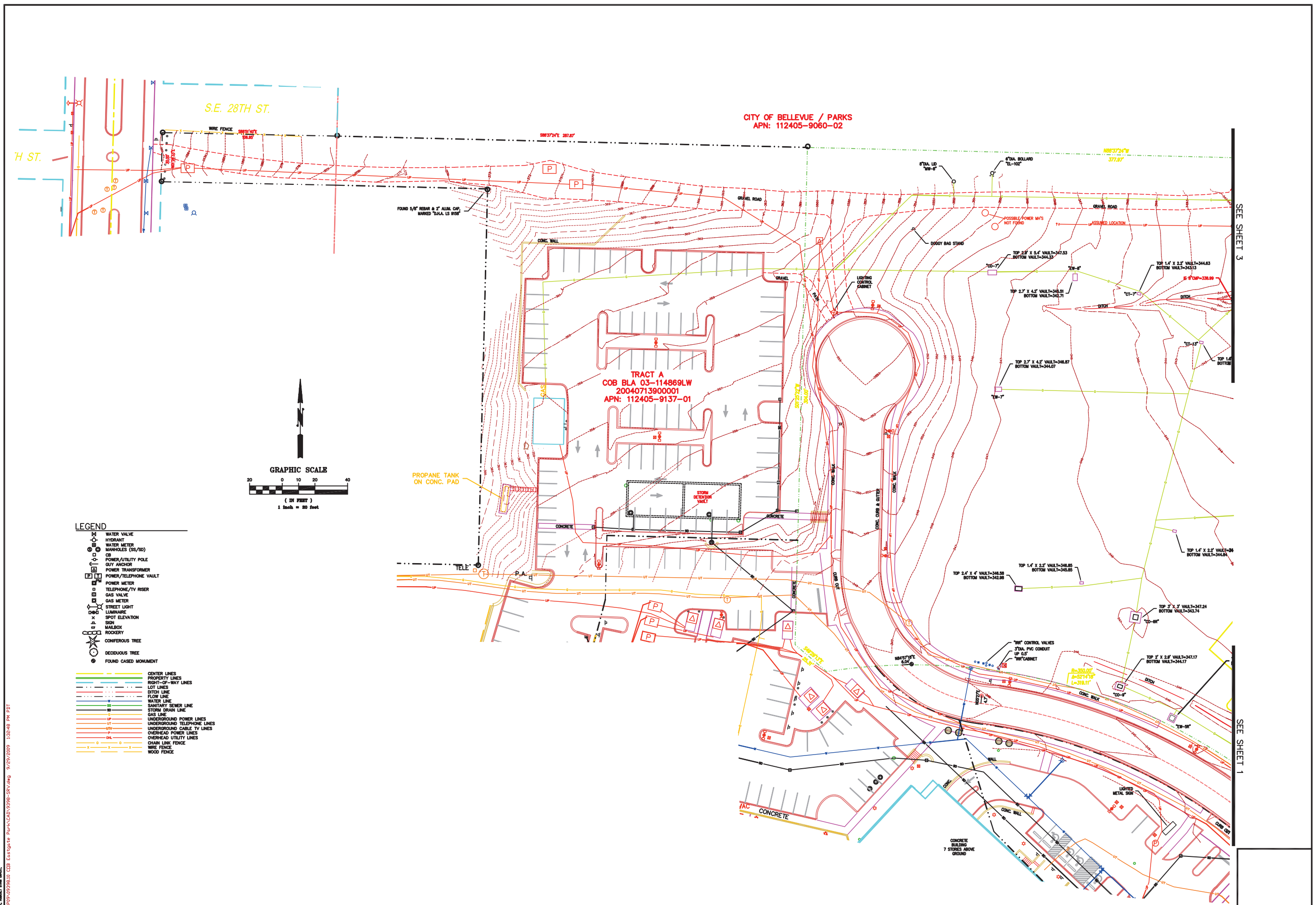
EASTGATE LANDFILL PARK

DATE	9/29/2009
SCALE	1" = 20'
SURVEY TEAM	GW/BD/DB
FIELD BOOK	611C, 611D
DWG FILE	9398-SRV.dwg

TOPOGRAPHIC SURVEY
FOR
CITY OF BELLEVUE
PARKS & COMMUNITY DEVELOPMENT DEPARTMENT

PROJECT NO. 09398.10

SHEET 1 OF 3



CAD/CALC XXX					
DRAWN XXX					
PLAT CHK XXX	SYM	REVISION	DATE	BY	APP'D

PACE
An Engineering Services Company
Civil | Structural | Planning | Survey
paceengrs.com

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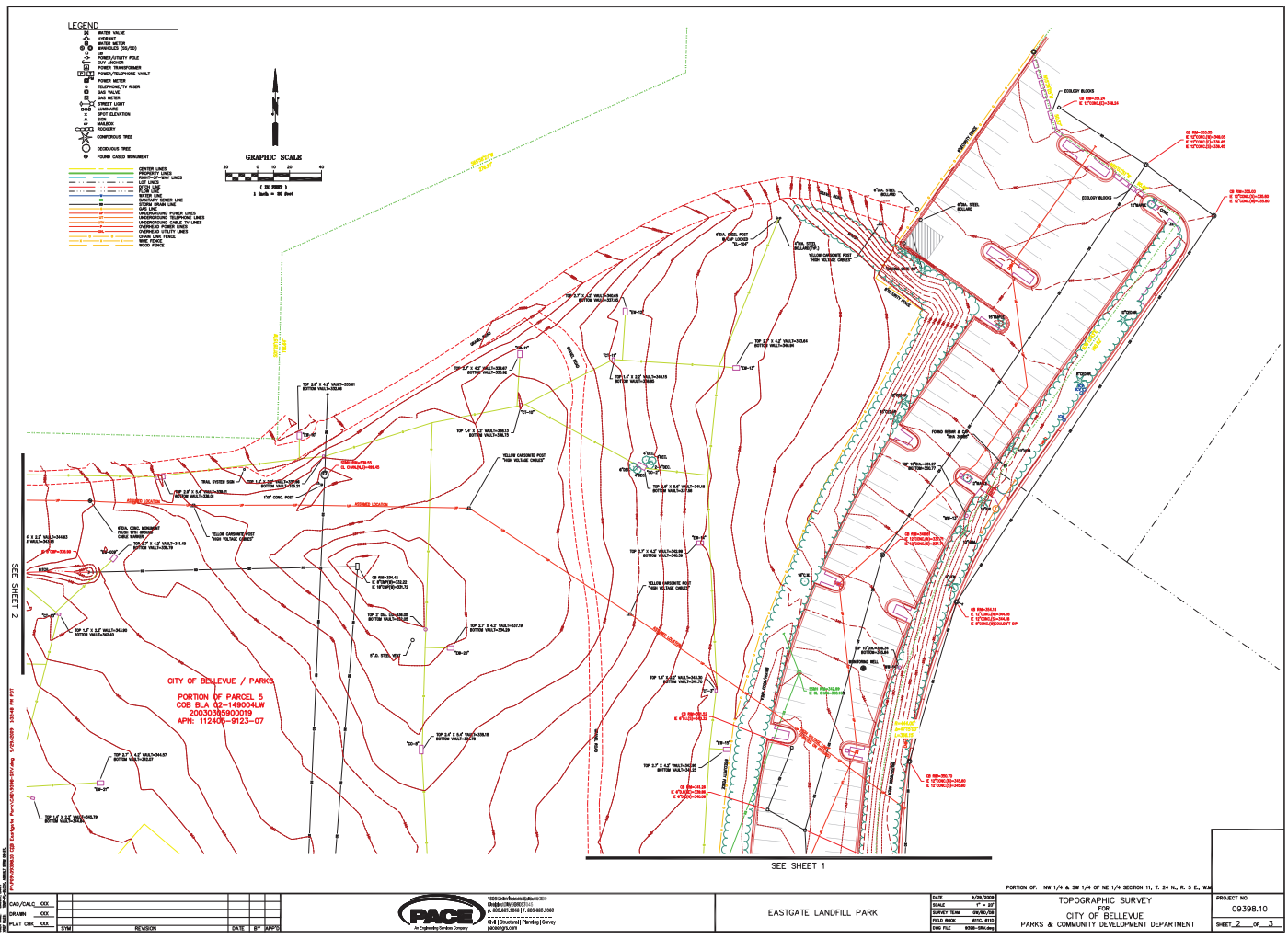
TOPOGRAPHIC SURVEY
FOR
CITY OF BELLEVUE
PARKS & COMMUNITY DEVELOPMENT DEPARTMENT

PROJECT NO. 09398.10

SHEET 2 OF 3



PORTION OF: NW 1/4 & SW 1/4 OF NE 1/4 SECTION 11, T. 24 N., R. 5 E., W.M.

CAD/CALC XXX
DRAWN XXX
PLAT CHK XXX

SYM	REVISION	DATE	BY	APP'D

PACE
An Engineering Services Company

EASTGATE LANDFILL PARK

DATE 9/29/2009
SCALE 1" = 20'
SURVEY TEAM RM/RK/DB
FIELD BOOK 615C, 611D
DWG FILE 8398-SRV.dwg

TOPOGRAPHIC SURVEY
FOR
CITY OF BELLEVUE
PARKS & COMMUNITY DEVELOPMENT DEPARTMENT

PROJECT NO. 09398.10
SHEET 2 OF 3

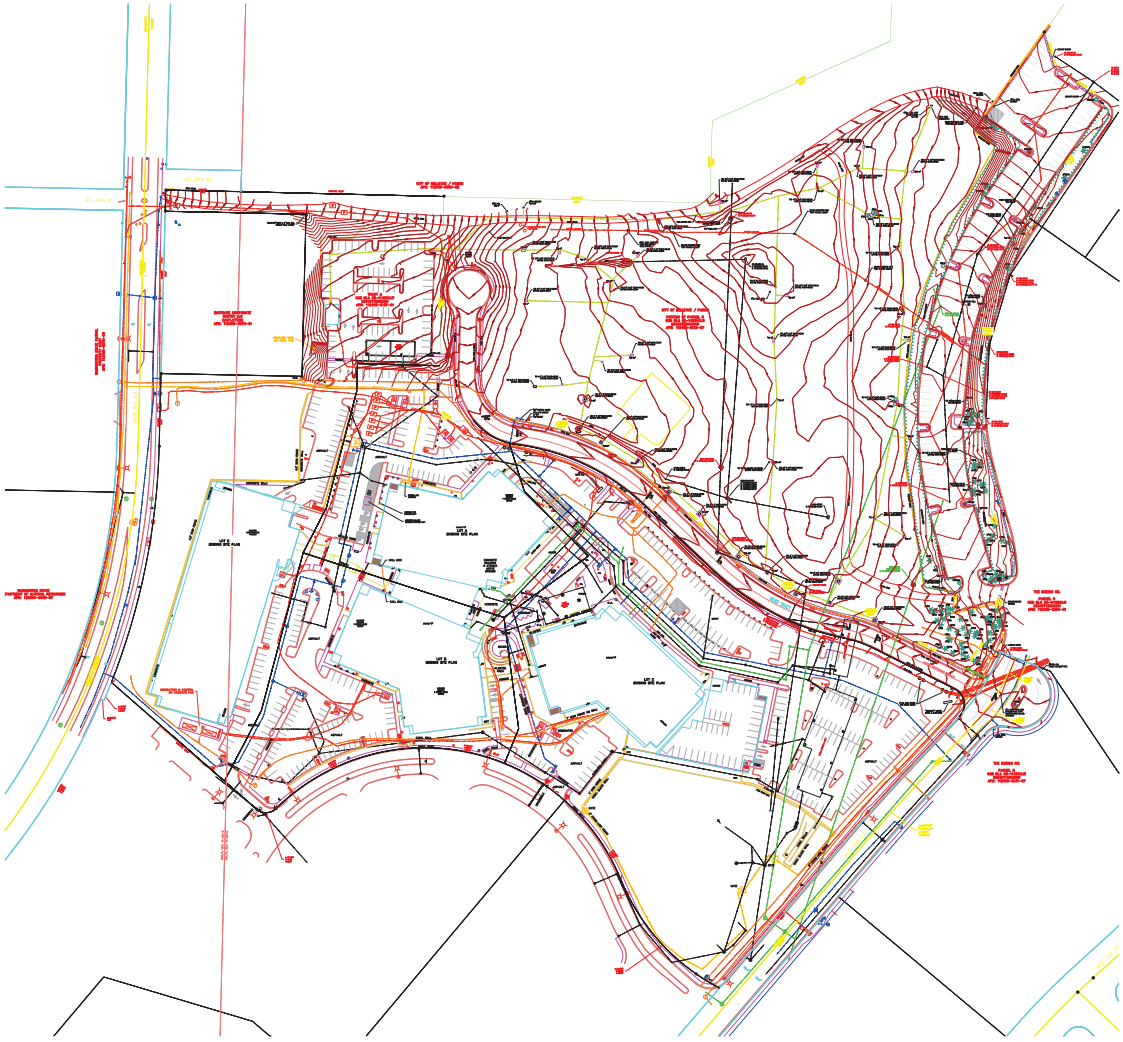


Exhibit 6

LEGEND:

- Existing Right of Way
- Existing Property Line
- S — Existing Sanitary Sewer Line
- D — Existing Storm Drainage Line
- W — Existing Water Line
- G — Existing Gas Line
- OHP — Overhead Power Line
- UGC — Underground Telecom Line
- G — Monitoring Well Gas Line

Survey Control: MON IN CASE, IRON ROD, PK NAIL
Power: UTILITY POLE, POWER VAULT
Sanitary Sewer: CLEAN OUT, SEWER MANHOLE
Telecommunications: TELEPHONE RISER, TELEPHONE VAULT
Storm Drainage: CATCH BASIN, DRAIN MANHOLE
Traffic Control: TRAFFIC SIGNAL, TRAFFIC CONTROLLER, STREET LIGHT, PACE LIGHT, JUNCTION BOX, STREET SIGN
Water: FIRE HYDRANT, WATER VALVE, WATER METER
Landscaping: CONIFER TREE, DECIDUOUS TREE
Gas: GAS VALVE, GAS METER
Groundwater Monitoring: VAULTS, MONITORING WELLS

GRID NORTH

100' 50' 0' 100' 200'

Scale: 1 inch = 100 feet (Ground)

Basis of Bearing: NAD 83 (2007)
Washington, North Zone

Vertical Datum: NAVD 1988

VERTICAL CONTROL:

BM #116: 4"X4"CONC MON W/ 2" BRASS PLUG
160th Ave. S.E. 600'+/- North of SE 33rd ST
Elev.=344.29' HORZ STA 0382

BM #499: 3"X3" CONC MON W/ 3/8" BRASS PLUG AT INTERSECTION OF 156th Ave. S.E. & S.E. 26th ST
Elev.=379.61' HORZ STA 0381

BM #838: 4"X4" CONC MON W/ 1 3/4" BRASS CAP AT INTERSECTION OF 158th Ave. S.E. & S.E. 26th ST
Elev.=301.397' HORZ STA 3182

autocad drawing file: 11069 Bellevue Airfield Park.dwg

NO.	DATE	BY	APPR.	REVISIONS

Bellevue Airfield Park

Eastgate Area - Topography

DRAFT

City of Bellevue
Civic Services Department

Topographic Survey
situated in
NE 1/4 Section 11, T.24 N., R.5 E., W.M.
King County, Washington

PREPARED BY:	S. Bretz	DATE:	11/16/2011
WORK ORDER NO.:	11069	SHEET:	4 of 5

LEGEND:

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autocad drawing file: 11069 Bellevue Airfield Park.dwg

NO.	DATE	BY	APPR.	REVISIONS

Bellevue Airfield Park

Eastgate Area - Topography

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City of Bellevue
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PREPARED BY:	S. Bretz	DATE:	11/16/2011
WORK ORDER NO.:	11069	SHEET:	4 of 5