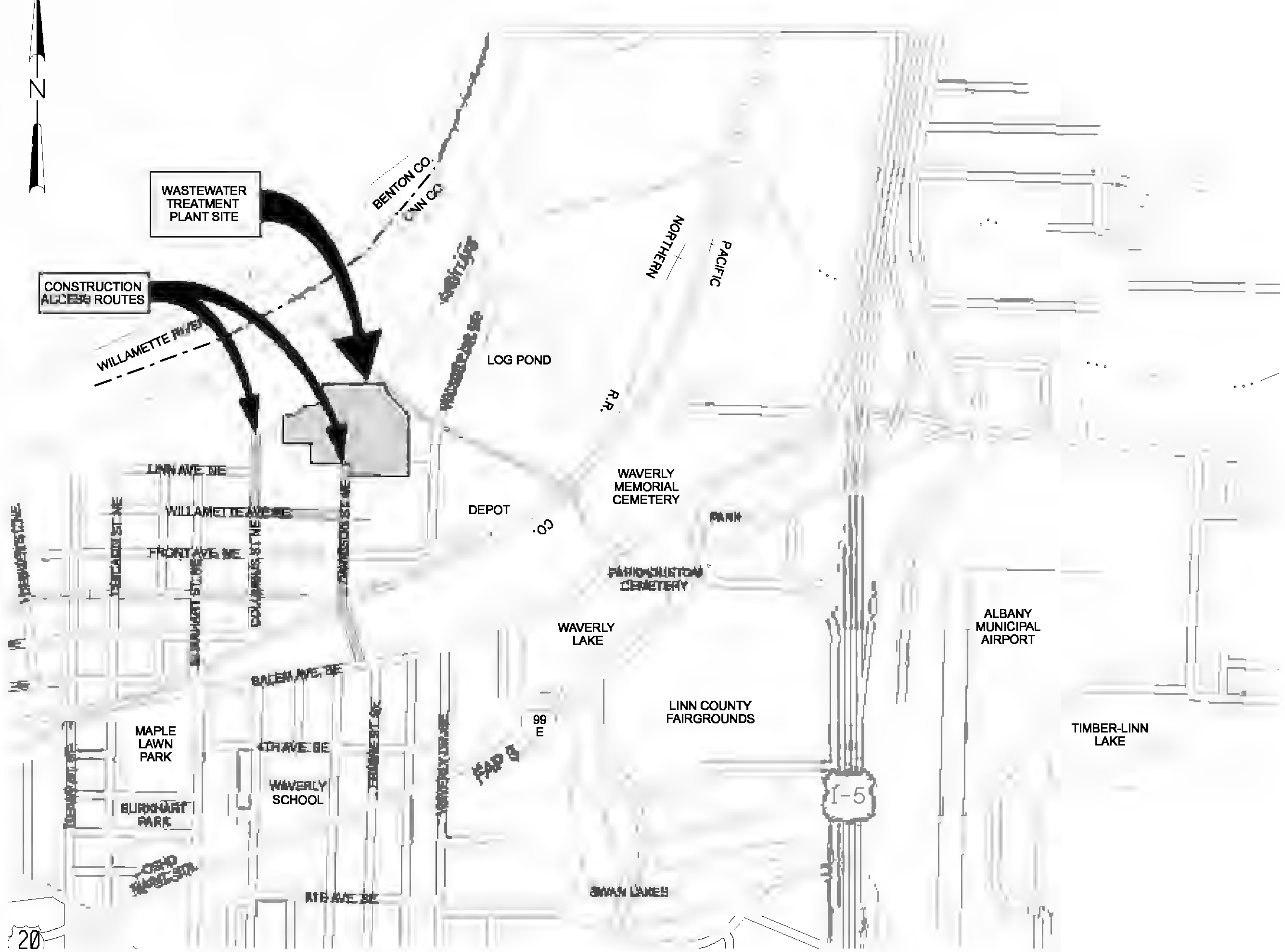
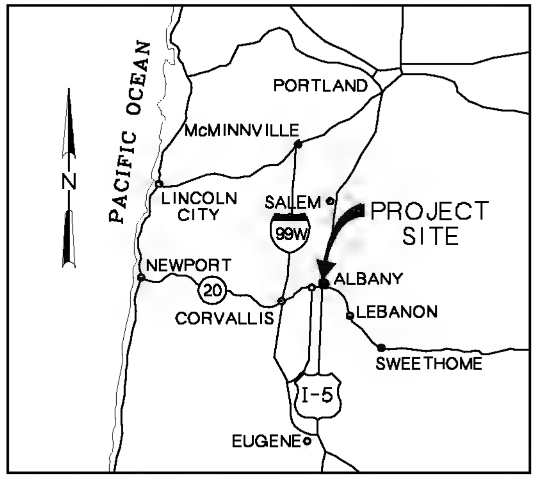
ALBANY WASTEWATER

SYSTEM IMPROVEMENTS PROJECT
LINN COUNTY, OREGON



VICINITY MAP



LOCATION MAP

RECORD DRAWINGS

Revisions Drawn By CH2M HILL Date 02/2010

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DSGN WB LOVE						VERIFY SCALE
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CHK RC FRANKENFIELD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

GENERAL

LOCATION AND VICINITY MAPS

SHEET	01
DWG	01-G-01
DATE	MAY 19 2006
PROJ	326918

FILENAME 01rg001d_326918.dgn PLOT DATE 3/26/2010 PLOT TIME 2:04:58 PM

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
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GENERAL

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INDEX TO DRAWINGS
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336	30-S-130	INTERMEDIATE PLAN
337	30-S-140	TOP PLAN
338	30-S-141	STRUCT - PARTIAL TOP PLAN
339	30-S-201	STRUCT - SECTION
340	30-S-202	STRUCT - SECTION
341	30-S-203	STRUCT - SECTION
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352	32-E-141	FLOOR PLAN
353	32-E-142	FACILITY PLAN
354	32-E-501	ELECTRICAL RISER DIAGRAMS
355	32-H-141	PLAN
356	32-H-201	SECTIONS
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358	32-M-201	SECTIONS
359	32-S-131	STRUCT - FOUNDATION PLAN
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361	32-S-201	STRUCT - SECTION
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364	35-D-201	DEMOLITION SECTION
365	35-E-141	PROCESS AND FACILITY PLAN
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370	38-E-501	RISER DIAGRAM
371	38-M-131	PLAN AND SECTION
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373	38-S-201	SECTIONS
374	38-S-202	SECTIONS AND DETAILS
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378	45-E-503	RISER DIAGRAM - CLARIFIER 3
379	45-M-131	CLARIFIER NO. 1 - PLAN
380	45-M-131A	CLARIFIER NO. 2 - PLAN
381	45-M-131B	CLARIFIER NO. 3 - PLAN
382	45-M-132	SECONDARY CLARIFIER #1 RAS & SCUM PUMP STATIONS
383	45-M-132A	SECONDARY CLARIFIER #2 RAS & SCUM PUMP STATIONS
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386	45-M-201A	SECONDARY CLARIFIER #2 SECTIONS
387	45-M-201B	SECONDARY CLARIFIER #3 SECTIONS
388	45-M-202	PARTIAL PLAN AND SECTION
389	45-M-401	DETAILS
390	45-S-131	SC#1 FOUNDATION PLAN
391	45-S-131A	SC#2 FOUNDATION PLAN
392	45-S-131B	SC#3 FOUNDATION PLAN
393	45-S-132	SC#1 TOP PLAN
394	45-S-132A	SC#2 TOP PLAN
395	45-S-132B	SC#3 TOP PLAN
396	45-S-201	SC#1 SECTIONS
397	45-S-201A	SC#2 SECTIONS
398	45-S-201B	SC#3 SECTIONS
399	45-S-202	PARTIAL PLANS AND SECTION
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406	60-E-501	RISER DIAGRAM
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408	60-M-141	MECHANICAL UPPER PLAN TOP PLAN
409	60-M-201	SECTIONS
410	60-M-202	SECTION AND DETAIL
411	60-S-131	LOWER PLAN
412	60-S-141	UPPER PLAN
413	60-S-201	SECTIONS
414	60-S-202	SECTIONS
415	60-S-401	DETAILS
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417	61-E-141	PLAN
418	61-E-501	RISER DIAGRAM
419	61-E-502	RISER DIAGRAM
420	61-H-141	PLAN
421	61-M-141	PLAN
422	61-M-201	SECTIONS
423	61-M-202	SECTION AND DETAIL
424	61-S-121	FOUNDATION PLAN
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430	70-D-201	EXISTING AERATION BASINS DEMOLITION SECTIONS & DETAILS
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432	70-S-141	UPPER LEVEL PLAN AND SECTIONS
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434	70-S-202	PARTIAL PLAN, SECTIONS AND DETAILS
435	70-S-203	PARTIAL PLAN, SECTIONS AND DETAILS
436	70-M-131	LOWER PLAN
437	70-M-141	UPPER PLAN
438	70-M-201	PARTIAL PLAN AND SECTIONS
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448	91-E-505	MCC-6C/D ONE-LINE DIAGRAM
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466	91-E-553	SITE ROUTED CIRCUIT SCHEDULE
467	91-E-554	SITE ROUTED CONDUIT SCHEDULE
468	91-E-555	SITE ROUTED CONDUIT SCHEDULE
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THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/08 BY RICH C. FRANKENFIELD STATE OF OREGON, P.E. NO. 10,678.

DSGN WB LOVE					VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-O3-01 LINN COUNTY, OREGON
DR WB LOVE					BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	
CHK RC FRANKENFIELD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)	JMD	SJP	
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

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GENERAL

INDEX TO DRAWINGS
SHEET 3

SHEET	04
DWG	01-G-04
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng031d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:07:31 PM

A	AMMETER, AMPERES, AWNINGS
AB	ANCHOR BOLT, ABOVE
ABDN	ABANDON
AC	ACOUSTICAL, ACOUSTICAL CEILING
AC	ALTERNATING CURRENT
AC	ASPHALTIC CONCRETE
ACFL	ACCESS FLOORING
ACI	AMERICAN CONCRETE INSTITUTE
ACMU	ACOUSTICAL CONCRETE MASONRY UNIT, ACOUSTICAL CMU
ACP	ACOUSTICAL PANELS
ACST	ACOUSTICAL
ACT	ACOUSTICAL TILE
AD	AREA DRAIN
ADDL	ADDITIONAL
ADJ	ADJACENT
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AG	ACOUSTICAL, ACOUSTICAL GLASS
AGGR	AGGREGATE
AHR	ANCHOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AJ	ADJUSTABLE
AL	ALUMINUM
ALKY	ALKALINITY
ALTN	ALTERNATE
AM	AUTO-MANUAL
AMRD	ACOUSTICAL METAL ROOF DECKING
ANDZ	ANODIZE
APPROX	APPROXIMATE
APVD	APPROVED
ARCH	ARCHITECTURAL
AR	ANALOG RELAY
AS	AS SELECTED
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AVG	AVERAGE
@	AT
B	BELL
BAL	BALANCE
BC	BOTTOM OF CURB, BOLT CIRCLE
BDD	BACK DRAFT DAMPER
BETW	BETWEEN
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
BL	BASELINE
BFP	BACKFLOW PREVENTER
BLDG	BUILDING
BLK	BLOCK
BM	BEAM, BENCHMARK
BO	BOTTOM OF
B.O.B.	BOTTOM OF BEAM
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOT	BOTTOM
BRG	BEARING
BRK	BRICK
BRKR	BREAKER
BSP	BLACK STEEL PIPE
BV	BALL VALVE, BLOCK VENT
BVC	BEGINNING OF VERTICAL CURVE

C	CONDUIT, CASEMENT
°C	DEGREE CELSIUS
C TO C	CENTER TO CENTER
CAB	CABINET
CB	CATCH BASIN, CIRCUIT BREAKER
CC	CONTROL CABLE
CCP	CENTRAL CONTROL PANEL
CCS	CENTRAL CONTROL SYSTEM
CD	CARBON DIOXIDE
CDF	CONTROLLED DENSITY FILL
CE	CONSTRUCTION ENTRANCE
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHEM	CHEMICAL
CHKD	CHECKERED
CI	CAST IRON
CIP	CAST IRON PIPE, CAST IN PLACE
CIP	CULVERT INLET PROTECTION
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CKT	CIRCUIT
CL	CENTERLINE
CLDIP	CEMENT LINED DUCTILE IRON PIPE
CLG	CEILING
CMP	CENTRAL MONITORING PANEL
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CLEANOUT, CARBON MONOXIDE
COL	COLUMN, COLOR
CONC	CONCRETE
COND	CONDENSATE
CONDTN	CONDITIONED
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUED, CONTINUOUS, CONTINUATION
CONTR	CONTRACTOR
COORD	COORDINATE
COP	COPPER
CP	CENTER PIVOT
CP-X	CONTROL PANEL NO. X
CPLG	COUPLING
CPRSR	COMPRESSOR
CPT	CONTROL POWER TRANFORMER, CARPET
CPVC	CHLORINATED PVC
CR	CONTROL RELAY
CRS	COLD ROLLED STEEL
CRS	CONSTRUCTION ROAD STABILIZATION
CT	CERAMIC TILE
CT	CURRENT TRANSFORMER
CTC	COMPUTER TERMINAL CABINET
CTR	CENTER
CTRD	CENTERED
CTSK	COUNTERSUNK
CU	CUBIC
CU FT	CUBIC FOOT
CU IN	CUBIC INCH
CUH	COPPER TUBING, HARD DRAWN
CV	CHECK VALVE
CW	DOMESTIC COLD WATER
CWR	PROCESS COOLING WATER RETURN, CABINET DOOR MOUNTED WASTE RECEPTACLE
CWS	PROCESS COOLING WATER SUPPLY
CY, CU YD	CUBIC YARD
D	DEEP, DRAIN
d	PENNY NAIL SIZE
DA	DUAL ACTION
DAS	DATA ACQUISTION SYSTEM

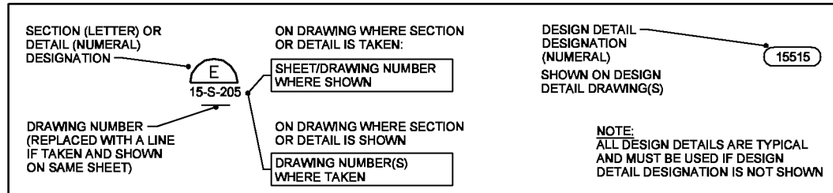
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEMO	DEMOLITION
DET	DETAIL
DF	DOUGLAS FIR, DRINKING FOUNTAIN
DDI	DROP INLET
DH	DOUBLE HUNG
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIP	DUCTILE IRON PIPE
DIR	DIRECTION
DISCH	DISCHARGE
DN	DOWN
DO	DISSOLVED OXYGEN
DOL	DIRECT-ON-LINE
DP, DPNL	DISTRIBUTION PANEL
DR	DOOR
DS	DOWNSPOUT
DV	DIAPHRAGM VALVE
DWG	DRAWING
DWL	DOWEL
△	DELTA
E	EAST, EMPTY
EA	EACH, EXHAUST AIR
EB, EBCT	EMPTY BED CONTACT TIME
ECC	ECCENTRIC
EE	EMERGENCY EYEWASH
EF	EACH FACE, EXHAUST FAN
EFF	EFFICIENCY, EFFICIENT
EFL	EFFLUENT
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EL	ELEVATION
ELB	ELBOW
ELC	ELECTRICAL LOAD CENTER
ELEC	ELECTRIC, ELECTRICAL
ENGR	ENGINEER
EP	EXPLOSION PROOF, EDGE OF PAVING
EQL	EQUAL
EXP	EXPOSED STRUCTURE
EQL SP	EQUALLY SPACED
EQPT	EQUIPMENT
ESEW	EMERGENCY SHOWER / EYE WASH
ESC	EROSION AND SEDIMENTATION CONTROL
ETM	ELAPSED TIME METER
EVC	END OF VERTICAL CURVE
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXP	EXPANSION, EXPOSED
EXP AB	EXPANSION ANCHOR BOLT
EXP JT	EXPANSION JOINT
EXST	EXISTING
EXT	EXTERIOR
°F	DEGREE FAHRENHEIT
F, FU	FUSE
F, FX	FIXED
FAP	FIRE ALARM PANEL
FC	FLEXIBLE CONDUIT
FCA	FLANGED COUPLING ADAPTER
FCL2	FREE CHLORINE RESIDUAL
FCO	FLOOR CLEANOUT
FCTY	FACTORY
FD	FLOOR DRAIN
FDN	FOUNDATION
FDR	FEEDER
FEXT	FIRE EXTINGUISHER
FF	FINISHED FLOOR
FG	FINISH GRADE, FLOAT GLASS
FH	FLAT HEAD

FHY	FIRE HYDRANT
FIG	FIGURE
FL	FLOW LINE
FLG	FLANGE
FL	FLOOR
FLEX	FLEXIBLE
FLH	FLAT HEAD
FLTR	FILTER
FLUOR	FLUORESCENT
FNSH	FINISH
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FP	FIELD PANEL
FPM	FEET PER MINUTE
FR	FORWARD REVERSE
FRP	FIBERGLASS REINFORCED PLASTIC
FSHS	FOLDING SHOWER SEAT
FT	FOOT OR FEET
FTG	FOOTING
FU	FIXTURE UNIT
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
FWD	FORWARD
G, GND	GROUND
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GYPSUM BOARD
GC	GROOVED COUPLING
GCMU	GLAZED CONCRETE MASONRY UNITS
GFI	GROUND FAULT INTERRUPTER
GFR	GOUND FAULT RELAY
GH	GREENHOUSE
GL	GLASS
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPS	GLOBAL POSITION SYSTEM
GRTG	GRATING
GSB	GYPSUM SOFFIT BOARD
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
GVL	GRAVEL
GWB	GYPSUM WALLBOARD
GYP	GYPSUM
H	HIGH, HORN OR HOWLER
H_2S	HYDROGEN SULFIDE
H.A.S.	HEADED ANCHOR STUD
HC	HOLLOW CORE WOOD
HCL	HYDROCHLORIC ACID
HDNR	HARDENER
HDNS	HARDNESS
HDR	HEADER
HDW	HARDWARE
HGL	HYDRAULIC GRADE LINE
HK	HOOK
HGT	HEIGHT
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HK	HOOK
HM	HOLLOW METAL
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE

HORIZ	HORIZONTAL
HP	HORSEPOWER, HYDRONIC HEAT PUMP
HPT	HIGH POINT
HR	HOSE RACK, HANDRAIL
HRC	HEAT RECOVERY COIL
HV	HOSE VALVE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HW	DOMESTIC HOT WATER
HWC	DOMESTIC HOT WATER CIRCULATION
HWL	HIGH WATER LEVEL
IC	INTERRUPTING CAPACITY
ID	INDUCED DRAFT, INSIDE DIAMETER
IE	INVERT ELEVATION
I.F.	INSIDE FACE
IG	INSULATING, INSULATING GLASS
IN	INCH
INCAND	INCANDESCENT
INFL	INFLUENT
INJS	INJECTIONS
INST	INSTANTANEOUS
INSTM	INSTRUMENT, INSTRUMENTATION
INSUL	INSULATION
INVT	INVERT
IP	INLET PROTECTION, INSTRUMENTATION PANEL
IRRIG	IRRIGATION
ITG	INSULATED TEMPERED GLASS
ITX	ISOLATION TRANSFORMER
IU	INTAKE UNIT
IW	IRRIGATION WELL
JA	JAL-AWNING
JB	JUNCTION BOX
JAN	JANITOR
JCT	JUNCTION
JT	JOINT
K	KEY GROUP, KEY INTERLOCK
KIP	THOUSAND POUNDS
KIT	KITCHEN
K-PL	KICKPLATE
KSK	KITCHEN SINK
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KW	KILOWATT

NOTES:

1. THIS IS A STANDARD SHEET, THEREFORE SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT BE USED ON THE PROJECT.
2. CONTACT CONSULTING ENGINEER FOR ABBREVIATIONS USED BUT NOT SHOWN ON THIS DRAWING.
3. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS (PLUMBING, CIVIL, HVAC, ELECTRICAL, INSTRUMENTATION AND CONTROL, MECHANICAL, AND STRUCTURAL/ARCHITECTURAL), SEE OTHER LEGENDS.



DETAIL AND SECTION DESTINATION DESIGN DETAIL DESIGNATION

DSGN WB LOVE						VERIFY SCALE
DR WB LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK RC FRANKENFIELD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP	
	NO.	DATE	REVISION	BY	APVD	

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

GENERAL

STANDARD ABBREVIATIONS
SHEET 1

SHEET	05
DWG	01-G-05
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng004d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:05:06 PM

L	ANGLE, LENGTH
LA	LIGHTNING ARRESTER
LAB	LABORATORY
LAM	LAMINATE
LAT	LATITUDE
LB	POUND
LC	LIGHTING CONTACTOR
LD	COMBINATION LOUVER/DAMPER
LDG	LOADING DOCK
LEL	LOWER EXPLOSIVE LIMIT
LF	LINEAR FEET
LG	LONG
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LOS	LOCK-OUT STOP PUSHBUTTON
LP	LIGHT POLE, LIGHTING PANEL
LPT	LOW POINT
LR	LATCHING RELAY
LR	LOCAL-REMOTE
LR	LONG RADIUS
LS	LABORATORY SINK
LTG, LTS	LIGHTS OR LIGHTING
LTX	LIGHTING TRANSFORMER
LWL	LOW WATER LEVEL
MA	MANUAL-AUTO
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MASONRY CLEARANCE
MC	MODULATE-CLOSE
MCC	MOTOR CONTROL CENTER
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MFD	MANUFACTURED
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE, MOUNTING HEIGHT
MIN	MINUMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MLO	MAIN LUGS ONLY
MMP	MECHANICAL MOUNTING PANEL
MO	MANUAL OPERABLE, MASONRY OPENING
MOD	MOTOR OPERATED DAMPER
MP	METAL PANEL
MPU	MULTIPURPOSE UNIT
MS	MANUFACTURER'S STANDARD
MSC	MANUFACTURER SUPPLIED CABLE
MSR	GROUPED MOTOR CONTROL
MT	MOUNT
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MTS	MILL TYPE STEEL PIPE
MU	MULCHING
MV	MERCURY VAPOR
MWS	MAXIMUM WATER SURFACE

N	NORTH, NEUTRAL
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEUT	NEUTRAL
NA	NON-AUTOMATIC
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NO., #	NUMBER
NOM	NOMINAL
NP	NON-PROTECTED
NPCW	NON-POTABLE COLD WATER
NPHW	NON-POTABLE HOT WATER
NPT	NATIONAL PIPE THREADS
NS	NON-SHRINK
NTS	NOT TO SCALE
O_2	OXYGEN
OA	OVERALL, ODEROUS AIR
OC	ON CENTER
OC	OPEN-CLOSE (O)
OCA	OPEN-CLOSE-AUTO
OCR	OPEN-CLOSE-REMOTE
OD	OUTSIDE DIAMETER, OVERFLOW DRAIN
O.F.	OUTSIDE FACE
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OG	OBSCURE
OL	OVERLOAD RELAY
OO	ON-OFF
OOA	ON-OFF-AUTO
OOR	ON-OFF-REMOTE
OP	OPAQUE PANEL, OUTLET PROTECTION
OPER	OPERATOR
OPNG	OPENING
OPP	OPPOSITE
OSA	OUTSIDE AIR
OSC	OPEN-STOP-CLOSE
OSD	OPEN SITE DRAIN
OWSJ	OPEN WEB STEEL JOIST
OZ	OUNCE
P	PROJECTED
P	PILASTER, PIPE
PAVT	PAVER TILE
PB	PUSHBUTTON SWITCH
PC	POINT OF CURVE, PHOTOCELL
PC	PRECAST CONCRETE PANEL
PCCP	PRECAST CONCRETE CYLINDER PIPE
PCR	POINT OF CURB RETURN
PCV	PRESSURE CONTROL VALVE
PE	PLAIN END
PED	PEDESTAL, PEDESTRIAN
PEP	POLYETHYLENE PIPE
PEN.	PENETRATION
PFC	POUNDS PER CUBIC FOOT
PH	PENTHOUSE
pH	HYDROGEN ION CONCENTRATION
PH	PHASE
PI	POINT OF INTERSECTION
PIT	PILOT TUBE TEST STATION
PJF	PREMOULDED JOINT FILLER
PL	PLATE (STEEL)
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER, PLASTIC
PLC	PROGRAMMABLE LOGIC CONTROLLER

PLYWD	PLYWOOD
PNL	PANEL
PP	POWER POLE
P-P	PUSH-PULL
PPL	POLYPROPYLENE LINED
PR	PAIR
PRCST	PRECAST
PREFAB	PREFABRICATION
PRES	PRESSURE
PRI	PRIMARY
PRM	PERMANENT REFERENCED MARKER
PROJ	PROJECTION
PROP	PROPERTY
PS	PLASTIC SHEET, POLYCARBONATE SHEET
PS	PAINT SYSTEM
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH, GAUGE
PT	POINT OF TANGENCY
PT	POTENTIAL TRANSFORMER
PT	PRESSURE TREATED
PTD	PAPER TOWEL DISPENSER
PTN	PARTITION
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
QAA	AVERAGE FLOW
QMM	MAXIMUM 30 DAY FLOW
QPI	PEAK INSTANTANEOUS FLOW
QPP	PEAK PUMPING FLOW
QT	QUARRY TILE
R	RISER
R OR RAD	RADIUS
RA	RETURN AIR
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RCPT	RECEPTACLE
RD	ROAD, ROOF DRAIN
RDCR	REDUCER
RDW	REDWOOD
RECIR	RECIRCULATION
REF	REFER OR REFERENCE
REFR	REFRIGERATE, REFRIGERANT
REINF	REINFORCED, REINFORCING, REINFORCE
REQD	REQUIRED
RESIL	RESILIENT
RFS	ROLL-UP FIRE SHUTTER
RG	REFLECTIVE
RH	RIGHT HAND
RH	RODHOLE
RHR	RIGHT HAND REVERSE
RL	RAIN LEADER
RLS	RUBBER LINED STEEL
RM	ROOM
RO	ROUGH OPENING
ROL	RAISE-OFF-LOWER
RP	RADIUS POINT
RPBP	REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RR	RIPRAP
RRUB	RADIAL RUBBER
RS	RIGID STEEL
RST	REINFORCING STEEL
RTN	RETURN
RTO	REGENERATIVE THERMAL OXIDIZER
RUB	RUBBER
RUBC	RUBBER CUSHIONED FLOORING
RUBS	RUBBER ESD CONTROL FLOORING
R/W	RIGHT OF WAY

S	I-BEAM
S	SLOPE, SOUTH, SWITCH
SA	SUPPLY AIR
SATC	SUSPENDED ACCUSTICAL TILE CEILING
SB	SEDIMENT BASIN
SC	SHOWER CURTAIN, SOLID CORE WOOD
SCC	SOLID CORE
SCFM	STANDARD CUBIC FEED PER MINUTE
SCHED	SCHEDULE
SCU	SPEED CONTROL UNIT
SDP	SUB-DISTRIBUTION PANEL
SDWK	SIDEWALK
SEC	SECONDARY
SECT	SECTION
SED	SEDIMENTATION
SEW	SEWAGE
SG	LAMINATED SAFETY GLASS, SAFETY
SGWB	SUSPENDED GYPSUM WALL BOARD
SH	SHEET
SHA	SURFACE HARDENING AGENT
SHS	SOLIDS HANDLING SYSTEM
SIM	SIMILAR
SK	SINK
SLR	SEALER
SLV	SLEEVE
SMLS	SEAMLESS EPOXY
SOI	SPRAY- ON INSULATION
SOLN	SOLUTION
SP	SPACE OR SPACES, SPANDREL PANEL, STORMPROOF
SPEC, SPECS	SPECIFICATIONS
SPG	SPACING
SPLY	SUPPLY
SQ	SQUARE
SQ FT	SQUARE FOOT, FEET
SQ IN	SQUARE INCH
SR	SHORT RADIUS
SS	START-STOP
SSL	SHORT SLOTTED HOLE
SST	STAINLESS STEEL
SSC	SUPERVISORY SET POINT CONTROL
ST	STRAIGHT
STA	STATUS
STD	STANDARD
STIF	STIFFENER
STIRR	STIRRUP
STL	STEEL
STRL	STRUCTUAL
STRUCT	STRUCTURE
SUBFL	SUBFLOOR
SUSP	SUSPENDED
SV	SOLENOID VALVE
SVIN	SHEET VINYL
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYMM	SYMMETRICAL
T	TANGENT
T	THERMOSTAT, TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TA	TRANSFER AIR
TAN	TANGENT
TB	TERMINAL BOARD
TBG	TUBING
TC	TIME TO CLOSE
TC	TOP OF CURB
TC	TURBIDITY CURTAIN
TCAD	TIME CLOSE AFTER DE-ENERGIATION
TCAE	TIME CLOSE AFTER ENERGIZATION
TDH	TOTAL DYNAMIC HEAD
TDR	TIME DELAY RELAY
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPORARY, TEMPERATURE
TF	TOP FACE
TFG	TEMPERED FLOAT GLASS
TG	TEMPERED
TH	TOP-HINGED
THD	THREAD

THK	THICKNESS
THRU	THROUGH
TJB	TERMINAL JUNCTION BOX
TL	TEFLON LINED PIPE
T.O.	TIME TO OPEN, TOP OF
TOAE	TIME OPEN AFTER ENERGIZATION
TOC	TOP OF CONCRETE
TOD	TIME ON DELAY, TOP OF DUCT, TOTAL OXYGEN DEMAND
TOF	TOP OF FOOTING
TOG	TOP OF GROUT
TOS	TOP OF STEEL
T.O.W.	TOP OF WALL
TP	TURNING POINT
TR	TRANSOM, TRUSS
TRANS	TRANSFORMER, TRANSITION
TRANSV	TRANSVERSE
TRD	TREAD
TS	TEMPORARY SEEDING, TUBE STEEL
TSHT	THRESHOLD
TSS	TOTAL SUSPENSION SOLIDS
TST	TOP OF STEEL
TTC	TELEPHONE TERMINAL CABINET
TTD	TOILET TISSUE DISPENSER
TU-X	TREATMENT UNIT NO. X
TURB	TURBIDITY
TWP	TRANSLUCENT WALL PANEL
TX	TRANSFORMER
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIT SUBSTATION
UVR	UNDER VOLTAGE RELAY
V	VENT, VALVE
V	VOLTMETER, VOLTS
VB	VAPOR BARRIER (RETARDER)
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE
VEL	VELOCITY
VERT	VERTICAL
VHC	VOLATILE HYDROCARBONS
VIB	VIBRATION
VIN	VINYL
VINT, VT	VINYL TILE
VP	VERTICAL PIVOTED
VPS	VENEER PLASTER SYSTEM
VPC	POINT OF VERTICAL CURVATURE
VPI	POINT OF VERTICAL INTERSECTION
vpt	POINT OF VERTICAL TANGENT
VS	VERTICAL SLIDE
VTR	VENT THRU ROOF
VWC	VINYL WALL COVERING
W	WATER
W/	WITH
WEASTRIP	WEATHERSTRIP
WG	WIRE, WIRE GLASS
WH	WATTHOUR METER
WHD	WATTHOUR DEMAND METER
WP	WATERPROOF, WEATHERPROOF, WORKPOINT
WR	WASTE RECEPTACLE
WRB	WATER RESISTANT GWB
WS	WATER SURFACE, WATERSTOP, WELDED STEEL

NOTES:

1. THIS IS A STANDARD SHEET, THEREFORE SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT BE USED ON THE PROJECT.
2. CONTACT ENGINEER FOR ABBREVIATIONS USED BUT NOT SHOWN ON THIS DRAWING.
3. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS PLUMBING, CIVIL, HVAC, ELECTRICAL, INSTRUMENTATION AND CONTROL, MECHANICAL, AND STRUCTURAL/ ARCHITECTURAL), SEE OTHER LEGENDS.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY RICH C. FRANKENFIELD STATE OF OREGON, P.E. NO. 10,678.

DSGN	WB LOVE						VERIFY SCALE
DR	WB LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	RC FRANKENFIELD						
APVD	CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP	
		NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

GENERAL

STANDARD ABBREVIATIONS
SHEET 2

SHEET	06
DWG	01-G-06
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng005d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:05:13 PM

GENERAL ARCHITECTURAL NOTES

1. UNLESS OTHERWISE INDICATED, PLAN DIMENSIONS ARE TO COLUMN GRID ON CENTERLINES, NOMINAL SURFACE OF MASONRY, FACE OF STUDS AND FACE OF CONCRETE WALLS.
2. "FLOOR LINE" REFERS TO TOP ON CONCRETE SLABS. FINISH FLOORING IS INSTALLED ABOVE THE FLOOR LINE. FOR DEPRESSED FLOORS AND CURBS, SEE STRUCTURAL DRAWINGS.
3. REPETITIVE FEATURES ARE NOT DRAWN IN THEIR ENTIRETY AND SHALL BE COMPLETELY PROVIDED AS IF DRAWN IN FULL.
4. WHERE DOOR IS LOCATED NEAR CORNER OF ROOM AND IS NOT LOCATED BY DIMENSION ON PLAN OR DETAILS, DIMENSION SHALL BE 4-INCHES FROM FACE OF STUD (WALL) TO FACE OF ROUGH OPENING. DIMENSION SHALL BE 6" FROM FACE OF WALL TO EDGE OF ROUGH OPENING AT CONCRETE WALLS, 8" AT CMU WALLS.
5. AT SOUND INSULATED WALLS, FULL HEIGHT PARTITIONS SHALL BE SEALED BOTH SIDES WITH ACOUSTIC SEALANT; TOP, BOTTOM, INTERSECTION, DOOR FRAMES, GLAZED OPENING FRAMES, AND OTHER PENETRATIONS.
6. LINE OF EXISTING GRADES, AS SHOWN ON THE BUILDING ELEVATIONS AND SECTIONS ARE APPROXIMATE. THEY ARE AT THE BUILDING FACE, OR ON THE SECTION END EXCEPT AS NOTED.
7. VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT PROVIDED IN THIS CONTRACT, OR BY OTHERS.
8. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER CATEGORIES OR DRAWINGS FOR ADDITIONAL NOTES.
9. VERIFY SIZE AND LOCATION OF, AND PROVIDE: REQUIRED OPENINGS THROUGH FLOORS AND WALLS, ACCESS DOORS, FURRING, CURBS, ANCHORS AND INSERTS. PROVIDE ALL BASES AND BLOCKING REQUIRED FOR ACCESSORIES, MECHANICAL, ELECTRICAL AND OTHER EQUIPMENT.

ARCH/STRUCT MATERIAL SYMBOLS

SYMBOL	LEGEND
	GRATING, SPAN DIRECTION INDICATED
	CHECKERED PLATE
	GROUT
	GRANULAR FILL
	EARTH OR FINISH GRADE
	CONCRETE
	CMU WALL (PLAN)
	CMU WALL (SECTION)
	MASONRY VENEER WALL
	METAL STUD WALL (PLAN)
	RIGID INSULATION
	BATT INSULATION
	STEEL
	ALUMINUM
	PLYWOOD
	GYPSUM WALLBOARD
	WOOD, ROUGH CONTINUOUS
	WOOD, ROUGH NON-CONTINUOUS
	WOOD, FINISHED

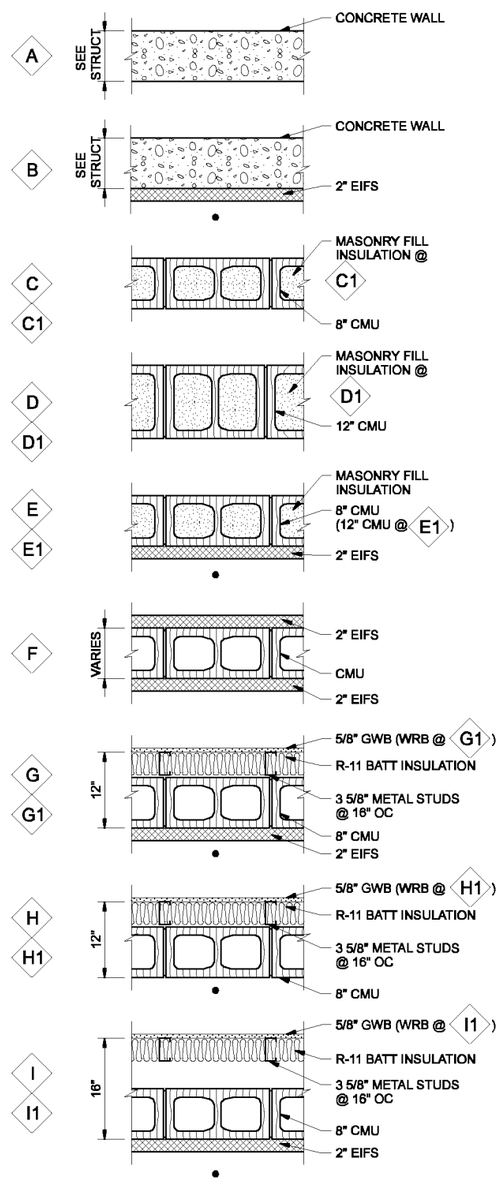
ARCHITECTURAL/STRUCTURAL LEGEND

SYMBOL	LEGEND
A	COLUMN GRID NUMBER OR LETTER
ROOM NAME XX101	ROOM NUMBER
"XX" = FACILITY NUMBER; XX101 A — ROOM NUMBER; DOOR LETTER	DOOR NUMBER
XXW-1	WINDOW NUMBER
XXR-1	RELIGHT NUMBER
XXL-1	LOUVER NUMBER
1 — DIRECTION SHOWN	INTERIOR ELEVATION
A	WALL TYPE
⊗ 110.50	SPOT ELEVATION
	DIRECTION OF SLOPE DOWN
1 / XX-AS-201 — LINE INDICATES DIRECTION AND EXTENT OF DETAIL CUT	DETAIL REFERENCE
HINGE SIDE	DOOR/HATCH SWING
ACTIVE; INACTIVE	INDICATES PAIR OF DOORS
F.EXT-X	FIRE EXTINGUISHER "X" = NUMBER IN SPECIFICATIONS
	CONTROL JOINT
	EXPANSION JOINT
POST	RAILINGS

WALL TYPES

NOTES:

1. • DENOTES LOCATION OF WALL TYPE SYMBOL ON PLANS.
2. WHERE MORE THAN ONE WALL TYPE IS INDICATED FOR A SINGLE LOCATION ON PLANS, CONSTRUCTION VARIES IN THE HEIGHT OF THE WALL. WALL TYPES ARE SHOWN IN THE ORDER IN WHICH THEY OCCUR, WITH THE LOWEST LOCATED NEAREST THE WALL.
3. WALL TYPES SHOWN APPLY TO HEADWORKS, AERATION BLOWER BUILDING, DISINFECTION BUILDING PLAN W3 PUMP STATION, AND CONTROL BUILDING, ONLY.



THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY JOHN E. CAVE STATE OF OREGON, P.E. NO. 2,429

DSGN MJ MERKLEIN JE CAVE						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-03-01 LINN COUNTY, OREGON	GENERAL ARCHITECTURAL / STRUCTURAL LEGENDS AND WALL TYPES	SHEET 07
DR WB LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"			DWG 01-G-07
CHK GB KIRSTEN						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DATE MAY 19 2006
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD				PROJ 326918
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP				

CH2MHILL carollo engineers

FILENAME: 01ng006d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:05:21 PM

BUILDING CODE DATA TABLE

FACILITY NO.: 20 FACILITY NAME: HEADWORKS

BUILDING CODE:	2004 OSSC	FIRE SUPPRESSION SYSTEM:	HAND HELD FIRE EXTINGUISHERS
OCCUPANCY GROUP:	F-2	FIRE RESISTANCE RATING FOR BUILDING ELEMENTS:	
TYPE OF CONSTRUCTION:	IIB	STRUCTURAL FRAME:	0 HRS
MAXIMUM STORIES ALLOWED:	3	BEARING WALLS:	0 HRS
ACTUAL NUMBER OF STORIES:	2	NONBEARING WALLS, INTERIOR:	0 HRS
MAXIMUM HEIGHT ALLOWED:	55 FT	FLOOR CONSTRUCTION:	0 HRS
ACTUAL HEIGHT:	50 FT	ROOF ENCLOSURES:	0 HRS
MAXIMUM AREA ALLOWED PER FLOOR:	23,000 SF	SHAFT ENCLOSURES:	0 HRS
ACTUAL AREA PER FLOOR:		STAIRWAY ENCLOSURE:	0 HRS
LOWER LEVEL:	9,777 SF	CORRIDOR:	0 HRS
UPPER LEVEL:	6,298 SF	EXTERIOR WALL FIRE RESISTANCE BASED ON FIRE SEPARATION DISTANCE:	0 HRS WHEN > 10 FT
ALLOWABLE NUMBER OF OCCUPANTS:			
LOWER LEVEL:	98		
UPPER LEVEL:	63		
ACTUAL NUMBER OF OCCUPANTS:	NOT NORMALLY OCCUPIED		
TRAVEL DISTANCE ALLOWED (MAX.):	300 FT		
OCCUPANCY SEPARATION / FIRE RATING:	1 HR BETWEEN SCREENED RAS MECHANICAL ROOM AND ADJACENT SPACES, AND BETWEEN MECHANICAL ROOM / GRIT PUMP ROOM AND ADJACENT SPACES (IBC TABLE 302.1.1 - EQUIPMENT W/ > 4000,000 BTU PER HOUR INPUT)		

BUILDING CODE DATA TABLE

FACILITY NO.: 30 FACILITY NAME: VERTICAL LOOP REACTORS ELECTRICAL ENCLOSURE

BUILDING CODE:	2004 OSSC	FIRE SUPPRESSION SYSTEM:	HAND HELD FIRE EXTINGUISHERS
OCCUPANCY GROUP:	F-2	FIRE RESISTANCE RATING FOR BUILDING ELEMENTS:	
TYPE OF CONSTRUCTION:	IIB	STRUCTURAL FRAME:	0 HRS
MAXIMUM STORIES ALLOWED:	3	BEARING WALLS:	0 HRS
ACTUAL NUMBER OF STORIES:	1	NONBEARING WALLS, INTERIOR:	0 HRS
MAXIMUM HEIGHT ALLOWED:	55FT	FLOOR CONSTRUCTION:	0 HRS
ACTUAL HEIGHT:	10 FT 6 IN	ROOF ENCLOSURES:	0 HRS
MAXIMUM AREA ALLOWED PER FLOOR:	23,000 SF	SHAFT ENCLOSURES:	0 HRS
ACTUAL AREA PER FLOOR:	83 SF	STAIRWAY ENCLOSURE:	0 HRS
ALLOWABLE NUMBER OF OCCUPANTS:	< 1	CORRIDOR:	0 HRS
ACTUAL NUMBER OF OCCUPANTS:	NOT NORMALLY OCCUPIED	EXTERIOR WALL FIRE RESISTANCE BASED ON FIRE SEPARATION DISTANCE:	0 HRS WHEN > 10 FT
TRAVEL DISTANCE ALLOWED (MAX.):	300 FT		
OCCUPANCY SEPARATION / FIRE RATING:	N/A		

BUILDING CODE DATA TABLE

FACILITY NO.: 32 FACILITY NAME: AERATION BLOWER BUILDING

BUILDING CODE:	2004 OSSC	FIRE SUPPRESSION SYSTEM:	HAND HELD FIRE EXTINGUISHERS
OCCUPANCY GROUP:	F-2	FIRE RESISTANCE RATING FOR BUILDING ELEMENTS:	
TYPE OF CONSTRUCTION:	IIB	STRUCTURAL FRAME:	0 HRS
MAXIMUM STORIES ALLOWED:	3	BEARING WALLS:	0 HRS
ACTUAL NUMBER OF STORIES:	1	NONBEARING WALLS, INTERIOR:	0 HRS
MAXIMUM HEIGHT ALLOWED:	55FT	FLOOR CONSTRUCTION:	0 HRS
ACTUAL HEIGHT:	20 FT 6 IN	ROOF ENCLOSURES:	0 HRS
MAXIMUM AREA ALLOWED PER FLOOR:	23,000 SF	SHAFT ENCLOSURES:	0 HRS
ACTUAL AREA PER FLOOR:	2,576 SF	STAIRWAY ENCLOSURE:	0 HRS
ALLOWABLE NUMBER OF OCCUPANTS:	26	CORRIDOR:	0 HRS
ACTUAL NUMBER OF OCCUPANTS:	NOT NORMALLY OCCUPIED	EXTERIOR WALL FIRE RESISTANCE BASED ON FIRE SEPARATION DISTANCE:	0 HRS WHEN > 10 FT
TRAVEL DISTANCE ALLOWED (MAX.):	300 FT		
OCCUPANCY SEPARATION / FIRE RATING:	N/A		

BUILDING CODE DATA TABLE

FACILITY NO.: 61 FACILITY NAME: DISINFECTION BUILDING AND W3 PUMP STATION

BUILDING CODE:	2004 OSSC	FIRE SUPPRESSION SYSTEM:	HAND HELD FIRE EXTINGUISHERS/ FULLY SPRINKLERED
OCCUPANCY GROUP:	PUMP ROOM: F2 SODIUM HYPOCHLORITE STORAGE: H4 (13,000 GALLONS OF SODIUM HYPOCHLORITE, 12 1/2% CONCENTRATION)	FIRE RESISTANCE RATING FOR BUILDING ELEMENTS:	
TYPE OF CONSTRUCTION:	IIB	STRUCTURAL FRAME:	0 HRS
MAXIMUM STORIES ALLOWED:	3	BEARING WALLS:	0 HRS
ACTUAL NUMBER OF STORIES:	1	NONBEARING WALLS, INTERIOR:	0 HRS
MAXIMUM HEIGHT ALLOWED:	55 FT	FLOOR CONSTRUCTION:	0 HRS
ACTUAL HEIGHT:	22 FT 6 IN	ROOF ENCLOSURES:	0 HRS
MAXIMUM AREA ALLOWED PER FLOOR:	23,000 SF / 17,500 SF	SHAFT ENCLOSURES:	0 HRS
ACTUAL AREA PER FLOOR:	792 SF / 651 SF	STAIRWAY ENCLOSURE:	0 HRS
ALLOWABLE NUMBER OF OCCUPANTS:	8 / 7	CORRIDOR:	0 HRS
ACTUAL NUMBER OF OCCUPANTS:	NOT NORMALLY OCCUPIED	EXTERIOR WALL FIRE RESISTANCE BASED ON FIRE SEPARATION DISTANCE:	0 HRS WHEN > 10 FT
TRAVEL DISTANCE ALLOWED (MAX.):	300 FT / 175 FT		
OCCUPANCY SEPARATION / FIRE RATING:	3 HR		

BUILDING CODE DATA TABLE

FACILITY NO.: 95 FACILITY NAME: CONTROL BUILDING

BUILDING CODE:	2004 OSSC	FIRE SUPPRESSION SYSTEM:	HAND HELD FIRE EXTINGUISHERS/ FULLY SPRINKLERED
OCCUPANCY GROUP:	B	FIRE RESISTANCE RATING FOR BUILDING ELEMENTS:	
TYPE OF CONSTRUCTION:	IIB	STRUCTURAL FRAME:	0 HRS
MAXIMUM STORIES ALLOWED:	4	BEARING WALLS:	0 HRS
ACTUAL NUMBER OF STORIES:	1	NONBEARING WALLS, INTERIOR:	0 HRS
MAXIMUM HEIGHT ALLOWED:	55 FT	FLOOR CONSTRUCTION:	0 HRS
ACTUAL HEIGHT:	19 FT 6 IN	ROOF ENCLOSURES:	0 HRS
MAXIMUM AREA ALLOWED PER FLOOR:	23,000 SF	SHAFT ENCLOSURES:	0 HRS
ACTUAL AREA PER FLOOR:	4712 SF	STAIRWAY ENCLOSURE:	0 HRS
ALLOWABLE NUMBER OF OCCUPANTS:	48	CORRIDOR:	0 HRS
ACTUAL NUMBER OF OCCUPANTS:	VARIES	EXTERIOR WALL FIRE RESISTANCE BASED ON FIRE SEPARATION DISTANCE:	0 HRS WHEN > 10 FT
TRAVEL DISTANCE ALLOWED (MAX.):	300 FT		
OCCUPANCY SEPARATION / FIRE RATING:	N/A		

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY JOHN E. CAVE, STATE OF OREGON, P.E. NO. 2,429

DSGN JE CAVE
DR WB LOVE
CHK GB KIRSTEN
APVD CW MASSIE

NO.	DATE	REVISION	BY	APVD
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

GENERAL
ARCHITECTURAL
CODE DATA

SHEET	08
DWG	01-G-08
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng007d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:05:27 PM

DESIGN CRITERIA

1. APPLICABLE CODE: 2003 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED BY THE STATE OF OREGON AND LOCAL AGENCIES.

2. REFER TO THE DRAWINGS FOR ADDITIONAL AND SPECIFIC STRUCTURE LOADINGS AND REQUIREMENTS.

3. ROOF LOADS:
   - SNOW LOAD (GROUND) = 25 PSF PLUS DRIFTING
   - Ce = .9 FULLY EXPOSED; 1.0 PARTIALLY EXPOSED; 1.2 SHELTERED
   - Is = 1.1
   - Ct = 1.0

   SEE SNOW DRIFT DIAGRAMS ON ROOF PLAN(S).

   DEFLECTION CRITERIA FOR ROOF FRAMING MEMBERS:
   - TOTAL LOAD L / 240
   - LIVE LOAD L / 360

   WHERE L IS THE MEMBERS SPAN LENGTH

4. FLOOR LIVE LOADS:
   - OFFICE FLOOR 100 PSF
   - ELECTRICAL ROOM 300 PSF
   - MECHANICAL ROOM 150 PSF
   - CORRIDORS, EXITS, STAIRS 100 PSF
   - VEHICULAR ACCESS HS 20

   COLUMNS, FOOTINGS, AND FLOOR FRAMING MEMBERS HAVE BEEN DESIGNED FOR REDUCED LIVE LOADS IN ACCORDANCE WITH THE BUILDING CODE.

   DEFLECTION CRITERIA FOR FLOOR FRAMING MEMBERS:
   - TOTAL LOAD L / 360
   - LIVE LOAD L / 480

   WHERE L IS THE MEMBERS SPAN LENGTH

5. WIND LOAD:
   OSSC/IBC WIND PRESSURE
   - MPH WIND SPEED = 100 MPH
   - EXPOSURE = C
   - Iw = 1.15

6. SEISMIC LOAD:

   MAPPED SPECTRAL RESPONSE ACCELERATION (USGS 2002)
   - Ss = 0.74 g
   - S1 = 0.34 g

   SPECTRAL RESPONSE COEFFICIENTS
   - Sds = 0.59 g
   - Sd1 = 0.39 g
   - Ie = 1.25
   - SITE CLASS = D
   - SEISMIC USE GROUP = II
   - SESMIC DESIGN CATEGORY = D

7. LATERAL FORCE RESISTING SYSTEM FOR BUILDINGS:

   HEADWORKS:
   SPECIAL REINF CMU AND CONCRETE SHEAR WALL SYSTEM
   V = CsW
   Cs = 0.13
   R = 5.5
   EQUIVALENT LATERAL FORCE PROCEDURE

   BLOWER BUILDING:
   SPECIAL REINF CMU SHEAR WALL SYSTEM
   V = CsW
   Cs = 0.15
   R = 5.5
   EQUIVALENT LATERAL FORCE PROCEDURE

   W3 PUMP STATION:
   SPECIAL REINFORCED CMU SHEAR WALL SYSTEM
   V = CsW
   Cs = 0.37
   R = 2.0

   CONTROL BUILDING:
   SPECIAL REINF CMU SHEAR WALL SYSTEM
   V = CsW
   Cs = 0.13
   R = 5.0
   EQUIVALENT LATERAL FORCE PROCEDURE

8. LATERAL FORCE RESISTING SYSTEM FOR TANKS AND WATER HOLDING PORTIONS OF STRUCTURES: SEISMIC DESIGN IN ACCORDANCE WITH ACI 350.3

   NEW SECONDARY CLARIFIERS:
   V = AI W/R
   A = VARIES
   R = 3.0
   I = 1.25
   EQUIVALENT LATERAL FORCE PROCEDURE

   VERTICAL LOOP REACTORS:
   V = AI W/R
   A = VARIES
   R = 4.0
   I = 1.25
   EQUIVALENT LATERAL FORCE PROCEDURE

   MIXED LIQUOR FLOW SPLIT STRUCTURE:
   V = AI W/R
   A = VARIES
   R = 3.0
   I = 1.25
   EQUIVALENT LATERAL FORCE PROCEDURE

   CHLORINE CONTACT BASINS:
   V = AI W/R
   A = VARIES
   R = 3.0
   I = 1.25
   EQUIVALENT LATERAL FORCE PROCEDURE

   FLOW CONTROL STRUCTURE
   V = AI W/R
   A = VARIES
   R = 3.0
   I = 1.25
   EQUIVALENT LATERAL FORCE PROCEDURE

   INTERCHANGE REACTORS / AEROBIC DIGESTERS
   V = AI W/R
   A = VARIES
   R = 3.0
   I = 1.25
   EQUIVALENT LATERAL FORCE PROCEDURE

9. SOIL DESIGN PARAMETERS:
   A. NET ALLOWABLE SOIL BEARING PRESSURES:
      - STRIP FOOTINGS 2000 PSF
      - ISOLATED FOOTINGS 2000 PSF
      - OVER EXCAVATION HEADWORKS AREA 'A' 3000 PSF
      - HEADWORKS AREAS 'B' AND 'C' 5000 PSF

   B. EQUIVALENT DRAINED FLUID PRESSURES:
      - ACTIVE: 34 PCF
      - AT REST: 54 PCF
      - PASSIVE: 463 PCF

   C. EQUIVALENT UNDRAINED FLUID PRESSURES:
      - ACTIVE: 79 PCF
      - AT REST: 89 PCF
      - PASSIVE: 294 PCF

   D. GROUND WATER ELEVATION (100 YEAR FLOOD): EL 199.00

GENERAL INFORMATION

1. FOR ABBREVIATIONS NOT LISTED, SEE ASME Y14.38 "ABBREVIATIONS AND ACRONYMS" PUBLICATION AS DISTRIBUTED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).

2. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT.

3. DETAILING AND DIMENSIONS OF EXISTING STRUCTURES SHOWN ARE BASED ON AS-BUILT DESIGN DRAWINGS, AND DO NOT NECESSARILY REPRESENT THE AS-CONSTRUCTED CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND DETAILING OF THE EXISTING STRUCTURES PRIOR TO FABRICATION OF ADJACENT FRAMING OR CONNECTIONS THAT ARE AFFECTED BY THE EXISTING STRUCTURE.

4. VERIFY OPENING DIMENSIONS IN WALLS, SLABS, AND DECKS WITH OTHER DISCIPLINE DRAWINGS.

5. FOR NUMBER, TYPE, SIZE, ARRANGEMENT, AND/OR LOCATION OF EQUIPMENT PADS SEE OTHER DISCIPLINE DRAWINGS. COORDINATE WITH EQUIPMENT SUPPLIER PRIOR TO PLACING SLABS, WALLS AND FOUNDATIONS. COORDINATE PIPING OPENINGS WITH OTHER DISCIPLINE DRAWINGS.

6. CUT NO STRUCTURAL MEMBERS FOR PIPES, DUCTS, ETC, UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.

7. VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS GUARANTORS OF CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, NOR SAFETY AT THE JOB SITE.

FOUNDATIONS:

1. NO BACKFILL SHALL BE PLACED BEHIND WALLS UNTIL THE WALL'S AND TOP SUPPORTING SLAB'S CONCRETE HAVE ATTAINED 80% OF THEIR SPECIFIED COMPRESSIVE STRENGTH, OR UNTIL TOP-OF-WALL FRAMING SYSTEMS, INCLUDING DIAPHRAGMS, HAVE BEEN COMPLETED.

2. NO BACKFILL SHALL BE PLACED BEHIND CANTILEVERED, FREE TOP WALLS UNTIL THE CONCRETE HAS ATTAINED 100% OF ITS SPECIFIED COMPRESSIVE STRENGTH.

3. EXCAVATIONS SHALL BE SHORED AS REQUIRED TO PREVENT SUBSIDENCE OR DAMAGE TO ADJACENT EXISTING STRUCTURES, STREETS, UTILITIES, ETC.

4. ALL SOIL BEARING SURFACES SHALL BE INSPECTED BY THE SOILS ENGINEER PRIOR TO PLACEMENT OF REINFORCING STEEL.

FORMWORK, SHORING AND BRACING:

1. CONSTRUCTION SHORING AND BRACING OF FORMWORK SHALL BE IN ACCORDANCE WITH CHAPTER 4 OF ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 347 "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK".

2. THE STRUCTURES SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED FOR STABILITY UNDER FINAL CONDITIONS ONLY. THESE PLANS DO NOT INCLUDE THE NECESSARY COMPONENTS OR EQUIPMENT FOR THE STRUCTURES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK RELATING TO CONSTRUCTION ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS, SCAFFOLDING, FORMWORK, AND OTHER WORK AIDS REQUIRED TO SAFELY PERFORM THE WORK SHOWN.

3. WALLS TIED TO ELEVATED FLOOR OR ROOF SLABS SHALL BE BRACED AND REMOVAL OF BRACING FOLLOWED BY BACKFILLING SHALL NOT BE ALLOWED UNTIL THE SLAB IS COMPLETE AND HAS ATTAINED 80% OF ITS SPECIFIED COMPRESSIVE STRENGTH.

DEFERRED SUBMITTALS

PER 2003 IBC 106.3.4.2, THE FOLLOWING ITEMS SHALL BE STAMPED BY AN ENGINEER REGISTERED IN THE STATE OF OREGON AND SUBMITTED TO THE BUILDING PERMITTING AGENCY FOLLOWING FINAL REVIEW BY THE ENGINEER:

SPECIFICATION SECTION	ITEM
01611	CALCULATIONS FOR ALL SEISMIC BRACING REQUIREMENTS
05210	STEEL JOIST CALCULATIONS
05500	CHANNEL COVER CALCULATIONS
05520	HANDRAIL CALCULATIONS OR TEST DATA
08500	DESIGN CALCULATIONS AND TEST DATA
11281	DESIGN CALCULATIONS
11282	DESIGN CALCULATIONS
11331	DESIGN CALCULATIONS
14620	DESIGN CALCULATIONS
15060	PIPING SUPPORT SYSTEM DESIGN AND CALCULATIONS

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY MARK J. MERKLEIN STATE OF OREGON, P.E. NO. 58,357.

DSGN MJ MERKLEIN					VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-03-01 LINN COUNTY, OREGON
DR KJ DAVIS					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
CHK SM FREY					IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

GENERAL
STRUCTURAL
NOTES - SHEET 1

SHEET	09
DWG	01-G-09
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng008d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:05:33 PM

CONCRETE:

1. ALL CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE, EXCEPT 3000 PSI FOR SECONDARY CONCRETE ELEMENTS SUCH AS CURBS, SIDEWALKS, AND PIPE/CONDUIT ENCASEMENTS.
2. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 "MANUAL OF STANDARD PRACTICE" AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL, CONCRETE FOR BUILDING".
3. CONSTRUCTION JOINTS INDICATED ARE SUGGESTED LOCATIONS. CONTRACTOR MAY REVISE LOCATION OF JOINTS, SUBJECT TO SPECIFIED REQUIREMENTS, AND SHALL SUBMIT ALL JOINT LOCATIONS FOR REVIEW BY THE ENGINEER. ADDITIONAL CONSTRUCTION JOINT LOCATIONS, AS REQUIRED FOR CONSTRUCTION, SHALL BE SUBMITTED FOR REVIEW.
4. CONTINUOUS WATERSTOP AS SPECIFIED SHALL BE INSTALLED IN ALL CONSTRUCTION JOINTS IN WALLS OF WATER HOLDING BASINS, CHANNELS, AND BELOW GRADE STRUCTURES, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
5. ROUGHEN AND CLEAN ALL CONSTRUCTION JOINTS IN WALLS AND SLABS AS SPECIFIED PRIOR TO PLACING ADJACENT CONCRETE. SANDBLASTING OR OTHER PREPARATION OF HORIZONTAL AND VERTICAL JOINTS IS REQUIRED.
6. THE CONTRACTOR SHALL COORDINATE PLACEMENT OF ALL OPENINGS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS AND INSERTS PRIOR TO PLACEMENT OF CONCRETE.
7. NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.

CONCRETE REINFORCING

1. THE MINIMUM REINFORCING FOR ALL CONCRETE WALLS AND SLABS SHALL BE AS FOLLOWS:

WALL THICKNESS	REINF EACH WAY	LOCATION
6"	#4@12"	CENTERED
8"	#5@12"	CENTERED
10"	#4@12"	EACH FACE
12"	#5@12"	EACH FACE

PROVIDE LARGER SIZES AND MORE REINFORCING IN ALL SECTIONS OF CONCRETE WHERE REQUIRED BY THE DETAILS ON THE DRAWINGS OR BY THE SPECIFICATIONS.

2. CLEARANCE FOR REINFORCEMENT BARS, UNLESS SHOWN OTHERWISE, SHALL BE:
   - WHEN PLACED ON GROUND: ——— 3"
   - CONCRETE SURFACES EXPOSED TO WATER, EARTH OR WEATHER: — 2"
   - INTERIOR CONCRETE BEAMS, WALLS AND SLABS NOT EXPOSED TO WATER, EARTH OR WEATHER
     - #5 BAR OR SMALLER ——— 1 1/2"
     - #6 BAR OR LARGER ——— 2"
3. REFER TO WALL CORNER AND WALL INTERSECTION REINFORCING DETAILS 3303. IN GENERAL, THE WALL CORNER REINFORCING SIZES AND SPACINGS SHALL BE CALLED OUT ON THE PLANS AND REFERENCED TO THESE DETAILS AND THE TYPICAL HORIZONTAL WALL REINFORCING SHALL LAP WITH THE CORNER HORIZONTAL REINFORCING.
4. ALL BENDS, UNLESS OTHERWISE SHOWN, SHALL BE A 90 DEGREE STANDARD BEND AS DEFINED IN LATEST EDITION OF ACI 318.
5. ALL WALL CORNER AND WALL INTERSECTION REINFORCEMENT BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH COLUMNS OR PILASTERS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING WALLS, AS INDICATED ELSEWHERE ON THIS SHEET.
6. VERTICAL WALL BARS SHALL BE LAPPED WITH DOWELS FROM BASE SLABS AND EXTENDED INTO THE TOP FACE OF ROOF SLABS AND LAPPED WITH TOP SLAB REINFORCEMENT. FOR HYDRAULIC STRUCTURES, PROVIDE A MINIMUM OF TWO FULL HEIGHT VERTICAL BARS WITH MATCHING DOWELS AT WALL ENDS, CORNERS AND INTERSECTIONS WITH SIZE TO MATCH TYPICAL VERTICAL REINFORCING STEEL SHOWN OR REQUIRED BY NOTES ABOVE.
7. UNLESS INDICATED OTHERWISE, CONTRACTOR MAY SPLICE CONTINUOUS SLAB OR LONGITUDINAL BEAM BARS AT LOCATIONS OF HIS CHOOSING, EXCEPT THAT TOP BAR SPLICES SHALL BE LOCATED AT MIDSPAN AND BOTTOM BAR SPLICES SHALL BE LOCATED AT SUPPORTS. ALL REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

CONCRETE DESIGN STRENGTH = 4,000 PSI **		GRADE 60 REINFORCING STEEL								
BAR SIZE		3	4	5	6	7	8	9	10	11
LAP SPLICE LENGTH		#	#	#	#	#	#	#	#	#
SPACING<6"	TOP BAR *	1'-4"	2'-0"	3'-0"	4'-0"	5'-10"	6'-8"	7'-6"	8'-4"	9'-2"
	OTHER BAR	1'-4"	1'-7"	2'-3"	3'-1"	4'-6"	5'-2"	5'-10"	6'-5"	7'-1"
SPACING≥6"	TOP BAR *	1'-4"	1'-7"	2'-0"	2'-5"	3'-6"	4'-0"	5'-0"	6'-0"	7'-1"
	OTHER BAR	1'-4"	1'-4"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-7"	5'-5"
EMBEDMENT LENGTH										
SPACING<6"	TOP BAR *	1'-0"	1'-7"	2'-3"	3'-1"	4'-6"	5'-2"	5'-10"	6'-5"	7'-1"
	OTHER BAR	1'-0"	1'-2"	1'-9"	2'-5"	3'-6"	4'-0"	4'-6"	5'-0"	5'-5"
SPACING≥6"	TOP BAR *	1'-0"	1'-3"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-7"	5'-5"
	OTHER BAR	1'-0"	1'-0"	1'-2"	1'-5"	2'-1"	2'-5"	2'-11"	3'-7"	4'-2"

CONCRETE REINFORCING: CONTINUED

* TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.

** WHERE 3000 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 16%.

MASONRY:

1. MORTAR SHALL CONFORM TO ASTM C270, TYPE S, HYDRATED. MASONRY CEMENT SHALL NOT BE USED.
2. GROUT SHALL CONFORM TO ASTM C476 COURSE GROUT AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI.
3. ALL CONCRETE MASONRY UNITS SHALL BE GRADE N, MEDIUM WEIGHT, AND HAVE A UNIT COMPRESSIVE MASONRY STRESS OF 1900 PSI. CONFORM TO ASTM C90.
4. THE DESIGN f'm OF THE FINISHED ASSEMBLY SHALL BE 1500 PSI.
5. GROUTING:
   - A. GROUT ONLY CELLS WITH REINFORCING WHERE REBAR SPACING IS 32" ON CENTER OR GREATER EACH WAY.
   - B. SOLID GROUT ALL CMU IN WALLS FOR REBAR SPACING 24" ON CENTER OR LESS, EITHER WAY.
   - C. SOLID GROUTING OF NON-REINFORCED MASONRY CELLS IS NOT ACCEPTABLE
   - D. DO NOT SOLID GROUT WALLS UNLESS SO INDICATED ON THE DRAWINGS.
   - E. SOLID GROUT ALL PIERS, COLUMNS, HEADERS, AND BOND BEAMS. SOLID GROUT ANY ADDITIONAL MASONRY AREAS SPECIFICALLY INDICATED ON THE DRAWINGS.
   - F. GROUT ANY AND ALL CELLS CONTAINING REINFORCING OR WHERE SPECIFICALLY INDICATED.
   - G. FILL ALL CELLS NOT GROUTED WITH MASONRY FILL INSULATION WHERE WALL TYPES SHOWN ON ARCHITECTURAL PLANS INDICATE INSULATION.
6. PLACE COURSES IN RUNNING BOND PATTERN, UNLESS SPECIFICALLY INDICATED OTHERWISE.
7. AT BUILDING WALLS, LAP VERTICAL REINFORCING 48 BAR DIAMETER WITH DOWELS BUT ALL OTHER VERTICAL BAR LAPS SHALL BE 72 BAR DIAMETERS. ALL LAPS IN CANTILEVER CONSTRUCTION SHALL BE 72 BAR DIAMETERS. STAGGER ALL ADJACENT LAP SPLICES, SEPARATED BY 3 INCHES OR LESS, BY 24 INCHES.
8. PROVIDE TWO FULL HEIGHT TYPICAL VERTICAL BARS AT EDGES OF ALL OPENINGS AND FULL HEIGHT TYPICAL VERTICAL BARS IN 3 CELLS AT ALL CORNERS. PROVIDE MATCHING DOWELS FOR ALL VERTICAL BARS. PROVIDE REINFORCED LINTELS ABOVE AND REINFORCED BOND BEAMS BELOW ALL OPENINGS. PROVIDE HORIZONTAL CORNER BARS WITH MINIMUM 2'-0" LEGS AT ALL CORNERS. SEE DETAILS (4001) AND (4003)
9. THE MINIMUM REINFORCING FOR ALL CONCRETE BLOCK WALLS SHALL BE AS FOLLOWS:

WALL THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING	LOCATION
8"	#6@48"	#5@48"	CENTERED
12"	#5@48"	#5@48"	EACH FACE

PROVIDE LARGER SIZES AND MORE REINFORCING IN ALL WALLS WHERE REQUIRED BY THE DRAWINGS OR BY THE SPECIFICATIONS.

FABRICATED METAL WORK:

1. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 UNLESS SHOWN OTHERWISE. SQUARE OR RECTANGULAR STEEL TUBING SHALL CONFORM TO ASTM A-500, GRADE B. STEEL PIPE SHALL BE A501 OR ASTM A53, GRADE B. WIDE FLANGES SHALL BE A992.
2. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN CONFORMANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION, CURRENT EDITION.
3. ALL BOLTS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO ASTM A325-N (OR A325-SC WHERE INDICATED) UNLESS OTHERWISE SHOWN. BOLTS INDICATED AS MACHINE BOLTS (MB) OR ANCHOR BOLTS (AB) SHALL CONFORM TO ASTM A307 FOR CARBON STEEL, A193 FOR STAINLESS STEEL, AND A153 FOR GALVANIZED STEEL EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE. ALL JOINT CONTACT SURFACES SHALL BE CLEAN AND FREE FROM OIL, DIRT AND PAINT.
4. ALL STRUCTURAL STEEL TO BE EMBEDDED IN CONCRETE SHALL BE CLEAN AND FREE OF PAINT, OIL OR DIRT.
5. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THROUGH STRUCTURAL STEEL MEMBERS. NO CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

METAL DECK

1. SEE ROOF PLAN FOR DECK SIZE, GAUGE, AND BUILDING SPECIFIC WELDING REQUIREMENTS.
2. WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.3 "STRUCTURAL WELDING CODE - SHEET STEEL". WELDING FILLER MATERIAL SHALL BE AWS A5.1 OR A5.5 E70XX ELECTRODES.
3. WELDERS SHALL BE AWS CERTIFIED.
4. DECKING SHALL HAVE A MINIMUM 2" BEARING ON ALL SUPPORTS.
5. DECKING SHALL BE CONTINUOUS OVER 3 SPANS MINIMUM, EXCEPT WHERE SHOWN OTHERWISE.
6. THE DECK SHALL BE REINFORCED FOR SMALL OPENINGS IN THE DECK AS SPECIFIED. LARGER OPENINGS SHALL BE REINFORCED PER DETAIL (5321)

WELDING

1. ALL WELDS SHALL BE DONE BY AWS CERTIFIED WELDERS AND SHALL CONFORM TO AWS D 1.1. LATEST EDITION. ALL BUTT WELDS ARE FULL PENETRATION UNLESS INDICATED OTHERWISE. WELD FILLER METAL SHALL BE AWS A5.1 OR A5.5 E70XX ELECTRODES.
2. ALL WELDS FOUND DEFECTIVE SHALL BE REPAIRED AND/OR REPLACED AND RETESTED FOR ADEQUACY AT THE CONTRACTOR'S EXPENSE.
3. USE INTERMITTENT WELDS AT FIELD WELDS OF EMBED PLATES AND ANGLES TO AVOID SPALLING OR CRACKING OF THE EXISTING CONCRETE.
4. BUTT JOINT WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) UNLESS INDICATED OTHERWISE.

PREFABRICATED OPEN WEB METAL JOISTS:

1. THE OPEN WEB STEEL JOIST MANUFACTURER SHALL DESIGN THE JOISTS FOR THE FOLLOWING LOADS:
   - SUPERIMPOSED ROOF LIVE LOAD = 25 PSF
   - SUPERIMPOSED ROOF DEAD LOAD
     - ROOFING = 2.5 PSF (TOP CHORD)
     - METAL DECK = 2.5 PSF (TOP CHORD)
     - INSULATION = 2.5 PSF (TOP CHORD)
     - MECH/ELEC/PIPING = 10 PSF AND 1000 POUNDS POINT LOAD AT ANY PANEL POINT (BOTTOM CHORD)
     - MISCELLANEOUS = MIN 2.5 PSF (TOP AND BOTTOM CHORD)

   TRUSSES SHALL NOT BE DESIGNED FOR LESS THAN 20 PSF TOTAL DEAD LOAD. SEE MECHANICAL AND HVAC DRAWINGS FOR SPECIFIC EQUIPMENT LOADS THAT MUST BE DESIGNED FOR.
2. THE CONTRACTOR SHALL VERIFY AND COORDINATE EQUIPMENT WEIGHTS, LOCATIONS, AND ATTACHMENT REQUIREMENTS PRIOR TO JOIST FABRICATION. EQUIPMENT SUPPLIER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE VERTICAL AND LATERAL SUPPORT OF THEIR EQUIPMENT TO THE STRUCTURE.
3. TOTAL WIND UPLIFT LOADS ON THE JOISTS: SEE DIAGRAMS ON ROOF PLANS
4. MECHANICAL, ELECTRICAL, CEILINGS, AND MISCELLANEOUS LOADS SHALL NOT BE USED TO REDUCE UPLIFT.
5. JOISTS SHALL BE DESIGNED FOR A TOTAL LOAD MAXIMUM DEFLECTION OF L/240 WHERE L IS THE JOIST SPAN LENGTH. PROVIDE MANUFACTURER'S STANDARD CAMBER
6. THE JOIST SIZES INDICATED ON THE PLANS ARE THE MINIMUM ACCEPTABLE SIZES.
7. WHERE NOTED DESIGN THE JOIST TOP CHORD AT THE END OF ROOF SUB-DIAPHRAGMS FOR THE ADDITIONAL AXIAL LOAD (BOTH TENSION AND COMPRESSION) INDICATED ON THE ROOF FRAMING PLANS.
8. PROVIDE CALCULATIONS, PRODUCT DATA, MATERIAL PROPERTIES, CONNECTION DETAILS, ETC FOR ALL TYPES OF JOISTS. THE CALCULATIONS SHALL BE STAMPED AND SIGNED BY AN ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
9. JOIST BRIDGING, BOTTOM CHORD BRACING, AND OTHER ACCESSORIES SHALL BE PER THE MANUFACTURER'S STANDARDS AND AS INDICATED ON THE DRAWINGS. PERMANENTLY BRACE BOTTOM CHORDS AT SPACING RECOMMENDED BY THE JOIST MANUFACTURER, UNLESS SPECIFICALLY INDICATED OTHERWISE. BRACING SHALL EXTEND TO WALLS. SEE DETAIL (5221)

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY MARK J. MERKLEIN STATE OF OREGON, P.E. NO. 58,357.

DSGN MJ MERKLEIN					VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-O3-01 LINN COUNTY, OREGON	GENERAL STRUCTURAL NOTES - SHEET 2	SHEET 10
DR KJ DAVIS					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DWG 01-G-10
CHK SM FREY		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP			DATE MAY 19 2006
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD			PROJ 326918

CH2MHILL carollo engineers

FILENAME: 01ng009d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:05:42 PM

GENERAL NOTES

1. THE QUALITY ASSURANCE PLAN DRAWINGS PROVIDE PROJECT COMPLIANCE WITH THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE (IBC) CHAPTER 17 FOR SPECIAL INSPECTION, STRUCTURAL OBSERVATION, AND QUALITY ASSURANCE FOR WIND AND SEISMIC RESISTANCE AS APPLICABLE. THIS INSPECTION IS OWNER FURNISHED.
2. STANDARD SPECIAL INSPECTION REQUIREMENTS FOR NONSTRUCTURAL COMPONENTS ARE CONTAINED IN TABLE 1.
3. STANDARD SPECIAL INSPECTION REQUIREMENTS FOR STRUCTURAL COMPONENTS, IRREGARDLESS OF WIND OR SEISMIC DESIGN CATEGORIES, ARE CONTAINED IN TABLE 2. STANDARD TESTING REQUIREMENTS FOR STRUCTURAL COMPONENTS ARE CONTAINED IN TABLE 3.
4. PROJECT SPECIFIC REQUIREMENTS FOR STRUCTUES ASSIGNED TO SEISMIC DESIGN CATEGORIES C, D, E, OR F ARE CONTAINED IN TABLE 4. ADDITIONAL TESTING REQUIREMENTS FOR STRUCTURAL RESISTANCE ARE CONTAINED IN TABLE 6.
5. PROJECT SPECIFIC REQUIREMENTS FOR STRUCTURES SUBJECT TO BASIC WIND SPEEDS IN EXCESS OF 100 MPH ARE CONTAINED IN TABLE 5. (NOT REQUIRED FOR THIS CONTRACT)
6. FOR ADDITIONAL REQUIREMENTS, REFER TO SPECIFICATION SECTION 01450, QUALITY ASSURANCE AND INSPECTION. THESE INCLUDE:
   A. CONTRACTOR'S REQUIREMENTS TO PROVIDE ACCESS TO THE WORK FOR REQUIRED INSPECTIONS, AND TO PROVIDE NOTICE OF REQUIRED INSPECTIONS AND STRUCTURAL OBSERVATION.
   B. CONTRACTOR'S STATEMENT OF RESPONSIBILITY FOR WORK TO BE PERFORMED ON SYSTEMS DESIGNATED UNDER THE QUALITY ASSURANCE PLAN FOR WIND OR SEISMIC RESISTANCE.
   C. CONTRACTOR'S STATEMENT OF RESPONSIBILITY FOR WORK TO BE PERFORMED ON SYSTEMS DESIGNATED UNDER THE QUALITY ASSURANCE PLAN FOR WIND OR SEISMIC RESISTANCE.
   D. DEFINITIONS AND TERMINOLOGY USED IN THIS PLAN.

SPECIAL INSPECTION

1. SPECIAL INSPECTION SHALL BE IN ACCORDANCE WITH IBC SECTION 1704 TOGETHER WITH LOCAL AND STATE AMENDMENTS. REFER TO THE TABLES CONTAINED ON THESE GENERAL SHEETS FOR PROJECT SPECIFIC INSPECTION TYPES AND FREQUENCIES.
2. SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY. THE OWNER WILL SECURE AND PAY FOR THE SERVICES OF THE AGENCY TO PERFORM ALL SPECIAL INSPECTION AND ASSOCIATED TESTS. INSPECTORS FOR EACH SYSTEM AND MATERIAL SHALL BE INTERNATIONAL CODE COUNCIL (ICC) CERTIFIED OR OTHERWISE APPROVED BY THE BUILDING OFFICIAL.
3. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONTRACT DOCUMENTS AND SUBMIT RECORDS OF INSPECTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
4. SPECIAL INSPECTION AND ASSOCIATED TESTING REPORTS SHALL BE SUBMITTED TO THE ENGINEER, CONTRACTOR, BUILDING OFFICAL, AND OWNER WITHIN ONE WEEK OF INSPECTION OR WITHIN ONE WEEK OF TEST COMPLETION. THE ENGINEER WILL BE NOTIFIED BY PHONE WITHIN 24 HOURS UPON FINDING DEFICIENCIES REQUIRING IMMEDIATE ATTENTION. INSPECTIONS FOR WHICH REPORTING SHALL BE REQUIRED ARE NOTED IN THE TABLES CONTAINED ON THIS PLAN.
5. AT THE CONCLUSION OF CONSTRUCTION, A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF PREVIOUSLY NOTED DISCREPANCIES SHALL BE SUBMITTED.

STRUCTURAL OBSERVATION

1. STRUCTURAL OBSERVATION SHALL BE IN ACCORDANCE WITH IBC SECTION 1709 TOGETHER WITH LOCAL AND STATE AMENDMENTS. REFER TO PROJECT SPECIFIC NOTES ON THIS SHEET.
2. ONSITE STRUCTURAL OBSERVATION WILL BE PERFORMED AT LEAST ONCE A MONTH, PLUS AT COMPLETION, FOR EACH IDENTIFIED SEISMIC FORCE-OR WIND FORCE-RESISTING SYSTEM IDENTIFIED, INCLUDING FOUNDATIONS AND CONNECTIONS. REFER TO THE GENERAL STRUCTURAL NOTES, FOR THE BASIC SEISMIC- AND WIND-RESISTING SYSTEMS FOR THE STRUCTURES INCLUDED IN THE WORK.
3. STRUCTURAL OBSERVATION WILL BE PERFORMED BY THE REGISTERED PROJECT DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR ANY REQUIRED SPECIAL INSPECTIONS OR INSPECTIONS BY THE BUILDING OFFICIAL.
4. STRUCTURAL OBSERVATION REPORTS, NOTING ANY DEFICIENCIES, WILL BE DELIVERED TO THE CONTRACTOR, BUILDING OFFICIAL, AND OWNER WITHIN ONE WEEK OF THE OBSERVATION. THE CONTRACTOR WILL BE NOTIFIED ON-SITE OR BY PHONE WITHIN 24 HOURS UPON FINDING DEFICIENCIES.
5. AT THE CONCLUSION OF CONSTRUCTION, A WRITTEN STATEMENT WILL BE PROVIDED TO VERIFY THAT THE STRUCTURAL OBSERVATION SITE VISITS WERE MADE AND WHETHER THERE REMAIN ANY STRUCTURAL DEFICIENCIES THAT HAVE NOT BEEN RESOLVED.
6. STRUCTURAL OBSERVATION SHALL INCLUDE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM FOR EACH STRUCTURE CONTAINED IN THE WORK. THE CONTRACTOR SHALL SCHEDULE AND FACILITATE STRUCTURAL OBSERVATION INCLUDING THE FOLLOWING:
   A. FOUNDATION REINFORCING STEEL, WATERSTOPS, EMBEDS, AND SIMILAR ITEMS PRIOR TO CONCRETE PLACEMENT.
   B. WALL TO FOUNDATION CONNECTIONS PRIOR TO FORM CLOSURE FOR ALL MATERIALS.

STRUCTURAL OBSERVATION CONTINUED

   C. CONCRETE SHEAR WALLS PRIOR TO CONCRETE PLACEMENT.
   D. ELEVATED CONCRETE SLABS AND BEAMS PRIOR TO CONCRETE PLACEMENT.
   E. MASONRY WALL, BEAM, PIER, AND COLUMN REINFORCING STEEL PRIOR TO GROUTING AND PRIOR TO CLOSING OF CLEANOUTS.
   F. SYSTEM CONNECTION EMBEDS PRIOR TO GROUT OR CONCRETE PLACEMENT.
   G. CONCRETE WALL TO FLOOR AND ROOF CONNECTIONS PRIOR TO FORM CLOSURE OR OTHER COVER.
   H. STEEL DECK WELDING AND OTHER CONNECTIONS PRIOR TO INSTALLATION OF CONCRETE TOPPING SLABS OR ROOFING.
   I. STEEL DRAG STRUT AND COLLECTOR CONNECTIONS PRIOR TO COVER.
   J. ALL OTHER WALL ANCHORAGE CONNECTIONS FOR MATERIALS NOT SPECIFICALLY IDENTIFIED ABOVE.

QUALITY ASSURANCE FOR WIND RESISTANCE

1. QUALITY ASSURANCE PLAN REQUIREMENTS FOR WIND RESISTANCE IN ACCORDANCE WITH IBC SECTION 1706 ARE NOT APPLICABLE TO THIS PROJECT.

QUALITY ASSURANCE FOR SEISMIC RESISTANCE

1. QUALITY ASSURANCE PLAN REQUIREMENTS FOR SEISMIC RESISTANCE SHALL BE IN ACCORDANCE WITH IBC SECTION 1705 TOGETHER WITH LOCAL AND STATE AMENDMENTS.
2. QUALITY ASSURANCE PLAN REQUIREMENTS SHALL APPLY TO THE FOLLOWING:
   A. SEISMIC FORCE-RESISTING SYSTEMS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F. REFER TO GENERAL STRUCTURAL NOTES, DRAWINGS 01-G-08 AND 01-G-09, FOR BASIC SEISMIC FORCE-RESISTING SYSTEMS FOR EACH STRUCTURE AND DESIGNATED SEISMIC DESIGN CATEGORY.
   B. DESIGNATED SEISMIC SYSTEMS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E OR F.
   C. HVAC DUCTWORK CONTAINING HAZARDOUS MATERIALS AND ASSOCIATED ANCHORAGE; PIPING SYSTEMS AND MECHANICAL UNITS CONTAINING FLAMMABLE, COMBUSTIBLE OR HIGHLY TOXIC MATERIALS, AND ANCHORAGE OF ELECTRICAL EQUIPMENT USED FOR EMERGENCY OR STANDBY POWER SYSTEMS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F.
   D. EXTERIOR WALL PANELS AND THEIR ANCHORAGE, SUSPENDED CEILING SYSTEMS AND THEIR ANCHORAGE, ACCESS FLOORS AND THEIR ANCHORAGE, AND STEEL STORAGE RACKS AND THEIR ANCHORAGE IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E OR F.
   E. ALL ELECTRICAL EQUIPMENT IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY E OR F.
3. MAIN SYSTEMS REQUIRED TO BE COVERED UNDER PROJECT QUALITY ASSURANCE REQUIREMENTS INCLUDE THE FOLLOWING TOGETHER WITH THEIR CONNECTIONS. REFER TO SPECIFICATION 01450, QUALITY ASSURANCE AND INSPECTION.
   A. OUTFALL
   B. FLOW CONTROLSTRUCTURE
   C. INFLUENT PUMP STATION
   D. HEADWORKS
   E. VERTICAL LOOP REACTORS
   F. AERATION BLOWER BUILDING
   G. INTERCHANGE REACTOR BLOWER BUILDING
   H. MIXED LIQUOR FLOW SPLIT STRUCTURE
   I. NEW SECONDARY CLARIFIERS
   J. SECONDARY EFFLUENT JUNCTION BOXES
   K. CHLORINE CONTACT BASINS
   L. DISINFECTION BUILDING AND W3 PUMP STATION
   M. INTERCHANGE REACTORS/AEROBIC DIGESTERS
   N. CONTROL BUILDING
   O. VLR ELECTRICAL ENCLOSURE

TABLE 1
REQUIRED NON-STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01451

SYSTEM OR MATERIAL	2003 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC OWNER FURNISHED SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS OWNER FURNISHED SPECIAL INSPECTION	REQUIRED REPORTING BY SPECIAL INSPECTOR TO DESIGNATED DISTRIBUTION LIST	COMMENTS	TESTING FOR SPECIAL INSPECTION
GEOTECHNICAL							
1. SOILS:							
A. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	1704.7.1, 1803.5, 1803.6	GEOTECHNICAL REPORT	X		X	BY GEOTECHNICAL ENGINEER OF RECORD.	SEE TABLE 3 FOR DENSITY TEST REQUIREMENTS
B. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	1704.7.1	GEOTECHNICAL REPORT	X		X	BY GEOTECHNICAL ENGINEER OF RECORD.	SEE TABLE 3 FOR DENSITY TEST REQUIREMENTS
C. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS (SEE NOTE 20	1704.7.2	GEOTECHNICAL REPORT	X		X	BY GEOTECHNICAL ENGINEER OF RECORD.	SEE TABLE 3 FOR GRADATION TEST REQUIREMENTS
D.VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	1704.7.2, 1704.7.3	GEOTECHNICAL REPORT		X	X	BY GEOTECHNICAL ENGINEER OF RECORD.	SEE TABLE 3 FOR DENSITY TEST REQUIREMENTS
E. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	1704.7.1	GEOTECHNICAL REPORT	X		X	BY GEOTECHNICAL ENGINEER OF RECORD.	SEE TABLE 3 FOR DENSITY TEST REQUIREMENTS
BUILDING MECHANICAL							
1. INSTALLATION OF SMOKE CONTROL SYSTEMS	1704.14		X		X		
GENERAL							
3. INSTALLATION OF MATERIALS THAT REQUIRE ADDITIONAL MANUFACTURER'S INSTRUCTIONS BEYOND CODE REQUIREMENTS	1703.4.2, 1704.13 ITEM 3	ICC-ES EVALUATION REPORTS		X	X	ANCHORS INSTALLED IN HARDENED CONCRETE	
STRUCTURAL							
SEE TABLE 2.							

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY MARK J. MERKLEIN STATE OF OREGON, P.E. NO. 58,357.

DSGN MJ MERKLEIN						VERIFY SCALE
DR KJ DAVIS						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK SM FREY						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

GENERAL
QUALITY ASSURANCE PLAN
SHEET 1

SHEET	11
DWG	01-G-11
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng010d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:05:53 PM

TABLE 2
REQUIRED STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01451

SYSTEM	2003 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC OWNER FURNISHED SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS OWNER FURNISHED SPECIAL INSPECTION	REQUIRED REPORTING BY SPECIAL INSPECTOR TO DESIGNATED DISTRIBUTION LIST	COMMENTS	TESTING FOR SPECIAL INSPECTION
CONCRETE							
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT	1704.4, 1903.5, 1907.1, 1907.7, 1914.4	ACI 318: 3.5, 7.1-7.7	X		X		
2. INSPECTION OF REINFORCING STEEL WELDING	1704.4, 1903.5.2					SEE STEEL CONSTRUCTION FOR WELDING INSPECTION REQUIREMENTS	
3. INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED	1704.4, 1912.5			X	X		
4. VERIFY USE OF REQUIRED DESIGN MIX	1704.4, 1904, 1905.2-1905.4, 1914.2, 1914.3	ACI 318: Ch. 4, 5.2-5.4	X		X		
5. AT THE TIME FRESH CONCRETE IS PLACED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	1704.4, 1905.6, 1914.10	ASTM C 172, ASTM C 31, ACI 318: 5.6, 5.8		X	X		SEE TABLE 3 FOR CONCRETE TEST REQUIREMENTS
6. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	1704.4, 1905.9, 1905.10, 1914.6, 1914.7, 1914.8	ACI 318: 5.9, 5.10		X	X		
7. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	1704.4, 1905.11-1905.13, 1914.9	ACI 318: 5.11-5.13	X		X		
11. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	1906.1.1	ACI 318: 6.1.1	X		X		
MASONRY LEVEL 1							
1. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:							
A. PROPORTIONS OF SITE-PREPARED MORTAR	1704.5.2	ACI 530.1: Art. 2.6A	X		X		
B. CONSTRUCTION OF MORTAR JOINTS	1704.5.2	ACI 530.1: Art. 3.3B	X		X		
C. LOCATION OF REINFORCEMENT AND CONNECTORS	1704.5.2	ACI 530.1: Art. 3.4, 3.6A	X		X		

TABLE 2 CONT
REQUIRED STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01451

SYSTEM	2003 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC OWNER FURNISHED SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS OWNER FURNISHED SPECIAL INSPECTION	REQUIRED REPORTING BY SPECIAL INSPECTOR TO DESIGNATED DISTRIBUTION LIST	COMMENTS	TESTING FOR SPECIAL INSPECTION
MASONRY LEVEL 1 CONT							
2. THE INSPECTION PROGRAM SHALL VERIFY:							
A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	1704.5.2	ACI 530.1: Art. 3.3G	X		X		
B. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	1704.5.2	ACI 530: Sec. 1.2.2(e), 2.1.4, 3.1.6	X		X		
C. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT	1704.5.2	ACI 530: Sec. 1.13 ACI 530.1: Art. 2.4, 3.4	X		X		
D. WELDING OF REINFORCING BARS	1704.5.2	ACI 530: Sec. 2.1.10.6.2, 3.3.3.4(b)		X	X	SEE STEEL CONSTRUCTION FOR WELDING INSPECTION REQUIREMENTS	
E. PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 DEGREES F) OR HOT WEATHER (TEMPERATURE ABOVE 90 DEGREES F)	1704.5.2, 2104.3, 2104.4	ACI 530.1: Art. 1.8C, 1.8D	X		X		
3. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:							
A. GROUT SPACE IS CLEAN	1704.5.2	ACI 530.1: Art. 3.2D	X		X		
B. PLACEMENT OF REINFORCEMENT AND CONNECTORS AND PRESTRESSING TENDONS AND ANCHORAGES	1704.5.2	ACI 530: Sec. 1.13 ACI 530.1: Art. 3.4	X		X		
C. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	1704.5.2	ACI 530.1: Art. 2.6B	X		X		
D. CONSTRUCTION OF MORTAR JOINTS	1704.5.2	ACI 530.1: Art. 3.3B	X		X		
4. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS	1704.5.2	ACI 530.1: Art. 3.5		X	X		
5. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED	1704.5.2, 2105.2.2, 2105.3	ACI 530.1: Art. 1.4		X	X		SEE TABLE 3 FOR UNIT STRENGTH TESTS (PRISM TEST) FOR MASONRY
6. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED	1704.5.2	ACI 530.1: Art. 1.5	X		X		
STEEL							
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS:							
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	1704.3	Applicable ASTM Material Specifications; AISC 360: Sec. A3.3	X		X		
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	1704.3		X		X		
2. INSPECTION OF HIGH-STRENGTH BOLTING:							
A. BEARING-TYPE CONNECTIONS	1704.3.3	AISC 360: Sec. M2.5	X		X		
B. SLIP-CRITICAL CONNECTIONS	1704.3.3	AISC 360: Sec. M2.5		X	X		

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 06/30/06 BY MARK J MERKLEIN, STATE OF OREGON, P.E. NO. 90,357.

DSGN MJ MERKLEIN					VERIFY SCALE
DR KJ DAVIS					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK SM FREY			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)		IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	01/20/10	AS-BUILT	JMD	SJP	
NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

GENERAL
QUALITY ASSURANCE PLAN
SHEET 2

SHEET	12
DWG	01-G-12
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng011d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:06:02 PM

TABLE 2 CONT

REQUIRED STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01451

SYSTEM	2003 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC OWNER FURNISHED SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS OWNER FURNISHED SPECIAL INSPECTION	REQUIRED REPORTING BY SPECIAL INSPECTOR TO DESIGNATED DISTRIBUTION LIST	COMMENTS	TESTING FOR SPECIAL INSPECTION
STEEL CONT							
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL:							
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	1704.3, 2203.1	ASTM A 6 or ASTM A 568 AISC 360: Sec. M5.5			X		
B. MANUFACTURERS' CERTIFIED MILL TEST REPORTS	1704.3, 2203.1	ASTM A 6 or ASTM A 568 AISC 360: Sec. M5.5			X		
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:							
A. IDENTIFICATION MARKINGS CONFORM TO AWS SPECIFICATIONS IN THE APPROVED CONSTRUCTION DOCUMENTS	1704.3	AISC 360: Sec. A3.5 AWS D1.1: Sec. 6			X		
B. MANUFACTURER'S CERTIFICATES OF COMPLIANCE REQUIRED	1704.3	AISC 360: Sec. A3.5 AWS D1.1: Sec. 6			X		
5.A. INSPECTION OF WELDING, STRUCTURAL STEEL:							
1. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	1704.3.1	AWS D1.1		X	X		
2. MULTI-PASS FILLET WELDS	1704.3.1	AWS D1.1		X	X		
3. SINGLE-PASS FILLET WELDS > 5/16"	1704.3.1	AWS D1.1		X	X		
4. SINGLE-PASS FILLET WELDS <= 5/16"	1704.3.1	AWS D1.1	X		X		
5. FLOOR AND DECK WELDS	1704.3	AWS D1.3	X		X		
5.B. INSPECTION OF WELDING, REINFORCING STEEL:							
1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706	1704.3, 1903.5.2	AWS D1.4 ACI 318: 3.5.2	X		X		
2. REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS AND SHEAR REINFORCEMENT	1704.3, 1903.5.2	AWS D1.4 ACI 318: 3.5.2		X	X		
3. SHEAR REINFORCEMENT	1704.3, 1903.5.2	AWS D1.4 ACI 318: 3.5.2		X	X		
4. OTHER REINFORCING STEEL	1704.3, 1903.5.2	AWS D1.4 ACI 318: 3.5.2	X		X		

TABLE 2 CONT

REQUIRED STRUCTURAL SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01451

SYSTEM	2003 IBC CODE REFERENCE	REFERENCED STANDARD	PERIODIC OWNER FURNISHED SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS OWNER FURNISHED SPECIAL INSPECTION	REQUIRED REPORTING BY SPECIAL INSPECTOR TO DESIGNATED DISTRIBUTION LIST	COMMENTS	TESTING FOR SPECIAL INSPECTION
ALUMINUM							
1. MATERIAL VERIFICATION OF ALUMINUM:							
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	1704.13 ITEM 2				X		
B. MANUFACTURERS' CERTIFIED MILL TEST REPORTS	1704.13 ITEM 2				X		
2. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:							
A. IDENTIFICATION MARKINGS CONFORM TO AWS SPECIFICATIONS IN THE APPROVED CONSTRUCTION DOCUMENTS	1704.13 ITEM 2				X		
B. MANUFACTURER'S CERTIFICATES OF COMPLIANCE REQUIRED	1704.13 ITEM 2				X		
3. INSPECTION OF WELDING:							
A. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	1704.13 ITEM 2	AWS D1.2		X	X		
B. MULTI-PASS FILLET WELDS	1704.13 ITEM 2	AWS D1.2		X	X		
C. SINGLE-PASS FILLET WELDS	1704.13 ITEM 2	AWS D1.2	X		X		
D. WELDED SHEET FOR ALUMINUM MEMBERS	1704.13 ITEM 2	AWS D1.2	X		X		

NOTES:
1. PERIODIC INSPECTION IS DEFINED AS OBSERVATION BY THE SPECIAL INSPECTOR OF ALL IN-PLACE MATERIALS, EITHER DURING THEIR PLACEMENT OR UPON THE COMPLETION OF THEIR PLACEMENT. THE COMPLETION OBSERVATION SHALL BE PERFORMED SO THAT WORK CAN BE CORRECTED PRIOR TO OTHER RELATED WORK PROCEEDING. ADDITIONALLY, THE SPECIAL INSPECTOR SHALL CONTINUOUSLY OBSERVE THE FIRST FIVE PERCENT OF EACH TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION.

TABLE 3
TESTING FOR REQUIRED SPECIAL INSPECTION
REFER TO SPECIFICATION SECTION 01451

MATERIAL	TYPE OR SCOPE	STANDARD	2003 IBC CODE REFERENCE	FREQUENCY	BY WHOM	REQUIRED REPORTING TO DESIGNATED DISTRIBUTION LIST	COMMENTS
GEOTECHNICAL							
CONTROLLED FILL	GRADATION	ASTM D422	1704.7.2	ONE SAMPLE PER 500 TONS OF FINISHED PRODUCT	SPECIAL INSPECTOR	X	
CONTROLLED FILL	DENSITY	ASTM D2922	1704.7.2	TWO TESTS ON EVERY LIFT	SPECIAL INSPECTOR	X	
PREPARED SUBGRADE	DENSITY	ASTM D2922	1704.7.1	TWO TESTS FOR EACH STRUCTURE	SPECIAL INSPECTOR	X	
CONCRETE							
CONCRETE	STRENGTH	ASTM C39	1704.4, 1905.6	ONCE EACH SHIFT, BUT NOT LESS THAN ONE SAMPLE FOR EACH 100 CUBIC YARDS PLACED	SPECIAL INSPECTOR	X	
CONCRETE	SLUMP	ASTM C143	1704.4	ONE SAMPLE PER STRENGTH TEST	SPECIAL INSPECTOR	X	
CONCRETE	AIR CONTENT	ASTM C231	1704.4	ONE SAMPLE PER STRENGTH TEST	SPECIAL INSPECTOR	X	
CONCRETE	TEMPERATURE	ASTM C1064	1704.4	ONE SAMPLE PER STRENGTH TEST	SPECIAL INSPECTOR	X	
MASONRY							
MASONRY	UNIT STRENGTH	ASTM C140	2105.2.2.1.2	TEST 6 UNITS PER EVERY 5000 OR FRACTION THEREOF PRIOR TO CONSTRUCTION	SPECIAL INSPECTOR	X	
MASONRY	COMPRESSIVE STRENGTH OF GROUT	ASTM C1019	2105.2.2.1.2	THREE SAMPLES PRIOR TO CONSTRUCTION	SPECIAL INSPECTOR	X	
MASONRY	PRISM	ASTM C1314	2105.2.2.2	TEST FIVE PRISMS PRIOR TO CONSTRUCTION	SPECIAL INSPECTOR	X	
STEEL							
STRUCTURAL STEEL	ULTRASONIC OR RADIOGRAPHIC NONDESTRUCTIVE TESTING	AWS D1.1	1704.3.1	10% OF ALL GROOVE AND BUTT JOINT WELDS	CONTRACTOR'S CERTIFIED WELDING INSPECTOR	X	
REINFORCING STEEL	MAGNETIC PARTICLE NONDESTRUCTIVE TESTING	AWS D1.4	1903.5.2	ALL WELDED REINFORCING BAR SPLICES	CONTRACTOR'S CERTIFIED WELDING INSPECTOR	X	

TABLE 4
REQUIRED SPECIAL INSPECTION FOR SEISMIC RESISTANCE FOR STRUCTURAL SYSTEMS

REFER TO TABLE 2 FOR STANDARD STRUCTURAL SPECIAL INSPECTION REQUIREMENTS

The Seismic Design Category (SDC) for this Project is D.

SYSTEM	2003 IBC CODE REFERENCE	STANDARD OR CODE	PERIODIC OWNER FURNISHED SPECIAL INSPECTION (SEE NOTE 1)	CONTINUOUS OWNER FURNISHED SPECIAL INSPECTION	REQUIRED REPORTING BY SPECIAL INSPECTOR TO DESIGNATED DISTRIBUTION LIST	COMMENTS FOR DETAILS, REFER TO SPECIFICATION SECTION 01451	TESTING FOR SPECIAL INSPECTION
ARCHITECTURAL							
INSTALLATION AND ANCHORAGE OF SUSPENDED CEILING SYSTEMS	1705.1 ITEM 4.4.3, 1707.6		X		X		
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ARCHITECTURAL SYSTEMS AND THEIR COMPONENTS	1707.1 ITEM 2		X		X		
ELECTRICAL							
INSTALLATION OF ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS	1707.8		X		X	NOTES 2 & 3	
INSTALLATION OF ELECTRICAL MOTORS, TRANSFORMERS, SWITCH-GEAR UNITS, SUBSTATIONS AND MOTOR CONTROL CENTERS WITH I_P = 1.5	1707.8.1 ITEM 2		X		X	NOTES 2 & 3	
INSTALLATION OF SEISMIC SUPPORTS FOR ELECTRICAL SYSTEMS AND THEIR COMPONENTS WITH I_P = 1.5	1707.8.1		X		X	NOTES 2 & 3	
PROCESS MECHANICAL							
INSTALLATION OF PIPING SYSTEM MEANT TO CARRY FLAMMABLE, COMBUSTIBLE OR HIGHLY TOXIC CONTENTS AND ITS ASSOCIATED MECHANICAL UNITS	1707.8		X		X		
INSTALLATION OF OTHER EQUIPMENT REQUIRED TO BE OPERATIONAL AFTER AN EARTHQUAKE	1707.8		X		X	NOTES 2 & 3	
INSTALLATION OF PIPING DISTRIBUTION SYSTEMS 3-INCHES OR MORE IN DIAMETER WITH I_P = 1.5	1707.8.1 ITEM 4		X		X		
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED MECHANICAL SYSTEMS AND THEIR COMPONENTS	1707.1 ITEM 2		X		X	NOTES 2 & 3	
BUILDING MECHANICAL							
INSTALLATION OF FIRE PROTECTION SPRINKLER SYSTEM	1707.1 ITEM 2		X				
INSTALLATION OF PIPING DISTRIBUTION SYSTEMS 3-INCHES OR MORE IN DIAMETER	1707.7.1 ITEM 4		X		X		
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED MECHANICAL SYSTEMS AND THEIR COMPONENTS	1707.1 ITEM 2		X		X	NOTES 2 & 3	
STRUCTURAL							
STRUCTURAL STEEL WELDING IN SEISMIC FORCE-RESISTING SYSTEMS EXCEPT FOR FLOOR/ROOF DECK WELDING AND SINGLE PASS FILLET WELDS ≤ 5/16"	1707.2	AISC 341		X	X		SEE TABLE 6 FOR NONDESTRUCTIVE TESTING OF WELDS
COLD FORMED STEEL FRAMING: WELDING OF ELEMENTS OF THE SEISMIC FORCE-RESISTING SYSTEM	1707.4		X		X		

NOTES:
1. PERIODIC INSPECTION IS DEFINED AS OBSERVATION BY THE SPECIAL INSPECTOR OF ALL IN-PLACE MATERIALS, EITHER DURING THEIR PLACEMENT OR UPON THE COMPLETION OF THEIR PLACEMENT. THE COMPLETION OBSERVATION SHALL BE PERFORMED SO THAT WORK CAN BE CORRECTED PRIOR TO OTHER RELATED WORK PROCEEDING. ADDITIONALLY, THE SPECIAL INSPECTOR SHALL CONTINUOUSLY OBSERVE THE FIRST FIVE PERCENT OF EACH TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION.
2. TESTING OF SYSTEMS AND THEIR ANCHORAGE SHALL BE IN CONFORMANCE WITH 2006 IBC SECTION 1708.5.
3. CERTIFICATION OF SYSTEMS AND THEIR ANCHORAGE SHALL BE IN CONFORMANCE WITH 2006 IBC SECTION 1708.5.

DSGN	MJ MERKLEIN					VERIFY SCALE
DR	KJ DAVIS					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	SM FREY					IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP	
		NO. DATE	REVISION	BY	APVD	

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

GENERAL
QUALITY ASSURANCE PLAN
SHEET 4

SHEET	14
DWG	01-G-14
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng013d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:06:07 PM

TABLE 6
TESTING FOR SEISMIC RESISTANCE
REFER TO SPECIFICATION SECTION 01451

MATERIAL	TYPE OR SCOPE	STANDARD	2003 IBC CODE REFERENCE	FREQUENCY	BY WHOM	REQUIRED REPORTING TO DESIGNATED DISTRIBUTION LIST	COMMENTS
REINFORCING STEEL							
REINFORCING STEEL USED TO RESIST FLEXURAL, SHEAR AND AXIAL FORCES IN REINFORCED CONCRETE INTERMEDIATE FRAMES, SPECIAL MOMENT FRAMES AND BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE OR REINFORCED MASONRY SHEAR WALLS	CERTIFIED MILL TEST REPORTS		1708.3	EACH SHIPMENT	MANUFACTURER	X	
ASTM A615 REINFORCING STEEL USED TO RESIST FLEXURAL AND AXIAL FORCES IN SPECIAL MOMENT FRAMES AND IN BOUNDARY ELEMENTS OF SHEAR WALLS	MEET TESTING REQUIREMENTS	ACI 318: Sec. 21.2.5	1708.3	EACH SHIPMENT	MANUFACTURER	X	
REINFORCING STEEL MATERIAL IF ASTM A615 REINFORCING STEEL IS TO BE WELDED	CHEMICAL TEST TO DETERMINE WELDABILITY		1708.3, 1903.5.2	EACH SHIPMENT	MANUFACTURER	X	
MASONRY LEVEL 1							
ENGINEERED MASONRY IN NONESSENTIAL FACILITIES	CERTIFICATES OF COMPLIANCE USED IN MASONRY CONSTRUCTION		1708.1.3	PRIOR TO CONSTRUCTION	MANUFACTURER	X	
ENGINEERED MASONRY IN NONESSENTIAL FACILITIES	UNIT STRENGTH	ASTM C140	1708.1.3, 2105.2.2.1.2	PRIOR TO CONSTRUCTION	SPECIAL INSPECTOR	X	
ENGINEERED MASONRY IN NONESSENTIAL FACILITIES	COMPRESSIVE STRENGTH OF GROUT	ASTM C1019	1708.1.3, 2105.2.2.1.2	PRIOR TO CONSTRUCTION	SPECIAL INSPECTOR	X	
ENGINEERED MASONRY IN NONESSENTIAL FACILITIES	MASONRY PRISM TEST	ASTM C1314	1708.1.3, 2105.2.2.2	PRIOR TO CONSTRUCTION	SPECIAL INSPECTOR	X	
STEEL							
COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	NONDESTRUCTIVE TESTING	AISC 341 AWS D1.1	1708.4	CONTINUOUS	SPECIAL INSPECTOR	X	
MULTI-PASS FILLET WELDS	NONDESTRUCTIVE TESTING	AISC 341 AWS D1.1	1708.4	CONTINUOUS	SPECIAL INSPECTOR	X	
SINGLE-PASS FILLET WELDS > 5/16"	NONDESTRUCTIVE TESTING	AISC 341 AWS D1.1	1708.4	CONTINUOUS	SPECIAL INSPECTOR	X	
BASE METAL THICKER THAN 1.5 INCHES WHERE SUBJECT TO THROUGH-THICKNESS WELD SHRINKAGE STRAINS	ULTRASONIC TESTING	ASTM A435 OR A898 (LEVEL 1)	1708.4	CONTINUOUS	SPECIAL INSPECTOR	X	

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT CONTAINS SEAL OF AND SIGNED DATED BY MARK J. MERKLEIN STATE OF OREGON PE NO. 58,357.

DSGN MJ MERKLEIN						VERIFY SCALE
DR KJ DAVIS						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK SM FREY			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	01/20/10	AS-BUILT	JMD	SJP		
NO.	DATE	REVISION	BY	APVD		

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

GENERAL
QUALITY ASSURANCE PLAN
SHEET 5

SHEET	15
DWG	01-G-15
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng014d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:06:10 PM

GENERAL SITE NOTES:

1. SOURCE OF TOPOGRAPHY SHOWN ON THE CIVIL PLANS ARE BASE MAPS PROVIDED BY K&D ENGINEERING. ADDITIONAL UTILITY MAPPING HAS BEEN ADDED FROM AS-BUILT DATA. EXISTING CONDITIONS MAY VARY FROM THOSE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ADJUST WORK PLAN ACCORDINGLY PRIOR TO BEGINNING CONSTRUCTION.
2. EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED. NEW FINISH GRADE, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED.
3. HORIZONTAL DATUM: NAD (83) 91.
4. VERTICAL DATUM: NGVD (29) 47.
5. MAINTAIN, RELOCATE, OR REPLACE EXISTING SURVEY MONUMENTS, CONTROL POINTS, AND STAKES WHICH ARE DISTURBED OR DESTROYED. PERFORM THE WORK TO PRODUCE THE SAME LEVEL OF ACCURACY AS THE ORIGINAL MONUMENT(S) IN A TIMELY MANNER, AND AT THE CONTRACTOR'S EXPENSE, SEE (410).
6. FOR LOCATION OF CONTROL POINT ON STRUCTURES, SEE STRUCTURAL DRAWINGS.
7. COORDINATES AND DIMENSIONS SHOWN FOR ROADWAY IMPROVEMENTS ARE TO FACE OF CURB OR EDGE OF PAVEMENT.
8. STAGING AREA SHALL BE FOR CONTRACTOR'S EMPLOYEE OVERFLOW PARKING AND ON-SITE STORAGE OF MATERIALS. CONTRACTOR'S TRAILERS SHALL BE LOCATED IN TRAILER AREA AS SHOWN ON DWG 05-EC-101. STAGING AND STORAGE AREAS AS SHOWN ON DWGS 05-EC-100 AND 05-EC-101.
9. PROVIDE TEMPORARY FENCING AS NECESSARY TO MAINTAIN SECURITY AT ALL TIMES.
10. ELEVATIONS GIVEN ARE TO FINISH GRADE UNLESS OTHERWISE SHOWN.
11. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
12. UNLESS SHOWN ON THE LANDSCAPING PLANS, ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE SHALL BE COVERED WITH GRASS AS SPECIFIED IN SECTION 02370.
13. CONTRACTOR SHALL SUBMIT A COMPLETE SOIL EROSION CONTROL PLAN FOR DEQ APPROVAL, AS SPECIFIED. SEE EROSION CONTROL GENERAL NOTES ON DRAWING 01-G-017. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION CONTROL DEVICES DURING CONSTRUCTION. CONTRACTOR SHALL TAKE ALL OTHER MEASURES TO POSITIVELY PRECLUDE EROSION MATERIALS FROM LEAVING THE SITE.
14. ALL EXISTING BASE MAPPING SHOWN FOR AREA LOCATION, GRADING, AND YARD PIPING PLANS REFLECT POST-DEMOLITION CONDITIONS. CONTRACTOR SHALL SEE DEMOLITION DRAWINGS FOR EXISTING CONDITIONS. SEE NOTE 1 FOR SOURCE OF EXISTING BASE MAPPING.

GENERAL YARD PIPING AND UTILITIES NOTES:

1. EXISTING UNDERGROUND UTILITIES OBTAINED FROM AS-BUILTS AND FROM FIELD SURVEY. CONTRACTOR SHALL POTHOLE AND FIELD VERIFY DEPTH AND LOCATION PRIOR TO EXCAVATION. PROTECT ALL EXISTING UTILITIES TO REMAIN DURING CONSTRUCTION.
2. FOR PIPING FLOW STREAM IDENTIFICATION, SEE DRAWING 01-G-21.
3. EXISTING PIPING AND EQUIPMENT ARE SHOWN SCREENED AND/OR LIGHT-LINED. NEW PIPING AND EQUIPMENT ARE SHOWN HEAVY-LINED.
4. UNLESS OTHERWISE SHOWN ALL PIPING SHALL HAVE A MINIMUM OF 3' COVER.
5. ALL PIPES SHALL HAVE A CONSTANT SLOPE BETWEEN INVERT ELEVATIONS UNLESS A FITTING IS SHOWN.
6. ALL NEW WATER PIPES MUST BE PROPERLY FLUSHED, PRESSURE TESTED, CHLORINATED AND BACTERIOLOGICALLY TESTED, AS SPECIFIED.
7. FOR TRENCHING AND BACKFILL, SEE (205).
8. FOR SURFACE RESTORATION OF ASPHALT CONCRETE, SEE (2220), FOR GRAVEL ROADS, SEE (2240), AND FOR GRASS, SEE SPECIFICATIONS. INDIVIDUAL THICKNESSES A MINIMUM, OTHERWISE, MATCH EXST PVMT.
9. MINIMUM ALLOWABLE CLEARANCE BETWEEN PIPES AT CROSSINGS SHALL BE 3". CONTROLLED LOW STRENGTH FILL SUPPORT IS REQUIRED AS SHOWN ON (2335).
10. ALL CONTROL POINTS SHOWN FOR GRAVITY UTILITY SYSTEM STRUCTURES ARE LOCATED AT CENTER OF MANHOLES, FACE OF CURB AT CENTERLINE OF CATCH BASINS, OR CENTER OF AREA DRAINS.

GENERAL NOTE:

1. THIS IS A STANDARD LEGEND SHEET. THEREFORE, NOT ALL OF THE INFORMATION SHOWN MAY BE USED ON THIS PROJECT.

CIVIL LEGEND

EXISTING	THIS CONTRACT	
	⊗ 158.5	SPOT ELEVATION
	155	CONTOUR LINE
	3:1	EMBANKMENT AND SLOPE
		DRAINAGEWAY OR DITCH
		CATCH BASIN OR INLET
		TRENCH DRAIN
	OR	SIGN
		MANHOLE
		ELECTRICAL MANHOLE
		ELECTRIC HANDHOLE
		POST OR GUARD POST
		GUY ANCHOR
		FIRE HYDRANT
		UTILITY POLE
		LIGHT POLE
		BENCH MARK
		SURVEY CONTROL POINT OR POINT OF INTERSECTION
		BRUSH/TREE LINE
		TREE
		PROPERTY LINE
		CENTER LINE, BUILDING, ROAD, ETC.
		STAGING OR WORK AREA LIMITS
	N 1000.00 E 1000.00	STRUCTURE, BUILDING OR FACILITY LOCATION POINT - COORDINATES
	B-1	BORING LOCATION AND NUMBER
	TP-2	TEST PIT LOCATION AND NUMBER
	P-3	PIEZOMETER LOCATION AND NUMBER
OR	OR OR	DEMOLITION
OR	OR	STRUCTURE, BUILDING OR FACILITY
		ASPHALT CONCRETE PAVEMENT
		GRAVEL SURFACING
		CONCRETE PAVEMENT
		CURB
		CURB AND GUTTER
		SINGLE SWING GATE
		DOUBLE SWING GATE
		SLIDING GATE
		GUARD RAIL
		CHAIN LINK FENCE
		ARCHITECTURAL FENCE
		WIRE FENCE
		CULVERT

YARD PIPING LEGEND

EXISTING	THIS CONTRACT	
	8" PE	NOMINAL PIPE DIAMETER PIPE USE IDENTIFICATION
		PIPING < 30" DIAMETER
		PIPING ≥ 30" DIAMETER
		EXISTING PIPE TO BE ABANDONED
		EXISTING PIPE TO BE REMOVED
		NON-FREEZE HOSE VALVE (V-X) X = NO. IN SPECIFICATIONS
		NON-FREEZE HOSE VALVE WITH HOSE RACK (V-X) X = NO. IN SPECIFICATIONS
		INDICATOR POST VALVE
		GATE VALVE AND VALVE BOX
		BUTTERFLY VALVE AND VALVE BOX
		PLUG VALVE AND VALVE BOX
		FLEXIBLE COUPLING
		90° ELBOW UP
		90° ELBOW DOWN
		BEND < 90° UP
		BEND < 90° DOWN
		CONCENTRIC REDUCER
		CAP OR PLUG
		CLEANOUT
		FIRE HYDRANT
	(A)	BACKFILL CLASS

DSGN JT ASHLEY					VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-03-01 LINN COUNTY, OREGON	GENERAL CIVIL LEGEND AND GENERAL NOTES	SHEET 16
DR PA LONG					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DWG 01-G-16
CHK DJ PETERSON								DATE MAY 19 2006
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD			PROJ 326918
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP			

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GENERAL EROSION CONTROL NOTES:

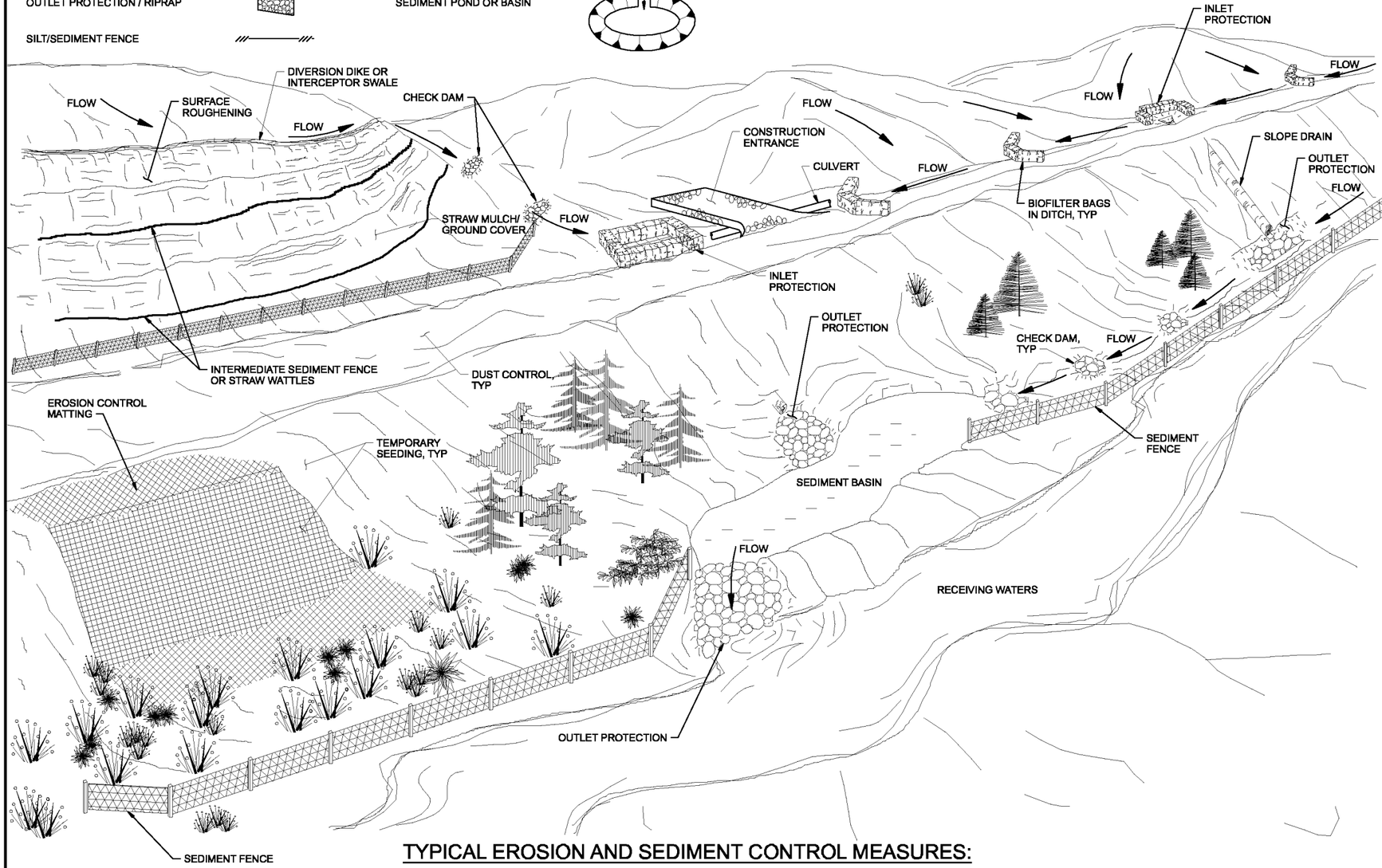
1. CONTRACTOR SHALL SUBMIT A COMPLETE EROSION AND SEDIMENT CONTROL(ESC) PLAN FOR APPROVAL AS SPECIFIED. SEE SPECIFICATION SECTION 02370 FOR EROSION AND SEDIMENTATION SUBMITTAL REQUIREMENTS. SEE SPECIFICATIONS SECTION 01400 AND 01500 FOR PERMITTING REQUIREMENTS .
2. SEE DRAWINGS 05-EC-100 THROUGH 05-EC-101 FOR MINIMUM PROJECT EROSION AND SEDIMENT CONTROL MEASURES. THE INTENT OF THESE PLANS IS TO SHOW THE MINIMUM REQUIRED ESC MEASURES AND THEIR LOCATIONS. CONTRACTOR SHALL SUPPLEMENT THESE PLANS AS NECESSARY TO MEET LOCAL, STATE, AND FEDERAL REQUIREMENTS.
3. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND OPERATIONAL PRIOR TO BEGINNING ANY SITE ACTIVITIES. THE IMPLEMENTATION, CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THE ESC FACILITIES IS THE REPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED BY THE LOCAL JURISDICTION, AND VEGETATION IS ESTABLISHED.
4. THE BOUNDARIES OF THE CLEARING LIMITS FOR THE PROJECT SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE BOUNDARY MARKINGS SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
5. THE ESC FACILITIES SHOWN ON THE EROSION CONTROL PLANS MUST BE CONSTRUCTED IN CONJUNCTION WILL ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
6. THE ESC FACILITIES SHOWN ON THE EROSION CONTROL PLANS ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THE ESC FACILITIES SHALL BE UPGRADED AS NEED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.
7. CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE PATTERNS AT ALL TIMES AND TAKE ALL NECESSARY MEASURES TO POSITIVELY PRECLUDE EROSION MATERIALS FROM LEAVING THE SITE.
8. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEY CONTINUE FUNCTIONING.
9. AT NO TIME SHALL SEDIMENT BE ALLOWED TO ACCUMULATE MORE THAN 1/3 THE BARRIER HEIGHT. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATIONS SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
10. STABILIZED GRAVEL CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
11. PROVIDE AND MAINTAIN DUST CONTROL MEASURES FOR ALL PROPERTIES ADJACENT TO WORK AREAS. ANY HIGH ERODIBLE AREAS OR TEMPORARY SOIL STOCKPILINGS SHALL BE COVERED PER (5) 05-EC-401
12. STORM DRAIN INLETS, BASINS, AND AREA DRAINS SHALL BE PROTECTED PER (4) 05-EC-401 UNTIL PAVEMENT SURFACES ARE COMPLETED AND/OR VEGETATION IS RE-ESTABLISHED.
13. PAVEMENT SURFACES AND VEGETATION ARE TO BE PLACED AS RAPIDLY AS POSSIBLE.
14. SEEDING SHALL BE PERFORMED NO LATER THAN SEPTEMBER 1ST FOR EACH PHASE OF CONSTRUCTION.
15. IF THERE ARE ANY EXPOSED SOILS OR ANY GROUND COVER THAT IS NOT FULLY ESTABLISHED BY OCTOBER 1ST, THEN THE OPEN AREA SHALL BE PROTECTED THROUGH THE WINTER BY MEANS OF WET WEATHER EROSION PREVENTION MEASURES. THESE MEASURES CONSIST OF STRAW MULCH, EROSION CONTROL BLANKETS/MATTING, OR OTHER METHOD(S) AS APPROVED BY LOCAL JURISDICTION.
16. UPON PROJECT COMPLETION, CONTRACTOR SHALL RESTORE ALL STAGING AND STOCKIPILING AREAS TO EQUAL OR BETTER CONDITION PRIOR TO CONSTRUCTION. ALL TEMPORARY FILLS, SURFACINGS, AND CONSTRUCTION MATERIALS NOT SCHEDULED TO REMAIN SHALL BE REMOVED AND AREAS SHALL BE SEEDED IN ACCORDANCE WITH SPECIFICATION SECTION 02370, UNLESS SHOWN OTHERWISE ON LANDSCAPING DRAWINGS.
17. CONTRACTOR SHALL REMOVE ESC MEASURES ONLY WHEN VEGETATION BECOMES STABILIZED AND IS FULLY ESTABLISHED.

GENERAL EROSION CONTROL LEGEND:

COVER PRACTICES	SYMBOL	COVER PRACTICES	SYMBOL
CONSTRUCTION ENTRANCE		BIOFILTER BAG BARRIER	
TIRE/WHEEL WASH		INLET PROTECTION	OR
CHECK DAMS		SEDIMENT TRAP (OR SUMP)	
OUTLET PROTECTION / RIPRAP		SEDIMENT POND OR BASIN	
SILT/SEDIMENT FENCE			

LEGEND NOTE:

THIS IS A STANDARD LEGEND SHEET. THEREFORE, ALL THE SYMBOLS SHOWN MIGHT NOT BE USED ON THIS PROJECT.



TYPICAL EROSION AND SEDIMENT CONTROL MEASURES:

NOTE:

THE INTENT OF THIS SKETCH IS TO PROVIDE AN OVERALL PERSPECTIVE OF TYPICAL EROSION CONTROL DEVICES AND METHODS USED DURING CONSTRUCTION. THIS DOES NOT IMPLY THAT THE CONTRACTOR IS TO USE ONLY THE DEVICES SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING EROSION CONTROL PREVENTION TECHNIQUES AND PROVIDING ALL NECESSARY EROSION CONTROL DEVICES THAT MEET LOCAL, STATE, AND FEDERAL REQUIREMENTS.

DSGN JT ASHLEY						VERIFY SCALE
DR JT ASHLEY						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE		01/20/10	AS-BUILT	JMD	SJP	
	NO.	DATE	REVISION	BY	APVD	

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

GENERAL

EROSION CONTROL LEGEND AND GENERAL NOTES

SHEET	17
DWG	01-G-17
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng016d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:06:19 PM

MECHANICAL LEGEND AND NOTES

GENERAL PIPING NOTES

1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
2. SIZE OF FITTINGS SHOWN ON PLANS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS APPROXIMATE. CONTRACTOR SHALL DESIGN SUPPORTS AS SPECIFIED.
4. ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL UNLESS OTHERWISE SHOWN.
5. ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST PROTECTION UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
6. ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, OR SCREWED PIPING, SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED.
7. SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE PLANS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
8. NUMBER AND LOCATION OF UNIONS SHOWN ON PLANS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
9. WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, UNLESS OTHERWISE SPECIFIED. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER.

MISCELLANEOUS PIPING SYMBOLS

- STRAINER
- SIGHT GLASS
- FLEXIBLE (ELASTOMER) PIPE CONNECTION
- GAUGE WITH COCK
- THERMOMETER
- ROTAMETER
- PIG LAUNCHER
- PIG CATCHER

GATE SYMBOLS

EL VIEW / PLAN VIEW

- SLUICE
- BUTTERFLY
- FLAP
- SHEAR
- FABRICATED SLIDE

PIPE AND FITTING SYMBOLS

DOUBLE LINE / SINGLE LINE

- EXISTING PIPE
- NEW PIPE
- EXISTING PIPE TO BE ABANDONED
- EXISTING PIPE TO BE REMOVED
- WELDED JOINT
- GROOVED END JOINT
- FLANGED JOINT
- PROPRIETARY RESTRAINED JOINT AND MECHANICAL JOINT
- FLANGED COUPLING ADAPTER
- FLEXIBLE COUPLING
- ELASTOMER BELLOWS EXP JOINT
- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- LATERAL UP
- LATERAL DOWN
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- UNION
- CAP
- ELBOW, 90 DEGREE
- CROSS
- TEE
- ELBOW, 45 DEGREE
- LATERAL

GENERAL NOTE

THIS IS A STANDARD LEGEND SHEET. THEREFORE, NOT ALL OF THE INFORMATION SHOWN MAY BE USED ON THIS PROJECT.

NOTES:

1. ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLELINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS.
2. SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS.
3. EXISTING PIPE AND EQUIPMENT IS SHOWN LIGHT-LINED AND/OR SCREENED AND IS NOTED AS EXISTING. NEW PIPING AND EQUIPMENT IS SHOWN DARK-LINED.

VALVE DESIGNATIONS

MANUAL VALVES AND CHECK VALVES SMALLER THAN 2 INCH

1" V300
- VALVE TYPE, SEE SPECIFICATIONS
- NOMINAL VALVE SIZE

NOTE:

NOT ALL MANUAL VAVLE AND CHECK VALVE TYPES ARE DESIGNATED ON THE DRAWINGS. REFER TO THE MANUAL VALVE AND CHECK VALVE SCHEDULE IN THE SPECIFICATIONS FOR VALVE TYPE APPLICATION TO EACH SERVICE.

MANUAL VALVES AND CHECK VALVES 2 INCH AND LARGER

61V8561
- UNIQUE TAG NUMBER. SEE TAGGED MANUAL VALVE AND CHECK VALVE SCHEDULE IN THE SPECIFICATIONS
- MANUAL VALVE AND CHECK VALVE
- PROCESS OR FACILITY NUMBER. 05 = YARD 95 = CONTROL BUILDING SEE P&IDS FOR PROCESS VALVES

CONTROL VALVES

M / 20FV 6112
- UNIT PROCESS
- VALVE FUNCTION
- UNIQUE TAG NUMBER

NOTE:

SEE I&C LEGENDS FOR FURTHER DEFINITIONS AND ACTUATOR TYPES.

SELF-CONTAINED REGULATING VALVES

20PRV8011
- UNIQUE TAG NUMBER. SEE SELF-CONTAINED REGULATION VALVE SCHEDULE IN THE SPECIFICATIONS
- VALVE TYPE AND FUNCTON. SEE I&C LEGENDS FOR FURTHER DEFINITIONS
- PROCESS OR FACILITY NUMBER. 05 = YARD 95 = CONTROL BUILDING SEE P&IDS FOR PROCESS VALVES

VALVE SYMBOLS

SINGLE LINE	DOUBLE LINE
GATE	
KNIFE GATE	OR
BUTTERFLY	OR
GLOBE	OR
BALL	OR
VEE-BALL	OR
SEATING PORT	
ECCENTRIC PLUG	OR
PLUG OR COCK	OR
NEEDLE	OR
DIAPHRAGM	OR
PINCH	OR
SWING CHECK	OR
BALL CHECK	OR

- HOSE VALVE (HV- X) OR (V-X) X = NO. IN SPECS
- SAMPLE
- MUD
- PRESSURE RELIEF
- AIR AND/OR VACUUM RELEASE
- REGULATED SIDE
- PRESSURE CONTROL
- MULTI-PORT VALVE (BALL VALVE SHOWN. FOR OTHER VALVE TYPES, APPROPRIATE VALVE SYMBOL SHOWN.) ARROWS INDICATE FLOW PATTERN. SEATING PORTS ARE IMPLIED BY INDICATED FLOW PATTERN.

PIPING DESIGNATION

EXAMPLE:

16" RAS
- PIPE USE IDENTIFICATION LEGEND
- NOMINAL PIPE DIAMETER

PIPE AND FITTING END PATTERNS

B	BELL	PE	PLAIN END
S	SPIGOT	GE	GROOVED END
F	FLANGE	MJ	MECHANICAL JOINT

EXAMPLE: F / MJ / PE

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DSGN KG CLEGG						VERIFY SCALE
DR ER BROWN						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK BR JOHNSON						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP	

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

GENERAL

MECHANICAL LEGEND

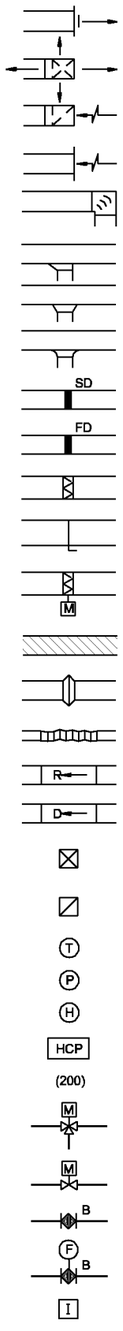
SHEET	18
DWG	01-G-18
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng017d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:06:28 PM

HVAC EQUIPMENT IDENTIFICATION

ACC	AIR-COOLED CONDENSER
ACCU	AIR-COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
ASU	AIR SUPPLY UNIT
BD	BUTTERFLY DAMPER
CD	CEILING DIFFUSER
DH	DUCT HEATER
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
FD	FIRE DAMPER
HCP	HVAC CONTROL PANEL
HP	HEAT PUMP
MD	MOTORIZED DAMPER
ML	MOTORIZED LOUVER
OBD	OPPOSED BLADE DAMPER
RG	RETURN GRILLE
RH	RADIANT HEATER
RR	RETRUN REGISTER
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SR	SUPPLY REGISTER
TCU	TERMINAL CONTROL UNIT
TG	TRANSFER GRILLE
UH	UNIT HEATER

HEATING, VENTILATING, AND AIR CONDITIONING SYMBOLS



PLUMBING FIXTURE AND EQUIPMENT IDENTIFICATION

IDENTIFICATION	EQUIPMENT NAME
AC	AIR COMPRESSOR
ANT	ACID NEUTRALIZATION TANK
BP	BOOSTER PUMP
CP	CIRCULATION PUMP
DB	DOWNSPOUT BOOT
DF	DRINKING FOUNTAIN
DN	DOWNSPOUT NOZZLE
DWT	DOMESTIC WATER STORAGE TANK
EE	EMERGENCY EYE WASH
ES	EMERGENCY SAFETY SHOWER
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
FD	FLOOR DRAIN
GD	GUTTER DRAIN
HD	HUB DRAIN
HX	HEAT EXCHANGER
LAV	LAVATORY
OS	OIL SEPERATOR
S	SINK
SH	SHOWER
SSH	SAFETY SHOWER
SSK	SERVICE SINK
SP	SUMP PUMP
TD	TRENCH DRAIN
TP	TRAP PRIMER ASSEMBLY
TWT	TEMPERED WATER STORAGE TANK
UR	URINAL
WC	WATER CLOSET
WH	WATER HEATER
WS	AUTOMATIC WASHER
VP	VACUUM PUMP

EXAMPLE CALLOUT: 70 - WH - 1

- 70 — FACILITY NUMBER OR UNIT PROCESS
- WH — FIXTURE LEGEND
- 1 — NO. IN SPECIFICATIONS

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DR JS WILLIAMSON						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
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		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP	

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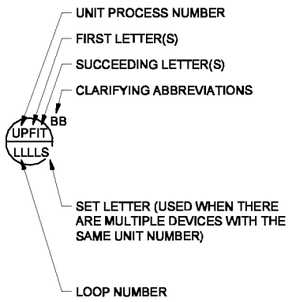
HVAC & PLUMBING LEGENDS

SHEET	19
DWG	01-G-19
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng018d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:06:34 PM

INSTRUMENT IDENTIFICATION

EXAMPLE SYMBOLS



DIGITAL SYSTEM INTERFACES

- ▲ ANALOG INPUT
- ▼ ANALOG OUTPUT
- $\triangle_X$ DISCRETE INPUT
- ∇_X DISCRETE OUTPUT

WHERE X=
A - ALARM
H - MAINTAINED
M - MOMENTARY
S - STATUS

INSTRUMENT IDENTIFICATION LETTERS TABLE

LETTER	FIRST-LETTER		SUCCEEDING-LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (+)		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE (*)	USER'S CHOICE (*)	USER'S CHOICE (*)
C	USER'S CHOICE (*)			CONTROL	
D	DENSITY (S.G)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT, SENSOR		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE (*)		GLASS, GAUGE VIEWING DEVICE	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION	MOMENTARY			MIDDLE, INTERMEDIATE
N	TORQUE		USER'S CHOICE (*)	USER'S CHOICE (*)	USER'S CHOICE (*)
O	USER'S CHOICE (*)		ORIFICE, RESTRICTION		
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED (+)	X AXIS	UNCLASSIFIED (+)	UNCLASSIFIED (+)	UNCLASSIFIED (+)
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION	Z AXIS		DRIVE, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

TABLE BASED ON THE INSTRUMENTATION, SYSTEMS, AND AUTOMATION SOCIETY (ISA) STANDARD.

(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.

(*) WHEN USED, DEFINE THE MEANING HERE FOR THE PROJECT

GENERAL INSTRUMENT OR FUNCTIONAL SYMBOLS

- FIELD MOUNTED INSTRUMENT
- REAR-OF-PANEL MOUNTED INSTRUMENT (OPERATOR INACCESSIBLE)
- PANEL MOUNTED INSTRUMENT
- MOTOR CONTROL CENTER MOUNTED INSTRUMENT
- COMPUTER FUNCTION
- PLC FUNCTION

SPECIAL CASES

- YL OO — ON AND OFF EVENT LIGHTS
- HS OO — ON-OFF HAND SWITCH. MAINTAINED CONTACT SWITCH (CONTROLLED DEVICE WILL RESTART ON RETURN OF POWER AFTER POWER FAILURE).
- HS SS — STOP-START HAND SWITCH MOMENTARY CONTACT SWITCHES (CONTROLLED DEVICE WILL NOT RESTART ON RETURN OF POWER AFTER POWER FAILURE).

TRANSDUCERS

A	ANALOG	I	CURRENT
D	DIGITAL	P	PNEUMATIC
E	VOLTAGE	PF	PULSE FREQUENCY
F	FREQUENCY	PD	PULSE DURATION
H	HYDRAULIC	R	RESISTANCE

EXAMPLE: FY I/P — CURRENT TO PNEUMATIC TRANSDUCER (BACK OF PANEL, IN A FLOW LOOP)

ACCESSORY DEVICES

EXAMPLE: TRANSMITTER AS AN ACCESSORY TO A FLOW ELEMENT

FT / T

- A - ALARM
- C - CONTROLLER
- I - INDICATOR
- R - RECORDER
- S - SWITCH
- T - TRANSMITTER
- X - UNCLASSIFIED

LINE LEGEND

- PROCESS (CLOSED CONDUIT, DASHED LINE INDICATES ALTERNATE FLOW STREAM)
- PROCESS (OPEN CHANNEL)
- ANALOG SIGNAL (4 TO 20 mAdc, ETC.)
- DISCRETE SIGNAL (ON/OFF, ETC.)/POWER
- PNEUMATIC SIGNAL
- FILLED SYSTEM SIGNAL
- HYDRAULIC SYSTEM SIGNAL
- DATA LINK
- PROFIBUS
- INTERFACE SEPARATOR
- BUILDING OR FACILITY BOUNDARY
- PACKAGE SYSTEM EQUIPMENT

PARALLELING LINES

(2) 3(2)

(A) (B)

(A) TOTAL OF 2 SIGNALS

(B) 3 TYPICAL SETS OF 2 SIGNALS EACH. TOTAL OF 6 SIGNALS.

- CONNECTING LINES
- NON-CONNECTING LINES

INTERFACE SYMBOLS

S A — f A D

- = PROCESS INTERFACE
- = SIGNAL INTERFACE
- A = INTERFACE NO.
- D = DESTINATION DRAWING NO.
- S = SOURCE DRAWING NO.

- N — PROCESS OR SIGNAL LINE CONTINUATION N=1,2,3,ETC
- INTERFACE TO OR FROM PROCESS EXTERNAL TO PROJECT

SELF CONTAINED VALVE & EQUIPMENT TAG NUMBERS

DDD-WWXYZ

- W = UNIT PROCESS NUMBER
- D = DEVICE TYPE
- X = LOOP NUMBER
- Y = UNIT NUMBER
- Z = SET LETTER (USED WHEN THERE ARE MULTIPLE DEVICES WITH THE SAME UNIT NUMBER)

ABBREVIATIONS & LETTER SYMBOLS

AC	ALTERNATING CURRENT
AIR	AIR SUPPLY
AM	AUTO-MANUAL
AS	ADJUSTABLE SPEED
AVG	AVERAGE
CAM	COMPUTER-AUTO-MANUAL
CAT5	CATEGORY 5 CABLE
CCS	CENTRAL CONTROL SYSTEM
CL_2 etc.	CHLORINE (TYPICAL: USE STANDARD CHEMICAL ELEMENT ABBREVIATION)
CM	COMPUTER-MANUAL
CN	CONTROLNET
CNET	CONTROLNET
COD	CHEMICAL OXYGEN DEMAND
COND	CONDUCTIVITY
CP-X	CONTROL PANEL NO. X
DC	DIRECT CURRENT
DCS	DISTRIBUTED CONTROL SYSTEM
DCU	DISTRIBUTED CONTROL UNIT
DO	DISSOLVED OXYGEN
ENET	ETHERNET
FCL_2	FREE CHLORINE RESIDUAL
FL	FLUORIDE
FOS	FAST-OFF-SLOW
FOSA	FAST-OFF-SLOW-AUTO
FOSR	FAST-OFF-SLOW-REMOTE
FP-W-X	FIELD PANEL NO. WX (W = UNIT PROCESS NUMBER X = PANEL NUMBER)
FR	FORWARD-REVERSE
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
!SR	INTRINSICALLY SAFE RELAY
LEL	LOWER EXPLOSIVE LIMIT
LOS	LOCKOUT STOP
LR	LOCAL-REMOTE
MA	MANUAL-AUTO
MC	MODULATE-CLOSE
MCC-X	MOTOR CONTROL CENTER NO. X
MMFO	MULTI-MODE FIBER OPTIC
MSC	MANUFACTURER SUPPLIED CABLE
OC	OPEN-CLOSE (D)
OCR	OPEN-CLOSE-REMOTE
OCA	OPEN-CLOSE-AUTO
OO	ON-OFF
OOA	ON-OFF-AUTO
OOR	ON-OFF-REMOTE
ORP	OXIDATION REDUCTION POTENTIAL
OSC	OPEN-STOP-CLOSE
pH	HYDROGEN ION CONCENTRATION
PLC	PROGRAMMABLE LOGIC CONTROLLER
PROC	PROCESSOR
PS	POWER SUPPLY
RM-X	REMOTE MULTIPLEXING MODULE NO. X
RTU-X	REMOTE TELEMETRY UNIT NO. X
SF	SLOWER-FASTER
SMFO	SINGLE-MODE FIBER OPTIC
SS	START-STOP
SSC	SUPERVISORY SET POINT CONTROL
SUSP	SUSPENDED SOLIDS
TCL_2	TOTAL CHLORINE RESIDUAL
TOC	TOTAL ORGANIC CARBON
TOD	TOTAL OXYGEN DEMAND
TURB	TURBIDITY
USD	UP-STOP-DOWN
$\sqrt{}$	SQUARE ROOT
1:1	REPEAT OR BOOST

GENERAL NOTES

1. COMPONENTS AND PANELS SHOWN WITH A SINGLE ASTERISK (*) ARE TO BE PROVIDED AS PART OF A PACKAGE SYSTEM.
2. COMPONENTS AND PANELS SHOWN WITH A DOUBLE ASTERISK (**) ARE TO BE PROVIDED UNDER DIVISION 16, ELECTRICAL.
3. COMPONENTS AND PANELS SHOWN WITH A DIAMOND (◆) ARE TO BE OWNER-FURNISHED ITEMS.
4. THIS IS A STANDARD LEGEND. THEREFORE, NOT ALL OF THIS INFORMATION MAY BE USED ON THIS PROJECT.

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GENERAL

INSTRUMENTATION & CONTROL LEGEND SHEET 1

SHEET	20
DWG	01-G-20
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng020d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:06:38 PM

VALVE SYMBOLS

- GATE
- KNIFE GATE
- BUTTERFLY
- GLOBE
- BALL
- VEE- BALL
- PLUG
- SEAT PORT ECCENTRIC PLUG
- DIAPHRAGM
- PINCH
- NEEDLE
- SWING CHECK
- BALL CHECK
- FLEX
- FISH LIP CHECK
- PRESSURE RELIEF
- AIR AND/OR VACUUM RELEASE
- REGULATED SIDE PRESSURE CONTROL
- MULTI-PORT VALVES (BALL VALVE SHOWN. FOR OTHER VALVE TYPES, APPROPRIATE VALVE SYMBOL SHOWN.) ARROWS INDICATE FLOW PATTERN. SEAT PORTS ARE IMPLIED BY INDICATED FLOW PATTERN.
- TELESCOPE
- SAMPLE
- MUD
- ROTARY
- LSL — FLOAT SHUTOFF (OPEN ON LOW LEVEL)

GATE SYMBOLS

- SLUICE
- BUTTERFLY
- FLAP
- FABRICATED SLIDE
- SHEAR
- WEIR

ACTUATOR SYMBOLS

- XX — PNEUMATIC DIAPHRAM SPRING-OPPOSED, SINGLE OR DOUBLE ACTING
- XX — PNEUMATIC CYLINDER SINGLE OR DOUBLE ACTING ACTUATED BY ONE INPUT
- MANUAL
- M XX — ELECTRIC MOTOR
- E/H XX — ELECTROHYDRAULIC
- S XX — SOLENOID
- H XX — HYDRAULIC

NOTE:
ON LOSS OF PRIMARY POWER (PNEUMATIC, ELECTRICAL OR HYDRAULIC)
XX: FO =FAIL OPEN
FC =FAIL CLOSED
FLP=FAIL TO LAST POSITION

PRIMARY ELEMENT SYMBOLS

- PARSHALL FLUME
- WEIR
- ORFICE PLATE
- FLOW TUBE
- THERMAL MASS FLOWMETER
- VORTEX METER
- ULTRASONIC FLOWMETER
- ELECTROMAGNETIC FLOWMETER
- PROPELLER OR TURBINE METER
- LE — LEVEL (SUBMERSIBLE, W/ STILLING WELL)
- LE — LEVEL (RADAR)
- FI — ROTAMETER
- DE — DENSITY METER
- XX — GENERIC
- LE — LEVEL (ULTRASONIC)
- LEVEL (BUBBLER TUBE)
- LS — LEVEL (FLOAT)

MISCELLANEOUS SYMBOLS

- LE — SIGHT GLASS
- DIAPHRAGM SEAL
- BLIND FLANGE
- AIR GAP
- V — VENT TO ATMOSPHERE
- AERATOR
- PLUG
- RECEPTACLE
- A — SELF CONTAINED AIR SUPPLY
- SD — COMPOSITE SAMPLER (DIPPER TYPE)
- SS — COMPOSITE SAMPLER (SUCTION TYPE)
- TV — TV CAMERA
- RADIO ANTENNA
- A — ON-TD X-SEC — B — "ON" TIME DELAY B "ON" X-SEC. AFTER A "ON". INSTANT "OFF".
- A — OFF-TD X-SEC — B — "OFF" TIME DELAY B "OFF" X-SEC. AFTER A "OFF". INSTANT "ON".
- I — OR — I — INTERLOCK. SEE CONTROL DIAGRAMS
- A, B — S, R — C — MEMORY ELEMENT S= SET , R= RESET
- X — PURGE SET X: W = WATER A = AIR SEE ○
- XX — AIR SET XX= SUPPLY PRESSURE IN PSIG.
- FILTER/ REGULATOR/ GAUGE SET
- FLEXIBLE CONNECTOR
- PULSATION DAMPENER
- FILTER
- DO ANALYZER
- PROFIBUS PA CABLE CONNECTOR
- 120V — 120 VOLT, 60 HZ POWER
- 480V — 480 VOLT, 60 HZ POWER
- ANNULAR DIAPHRAGM SEAL
- RUPTURE DISK (PRESSURE)
- RUPTURE DISK (VACUUM)
- PIG INSERT POINT
- OR — PIG CATCH POINT
- MIXER
- M — ELECTRIC MOTOR
- PRESSURE GAUGE
- X — TONE TRANSMITTER NO. X
- X — TONE RECEIVER NO. X
- VOICE COMMUNICATION POINT
- TV — TV MONITOR
- A, B — AND — C — LOGIC ELEMENT: IF A AND NOT B THEN C
- A, B — OR — C — LOGIC ELEMENT: IF A OR B THEN C
- S, R — ON/OFF RELAY. INPUT IS CONNECTED TO OUTPUT WHEN SWITCHING SIGNAL IS PRESENT.
- S, R — SWITCHING SIGNAL SWITCHING RELAY. INPUT WITH DOT IS CONNECTED TO OUTPUT WHEN SWITCHING SIGNAL IS PRESENT
- OTHER INPUT IS CONNECTED TO OUTPUT WHEN SWITCHING SIGNAL IS NOT PRESENT.
- F — FLUSHING CONNECTION
- HOSE ADAPTOR
- S — SEAL WATER SET
- SIGHT GLASS
- FFLCPLLLX — PANEL CONTINUED ON SAME OR OTHER DRAWING
- PANEL OUTLINE
- PANEL NAME
- CONTROL PANEL DATABASE SYMBOL

PUMP AND COMPRESSOR SYMBOLS

NOTE: XX: AS ADJUSTABLE SPEED
CS-1 CONSTANT SPEED (SINGLE SPEED)
CS-2 CONSTANT SPEED (TWO SPEED)

- CENTRIFUGAL PUMP (DRY PIT) XX
- CENTRIFUGAL WET PIT PUMP OR TURBINE PUMP XX
- CHEMICAL FEED PUMP XX
- DIAPHRAGM PUMP XX
- PERISTALTIC PUMP XX
- SUBMERSIBLE SUMP PUMP XX
- PROGRESSIVE CAVITY PUMP XX
- COMPRESSOR (CENTRIFUGAL) XX
- COMPRESSOR (PISTON) XX
- BLOWER OR FAN (CENTRIFUGAL) XX
- GEAR PUMP OR BLOWER (POSITIVE DISPLACEMENT) XX
- EJECTOR

FLOW STREAM IDENTIFICATION

AHP	AIR, HIGH PRESSURE	PR	PRESSURIZED RECYCLE
ALP	AIR, LOW PRESSURE	PS	PRESSURE SEWER
ARD	ACID-RESISTANT DRAIN	PSD	PRIMARY SLUDGE
ARV	ACID-RESISTANT VENT	PSM	PRIMARY SCUM
AS	ACTIVATED SLUDGE MIXED LIQUOR	RAS	RETURN ACTIVATED SLUDGE
xx/BYP	BYPASS	RCY	RECYCLE
CS	CHLORINE SOLUTION	RD	ROOF DRAIN
D	DRAIN, SANITARY	RS	RAW SEWAGE
xx/DR	PROCESS DRAIN	RSCR	RAS SCREENINGS
DS	DIGESTED SLUDGE	SA	SAMPLE
DSF	DEWATERING SYSTEM FEED	SC	SCUM
DW	DEIONIZED WATER	SCR	SCREENINGS
DWS	DEWATERED SOLIDS	SD	STORM DRAIN
FW	FIREWATER	SE	SECONDARY EFFLUENT
GR	GRIT	SG	SEWAGE GAS
GS	GRIT SLURRY	SL	SUPERNATANT LIQUOR
HPW	HIGH PRESSURE WASH WATER	SLF	SLUDGE FEED
HS	HARVESTED SLUDGE	SN	SUPERNATANT
HW	HOT WATER (POTABLE)	SPD	SUMP PUMP DISCHARGE
HW2	HOT WATER (NON-POTABLE)	SRS	SCREENED RAW SEWAGE
HWC	HEATING WATER CIRCULATION	SS	SANITARY SEWER
HWR	HEATING WATER RETURN	SSM	SECONDARY SCUM
HWS	HEATING WATER SUPPLY	TAS	THICKENED ACTIVATED SLUDGE
HYP	HYPOCHLORITE (NEAT)	TBS	THICKENED BOTTOM SLUDGE
IRD	INTERCHANGE REACTOR DISCHARGE	TUF	THICKENED UNDER FLOW
IRF	INTERCHANGE REACTOR FEED	TW	TEMPERED WATER (POTABLE)
LPO	LIQUID POLYMER	UD	UNDERDRAIN
ML	MIXED LIQUOR	V	SANITARY VENT
MS	MIXED SLUDGE FEED	VAC	VACUUM
NG	NATURAL GAS	xx/V	PROCESS VENT
OA	ODOROUS AIR	W1	NO.1 WATER (POTABLE)
OF	OVERFLOW	W2	NO.2 WATER (NON-POTABLE)
PD	PLANT DRAIN	W3	NO.3 WATER (PLANT EFFLUENT)
PE	PRIMARY EFFLUENT	WAS	WASTE ACTIVATED SLUDGE
PI	PRIMARY INFLUENT	WW	WELL WATER
PLE	PLANT EFFLUENT		
PO	POLYMER SOLUTION		

ELECTRONIC COMPONENT SYMBOLS

- RPFRXL — CONTROLNET FIBER RING REPEATER MODULE
- RPA — CONTROLNET ADAPTER MODULE
- KVM — KEYBOARD, VIDEO, MOUSE (KVM) MODULE

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
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GENERAL

INSTRUMENTATION & CONTROL LEGEND SHEET 2

SHEET	21
DWG	01-G-21
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng021d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:06:44 PM

WIRING DIAGRAM LEGEND

SYMBOL	DESCRIPTION
FF CR LLL U	RELAY COIL
FF CR LLL U	CONTACT, NORMALLY OPEN
FF CR LLL U	CONTACT , NORMALLY CLOSED
	PUSHBUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
	PUSHBUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
H O A XOO OOX OOX	SELECTOR SWITCH
C NO	LIMIT SWITCH
CR-ANN	ANNUNCIATOR RELAY CONTACT FOLLOWS ANNUNCIATOR INPUT
C NO	FLOW SWITCH
C NO	TEMPERATURE SWITCH
C NO	LEVEL SWITCH
C NO	PRESSURE SWITCH
FF TDR LLL U 5 SEC	TIME DELAY SWITCH, NORMALLY CLOSED WITH TIME DELAY CLOSING
FF TDR LLL U 10 SEC	TIME DELAY SWITCH, NORMALLY CLOSED WITH TIME DELAY OPENING
FF TDR LLL U 30 SEC	TIME DELAY SWITCH, NORMALLY OPEN WITH TIME DELAY CLOSING
FF TDR LLL U 180 SEC	TIME DELAY SWITCH, NORMALLY OPEN WITH TIME DELAY OPENING
FF TDR LLL U 30 SEC RANGE	TIME DELAY RELAY

SYMBOL	DESCRIPTION
FF QA LLL U 2 R C	INDICATING LIGHT, LETTER INDICATES COLOR: A = AMBER R = RED B = BLUE W = WHITE C = CLEAR Y = YELLOW G = GREEN
FF QA LLL U S G L2 L1	INDICATING LIGHT, PUSH-TO-TEST LETTER INDICATES COLOR
	SOLENOID VALVE
FF QA LLL U	HORN, BEEPER
FF QA LLL U	BELL
	GROUND
ETM	ELAPSED TIME METER
OPEN A B	PLC INPUT
ON A B	PLC OUTPUT NORMALLY OPEN
STOP A B	PLC OUTPUT NORMALLY CLOSED
120VAC	TRANSFORMER, SECONDARY VOLTAGE INDICATED
	CIRCUIT BREAKER
	FUSE
	FUSE
CR- UP-LL-P L UL	LATCHING RELAY

SYMBOL	DESCRIPTION
1	TERMINAL BLOCK
2 FU	TERMINAL BLOCK, FUSED, SWITCHED
3	TERMINAL BLOCK, SWITCHED
	FIELD DEVICE(S)
	DISTRIBUTED CONTROL SYSTEM (DCS)
	CONTROL PANEL DEVICE(S)
	MOTOR CONTROL CENTER DEVICE(S)

(INSTRUMENT, PANEL, RELAY) TAG NUMBERS

NUMBERS

FFXXLLLU WHERE

FF = FACILITY/PROCESS NUMBER
XX = EQUIPMENT OR ISA TAG
LLL = LOOP NUMBER
U = UNIT LETTER

SEE LOOP LIST FOR TAG NUMBERS.

ABBREVIATIONS

ABBREVIATIONS	DESCRIPTION
A	AUTO, AMPS, AMBER
B	BASE
BK	BLACK
BL	BLUE
BR	BROWN
C	CLOSE
CR	CONTROL RELAY
CS	CURRENT SWITCH (4-20mA)
DEC	DECREASE
G	GREEN
H	HAND
INC	INCREASE
L	LOCAL
LOS	LOCKOUT STOP
M	MOTOR RELAY/CONTACT
MAN	MANUAL
N/S/C	NODE / SLOT / CHANNEL
N/S/P	NODE / SLOT / POINT
O	OFF, ON, OPEN
OR	ORANGE
R	RED
REM	REMOTE
S	SLOT
SEC	SECONDS
TDD	TIME DELAY ON DE-ENERGIZATION
TDE	TIME DELAY ON ENERGIZATION
TDR	TIME DELAY RELAY
WH	WHITE
Y	YELLOW
ZS-C	CLOSED END LIMIT SWITCH
ZS-O	OPEN END LIMIT SWITCH

ANALOG SYMBOLS

FF TT LLL U FIELD + -	2-WIRE TRANSMITTER
FF TT LLL U + - C	DCS ANALOG I/O
FF TT LLL U FIELD + - L N G	4-WIRE TRANSMITTER
XXXX	FUSED TERMINAL BLOCK
XXXX	SWITCHING TERMINAL BLOCK
XXXX	GROUNDED TERMINAL BLOCK
FF TT LLL U I+ I- O+ O- L N G	SIGNAL CONVERSION

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/08 BYCHRISTOPHER S. BURR STATE OF OREGON, P.E. NO. 49,633PE.

DSGN CS BURR						VERIFY SCALE	CH2MHILL carollo engineers	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-O3-01 LINN COUNTY, OREGON	GENERAL INSTRUMENTATION & CONTROL LEGEND SHEET 3	SHEET 22
DR PM HAMLIN						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"				DWG 01-G-22
CHK LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.				DATE MAY 19 2006
APVD CW MASSIE	NO.	01/20/10 DATE	REVISION	BY	APVD					PROJ 326918

FILENAME: 01ng022d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:06:49 PM

SITE (SIT)

CODE (SIT)	DESCRIPTION
WW1	WASTEWATER TREATMENT PLANT
WT1	VINE STREET WATER TREATMENT PLANT
WT2	ALBANY MILLERSBURG WATER TREATMENT PLANT
BIO	BIOSOLIDS FACILITY

FACILITY (FAC)

CODE (FAC)	DESCRIPTION
AB	AERATION BASINS
BIO	BIOSOLIDS FACILITY
BLR	BLOWER BUILDING
CCB	CHLORINE CONTACT BASINS
HDW	HEADWORKS BUILDING
IPS	INFLUENT PUMP STATION BUILDING
IR	INTERCHANGE REACTORS
OPS	OPERATIONS BUILDING
PRI	PRIMARY CLARIFIERS
RAS	RAS FLOW SPLIT
SBF	SOIL BIOFILTER
SEC	SECONDARY CLARIFIERS
SEP	SEPTAGE RECEIVING
TW	TRUCK WASH
VLR	VERTICAL-LOOP REACTORS

PROCESS EQUIPMENT (ISAX) - NOTE 1

CODE (ISAX)	DESCRIPTION
ACCU	AIR COOLED CONDENSING UNIT
AFD	ADJUSTABLE FREQUENCY DRIVE
ASD	ADJUSTABLE SPEED DRIVE (DC-SCR)
ASU	AIR SUPPLY UNIT
BLR	BOILER
BLW	BLOWER
BSN	BASIN
CC	CALIBRATION COLUMN
CLL	CELL
CLS	COALESCER
CON	CONVEYOR
CP	CONTROL PANEL
CPR	COMPRESSOR
CS	CONTROL STATION
CYL	CYLINDER
DMP	DAMPER
EF	EXHAUST FAN
EJ	EJECTOR
FCV	FLOW CONTROL VALVE (W/ ACTUATOR, INTEGRAL CONTROLLER)
FDR	FEEDER
FTR	FILTER
FV	FLOW VALVE (W/ ACTUATOR)
G	GATE
HOP	HOPPER
HTR	HEATER
HV	MANUALLY OPERATED VALVE (W/ ACTUATOR)
INJ	INJECTOR
LCV	LEVEL CONTROL VALVE (W/ ACTUATOR, INTEGRAL CONTROLLER)
LV	LEVEL VALVE (W/ ACTUATOR)
M	MOTOR
MAU	MAKEUP AIR UNIT
MD	MOTORIZED DAMPER
MOD	MODULE
MST	MOISTURE SENSOR
MXR	MIXER
P	PUMP
PCV	PRESSURE CONTROL VALVE (W/ ACTUATOR, INTEGRAL CONTROLLER)
PD	PULSATION DAMPENER
PSV	PRESSURE SAFETY VALVE
PV	PRESSURE VALVE (W/ ACTUATOR)
RCV	RECEIVER
S	SAMPLER
SCR	SCREEN
SF	SUPPLY FAN
STR	STRAINER
SV	SOLENOID VALVE
TCV	TEMPERATURE CONTROL VALVE (W/ ACTUATOR, INTEGRAL CONTROLLER)
TNK	TANK
TSH	THERMAL SENSOR
TV	TEMPERATURE VALVE (W/ ACTUATOR)
UH	UNIT HEATER
V	MANUALLY OPERATED VALVE (NO ACTUATOR)
VNT	VENT

NOTES:

1. FOR INSTRUMENTATION, (ISAX) CODES ARE BASED ON THE "INSTRUMENT IDENTIFICATION LETTERS TABLE" (REFERENCE DWG. 01-G-12).

TAG FORMATS

PROCESS EQUIP, INSTRUMENT & I/O FORMAT: SIT-UP-ISAX-LOOPa-FUNCTION

NON-PROCESS EQUIPMENT FORMAT: SIT-D-FAC-EQU##

UNIT PROCESS (UP)

CODE (UP)	DESCRIPTION	CODE (UP)	DESCRIPTION
01	GENERAL	50	RAS PUMPING
05	SITE DEVELOPMENT	52	RAS GRIT PUMPS
06	OUTFALL	54	RAS SCREENING
07	FLOW CONTROL STRUCTURE	55	RAS FLOW SPLIT
08	INSTRUMENTATION AND CONTROL	60	CHLORINE CONTACT BASINS
10	INFLUENT PUMP STATION	61	SODIUM HYPOCHLORITE
15	SEPTAGE RECEIVING AND TRUCK WASHING	62	EXISTING DIGESTER COMPLEX
20	HEADWORKS INFLUENT SCREENS	65	WAS STORAGE TANKS
22	WASHER/COMPACTORS	66	W1 SYSTEMS
24	GRIT CLASSIFIERS	67	W2 SYSTEMS
25	EXISTING HEADWORKS	68	W3 SYSTEMS
27	PRIMARY CLARIFIERS	70	INTERCHANGE REACTOR
30	VERTICAL LOOP REACTORS	72	AEROBIC DIGESTION
32	NEW BLOWER BUILDING	75	RTU SYSTEMS
35	OLD BLOWER BUILDING	77	INTERCHANGE / AEROBIC BLOWERS
38	MIXED LIQUOR (ML) FLOW SPLIT	90	FACILITY SYSTEM
40	SECONDARY CLARIFIERS	91	ELECTRICAL, FIRE ALARM & SECURITY
42	RAS/WAS PUMP STATION	92	HVAC
45	NEW SECONDARY CLARIFIERS	93	PERSONNEL SAFETY
47	EFFLUENT JUNCTION BOX	94	PLANT CONTROL SYSTEM
		95	CONTROL BUILDING / MISCELLANEOUS
		96	OPERATIONS BLDG (EXISTING)

NON-PROCESS EQUIPMENT (EQU)

CODE (EQU)	DESCRIPTION
AN	ACCESS NODE
ANL	ACCESS NODE (LAN)
ANW	ACCESS NODE (WAN)
ATS	AUTOMATIC TRANSFER SWITCH
CP	CONTROL PANEL
CS	CONTROL STATION
DLR	DIALER
ES	ETHERNET SWITCH
FCP	FIRE ALARM CONTROL PANEL
FP	FIBER PATCH PANEL
GAT	GATE
HMI	HUMAN MACHINE INTERFACE
HWCP	HOT WATER CIRCULATION PUMP
LP	LIGHTING PANEL
MCC	MOTOR CONTROL CENTER
P	NON-PROCESS PUMP
PC	PERSONAL COMPUTER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PM	POWER MONITOR
PP	POWER PANEL
PPMM	PATCH PANEL, MULTI-MODE FIBER
PPSM	PATCH PANEL, SINGLE-MODE FIBER
PRT	PRINTER
SVR	SERVER
SWB	SWITCHBOARD
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TWST	TEMPERED WATER STORAGE TANK
TX	TRANSFORMER
UPS	UNINTERRUPTIBLE POWER SUPPLY
WH	WATER HEATER
WKS	WORKSTATION
XCVR	TRANSCEIVER

SOFTWARE FUNCTION (FUNCTION)

CODE (FUNCTION)	DESCRIPTION
ALARM	ALARM
AUTO	AUTO STATUS
AVAIL	AVAILABLE
AVAILA	SOURCE A AVAILABLE
AVAILB	SOURCE B AVAILABLE
BACKWASH	IN BACKWASH
CALL	CALL TO OPERATE COMMAND
CL2	CHLORINE
CLOSE	CLOSE COMMAND
CLSD	CLOSED STATUS
COND	CONDUCTIVITY
CONNECTA	SOURCE A CONNECTED
CONNECTB	SOURCE B CONNECTED
CURRENT	CURRENT
CURRENTA	PHASE A CURRENT
CURRENTB	PHASE B CURRENT
CURRENTC	PHASE C CURRENT
DO	DISSOLVED OXYGEN
EMERGENCY	EMERGENCY ALARM SYSTEM
ENTRY	ENTRY
ESTOP	EMERGENCY STOP
FAIL	FAILURE
FAULT	FAULT
FL	FLUORIDE
FLOW	FLOWRATE
HIGH	HIGH
HIHI	HIGH-HIGH
INTRUSION	INTRUSION
KW	KILOWATTS
LEVEL	LEVEL
LEVELRTX	LEVEL (RETRANSMITTED)
LOW	LOW
LOLO	LOW-LOW
LOSS	LOSS
MOISTURE	MOISTURE DETECTED
ON	ON STATUS
OPEN	OPEN COMMAND
OPND	OPEN STATUS
ORP	OXYGEN REDUCTION POTENTIAL
OVERTEMP	OVER TEMPERATURE
PART	PARTICLE COUNT
PH	pH
POSNFBK	POSITION FEEDBACK
POSNCTRL	POSITION CONTROL
POSNRTX	POSITION (RE-TRANSMITTED)
PWR FACTR	POWER FACTOR
PRESSURE	PRESSURE
REMOTE	REMOTE STATUS
RESET	RESET
RUN	RUN CONTROL OUTPUT
RUNTIME	RUNTIME
RUNTIME_RST	RUNTIME RESET
SILENCE	SILENCE ALARM
SPDCTRL	SPEED CONTROL OUTPUT
SPDFBK	SPEED FEEDBACK
START	START
STARTFAIL	START FAILURE
STOP	STOP
STOPFAIL	STOP FAILURE
SUPERVISORY	SUPERVISORY
TEMP	TEMPERATURE
TROUBLE	TROUBLE
TURB	TURBIDITY
TVSSFAIL	TRANSIENT VOLTAGE SURGE SUPPRESSOR FAILURE
VOLTAGE	VOLTAGE
VOLTAGEA	PHASE A VOLTAGE
VOLTAGEB	PHASE B VOLTAGE
VOLTAGEC	PHASE C VOLTAGE
WEIGHT	WEIGHT

TAGNAMING SAMPLES

PROCESS EQUIPMENT, INSTRUMENTS, AND PLC I/O

DESCRIPTION	TAG COMPONENTS: SIT	UP	ISA	LOOP	UNIQUE IDENTIFIER (a)	FUNCTION	ANALOG OR DISCRETE	PDB TAG	FIELD TAG	LOOP ID	SOFTWARE TAG	WIRING DIAGRAM	WIRE # SAMPLE (TERMINAL)
INFLUENT PUMP 1 ON	WW1	10	P	0101		ON	D	WW1-10P0101	10P0101	WW1-10-0101	WW1_10_0101_P_ON	WW1-10-0101D	10-0101-01
INFLUENT PUMP 1 AUTO	WW1	10	P	0101		AUTO	D	WW1-10P0101	10P0101	WW1-10-0101	WW1_10_0101_P_AUTO	WW1-10-0101D	10-0101-02
INFLUENT PUMP 1 L-R SWITCH	WW1	10	HS	0101	A	REM	D	WW1-10HS0101A	10HS0101A	WW1-10-0101	WW1_10_0101_P_REM	WW1-10-0101D	10-0101-06
INFLUENT PUMP 1 START SWITCH	WW1	10	HS	0101	B	START	D	WW1-10HS0101B	10HS0101B	WW1-10-0101	WW1_10_0101_P_START	WW1-10-0101D	10-0101-07

NON-PROCESS EQUIPMENT

DESCRIPTION	TAG COMPONENTS: SIT	FAC	EQU	##	PDB TAG	P&ID TAG	LOOP ID	SOFTWARE TAG	WIRING DIAGRAM	WIRE # SAMPLE
BLOWER BUILDING LIGHTING PANELBOARD	WW1	BLR	LP	01	WW1-BLR-LP01	N/A	N/A	N/A	N/A	N/A
HEADWORKS BUILDING MCC	WW1	HDW	MCC	01	WW1-HDW-MCC01	N/A	N/A	N/A	N/A	N/A

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DSGN	CS BURR					
DR	PM HAMLIN					
CHK	LL WOOD					
APVD	CW MASSIE					
		NO.	DATE	REVISION	BY	APVD
			01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

GENERAL

INSTRUMENTATION & CONTROL LEGEND
TAG NAMING STRUCTURE

SHEET	23
DWG	01-G-23
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng023d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:06:54 PM

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	CONNECTION POINT TO EQUIPMENT SPECIFIED. FURNISHED AND INSTALLED UNDER OTHER DIVISIONS. RACEWAY, CONDUCTOR AND CONNECTION SPECIFIED IN DIVISION 16. COORDINATE FINAL CONNECTION WITH EQUIPMENT SUPPLIER.
MCC-A	MAJOR ELECTRICAL COMPONENT OR DEVICE - NAME OR IDENTIFYING SYMBOL AS SHOWN.
	BRANCH CIRCUIT PANELBOARD
TTC	TELEPHONE TERMINAL CABINET
CTC	COMPUTER TERMINAL CABINET
TJB	TERMINAL JUNCTION BOX
M	MOTOR, SQUIRREL CAGE INDUCTION, HORSEPOWER INDICATED ON ONE-LINE DIAGRAM, (M) SHOWN ON PLANS
1	LUMINAIRE, SEE SCHEDULE
2	LUMINAIRE, SEE SCHEDULE
3	LUMINAIRE, UNSWITCHED, SEE SCHEDULE
4	LUMINAIRE AND POLE, SEE SCHEDULE
5	WALL MOUNTED LUMINAIRE, SEE SCHEDULE
6	EMERGENCY LIGHTING UNIT
	EXIT LIGHTS, SEE SCHEDULE
Sa or (2a)	SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING. SUBSCRIPT NUMBER AT LUMINAIRE INDICATES CIRCUIT IN PANELBOARD.
OS	OCCUPANCY SENSOR
LA-2	HOME RUN - DESTINATION SHOWN
or	EXPOSED CONDUIT AND CONDUCTORS*
or G	CONCEALED CONDUIT AND CONDUCTORS*

NOTE:
* ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO.12 CONDUCTORS IN CONDUIT. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF NO. 12 CONDUCTORS. CROSSHATCH WITH SUBSCRIPT "G" INDICATES GREEN GROUND WIRE. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE.

[ ]	CIRCUIT CALLOUT, [1"C,3#8,1#10G] CONDUIT, CONDUCTOR, AND NUMBER INDICATED. 2-[3"C,3-350 KCMIL,1#1/0G] EA INDICATES TWO CONDUITS, EACH WITH CONDUCTORS INDICATED.
	GROUND TEST WELL
	GROUND ROD
	CONDUIT DOWN
	CONDUIT UP
	CONDUIT, STUBBED AND CAPPED AS SHOWN
	CONCEALED CONDUIT INSIDE BUILDINGS, DIRECT BURIED OUTSIDE BUILDINGS
– – HV – –	HIGH VOLTAGE CONCRETE ENCASED DUCTBANK
– – G – –	GROUND
S	SWITCH:

WALL SWITCH: 2- DOUBLE POLE; 3- THREE WAY; 4- FOUR WAY; CRE- CORROSION RESISTANT; D- DIMMER; K- KEY OPERATED; P- PILOT LIGHT; WP- WEATHERPROOF

MOTOR SWITCH: M- MOTOR RATED TOGGLE SWITCH WITHOUT OVERLOADS MANUAL MOTOR; MS- STARTER WITH OVERLOADS

	CABLE TRAY OR CABLE BUS
A	DUCTBANK CALLOUT, THE LETTER REFERS TO THE DUCTBANK DESIGNATION, SEE DUCTBANK SCHEDULE

SYMBOL	DESCRIPTION
	CONVENIENCE RECEPTACLE - DUPLEX UNLESS SPECIFIED OTHERWISE. WP- WEATHERPROOF; TL- TWIST LOCK; GFCI- GROUND FAULT CIRCUIT INTERRUPTER; C- CLOCK HANGER; CRE- CORROSION RESISTANT
30	RECEPTACLE - 240V, 1PH, AMPERAGE INDICATED
30	RECEPTACLE, SPECIAL PURPOSE - AMPERAGE INDICATED
	DUPLEX CONVENIENCE RECEPTACLE - FLUSH IN FLOOR
	CONVEINENCE RECEPTACLE - FOUR PLEX FLUSH IN FLOOR
	MULTI-OUTLET ASSEMBLY
	TELEPHONE RECEPTACLE (OUTLET BOX ONLY) FLUSH IN FLOOR
	TELEPHONE RECEPTACLE (OUTLET BOX ONLY)
	DATA RECEPTACLE (OUTLET BOX ONLY)
	COMBINATION DATA AND TELCO RECEPTACLE
HS	GENERAL CONTROL OR WIRING DEVICE. LETTER SYMBOLS OR ABBREVIATIONS INDICATE TYPE OF DEVICE.
CS	CONTROL STATION, SEE CONTROL DIAGRAMS FOR TYPE.
J	CONDUIT FITTING OR JUNCTION BOX
	NONFUSED DISCONNECT SWITCH, 30A, 3 POLE UNLESS INDICATED OTHERWISE.
P	DISCONNECT SWITCH WITH PLUG, SIZE AS INDICATED
60/40 F	FUSED DISCONNECT SWITCH, SIZE INDICATED (60/40, 60 = SWITCH RATING: 40 = FUSE RATING) 3 POLE UNLESS INDICATED OTHERWISE.
	CONTACTOR, MAGNETIC, NEMA SIZE INDICATED.
30 L	LIGHTING CONTACTOR, CURRENT RATING INDICATED. FOR NUMBER OF POLES, SEE CONTROL DIAGRAM.
2 2	STARTER MAGNETIC NEMA SIZE INDICATED, SEE CONTROL DIAGRAM.
2	COMBINATION (FUSE OR CIRCUIT BREAKER AS INDICATED) MAGNETIC STARTER, NEMA SIZE INDICATED, SEE CONTROL DIAGRAM.
HT	HEAT TRACKING CONNECTION POINT
	METERING FACILITIES
F	FIRE ALARM STATION, MANUAL
F	FIRE ALARM STROBE
F	FIRE ALARM HORN
F	FIRE ALARM COMBINATION STROBE/HORN
FS	FIRE ALARM SMOKE DETECTOR
FID	FIRE ALARM, INTELLIGENT FIRE DETECTOR
FH	FIRE ALARM HEAT DETECTOR
E	EMERGENCY ALARM STATION, MANUAL
E	EVACUATION ALARM COMBINATION (FOR GAS AND FAN FAILURE) STROBE/HORN
E	EVACUATION ALARM, (FOR GAS AND FAN FAILURE) GO/NO GO LIGHT
TS	SPRINKLER SYSTEM TAMPER SWITCH
FS	SPRINKLER SYSTEM FLOW SWITCH
CGD	COMBUSTIBLE GAS DETECTOR
FFS	FAN FAILURE CURRENT SWITCH
I	AIR DUCT IONIZATION DETECTOR

SYMBOL	DESCRIPTION
1	CONTACT - NORMALLY OPEN WITH NEMA SIZE INDICATED AS APPLICABLE
	CONTACT - NORMALLY CLOSED
	OVERLOADS
1	MAGNETIC STARTER WITH NEMA SIZE INDICATED
100/M	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, FRAME SIZE SHOWN, 3 POLE UNLESS INDICATED OTHERWISE.
400	CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE UNLESS INDICATED OTHERWISE.
100	SWITCH - CURRENT RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE.
100	DISCONNECT SWITCH WITH PLUG SIZE INDICATED
225	FUSE - RATING INDICATED
	DRAWOUT CIRCUIT BREAKER, LOW VOLTAGE
	DRAWOUT CIRCUIT BREAKER, MEDIUM VOLTAGE
	DRAWOUT FUSED SWITCH, MEDIUM VOLTAGE
	SURGE ARRESTER
10	CAPACITOR - KVAR INDICATED
V VS 0-600V	METER WITH SWITCH - SCALE RANGE SHOWN
	GROUND
120V or 120/240V 15 KVA, 1PH	TRANSFORMER, SECONDARY VOLTAGES, PHASE AND RATING INDICATED AS APPLICABLE
GFR 25A 0.1	PICK-UP SETTING; TIME CURRENT CHARACTERISTIC (GROUND FAULT RELAY WITH CT)
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
	NORMALLY CLOSED, TIME DELAY OPENING
	NORMALLY CLOSED, TIME DELAY CLOSING
	NORMALLY OPEN, TIME DELAY CLOSED
	NORMALLY OPEN, TIME DELAY OPEN
	REMOTE DEVICE
H A	SELECTOR SWITCH - MAINTAINED CONTACT - CHART IDENTIFIES OPERATION:

CKT	POSITION HAND	OFF	AUTO	
1	X	O	O	X - CLOSED CONTACT
2	O	O	X	O - OPEN CONTACT

(3)	CURRENT TRANSFORMER, NUMBER INDICATED
A	INDICATING LIGHT, PUSH-TO-TEST, LETTER INDICATES COLOR
A	INDICATING LIGHT - LETTER INDICATES COLOR: A - AMBER; B - BLUE; C - CLEAR; G - GREEN; R - RED; W - WHITE

ABBREVIATIONS

ABBREVIATIONS	DESCRIPTION
A	AMMETER, AMPERE, AMBER
AF	AMPERE FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AS	AMMETER SWITCH, AMPERE SENSOR
ASU	AIR SUPPLY UNIT
AT	AMPERE TRIP
ATC	AUTOMATIC THROWOVER CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
BC	BARE COPPER
BRKR	BREAKER
C	CONDUIT, CONTACTOR
CB	CIRCUIT BREAKER
CC	CONTROL CABLE
CKT	CIRCUIT
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CRE	CORROSION-RESISTANT
CRS	COATED RIGID STEEL CONDUIT
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DIV	DIVISION
E	EMPTY
EO	ELECTRIC OPERATOR
EQPT	EQUIPMENT
ESS	EMERGENCY SHUTDOWN SWITCH
ETM	ELAPSED TIME METER
EXST	EXISTING
FDR	FEEDER
F	FUSE
FLR	FLOOR
FLUOR	FLUORESCENT
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G	GREEN, GROUND
GALV	GALVANIZED
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFR	GROUND FAULT RELAY
GND	GROUND
H	HIGH SPEED
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HPS	HIGH PRESSURE SODIUM
HS	HAND SWITCH
IC	INTERRUPTING CAPACITY
I &C	INSTRUMENTATION AND CONTROL
INCAND	INCANDESCENT
INST	INSTANTANEOUS
J, J-BOX	JUNCTION BOX
K	KEY INTERLOCK
L	LIGHTING CONTACTOR, LOW SPEED
LOS	LOCKOUT STOP PUSH BUTTON
LR	LATCHING RELAY
LT FLEX	LIQUID TIGHT FLEX CONDUIT
LTS	LIGHTS

ABBREVIATIONS	DESCRIPTION
M	MAGNETIC CONTACTOR COIL
MCC	MOTOR CONTROL CENTER
MH	MANHOLE, METAL HALIDE
MO	MOTOR OPERATER
MS	MOTOR STARTER
MT	MOUNT
MTD	MOUNTED
N	NEUTRAL
NA	NON-AUTOMATIC
NC	NORMALLY CLOSED
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NP	NAMEPLATE
OC	ON CENTER
OL	OVERLOAD RELAY
PB	PUSH BUTTON SWITCH
PBX	PULLBOX
PC	PHOTOCELL
PH	PHASE
PMC	POWER METERING CABINET
PMR	PHASE MONITOR RELAY
PNL	PANEL
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE CONDUIT
R	RED
RCPT	RECEPTACLE
REQD	REQUIRED
RM	REMOTE MULTIPLEXER
RS	RIGID STEEL CONDUIT
RT	REMOTE TELEMETRY
RVNR	REDUCED VOLTAGE NON-REVERSING
RVR	REDUCED VOLTAGE REVERSING
SA	SURGE ARRESTOR
SCCR	SHORT CIRCUIT CURRENT RATING
S/N	SOLID NEUTRAL
SPD	SPEED
SST	STAINLESS STEEL
SV	SOLENOID VALVE
SW	SWITCH
SWGR	SWITCHGEAR
SYMM	SYMMETRICAL
T	THERMOSTAT
TB	TERMINAL BOARD
TC	TIME CLOSE
TD	TEMPERATURE DETECTOR RELAY
TDR	TIME DELAY RELAY
TJB	TERMINAL JUNCTION BOX
T.O.	TIME OPEN
TS	AUTO TRANSFORMER TEMPERATURE SWITCH
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TX	TRANSFORMER
TYP	TYPICAL
UH	UNIT HEATER
UVR	UNDER VOLTAGE RELAY
V	VOLTMETER, VOLT
VS	VOLTMETER SWITCH
W	WATT
WHD	WATTHOUR DEMAND METER
WP	WEATHERPROOF
XFDR	TRANSPONDER
XFMR	TRANSFORMER

NOTES:
1. THIS IS A STANDARD LEGEND SHEET. SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS DRAWING AND NOT ON THE PLANS.
2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS (CIVIL, HVAC, PLUMBING INTRUMENTATION AND CONTROL, MECHANICAL, AND STRUCTURAL/ARCHITECTURAL), SEE OTHER LEGENDS.

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		NO.	DATE	REVISION	BY	APVD
DSGN	KL MAESTRI					
DR	GJ LOVE					
CHK	JB MAURAIS		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GRW	SJP
APVD	CW MASSIE					

VERIFY SCALE: BAR IS ONE INCH ON ORIGINAL DRAWING. 0 — 1". IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL Carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

GENERAL

ELECTRICAL LEGEND AND ABBREVIATIONS

SHEET	24
DWG	01-G-24
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng024d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:07:02 PM

GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION

Analog Circuit Callouts	
[A1]	[3/4"C, 1 TYPE 3]
[A2]	[1"C, 2 TYPE 3]
[A3]	[1"C,3 TYPE 3]
[A4]	[1"C,4 TYPE 3]
[A5]	[1 1/4"C,5 TYPE 3]
[A6]	[1 1/4"C,6 TYPE 3]
[A7]	[1 1/2"C,7 TYPE 3]
[A8]	[1 1/2"C,8 TYPE 3]
[A9]	[1 1/2"C,9 TYPE 3]
[A10]	[2"C,10 TYPE 3]
[A11]	[2"C,11 TYPE 3]
[A12]	[2"C,12 TYPE 3]
[A13]	[2"C,13 TYPE 3]
[A14]	[2"C,14 TYPE 3]
[A15]	[3/4"C,1 TYPE 4]
[A16]	[3/4"C,2 TYPE 4]
[A17]	[1"C,3 TYPE 4]
[A18]	[1 1/4"C,4 TYPE 4]
[A19]	[1 1/4"C,5 TYPE 4]
[A20]	[1 1/4"C,6 TYPE 4]
[A21]	[1 1/2"C,7 TYPE 4]
[A22]	[1 1/2"C,8 TYPE 4]
[A23]	[2"C, 9 TYPE 4]
[A24]	[3/4"C, 1-4PR TYPE 5]
[A25]	[1"C, 2-4PR TYPE 5]

Control Circuit Callouts	
[C1]	[3/4"C,MSC]
[C2]	[3/4"C,2#14,1#14G]
[C3]	[3/4"C,3#14,1#14G]
[C4]	[3/4"C,4#14,1#14G]
[C5]	[3/4"C,5#14,1#14G]
[C6]	[3/4"C,6#14,1#14G]
[C7]	[3/4"C,7#14,1#14G]
[C8]	[3/4"C,8#14,1#14G]
[C9]	[3/4"C,9#14,1#14G]
[C10]	[3/4"C,10#14,1#14G]
[C11]	[3/4"C,11#14,1#14G]
[C12]	[3/4"C,12#14,1#14G]
[C13]	[3/4"C,13#14,1#14G]
[C14]	[3/4"C,14#14,1#14G]
[C15]	[3/4"C,15#14,1#14G]
[C16]	[3/4"C,16#14,1#14G]
[C17]	[3/4"C,17#14,1#14G]
[C18]	[3/4"C,18#14,1#14G]
[C19]	[3/4"C,19#14,1#14G]
[C20]	[3/4"C,20#14,1#14G]
[C21]	[3/4"C,21#14,1#14G]
[C22]	[3/4"C,22#14,1#14G]
[C23]	[3/4"C,23#14,1#14G]
[C24]	[1"C,24#14,1#14G]
[C25]	[1"C,25#14,1#14G]

Control Cable Circuit Callouts	
[CC3]	[3/4"C, 1-3C TYPE 1]
[CC3A]	[1"C, 2-3C TYPE 1]
[CC3B]	[1 1/4"C, 3-3C TYPE 1]
[CC3C]	[1 1/4"C, 4-3C TYPE 1]
[CC5]	[3/4"C,1-5C TYPE 1]
[CC5A]	[1 1/4"C,2-5C TYPE 1]
[CC7]	[3/4"C,1-7C TYPE 1]
[CC7A]	[1 1/4"C, 2-7C TYPE 1]
[CC9]	[1"C, 9C TYPE 1]
[CC9A]	[2"C, 2-9C TYPE 1]
[CC9B]	[2"C, 3-9C TYPE 1]
[CC9C]	[2"C, 4-9C TYPE 1]
[CC12]	[1"C,1-12C TYPE 1]
[CC12C]	[2 1/2"C, 4-12C TYPE 1]
[CC19]	[1 1/2", 1-19C TYPE 1]
[CC25]	[1 1/2"C,1-25C TYPE 1]
[CC37]	[2"C,1-37C TYPE 1]
[CC7A]	[1 1/4"C,2-7C TYPE 1]
[CC12A]	[2"C,2-12C TYPE 1]
[CC3/CC5]	[1 1/4"C, 3C TYPE 1, 5C TYPE 1]
[CC3/CC9]	[1 1/2"C, 3C TYPE 1, 9C TYPE 1]
[CC3A/CC9]	[1 1/4"C, 2-3C TYPE 1, 9C TYPE 1]
[CC3A/CC12A]	[2"C, 2-3C TYPE 1, 2-12C TYPE 1]
[CC5/CC9]	[1 1/2"C, 5C TYPE 1, 9C TYPE 1]
[CC5/CC12]	[1 1/2"C, 5C TYPE 1, 12C TYPE 1]
[CC5B/CC7]	[1 1/4"C, 2-5C TYPE 1, 7C TYPE 1]
[CC7/CC9]	[1 1/2"C, 7C TYPE 1, 9C TYPE 1]

Power Cable Circuit Callouts	
[PC1]	[3/4"C,1-4C#12 TYPE 2]
[PC1A]	[1 1/4"C, 2-4C#12 TYPE 2]
[PC1B]	[1 1/4"C, 3-4C#12 TYPE 2]
[PC1C]	[1 1/2"C, 4-4C#12 TYPE 2]
[PC2]	[3/4"C,1-4C#10 TYPE 2]
[PC3]	[1"C,1-4C#8 TYPE 2]
[PC4]	[1 1/4"C,2-4C#12 TYPE 2]
[PC5]	[1 1/2"C,2-4C#10 TYPE 2]
[PC11]	[3/4"C, 1-3C #12, TYPE 2]
[PC11A]	[1 1/4"C, 2-3C#12 TYPE 2]
[PC11B]	[1 1/4"C, 3-3C#12 TYPE 2]
[PC11C]	[1 1/4"C, 4-3C#12 TYPE 2]
[PC12]	[3/4"C, 1-3C#10, TYPE 2]
[PC1A/PC11A]	[1 1/4"C, 3C#12 TYPE 2, 4C#12 TYPE 2]

Communication Circuit Callouts	
[AD]	[3/4"C, DEVICE NET CABLE]
[AC]	[3/4"C, CONTROL NET CABLE]
[AE]	[3/4"C, ETHERNET CABLE]

Power Circuit Callouts			
[B1]	[3/4"C,MSC]	[B26]	[1"C,3#8,5#14,1#10G]
[B2]	[3/4"C,2#12,1#12G]	[B27]	[1"C,2#6,1#10G]
[B3]	[3/4"C,3#12,1#12G]	[B28]	[1"C,3#6,1#10G]
[B4]	[3/4"C,4#12,1#12G]	[B28A]	[1"C,4#6,1#10G]
[B5]	[3/4"C,5#12,1#12G]	[B29]	[1"C,3#6,2#14,1#10G]
[B6]	[3/4"C,6#12,1#12G]	[B30]	[1"C,3#6,3#14,1#10G]
[B7]	[3/4"C,7#12,1#12G]	[B31]	[1"C,3#6,4#14,1#10G]
[B8]	[3/4"C,8#12,1#12G]	[B32]	[1"C,3#6,5#14,1#10G]
[B9]	[3/4"C,3#12.2#14,1#12G]	[B33]	[1"C,3#4,1#8G]
[B10]	[3/4"C,3#12,3#14,1#12G]	[B34]	[1 1/4"C,3#4,3#14,1#8G]
[B11]	[3/4"C,3#12,4#14,1#12G]	[B35]	[1 1/4"C,3#4,5#14,1#8G]
[B12]	[3/4"C,3#12,5#14,1#12G]	[B36]	[1 1/4"C,3#3, 1#8G]
[B13]	[3/4"C,3#12,6#14,1#12G]	[B37]	[1 1/4"C,3#3, 3#14, 1#8G]
[B14]	[3/4"C,3#12,7#14,1#12G]	[B38]	[1 1/4"C,3#2,1#6G]
[B14A]	[3/4"C,3#12,8#14,1#12G]	[B39]	[1 1/4"C,3#1,1#6G]
[B15]	[3/4"C,2#10,1#10G]	[B39A]	1 1/2"C, 4#1, 1#6G]
[B16]	[3/4"C,3#10,1#10G]	[B40]	[1 1/2"C,3#1,3#14, 1#6G]
[B17]	[3/4"C,3#10,2#14,1#10G]	[B41]	[1 1/2"C,3#2/0,1#6G]
[B18]	[3/4"C,3#10,3#14,1#10G]	[B41A]	[2"C,4#2/0,1#6G]
[B19]	[3/4"C,3#10,4#14,1#10G]	[B42]	[2"C,3#3/0,1#4G]
[B20]	[3/4"C,3#10,5#14,1#10G]	[B43]	[2"C,4#3/0,1#4G]
[B21]	[1"C,2#8, 1#10G]	[B44]	[3"C, 3-500MCM, 1#3G]
[B22]	[1"C,3#8,1#10G]		
[B23]	[1"C,3#8,2#14,1#10G]	[B64]	[1 1/2"C, 3#1/0, 1#6G]
[B24]	[1"C,3#8,3#14,1#10G]	[B65]	[2 1/2"C, 3#250MCM, 1#4G]
[B25]	[1"C,3#8,4#14,1#10G]	[B66]	2 - [2 1/2"C, 3#250MCM, 1#4G] EA
		[B67]	2 - [4"C, 3#750MCM, 1#1/0G] EA

Power and Control Cable Callouts	
[PC1/CC3]	[1 1/4"C, 1-4C#12 TYPE 2, 1-3C TYPE 1]
[PC1/CC3A]	[1 1/4"C, 1-4C#12 TYPE 2, 2-3C TYPE 1]
[PC1/CC3/CC5]	[1 1/4"C, 4C#12 TYPE 2, 3C TYPE 1, 5C TYPE 1]
[PC1/CC3/CC7]	[1 1/4"C, 4C#12 TYPE 2, 3C TYPE 1, 7C TYPE 1]
[PC1/CC5]	[1 1/4"C, 1-4C#12 TYPE 2, 1-5C TYPE 1]
[PC1/CC5A]	[1 1/4"C, 4C#12 TYPE 2, 2-5C TYPE 1]
[PC1/CC9]	[1 1/2"C, 4C#12 TYPE 2, 9C TYPE 1]
[PC1/CC9A]	[2"C, 4C#12 TYPE 2, 2-9C TYPE 1]
[PC1/CC9B]	[2"C, 4C#12 TYPE 2, 3-9C TYPE 1]
[PC1/CC12]	[1 1/2"C, 1-4C#12 TYPE 2, 1-12C TYPE 1]
[PC1/CC12A]	[2"C, 1-4C#12 TYPE 2, 3-12C TYPE 1]
[PC1/CC12B]	[2 1/2"C, 1-4C#12 TYPE 2, 2-12C TYPE 1]
[PC1A/CC3A]	[1 1/2"C, 2-4C#12 TYPE 2, 2-3C TYPE 1]
[PC1A/CC3C]	[2"C, 2-4C#12 TYPE 2, 4-3C TYPE 1]
[PC1A/CC12A]	[2"C, 2-4C#12 TYPE 2, 2-12C TYPE 1]
[PC1B/CC9B]	[2"C, 3-4C#12 TYPE 2, 3-9C TYPE 1]
[PC11/CC3]	[1 1/4"C, 3C#12 TYPE 2, 3C TYPE 1]
[PC11/CC5]	[1 1/4"C, 3C#12 TYPE 2, 5C TYPE 1]
[PC11/CC9]	[1 1/2"C, 3C#12 TYPE 2, 9C TYPE 1]
[PC11A/CC9A]	[2"C, 2-3C#12 TYPE 2, 2-9C TYPE 1]
[PC11B/CC9B]	[2 1/2"C, 3-3C#12 TYPE 2, 3-9C TYPE 1]
[PC3/CC7]	[1 1/2"C, 1-4C#8 TYPE 2, 1-7C TYPE 1]

GENERAL ELECTRICAL CONSTRUCTION NOTES:

1. APPLICATION: THESE PROVISIONS APPLY TO ALL WORK GENERALLY, UNLESS OTHERWISE SPECIFIED BY SPECIFIC NOTE OR REFERENCE.
2. ELECTRICAL INSTALLATION CONDITIONS: FOR REQUIREMENTS, SEE SPECIFICATION SECTION 16010, AREA DESIGNATIONS.
3. ANALYZE THE REQUIREMENTS FOR ROUTING EACH RACEWAY AND INSTALL ACCORDING TO THE SPECIFICATIONS. WHERE SPECIFIC ROUTING RIGHTS-OF-WAY (R.O.W.) ARE SHOWN, ROUTING OF RACEWAYS SHALL CONFORM TO THOSE CORRIDORS UNLESS ALLOWED OTHERWISE. WHERE ACCESS, CONSTRUCTABILITY, OR COORDINATION WITH OTHER ELEMENTS OF THE WORK SUGGESTS THAT AN ALTERNATE ROUTING BE CONSIDERED, SUBMIT THAT ALTERNATE PLAN FOR APPROVAL.
4. ALL CONDUITS ROUTED ON THE SITE SHALL BE CONCRETE ENCASED UNLESS SPECIFICALY IDENTIFIED AS DIRECT BURIED.
5. FINAL CIRCUIT ROUTING FOR PNEUMATIC CONTROL VALVE ACTUATORS: THE ACTUATORS CONSIST OF MULTIPLE DEVICES, EACH REQUIRING INDIVIDUAL CONNECTION OF ELECTRIC POWER AND CONTROL CIRCUITS. FOR CLARITY, A SINGLE CONNECTION SYMBOL IS SHOWN. AT EACH VALVE, THE ASSOCIATED CIRCUITS AND RACEWAY SHALL BE ROUTED TO A SINGLE JUNCTION BOX MOUNTED AT OR ADJACENT TO THE VALVE. EXTEND EACH CIRCUIT TO ITS RESPECTIVE DEVICE VIA 3/4-INCH FLEXIBLE CONDUIT. TAP THE EQUIPMENT GROUNDING CONDUCTOR IN THE BOX AND EXTEND TO EACH DEVICE.
6. FINAL CIRCUITING FOR ELECTRIC VALVES & GATES: EACH VALVE OR GATE MAY CONSIST OF MULTIPLE DEVICES EACH REQUIRING INDIVIDUAL CONNECTION OF ELECTRIC POWER AND CONTROL CIRCUITS. FOR CLARITY, A SINGLE CONNECTION SYMBOL IS SHOWN. AT EACH VALVE, THE ASSOCIATED CIRCUITS AND RACEWAY SHALL BE ROUTED TO A SINGLE JUNCTION BOX MOUNTED AT OR ADJACENT TO THE VALVE. EXTEND EACH CIRCUIT TO ITS RESPECTIVE DEVICE VIA 3/4-INCH FLEXIBLE CONDUIT. TAP THE EQUIPMENT GROUNDING CONDUCTOR IN THE BOX AND EXTEND TO EACH DEVICE.
7. CIRCUITS THAT ARE ROUTED WITHIN A FACILITY ARE IDENTIFIED BY A CIRCUIT/CONDUIT CALLOUT OR BY AN IDENTIFIER DESCRIBED ON THE GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION SCHEDULE ON THIS SHEET. CIRCUITS THAT ARE ROUTED ON THE SITE ARE IDENTIFIED ON THE SITE CIRCUIT SCHEDULE INCLUDED IN THE ELECTRICAL DRAWINGS. ROUTING OF SITE ROUTED CIRCUITS ARE DESCRIBED ON THE RISER DIAGRAMS AND DUCTBANK SCHEDULE IN THE ELECTRICAL DRAWINGS.
8. FOR INTERFACING CIRCUITS AND CONDUITS AT DEVICES, SEE SPECIFICATION SECTION 13411, SUPPLEMENT FOR I & C DESIGN DETIALS.
9. ALL BURIED CONDUITS SHALL BE A MINIMUM OF 1". IF DRAWINGS INDICATE A CIRCUIT IDENTIFICATION FROM THE ADJACENT TABLE THAT IS 3/4"C, THE CONTRACTOR SHALL ASSUME THAT WHILE THE CONDUIT IS BURIED, THE SIZE IS 1". ONCE CONDUIT IS ROUTED OUTSIDE THE GROUND, RESUME WITH CONDUIT SIZE LISTED IN TABLE.
10. ALL DUCTBANKS CONTAINING HIGH VOLTAGE CIRCUITS SHALL BE CONCRETE ENCASED PER (16400a) UNLESS NOTES OTHERWISE. ALL DUCTBANKS CONTAINING LESS THAN 600 VOLT CIRCUITS SHALL BE DIRECT BURIED PER DETAILS (16325a) AND (16325b) UNLESS NOTED OTHERWISE.

GENERAL NOTES: FOR LIGHTING SYSTEM

1. CIRCUIT NUMBERS AND PANEL DESIGNATION ARE SHOWN ADJACENT TO LIGHTS. FOR EXAMPLE: THE (3) INDICATES CIRCUIT NO. 3 IN THE PANEL DESIGNATED ON THE SHEET THE FIXTURE IS SHOWN.
2. FURNISH, INSTALL AND CONNECT THE QUANTITY OF CONDUCTORS IN CONDUIT AS REQUIRED FOR THE COMBINATIIONS OF LIGHTS AND LIGHT SWITCHES ASSIGNED TO THE BRANCH CIRCUIT.
3. FURNISH AND INSTALL NO. 12 AWG WITH NO. 12 AWG GROUND IN 3/4" CONDUIT FOR CIRCUIT LENGTHS LESS THAN 75 FEET. PROVIDE NO. 10 AWG WIRE SIZE FOR LENGTHS GREATER THAN 75 FEET.
4. FOR UNFINISHED ROOMS FURNISH AND INSTALL 1 5/8"x1 5/8"x LENGTHS AS REQUIRED, GALVANIZED STEEL CHANNEL BETWEEN JOISTS/TRUSSES. SUPPORT LIGHTS FROM CHANNELING.
5. DO NOT RUN ANY CONDUIT IN FRONT OF TRANSLUCENT GLAZING PANELS.

GENERAL NOTES: FOR POWER AND SIGNAL SYSTEM

1. CIRCUIT NUMBERS AND PANEL DESIGNATIONS ARE SHOWN ADJACENT TO RECEPTACLES, HVAC EQUIPMENT AND EQUIPMENT CONNECTIONS. FOR EXAMPLE: THE (2) INDICATES CIRCUIT 2 INTHE PANEL DESIGNATED ON THE SHEET THE DEVICE IS SHOWN ON.
2. FURNISH, INSTALL AND CONNECT THE QUANTITY OF CONDUCTORS IN CONDUIT AS REQUIRED FOR THE RECEPTACLES AND EQUIPMENT CONNECTIONS ASSIGNED TO THE BRANCH CIRCUIT SHOWN.
3. FURNISH AND INSTALL NO. 12 AWG WITH NO. 12 AWG GROUND IN 3/4" CONDUIT FOR CIRCUIT LENGTHS LESS THAN 75 FEET. PROVIDE NO. 10 AWG WIRE SIZE FOR LENGTHS GREATER THAN 75 FEET.
4. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF TERMINAL BOXES AND CONDUIT ENTRANCES OF ALL EQUIPMENT WITH SHOP DRAWINGS BEFORE STUBBING UP CONDUITS.
5. PROVIDE FLEXIBLE CONDUIT WHERE CONDUIT TERMINATES AT EQUIPMENT OR DEVICES SUBJECT TO MOVEMENT FROM VIBRATION, EXPANSION AND CONTRACTION. REFER TO 16130, RACEWAYS AND BOXES FOR ADDITIONAL REQUIREMENTS.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY KANDIL MAESTRI, STATE OF OREGON. P.E. NO. 53785PE

DSGN KL MAESTRI						VERIFY SCALE	CH2MHILL carollo engineers
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
CHK JB MAURAIS						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GRW	SJP		
	NO.	DATE	REVISION	BY	APVD		

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

GENERAL
ELECTRICAL
GENERAL NOTES AND CIRCUIT CONDUCTOR AND CONDUIT INDENTIFICATION

SHEET	25
DWG	01-G-25
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng025d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:07:09 PM

INFLUENT FLOWS AND LOADS	DESIGN VALUES	
YEAR	2020	2030
DESIGN POPULATION		
FLOWS, MGD		
AVERAGE ANNUAL	13	16
AVERAGE DRY WEATHER	9.6	12.3
AVERAGE WET WEATHER	15	20
MAXIMUM MONTH WET WEATHER	25	29
MAXIMUM WEEK WET WEATHER	36	44
PEAK WET WEATHER	63	68
BOD LOADINGS, LBS/DAY		
AVERAGE ANNUAL	9,400	11,300
MAXIMUM MONTH	12,100	14,600
MAXIMUM WEEK	16,000	19,200
MAXIMUM DAY	24,400	29,400
TSS LOADINGS, LBS/DAY		
AVERAGE ANNUAL	12,300	14,600
MAXIMUM MONTH	16,100	19,100
MAXIMUM WEEK	22,500	26,700
MAXIMUM DAY	21,400	37,200
TKN LOADINGS, LBS/DAY		
AVERAGE ANNUAL	3,000	3,500
MAXIMUM MONTH	3,900	4,500
MAXIMUM WEEK	5,100	5,900
MAXIMUM DAY	7,800	9,100
AMMONIA LOADINGS, LBS/DAY		
AVERAGE ANNUAL	1,900	2,200
MAXIMUM MONTH	2,500	2,800
MAXIMUM WEEK	3,200	3,700
MAXIMUM DAY	4,900	5,700

EFFLUENT REQUIREMENTS	
DRY WEATHER	DESIGN VALUES
BOD, MG/L	10
TSS, MG/L	10
WET WEATHER	
BOD, MG/L	25
TSS, MG/L	30

LIQUID UNIT PROCESS CRITERIA	
INFLUENT PUMP STATION	
UNITS	3
TYPE	SUBMERSIBLE PREROTATION (WET PIT)
CAPACITY/UNIT, MGD	8
OPERATING HEAD, FT	73
MOTOR, EA, HP	177
DRIVE	VARIABLE

LIQUID UNIT PROCESS CRITERIA	DESIGN VALUES
INFLUENT PUMP STATION	
UNITS	3
TYPE	IMMERSIBLE (DRY PIT)
CAPACITY/UNIT, MGD	14.7
OPERATING HEAD, FT	70
MOTOR, EA, HP	306
DRIVE	VARIABLE
INFLUENT PUMP STATION SUMP PUMP	
UNITS	1
TYPE	SUBMERSIBLE CHOPPER
CAPACITY/UNIT, GPM	150
OPERATING HEAD, FT	15
MOTOR, EA, HP	5
DRIVE	CONSTANT
MECHANICAL SCREENS	
UNITS	3
TYPE	PERFORATED PLATE
CAPACITY/UNIT, MGD	23
OPENING SIZE, MM	6
MOTOR, EA, HP	5 (MAIN) + 5 (BRUSH)
DRIVE	MAIN - VARIABLE
	BRUSH - CONSTANT
MANUAL BAR SCREEN	
UNITS	1
OPENING SIZE, IN	2
SCREENINGS WASHER	
UNITS	3
CAPACITY/UNIT, CF/HR	5
MOTOR, EA, HP	5.0
DRIVE	CONSTANT - FORWARD/REVERSE
SCREENINGS COMPACTOR	
UNITS	3
CAPACITY/UNIT, CF/HR	7
MOTOR, EA, HP	7.5
DRIVE	VARIABLE
SCREENINGS CONVEYOR	
UNITS	1
TYPE	SHAFTLESS
CAPACITY/UNIT, CF/HR	18
MOTOR, EA, HP	7.5
DRIVE	VARIABLE
SCREENINGS LOADOUT CONVEYOR	
UNITS	1
TYPE	SHAFTLESS
CAPACITY/UNIT, CF/HR	18
MOTOR, EA, HP	5.0
DRIVE	VARIABLE

LIQUID UNIT PROCESS CRITERIA	DESIGN VALUES
SCREENINGS DUMPSTER	
CAPACITY/UNIT, CY	34
DIMENSIONS, L x W x D	20 FT x 8 FT x 5 FT - 10 IN
GRIT REMOVAL	
UNITS	3
TYPE	VORTEX SEPARATOR
CAPACITY/UNIT, MGD	23
MOTOR, EA, HP	2.0
DRIVE	CONSTANT
GRIT PUMPS	
UNITS	5
TYPE	TORQUE FLOW, MODEL C
CAPACITY/UNIT, GPM	220
OPERATING HEAD, FT	48
MOTOR, EA, HP	20
DRIVE	CONSTANT
GRIT CYCLONES	
UNITS	4
CAPACITY/UNIT, GPM	220
INFLUENT PRESSURE, PSI	5
GRIT CLASSIFIER	
UNITS	2
TYPE	18" FLARED
CAPACITY/UNIT, TON/HR	2
MOTOR, EA, HP	1.0
DRIVE	CONSTANT
RAS SCREENS	
UNITS	3
TYPE	ROTARY DRUM
OPENING SIZE, µM	250
CAPACITY/UNIT, MGD	3
MOTOR, EA, HP	2.0
DRIVE	CONSTANT
RAS GRIT PUMPS	
UNITS	1
TYPE	CENTRIFUGAL
CAPACITY/UNIT, GPM	192
OPERATING HEAD, PSI	30
MOTOR, EA, HP	10
DRIVE	CONSTANT
GRIT DUMPSTER	
CAPACITY/UNIT, CY	27
DIMENSIONS, L x W x D	16 FT x 8 FT x 5 FT - 10 IN

DSGN	KE MATHES					VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-03-01 LINN COUNTY, OREGON
DR	ER BROWN			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)		BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
CHK	BR JOHNSON		01/20/10	AS-BUILT	JMD	SJP	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

GENERAL

DESIGN DATA SUMMARY
SHEET 1

SHEET	26
DWG	01-G-26
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng026d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:07:16 PM

LIQUID UNIT PROCESS CRITERIA	DESIGN VALUES
GRIT LOADOUT CONVEYOR	
UNITS	1
TYPE	SHAFTLESS
CAPACITY/UNIT, CF/HR	10
MOTOR, EA, HP	5.0
DRIVE	VARIABLE
RAS SCREENINGS CONVEYOR	
UNITS	1
TYPE	SHAFTED
CAPACITY/UNIT CF/HR	8
MOTOR, EA, HP	3.0
DRIVE	CONSTANT
RAS SCREENINGS COMPACTOR	
UNITS	1
CAPACITY/UNIT CF/HR	8
MOTOR, EA, HP	3.0
DRIVE	CONSTANT
RAS GRIT CYCLONE	
UNITS	12
CAPACITY/UNIT, GPM	20
INFLUENT PRESSURE, PSI	30
AERATION BASINS	
UNITS	6
TYPE	VERTICAL LOOP REACTORS
MAXIMUM MONTH FLOW, MGD	25
MAXIMUM MONTH BOD LOADING, LB/DAY	12,100
MAXIMUM MONTH TSS LOADING, LB/DAY	16,100
MAXIMUM MONTH TKN LOADING, LB/DAY	3,900
MAXIMUM MONTH NH_3 LOADING, LB/DAY	2,500
VSS	82%
MLSS, MG/L	3,500
SVI, ML/G	150
MAXIMUM AOR, LB O_2/DAY	11,300
SIZE, EA, L x W x D, FT	125 x 30 x 26.33
SIDEWATER DEPTH, FT	23
VOLUME, EA, GAL	625,000
DISC AERATORS	
UNITS, PER BASIN	2
DISCS PER UNIT	41
STANDARD OXYGEN TRANSFER RATE, EA, LB/HR	51.1
MOTOR, EA, HP	25
DRIVE	VARIABLE
AERATION BLOWERS	
UNITS	4
TYPE	CENTRIFUGAL
CAPACITY/UNIT, SCFM	2,650
OPERATING PRESSURE, PSI	11.5
MOTOR, EA, HP	250

LIQUID UNIT PROCESS CRITERIA	DESIGN VALUES
AERATION DIFFUSERS	
UNITS, PER BASIN	120
TYPE	COARSE BUBBLE
CAPACITY/UNIT, SCFM	12
VERTICAL LOOP REACTOR SCUM PUMP	
UNITS	1
TYPE	RECIRCULATOR SUBMERSIBLE CHOPPER
CAPACITY/UNIT, GPM	150
OPERATING HEAD, FT	15
MOTOR, EA, HP	5.0
DRIVE	CONSTANT
SECONDARY CLARIFIERS	
UNITS	3
TYPE	CIRCULAR
MAXIMUM MONTH SOR, GPD/SF	1150
PEAK WET WEATHER SOR, GPD/SF	1475
SIZE, EA, DIA, FT	140
SIDEWATER DEPTH, FT	18
VOLUME, EA, GAL	2,073,000
SECONDARY SCUM PUMP	
UNITS	1 PER SECONDARY CLARIFIER
TYPE	RECIRCULATOR SUBMERSIBLE CHOPPER
CAPACITY/UNIT, GPM	200
OPERATING HEAD, FT	27.5
MOTOR, EA, HP	5.0
DRIVE	CONSTANT
RETURN ACTIVATED SLUDGE PUMPS	
UNITS	2 PER SECONDARY CLARIFIER
TYPE	SUBMERSIBLE
CAPACITY/UNIT, MGD	4
OPERATING HEAD, FT	41
MOTOR, EA, HP	54
DRIVE	VARIABLE
CHLORINE CONTACT BASINS	
UNITS	2
SIZE, EA, L x W x D, FT	434 x 10 x 12
VOLUME, GAL	390,000
DETENTION TIME @ PEAK DAY, MIN	21
DETENTION TIME @ PEAK HOUR, MIN	17
TANK DRAIN PUMP	
UNITS	1
TYPE	HIDROSTAL
CAPACITY/UNIT, GPM	
OPERATING HEAD, FT	
MOTOR, EA, HP	
DRIVE	CONSTANT

LIQUID UNIT PROCESS CRITERIA	DESIGN VALUES
W3 PUMP STATION	
UNITS	3
TYPE	VERTICAL TURBINE
CAPACITY/UNIT, GPM	1,000
DESIGN PRESSURE, PSI	90
MOTOR, EA, HP	75
DRIVE	VARIABLE
HYPOCHLORITE METERING PUMPS	
UNITS	3
TYPE	PERISTALTIC
CAPACITY/UNIT, GPM	0.011 - 3.2
DRIVE	VARIABLE

SOLID UNIT PROCESS CRITERIA	DESIGN VALUES
INTERCHANGE REACTOR	
UNITS	2
TYPE	SEMI-BATCH
SIZE, EA, L x W x D, FT	119 x 39.5 x 18.5
SIDEWATER DEPTH, FT	14.5
VOLUME, EA, GAL	510,000
SURFACE MIXERS	
UNITS, PER BASIN	2
MOTOR, EA, HP	15.0
DRIVE	CONSTANT
AERATION DIFFUSERS (I/R)	
UNITS, PER BASIN	134
TYPE	COARSE BUBBLE
CAPACITY/UNIT, SCFM	10
INTERCHANGE REACTOR PUMPS	
UNITS	2
TYPE	NON-CLOG SUBMERSIBLE
CAPACITY/UNIT, GPM	830
OPERATING HEAD, FT	22
MOTOR, EA, HP	10
DRIVE	VARIABLE
AEROBIC DIGESTERS	
UNITS	2
TYPE	BATCH
SIZE, EA, DIA, FT	119 x 39.5 x 18.5
SIDEWATER DEPTH, FT	14.5
VOLUME, EA, GAL	510,000
AERATION DIFFUSERS (DIGESTER)	
UNITS, PER BASIN	100
TYPE	COARSE BUBBLE
CAPACITY/UNIT, SCFM	10
AEROBIC DIGESTER PUMP	
UNITS	1
TYPE	NON-CLOG SUBMERSIBLE
CAPACITY/UNIT, GPM	520
OPERATING HEAD, FT	36
MOTOR, EA, HP	10
DRIVE	VARIABLE

DSGN	KE MATHES					VERIFY SCALE
DR	ER BROWN					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	BR JOHNSON		01/2010	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD

CH2MHILL carollo engineers

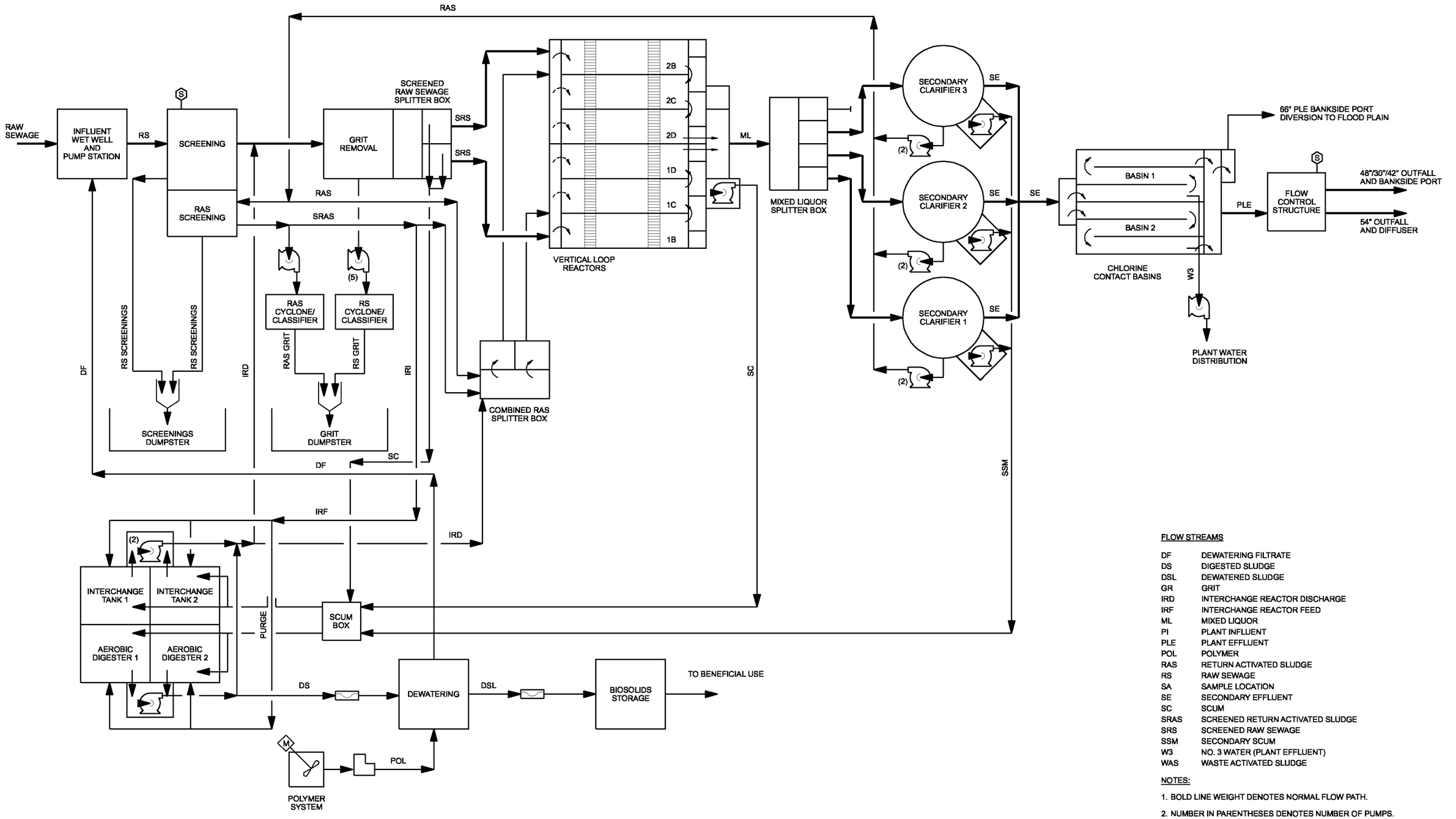
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

GENERAL

DESIGN DATA SUMMARY
SHEET 2

SHEET	27
DWG	01-G-27
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng027d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:07:18 PM



FLOW STREAMS

DF	DEWATERING FILTRATE
DS	DIGESTED SLUDGE
DSL	DEWATERED SLUDGE
GR	GRIT
IRD	INTERCHANGE REACTOR DISCHARGE
IRF	INTERCHANGE REACTOR FEED
ML	MIXED LIQUOR
PI	PLANT INFLUENT
PLE	PLANT EFFLUENT
POL	POLYMER
RAS	RETURN ACTIVATED SLUDGE
RS	RAW SEWAGE
SA	SAMPLE LOCATION
SE	SECONDARY EFFLUENT
SC	SCUM
SRAS	SCREENED RETURN ACTIVATED SLUDGE
SRS	SCREENED RAW SEWAGE
SSM	SECONDARY SCUM
W3	NO. 3 WATER (PLANT EFFLUENT)
WAS	WASTE ACTIVATED SLUDGE

NOTES:

1. BOLD LINE WEIGHT DENOTES NORMAL FLOW PATH.
2. NUMBER IN PARENTHESES DENOTES NUMBER OF PUMPS.
3. (S) DENOTES SAMPLE LOCATION

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/08 BY CRAIG WHITMAN MASSIE STATE OF OREGON, P.E. NO. 16,043.

DSGN	KE MATHES					VERIFY SCALE
DR	ER BROWN					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	BR JOHNSON			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP
APVD	CW MASSIE	01/20/10				IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
		NO.	DATE	REVISION	BY	APVD

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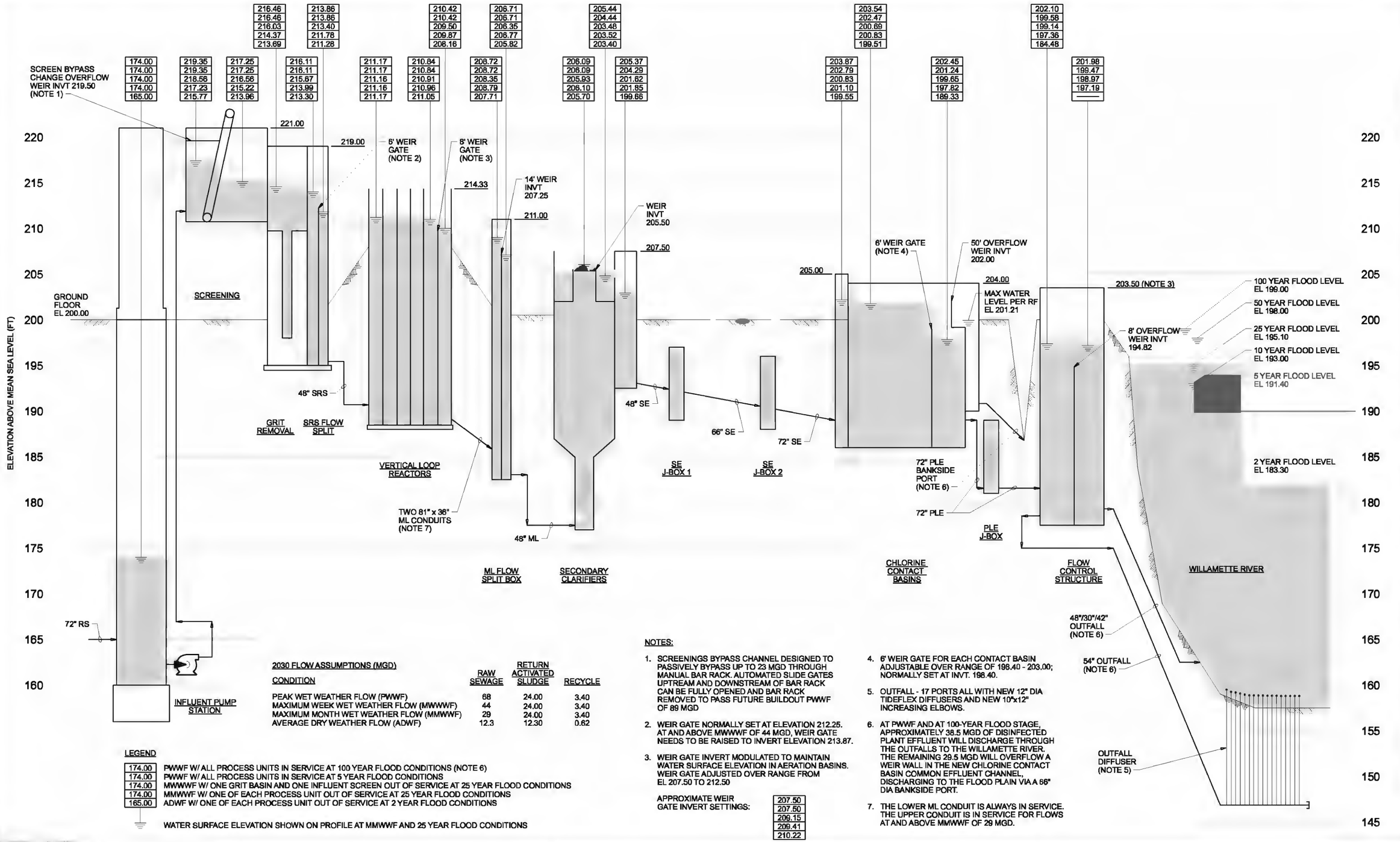
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

GENERAL

PROCESS FLOW DIAGRAM

SHEET	28
DWG	01-G-28
DATE	MAY 19 2006
PROJ	326918

FILENAME: 01ng028d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:07:21 PM



2030 FLOW ASSUMPTIONS (MGD)

CONDITION	RAW SEWAGE	RETURN ACTIVATED SLUDGE	RECYCLE
PEAK WET WEATHER FLOW (PWWF)	68	24.00	3.40
MAXIMUM WEEK WET WEATHER FLOW (MWWWF)	44	24.00	3.40
MAXIMUM MONTH WET WEATHER FLOW (MMWWF)	29	24.00	3.40
AVERAGE DRY WEATHER FLOW (ADWF)	12.3	12.30	0.62

LEGEND

174.00	PWWF W/ ALL PROCESS UNITS IN SERVICE AT 100 YEAR FLOOD CONDITIONS (NOTE 6)
174.00	PWWF W/ ALL PROCESS UNITS IN SERVICE AT 5 YEAR FLOOD CONDITIONS
174.00	MWWWF W/ ONE GRIT BASIN AND ONE INFLUENT SCREEN OUT OF SERVICE AT 25 YEAR FLOOD CONDITIONS
174.00	MMWWF W/ ONE OF EACH PROCESS UNIT OUT OF SERVICE AT 25 YEAR FLOOD CONDITIONS
165.00	ADWF W/ ONE OF EACH PROCESS UNIT OUT OF SERVICE AT 2 YEAR FLOOD CONDITIONS

WATER SURFACE ELEVATION SHOWN ON PROFILE AT MMWWF AND 25 YEAR FLOOD CONDITIONS

NOTES:

1. SCREENINGS BYPASS CHANNEL DESIGNED TO PASSIVELY BYPASS UP TO 23 MGD THROUGH MANUAL BAR RACK. AUTOMATED SLIDE GATES UPTREAM AND DOWNSTREAM OF BAR RACK CAN BE FULLY OPENED AND BAR RACK REMOVED TO PASS FUTURE BUILDOUT PWWF OF 89 MGD
2. WEIR GATE NORMALLY SET AT ELEVATION 212.25. AT AND ABOVE MWWWF OF 44 MGD, WEIR GATE NEEDS TO BE RAISED TO INVERT ELEVATION 213.87.
3. WEIR GATE INVERT MODULATED TO MAINTAIN WATER SURFACE ELEVATION IN AERATION BASINS. WEIR GATE ADJUSTED OVER RANGE FROM EL 207.50 TO 212.50

APPROXIMATE WEIR GATE INVERT SETTINGS:

207.50
207.50
209.15
209.41
210.22

4. 6' WEIR GATE FOR EACH CONTACT BASIN ADJUSTABLE OVER RANGE OF 198.40 - 203.00; NORMALLY SET AT INVT. 198.40.
5. OUTFALL - 17 PORTS ALL WITH NEW 12" DIA TIDEFLEX DIFFUSERS AND NEW 10"x12" INCREASING ELBOWS.
6. AT PWWF AND AT 100-YEAR FLOOD STAGE, APPROXIMATELY 38.5 MGD OF DISINFECTED PLANT EFFLUENT WILL DISCHARGE THROUGH THE OUTFALLS TO THE WILLAMETTE RIVER. THE REMAINING 29.5 MGD WILL OVERFLOW A WEIR WALL IN THE NEW CHLORINE CONTACT BASIN COMMON EFFLUENT CHANNEL, DISCHARGING TO THE FLOOD PLAIN VIA A 66" DIA BANKSIDE PORT.
7. THE LOWER ML CONDUIT IS ALWAYS IN SERVICE. THE UPPER CONDUIT IS IN SERVICE FOR FLOWS AT AND ABOVE MMWWF OF 29 MGD.

NO.	DATE	REVISION	BY	APVD
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	JMD	SJP

DSGN RC FRANKENFIELD
DR ER BROWN
CHK LR DAVIS
APVD CW MASSIE

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WWTP-03-01
LINN COUNTY, OREGON

GENERAL

HYDRAULIC PROFILE

SHEET	29
DWG	01-G-29
DATE	MAY 19 2006
PROJ	326918

10,678.

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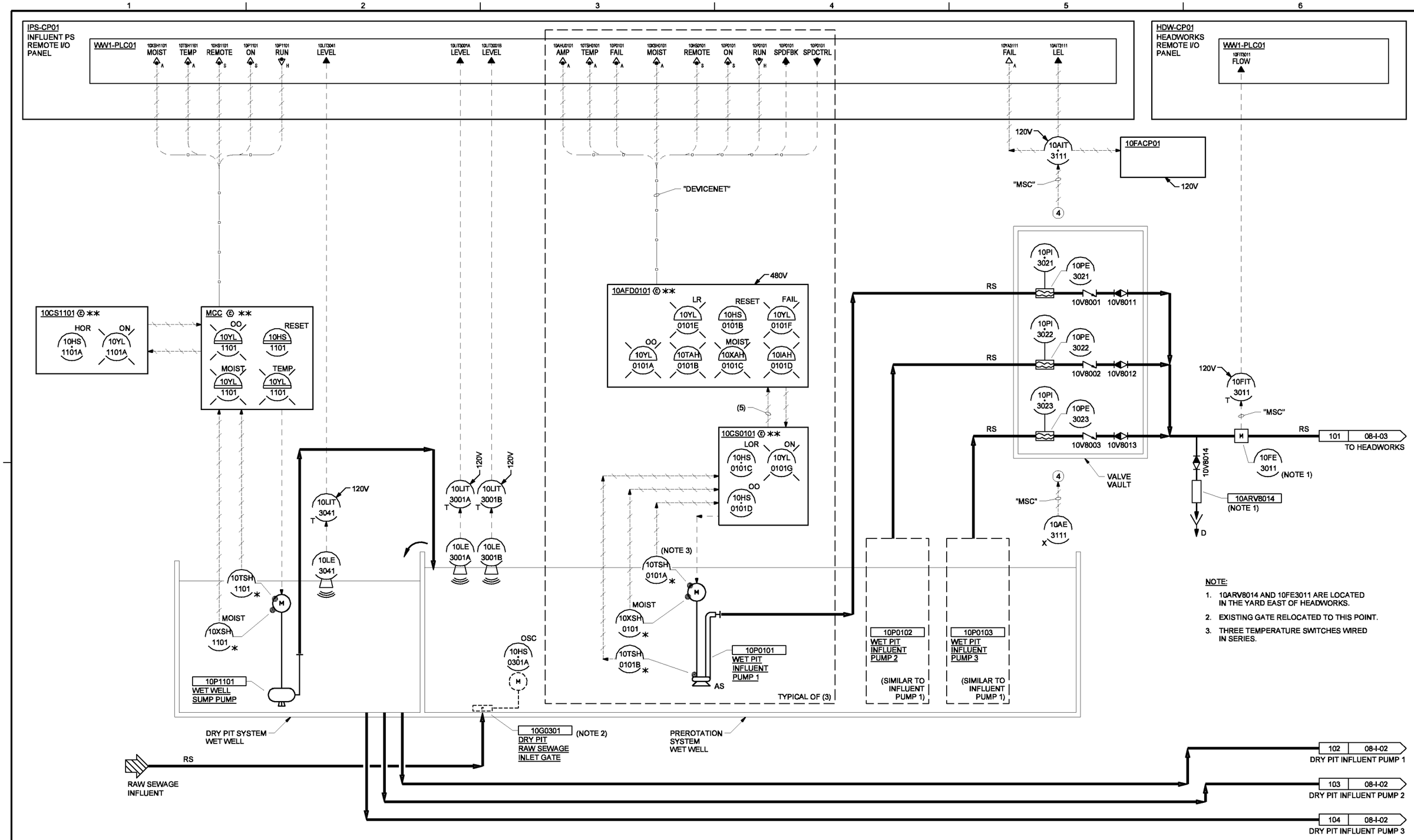

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DSGN	CS BURR/BM CASEY						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	RS SHANLEY	NO.	DATE	REVISION	BY	APVD	
			01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	

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CITY OF ALBANY
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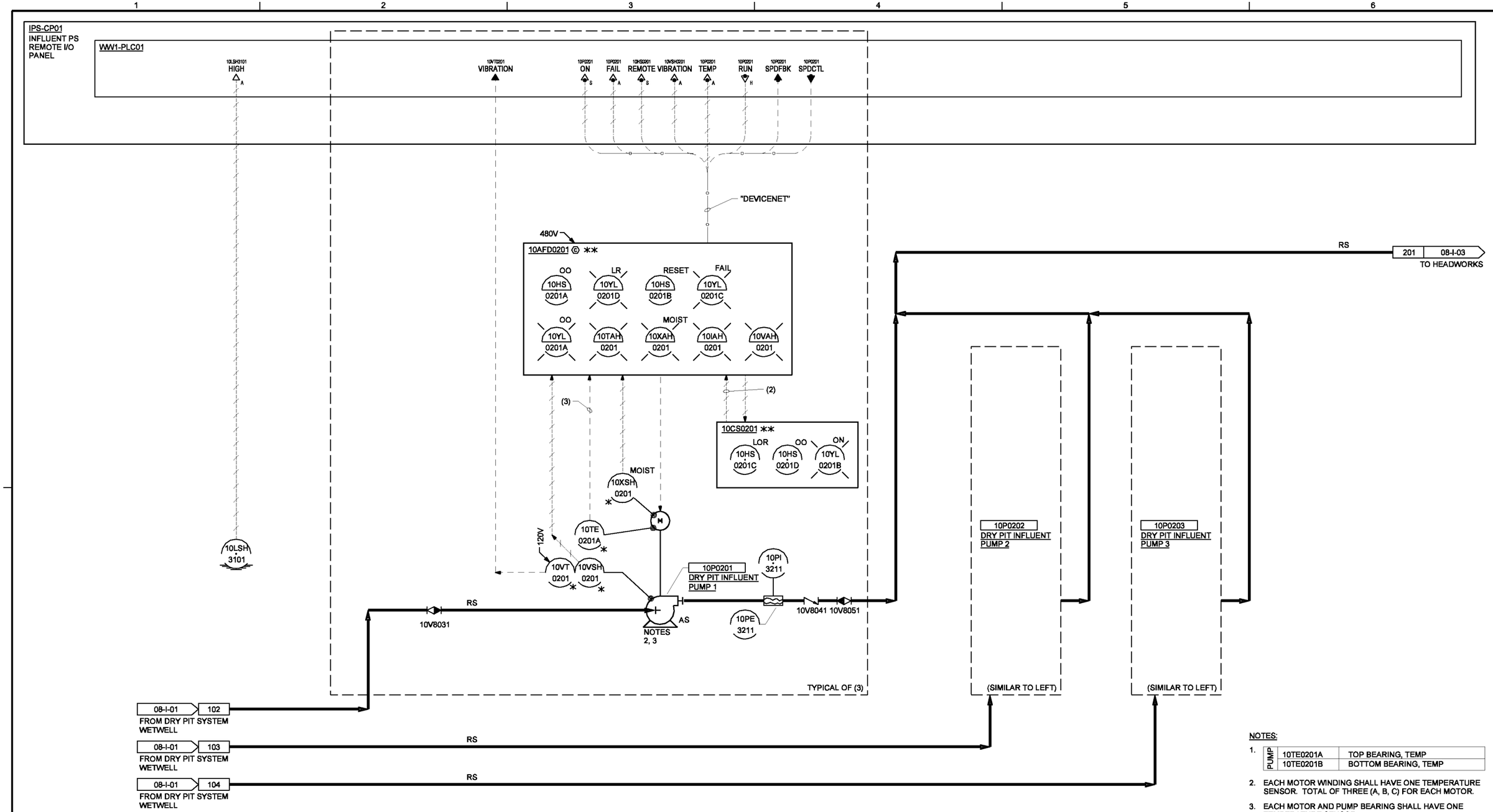
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
INFLUENT PUMPING - WET PIT PUMPS

SHEET	30
DWG	08-I-01
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni001d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:46:37 PM



NOTES:

1. | PUMP | | |
|---|---|---|
| | 10TE0201A | TOP BEARING, TEMP |
| | 10TE0201B | BOTTOM BEARING, TEMP |

2. EACH MOTOR WINDING SHALL HAVE ONE TEMPERATURE SENSOR. TOTAL OF THREE (A, B, C) FOR EACH MOTOR.
3. EACH MOTOR AND PUMP BEARING SHALL HAVE ONE TEMPERATURE SENSOR.

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DSGN	CS BURR/BM CASEY
DR	DS PARKER
CHK	LL WOOD
APVD	RS SHANLEY

NO.	DATE	REVISION	BY	APVD
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB

VERIFY SCALE
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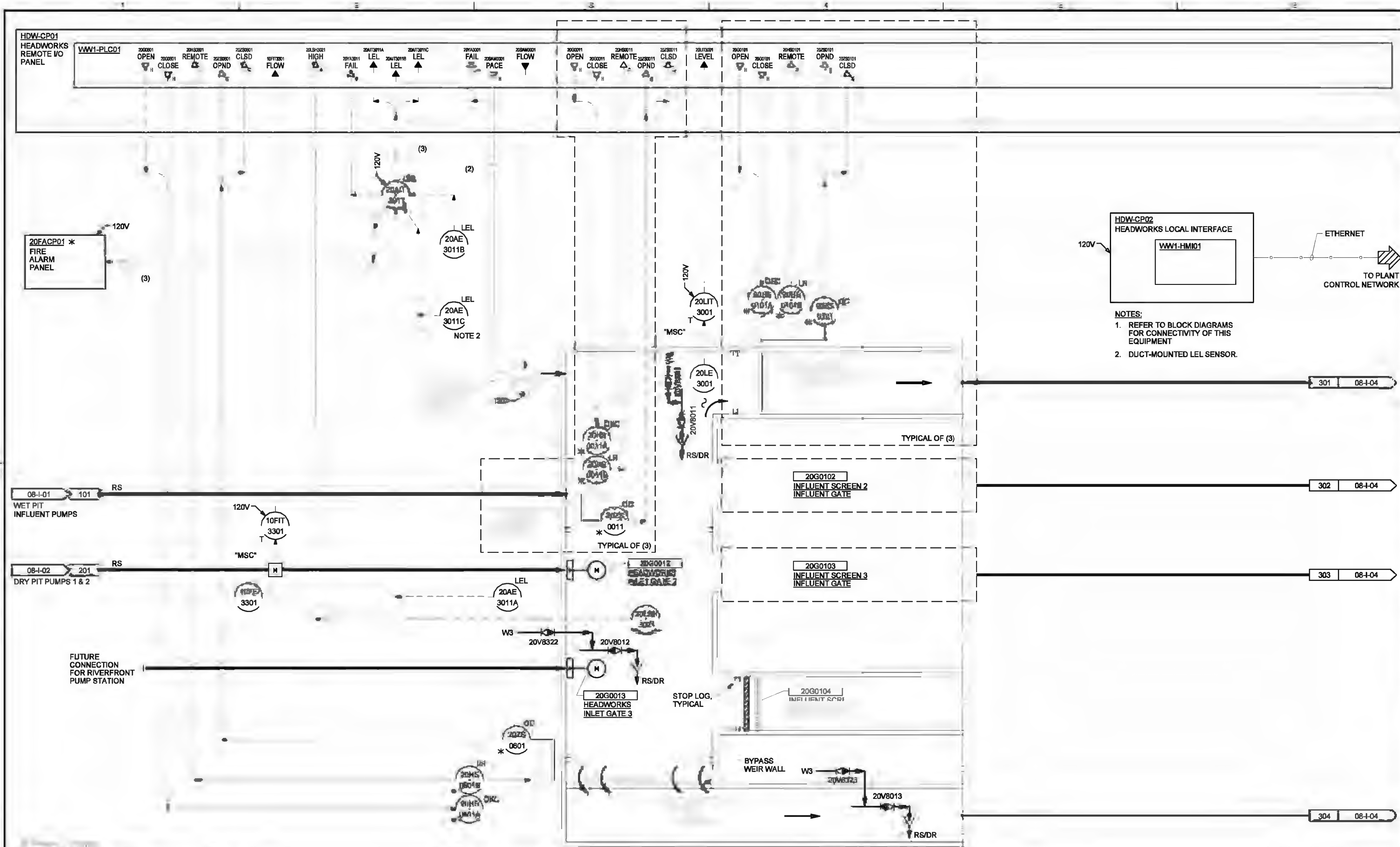
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
INFLUENT PUMPING - DRY PIT PUMPS

SHEET	31
DWG	08-I-02
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni002d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:46:41 PM


HDW-CP01
HEADWORKS REMOTE I/O PANEL
WW1-PLC01
OPEN
CLOSE
REMOTE
OPND
CLSD
FLOW
HIGH
FAIL
LEL
PACE
LEVEL
120V
20FACP01 *
FIRE ALARM PANEL
(3)
(2)
20AE 3011B
20AE 3011C
NOTE 2
20LIT 3001
"MSC"
20LE 3001
20V8011
RS/DR
HDW-CP02
HEADWORKS LOCAL INTERFACE
WW1-HMI01
ETHERNET
TO PLANT CONTROL NETWORK
NOTES:
1. REFER TO BLOCK DIAGRAMS FOR CONNECTIVITY OF THIS EQUIPMENT
2. DUCT-MOUNTED LEL SENSOR.
301 08-I-04
TYPICAL OF (3)
08-I-01 101
RS
WET PIT INFLUENT PUMPS
10FIT 3301
20G0102
INFLUENT SCREEN 2
INFLUENT GATE
302 08-I-04
TYPICAL OF (3)
08-I-02 201
DRY PIT PUMPS 1 & 2
20G0012
20AE 3011A
20G0103
INFLUENT SCREEN 3
INFLUENT GATE
303 08-I-04
W3
20V8322
20V8012
FUTURE CONNECTION FOR RIVERFRONT PUMP STATION
20G0013
HEADWORKS INLET GATE 3
STOP LOG, TYPICAL
20G0104
0601
BYPASS WEIR WALL
20V8013
304 08-I-04

DSGN	CS BURR		
DR	DB PARKER		
CHK	LL WOOD		
APVD	CW MASSIE		

(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)
AS-BUILT

NO.	DATE	REVISION	BY	APVD
		(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB

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0 1"
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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
HEADWORKS
UPSTREAM SECTION

SHEET	32
DWG	08-I-03
DATE	MAY 19 2006
PROJ	326918

HDW-CP01
HEADWORKS REMOTE I/O PANEL

WW1-PLC01

20HS6001 REMOTE S | 20FV6001 OPEN H | 20FV6001 CLOSE H | 20ZS6001 OPND S | 20ZS6001 CLSD S

20HS6011 REMOTE S | 20FV6011 OPEN H | 20FV6011 CLOSE H | 20ZS6011 OPND S | 20ZS6011 CLSD S

20M0201 SPDCTRL | 20M0201 SPDFBK | 20M0201 RUN H | 20M0201 ON S | 20M0201 REM S | 20M0201 FAIL A | 20M0201 ESTOP S

20M0301 REM S | 20M0301 RUN H | 20M0301 ON S | 20ZS0401 OPND S | 20ZS0401 CLSD S | 20G0401 OPEN H | 20G0401 CLOSE H | 20HS0401 REMOTE S

20LIT3002 LEVEL | 20G0602 OPEN H | 20G0602 CLOSE H | 20HS0602 REMOTE S | 20ZS0602 OPND S | 20ZS0602 CLSD S

20CSD201 ** LOR 20HS 0201A OO 20HS 0201B

"ESTOP"

MCC ** 20YL 0301 OO

"POWER"

HOR 20HS 0301 **

20PI 3101 | 20PI 3102 | 20PRV8001

W3 | W3 WATER

20PI 3201

HW2

08-I-31 3102 FROM HOT WATER HEATER SYSTEM

LR 20HS 6001B S | OSC 20HS 6001A S | OC 20ZS 6001 S

120V | 20FV 6001

LR 20HS 6011 S | OSC 20HS 6011 S | OC 20ZS 6011 S

120V | 20FV 6011

20AFD0201 ⓔ ** 20YL 0201A OO | 20YL 0201B REM | 20YL 0201C FAIL

480V

ESTOP 20HS 0201D * | ESTOP 20HS 0201C *

AS

20M0301 INFLUENT SCREEN 1 CLEANING BRUSH

OSC 20HS 0401A * | LR 20HS 0401B *

OC 20ZS 0401 *

120V | 20LIT 3002 T | IRD | 2803 08-I-28 FROM INTERCHANGE REACTORS

20V8131

"MSC"

W3 20V8511 | 20V8091 | RS/DR

20M0201 INFLUENT SCREEN 1

20G0401 INFLUENT SCREEN 1 DISCHARGE GATE

TYPICAL OF (3)

SCR 405 08-I-07 TO SCREENINGS WASHER/COMPACTOR 1

W3 20V8521 | 20V8014 | RS/DR

20LE 3002

SRS 401 08-I-05 TO FUTURE VORTEX GRIT SEPARATOR 1

08-I-03 301

08-I-07 701 SRS/DR FROM SCREENINGS COMPACTOR 1

20M0202 INFLUENT SCREEN 2

20M0302 INFLUENT SCREEN 2 CLEANING BRUSH

20G0402 INFLUENT SCREEN 2 DISCHARGE GATE

SCR 406 08-I-07 TO SCREENINGS WASHER/COMPACTOR 2

(SIMILAR TO ABOVE)

SRS 402 08-I-05 TO VORTEX GRIT SEPARATOR 2

08-I-03 302

08-I-07 705 SRS/DR FROM SCREENINGS COMPACTOR 2

20M0203 INFLUENT SCREEN 3

20M0303 INFLUENT SCREEN 3 CLEANING BRUSH

20G0403 INFLUENT SCREEN 3 DISCHARGE GATE

SRS 403 08-I-05 TO VORTEX GRIT SEPARATOR 3

SCR 407 08-I-07 TO SCREENINGS WASHER/COMPACTOR 3

(SIMILAR TO ABOVE)

08-I-03 303

08-I-07 706 SRS/DR FROM SCREENINGS COMPACTOR 3

20V8015 | W3 20V8522 | RS/DR

SRS 404 08-I-05 TO VORTEX GRIT SEPARATOR 4

1 OSC 20HS 0602A | 2 LR 20HS 0602B | 3 OC 20ZS 0602

W3 20V8514 | 20V8094 | RS/DR

20G0404 INFLUENT SCREEN 4 DISCHARGE GATE (FUTURE)

TEMPORARY KNOCK-OUT WALL, TYP

20G0602 BYPASS WEIR GATE 2

08-I-03 304

20M0205 MANUALLY CLEANED BAR RACK

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DSGN	CS BURR
DR	DS PARKER
CHK	LL WOOD
APVD	CW MASSIE

NO.	DATE	REVISION	BY	APVD
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

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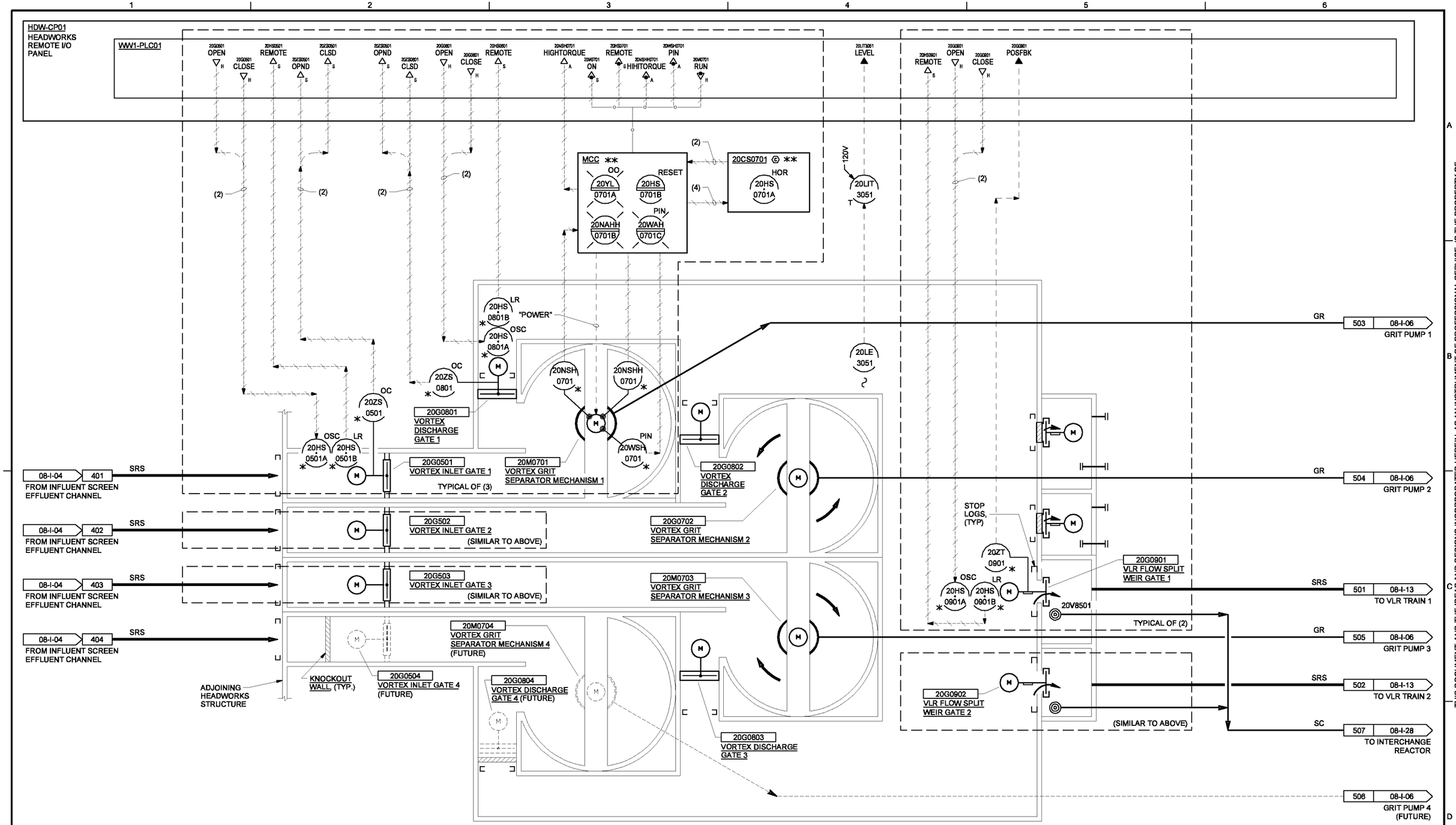
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
HEADWORKS INFLUENT SCREENS

SHEET	33
DWG	08-I-04
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni004d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:46:54 PM



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DSGN	CS BURR						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	
			01/20/10		PMH	CSB	

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
HEADWORKS VORTEX GRIT SEPARATORS

SHEET	34
DWG	08-I-05
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni005d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:46:59 PM

HDW-CP01
HEADWORKS
REMOTE I/O
PANEL

VW1-PLC01

20HS6132 REMOTE S | 20FV6132 OPEN H | 20FV6132 CLOSE H | 20ZS6132 OPND S | 20ZS6132 CLSD S | 20HS6102 REMOTE S | 20FV6102 OPEN H | 20FV6102 CLOSE H | 20ZS6102 OPND S | 20ZS6102 CLSD S

20HS6112 REMOTE S | 20FV6112 OPEN H | 20FV6112 CLOSE H | 20ZS6112 CLSD S | 20P1002 RUN H | 20HS1002 REMOTE S | 20P1002 ON S | 20ZS6112 OPND S

20MCC1002 **
OO
20YL 1002A

W3
20PI 3211
20PI 3212
20PRV8011
20V8202
20V8212
20V8222
20V8254
GR/DR
LR
OSC
120V
20HS 6132B
20HS 6132A
20ZS 6132
OC
20FV 6132
TYPICAL OF (3)
LR
OSC
480V
20HS 6102B
20HS 6102A
20ZS 6102
OC
20FV 6102
K

08-I-05 504
FROM VORTEX SEPARATOR 2
GR

LR
OSC
480V
20HS 6112B
20HS 6112A
20ZS 6112
OC
"VALVE OPEN"
HOR
20HS 1002 **
20FV 6112
20V8232
GR/DR
20P1002
GRIT PUMP 2
TYPICAL OF (5)
20PI 3402
20PE 3402
20V8262
20V8272
20V8301
GR/DR
GR
601 08-I-08
TO GRIT CYCLONE 2

20V8251
20V8252
20V8255
GR/DR
F

20P1005
GRIT PUMP 5
2 & 3 SWING
(SIMILAR TO ABOVE)

20V8291
20V8292
20V8302
GR/DR
GR
602 08-I-08
TO GRIT CYCLONE 1

08-I-05 505
FROM VORTEX SEPARATOR 3
GR
LOOP 20-6103
(SIMILAR TO ABOVE)

20P1003
GRIT PUMP 3
(SIMILAR TO ABOVE)

20V8256
GR/DR
20V8253

08-I-05 503
FROM VORTEX SEPARATOR 1
GR
LOOP 20-6101
(SIMILAR TO ABOVE)

20P1001
GRIT PUMP 1
(SIMILAR TO ABOVE)

20V8293
20V8303
GR/DR
GR
603 08-I-08
TO GRIT CYCLONE 1

20P1006
GRIT PUMP 6
1 & 4 SWING
(SIMILAR TO ABOVE)

20V8294
20V8304
GR/DR
GR
604 08-I-08
TO GRIT CYCLONE 4

08-I-05 506
FROM FUTURE VOTEX SEPARATOR 4
M
K
20FV 6104

20P1004
GRIT PUMP 4
(FUTURE)
(SIMILAR TO ABOVE)

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DSGN A ELUGANTI						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK CS BURR			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			
APVD CW MASSIE	NO.	01/20/10 DATE	REVISION	PMH BY	CSB APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
HEADWORKS GRIT PUMPS

SHEET	35
DWG	08-I-06
DATE	JULY 2007
PROJ	326918

FILENAME: 08ni006d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:47:02 PM

HDW-CP01
HEADWORKS
REMOTE I/O
PANEL

WW1-PLC01

22HS0041 REMOTE S | 22FV0041 OPEN H | 22FV0041 CLOSE H | 22ZS0041 OPND S | 22ZS0041 CLSD S | 22LSH3111 HIGH A | 22M0201 RUN H | 22M0201 FAIL A | 22SK0201 SPDCTRL | 22SS0201 SPDFBK | 22M0201 ON S | 22M0201 REMOTE S | 22M0201 ESTOP A | 22M0101 REV H | 22M0101 FWD H | 22M0101 REMOTE S | 22M0101 FWD S | 22M0101 REV S | 22M0101 ESTOP A | 22HS0031 REMOTE S | 22FV0031 OPEN H | 22FV0031 CLOSE H | 22ZS0031 OPND S | 22ZS0031 CLSD S | 22HS0021 REMOTE S | 22FV0021 OPEN H | 22FV0021 CLOSE H | 22ZS0021 OPND S | 22ZS0021 CLSD S | 22HS0011 REMOTE S | 22FV0011 OPEN H | 22FV0011 CLOSE H | 22ZS0011 OPND S | 22ZS0011 CLSD S | 22HS0001 REMOTE S | 22FV0001 OPEN H | 22FV0001 CLOSE H | 22ZS0001 OPND S | 22ZS0001 CLSD S

22AFD0201 ⓒ ** — OO | REM | FAIL — 22YL 0201A | 22YL 0201B | 22YL 0201C

MCC ** — FR — 22YL 0101

480V

08-I-04 405 SCR
FROM SCREEN 1

22CS0201 ** — LOR | OO — 22HS 0201C | 22HS 0201B — ON — 22YL 0201D

22CS0101 ** — FOR — 22HS 0101A — LR — 22HS 0101B

"POWER"

ESTOP 22HS 0101C

22M0101 SCREENINGS WASHER 1 — M FR — ESTOP 22HS 0201C

22LSH 3111 | 22LE 3111

SCREW BYPASS DUMPSTER

AS

22M0201 SCREENINGS COMPACTOR 1

LR | OSC | 120V | OC — 22HS 6001B | 22HS 6001A — M — 22ZS 6001 — 22FV 6001

22PI 3102 | 22PI 3101 — W3 — 22PRV8001 — W3 WATER

LR | OSC | 120V | OC — 22HS 6011B | 22HS 6011A — M — 22ZS 6011 — 22FV 6011

22PI 3201 — HW2 — 3101 08-I-31 HOT WATER

LR | OSC | 120V | OC — 22HS 6021B | 22HS 6021A — M — 22ZS 6021 — 22FV 6021

LR | OSC | 120V | OC — 22HS 6031B | 22HS 6031A — M — 22ZS 6031 — 22FV 6031

LR | OSC | 120V | OC — 22HS 6041B | 22HS 6041A — M — 22ZS 6041 — 22FV 6041

SCR 702 08-I-10
SCR 703 08-I-10
SCR 704 08-I-10
SRS/DR 701 08-I-04
SRS/DR 705 08-I-04
SRS/DR 706 08-I-04
TO SCREENINGS CHANNEL

TYPICAL OF (3)

08-I-04 406 SCR
FROM SCREEN 2

22M0102 SCREENINGS WASHER 2
22M0202 SCREENINGS COMPACTOR 2
(SIMILAR TO ABOVE)

08-I-04 407 SCR
FROM SCREEN 3

22M0103 SCREENINGS WASHER 3
22M0203 SCREENINGS COMPACTOR 3
(SIMILAR TO ABOVE)

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DSGN	CS BURR
DR	DS PARKER
CHK	LL WOOD
APVD	CW MASSIE

NO.	DATE	REVISION	BY	APVD
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB

VERIFY SCALE
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0 1"
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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
HEADWORKS WASHER/COMPACTORS

SHEET	36
DWG	08-I-07
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni007d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:47:06 PM

HDW-CP01
HEADWORKS REMOTE I/O PANEL

WW1-PLC01

24PIT3001 PRESSURE
24LSH3131 HIGH
24HS6001 REMOTE
24FV6001 OPEN
24FV6001 CLOSE
24ZS6001 OPND
24ZS6001 CLSD
24HS6011 REMOTE
24FV6011 OPEN
24FV6011 CLOSE
24ZS6011 OPND
24ZS6011 CLSD
24PIT3011 PRESSURE
24M0101 ON
24M0101 RUN
24M0101 REMOTE
24HS2101 ESTOP
24HS6021 REMOTE
24FV6021 OPEN
24FV6021 CLOSE
24ZS6021 OPND
24ZS6021 CLSD

TYPICAL OF (2)

(SIMILAR TO LEFT)

52HS1001 REMOTE
52P1001 RUN
52P1001 ON
52HS1101 REMOTE
52M0101 RUN
52M0101 ON
52HS0101 ESTOP

08-I-06 | 601 — GR — VORTEX SEPARATOR 2 GRIT PUMPING
08-I-06 | 602 — GR — VORTEX SEPARATOR 3 GRIT PUMPING
08-I-06 | 604 — GR — VORTEX SEPARATOR 4 GRIT PUMPING
08-I-06 | 603 — GR — VORTEX SEPARATOR 1 GRIT PUMPING

20V8461
20V8463
20V8464
20V8462

TO GRIT CYCLONE 3
TO GRIT CYCLONE 2

LR OSC OC
24HS 6001B S
24HS 6001A S
24ZS 6001 S
480V
24FV 6001
24PIT 3001
24PE 3001

LR OSC OC
24HS 6011 S
24FV 6011A S
24ZS 6011 S
460V
24FV 6011
24PE 3011
24PIT 3011

GRIT CYCLONE 4
GRIT CYCLONE 1

24V8481
GR/DR
V
120V
OF
24LSH 3131
20V8471
GR/DR

24M0101 GRIT CLASSIFIER 1
"POWER"
HOA
24HS 0101A **

ESTOP
24HS 0101B *
24HS 0101C *
MCC **
ON
24YL 0101

24FV 6021
120V
LR OSC OC
24HS 6021B S
24HS 6021A S
24ZS 6021 S

TYPICAL OF (2)

GRIT CYCLONE 2
GRIT CYCLONE 3
24M0102 GRIT CLASSIFIER 2

(SIMILAR TO LEFT)

24PI 3101
24PI 3102
W3
W3 PUMPING
24PRV8001

SRAS
SRAS
804 | 08-I-09 TO SRAS HEADER

52PI 3021
52V8011
52M0201 RAS GRIT HYDROCLONE
GR

MCC **
OO
52YL 0101
ESTOP
52HS 0101B
"POWER"
HOR
52HS 0101A **
M

SRAS
GR
803 | 08-I-10 TO GRIT HOPPER
52M0101 RAS GRIT CLASSIFIER
GR/DR

MCC **
OO
52YL 1001
"POWER"
HOR
52HS 1001 **

52PI 3042
52PI 3041
52FI 3031
FO
W3
52SV 6011
52PRV8041
W3 SUPPLY

52PI 3001
52V8002
52V8001
52V8111
SRAS
901 | 08-I-09 FROM SRAS HEADER
52PE 3001
52P1001 RAS GRIT PUMP
52SV 6021

GR
801 | 08-I-10
GR
802 | 08-I-10

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			01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
HEADWORKS AND RAS GRIT CLASSIFIERS

SHEET	37
DWG	08-I-08
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni008d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:47:10 PM

HDW-CP01
HEADWORKS
REMOTE I/O
PANEL

WW1-PLC01

54PIT3014 PRESSURE

54VA0201 TROUBLE A
54FIT3001 FLOW
54ZT3001 POSFBK
54HSB201 REMOTE S
54FCV6001 POSCTRL
54HSD101 ESTOP A
54M0101 ON S
54M0101 RUN H
54HSD101 REMOTE S
54SSL3151 SLOW S
54SZ3161 OPEN S
54FV6011 OPEN H
54FV6011 CLOSE H
54SZ6011 OPND S
54HSD011 REMOTE S
54SZ6011 CLSD S
54FV6021 OPEN H
54FV6021 CLOSE H
54HS6021 REMOTE S
54ZS6021 OPND S
54ZS6021 CLSD S
54LSH3131 HIGH A
54ZT6004 POSFBK
54PSH3171 HIGH A
54FCV6004 POSCTRL
54HS6004 REMOTE S
54SS3111 SLOW S
54HS1101 ESTOP A
54M1101 ON S
54M1101 RUN H
54HS1101 REMOTE S
54M1101 FAIL A
54M1101 SPDCRL
54M1101 SPDFBK
54FV6101 OPEN H
54FV6101 CLOSE H
54HSB101 REMOTE S
54ZS6101 OPND S
54ZS6101 CLSD S
54FIT3101 FLOW
54HSB201 REMOTE S
54FCV6201 POSCTRL
54ZT6201 POSFBK
54HS1201 ESTOP A
54SSL3121 SLOW S
54M1201 ON S
54M1201 RUN H
54HS1201 REMOTE S

MCC ** OO 54YL 0101

54HS 6001 LR
54HS 6001 OSC
54FIT 3001
54ZT 6001
"MSC"
480V
54V8021
54V8101
RAS/D
54FE 3001
54FCV 6001
120V
"POWER"
HOA 54HS 0101A **
ESTOP 54HS 0101B
54SSL 3151
54ZS 3161
54FV 6021
54M0101 RAS DRUM SCREEN 1
54P0201 OIL LUBRICATION PUMP 1
OIL RESERVOIR
54V8041
54V8051
SRAS/DR
TYPICAL OF (3)

54HS 6021A OSC
54HS 6021B LR
54ZS 6021 OC
54HS 6011A OSC
54HS 6011B LR
54ZS 6011 OC
54FV 6011

54PSH 3171
54PI 3211
54PI 3201
54V8061
54PRV8001

54HS 6101A OSC
54HS 6101B LR
54ZS 6101 OC
54FV 6101

W3
W3 SUPPLY
54PI 3221
54PRV8011
54PI 3231

54V8071
54V8072
54V8073
54V8081
54V8075

54FIT 3101
"MSC"
54HS 6201B LR
54HS 6201A OSC
54ZT 6201
480V
54FE 3101
54FCV 6201
TYPICAL OF (2)

54AFD1101 ** OO 54YL 1101A FAIL 54YL 1101B REM 54YL 1101C
"POWER"
ESTOP 54HS 1101C
(2)
5
120V
54LSH 3131
AS
54CS1101 ** OO 54HS 1101D LOR 54HS 1101E ON 54YL 1101D 54SK 1101
54M1101 RAS SCREENINGS CONVEYOR
54SSL 3111
54SSL 3121
54M1201 RAS SCREENINGS COMPACTOR
ESTOP 54HS 1201B
"POWER"
SCR/DR
54CS1201 ** HOR 54HS 1201A ON 54YL 1201A
MCC ** OO 54YL 1201B

08-I-17 1702 FROM CLARIFIER 1 RAS PUMPS
08-I-18 1802 FROM CLARIFIER 2 RAS PUMPS
08-I-19 1902 FROM CLARIFIER 3 RAS PUMPS
08-I-31 3103 HOT WATER
08-I-31 3104 HOT WATER
08-I-31 3105 HOT WATER
08-I-31 3106 HOT WATER
08-I-31 3107 HOT WATER
08-I-31 3108 HOT WATER

SCR
SRAS
HW
54P0202 OIL LUBRICATION PUMP 2
54M0102 RAS SCREEN 2
(SIMILAR TO ABOVE)
54P0203 OIL LUBRICATION PUMP 3
54M0103 RAS SCREEN 3

54PIT 3014
54PE 3014
RAS
54ZT 6004
480V
54HS 6004 OSC
54HS 6004 LR
54FCV 6004
906 08-I-11 TO RAS SPLITTER BOX

SRAS 901 08-I-08 TO RAS GRIT PUMP
SRAS 804 08-I-08 FROM RAS GRIT CLASSIFIER
SRAS 902 08-I-28 TO INTERCHANGE REACTORS
SRAS 903 08-I-29 TO AEROBIC DIGESTERS PURGE
(SIMILAR TO ABOVE)
SRAS 904 08-I-11 RAS SPLITTER BOX
SCR 905 08-I-10 TO SCREENING HOPPER

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CHK	LL WOOD					IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD
			01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB

CH2MHILL Carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
RAS SCREENS

SHEET	38
DWG	08-I-09
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni009d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:47:15 PM

HDW-CP01
HEADWORKS
REMOTE I/O
PANEL

WW1-PLC01

22M1001 SPDFBK | 22M1001 SPDCRL | 22M1001 RUN | 22M1001 ON | 22M1001 FAIL | 22M1001 REMOTE | 22M1001 ESTOP | 22SSL1001 SLOW | 22MT3021 WEIGHT | 22G1201 OPEN | 22G1201 CLOSE | 22HS1201 REMOTE | 22ZS1201 OPND | 22ZS1201 CLSD | 22LIT3011A LEVEL | 22M1301 SPDFBK | 22M1301 SPDCRL | 22M1301 RUN | 22M1301 ON | 22M1301 FAIL | 22M1301 REMOTE | 22M1301 ESTOP | 22SSL1301 SLOW | 22LIT3011B LEVEL | 24MT3041 WEIGHT | 24ZS3141 ON | 24Q1201 OPEN | 24Q1201 CLOSE | 24HS1201 REMOTE | 24ZS1201 OPND | 24ZS1201 CLSD | 24LIT3021A LEVEL | 24M1301 SPDFBK | 24M1301 SPDCRL | 24M1301 RUN | 24M1301 ON | 24M1301 FAIL | 24M1301 REMOTE | 24M1301 ESTOP | 24SSL1301 SLOW | 24LIT3021B LEVEL

"DEVICENET"

480V
22AFD1001 © **
OO 22YL 1001A | FAIL 22YL 1001D | REM 22YL 1001B

(2)

22CS1001 **
LOR
22SK 1001
22HS 1001A
OO 22HS 1001B
ON 22YL 1001C

08-I-07 702 SCR/RS
08-I-07 703 SCR/RS
08-I-07 704 SCR/RS

ESTOP 22HS 1001C *

"POWER"

22M1001 SCREENINGS CONVEYOR
M AS
120V
22SSL 3001 *

08-I-09 905 SCR/RAS
RAS SCREENINGS

120V 22WIT 3021 *
V
(4)
(3)

22M1101 SCREENINGS HOPPER

22WE 3021A * X
TYPICAL OF (4)

SCR/DR

OSC LR
22HS 1201A *
22HS 1201B *
OC
22ZS 1201 *

22G1201 SCREENING HOPPER GATE

"DEVICENET"

480V
22AFD1301 © **
OO 22YL 1301A | FAIL 22YL 1301C | REM 22YL 1301B

(2)

22CS1301 **
LOR
22SK 1301
22HS 1301A
OO 22HS 1301B
ON 22YL 1301D

22LIT 3011A T 120V
ESTOP 22HS 1301C *
"POWER"
22LIT 3011B T 120V

120V
22SSL 3031 *

"MSC"
"MSC"

22M1301 SCREENINGS LOADOUT CONVEYOR
M AS
DUMPSTER

22LE 3011A 120V
22LE 3011B 120V

24ZS 3141 *
HOPPER AREA SAFETY SHOWER

08-I-08 801 SCR
GRIT CLASSIFIER 1
08-I-08 802 SCR
GRIT CLASSIFIER 2
08-I-08 803 SCR
RAS GRIT CLASSIFIER

120V 24WIT 3041 *
V
(4)
(3)

24M1101 GRIT HOPPER

24WE 3041A * X
TYPICAL OF (4)

SCR/DR

OSC LR
24HS 1201A *
24HS 1201B *
OC
24ZS 1201 *

24G1201 GRIT HOPPER GATE

"DEVICENET"

480V
24AFD1301 © **
OO 24YL 1301A | FAIL 24YL 1301D | REM 24YL 1301B
RESET 24HS 1301B

(2)

24CS1301 **
LOR
24SK 1301
24HS 1301A
OO 24HS 1301B
ON 24YL 1301C

ESTOP 24HS 1301C *
"POWER"
24LIT 3021A T 120V
24LIT 3021B T 120V

120V
24SSL 3031 *

"MSC"
"MSC"

24M1301 GRIT LOADOUT CONVEYOR
M AS
DUMPSTER

24LE 3021A 120V
24LE 3021B 120V

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DSGN CS BURR						VERIFY SCALE
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CHK LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
SCREENINGS AND GRIT HANDLING

SHEET	39
DWG	08-I-10
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni010d_326918.dgn PLOT DATE: 3/17/2010 PLOT TIME: 2:03:38 PM

VLR-CP01
VLR REMOTE I/O PANEL

VW1-PLC01

30LIT4201 LEVEL | 36ZS6011 OPND | 36ZS6011 CLSD | 36ZS0401 OPND | 36ZS0401 CLSD | 38HS0401 REMOTE | 38GO401 OPEN | 36GO401 CLOSE | 36ZS0001 1 | 36ZS0001 2 | 36GO301 OPEN | 36GO301 CLOSE | 38HS0201 REMOTE | 36ZT0201 POSFBK | 38LIT3001 LEVEL | 38FV6201 ON | 38FV6001 1 | 38FV6001 2 | 38FV6011 CLSD | 38FV6011 OPND | 38HS6001 REMOTE | 38HS6011 REMOTE | 55LIT3001 LEVEL | 55HS0101 REMOTE | 55GO101 OPEN | 55GO101 CLOSE | 55ZT0101 POSFBK | 55AIT4511 SUSP SOLIDS | 30GO301 OPEN | 30GO301 CLOSE | 30HS3001 REMOTE | 30ZT3001 POSFBK | 30XLS3001 LOW | 30TSH2011 TEMP | 30HS2011 REMOTE | 30P2011 RUN | 30P2011 ON | 30XSH2011 MOIST

38CS0201 Ⓒ ** HOR: 38HS 0201A | 1-2-R: 38HS 8001 | OSC: 38HS 8011A | LR: 38HS 6011B
38YL 0201 ON | 38YL 8001 1-2 | 38YL 8011 OC

08-I-28 2802 — IRD — FROM INTERCHANGE REACTORS
08-I-09 906 — RAS — FROM HEADWORKS
08-I-09 904 — RAS — RAS FROM RAS SCREENS
08-I-28 2809 — CS — FROM SODIUM HYPOCHLORITE FEED
08-I-14B 1403 — SL — FROM VERTICAL LOOP REACTOR SCUM VALVES
08-I-14B 1404 — W3

"REMOTE, RUN"

MCC ** OO: 38YL 0201 | RESET: 38HS 0201 | 38TAH 0201 | 38XAH 0201 MOIST

38ZS 6011 OC | 38FV 6011 | 120V

38ZS 0401 OC | 38HS 0401B LR | 38HS 0401A OSC

38G0401 ML CONDUIT ISOLATION GATE 1

"MSC"

30LIT 4201 | 120V | 30LE 4201

FUTURE VLR MIXED LIQUOR BOX STUB OUT

38ZT 0301 | 38LIT 3001 | 38LET 3001

38HS 0301A OSC | 38HS 0301B LR

38G0301 ML DROP BOX SCUM GATE

38TSH 0201 | MOIST 38XSH 0201

38P0201 VERTICAL LOOP REACTOR SCUM PUMP

120V | 38ZS 6001 1-2 | 38FV 6001

55ARV8021

30G2002 MIXED LIQUOR EFFLUENT LEVEL CONTROL GATE 2 — (SIMILAR TO RIGHT)

30G2001 MIXED LIQUOR EFFLUENT LEVEL CONTROL GATE 1 — TYPICAL OF (2)
30HS 2001 OSC | 30HS 2001B LR | 30ZT 2001

08-I-14A 1402 — ML — FROM VERTICAL LOOP REACTOR TRAIN 2
08-I-14A 1401 — ML — FROM VERTICAL LOOP REACTOR TRAIN 1

55G0102 RAS FLOW SPLIT GATE 2 (SIMILAR TO RIGHT)

55G0101 RAS FLOW SPLIT GATE 1 — TYPICAL OF (2)
55HS 0101B | 55HS 0101A LR | OSC | 55ZT 0101

120V | 55LIT 3001 | "MSC" | 55LE 3001

MLSS 55AIT 4511 | MLSS 55AE 4511

FUTURE RAS SPLITTER BOX STUB OUT

RAS SPLITTER BOX

38PE 3011 | 38PI 3011 | 55V8031 | 55V8041

MCC: OO 30YL 2011B | MOIST: 30XLH 2011 | 30TLH 2011

30V8991 ML/D | 30V8992 | (2) ML/D

30LSL 3001 | "POWER" | 30TSH 2011 | MOIST 30XSH 2011

30CS2011 ** ON: 30YL 2011A | HOR: 30HS 2011

30P2011 TANK DRAIN PUMP

TANK DRAIN PIT

1106 08-I-16 — ML — TO MIXED LIQUOR SPLITTER BOX
1104 08-I-16 — ML — TO MIXED LIQUOR SPLITTER BOX
1105 08-I-14B — W3
1107 08-I-14B
1201 08-I-12A
1101 08-I-12B — RAS — RAS TO VLR TRAIN 1
1102 08-I-12B — RAS — RAS TO VLR TRAIN 2
1103 08-I-28 — SSM — TO INTERCHANGE REACTORS

(2) 4 5 6 — TYPICAL OF (2)
10

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DSGN	CS BURR						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 ■ 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			
APVD	CW MASSIE	01/20/10			PMH	CSB	
		NO.	DATE	REVISION	BY	APVD	

CH2MHILL Carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
VLR FLOW CONTROL STRUCTURE

SHEET	40
DWG	08-I-11
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni011d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:47:30 PM

BLR-CP01
BLOWER BUILDING
REMOTE I/O PANEL

VW1-PLC01

30AT4512 SUSP SOLIDS
30AT4412 ORP
30FV8512 POSCTRL
30HS8512 REMOTE
30FV8512 POSFBK
30FT4012 FLOW
30FV8312 OPEN
30FV8312 CLOSE
30HS8312 REMOTE
30ZT8312 POSFBK
30ZT8311 POSFBK
30HS8311 REMOTE
30FV8311 CLOSE
30FV8311 OPEN
30FT4011 FLOW
30FV8511 POSFBK
30HS8511 REMOTE
30FV8511 POSCTRL
30AT4411 ORP
30AT4511 SUSP SOLIDS

ML/D 1201 08-I-11
TO VLR TANK DRAIN

30G0412 | 30G0422 | 30G0432 | 30G0431 | 30G0421 | 30G0411

VERTICAL LOOP REACTOR 2A (FUTURE)

120V ORP 30AIT 4412 T
ORP 30AE 4412
120V MLSS 30AIT 4512 T
MLSS 30AE 4512

30M8012 COARSE BUBBLE DIFFUSERS, TYP
30M8022 COARSE BUBBLE DIFFUSERS
30M8032 COARSE BUBBLE DIFFUSERS
30M8031 COARSE BUBBLE DIFFUSERS
30M8021 COARSE BUBBLE DIFFUSERS
30M8011 COARSE BUBBLE DIFFUSERS, TYP

30ZT 6512 T
OSC 30HS 6512 S
LR 30HS 6512 S
480V
30FCV 6512
120V "MSC" 30FIT 4012 T
30FE 4012
30V8012

30ZT 6511 T
LR 30HS 6511 S
OSC 30HS 6511 S
480V
30FCV 6511
120V "MSC" 30FIT 4011 T
30FE 4011
30V8011

ORP 30AE 4411
120V ORP 30AIT 4411 T
MLSS 30AE 4511
120V MLSS 30AIT 4511 T

VERTICAL LOOP REACTOR 1A (FUTURE)

VERTICAL LOOP REACTOR 2B
VERTICAL LOOP REACTOR 2C
VERTICAL LOOP REACTOR 2D
VERTICAL LOOP REACTOR 1D
VERTICAL LOOP REACTOR 1C
VERTICAL LOOP REACTOR 1B

08-I-15 1501
AIR FROM PROCESS BLOWER BUILDING
ALP

OSC 30HS 0312A
LR 30HS 0312B
M
30ZT 0312
30G0312 VLR 2B RAS INLET GATE

30G0322 VLR 2C RAS INLET GATE
30G0332 VLR 2D RAS INLET GATE
30G0331 VLR 1D RAS INLET GATE
30G0321 VLR 1C RAS INLET GATE

30ZT 0311
LR 30HS 0311B
OSC 30HS 0311A
30G0311 VLR 1B RAS INLET GATE

TYPICAL OF (3)
(SIMILAR TO LEFT)
(SIMILAR TO LEFT)
(SIMILAR TO RIGHT)
(SIMILAR TO RIGHT)
TYPICAL OF (3)

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DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
VERTICAL LOOP REACTORS - LOWER (SOUTH END)

SHEET	41
DWG	08-I-12A
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni012ad_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:47:35 PM

VLR-CP01
VLR
REMOTE I/O
PANEL

VW1-PLC01

72PT3101
PRESSURE

08-I-29 2902
FROM LOOP 72-3101

30G0412
VLR 2B TANK
DRAIN GATE

30G0422

30G0432

30G0431

30G0421

30G0411
VLR 1B TANK
DRAIN GATE

VERTICAL LOOP
REACTOR 2A
(FUTURE)

VERTICAL LOOP
REACTOR 2B

VERTICAL LOOP
REACTOR 2C

VERTICAL LOOP
REACTOR 2D

VERTICAL LOOP
REACTOR 1D

VERTICAL LOOP
REACTOR 1C

VERTICAL LOOP
REACTOR 1B

VERTICAL
LOOP
REACTOR 1A
(FUTURE)

TYPICAL OF (3)

(SIMILAR TO LEFT)

(SIMILAR TO LEFT)

(SIMILAR TO RIGHT)

(SIMILAR TO RIGHT)

TYPICAL OF (3)

08-I-11 1102
FROM RAS
SPLITTER BOX
RAS

08-I-11 1101
FROM RAS
SPLITTER BOX
RAS

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DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
VERTICAL LOOP REACTORS - LOWER (NORTH END)

SHEET	42
DWG	08-I-12B
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni012bd_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:47:39 PM

BLR-CP01
BLOWER BUILDING
REMOTE I/O
PANEL

WW1-PLC01

30AIT 4112 DO
30ZT 0112 POSFBK
30G0112 OPEN
30G0112 CLOSE
30HS 0112 REMOTE
30ZT 0212 POSFBK
30G0212 OPEN
30G0212 CLOSE
30HS 0212 REMOTE
30HS 0211 REMOTE
30G0211 OPEN
30G0211 CLOSE
30ZT 0211 POSFBK
30HS 0111 REMOTE
30G0111 OPEN
30G0111 CLOSE
30ZT 0111 POSFBK
30AIT 4111 DO

VERTICAL LOOP REACTOR 2A (FUTURE)
VERTICAL LOOP REACTOR 1A (FUTURE)

120V
30AIT 4112 DO
T
"MSC"
30AE 4112 DO
30AE 4111 DO
120V
30AIT 4111 DO
T
"MSC"

VERTICAL LOOP REACTOR 2B
VERTICAL LOOP REACTOR 2C
VERTICAL LOOP REACTOR 2D
VERTICAL LOOP REACTOR 1D
VERTICAL LOOP REACTOR 1C
VERTICAL LOOP REACTOR 1B

LR
30HS 0112B OSC
30HS 0112A
30ZT 0112
30HS 0212B OSC
30HS 0212A
30ZT 0212
30HS 0211B OSC
30HS 0211A
30ZT 0211
30HS 0111B OSC
30HS 0111A
30ZT 0111

30G0112
VLR 2B
INLET GATE 1
30G0212
VLR 2B
INLET GATE 2
30G0111
VLR 1B
INLET GATE 1
30G0211
VLR 1B
INLET GATE 2

TYPICAL OF (3)
(SIMILAR TO LEFT)
(SIMILAR TO LEFT)
(SIMILAR TO RIGHT)
(SIMILAR TO RIGHT)
TYPICAL OF (3)

08-I-05 502
FROM HEADWORKS
SRS

08-I-05 501
FROM HEADWORKS
SRS

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DSGN CS BURR							VERIFY SCALE
DR DS PARKER							BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK LL WOOD							
APVD CW MASSIE	NO.	DATE	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT REVISION	BY	APVD		
		01/20/10		PMH	CSB		

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
VERTICAL LOOP REACTORS - INTERMEDIATE

SHEET	43
DWG	08-I-13
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni013d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:47:41 PM

VLR-CP01 VLR REMOTE I/O PANEL

WW1-PLC01

30LIT4312 LEVEL

30G1022 OPEN / 30G1122 CLOSE / 30ZS1022 OPND / 30ZS1122 CLSD / 30HS1022 REMOTE

30G1122 OPEN / 30G1222 CLOSE / 30ZS1122 OPND / 30ZS1222 CLSD / 30HS1122 REMOTE

30G1322 OPEN / 30G1222 CLOSE / 30ZS1322 OPND / 30ZS1222 CLSD / 30HS1322 REMOTE

30G1222 OPEN / 30G1222 CLOSE / 30ZT1222 POSFBK / 30HS1222 REMOTE

30LIT4002 LEVEL

30LIT4001 LEVEL

30G1221 OPEN / 30G1122 CLOSE / 30ZT1221 POSFBK / 30HS1221 REMOTE

30G1321 OPEN / 30G1321 CLOSE / 30ZS1321 OPND / 30ZS1321 CLSD / 30HS1321 REMOTE

30G1121 OPEN / 30G1121 CLOSE / 30ZS1121 OPND / 30ZS1121 CLSD / 30HS1121 REMOTE

30G1021 OPEN / 30G1021 CLOSE / 30ZS1021 OPND / 30ZS1021 CLSD / 30HS1021 REMOTE

30LIT4311 LEVEL

(2) (2) 3 OSC LR 30HS 1022A 30HS 1022B

(2) (2) 4 OSC LR 30HS 1122A 30HS 1122B

(2) (2) 5 OSC LR 30HS 1322A 30HS 1322B

(2) 6 OSC LR 30HS 1222 30HS 1222

(2) (2) 10 OSC LR 30HS 1221 30HS 1221

(2) (2) 9 OSC LR 30HS 1321A 30HS 1321B

(2) (2) 8 OSC LR 30HS 1121A 30HS 1121B

(2) (2) 7 OSC LR 30HS 1021A 30HS 1021B

NOTE:

ALL GATE CONTROLS FOR THESE GATES ARE INTEGRAL TO ACTUATOR. SHOWN SEPARATELY FOR CLARITY.

3 (2) OC 30ZS 1022

4 (2) OC 30ZS 1122

5 (2) OC 30ZS 1322

6 30ZT 1222

10 30ZT 1221

9 (2) OC 30ZS 1321

8 (2) OC 30ZS 1121

7 (2) OC 30ZS 1021

30G1312 VLR TRAIN 2 CHANNEL FLOW CONTROL GATE

120V 30LIT 4002 T "MSC"

120V 30LIT 4001 T "MSC"

ML 1402 08-I-11 MIXED LIQUOR EFFLUENT LEVEL CONTROL GATE 2

ML 1401 08-I-11 MIXED LIQUOR EFFLUENT LEVEL CONTROL GATE 1

30LE 4002

30LE 4001

30G1212 VLR 2C LEVEL CONTROL GATE

30G1112 VLR 2C FLOW CONTROL GATE 2

30G1012 VLR 2C FLOW CONTROL GATE 1

30G1221 VLR 1C LEVEL CONTROL GATE

30G1321 VLR TRAIN 1 CHANNEL FLOW CONTROL GATE

30G1121 VLR 1C FLOW CONTROL GATE 2

30G1021 VLR 1C FLOW CONTROL GATE 1

120V 30LIT 4312 T "MSC"

30LE 4312

TYPICAL OF (3)

TYPICAL OF (2)

(SIMILAR TO VERTICAL LOOP REACTOR 2C)

(SIMILAR TO VERTICAL LOOP REACTOR 1C)

TYPICAL OF (2)

30LE 4311

120V 30LIT 4311 T "MSC"

TYPICAL OF (3)

VERTICAL LOOP REACTORS 2A (FUTURE)

VERTICAL LOOP REACTORS 2B

VERTICAL LOOP REACTORS 2C

VERTICAL LOOP REACTORS 2D

VERTICAL LOOP REACTORS 1D

VERTICAL LOOP REACTORS 1C

VERTICAL LOOP REACTORS 1B

VERTICAL LOOP REACTORS 1A (FUTURE)

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DSGN CS BURR					VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON	INSTRUMENTATION AND CONTROL P&ID VERTICAL LOOP REACTORS - UPPER (GATES)	SHEET 44
DR DS PARKER					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DWG 08-I-14A
CHK LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB			DATE MAY 19 2006
APVD CW MASSIE	NO.	01/20/10 DATE	REVISION	BY	APVD			PROJ 326918

CH2MHILL carollo engineers

FILENAME: 08ni014ad_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:47:45 PM

BLR-CP01 BLOWER BUILDING REMOTE I/O PANEL

WW1-PLC01

30M1512 SPDFBK | 30M1512 SPDCRL | 30M1512 RUN H | 30M1512 ON S | 30M1512 FAIL A | 30M1512 REMOTE S | 30M1512 HITEMP A

30M1812 SPDFBK | 30M1812 SPDCRL | 30M1812 RUN H | 30M1812 ON S | 30M1812 FAIL A | 30M1812 REMOTE S | 30M1812 HITEMP A

30M0801 FAIL A

36PD201 ON S | 36HS201 REMOTE S | 36PD201 RUN H

30M1611 SPDFBK | 30M1611 SPDCRL | 30M1611 RUN H | 30M1611 ON S | 30M1611 FAIL A | 30M1611 REMOTE S | 30M1611 HITEMP A

30M1511 SPDFBK | 30M1511 SPDCRL | 30M1511 RUN H | 30M1511 ON S | 30M1511 FAIL A | 30M1511 REMOTE S | 30M1511 HITEMP A

"DEVICENET" (2) | "DEVICENET" (2) | "DEVICENET" (1) | "DEVICENET" (1)

30LCP0801 480V

"POWER" | "COUNT"

30M0801 LUBRICATION SYSTEM

TO AERATOR BEARINGS

08-I-11 1107

W3 SUPPLY W3

F

30V8141

SC 1403 08-I-11 SECONDARY SCUM WETWELL

08-I-11 1105

30V8251 | 1404 08-I-11

30V8252

30V8273 | 30V8263 | 30V8262 | 30V8271 | 30V8261

30AFD1512 ⓒ ** OO | FAIL | REM — 30YL 1512A | 30YL 1512C | 30YL 1512B — RESET — 30HS 1512B | 30TLH 1512

480V

30CS1512 ** LOR OO — 30HS 1512C | 30HS 1512D

"PWR" — M AS — 30TSH 1512 * — 30M1512 VLR 2B DISC AERATOR 1

30AFD1612 ⓒ ** OO | FAIL | REM — 30YL 1612A | 30YL 1612C | 30YL 1612B — RESET — 30HS 1612B | 30TLH 1612

480V

30CS1612 ** LOR OO — 30HS 1612C | 30HS 1612D

(2) — M AS — 30TSH 1612 * — 30M1612 VLR 2B DISC AERATOR 2

"PWR"

30V8112

TYPICAL OF (3)

(SIMILAR TO VERTICAL LOOP REACTOR 2B)

(SIMILAR TO VERTICAL LOOP REACTOR 2B)

(SIMILAR TO VERTICAL LOOP REACTOR 1B)

(SIMILAR TO VERTICAL LOOP REACTOR 1B)

30CS1511 ** LOR OO — 30HS 1511C | 30HS 1511D

"PWR" — M AS — 30M1511 VLR 1B DISC AERATOR 1 — 30TSH 1511 *

30CS1611 ** LOR OO — 30HS 1611C | 30HS 1611D

M AS — 30M1611 VLR 1B DISC AERATOR 2 — 30TSH 1611 *

"PWR"

30V8111

TYPICAL OF (3)

30AFD1511 ⓒ ** OO | FAIL | REM — 30YL 1511A | 30YL 1511C | 30YL 1511B — RESET — 30HS 1511B | 30TLH 1511

480V

30AFD1611 ⓒ ** OO | FAIL | REM — 30YL 1611A | 30YL 1611C | 30YL 1611B — RESET — 30HS 1611B | 30TLH 1611

480V

VERTICAL LOOP REACTORS 2A (FUTURE) | VERTICAL LOOP REACTORS 2B | VERTICAL LOOP REACTORS 2C | VERTICAL LOOP REACTORS 2D | VERTICAL LOOP REACTORS 1D | VERTICAL LOOP REACTORS 1C | VERTICAL LOOP REACTORS 1B | VERTICAL LOOP REACTORS 1A (FUTURE)

30V8254 | 30V8253

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DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE						
	NO.	DATE	REVISION	BY	APVD	
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
VERTICAL LOOP REACTORS - UPPER (AERATORS)

SHEET	45
DWG	08-I-14B
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08nl014bd_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:47:49 PM

BLR-CP01
BLOWER BUILDING
REMOTE I/O
PANEL

WW1-PLC01

32HS0001 REMOTE S | 32B0101 RUN H | 32B0101 ON S | 32HS0101 REMOTE S | 32B0101 FAIL A | 32FCV0101 POSCTL | 32FCV0101 POSFBK | 32B0101 CURRENT | 32HS0101 ESTOP A | 32PIT3201 PRESSURE

"ETHERNET"

120V

32LCP0101 Ⓔ ✱

NOTE 1

MCC Ⓔ ✱✱
32YL 0101 ON

NOTE 2

"POWER"

480V

INLET SILENCER ✱

ALP

32V8001 ✱

32ZT 6001 T

32PI 3131

32TIT 3111

32VE 0101 ✱

32TE 0101B ✱

32TE 0101C ✱

32IT 0101 ✱

32FCV 6001 ✱

32TE 0101A ✱

32VE 0101B ✱

32TSH 3121 ✱

32PI 3141

32V8011

32V8021

32PIT 3201

ALP

32V8031

1501 08-I-12A
TO VLRS

32V8032

CONDENSATE BLOWOFF

32B0101
AERATION BLOWER 1

TYPICAL OF (4)

ALP

32B0102
AERATION BLOWER 2

(SIMILAR TO ABOVE)

ALP

32B0103
AERATION BLOWER 3

(SIMILAR TO ABOVE)

ALP

32B0104
AERATION BLOWER 4

(SIMILAR TO ABOVE)

32PDI 3001

LOUVER

PLENUM

NOTES:

1. SIGNALS INCLUDE MOTOR RUN, MOTOR FAILURE, MOTOR ON STATUS.
2. REFER TO BLOCK DIAGRAMS FOR DEVICE-NET CONNECTIVITY. I/O FOR THIS EQUIPMENT IS MONITORED BY PACKAGE SYSTEM CONTROLLER.

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DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			
APVD CW MASSIE	NO.	01/20/10 DATE	REVISION	BY PMH	APVD CSB	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
PROCESS BLOWERS

SHEET	46
DWG	08-I-15
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni015d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:47:53 PM

HDW-CP01
HEADWORKS
REMOTE I/O
PANEL

WW1-PLC01

38G0101 OPEN H | 38G0101 CLOSE H | 38HS0101 REMOTE S | 38ZT0101 POSFBK A
38LSH3301 HIGH A
38G0402 OPEN H | 38G0402 CLOSE H | 38HS0402 REMOTE S | 38ZS0402 OPND S | 38ZS0402 CLSD S

1 2 3 — TYPICAL OF (3)
4 5 6

PO
FROM W3/DISINFECTION BLDG
POLYMER SYSTEM (FUTURE)

ML
TO SECONDARY
CLARIFIER NO. 4
(FUTURE)

PO

38LSH 3301

38G0103
SECONDARY CLARIFIER 3
INLET GATE
(SIMILAR TO BELOW)

PO

ML
1603 | 08-I-19
TO SECONDARY
CLARIFIER NO. 3

PO

1 2 3
OSC LR OC
38HS 0101A * | 38HS 0101B * | 38ZT 0101 *

38G0101
SECONDARY CLARIFIER 1
INLET GATE
TYPICAL OF (3)

38G0102
SECONDARY CLARIFIER 2
INLET GATE
(SIMILAR TO LEFT)

PO

08-I-17 | 1601
ML
TO SECONDARY
CLARIFIER NO. 1

ML
1602 | 08-I-18
TO SECONDARY
CLARIFIER NO. 2

4 5 6
OSC LR OC
38HS 0402A * | 38HS 0402B * | 38ZS 0402 *

38G0402
ML CONDUIT
ISOLATION GATE 2

08-I-11 | 1104
ML
FROM VERTICAL
LOOP REACTORS

08-I-11 | 1106
ML

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DSGN	BURR/KATALINICH
DR	DS PARKER
CHK	LL WOOD
APVD	RS SHANLEY

NO.	DATE	REVISION	BY	APVD
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

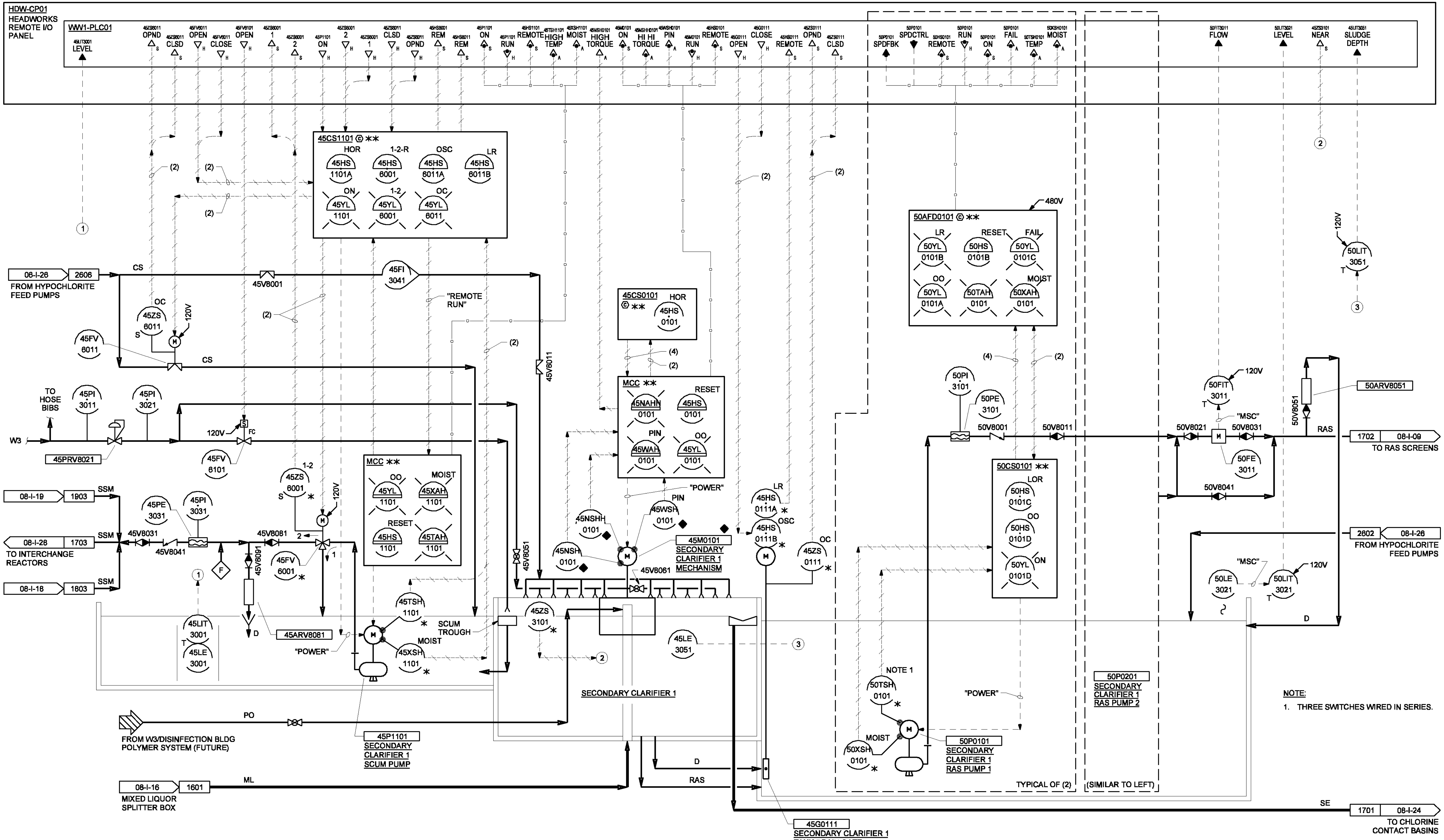
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
MIXED LIQUOR SPLITTER BOX

SHEET	47
DWG	08-I-16
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni016d_326918.dgn PLOT DATE: 3/17/2010 PLOT TIME: 2:04:14 PM



NOTE:

1. THREE SWITCHES WIRED IN SERIES.

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DSGN	BURR/KATALINICH				
DR	DS PARKER				
CHK	LL WOOD	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB
APVD	RS SHANLEY	NO. / DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 — 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

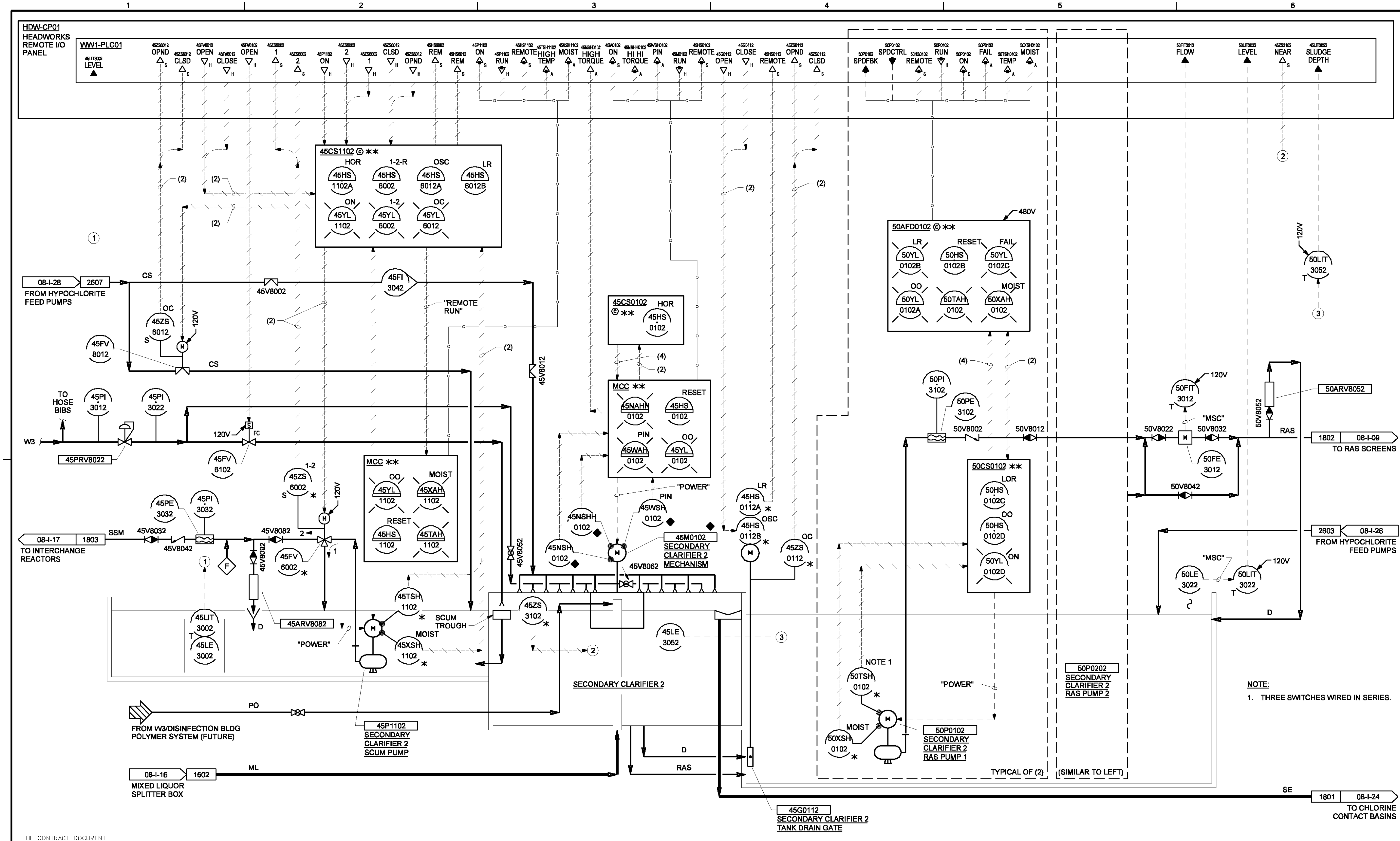
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
SECONDARY CLARIFIER / RAS PUMP STATION 1

SHEET	48
DWG	08-I-17
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08nl017d_326918.dgn PLOT DATE: 3/17/2010 PLOT TIME: 2:04:55 PM



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DSGN	BURR/KATALINICH				
DR	DS PARKER		(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)		
CHK	LL WOOD	01/20/10	AS-BUILT	PMH	CSB
APVD	RS SHANLEY	NO. DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
SECONDARY CLARIFIER / RAS PUMP STATION 2

SHEET	49
DWG	08-I-18
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08nl018d_326918.dgn PLOT DATE: 3/17/2010 PLOT TIME: 2:05:28 PM

HDW-CP01
HEADWORKS
REMOTE I/O
PANEL

WW1-PLC01

45LIT3003 LEVEL
45ZSH013 OPND
45ZSD013 CLSD
45FV6013 OPEN
45FV6013 CLOSE
45FV6103 OPEN
45ZS6003 1
45ZS6003 2
45P1103 ON
45ZS6003 2
45ZS6003 1
45ZSD013 CLSD
45ZSD013 OPND
45HS6023 REM
45HS6013 REM
45P1103 ON
45P1103 RUN
45HS1103 REMOTE
45TSH1102 HIGH TEMP
45SH1103 MOIST
45MSH0103 HIGH TORQUE
45M0103 ON
45MSH0103 HI HI TORQUE
45WSH0103 PIN
45M0103 RUN
45HS0103 REMOTE
45G0113 OPEN
45G0113 CLOSE
45HS0113 REMOTE
45ZSD113 OPND
45ZSD113 CLSD
50P0103 SPDCTRL
50P0103 SPDFBK
50HS0103 REMOTE
50P0103 RUN
50P0103 ON
50P0103 FAIL
50TSH0103 TEMP
50SH0103 MOIST
50FIT3013 FLOW
50LIT3023 LEVEL
45ZS3103 NEAR
45LIT3053 SLUDGE DEPTH

45CS1103 ⓒ ✱✱
HOR 45HS 1103A ON 45YL 1103
1-2-R 45HS 6003 1-2 45YL 6003
OSC 45HS 6013A OC 45YL 6013
LR 45HS 8013B

08-I-28 2608
FROM HYPOCHLORITE FEED PUMPS
CS
45V8003
45FI 3043
"REMOTE RUN"
45ZS 6013 OC S 120V
45FV 6013
CS
45V8013

45CS0103 ⓒ ✱✱ HOR 45HS 0103

MCC ✱✱
45NAHH 0103
RESET 45HS 0103
45WAH 0103 PIN
45YL 0103 OO

"POWER"
45M0103 SECONDARY CLARIFIER 3 MECHANISM
45NSHH 0103
45WSH 0103 PIN
45NSH 0103
45V8063
45V8053
45HS 0113A LR
45HS 0113B OSC
45ZS 0113 OC

480V
50AFD0103 ⓒ ✱✱
LR 50YL 0103B
RESET 50HS 0103B
FAIL 50YL 0103C
OO 50YL 0103A
50TAH 0103
MOIST 50XAH 0103

50PI 3103
50PE 3103
50V8003
50V8013

50CS0103 ✱✱
LOR 50HS 0103C
OO 50HS 0103D
ON 50YL 0103D

50FIT 3013 120V
"MSC"
50V8023
50V8033
50FE 3013
50V8043
50V8053
RAS
50ARV8053
1902 08-I-09
TO RAS SCREENS

50LIT 3053 120V

2604 08-I-28
FROM HYPOCHLORITE FEED PUMPS

"MSC"
50LE 3023
50LIT 3023 120V

TO HOSE BIBS
45PI 3013
45PI 3023
W3
45PRV8023
120V FC
45FV 6103

MCC ✱✱
OO 45YL 1103
MOIST 45XAH 1103
RESET 45HS 1103
45TAH 1103

45ZS 6003 1-2 S 120V
45PE 3033
45PI 3033
08-I-28 1903
SSM
TO INTERCHANGE REACTORS
45V8033
45V8043
45V8083
45FV 6003
45V8093
45LIT 3003
45LE 3003
45ARV8083
"POWER"
45TSH 1103
SCUM TROUGH
MOIST
45XSH 1103
45ZS 3103
45LE 3053
SECONDARY CLARIFIER 3

NOTE 1
50TSH 0103
MOIST
50XSH 0103
"POWER"
50P0103 SECONDARY CLARIFIER 3 RAS PUMP 1

50P0203 SECONDARY CLARIFIER 3 RAS PUMP 2

TYPICAL OF (2)
(SIMILAR TO LEFT)

NOTE:
1. THREE SWITCHES WIRED IN SERIES.

PO
FROM W3/DISINFECTION BLDG POLYMER SYSTEM (FUTURE)
45P1103 SECONDARY CLARIFIER 3 SCUM PUMP

D
RAS

08-I-16 1603
MIXED LIQUOR SPLITTER BOX
ML

SE
1901 08-I-24
TO CHLORINE CONTACT BASINS

45G0113 SECONDARY CLARIFIER 3 TANK DRAIN GATE

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DSGN	BURR/KATALINICH						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	RS SHANLEY	NO.	DATE	REVISION	BY	APVD	

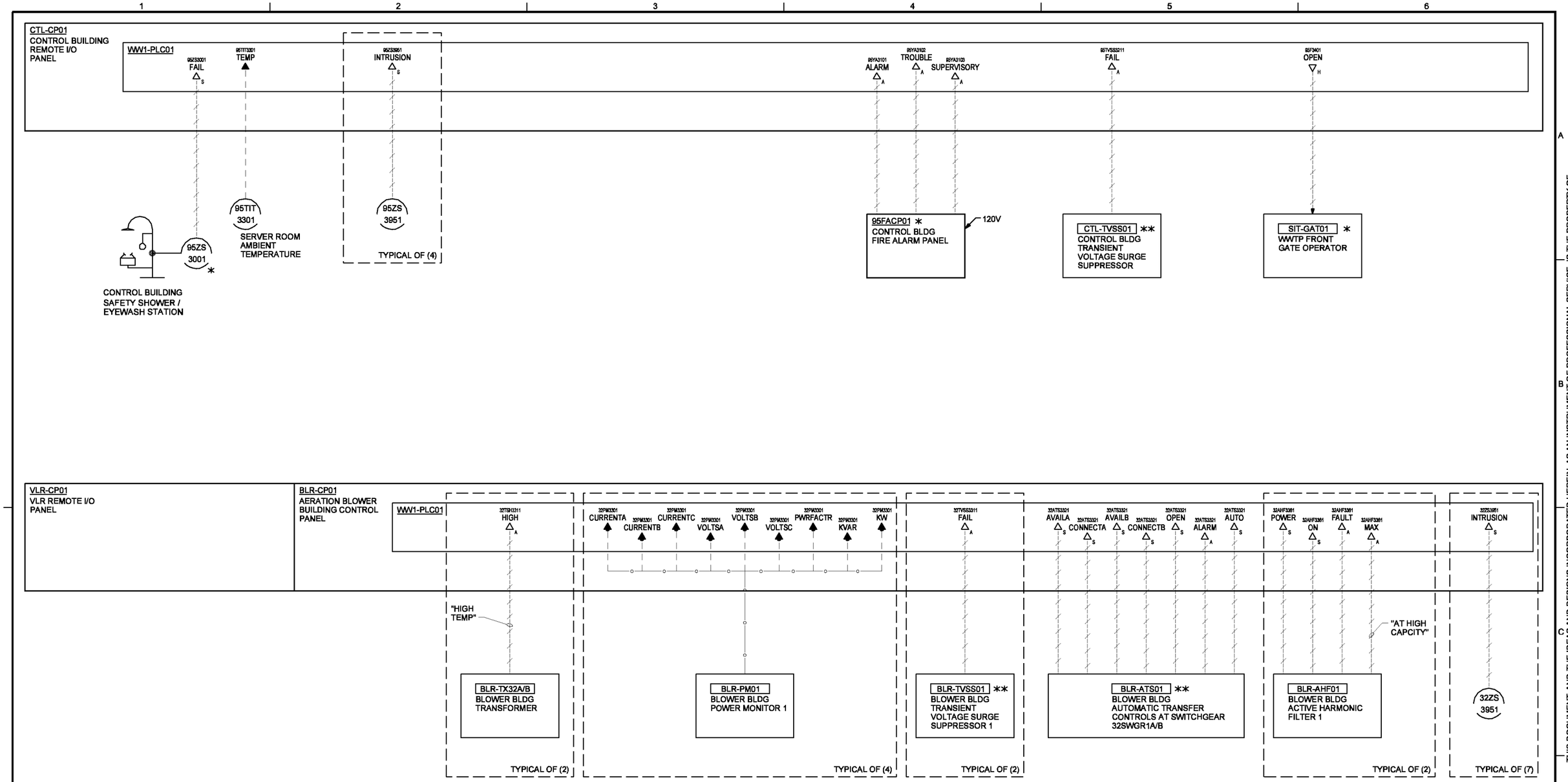
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
SECONDARY CLARIFIER / RAS PUMP STATION 3

SHEET	50
DWG	08-I-19
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni019d_326918.dgn PLOT DATE: 3/17/2010 PLOT TIME: 2:06:01 PM



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DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
	NO.	DATE	REVISION	BY	APVD	

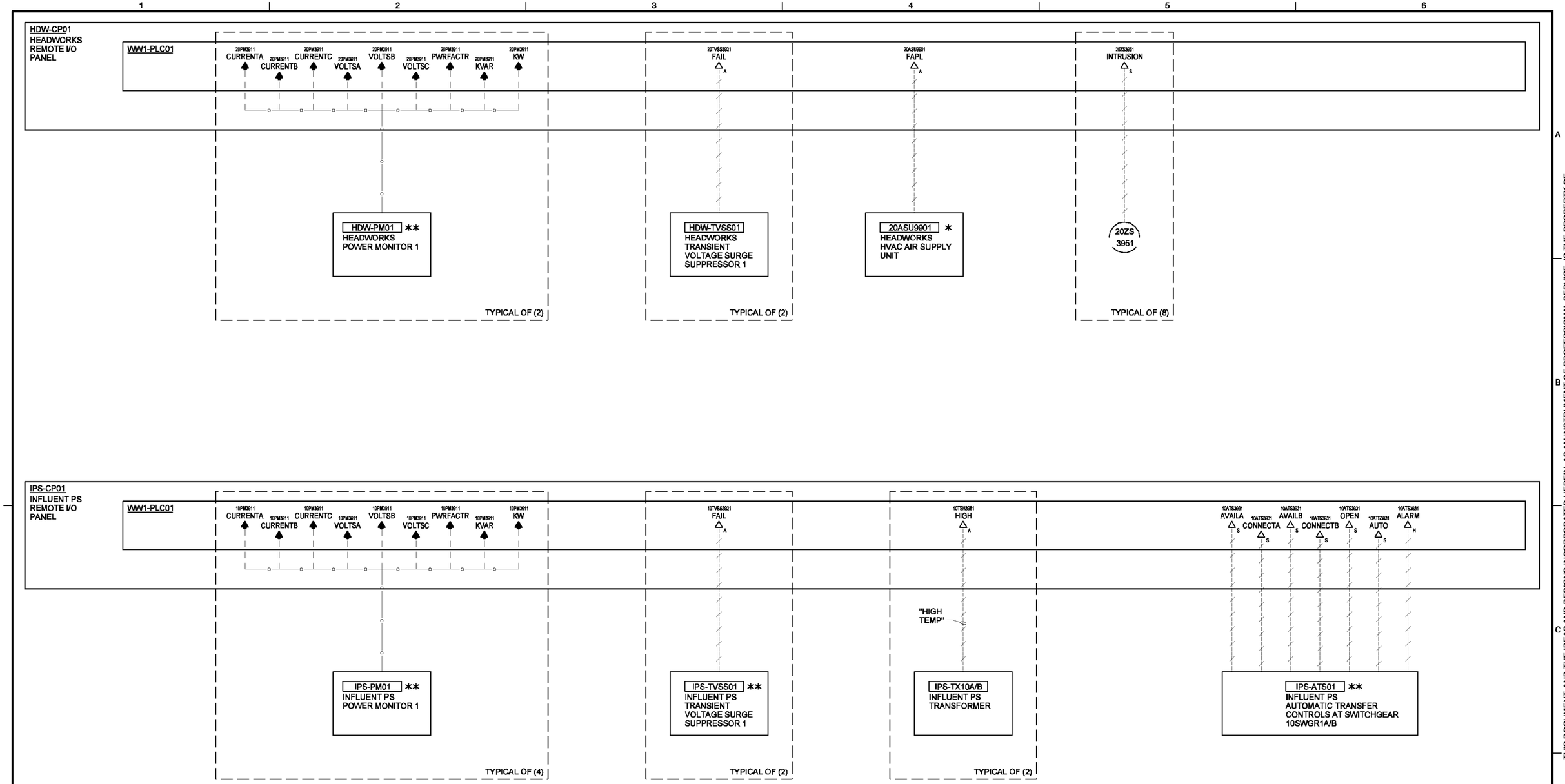
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
MISCELLANEOUS SYSTEMS MONITORING
SHEET 1

SHEET	51
DWG	08-I-20
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni020d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:48:33 PM



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DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
	1	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
MISCELLANEOUS SYSTEMS MONITORING
SHEET 2

SHEET	52
DWG	08-I-21
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni021d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:48:36 PM

IPS-CP01
INFLUENT PS
REMOTE I/O
PANEL

WW1-PLC1

07S0121 TEMP
07S0121 FAIL
07FSL3051 FLOW
07AIT3011 PH
07AIT3011 TEMP
07AIT3001 RESIDUAL
07AIT3021 COND
07HS0111 REMOTE
07G0111 OPEN
07G0111 CLOSE
07ZS0111 OPND
07ZS0111 CLSD

(2)

120V
07FSL 3051

SA/PLE
07V8001
07V8011

07PI 3031
07PI 3032
07PCV8001
07V8042

120V
NOTE
07AIT 3001 CL2
T
07AE 3001 CL2

07PI 3041
07PI 3042
07V8021
07V8031
07PCV8011
07V8032
07V8033

120V PH/TEMP
NOTE
07AIT 3011
T
07AE 3011 PH/TEMP

120V COND
NOTE
07AIT 3021
T
07AE 3021 COND

NOTE
07HS 0111A OSC
LR
07HS 0111B
M

07ZS 0111 OC

07S0121
LAB
BOTTLE SAMPLER
120V
SS
NOTE

NOTE:
REUSE SAMPLER, GATE ACTUATOR, AND ANALYZERS FROM EXISTING FLOW CONTROL STRUCTURE.

120V
M

07P0101
EFFLUENT SAMPLE
PUMP 1

07G0111
EFFLUENT
DIVERSION GATE

PLE
TO DIFFUSED
OUTFALL

PLE
TO SHORE LINE
OUTFALL

08-I-24 2402
FROM CHLORINE
CONTACT BASINS

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CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	RS SHANLEY	NO.	DATE	REVISION	BY	APVD	

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
FLOW CONTROL STRUCTURE

SHEET	53
DWG	08-I-23
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni023d_326918.dgn PLOT DATE: 3/17/2010 PLOT TIME: 2:06:32 PM

IPS-CP01
INFLUENT PS
REMOTE I/O
PANEL

WW1-PLC01

60TAH0101 TEMP A | 60XAH0101 MOIST A | 60M0101 RUN H | 60HS0101 REMOTE S | 60M0101 ON S

60ZS0402 OPND S | 60ZS0402 CLSD S | 60HS0402 REMOTE S | 60QH402 OPEN H | 60G0402 CLOSE H

60P1102 ON S | 60HS1102 REMOTE S | 60P1102 RUN H

60LIT3022 LEVEL

60FV3022 OPEN H | 60FV3022 CLOSE H | 60HS3022 REMOTE S | 60ZT3022 POSFBK

60AIT3022 RESIDUAL

60FV6012 OPEN H | 60FV6012 CLOSE H | 60HS6012 REMOTE S | 60ZS6012 OPND S | 60ZS6012 CLSD S

60LSH3011 HIGH A

MCC **
MOIST OO RESET
60TAH 0101 | 60XAH 0101 | 60YL 0101B | 60HS 0101B

60CS0101 **
HOR ON
60HS 0101A | 60YL 0101A

60TSH 0101 *
MOIST
60XSH 0101 *
"POWER"
CS

08-I-26 2601
FROM HYPOCHLORITE PUMP ROOM

60M0101
CHEMICAL INJECTOR/ MIXER

COMMON CCB INFLUENT BOX

60G0402
CHLORINE CONTACT BASIN 2 INFLUENT WEIR GATE

60G0401
CHLORINE CONTACT BASIN 1 INFLUENT WEIR GATE

OC 60ZS 0402 *
LR OSC
60HS 0402B | 60HS 0402A *

60V8032
60V8031

FUTURE SECONDARY CLARIFIER 4 SE

08-I-19 1901 SE
FROM SECONDARY CLARIFIER 3

08-I-18 1801 SE
FROM SECONDARY CLARIFIER 2

08-I-17 1701 SE
FROM SECONDARY CLARIFIER 1

60CS1102 **
HOR
60HS 1102

MCC **
ON
60YL 1102

"POWER"
60P1102
CHLORINE CONTACT BASIN 2 SAMPLE PUMP
SE

60LIT 3022 120V T

60LE 3022
60V8062

60AE 3002 CL2
60AIT 3002 CL2 T
120V

OSC LR
60HS 6012 S | 60HS 6012 S | 60ZS 6012 S OC
480V
60FV 6012

OSC LR
60HS 0302A * | 60HS 0302B * | 60ZT 0302 *

60G0302
CHLORINE CONTACT BASIN 2 EFFLUENT GATE

OVERFLOW WEIR WALL
PLE
COMMON CCB EFFLUENT CHANNEL
TYPICAL OF (2)
TO OVERFLOW OUTFALL

60LSH 3011

60P1101
CHLORINE CONTACT BASIN 1 SAMPLE PUMP

60V8062
60G0301
CHLORINE CONTACT BASIN 1 EFFLUENT GATE
PLE
2402 08-I-23
TO NEW FLOW CONTROL STRUCTURE

60FV 6011
480V
2401 08-I-27
TO W3 PUMP STATION
(SIMILAR TO ABOVE)

TO COLLECTION SYSTEM MANHOLE

TO COLLECTION SYSTEM MANHOLE

NOTE:
1. CHLORINE ANALYZERS AND SAMPLE PUMPS LOCATED IN W3 PUMP STATION

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DSGN	CS BURR/BM CASEY						VERIFY SCALE
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CHK	LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	RS SHANLEY		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
		NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
NEW CHLORINE CONTACT BASINS

SHEET	54
DWG	08-I-24
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni024d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:48:49 PM

IPS-CP01
INFLUENT PS
REMOTE I/O
PANEL

VW1-PLC-01

63P0101 RUN H
63P0101 ON S
63HS0101 REMOTE S
63P0101 FAIL A
63TSH0101 TEMP A
63P0101 SPDCTRL
63P0101 SPKFBK
63FIT0201 FLOW

480V

63AFD0101 **
OO 63YL 0101
REM 63YL 0101
FAIL 63YL 0101
63TLH 0101

(4)

63CS0101 **
HOR 63HS 0101A
ON 63YL 0101A

"POWER"

63TSH 0101 *

63PI 3011

63ARV8011

63V9011 63V9021

63P0101
REUSE PUMP 1

TYPICAL OF (2)

63ARV8021

120V

63FIT 3001

63FE 3001

63V9051

PLE

TO WETLANDS

08-I-24 2404 PLE 62V9001

08-I-24 2403 PLE 63V9001

PLE

63P0102
REUSE PUMP 2

(SIMILAR TO ABOVE)

PLE

63P0103
REUSE PUMP 3
(FUTURE)

(SIMILAR TO ABOVE)

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DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK KL MAESTRI						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
EFFLUENT
PUMP STATION

SHEET	55
DWG	08-I-24A
DATE	AUG 2008
PROJ	326918

FILENAME: 08ni024ad_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:48:46 PM

IPS-CP01
INFLUENT PS
REMOTE I/O
PANEL

WW1-PLC01

61LIT3011 LEVEL
61LIT3011 LEVEL RTX
61LIT3012 LEVEL RTX
61YL3001 HIHI A
61YL3002 HIHI A
61HS6011 REMOTE S
61FV6011 OPEN H
61FV6011 CLOSE H
61LIT3012 LEVEL
61LSH3021 HIGH A
61ZS6011 OPND S
61ZS6011 CLSD S
61ZS3301 ON S

61LCP0100 Ⓒ
SODIUM HYPOCHLORITE
TRUCK UNLOADING PANEL

HORN 61YA 0100
HI/HI 61YL 3001
HI/HI 61YL 3002
HI/HI OSC 61HS 6011A
SILENCE 61HS 0100
61LI 3011
61LI 3012
LR 61HS 6011B

120V 61LIT 3011 T
120V 61LIT 3012 T
120V

(2)
(3)

61ZS 3301 *
61M3301
HYPOCHLORITE
STORAGE
SAFETY SHOWER
TYPICAL OF (2)

NOTE:
TANK VENTS EXTEND THROUGH ROOF.

61LE 3011
61LE 3012
V (NOTE)
OF

120V 61LSHH 3001
120V 61LSHH 3002

61T0101
SODIUM
HYPOCHLORITE
TANK 1

61T0102
SODIUM
HYPOCHLORITE
TANK 2

61V8581 HYP
61V8582
DUPLEX BASKET-STRAINER (TYP)
HYP
61V8571
TRUCK FILL

DRAIN 61V8501
DRAIN 61V8502
61V8521
61V8522
61V8511
61V8512

61LSH 3021

2502 08-I-26 TO HYPOCHLORITE PUMPING
2501 08-I-26 TO HYPOCHLORITE PUMPING
HYP

SECONDARY CONTAINMENT
TRUCK LOADING AREA

61V8583
HYP/D
TO SANITARY SEWER MANHOLE

STORM DRAIN MANHOLE
480V
OC
61ZS 6011 *
M
HYP/D
61FV 6011
TO STORM DRAIN OUTFALL

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DSGN	CS BURR/BM CASEY						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 ——— 1"
CHK	LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	RS SHANLEY	NO.	DATE	REVISION	BY	APVD	
			01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
SODIUM HYPOCHLORITE
STORAGE TANKS

SHEET	56
DWG	08-I-25
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni025d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:48:53 PM

IPS-CP01
INFLUENT PS
REMOTE I/O
PANEL

VW1-PLC01

61ZS3303 ON
61HS3101 REM
61P1101 SPDCTRL
61P1101 RUN
61XSH3111 LEAK
61YA1101 FAIL
61P1101 SPDFBK
61P1101 ON
61PSH3101 HIGH
(1) (2) (3) (4) (5) (6) (7) (8)
TYPICAL OF (3)

61FV8001 OPEN
61FV8001 CLOSE
61HS8001 REMOTE
61ZS8001 OPND
61ZS8001 CLSD
61FV8002 OPEN
61FV8002 CLOSE
61HS8002 REMOTE
61ZS8002 OPND
61ZS8002 CLSD

61V8621
61V8611
61V8631
CS

61V8671 — 61FI 3201 — 61V8681 CS — 2606 08-I-17 — TO SECONDARY CLARIFIER 1 HYPOCHLORITE RING AND SCUM PIT
61V8672 — 61FI 3202 — 61V8682 CS — 2607 08-I-18 — TO SECONDARY CLARIFIER 2 HYPOCHLORITE RING AND SCUM PIT
61V8673 — 61FI 3203 — 61V8683 CS — 2608 08-I-19 — TO SECONDARY CLARIFIER 3 HYPOCHLORITE RING AND SCUM PIT

2601 08-I-24 — TO CHLORINE CONTACT BASINS

61PI 3031
61PI 3032
W3
61V8601
61PCVV3032

61ZS 3303
61M3303 HYPOCHLORITE FEED SAFETY SHOWER

61ASD1101
61PI 3101
61PSH 3101
61PE 3101
120V
LEAK 61LS 3111
61P1101 SODIUM HYPOCHLORITE PUMP 1
TYPICAL OF (3)

61P1102 SODIUM HYPOCHLORITE PUMP 2
(SIMILAR TO LEFT)

61P1103 SODIUM HYPOCHLORITE PUMP 3
(SIMILAR TO LEFT)

SECONDARY CONTAINMENT

OSC LR OC
61HS 6001 61HS 6001 61ZS 6001
61FV 6001
HYP
120V

OSC LR OC
61HS 6002 61HS 6002 61ZS 6002
61FV 6002
HYP
120V

61FI 3211 — HYP/CS — 2602 08-I-17 — TO SECONDARY CLARIFIER 1 RAS PIT
61FI 3212 — HYP/CS — 2603 08-I-18 — TO SECONDARY CLARIFIER 2 RAS PIT
61FI 3213 — HYP/CS — 2604 08-I-19 — TO SECONDARY CLARIFIER 3 RAS PIT
HYP/CS — 2609 08-I-11 — TO VLR SCUM PIT

08-I-25 2502 — FROM HYPOCHLORITE STORAGE TANK 2 — HYP
08-I-25 2501 — FROM HYPOCHLORITE STORAGE TANK 1 — HYP

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	CS BURR/BM CASEY						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD						
APVD	RS SHANLEY		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
		NO.	DATE	REVISION	BY	APVD	

CH2MHILL Carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
SODIUM HYPOCHLORITE PUMPING SYSTEM

SHEET	57
DWG	08-I-26
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni026d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:48:57 PM

IPS-CP01
INFLUENT PS
REMOTE I/O
PANEL

WW1-PLC01

68TSH0101 TEMP A
68P0101 FAIL A
68P0101 RUN H
68HS0101 REMOTE S
68P0101 ON S
68P0101 SPDCTRL
68P0101 SPDFBK

68M0201 ON S
68YA0201 FAIL A
68HS0201 REMOTE S
68M0201 ENABLE H
68FIT3001 FLOW
68PIT3051 PRESSURE

68AFD0101 ⓔ **
REM 68YL 0101D
RESET 68HS 0101B
FAIL 68YL 0101B
OO 68YL 0101A
68TLH 0101
480V

(2)

68CS0101 **
LOR 68HS 0101C
OO 68HS 0101D
ON 68YL 0101C

68TSH 0101 *

68V8001 68V8011
68P0101
W3 PUMP 1

68V8002 68V8012
68P0102
W3 PUMP 2

68V8003 68V8013
68P0103
W3 PUMP 3

TYPICAL OF (3)
(SIMILAR TO LEFT)
(SIMILAR TO LEFT)

480V
68LCP0201 ⓔ *
"POWER"

68PDSH 3021 *
68PI 3031 *
68PI 3041 *
68FIT 3001 T
120V
"MSC"
68ARV3011
68V8071
68V8061
68PIT 3051
W3
W3 DISTRIBUTION
68FE 3001

68V8051
68M0201 MOTORIZED STRAINER
68FV 6001 *
68V8021
68V8031

08-I-24 2401
FROM CHLORINE CONTACT BASINS

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DSGN	CS BURR/BM CASEY						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	RS SHANLEY	NO.	01/20/10 DATE	REVISION	BY	APVD	

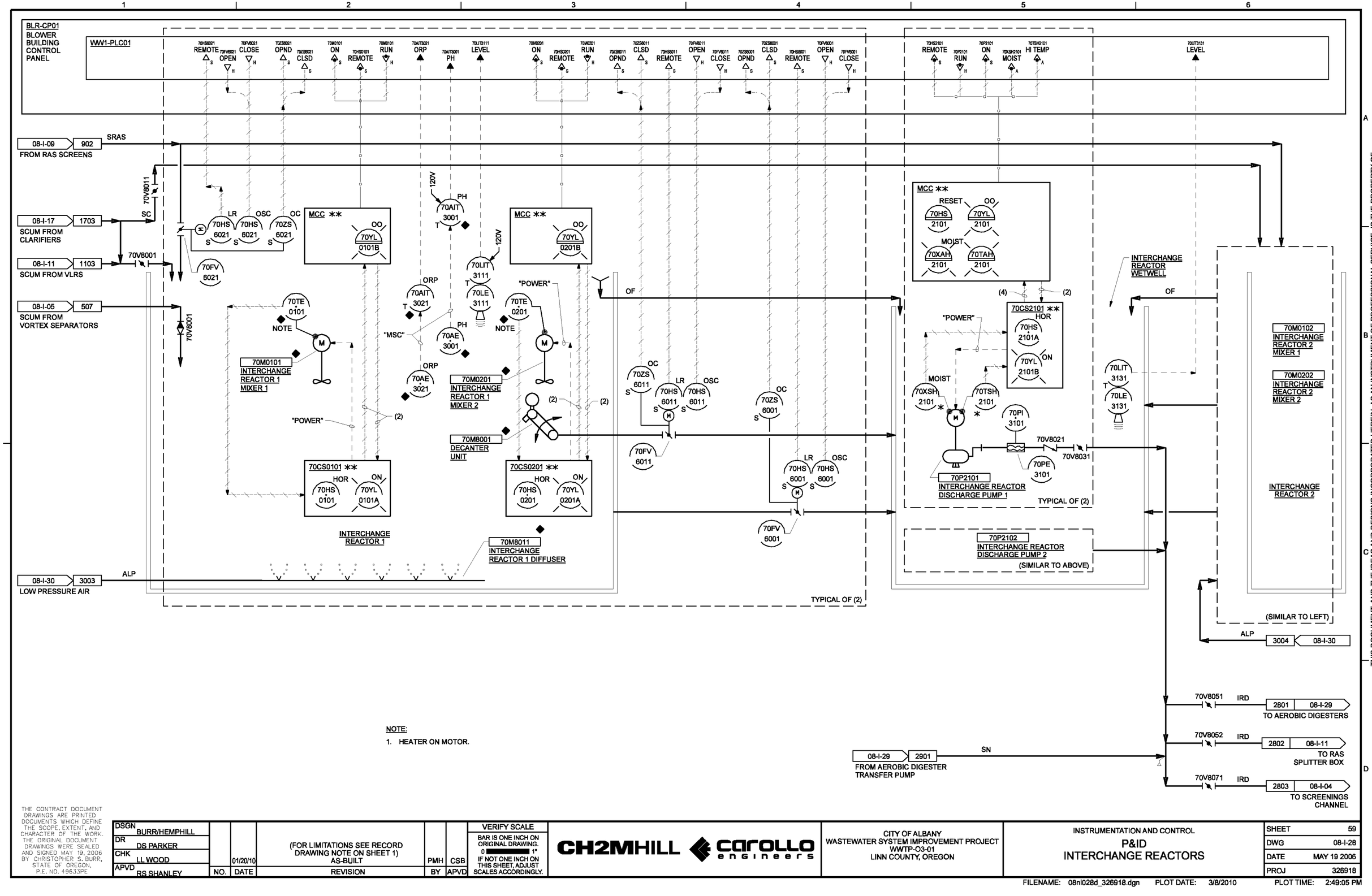
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
W3 PUMPING SYSTEM

SHEET	58
DWG	08-I-27
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni027d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:02 PM



NOTE:

1. HEATER ON MOTOR.

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DSGN	BURR/HEMPHILL					
DR	DS PARKER					
CHK	LL WOOD					
APVD	RS SHANLEY					
NO.	DATE	REVISION	BY	APVD		
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB		

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
INTERCHANGE REACTORS

SHEET	59
DWG	08-I-28
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni028d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:05 PM

BLR-CP01
BLOWER BUILDING CONTROL PANEL

VW1-PLC01

72ZSB201 OPND S | 72ZSB201 CLSD S | 72HSB201 REMOTE S | 72FVB201 OPEN H | 72FVB201 CLOSE H
72ZSB021 OPND S | 72ZSB021 REMOTE S | 72FVB021 OPEN H | 72FVB021 CLOSE H | 72AIT3001 DO | 72LIT3011 LEVEL
72ZSB011 OPND S | 72ZSB011 CLSD S | 72HSB011 REMOTE S | 72FVB011 OPEN H | 72FVB011 CLOSE H
72ZSB001 OPND S | 72ZSB001 CLSD S | 72HSB001 REMOTE S | 72FVB001 OPEN H | 72FVB001 CLOSE H
72P2101 SPDFBK | 72P2101 SPDCTRL | 72HS2101 REMOTE S | 72P2101 RUN H | 72P2101 ON S | 72P2101 FAIL A | 72SH2101 HI TEMP A | 72SH2101 MOIST A
72LIT3121 LEVEL
72ZSB211 OPND S | 72ZSB211 CLSD S | 72HSB211 REMOTE S | 72FVB211 OPEN H | 72FVB211 CLOSE H

08-I-09 903 SRAS
FROM RAS SCREENS

08-I-28 2801 IRD
FROM INTERCHANGE REACTOR

72ZS 6021 OC S
72HS 6021 LR S
72HS 6021 OSC S
72FV 6021
120V
72AIT 3001 DO T
"MSC"
72AE 3001 DO
72LIT 3011 T
72LE 3011
OF

72M8001 DECANTER UNIT

72ZS 6011 OC S
72HS 6011 LR S
72HS 6011 OSC S
72FV 6011

72ZS 6001 OC S
72HS 6001 LR S
72HS 6001 OSC S
72FV 6001

AEROBIC DIGESTER 1

72M8011 AEROBIC DIGESTER 1 DIFFUSER

08-I-30 3001 ALP
LOW PRESSURE AIR

TYPICAL OF (2)

480V
72AFD2101 ⓒ **
RESET
72HS 2101B
OO
72YL 2101A
LR
72YL 2101B
MOIST
72XAH 2101
72TAH 2101
FAIL
72YL 2101C

75CS2101 **
LOR
72HS 2101C
OO
72HS 2101D
72YL 2101D ON

"POWER"
MOIST
72XSH 2101 *
72TSH 2101 *

72P2101 AEROBIC DIGESTER TRANSFER PUMP

AEROBIC DIGESTER TRANSFER WETWELL
72LIT 3121 T
72LE 3121
OF

AEROBIC DIGESTER 2

72V6011
72V6021
(SIMILAR TO LEFT)
ALP 3002 08-I-30

72ZS 6211 OC S
72HS 6211 LR S
72HS 6211 OSC S
72FV 6211
72PIT 3101
2902 08-I-12B TO VLR-CP01
SLF
72PE 3101
TO EXISTING DEWATERING

08-I-28 2901 SN
TO INTERCHANGE REACTORS
SLF/SN

72ZS 6201 OC S
72HS 6201 LR S
72HS 6201 OSC S
72FV 6201

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DSGN	BURR/HEMPHILL						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD						
APVD	RS SHANLEY	NO.	DATE	REVISION	BY	APVD	
			01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
AEROBIC DIGESTERS

SHEET	60
DWG	08-I-29
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni029d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:10 PM

BLR-CP01
BLOWER BUILDING
CONTROL PANEL

WW1-PLC01

77PDSH3031 HIGH DIFF A

77B0101 RUN H | 77TSH0101A HI TEMP A | 77B0101 ON A | 77HS0101 REMOTE S | 77PSH3051 HI A

77CS0101 ©*
HOR
77HS 0101A

120V

"DEVICENET"

MCC **
RESET 77HS 0101B
OO 77YL 0101
77TAH 0101A

77PDI 3021 | 77PDSH 3031 | 77TI 3001 | 77PI 3001 | 77TSH 0101A * NOTE 1 | 77TSH 0101B * NOTE 1 | 77TSH 3011 * | 77TI 3011 | 77PI 3011 | 77PSH 3051

77PSV8001 *

77V8011

ALP 77V8021

INLET FILTER

INLET SILENCER

77B0101
AEROBIC DIGESTER
BLOWER 1

DISCHARGE SILENCER

77V8031

TYPICAL OF (4)

77FIT 3211 FLOW | 77FV 6101 CLOSE H | 77FV 6101 OPEN H | 77HS 6101 REMOTE S | 77ZS 6101 OPND S | 77ZS 6101 CLSD S

120V

77FIT 3211 T

"MSC"

77HS 6101 S OSC | 77HS 6101 S LR | M

77ZS 6101 S OC

77FE 3211

77FV 6101

TYPICAL OF (4)

3001 08-I-29
TO AEROBIC DIGESTER 1

77B0102
AEROBIC DIGESTER
BLOWER 2

(SIMILAR TO ABOVE)

ALP 77V8022

(SIMILAR TO ABOVE)

3002 08-I-29
TO AEROBIC DIGESTER 2

77B1101
INTERCHANGE
REACTOR
BLOWER 1

(SIMILAR TO ABOVE)

ALP 77V8023

77V8032

(SIMILAR TO ABOVE)

3003 08-I-28
TO INTERCHANGE REACTOR 1

77B1102
INTERCHANGE
REACTOR
BLOWER 2

(SIMILAR TO ABOVE)

ALP 77V8024

(SIMILAR TO ABOVE)

3004 08-I-28
TO INTERCHANGE REACTOR 2

NOTE:

1. BLOWER HAS TEMPERATURE SWITCHES ON THE BLOWER ENCLOSURE AS WELL AS THE LOWER BEARINGS.

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DSGN BURR/HEMPHILL						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON	INSTRUMENTATION AND CONTROL P&ID INTERCHANGE REACTOR / AEROBIC DIGESTER BLOWER SYSTEM	SHEET 61
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DWG 08-I-30
CHK LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)						DATE MAY 19 2006
APVD RS SHANLEY	NO.	DATE	REVISION	BY	APVD				PROJ 326918
		01/20/10	AS-BUILT	PMH	CSB				

CH2MHILL carollo engineers

FILENAME: 08ni030d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:15 PM

HDW-CP01
HEADWORKS
REMOTE I/O
PANEL

WW1-PLC01

68FIT3021 FLOW

68PIT3011 PRESSURE

68TIT3031 TEMPERATURE

54FV6041 OPEN H
54FV6041 CLOSE H
54HS6041 REMOTE S
54ZSO6041 OPND S
54ZSC6041 CLSD S
54FV6031 OPEN H
54FV6031 CLOSE H
54HS6031 REMOTE S
54ZSO6031 OPND S
54ZSC6031 CLSD S

OSC 54HS 6031A S
LR 54HS 6031B S
OC 54ZS 6031 S
54FV 6031

OSC 54HS 6041A S
LR 54HS 6041B S
OC 54ZS 6041 S
54FV 6041

TYPICAL OF (3)

3103 08-I-09 TO RAS DRUM SCREEN 1
3104 08-I-09 TO RAS DRUM SCREEN 1
3105 08-I-09 TO RAS DRUM SCREEN 2
(SIMILAR TO ABOVE)
3106 08-I-09 TO RAS DRUM SCREEN 2
3107 08-I-09 TO RAS DRUM SCREEN 3
(SIMILAR TO ABOVE)
3108 08-I-09 TO RAS DRUM SCREEN 3

68V8171
3101 08-I-07 TO SCREENINGS COMPACTOR 1, 2, AND 3
3102 08-I-04 TO INFLUENT SCREENS 1, 2, AND 3

HW2

68ESTOP 0101
68ESTOP 0101C
68ESTOP 0101B
68ESTOP 0101A

120V 68LCP0101 E *

"POWER"

68TET 0101 *

68PIT 3011

68TIT 3031

68V8131

NG

120V 68FIT 3021 T

"MSC"

68V8101

W2

W2 SUPPLY

68FE 3021

68M0101
GAS FIRED HOT
WATER HEATER
SYSTEM

D

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DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK LL WOOD						
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	

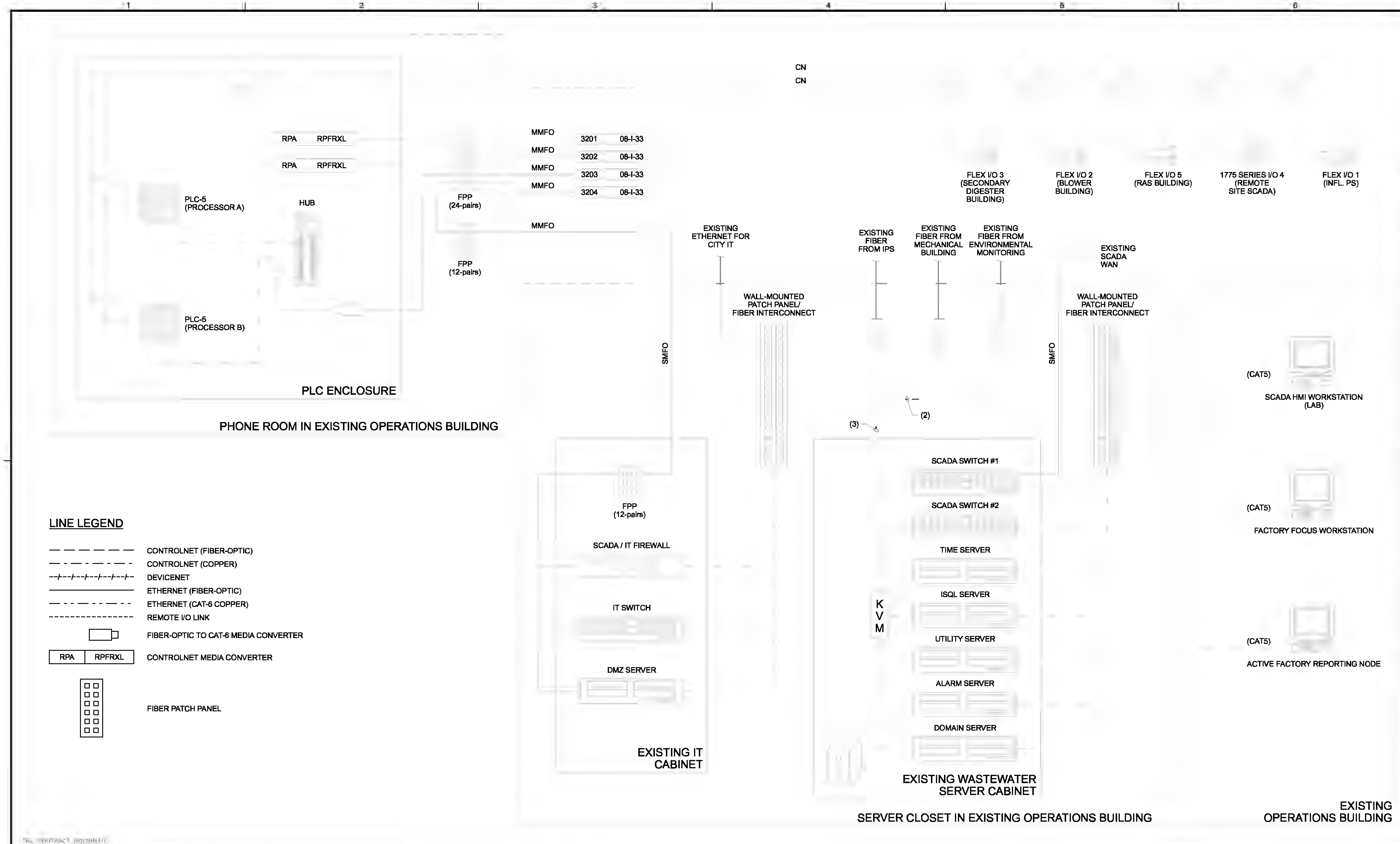
CH2MHILL Carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
P&ID
HOT WATER SYSTEM

SHEET	62
DWG	08-I-31
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni031d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:18 PM


CN
CN
RPA
RPFRXL
RPA
RPFRXL
PLC-5
(PROCESSOR A)
HUB
PLC-5
(PROCESSOR B)
PLC ENCLOSURE
FPP
(24-pairs)
FPP
(12-pairs)
MMFO
MMFO
MMFO
MMFO
MMFO
3201 08-I-33
3202 08-I-33
3203 08-I-33
3204 08-I-33
PHONE ROOM IN EXISTING OPERATIONS BUILDING
FLEX I/O 3
(SECONDARY
DIGESTER
BUILDING)
FLEX I/O 2
(BLOWER
BUILDING)
FLEX I/O 5
(RAS BUILDING)
1775 SERIES I/O 4
(REMOTE
SITE SCADA)
FLEX I/O 1
(INFL. PS)
EXISTING
ETHERNET FOR
CITY IT
EXISTING
FIBER
FROM IPS
EXISTING
FIBER FROM
MECHANICAL
BUILDING
EXISTING
FIBER FROM
ENVIRONMENTAL
MONITORING
EXISTING
SCADA
WAN
WALL-MOUNTED
PATCH PANEL/
FIBER INTERCONNECT
WALL-MOUNTED
PATCH PANEL/
FIBER INTERCONNECT
SMFO
SMFO
(CAT5)
SCADA HMI WORKSTATION
(LAB)
(2)
(3)
SCADA SWITCH #1
SCADA SWITCH #2
TIME SERVER
ISQL SERVER
UTILITY SERVER
ALARM SERVER
DOMAIN SERVER
K
V
M
EXISTING WASTEWATER
SERVER CABINET
FPP
(12-pairs)
SCADA / IT FIREWALL
IT SWITCH
DMZ SERVER
EXISTING IT
CABINET
(CAT5)
FACTORY FOCUS WORKSTATION
(CAT5)
ACTIVE FACTORY REPORTING NODE
SERVER CLOSET IN EXISTING OPERATIONS BUILDING
EXISTING
OPERATIONS BUILDING
LINE LEGEND
CONTROLNET (FIBER-OPTIC)
CONTROLNET (COPPER)
DEVICENET
ETHERNET (FIBER-OPTIC)
ETHERNET (CAT-6 COPPER)
REMOTE I/O LINK
FIBER-OPTIC TO CAT-6 MEDIA CONVERTER
RPA
RPFRXL
CONTROLNET MEDIA CONVERTER
FIBER PATCH PANEL

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DSGN CS BURR						
DR DS PARKER			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			
CHK LL WOOD		01/20/10	AS-BUILT	PMH	CSB	
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL

CONTROL SYSTEM BLOCK DIAGRAM
EXISTING SYSTEM, SHEET 1

SHEET	63
DWG	08-I-32
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni032d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:21 PM

08-I-32 3201 MMFO

08-I-32 3202 MMFO

08-I-32 3203 MMFO

08-I-32 3204 MMFO

CITY IT WORKSTATION

UPS

SCADA HMI WORKSTATION (BIOSOLIDS)

LOCAL IT SWITCH

(CAT5) (CAT5)

(CAT5)

UPS

ACTIVE FACTORY REPORTING NODE (BIOSOLIDS)

UPS

SCADA ALARM WORKSTATION (BIOSOLIDS)

LOCAL SCADA SWITCH

(CAT5)

(CAT5)

FPP (24-pairs)

BIOSOLIDS FIBER CABINET

RPFRXL RPA

RPFRXL RPA

BIOSOLIDS PLC 520E PROCESSOR AND REMOTE I/O

UPS

BIOSOLIDS BUILDING MCC

RIO

SLC-1

UPS

WWP-BDB1-POL-0001

SLC-1

WWP-BDB1-LCP-0001

SLC-1

UPS

WWP-BDB1-LCP-0002

RIO

VFD BFP 1 DRIVE

VFD POLY PUMP 1

VFD SLUDGE FEED PUMP 1

VFD CAKE PUMP 1

VFD BFP 2 DRIVE

VFD POLY PUMP 2

VFD SLUDGE FEED PUMP 2

VFD CAKE PUMP 2

BIOSOLIDS BUILDING

THE CONTRACT DOCUMENT DRAWINGS ARE PART OF CONTRACT DOCUMENTS WHICH DEFINE THE SCOPE ESTIMATE AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19 2006 BY CHRISTOPHER S. WOOD, STATE OF OREGON

DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	01/20/10		AS-BUILT			
NO.	DATE		REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL

CONTROL SYSTEM BLOCK DIAGRAM
EXISTING SYSTEM, SHEET 2

SHEET	64
DWG	08-I-33
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni033d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:48:25 PM

NOTES:

1. EXISTING EQUIPMENT RELOCATED FROM OPERATIONS BUILDING DURING MILESTONE A.
2. EQUIPMENT PROVIDED UNDER ALLOWANCE.

NOTE 2 NOTE 2 NOTE 2

CAT6 (3)

WORKSTATION 1 | WORKSTATION 2 | WORKSTATION 3

CONTROL ROOM IN CONTROL BUILDING

EXISTING VINE ST WT1 SCADA WAN — SMFO — FUSION SPLICE — SCADA SWITCH #1

EXISTING A-M WT2 SCADA WAN — SMFO

MMFO

CAT5 — SCADA HMI WORKSTATION (LAB)

CAT5 — FACTORY FOCUS WORKSTATION

CAT5 — ACTIVE FACTORY REPORTING NODE

EXISTING OPERATIONS BUILDING

(EXISTING) SERVER CLOSET AT OPERATIONS BUILDING

95-UPS-01 ** — DOCKING STATION — 120V

SCADA / IT FIREWALL — NOTE 1

IT SWITCH — NOTE 1

DMZ SERVER — NOTE 1

IT-CP01 IT CABINET

WW1-PP-CP01 CONTROL BUILDING PATCH PANEL

48-PORT SWITCH IP: 10.10.1.234 — NOTE 2

TIME SERVER — NOTE 1

ISQL SERVER — NOTE 2

UTILITY SERVER — NOTE 2

ALARM SERVER — NOTE 2

DOMAIN SERVER — NOTE 2

K V M — NOTE 2

SVR-CP01 CONTROL BUILDING SERVER CABINET

MMFO

CTL-ES01 ETHERNET SWITCH IP: 10.10.1.39

CONTROL BLDG I/O — PS PS CNET DNET — CNET NODE: 03

RPA | RPFRXL

FPP (24-pairs)

MMFO MMFO MMFO

CTL-CP01 CONTROL BUILDING REMOTE I/O PANEL

SIT-CP01
WWTP FRONT GATE ACCESS ENCLOSURE

FPP (12 PAIRS)

SIT-ES01 ETHERNET SWITCH IP: 10.10.1.236

SIT-MMI01 FRONT GATE KEYPAD ACCESS IP: 10.10.1.82

120V

CN

3601	08-I-36	FROM WW1-BLR-CP01
3605	08-I-36	FROM WW1-BLR-CP01
3607	08-I-36	FROM WW1-BLR-CP01
3604	08-I-36	

SERVER ROOM IN CONTROL BUILDING

MMFO

MMFO — 3501 — 08-I-35 — FROM EXISTING PLC-5 IN BIOSOLIDS BLDG

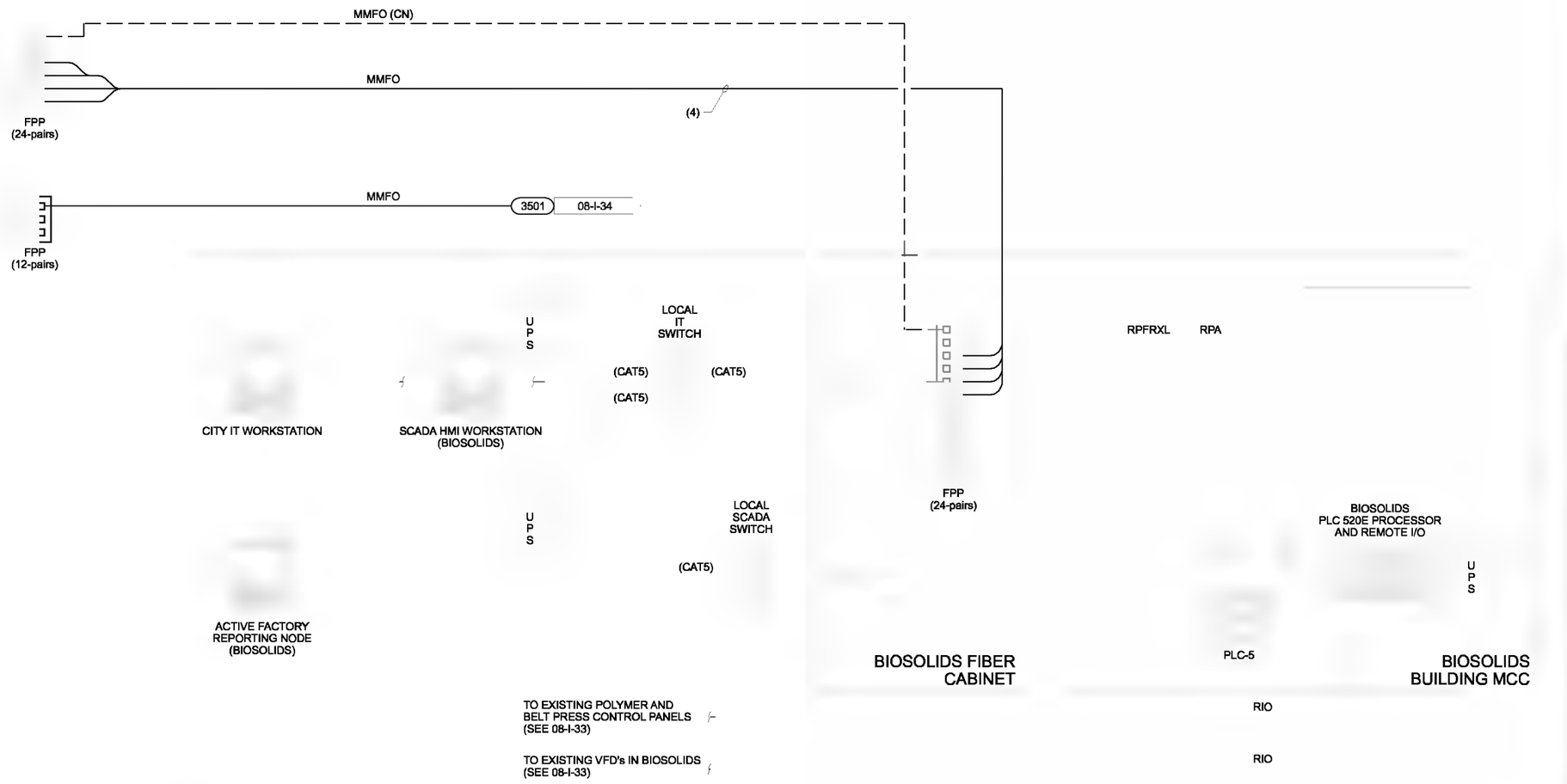
DSGN	CS BURR					VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-03-01 LINN COUNTY, OREGON	INSTRUMENTATION AND CONTROL	SHEET 65
DR	DS PARKER					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.		CONTROL SYSTEM BLOCK DIAGRAM MODIFICATIONS, SHEET 1	DWG 08-I-34
CHK	LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB			DATE MAY 19 2006
APVD	CW MASSIE	NO.	01/20/10 DATE	REVISION	BY	APVD			PROJ 326918

CH2MHILL carollo engineers

FILENAME: [illegible] PLOT DATE: 3/8/2011 PLOTTED: 2:48:56 PM

NOTES:

1. FLEX I/O TO BE DE-COMMISSIONED AT CONCLUSION OF MILESTONE B. ASSOCIATED PROCESSES WILL BE REINTEGRATED INTO THE SCADA SYSTEM V/A NEW REMOTE I/O MODULES IN THE CONTROLLOGIX PROCESSOR AT THE AERATION BLOWER BUILDING.
2. RECONFIGURE FLEX I/O NETWORK AS SHOWN TO ACCOMMODATE MILESTONE A AND MILESTONE B.
3. EXISTING REMOTE I/O CONNECTION.



DSGN CS BURR						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON	INSTRUMENTATION AND CONTROL	SHEET 66
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"		CONTROL SYSTEM BLOCK DIAGRAM MODIFICATIONS, SHEET 2	DWG 08-I-35
CHK LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DATE MAY 19 2006
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD				PROJ 326918

FILENAME: 08m035d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:48:02 PM

1 2 3 4 5 6

08-I-37 3603

VLR STRUCTURE

VLR-CP01 VLR REMOTE I/O PANEL

VLR I/O — PS PS — CNET — CNET NODE: 04

VLR I/O — PS PS — CNET — CNET NODE: 05

CN

RPA RPFRXL

RPA RPFRXL

FPP (24-pairs)

BLR-CP01
AERATION BLOWER
BUILDING
CONTROL
PANEL

FPP (24-pairs)

BLR-ES01
ETHERNET SWITCH
IP: 10.10.1.226

CONTROLLOGIX — PS PROC BCM CNET ENET

WW1-PLC-01
IP: 10.10.1.107
CNET NODE: 20

CONTROLLOGIX — PS PROC BCM CNET ENET

WW1-PLC-01
IP: 10.10.1.108
CNET NODE: 21

BLR I/O — PS PS — CNET DNET — CNET NODE: 01

BLR I/O — PS PS — CNET DNET DNET — CNET NODE: 02

CAT6

BLR-ES02
ETHERNET SWITCH
IP: 10.10.1.227

RPA RPFRXL

RPA RPFRXL

CN

08-I-34 3601 MMFO

08-I-37 3602 MMFO

08-I-34 3604 CN

08-I-37 3606 MMFO

08-I-34 3605 MMFO

08-I-34 3607 MMFO

3701 08-I-37

32-UPS-01 **

DN

(2)

32LCP0101 *
AERATION BLOWER 1
IP: 10.10.1.151

32LCP0102 *
AERATION BLOWER 2
IP: 10.10.1.152

32LCP0103 *
AERATION BLOWER 3
IP: 10.10.1.153

32LCP0104 *
AERATION BLOWER 4
IP: 10.10.1.154

CAT6

MCC-32A **

BLR-PM01 **
POWER MONITOR
IP: 10.10.1.91

MCC-32B **

BLR-PM02 **
POWER MONITOR
IP: 10.10.1.92

SWGR-32A/B **

SWG-PM01 **
POWER MONITOR
IP: 10.10.1.98

SWG-PM02 **
POWER MONITOR
IP: 10.10.1.99

32M0101 **

32M0103 **

32M0102 **

32M0104 **

MCC-35 (LINK 1) **
70B1101
70B0101
(LINK 2) **
70B1102
70B0102

INTERCHANGE REACTOR
BLOWER BUILDING

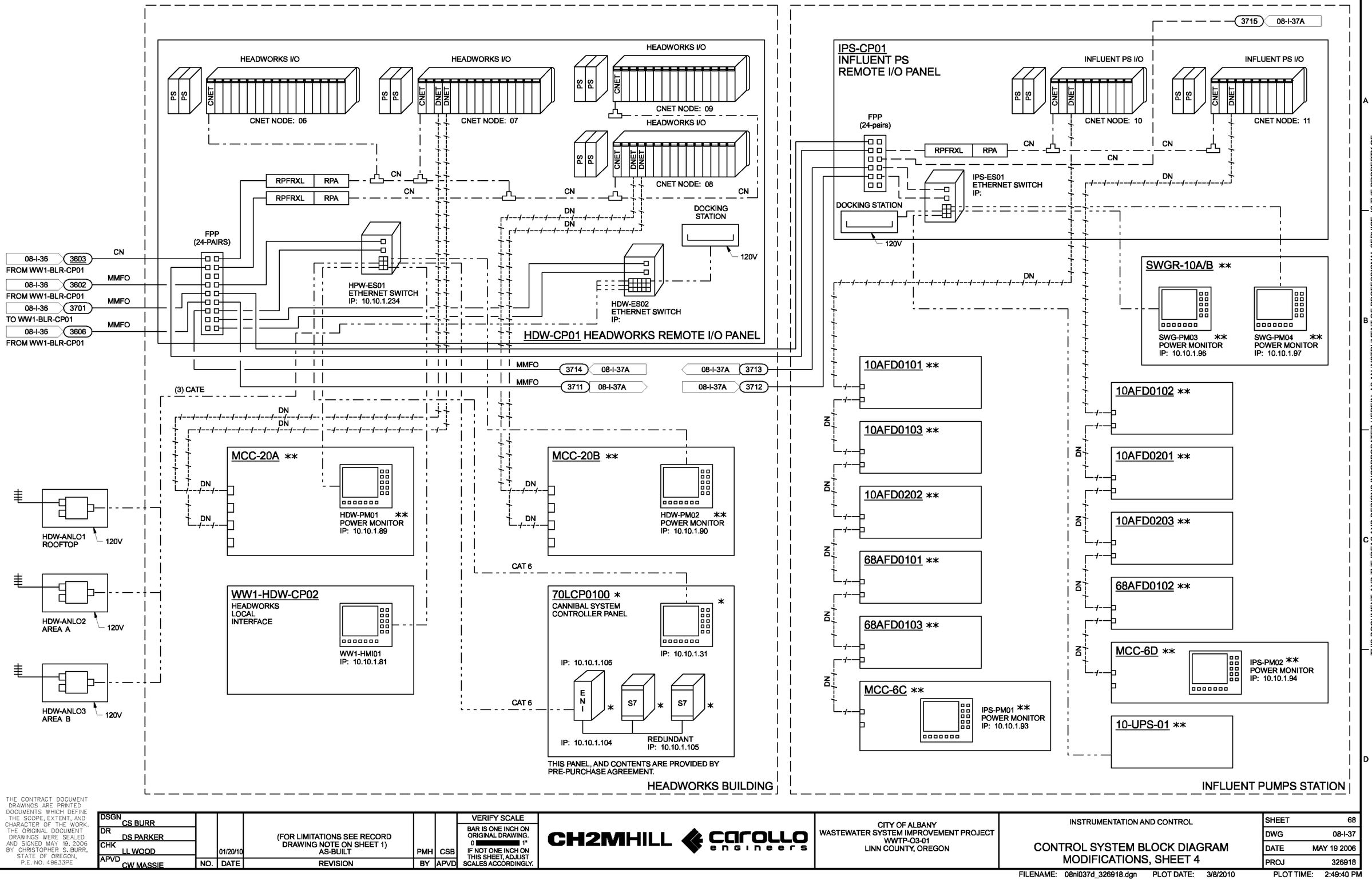
AERATION BLOWER BUILDING

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN CS BURR						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON	INSTRUMENTATION AND CONTROL	SHEET 67
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.		CONTROL SYSTEM BLOCK DIAGRAM MODIFICATIONS, SHEET 3	DWG 08-I-36
CHK LL WOOD									DATE MAY 19 2006
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD				PROJ 326918
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB				

CH2MHILL carollo engineers

FILENAME: 08ni036d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:35 PM



THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	CS BURR						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD						
APVD	CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
		NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

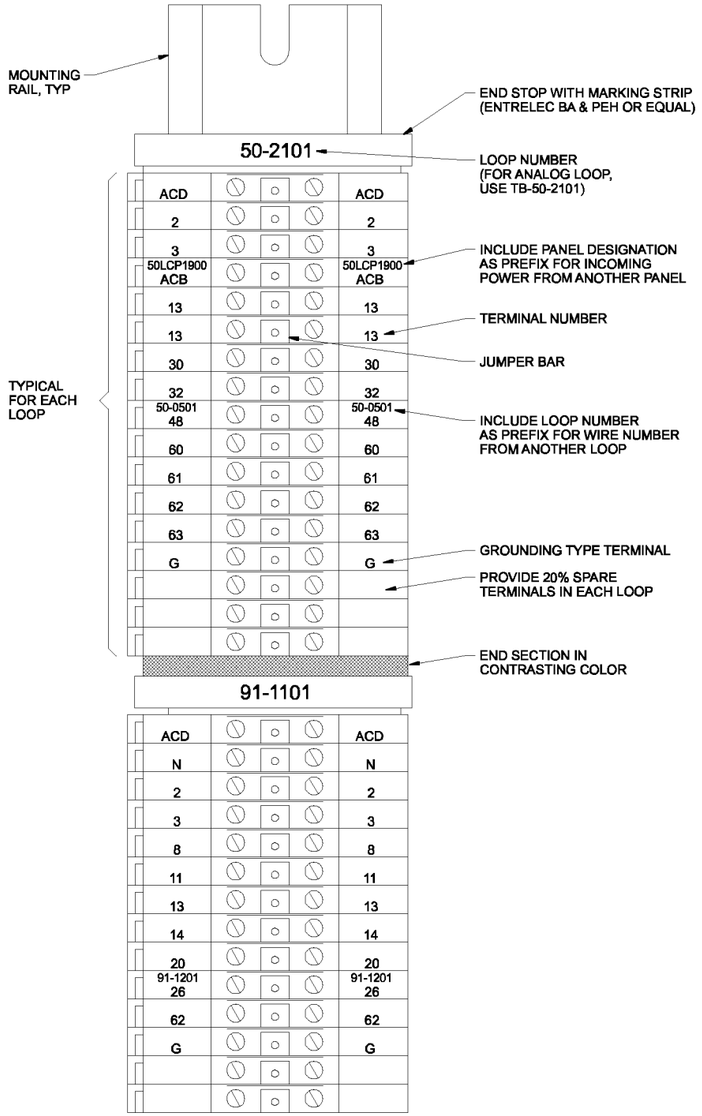
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL

CONTROL SYSTEM BLOCK DIAGRAM
MODIFICATIONS, SHEET 4

SHEET	68
DWG	08-I-37
DATE	MAY 19 2006
PROJ	326918

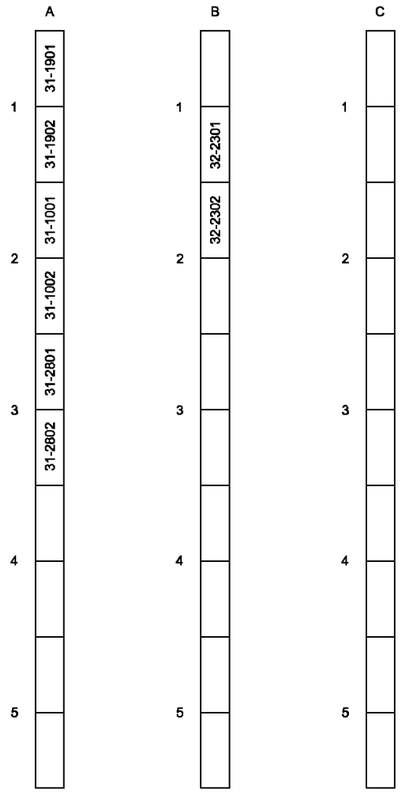
FILENAME: 08ni037d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:40 PM



TYPICAL TERMINAL BLOCK MARKING

NTS

TERMINAL BLOCK ARRANGEMENT



TERMINAL BLOCK LOCATION CODE

LOOP	LOCATION
31-1901	A1
31-1902	A1
31-1001	A2
31-1002	A2
31-2801	A3
31-2802	A3
32-2301	B1
32-2302	B2

TYPICAL TERMINAL MATRIX ARRANGEMENT TO BE PROVIDED BY CONTRACTOR

NTS

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DSGN CS BURR						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	

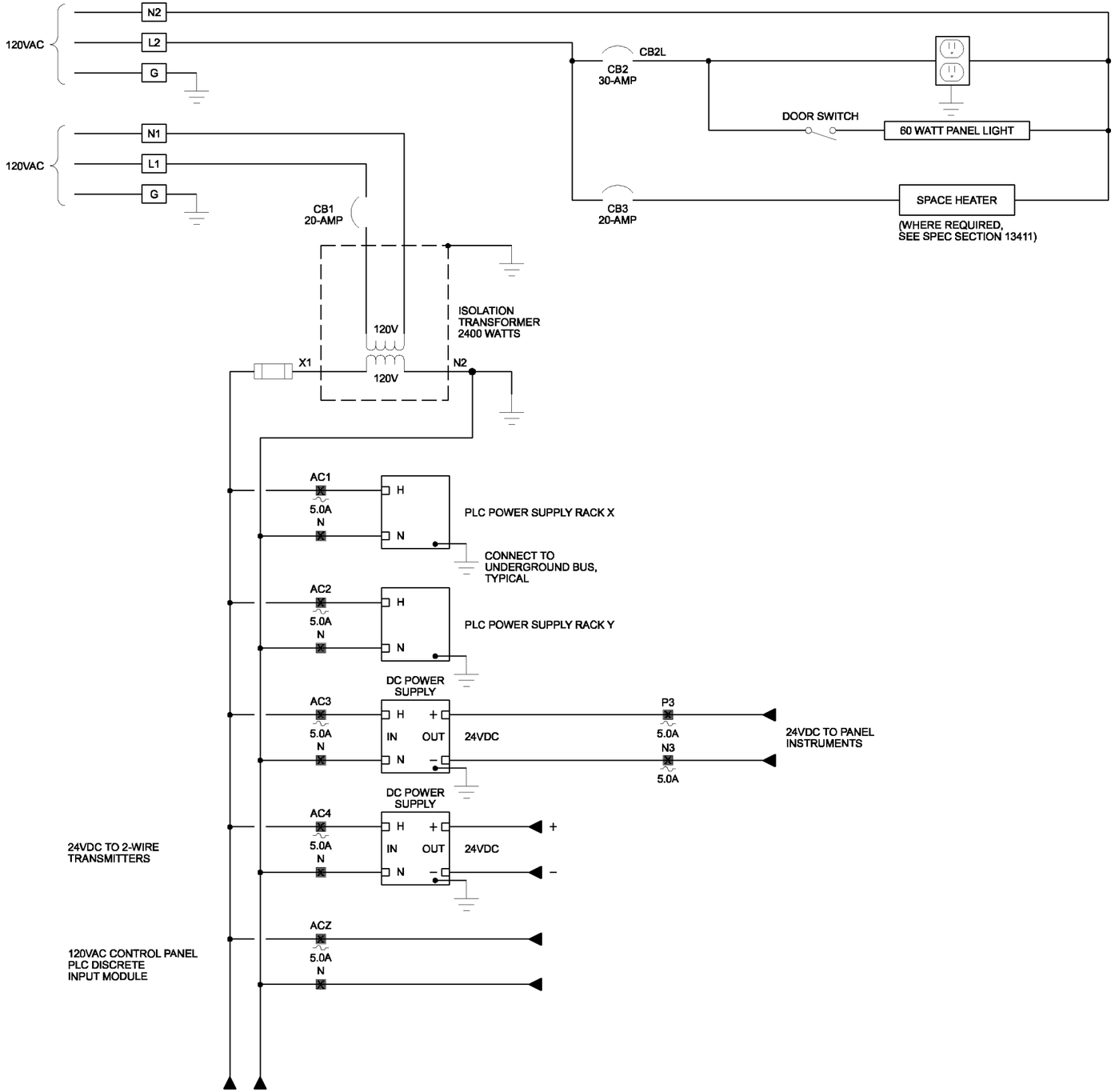
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
TYPICAL TERMINAL BLOCK MARKING AND LAYOUT

SHEET	69
DWG	08-I-38
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni038d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:44 PM



THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN CS BURR						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
	1	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	

CH2MHILL carollo engineers

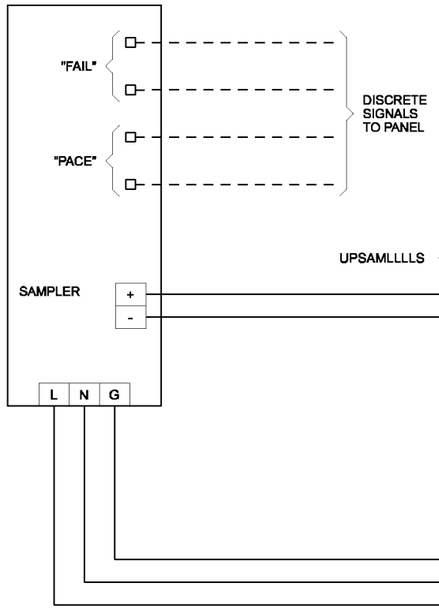
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
TYPICAL PANEL POWER
DISTRIBUTION

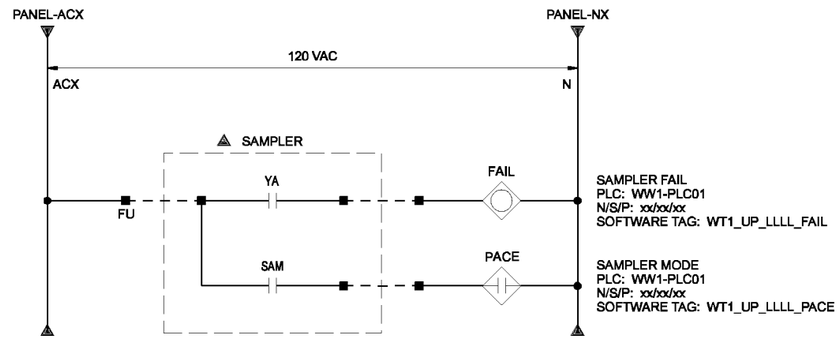
SHEET	70
DWG	08-I-39
DATE	MAY 19 2006
PROJ	326918

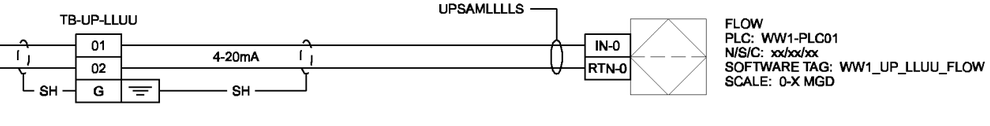
FILENAME: 08ni039d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:47 PM

FIELD

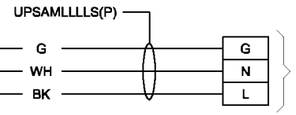


PANEL





FTJB



LOOP	LOOP DESCRIPTION	PANEL	SIT	EXCEPTIONS
20-0001	RAW SEWAGE COMPOSITE SAMPLER	HDW-CP01	WW1	
07-0121	LAB BOTTLE SAMPLER	IPS-CP01	WW1	FAIL ALARM ONLY

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DSGN	CS BURR						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM SAMPLER

SHEET	71
DWG	08-I-40
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni040d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:51 PM

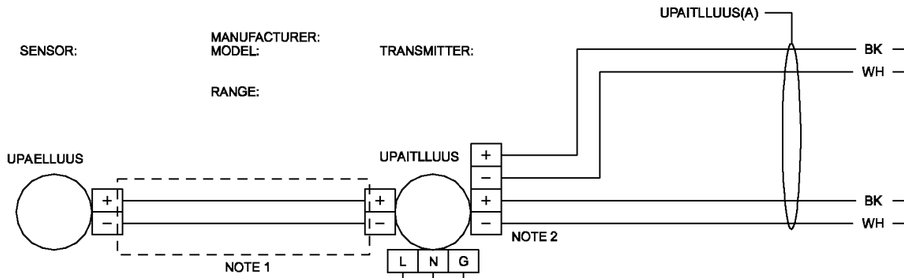
FIELD

SENSOR:

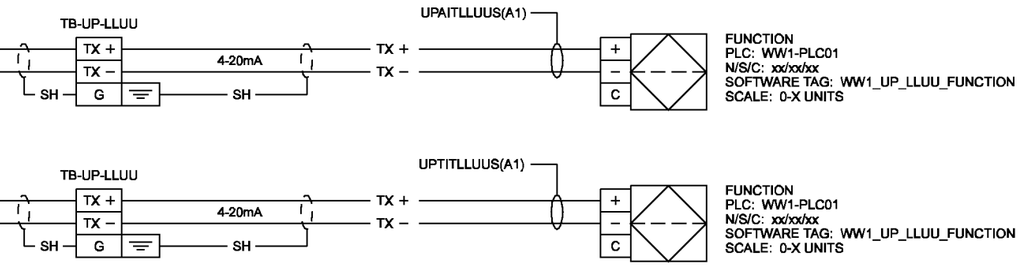
MANUFACTURER:
MODEL:

TRANSMITTER:

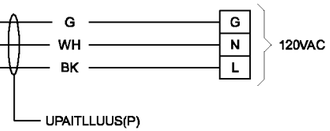
RANGE:



PANEL



FTJB



LOOP	LOOP DESCRIPTION	FUNCTION	PANEL	EXCEPTIONS
30-4111	VLR 1B DISSOLVED OXYGEN	DO	BLR-CP01	
30-4112	VLR 2B DISSOLVED OXYGEN	DO	BLR-CP01	
30-4121	VLR 1C DISSOLVED OXYGEN	DO	BLR-CP01	
30-4122	VLR 2C DISSOLVED OXYGEN	DO	BLR-CP01	
30-4131	VLR 1D DISSOLVED OXYGEN	DO	BLR-CP01	
30-4132	VLR 2D DISSOLVED OXYGEN	DO	BLR-CP01	
60-3001	CHLORINE CONTACT BASIN 1 CHLORINE RESIDUAL	CL2	IPS-CP01	
60-3002	CHLORINE CONTACT BASIN 2 CHLORINE RESIDUAL	CL2	IPS-CP01	
70-3001	INTERCHANGE REACTOR 1 pH	pH	BLR-CP01	
70-3002	INTERCHANGE REACTOR 2 pH	pH	BLR-CP01	
75-3001	AEROBIC DIGESTER 1 DISSOLVED OXYGEN	DO	BLR-CP01	
75-3002	AEROBIC DIGESTER 2 DISSOLVED OXYGEN	DO	BLR-CP01	
07-3001	FLOW CONTROL STRUCTURE CHLORINE	CL2	IPS-CP01	
07-3011	FLOW CONTROL STRUCTURE PH/TEMPERATURE	pH/TEMP	IPS-CP01	TEMPERATURE
07-3021	FLOW CONTROL STRUCTURE CONDUCTIVITY	COND	IPS-CP01	
55-4511	RAS SPLITTER BOX MLSS	MLSS	VLR-CP01	
30-4411	VLR TRAIN 1 ORP	ORP	BLR-CP01	
30-4412	VLR TRAIN 2 ORP	ORP	BLR-CP01	
30-4511	VLR TRAIN 1 MLSS	MLSS	BLR-CP01	
30-4512	VLR TRAIN 2 MLSS	MLSS	BLR-CP01	
70-3111	INTERCHANGE REACTOR 1 ORP	ORP	BLR-CP01	
70-3112	INTERCHANGE REACTOR 2 ORP	ORP	BLR-CP01	

NOTES:
1. WIRE INTERFACE BETWEEN TRANSMITTER AND ELEMENT IS BASED ON A NAMED MANUFACTURER MODEL. INTERFACE WIRING MAY VARY DEPENDING ON MANUFACTURED PRODUCT.
2. MULTIPLE OUTPUTS ARE AVAILABLE ON SPECIFIC INSTRUMENTS. REFER TO COMPONENT SPECIFICATIONS, AND DRAWINGS, AND NOTES EXCEPTIONS.

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DSGN CS BURR						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	PMH BY	CSB APVD	

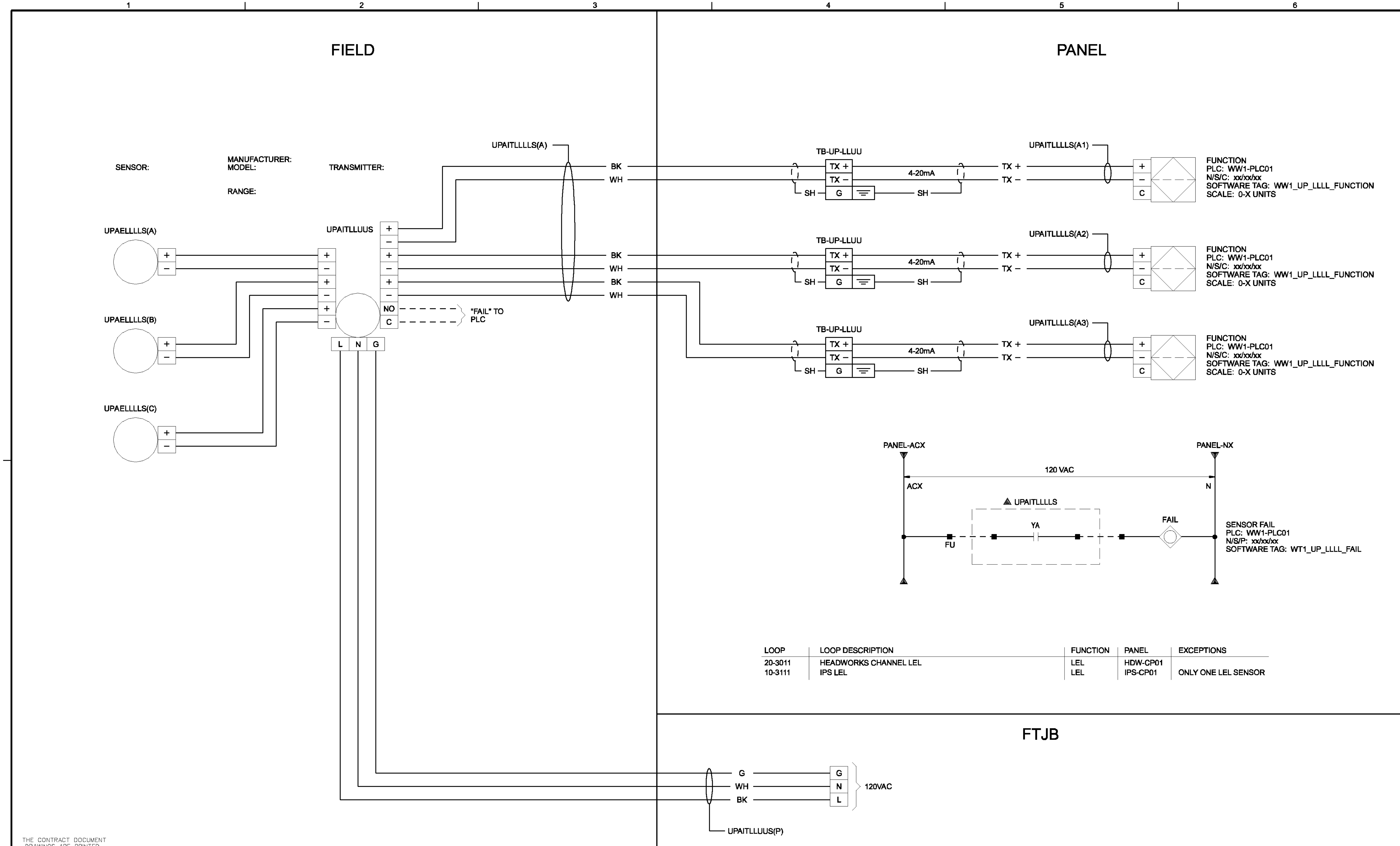
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM ANALYZER TYPICAL ANALOG LOOP

SHEET	72
DWG	08-I-41
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni041d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:54 PM



LOOP	LOOP DESCRIPTION	FUNCTION	PANEL	EXCEPTIONS
20-3011	HEADWORKS CHANNEL LEL	LEL	HDW-CP01	
10-3111	IPS LEL	LEL	IPS-CP01	ONLY ONE LEL SENSOR

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DSGN CS BURR
DR DS PARKER
CHK LL WOOD
APVD CW MASSIE

NO.	DATE	REVISION	BY	APVD
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
COMBUSTIBLE GAS AND FIRE ALARM PANEL
TYPICAL WIRING

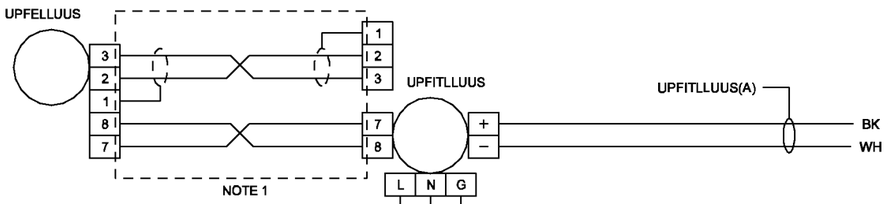
SHEET 73
DWG 08-I-42
DATE MAY 19 2006
PROJ 326918

FILENAME: 08nl042d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:49:58 PM

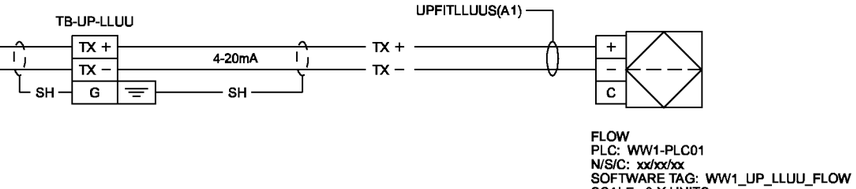
FIELD

MANUFACTURER:
MODEL: SENSOR:

RANGE:

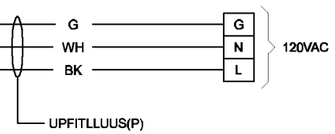


PANEL



FLOW
PLC: WW1-PLC01
N/S/C: xx/xx/xx
SOFTWARE TAG: WW1_UP_LLUU_FLOW
SCALE: 0-X UNITS

FTJB



LOOP	LOOP DESCRIPTION	PANEL	SIT
10-3011	WET PIT UNFLUENT FLOW	HDW-CP01	WW1
10-3301	DRY PIT INFLUENT FLOW	HDW-CP01	WW1
50-3011	SECONDARY CLARIFIER 1 RAS FLOW	HDW-CP01	WW1
50-3012	SECONDARY CLARIFIER 2 RAS FLOW	HDW-CP01	WW1
50-3013	SECONDARY CLAIRIFER 3 RAS FLOW	HDW-CP01	WW1
54-3001	RAS SCREEN 1 INLET FLOW	HDW-CP01	WW1
54-3002	RAS SCREEN 2 INLET FLOW	HDW-CP01	WW1
54-3003	RAS SCREEN 3 INLET FLOW	HDW-CP01	WW1
54-3101	SRAS FLOW TO INTERCHANGE REACTORS	HDW-CP01	WW1
54-3102	SRAS FLOW TO AEROBIC DIGESTERS	HDW-CP01	WW1
60-3021	COMBINED SECONDARY EFF. FLOW	IPS-CP01	WW1
67-3021	HOT WATER SUPPLY FLOW	HDW-CP01	WW1
68-3001	W3 DISCHARGE FLOW	IPS-CP01	WW1
70-3141	INTERCHANGE REACTOR DISCHARGE FLOW	BLR-CP01	WW1
68-3021	HOT WATER HEATER W3 SUPPLY FLOW	HDW-CP01	WW1

NOTES:
1. WIRE INTERFACE BETWEEN TRANSMITTER AND ELEMENT IS BASED ON A NAMED MANUFACTURER MODEL. INTERFACE WIRING MAY VARY DEPENDING ON MANUFACTURED PRODUCT.

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DSGN CS BURR						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	CSB APVD	
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH		

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
FLOW (ELECTROMAGNETIC) TYPICAL ANALOG LOOP

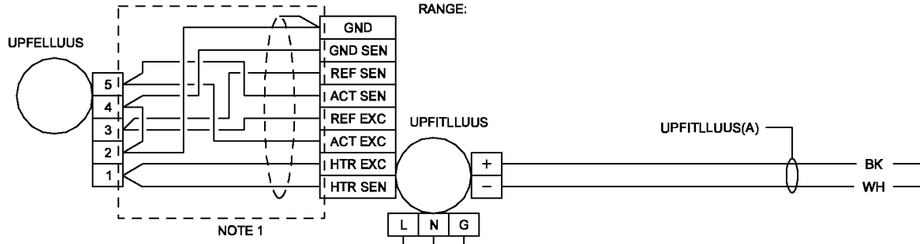
SHEET	74
DWG	08-I-43
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni043d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:02 PM

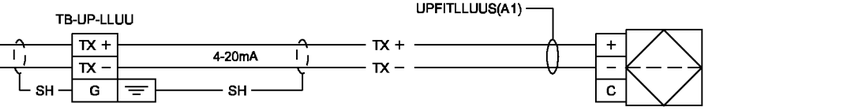
FIELD

MANUFACTURER:
MODEL: SENSOR:

RANGE:

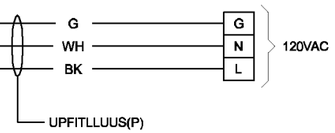


PANEL



FLOW
PLC: WW1-PLC01
N/S/C: xx/xx/xx
SOFTWARE TAG: WW1_UP_LLUU_FLOW
SCALE: 0-X UNITS

FTJB



LOOP	LOOP DESCRIPTION	PANEL	SIT
30-4011	VLR 1B AERATION FLOW	BLR-CP01	WW1
30-4012	VLR 2B AERATION FLOW	BLR-CP01	WW1
30-4021	VLR 1C AERATION FLOW	BLR-CP01	WW1
30-4022	VLR 2C AERATION FLOW	BLR-CP01	WW1
30-4031	VLR 1D AERATION FLOW	BLR-CP01	WW1
30-4032	VLR 2D AERATION FLOW	BLR-CP01	WW1
77-3211	AIR FLOW TO AEROBIC DIGESTER 1	BLR-CP01	WW1
77-3212	AIR FLOW TO AEROBIC DIGESTER 2	BLR-CP01	WW1
77-3213	AIR FLOW TO INTERCHANGE REACTOR 1	BLR-CP01	WW1
77-3214	AIR FLOW TO INTERCHANGE REACTOR 2	BLR-CP01	WW1

NOTES:
1. WIRE INTERFACE BETWEEN TRANSMITTER AND ELEMENT IS BASED ON A NAMED MANUFACTURER MODEL. INTERFACE WIRING MAY VARY DEPENDING ON MANUFACTURED PRODUCT.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

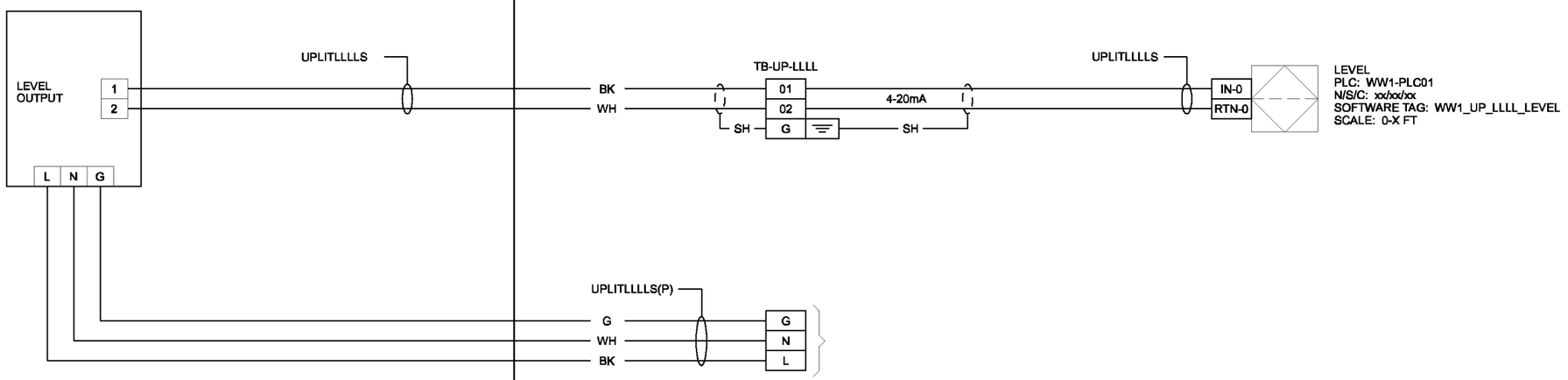
INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
FLOW (THERMAL MASS) TYPICAL
ANALOG LOOP

SHEET	75
DWG	08-I-44
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni044d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:05 PM

FIELD

PANEL



LOOP	LOOP DESCRIPTION	PANEL	SIT	EXCEPTIONS
10-3001	WET PIT WET WELL LEVEL 1	HDW-CP01	WW1	
10-3002	WET PIT WET WELL LEVEL 2	HDW-CP01	WW1	
10-3041	DRY PIT WET WELL LEVEL	HDW-CP01	WW1	

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN CS BURR							VERIFY SCALE
DR DS PARKER							BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB		IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD		

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL

WIRING DIAGRAM LEVEL (BUBBLER SYSTEM) TYPICAL ANALOG LOOP

SHEET	76
DWG	08-I-45
DATE	MAY 19 2006
PROJ	326918

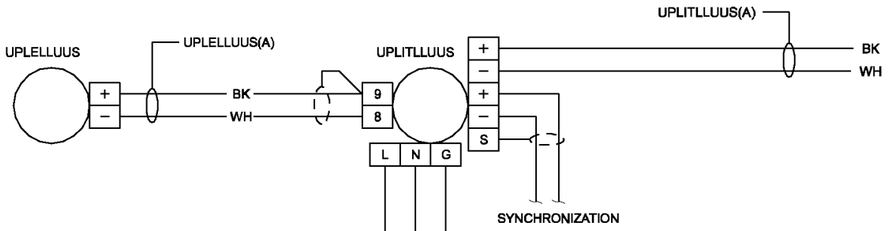
FILENAME: 08ni045d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:08 PM

FIELD

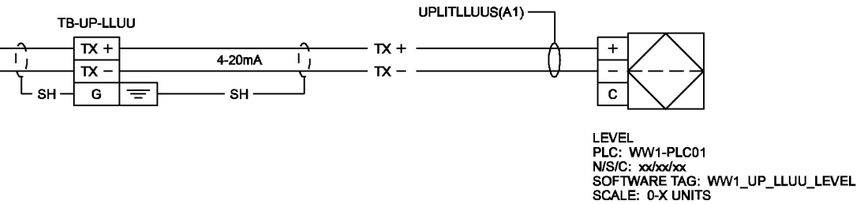
MANUFACTURER:
MODEL:

SENSOR:
TRANSMITTER:

RANGE:
LSHH:
LSH:
LSL:
LSLL:

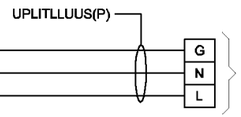


PANEL



LEVEL
PLC: WW1-PLC01
N/S/C: xx/xx/xx
SOFTWARE TAG: WW1_UP_LLUU_LEVEL
SCALE: 0-X UNITS

FTJB



LOOP	LOOP DESCRIPTION	PANEL	SIT
20-3001	HEADWORKS INLET CHANNEL LEVEL	HDW-CP01	WW1
20-3002	HEADWORKS DISCHARGE CHANNEL LEVEL	HDW-CP01	WW1
20-3501	VORTEX SEPARATOR EFFLUENT CHANNEL LEVEL	HDW-CP01	WW1
22-3011A	SCREENING DUMPSTER FULL	HDW-CP01	WW1
22-3011B	SCREENING DUMPSTER FULL	HDW-CP01	WW1
24-3021A	GRIT DUMPSTER FULL	HDW-CP01	WW1
24-3021B	GRIT DUMPSTER FULL	HDW-CP01	WW1
30-4001	VLR 1 EFFLUENT CHANNEL LEVEL	VLR-CP01	WW1
30-4002	VLR 2 EFFLUENT CHANNEL LEVEL	VLR-CP01	WW1
30-4201	MIXED LIQUOR DROP BOX	VLR-CP01	WW1
30-4311	VLR BASIN 1B LEVEL	VLR-CP01	WW1
30-4312	VLR BASIN 2B LEVEL	VLR-CP01	WW1
30-4321	VLR BASIN 1C LEVEL	VLR-CP01	WW1
30-4322	VLR BASIN 2C LEVEL	VLR-CP01	WW1
30-4331	VLR BASIN 1D LEVEL	VLR-CP01	WW1
30-4332	VLR BASIN 2D LEVEL	VLR-CP01	WW1
50-3021	SECONDARY CLARIFIER 1 RAS LEVEL	HDW-CP01	WW1
50-3022	SECONDARY CLARIFIER 2 RAS LEVEL	HDW-CP01	WW1
50-3023	SECONDARY CLARIFIER 3 RAS LEVEL	HDW-CP01	WW1
55-3001	RAS SPLITTER BOX	VLR-CP01	WW1
60-3021	CHLORINE CONTACT BASIN 1 LEVEL	IPS-CP01	WW1
60-3022	CHLORINE CONTACT BASIN 2 LEVEL	IPS-CP01	WW1
70-3111	INTERCHANGE REACTOR 1 LEVEL	BLR-CP01	WW1
70-3112	INTERCHANGE REACTOR 2 LEVEL	BLR-CP01	WW1
70-3131	INTERCHANGE REACTOR PUMP WETWELL LEVEL	BLR-CP01	WW1
75-3011	AEROBIC DIGESTER 1 LEVEL	BLR-CP01	WW1
75-3012	AEROBIC DIGESTER 2 LEVEL	BLR-CP01	WW1
75-3121	AEROBIC DIGESTER TRANSFER WETWELL LEVEL	BLR-CP01	WW1

DSGN CS BURR						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE		01/20/10	AS-BUILT	PMH	CSB	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
LEVEL (ULTRASONIC) TYPICAL
ANALOG LOOP

SHEET	77
DWG	08-I-46
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni046d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:11 PM

FIELD

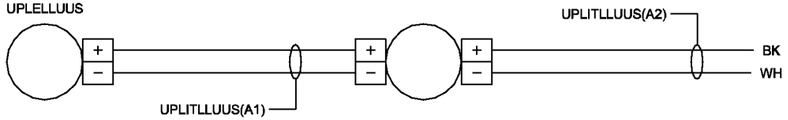
MANUFACTURER:
MODEL:

SENSOR:

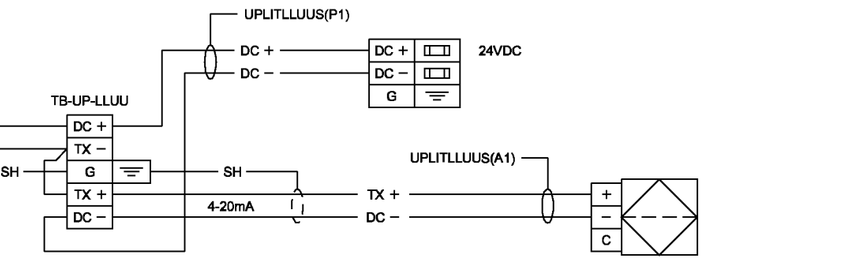
TRANSMITTER/
INDICATOR:

RANGE:

UPLELLUUS



PANEL



LEVEL
PLC: WW1-PLC01
N/S/C: xx/xx/xx
SOFTWARE TAG: WW1_UP_LLUU_LEVEL
SCALE: 0-X UNITS

LOOP	LOOP DESCRIPTION	PANEL	SIT
38-3001	VLR SCUM PIT LEVEL	VLR-CP01	WW2
45-3001	SECONDARY CLARIFIER 1 SCUM PIT LEVEL	HDW-CP01	WW2
45-3002	SECONDARY CLARIFIER 2 SCUM PIT LEVEL	HDW-CP01	WW2
45-3003	SECONDARY CLARIFIER 3 SCUM PIT LEVEL	HDW-CP01	WW2

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DSGN	CS BURR					VERIFY SCALE
DR	DS PARKER					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL

WIRING DIAGRAM
LEVEL (SUBMERSIBLE) TYPICAL ANALOG LOOP

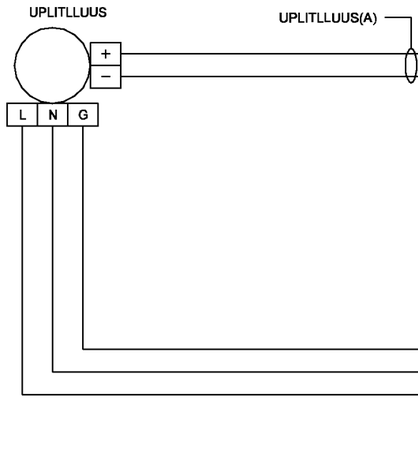
SHEET	78
DWG	08-I-47
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni047d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:15 PM

FIELD

MANUFACTURER:
MODEL: SENSOR:

RANGE:



UPLITLLUUS(A)

BK
WH

PANEL

TB-UP-LLUU

TX +
TX –
G

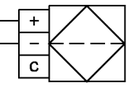
SH

4-20mA

SH

UPLITLLUUS(A1)

TX +
TX –



LEVEL
PLC: WW1-PLC01
N/S/C: xx/xx/xx
SOFTWARE TAG: WW1_UP_LLUU_LEVEL
SCALE: 0-X UNITS

FTJB

G
WH
BK

G
N
L

120VAC

UPLITLLUUS(P)

LOOP	LOOP DESCRIPTION	PANEL	SIT
70-3111	INTERCHANGE REACTOR 1 LEVEL	BLR-CP01	WW1
70-3112	INTERCHANGE REACTOR 2 LEVEL	BLR-CP01	WW1
70-3131	INTERCHANGE REACTOR PUMP WETWELL LEVEL	BLR-CP01	WW1
72-3011	AEROBIC DIGESTER 1 LEVEL	BLR-CP01	WW1
72-3012	AEROBIC DIGESTER 2 LEVEL	BLR-CP01	WW1
72-3121	AEROBIC DIGESTER TRANSFER WETWELL LEVEL	BLR-CP01	WW1

NOTES:
1. WIRE INTERFACE BETWEEN TRANSMITTER AND ELEMENT IS BASED ON A NAMED MANUFACTURER MODEL. INTERFACE WIRING MAY VARY DEPENDING ON MANUFACTURED PRODUCT.

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DSGN CS BURR						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
LEVEL (RADAR) TYPICAL
ANALOG LOOP

SHEET	79
DWG	08-I-48
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni048d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:18 PM

FIELD

MANUFACTURER:
MODEL:

SENSOR:
TRANSMITTER:

RANGE:
LSHH:
LSH:
LSL:
LSLL:

UPLELLUUS

UPLELLUUS(A)

BK
WH

9
8

UPLITLLUUS

L N G

UPLITLLUUS(A)

4-20mA

BK
WH

UPLILLUUS(A)

4-20mA

BK
WH

PANEL 2

TB-UP-LLUU

TX +
TX –
S

SH

4-20mA

TX +
TX –

SH

UPLITLLUUS(A1)

+
–
C

LEVEL
PLC: WW1-PLC01
N/S/C: xx/xx/xx
SOFTWARE TAG: WW1_UP_LLUU_LEVEL
SCALE: 0-X UNITS

TB-UP-LLUU

TX +
TX –
S

SH

4-20mA

TX +
TX –

SH

UPLILLUUS(A1)

+
–
C

LEVEL (RE-TRANSMITTED)
PLC: WW1-PLC01
N/S/C: xx/xx/xx
SOFTWARE TAG: WW1_UP_LLUU_LEVELRTX
SCALE: 0-X UNITS

FTJB

UPLITLLUUS(P)

G
WH
BK

G
N
L

120VAC

PANEL 1

UPLILLUUS

+
–

MANUFACTURER:
MODEL:
RANGE:

LOOP	LOOP DESCRIPTION	PANEL 1	PANEL 2
61-3011	SODIUM HYPOCHLORITE TANK 1 LEVEL	61LCP0100	IPS-CP01
61-3012	SODIUM HYPOCHLORITE TANK 2 LEVEL	61LCP0100	IPS-CP01

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DSGN	CS BURR						VERIFY SCALE
DR	GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
CHEMICAL TANK LEVEL TYPICAL ANALOG LOOP

SHEET	80
DWG	08-I-49
DATE	MAY 19 2006
PROJ	326918

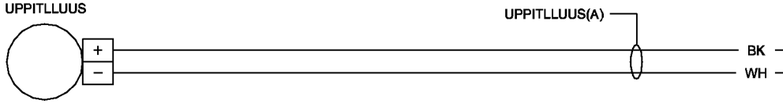
FILENAME: 08ni049d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:20 PM

FIELD

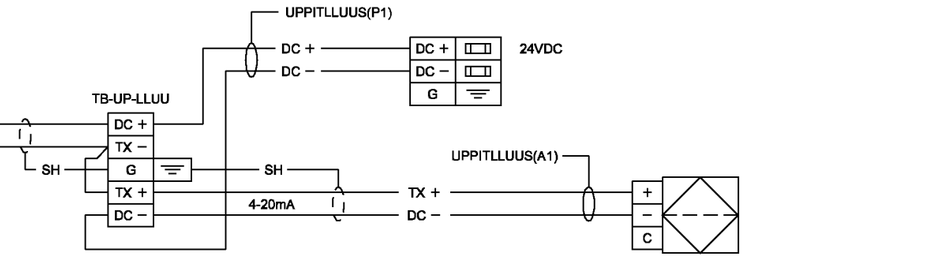
MANUFACTURER:
MODEL: SENSOR:

RANGE:

UPPITLLUUS



PANEL



PRESSURE
PLC: WW1-PLC01
N/S/C: xx/xx/xx
SOFTWARE TAG: WW1_UP_LLUU_PRESSURE
SCALE: 0-X UNITS

LOOP	LOOP DESCRIPTION	PANEL	SIT
24-3001	GRIT CYCLONE 1 PRESSURE	HDW-CP01	WW1
24-3002	GRIT CYCLONE 2 PRESSURE	HDW-CP01	WW1
24-3011	GRIT CYCLONE 4 PRESSURE	HDW-CP01	WW1
24-3012	GRIT CYCLONE 3 PRESSURE	BLR-CP01	WW1
32-3201	AERATION BLOWER HEADER PRESSURE	HDW-CP01	WW1
54-3014	RAS SCREEN BYPASS PRESSURE	HDW-CP01	WW1
67-3011	HOT WATER SYSTEM PRESSURE	IPS-CP01	WW1
68-3011	W3 HEADER PRESSURE	BLR-CP01	WW1
75-3101	AEROBIC DIGESTER DISCHARGE PUMP PRESSURE	HDW-CP01	WW1

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DSGN CS BURR						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL

WIRING DIAGRAM PRESSURE TYPICAL ANALOG LOOP

SHEET	81
DWG	08-I-50
DATE	MAY 19 2006
PROJ	326918

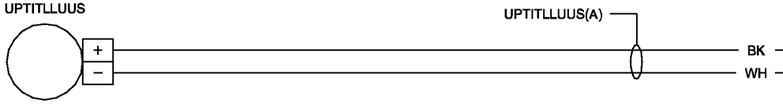
FILENAME: 08ni050d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:24 PM

FIELD

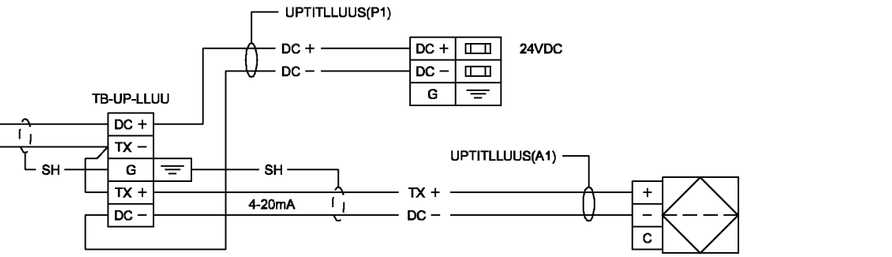
MANUFACTURER:
MODEL: SENSOR:

RANGE:

UPTITLLUUS



PANEL



TEMPERATURE
PLC: WW1-PLC01
N/S/C: xx/xx/xx
SOFTWARE TAG: WW1_UP_LLUU_TEMP
SCALE: 0-X UNITS

LOOP	LOOP DESCRIPTION	PANEL	SIT
32-3111	AERATION BLOWER 1 INLET TEMPERATURE	BLR-CP01	WW1
32-3112	AERATION BLOWER 2 INLET TEMPERATURE	BLR-CP01	WW1
32-3113	AERATION BLOWER 3 INLET TEMPERATURE	BLR-CP01	WW1
32-3114	AERATION BLOWER 4 INLET TEMPERATURE	BLR-CP01	WW1
68-3031	HOT WATER SYSTEM TEMPERATURE	HDW-CP01	WW1

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DSGN CS BURR						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

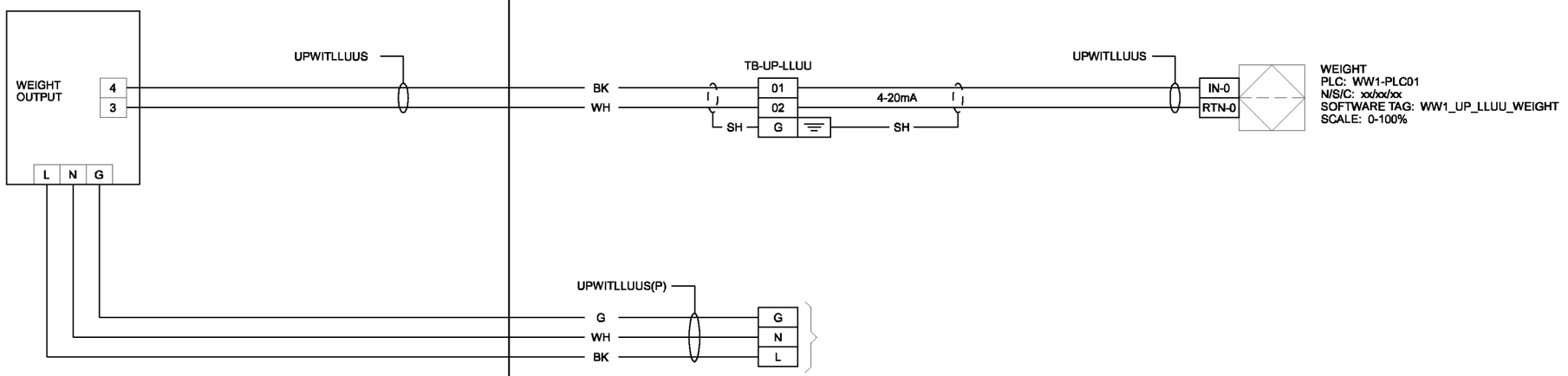
INSTRUMENTATION AND CONTROL
WIRING DIAGRAM TEMPERATURE TYPICAL ANALOG LOOP

SHEET	82
DWG	08-I-51
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni051d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:27 PM

FIELD

PANEL



LOOP	LOOP DESCRIPTION	PANEL	SIT
22-3021	SCREENINGS HOPPER WEIGHT	HDW-CP01	WW1
24-1101	GRIT HOPPER WEIGHT	HDW-CP01	WW1

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DSGN	CS BURR						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
		NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

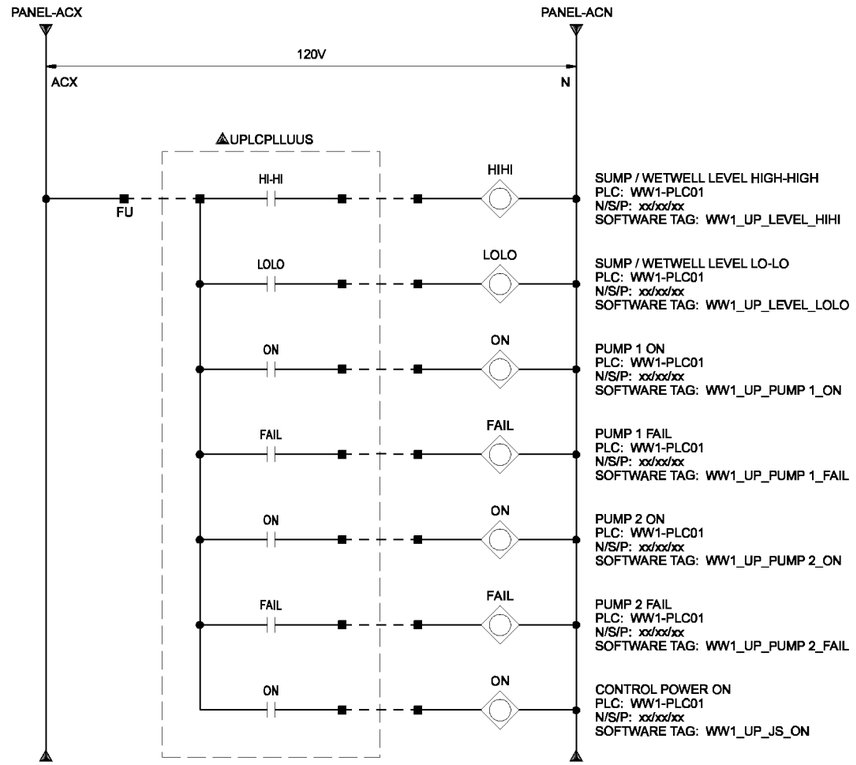
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
HOPPER WEIGHT TYPICAL
ANALOG LOOP

SHEET	83
DWG	08-I-52
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni052d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:29 PM

PANEL



LOOP	LOOP DESCRIPTION	PANEL	LEVEL	PUMP 1	PUMP 2	JS
20-2000	HEADWORKS SUMP PUMPS	HDW-CP01	3301	2001	2002	2000

DSGN	CS BURR						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

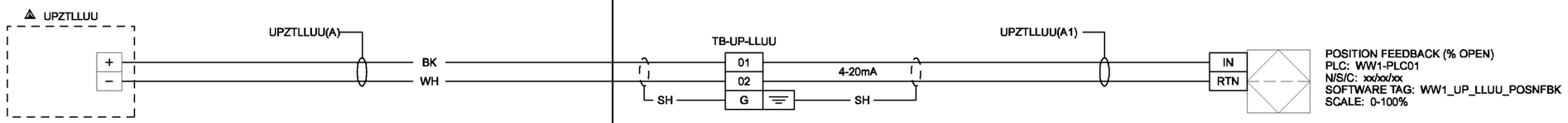
INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
HEADWORKS SUMP PUMP
TYPICAL DISCRETE LOOP

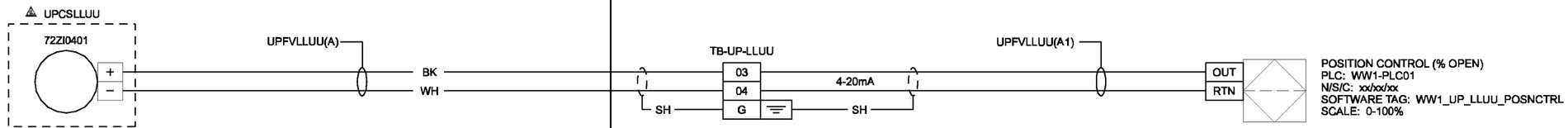
SHEET	84
DWG	08-I-53
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni053d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:32 PM

FIELD

PANEL





LOOP	LOOP DESCRIPTION	PANEL	SIT	EXCEPTIONS
30-6511	VLR 1B AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
30-6512	VLR 2B AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
30-6521	VLR 1C AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
30-6522	VLR 2C AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
30-6531	VLR 1D AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
30-6532	VLR 2D AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
54-6001	RAS SCREEN 1 FLOW CONTROL VALVE	HDW-CP01	WW1	
54-6002	RAS SCREEN 2 FLOW CONTROL VALVE	HDW-CP01	WW1	
54-6003	RAS SCREEN 3 FLOW CONTROL VALVE	HDW-CP01	WW1	
54-6004	RAS SCREEN BYPASS FLOW CONTROL VALVE	HDW-CP01	WW1	
54-6201	INTERCHANGE REACTOR SRAS FEED CONTROL VALVE	HDW-CP01	WW1	
54-6202	AEROBIC DIGESTER SRAS FEED CONTROL VALVE	HDW-CP01	WW1	

NOTES:

1. SEE MODULATING VALVE TYPICAL DISCRETE WIRING DIAGRAM FOR CONTINUATION.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	CS BURR						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL

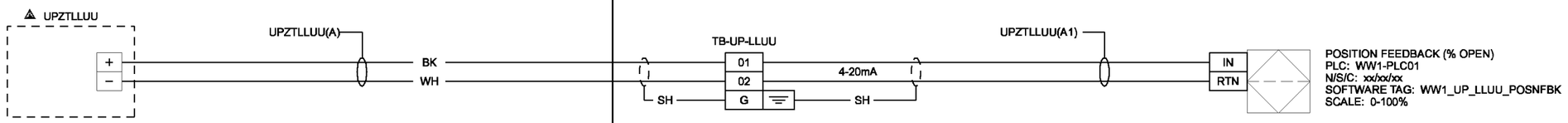
WIRING DIAGRAM MODULATING VALVE POSITION TYPICAL ANALOG LOOP

SHEET	85
DWG	08-I-54
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni054d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:35 PM

FIELD

PANEL



LOOP	LOOP DESCRIPTION	PANEL	SIT	EXCEPTIONS
20-0901	VLR FLOW SPLIT WEIR GATE 1	HDW-CP01	WW1	
20-0902	VLR FLOW SPLIT WEIR GATE 2	HDW-CP01	WW1	
30-2001	MIXED LIQUOR EFFLUENT LEVEL CONTROL GATE 1	VLR-CP01	WW1	
30-2002	MIXED LIQUOR EFFLUENT LEVEL CONTROL GATE 2	VLR-CP01	WW1	
38-0301	MIXED LIQUOR DROP BOX SCUM GATE	VLR-CP01	WW1	
55-0101	RAS FLOW SPLIT GATE 1	VLR-CP01	WW1	
55-0102	RAS FLOW SPLIT GATE 2	VLR-CP01	WW1	
30-0311	VLR 1B RAS INLET GATE	BLR-CP01	WW1	
30-0312	VLR 2B RAS INLET GATE	BLR-CP01	WW1	
30-0321	VLR 1C RAS INLET GATE	BLR-CP01	WW1	
30-0322	VLR 2C RAS INLET GATE	BLR-CP01	WW1	
30-0331	VLR 1D RAS INLET GATE	BLR-CP01	WW1	
30-0332	VLR 2D RAS INLET GATE	BLR-CP01	WW1	
30-0111	VLR 1B INLET GATE 1	BLR-CP01	WW1	
30-0211	VLR 1B INLET GATE 2	BLR-CP01	WW1	
30-0121	VLR 1C INLET GATE 1	BLR-CP01	WW1	
30-0221	VLR 1C INLET GATE 2	BLR-CP01	WW1	
30-0131	VLR 1D INLET GATE 1	BLR-CP01	WW1	
30-0231	VLR 1D INLET GATE 2	BLR-CP01	WW1	
30-0112	VLR 2B INLET GATE 1	BLR-CP01	WW1	
30-0212	VLR 2B INLET GATE 2	BLR-CP01	WW1	
30-0122	VLR 2C INLET GATE 1	BLR-CP01	WW1	
30-0222	VLR 2C INLET GATE 2	BLR-CP01	WW1	
30-0132	VLR 2D INLET GATE 1	BLR-CP01	WW1	
30-0232	VLR 2D INLET GATE 2	BLR-CP01	WW1	
30-1021	VLR 1C FLOW CONTROL GATE 1	VLR-CP01	WW1	
30-1031	VLR 1D FLOW CONTROL GATE 1	VLR-CP01	WW1	
30-1022	VLR 2C FLOW CONTROL GATE 1	VLR-CP01	WW1	
30-1032	VLR 2D FLOW CONTROL GATE 1	VLR-CP01	WW1	
30-1121	VLR 1C FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1131	VLR 1D FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1122	VLR 2C FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1132	VLR 2D FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1221	VLR 1C LEVEL CONTROL GATE	VLR-CP01	WW1	
30-1231	VLR 1D LEVEL CONTROL GATE	VLR-CP01	WW1	
30-1222	VLR 2C LEVEL CONTROL GATE	VLR-CP01	WW1	
30-1232	VLR 2D LEVEL CONTROL GATE	VLR-CP01	WW1	
30-1321	VLR TRAIN 1 CHANNEL FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1331	VLR TRAIN 1 CHANNEL FLOW CONTROL GATE 3	VLR-CP01	WW1	
30-1322	VLR TRAIN 2 CHANNEL FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1332	VLR TRAIN 2 CHANNEL FLOW CONTROL GATE 3	VLR-CP01	WW1	
60-0301	CHLORINE CONTACT BASIN 1 EFFLUENT GATE	IPS-CP01	WW1	
60-0302	CHLORINE CONTACT BASIN 2 EFFLUENT GATE	IPS-CP01	WW1	

NOTES:

1. SEE MODULATING GATE TYPICAL DISCRETE WIRING DIAGRAM FOR CONTINUATION.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
MODULATING GATE POSITION TYPICAL ANALOG LOOP

SHEET	86
DWG	08-I-55
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni055d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:39 PM

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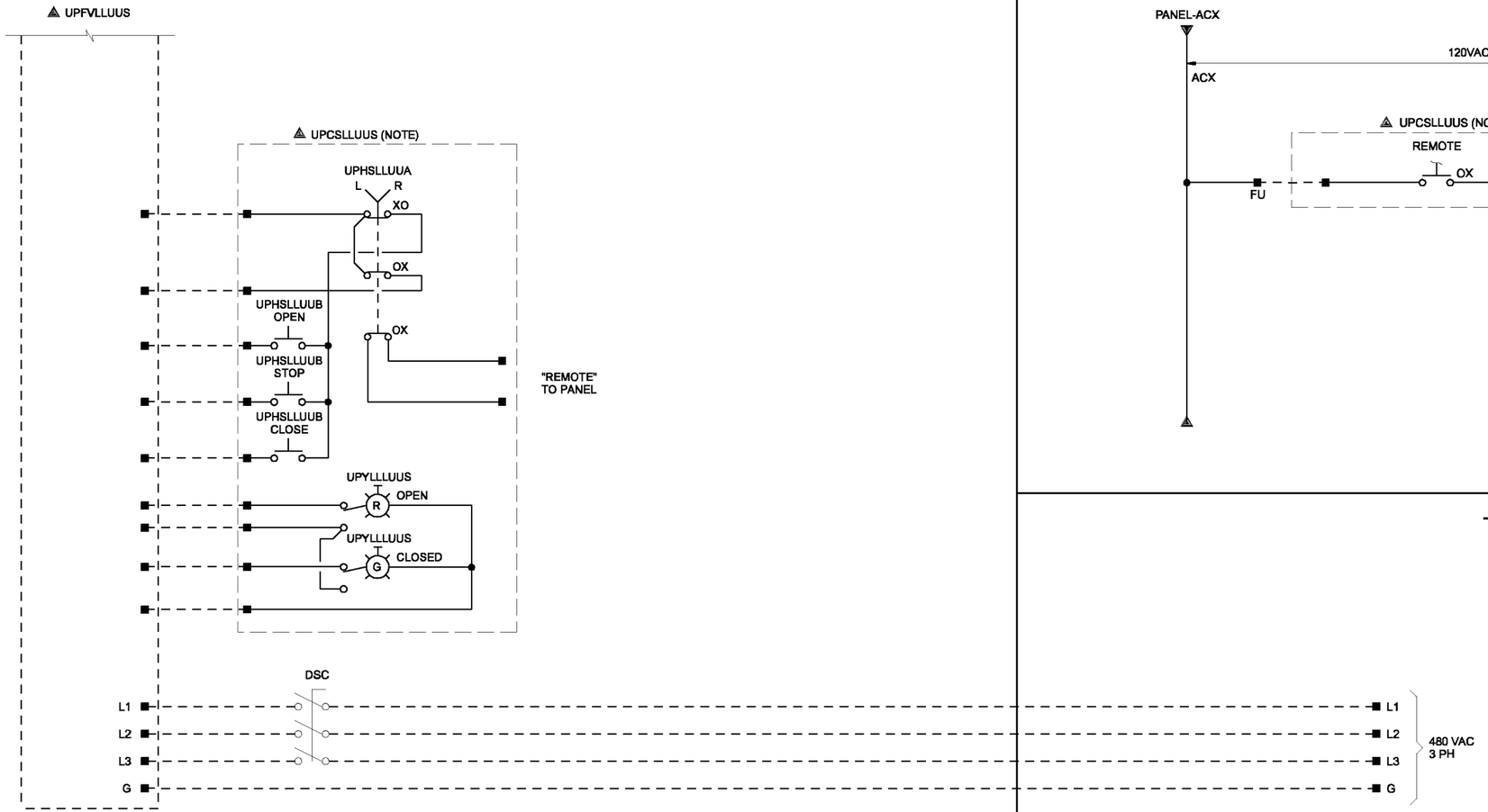
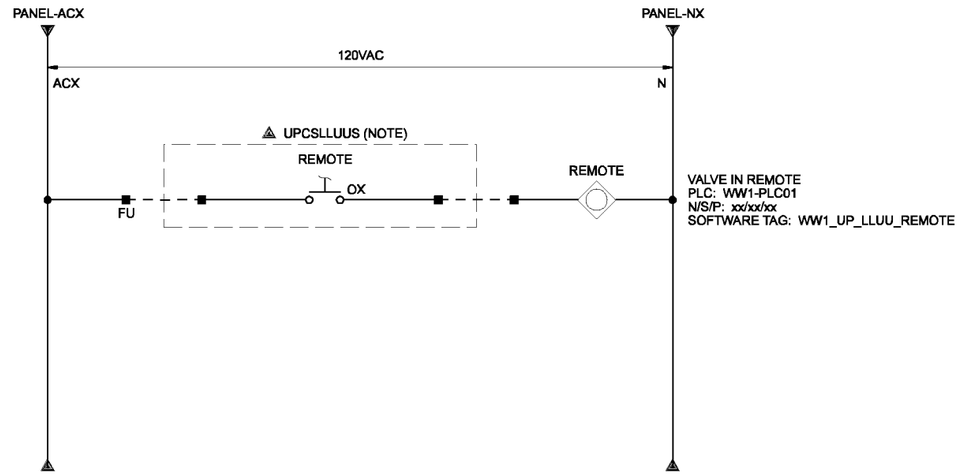


LOOP	LOOP DESCRIPTION	PANEL	SIT	EXCEPTIONS
54-6001	RAS SCREEN 1 FLOW CONTROL VALVE	HDW-CP01	WW1	
54-6002	RAS SCREEN 2 FLOW CONTROL VALVE	HDW-CP01	WW1	
54-6003	RAS SCREEN 3 FLOW CONTROL VALVE	HDW-CP01	WW1	
54-6004	RAS SCREEN BYPASS FLOW CONTROL VALVE	HDW-CP01	WW1	

PANEL



TJB

NOTE:

REMOTE CONTROLS ARE SHOWN.
WHERE CONTROLS ARE INTEGRAL
TO ACTUATOR, REFER TO 08-I-57.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	CS BURR					VERIFY SCALE
DR	DS PARKER					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT		
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
MODULATING VALVE TYPICAL
(REMOTE) DISCRETE LOOP

SHEET	87
DWG	08-I-56
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni056d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:43 PM

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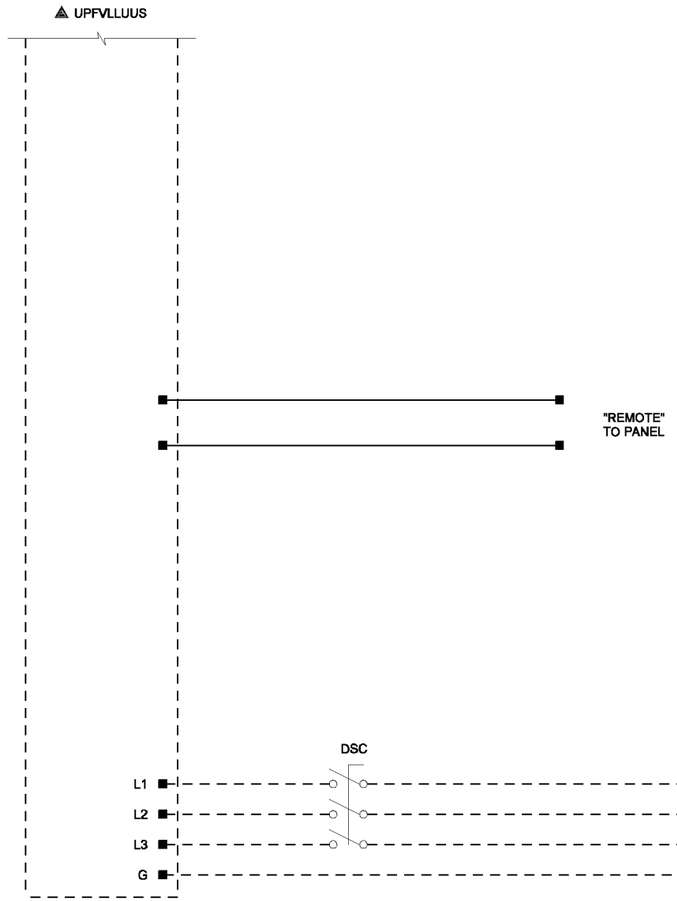
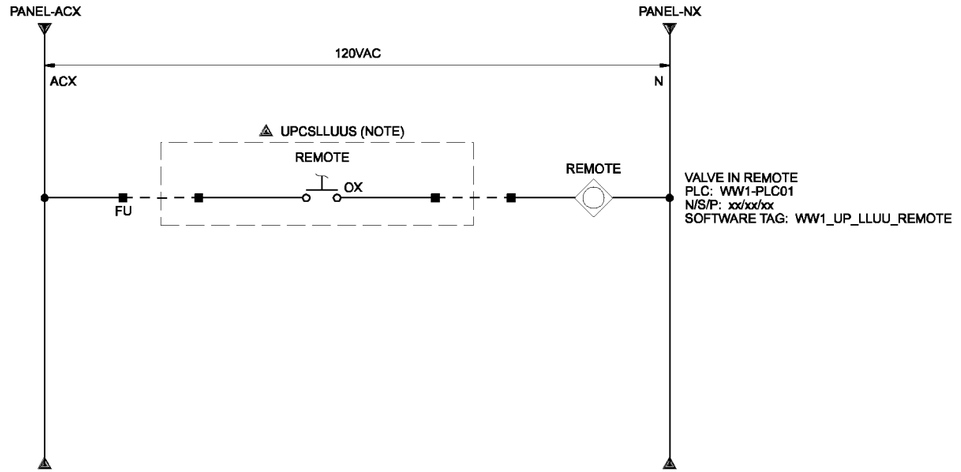


PANEL



TJB

LOOP	LOOP DESCRIPTION	PANEL	SIT	EXCEPTIONS
30-6511	VLR 1B AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
30-6512	VLR 2B AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
30-6521	VLR 1C AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
30-6522	VLR 2C AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
30-6531	VLR 1D AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
30-6532	VLR 2D AIR FLOW CONTROL VALVE	BLR-CP01	WW1	
54-6201	INTERCHANGE REACTOR SRAS FEED CONTROL VALVE	HDW-CP01	WW1	
54-6202	AEROBIC DIGESTER SRAS FEED CONTROL VALVE	HDW-CP01	WW1	

NOTE:

INTEGRAL CONTROLS ARE SHOWN.
WHERE CONTROLS ARE REMOTE
TO ACTUATOR, REFER TO 08-I-59A.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	CS BURR						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM MODULATING VALVE TYPICAL (INTEGRAL) DISCRETE LOOP

SHEET	88
DWG	08-I-57
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni057d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:47 PM

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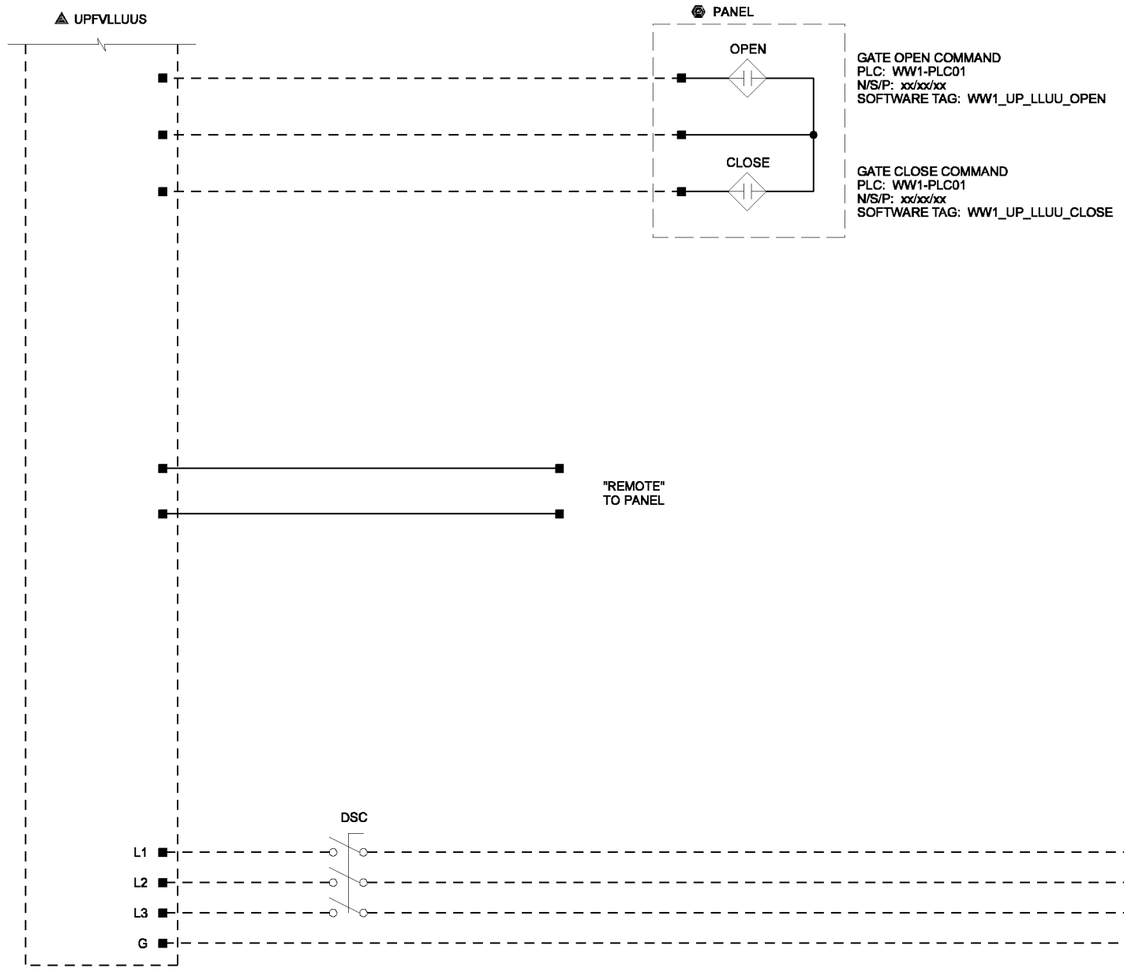
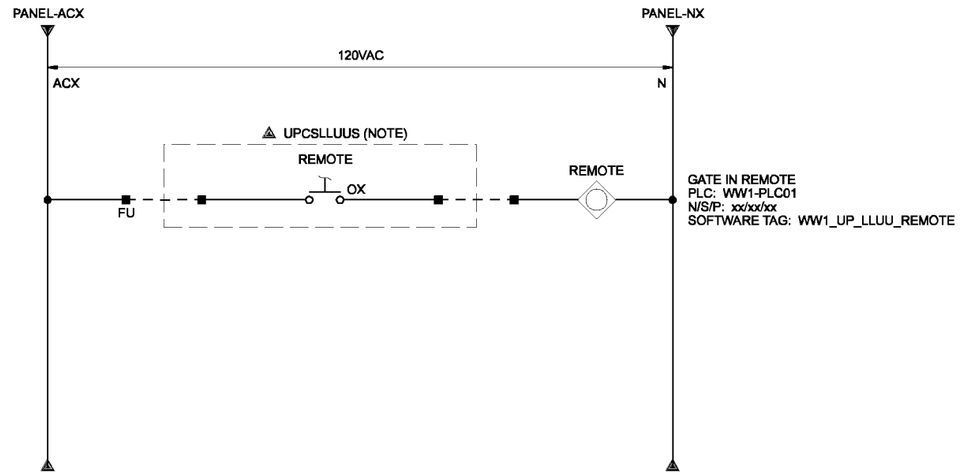


PANEL



TJB

NOTES:

1. REFER TO 08-I-59 FOR SCHEDULE OF GATES.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	CS BURR						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			
APVD	CW MASSIE		01/20/10	AS-BUILT	PMH	CSB	
		NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
MODULATING GATE TYPICAL
DISCRETE LOOP

SHEET	89
DWG	08-I-58
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni058d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:50 PM

LOOP	LOOP DESCRIPTION	PANEL	SIT	EXCEPTIONS
20-0901	VLR FLOW SPLIT WEIR GATE 1	HDW-CP01	WW1	
20-0902	VLR FLOW SPLIT WEIR GATE 2	HDW-CP01	WW1	
30-2001	MIXED LIQUOR EFFLUENT LEVEL CONTROL GATE 1	VLR-CP01	WW1	
30-2002	MIXED LIQUOR EFFLUENT LEVEL CONTROL GATE 2	VLR-CP01	WW1	
38-0301	MIXED LIQUOR DROP BOX SCUM GATE	VLR-CP01	WW1	
55-0101	RAS FLOW SPLIT GATE 1	VLR-CP01	WW1	
55-0102	RAS FLOW SPLIT GATE 2	VLR-CP01	WW1	
30-0311	VLR 1B RAS INLET GATE	BLR-CP01	WW1	
30-0312	VLR 2B RAS INLET GATE	BLR-CP01	WW1	
30-0321	VLR 1C RAS INLET GATE	BLR-CP01	WW1	
30-0322	VLR 2C RAS INLET GATE	BLR-CP01	WW1	
30-0331	VLR 1D RAS INLET GATE	BLR-CP01	WW1	
30-0332	VLR 2D RAS INLET GATE	BLR-CP01	WW1	
30-0111	VLR 1B INLET GATE 1	BLR-CP01	WW1	
30-0211	VLR 1B INLET GATE 2	BLR-CP01	WW1	
30-0121	VLR 1C INLET GATE 1	BLR-CP01	WW1	
30-0221	VLR 1C INLET GATE 2	BLR-CP01	WW1	
30-0131	VLR 1D INLET GATE 1	BLR-CP01	WW1	
30-0231	VLR 1D INLET GATE 2	BLR-CP01	WW1	
30-0112	VLR 2B INLET GATE 1	BLR-CP01	WW1	
30-0212	VLR 2B INLET GATE 2	BLR-CP01	WW1	
30-0122	VLR 2C INLET GATE 1	BLR-CP01	WW1	
30-0222	VLR 2C INLET GATE 2	BLR-CP01	WW1	
30-0132	VLR 2D INLET GATE 1	BLR-CP01	WW1	
30-0232	VLR 2D INLET GATE 2	BLR-CP01	WW1	
30-1021	VLR 1C FLOW CONTROL GATE 1	VLR-CP01	WW1	
30-1031	VLR 1D FLOW CONTROL GATE 1	VLR-CP01	WW1	
30-1022	VLR 2C FLOW CONTROL GATE 1	VLR-CP01	WW1	
30-1032	VLR 2D FLOW CONTROL GATE 1	VLR-CP01	WW1	
30-1121	VLR 1C FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1131	VLR 1D FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1122	VLR 2C FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1132	VLR 2D FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1221	VLR 1C LEVEL CONTROL GATE	VLR-CP01	WW1	
30-1231	VLR 1D LEVEL CONTROL GATE	VLR-CP01	WW1	
30-1222	VLR 2C LEVEL CONTROL GATE	VLR-CP01	WW1	
30-1232	VLR 2D LEVEL CONTROL GATE	VLR-CP01	WW1	
30-1321	VLR TRAIN 1 CHANNEL FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1331	VLR TRAIN 1 CHANNEL FLOW CONTROL GATE 3	VLR-CP01	WW1	
30-1322	VLR TRAIN 2 CHANNEL FLOW CONTROL GATE 2	VLR-CP01	WW1	
30-1332	VLR TRAIN 2 CHANNEL FLOW CONTROL GATE 3	VLR-CP01	WW1	
60-0301	CHLORINE CONTACT BASIN 1 EFFLUENT GATE	IPS-CP01	WW1	
60-0302	CHLORINE CONTACT BASIN 2 EFFLUENT GATE	IPS-CP01	WW1	

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	CS BURR		
DR	DS PARKER		
CHK	LL WOOD		
APVD	CW MASSIE		

NO.	DATE	REVISION	BY	APVD
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

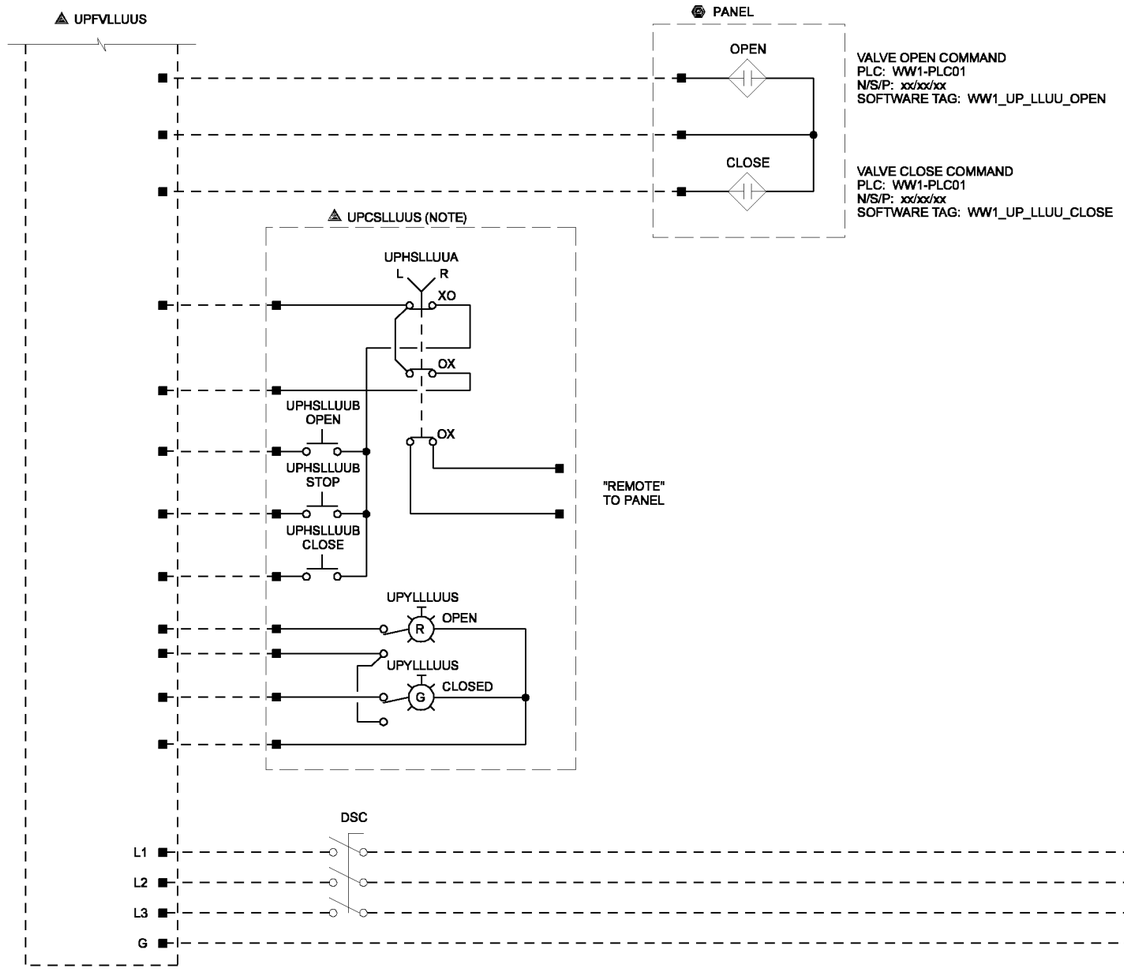
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM MODULATING GATE SCHEDULE

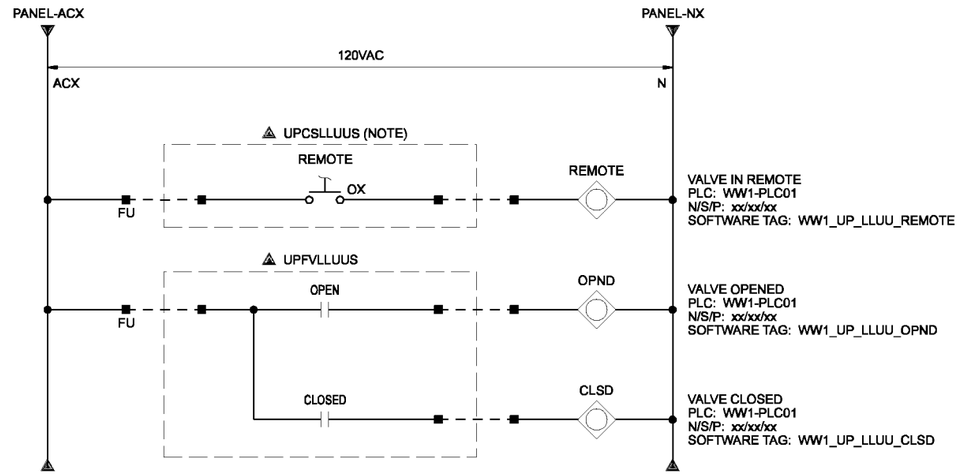
SHEET	90
DWG	08-I-59
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni059d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:53 PM

FIELD



PANEL



TJB

LOOP	LOOP DESCRIPTION	PANEL	SIT	EXCEPTIONS
20-0601	BYPASS WEIR GATE 1	HDW-CP01	WW1	
20-0602	BYPASS WEIR GATE 2	HDW-CP01	WW1	
61-6011	STORM DRAIN MANHOLE DRAIN VALVE	61LCP0100	WW1	INPUT POINTS TERMINATE IN IPS-CP01

NOTE:

REMOTE CONTROLS ARE SHOWN.
WHERE CONTROLS ARE INTEGRAL
TO ACTUATOR, REFER TO 08-I-61.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49533PE

DSGN	CS BURR			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB
DR	DS PARKER					
CHK	LL WOOD		01/20/10			
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
OPEN/CLOSE GATE OR VALVE TYPICAL (REMOTE) DISCRETE LOOP

SHEET	91
DWG	08-I-60
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni060d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:50:57 PM

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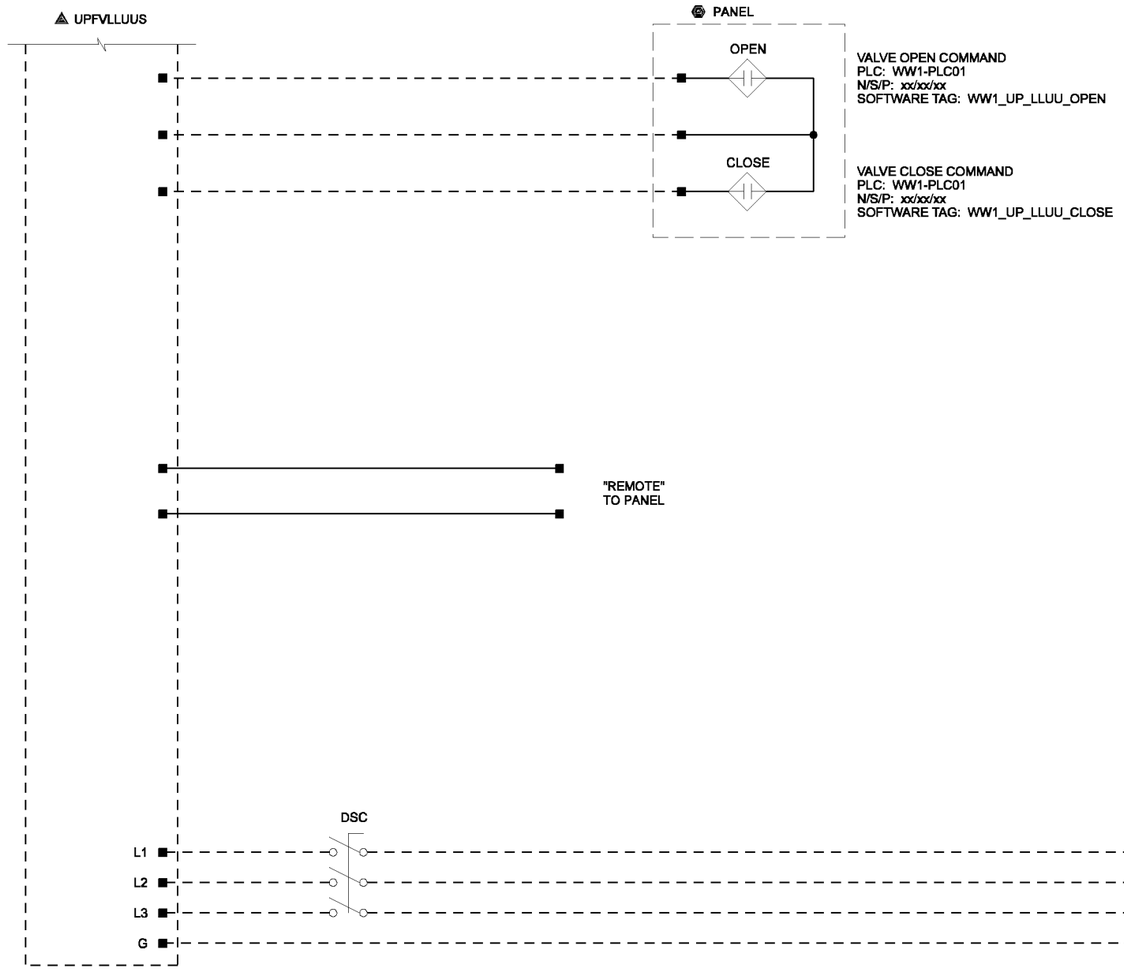
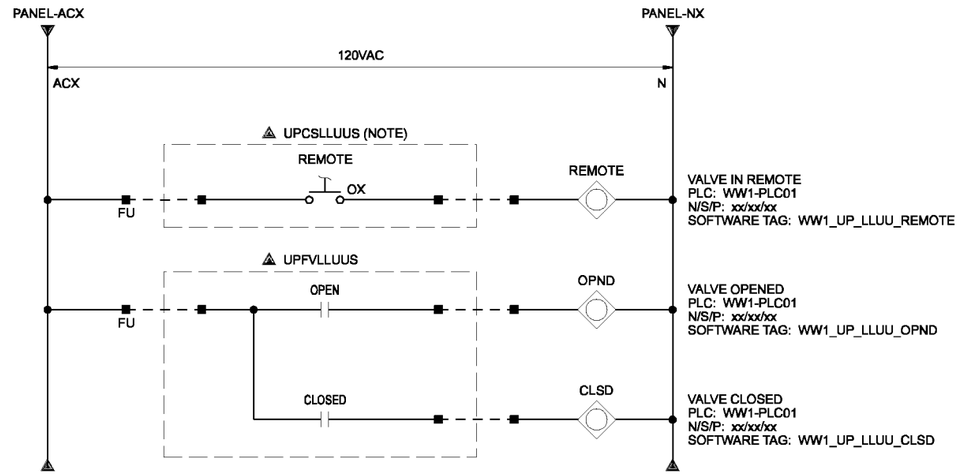


PANEL



TJB

NOTES:

1. INTEGRAL CONTROLS ARE SHOWN. WHERE CONTROLS ARE REMOTE TO ACTUATOR, REFER TO 08-I-60.
2. REFER TO 08-I-62 FOR SCHEDULE OF GATES AND VALVES.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49533PE

DSGN CS BURR						VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK LL WOOD			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			
APVD CW MASSIE	NO.	01/20/10 DATE	REVISION	PMH BY	CSB APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
OPEN/CLOSE GATE OR VALVE TYPICAL
(INTEGRAL) DISCRETE LOOP

SHEET	92
DWG	08-I-61
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni061d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:00 PM

LOOP	LOOP DESCRIPTION	PANEL	SIT	EXCEPTIONS
07-0111	EFFLUENT DIVERSION GATE	IPS-CP01	WW1	
20-0011	HEADWORKS INLET GATE 1	HDW-CP01	WW1	
20-0012	HEADWORKS INLET GATE 2	HDW-CP01	WW1	
20-0013	HEADWORKS INLET GATE 3	HDW-CP01	WW1	
20-0101	INFLUENT SCREEN 1 INFLUENT GATE	HDW-CP01	WW1	
20-0102	INFLUENT SCREEN 2 INFLUENT GATE	HDW-CP01	WW1	
20-0103	INFLUENT SCREEN 3 INFLUENT GATE	HDW-CP01	WW1	
20-0401	INFLUENT SCREEN 1 DISCHARGE GATE	HDW-CP01	WW1	
20-0402	INFLUENT SCREEN 2 DISCHARGE GATE	HDW-CP01	WW1	
20-0403	INFLUENT SCREEN 3 DISCHARGE GATE	HDW-CP01	WW1	
20-0501	VORTEX INLET GATE 1	HDW-CP01	WW1	
20-0502	VORTEX INLET GATE 2	HDW-CP01	WW1	
20-0503	VORTEX INLET GATE 3	HDW-CP01	WW1	
20-0801	VORTEX DISCHARGE GATE 1	HDW-CP01	WW1	
20-0802	VORTEX DISCHARGE GATE 2	HDW-CP01	WW1	
20-0803	VORTEX DISCHARGE GATE 3	HDW-CP01	WW1	
20-6001	INFLUENT SCREEN 1 W3 WATER VALVE	HDW-CP01	WW1	
20-6002	INFLUENT SCREEN 2 W3 WATER VALVE	HDW-CP01	WW1	
20-6003	INFLUENT SCREEN 3 W3 WATER VALVE	HDW-CP01	WW1	
20-6011	INFLUENT SCREEN 1 HOT WATER VALVE	HDW-CP01	WW1	
20-6012	INFLUENT SCREEN 2 HOT WATER VALVE	HDW-CP01	WW1	
20-6013	INFLUENT SCREEN 3 HOT WATER VALVE	HDW-CP01	WW1	
20-6101	VORTEX GRIT DISCHARGE VALVE 1	HDW-CP01	WW1	
20-6102	VORTEX GRIT DISCHARGE VALVE 2	HDW-CP01	WW1	
20-6103	VORTEX GRIT DISCHARGE VALVE 3	HDW-CP01	WW1	
20-6111	GRIT PUMP 1 INLET VALVE	HDW-CP01	WW1	
20-6112	GRIT PUMP 2 INLET VALVE	HDW-CP01	WW1	
20-6113	GRIT PUMP 3 INLET VALVE	HDW-CP01	WW1	
20-6114	GRIT PUMP 4 INLET VALVE	HDW-CP01	WW1	
20-6115	GRIT PUMP 5 INLET VALVE	HDW-CP01	WW1	
20-6131	GRIT PUMP W3 SUPPLY VALVE 1	HDW-CP01	WW1	
20-6132	GRIT PUMP W3 SUPPLY VALVE 2	HDW-CP01	WW1	
20-6133	GRIT PUMP W3 SUPPLY VALVE 3	HDW-CP01	WW1	
22-1201	SCREENING HOPPER GATE	HDW-CP01	WW1	
22-6001	SCREENINGS WASHER/COMPACTOR 1 W3 SUPPLY VALVE 1	HDW-CP01	WW1	
22-6002	SCREENINGS WASHER/COMPACTOR 2 W3 SUPPLY VALVE 1	HDW-CP01	WW1	
22-6003	SCREENINGS WASHER/COMPACTOR 3 W3 SUPPLY VALVE 1	HDW-CP01	WW1	
22-6011	SCREENINGS WASHER/COMPACTOR 1 W3 SUPPLY VALVE 2	HDW-CP01	WW1	
22-6012	SCREENINGS WASHER/COMPACTOR 2 W3 SUPPLY VALVE 2	HDW-CP01	WW1	
22-6013	SCREENINGS WASHER/COMPACTOR 3 W3 SUPPLY VALVE 2	HDW-CP01	WW1	
22-6021	SCREENINGS WASHER/COMPACTOR 1 HOT SUPPLY VALVE 1	HDW-CP01	WW1	
22-6022	SCREENINGS WASHER/COMPACTOR 2 HOT SUPPLY VALVE 1	HDW-CP01	WW1	
22-6023	SCREENINGS WASHER/COMPACTOR 3 HOT SUPPLY VALVE 1	HDW-CP01	WW1	
22-6031	SCREENINGS WASHER/COMPACTOR 1 HOT SUPPLY VALVE 2	HDW-CP01	WW1	
22-6032	SCREENINGS WASHER/COMPACTOR 2 HOT SUPPLY VALVE 2	HDW-CP01	WW1	
22-6033	SCREENINGS WASHER/COMPACTOR 3 HOT SUPPLY VALVE 2	HDW-CP01	WW1	
22-6041	SCREENINGS WASHER/COMPACTOR 1 HOT SUPPLY VALVE 3	HDW-CP01	WW1	
22-6042	SCREENINGS WASHER/COMPACTOR 2 HOT SUPPLY VALVE 3	HDW-CP01	WW1	
22-6043	SCREENINGS WASHER/COMPACTOR 3 HOT SUPPLY VALVE 3	HDW-CP01	WW1	
24-1201	GRIT HOPPER GATE	HDW-CP01	WW1	
24-6001	GRIT CLASSIFIER 1 INLET VALVE 1	HDW-CP01	WW1	
24-6002	GRIT CLASSIFIER 2 INLET VALVE 1	HDW-CP01	WW1	
24-6011	GRIT CLASSIFIER 1 INLET VALVE 2	HDW-CP01	WW1	
24-6012	GRIT CLASSIFIER 2 INLET VALVE 2	HDW-CP01	WW1	
24-6021	GRIT CLASSIFIER 1 W3 SUPPLY VALVE	HDW-CP01	WW1	
24-6022	GRIT CLASSIFIER 2 W3 SUPPLY VALVE	HDW-CP01	WW1	

LOOP	LOOP DESCRIPTION	PANEL	SIT	EXCEPTIONS
38-0101	SECONDARY CLARIFIER 1 INLET GATE	HDW-CP01	WW1	
38-0102	SECONDARY CLARIFIER 2 INLET GATE	HDW-CP01	WW1	
38-0103	SECONDARY CLARIFIER 3 INLET GATE	HDW-CP01	WW1	
38-0104	SECONDARY CLARIFIER 4 INLET GATE	HDW-CP01	WW1	
45-0111	SECONDARY CLARIFIER 1 ISOLATION GATE	HDW-CP01	WW1	
45-0112	SECONDARY CLARIFIER 2 ISOLATION GATE	HDW-CP01	WW1	
45-0113	SECONDARY CLARIFIER 3 ISOLATION GATE	HDW-CP01	WW1	
54-6011	RAS SCREEN 1 W3 SPRAY VALVE 1	HDW-CP01	WW1	
54-6012	RAS SCREEN 2 W3 SPRAY VALVE 1	HDW-CP01	WW1	
54-6013	RAS SCREEN 3 W3 SPRAY VALVE 1	HDW-CP01	WW1	
54-6021	RAS SCREEN 1 W3 SPRAY VALVE 2	HDW-CP01	WW1	
54-6022	RAS SCREEN 2 W3 SPRAY VALVE 2	HDW-CP01	WW1	
54-6023	RAS SCREEN 3 W3 SPRAY VALVE 2	HDW-CP01	WW1	
54-6031	RAS SCREEN 1 HOT WATER SUPPLY VALVE 1	HDW-CP01	WW1	
54-6032	RAS SCREEN 2 HOT WATER SUPPLY VALVE 1	HDW-CP01	WW1	
54-6033	RAS SCREEN 3 HOT WATER SUPPLY VALVE 1	HDW-CP01	WW1	
54-6041	RAS SCREEN 1 HOT WATER SUPPLY VALVE 2	HDW-CP01	WW1	
54-6042	RAS SCREEN 2 HOT WATER SUPPLY VALVE 2	HDW-CP01	WW1	
54-6043	RAS SCREEN 3 HOT WATER SUPPLY VALVE 2	HDW-CP01	WW1	
54-6101	RAS SCREENING COMPACTOR W3 SPRAY VALVE	HDW-CP01	WW1	
60-0401	CHLORINE CONTACT BASIN 1 INFLUENT WEIR GATE	IPS-CP01	WW1	
60-0402	CHLORINE CONTACT BASIN 2 INFLUENT WEIR GATE	IPS-CP01	WW1	
60-6011	CHLORINE CONTACT BASIN 1 W3 VALVE	IPS-CP01	WW1	
60-6012	CHLORINE CONTACT BASIN 2 W3 VALVE	IPS-CP01	WW1	
61-6001	SODIUM HYPOCHLORITE DISTRIBUTION VALVE 1	IPS-CP01	WW1	
61-6002	SODIUM HYPOCHLORITE DISTRIBUTION VALVE 2	IPS-CP01	WW1	
70-6001	INTERCHANGE REACTOR 1 TRANSFER VALVE 1	BLR-CP01	WW1	
70-6002	INTERCHANGE REACTOR 2 TRANSFER VALVE 1	BLR-CP01	WW1	
70-6011	INTERCHANGE REACTOR 1 TRANSFER VALVE 2	BLR-CP01	WW1	
70-6012	INTERCHANGE REACTOR 2 TRANSFER VALVE 2	BLR-CP01	WW1	
70-6021	INTERCHANGE REACTOR 1 SRAS FEED VALVE	BLR-CP01	WW1	
70-6022	INTERCHANGE REACTOR 2 SRAS FEED VALVE	BLR-CP01	WW1	
72-6001	AEROBIC DIGESTER 1 TRANSFER VALVE 1	BLR-CP01	WW1	
72-6002	AEROBIC DIGESTER 2 TRANSFER VALVE 1	BLR-CP01	WW1	
72-6011	AEROBIC DIGESTER 1 TRANSFER VALVE 2	BLR-CP01	WW1	
72-6012	AEROBIC DIGESTER 2 TRANSFER VALVE 2	BLR-CP01	WW1	
72-6021	AEROBIC DIGESTER 1 SRAS FEED VALVE	BLR-CP01	WW1	
72-6022	AEROBIC DIGESTER 2 SRAS FEED VALVE	BLR-CP01	WW1	
72-6201	AEROBIC DIGESTER PUMP DISCHARGE VALVE 1	BLR-CP01	WW1	
72-6211	AEROBIC DIGESTER PUMP DISCHARGE VALVE 2	BLR-CP01	WW1	
77-6101	AERATION BASIN 1 FEED AIR VALVE	BLR-CP01	WW1	
77-6102	AERATION BASIN 2 FEED AIR VALVE	BLR-CP01	WW1	
77-6103	INTERCHANGE REACTOR 1 FEED AIR VALVE	BLR-CP01	WW1	
77-6104	INTERCHANGE REACTOR 2 FEED AIR VALVE	BLR-CP01	WW1	
38-0401	MIXED LIQUOR OVERFLOW GATE 1	VLR-CP01	WW1	
38-0402	MIXED LIQUOR OVERFLOW GATE 2	VLR-CP01	WW1	

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DSGN	CS BURR						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

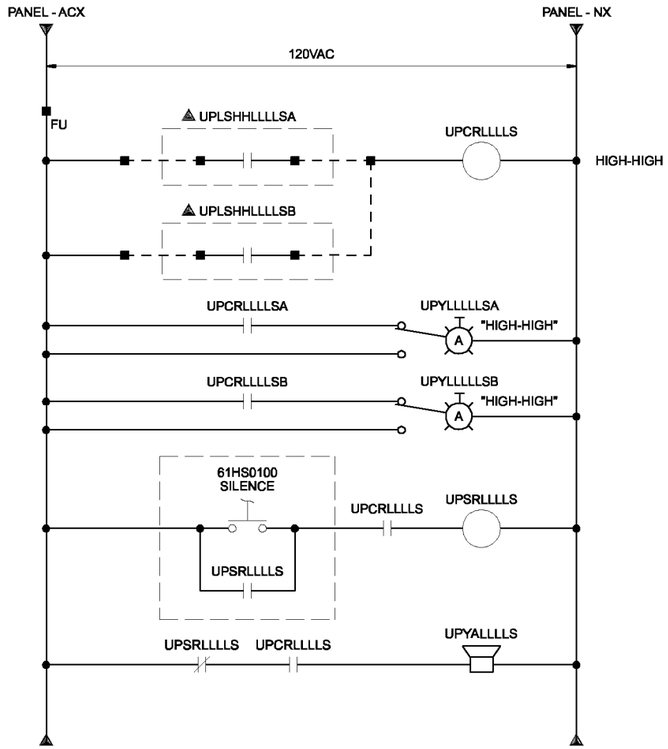
INSTRUMENTATION AND CONTROL

WIRING DIAGRAM OPEN/CLOSE GATE OR VALVE (INTEGRAL) SCHEDULE

SHEET	93
DWG	08-I-62
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni062d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:04 PM

PANEL



LOOP	LOOP DESCRIPTION	PANEL
61-0100	SODIUM HYPOCHLORITE TRUCK UNLOADING PANEL	61LCP0100

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DSGN	CS BURR					VERIFY SCALE
DR	GJ LOVE					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD

CH2MHILL carollo engineers

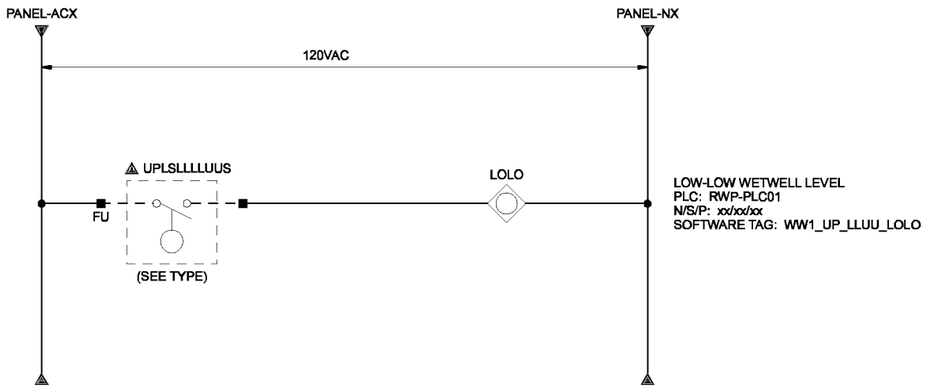
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
TRUCK UNLOADING PANEL
TYPICAL DISCRETE LOOP

SHEET	94
DWG	08-I-63
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni063d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:11 PM

PANEL



LOOP	LOOP DESCRIPTION	PANEL	TYPE
20-3021	HEADWORKS INLET CHANNEL HIGH	HDW-CP01	FLOAT
54-3171	RAS SCREENS W3 SUPPLY PRESSURE HIGH	HDW-CP01	PRESSURE SWITCH
54-3161	RAS SCREEN 1 HATCH OPEN	HDW-CP01	PROXIMITY SWITCH
54-3162	RAS SCREEN 2 HATCH OPEN	HDW-CP01	PROXIMITY SWITCH
54-3163	RAS SCREEN 3 HATCH OPEN	HDW-CP01	PROXIMITY SWITCH
38-3301	MIXED LIQUOR SPLITTER BOX LEVEL HIGH	HDW-CP01	FLOAT
30-3001	TANK DRAIN PIT LEVEL LOW	VLR-CP01	FLOAT
60-3011	CHLORINE CONTACT BASIN EFFLUENT CHANNEL OVERFLOW	IPS-CP01	FLOAT
61-3021	HYPOCHLORITE CONTAINMENT AREA FLOOD SWITCH	IPS-CP01	FLOAT
10-3101	DRY PIT AREA FLOOD	IPS-CP01	FLOAT
77-3031	AEROBIC DIGESTER BLOWER 1 INLET DIFFERENTIAL	BLR-CP01	DIFFERENTIAL SWITCH
77-3032	AEROBIC DIGESTER BLOWER 2 INLET DIFFERENTIAL	BLR-CP01	DIFFERENTIAL SWITCH
77-3131	INTERCHANGE REACTOR BLOWER 1 INLET DIFFERENTIAL	BLR-CP01	DIFFERENTIAL SWITCH
77-3132	INTERCHANGE REACTOR BLOWER 2 INLET DIFFERENTIAL	BLR-CP01	DIFFERENTIAL SWITCH
77-3051	AEROBIC DIGESTER BLOWER 1 DISCHARGE PRESSURE	BLR-CP01	PRESSURE SWITCH
77-3052	AEROBIC DIGESTER BLOWER 2 DISCHARGE PRESSURE	BLR-CP01	PRESSURE SWITCH
77-3151	INTERCHANGE REACTOR BLOWER 1 DISCHARGE PRESSURE	BLR-CP01	PRESSURE SWITCH
77-3152	INTERCHANGE REACTOR BLOWER 2 DISCHARGE PRESSURE	BLR-CP01	PRESSURE SWITCH
77-3041	AEROBIC DIGESTER BLOWER 1 DISCHARGE TEMPERATURE	BLR-CP01	TEMPERATURE SWITCH
77-3042	AEROBIC DIGESTER BLOWER 2 DISCHARGE TEMPERATURE	BLR-CP01	TEMPERATURE SWITCH
77-3141	INTERCHANGE REACTOR BLOWER 1 DISCHARGE TEMPERATURE	BLR-CP01	TEMPERATURE SWITCH
77-3142	INTERCHANGE REACTOR BLOWER 2 DISCHARGE TEMPERATURE	BLR-CP01	TEMPERATURE SWITCH
45-3101	SECONDARY CLARIFIER 1 SCUM TROUGH PROXIMITY	BLR-CP01	PROXIMITY SENSOR
45-3102	SECONDARY CLARIFIER 2 SCUM TROUGH PROXIMITY	BLR-CP01	PROXIMITY SENSOR
45-3103	SECONDARY CLARIFIER 3 SCUM TROUGH PROXIMITY	BLR-CP01	PROXIMITY SENSOR

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DSGN CS BURR						VERIFY SCALE	CH2MHILL carollo engineers
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	
CHK LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB		
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD		

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

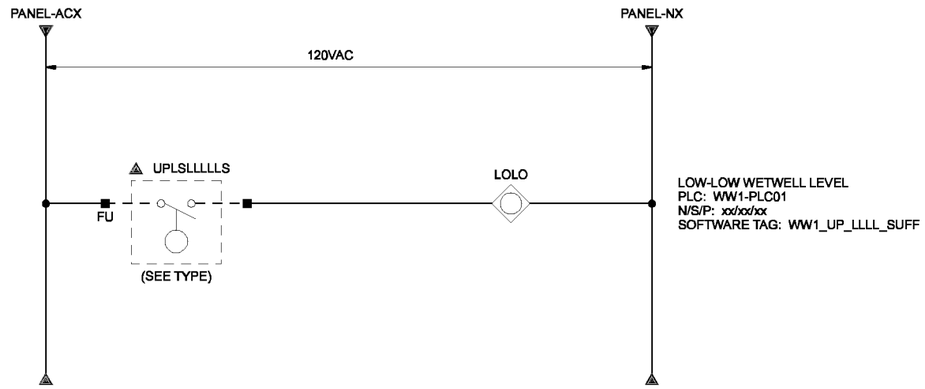
INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
DISCRETE FIELD INPUT
TYPICAL LOOP

SHEET	95
DWG	08-I-64
DATE	MAY 19 2006
PROJ	326918

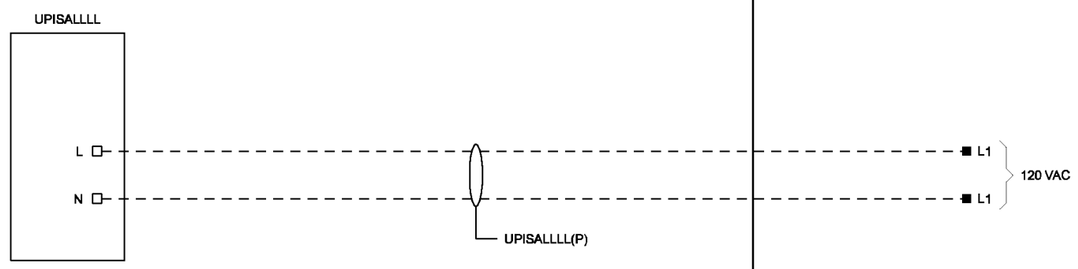
FILENAME: 08ni064d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:14 PM

LOOP	LOOP DESCRIPTION	PANEL	ISA	TYPE	SUFF
54-3111	RAS SCREENINGS CONVEYOR	HDW-CP01	LSH	TUNING FORK	HIGH
61-3001	SODIUM HYPOCHLORITE STORAGE TANK 1	61LCP0100	LSHH	TUNING FORK	HI-HI
61-3002	SODIUM HYPOCHLORITE STORAGE TANK 2	61LCP0100	LSHH	TUNING FORK	HI-HI
54-0201	OIL LUBRICATION PUMP 1	HDW-CP01	LSHH	TUNING FORK	HI-HI
54-0202	OIL LUBRICATION PUMP 2	HDW-CP01	LSHH	TUNING FORK	HI-HI
54-0203	OIL LUBRICATION PUMP 3	HDW-CP01	LSHH	TUNING FORK	HI-HI

PANEL



TJB



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DSGN	CS BURR						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

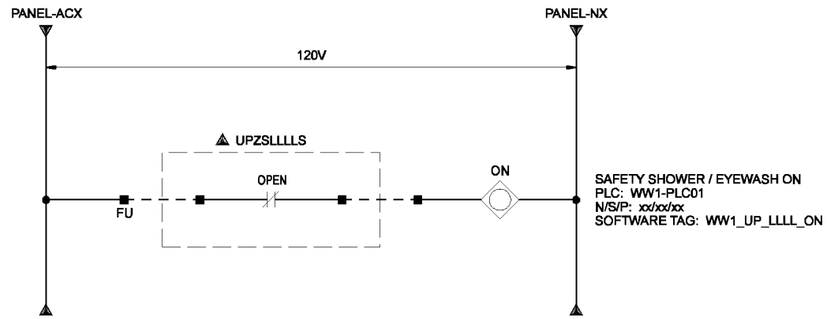
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
DISCRETE FIELD INPUT
TYPICAL LOOP (FIELD POWERED)

SHEET	96
DWG	08-I-65
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni065d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:19 PM

PANEL



LOOP	LOOP DESCRIPTION	PANEL
24-3141	HOPPER AREA SAFETY SHOWER	HDW-CP01
95-3001	CONTROL BUILDING LAB SAFETY SHOWER	CTL-CP01
61-3301	HYPOCHLORITE STORAGE SAFETY SHOWER 1	IPS-CP01
61-3302	HYPOCHLORITE STORAGE SAFETY SHOWER 2	IPS-CP01
61-3303	HYPOCHLORITE FEED SAFETY SHOWER	IPS-CP01

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DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

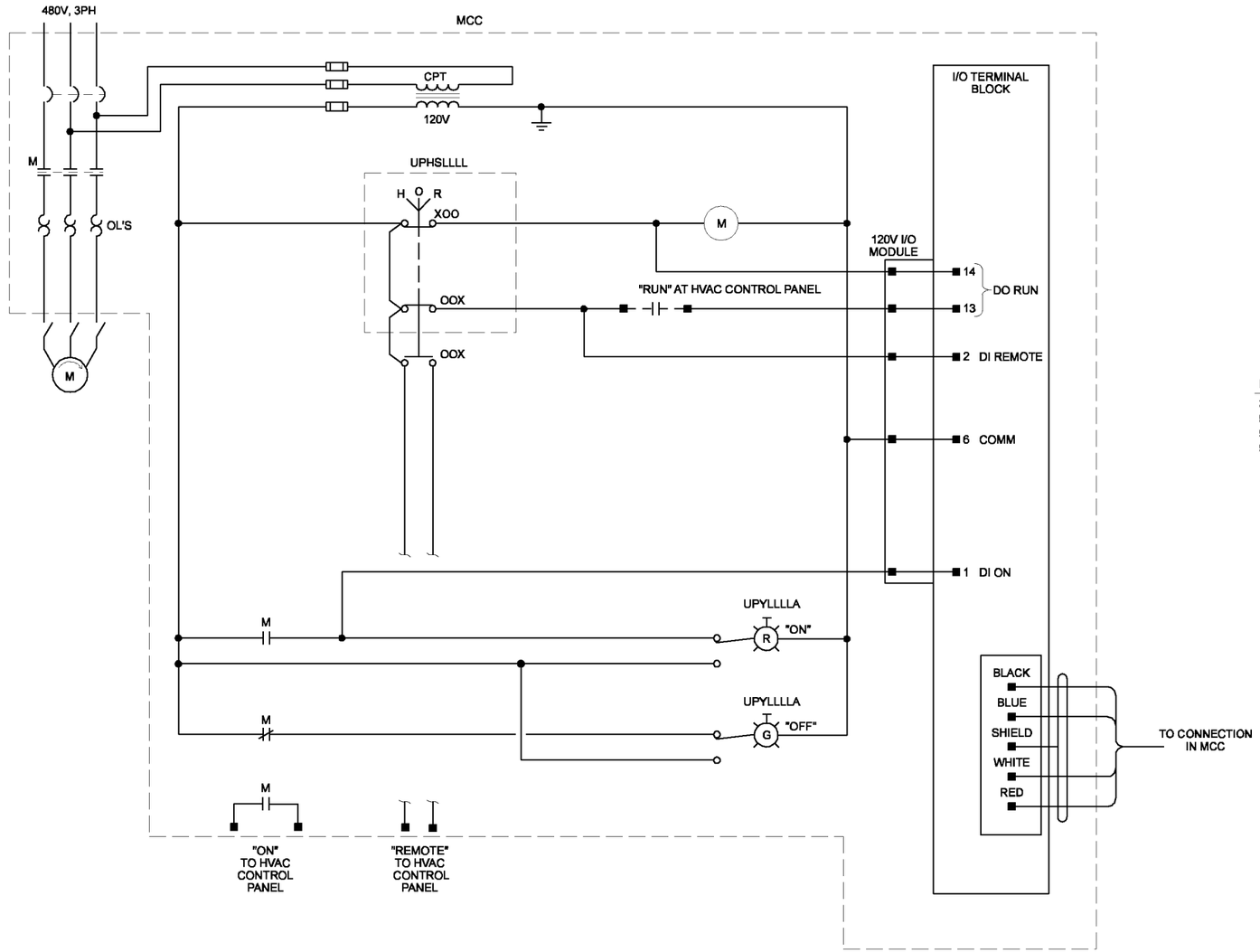
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
SAFETY SHOWER AND EYEWASH TYPICAL
DISCRETE LOOP

SHEET	97
DWG	08-I-66
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni066d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:22 PM



LOOP	LOOP DESCRIPTION	PANEL	MCC	HVAC CONTROL PANEL
32-9901	EXHAUST FAN	BLR-CP01	MCC-32B	32HCP9901
95-9901	AIR SUPPLY UNIT	CTL-CP01	MCC-95	95HCP9901
95-9902	AIR SUPPLY UNIT	CTL-CP01	MCC-95	95HCP9901
95-9902	EXHAUST FAN	CTL-CP01	MCC-95	95HCP9901

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DSGN	KL MAESTRI						VERIFY SCALE
DR	GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD/CS BURR			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			
APVD	CW MASSIE		01/20/10	AS-BUILT	PMH	CSB	
		NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

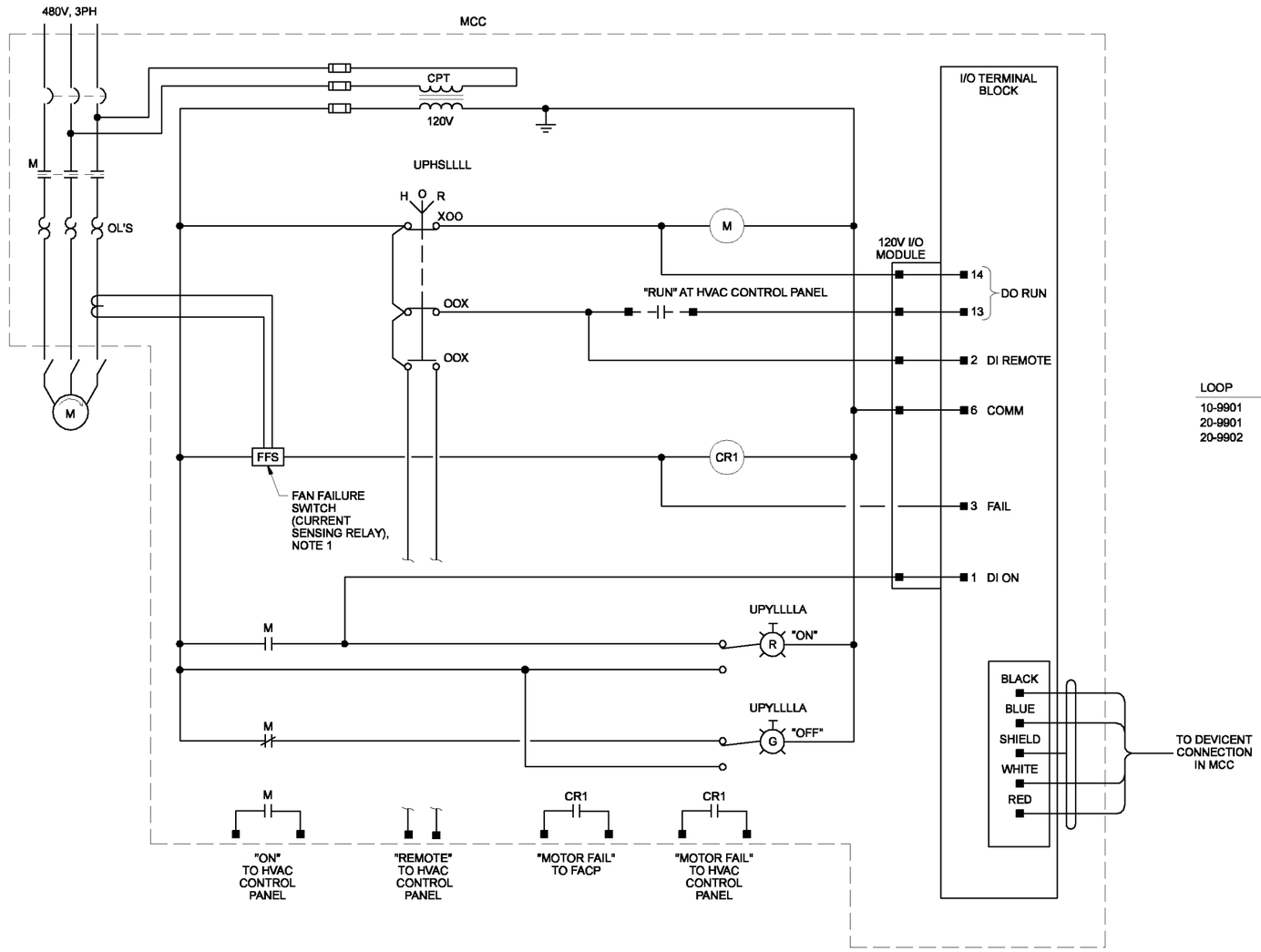
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL

WIRING DIAGRAM HVAC CONSTANT SPEED MOTOR, REMOTE HOR TYPICAL

SHEET	98
DWG	08-I-67
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni067d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:25 PM



LOOP	LOOP DESCRIPTION	PANEL	MCC	HVAC CONTROL PANEL	FACP
10-9901	EXHAUST FAN	IPS-CP01	MCC-6D	10HCP9901	10FACP01
20-9901	EXHAUST FAN	HDW-CP01	MCC-20B	20HCP9901	20FACP01
20-9902	ODOROUS AIR EXHAUST FAN	HDW-CP01	MCC-20B	20HCP9901	20FACP01

NOTES:

1. PROVIDE UNDERCURRENT SENSING RELAYS & CTS TO DETECT UNDERCURRENT WHEN UNIT IS IN OPERATION. SET RELAYS PER HVAC MANUFACTURER'S RECOMMENDATION. MANUFACTURER: SQUARE D MODEL: RM3JA1, OR EQUAL.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	KL MAESTRI			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	VERIFY SCALE: BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
DR	GJ LOVE						
CHK	LL WOOD/CS BURR		01/20/10				
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

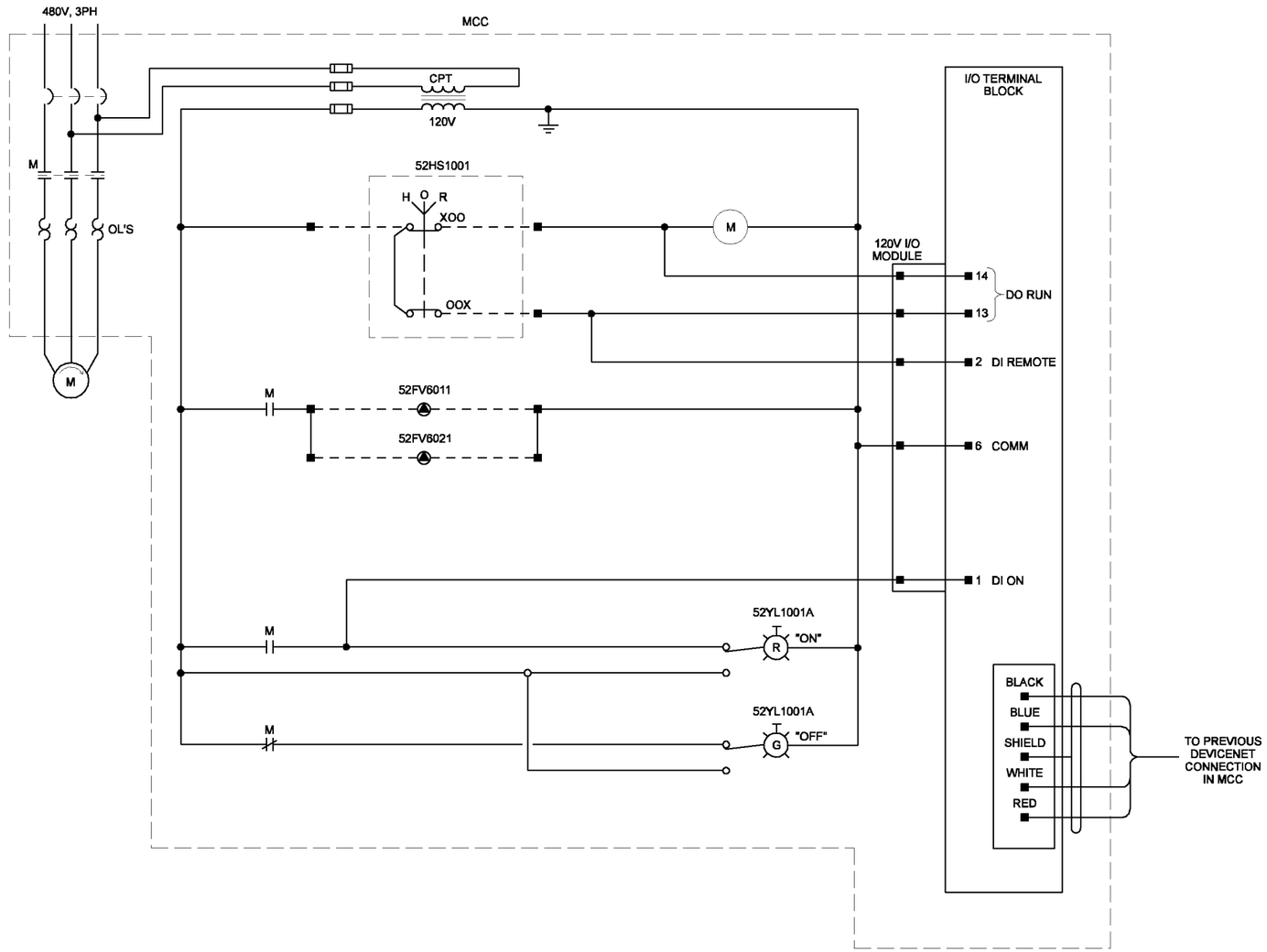
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
HVAC WITH HOR AND
CURRENT SENSOR, TYPICAL

SHEET	99
DWG	08-I-68
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni068d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:28 PM



THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN KL MAESTRI						VERIFY SCALE
DR JE HAMNER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK LL WOOD/CS BURR			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
	1	01/20/10		PMH	CSB	

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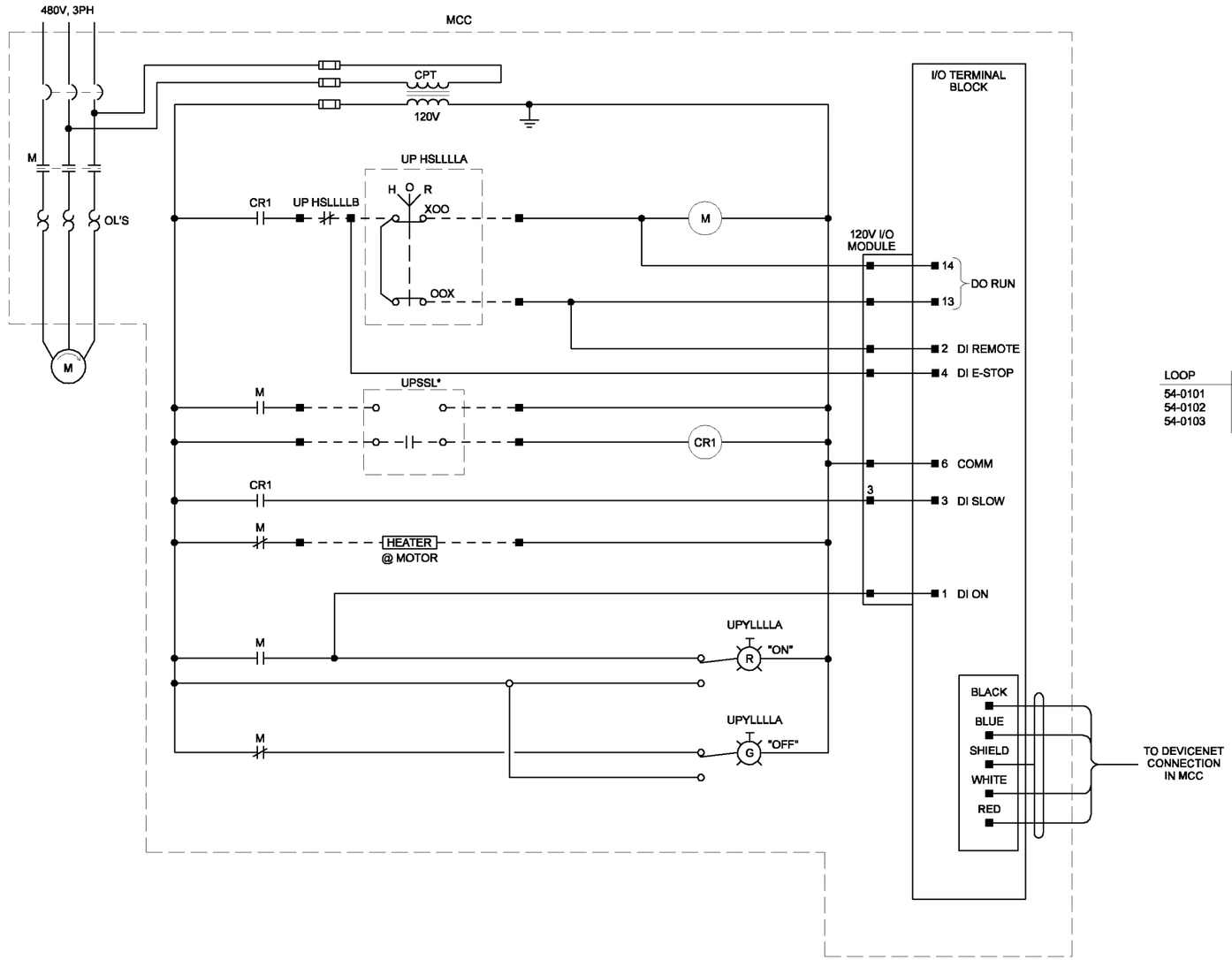
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL

WIRING DIAGRAM
RAS GRIT PUMP

SHEET	100
DWG	08-I-69
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni069d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:31 PM



LOOP	LOOP DESCRIPTION	PANEL	MCC	SSL
54-0101	RAS DRUM SCREEN 1	HDW-CP01	MCC-20A	3151
54-0102	RAS DRUM SCREEN 2	HDW-CP01	MCC-20B	3152
54-0103	RAS DRUM SCREEN 3	HDW-CP01	MCC-20A	3153

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	KL MAESTRI						VERIFY SCALE
DR	JE HAMNER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD/CS BURR		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

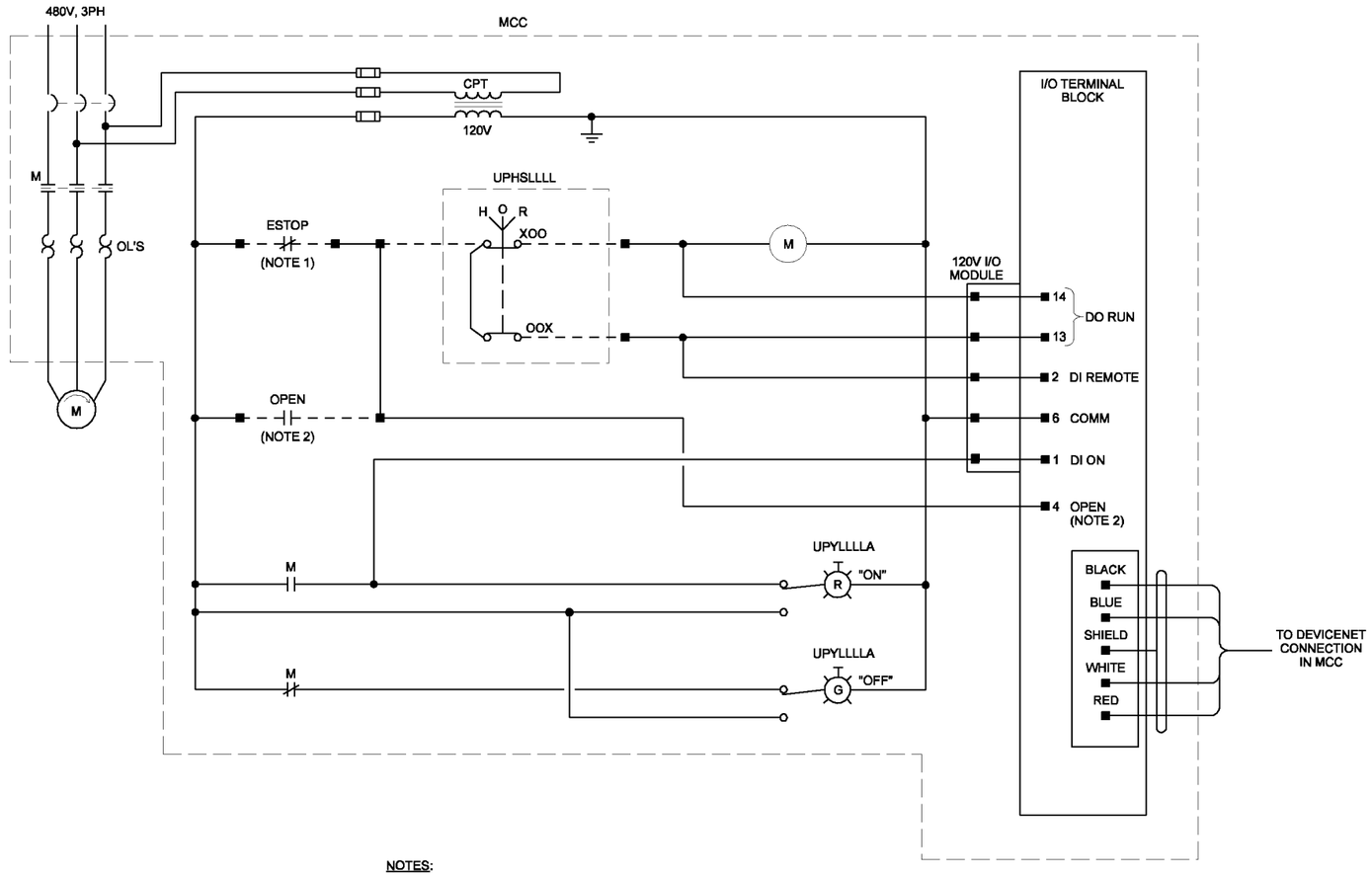
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM RAS DRUM SCREEN TYPICAL

SHEET	101
DWG	08-I-70
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni070d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:34 PM



LOOP	LOOP DESCRIPTION	PANEL	MCC
20-0301	INFLUENT SCREEN 1 CLEANING BRUSH	HDW-CP01	MCC-20A
20-0302	INFLUENT SCREEN 2 CLEANING BRUSH	HDW-CP01	MCC-20B
20-0303	INFLUENT SCREEN 3 CLEANING BRUSH	HDW-CP01	MCC-20A
20-1001	GRIT PUMP 1	HDW-CP01	MCC-20A
20-1002	GRIT PUMP 2	HDW-CP01	MCC-20B
20-1003	GRIT PUMP 3	HDW-CP01	MCC-20A
20-1004	GRIT PUMP 4	HDW-CP01	MCC-20A
20-1005	GRIT PUMP 5	HDW-CP01	MCC-20B
07-0101	FLOW CONTROL STRUCTURE SAMPLING PUMP 1	IPS-CP01	MCC-6C
07-0102	FLOW CONTROL STRUCTURE SAMPLING PUMP 2	IPS-CP01	MCC-6D
60-1101	CHLORINE CONTACT BASIN SAMPLING PUMP 1	IPS-CP01	MCC-6C
60-1102	CHLORINE CONTACT BASIN SAMPLING PUMP 2	IPS-CP01	MCC-6D

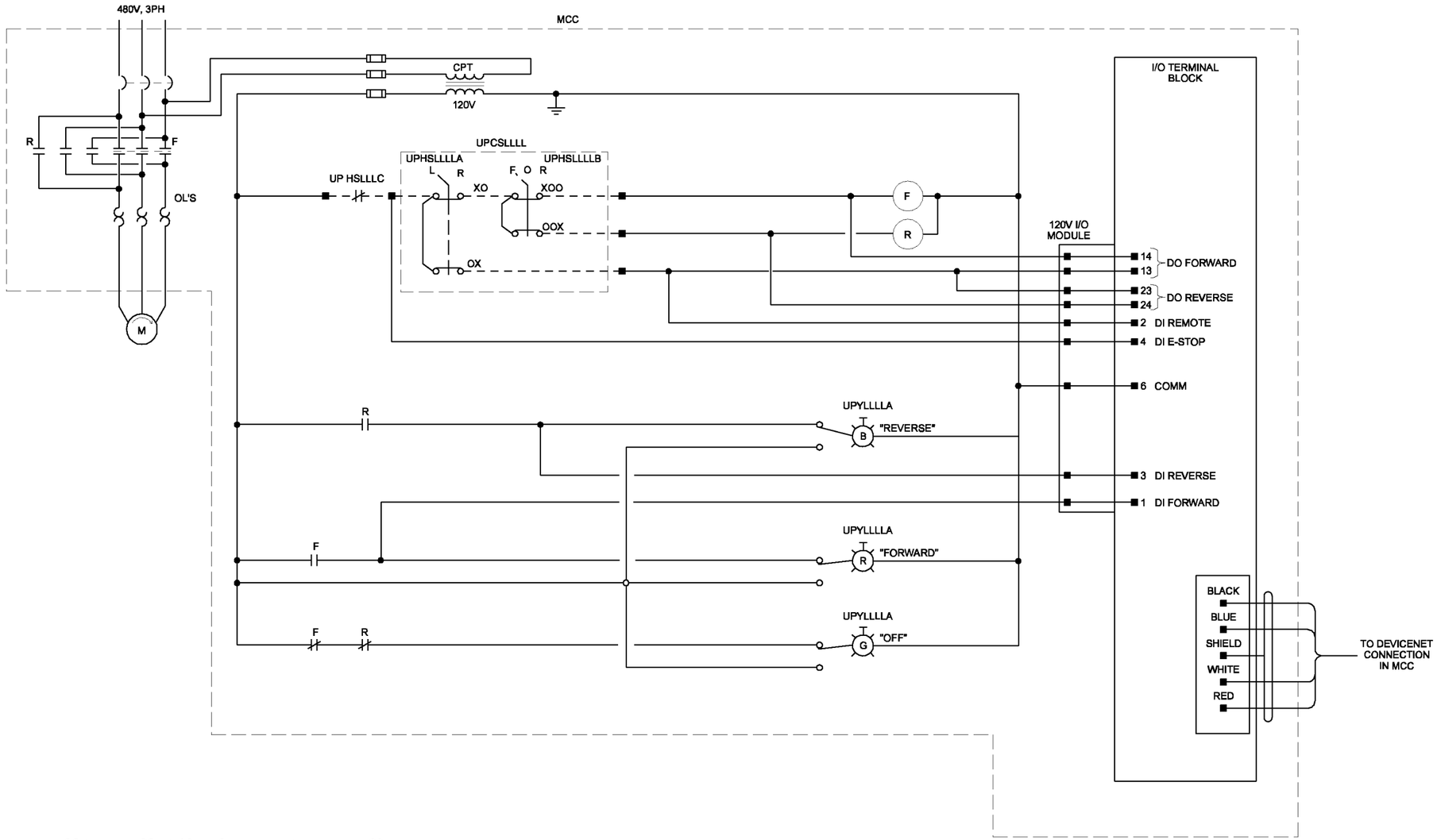
NOTES:

1. ESTOP FOR INFLUENT SCREEN CLEANING BRUSH MOTORS ONLY.
2. INLET VALVE OPEN STATUS FOR GRIT PUMPS ONLY.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49533PE

DSGN KL MAESTRI						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON	INSTRUMENTATION AND CONTROL WIRING DIAGRAM CONSTANT SPEED MOTOR, REMOTE HOR TYPICAL	SHEET 102
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DWG 08-I-71
CHK LL WOOD/CS BURR			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB				DATE MAY 19 2006
APVD CW MASSIE	NO.	01/20/10 DATE	REVISION	BY	APVD				PROJ 326918

FILENAME: 08ni071d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:37 PM



LOOP	LOOP DESCRIPTION	PANEL	MCC
22-0101	SCREENINGS WASHER 1	HDW-CP01	MCC-20A
22-0102	SCREENINGS WASHER 2	HDW-CP01	MCC-20B
22-0103	SCREENINGS WASHER 3	HDW-CP01	MCC-20A

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN KL MAESTRI						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD/CS BURR		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

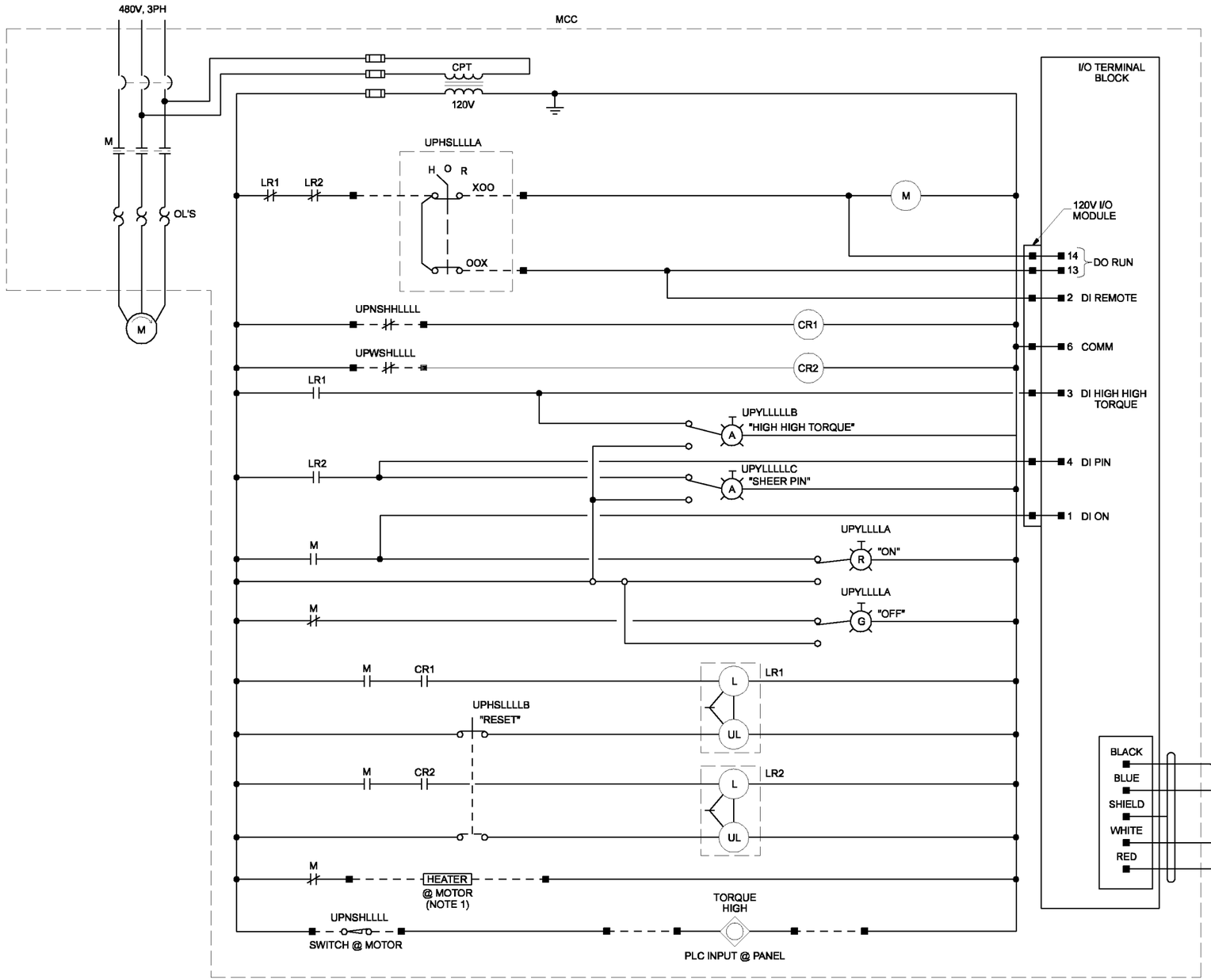
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
SCREENINGS WASHER
TYPICAL

SHEET	103
DWG	08-I-72
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni072d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:40 PM



LOOP	LOOP DESCRIPTION	PANEL	MCC
20-0701	VORTEX GRIT SEPARATOR MECHANISM 1	HDW-CP01	MCC-20A
20-0702	VORTEX GRIT SEPARATOR MECHANISM 2	HDW-CP01	MCC-20B
20-0703	VORTEX GRIT SEPARATOR MECHANISM 3	HDW-CP01	MCC-20A
45-0101	SECONDARY CLARIFIER MECHANISM 1	HDW-CP01	MCC-20A
45-0102	SECONDARY CLARIFIER MECHANISM 2	HDW-CP01	MCC-20B
45-0103	SECONDARY CLARIFIER MECHANISM 3	HDW-CP01	MCC-20A

TORQUE HIGH
PLC = WW1-PLC01
N/S/P = XX/XX/XX
SOFTWARE TAG: WW1_UP_LLLL_HITORQUE

NOTES:

1. FOR VORTEX GRIT SEPARATOR MECHANISMS ONLY.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	KL MAESTRI						VERIFY SCALE
DR	GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 ■ 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD/CS BURR						
APVD	CW MASSIE	NO.	01/20/10 DATE	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT REVISION	PMH BY	CSB APVD	

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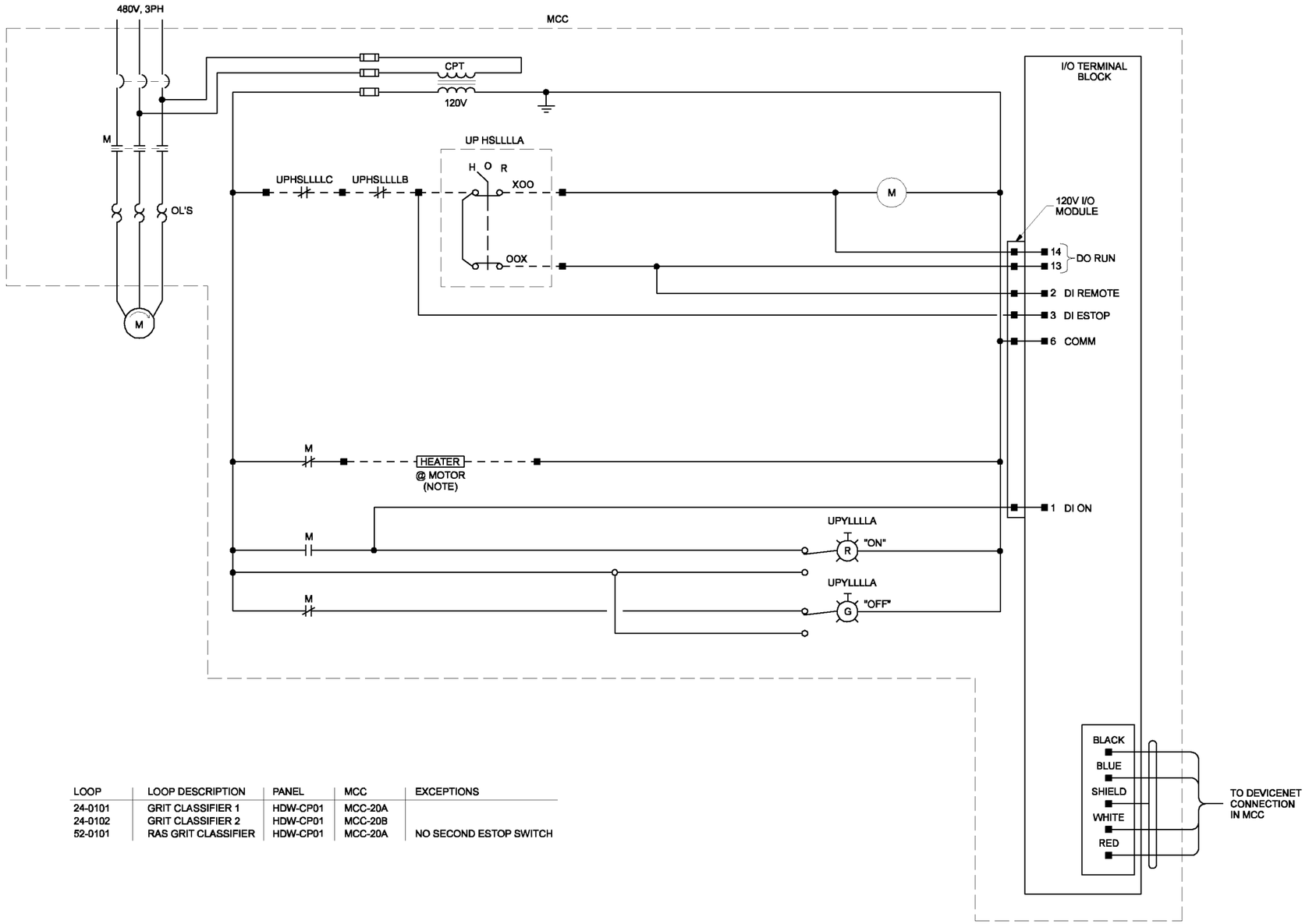
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL

WIRING DIAGRAM VORTEX GRIT SEPERATOR MECHANISM AND SECONDARY CLARIFIER MECHANISM, TYPICAL

SHEET	104
DWG	08-I-73
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni073d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:43 PM



LOOP	LOOP DESCRIPTION	PANEL	MCC	EXCEPTIONS
24-0101	GRIT CLASSIFIER 1	HDW-CP01	MCC-20A	
24-0102	GRIT CLASSIFIER 2	HDW-CP01	MCC-20B	
52-0101	RAS GRIT CLASSIFIER	HDW-CP01	MCC-20A	NO SECOND ESTOP SWITCH

NOTE:

FOR RAS GRIT CLASSIFIER ONLY.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

		NO.	DATE	REVISION	BY	APVD
DSGN	KL MAESTRI					
DR	GJ LOVE					
CHK	LL WOOD/CS BURR		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB
APVD	CW MASSIE					

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

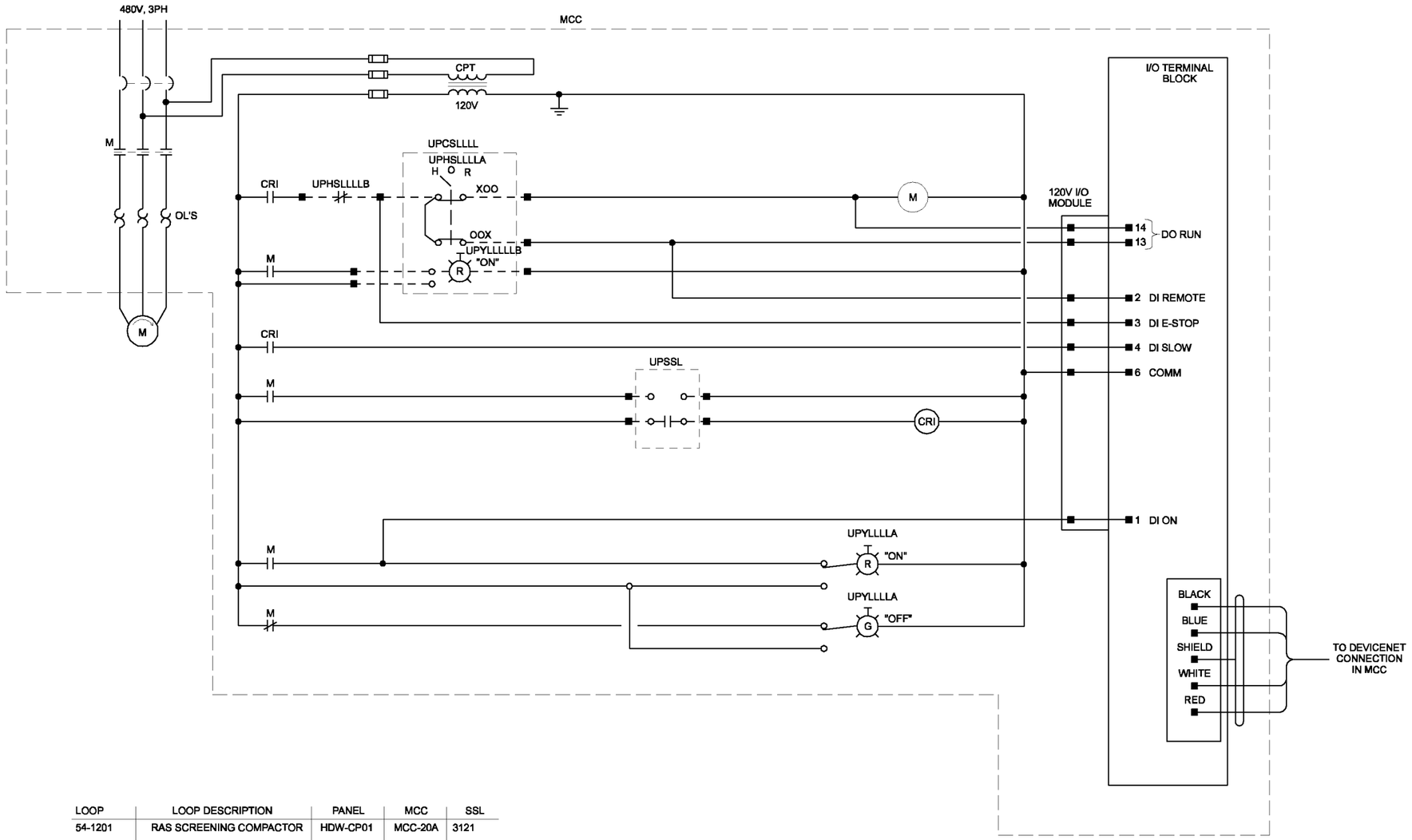
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
CLASSIFIER AND GRIT CLASSIFIER, TYPICAL

SHEET	105
DWG	08-I-74
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni074d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:47 PM



LOOP	LOOP DESCRIPTION	PANEL	MCC	SSL
54-1201	RAS SCREENING COMPACTOR	HDW-CP01	MCC-20A	3121

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	KL MAESTRI						VERIFY SCALE
DR	GJ LOVE			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD/CS BURR		01/20/10		PMH	CSB	
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

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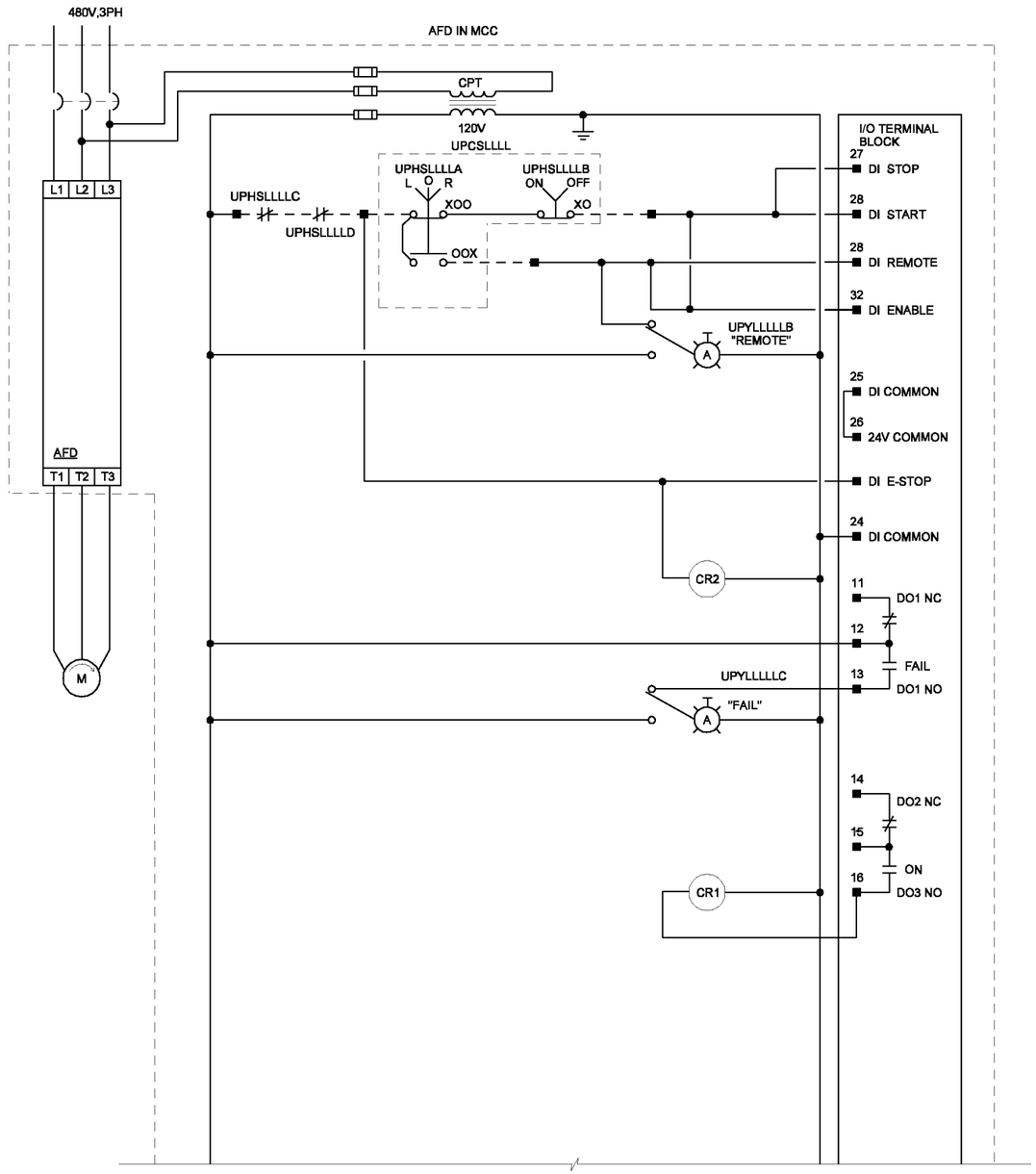
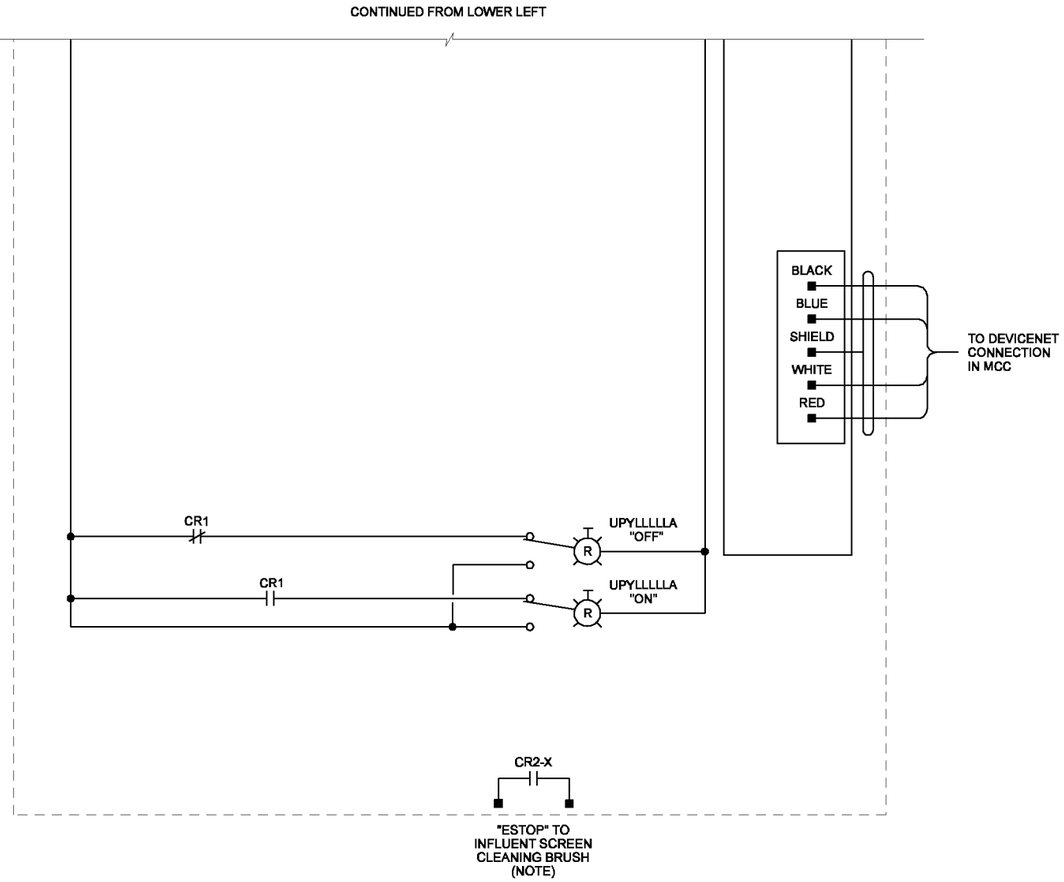
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
RAS SCREENINGS COMPACTOR

SHEET	106
DWG	08-I-75
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08nl075d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:50 PM





LOOP	LOOP DESCRIPTION	PANEL	MCC	X
20-0201	INFLUENT SCREEN 1	HDW-CP01	MCC-20A	20-0301
20-0202	INFLUENT SCREEN 2	HDW-CP01	MCC-20B	20-0302
20-0203	INFLUENT SCREEN 3	HDW-CP01	MCC-20A	20-0303

NOTE:

WIRING BETWEEN SCREEN AND CLEANING BRUSH SHALL BE INTEGRAL TO MCC AND PROVIDED BY MCC SUPPLIER.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	KL MAESTRI						VERIFY SCALE
DR	GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD/CS BURR		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

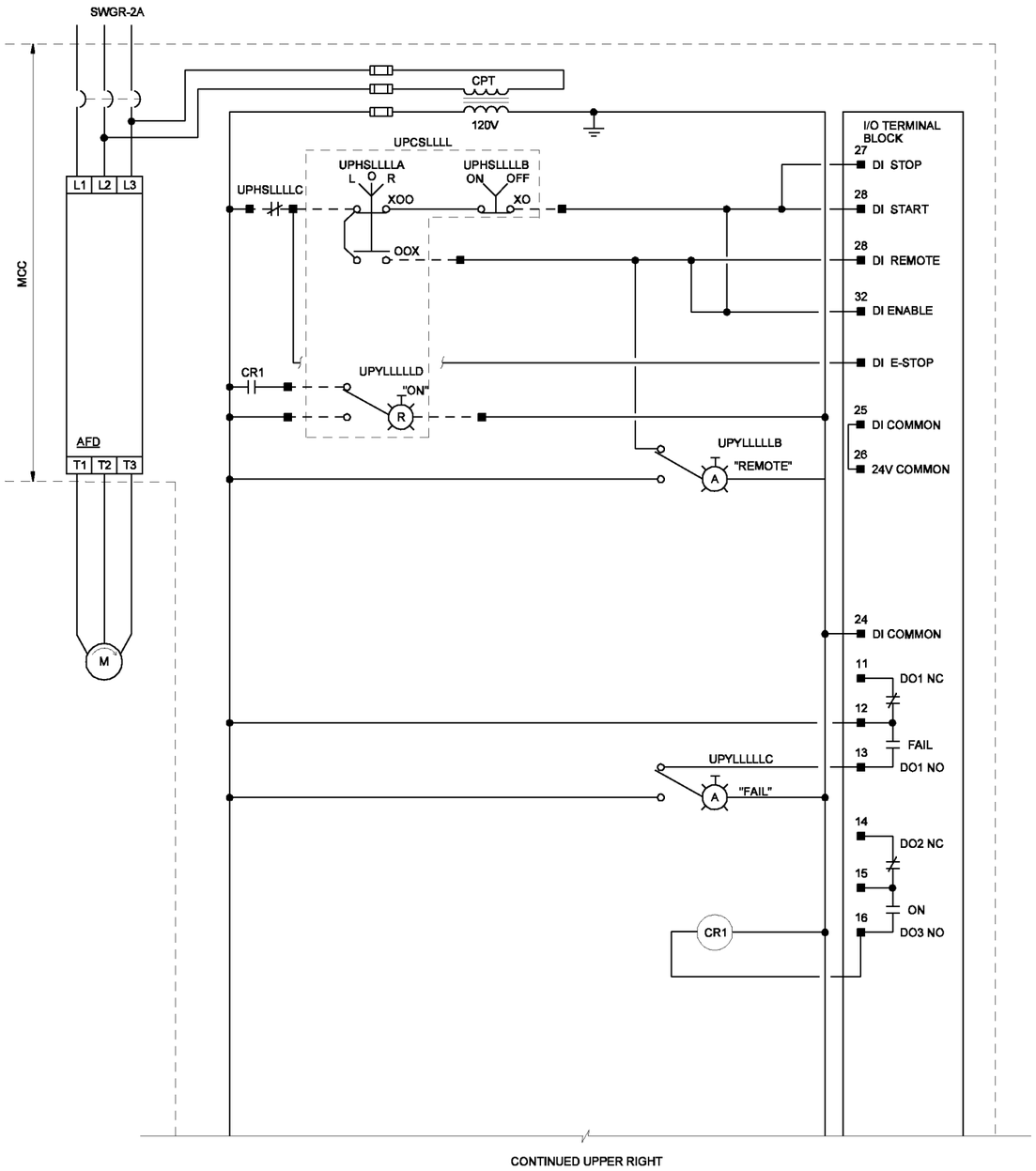
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
INFLUENT SCREEN, TYPICAL

SHEET	107
DWG	08-I-76
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni076d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:52 PM



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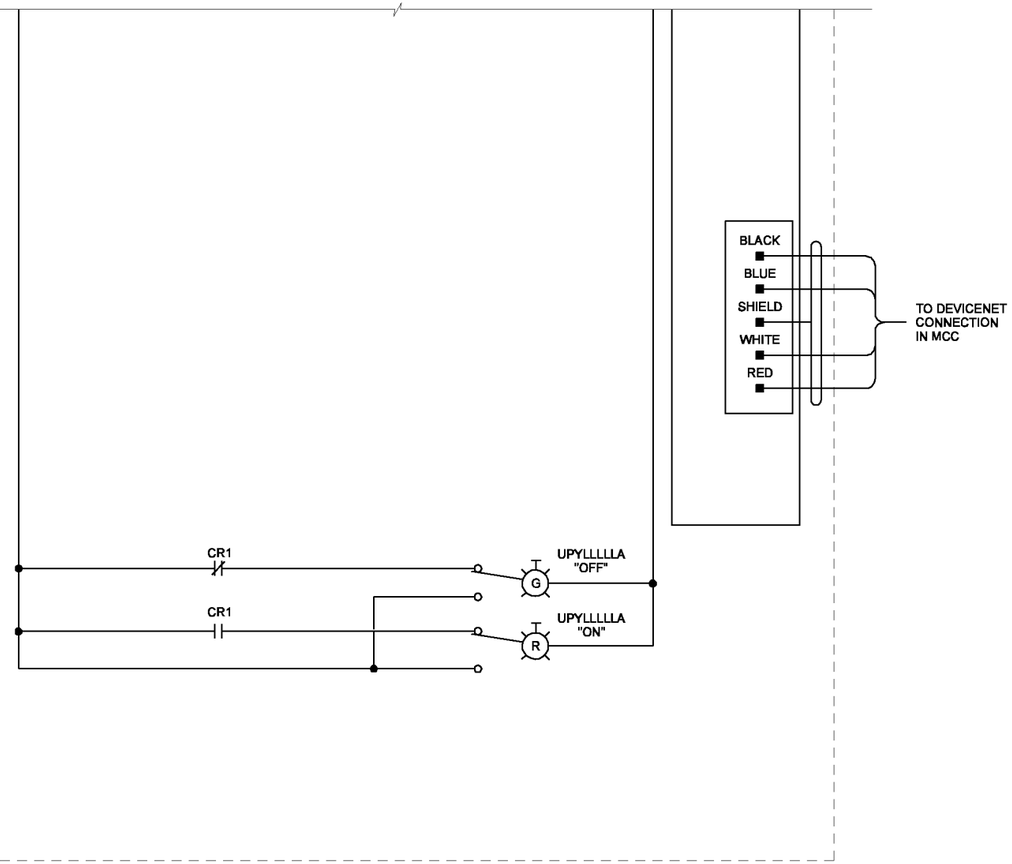
CONTINUED FROM LOWER LEFT



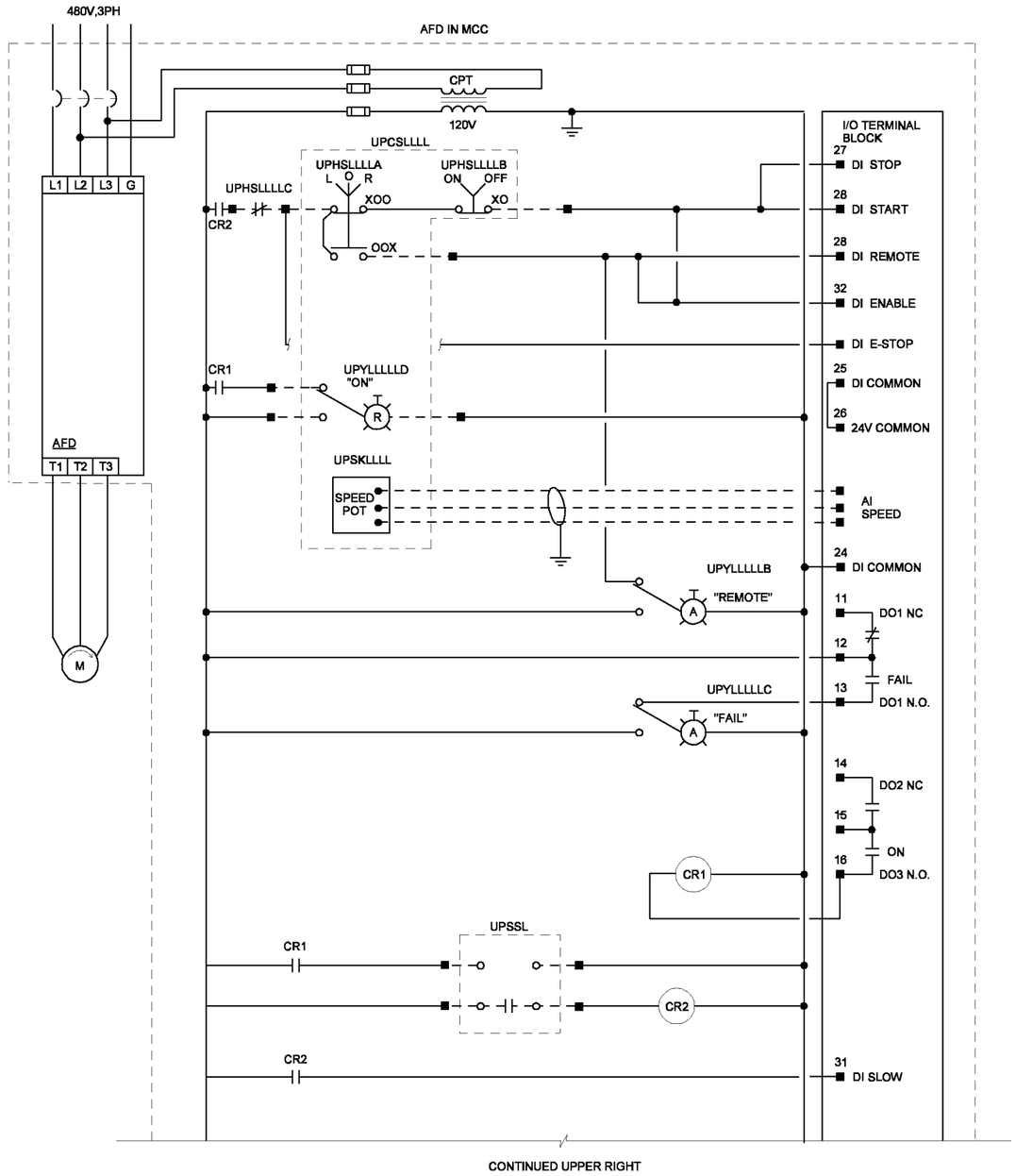
LOOP	LOOP DESCRIPTION	PANEL	MCC
22-0201	SCREENINGS COMPACTOR 1	HDW-CP01	MCC-20A
22-0202	SCREENINGS COMPACTOR 2	HDW-CP01	MCC-20B
22-0203	SCREENINGS COMPACTOR 3	HDW-CP01	MCC-20A

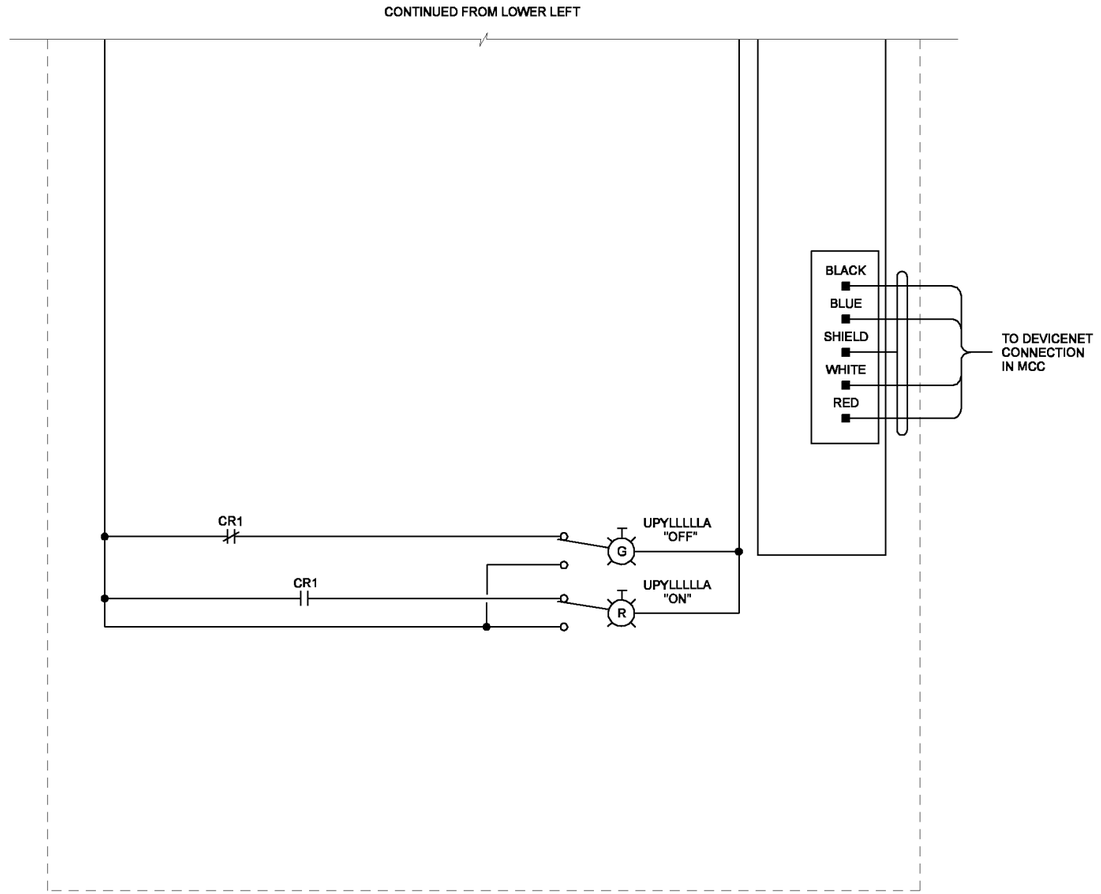
THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN KL MAESTRI						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-03-01 LINN COUNTY, OREGON	INSTRUMENTATION AND CONTROL WIRING DIAGRAM SCREENINGS COMPACTOR, TYPICAL	SHEET 108
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DWG 08-I-77
CHK LL WOOD/CS BURR			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB				DATE MAY 19 2006
APVD CW MASSIE	NO.	01/20/10 DATE	REVISION	BY	APVD				PROJ 326918

CH2MHILL carollo engineers

FILENAME: 08ni077d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:56 PM





LOOP	LOOP DESCRIPTION	PANEL	MCC	*
22-1001	SCREENING CONVEYOR	HDW-CP01	MCC-20A	3001
22-1301	SCREENING LOADOUT CONVEYOR	HDW-CP01	MCC-20A	3031
24-1301	GRIT LOADOUT CONVEYOR	HDW-CP01	MCC-20B	3031
54-1101	RAS SCREENING CONVEYOR	HDW-CP01	MCC-20A	3111

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

		NO.	DATE	REVISION	BY	APVD
DSGN	KL MAESTRI					
DR	GJ LOVE					
CHK	LL WOOD/CS BURR		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB
APVD	CW MASSIE					

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

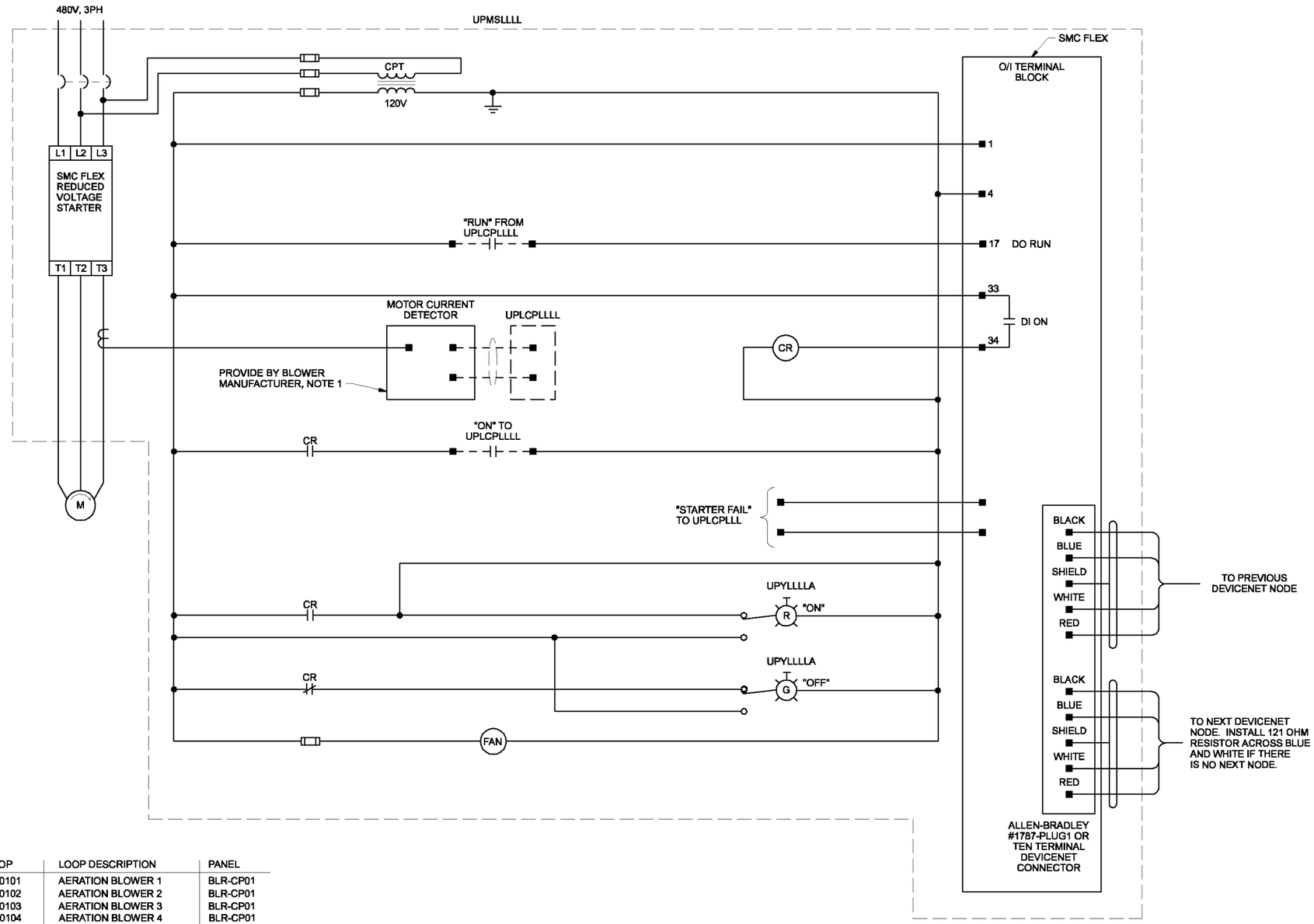
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM CONVEYORS, TYPICAL

SHEET	109
DWG	08-I-78
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni078d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:51:59 PM



LOOP	LOOP DESCRIPTION	PANEL
22-0101	AERATION BLOWER 1	BLR-CP01
22-0102	AERATION BLOWER 2	BLR-CP01
22-0103	AERATION BLOWER 3	BLR-CP01
22-0104	AERATION BLOWER 4	BLR-CP01

NOTES:

1. COORDINATE WITH BLOWER MANUFACTURER FOR INSALLATION IN MOTOR STARTER.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	KL MAESTRI						VERIFY SCALE
DR	GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD/CS BURR		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

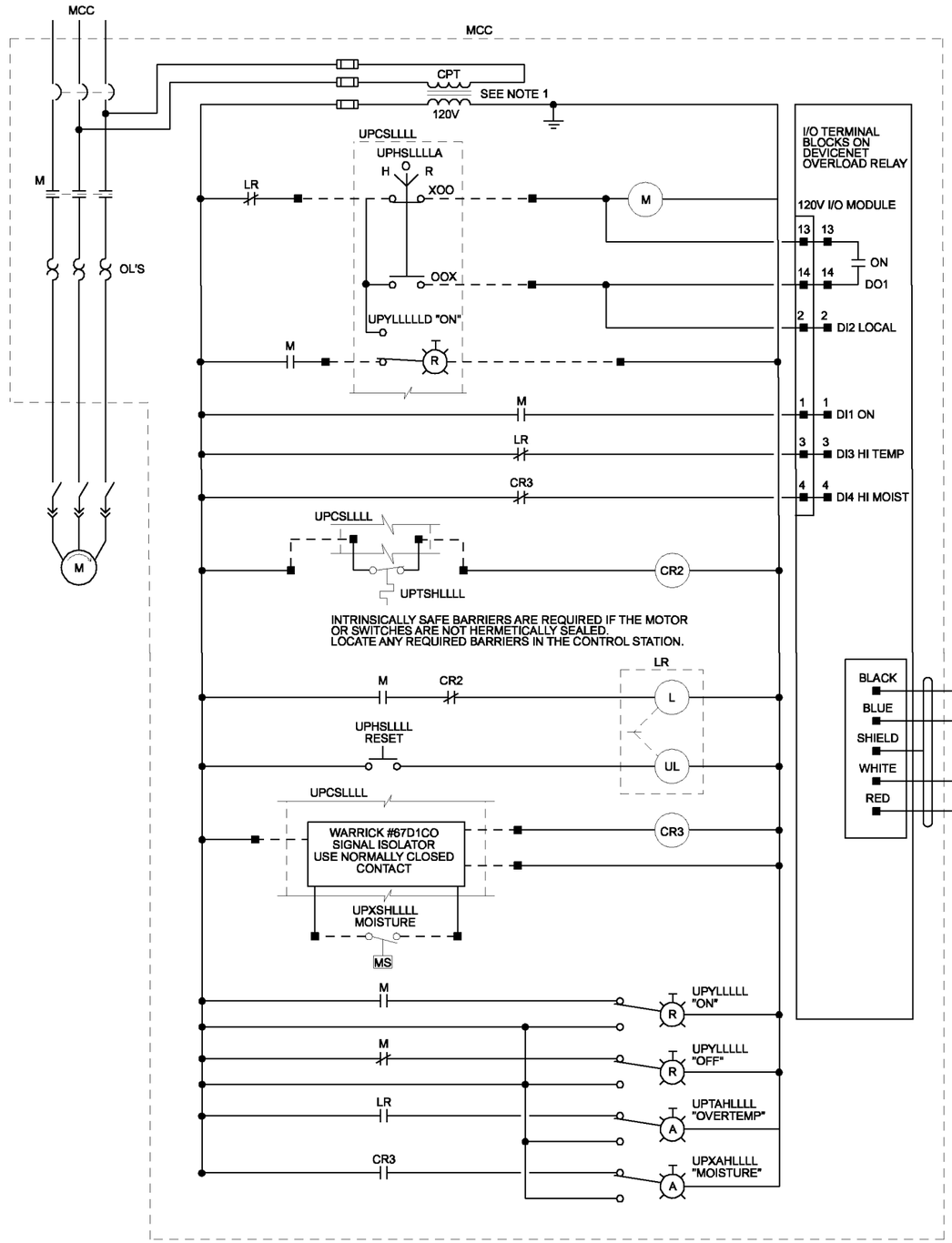
CH2MHILL carollo engineers

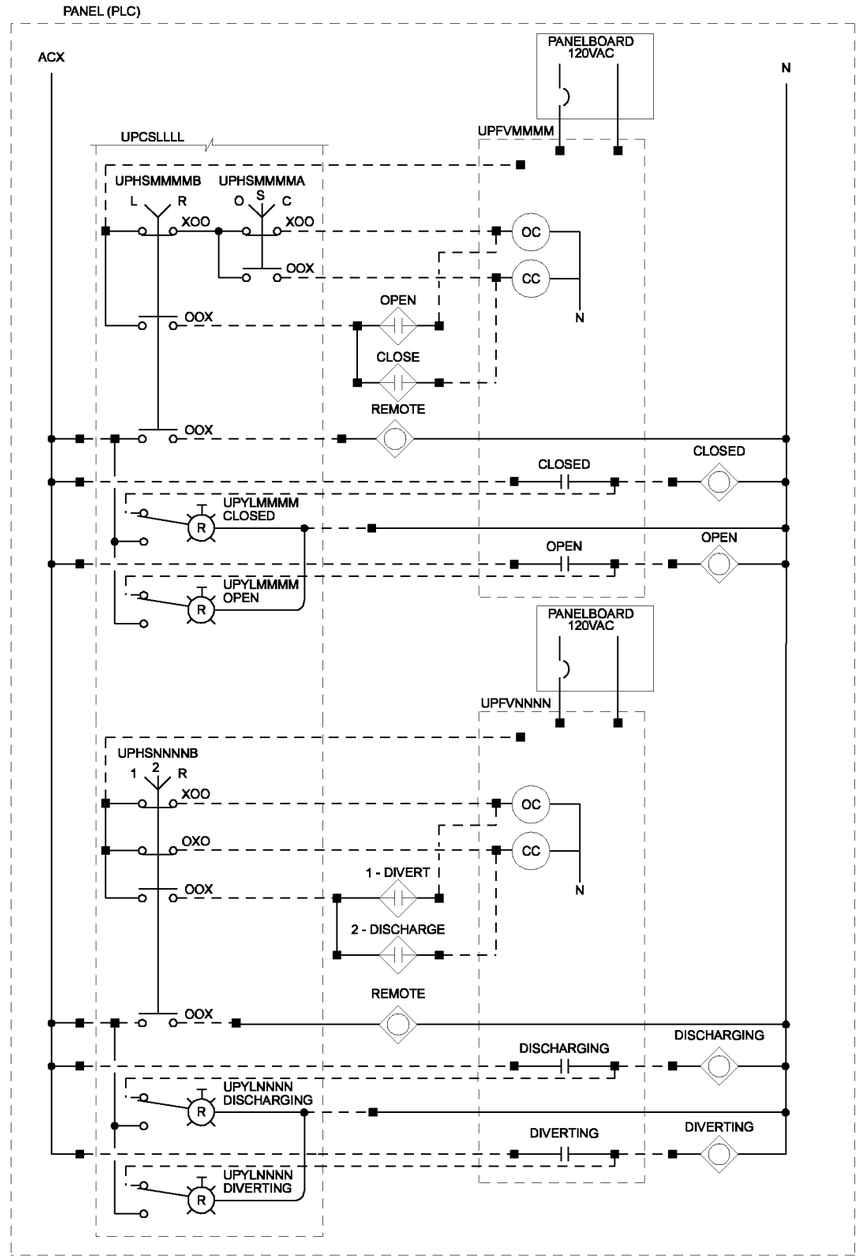
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
AERATION BLOWER, TYPICAL

SHEET	110
DWG	08-I-79
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni079d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:02 PM





LOOP	LOOP DESCRIPTION	PANEL	MCC	MMMM	NNNN
32-0201	VERTICAL LOOP REACTOR SECONDARY SCUM PUMP	AER-CP01	MCC-32A	6011	6001
45-1101	SECONDARY CLARIFIER SCUM PUMP 1	HDW-CP01	MCC-20A	6011	6001
45-1102	SECONDARY CLARIFIER SCUM PUMP 2	HDW-CP01	MCC-20B	6012	6002
45-1103	SECONDARY CLARIFIER SCUM PUMP 3	HDW-CP01	MCC-20A	6013	6003

NOTES:
1. SIZE CPT TO PROVIDE SUFFICIENT CAPACITY FOR CONTROLS AND FAN.

		NO.	DATE	REVISION	BY	APVD
DSGN	KL MAESTRI					
DR	GJ LOVE					
CHK	LL WOOD/CS BURR		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB
APVD	CW MASSIE					

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

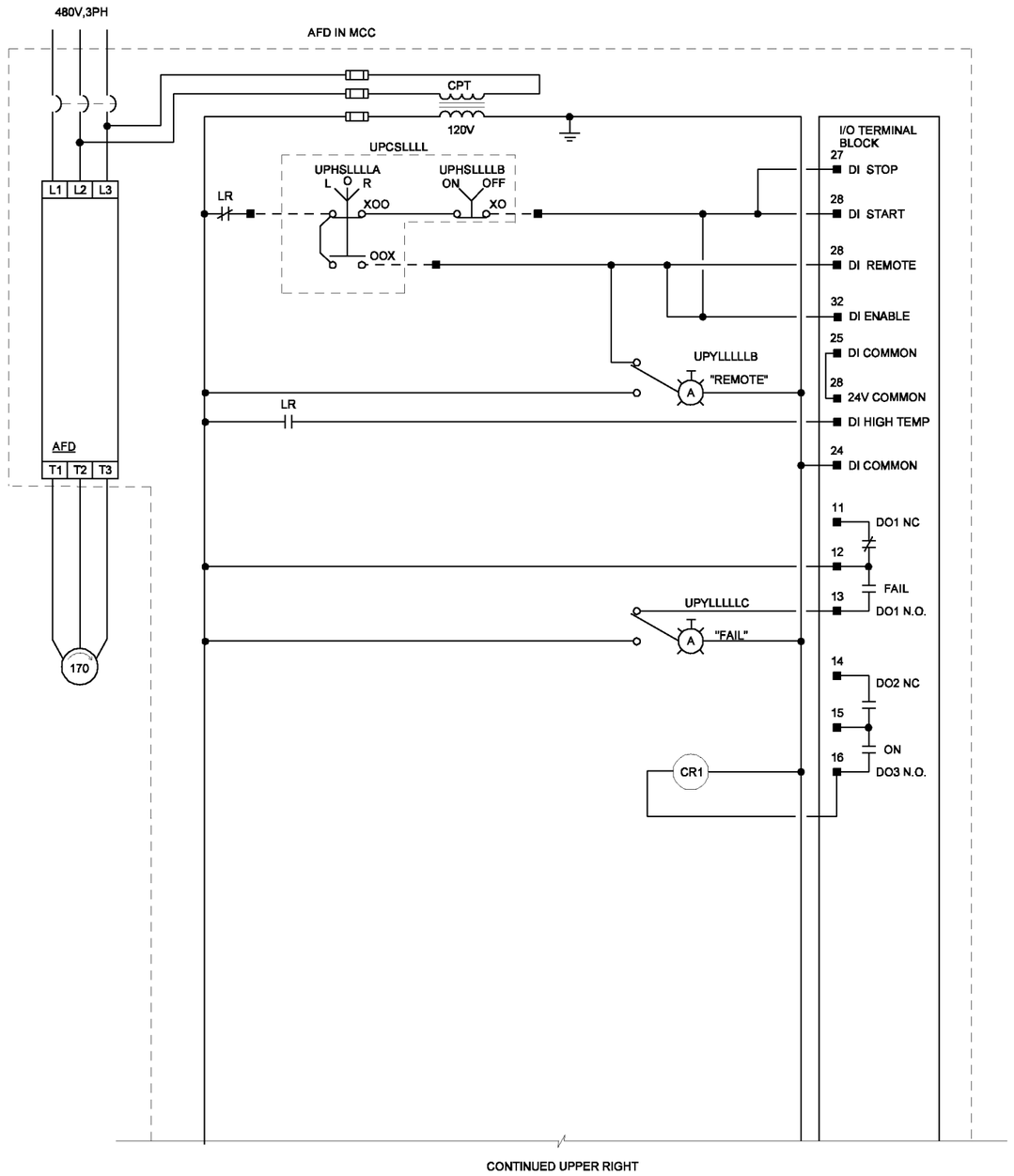
CH2MHILL carollo engineers

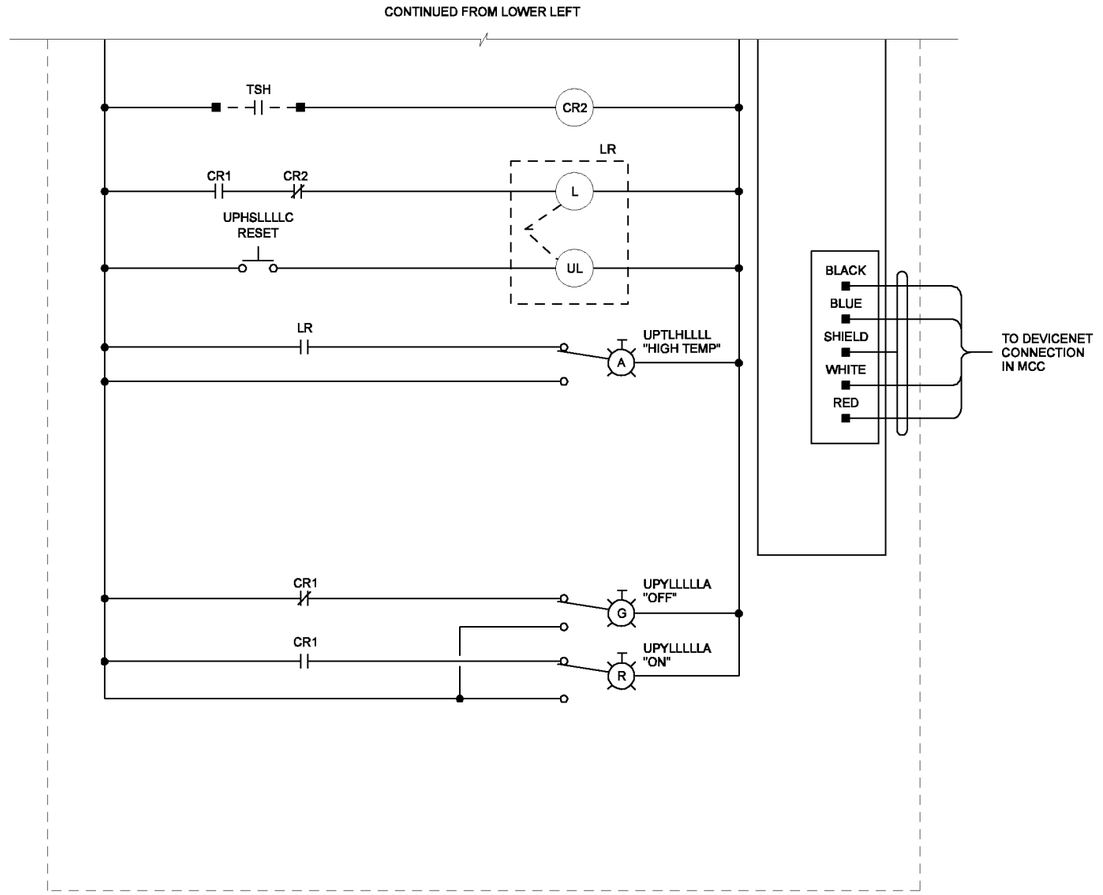
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM SCUM PUMPS, TYPICAL

SHEET	111
DWG	08-I-80
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni080d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:05 PM





LOOP	LOOP DESCRIPTION	PANEL	MCC
30-1511	VLR 1B DISC AERATOR 1	BLR-CP01	MCC-32A
30-1611	VLR 1B DISC AERATOR 2	BLR-CP01	MCC-32B
30-1521	VLR 1C DISC AERATOR 1	BLR-CP01	MCC-32A
30-1621	VLR 1C DISC AERATOR 2	BLR-CP01	MCC-32B
30-1531	VLR 1D DISC AERATOR 1	BLR-CP01	MCC-32A
30-1631	VLR 1D DISC AERATOR 2	BLR-CP01	MCC-32B
30-1512	VLR 2B DISC AERATOR 1	BLR-CP01	MCC-32A
30-1612	VLR 2B DISC AERATOR 2	BLR-CP01	MCC-32B
30-1522	VLR 2C DISC AERATOR 1	BLR-CP01	MCC-32A
30-1622	VLR 2C DISC AERATOR 2	BLR-CP01	MCC-32B
30-1532	VLR 2D DISC AERATOR 1	BLR-CP01	MCC-32A
30-1632	VLR 2D DISC AERATOR 2	BLR-CP01	MCC-32B

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49533PE

DSGN	KL MAESTRI			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	VERIFY SCALE: BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
DR	GJ LOVE						
CHK	LL WOOD/CS BURR		01/20/10				
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

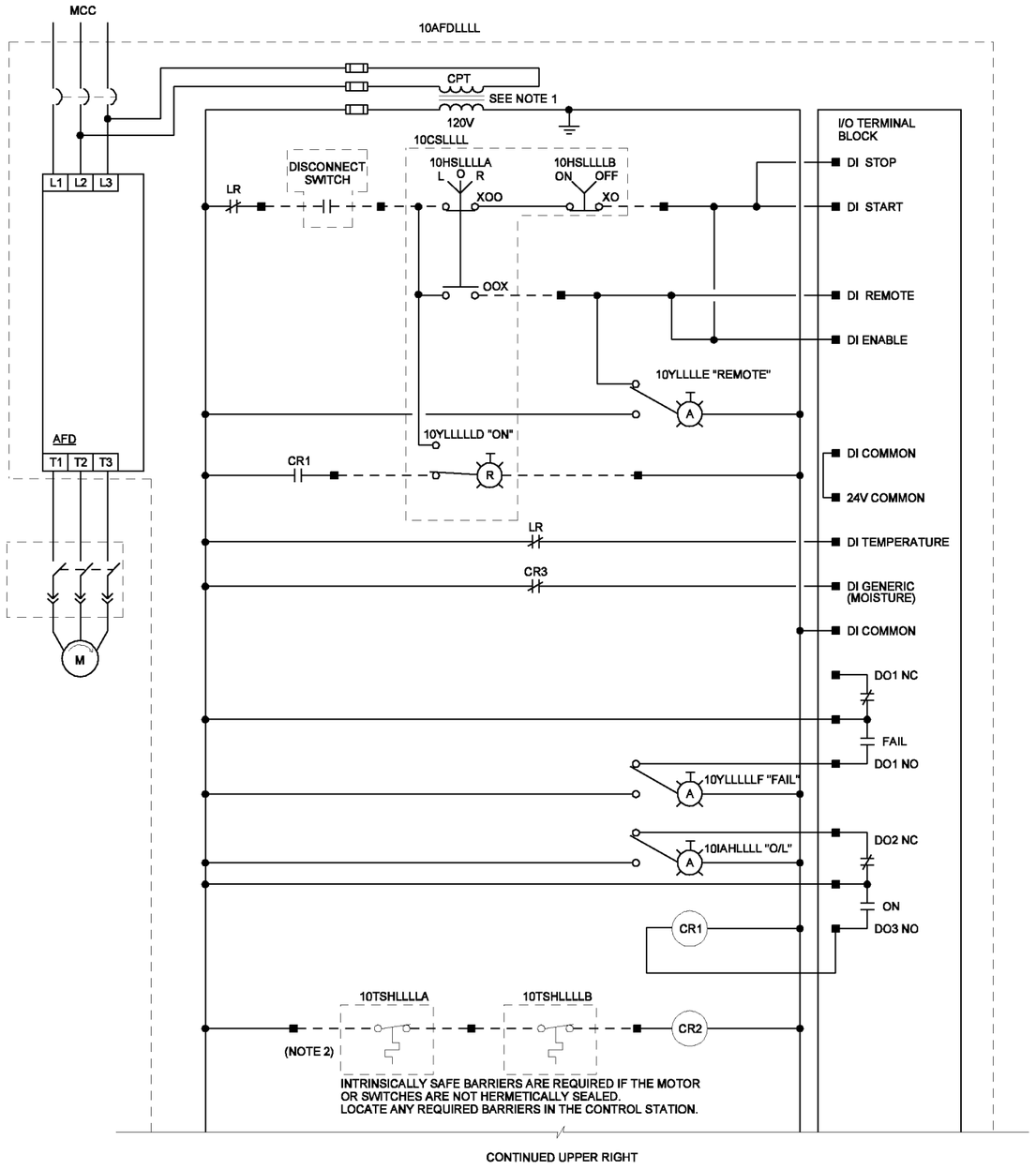
CH2MHILL carollo engineers

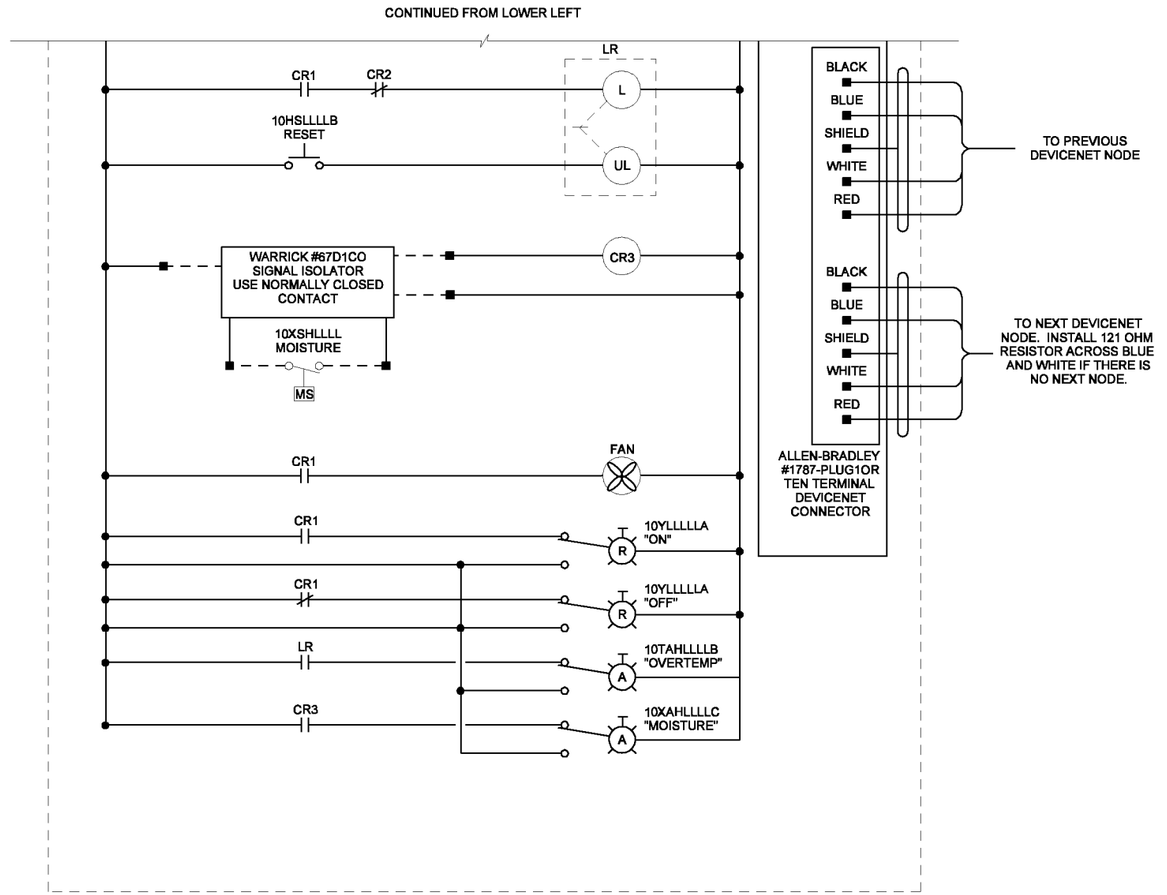
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
DISC AERATORS, TYPICAL

SHEET	112
DWG	08-I-81
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni081d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:09 PM





LOOP	LOOP DESCRIPTION	PANEL	MCC
10-0101	WET WELL PUMP 1	IPS-CP01	MCC-6C
10-0102	WET WELL PUMP 2	IPS-CP01	MCC-6D
10-0103	WET WELL PUMP 3	IPS-CP01	MCC-6C

NOTES:
1. SIZE CPT TO PROVIDE SUFFICIENT CAPACITY FOR CONTROLS AND FAN.
2. CONNECT PHASE SWITCHES IN SERIES.

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DSGN	KL MAESTRI						VERIFY SCALE
DR	GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	LL WOOD/CS BURR		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

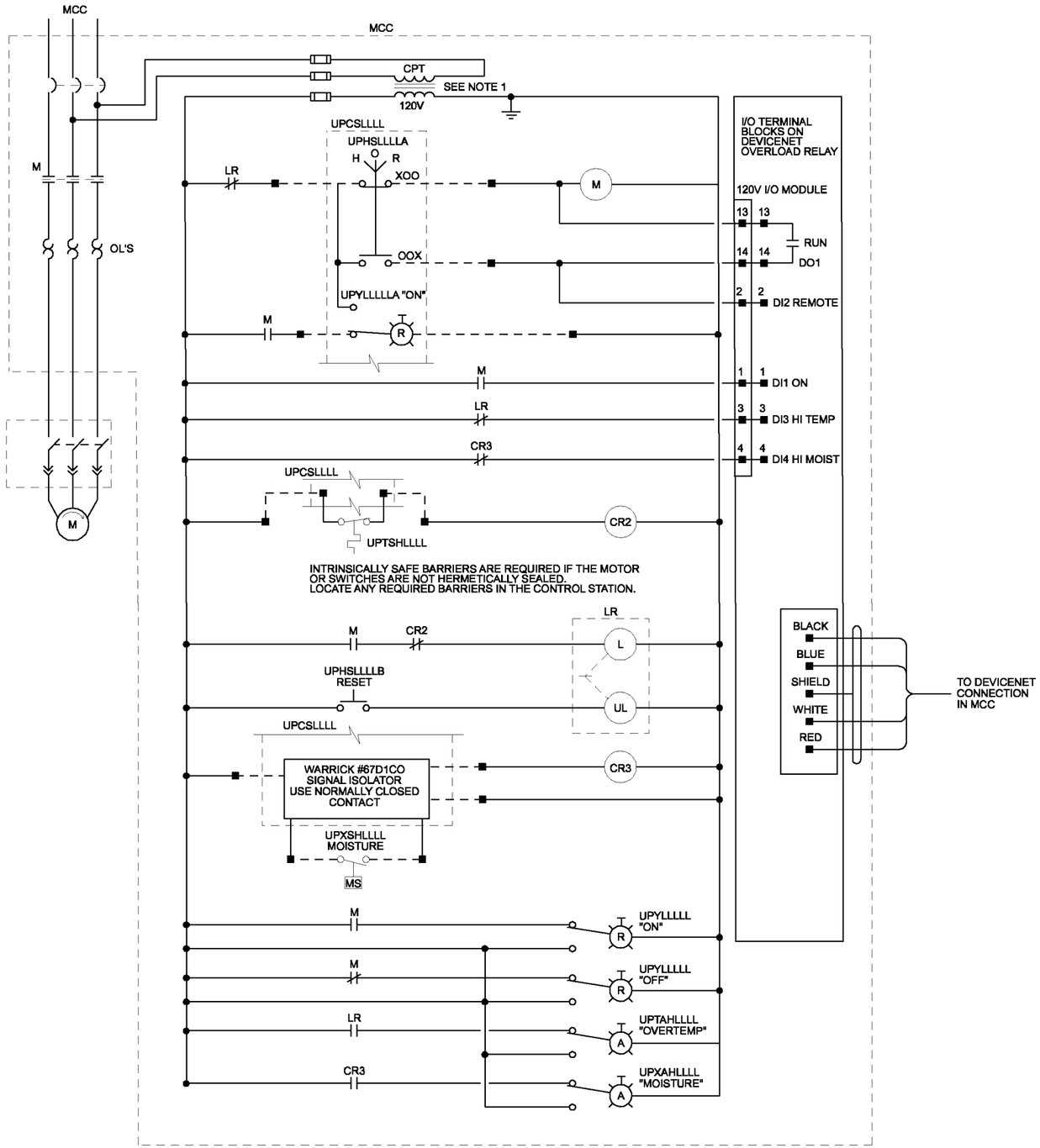
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
IPS WET WELL PUMP, TYPICAL

SHEET	113
DWG	08-I-82
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni082d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:12 PM



LOOP	LOOP DESCRIPTION	PANEL	MCC
10-1101	WET WELL SUMP PUMP	IPS-CP01	MCC-6C
30-2011	TANK DRAIN PUMP	VLR-CP01	MCC-32B
60-0101	CHEMICAL INJECTION MIXER	IPS-CP01	MCC-6C
70-2101	INTERCHANGE REACTOR PUMP 1	HDW-CP01	MCC-32A
70-2102	INTERCHANGE REACTOR PUMP 2	HDW-CP01	MCC-32B

NOTES:
1. SIZE CPT TO PROVIDE SUFFICIENT CAPACITY FOR CONTROLS AND FAN.

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		NO.	DATE	REVISION	BY	APVD
DSGN	KL MAESTRI					
DR	GJ LOVE					
CHK	LL WOOD/CS BURR		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB
APVD	CW MASSIE					

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

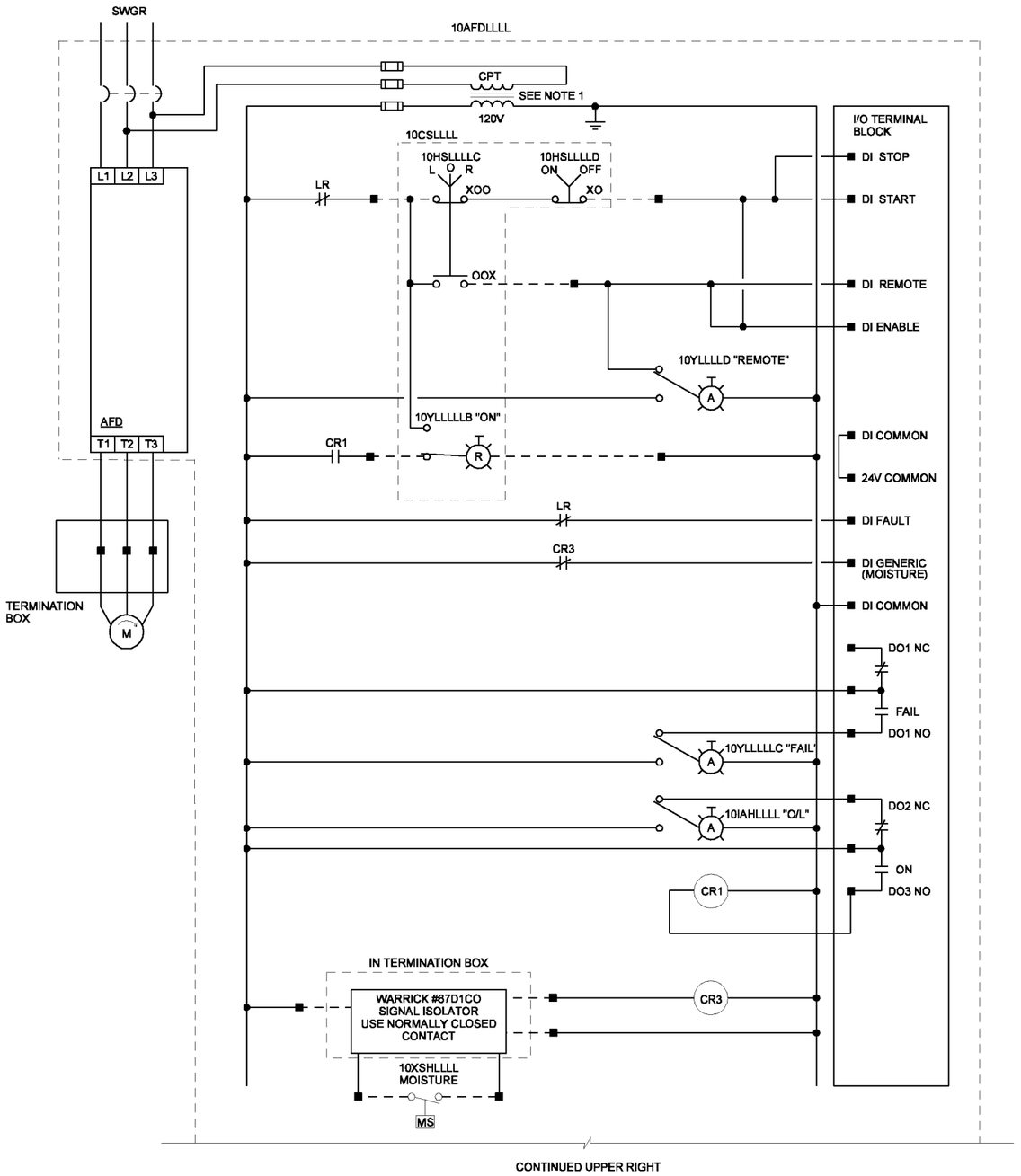
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
CONSTANT SPEED SUBMERSIBLE
PUMPS AND MIXERS, TYPICAL

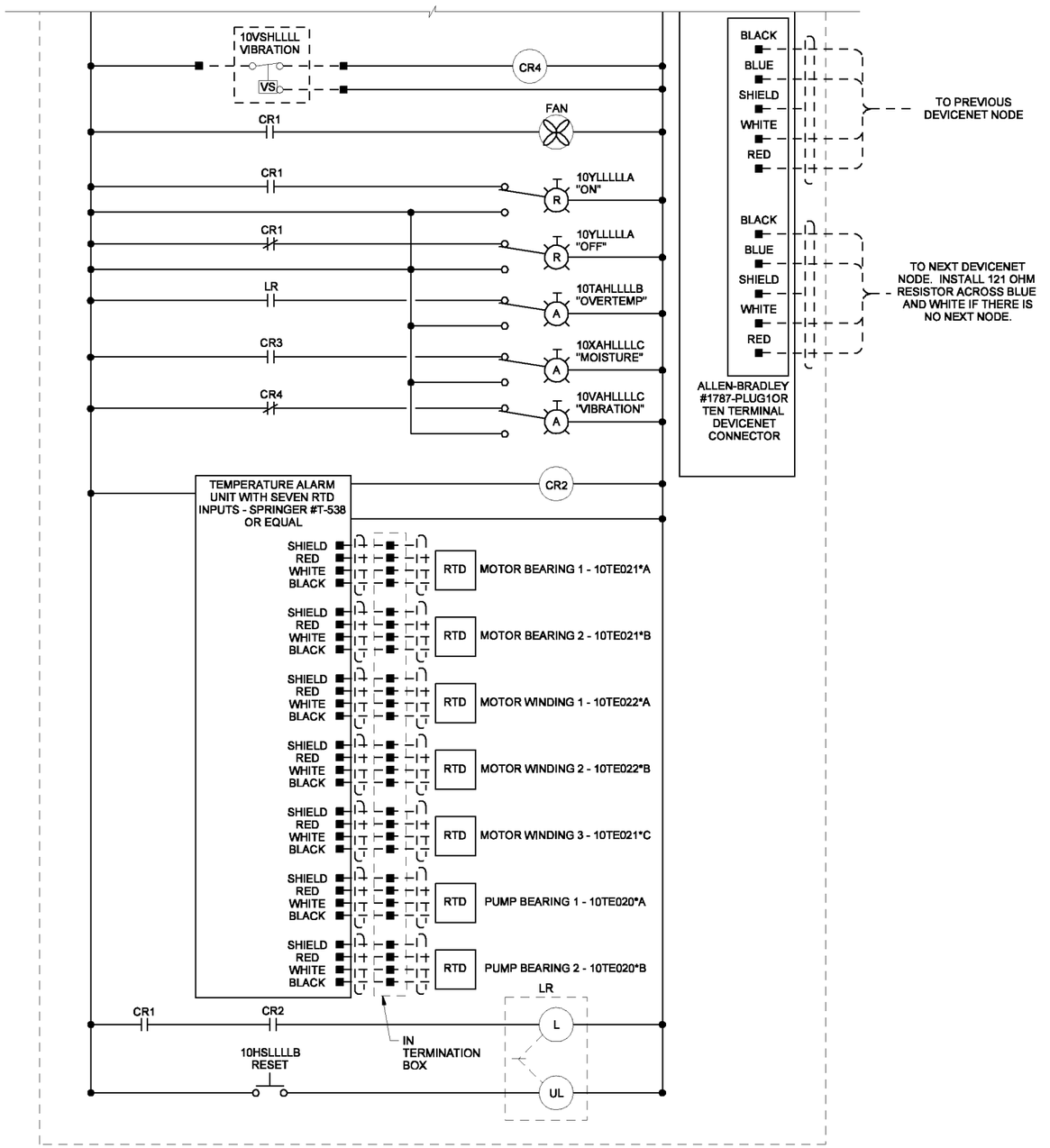
SHEET	114
DWG	08-I-83
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni083d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:16 PM



CONTINUED UPPER RIGHT

CONTINUED FROM LOWER LEFT



LOOP	LOOP DESCRIPTION	PANEL	SWGR	*
10-0201	DRY PIT PUMP 1	IPS-CP01	SWGR-10A	1
10-0202	DRY PIT PUMP 2	IPS-CP01	SWGR-10B	2
10-0203	DRY PIT PUMP 3	IPS-CP01	SWGR-10B	3

NOTES:
1. SIZE CPT TO PROVIDE SUFFICIENT CAPACITY FOR CONTROLS AND FAN.

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DSGN	KL MAESTRI						VERIFY SCALE
DR	GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD/CS BURR		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

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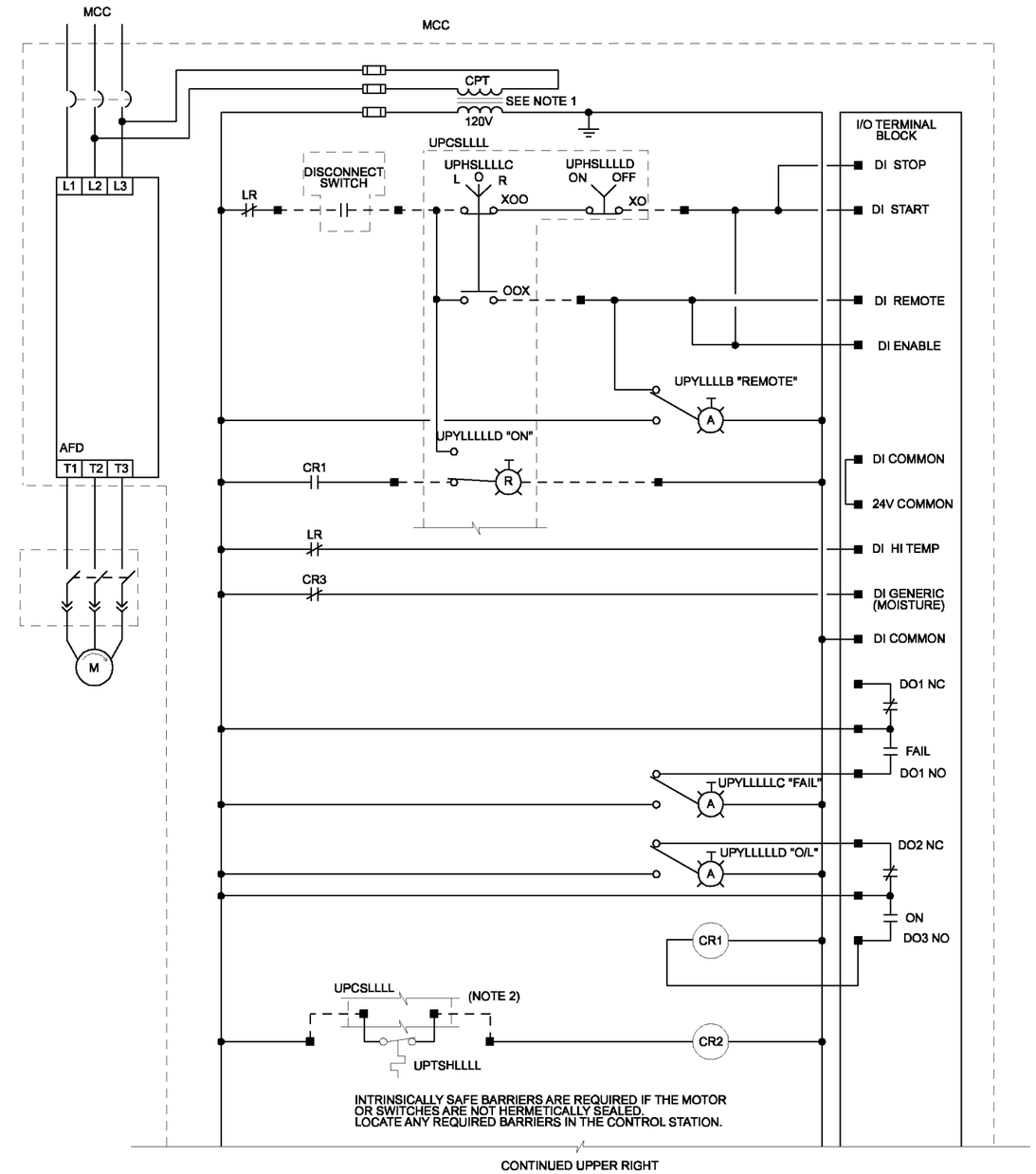
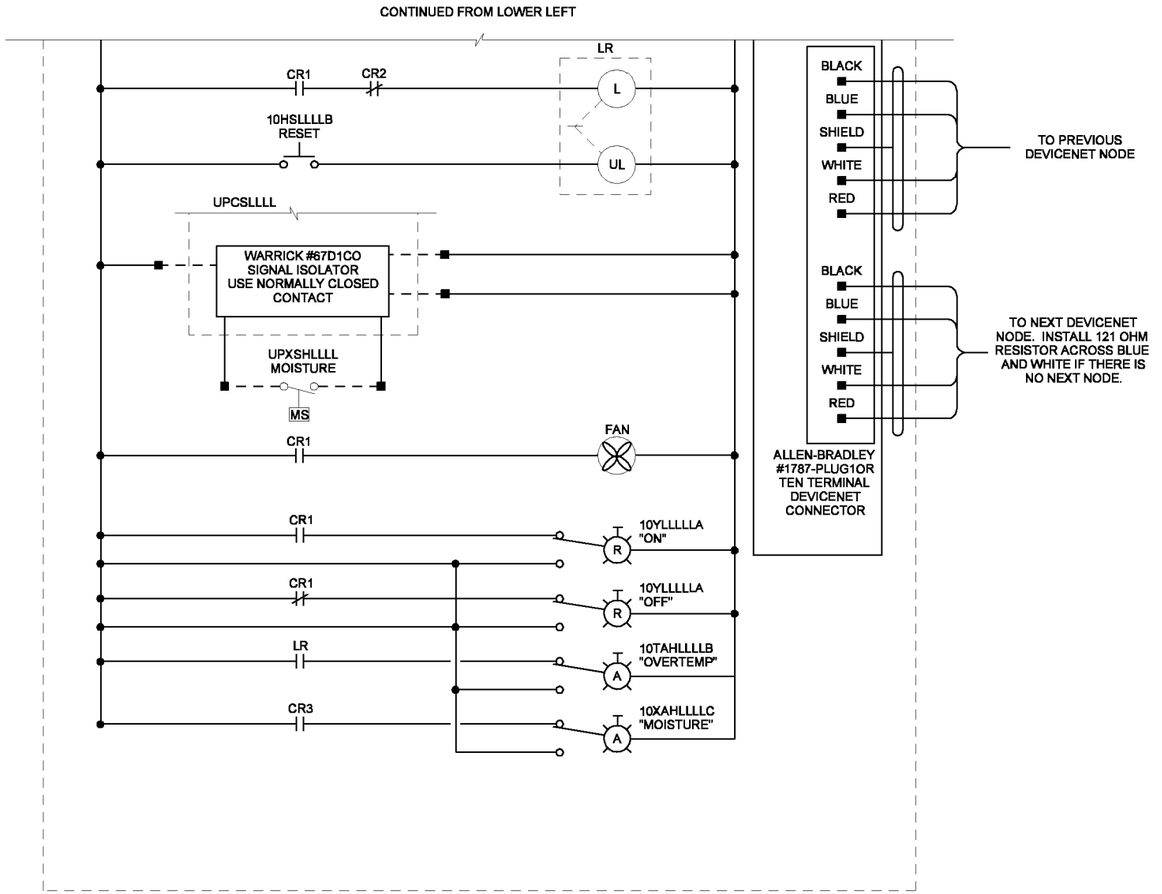
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
IPS DRY WELL PUMP, TYPICAL

SHEET	115
DWG	08-I-84
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni084d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:19 PM





LOOP	LOOP DESCRIPTION	PANEL	MCC
50-0101	CLARIFIER 1, RAS PUMP 1	HDW-CP01	MCC-20A
50-0201	CLARIFIER 1, RAS PUMP 2	HDW-CP01	MCC-20B
50-0102	CLARIFIER 2, RAS PUMP 1	HDW-CP01	MCC-20A
50-0202	CLARIFIER 2, RAS PUMP 2	HDW-CP01	MCC-20B
50-0103	CLARIFIER 3, RAS PUMP 1	HDW-CP01	MCC-20A
50-0203	CLARIFIER 3, RAS PUMP 2	HDW-CP01	MCC-20B
72-2101	AEROBIC DIGESTER DISCHARGE PUMP	AER-CP01	MCC-32B

NOTES:
1. SIZE CPT TO PROVIDE SUFFICIENT CAPACITY FOR CONTROLS AND FAN.
2. CONNECT PHASE SWITCHES IN SERIES.

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		NO.	DATE	REVISION	BY	APVD
DSGN	KL MAESTRI					
DR	GJ LOVE					
CHK	LL WOOD/CS BURR		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB
APVD	CW MASSIE					

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

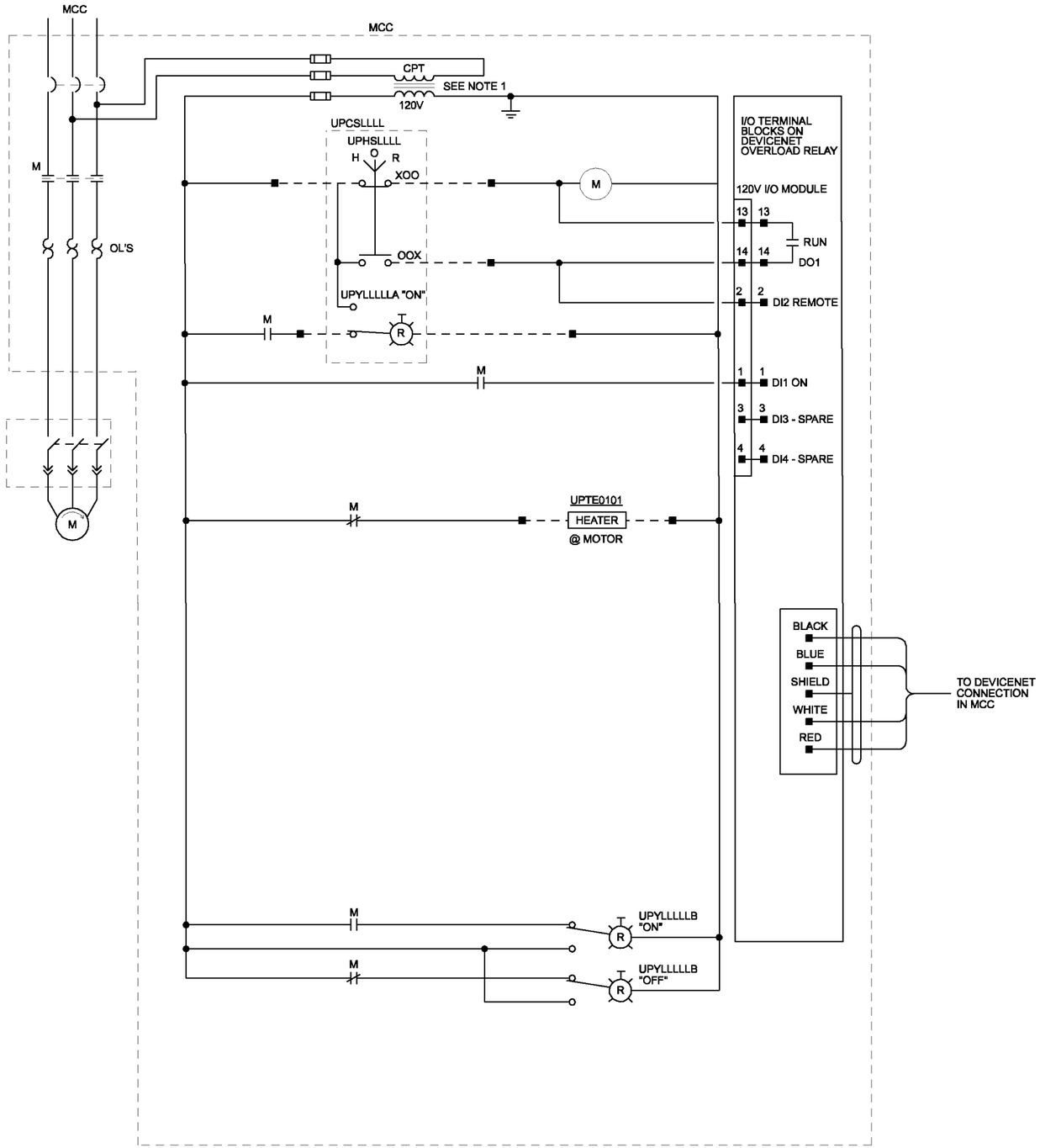
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
RAS AND AEROBIC DIGESTER DISCHARGE PUMPS, TYPICAL

SHEET	116
DWG	08-I-85
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni085d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:23 PM



LOOP	LOOP DESCRIPTION	PANEL	MCC
70-0101	INTERCHANGE REACTOR 1 MIXER 1	BLR-CP01	MCC-32A
70-0201	INTERCHANGE REACTOR 1 MIXER 2	BLR-CP01	MCC-32B
70-0102	INTERCHANGE REACTOR 2 MIXER 1	BLR-CP01	MCC-32A
70-0202	INTERCHANGE REACTOR 2 MIXER 2	BLR-CP01	MCC-32B

NOTES:
1. SIZE CPT TO PROVIDE SUFFICIENT CAPACITY FOR CONTROLS AND FAN.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN KL MAESTRI						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK LL WOOD/CS BURR			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
		01/20/10		PMH	CSB	

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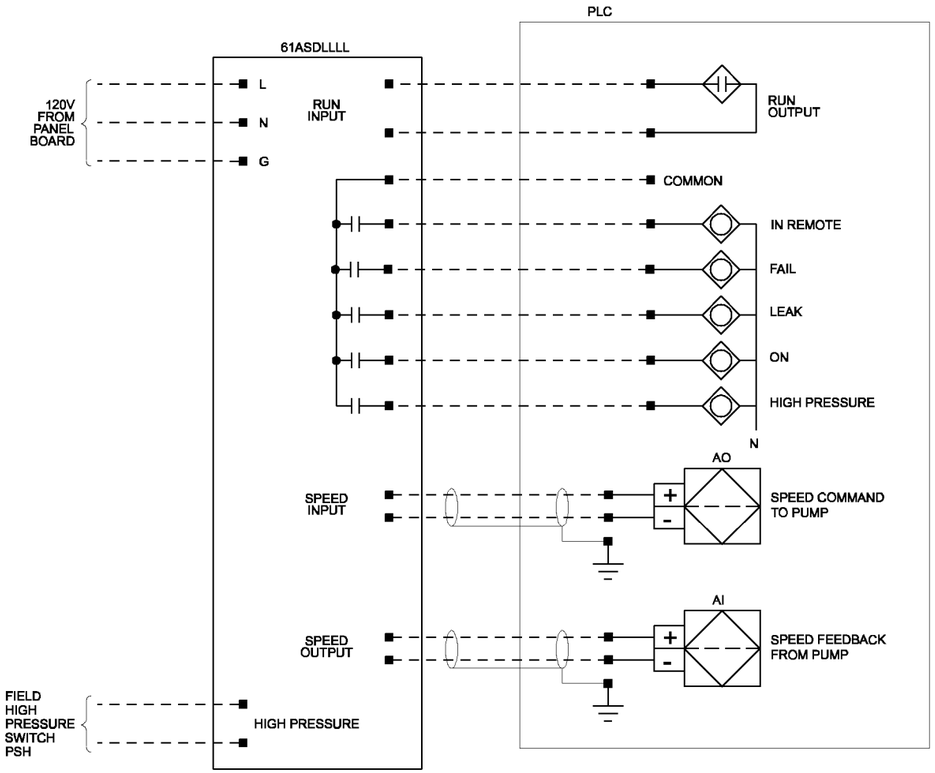
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
INTERCHANGE REACTOR MIXER, TYPICAL

SHEET	117
DWG	08-I-86
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni086d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:27 PM



LOOP	LOOP DESCRIPTION	PANEL	PANEL BOARD	PSH
1101	SODIUM HYPOCHLORITE PUMP 1	IPS-CP01	IPS-LP01	61-3101
1102	SODIUM HYPOCHLORITE PUMP 2	IPS-CP01	IPS-LP01	61-3102
1103	SODIUM HYPOCHLORITE PUMP 3	IPS-CP01	IPS-LP01	61-3103

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN KL MAESTRI						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD/CS BURR			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	PMH BY	CSB APVD	
		01/20/10				

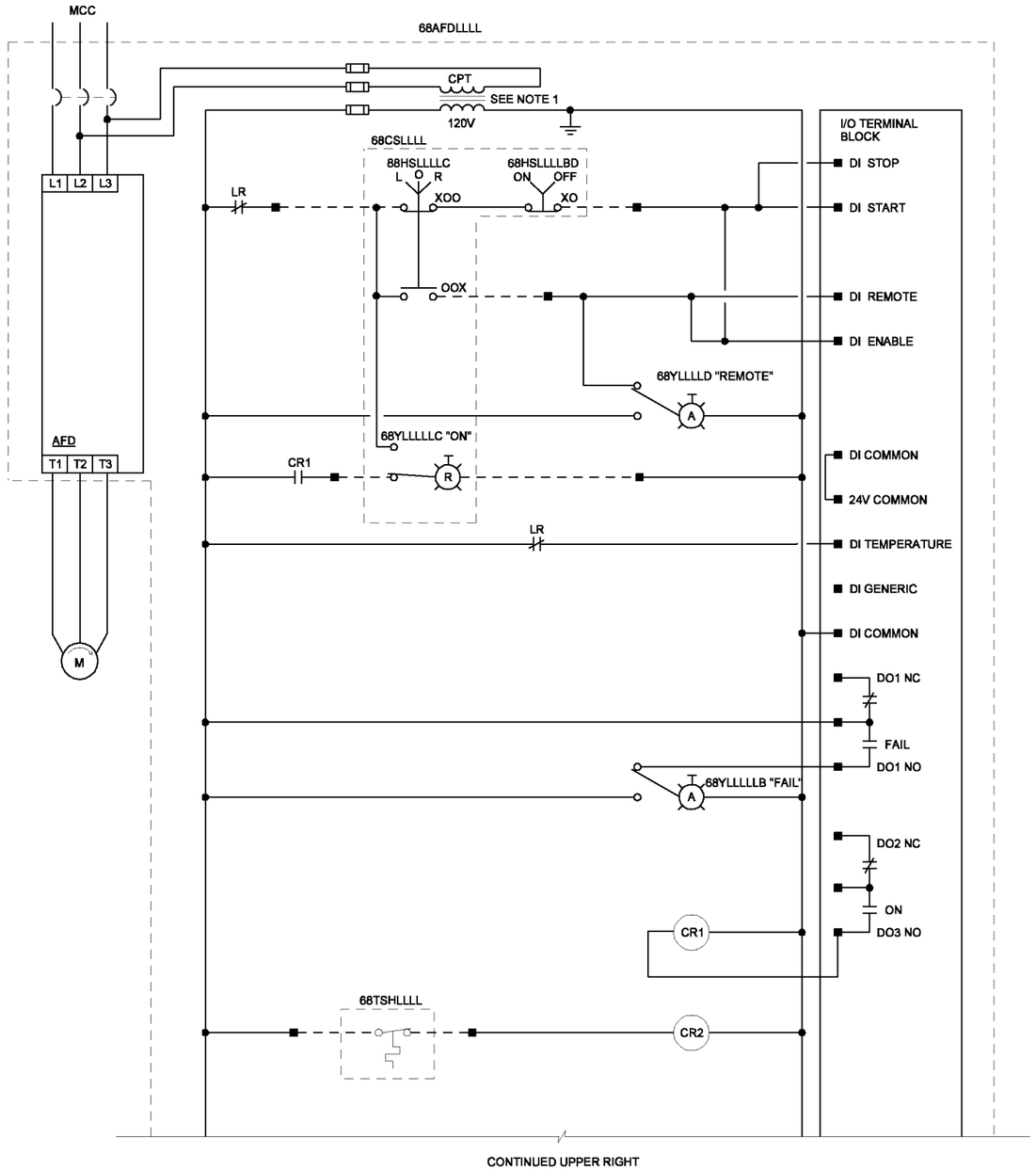
CH2MHILL carollo engineers

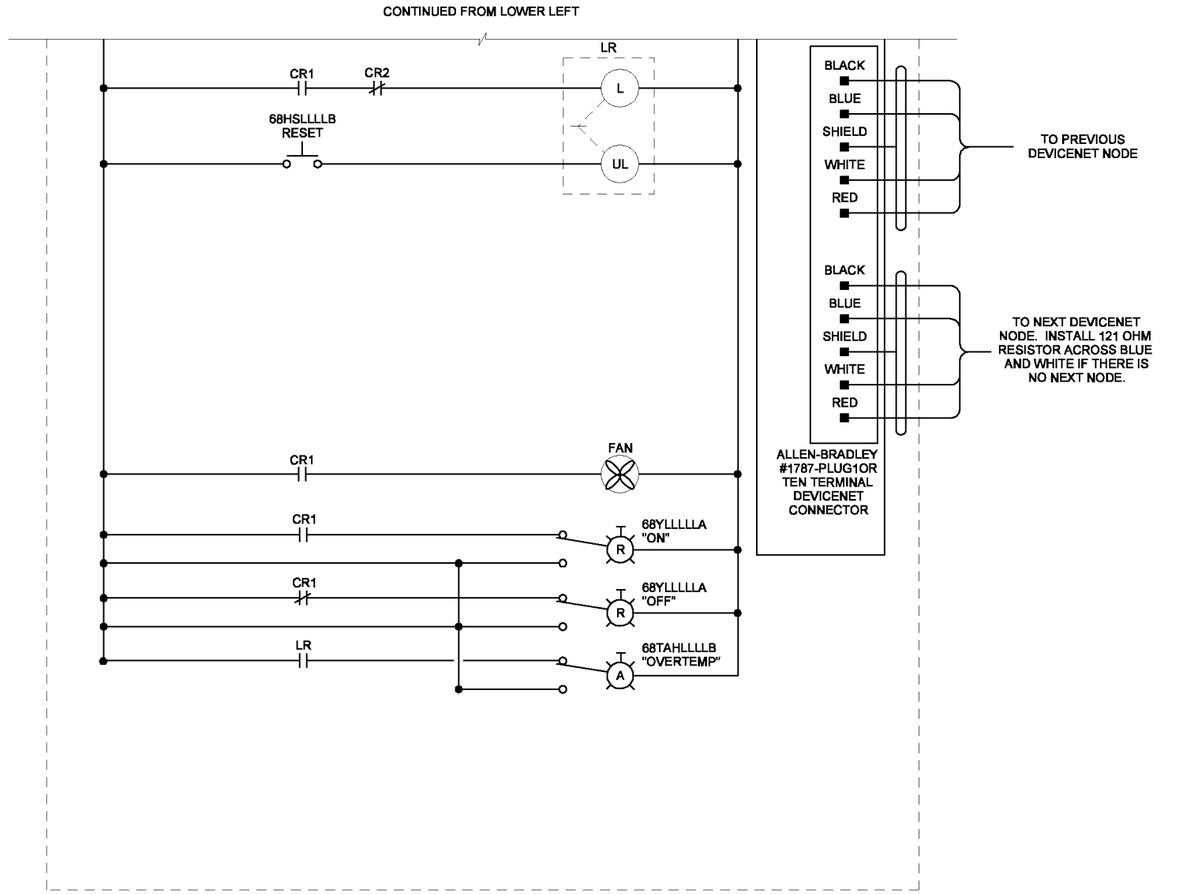
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
SODIUM HYPOCHLORITE PUMP, TYPICAL

SHEET	118
DWG	08-I-87
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni087d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:30 PM





LOOP	LOOP DESCRIPTION	PANEL	MCC
68-0101	W3 PUMP 1	IPS-CP01	MCC-6C
68-0102	W3 PUMP 2	IPS-CP01	MCC-6D
68-0103	W3 PUMP 3	IPS-CP01	MCC-6C

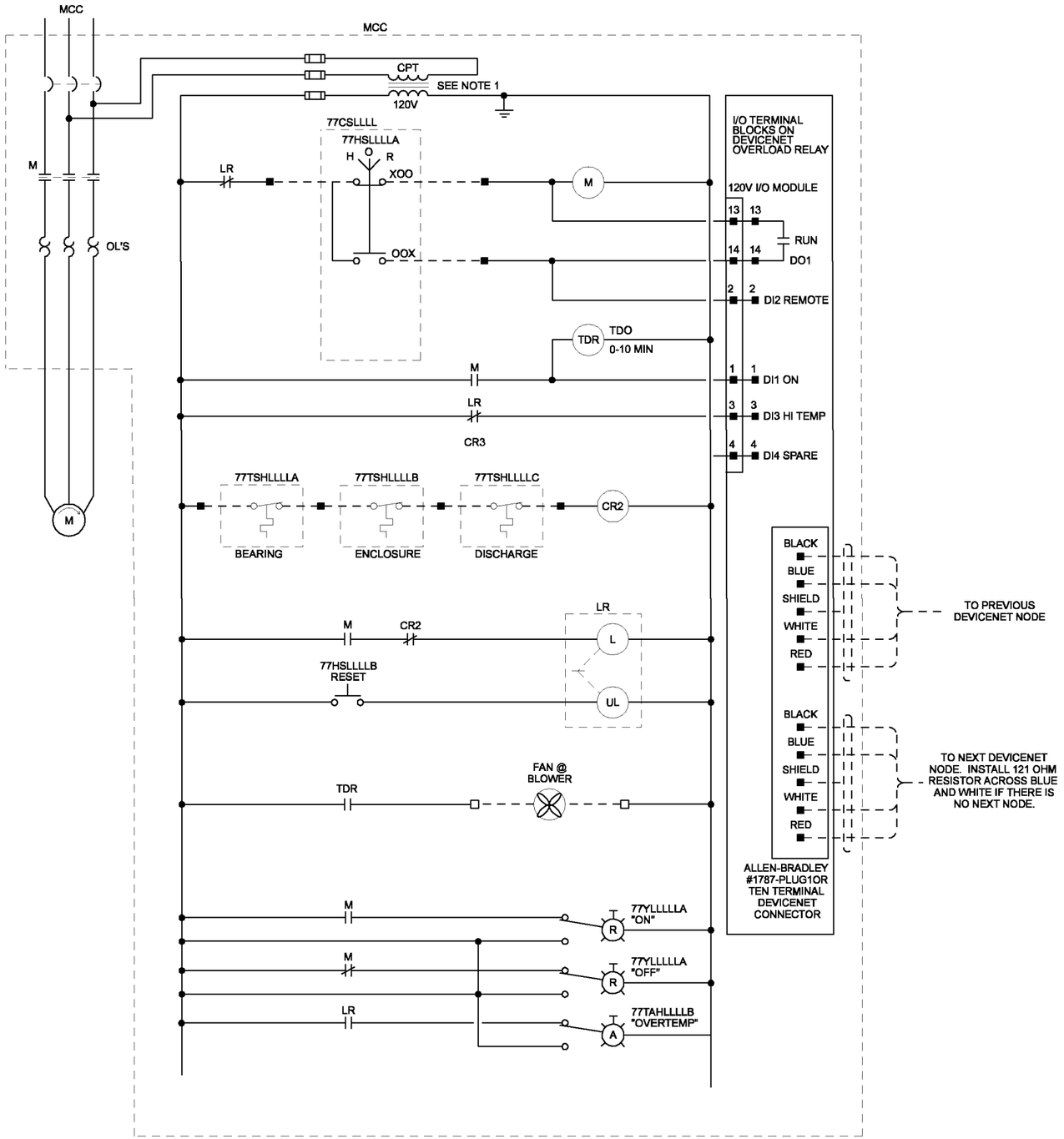
NOTES:
1. SIZE CPT TO PROVIDE SUFFICIENT CAPACITY FOR CONTROLS AND FAN.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN KL MAESTRI						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON	INSTRUMENTATION AND CONTROL WIRING DIAGRAM W3 PUMP, TYPICAL	SHEET 119
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DWG 08-I-88
CHK LL WOOD/CS BURR			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT						DATE MAY 19 2006
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD				PROJ 326918
		01/20/10		PMH	CSB				

CH2MHILL carollo engineers

FILENAME: 08ni088d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:33 PM



LOOP	LOOP DESCRIPTION	PANEL	MCC
77-0101	AEROBIC DIGESTER BLOWER 1	BLR-CP01	MCC-1A (EXST)
77-0102	AEROBIC DIGESTER BLOWER 2	BLR-CP01	MCC-1A (EXST)
77-1101	INTERCHANGE REACTOR BLOWER 1	BLR-CP01	MCC-1A (EXST)
77-1102	INTERCHANGE REACTOR BLOWER 2	BLR-CP01	MCC-1A (EXST)

NOTES:
1. SIZE CPT TO PROVIDE SUFFICIENT CAPACITY FOR CONTROLS AND FAN.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN	KL MAESTRI						VERIFY SCALE
DR	GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD/CS BURR			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			
APVD	CW MASSIE	NO.	01/20/10 DATE	REVISION	PMH BY	CSB APVD	

CH2MHILL carollo engineers

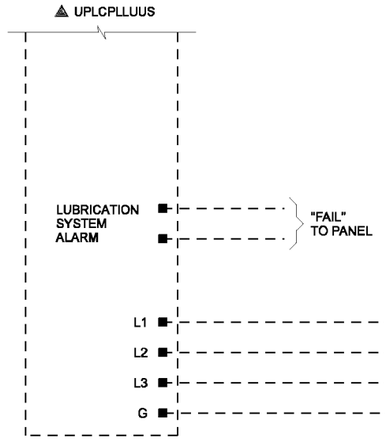
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
INTERCHANGE REACTOR BLOWER AND AEROBIC DIGESTER BLOWER, TYPICAL

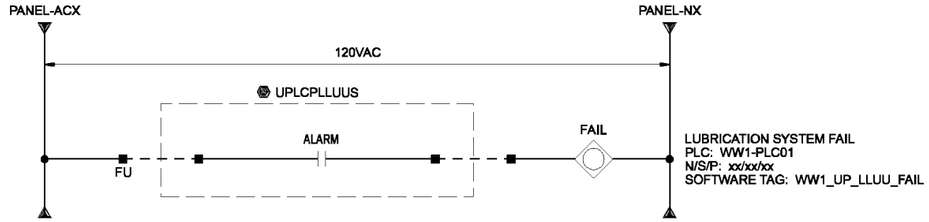
SHEET	120
DWG	08-I-89
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni089d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:36 PM

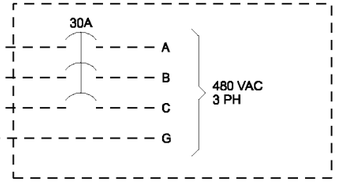
FIELD



PANEL



480VAC PANEL



LOOP	LOOP DESCRIPTION	PANEL	480VAC PANEL
30-0801	LUBRICATION SYSTEM CONTROL PANEL	BLR-CP01	

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DSGN	KL MAESTRI						VERIFY SCALE
DR	DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	LL WOOD/CS BURR			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB	
APVD	CW MASSIE	NO.	01/20/10 DATE	REVISION	BY	APVD	

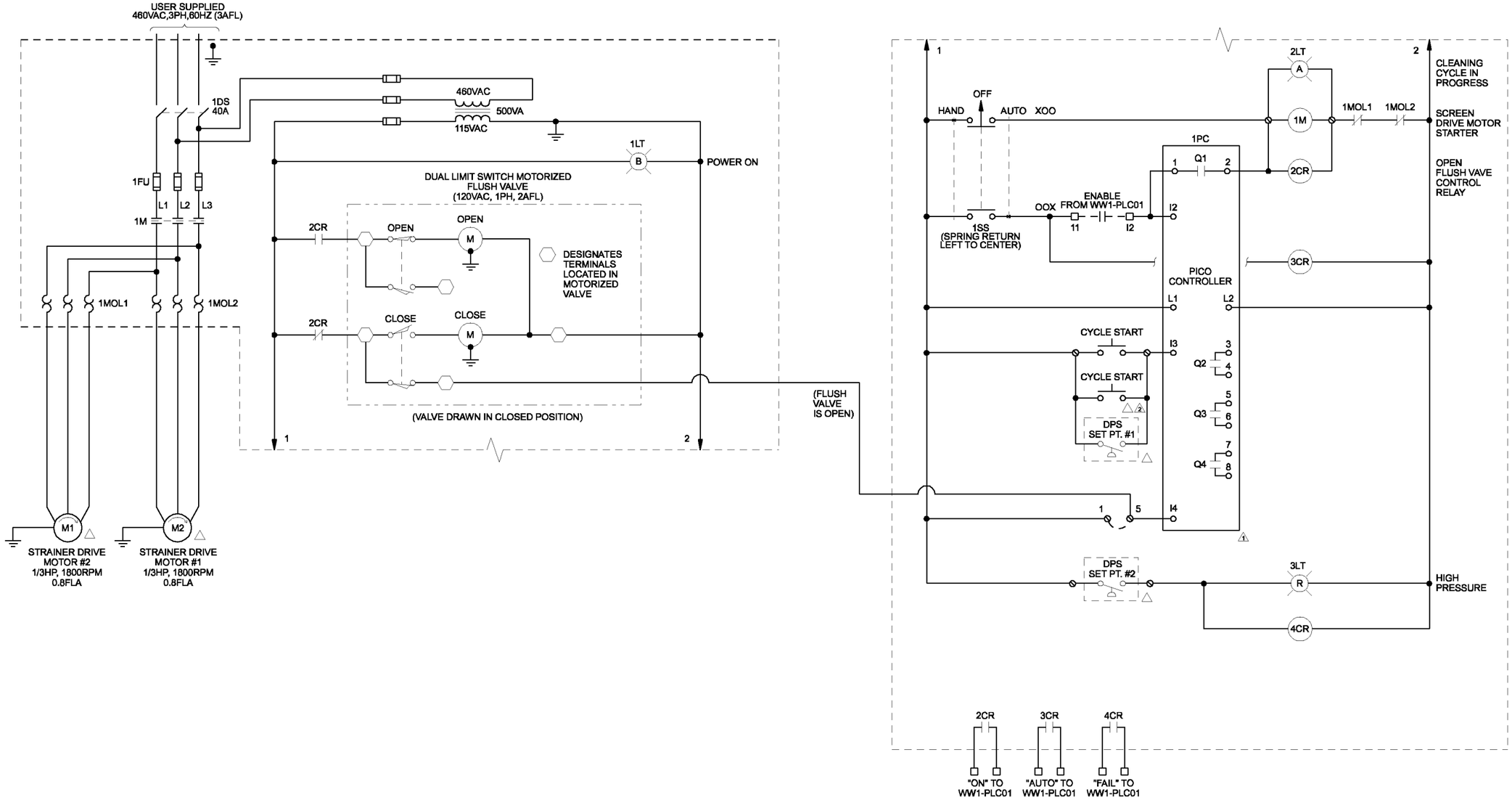
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL
WIRING DIAGRAM
LUBRICATION SYSTEM
DISCRETE LOOP

SHEET	121
DWG	08-I-90
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni090d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:40 PM



△ REMOTELY LOCATED COMPONENTS.

⚠1 TIME SETTINGS
T1-SCREEN FLUSH CYCLE TIME
T2-NEXT CYCLE DELAY
T3-AUTO CLEANING CYCLE
(TIME OUT INITIATES SCREEN
FLUSH CYCLE)

DIFFERENTIAL PRESSURE SWITCH (DPS)

SET POINT #1
CYCLE START (LOW PRESSURE)

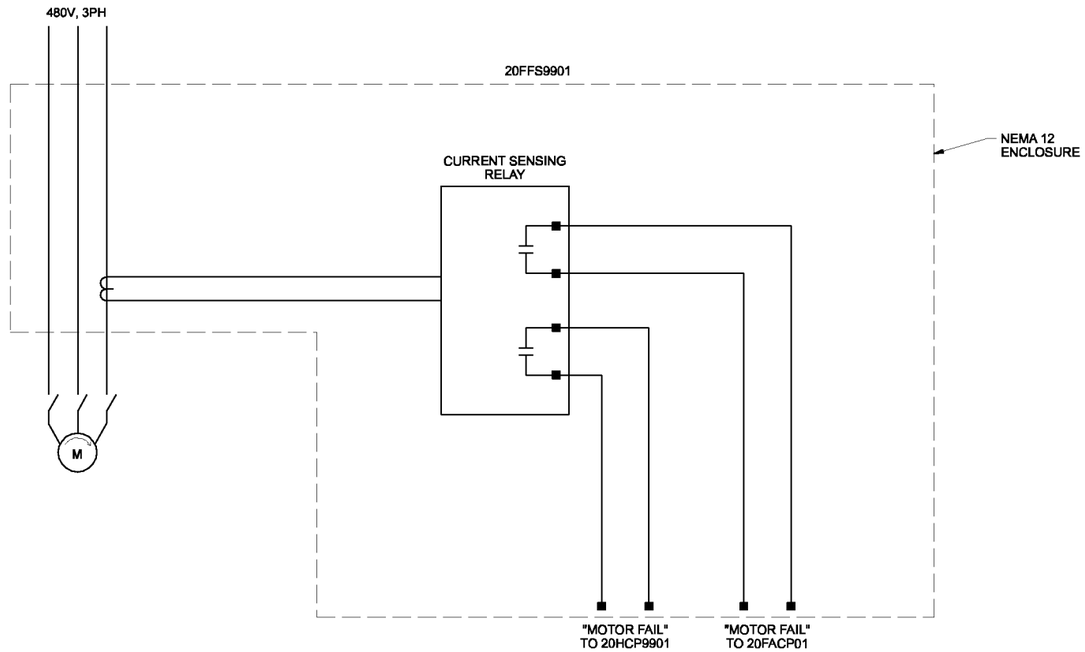
SET POINT #2
PILOT LIGHT ALARM (PRESSURE HIGH)

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN BR ROGERS						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON	INSTRUMENTATION AND CONTROL WIRING DIAGRAM MOTORIZED STRAINER	SHEET 122
DR RB CAVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DWG 08-I-91
CHK CS BURR									DATE MAY 19 2006
APVD RS SHANLEY	NO.	DATE	REVISION	BY	APVD				PROJ 326918
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	PMH	CSB				

CH2MHILL carollo engineers

FILENAME: 08ni091d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:43 PM



NOTES:

1. PROVIDE UNDERCURRENT SENSING RELAYS & CTS TO DETECT UNDERCURRENT WHEN UNIT IS IN OPERATION. SET RELAYS PER HVAC MANUFACTURER'S RECOMMENDATION. MANUFACTURER: SQUARE D MODEL: RM3JA1, OR EQUAL.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 19, 2006 BY CHRISTOPHER S. BURR, STATE OF OREGON, P.E. NO. 49633PE

DSGN KL MAESTRI			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			VERIFY SCALE
DR DS PARKER						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK LL WOOD/CS BURR		01/20/10		PMH	CSB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

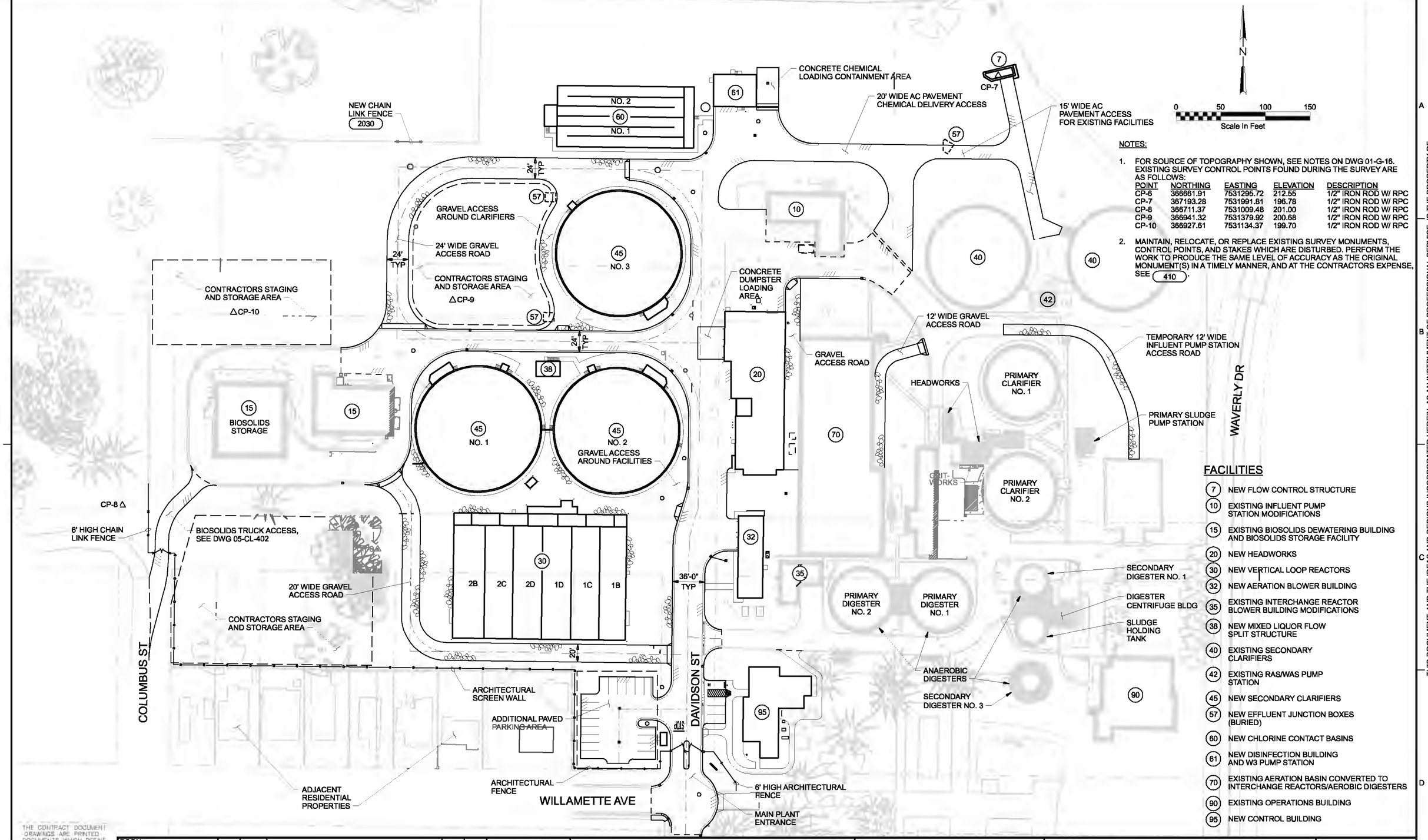
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INSTRUMENTATION AND CONTROL

WIRING DIAGRAM AIR SUPPLY UNIT FAN FAILURE SWITCH

SHEET	123
DWG	08-I-92
DATE	MAY 19 2006
PROJ	326918

FILENAME: 08ni092d_326918.dgn PLOT DATE: 3/8/2010 PLOT TIME: 2:52:46 PM



THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60132PE.

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

OVERALL SITE PLAN

SHEET	124
DWG	05-C-100
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nc100d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:13:31 PM

AREA 101

AREA 102

AREA 103

AREA 104

AREA 105

AREA 106

FUTURE MEMBRANE

NO. 2 (80) NO. 1

54" REROUTED RIVERFRONT INTERCEPTOR SEWER

FUTURE SECONDARY CLARIFIER NO. 4

NO. 3

EXISTING 12" PRESSURE SEWER

EXISTING 21" SANITARY SEWER

EXST SANITARY SEWER

BIOSOLIDS STORAGE

NO. 1

NO. 2

FUTURE BLOWER BUILDING

FUTURE VERTICAL LOOP REACTORS

RAS FLOW SPLIT

HEADWORKS

TEMPORARY GRAVEL ACCESS ROAD

PRIMARY CLARIFIERS

PRIMARY SLUDGE PUMP STATION

GRIT-WORKS

MAINTENANCE BUILDING

SECONDARY DIGESTER NO. 1

BIOSOLIDS TRUCK ACCESS, SEE DWG 05-CL-402

2B 2C 2D 1D 1C 1B

DAVIDSON ST

PRIMARY DIGESTER NO. 2

PRIMARY DIGESTER NO. 1

DIGESTER CENTRIFUGE BLDG

SLUDGE HOLDING TANK

ANAEROBIC DIGESTERS

SECONDARY DIGESTER NO. 3

COLUMBUS ST

WILLAMETTE AVE

EXISTING DAVIDSON INTERCEPTOR SEWER

WAVERLY DRIVE

N

0 60 120 180

Scale In Feet

FACILITIES

7 NEW FLOW CONTROL STRUCTURE

10 EXISTING INFLUENT PUMP STATION MODIFICATIONS

15 EXISTING BIOSOLIDS DEWATERING BUILDING AND BIOSOLIDS STORAGE FACILITY MODIFICATIONS

20 NEW HEADWORKS

30 NEW VERTICAL LOOP REACTORS

32 NEW AERATION BLOWER BUILDING

35 EXISTING INTERCHANGE REACTOR BLOWER BUILDING MODIFICATIONS

38 NEW MIXED LIQUOR FLOW SPLIT STRUCTURE

40 EXISTING SECONDARY CLARIFIERS

42 EXISTING RAS/WAS PUMP STATION

45 NEW SECONDARY CLARIFIERS

57 NEW EFFLUENT JUNCTION BOXES (BURIED)

60 NEW CHLORINE CONTACT BASINS

61 NEW DISINFECTION BUILDING AND W3 PUMP STATION

70 EXISTING AERATION BASIN CONVERTED TO INTERCHANGE REACTORS/AEROBIC DIGESTERS

90 EXISTING OPERATIONS BUILDING

95 NEW CONTROL BUILDING

DSGN	JT ASHLEY				
DR	PA LONG				
CHK	DJ PETERSON				
APVD	CW MASSIE				
NO.	DATE	REVISION	BY	APVD	
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

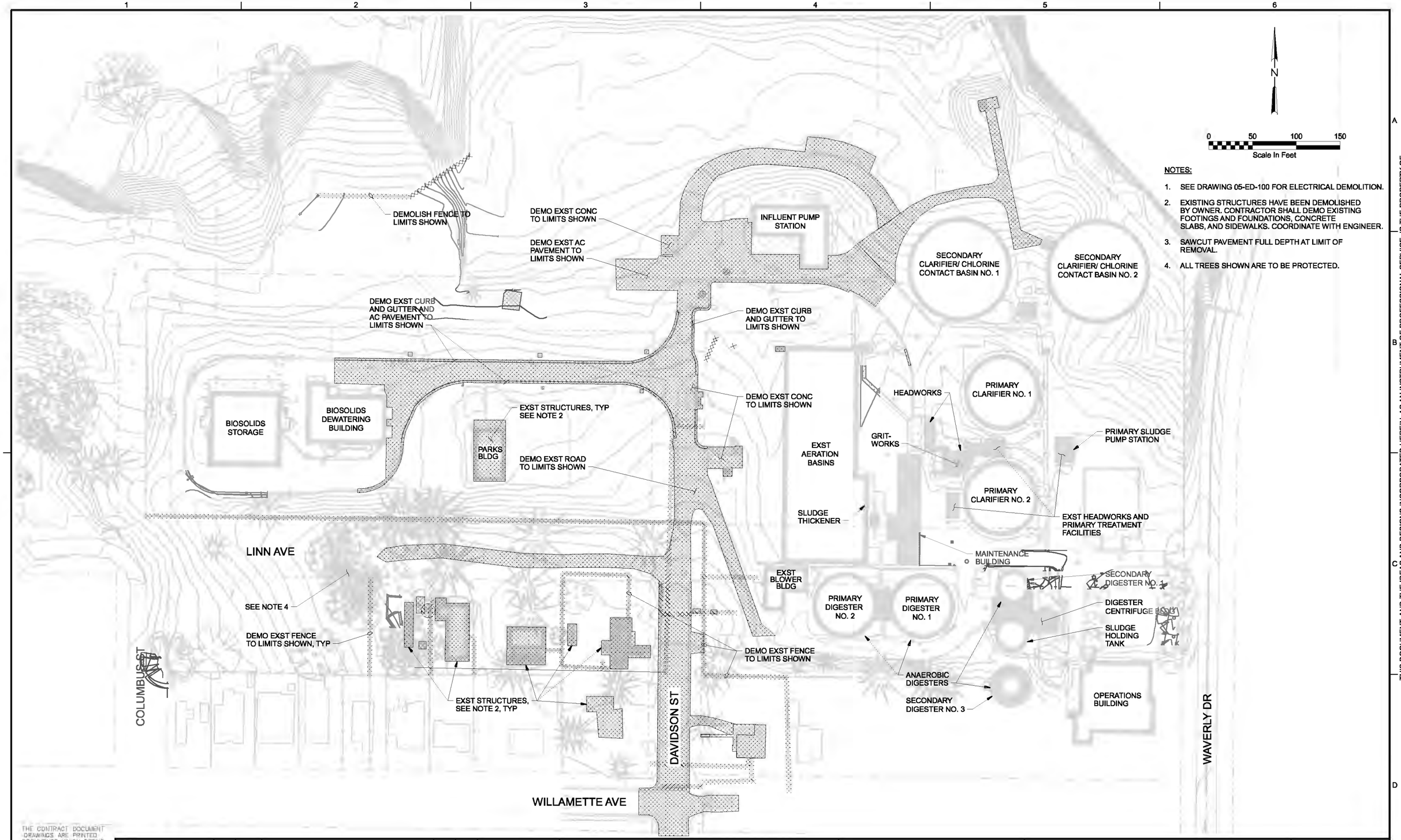
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

CIVIL
KEY PLAN

SHEET	125
DWG	05-C-101
DATE	MAY 19 2006
PROJ	326918

FILENAME: 06nc101d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:13:42 PM



NOTES:

1. SEE DRAWING 05-ED-100 FOR ELECTRICAL DEMOLITION.
2. EXISTING STRUCTURES HAVE BEEN DEMOLISHED BY OWNER. CONTRACTOR SHALL DEMO EXISTING FOOTINGS AND FOUNDATIONS, CONCRETE SLABS, AND SIDEWALKS. COORDINATE WITH ENGINEER.
3. SAWCUT PAVEMENT FULL DEPTH AT LIMIT OF REMOVAL.
4. ALL TREES SHOWN ARE TO BE PROTECTED.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60139PE.

DSGN	JT ASHLEY					VERIFY SCALE
DR	PA LONG					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	DJ PETERSON					IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE					
		NO.	DATE	REVISION	BY	APVD
			01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB

CH2MHILL carollo engineers

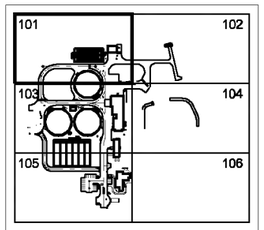
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

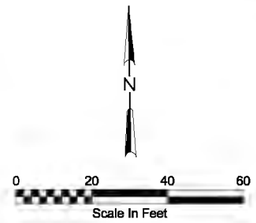
OVERALL DEMOLITION PLAN

SHEET	126
DWG	05-CD-100
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncd100d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:14:29 PM



KEY MAP



NOTES:

1. SEE DWG 05-ED-100 FOR ELECTRICAL DEMOLITION.
2. EXISTING PAVEMENT MAY BE REMOVED BY DIAMOND GRINDING AND REUSED AS BASE COURSE, PROVIDED THAT IT MEETS BASE COURSE REQUIREMENTS, AS SPECIFIED.

EXST CHAIN LINK FENCING TO REMAIN

EXISTING 12" SD TO REMAIN

REMOVE AND REPLACE EXISTING CHAIN LINK FENCE, SEE DWG 05-CL-101

EXST CHAIN LINK FENCING TO REMAIN

42" SS

REMOVE AND REPLACE EXISTING INTERCEPTOR, SEE DWG 05-CY-204 AND 05-CY-205

EXISTING 12" SD TO REMAIN

DEMO EXST AC PAVEMENT TO LIMITS SHOWN, SEE NOTE 2

DEMO EXST 7" W3

INFLUENT PUMP STATION MODIFICATIONS

℄ EL 191.1

DEMO EXST CONCRETE PAD

SEE NOTE 1

42" SS

MATCH LINE, SEE DWG 05-CD-103

MATCH LINE, SEE DWG 05-CD-102

DSGN JT ASHLEY						VERIFY SCALE	CH2MHILL carollo engineers
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD		

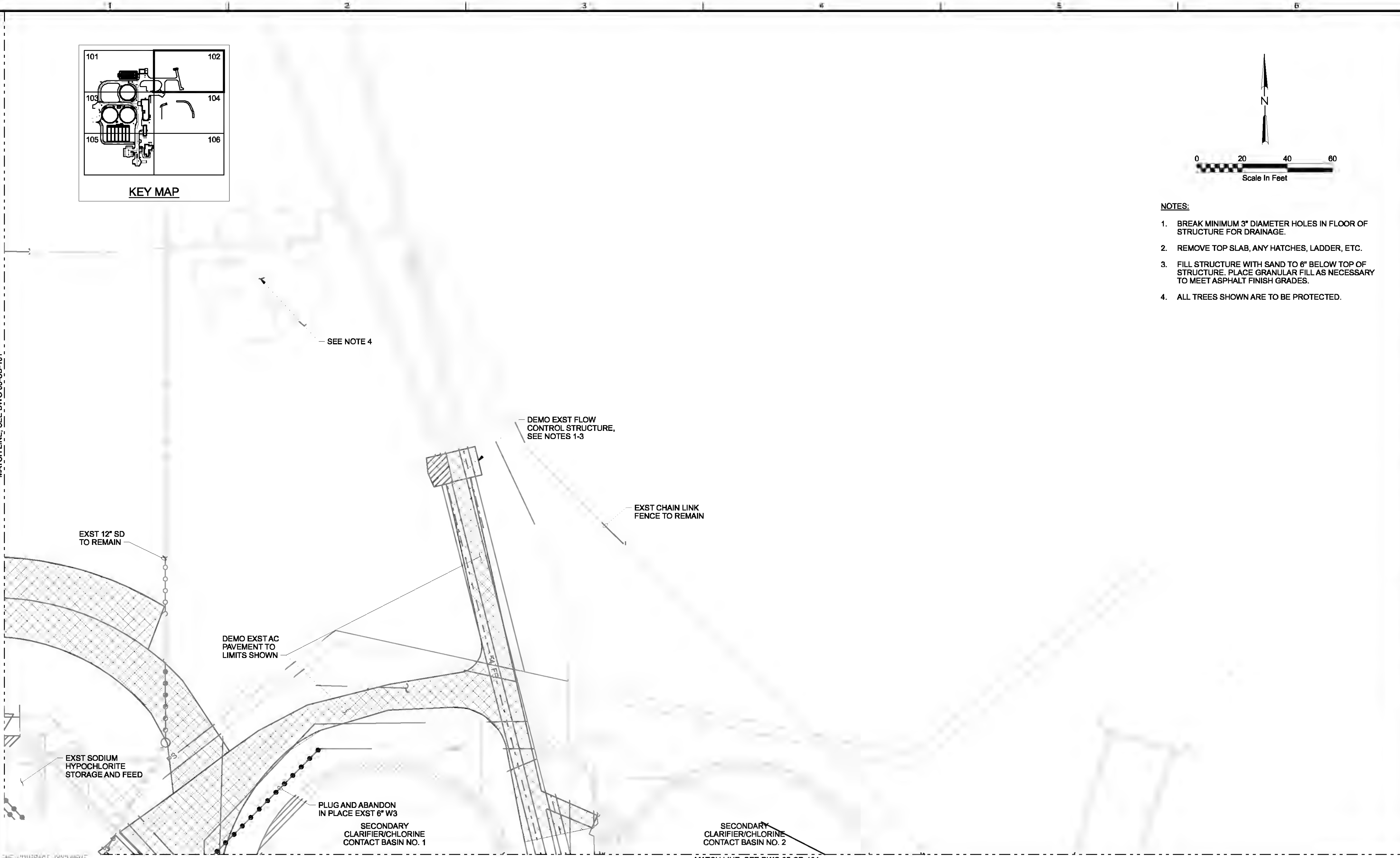
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

DEMOLITION PLAN
AREA 101

SHEET	127
DWG	05-CD-101
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05mcd101d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:14:39 PM



NOTES:

1. BREAK MINIMUM 3" DIAMETER HOLES IN FLOOR OF STRUCTURE FOR DRAINAGE.
2. REMOVE TOP SLAB, ANY HATCHES, LADDER, ETC.
3. FILL STRUCTURE WITH SAND TO 6" BELOW TOP OF STRUCTURE. PLACE GRANULAR FILL AS NECESSARY TO MEET ASPHALT FINISH GRADES.
4. ALL TREES SHOWN ARE TO BE PROTECTED.

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DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING.
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	0 1"
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

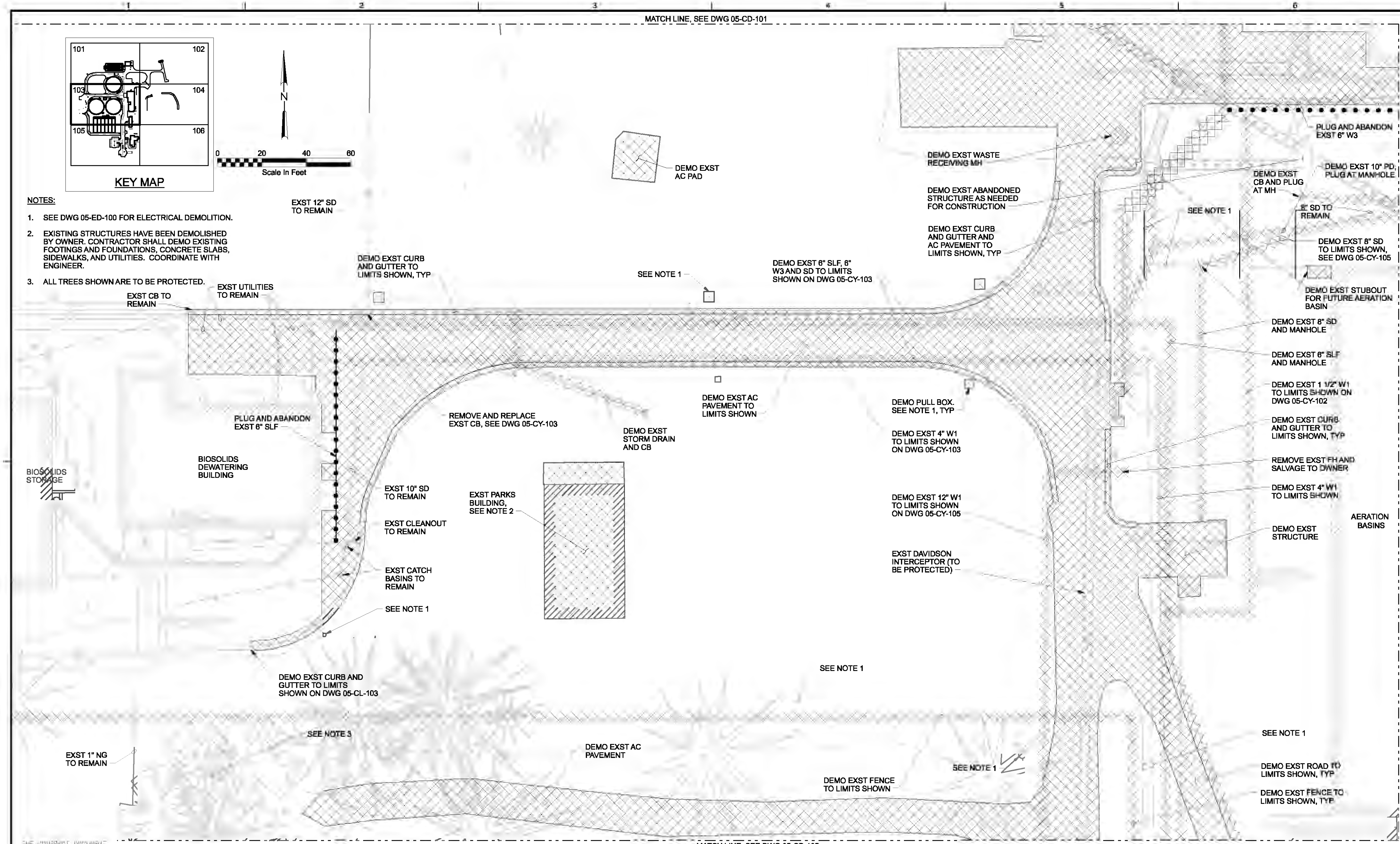
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

DEMOLITION PLAN
AREA 102

SHEET	128
DWG	05-CD-102
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncd102d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:14:45 PM


MATCH LINE, SEE DWG 05-CD-101
KEY MAP
101
102
103
104
105
106
N
0
20
40
60
Scale In Feet
NOTES:
1. SEE DWG 05-ED-100 FOR ELECTRICAL DEMOLITION.
2. EXISTING STRUCTURES HAVE BEEN DEMOLISHED BY OWNER. CONTRACTOR SHALL DEMO EXISTING FOOTINGS AND FOUNDATIONS, CONCRETE SLABS, SIDEWALKS, AND UTILITIES. COORDINATE WITH ENGINEER.
3. ALL TREES SHOWN ARE TO BE PROTECTED.
EXST 12" SD TO REMAIN
DEMO EXST AC PAD
DEMO EXST CURB AND GUTTER TO LIMITS SHOWN, TYP
SEE NOTE 1
DEMO EXST 6" SLF, 6" W3 AND SD TO LIMITS SHOWN ON DWG 05-CY-103
DEMO EXST WASTE RECEIVING MH
DEMO EXST ABANDONED STRUCTURE AS NEEDED FOR CONSTRUCTION
DEMO EXST CURB AND GUTTER AND AC PAVEMENT TO LIMITS SHOWN, TYP
PLUG AND ABANDON EXST 6" W3
DEMO EXST 10" PD, PLUG AT MANHOLE
DEMO EXST CB AND PLUG AT MH
SEE NOTE 1
8" SD TO REMAIN
DEMO EXST 8" SD TO LIMITS SHOWN, SEE DWG 05-CY-105
DEMO EXST STUBOUT FOR FUTURE AERATION BASIN
EXST UTILITIES TO REMAIN
EXST CB TO REMAIN
DEMO EXST 8" SD AND MANHOLE
DEMO EXST 6" SLF AND MANHOLE
DEMO EXST 1 1/2" W1 TO LIMITS SHOWN ON DWG 05-CY-102
DEMO EXST CURB AND GUTTER TO LIMITS SHOWN, TYP
REMOVE EXST FH AND SALVAGE TO OWNER
DEMO EXST 4" W1 TO LIMITS SHOWN
AERATION BASINS
DEMO EXST STRUCTURE
DEMO EXST AC PAVEMENT TO LIMITS SHOWN
DEMO PULL BOX. SEE NOTE 1, TYP
REMOVE AND REPLACE EXST CB, SEE DWG 05-CY-103
DEMO EXST STORM DRAIN AND CB
DEMO EXST 4" W1 TO LIMITS SHOWN ON DWG 05-CY-103
PLUG AND ABANDON EXST 6" SLF
BIOSOLIDS DEWATERING BUILDING
BIOSOLIDS STORAGE
EXST 10" SD TO REMAIN
EXST PARKS BUILDING, SEE NOTE 2
DEMO EXST 12" W1 TO LIMITS SHOWN ON DWG 05-CY-105
EXST CLEANOUT TO REMAIN
EXST DAVIDSON INTERCEPTOR (TO BE PROTECTED)
EXST CATCH BASINS TO REMAIN
SEE NOTE 1
DEMO EXST CURB AND GUTTER TO LIMITS SHOWN ON DWG 05-CL-103
SEE NOTE 1
SEE NOTE 3
EXST 1" NG TO REMAIN
DEMO EXST AC PAVEMENT
SEE NOTE 1
SEE NOTE 1
DEMO EXST FENCE TO LIMITS SHOWN
DEMO EXST ROAD TO LIMITS SHOWN, TYP
DEMO EXST FENCE TO LIMITS SHOWN, TYP
MATCH LINE, SEE DWG 05-CD-104
MATCH LINE, SEE DWG 05-CD-105

DSGN	JT ASHLEY						VERIFY SCALE
DR	PA LONG			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			BAR IS ONE INCH ON ORIGINAL DRAWING. 0 — 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	DJ PETERSON		01/20/10	AS-BUILT	GTM	JAB	
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL · carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

DEMOLITION PLAN
AREA 103

SHEET	129
DWG	05-CD-103
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncd103d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:14:52 PM

MATCH LINE, SEE DWG 05-CD-102

MATCH LINE, SEE DWG 05-CD-103

SECONDARY CLARIFIER/CHLORINE CONTACT BASIN NO. 1

SECONDARY CLARIFIER/CHLORINE CONTACT BASIN NO. 2

DEMO EXST AC PAVEMENT, SEE DWG 05-CL-104 FOR LIMITS

PLUG AND ABANDON IN PLACE EXST 6" W3

SEE DWG 05-CY-104

DEMO EXST CURB AND GUTTER TO LIMITS SHOWN, SEE 05-CL-104

DEMO EXST SIDEWALK FOR ACCESS ROAD, SEE 05-CL-104

PRIMARY CLARIFIER NO. 1

EXST AERATION BASINS

PRIMARY SLUDGE PUMP STATION

GRIT WORKS

MAINTENANCE BUILDING

PRIMARY CLARIFIER NO. 2

SECONDARY DIGESTER NO. 1

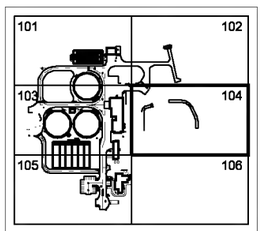
N

0 20 40 60

Scale In Feet

NOTE:

1. SEE DWG 05-ED-100 FOR ELECTRICAL DEMOLITION.



KEY MAP

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60330PE.

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	01/20/10 DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

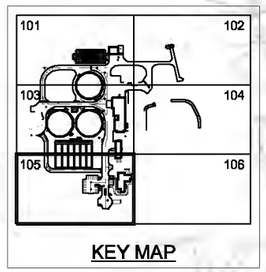
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

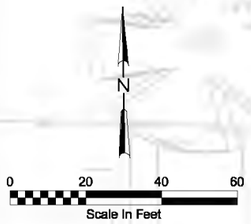
DEMOLITION PLAN
AREA 104

SHEET	130
DWG	05-CD-104
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncd104d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:15:00 PM



KEY MAP



MATCH LINE, SEE DWG 05-CD-103

SEE NOTE 3

EXST STRUCTURES, SEE NOTE 2

DEMO EXST 1" NG TO LIMITS SHOWN ON DWG 05-CY-1025

DEMO EXST NG TO LIMITS SHOWN ON DWG 05-CY-105

BLOWER BLDG

PLUG AND ABANDON EXST 6" SLF

2" W1

4" W1

SEE NOTE 1

DEMO EXST 4" W1 TO LIMITS SHOWN ON DWG 05-CY-105

DEMO EXST ROAD TO LIMITS SHOWN

DEMO EXST FENCE TO LIMITS SHOWN

SEE NOTE 1

EXST STRUCTURES, SEE NOTE 2

EXST STRUCTURES, SEE NOTE 2

DEMO EXST FENCE

SEE NOTE 1

DEMO EXST 2" W1

EXISTING 8" SS ABANDONED

SEE NOTE 1

DEMO EXST FENCE TO LIMITS SHOWN, TYP

DEMO EXST MH

EXST ABANDONED 8" SS

DEMO EXST AC PAVEMENT TO LIMITS SHOWN

EXST DAVIDSON INTERCEPTOR (TO BE PROTECTED)

EXISTING STRUCTURE, SEE NOTE 2

EXISTING UTILITIES TO REMAIN

DEMO EXST SIDEWALK

ADJACENT PROPERTIES

EXISTING ABANDONED 6" AC WATER MAIN DEMO AS NEEDED FOR CONSTRUCTION

DEMO EXST DRIVEWAY AND MAILBOX

DEMO EXST 1" NG

ABANDON IN PLACE, PLUG AND REMOVE AS NEEDED FOR CONSTRUCTION, SEE DWG 05-CY-105

EXST STRUCTURE, SEE NOTE 2

DEMO EXST 2" W1

DEMO EXST CURB AND GUTTER TO LIMITS SHOWN

DEMO EXST FENCE

WILLAMETTE AVE

DEMO EXST FENCE TO LIMITS SHOWN, SEE DWG 05-CL-105

DEMO TO LIMITS SHOWN ON DWG 05-CL-105

DAVIDSON ST

EXST DAVIDSON ST INTERCEPTOR (TO BE PROTECTED)

11S03W05DB00200 11S03W05DB00206 11S03W05DB00205 11S03W05DB00901 11S03W05DB00900 11S03W05DB00800 11S03W05DB00700

NOTES:

1. SEE DWG 05-ED-100 FOR ELECTRICAL DEMOLITION.
2. EXISTING STRUCTURES HAVE BEEN DEMOLISHED BY OWNER. CONTRACTOR SHALL DEMO EXISTING FOOTINGS AND FOUNDATIONS, CONCRETE SLABS, SIDEWALKS, AND UTILITIES. COORDINATE WITH ENGINEER.
3. ALL TREES SHOWN ARE TO BE PROTECTED.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60139PE.

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

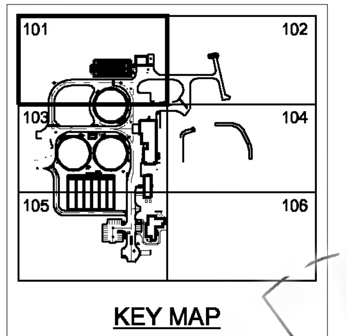
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

DEMOLITION PLAN
AREA 105

SHEET	131
DWG	05-CD-105
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nod105d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:15:06 PM

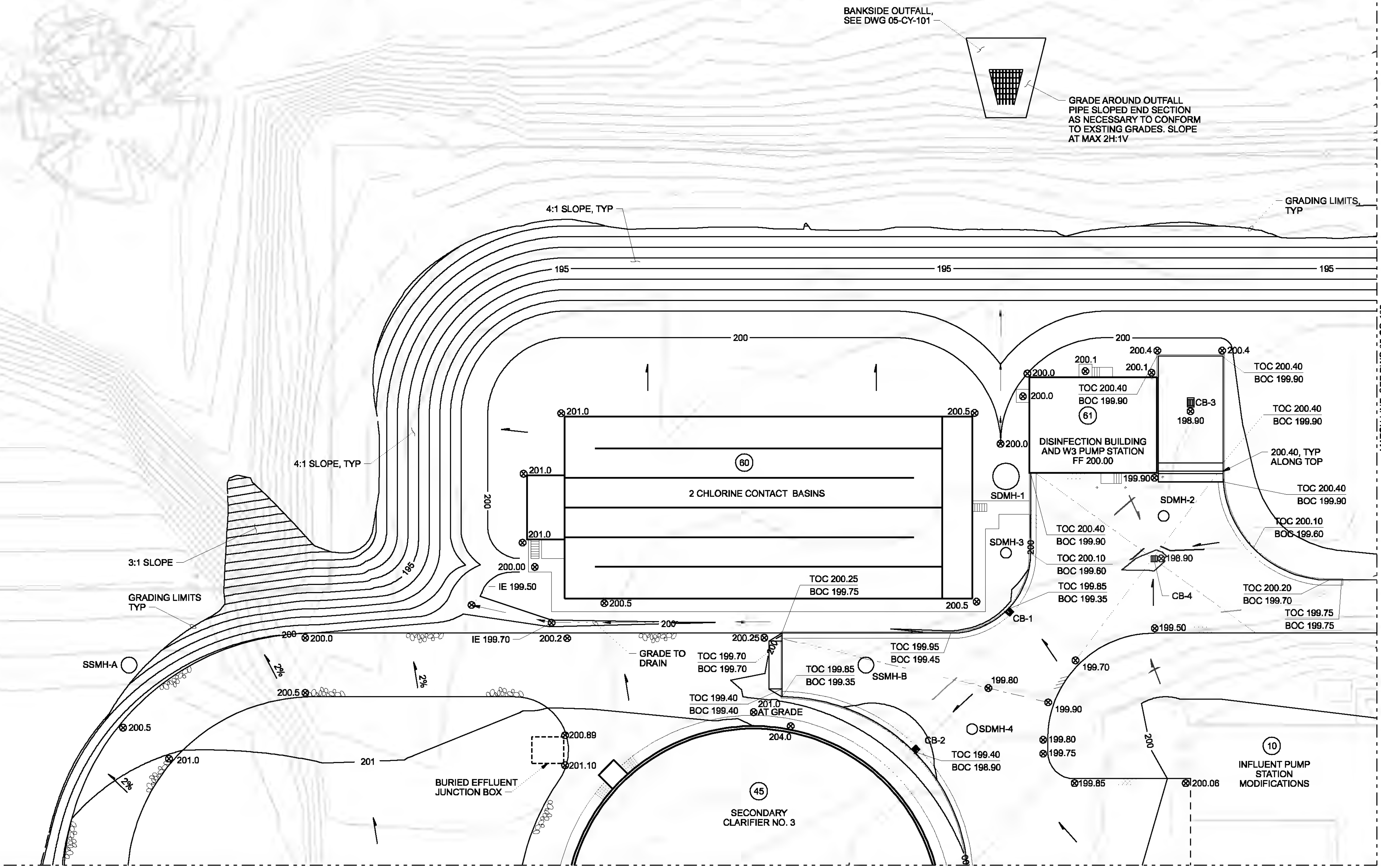


N

0 20 40 60
Scale In Feet

NOTES:

1. ELEVATIONS GIVEN ARE TO FINISH GRADE OR TOP OF CURB UNLESS NOTED OTHERWISE.
2. FOR MANHOLE AND CATCH BASIN LOCATIONS AND RIM/TOG ELEVATIONS, SEE YARD PIPING DRAWINGS.
3. UNLESS SHOWN OTHERWISE ON LANDSCAPING PLAN, ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACING SHALL BE COVERED WITH NATIVE GRASS.
4. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.



BANKSIDE OUTFALL, SEE DWG 05-CY-101
GRADE AROUND OUTFALL PIPE SLOPED END SECTION AS NECESSARY TO CONFORM TO EXSTING GRADES. SLOPE AT MAX 2H:1V
4:1 SLOPE, TYP
GRADING LIMITS, TYP
195
200
2 CHLORINE CONTACT BASINS
60
DISINFECTION BUILDING AND W3 PUMP STATION FF 200.00
61
TOC 200.40
BOC 199.90
CB-3
198.90
200.40, TYP ALONG TOP
SDMH-1
SDMH-2
SDMH-3
SDMH-4
SSMH-A
SSMH-B
CB-1
CB-2
CB-4
3:1 SLOPE
IE 199.50
IE 199.70
GRADE TO DRAIN
TOC 200.25
BOC 199.75
TOC 199.95
BOC 199.45
TOC 199.85
BOC 199.35
TOC 200.10
BOC 199.60
TOC 200.20
BOC 199.70
TOC 199.75
BOC 199.75
TOC 199.70
BOC 199.70
TOC 199.40
BOC 199.40
TOC 199.40
BOC 198.90
201.0 AT GRADE
204.0
2%
BURIED EFFLUENT JUNCTION BOX
45
SECONDARY CLARIFIER NO. 3
10
INFLUENT PUMP STATION MODIFICATIONS
MATCH LINE, SEE DWG 05-CG-102
MATCH LINE, SEE DWG 05-CG-103

DSGN	JT ASHLEY					
DR	PA LONG					
CHK	DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

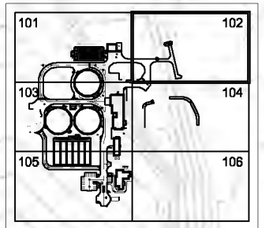
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

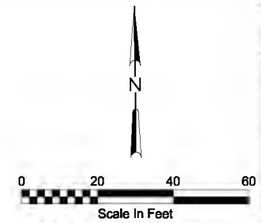
GRADING PLAN
AREA 101

SHEET	132
DWG	05-CG-101
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncg101d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:15:14 PM



KEY MAP



NOTES:

1. ELEVATIONS GIVEN ARE TO FINISH GRADE OR TOP OF CURB UNLESS NOTED OTHERWISE.
2. FOR MANHOLE AND CATCH BASIN LOCATIONS, SEE YARD PIPING DRAWINGS.
3. UNLESS SHOWN OTHERWISE ON LANDSCAPING PLAN, ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACING SHALL BE COVERED WITH NATIVE GRASS.
4. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.

MATCH LINE, SEE DWG 05-CG-101

GRADING LIMITS, TYP

4:1 SLOPE, TYP

TIE FINISHED GRADE INTO BANK

195

FLOW CONTROL STRUCTURE

200

203.5

NEW SIDEWALK
2010 TYP

195

1%

1%

201.00

BURIED EFFLUENT JUNCTION BOX

200.25

200

6:1 SLOPE

200.20

200

199.85

199.70

199.70

199.66

199.40

199.17

199.75

199.75

199

GRADING LIMITS CONFORM TO MATCH EXST, TYP

198.50

198.64

1%

198.34

199

INFLUENT PUMP STATION

REPLACE MH SOLID COVER WITH GRATED COVER RIM EL 198.10

199.50

EXST CHAIN LINK FENCING

WAVERLY DR

200

TOP OF TRENCH EL 199.60

10

198.44

199.65

199.25

199.73

198.87

199.00

EXISTING SECONDARY CLARIFIER/CHLORINE CONTACT BASIN NO. 1

199.80

199.80

199.81

MATCH EXST, TYP

EXISTING SECONDARY CLARIFIER/CHLORINE CONTACT BASIN NO. 2

MATCH LINE, SEE DWG 05-CG-104

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY ADAM T. ASHLEY, STATE OF OREGON, P.E. NO. 60139PE.

DSGN	JT ASHLEY
DR	PA LONG
CHK	DJ PETERSON
APVD	CW MASSIE

NO.	DATE	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB
	01/20/10	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

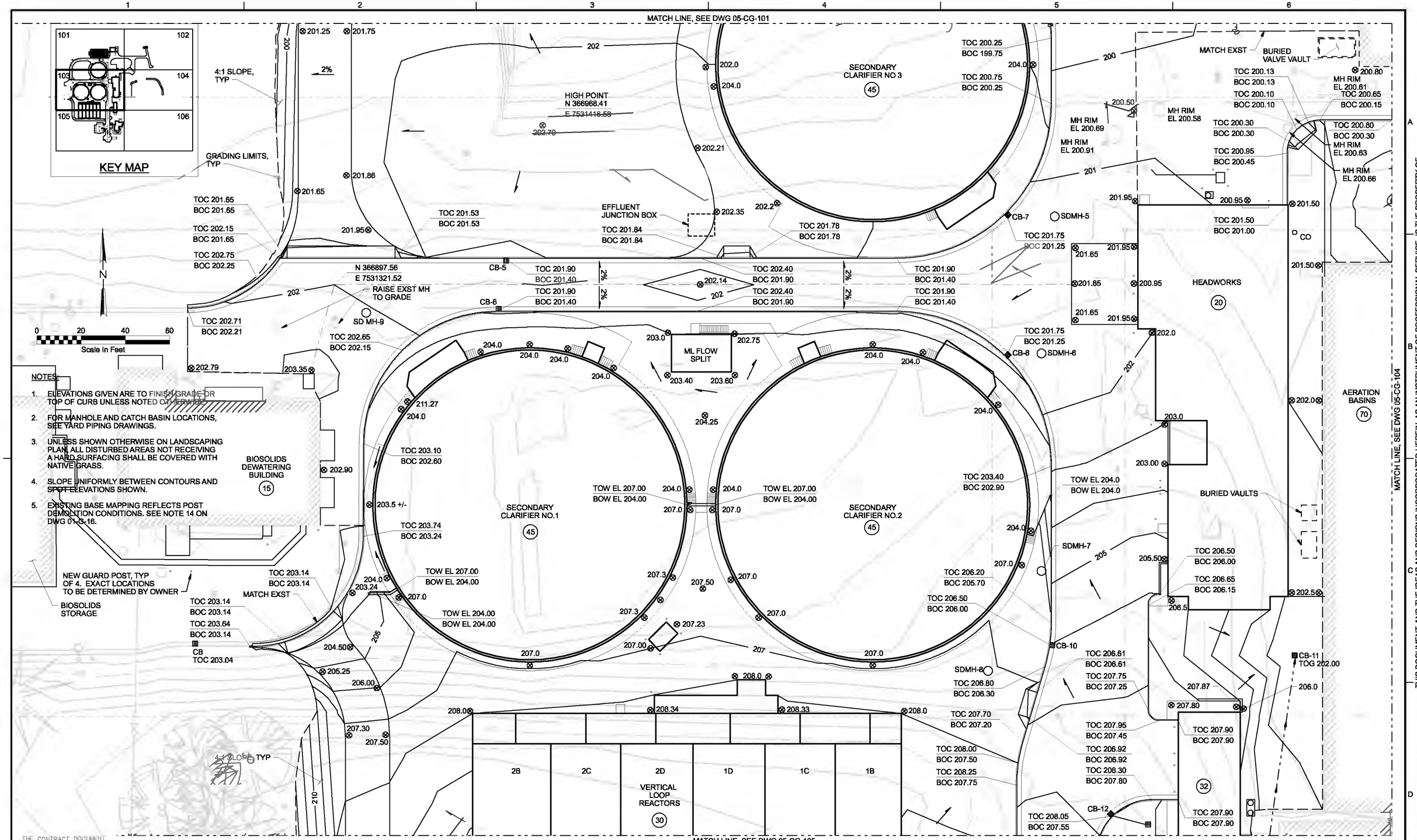
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

GRADING PLAN
AREA 102

SHEET	133
DWG	05-CG-102
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncg102d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:15:20 PM



DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

GRADING PLAN
AREA 103

SHEET	134
DWG	05-CG-103
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncg103d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:15:27 PM

MATCH LINE, SEE DWG 05-CG-102

MATCH LINE, SEE DWG 05-CG-103

MATCH LINE, SEE DWG 05-CG-106

(10)

MH RIM
EL 199.58

200.72

MH RIM
EL 199.68

TOC 200.00
BOC 199.50
CB-13

200

TOP OF
TRENCH
EL 200.13

199.93

MATCH EXST

GRADING LIMITS,
TYP

REPLACE MH SOLID COVER
WITH GRATED COVER

SECONDARY
CLARIFIER/CHLORINE
CONTACT BASIN NO. 1

SECONDARY
CLARIFIER/CHLORINE
CONTACT BASIN NO. 2

COORDINATE ROAD
LOCATION AND GRADES
WITH EXISTING FEATURES

TEMPORARY GRAVEL
ACCESS ROAD (2240)
REMOVE UPON
PROJECT COMPLETION

PRIMARY
CLARIFIER NO. 1

AERATION
BASINS
(70)

FOR NEW VAULTS EAST
OF AERATION BASINS,
SEE DWG 70-M-203

2%

MATCH EXST

HEADWORKS

MATCH EXST

2%

GRIT-WORKS

PRIMARY
SLUDGE
PUMP
STATION

PROVIDE TEMPORARY
ACCESS CURB RAMP

A

SLUDGE
THICKENER

PRIMARY
CLARIFIER NO. 2

EXST
PARKING
LOT

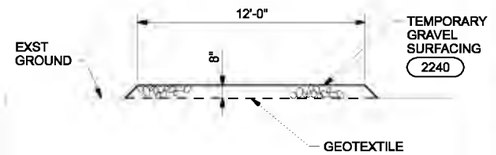
MAINTENANCE
BUILDING

N

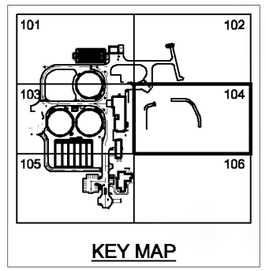
0 20 40 60
Scale In Feet

NOTES:

1. ELEVATIONS GIVEN ARE TO FINISH GRADE OR TOP OF CURB UNLESS NOTED OTHERWISE.
2. FOR MANHOLE AND CATCH BASIN LOCATIONS, SEE YARD PIPING DRAWINGS.
3. UNLESS SHOWN OTHERWISE ON LANDSCAPING PLAN, ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACING SHALL BE COVERED WITH NATIVE GRASS.
4. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.



SECTION (A)
NTS



KEY MAP

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED ON 2/26/10 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60139PE.

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE		01/20/10	AS-BUILT	GTM	JAB	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

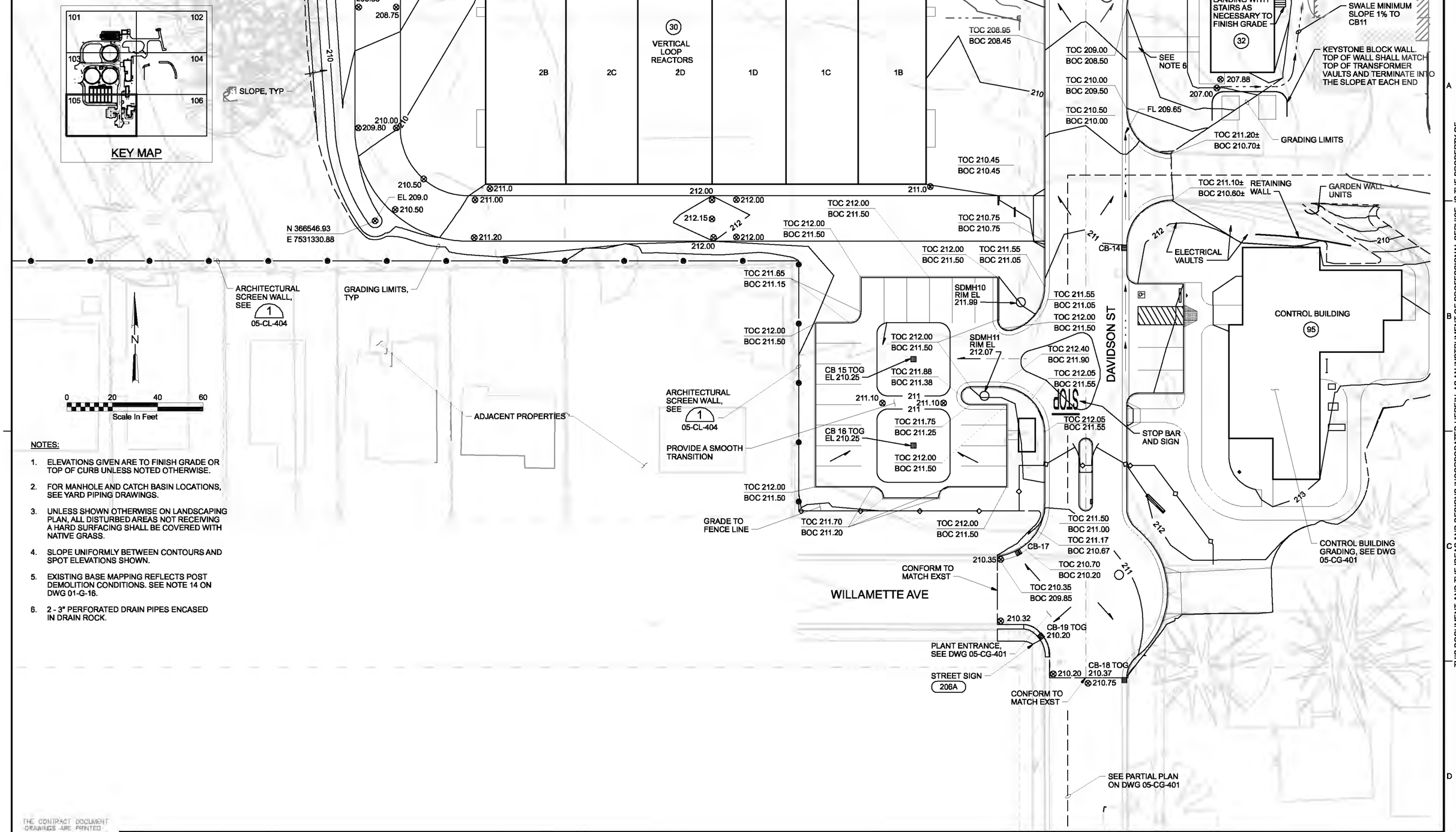
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

GRADING PLAN
AREA 104

SHEET	135
DWG	05-CG-104
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncg104d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:15:34 PM



NOTES:

1. ELEVATIONS GIVEN ARE TO FINISH GRADE OR TOP OF CURB UNLESS NOTED OTHERWISE.
2. FOR MANHOLE AND CATCH BASIN LOCATIONS, SEE YARD PIPING DRAWINGS.
3. UNLESS SHOWN OTHERWISE ON LANDSCAPING PLAN, ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACING SHALL BE COVERED WITH NATIVE GRASS.
4. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.
6. 2 - 3" PERFORATED DRAIN PIPES ENCASED IN DRAIN ROCK.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60132PE.

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK DJ PETERSON			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			
APVD CW MASSIE	01/20/10			GTM	JAB	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

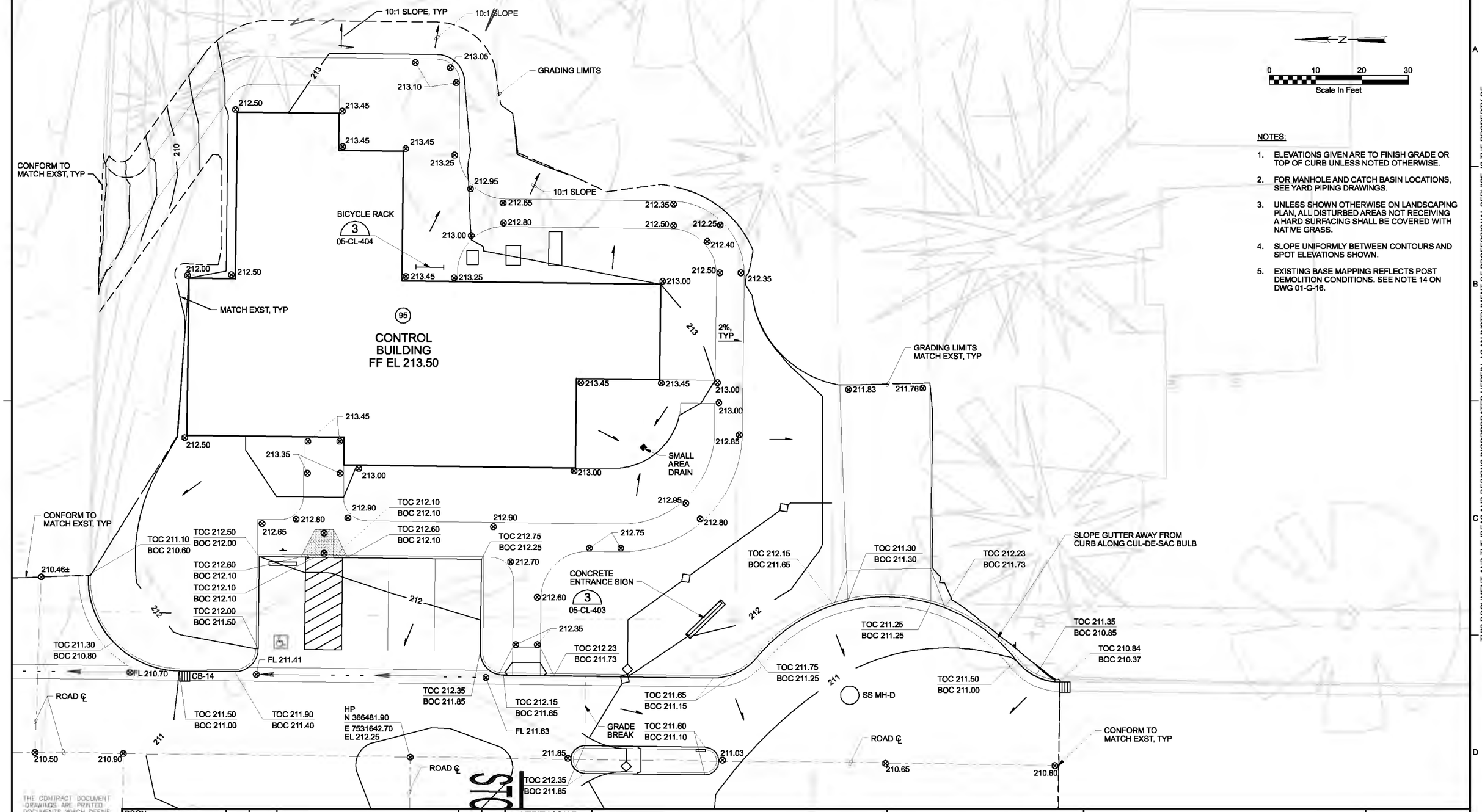
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

GRADING PLAN
AREA 105

SHEET	136
DWG	05-CG-105
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncg105d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:15:39 PM



Z

0 10 20 30

Scale In Feet

NOTES:

1. ELEVATIONS GIVEN ARE TO FINISH GRADE OR TOP OF CURB UNLESS NOTED OTHERWISE.
2. FOR MANHOLE AND CATCH BASIN LOCATIONS, SEE YARD PIPING DRAWINGS.
3. UNLESS SHOWN OTHERWISE ON LANDSCAPING PLAN, ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACING SHALL BE COVERED WITH NATIVE GRASS.
4. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60132PE.

DSGN	JT ASHLEY					
DR	SR REDDELL					
CHK	DJ PETERSON					
APVD	CW MASSIE					
NO.	DATE	REVISION	BY	APVD		
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB		

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

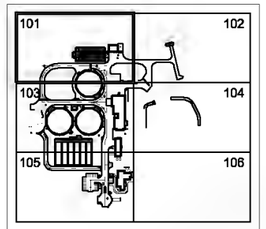
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

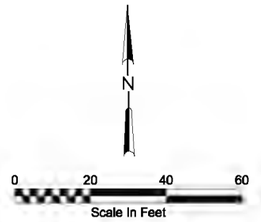
SITE GRADING PARTIAL PLAN

SHEET	137
DWG	05-CG-401
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncg401d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:15:46 PM



KEY MAP



NOTES:

1. DIMENSIONS AND COORDINATES SHOWN ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN. STRUCTURAL COORDINATES SHOWN ARE TO OUTSIDE OF FOUNDATION WALLS. FOOTINGS ARE NOT SHOWN FOR CLARITY.
2. FOR MANHOLE AND CATCH BASIN LOCATIONS, SEE YARD PIPING DRAWINGS.
3. SEE ADDITIONAL SITE NOTES ON DWG 01-G-16.
4. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.

8' WIDE GATE FOR ACCESS TO OUTFALL

EXST CHAIN LINK FENCING

BLDG CORNER
N 367194.88
E 7531672.60

BLDG CORNER
N 367194.26
E 7531720.60

CURB 304

CONCRETE PAVEMENT 2230
SIM, EXCEPT FOR 10" THICK SLAB

8'-0"

24.5'

CB-3

CONTAINMENT CURB 2253

6" CONC PAD, #4@12 EW, TYP

W3 PUMP STATION (61)

60
CHLORINE CONTACT BASINS

SDMH-1

SDMH-2

GUARD POSTS, TYP 2080

CURB TERMINUS AT PCR 2257

CONNECT TO EXST FENCE
N 367118.12±
E 7531408.46±

CHAIN LINK FENCE 2030

OF WALL
N 367113.81
E 7531496.54

5' WIDE SIDEWALK 2010

5' TYP

SDMH-3

CB-4

CURB AND GUTTER 304, TYP

CB-1

PI, R = 30'
N 367098.54
E 7531671.86

PI, R = 40'
N 367117.61
E 7531744.28

20'-0"

PI, R = 70'
N 367078.94
E 7531331.45

SSMH-A

24' TYP

PI, R = 20'
N 367076.56
E 7531515.68

8" THICK x 18' WIDE DRIVEWAY 308, SIM

SSMH-B

PI, R = 70'
N 367074.85
E 7531648.01

OF WALL
N 367111.83
E 7531650.03

CURB AND GUTTER 304

PI, R = 40'
N 367098.46
E 7531678.32

CURVE PT

SDMH-4

CB-2

AC PAVEMENT 2220, TYP

℄
N 367056.90
E 7531489.47

GRAVEL SURFACING 2240

10
INFLUENT PUMP STATION MODIFICATIONS

PI, R =10'
N 367043.62
E 7531677.61

N 367042.93
E 7531731.46

BURIED EFFLUENT JUNCTION BOX B 57-S-131

GRAVEL SURFACING, SEE 2240

45
SECONDARY CLARIFIER NO.3

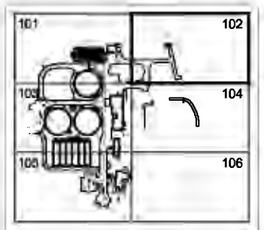
MATCH LINE, SEE DWG 05-CL-103

MATCH LINE, SEE DWG 05-CL-102

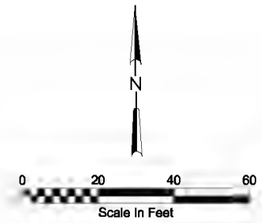
DSGN JT ASHLEY						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON	SITE DEVELOPMENT	SHEET 138
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.		LOCATION PLAN AREA 101	DWG 05-CL-101
CHK DJ PETERSON									DATE MAY 19 2006
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD				PROJ 326918
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB				

CH2MHILL carollo engineers

FILENAME: 05ncl101d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:15:52 PM

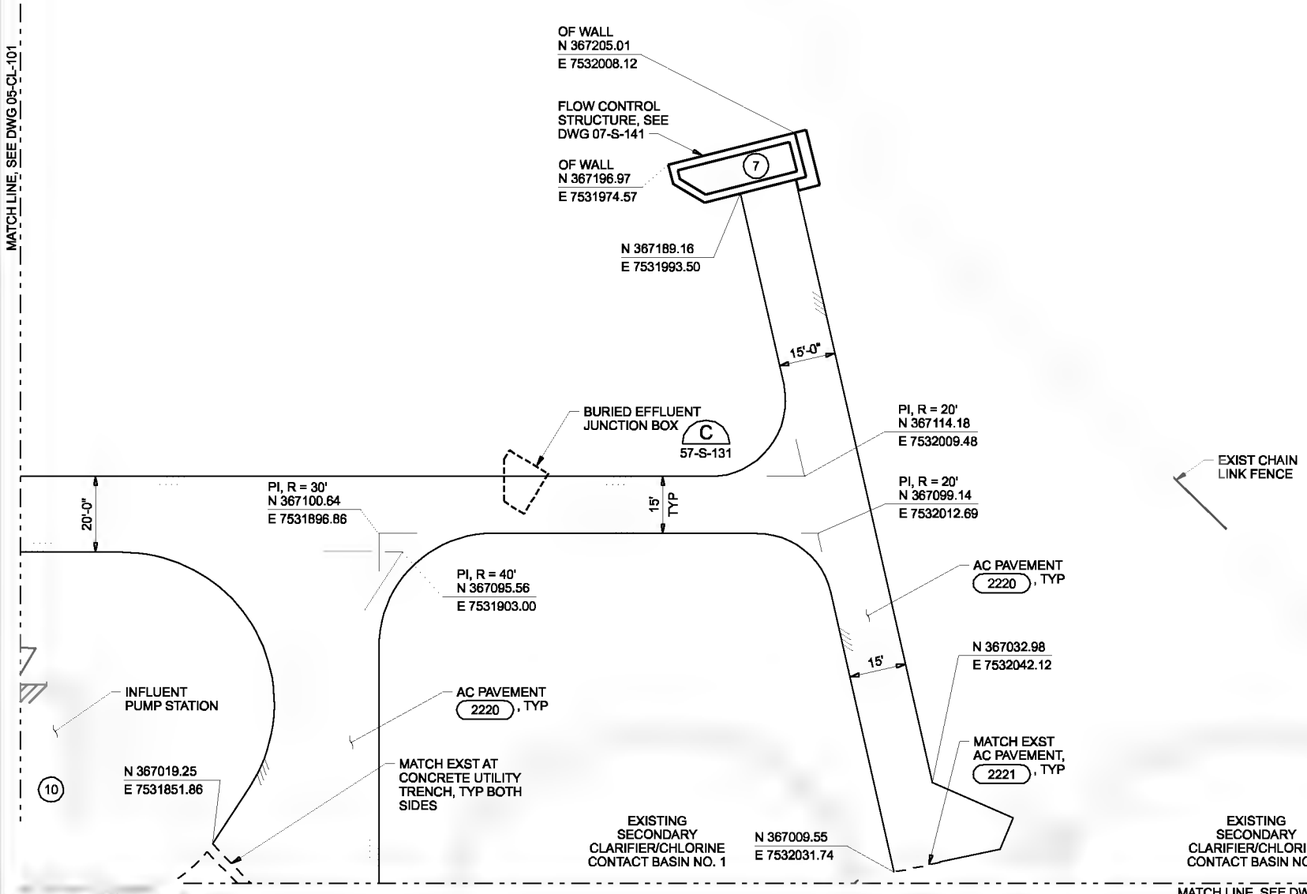


KEY MAP



NOTES:

1. DIMENSIONS AND COORDINATES SHOWN ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN. STRUCTURAL COORDINATES SHOWN ARE TO OUTSIDE CORNER OF FOUNDATION WALLS. FOOTINGS ARE NOT SHOWN FOR CLARITY.
2. PROVIDE PAVEMENT CONNECTION AT ALL PAVING LIMITS, TYP (2221)
3. FOR MANHOLE AND CATCH BASIN LOCATIONS, SEE YARD PIPING DRAWINGS.
4. SEE ADDITIONAL SITE NOTES ON DWG 01-G-16.
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.



DSGN JT ASHLEY						VERIFY SCALE	CH2MHILL carollo engineers
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	
CHK DJ PETERSON							
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB		
	NO.	DATE	REVISION	BY	APVD		

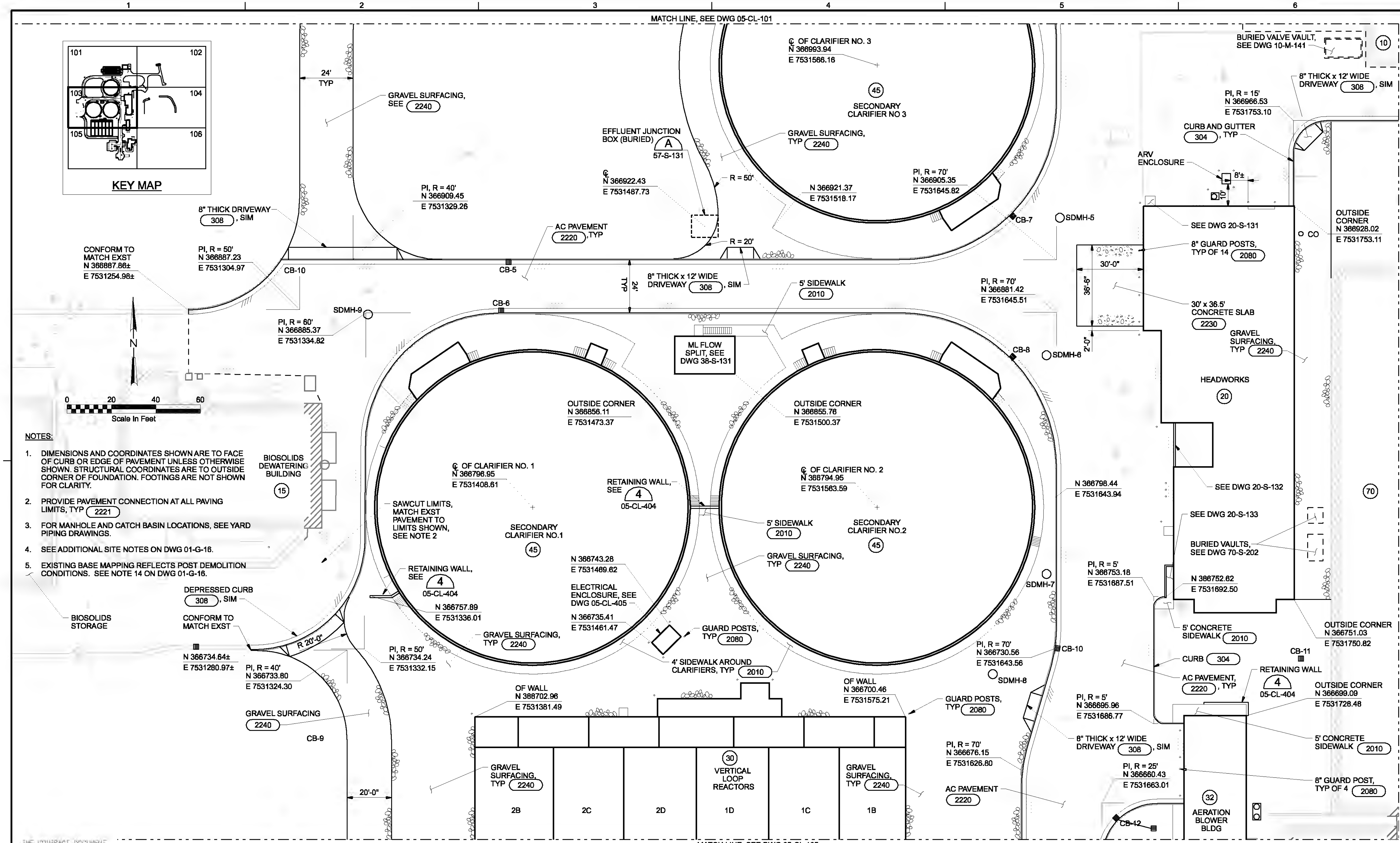
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

LOCATION PLAN AREA 102

SHEET	139
DWG	05-CL-102
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05mdl102d_326918.dgn PLOT DATE: 2/25/2010 PLOT TIME: 2:16:57 PM


MATCH LINE, SEE DWG 05-CL-101
KEY MAP
101
102
103
104
105
106
0 20 40 60
Scale In Feet
N
24' TYP
GRAVEL SURFACING, SEE 2240
℄ OF CLARIFIER NO. 3
N 366993.94
E 7531566.16
45
SECONDARY CLARIFIER NO 3
BURIED VALVE VAULT, SEE DWG 10-M-141
10
8" THICK x 12' WIDE DRIVEWAY 308, SIM
PI, R = 15'
N 366966.53
E 7531753.10
CURB AND GUTTER 304, TYP
EFFLUENT JUNCTION BOX (BURIED) A 57-S-131
GRAVEL SURFACING, TYP 2240
ARV ENCLOSURE
8'±
10'
℄
N 366922.43
E 7531487.73
R = 50'
N 366921.37
E 7531518.17
PI, R = 70'
N 366905.35
E 7531645.82
PI, R = 40'
N 366909.45
E 7531329.26
CB-7
SDMH-5
SEE DWG 20-S-131
OUTSIDE CORNER
N 366928.02
E 7531753.11
CO
8" THICK DRIVEWAY 308, SIM
AC PAVEMENT 2220, TYP
R = 20'
8" GUARD POSTS, TYP OF 14 2080
CONFORM TO MATCH EXST
N 366887.86±
E 7531254.98±
PI, R = 50'
N 366887.23
E 7531304.97
CB-10
CB-5
24' TYP
8" THICK x 12' WIDE DRIVEWAY 308, SIM
30'-0"
36'-6"
PI, R = 70'
N 366881.42
E 7531645.51
5' SIDEWALK 2010
30' x 36.5' CONCRETE SLAB 2230
SDMH-9
CB-6
PI, R = 60'
N 366885.37
E 7531334.82
GRAVEL SURFACING, TYP 2240
ML FLOW SPLIT, SEE DWG 38-S-131
CB-8
SDMH-6
2'-0"
HEADWORKS
20
BIOSOLIDS DEWATERING BUILDING
15
OUTSIDE CORNER
N 366856.11
E 7531473.37
OUTSIDE CORNER
N 366855.76
E 7531500.37
℄ OF CLARIFIER NO. 1
N 366796.95
E 7531408.61
RETAINING WALL, SEE 4 05-CL-404
℄ OF CLARIFIER NO. 2
N 366794.95
E 7531563.59
SEE DWG 20-S-132
N 366798.44
E 7531643.94
70
SAWCUT LIMITS, MATCH EXST PAVEMENT TO LIMITS SHOWN, SEE NOTE 2
SECONDARY CLARIFIER NO.1
45
5' SIDEWALK 2010
SECONDARY CLARIFIER NO.2
45
SEE DWG 20-S-133
BURIED VAULTS, SEE DWG 70-S-202
N 366743.28
E 7531469.62
GRAVEL SURFACING, TYP 2240
RETAINING WALL, SEE 4 05-CL-404
ELECTRICAL ENCLOSURE, SEE DWG 05-CL-405
SDMH-7
PI, R = 5'
N 366753.18
E 7531687.51
N 366752.62
E 7531692.50
DEPRESSED CURB 308, SIM
BIOSOLIDS STORAGE
CONFORM TO MATCH EXST
N 366757.89
E 7531336.01
N 366735.41
E 7531461.47
GUARD POSTS, TYP 2080
OUTSIDE CORNER
N 366751.03
E 7531750.82
5' CONCRETE SIDEWALK 2010
R 20'-0"
GRAVEL SURFACING, TYP 2240
PI, R = 50'
N 366734.24
E 7531332.15
PI, R = 70'
N 366730.56
E 7531643.56
CB-10
CB-11
N 366734.64±
E 7531280.97±
PI, R = 40'
N 366733.80
E 7531324.30
4' SIDEWALK AROUND CLARIFIERS, TYP 2010
SDMH-8
CURB 304
RETAINING WALL 4 05-CL-404
AC PAVEMENT, 2220, TYP
OUTSIDE CORNER
N 366699.09
E 7531728.48
OF WALL
N 366702.96
E 7531381.49
OF WALL
N 366700.46
E 7531575.21
GUARD POSTS, TYP 2080
PI, R = 5'
N 366695.96
E 7531686.77
GRAVEL SURFACING 2240
CB-9
8" THICK x 12' WIDE DRIVEWAY 308, SIM
5' CONCRETE SIDEWALK 2010
GRAVEL SURFACING, TYP 2240
30
VERTICAL LOOP REACTORS
GRAVEL SURFACING, TYP 2240
PI, R = 70'
N 366676.15
E 7531626.80
PI, R = 25'
N 366660.43
E 7531663.01
8" GUARD POST, TYP OF 4 2080
20'-0"
AC PAVEMENT 2220
2B
2C
2D
1D
1C
1B
32
AERATION BLOWER BLDG
CB-12
MATCH LINE, SEE DWG 05-CL-104
MATCH LINE, SEE DWG 05-CL-105
1
2
3
4
5
6
A
B
C
D

NOTES:

1. DIMENSIONS AND COORDINATES SHOWN ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN. STRUCTURAL COORDINATES ARE TO OUTSIDE CORNER OF FOUNDATION. FOOTINGS ARE NOT SHOWN FOR CLARITY.
2. PROVIDE PAVEMENT CONNECTION AT ALL PAVING LIMITS, TYP 2221
3. FOR MANHOLE AND CATCH BASIN LOCATIONS, SEE YARD PIPING DRAWINGS.
4. SEE ADDITIONAL SITE NOTES ON DWG 01-G-16.
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.

DSGN	JT ASHLEY				
DR	PA LONG		(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)		
CHK	DJ PETERSON	01/20/10	AS-BUILT	GTM	JAB
APVD	CW MASSIE	NO. / DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL / carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

LOCATION PLAN
AREA 103

SHEET	140
DWG	05-CL-103
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncl103d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:16:03 PM

MATCH LINE, SEE DWG 05-CL-102

MATCH LINE, SEE DWG 05-CL-103

MATCH LINE, SEE DWG 05-CL-106

10

INFLUENT PUMP STATION

PI, R = 15'
N 366965.41
E 7531839.64

CB-13

MATCH EXST AT CONCRETE UTILITY TRENCH, TYP BOTH SIDES

N 366974.24
E 7531895.23

SECONDARY CLARIFIER/CHLORINE CONTACT BASIN NO. 1

SECONDARY CLARIFIER/CHLORINE CONTACT BASIN NO. 2

SEE NOTE 2
2221

N 366914.53
E 7531997.40

PI, R = 62'
N 366913.14
E 7532105.10

12' WIDE DRIVEWAY
308, SIM

5

R = 20'

GRAVEL SURFACING
2240

12'-0" TYP

TEMPORARY 12' WIDE INFLUENT PUMP STATION ACCESS ROAD

PI, R = 112'
N 366815.74
E 7532150.36

PRIMARY CLARIFIER NO. 1

70
EXST AERATION BASINS

12' WIDE GRAVEL ACCESS ROAD
2240

12'

FOR NEW VAULTS EAST OF EXISTING AERATION BASINS SEE DWG 70-M-203

HEADWORKS

GRIT WORKS

PRIMARY SLUDGE PUMP STATION

N 366763.01
E 7532149.68

PRIMARY CLARIFIER NO. 2

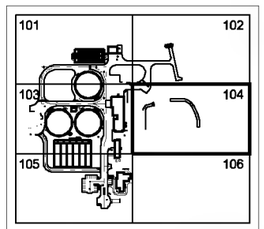
MAINTENANCE BUILDING

N

0 20 40 60
Scale In Feet

NOTES:

1. DIMENSIONS AND COORDINATES SHOWN ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN. STRUCTURAL COORDINATES ARE SHOWN TO OUTSIDE CORNER OF FOUNDATION. FOOTINGS ARE NOT SHOWN FOR CLARITY
2. PROVIDE PAVEMENT CONNECTION AT ALL PAVING LIMITS, TYP
3. FOR MANHOLE AND CATCH BASIN LOCATIONS, SEE YARD PIPING DRAWINGS.
4. SEE ADDITIONAL SITE NOTES ON DWG 01-G-16.
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.



KEY MAP

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60135PE.

DSGN	JT ASHLEY						VERIFY SCALE
DR	PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	DJ PETERSON						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	
		1	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	

CH2MHILL carollo engineers

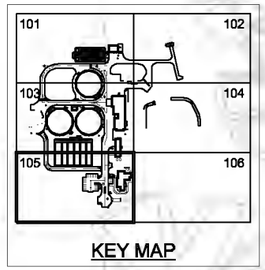
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

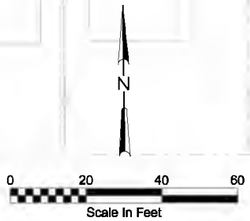
LOCATION PLAN AREA 104

SHEET	141
DWG	05-CL-104
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncl104d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:16:11 PM



KEY MAP



NOTES:

1. DIMENSIONS AND COORDINATES SHOWN ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN. STRUCTURAL COORDINATES SHOWN ARE TO OUTSIDE CORNER OF FOUNDATION WALLS. FOOTINGS ARE NOT SHOWN FOR CLARITY.
2. PROVIDE PAVEMENT CONNECTION AT ALL PAVING LIMITS, TYP
3. FOR MANHOLE AND CATCH BASIN LOCATIONS, SEE YARD PIPING DRAWINGS.
4. SEE ADDITIONAL SITE NOTES ON DWG 01-G-16.
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 8013PE

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

LOCATION PLAN
AREA 105

SHEET	142
DWG	05-CL-105
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncl105d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:16:15 PM

PROVIDE SIDEWALK JOINTS AT NO MORE THAN 10' SQUARE INTERVALS AND AS NECESSARY

PI, R = 5'
N 366471.11
E 7531793.58

PI, R = 10'
N 366471.49
E 7531763.58

CONCRETE SIDEWALK (2010)

CONFORM TO MATCH EXST (2221)

SAWCUT AND REMOVE EXST CURB

BICYCLE RACK (3, 05-CL-404)

CURB TERMINUS, TYP (2257)

OUTSIDE CORNER
N 366529.72
E 7531746.33

(95) CONTROL BUILDING

N 366416.06
E 7531719.19

PAVING LIMITS MATCH EXST, SEE NOTE 2

N 366369.59
E 7531723.62

AC PAVEMENT (2220)

N 366389.09
E 7531723.21

SEE DWG 95-S-130

SMALL AREA DRAIN

(315) HANDICAP RAMP, SIM, WITH DETECTABLE WARNING SURFACE

OUTSIDE CORNER
N 366530.16
E 7531712.33

(2070) HANDICAP PARKING SIGN OR 20-68, OR 20-60

PI, R = 5'
N 366505.06
E 7531694.01

4" WIDE WHITE PAVEMENT STRIPES AT 30° ANGLE, 2' SPACING

6' ARCHITECTURAL FENCING (1, 05-CL-403)

4" WIDE WHITE PAVEMENT STRIPES

CONFORM TO MATCH EXST, TYP (2221)

10'x20' PARKING STALLS, TYP OF 3

PI, R = 26'
N 366410.46
E 7531666.79

FENCE CORNER
N 366399.67
E 7531697.74

8" THICK x 20' WIDE DRIVEWAY (308) SIM

AC PAVEMENT (2220) TYP

N 366514.50
E 7531686.13

WHEEL STOP (2261)

CONCRETE CURB (304)

HANDICAP PARKING SYMBOL (2285)

CONC ENTRANCE SIGN (3, 05-CL-403)

℄ N 366414.26
E 7531676.26

SERVICE CART RAMP SIM (315)

℄ N 366421.90
E 7531688.82

CONC CURB AND GUTTER (304), TYP

RELOCATE EXST SIGN

CONFORM TO MATCH EXST, TYP

CB-14

3' WIDE VALLEY GUTTER (305)

PI, R = 5'
N 366514.82
E 7531661.13

3' WIDE VALLEY GUTTER (305)

N 366466.50
E 7531685.51

PI, R = 5'
N 366466.82
E 7531680.47

FENCE CORNER
N 366434.81
E 7531672.44

N 366341.57±
E 7531658.98±

PAVING LIMITS, SEE NOTE 2

CARD ACCESS

(2) 05-CL-403

R = 3'
N 366418.20
E 7531641.88

ROAD ℄

R = 3'
N 366444.20
E 7531642.22

CONCRETE CURB (304)

R = 36', CENTER RADIUS POINT
N 366379.21
E 7531641.38

N

0 10 20 30
Scale In Feet

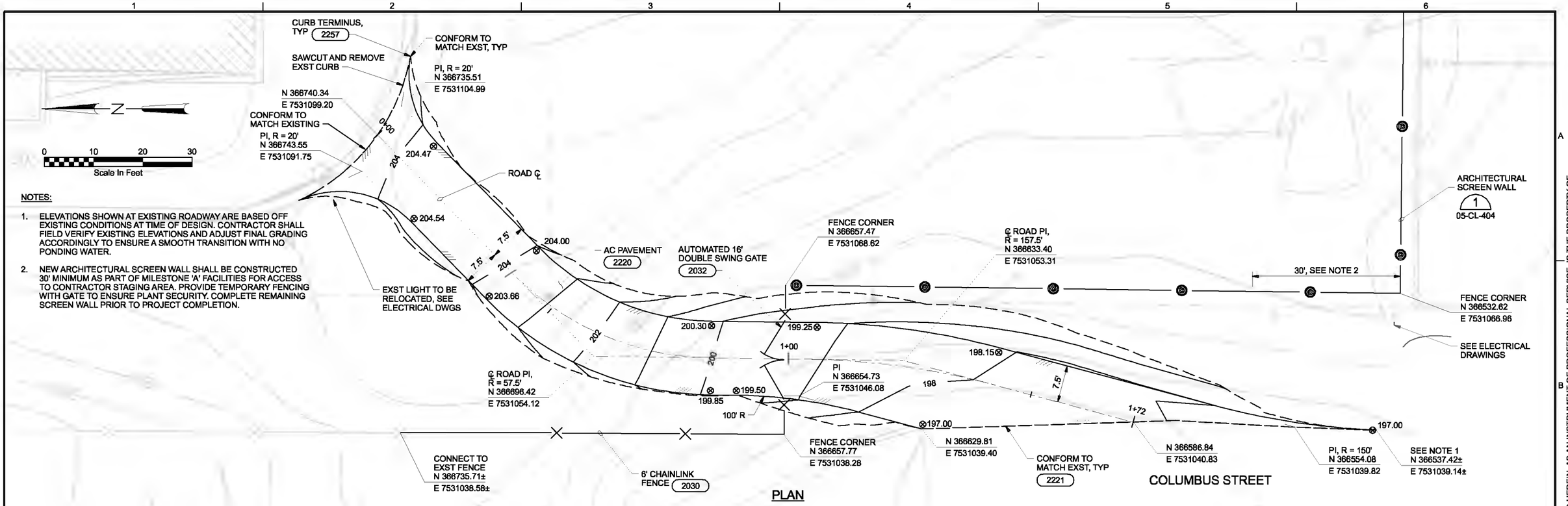
NOTES:

1. DIMENSIONS AND COORDINATES SHOWN ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN. STRUCTURAL COORDINATES SHOWN ARE TO OUTSIDE CORNER OF FOUNDATION WALLS. FOOTINGS ARE NOT SHOWN FOR CLARITY.
2. PROVIDE PAVEMENT CONNECTION AT ALL PAVING LIMITS, TYP (2221)
3. FOR MANHOLE AND CATCH BASIN LOCATIONS, SEE YARD PIPING DRAWINGS.
4. SEE ADDITIONAL SITE NOTES ON DWG 01-G-16.
5. INSTALL NEW END POST ASSEMBLY AS NECESSARY TO MAKE CONNECTION (2030)
6. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.
7. ALL TREES SHOWN ARE TO BE PROTECTED.

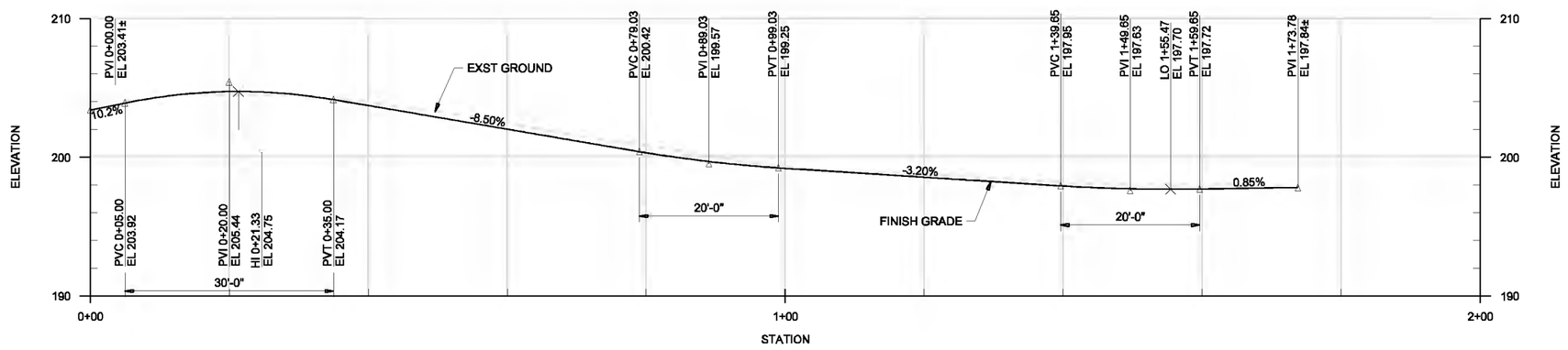
DSGN JT ASHLEY						VERIFY SCALE	CH2MHILL carollo engineers
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-03-01 LINN COUNTY, OREGON
CHK DJ PETERSON						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	SITE DEVELOPMENT
APVD CW MASSIE	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB			PARTIAL SITE PLAN
	NO.	DATE REVISION	BY	APVD			

SHEET	143
DWG	05-CL-401
DATE	MAY 19 2006
PROJ	326918

FILENAME: 06nc401d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:13:48 PM



PLAN



PROFILE
1"=10' HORIZ
1"=5' VERT

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60132PE

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

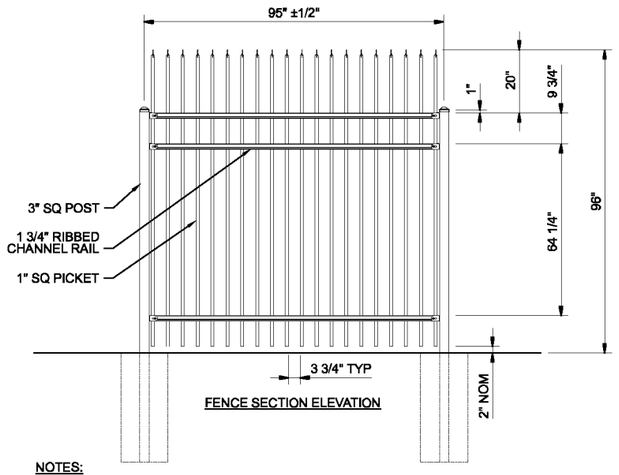
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

BIOSOLIDS ACCESS ROAD
PLAN AND PROFILE

SHEET	144
DWG	05-CL-402
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nc402d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:13:55 PM



FENCE SECTION ELEVATION

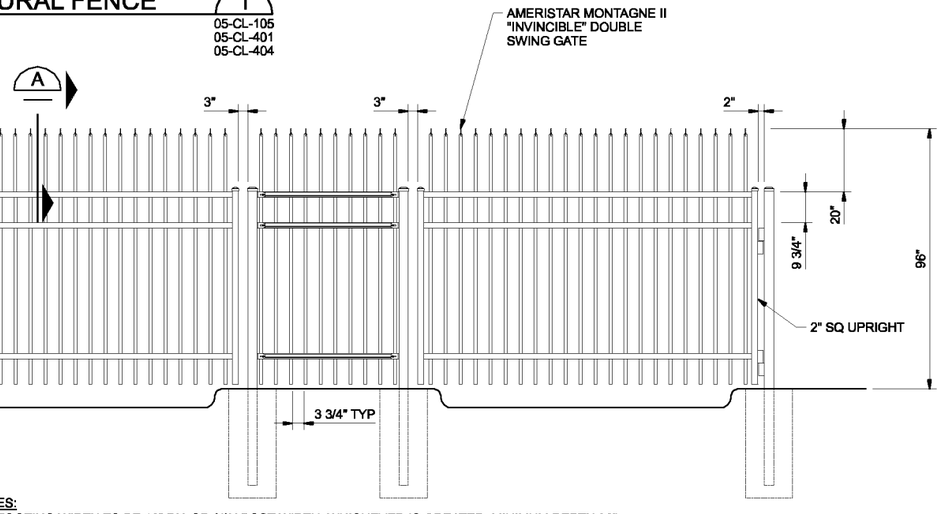
NOTES:

1. FOOTING WIDTH TO BE 16" DIA OR (4)X POST WIDTH. WHICHEVER IS GREATER MINIMUM DEPTH 36".
2. FENCING SHALL BE BY AMERISTAR FENCE MONTAGNE II "INVINCIBLE".
3. ARCHTECTURAL FENCING AND GATES SHALL HAVE BLACK POWDER COATING, ALL POSTS ARE TO BE SIZED ACCORDING TO MANUFACTURERS RECOMMENDATION, AND ALL 1" SQUARE PICKETS TO BE 14 GUAGE. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

ARCHITECTURAL FENCE 1

NTS

05-CL-105
05-CL-401
05-CL-404



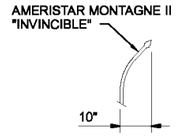
NOTES:

1. FOOTING WIDTH TO BE 16" DIA OR (4)X POST WIDTH. WHICHEVER IS GREATER. MINIMUM DEPTH 36".
2. GATES TO BE ELECTRICALLY OPERATED. HARDWARE WILL VARY.
3. GATES TO HAVE 3 RAILS TO MATCH FENCE.
4. DOUBLE SWING GATE SHALL BE MANUFACTURED BY ARCHITECTURAL FENCING MANUFACTURER. SUBMIT DETAILS TO OWNER FOR APPROVAL.
5. VERIFY GATE OPENER COMPATIBILITY WITH GATE AND OPERATOR MANUFACTURERS PRIOR TO ORDERING OPENER TO ENSURE ADEQUACY.
6. ARCHTECTURAL FENCING AND GATES SHALL HAVE BLACK POWDER COATING, ALL POSTS ARE TO BE SIZED ACCORDING TO MANUFACTURERS RECOMMENDATION. ALL 1" SQUARE PICKETS TO BE 14 GUAGE. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

DOUBLE SWING ENTRY GATE 2

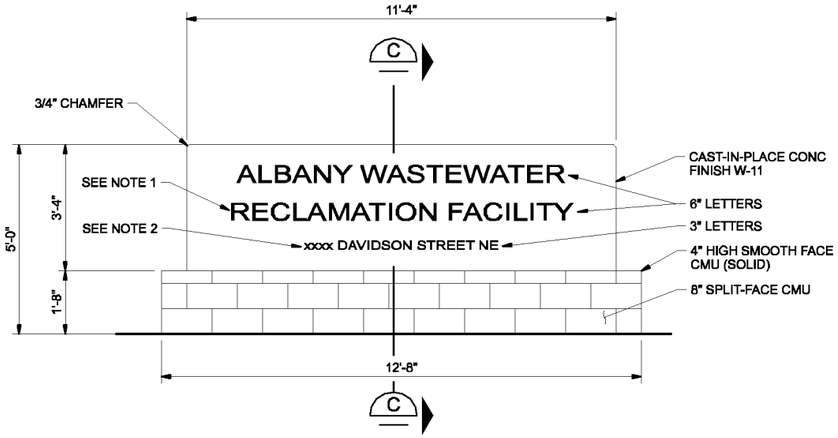
NTS

05-CL-105
05-CL-401



SECTION A

NTS



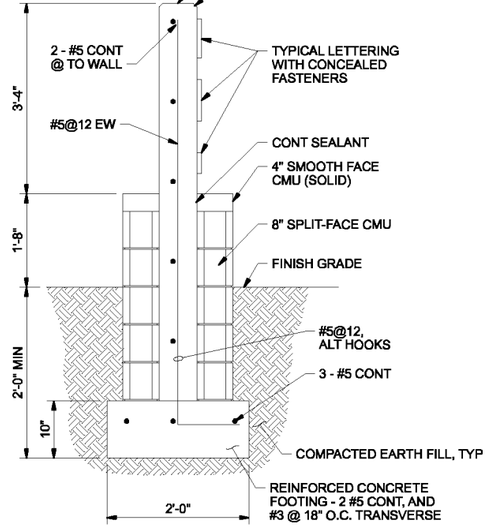
NOTES:

1. LETTERING SHALL BE SPECIFIED IN SPECIFICATION SECTION 10400.
2. VERIFY STREET NUMBERING WITH OWNER.

CONCRETE ENTRANCE SIGN 3

1/2"=1'-0"

05-CL-105
05-CL-401
05-CG-401



SECTION C

NTS

DSGN	JT ASHLEY						VERIFY SCALE
DR	SR REDDELL			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	DJ PETERSON		01/20/10	AS-BUILT	BRP	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

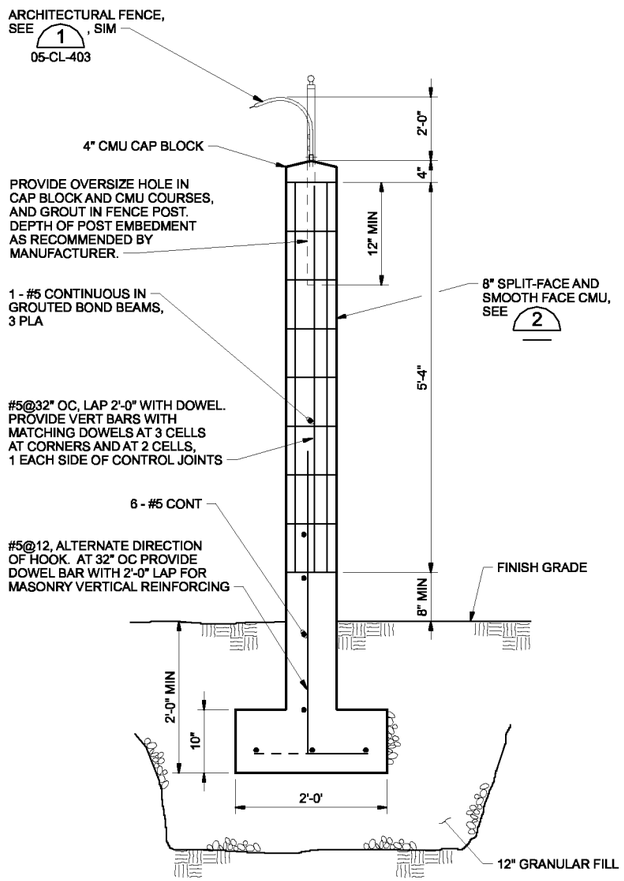
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

SITE DETAILS

SHEET	145
DWG	05-CL-403
DATE	MAY 19 2006
PROJ	326918

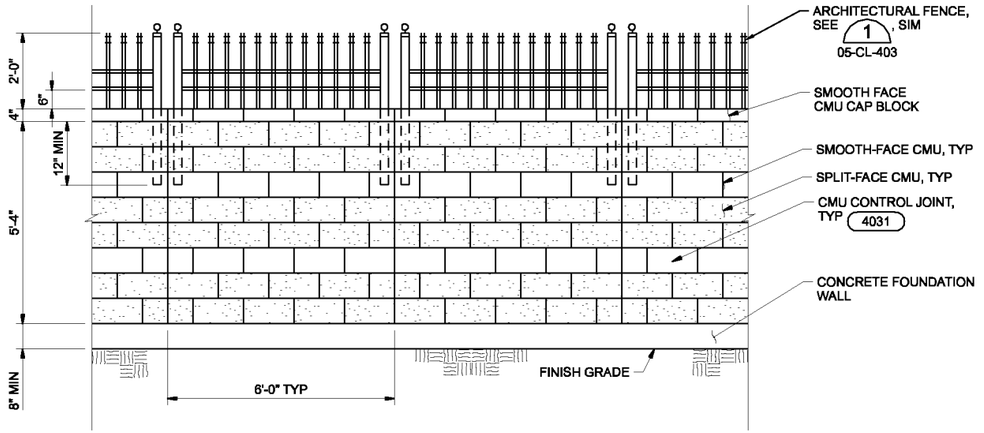
FILENAME: 05nc403d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:14:00 PM



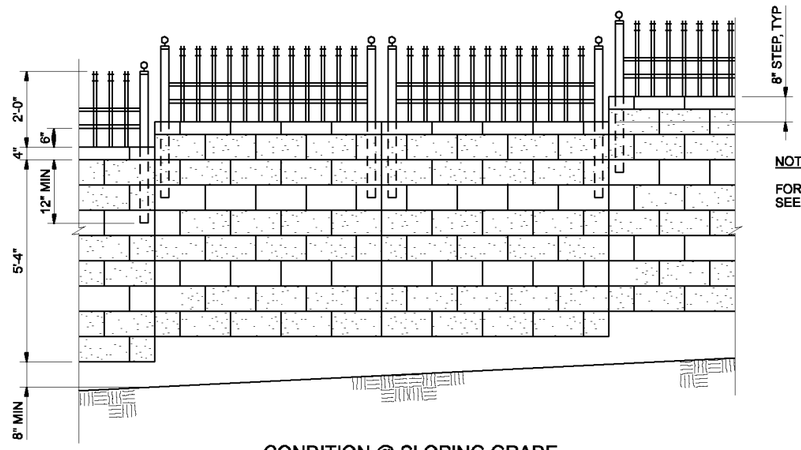
ARCHITECTURAL SCREEN WALL (1)

NTS

05-CG-105
05-CL-105
05-CL-402
05-CY-203



CONDITION @ LEVEL GRADE



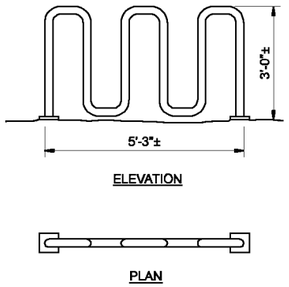
CONDITION @ SLOPING GRADE

NOTE:

FOR TYPICAL NOTES, SEE ABOVE

ARCHITECTURAL SCREEN WALL ELEVATIONS (2)

1/2" = 1'-0"



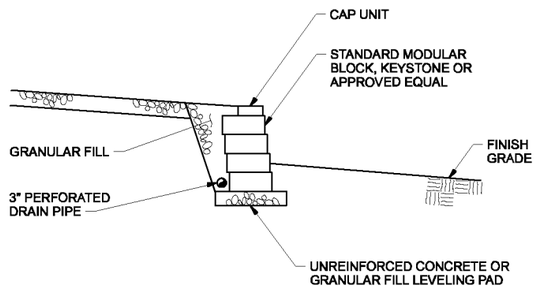
NOTE:

BICYCLE RACK SHALL BE SPECIFIED IN SPECIFICATION SECTION 10999.

BICYCLE RACK (3)

NTS

05-CL-105
05-CL-401
05-CG-401



TYPICAL GRAVITY RETAINING WALL (4)

NTS

05-CL-103

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60132PE AND BY MARK J. MERKLEIN, STATE OF OREGON, P.E. NO. 58357.

DSGN JT ASHLEY/MJ MERKLEIN						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	BRP	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

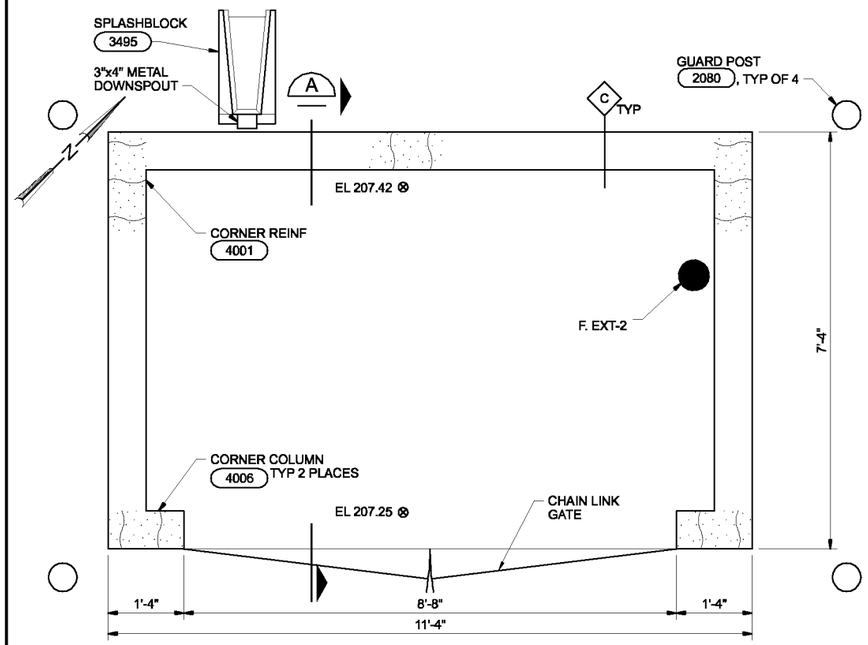
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

SITE DETAILS

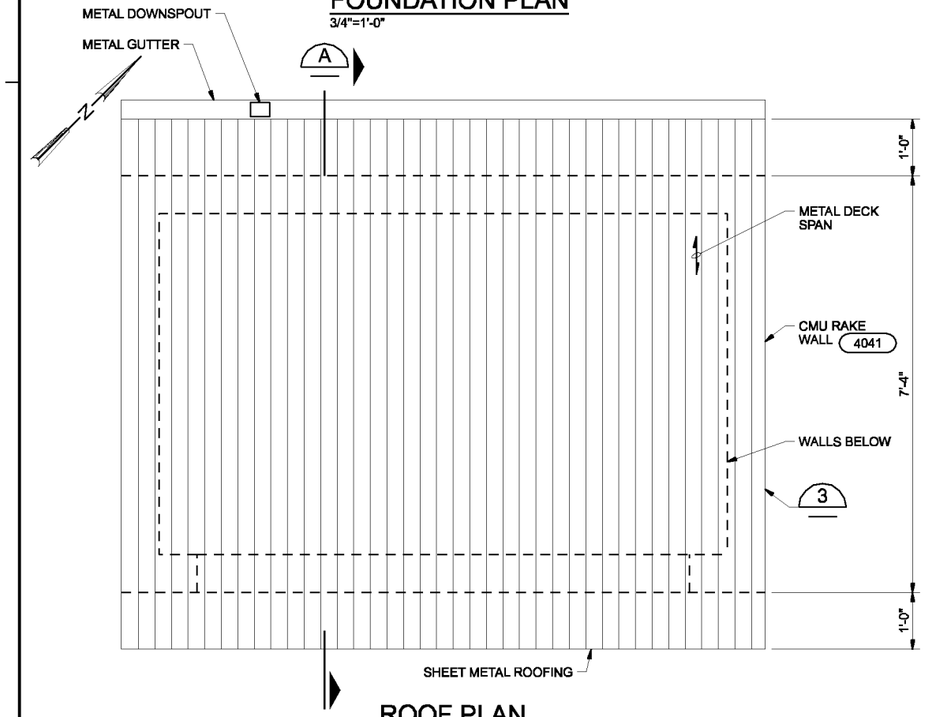
SHEET	146
DWG	05-CL-404
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nc404d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:14:06 PM



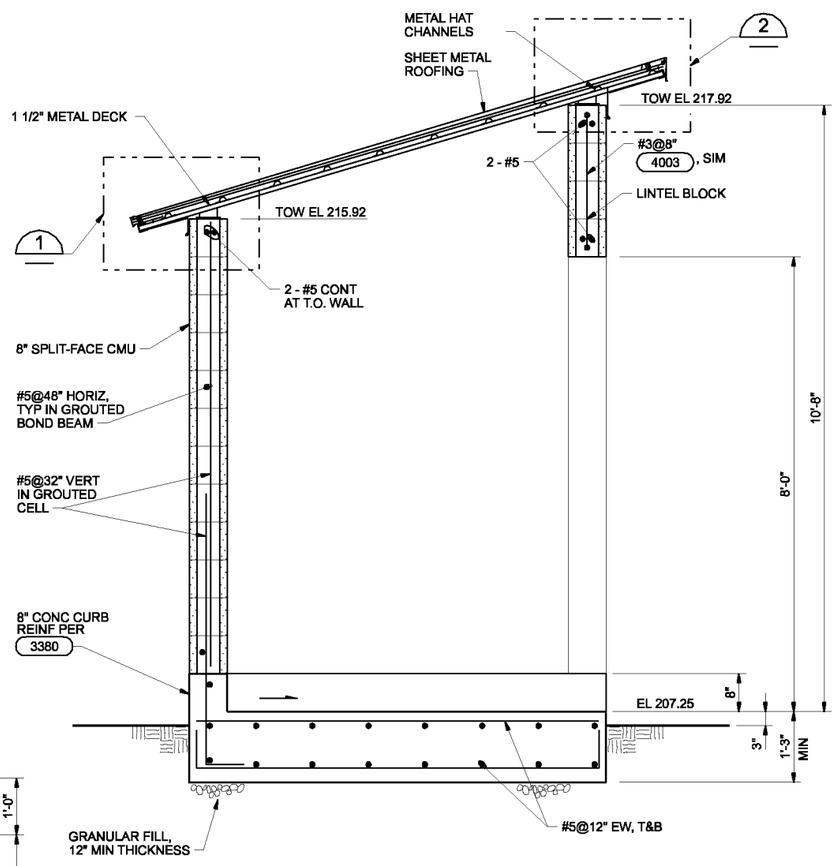
FOUNDATION PLAN

3/4"=1'-0"



ROOF PLAN

3/4"=1'-0"



SECTION A

3/4"=1'-0"

METAL DECK NOTES:

1. UNLESS NOTED OTHERWISE METAL DECK SHALL BE 1 1/2", 20 GAGE, TYPE 'B', GALVANIZED STEEL WITH THE FOLLOWING MINIMUM PROPERTIES:

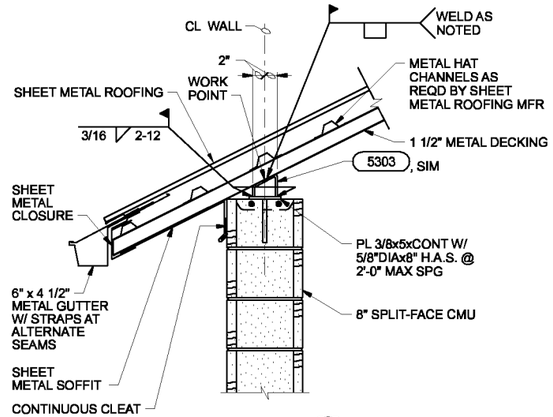
   $I = 0.212\ in^4/FT$
   $+S = 0.234\ in^3/FT$
   $-S = 0.217\ in^3/FT$
   $FY = 33\ ksi$

2. METAL DECK SHALL BE ATTACHED TO ALL SUPPORTS AS FOLLOWS:

   TYPICAL SUPPORTS:
   5 - 5/8" PUDDLE WELD PER 36" PANEL WIDTH
   SIDE LAP:
   5 - SIDE SEAM WELDS PER 6'-0" SPAN

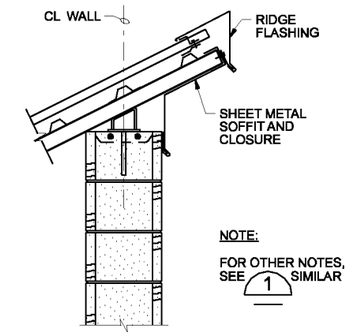
GENERAL NOTES:

1. FOR GENERAL ARCHITECTURAL NOTES, SYMBOLS, LEGEND AND WALL TYPES, SEE DWG 01-G-07.
2. FOR CODE DATA, SEE DWG 01-G-08.



DETAIL 1

NTS

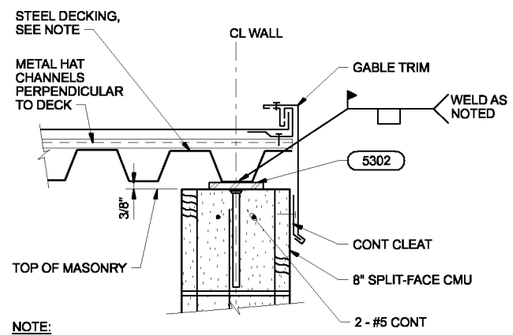


NOTE:

FOR OTHER NOTES, SEE 1 SIMILAR

DETAIL 2

NTS



NOTE:

WHERE DECKING SPAN IS PARALLEL TO WALL, LOCATE VALLEY OF DECKING CENTERED ON WALL.

DETAIL 3

NTS

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY MARK J. MERKLEIN, STATE OF OREGON, P.E. NO.58357 .

DSGN	MJ MERKLEIN						VERIFY SCALE
DR	SR REDDELL						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

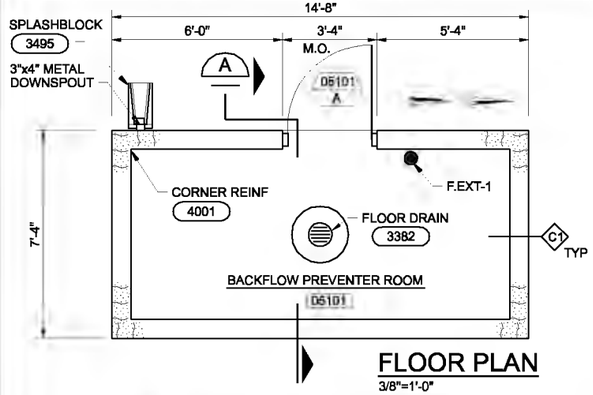
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

CIVIL

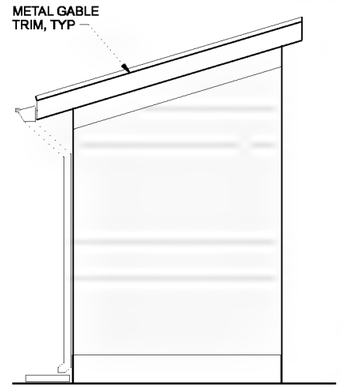
ELECTRICAL ENCLOSURE

SHEET	147
DWG	05-CL-405
DATE	MAY 19 2006
PROJ	326918

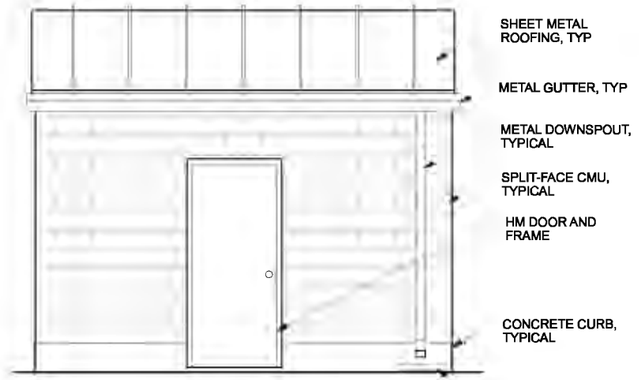
FILENAME: 05nc405d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:14:10 PM



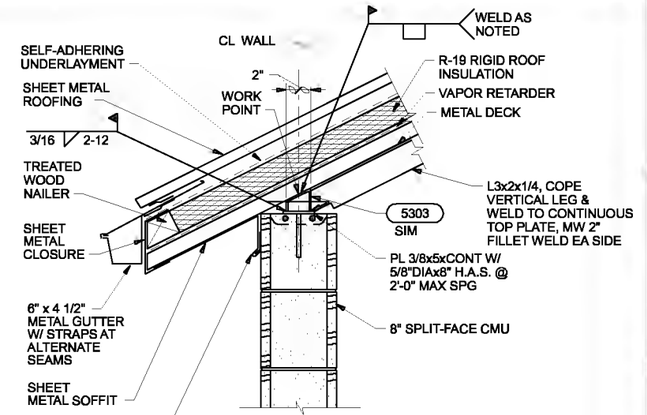
FLOOR PLAN
3/8"=1'-0"



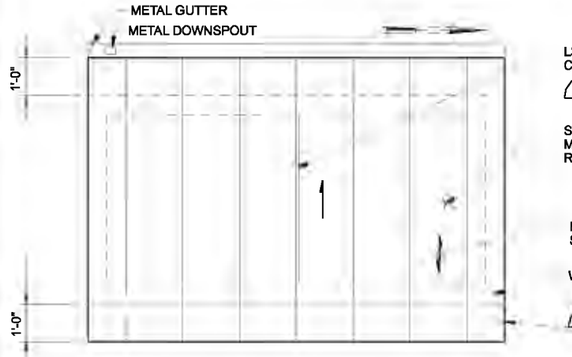
SOUTH ELEVATION
3/8"=1'-0"



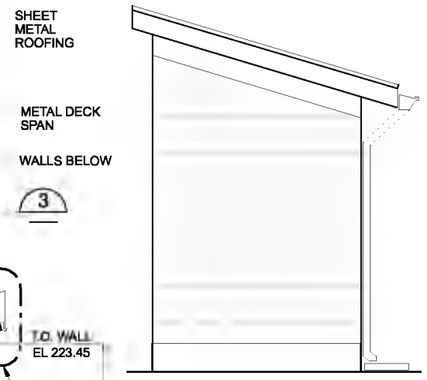
WEST ELEVATION
3/8"=1'-0"



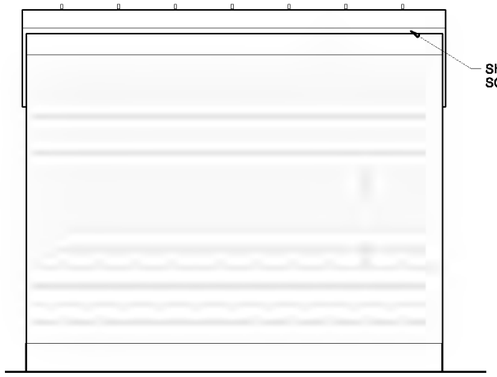
DETAIL 1
NTS



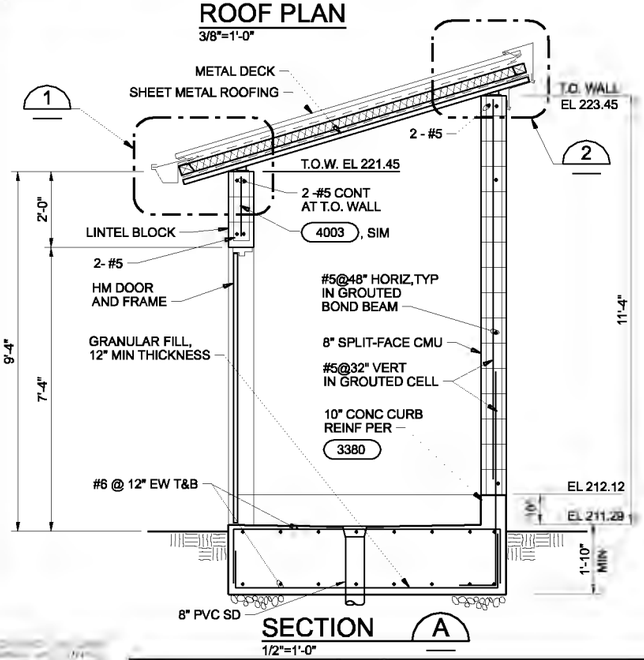
ROOF PLAN
3/8"=1'-0"



NORTH ELEVATION
3/8"=1'-0"



EAST ELEVATION
3/8"=1'-0"



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

METAL DECK NOTES:

1. UNLESS NOTED OTHERWISE METAL DECK SHALL BE 1 1/2", 20 GAGE, TYPE 'B', GALVANIZED STEEL WITH THE FOLLOWING MINIMUM PROPERTIES:

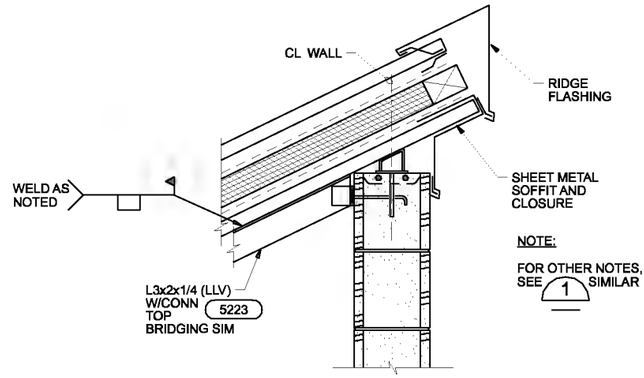
   $I = 0.212\ in^4/FT$
   $+S = 0.234\ in^3/FT$
   $-S = 0.217\ in^3/FT$
   $FY = 33\ ksi$

2. METAL DECK SHALL BE ATTACHED TO ALL SUPPORTS AS FOLLOWS:

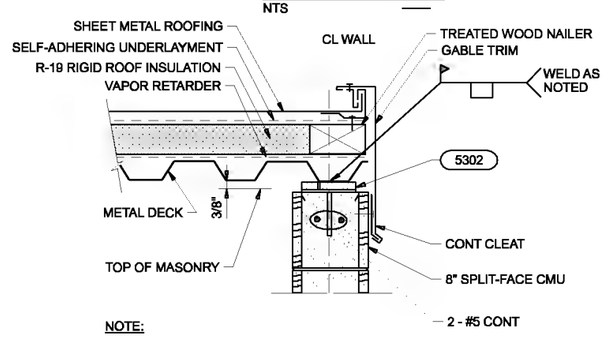
   TYPICAL SUPPORTS:
   5 - 5/8" PUDDLE WELD PER 36" PANEL WIDTH
   SUPPORTS PARALLEL TO DECK SPAN:
   5/8" PUDDLE WELDS AT 12" ON CENTER
   SIDE LAP:
   #10 TEK SCREWS @12" MAX SPACING

GENERAL NOTES:

1. FOR GENERAL ARCHITECTURAL NOTES, SYMBOLS, LEGEND AND WALL TYPES, SEE DWG 01-G-07.



DETAIL 2
NTS

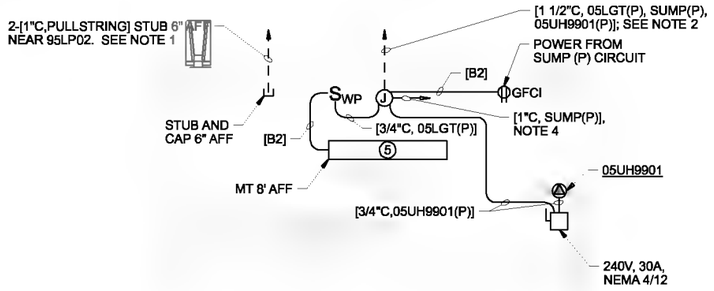


NOTE:
WHERE DECK SPAN IS PARALLEL TO WALL, LOCATE VALLEY OF DECK CENTERED ON WALL.

DETAIL 3
NTS

DSGN MJ MERKLEIN						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON	CIVIL	SHEET 148
DR WB LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"		BACKFLOW PREVENTER BUILDING	DWG 05-CL-406
CHK DJ PETERSON			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	BRP	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CH2MHILL carollo engineers		DATE SEPT 27 2006
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD				PROJ 326918
	1	01/20/10							

FILENAME: 06nc406d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:14:15 PM

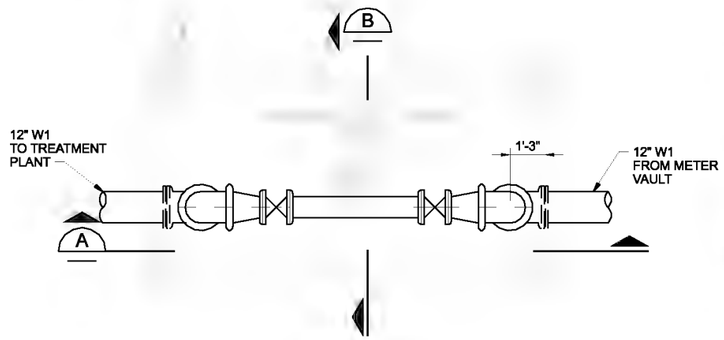


ELECTRICAL FLOOR PLAN

3/8"=1'-0"

HVAC FLOOR PLAN

3/8"=1'-0"



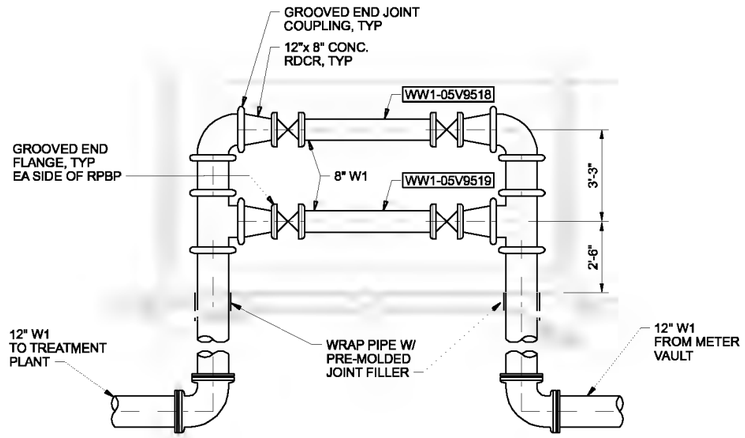
PROCESS FLOOR PLAN

3/8"=1'-0"

NOTES:

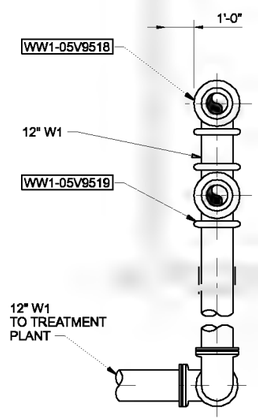
1. ADD CONDUITS TO THE DUCTBANK SCHEDULE ON SHEET 439. LABEL THEM AS NN06 AND NN07 FROM BACK PREV BLDG TO STUB BELOW 95LP02.
2. THE CONDUIT SHALL BE LABELED NN05, WHICH WAS ADDED IN ADDENDUM 2. IN THE SITE ROUTED CIRCUIT SCHEDULE, CHANGE THE NN05 "FROM" COLUMN TO "BACKFLOW PREVENTER BLDG".
3. IT HAS BEEN CONFIRMED WITH THE CITY THAT AN EXTERNAL POWER SOURCE IS NOT REQUIRED FOR THE WATER METER.
4. PROVIDE 120V, 20A IMMERSION PROOF RECEPTACLE AND MATCHING PLUG FOR WATER METER VAULT SUMP PUMP. COORDINATE MOUNTING LOCATION OF RECEPTACLE WITH MECHANICAL CONTRACTOR. ROUTE CIRCUIT TO RECEPTACLE. REFER TO 05-CY-105 FOR VAULT LOCATION.
5. MODIFY THE PANEL SCHEDULE FOR 95LP02 AS FOLLOWS:
   A. CHANGE CKT 19 TITLE TO "LGTS, BACK PREV BLDG". CHANGE VA TO 90.
   B. ADD A 20A, 2 POLE BREAKER TO CIRCUITS 27 AND 29. ADD TITLE "05UH9901". ADD VA RATING OF "1250" PER PHASE.
6. ADD THE FOLLOWING TO THE SITE ROUTED CIRCUIT SCHEDULE ON SHEET 430:

CIRCUIT NAME	FACILITY CIRCUIT ORGIN. IN	FROM	TO	CONDUCTORS	DUCTBANK CABLE IS IN
05LGT(P)	BACKFLOW PREV. BLDG	LIGHT SWITCH	95LP02	3/C#10 TYPE 2	NN
05UH9901(P)	BACKFLOW PREV. BLDG	05UH9901	95LP02	3/C#10 TYPE 2	NN



SECTION A

3/8"=1'-0"



SECTION B

3/8"=1'-0"

DSGN	KL MAESTRI					VERIFY SCALE
DR	G WHITTIER					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	BRP	JAB
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

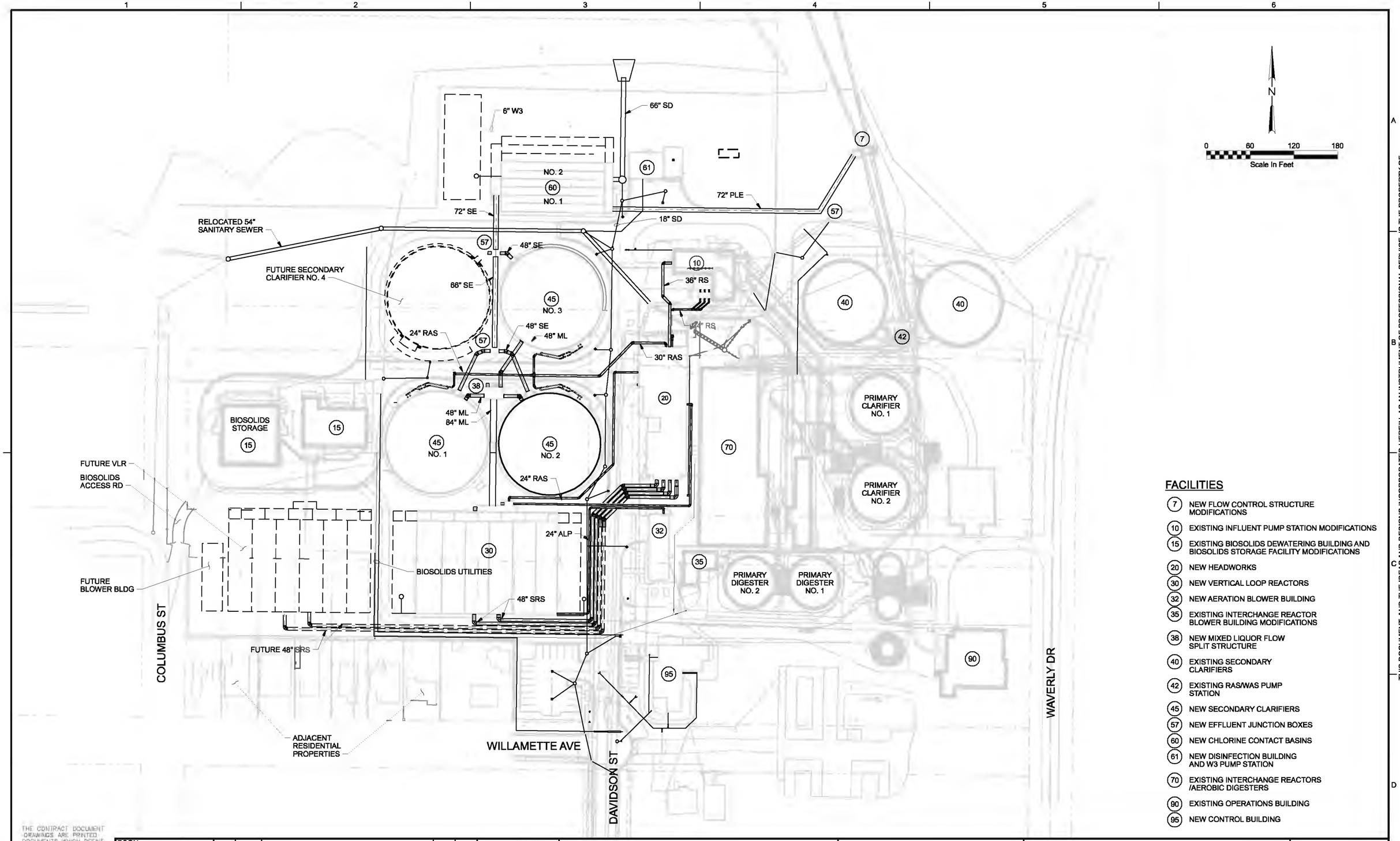
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

CIVIL
ELECRICAL / HVAC / MECHANICAL
BACKFLOW PREVENTER BUILDING

SHEET	149
DWG	05-CL-407
DATE	SEPT 27 2006
PROJ	326918

FILENAME: 05no407d_326918.dgn PLOT DATE: 2/25/2010 PLOT TIME: 2:14:21 PM



FACILITIES

- (7) NEW FLOW CONTROL STRUCTURE MODIFICATIONS
- (10) EXISTING INFLUENT PUMP STATION MODIFICATIONS
- (15) EXISTING BIOSOLIDS DEWATERING BUILDING AND BIOSOLIDS STORAGE FACILITY MODIFICATIONS
- (20) NEW HEADWORKS
- (30) NEW VERTICAL LOOP REACTORS
- (32) NEW AERATION BLOWER BUILDING
- (35) EXISTING INTERCHANGE REACTOR BLOWER BUILDING MODIFICATIONS
- (38) NEW MIXED LIQUOR FLOW SPLIT STRUCTURE
- (40) EXISTING SECONDARY CLARIFIERS
- (42) EXISTING RAS/WAS PUMP STATION
- (45) NEW SECONDARY CLARIFIERS
- (57) NEW EFFLUENT JUNCTION BOXES
- (60) NEW CHLORINE CONTACT BASINS
- (61) NEW DISINFECTION BUILDING AND W3 PUMP STATION
- (70) EXISTING INTERCHANGE REACTORS /AEROBIC DIGESTERS
- (90) EXISTING OPERATIONS BUILDING
- (95) NEW CONTROL BUILDING

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60132PE.

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

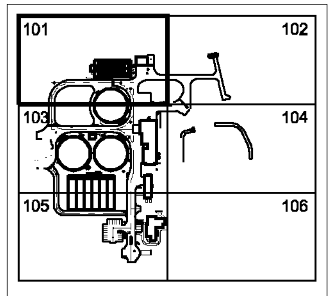
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

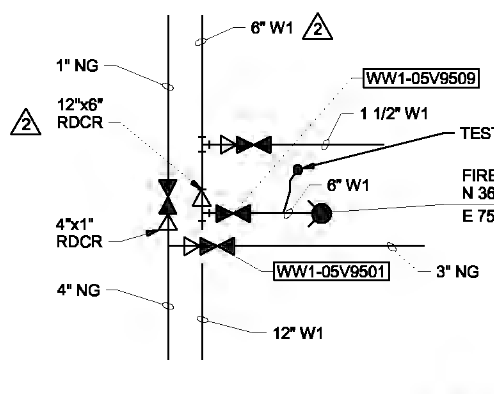
OVERALL YARD PIPING PLAN

SHEET	150
DWG	05-CY-100
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncy100d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:16:30 PM



KEY MAP



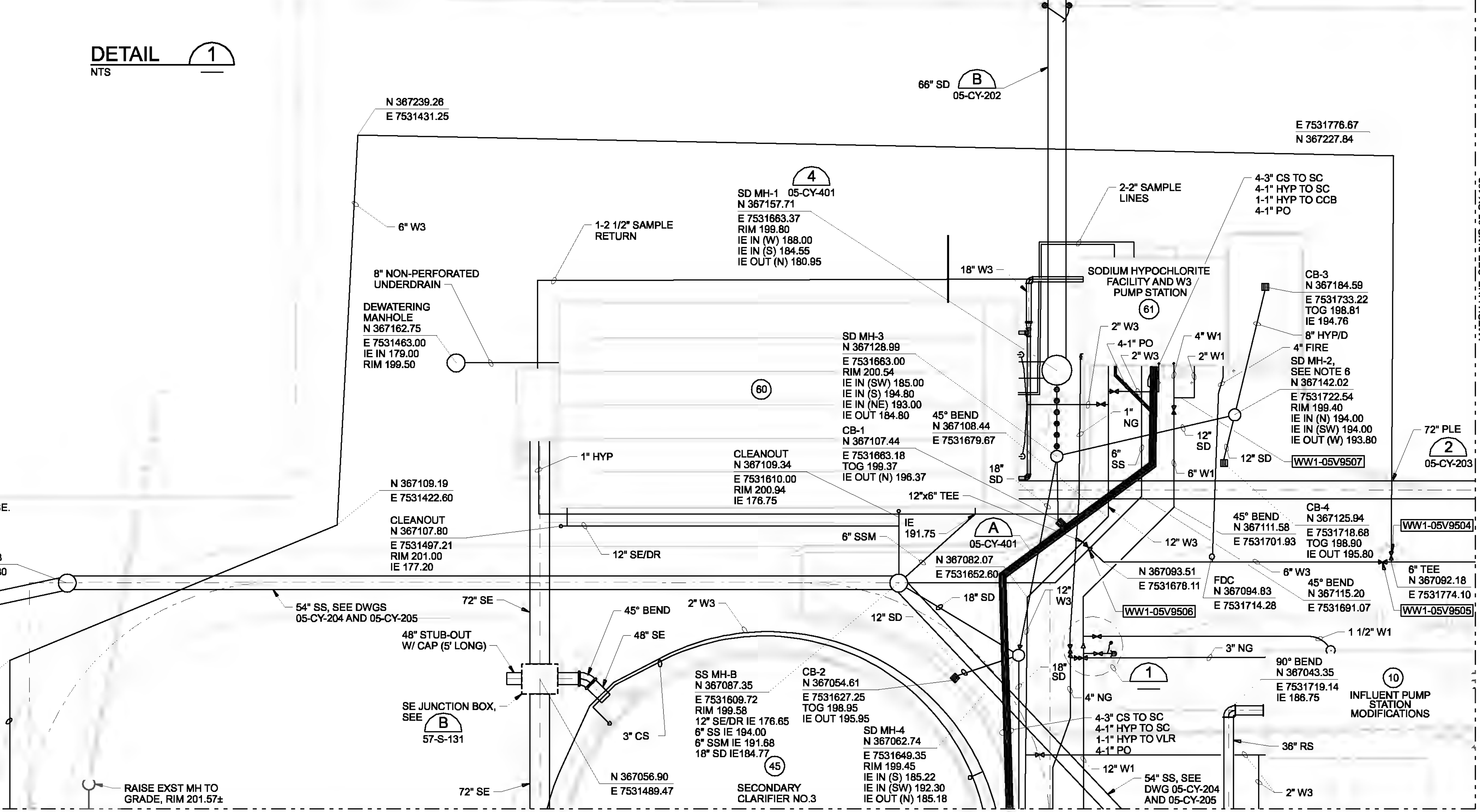
DETAIL 1
NTS

N

0 20 40 60
Scale In Feet

NOTES:

1. ALL NECESSARY FITTINGS ARE NOT SHOWN FOR CLARITY. PROVIDE ALL FITTINGS REQUIRED TO MAKE CONNECTIONS AND ACHIEVE GRADES, INVERTS, AND SLOPES SHOWN.
2. SEE ADDITIONAL NOTES ON DWG 01-G-16.
3. FOR TYPICAL TRENCH SECTION, SEE 205
4. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.
5. FOR MANHOLES, SEE 401 AND 405, FOR CATCH BASINS, SEE 414
6. PROVIDE 8" AUTOMATED BUTTERFLY CONTROL VALVE. SECURE 8" FLANGED AUTOMATED BUTTERFLY VALVE TO FLANGED PVC PIPE MINIMUM 6" TO FLANGE FACE INSIDE MANHOLE WALL OR AS NEEDED FOR MOTOR OPERATOR. SHAPE MANHOLE CHANNEL AS NECESSARY TO PROVIDE SUPPORT OF VALVE AND FLANGED CONNECTION. VERIFY ALL VALVE MANUFACTURER RECOMMENDED CLEARANCES AND ANY POSSIBLE INTERFERENCES OF VALVE OPERATION PRIOR TO OPERATING AUTOMATED VALVE. SEE W3 PUMP STATION DRAWINGS FOR ELECTRICAL AND CONTROLS.
7. PROVIDE JOINT BONDING AND GALVANIC ANODES FOR BURIED STEEL AND DUCTILE IRON PIPE AND BURIED DUCTILE IRON FITTINGS IN PVC PIPE IN ACCORDANCE WITH SPECIFICATION SECTIONS 13985 AND 13990 AND THE ASSOCIATED DESIGN DETAILS.
8. PROVIDE 3' MIN COVER ON ALL PIPES, UNLESS SHOWN OTHERWISE.
9. FOR BURIED VALVES, SEE 15640.



MATCH LINE, SEE DWG 05-CY-103

MATCH LINE, SEE DWG 05-CY-102

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		01/20/10	AS-BUILT	DLM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

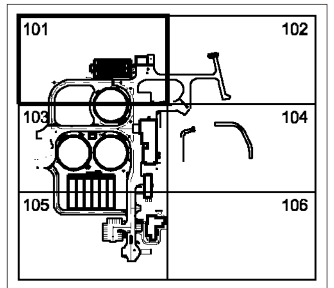
SITE DEVELOPMENT

YARD PIPING PLAN
AREA 101

SHEET	151
DWG	05-CY-101
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY101d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:16:56 PM

1 | 2 | 3 | 4 | 5 | 6



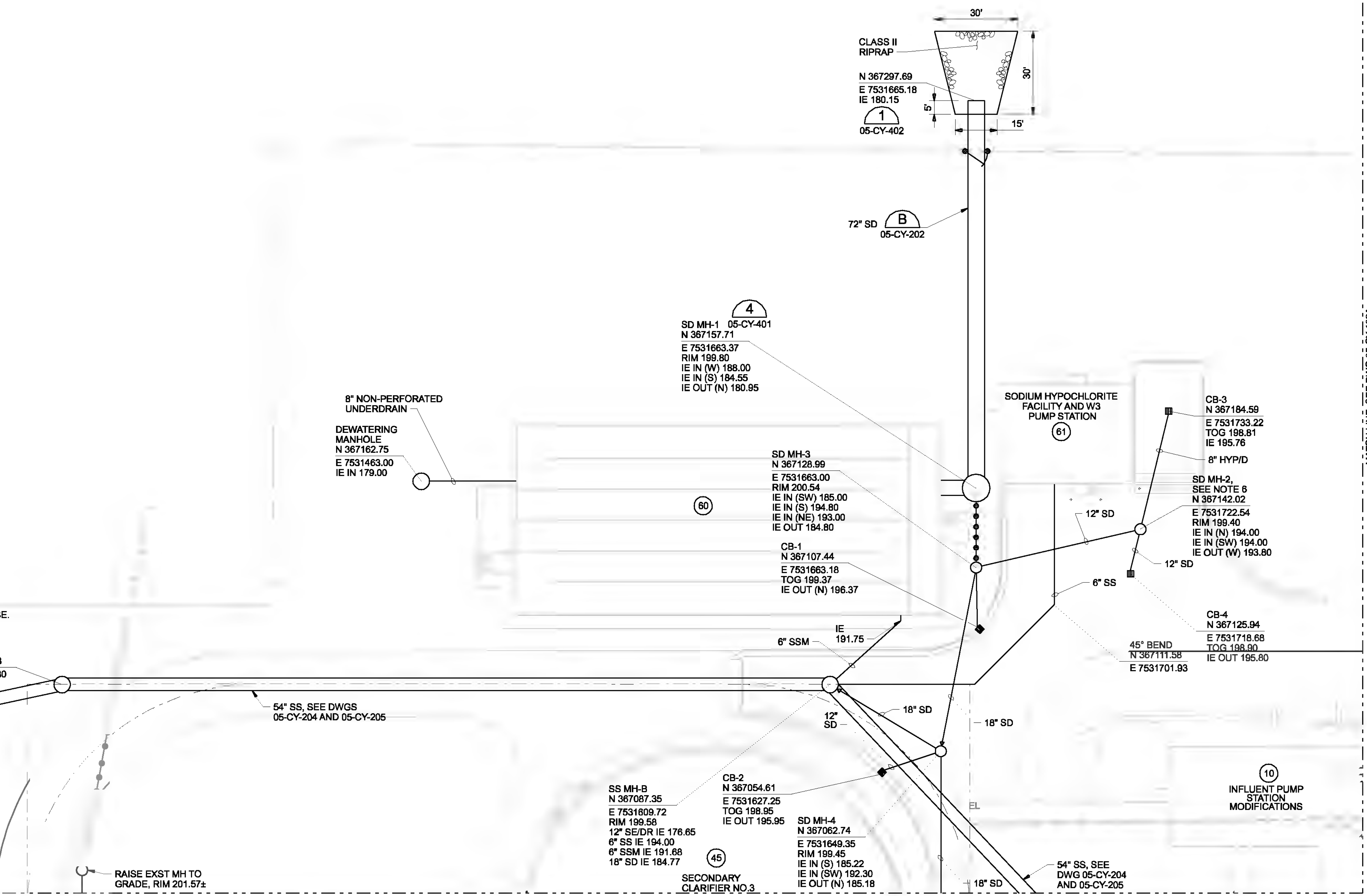
KEY MAP

N

0 20 40 60
Scale In Feet

NOTES:

1. ALL NECESSARY FITTINGS ARE NOT SHOWN FOR CLARITY. PROVIDE ALL FITTINGS REQUIRED TO MAKE CONNECTIONS AND ACHIEVE GRADES, INVERTS, AND SLOPES SHOWN.
2. SEE ADDITIONAL NOTES ON DWG 01-G-16.
3. FOR TYPICAL TRENCH SECTION, SEE (205)
4. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.
5. FOR MANHOLES, SEE (401) AND (405), FOR CATCH BASINS, SEE (414).
6. PROVIDE 8" AUTOMATED BUTTERFLY CONTROL VALVE. SECURE 8" FLANGED AUTOMATED BUTTERFLY VALVE TO FLANGED PVC PIPE MINIMUM 6" TO FLANGE FACE INSIDE MANHOLE WALL OR AS NEEDED FOR MOTOR OPERATOR. SHAPE MANHOLE CHANNEL AS NECESSARY TO PROVIDE SUPPORT OF VALVE AND FLANGED CONNECTION. VERIFY ALL VALVE MANUFACTURER RECOMMENDED CLEARANCES AND ANY POSSIBLE INTERFERENCES OF VALVE OPERATION PRIOR TO OPERATING AUTOMATED VALVE. SEE W3 PUMP STATION DRAWINGS FOR ELECTRICAL AND CONTROLS.
7. PROVIDE JOINT BONDING AND GALVANIC ANODES FOR BURIED STEEL AND DUCTILE IRON PIPE AND BURIED DUCTILE IRON FITTINGS IN PVC PIPE IN ACCORDANCE WITH SPECIFICATION SECTIONS 13985 AND 13990 AND THE ASSOCIATED DESIGN DETAILS.
8. PROVIDE 3' MIN COVER ON ALL PIPES, UNLESS SHOWN OTHERWISE.
9. FOR BURIED VALVES, SEE (15640).



MATCH LINE, SEE DWG 05-CY-103A

DSGN	JT ASHLEY					
DR	PA LONG			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)		
CHK	DJ PETERSON		01/20/10	AS-BUILT	DLM	JAB
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

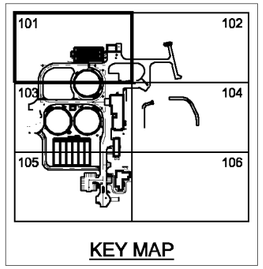
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

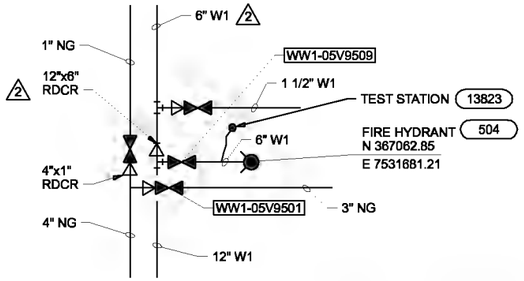
SITE DEVELOPMENT

SS/SD YARD PIPING PLAN
AREA 101

SHEET	152
DWG	05-CY-101A
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY101Ad_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:16:38 PM





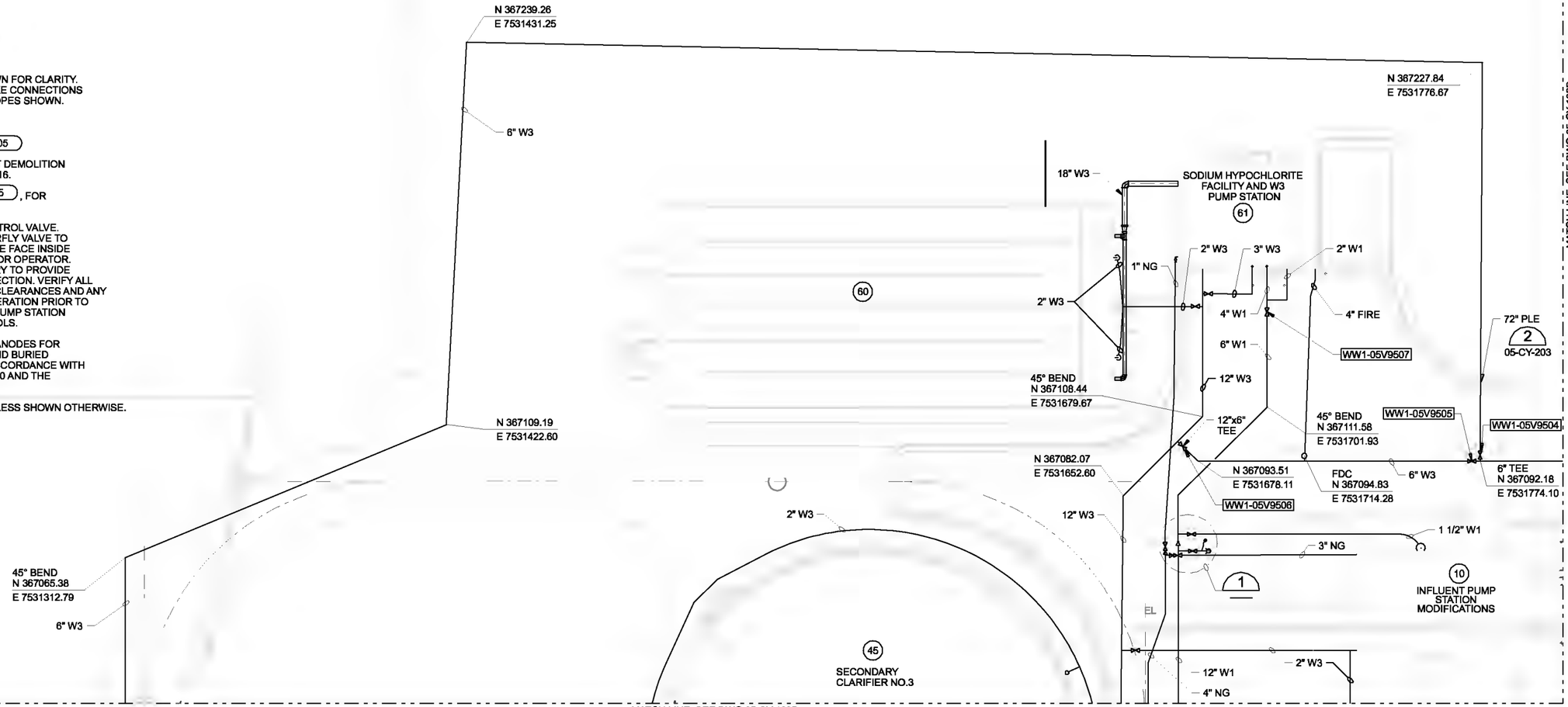
DETAIL 1
NTS

N

0 20 40 60
Scale In Feet

NOTES:

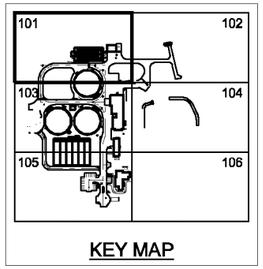
1. ALL NECESSARY FITTINGS ARE NOT SHOWN FOR CLARITY. PROVIDE ALL FITTINGS REQUIRED TO MAKE CONNECTIONS AND ACHIEVE GRADES, INVERTS, AND SLOPES SHOWN.
2. SEE ADDITIONAL NOTES ON DWG 01-G-16.
3. FOR TYPICAL TRENCH SECTION, SEE (205)
4. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.
5. FOR MANHOLES, SEE (401) AND (405), FOR CATCH BASINS, SEE (414).
6. PROVIDE 8" AUTOMATED BUTTERFLY CONTROL VALVE. SECURE 8" FLANGED AUTOMATED BUTTERFLY VALVE TO FLANGED PVC PIPE MINIMUM 6" TO FLANGE FACE INSIDE MANHOLE WALL OR AS NEEDED FOR MOTOR OPERATOR. SHAPE MANHOLE CHANNEL AS NECESSARY TO PROVIDE SUPPORT OF VALVE AND FLANGED CONNECTION. VERIFY ALL VALVE MANUFACTURER RECOMMENDED CLEARANCES AND ANY POSSIBLE INTERFERENCES OF VALVE OPERATION PRIOR TO OPERATING AUTOMATED VALVE. SEE W3 PUMP STATION DRAWINGS FOR ELECTRICAL AND CONTROLS.
7. PROVIDE JOINT BONDING AND GALVANIC ANODES FOR BURIED STEEL AND DUCTILE IRON PIPE AND BURIED DUCTILE IRON FITTINGS IN PVC PIPE IN ACCORDANCE WITH SPECIFICATION SECTIONS 13985 AND 13990 AND THE ASSOCIATED DESIGN DETAILS.
8. PROVIDE 3' MIN COVER ON ALL PIPES, UNLESS SHOWN OTHERWISE.
9. FOR BURIED VALVES, SEE (15640).



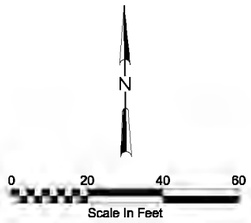
DSGN JT ASHLEY						VERIFY SCALE	CH2MHILL carollo engineers
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON
CHK DJ PETERSON			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	SITE DEVELOPMENT
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD		WATER AND NG YARD PIPING PLAN AREA 101
		01/20/10		APVR	JAB		

SHEET	153
DWG	05-CY-101B
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY101Bd_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:18:44 PM



KEY MAP



NOTES:

1. ALL NECESSARY FITTINGS ARE NOT SHOWN FOR CLARITY. PROVIDE ALL FITTINGS REQUIRED TO MAKE CONNECTIONS AND ACHIEVE GRADES, INVERTS, AND SLOPES SHOWN.
2. SEE ADDITIONAL NOTES ON DWG 01-G-16.
3. FOR TYPICAL TRENCH SECTION, SEE (205)
4. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.
5. FOR MANHOLES, SEE (401) AND (405), FOR CATCH BASINS, SEE (414).
6. PROVIDE 8" AUTOMATED BUTTERFLY CONTROL VALVE. SECURE 8" FLANGED AUTOMATED BUTTERFLY VALVE TO FLANGED PVC PIPE MINIMUM 6" TO FLANGE FACE INSIDE MANHOLE WALL OR AS NEEDED FOR MOTOR OPERATOR. SHAPE MANHOLE CHANNEL AS NECESSARY TO PROVIDE SUPPORT OF VALVE AND FLANGED CONNECTION. VERIFY ALL VALVE MANUFACTURER RECOMMENDED CLEARANCES AND ANY POSSIBLE INTERFERENCES OF VALVE OPERATION PRIOR TO OPERATING AUTOMATED VALVE. SEE W3 PUMP STATION DRAWINGS FOR ELECTRICAL AND CONTROLS.
7. PROVIDE JOINT BONDING AND GALVANIC ANODES FOR BURIED STEEL AND DUCTILE IRON PIPE AND BURIED DUCTILE IRON FITTINGS IN PVC PIPE IN ACCORDANCE WITH SPECIFICATION SECTIONS 13985 AND 13990 AND THE ASSOCIATED DESIGN DETAILS.
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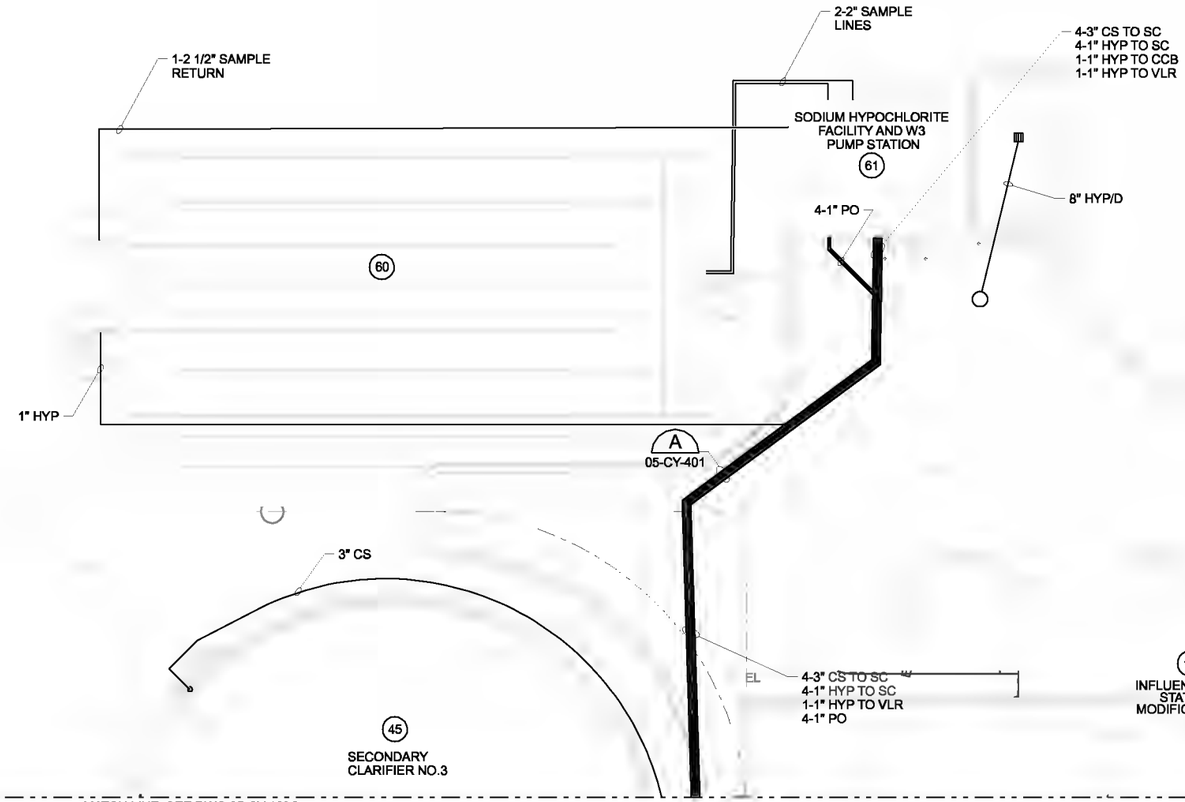
9. FOR BURIED VALVES, SEE (15640).



DSGN JT ASHLEY						VERIFY SCALE	CH2MHILL carollo engineers
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	DLM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	SITE DEVELOPMENT
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD		CHEMICAL YARD PIPING PLAN AREA 101

SHEET	154
DWG	05-CY-101C
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY101Cd_326918.dgn PLOT DATE: 2/25/2010 PLOT TIME: 2:16:50 PM

KEY MAP

NOTES:

1. ALL NECESSARY FITTINGS ARE NOT SHOWN FOR CLARITY. PROVIDE ALL FITTINGS REQUIRED TO MAKE CONNECTIONS AND ACHIEVE GRADES, INVERTS, AND SLOPES SHOWN.
2. SEE ADDITIONAL NOTES ON DWG 01-G-16.
3. FOR TYPICAL TRENCH SECTION, SEE (205)
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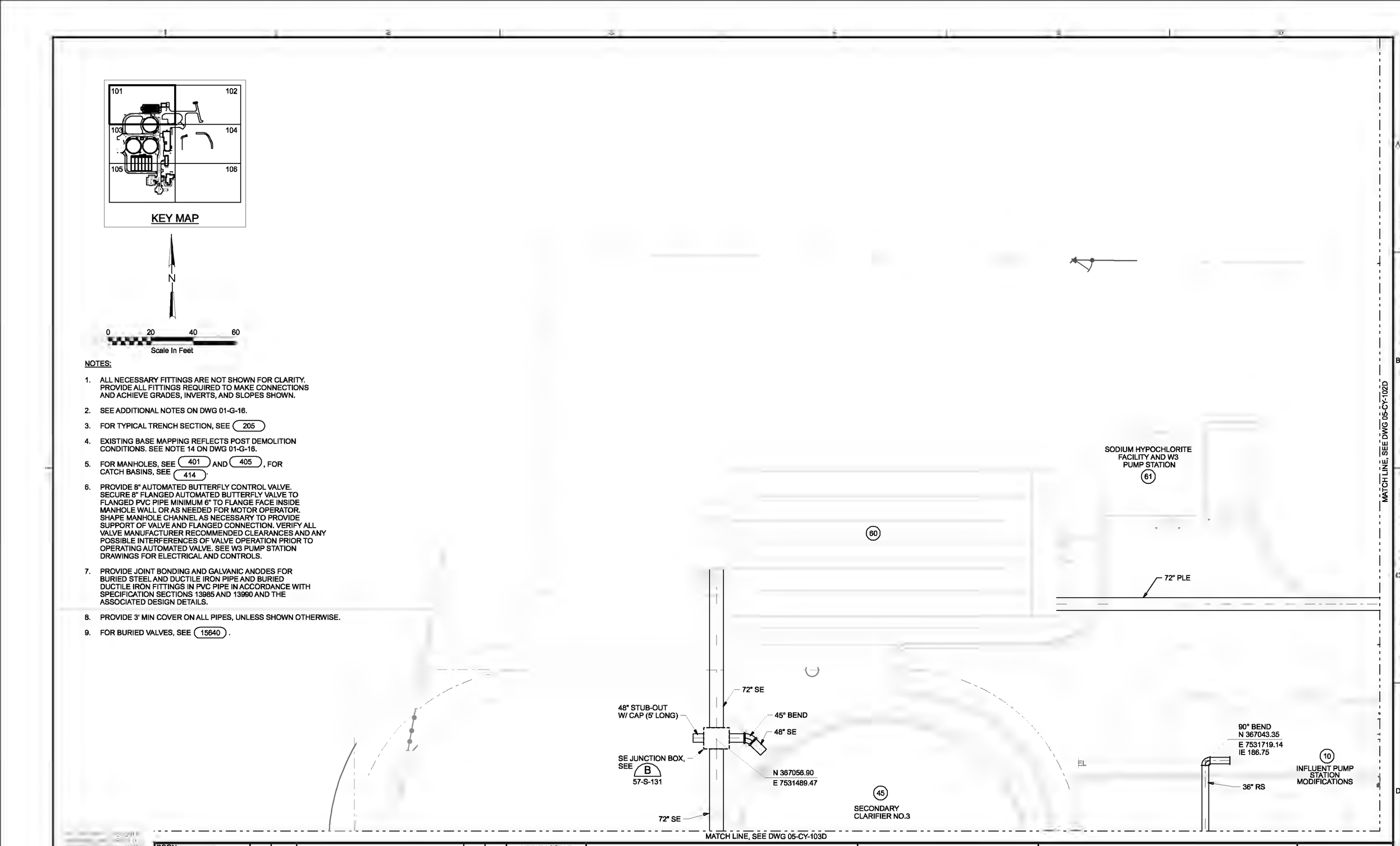
9. FOR BURIED VALVES, SEE (15640).



DSGN JT ASHLEY DR PA LONG CHK DJ PETERSON APVD CW MASSIE						VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CH2MHILL carollo engineers
	NO.	DATE	REVISION	DLM	JAB		
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT				

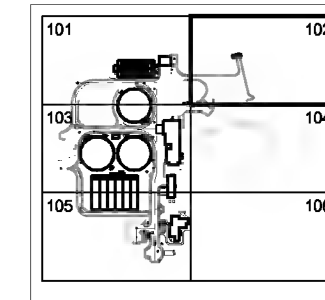
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

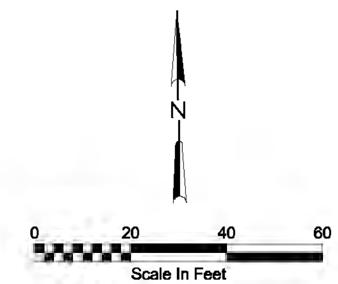
PROCESS YARD PIPING PLAN AREA 101

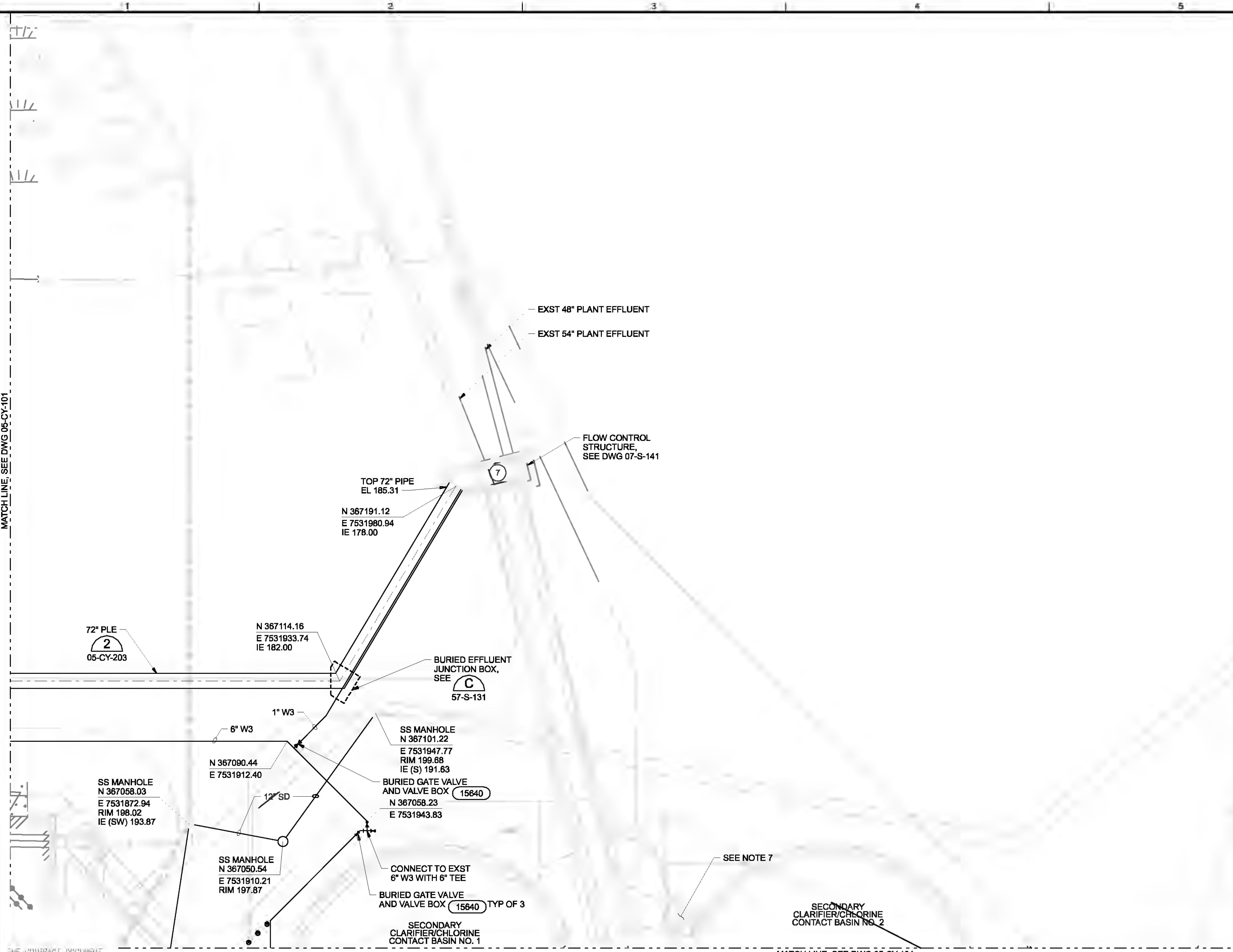
SHEET	155
DWG	05-CY-101D
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY101Dd_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:17:12 PM



KEY MAP





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6. PROVIDE 3' MIN COVER ON ALL PIPING, UNLESS SHOWN OTHERWISE.
7. UPON COMPLETION OF NEW W3 PUMP STATION, FACILITY 61, CONTRACTOR SHALL REMOVE EXISTING PUMP STATION AND CHECK VALVES AT EXISTING SECONDARY CLARIFIERS AND CONNECT NEW W3 TO EXISTING PIPES. COORDINATE WITH OWNER.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON P.E. NO. [illegible]

DSGN JT ASHLEY						
DR PA LONG						
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 — 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

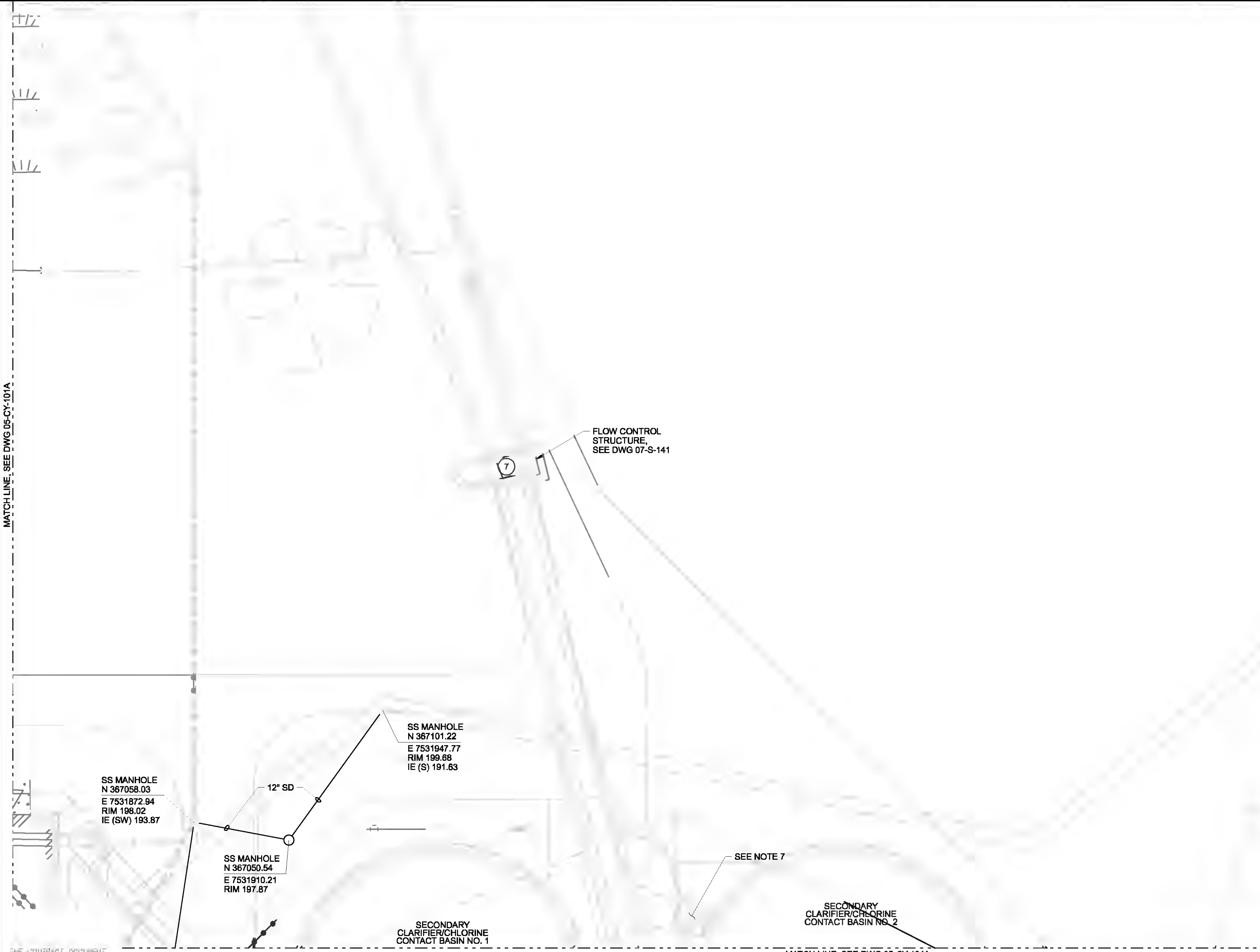
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

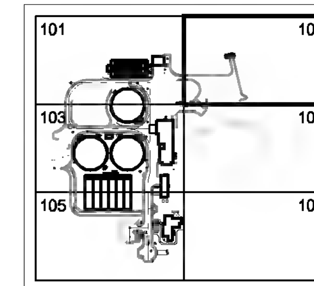
SITE DEVELOPMENT

YARD PIPING PLAN
AREA 102

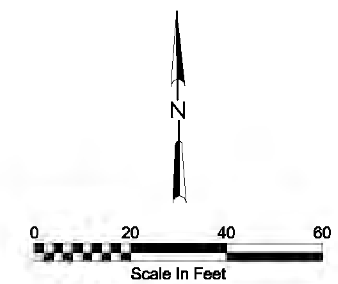
SHEET	156
DWG	05-CY-102
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY102d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:17:28 PM





KEY MAP



NOTES:

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6. PROVIDE 3' MIN COVER ON ALL PIPING, UNLESS SHOWN OTHERWISE.
7. UPON COMPLETION OF NEW W3 PUMP STATION, FACILITY 61, CONTRACTOR SHALL REMOVE EXISTING PUMP STATION AND CHECK VALVES AT EXISTING SECONDARY CLARIFIERS AND CONNECT NEW W3 TO EXISTING PIPES. COORDINATE WITH OWNER.

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DSGN	JT ASHLEY	NO.	DATE	REVISION	BY	APVD
DR	PA LONG		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB
CHK	DJ PETERSON					
APVD	CW MASSIE					

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

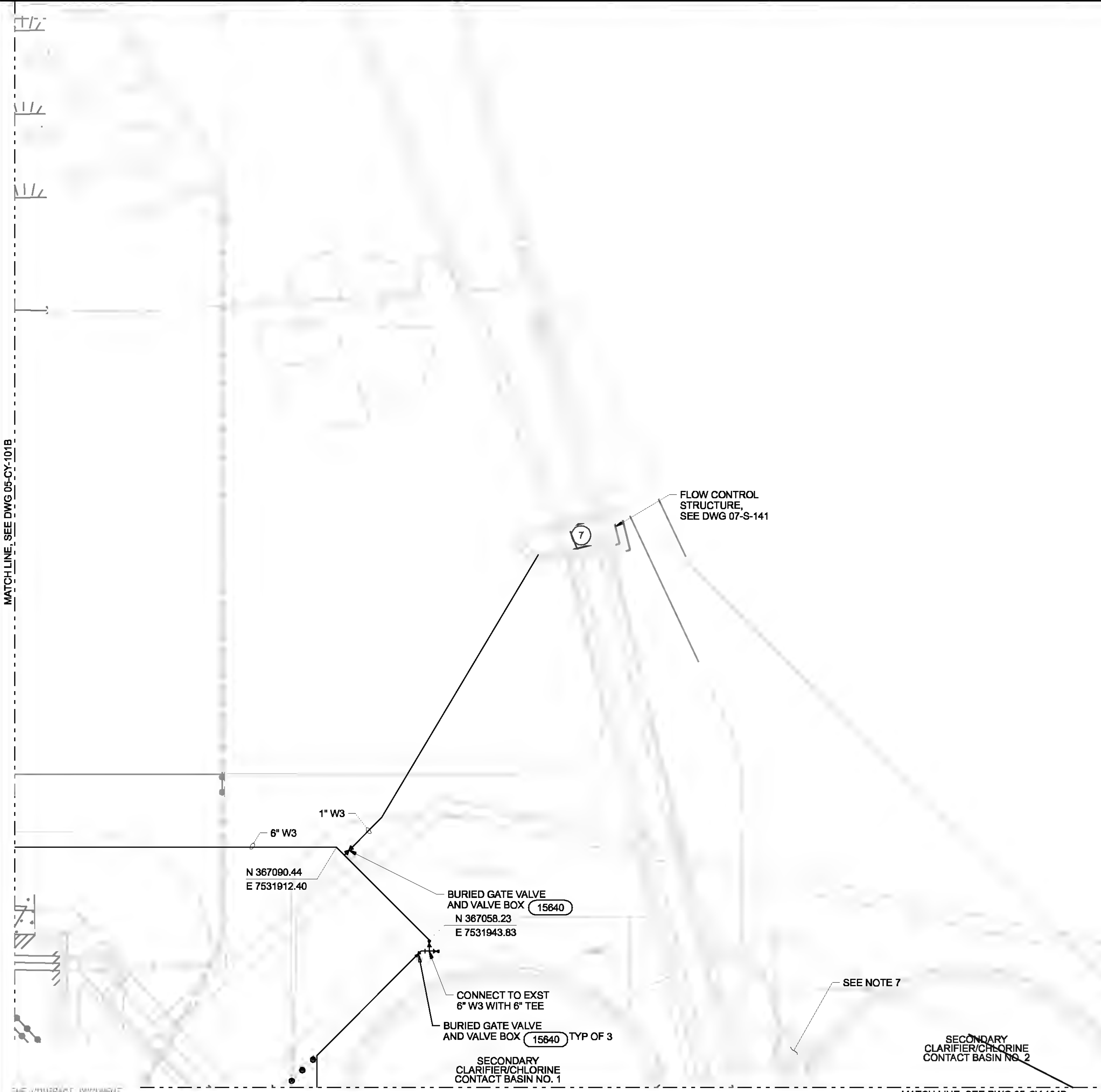
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

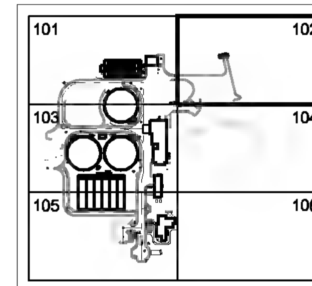
SITE DEVELOPMENT

SS/SD YARD PIPING PLAN
AREA 102

SHEET	157
DWG	05-CY-102A
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY102Ad_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:17:17 PM





KEY MAP

N

0 20 40 60
Scale In Feet

NOTES:

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6. PROVIDE 3' MIN COVER ON ALL PIPING, UNLESS SHOWN OTHERWISE.
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DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

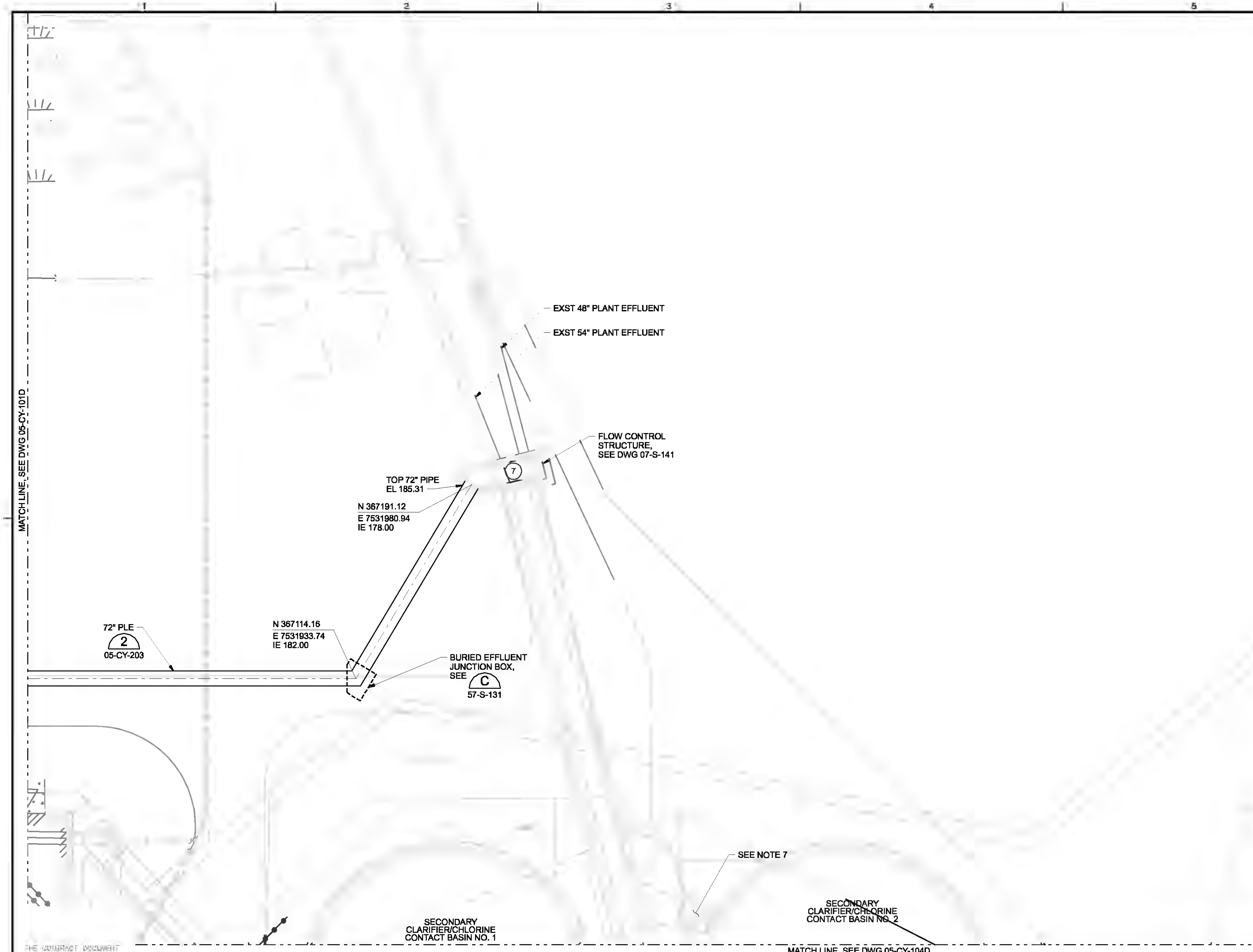
CH2MHILL carollo engineers

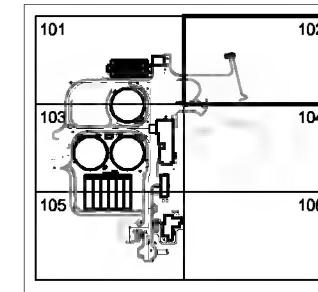
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

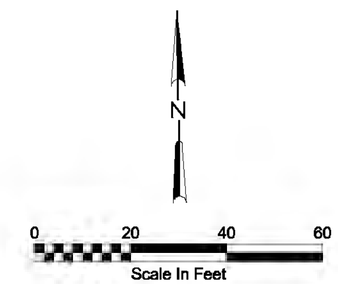
WATER YARD PIPING PLAN
AREA 102

SHEET	158
DWG	05-CY-102B
DATE	MAY 19 2006
PROJ	326918





KEY MAP



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DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			BAR IS ONE INCH ON ORIGINAL DRAWING. 0 — 1"
CHK DJ PETERSON		01/20/10	AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

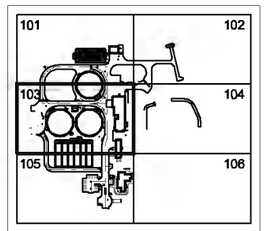
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

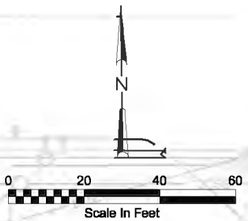
PROCESS YARD PIPING PLAN
AREA 102

SHEET	159
DWG	05-CY-102D
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY102Dd_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:17:33 PM



KEY MAP



NOTES:

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2. SEE ADDITIONAL NOTES ON DWG 01-G-16.
3. FOR TYPICAL TRENCH SECTION, SEE (205)
4. REMOVE AND REPLACE EXST CATCH BASIN WITH MANHOLE. CONTRACTOR TO MAINTAIN ALL INVERT ELEVATIONS INTO NEW MANHOLE.
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.
6. FOR MANHOLES, SEE (401) AND (405), FOR CATCH BASINS, SEE (414).
7. PROVIDE JOINT BONDING AND GALVANIC ANODES FOR BURIED STEEL AND DUCTILE IRON PIPE AND BURIED DUCTILE IRON FITTINGS IN PVC PIPE IN ACCORDANCE WITH SPECIFICATION SECTIONS 13985 AND 13990 AND THE ASSOCIATED DESIGN DETAILS.
8. INTERIOR OF EXST MANHOLE SHALL BE CLEANED, PREPARED, AND COATED WITH PAINT SYSTEM NO. 20 - CHEMICAL RESISTANT LINING, AS SPECIFIED IN SECTION 09900.
9. PROVIDE 3' MIN COVER ON ALL PIPE, UNLESS SHOWN OTHERWISE.
10. FOR BURIED VALVES, SEE (15640).

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK DJ PETERSON						
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	N	

CH2MHILL carollo engineers

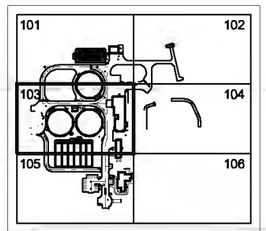
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

YARD PIPING PLAN
AREA 103

SHEET	160
DWG	05-CY-103
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY103d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:18:01 PM



KEY MAP

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9. PROVIDE 3' MIN COVER ON ALL PIPE, UNLESS SHOWN OTHERWISE.
10. FOR BURIED VALVES, SEE (15640).

MATCH LINE, SEE DWG 05-CY-101A

SECONDARY CLARIFIER NO 3 (45)

B 05-CY-202

54" SS, SEE DWG 05-CY-204 AND 05-CY-205

(10)

SEE NOTE 8

SD MH-5
N 366924.25
E 753167.57
RIM 201.41
TOP 18" (S) 189.82
IE IN (W) 196.61
IE IN (NW) 195.38
TOP 18" OUT (N) 189.76

18" SD

3" D, IE 189.0

4" SS

4" RD, CONNECT TO EXST MH. 2% SLOPE

CB-7
N 366926.13
E 7531625.58
TOG 201.21
IE 197.60

3" SPD

12" SD

3 05-CY-401

CO
N 366915.63
E 7531755.91
RIM 201.49±
IE OUT 192.00±
FIELD VERIFY

8" PVC SD

CB-5
N 366908.55
E 7531399.27
TOG 201.40
IE OUT 197.20

CB-6
N 366884.59
E 7531395.64
TOG 201.40
IE IN 197.0
IE OUT 196.80

IE 196.50, SEE NOTE 4 (401)

12" SD

12" SD

SDMH 9

3" D, IE 199.0

18" SD

12" SD

3" SPD

6" D

6" SS/DR

HEADWORKS (20)

6" D

ML FLOW SPLIT

SD MH-6
N 366862.56
E 7531640.77
RIM 201.69
IE IN (S) 189.90
IE IN (W) 195.36
IE IN (SW) 196.74
TOP 18" OUT (N) 191.10

CB-8
N 366861.17
E 7531624.74
TOG 201.27
IE OUT 198.27

4" RD, CONNECT TO 8" SD, TYP

12" SD

6" D

SECONDARY CLARIFIER NO.1 (45)

SECONDARY CLARIFIER NO.2 (45)

A 05-CY-201

BIOSOLIDS DEWATERING BUILDING

A 05-CY-201

(70)

SD MH-7
N 366764.12
E 7531639.50
RIM 206.69
IE IN (SW) 195.20
IE OUT (N) 195.0

SD MH-8
N 366719.28
E 7531614.75
RIM 206.98
IE IN (NE) 200.50
IE IN (S) 198.30
IE OUT (NE) 197.80

CB-10
N 366730.67
E 7531642.85
TOG 205.95
IE 202.95

BURIED VAULTS

12" P

12" SD

4" RD

CONNECT TO EXISTING IE 178.82

8" SD

CB
TOG 202.54
IE 199.04

12" SD

8" PVC SD

CB-11
N 366724.38
E 7531753.45
TOG 202.15
IE 199.00

12" SD

4" RD

(30)

VERTICAL LOOP REACTORS

(32)

2B 2C 2D 1D 1C 1B

CB-12
N 366653.01
E 7531670.24
TOG 207.72
IE 204.93

12" SD

B 05-CY-401

12" TEE
IE 199.91

6" RD

MATCH LINE, SEE DWG 05-CY-105A

MATCH LINE, SEE DWG 05-CY-104A

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED AUGUST 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60132PE.

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

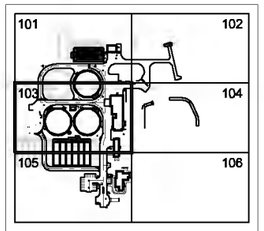
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

SS/SSD YARD PIPING PLAN
AREA 103

SHEET	161
DWG	05-CY-103A
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY103Ad_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:17:40 PM



KEY MAP

NOTES:

1. ALL NECESSARY FITTINGS ARE NOT SHOWN FOR CLARITY. PROVIDE ALL FITTINGS REQUIRED TO MAKE CONNECTIONS AND ACHIEVE GRADES, INVERTS, AND SLOPES SHOWN.
2. SEE ADDITIONAL NOTES ON DWG 01-G-16.
3. FOR TYPICAL TRENCH SECTION, SEE (205)
4. REMOVE AND REPLACE EXST CATCH BASIN WITH MANHOLE. CONTRACTOR TO MAINTAIN ALL INVERT ELEVATIONS INTO NEW MANHOLE.
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.
6. FOR MANHOLES, SEE (401) AND (405), FOR CATCH BASINS, SEE (414).
7. PROVIDE JOINT BONDING AND GALVANIC ANODES FOR BURIED STEEL AND DUCTILE IRON PIPE AND BURIED DUCTILE IRON FITTINGS IN PVC PIPE IN ACCORDANCE WITH SPECIFICATION SECTIONS 13985 AND 13990 AND THE ASSOCIATED DESIGN DETAILS.
8. INTERIOR OF EXST MANHOLE SHALL BE CLEANED, PREPARED, AND COATED WITH PAINT SYSTEM NO. 20 - CHEMICAL RESISTANT LINING, AS SPECIFIED IN SECTION 09900.
9. PROVIDE 3' MIN COVER ON ALL PIPE, UNLESS SHOWN OTHERWISE.
10. FOR BURIED VALVES, SEE (15640).

MATCH LINE, SEE DWG 05-CY-101B

SECONDARY CLARIFIER NO 3 (45)

A 57-S-131

6" W3

12" W3

2" W3

1" W3

12" W1

4" NG

3/4" W3

10

2" W3

2" W3

2" W3

2" W3

1" W3

1" W3

ML FLOW SPLIT

6" W3

4" W1

2" W3

SECONDARY CLARIFIER NO.1 (45)

SECONDARY CLARIFIER NO.2 (45)

HEADWORKS (20)

METER PROVIDED AND INSTALLED BY NW NATURAL

4" NG

2" W3

4" NG

2" NG

GAS METER W/ GUARDPOST

A 05-CY-201

12"x6" REDUCER

4" W3

3" GATE VALVE WW1-05V9503

3" W1

70

BUILDING

BIOSOLIDS DEWATERING BUILDING

A 05-CY-201

BURIED VAULTS

2" W3

6" W3

2" NG (HP)

2" NG

30

VERTICAL LOOP REACTORS

2B 2C 2D 1D 1C 1B

B 05-CY-401

32

MATCH LINE, SEE DWG 05-CY-105B

MATCH LINE, SEE DWG 05-CY-104B

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APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

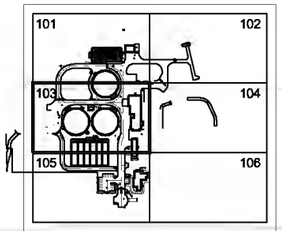
SITE DEVELOPMENT

WATER YARD PIPING PLAN
AREA 103

SHEET	162
DWG	05-CY-103B
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY103Bd_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:17:47 PM

MATCH LINE, SEE DWG 05-CY-101C



KEY MAP

N

0 20 40 60
Scale In Feet

NOTES:

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10. FOR BURIED VALVES, SEE (15640).

SECONDARY CLARIFIER NO 3 (45)

4-3" CS TO SC
4-1" HYP TO SC
1-1" HYP TO VLR
4-1" PO TO SC

3" CS SUPPLY
3" CS
1" PO

CAP FOR FUTURE CONNECTION
1-3" CS
1-1" HYP
1-1" PO

2-3" CS
2-1" HYP
2-1" PO

2-3" CS
3-1" HYP
2-1" PO

1" HYP

1" PO

1-3" CS
1-1" HYP
1-1" PO

1" HYP

ML FLOW SPLIT

1" PO

3" CS

3" CS SUPPLY

1" PO

SECONDARY CLARIFIER NO.1 (45)

SECONDARY CLARIFIER NO.2 (45)

HEADWORKS (20)

1" PO
3" CS
3" CS SUPPLY

BIOSOLIDS DEWATERING BUILDING

A 05-CY-201

A 05-CY-201

(70)

BURIED VAULTS

1" HYP

3" CS

3" CS

(30) VERTICAL LOOP REACTORS

2B 2C 2D 1D 1C 1B

B 05-CY-401

(32) TEST STATION (13823)

MATCH LINE, SEE DWG 05-CY-105C

MATCH LINE, SEE DWG 05-CY-104C

DSGN JT ASHLEY					VERIFY SCALE
DR PA LONG					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	01/20/10		GTM	JAB	
NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

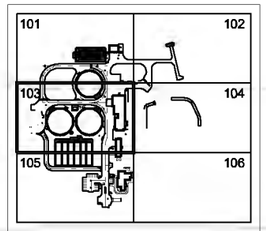
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

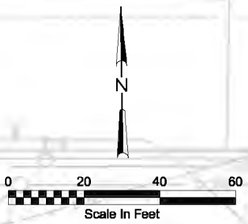
CHEMICAL YARD PIPING PLAN AREA 103

SHEET	163
DWG	05-CY-103C
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY103Cd_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:17:53 PM



KEY MAP



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10. FOR BURIED VALVES, SEE (15640).

MATCH LINE, SEE DWG 05-CY-101D

SECONDARY CLARIFIER NO 3 (45)

SEE B 05-CY-201

SE JUNCTION BOX 1, SEE A 57-S-131

22.5° BEND N 366922.63 E 7531472.18 IE 189.50

22.5° BEND N 366922.22 E 7531503.29 IE 189.50

45° BEND N 366918.38 E 7531512.25 IE 189.50

SEE DWG 45-M-132

45° BEND N 366919.12 E 7531463.39 IE189.50

72" SE

IE 188.00

CAP FOR FUTURE CONNECTION

24" BLIND FLANGE

24" TEE N 366893.11 E 7531429.51 IE 195.25

48" SE

IE 189.50

24" RAS

6" SSM

24"x18" RDCR

48" ML STUB-OUT IE 188.00

48" ML, TYP

4" SSM

90° BENDS

ML FLOW SPLIT

48" ML

48" ML

ML CONDUITS

SEE DWG 45-M-132

30"x24" RDCR

90° BENDS

2-90° BENDS ROTATED 35° N 366893.31 E 7531496.36 IE 188.00

SEE DWG 45-M-132

45° BEND N 366934.00 E 7531677.18 IE 195.00

48" SE

45° BEND N 366890.49 E 7531632.53 IE 195.00

30"x24" CROSS N 366891.62 E 7531545.18 IE 195.00

6" SSM

4" SSM

6" SSM

24" RS STUBOUT

HEADWORKS (20)

24" RAS

8" SRAS

2-90° BENDS IE 191.25

24" SRAS

8" IRD

TEST STATION, TYP OF 3 (13823)

(10)

45° BEND N 366998.05 E 7531718.55 IE 187.00

45° BEND N 366987.73 E 7531728.61 IE 187.00

SEE NOTE 8

90° BEND N 366979.83 E 7531731.20

24" RS (3) 05-CY-203

36" RS (1) 05-CY-203

24" TEE BYPASS CONNECTION

4" SADDLE TAP

4" RS

14.5'

30" RAS

90° BEND N 366933.40 E 7531723.17 CL 194.25

4" ARV ENCLOSURE (3) 05-CY-401

TEST STATION (13823)

SECONDARY CLARIFIER NO.1 (45)

SECONDARY CLARIFIER NO.2 (45)

4" GATE VALVE WW1-05V9502

BIOSOLIDS DEWATERING BUILDING

A 05-CY-201

CONNECT TO EXISTING

ML CONDUITS EXPANSION JOINT C MIDPOINT (3212) (3216), (3232)

6" SLF

90° BEND N 366707.84 E 7531618.59 IE 202.00

90° BEND N 366721.75 E 7531507.73 IE 191.67

24" RAS

36" RAS STUB-OUT

4" SC

60" ML STUB-OUT

8" IRD

24" SRAS

24" ALP

45° BEND N 366698.03 E 7531622.71 IE 195.78

45° BEND N 366695.78 E 7531627.93 IE 195.78

45° BEND N 366693.54 E 7531633.15 IE 195.78

(30) VERTICAL LOOP REACTORS

2B 2C 2D 1D 1C 1B

B 05-CY-401

BLIND FLANGE N 366681.14 E 7531632.99 IE 195.78

45° BEND N 366691.30 E 7531638.38 IE 195.78

BLIND FLANGE N 366681.07 E 7531638.24 IE 195.78

(32)

4-48" SRS

45° BEND N 366722.42 E 7531670.31 IE 195.78

90° BEND N 366726.92 E 7531728.34 IE 195.78

90° BEND N 366706.53 E 7531719.90 IE 201.40

TEST STATION (13823)

6" SLF

24" SRAS 90° BEND, IE 191.00

90° BEND N 366721.56 E 7531737.27 IE 195.78

A 05-CY-201

45° BEND N 366766.04 E 7531649.91 IE 191.67

45° BEND N 366738.26 E 7531663.99 IE 195.78

45° BEND N 366732.98 E 7531666.10 IE 195.78

45° BEND N 366727.70 E 7531668.21 IE 195.78

90° BEND N 366737.66 E 7531710.48 IE 195.78

5.25'

6" SC

8" IRD

6" SSM

90° BEND N 366732.29 E 7531719.41 IE 195.78

BURIED VAULTS

(70)

MATCH LINE, SEE DWG 05-CY-104D

DSGN	JT ASHLEY					VERIFY SCALE
DR	PA LONG					BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	DJ PETERSON					
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD
			01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB

CH2MHILL Carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

PROCESS YARD PIPING PLAN
AREA 103

SHEET	164
DWG	05-CY-103D
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY103Dd_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:18:24 PM

MATCH LINE, SEE DWG 05-CY-102

12" SD

SD MH
RIM 199.85
IE 6" (W) 195.25
IE (NE) 194.78
IE OUT (SE) 194.40

6" W3

4" W3

12" SD

CB-13
N 366965.82
E 7531838.68
TOG 199.37
IE 196.37

IE 193.50

REMOVE AND REPLACE
EXST MANHOLE COVER
WITH GRATED COVER

SD MH
RIM 199.03
IE 8" (W) 194.23
IE (W) 185.96
IE 12" (NE) 193.48
IE OUT (S) 185.63

SECONDARY
CLARIFIER/CHLORINE
CONTACT BASIN NO. 1

8" W3

SECONDARY
CLARIFIER/CHLORINE
CONTACT BASIN NO. 2

AERATION
BASINS

PRIMARY
CLARIFIER NO. 1

HEADWORKS

GRIT WORKS

PRIMARY
SLUDGE
PUMP
STATION

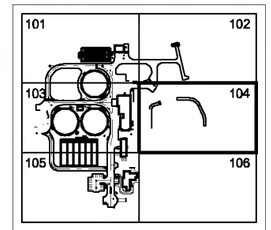
PRIMARY
CLARIFIER NO. 2

SLUDGE
THICKENER

MAINTENANCE
BUILDING

MATCH LINE, SEE DWG 05-CY-103

MATCH LINE, SEE DWG 05-CY-106



KEY MAP

N

0 20 40 60
Scale In Feet

NOTES:

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APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

YARD PIPING PLAN AREA 104

SHEET	165
DWG	05-CY-104
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY104d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:18:45 PM

MATCH LINE, SEE DWG 05-CY-102A

12" SD

SD MH
RIM 199.85
IE 6" (W) 195.25
IE (NE) 194.78
IE OUT (SE) 194.40

4" W3

12" SD

CB-13
N 366963.61
E 7531843.56
TOG 199.50
IE 194.50

IE 193.50

REMOVE AND REPLACE EXST MANHOLE COVER WITH GRATED COVER

SD MH
RIM 199.03
IE 8" (W) 194.23
IE (W) 185.96
IE 12" (NE) 193.48
IE OUT (S) 185.63

SECONDARY CLARIFIER/CHLORINE CONTACT BASIN NO. 1

8" W3

SECONDARY CLARIFIER/CHLORINE CONTACT BASIN NO. 2

AERATION BASINS

PRIMARY CLARIFIER NO. 1

HEADWORKS

GRIT WORKS

PRIMARY SLUDGE PUMP STATION

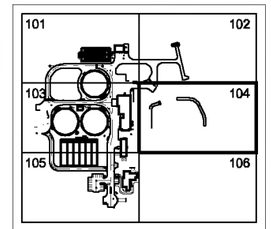
PRIMARY CLARIFIER NO. 2

SLUDGE THICKENER

MAINTENANCE BUILDING

MATCH LINE, SEE DWG 05-CY-103A

MATCH LINE, SEE DWG 05-CY-106A



KEY MAP

N

0 20 40 60
Scale In Feet

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DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

SS/SD YARD PIPING PLAN
AREA 104

SHEET	166
DWG	05-CY-104A
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY104Ad_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:18:33 PM

MATCH LINE, SEE DWG 05-CY-102B

MATCH LINE, SEE DWG 05-CY-103B

6" W3

4" W3

8" W3

SECONDARY CLARIFIER/CHLORINE CONTACT BASIN NO. 1

SECONDARY CLARIFIER/CHLORINE CONTACT BASIN NO. 2

AERATION BASINS

PRIMARY CLARIFIER NO. 1

PRIMARY CLARIFIER NO. 2

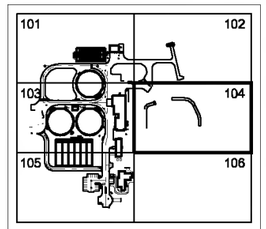
HEADWORKS

GRIT WORKS

PRIMARY SLUDGE PUMP STATION

SLUDGE THICKENER

MAINTENANCE BUILDING



KEY MAP

N

0 20 40 60

Scale In Feet

NOTES:

1. ALL NECESSARY FITTINGS ARE NOT SHOWN FOR CLARITY. PROVIDE ALL FITTINGS REQUIRED TO MAKE CONNECTIONS AND ACHIEVE GRADES, INVERTS, AND SLOPES SHOWN.
2. SEE ADDITIONAL NOTES ON DWG 01-G-16.
3. FOR TYPICAL TRENCH SECTION, SEE (205)
4. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.
5. FOR CATCH BASINS, SEE (414).
6. PROVIDE JOINT BONDING AND GALVANIC ANODES FOR BURIED STEEL AND DUCTILE IRON PIPE AND BURIED DUCTILE IRON FITTINGS IN PVC PIPE IN ACCORDANCE WITH SPECIFICATION SECTIONS 13985 AND 13990 AND THE ASSOCIATED DESIGN DETAILS.
7. PROVIDE 3' MIN COVER ON ALL PIPING UNLESS SHOWN OTHERWISE.

MATCH LINE, SEE DWG 05-CY-106B

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED TO DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60338PE.

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

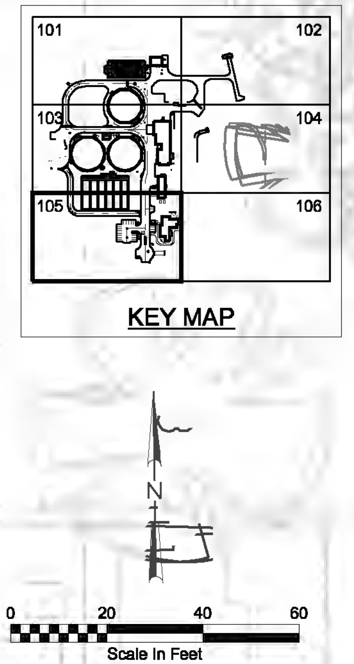
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

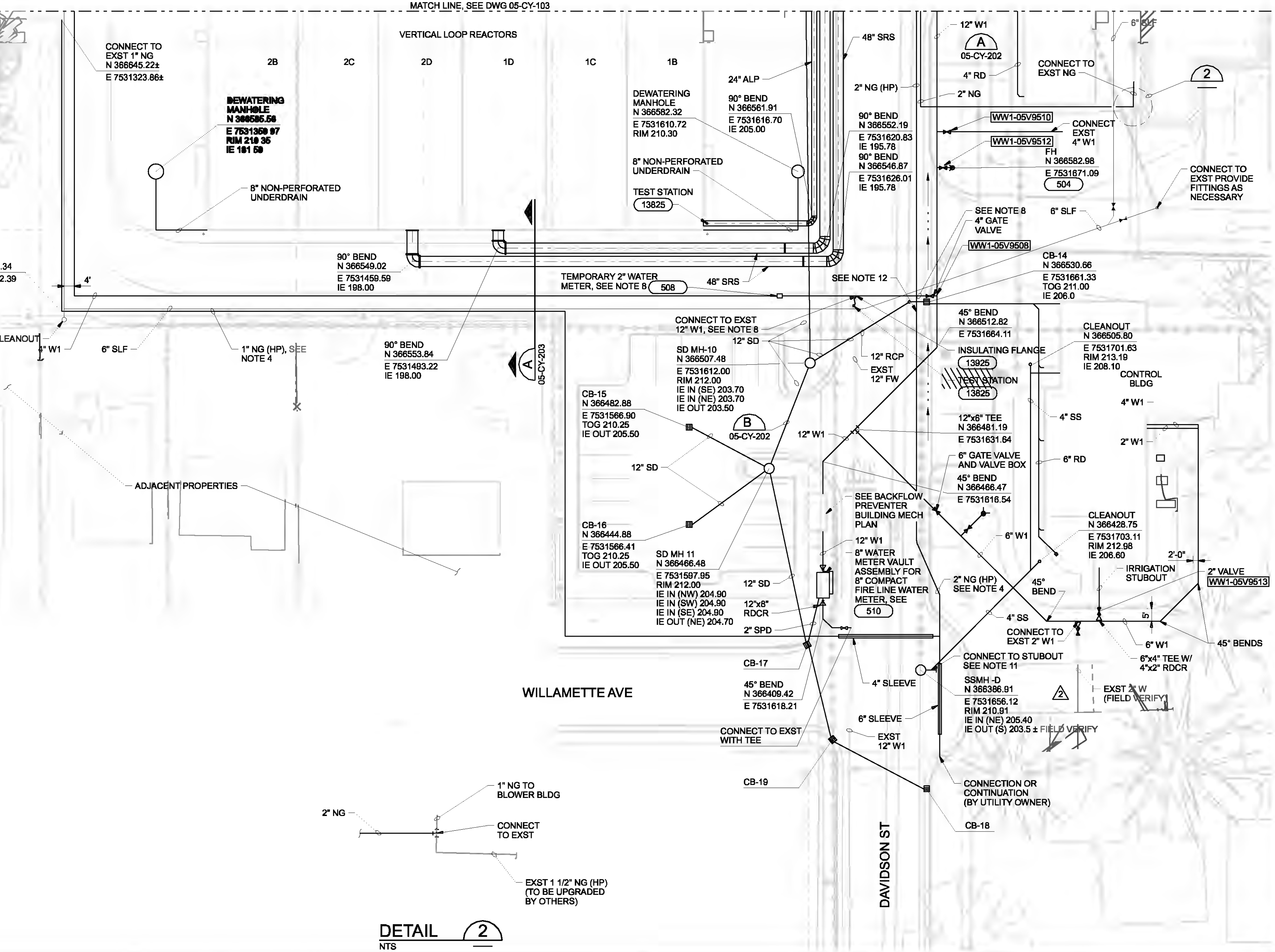
SITE DEVELOPMENT

WATER YARD PIPING PLAN AREA 104

SHEET	167
DWG	05-CY-104B
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY104Bd_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:18:39 PM





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2. SEE ADDITIONAL NOTES ON DWG 01-G-16.
3. FOR TYPICAL TRENCH SECTION, SEE (205)
4. CONTRACTOR SHALL COORDINATE ALL GAS AND WATER UTILITY CONNECTIONS WITH RIGHTFUL UTILITY OWNER. ALL NG LINES SHOWN AS HIGH PRESSURE (HP) ARE TO BE INSTALLED BY UTILITY OWNER. CONTRACTOR SHALL PROVIDE TRENCH EXCAVATION AND BACKFILL. ALL NG (HP) WORK SHALL BE IN ACCORDANCE WITH UTILITY OWNERS STANDARD SPECIFICATIONS. 2
5. EXISTING BASE MAPPING REFLECTS POST DEMOLITION CONDITIONS. SEE NOTE 14 ON DWG 01-G-16.
6. FOR MANHOLES, SEE (401) AND (405), FOR CATCH BASINS, SEE (414).
7. PROVIDE JOINT BONDING AND GALVANIC ANODES FOR BURIED STEEL AND DUCTILE IRON PIPE AND BURIED DUCTILE IRON FITTINGS IN PVC PIPE IN ACCORDANCE WITH SPECIFICATION SECTIONS 13985 AND 13990 AND THE ASSOCIATED DESIGN DETAILS.
8. CONTRACTOR SHALL INSTALL A NEW 2" TEMPORARY WATER METER FOR TEMPORARY BIOSOLIDS CONNECTION. REMOVE AND CONNECT TO NEW 12" W1 WITH BURIED GATE VALVE AND VALVE BOX ONCE NEW WATER LINE HAS BEEN INSTALLED AND OPERABLE.
9. PROVIDE 3' MIN COVER ON ALL PIPES UNLESS SHOWN OTHERWISE.
10. FOR BURIED VALVES, SEE (15640).
11. PROVIDE 5' STUBOUT WITH CAP TO EAST FOR FUTURE CONNECTION. SET INVERT ELEVATION 0.2' HIGHER THAN EXISTING 8" SS.
12. CONTRACTOR SHALL PROVIDE TRENCH EXCAVATION AND BACKFILL FOR NEW 1" NG (HP) ONCE NEW 2" NG (HP) HAS BEEN INSTALLED AND OPERABLE.

DSGN JT ASHLEY					
DR PA LONG					
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 — 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL | carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

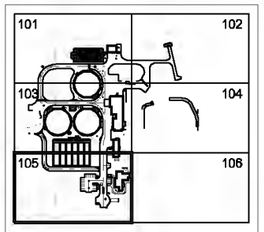
SITE DEVELOPMENT

YARD PIPING PLAN
AREA 105

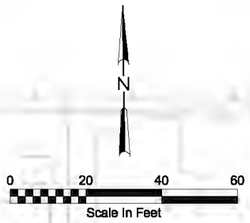
SHEET	168
DWG	05-CY-105
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY105d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:19:12 PM

MATCH LINE, SEE DWG 05-CY-103A



KEY MAP



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10. FOR BURIED VALVES, SEE (15640).
11. PROVIDE 5' STUBOUT WITH CAP TO EAST FOR FUTURE CONNECTION. SET INVERT ELEVATION 0.2' HIGHER THAN EXISTING 8" SS.
12. CONTRACTOR SHALL PROVIDE TRENCH EXCAVATION AND BACKFILL FOR NEW 1" NG (HP) ONCE NEW 2" NG (HP) HAS BEEN INSTALLED AND OPERABLE.

VERTICAL LOOP REACTORS

2B 2C 2D 1D 1C 1B

DEWATERING MANHOLE
N 366585.56
E 7531359.97
IE 183.00

8" NON-PERFORATED UNDERDRAIN

DEWATERING MANHOLE
N 366582.32
E 7531610.72
RIM 210.30

8" NON-PERFORATED UNDERDRAIN

A 05-CY-203

ADJACENT PROPERTIES

4" RD

CB-14
N 366530.66
E 7531661.33
TOG 211.00
IE 206.0

CLEANOUT
N 366505.80
E 7531701.63
RIM 213.19
IE 208.10

CONTROL BLDG

12" SD

SD MH-10
N 366507.48
E 7531612.00
RIM 212.00
IE IN (SE) 203.70
IE IN (NE) 203.70
IE OUT 203.50

B 05-CY-202

4" SS

6" RD

CB-15
N 366482.88
E 7531566.90
TOG 210.25
IE OUT 205.50

12" SD

CB-16
N 366444.88
E 7531566.41
TOG 210.25
IE OUT 205.50

SD MH 11
N 366466.48
E 7531597.95
RIM 212.00
IE IN (NW) 204.90
IE IN (SW) 204.90
IE IN (SE) 204.90
IE OUT (NE) 204.70

12" SD

CLEANOUT
N 366428.75
E 7531703.11
RIM 212.98
IE 206.60

4" SS

2" SPD

CB-17

CONNECT TO STUBOUT SEE NOTE 11

SSMH -D
N 366386.91
E 7531656.12
RIM 210.91
IE IN (NE) 205.40
IE OUT (S) 203.5 ± FIELD VERIFY

WILLAMETTE AVE

CB-19

CONNECTION OR CONTINUATION (BY UTILITY OWNER)

CB-18

DAVIDSON ST

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, SYSTEM, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED, SEPTEMBER 2006 BY JOHN T. ASHLEY, STATE OF OREGON, PE, NO. 8012PE.

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

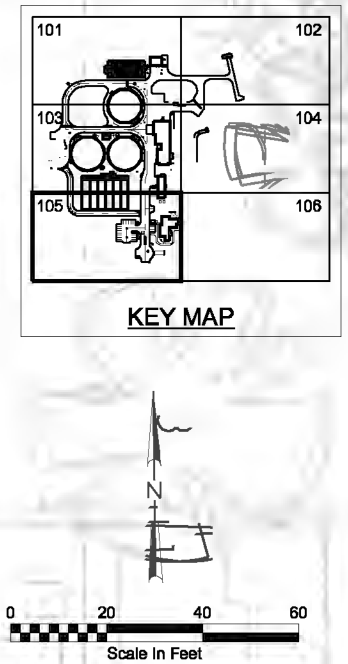
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

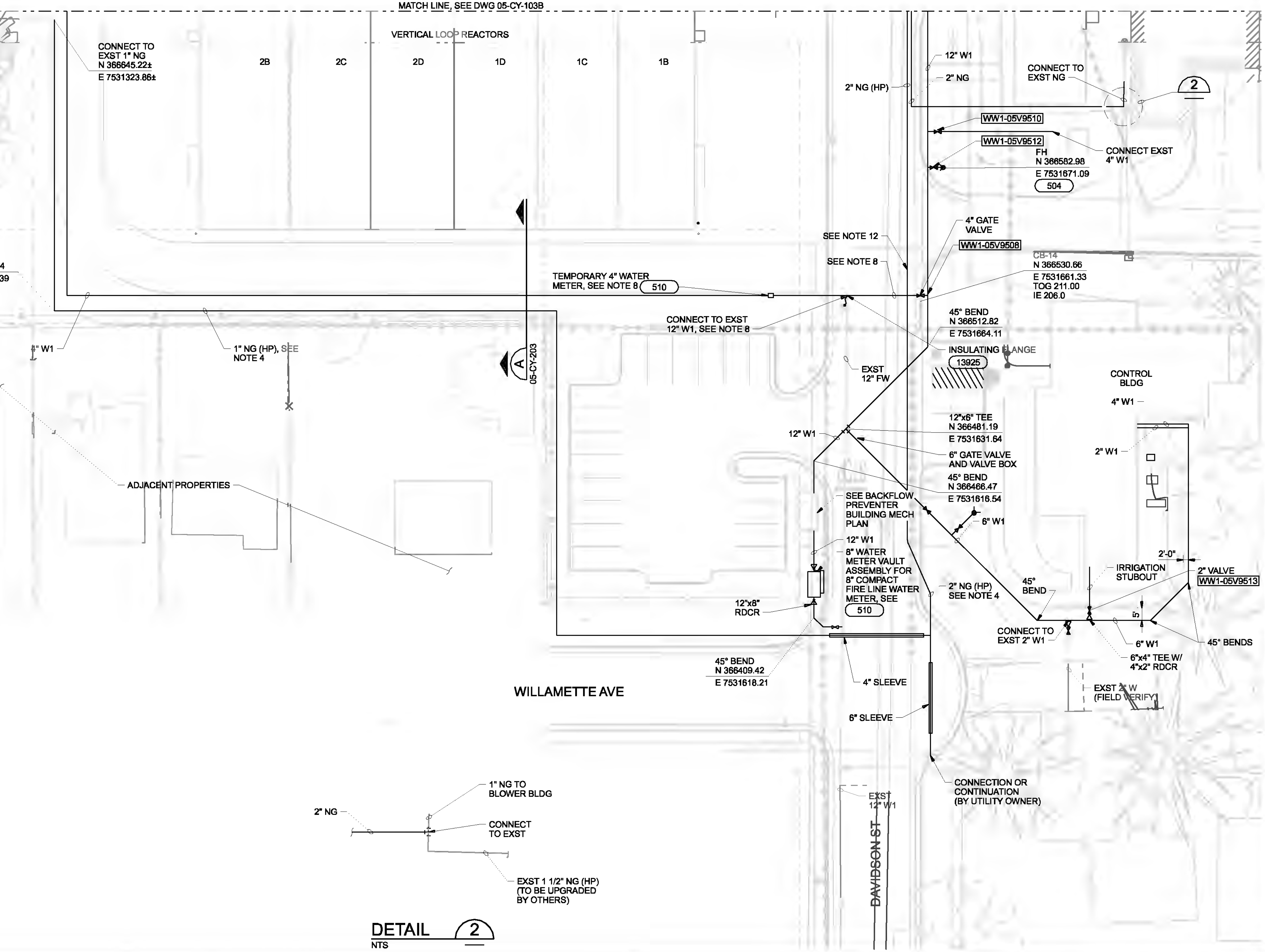
SITE DEVELOPMENT

SS/SD YARD PIPING PLAN
AREA 105

SHEET	169
DWG	05-CY-105A
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY105Ad_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:18:52 PM





NOTES:

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DSGN	JT ASHLEY					
DR	PA LONG					
CHK	DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD

VERIFY SCALE
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CH2MHILL | carollo engineers

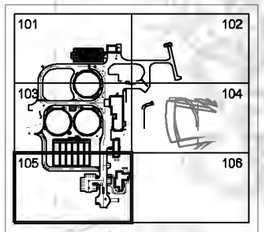
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

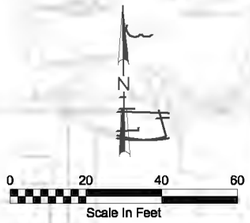
WATER YARD PIPING PLAN
AREA 105

SHEET	170
DWG	05-CY-105B
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY105Bd_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:18:58 PM



KEY MAP



MATCH LINE, SEE DWG 05-CY-103C

VERTICAL LOOP REACTORS

2B 2C 2D 1D 1C 1B

A 05-CY-203

CONTROL BLDG

ADJACENT PROPERTIES

WILLAMETTE AVE

DAVIDSON ST

NOTES:

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DSGN JT ASHLEY			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			VERIFY SCALE
DR PA LONG			AS-BUILT	GTM	JAB	BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK DJ PETERSON		01/20/10				
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

CHEMICAL YARD PIPING PLAN AREA 105

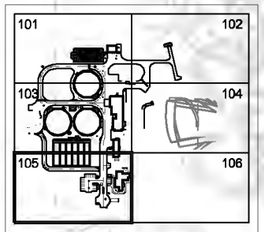
SHEET	171
DWG	05-CY-105C
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nCY105Cd_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:19:06 PM

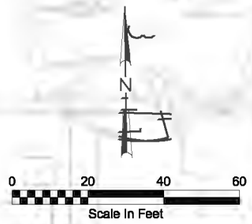
MATCH LINE, SEE DWG 05-CY-103D

VERTICAL LOOP REACTORS

2B 2C 2D 1D 1C 1B



KEY MAP



48" SRS
A
05-CY-202

24" ALP

90° BEND
N 366552.19
E 7531620.83
IE 195.78
90° BEND
N 366546.87
E 7531626.01
IE 195.78

90° BEND
N 366561.91
E 7531616.70
IE 205.00

6" SLF

6" SLF

FLANGE TO HDPE

TEST STATION
13825

90° BEND
N 366549.02
E 7531459.59
IE 198.00

48" SRS

6" SLF

90° BEND
N 366553.84
E 7531493.22
IE 198.00

A
05-CY-203

TEST STATION
13825

CONTROL BLDG

ADJACENT PROPERTIES

WILLAMETTE AVE

DAVIDSON ST

NOTES:

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2

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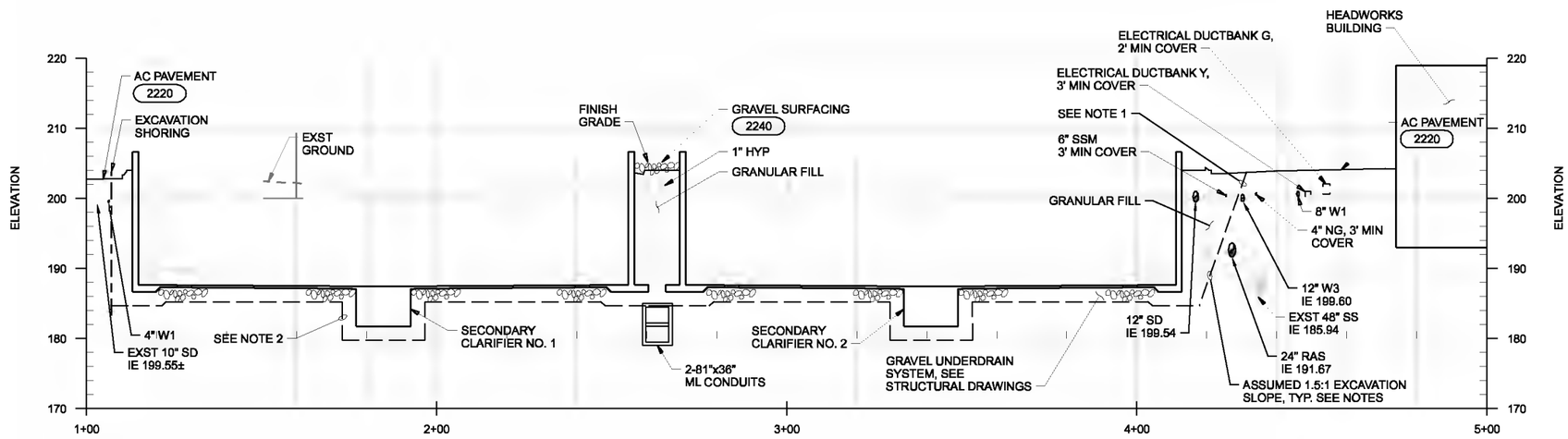
DSGN JT ASHLEY						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-03-01 LINN COUNTY, OREGON	SITE DEVELOPMENT	SHEET 172
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"			DWG 05-CY-105D
CHK DJ PETERSON			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CH2MHILL carollo engineers	PROCESS YARD PIPING PLAN AREA 105	DATE MAY 19 2006
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD				PROJ 326918
		01/20/10							

FILENAME: 05nCY105Dd_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:19:25 PM



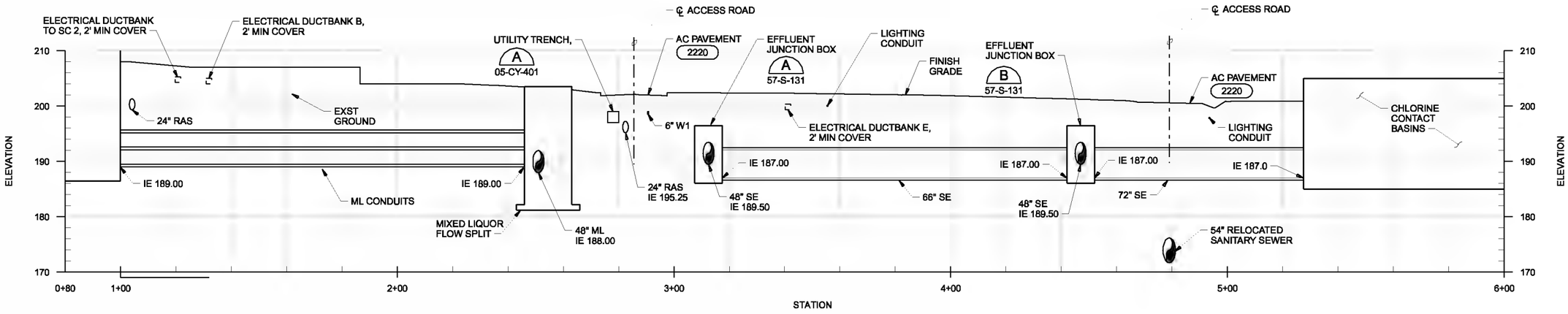
SECTION A

HORIZ 1" = 20'
VERT 1"=10'

05-CY-103

NOTES

1. EXCAVATION SIDE SLOPES ARE SHOWN SOLELY FOR THE PURPOSE OF ILLUSTRATING BACKFILL REQUIREMENTS. BY SHOWING SUCH SLOPES, THE ENGINEER DOES NOT INTEND TO IMPLY ANY PARTICULAR SLOPE IS TO BE USED OR WOULD BE STABLE. THE CONTRACTOR IS RESPONSIBLE FOR SELECTING AND MAINTAINING SAFE TEMPORARY EXCAVATION SLOPES.
2. SEE STRUCTURAL DRAWINGS FOR PREPARED SUBGRADE AND FOUNDATION REQUIREMENTS.



VLR TO CCB PROFILE B

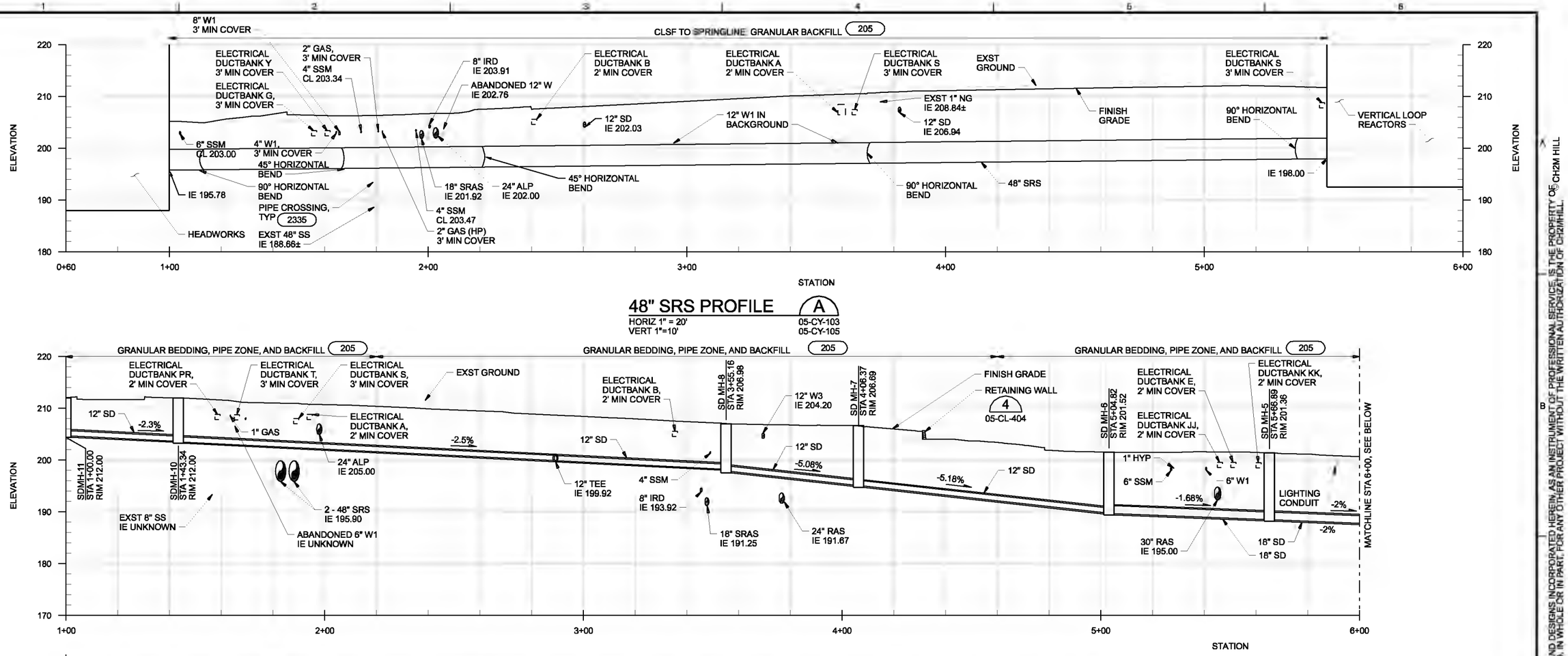
HORIZ 1" = 20'
VERT 1"=10'

05-CY-101
05-CY-103

DSGN JT ASHLEY						VERIFY SCALE	CH2MHILL carollo engineers
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-03-01 LINN COUNTY, OREGON
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB		SITE DEVELOPMENT
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD		YARD PIPING SECTIONS

SHEET	173
DWG	05-CY-201
DATE	MAY 19 2006
PROJ	326918

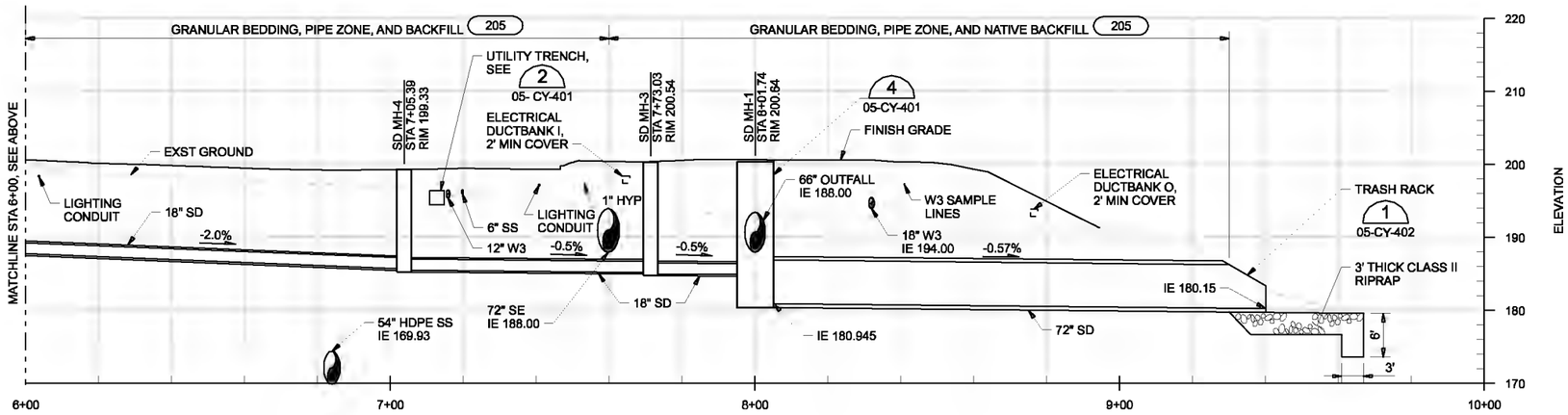
FILENAME: 05ncy201d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:19:31 PM



48" SRS PROFILE (A)

HORIZ 1" = 20'
VERT 1"=10'

05-CY-103
05-CY-105



SD PROFILE (B)

HORIZ 1" = 20'
VERT 1"=10'

05-CY-101
05-CY-103

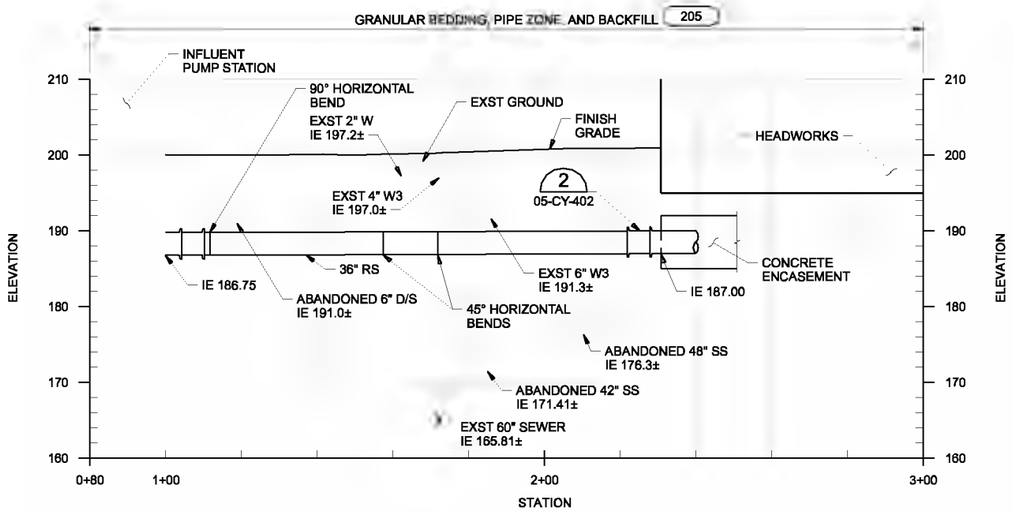
NOTES:

1. SEE ADDITIONAL NOTES ON DWG 01-G-16.
2. FOR TYPICAL TRENCH SEE 205.
3. FOR ALL PIPE CROSSINGS WITH LESS THAN 12" CLEARANCE, SEE 2335

DSGN JT ASHLEY						VERIFY SCALE	CH2MHILL carollo engineers
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-O3-01 LINN COUNTY, OREGON
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	SITE DEVELOPMENT
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD		YARD PIPING SECTIONS

SHEET	174
DWG	05-CY-202
DATE	MAY 19 2006
PROJ	326918

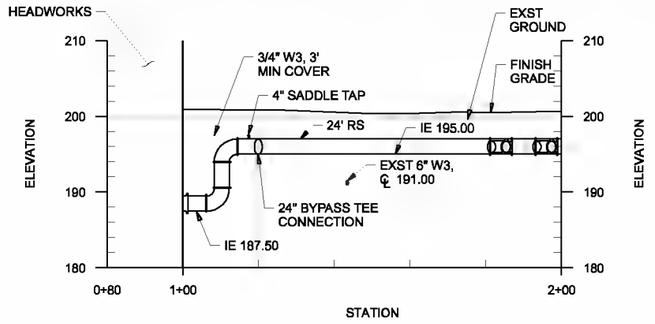
FILENAME: 05ncy202d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:19:36 PM



36" RS PROFILE 1

HORIZ 1" = 20'
VERT 1"=10'

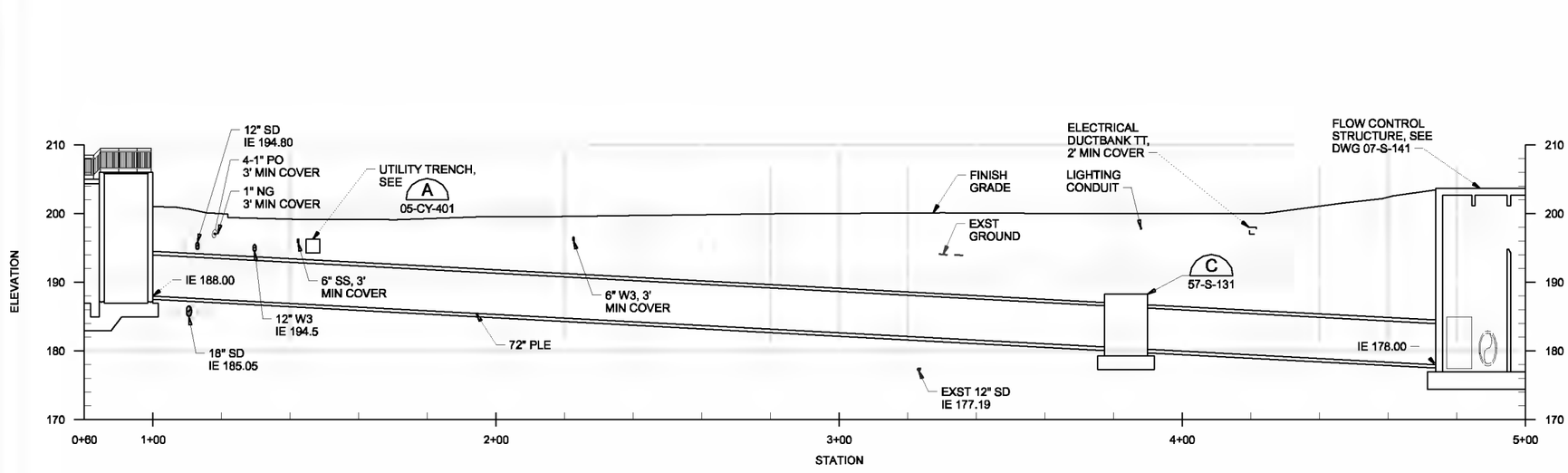
05-CY-101
05-CY-103



24" RS PROFILE 3

HORIZ 1" = 20'
VERT 1"=10'

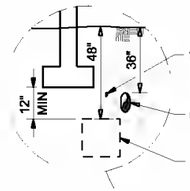
05-CY-103

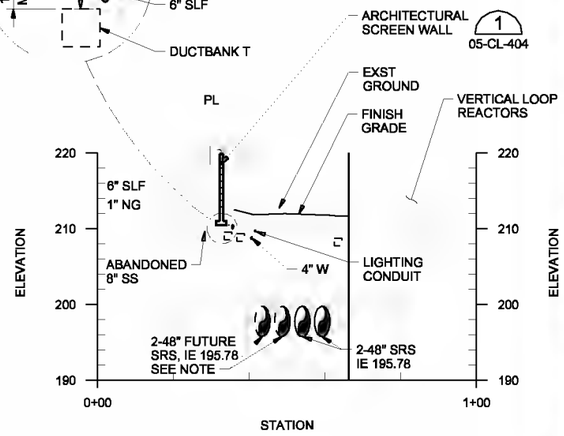


72" PLE PROFILE 2

HORIZ 1" = 20'
VERT 1"=10'

05-CY-101
05-CY-102





NOTE:

FUTURE 48" SRS PIPING IS SHOWN FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR SHALL ALLOW PROVISIONS FOR FUTURE AS BEST POSSIBLE DURING CONSTRUCTION TO HELP FACILITATE CONSTRUCTION IN FUTURE.

SECTION A

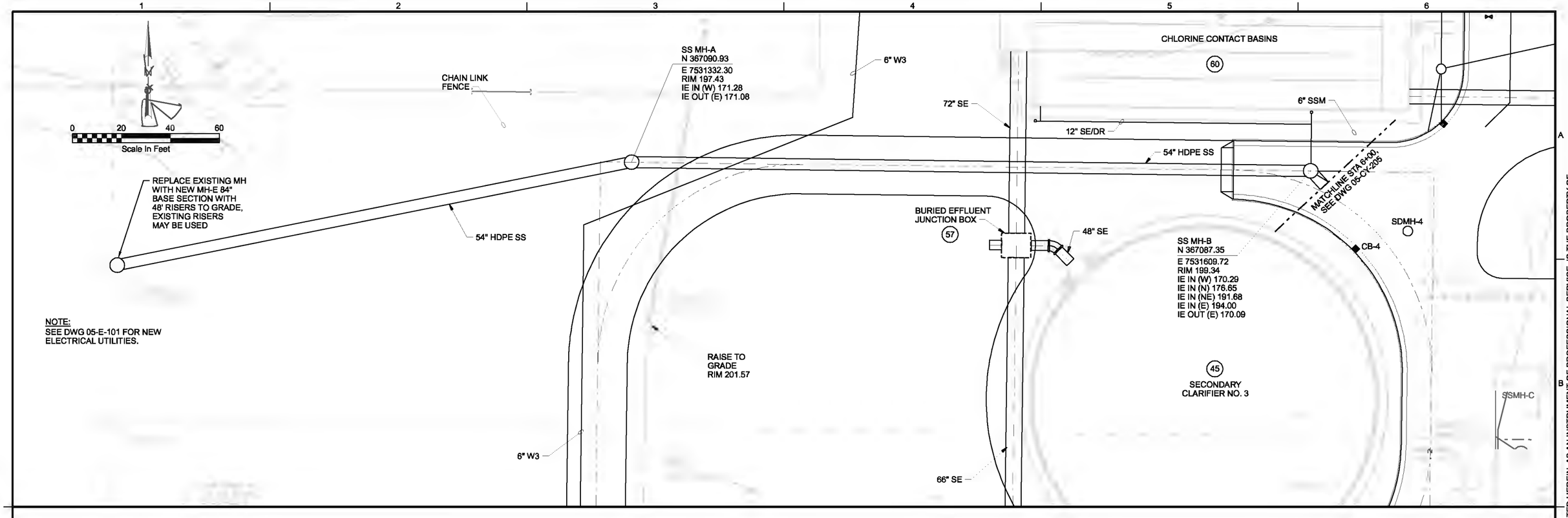
HORIZ 1" = 20'
VERT 1"=10'

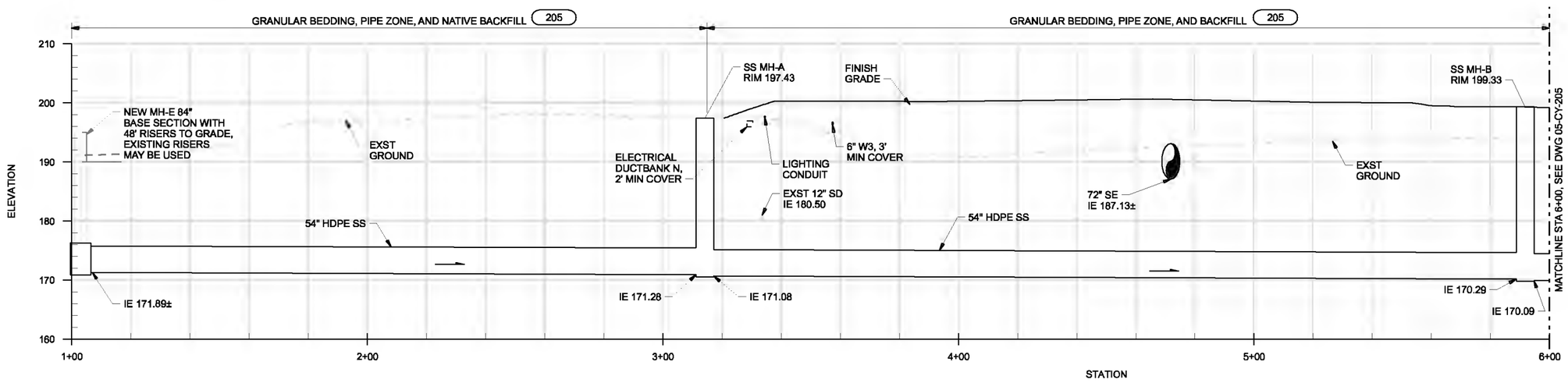
05-CY-105

DSGN JT ASHLEY						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENT PROJECT WWTP-03-01 LINN COUNTY, OREGON	SITE DEVELOPMENT	SHEET 175
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.		YARD PIPING SECTIONS	DWG 05-CY-203
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB				DATE MAY 19 2006
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD				PROJ 326918

CH2MHILL carollo engineers

FILENAME: 05ncy203d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:19:43 PM





NOTES:
1. FOR YARD PIPING NOTES, SEE DWG 05-CY-101.

54" SS RIVERFRONT INTERCEPTOR PROFILE

HORIZ 1" = 20'
VERT 1"=10'

DSGN JT ASHLEY					VERIFY SCALE
DR PA LONG					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

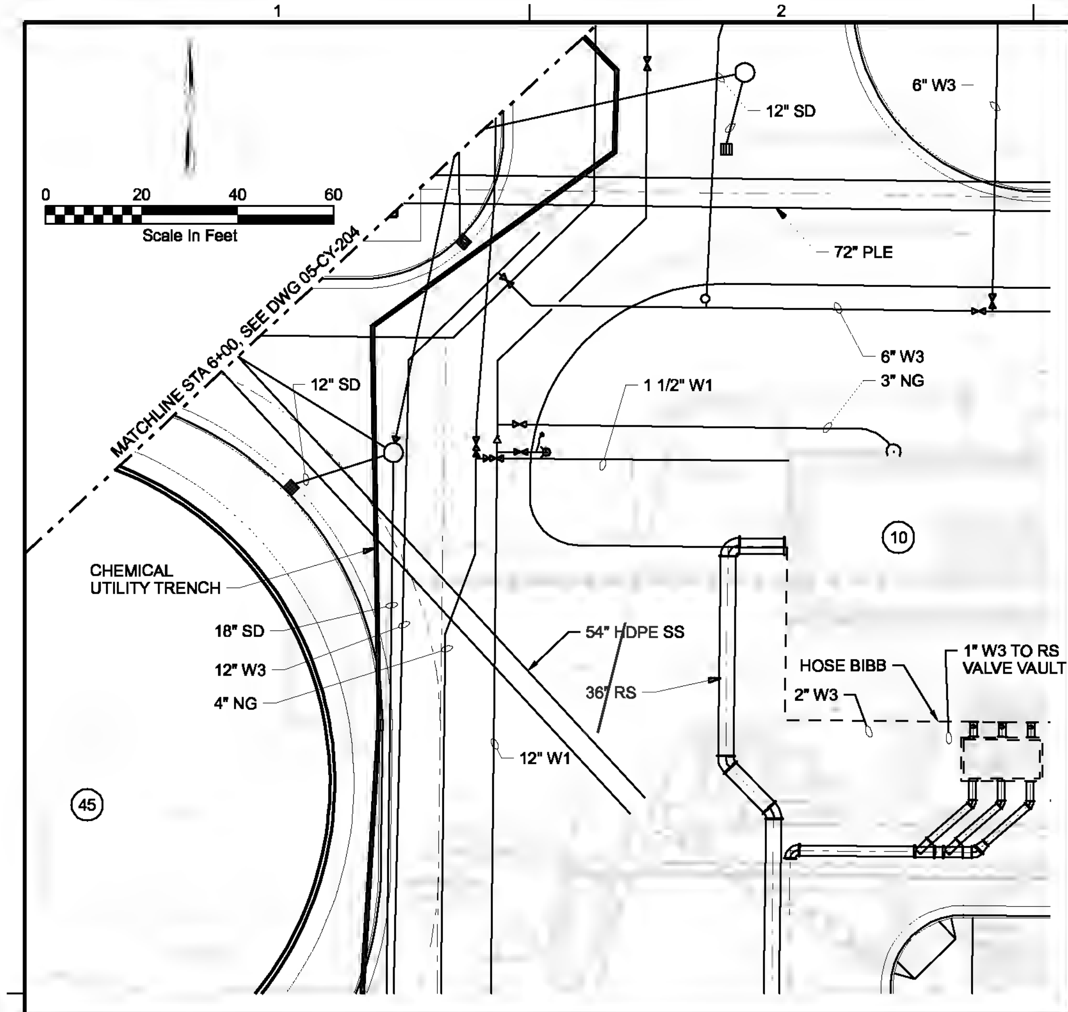
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

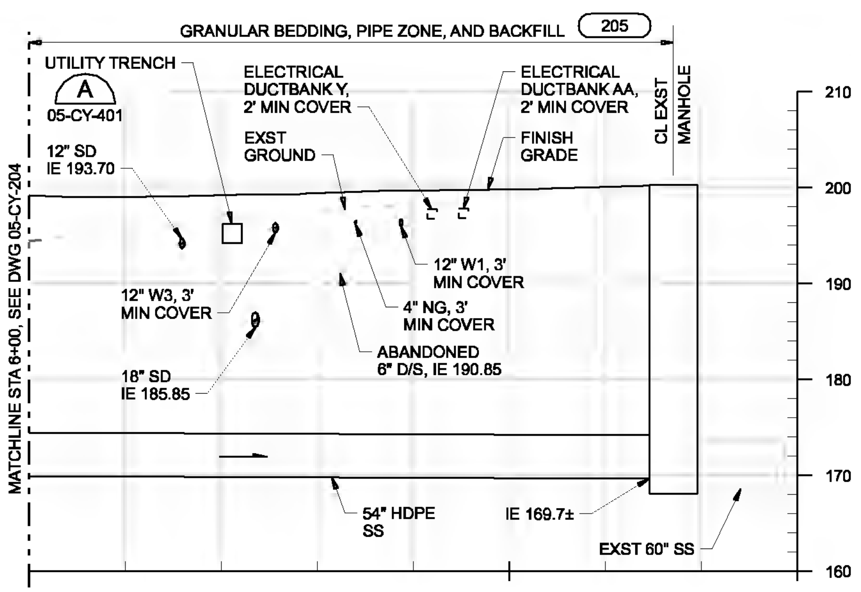
SITE DEVELOPMENT

54" SS RIVERFRONT INTERCEPTOR PLAN AND PROFILE

SHEET	176
DWG	05-CY-204
DATE	MAY 19 2006
PROJ	326918

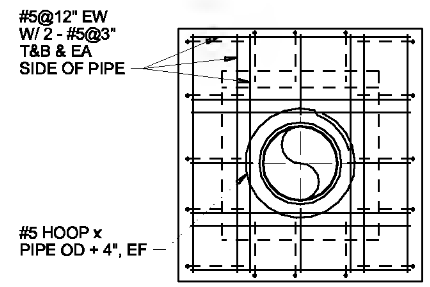
FILENAME: 05ncy204d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:19:49 PM



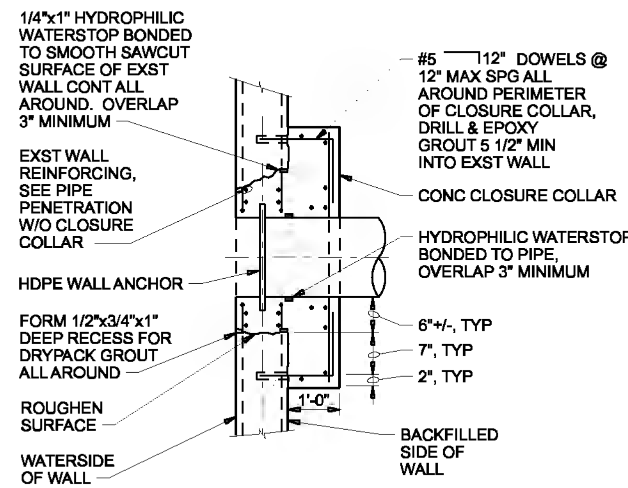


54" SS RIVERFRONT INTERCEPTOR PROFILE

HORIZ 1" = 20'
VERT 1"=10'



ELEVATION



SECTION

WITH CLOSURE COLLAR

NOTES:

1. SAW-CUT 1-INCH DEEP x PIPE OD + 12" SQUARE SCORE LINE ON EACH FACE OF WALL. (VERIFY DEPTH OF CUT TO CLEAR REINFORCING.) (INCREASE HEIGHT AS NOTED AT TOP ON WATERSIDE FACE FOR POURING.)
2. CHIP TO REMOVE THE CONCRETE WITHIN THE SCORE LINE, WHILE PRESERVING THE EXISTING WALL REINFORCING.
3. GRIND 1 1/2" WIDE x CONT SMOOTH SURFACE ALL AROUND THE OPENING AT CENTER OF WALL. CLEAN SURFACES AND BOND CONTINUOUS HYDROPHILIC WATERSTOP IN PLACE.
4. INSTALL HDPE WALL ANCHOR.
5. BOND CONTINUOUS HYDROPHILIC WATERSTOP TO PIPE. INSTALL ADDITIONAL REINFORCING EACH FACE, EACH SIDE, ABOVE AND BELOW PIPE.
6. SOAK CONCRETE SURFACES AND WITHIN 15-MINUTES CAST CONCRETE CLOSURE. (CONCRETE CLOSURE MUST BE CAST BEFORE HYDROPHILIC WATERSTOP EXPANDS.) FORM GROOVE ON ALL SIDES OF OPENING EXCEPT AT TOP ON THE POUR SIDE.
7. CLEAN SURFACES OF FORMED GROOVE WITH POWER WIRE BRUSH OR SANDBLASTING AND DRY-PACK WITH NON-SHRINK GROUT AFTER NEW CONCRETE MIN 28-DAYS OLD.
8. SEE SPECIFICATION SECTIONS 01040 AND 01050 FOR CONSTRUCTION SEQUENCING CONSTRAINTS.
9. SEE DRAWING 05-CY-103 FOR YARD PIPING NOTES.

PIPE PENETRATION - EXISTING WALL

NTS

1
05-CY-204

DSGN	JT ASHLEY			
DR	PA LONG			
CHK	DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT
APVD	CW MASSIE	NO.	DATE	REVISION

BY	APVD
GTM	JAB

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

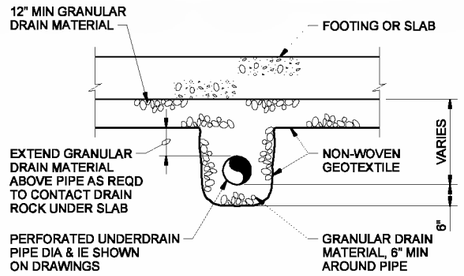
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

54" SS RIVERFRONT
INTERCEPTOR PLAN AND PROFILE AND DETAIL

SHEET	177
DWG	05-CY-205
DATE	MAY 19 2006
PROJ	326918

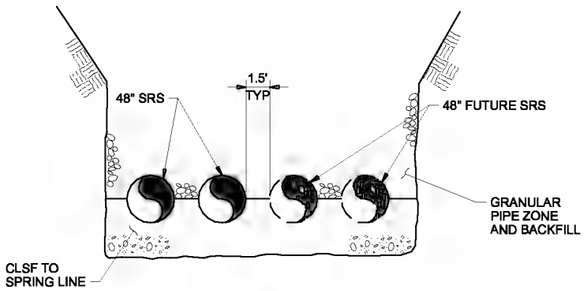
FILENAME: 05ncy205d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:19:56 PM



TYPICAL UNDERDRAIN TRENCH (1)

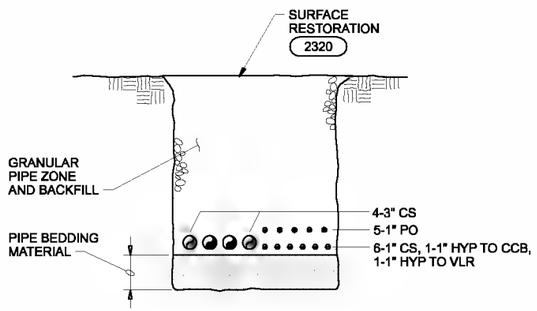
NTS

30-S-120
45-S-201
60-S-201



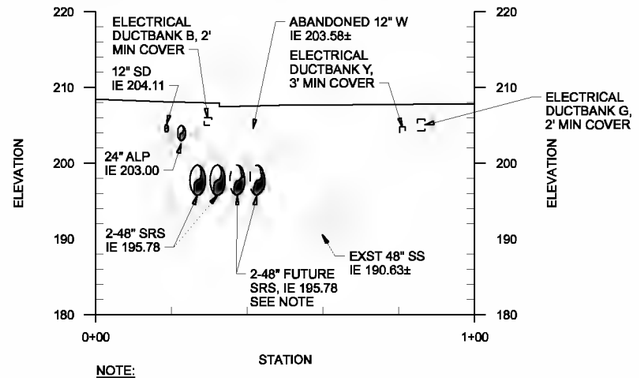
DETAIL (2)

NTS 05-CY-103



UTILITY TRENCH (A)

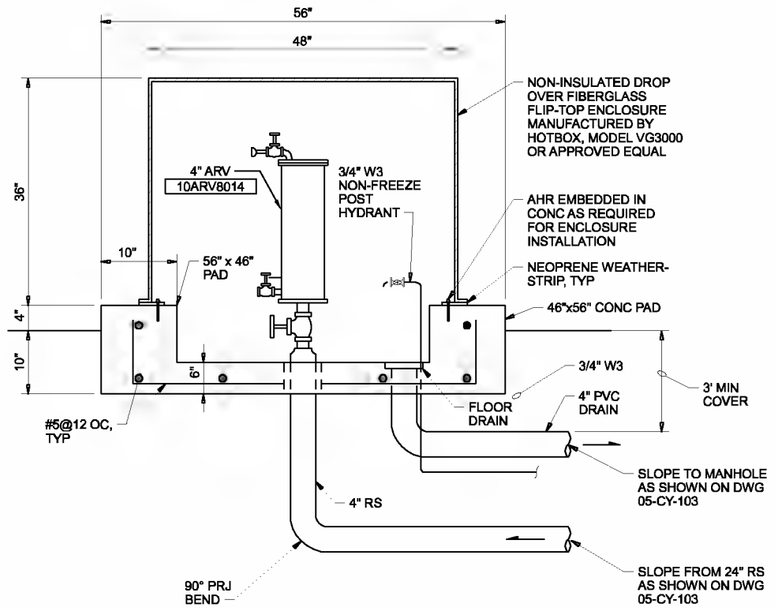
NTS 05-CY-101



NOTE:
FUTURE 48" SRS PIPING IS SHOWN FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR SHALL ALLOW PROVISIONS FOR FUTURE AS BEST POSSIBLE DURING CONSTRUCTION TO HELP FACILITATE CONSTRUCTION IN FUTURE.

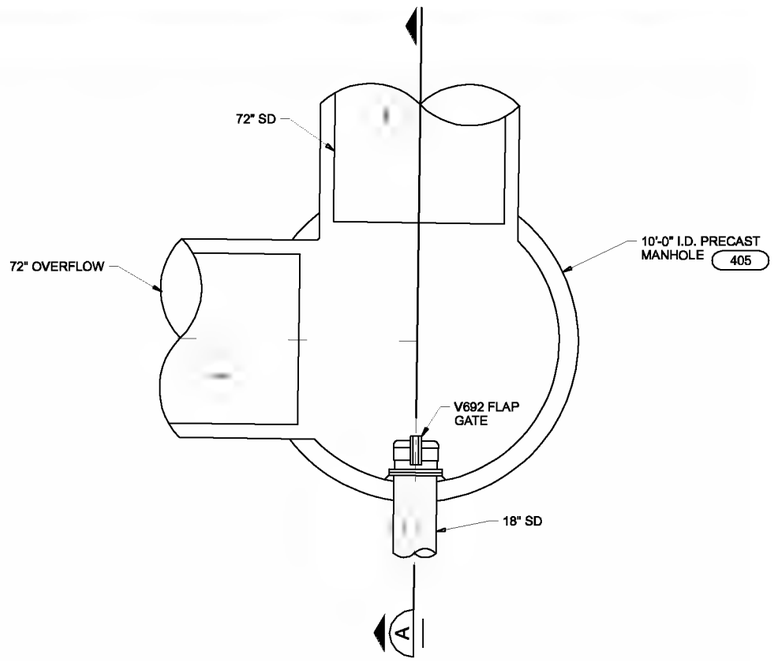
SECTION (B)

VERT 1" = 20'
HORIZ 1" = 10'
05-CY-103

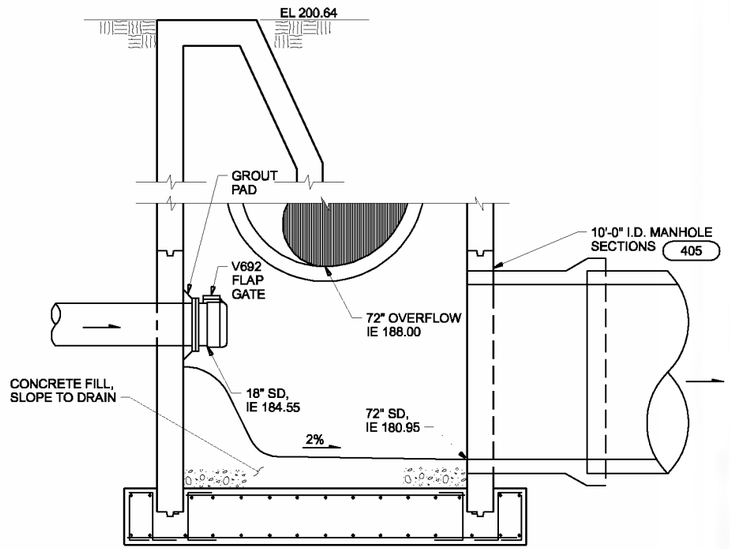


ARV ENCLOSURE (3)

NTS 05-CY-103



PLAN



SECTION A

OVERFLOW/DRAIN MANHOLE (4)

3/8"=1'-0"
05-CY-101
05-CY-202

DSGN	JT ASHLEY						VERIFY SCALE
DR	PA LONG			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	DJ PETERSON		01/20/10		GTM	JAB	
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD	

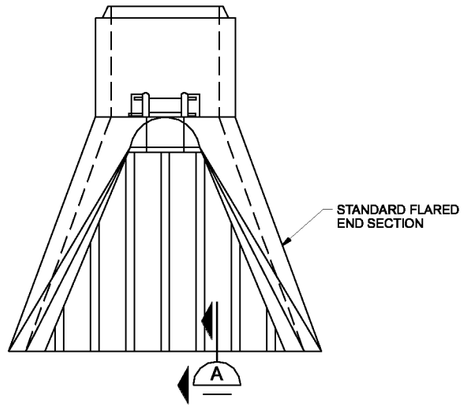
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

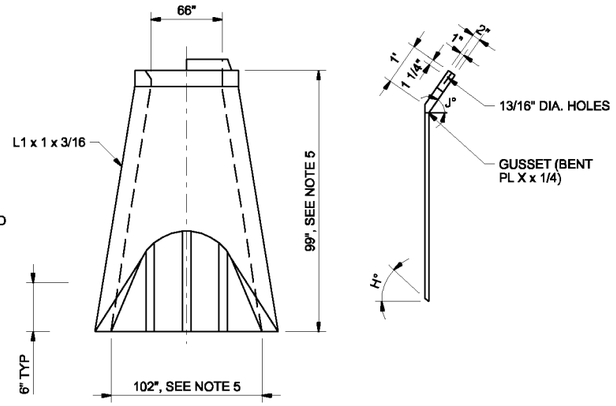
SITE DEVELOPMENT

YARD PIPING DETAILS

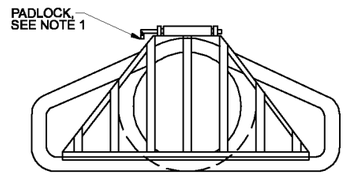
SHEET	178
DWG	05-CY-401
DATE	MAY 19 2006
PROJ	326918



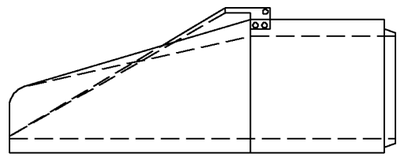
PLAN



RACK DETAIL



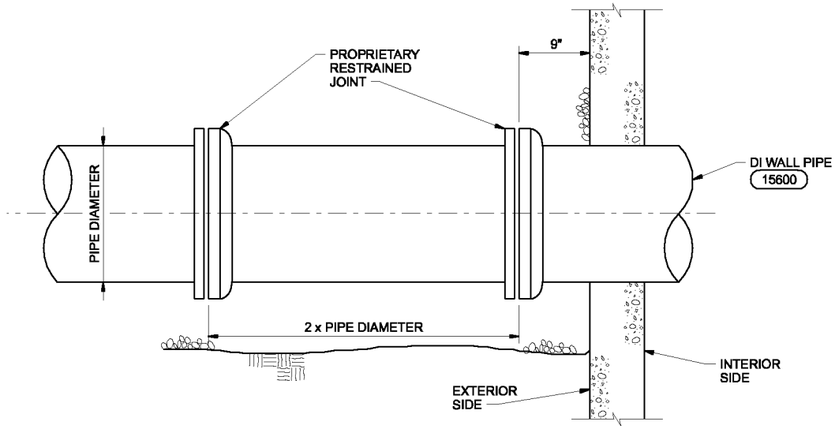
ELEVATION



SIDE VIEW

NOTES:

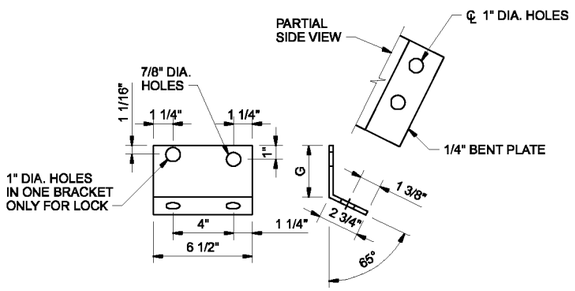
1. PADLOCKS FOR LOCKING BAR WILL BE FURNISHED AND INSTALLED BY THE CITY OF ALBANY.
2. THE TRASH GUARDS ARE NOT DESIGNED TO CARRY WHEEL LOADINGS AND AS SUCH ARE NOT TO BE USED AS SAFETY GRATES.
3. GALVANIZE ENTIRE ASSEMBLY.
4. PROVIDE SST HARDWARE.
5. ADJUST DIMENSIONS ACCORDINGLY IF PIPE STANDARD FLARED END SECTION DIFFERS FROM ONE SHOWN.



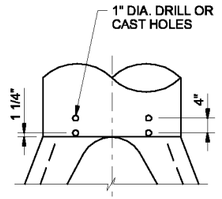
PROPRIETARY JOINT DETAIL (2)

NTS

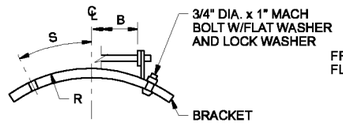
05-CY-203
10-M-131
10-M-141
61-M-201

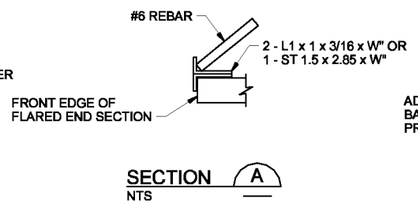


BRACKET (2 - REQ'D)

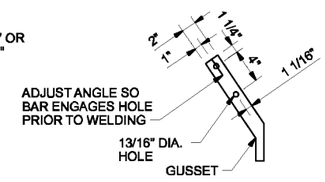


HOLES FOR BRACKETS





SECTION (A)
NTS



PARTIAL SIDE VIEW

BRACKET & HINGE DETAIL

TRASH RACK DETAIL (1)

NTS

05-CY-202

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

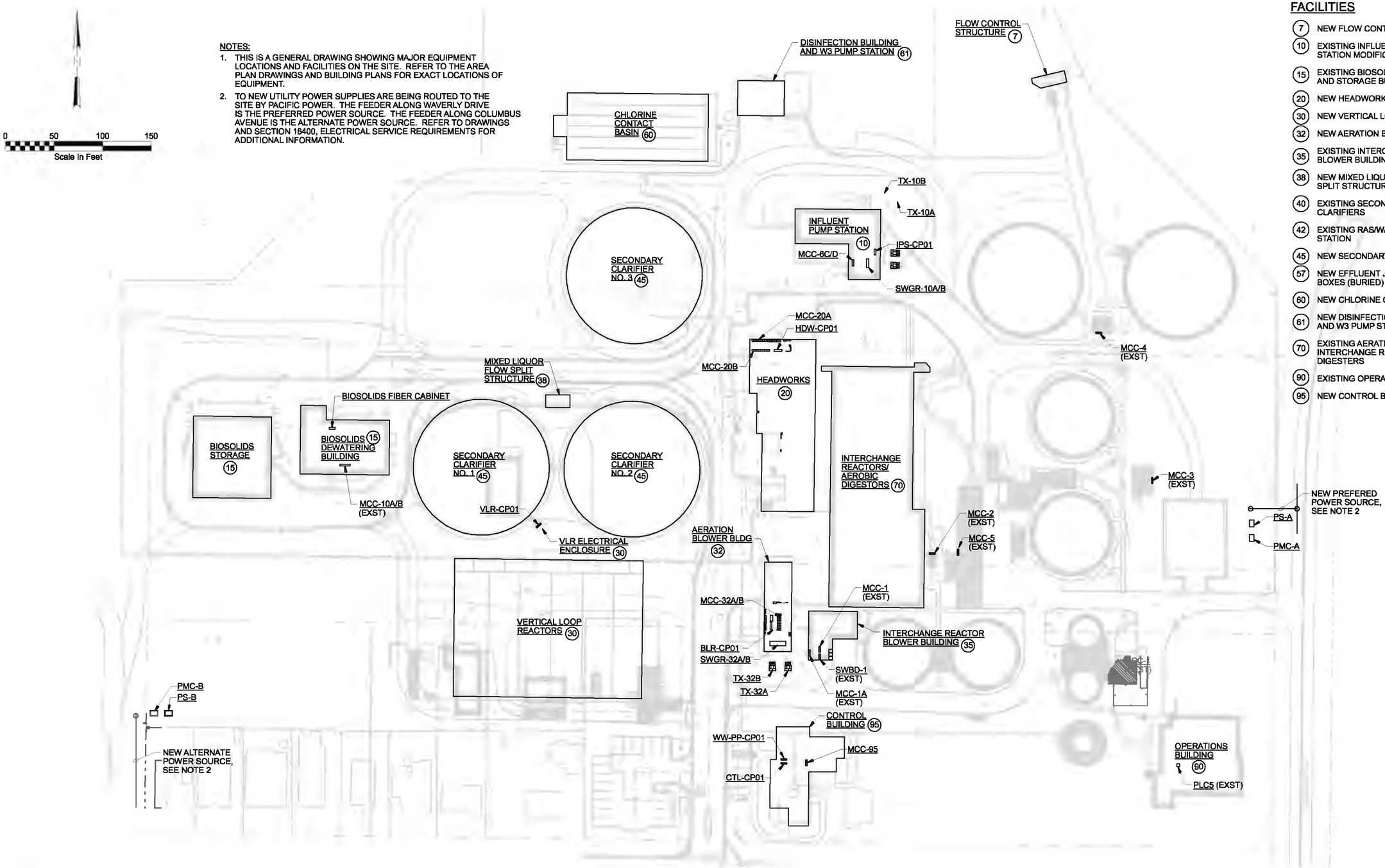
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

YARD PIPING DETAILS

SHEET	179
DWG	05-CY-402
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ncy402d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 2:20:07 PM



FACILITIES

- (7) NEW FLOW CONTROL STRUCTURE
- (10) EXISTING INFLUENT PUMP STATION MODIFICATIONS
- (15) EXISTING BIOSOLIDS DEWATERING AND STORAGE BUILDINGS MODIFICATIONS
- (20) NEW HEADWORKS
- (30) NEW VERTICAL LOOP REACTORS
- (32) NEW AERATION BLOWER BUILDING
- (35) EXISTING INTERCHANGE REACTOR BLOWER BUILDING MODIFICATIONS
- (38) NEW MIXED LIQUOR FLOW SPLIT STRUCTURE
- (40) EXISTING SECONDARY CLARIFIERS
- (42) EXISTING RAS/WAS PUMP STATION
- (45) NEW SECONDARY CLARIFIERS
- (57) NEW EFFLUENT JUNCTION BOXES (BURIED)
- (60) NEW CHLORINE CONTACT BASINS
- (61) NEW DISINFECTION BUILDING AND W3 PUMP STATION
- (70) EXISTING AERATION BASINS CONGRATED TO INTERCHANGE REACTORS /AEROBIC DIGESTERS
- (90) EXISTING OPERATION BUILDING
- (95) NEW CONTROL BUILDING

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY KAROL MAESTRI, STATE OF OREGON, P.E., NO. 9378PE

DSGN KL MAESTRI						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK JB MAURAIS						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE						
	NO.	DATE	REVISION	BY	APVD	
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GRW	KLM	

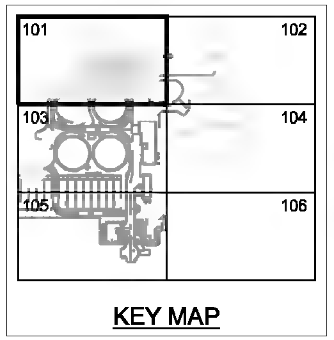
CH2MHILL carollo engineers

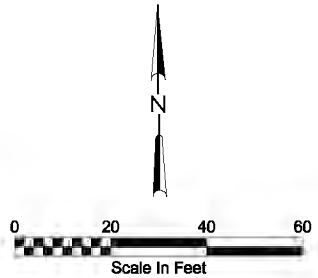
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT
ELECTRICAL
OVERALL SITE PLAN

SHEET	180
DWG	05-E-100
DATE	MAY 19 2006
PROJ	326918

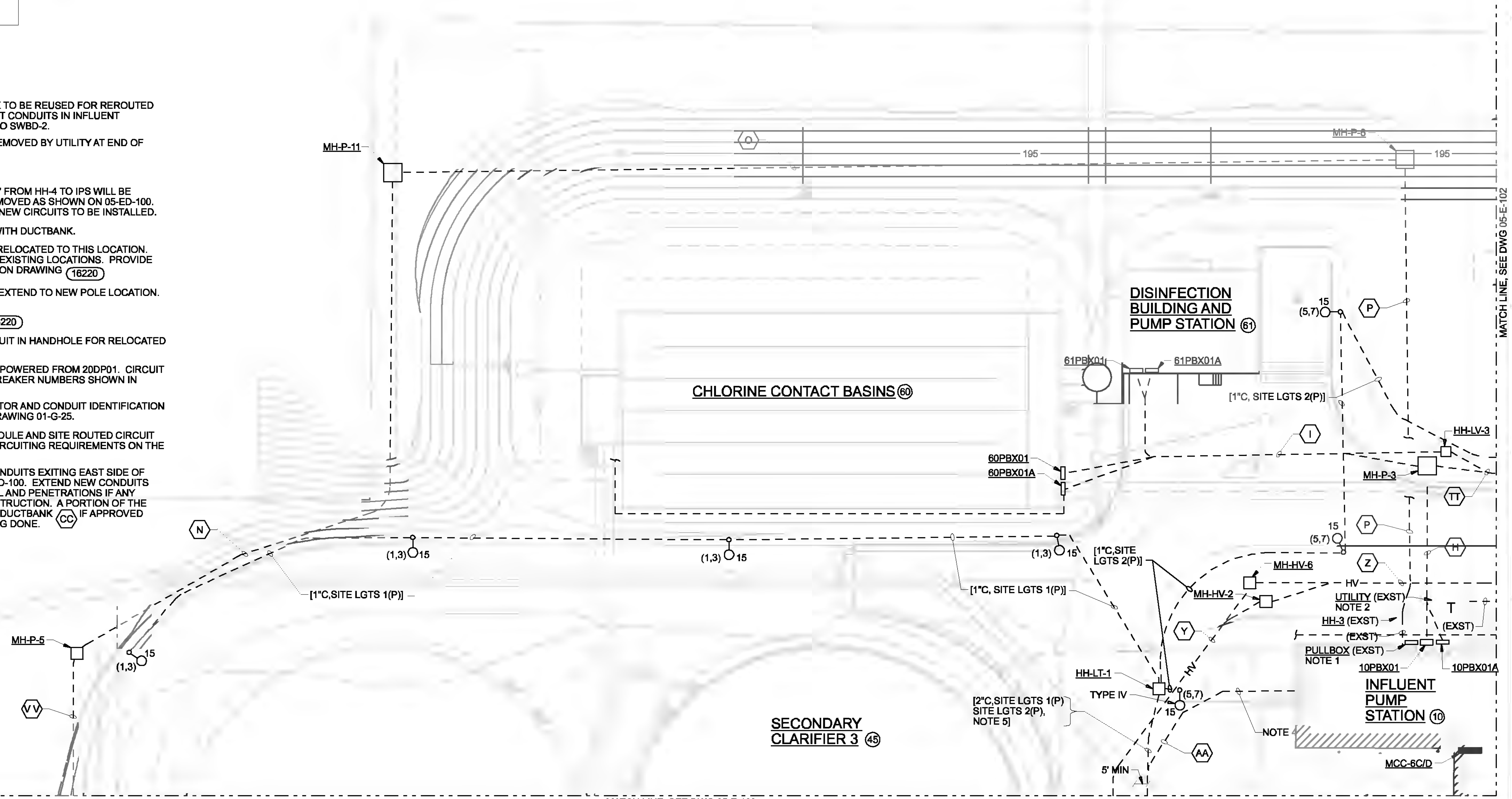
FILENAME: 05ne100d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:51:35 PM





NOTES:

1. EXISTING WALL MOUNT PULLBOX TO BE REUSED FOR REROUTED BIOSOLIDS FEEDER. REUSE EXST CONDUITS IN INFLUENT PUMP STATION FROM PULLBOX TO SWBD-2.
2. UTILITY TRANSFORMER TO BE REMOVED BY UTILITY AT END OF CONSTRUCTION.
3. NOT USED.
4. 2-2" FROM HH-5 AND 1-1" AND 1-2" FROM HH-4 TO IPS WILL BE EMPTY AFTER CIRCUITS ARE REMOVED AS SHOWN ON 05-ED-100. SEE DUCTBANK SCHEDULE FOR NEW CIRCUITS TO BE INSTALLED.
5. ROUTE SITE LIGHTING CIRCUIT WITH DUCTBANK.
6. EXISTING POLE AND LUMINAIRE RELOCATED TO THIS LOCATION. SEE DEMOLITION DRAWING FOR EXISTING LOCATIONS. PROVIDE POSE BASE SIMILIAR AS SHOWN ON DRAWING (16220)
7. INTERCEPT EXISTING CIRCUIT & EXTEND TO NEW POLE LOCATION. CIRCUIT TO MATCH EXISTING.
8. FOR TYPE 15 LUMINAIRE SEE (16220)
9. SPLICE EXISTING LIGHTING CIRCUIT IN HANDHOLE FOR RELOCATED LIGHT.
10. SITE LIGHTS CIRCUITS 1 & 2 ARE POWERED FROM 20DP01. CIRCUIT 3 IS POWERED FROM 95DP02. BREAKER NUMBERS SHOWN IN PARENTHISES.
11. FOR GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION AND ELECTRICAL NOTES, SEE DRAWING 01-G-25.
12. REFER TO THE DUCTBANK SCHEDULE AND SITE ROUTED CIRCUIT SCHEDULE FOR CONDUIT AND CIRCUITING REQUIREMENTS ON THE SITE.
13. CONTRACTOR IS TO REMOVE CONDUITS EXITING EAST SIDE OF PB #7 (EXST) AS SHOWN ON 05-ED-100. EXTEND NEW CONDUITS TO PB #7. REPAIR PULLBOX WALL AND PENETRATIONS IF ANY DAMAGE OCCURS DURING CONSTRUCTION. A PORTION OF THE CONDUITS MAY BE REUSED FOR DUCTBANK (CC) IF APPROVED ENGINEER PRIOR TO WORK BEING DONE.



DSGN	KL MEASTRI					
DR	GJ LOVE					
CHK	JB MAURAIS		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GRW	KLM
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

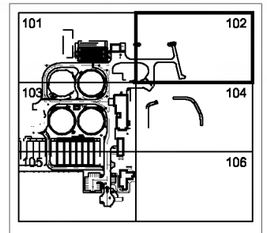
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

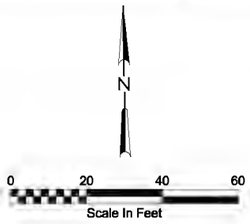
SITE PLAN - AREA 101

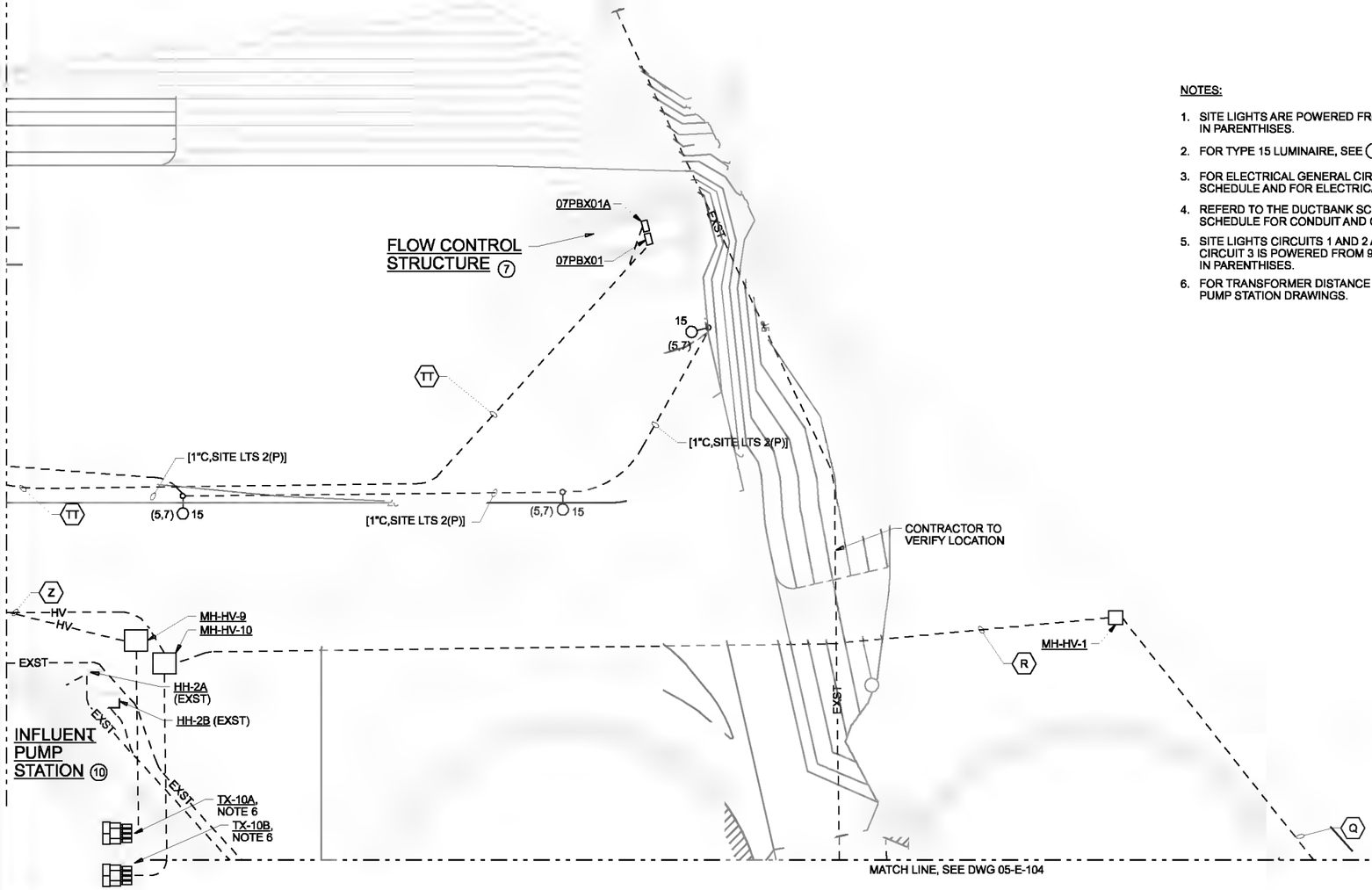
SHEET	181
DWG	05-E-101
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05no101d1_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:51:45 PM



KEY MAP





NOTES:

1. SITE LIGHTS ARE POWERED FROM 20DP01. BREAKER NUMBER SHOWN IN PARENTHISES.
2. FOR TYPE 15 LUMINAIRE, SEE (16220)
3. FOR ELECTRICAL GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION SCHEDULE AND FOR ELECTRICAL NOTES, SEE DRAWING 01-G-25.
4. REFERD TO THE DUCTBANK SCHEDULE AND SITE ROUTED CIRCUIT SCHEDULE FOR CONDUIT AND CIRCUITING REQUIREMENTS ON THE SITE.
5. SITE LIGHTS CIRCUITS 1 AND 2 ARE POWERED FROM 20DP01. CIRCUIT 3 IS POWERED FROM 95DP02. BREAKER NUMBERS SHOWN IN PARENTHISES.
6. FOR TRANSFORMER DISTANCE FROM BUILDING, SEE THE INFLUENT PUMP STATION DRAWINGS.

DSGN KL MAESTRI						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK JB MAURAIS			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
		01/20/10		GRW	KLM	

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CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT
ELECTRICAL
SITE PLAN-AREA 102

SHEET	182
DWG	05-E-102
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ne102d2_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:51:51 PM

MATCH LINE, SEE DWG 05-E-101

NOTE:

FOR NOTES, SEE 05-E-101.

N

0 20 40 60
Scale In Feet

RELOCATED LIGHT, NOTE 6

LIGHT HH (EXST) NOTE 9

[1"C,2#12,1#12G]

EXST

(EXST) NEW 1 1/2"C

PB#6 (EXST), NOTE 9

PB#7 (EXST)

[1"C,2#12,1#12G]

RELOCATED LIGHT, NOTE 6

HH-LV-7

MH-P-7

HH-LV-12 NOTE 13

45PBX01A

45PBX01

BIOSOLIDS FIBER CABINET (EXST)

BIOSOLIDS DEWATERING BLDG (15)

MIXED LIQUOR FLOW SPLIT STRUCTURE (38)

38PBX01

FOR CIRCUITING REQUIREMENTS, SEE 38-E-501

SECONDARY CLARIFIER 3 (45)

SECONDARY CLARIFIER 1 (45)

SECONDARY CLARIFIER 2 (45)

[2"C,SITE LTS 1(P), SITE LTS 2(P)]

HH-LT-2

[1"C,SITE LTS 1(P)]

45PBX03A

45PBX03

MH-P-2

MCC-20A

HDW-CP01

MCC-20B

HH-LV-2

5' MINIMUM BETWEEN HV AND LV DUCTBANKS

45PBX02A

45PBX02

HEADWORKS (20)

15 (1,3) TYPE IV

INTER-CHANGE REACTORS (70)

70PBX01

70PBX01A

MH-HV-5

MH-HV-3

HV

MCC-10A/B (EXST)

EXST LIGHTING CIRCUIT AND GATE-2(P) TO LP-10

PB-8 (EXST)

EXTEND TO NEW LOCATION FEEDER TO MATCH, NOTE 7

EXST HH

EXST LIGHTING CIRCUIT AND GATE-2(P)

RELOCATED LIGHT, NOTE 6

HH-LV-5

ELECTRICAL SHELTER, SEE 30-E-202

VERTICAL LOOP REACTORS (30)

AERATION BLOWER BUILDING (32)

[1"C,SITE LTS 3(P)]

(26,28)

KEY MAP

101 102 103 104 105 106

MATCH LINE, SEE DWG 05-E-201

MATCH LINE, SEE DWG 05-E-104

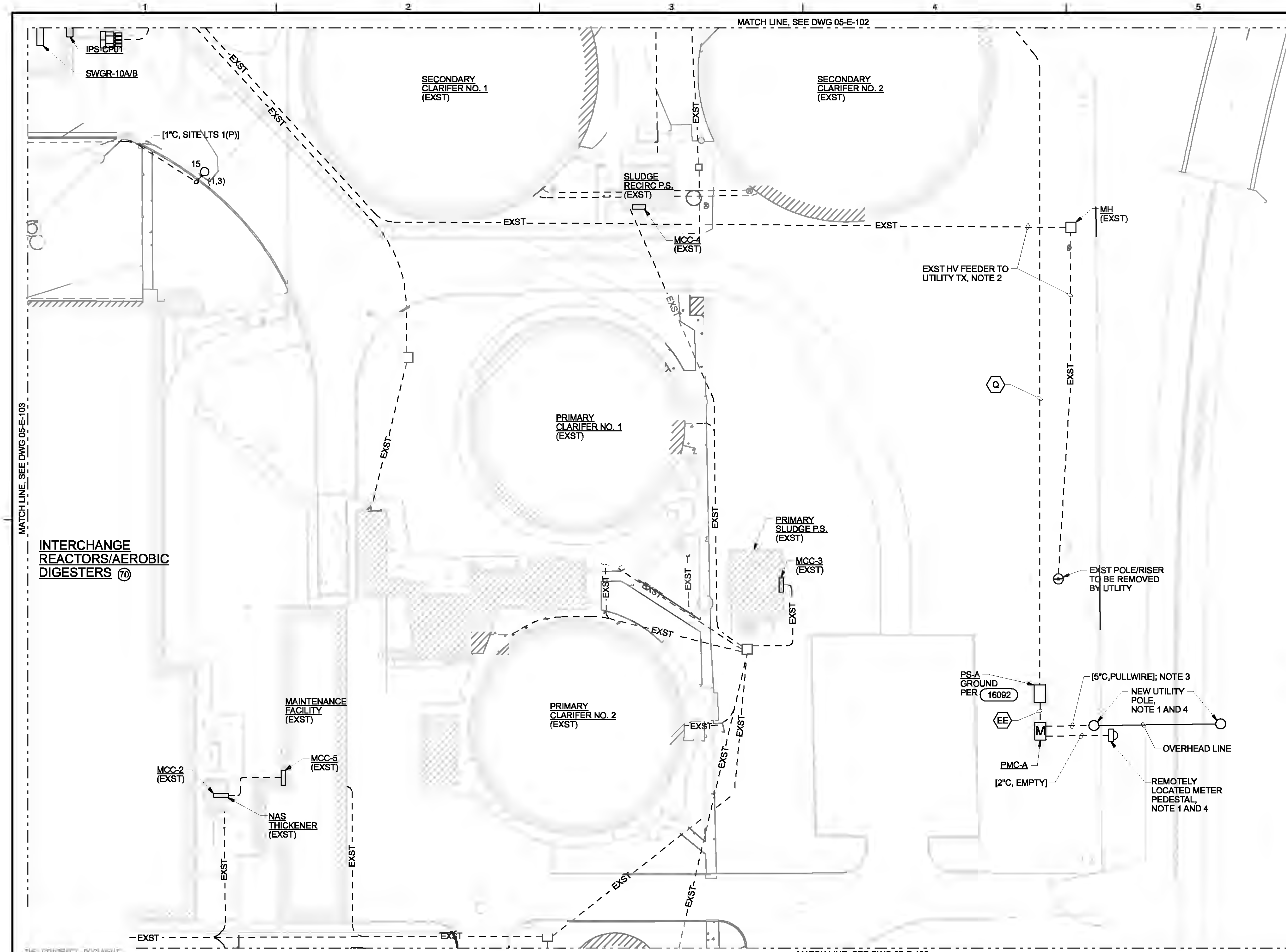
MATCH LINE, SEE DWG 05-E-105

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED/DATED BY HAROLD MAESTRI, STATE OF OREGON, EFFECTIVE

DSGN KL MAESTRI						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-O3-01 LINN COUNTY, OREGON	SITE DEVELOPMENT	SHEET 183
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.		SITE PLAN - AREA 103	DWG 05-E-103
CHK JB MAURAIS									DATE MAY 19 2006
APVD CW MASSIE	NO.	DATE	REVISION	GRW	KLM				PROJ 326918
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	BY	APVD				

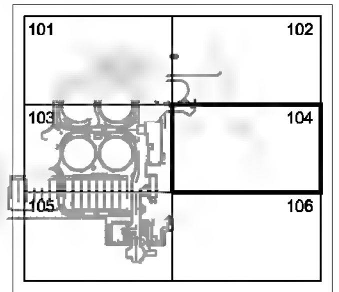
CH2MHILL carollo engineers

FILENAME: 05np103d3_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:51:56 PM



NOTES:

1. COORDINATE EXACT LOCATION WITH PACIFIC POWER.
2. UTILITY TO REMOVE HV CONDUCTORS AFTER TX REMOVED. CONDUITS TO BE ABANDONED.
3. 5" CONDUIT AND POLE RISER AS REQUIRED BY PACIFIC POWER.
4. REFER TO SPECIFICATION 16400, ELECTRICAL SERVICE REQUIREMENTS FOR ADDITONAL REQUIREMENTS AND COORDINATION WITH THE UTILITY (PACIFIC POWER).
5. FOR ELECTRICAL GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION SCHEDULE AND FOR ELECTRICAL NOTES, SEE DRAWING 01-G-25.
6. REFER TO THE SITE ROUTED CONDUIT SCHEDULE AND SITE ROUTED CIRCUIT SCHEDULE FOR CONDUIT AND CIRCUITING REQUIREMENTS ON THE SITE.
7. FOR TYPE 15 LUMINAIRE SEE (16220).
8. SITE LIGHTS CIRCUITS 1 AND 2 ARE POWERED FROM 20DP01. CIRCUIT 3 IS POWERED FROM 95DP02. BREAKER NUMBERS SHOWN IN PARENTHISES.



KEY MAP

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY DANIEL MAESTRI, STATE OF OREGON, P.E. NO. 59785PE

DSGN	KL MAESTRI					
DR	GJ LOVE			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)		
CHK	JB MAURAIS		01/20/10	AS-BUILT	GRW	KLM
APVD	CW MASSIE	NO.	DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

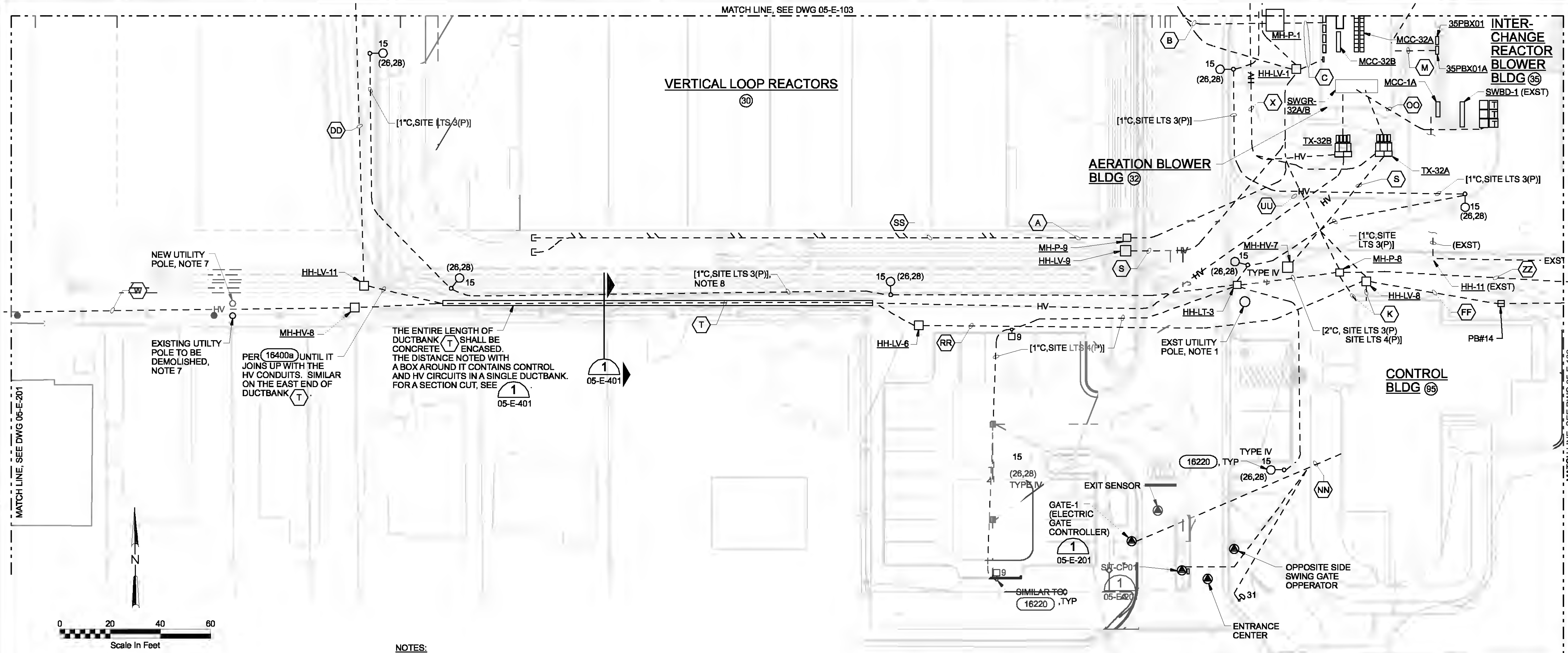
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

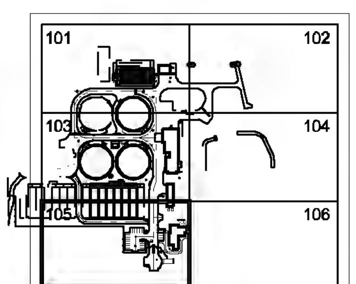
SITE DEVELOPMENT

SITE PLAN - AREA 104

SHEET	184
DWG	05-E-104
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ne104d4_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:52:03 PM





KEY MAP

NOTES:

1. EXISTING UTILITY POLE TO BE PROTECTED DURING CONSTRUCTION. UTILITY TO REMOVE POLE AFTER EXISTING SERVICE IS DISCONNECTED. FOR INFORMATION ON TEMPORARY RELOCATION OF POWER FEEDER FROM THIS POLE TO INTERCHANGE REACTOR BLOWER BUILDING. SEE 05-ED-100 AND SPECIFICATION SECTION 16400, ELECTRICAL SERVICE REQUIREMENTS.
2. FOR ELECTRICAL GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION SCHEDULE AND FOR ELECTRICAL NOTES, SEE DRAWING 01-G-25.
3. FOR TYPE 15 LUMINAIRE SEE (16220).
4. REFER TO THE DUCTBANK SCHEDULE AND SITE ROUTED CIRCUIT SCHEDULE FOR THE CONDUIT AND CIRCUITING REQUIREMENTS ON THE SITE.
5. SITE LIGHTS CIRCUITS 1 AND 2 ARE POWERED FROM 20DP01. CIRCUIT 3 IS POWERED FROM 95DP02. BREAKER NUMBERS SHOWN IN PARENTHISES.
6. INSTALL NEW CONDUIT TO HH-11.
7. THERE IS CURRENTLY A POLE LOCATED IN THE PATH OF THE NEW MASONRY FENCE. THE UTILITY IS TO INSTALL A NEW POLE AND DEMOLISH THE OLD ONE PRIOR TO THE START OF CONSTRUCTION. THE NEW UTILITY POWER POLE IS TO BE LOCATED APPROXIMATELY 7' NORTH OF THE PROPERTY LINE 4' NORTH OF THE MASONRY WALL. CONTRACTOR TO NOTIFY UTILTIY PRIOR TO CONSTRUCTING FENCE IN THIS LOCATION.
8. CIRCUIT IS TYPICAL BETWEEN TYPE 15 LIGHTS ON THIS SHEET.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY [illegible]

DSGN KL MAESTRI					
DR GJ LOVE					
CHK JB MAURAIS		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GRW	KLM
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

SITE PLAN - AREA 105

SHEET	185
DWG	05-E-105
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05no105d5_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:52:10 PM

MATCH LINE, SEE DWG 05-E-104

MATCH LINE, SEE DWG 05-E-105

EXST

EXST

ZZ

HH-12 (EXST)

HH-P-4

EXST

EXST

YY

FF

PB#15 (EXST)

INTERCEPT EXST CONDUITS AND EXTEND TO HH-LV-8

EXST

EXST

EXST

GG

PB#16 (EXST)

HH

HH-P-3

EXST

XX

PLC-5 (EXST)

PULLBOX

PULLBOX (EXST)

II

PB#17 (EXST)

OPERATIONS BUILDING (90)

FOR OPERATIONS BUILDING PARTIAL PLAN, SEE 91-E-521

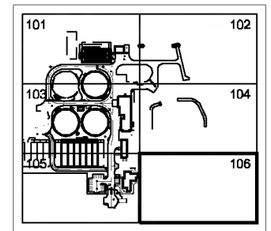
NOTE:

1. FOR ELECTRICAL GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION SCHEDULE AND FOR ELECTRICAL NOTES, SEE DRAWING 01-G-25.
2. REFER TO THE SITE ROUTED CIRCUIT SCHEDULE AND SITE ROUTED CONDUIT SCHEDULE FOR CONDUIT AND CIRCUITING REQUIREMENTS ON THE SITE.

N

0 20 40 60

Scale In Feet



KEY MAP

DSGN KL MAESTRI						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK JB MAURAIS			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
		01/20/10		GRW	KLM	

CH2MHILL carollo engineers

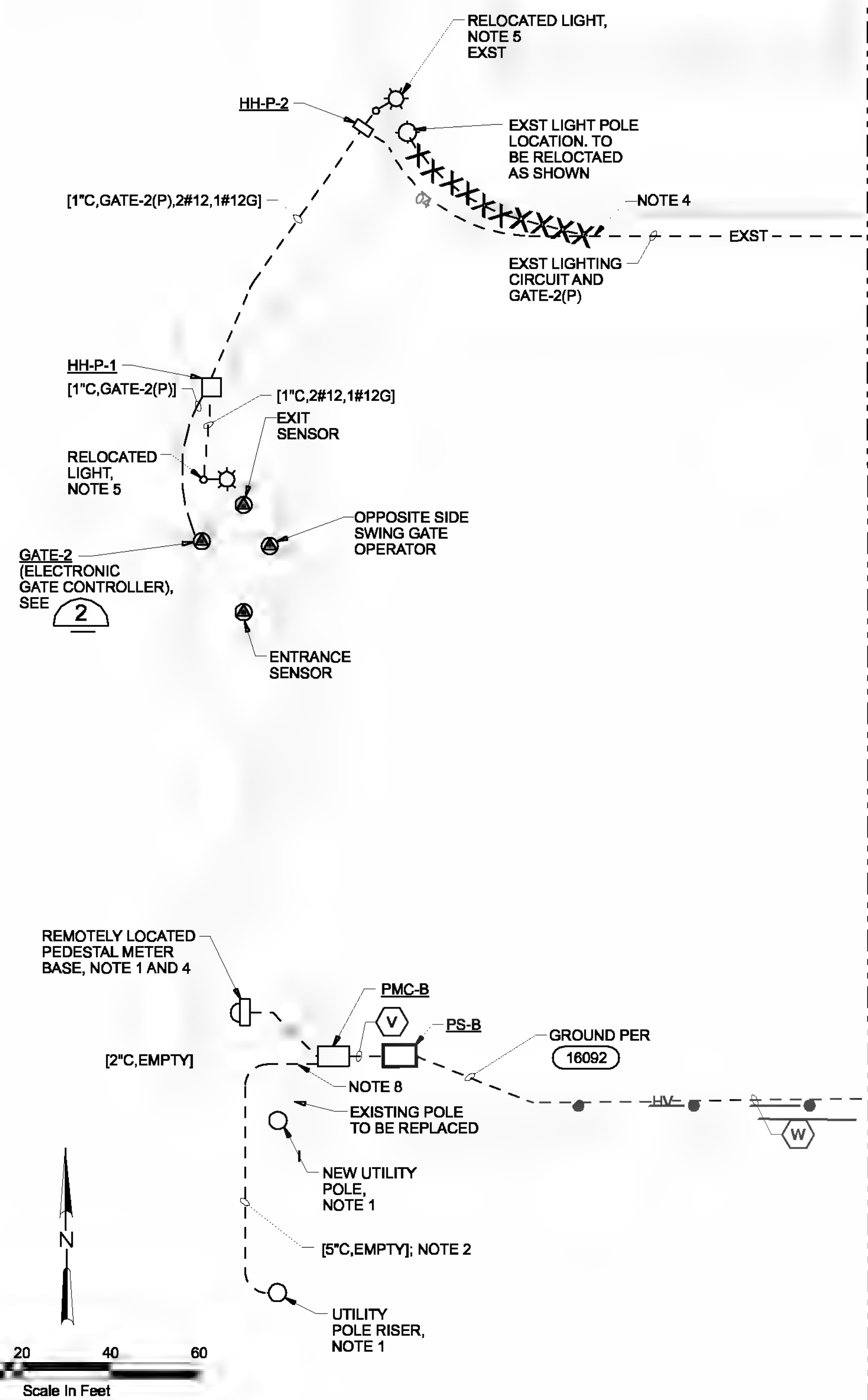
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

SITE PLAN - AREA 106

SHEET	186
DWG	05-E-106
DATE	MAY 19 2006
PROJ	326918

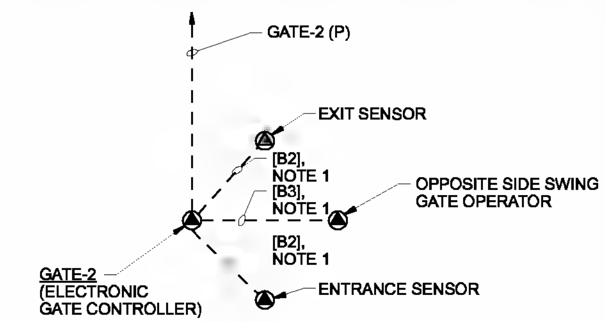
FILENAME: 05re106dE_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:52:16 PM



PARTIAL PLAN

NOTES:

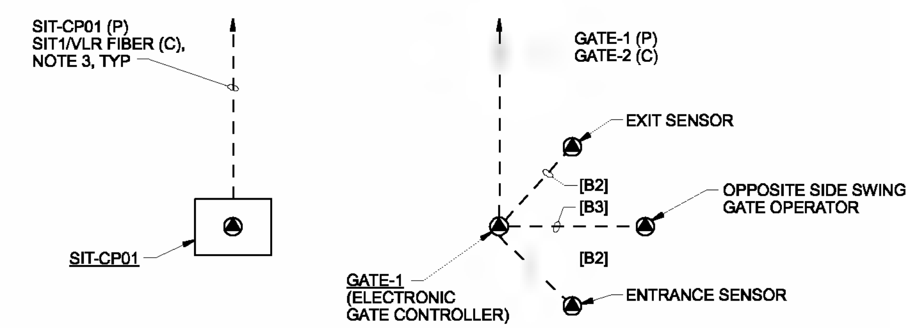
1. COORDINATE EXACT LOCATION WITH PACIFIC POWER.
2. 5" CONDUIT AND POLE RISER AS REQUIRED BY PACIFIC POWER.
3. REFER TO SPECIFICATION 16400 ELECTRICAL SERVICE REQUIREMENTS FOR ADDITONAL REQUIREMENTS AND COORDINATION WITH THE UTILITY (PACIFIC POWER).
4. INTERCEPT EXISTING CIRCUIT AND EXTEND TO NEW POLE LOCATION. CIRCUIT TO MATCH EXISTING.
5. EXISTING POLE AND LUMINAIRE RELOCATED TO THIS LOCATION. SEE DEMOLITION DRAWING FOR EXISTING LOCATIONS. PROVIDE POLE BASE SIMILIAR AS SHOWN ON DRAWING (16220)
6. FOR ELECTRICAL GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION SCHEDULE AND FOR GENERAL ELECTRICAL NOTES, SEE DRAWING 01-G-25.
7. INTERCEPT EXISTING CIRCUIT AND EXTEND TO NEW POLE LOCATION. CIRCUIT TO MATCH EXISTING.
8. ROUTE 5" AND 2" CONDUIT A MINIMUM OF 12" BELOW FOOTING OF SCREEN WALL AND AS REQUIRED BY PACIFIC POWER. INSTALL AT SAME TIME WALL IS BEING CONSTRUCTED.



NOTES:

1. FOR CIRCUITING BETWEEN GATE EQUIPMENT, VERIFY CIRCUITING REQUIREMENTS WITH GATE SUPPLIER.
2. VERIFY EQUIPMENT LOCATIONS WITH GATE SUPPLIER.
3. FOR CIRCUITING REQUIREMENTS, SEE SITE ROUTED CONDUIT SCHEDULE AND SITE ROUTED CIRCUIT SCHEDULE.

GATE-2 RISER DIAGRAM (2)



NOTES:

1. FOR CIRCUITING BETWEEN GATE EQUIPMENT, VERIFY CIRCUITING REQUIREMENTS WITH GATE SUPPLIER.
2. VERIFY EQUIPMENT LOCATIONS WITH GATE SUPPLIER.
3. FOR CIRCUITING REQUIREMENTS, SEE SITE ROUTED CONDUIT SCHEDULE AND SITE ROUTED CIRCUIT SCHEDULE.

GATE-1 RISER DIAGRAM (1) 05-E-105

DSGN KL MAESTRI						VERIFY SCALE
DR GJ LOVE			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			BAR IS ONE INCH ON ORIGINAL DRAWING. 0 — 1"
CHK JB MAURAIS		01/20/10	AS-BUILT	GRW	KLM	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL | carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

PARTIAL PLAN

SHEET	187
DWG	05-E-201
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ne201d_326918.dgn PLOT DATE: 2/25/2010 PLOT TIME: 3:52:07 PM

MANHOLE / HANDHOLE SCHEDULE

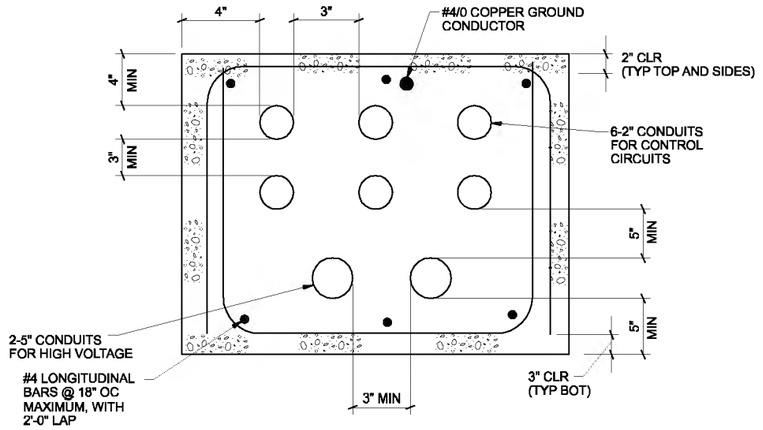
NAME	UV PNs	Actual Dim. Inside	Actual Dim. Outside	MINIMUM INSIDE DIMENSIONS	COVER INSCRIPTION	COM.
HH-LT-1	233-LA	36" x 24" x 32"	44" x 32" x 42"	36" x 24" x 36"	LIGHTING, HH-LT-1	H C
HH-LT-2	233-LA	36" x 24" x 32"	44" x 32" x 42"	36" x 24" x 36"	LIGHTING, HH-LT-2	H C
HH-LT-3	233-LA	36" x 24" x 32"	44" x 32" x 42"	36" x 24" x 36"	LIGHTING, HH-LT-3	H C
HH-LV-1	444-LA	42" x 42" x 35.5"	48" x 48" x 48"	42" x 42" x 42"	SIGNAL, HH-LV-1	H C
HH-LV-2	444-LA	42" x 42" x 35.5"	48" x 48" x 48"	42" x 42" x 42"	SIGNAL, HH-LV-2	H C
HH-LV-3	444-LA	42" x 42" x 35.5"	48" x 48" x 48"	42" x 42" x 42"	SIGNAL, HH-LV-3	H C
HH-LV-4	444-LA	42" x 42" x 35.5"	48" x 48" x 48"	42" x 42" x 42"	SIGNAL, HH-LV-4	H C
HH-LV-5	444-LA	42" x 42" x 35.5"	48" x 48" x 48"	42" x 42" x 42"	SIGNAL, HH-LV-5	H C
HH-LV-6	444-LA	42" x 42" x 35.5"	48" x 48" x 48"	42" x 42" x 42"	SIGNAL, HH-LV-6	H C
HH-LV-7	444-LA	42" x 42" x 35.5"	48" x 48" x 48"	42" x 42" x 42"	SIGNAL, HH-LV-7	H C
HH-LV-8	444-LA	42" x 42" x 35.5"	48" x 48" x 48"	42" x 42" x 42"	SIGNAL, HH-LV-8	H C
HH-LV-9	444-LA	42" x 42" x 35.5"	48" x 48" x 48"	42" x 42" x 42"	SIGNAL, HH-LV-9	H C
HH-LV-11	444-LA	42" x 42" x 35.5"	48" x 48" x 48"	42" x 42" x 42"	SIGNAL, HH-LV-11	H C
HH-LV-12	444-LA	42" x 42" x 35.5"	48" x 48" x 48"	42" x 42" x 42"	SIGNAL, HH-LV-12	H C / New
HH-P-1	233-LA	36" x 24" x 32"	44" x 32" x 42"	36" x 24" x 36"	ELECTRICAL POWER, HH-P-1	H C
HH-P-2	233-LA	36" x 24" x 32"	44" x 32" x 42"	36" x 24" x 36"	ELECTRICAL POWER, HH-P-2	H C
HH-P-3	233-LA	36" x 24" x 32"	44" x 32" x 42"	36" x 24" x 36"	ELECTRICAL POWER, HH-P-3	H C /Addn.
HH-P-4	233-LA	36" x 24" x 32"	44" x 32" x 42"	36" x 24" x 36"	ELECTRICAL POWER, HH-P-4	H C /Addn.
MH-HV-1	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	HV POWER, MH-HV-1	H C
MH-HV-2	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	HV POWER, MH-HV-2	H C
MH-HV-3	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	HV POWER, MH-HV-3	H C
MH-HV-4	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	HV POWER, MH-HV-4	H C
MH-HV-5	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	HV POWER, MH-HV-5	H C
MH-HV-6	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	HV POWER, MH-HV-6	H C
MH-HV-7	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	HV POWER, MH-HV-7	H C
MH-HV-8	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	HV POWER, MH-HV-8	H C
MH-P-1	687-LA	96" x 72" x 84"	104" x 80" x 97"	76" x 84" x 84"	ELECTRICAL POWER, MH-P-1	H C
MH-P-2	687-LA	96" x 72" x 84"	104" x 80" x 97"	76" x 84" x 84"	ELECTRICAL POWER, MH-P-2	H C
MH-P-3	776-LA	76" x 76" x 79"	84" x 84" x 92"	76" x 76" x 84"	ELECTRICAL POWER, MH-P-3	H C
MH-P-5	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	ELECTRICAL POWER, MH-P-5	H C
MH-P-6	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	ELECTRICAL POWER, MH-P-6	H C
MH-P-7	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	ELECTRICAL POWER, MH-P-7	H C
MH-P-8	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	ELECTRICAL POWER, MH-P-8	H C
MH-P-9	776-LA	76" x 76" x 79"	84" x 84" x 92"	72" x 72" x 72"	ELECTRICAL POWER, MH-P-9	H C
MH-P-11	577-LA	78" x 50" x 72"	84" x 56" x 84"	60" x 72" x 72"	ELECTRICAL POWER, MH-P-11	H C
VAULT/PAD FOR TX-32A				96" x 120" x 84"	NO INSCRIPTION REQUIRED	NOTE 3
VAULT/PAD FOR TX-32B				96" x 120" x 84"	NO INSCRIPTION REQUIRED	NOTE 3
VAULT/PAD FOR PS-A				60" x 96" x 84"	NO INSCRIPTION REQUIRED	NOTE 4
VAULT/PAD FOR PS-B				60" x 96" x 84"	NO INSCRIPTION REQUIRED	NOTE 4

H C = Hinged cover

NOTES:
1. MINIMUM INSIDE DIMENSIONS REQUIRED ARE SHOWN ABOVE.
2. TX-10A AND TX-10B SIT ON PADS, VAULTS NOT REQUIRED. PROVIDE A CONCRETE PADIN ACCORDANCE WITH DETAIL 3356, TYPE H.

3. APPROXIMATE VAULT SIZE SHOWN. FINAL DEPTH AND WIDTH TO BE COORDINATED WITH TRANSFORMER DEMINSIONS. TRANSFORMER TO SIT ON VAULT COVER, SIMILAR TO UTILITY VAULT # 810-T-2436P-TRANS1-PGE WITH HINGED DIAMOND PLATE ACCESS HATCH. COORDINATE OPENING LOCATIONS FOR TRANSFORMER PROVIDED.

4. APPROXIMATE VAULT SIZE SHOWN. FINAL DEPTH AND WIDTH TO BE COORDINATED WITH PRIMARY SWITCH DIMENSIONS. PRIMARY SWITCH TO SIT ON VAULT COVER WITH AN OPENING FOR THE CONDUCTORS TO BE ROUTED THROUGH. COORDINATE OPENING LOCATIONS FOR PRIMARY SWITCH PROVIDED.



DUCTBANK SECTION 1
NTS 05-E-105

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY KANDI L. MAESTRI, STATE OF OREGON, P.E. NO. 53785PE

DSGN KL MAESTRI							VERIFY SCALE
DR GJ LOVE							BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK JB MAURAIS							
APVD CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GRW	KLM		
	NO.	DATE	REVISION	BY	APVD		

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

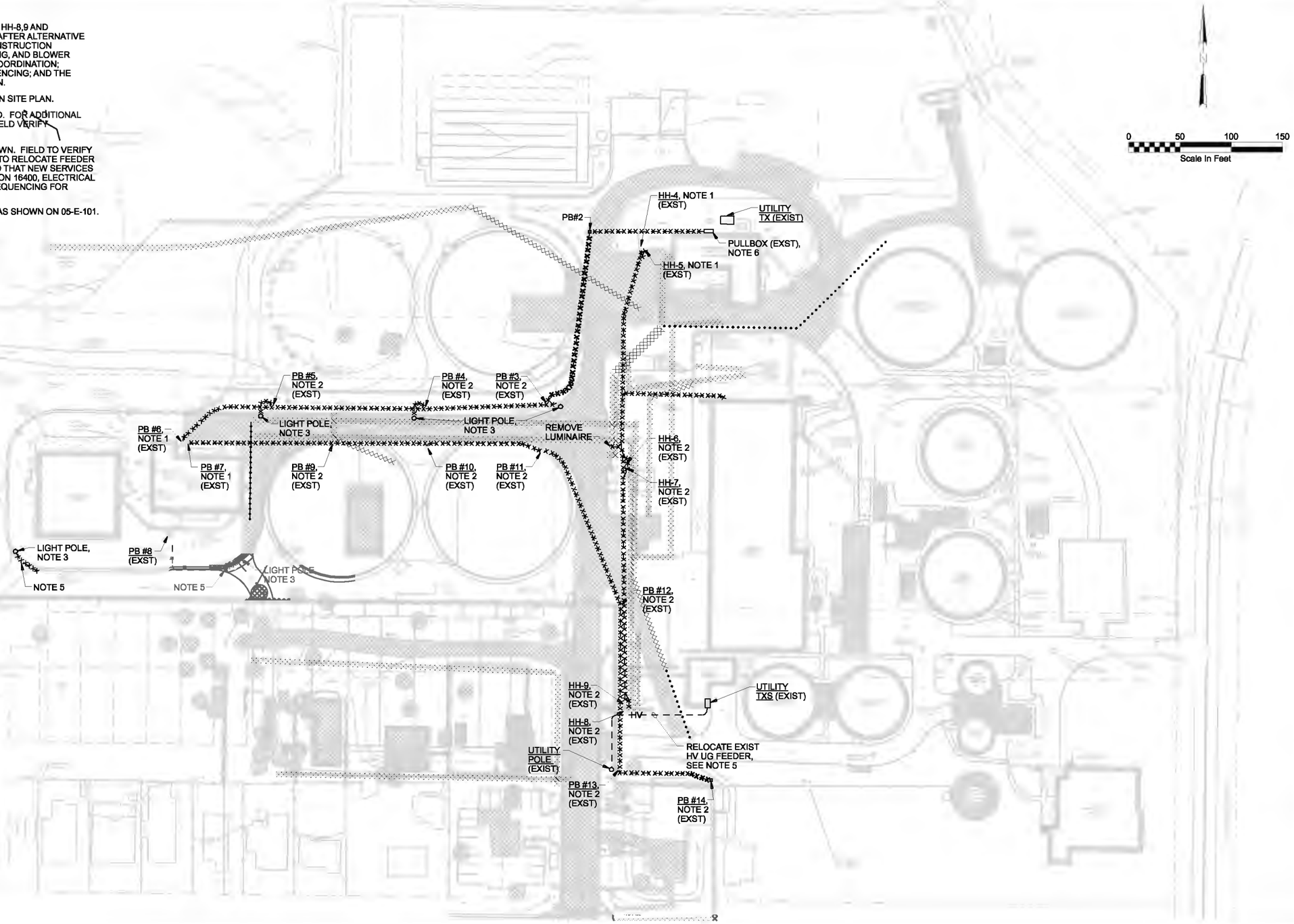
SITE DEVELOPEMENT
ELECTRICAL
SITE DETAILS AND SCHEDULES

SHEET	188
DWG	05-E-401
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ne401d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:52:27 PM

NOTES:

1. PULLBOX OR HANDHOLE TO REMAIN.
2. PULLBOXES PB 2,3,4,5,9,10,11,12,13,14 AND HANDHOLES HH-8,9 AND INTERCONNECTING DUCTBANKS ARE TO BE REMOVED AFTER ALTERNATIVE FEEDERS ARE INSTALLED AND PRIOR TO STARTING CONSTRUCTION OF THE SECONDARY CLARIFIERS, HEADWORKS BUILDING, AND BLOWER BUILDING. REFER TO SPECIFICATION SECTION 01040, COORDINATION; SPECIFICATION SECTION 01050, CONSTRUCTION SEQUENCING; AND THE ELECTRICAL SITE PLANS FOR ADDITIONAL INFORMATION.
3. RELOCATE LIGHT POLES TO NEW LOCATIONS SHOWN ON SITE PLAN.
4. A PORTION OF THE LIGHTING CIRCUITS TO BE REMOVED. FOR ADDITIONAL INFORMATION SEE SITE PLAN 05-E-103 AND 05-E-201. FIELD VERIFY DUCTBANK LOCATION.
5. APPROXIMATE LOCATION OF HV EXISTING FEEDER SHOWN. FIELD TO VERIFY EXACT LOCATION. COORDINATE WITH PACIFIC POWER TO RELOCATE FEEDER TO AN OVERHEAD SERVICE DURING CONSTRUCTION SO THAT NEW SERVICES CAN BE INSTALLED IN THIS LOCATION, SEE SPECIFICATION 16400, ELECTRICAL SERVICE REQUIREMENTS AND 1050, CONSTRUCTION SEQUENCING FOR ADDITIONAL INFORMATION.
6. WALL MOUNTED PULLBOX TO REMAIN AND BE REUSED AS SHOWN ON 05-E-101.



THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/08 BY KANDI L. MAESTRI, STATE OF OREGON, P.E. NO. 53785PE

DSGN KL MAESTRI						VERIFY SCALE
DR GJ LOVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK JB MAURAIS			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GRW	KLM	
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	
		01/20/10				

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

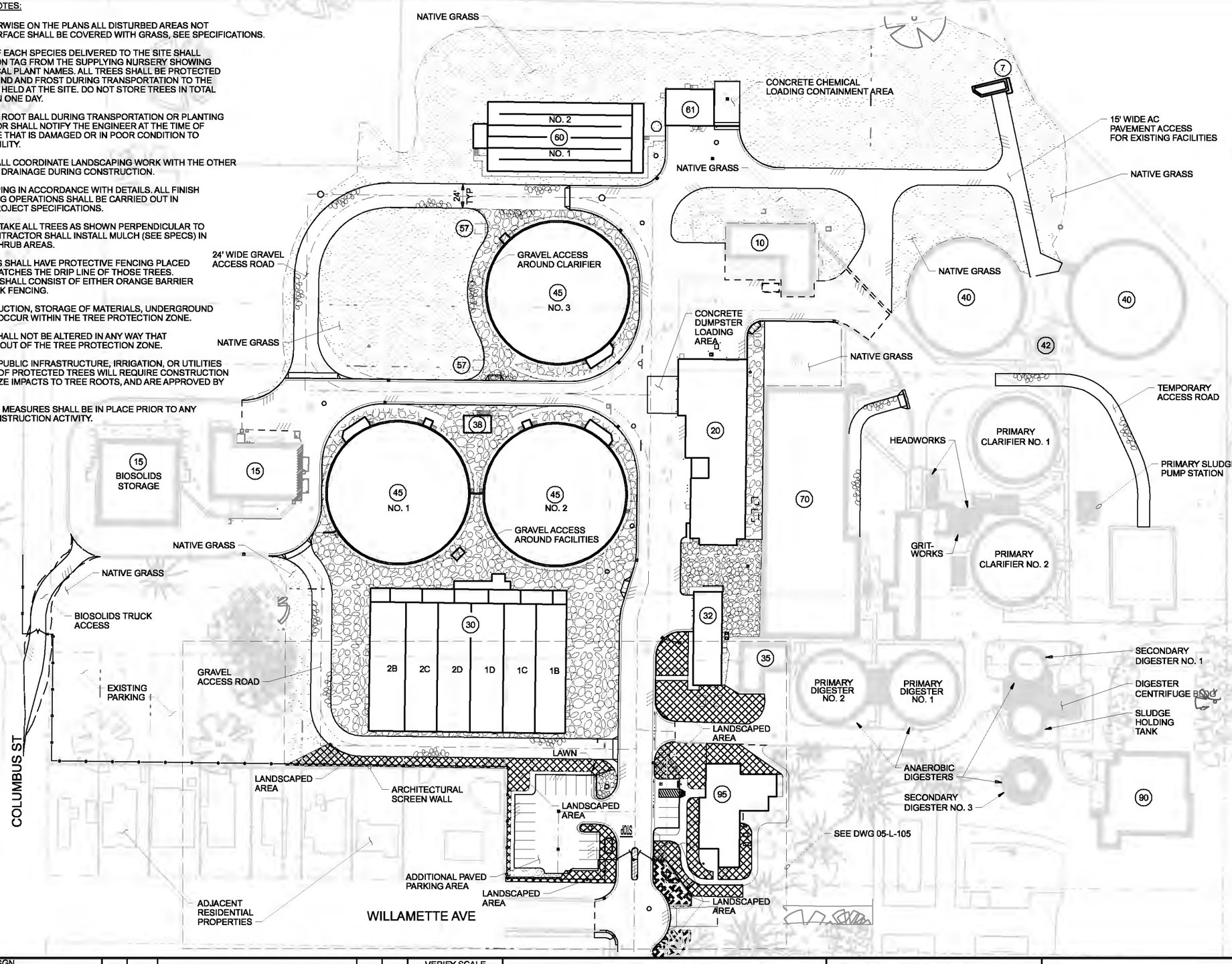
SITE DEVELOPMENT
ELECTRICAL
OVERALL DEMOLITION PLAN

SHEET	189
DWG	05-ED-100
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05ed100d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:47:55 PM

GENERAL LANDSCAPING NOTES:

1. UNLESS SHOWN OTHERWISE ON THE PLANS ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE SHALL BE COVERED WITH GRASS, SEE SPECIFICATIONS.
2. AT LEAST ONE TREE OF EACH SPECIES DELIVERED TO THE SITE SHALL HAVE AN IDENTIFICATION TAG FROM THE SUPPLYING NURSERY SHOWING COMMON AND BOTANICAL PLANT NAMES. ALL TREES SHALL BE PROTECTED AGAINST HEAT, SUN, WIND AND FROST DURING TRANSPORTATION TO THE SITE AND WHILE BEING HELD AT THE SITE. DO NOT STORE TREES IN TOTAL DARKNESS MORE THAN ONE DAY.
3. DO NOT DAMAGE TREE ROOT BALL DURING TRANSPORTATION OR PLANTING PROCESS. CONTRACTOR SHALL NOTIFY THE ENGINEER AT THE TIME OF DELIVERY OF ANY TREE THAT IS DAMAGED OR IN POOR CONDITION TO DETERMINE ACCEPTABILITY.
4. THE CONTRACTOR SHALL COORDINATE LANDSCAPING WORK WITH THE OTHER TRADES AND MAINTAIN DRAINAGE DURING CONSTRUCTION.
5. INSTALL ALL LANDSCAPING IN ACCORDANCE WITH DETAILS. ALL FINISH GRADING AND PLANTING OPERATIONS SHALL BE CARRIED OUT IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
6. CONTRACTOR SHALL STAKE ALL TREES AS SHOWN PERPENDICULAR TO PREVAILING WIND. CONTRACTOR SHALL INSTALL MULCH (SEE SPECS) IN ALL GROUND COVER SHRUB AREAS.
7. ALL PROTECTED TREES SHALL HAVE PROTECTIVE FENCING PLACED AROUND THEM THAT MATCHES THE DRIP LINE OF THOSE TREES. PROTECTIVE FENCING SHALL CONSIST OF EITHER ORANGE BARRIER FENCING OR CHAIN LINK FENCING.
8. NO GRADING, CONSTRUCTION, STORAGE OF MATERIALS, UNDERGROUND UTILITIES, ETC. SHALL OCCUR WITHIN THE TREE PROTECTION ZONE.
9. SURFACE DRAINAGE SHALL NOT BE ALTERED IN ANY WAY THAT DIRECTS WATER IN OR OUT OF THE TREE PROTECTION ZONE.
10. ANY INSTALLATION OF PUBLIC INFRASTRUCTURE, IRRIGATION, OR UTILITIES WITHIN THE DRIP LINE OF PROTECTED TREES WILL REQUIRE CONSTRUCTION METHODS THAT MINIMIZE IMPACTS TO TREE ROOTS, AND ARE APPROVED BY THE CITY FORESTER.
11. ALL TREE PROTECTION MEASURES SHALL BE IN PLACE PRIOR TO ANY EARTHMOVING OR CONSTRUCTION ACTIVITY.



FACILITIES

- (7) NEW FLOW CONTROL STRUCTURE MODIFICATIONS
- (10) EXISTING INFLUENT PUMP STATION
- (15) EXISTING BIOSOLIDS DEWATERING BUILDING AND BIOSOLIDS STORAGE FACILITY
- (20) NEW HEADWORKS
- (30) NEW VERTICAL LOOP REACTORS
- (32) NEW AERATION BLOWER BUILDING
- (35) EXISTING INTERCHANGE REACTOR BLOWER BUILDING MODIFICATIONS
- (38) NEW MIXED LIQUOR FLOW SPLIT STRUCTURE
- (40) EXISTING SECONDARY CLARIFIERS
- (42) EXISTING RAS/WAS PUMP STATION
- (45) NEW SECONDARY CLARIFIERS
- (57) NEW SECONDARY EFFLUENT JUNCTION BOXES
- (80) NEW CHLORINE CONTACT BASINS
- (81) NEW DISINFECTION BUILDING AND W3 PUMP STATION
- (70) EXISTING INTERCHANGE REACTORS /AEROBIC DIGESTERS
- (90) EXISTING OPERATIONS BUILDING
- (95) NEW CONTROL BUILDING

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60132PE.

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

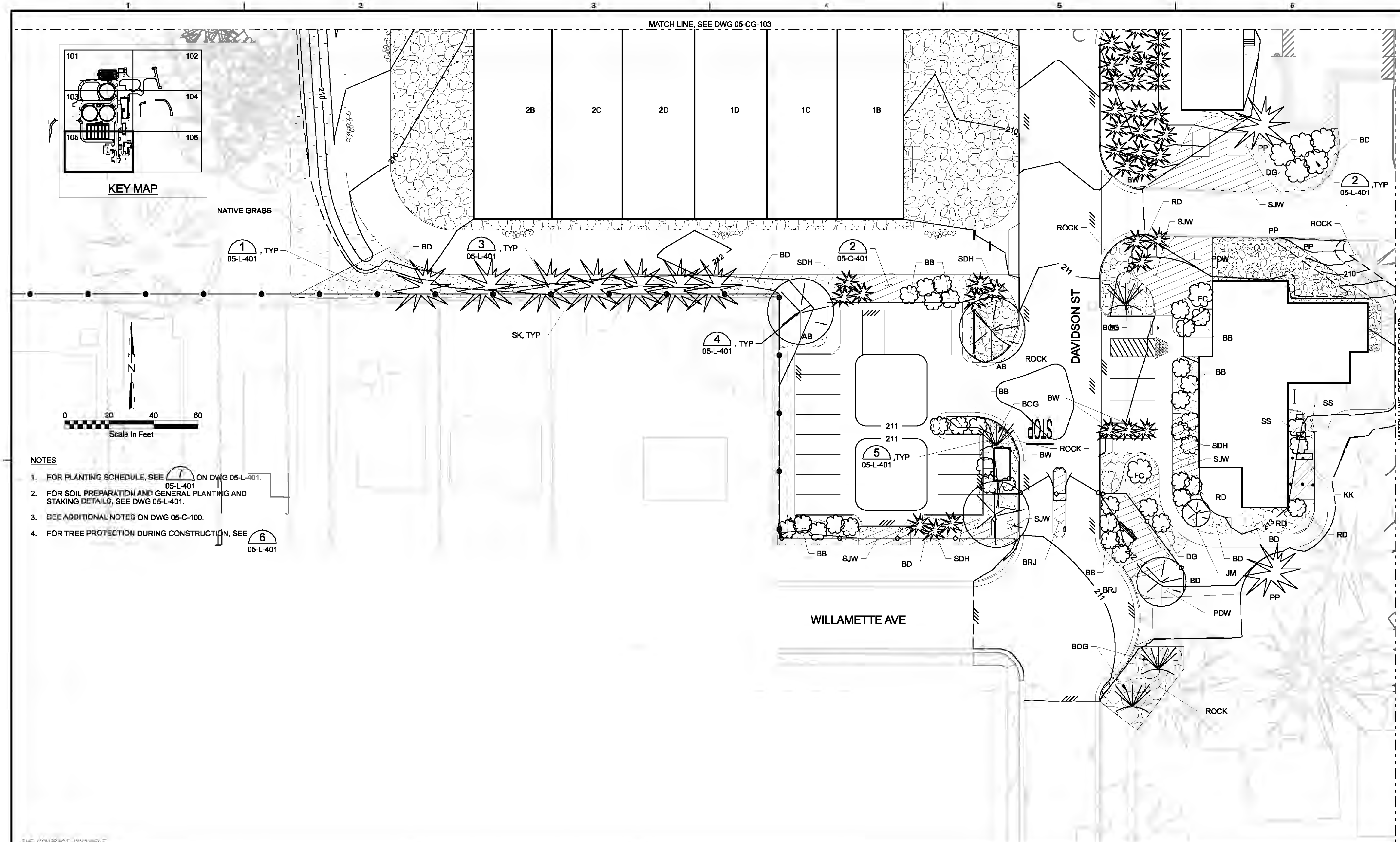
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-03-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

OVERALL LANDSCAPING PLAN

SHEET	190
DWG	05-L-100
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nl100d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:48:10 PM



NOTES

1. FOR PLANTING SCHEDULE, SEE 7 05-L-401 ON DWG 05-L-401.
2. FOR SOIL PREPARATION AND GENERAL PLANTING AND STAKING DETAILS, SEE DWG 05-L-401.
3. SEE ADDITIONAL NOTES ON DWG 05-C-100.
4. FOR TREE PROTECTION DURING CONSTRUCTION, SEE 6 05-L-401

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO.

DSGN JT ASHLEY						VERIFY SCALE
DR PA LONG						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK DJ PETERSON		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	BRP	JAB	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD CW MASSIE	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

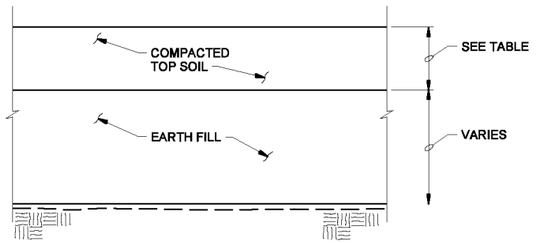
SITE DEVELOPMENT

LANDSCAPING PLAN
AREA 105

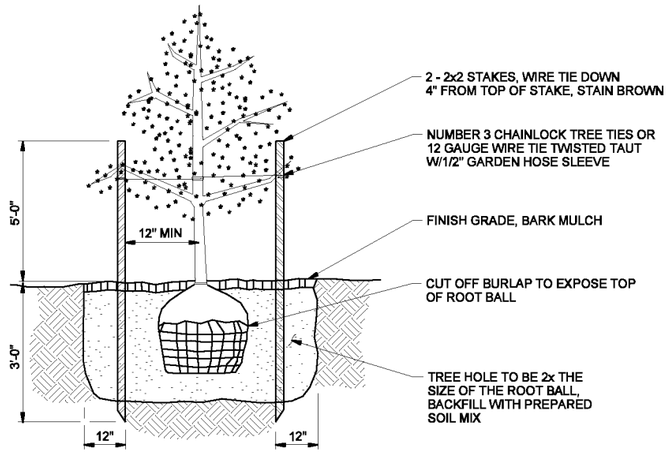
SHEET	191
DWG	05-L-105
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nl105d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:48:20 PM

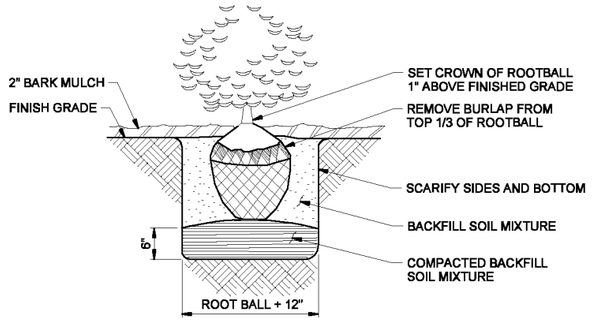
TOP SOIL DEPTHS	
APPLICATION	DEPTH
LAWN	8 INCHES
PLANTING BEDS	20 INCHES
GROUND COVERS	2 INCHES BELOW BOTTOM OF PLANT ROOTBALL
NATIVE GRASS	4 INCHES



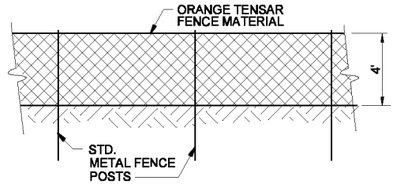
SOIL PREPARATION 1
1"=2'-0" 05-L-105



CONIFEROUS TREE PLANTING AND STAKING 3
NTS 05-L-105



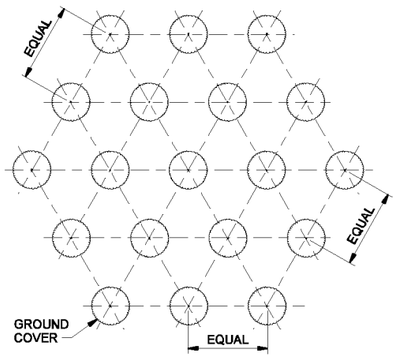
TYPICAL SHRUB PLANTING 5
NTS 05-L-105



TREE PROTECTION FENCING 6
NTS 05-L-100 05-L-105

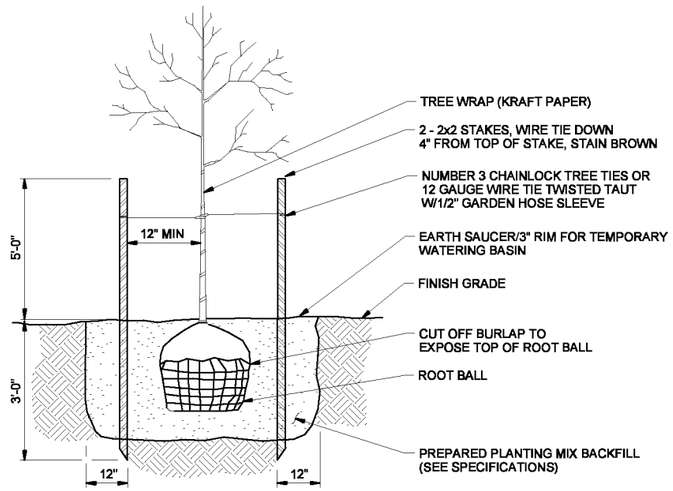
SYMBOL	KEY	BOTANNICAL NAME	COMMON NAME	SIZE / CONDITION	SPACING
TREES					
	AB	ACER AND FREEMANII	AUTUMN BLAZE MAPLE	2" CALIPER	AS SHOWN
	PR	PYRUS CALLERYANA	PEAR		
	SK				
	PP	JUNIPERUS SCOPULORUM PINUS PARDESIA	SKYROCKET PARDESIA PINE	15 GAL	AS SHOWN
	PDW	CORNUS FLORIDA	PINK DOGWOOD	2" CALIPER	AS SHOWN
	CAJM	ACER PALMATUM 'SHAINA'	SHAINA JAPANESE MAPLE	15-GAL	AS SHOWN
SHRUBS					
	FC	RIBES SANGUINEUM	FLOWERING CURRANT	5-GAL	AS SHOWN
	DG	CORNUS SERICEA	RED TWIG DOGWOOD		
	BB	CARYOPTERIS BLUEMIST	BLUEBEARD		
	BW	BUXUS	BOXWOOD GREEN BEAUTY	5-GAL	AS SHOWN
	SDH	ILEX VOMITORIA	STOKES DWARF HOLLY		
	RD	RHODODENDRON	RHOD PURPLE GEM		
SHADE PLANTS & GRASSES					
	SS	PIERIS	SPRING SNOW PIERIS	5 GAL	AS SHOWN
	BOG	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	1 GAL	AS SHOWN
GROUND COVERS					
	BD	BARK DUST	BARK DUST	BARK DUST	AS SHOWN
	ROCK	ROCK	ROCK	ROCK	AS SHOWN
	KK	ARCHTOSTAPHYLOS URA URSI	URA KINNIKINNIK	1-GAL	AS SHOWN
	BRJ/SJW	JUNIPERUS HORIZONTALIS HYPERICUM	BLUE RUG JUNIPER ST JOHNS WART	1-GAL	AS SHOWN

PLANTING SCHEDULE 7
NTS 05-L-105



1. ALL GROUND COVER SHALL BE PLANTED AT EQUAL TRIANGULAR SPACING PER ON CENTER SPACING AS SPECIFIED ON PLANTING PLAN.
2. LOCATE GROUND COVER ONE HALF OF SPECIFIED SPACING DISTANCE FROM ANY CURB, SIDEWALK, OF OTHER HARD SURFACE, UNLESS OTHERWISE SPECIFIED.

TYPICAL TYPICAL GROUND COVER PLANTING 2
NTS 05-L-105



DECIDUOUS TREE PLANTING AND STAKING 4
NTS 05-L-105

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY JOHN T. ASHLEY, STATE OF OREGON, P.E. NO. 60132PE.

DSGN	JT ASHLEY						VERIFY SCALE
DR	SR REDDELL						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	DJ PETERSON						
APVD	CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	JAB	
		NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

SITE DEVELOPMENT

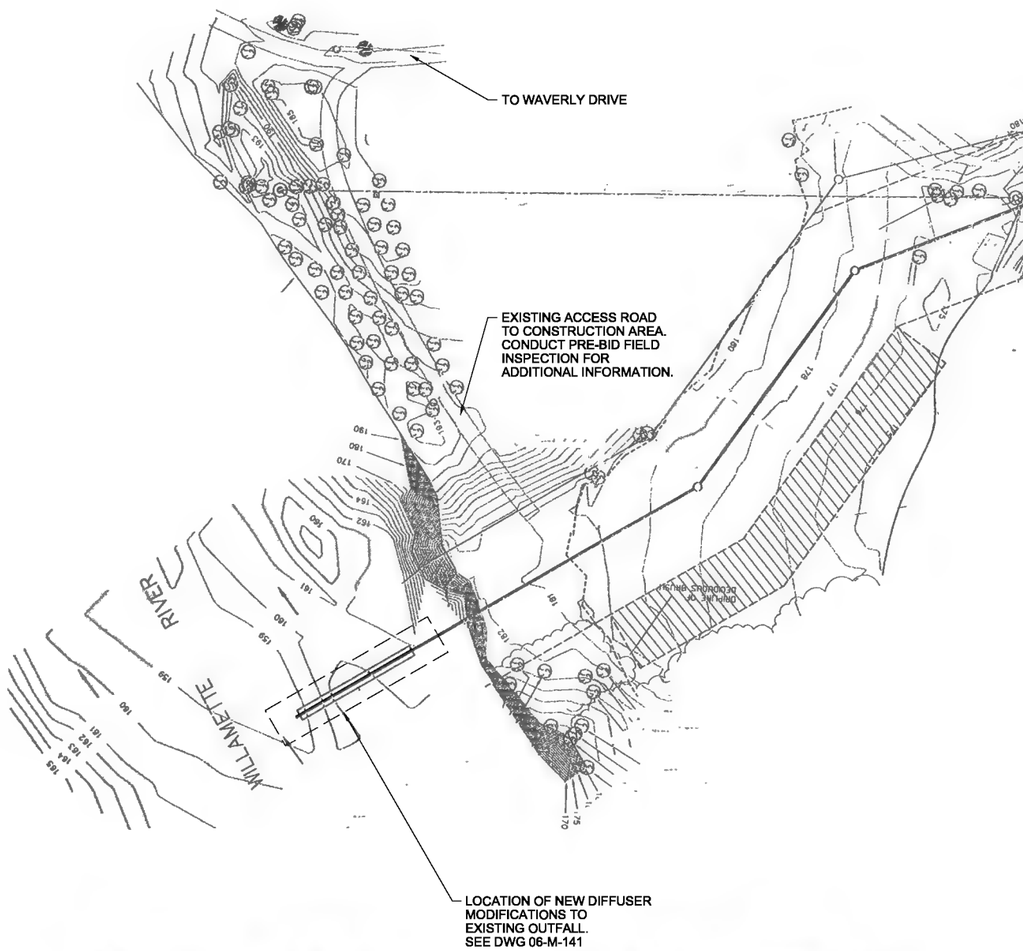
LANDSCAPE DETAILS

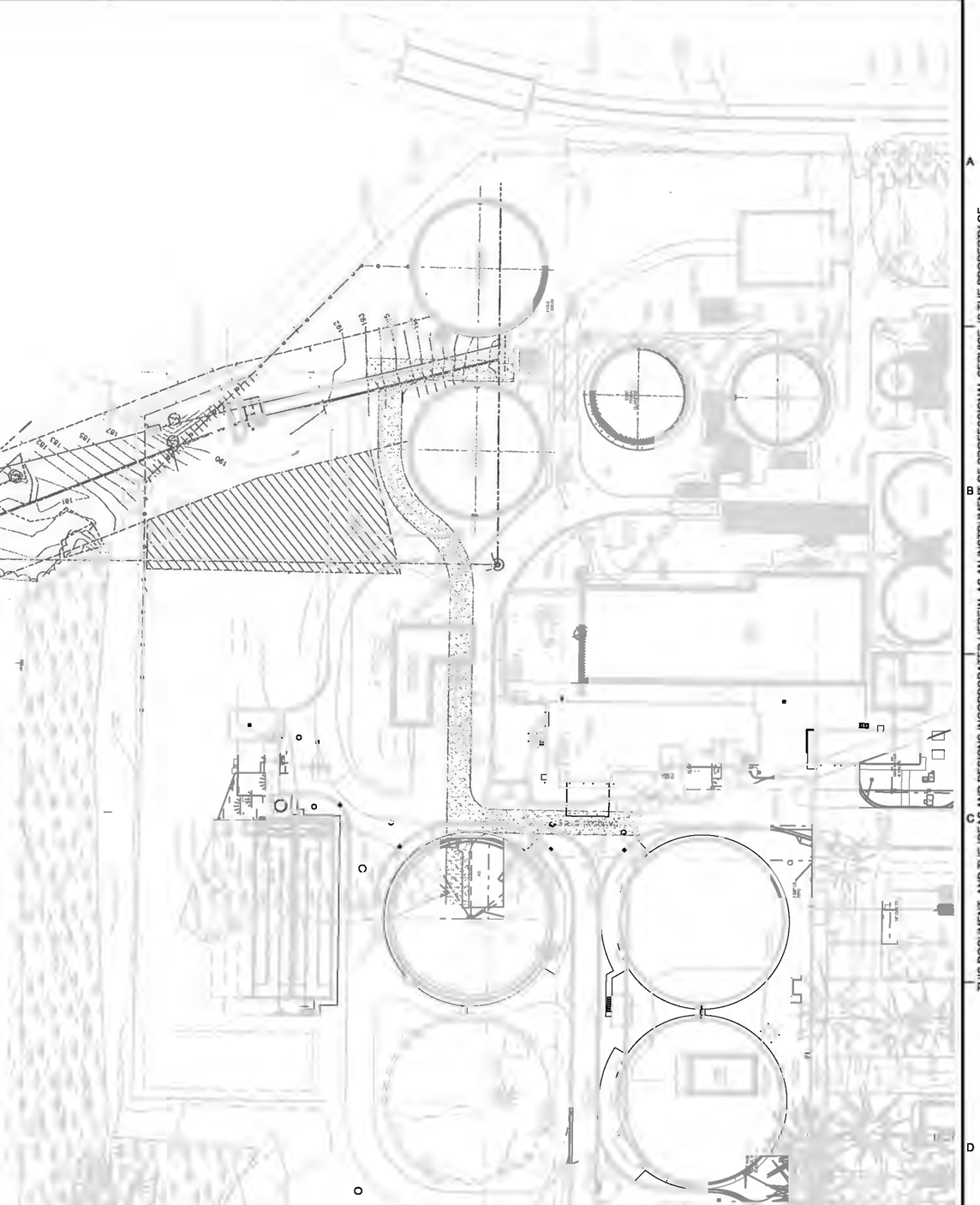
SHEET	192
DWG	05-L-401
DATE	MAY 19 2006
PROJ	326918

FILENAME: 05nl401d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 3:48:25 PM

1"=50'±

NOTE:
SCREENED INFORMATION INCLUDES AS-BUILTS FROM 1996 IMPROVEMENTS AND IMPROVEMENTS AS PART OF THIS CONTRACT.





THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY RICHARD S. SHANLEY, STATE OF OREGON, P.E. NO. 18933.

DSGN	M KATALINICH					VERIFY SCALE
DR	MJ GABEL					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	TR TEKIPPE			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	KGK
APVD	RS SHANLEY	1	01/20/10			
		NO.	DATE	REVISION	BY	APVD

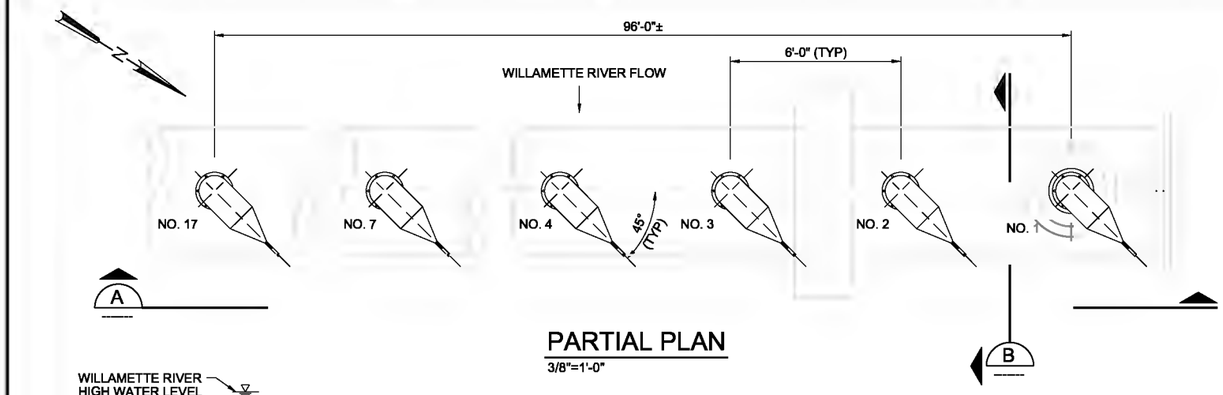
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

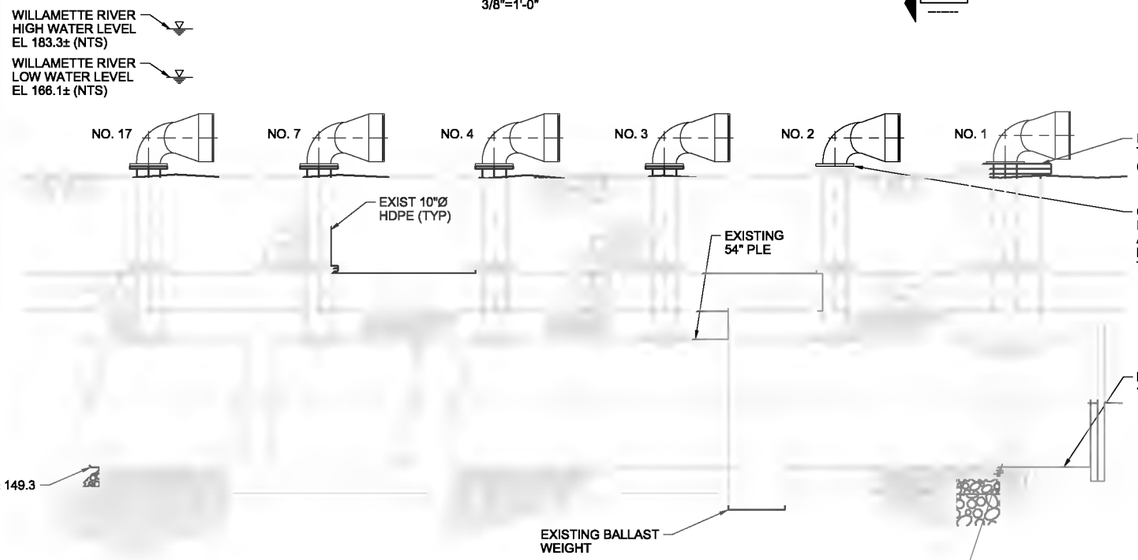
OUTFALL MODIFICATIONS
OUTFALL SYSTEM PLAN

SHEET	193
DWG	06-M-131
DATE	MAY 19 2006
PROJ	326918

FILENAME: 06xm131d_326918.dgn PLOT DATE: 5/7/2010 PLOT TIME: 4:34:56 PM

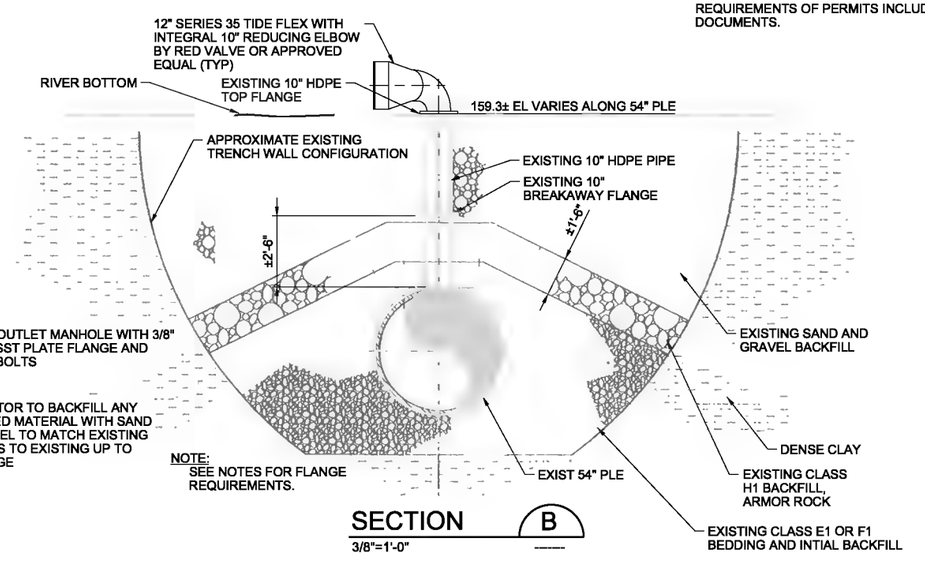


PARTIAL PLAN
3/8"=1'-0"



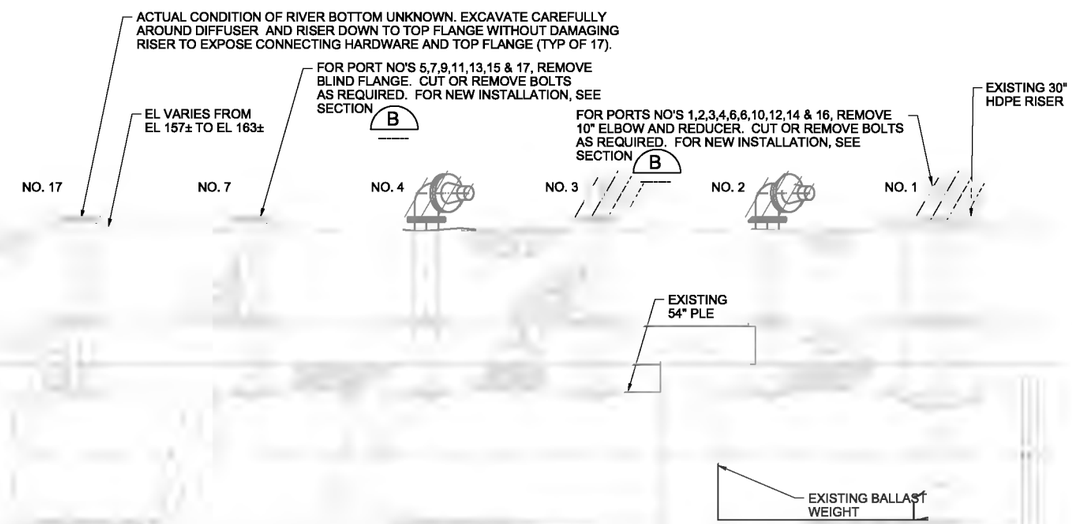
SECTION A
3/8"=1'-0"

NOTES:
1. DIFFUSER REDUCING ELBOW SHALL BE FABRICATED AS SINGLE INTEGRAL UNIT AS SPECIFIED. INSTALL 17 UNITS.
2. EXISTING BREAKAWAY FLANGE DRILLING AND BOLTING AS FOLLOWS: 10" PIPE - (4) 1/2" DIA BOLTS. CONNECT NEW DIFFUSERS WITH MIN (4) 1/2" DIA, 316 SST BOLTS. COORDINATE EXISTING HDPE BOLT PATTERN WITH MFR SUPPLIED DIFFUSER BOLT PATTERN.
3. ALL FLANGES SHALL HAVE TYPE 316 SST BOLTS AND BACKING RINGS
4. CONTRACTOR TO PERFORM WORK ACCORDING TO REQUIREMENTS OF PERMITS INCLUDED WITH CONTRACT DOCUMENTS.



NOTE:
SEE NOTES FOR FLANGE REQUIREMENTS.

SECTION B
3/8"=1'-0"



DEMOLITION SECTION A
3/8"=1'-0"

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED MAY 2006 BY RICHARD S. SHANLEY, STATE OF OREGON, P.E. NO. 18933.

DSGN	ENGINEER					VERIFY SCALE
DR	DRAWN-BY					BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	CHECKED-BY					
APVD	APPROVED-BY					
		NO.	DATE	REVISION	BY	APVD
			01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GTM	KGK

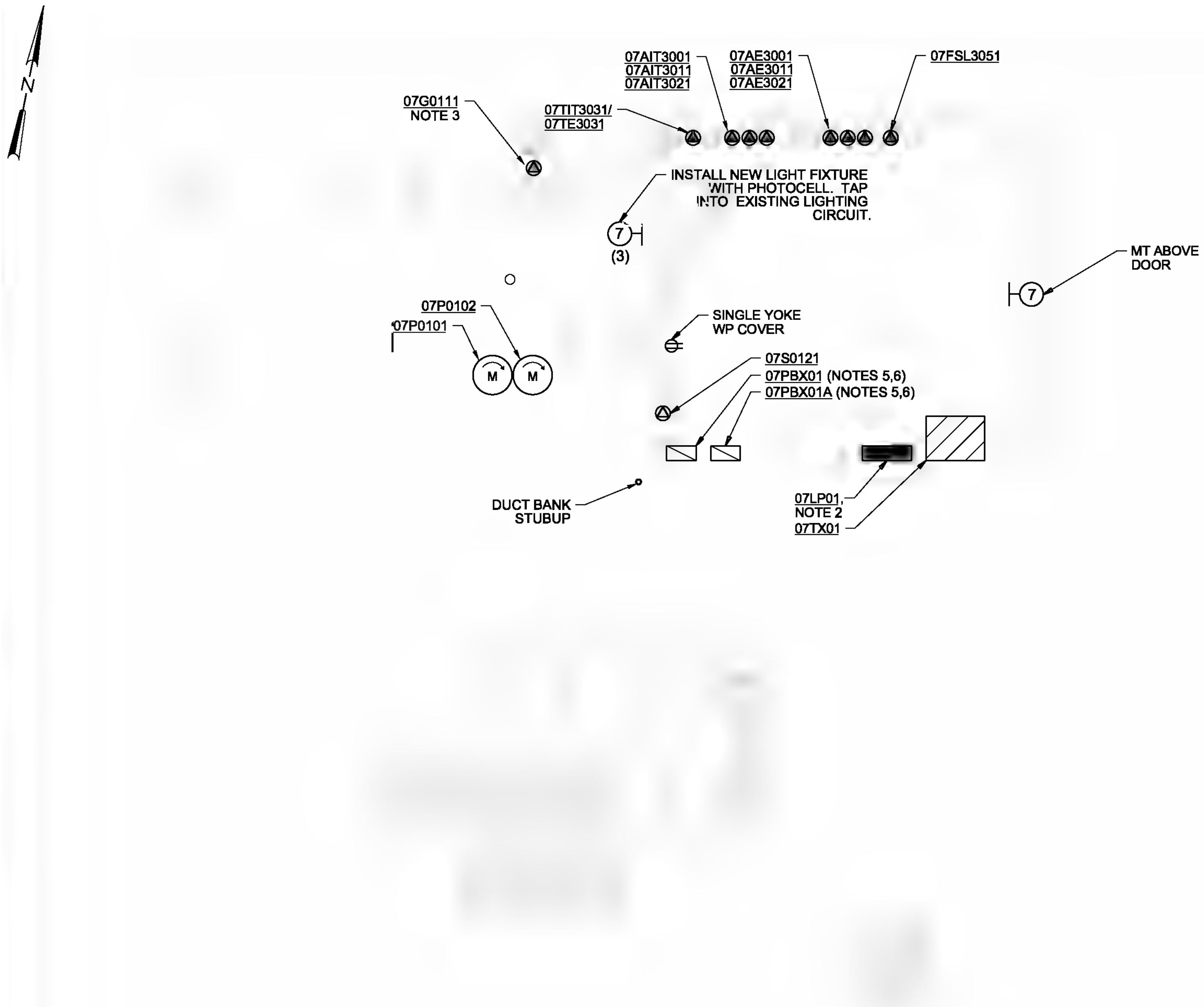
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

OUTFALL MODIFICATIONS
DIFFUSER PLANS, DETAILS AND DEMOLITION

SHEET	194
DWG	60-M-141
DATE	CDD-DATE
PROJ	326918

FILENAME: 06xm141d_326918.dgn PLOT DATE: 5/7/2010 PLOT TIME: 4:42:57 PM



TOP PLAN

3/8"=1'-0"

NOTES:

1. FIELD ROUTE CONDUITS PER RISER DIAGRAMS.
2. CONNECT 07LP01 GROUND TO STRUCTURE GROUND.
3. MOTOR RATED SWITCHES ARE REQUIRED FOR ALL GATES PER (16500)
4. 07TX01, 07LP01, LIGHTS, AND RECEPTACLES ARE PROVIDED WITH THE BUILDING.
5. SIZE PULLBOXES PER NEC REQUIREMENTS.
6. PROVIDE PVC COATED RIGID STEEL CONDUIT BETWEEN THE PULLBOXES AND THE UNDERGROUND HORIZONTAL PVC CONDUIT RUN. PROVIDE PVC COATED RIGID STEEL ELBOWS WHERE THE CONDUITS STUB UP.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY GREG BEBOIS STATE OF OREGON, P.E. NO. 77671.

(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)
AS-BUILT

NO.	DATE	REVISION	BY	APVD
		AS-BUILT	GPW	KLM

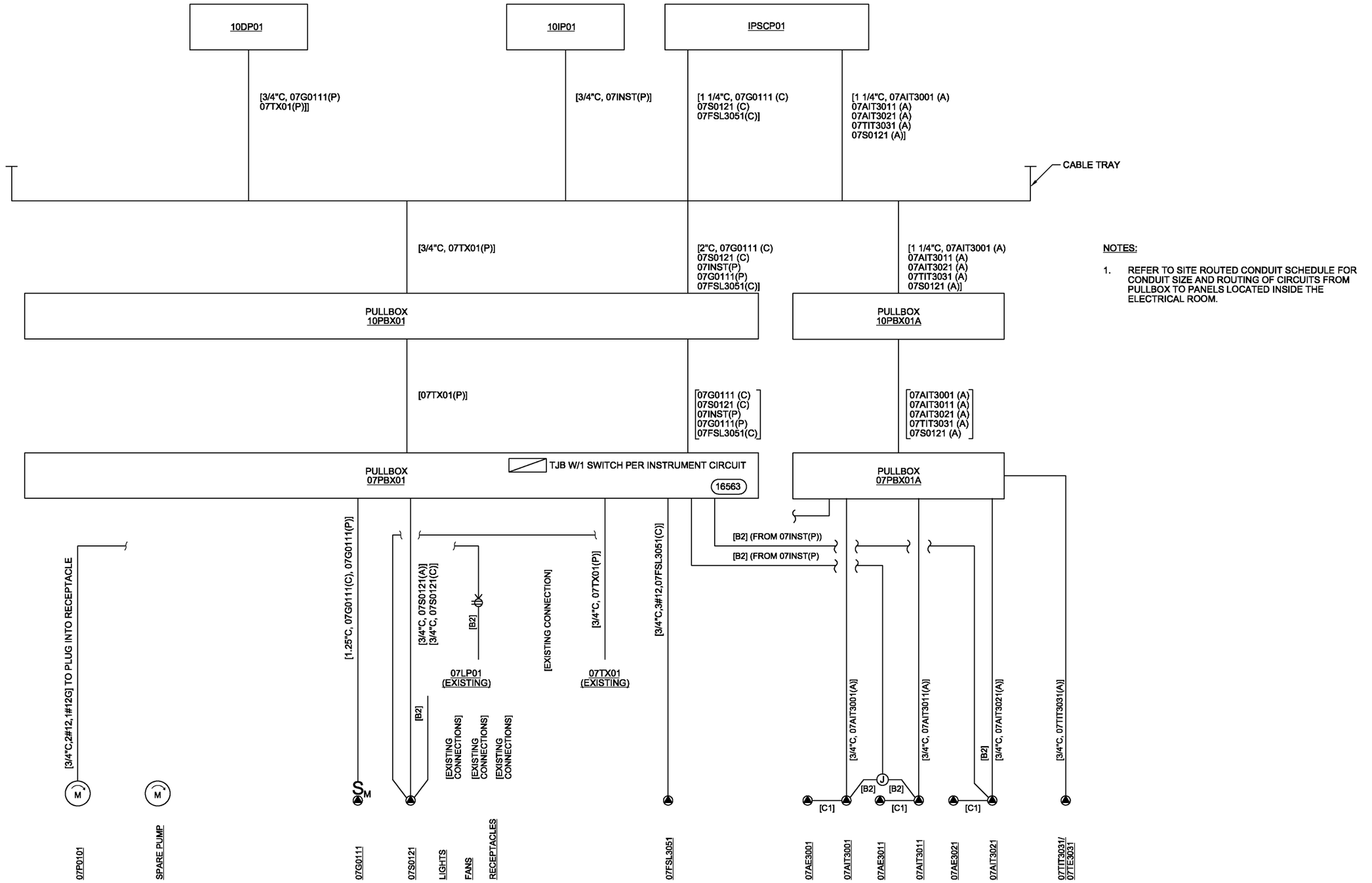
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 — 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

FLOW CONTROL STRUCTURE MODIFICATIONS
PROCESS AND FCAILITY PLANS

SHEET	195
DWG	07-E-141
DATE	MAY 19 2006
PROJ	326918



NOTES:

1. REFER TO SITE ROUTED CONDUIT SCHEDULE FOR CONDUIT SIZE AND ROUTING OF CIRCUITS FROM PULLBOX TO PANELS LOCATED INSIDE THE ELECTRICAL ROOM.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY GREG BEBOIS STATE OF OREGON, P.E. NO. 77671.

DSGN	BR RODGERS				
DR	RB CAVE				
CHK	GJ DeBOIS				
APVD	RS SHANLEY				
NO.	DATE	REVISION	GRW BY	KLM APVD	
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

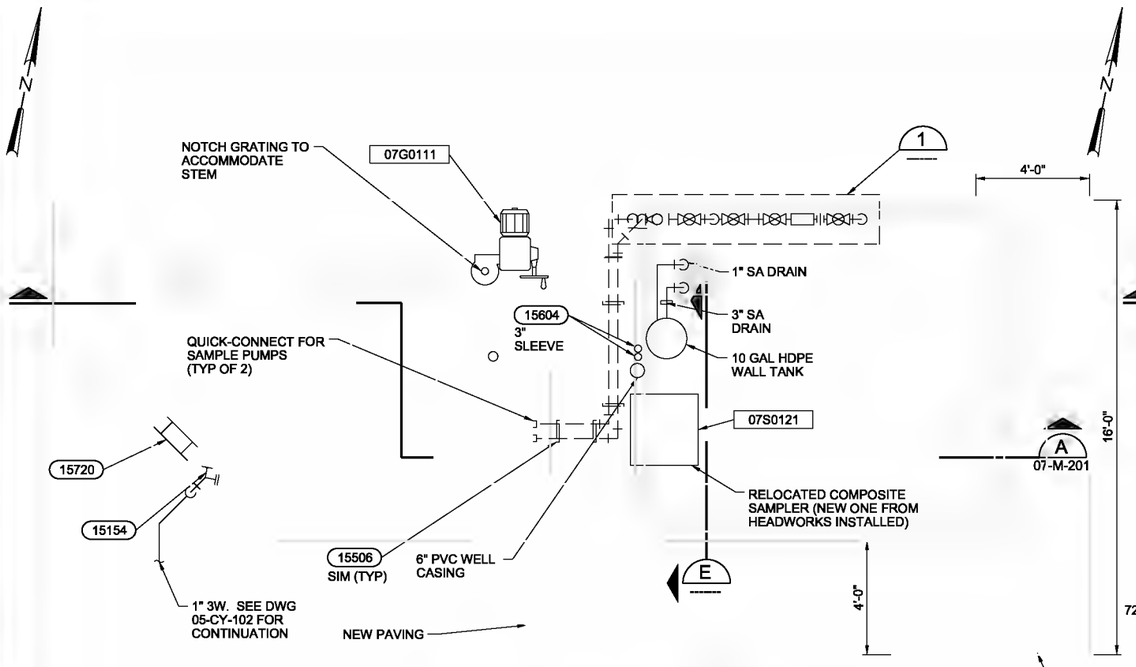
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

FLOW CONTROL STRUCTURE MODIFICATIONS

RISER DIAGRAM

SHEET	196
DWG	07-E-501
DATE	MAY 19 2006
PROJ	326918

FILENAME: 07ne501d_326918.dgn PLOT DATE: 5/10/2010 PLOT TIME: 12:41:58 PM

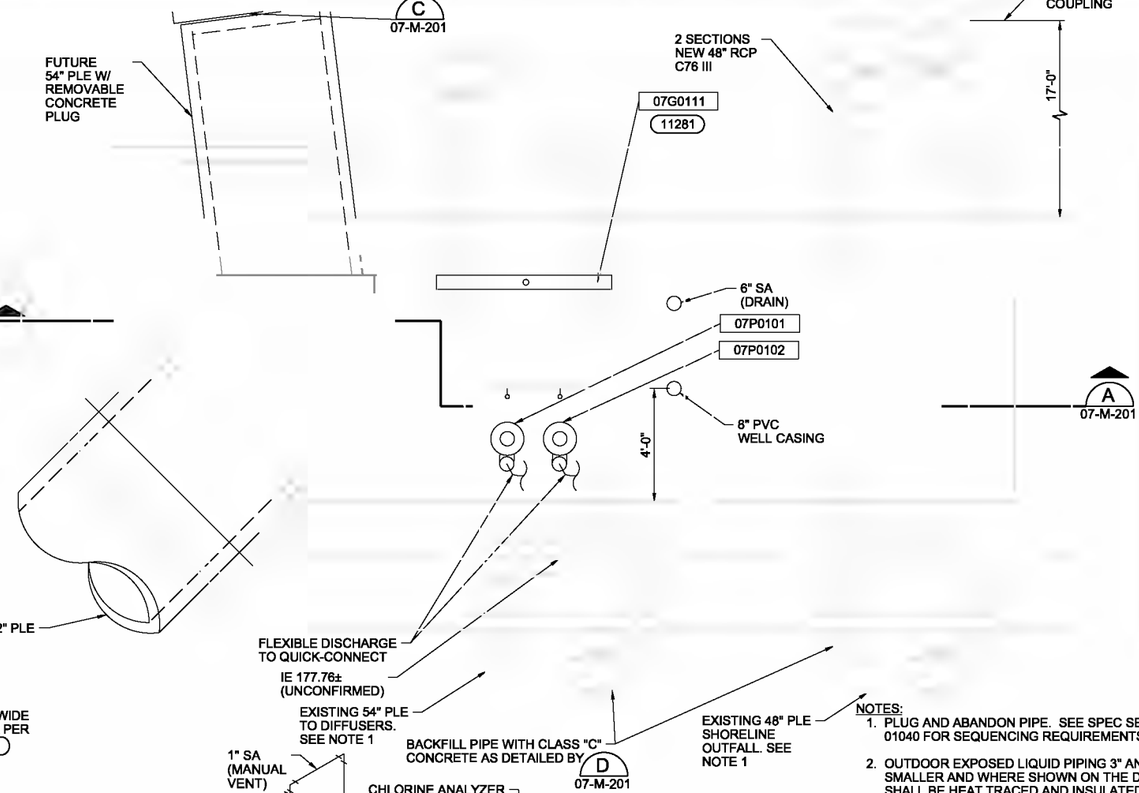


TOP PLAN

3/8"=1'-0"

DEMOLISH EXISTING FLOW CONTROL STRUCTURE. SEE DWG 07-S-141

NEW 4'-0" WIDE SIDEWALK PER TYP 2010

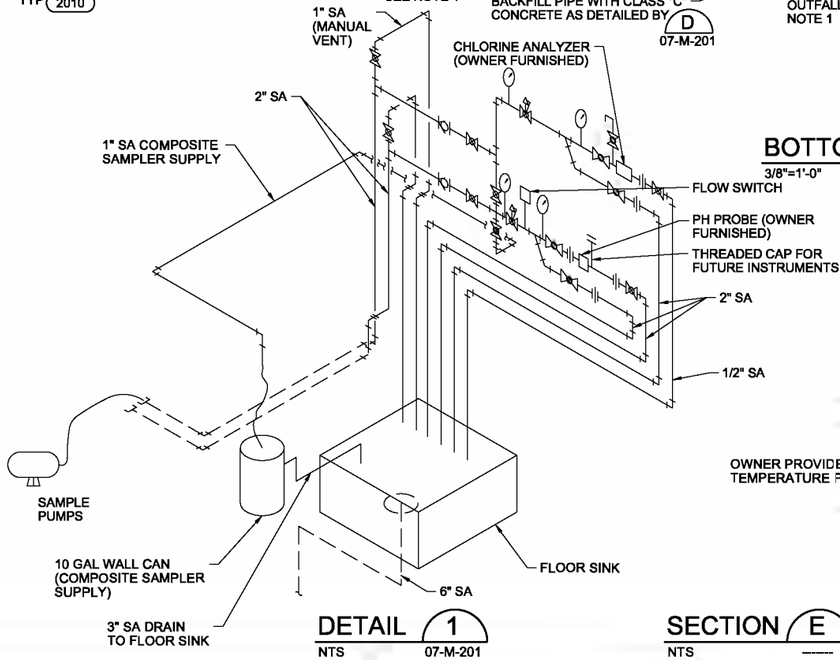


NOTES:

1. PLUG AND ABANDON PIPE. SEE SPEC SECTION 01040 FOR SEQUENCING REQUIREMENTS.
2. OUTDOOR EXPOSED LIQUID PIPING 3" AND SMALLER AND WHERE SHOWN ON THE DRAWINGS SHALL BE HEAT TRACED AND INSULATED AS SPECIFIED IN SECTION 15085, MECHANICAL THERMAL INSULATION SYSTEMS, AND IN SECTION 16055, PIPE HEAT TRACING.
3. OUTDOOR EXPOSED LIQUID PIPING 6" AND SMALLER AND WHERE SHOWN ON THE DRAWINGS SHALL BE INSULATED AS SPECIFIED IN SECTION 15085, MECHANICAL THERMAL INSULATION SYSTEMS.

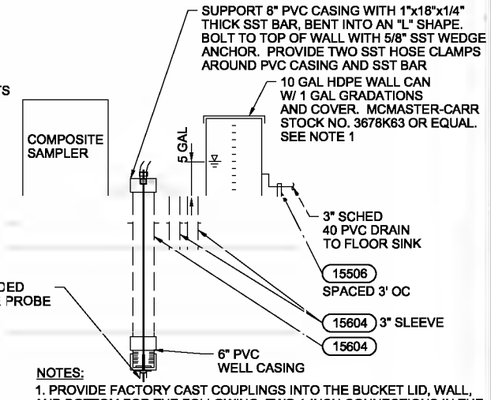
BOTTOM PLAN

3/8"=1'-0"



DETAIL 1

NTS 07-M-201



NOTES:

1. PROVIDE FACTORY CAST COUPLINGS INTO THE BUCKET LID, WALL, AND BOTTOM FOR THE FOLLOWING: TWO 1-INCH CONNECTIONS IN THE LID FOR FLEXIBLE SA TUBING CONNECTIONS, ONE 3-INCH CONNECTION IN THE WALL WITH ITS INVERT AT THE 5-GALLON ELEVATION FOR THE OVERFLOW LINE TO THE FLOOR SINK, AND ONE 1-INCH CONNECTION AT THE BOTTOM. INSTALL 1" PVC TRUE UNION BALL VALVE IN THE 1" DRAIN LINE. INSTALL 3" PVC UNION IN THE OVERFLOW LINE.

SECTION E

NTS

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY THOMAS S. SHANLEY STATE OF OREGON, P.E. NO. 18,933.

DSGN	M.HATALINICH					VERIFY SCALE
DR	MJ GAGE					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	TR THORPE					IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	RS SHANLEY	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	BRK	AGC	
	NO.	DATE	REVISION	BY	APVD	

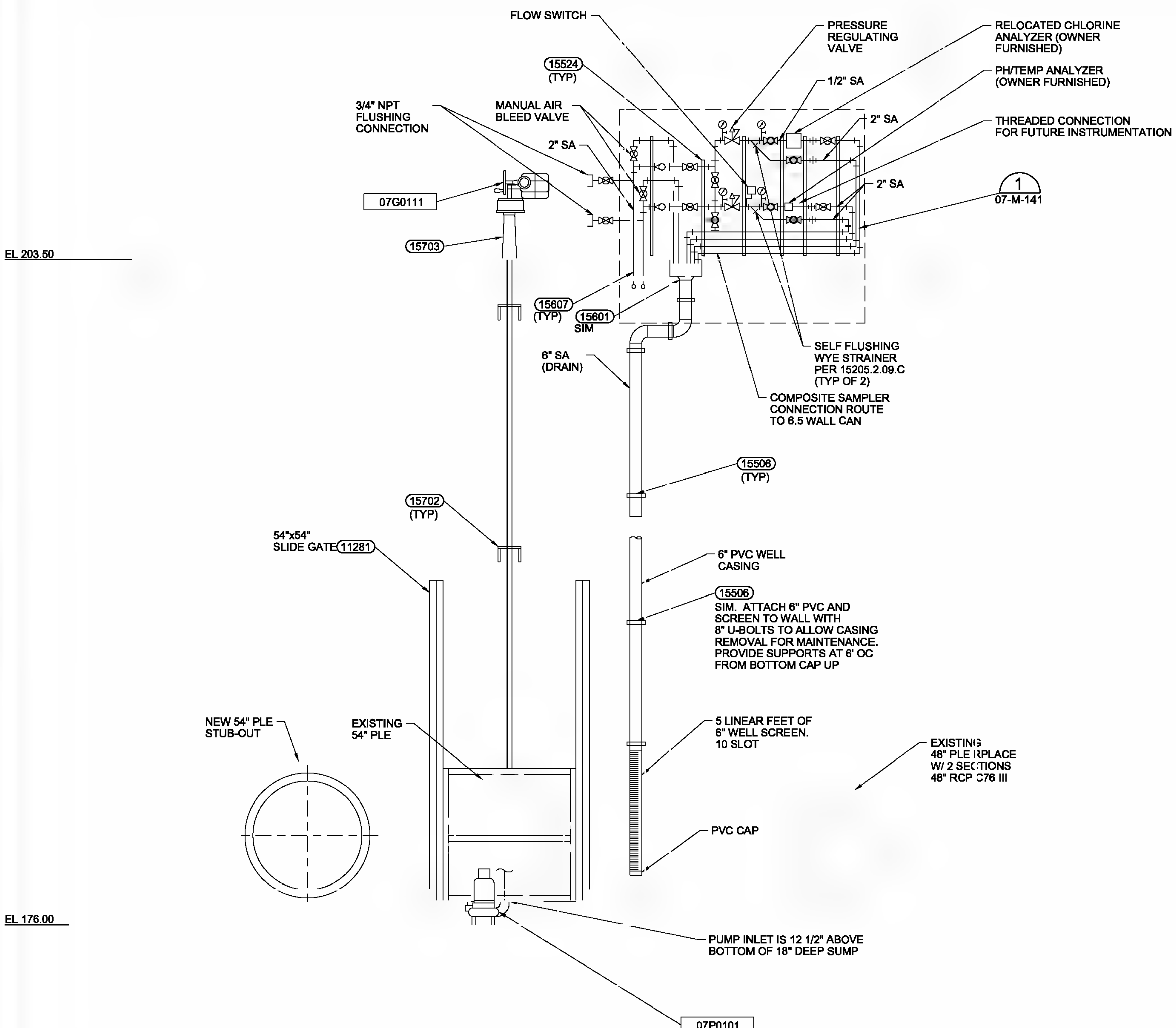
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

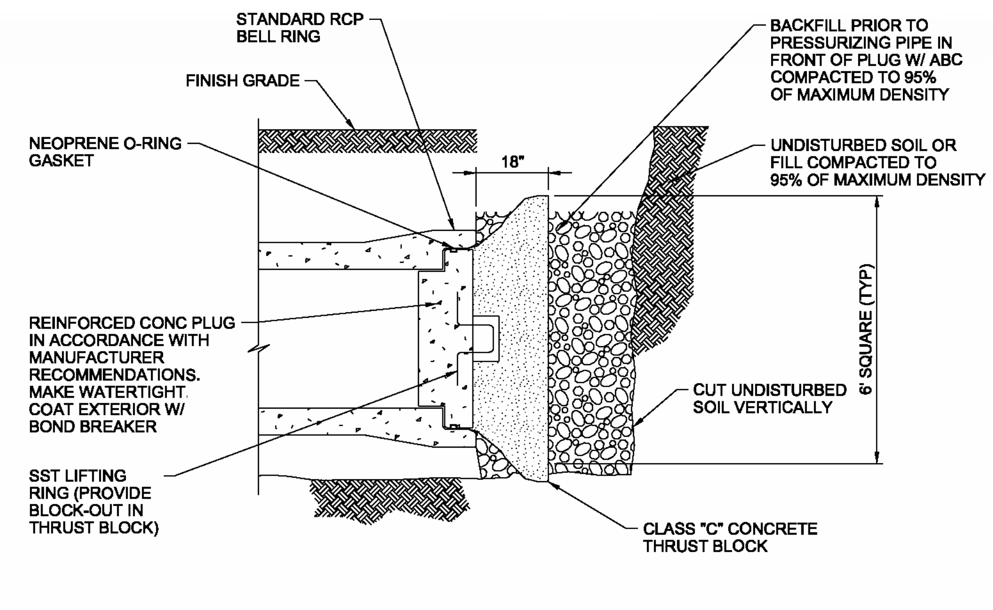
FLOW CONTROL STRUCTURE
PLANS

SHEET	197
DWG	70-M-141
DATE	MAY 19 2006
PROJ	326918

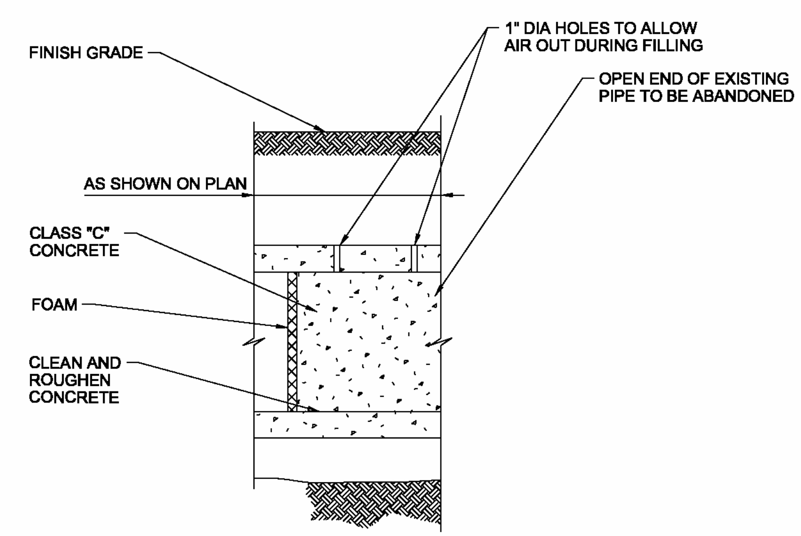
FILENAME: 07sm141d_326918.dgn PLOT DATE: 6/10/2010 PLOT TIME: 12:48:25 PM



SECTION A
3/8"=1'-0" 07-M-141



DETAIL C
NO SCALE 07-M-141



DETAIL D
NO SCALE 07-M-141

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY SHANLEY STATE OF [illegible], P.E. NO. 18,933.

(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)
AS-BUILT

BRK AGC

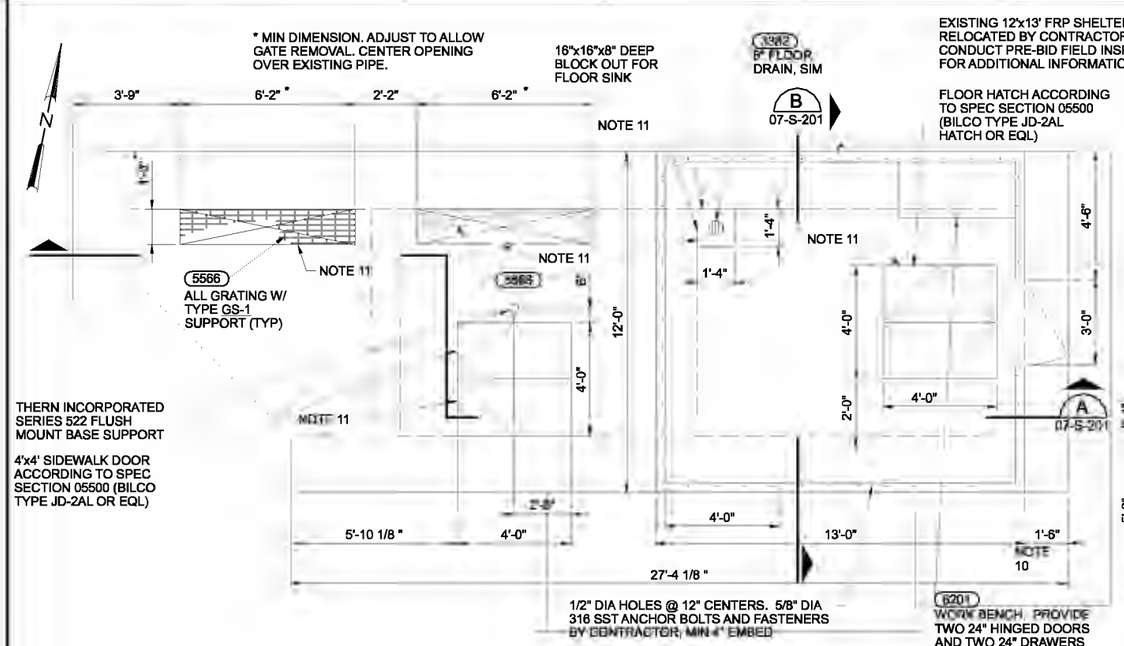
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

FLOW CONTROL STRUCTURE MODIFICATIONS
SECTIONS AND DETAILS

SHEET	198
DWG	07-M-201
DATE	MAY 19 2006
PROJ	326918

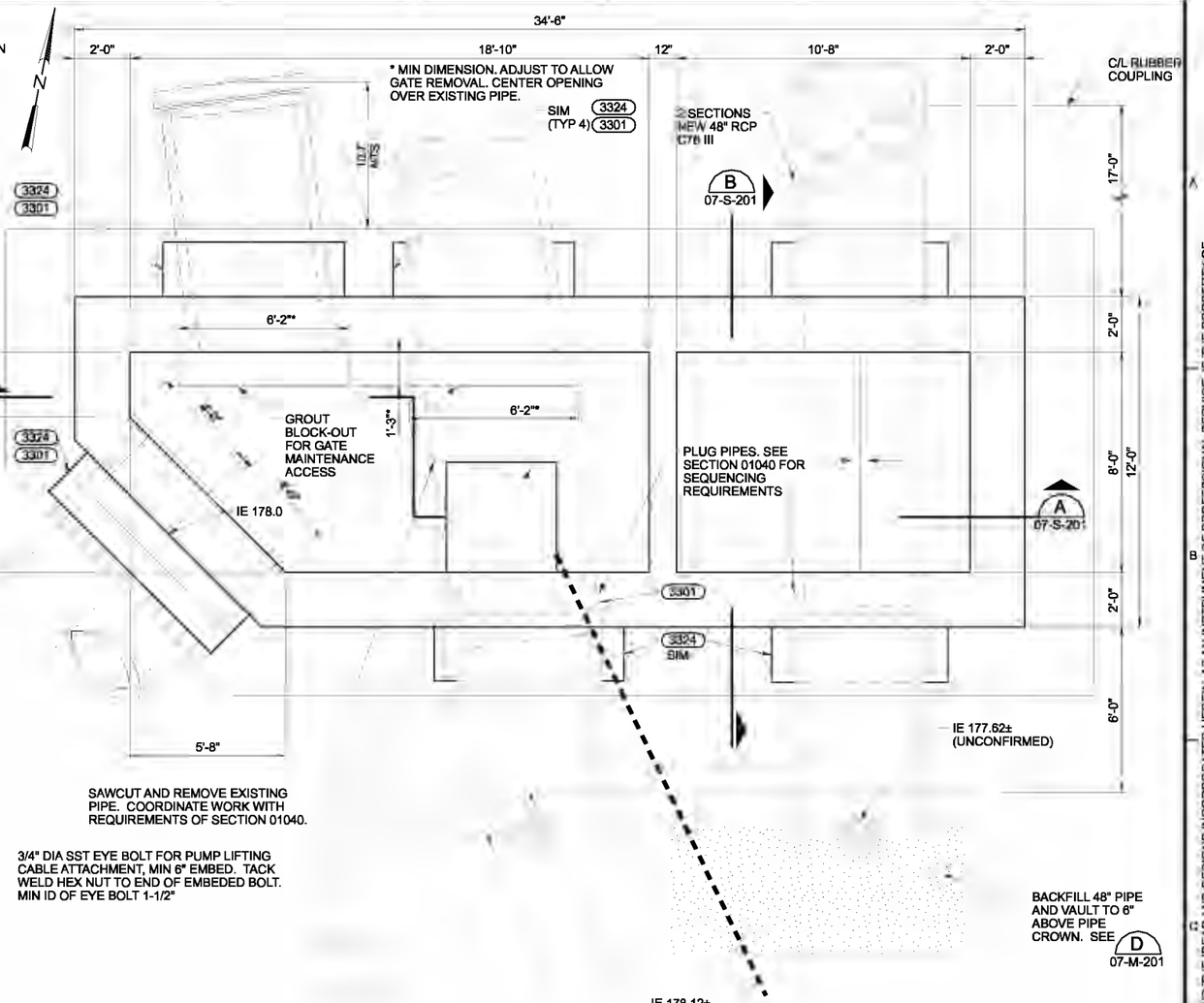


NOTES:

1. PROVIDE TWO 8" DIAMETER DRAIN HOLES AT EACH EXTERIOR CORNER OF THE STRUCTURE AT THE TOP OF CONCRETE FILL.
2. REMOVE ALL CONCRETE TO A MINIMUM 3' BELOW FINISHED GRADE.
3. SEE SECTION 01040 FOR SEQUENCING REQUIREMENTS.
4. FILL STRUCTURE AS REQUIRED TO ACCOMMODATE FINISHED GRADES PER SPECIFICATION SECTION 02316.
5. REMOVE GATE AS NOTED, SAMPLING EQUIPMENT, AND ALL RELATED PIPING AND SUPPORTS. REUSE EQUIPMENT AS NOTED. VERIFY WITH OWNER PRIOR TO EQUIPMENT DISPOSAL.
6. SCALES SHOWN ARE APPROXIMATE. CONDUCT PRE-BID FIELD INSPECTION FOR ADDITIONAL INFORMATION.
7. PROVIDE COMPLETE ELECTRICAL DEMO. ALL MOTORS, CONTROL PANELS, CONDUIT, AND INSTRUMENTATION NOT SHOWN. CONDUCT PRE-BID FIELD INSPECTION FOR ADDITIONAL INFORMATION.
8. REMOVE PICKET HANDRAIL AROUND PERIMETER OF STRUCTURE.
9. REMOVE WOOD SHED. CONDUCT PRE-BID FIELD INSPECTION FOR ADDITIONAL INFORMATION.
10. APPROXIMATE DIMENSION. LOCATE SHELTER TO ACCOMMODATE HATCH OPENING, PIPE PENETRATIONS, AND MIN 4" EDGE DISTANCE ON ANCHOR BOLTS.
11. 3301 AROUND OPENING.

TOP PLAN

3/8"=1'-0"



BOTTOM PLAN

3/8"=1'-0"

NOTE:

1. FOR STRUCTURAL NOTES, SEE DRAWINGS 01-G-09 AND 01-G-10.

DSGN	KA MARTIN
DR	MJ GABEL
CHK	CA GENTRY
APVD	RS SHANLEY

NO.	DATE	REVISION	BRK	AGC
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT		

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

FLOW CONTROL STRUCTURE MODIFICATIONS
PLANS

SHEET	199
DWG	07-S-141
DATE	MAY 19 2006
PROJ	326918

FILENAME: 07s141d_326918.dgn PLOT DATE: 3/26/2010 PLOT TIME: 4:02:20 PM

12'x13' RELOCATED FROM EXISTING SECONDARY CLARIFIER/CHLORINE CONTACT BASIN NO.2. FOR ADDITIONAL INFORMATION, SEE 1 / 07-S-401

THERN INCORPORATED SERIES 5122 PORTABLE DAVIT CRANE

SST EYE BOLT FOR PUMP LIFTING CABLE

DAVIT CRANE BASE SUPPORT

16"x16"x8" FLOOR SINK (BLOCK-OUT CONCRETE)

3341 (AROUND SINK)

#6@ 12" EW T&B

SEE DWG O5-CG-102 FOR GRADING CONTOURS

LAP SPLICE

EL 203.50

12"

#7@12" LONG EF W/ MATCHING DOWELS

#5 SIDE BAR (TYP)

3341 #3 STIRRUPS @ 9" (TYP)

3-#6 TOP AND BOTT (TYP)

2-#6 EF AROUND PERIMETER OF SLAB

8'-6" 12" 9'-4" 12" 1'-4"

#6@6" EF

6"

EL 194.82

6"

#6@6" EF

#6@12" EF WITH MATCHING DOWELS

#7@12" SHORT EF WITH MATCHING DOWELS, ALT W/ #7 LONG

STUB OUT FOR FUTURE 54" PLE. IE = 177.5

EXISTING 54" PLE IE 177.3± (UNCONFIRMED)

EXISTING 48" PLE IE +/- 176.8 (UNCONFIRMED)

GROUT BOTTOM TO PIPE INVERTS (TYP)

3378 (TYP)

EL 177.50 (TYP)

2'-6" (TYP)

10'-0"

EL 176.00 SEE NOTE 2

2'-6"

#7@6" EW, TOP & BOT

6" AGGR BASE ON COMPACTED NATIVE SOIL

SECTION A

3/8"=1'-0" 07-S-141

NOTE:
1. SEE SECTION 01040 AND 01050 FOR SEQUENCING REQUIREMENTS.
2. LOWER AS REQUIRED TO CONSTRUCT PIPE WALL PENETRATION AND GATE PER TYP 11281 AND 3324.

6811 WORK BENCH

LAP SPLICE

EL 203.50

12"

#6@12"EW, TOP & BOT

#7@12" LONG EF W/ MATCHING DOWELS

#6@6" EF

SLOPE GROUT TO PIPE INV

IE 176.8 +/- (UNCONFIRMED)

SAWCUT AND REMOVE EXISTING PIPE SEE NOTE 1.

#7@12" SHORT EF W/ MATCHING DOWELS

IE 177.3 +/- (UNCONFIRMED)

10'-0"

EL 176.00

2'-6"

3164

#7@6" EW, TOP & BOT

6" AGGR BASE ON COMPACTED NATIVE SOIL

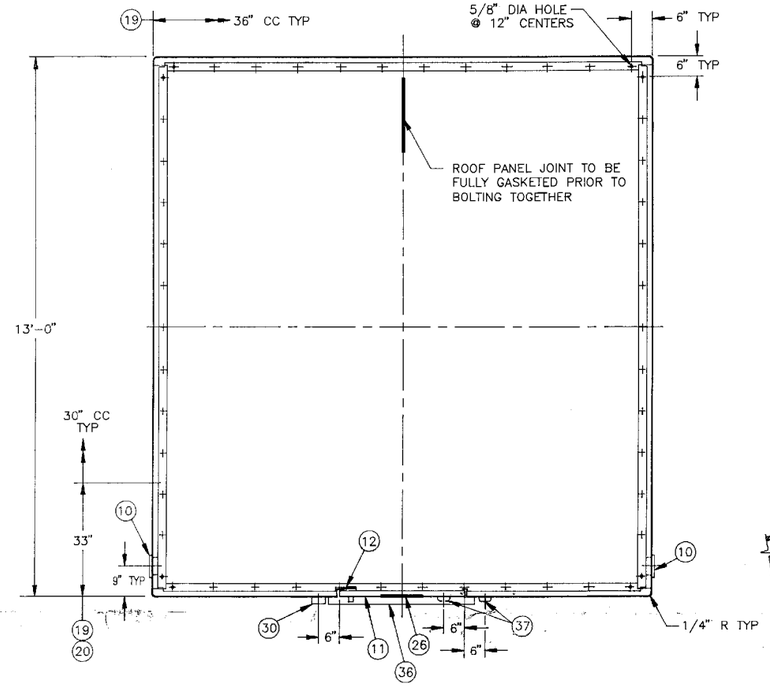
SECTION B

3/8"=1'-0" 07-S-141

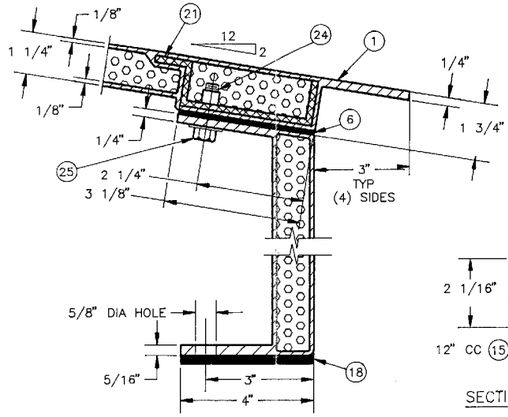
DSGN KA MARTIN						VERIFY SCALE	CH2MHILL carollo engineers	WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-O3-01 LINN COUNTY, OREGON	FLOW CONTROL STRUCTURE MODIFICATIONS	SHEET 200
DR MJ GABEL						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			SECTIONS	DWG 07-S-201
CHK CA GENTRY			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)							DATE MAY 19 2006
APVD RS SHANLEY	NO.	DATE	AS-BUILT	BRK	AGC					PROJ 326918
		01/20/10	REVISION	BY	APVD					

16,276.

FILENAME: 07s2010_326918.dgn PLOT DATE: 3/26/2010 PLOT TIME: 4:02:26 PM

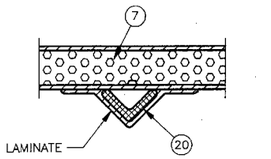


PLAN VIEW BELOW ROOF



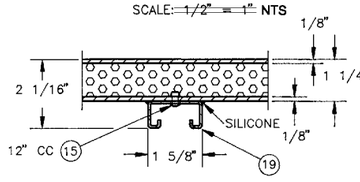
SECTION – ROOF & SIDE PANEL W/FLANGE

SCALE: ~~1/2" = 1"~~ NTS



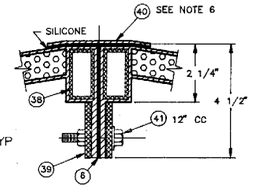
SECTION – ROOF SUPPORT

SCALE: ~~1/2" = 1"~~ NTS



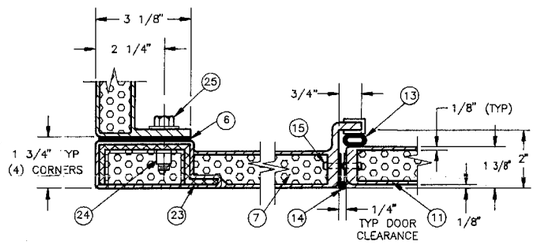
SECTION – WALL REINFORCEMENT

SCALE: ~~1/2" = 1"~~ NTS



ROOF JOINT DETAIL

SCALE: ~~3/8" = 1"~~ NTS

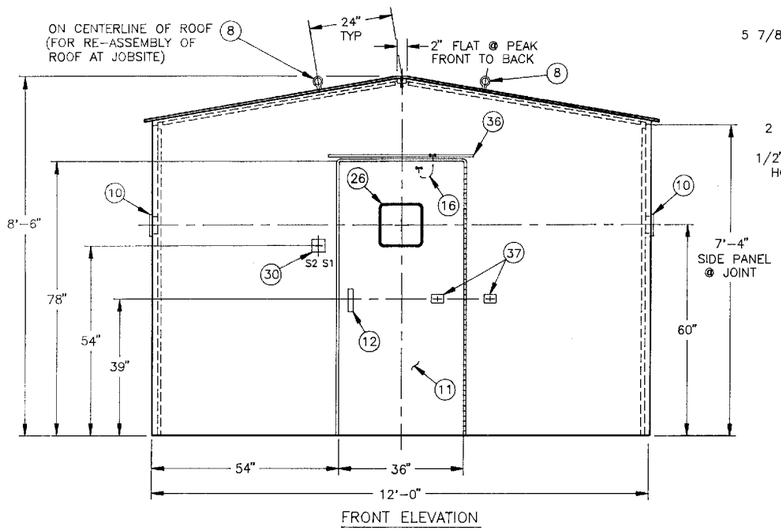


SECTION – SIDE & FRONT PANEL W/DOOR MTG

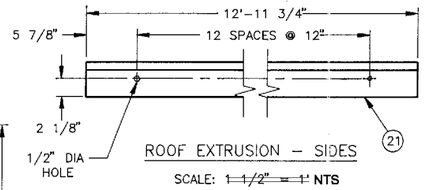
SCALE: NONE

ITEM	QTY	DESCRIPTION
1	2	ROOF PANEL – MOLDED FIBERGLASS CONSTRUCTION
2	1	SIDE PANEL R.H. – MOLDED FIBERGLASS CONSTRUCTION
3	1	SIDE PANEL L.H. – MOLDED FIBERGLASS CONSTRUCTION
4	1	FRONT PANEL – MOLDED FIBERGLASS CONSTRUCTION
5	1	BACK PANEL – MOLDED FIBERGLASS CONSTRUCTION
6	AR	JOINT GASKET – 3" X 1/4" POLYURETHANE SPONGE
7	AR	INSULATION – 1" THK RIGID POLYISOCYANURATE FOAM
8	2	LIFTING EYE BOLT – 3/4–10 NC CADMIUM PLATED, BOLTED THRU
9	–	LIFTING EYE BOLT SUPPORT – STL. 6" X 2" X 1" ENCAPSULATED
10	2	LOUVRE – 6" DIA PVC W/SCREEN MANUALLY ADJUSTABLE
11	1	DOOR – FIBERGLASS 36"W X 78"H
12	1	DOOR LATCH– 3 POINT EBERHARD #5647 W/PADLOCKABLE S.S. HANDLE
13	AR	DOOR GASKET – NEOPRENE HOLLOW BULB TRIM SEAL # 4100–1/4" OR =
14	1	DOOR HINGE – S.S. 2 1/2" OPEN PIANO TYPE 6" LG
15	AR	FASTENER – POP RIVET #AD610 B.S.
16	1	DOOR STOP CHAIN & SPRING ASSEMBLY PLATED
17	AR	DOOR & FRAME REINFORCEMENT – ENCAPSULATED
18	AR	FLOOR GASKET– 4" X 1/4" NEOPRENE SPONGE
19	11	WALL REINFORCEMENT – MTG CHANNEL, GALV. STL. POWER–STRUT #PS–500, W/(2) 3/8" CLAMPING NUT & SPRING ASS'Y, POWER–STRUT #PS–8SS
20	4	ROOF SUPPORT STL ANGLE 1 1/2" X 1 1/2" X 1/4" X67" ENCAPSULATED
21	2	ROOF PANEL – ALUMINUM EXTRUSION – SIDE
22	4	ROOF PANEL – ALUMINUM EXTRUSION – END
23	4	FRONT & BACK PANEL – ALUMINUM EXTRUSION
24	AR	NUTSERTS – WIDE FLANGE #9444–1233 3/8–16 NC ALUMINUM
25	AR	HEX HD BOLT – S.S. 3/8–16 NC X 1 1/4" LG W/WASHER – 3/8" ID
26	1	DOOR WINDOW – SAFETY GLASS 12" X 12" X 1/4" W/GASKET
* 27	1	HEATER – PUMP HOUSE, 500 WATTS W/THERMOSTAT
* 28	3	PENDANT MOUNTED 48" FLUORESCENT FIXTURES ⚠
* 29	2 ⚠	DUPLEX OUTLET IN PVC BOX W/GASKETED FLIP COVERS
30	1	DUPLEX WEATHERPROOF SWITCHBOX/2 TOGGLE,BELL#216–2 & 276–3 OR =
* 31	1	DUAL AXIAL EXHAUST FAN (2) 240 CFM 6" DIA DAYTON #4C720 – CORD
		SET #4C552 & WIRE GUARD (2) #4C741 (MOUNTED ON 1/4" FRP PLATE)
		W/FRP SHUTTER DAYTON #5C211 & SCREENED FRP CANOPY
* 32	1	FAN THERMOSTAT SPST ADJ. 30° TO 110° F DAYTON #2E728
* 33	1	LOUVRE – 12" X 12" PVC FIXED OPEN W/SCREEN & GRAVITY SHUTTER
		DAYTON #5C211
* 34	1	CIRCUIT BREAKER LOAD CENTER– 12 SPACE 120/208V 3 PHASE 125 AMP
		MAIN LUGS ONLY, W/8 1–POLE BRANCH BREAKERS SQUARE D
		CUTLER–HAMMER OR = ⚠
35	YES	SPECIAL COLOR – TO BE SELECTED
36	1	RAIN VISOR 42" WIDE FRP
37	1	DOOR HOLDER W/SPRING STOP – STAINLESS STEEL – HANSEN #29–45 (32818668)
38	2	STEEL TUBE – 1/8" X 2" X 1" X 12'–11 1/2" LG ENCAPSULATED
39	2	FLAT BAR – STAINLESS STEEL 1/4" X 2" X 12'–6" LG
40	1	FIBERGLASS CAPPING STRIP– 1/8" X 4 1/8" X 13'–6" LG
41	AR	3/8–16NC X 2" HEX HD BOLT, HEX NUT & FW (2) STAINLESS STEEL
* 42	2	3' X 3' SKYLIGHT – REMOVABLE ⚠
* 43	1	STEP DOWN TRANSFORMER– 3 PHASE 480V PRIMARY 120/208V SECONDARY ⚠
* 44	1	TERMINAL BOX FOR 480V 3 PHASE FEEDER NEMA 1 ⚠

* CUSTOMER PROVIDE LOCATION

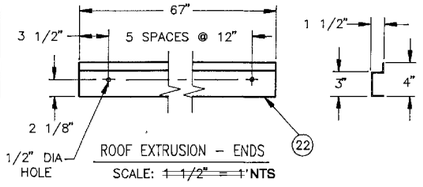


FRONT ELEVATION



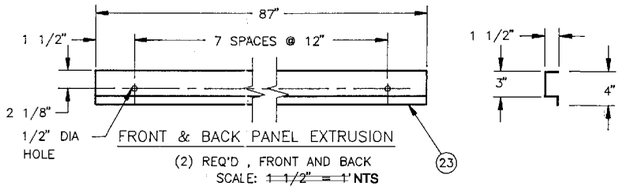
ROOF EXTRUSION – SIDES

SCALE: ~~1 1/2" = 1'~~ NTS



ROOF EXTRUSION – ENDS

SCALE: ~~1 1/2" = 1'~~ NTS



FRONT & BACK PANEL EXTRUSION

(2) REQ'D , FRONT AND BACK

SCALE: ~~1 1/2" = 1'~~ NTS

NOTES:

1. EXTERIOR SURFACE – SMOOTH GEL–COATED FINISH W/COLOR MOLDED IN
2. THERMAL RESISTANCE RATING R=7
3. WIND LOADING RESISTANCE 125 MPH
4. STATIC ROOF LOADING RESISTANCE 30 LBS PER SQ FT
5. FLOOR GASKET – ITEM #18, SHIPPED WITH BUILDING, FIELD INSTALLED
6. APPROX TOTAL NET WEIGHT – 1810 LBS
7. AFTER ROOF SECTIONS ARE BOLTED TOGETHER ON TOP OUTSIDE OF ROOF, USE RTV SILICONE AND GENEROUSLY CAULK ALONG THE JOINT ON THE CENTER OF THE ROOF; WHILE THE RTV IS STILL PLYABLE, SET 1/8" X 4 1/8" CAPPING STRIP ITEM #40 ON TOP TO COVER JOINT END TO END; THEN CAULK BOTH SIDES FULL LENGTH OF STRIP AS NECESSARY AND SMOOTH TO AN EVEN BEAD WITH TONGUE BLADE OR FINGER

QTY: ONE
SIZE: 12'–0"W X 13'–0"D
COLOR: TO BE SELECTED
PO#: 2000–03–13

DETAIL 1 / 07-S-201

NTS

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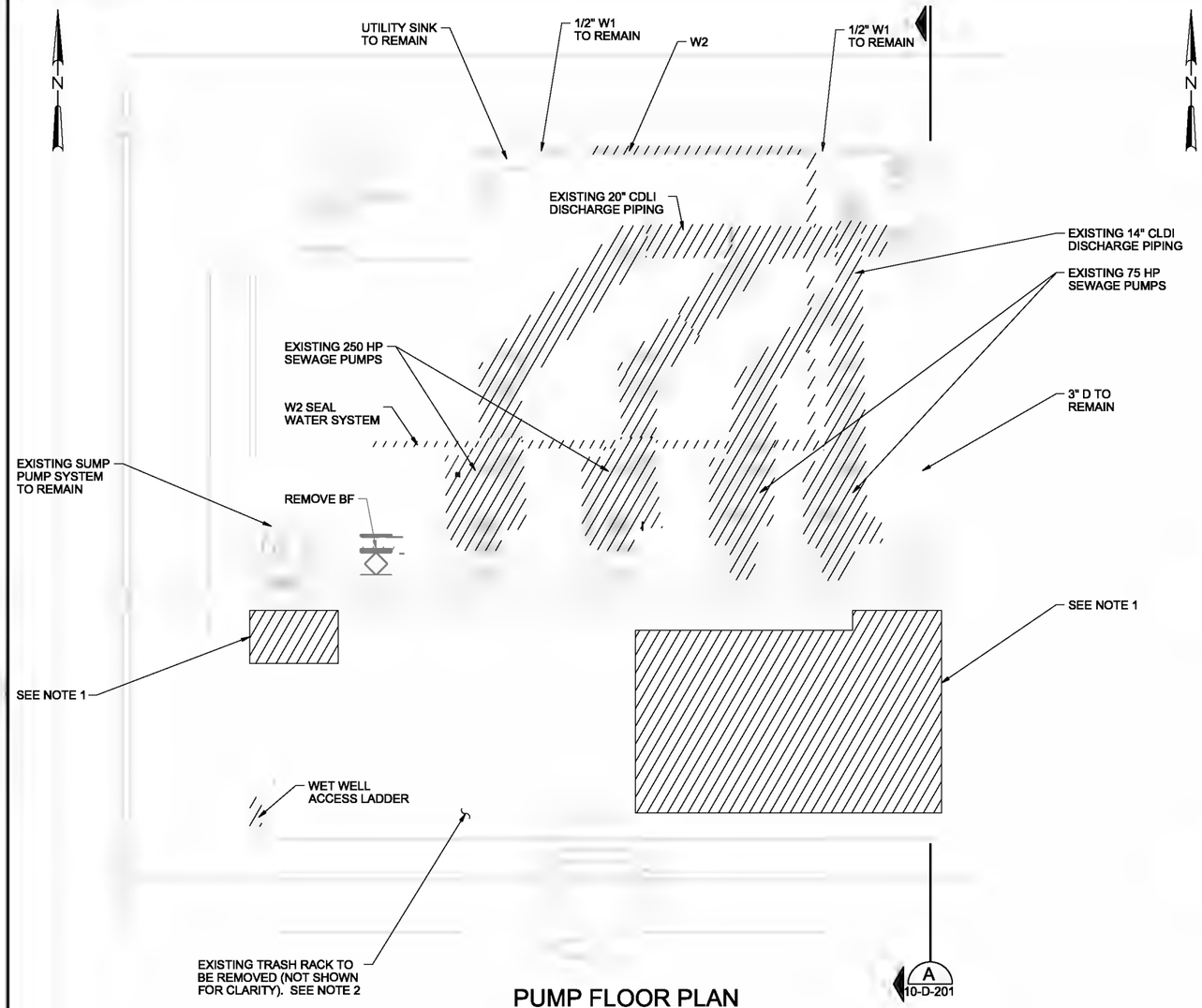
DSGN M KATALINICH						VERIFY SCALE	CH2MHILL carollo engineers
DR MJ GABEL						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-O3-01 LINN COUNTY, OREGON
CHK TR TEKIPPE						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	FLOW CONTROL STRUCTURE MODIFICATIONS EXISTING FRP SHELTER DETAILS
APVD RS SHANLEY	NO.	DATE	REVISION	BY	APVD		
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	BRK	AGC		

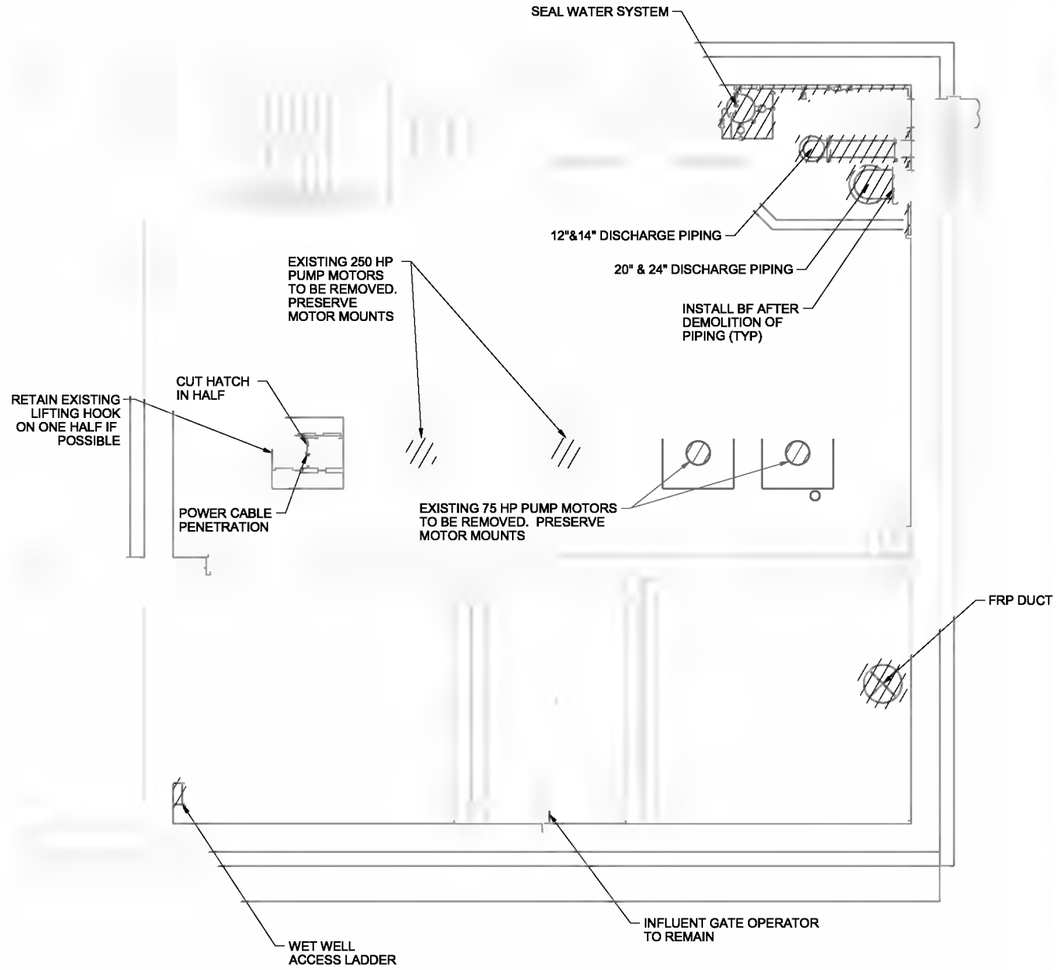
SHEET	201
DWG	07-S-401
DATE	MAY 19 2006
PROJ	326918

FILENAME: 07xs202d_326918.dgn PLOT DATE: 2/26/2010 PLOT TIME: 4:02:31 PM



PUMP FLOOR PLAN

3/16"=1'-0"



MOTOR FLOOR PLAN

3/16"=1'-0"

NOTES:

1. REINFORCED GROUT SHALL BE REMOVED AS NECESSARY TO ACCOMMODATE SUBMERSIBLE PUMPS. SURFACE PREPARATION SHALL BE AS SPECIFIED IN STRUCTURAL DWGS.
2. HORIZONTAL TRASH RACK COVERS ENTIRE FOOTPRINT OF WET WELL (17'-3"x52'-0"). TOP OF RACK AT APPROXIMATE ELEVATION OF 165.0. SEE DWG 10-D-201 FOR DETAILS.
3. NOT ALL EQUIPMENT, PIPING, CONDUITS SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATIONS FOR ALL EXISTING APPURTENANCES. EXISTING PIPING, EQUIPMENT, VALVES NOT TO BE REMOVED SHALL BE FULLY PROTECTED DURING DEMOLITION WORK.
4. NO LIVE PIPING, CONDUITS, SHALL BE DISCONNECTED PRIOR TO ENGINEER'S APPROVAL.
5. CONTRACTOR TO REMOVE AND PROPERLY DISPOSE OF ALL DEBRIS AND SEDIMENT ACCUMULATED IN THE WET WELL AND CLEAN THE ENTIRE WET WELL WITH A PRESSURE WASHER TO REMOVE ALL GREASE AND SEDIMENT.
6. CONTRACTOR TO REMOVE AND DISPOSE OF EXISTING PUMPS AND MOTORS. NO SALVAGE EFFORT IS REQUIRED.
7. ALL METAL ANCHORS, REBAR, NAD APPURTENANCES REMAINING IN THE WET WELL SHALL BE BURNED OUT/REMOVED TO A MINIMUM DEPTH OF 2". FILL HOLE WITH EPOXY GROUT.

DSGN	BS CASEY				BRK	AGC	VERIFY SCALE
DR	MJ GAMP						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	D TSAI						IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	RS SCHAILEY	NO.	DATE	REVISION	BY	APVD	
			01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			

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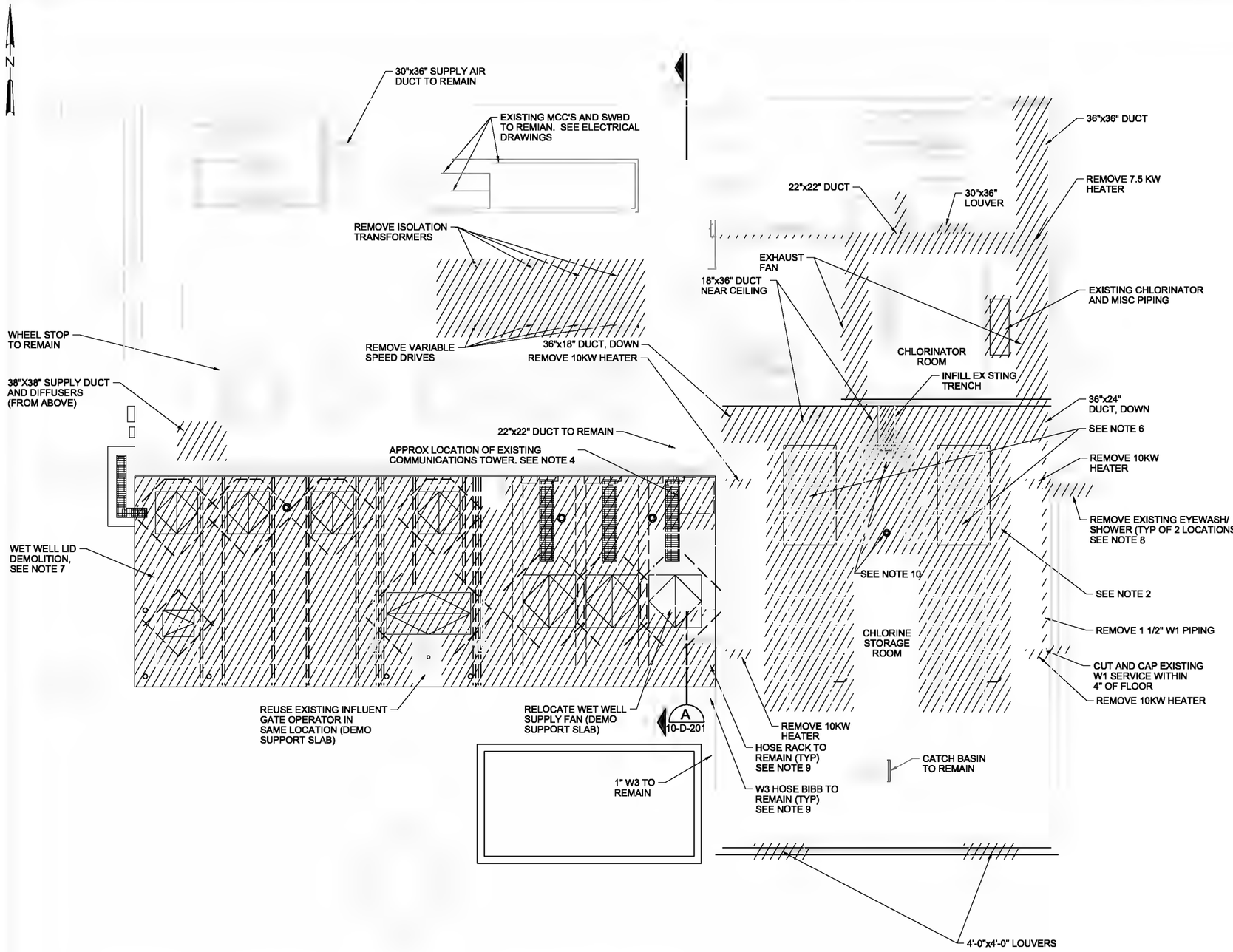
INFLUENT PUMP STATION
DEMOLITION
PUMP FLOOR DEMOLITION PLAN

SHEET	202
DWG	10-D-131
DATE	MAY 19 2006
PROJ	326918

FILENAME: 10dm110d_326918.dgn PLOT DATE: 5/10/2010 PLOT TIME: 12:49:28 PM



GROUND FLOOR PLAN

3/16"=1'-0"

NOTES:

1. SEE NOTES 3 AND 4 ON DWG 10-D-131.
2. CHLORINE GAS CYLINDERS TO BE REMOVED BY OTHERS. COORDINATE SEQUENCING WITH ENGINEER.
3. DEMOLISH ALL HVAC EQUIPMENT IN CHLORINE STORAGE AND CHLORINATOR RMS.
4. REMOVE 40 FOOT TALL TOWER FOR DEMOLITION AND RECONSTRUCTION OF WET WELL TOP SLAB. PROTECT 3 ANTENNAS INSTALLED ON TOWER. CONTRACTOR TO SECURELY STORE TOWER AND ANTENNAS PRIOR TO REINSTALLATION. COORDINATE THIS WORK WITH CITY. CONTRACTOR TO REINSTALL TOWER AT SAME LOCATION ONCE WET WELL TOP SLAB IS COMPLETE. SUPPORTS AND ANCHORS FOR TOWER AND ANTENNAS SHALL MATCH PRE-EXISTING CONDITIONS.
5. DEMOLITION OF ELECTRICAL EQUIPMENT SHALL INCLUDE REMOVAL OF ALL WIRING AND CONDUITS.
6. EACH CHLORINE GAS FEED AREA CONSISTS OF A 5'-0"x 9'-8"x1'-6" TALL EQUIPMENT PAD OVER A LOAD CELL AND INCLUDES TRUNNIONS AND MISC PIPING (TYP OF 2 AREAS). ALL TO BE REMOVED.
7. REMOVE WET WELL TOP SLAB TO ACCOMMODATE NEW SLAB. SEE STRUCTURAL DRAWINGS. PRIOR TO REMOVING EXIST SLAB, BRACE TOP OF EXIST WALLS TO RESIST FORCE OF 8000 LBS PER HORIZ FOOT OF WALL. MAX BRACE SPACING SHALL NOT EXCEED 5'-0". MAX BEARING PRESSURE OF BRACE END PLATE SHALL NOT EXCEED 1400 PSI.
8. REMOVE PIPE THROUGH WALL AND FILL WITH NON-SHRINK GROUT.
9. REPLACE IF DAMAGED DURING CONSTRUCTION.
10. PROTECT AND MAINTAIN EXISTING TRENCH AND FLOOR DRAIN.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY BRIAN N. CASEY STATE OF OREGON, P.E. NO. 73,447.

DSGN: BM CASEY						VERIFY SCALE
DR: MJ GAMPE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK: D TSAI						
APVD: RS SCHAILEY	NO.	DATE	REVISION	BY	APVD	
	01/20/10		(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	BRK	AGC	

CH2MHILL carollo engineers

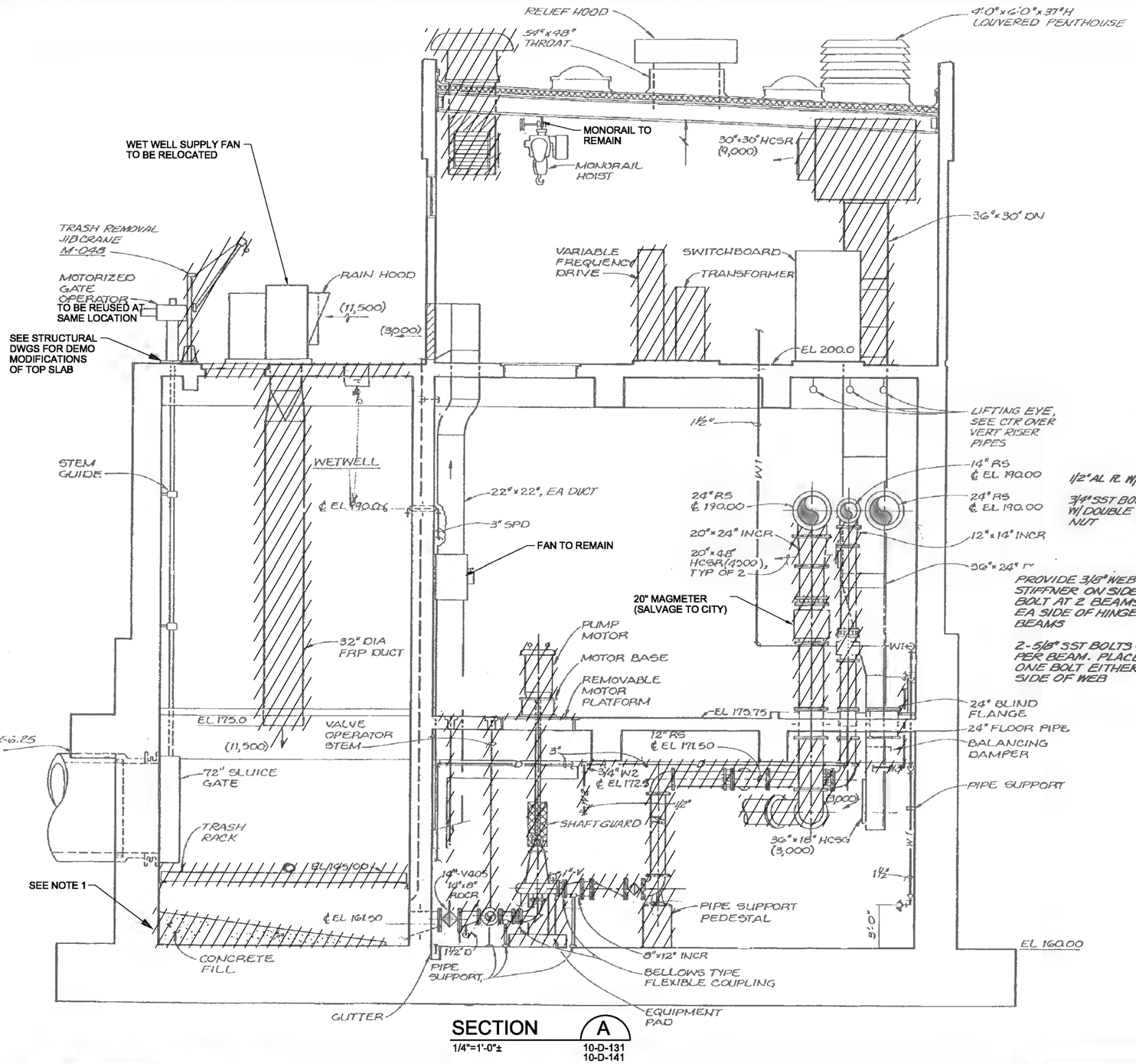
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INFLUENT PUMP STATION
DEMOLITION
GROUND FLOOR DEMOLITION PLAN

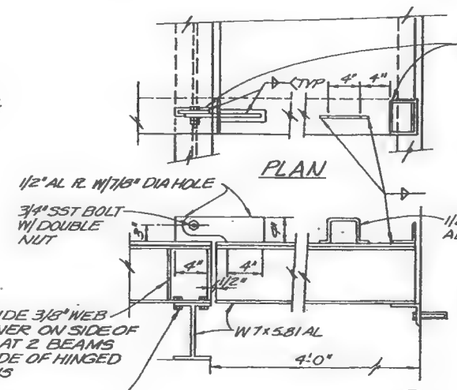
SHEET	203
DWG	10-D-141
DATE	MAY 19 2006
PROJ	326918

FILENAME: 10dm140d_326918.dgn PLOT DATE: 6/10/2010 PLOT TIME: 12:53:03 PM

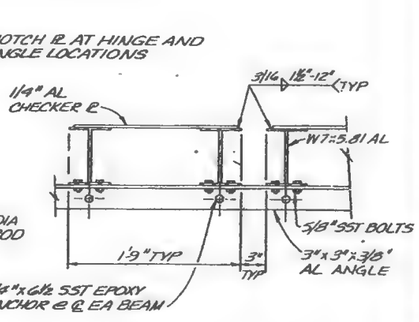
NOTES:
1. SEE NOTES 3 AND 4 ON DWG 10-D-131.
2. REINFORCED GROUT SHALL BE REMOVED TO ACCOMMODATE SUBMERSIBLE PUMPS. SURFACE PREPARATION SHALL BE AS SPECIFIED IN STRUCTURAL DWGS.
3. ELEVATIONS ARE BASED ON PREVIOUS DRAWINGS. CONTRACTOR TO VERIFY.
4. AFTER REMOVAL OF EQUIPMENT, PADS, AND PIPE SUPPORTS, CONTRACTOR TO REMOVE ANCHOR BOLTS MINIMUM OF 3/4" BELOW SURFACE AND PATCH W/ EPOXY GROUT.



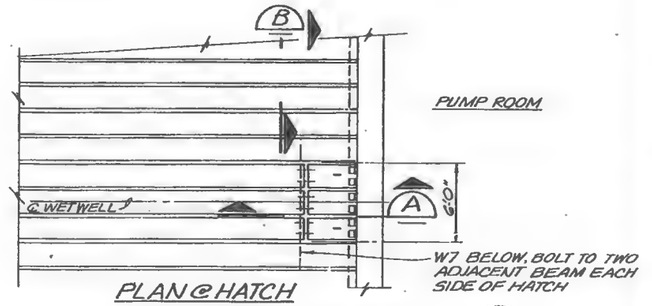
SECTION A
1/4"=1'-0"±
10-D-131
10-D-141



SECTION A



SECTION B



PLAN @ HATCH

TRASH RACK DETAIL 3
NTS
1-S/M-1

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY BRIAN N. CASEY STATE OF OREGON, P.E. NO. 73,447.

DSGN BM CASEY						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-03-01 LINN COUNTY, OREGON
DR MJ GABEL						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	
CHK D TSAI			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	BRK	AGC		
APVD RS SHANLEY	NO.	DATE	REVISION	BY	APVD		
		01/20/10					

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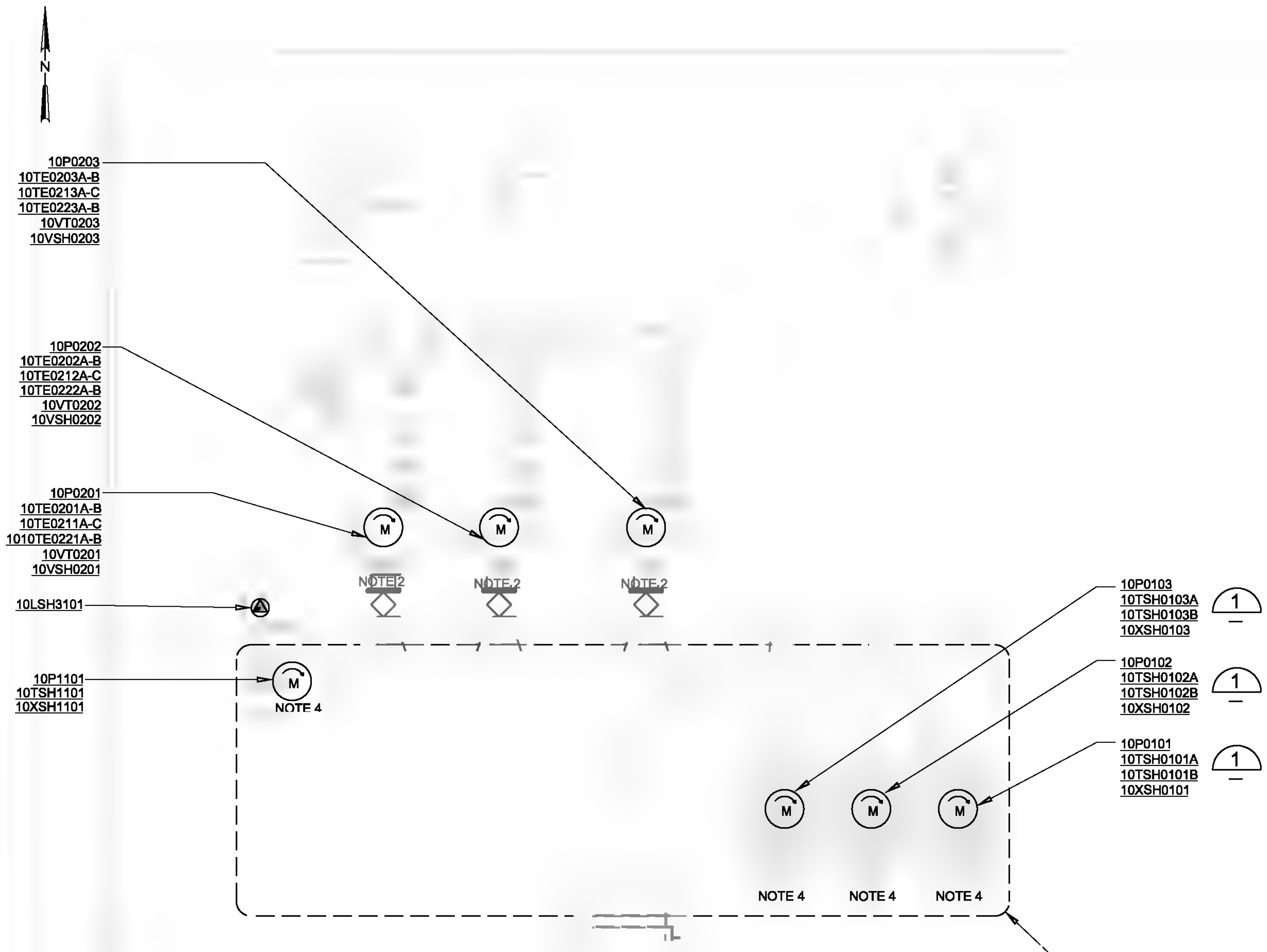
INFLUENT PUMP STATION
DEMOLITION SECTION

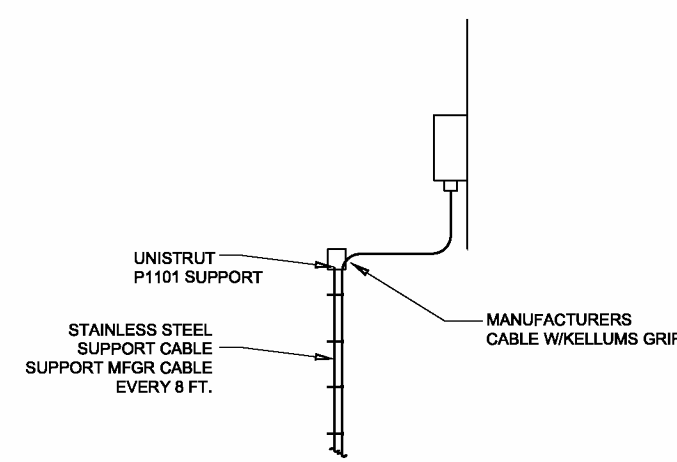
SHEET	204
DWG	10-D-201
DATE	MAY 19 2006
PROJ	326918

FILENAME: 10dm203d_326918.dgn PLOT DATE: 5/10/2010 PLOT TIME: 12:57:05 PM



PUMP FLOOR PLAN

3/16"=1'-0"



DETAIL 1

N.T.S.

NOTES:

1. FE/FIT3011 IS LOCATED IN THE HEADWORKS. SEE 20-E SERIES DRAWINGS.
2. ROUTE MANUFACTURER SUPPLIED CABLES THROUGH EXISTING HOLE IN CEILING AND CONNECT AT NEW NEMA 4X TERMINATION BOXES (1 POWER/1 CONTROL) ON MOTOR FLOOR. PROVIDE KELLUMS GRIPS FOR ALL CABLES.
3. FIELD ROUTE CONDUITS PER RISER DIAGRAMS.
4. RUN MANUFACTURER SUPPLIED CABLE TO PLUG DISCONNECT AT GROUND LEVEL.
5. DIGITAL CONTROL CIRCUITS MAY BE COMBINED ON THIS SHEET ONLY.
6. ANALOG CONTROL CIRCUITS MAY BE COMBINED ON THIS SHEET ONLY.
7. THE STRUCTURE IS A CLASS I, DIVISION 2, GROUP D AREA WITHIN THE ENVELOPE SHOWN. ALL EQUIPMENT WITHIN THE ENVELOPE SHALL BE RATED FOR USE IN THIS AREA CLASSIFICATION AND SHALL CONFORM TO THE SPECIFICATIONS AND THE NATIONAL ELECTRICAL CODE.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY GREG BEBOIS STATE OF OREGON, P.E. NO. 77671.

DSGN	BR HUTHERS				
DR	BB CAWE				
CHK	GJ DUBOIS	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GPW	KLM
APVD	RS SHAWLEY	NO. DATE	REVISION	BY	APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

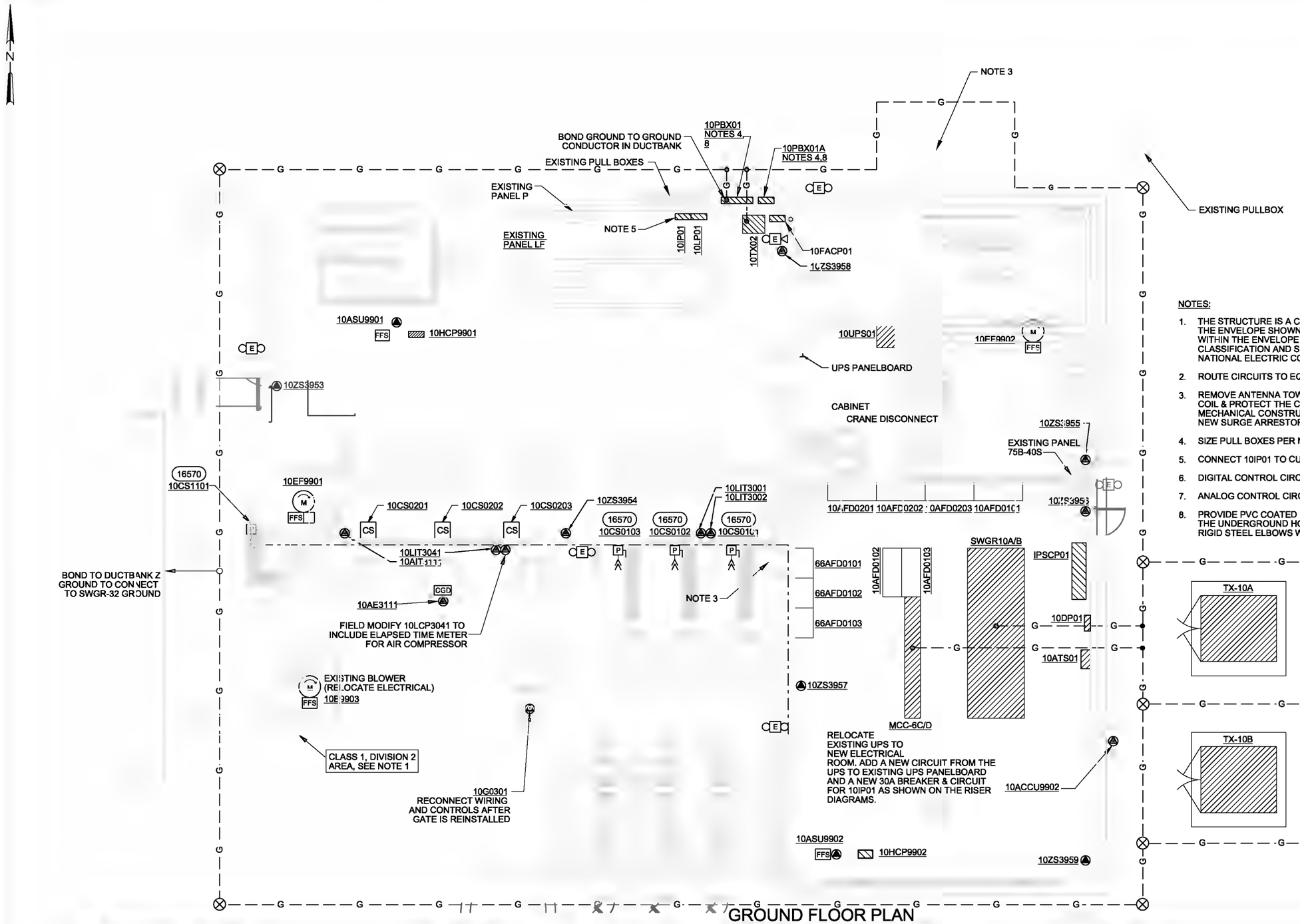
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INFLUENT PUMP STATION

PUMP FLOOR PLAN

SHEET	205
DWG	10-E-131
DATE	MAY 19 2006
PROJ	326918

FILENAME: 10e1418_326918.dgn PLOT DATE: 5/19/2011 PLOT TIME: 1:07:32 PM



GROUND FLOOR PLAN

3/16"=1'-0"

NOTES:

1. THE STRUCTURE IS A CLASS I, DIVISION 2, GROUP D AREA WITHIN THE ENVELOPE SHOWN AND AS DESCRIBED ON 91-E-532. ALL EQUIPMENT WITHIN THE ENVELOPE SHALL BE RATED FOR USE IN THIS AREA CLASSIFICATION AND SHALL CONFORM TO THE SPECIFICATIONS AND THE NATIONAL ELECTRIC CODE.
2. ROUTE CIRCUITS TO EQUIPMENT AS INDICATED ON THE RISER DIAGRAMS.
3. REMOVE ANTENNA TOWER DURING MECHANICAL CONSTRUCTION. COIL & PROTECT THE CABLES. REPLACE TOWER AND ANTENNAS WHEN MECHANICAL CONSTRUCTION IS COMPLETE. PROVIDE THREE (3) NEW SURGE ARRESTORS, ANTENEX #LABH350NN OR EQUAL.
4. SIZE PULL BOXES PER NEC & CONDUIT REQUIREMENTS.
5. CONNECT 10IP01 TO CUSTOMER SUPPLIED UPS.
6. DIGITAL CONTROL CIRCUITS MAY BE COMBINED ON THIS SHEET ONLY.
7. ANALOG CONTROL CIRCUITS MAY BE COMBINED ON THIS SHEET ONLY.
8. PROVIDE PVC COATED RIGID STEEL CONDUIT BETWEEN THE PULLBOXES AND THE UNDERGROUND HORIZONTAL PVC CONDUIT RUN. PROVIDE PVC COATED RIGID STEEL ELBOWS WHERE THE CONDUITS STUB UP.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY GREG BEBOIS STATE OF OREGON, P.E. NO. 77671.

DSGN	BR RODGERS					VERIFY SCALE
DR	RJGAVE					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	GJ DeSOUB					
APVD	RS SHANLEY					
	NO.	DATE	REVISION	BY	APVD	
		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GRW	KLM	

CH2MHILL carollo engineers

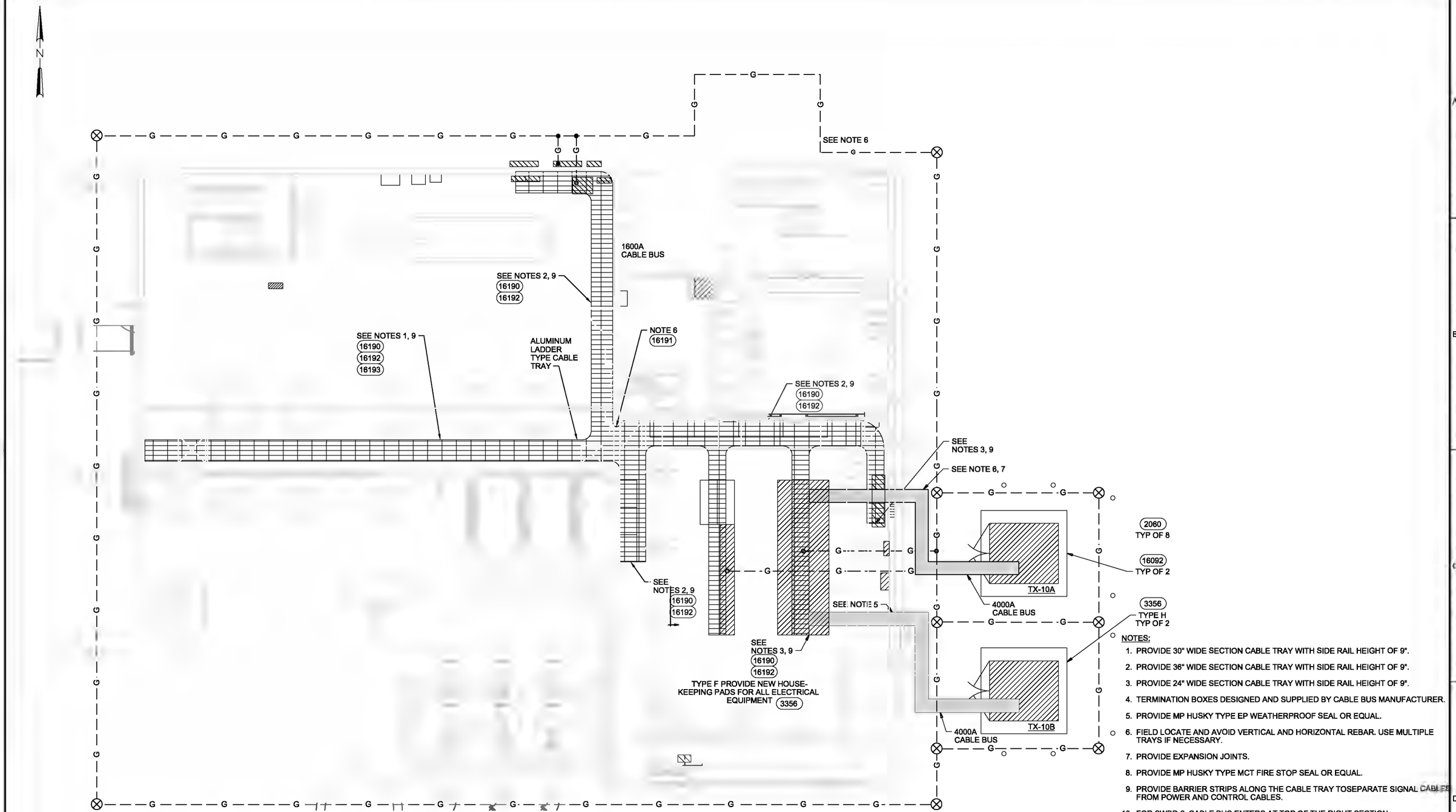
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

INFLUENT PUMP STATION

PUMP FLOOR PLAN

SHEET	206
DWG	10-E-141
DATE	MAY 19 2006
PROJ	326918

FILENAME: 10we131d_326918.dgn PLOT DATE: 5/10/2010 PLOT TIME: 12:58:32 PM



GROUND FLOOR PLAN

3/16"=1'-0"

NOTES:

1. PROVIDE 30" WIDE SECTION CABLE TRAY WITH SIDE RAIL HEIGHT OF 9".
2. PROVIDE 36" WIDE SECTION CABLE TRAY WITH SIDE RAIL HEIGHT OF 9".
3. PROVIDE 24" WIDE SECTION CABLE TRAY WITH SIDE RAIL HEIGHT OF 9".
4. TERMINATION BOXES DESIGNED AND SUPPLIED BY CABLE BUS MANUFACTURER.
5. PROVIDE MP HUSKY TYPE EP WEATHERPROOF SEAL OR EQUAL.
6. FIELD LOCATE AND AVOID VERTICAL AND HORIZONTAL REBAR. USE MULTIPLE TRAYS IF NECESSARY.
7. PROVIDE EXPANSION JOINTS.
8. PROVIDE MP HUSKY TYPE MCT FIRE STOP SEAL OR EQUAL.
9. PROVIDE BARRIER STRIPS ALONG THE CABLE TRAY TOSEPARATE SIGNAL CABLES FROM POWER AND CONTROL CABLES.
10. FOR SWBD-2, CABLE BUS ENTERS AT TOP OF THE RIGHT SECTION.
11. SEE RISER DIAGRAMS FOR ADDITIONAL CLARIFICATION.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY GREG BEBOIS STATE OF OREGON, P.E. NO. 77671.

DSGN	BR RODGERS					VERIFY SCALE
DR	RH CAVE					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK	GJ DeBOER					IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD	RS SHANLEY	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GRW	KLM	
	NO.	DATE	REVISION	BY	APVD	

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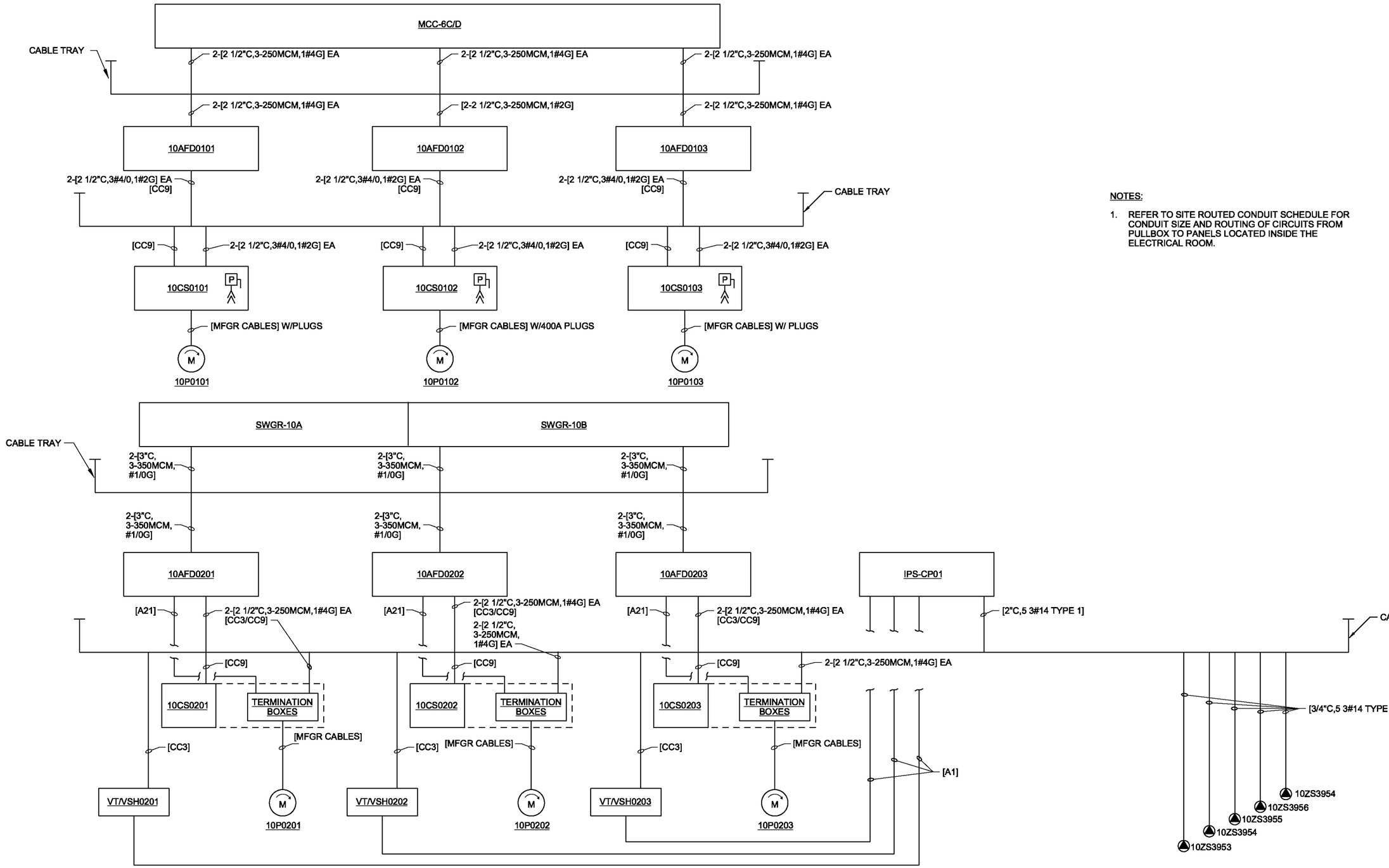
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INFLUENT PUMP STATION

CABLE TRAY & FOUNDATION DETAILS

SHEET	207
DWG	10-E-142
DATE	MAY 19 2006
PROJ	326918

FILENAME: 10we132d_326918.dgn PLOT DATE: 5/10/2010 PLOT TIME: 12:59:41 PM



INFLUENT PUMP STATION RISER DIAGRAM

NOTES:

1. REFER TO SITE ROUTED CONDUIT SCHEDULE FOR CONDUIT SIZE AND ROUTING OF CIRCUITS FROM PULLBOX TO PANELS LOCATED INSIDE THE ELECTRICAL ROOM.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY GREG BEBOIS STATE OF OREGON, P.E. NO. 77671.

DSGN	BR RODGERS
DR	RB CAVE
CHK	GJ DeBOIS
APVD	RS SHANLEY

NO.	DATE	REVISION	GRW BY	KLM APVD
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT		

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

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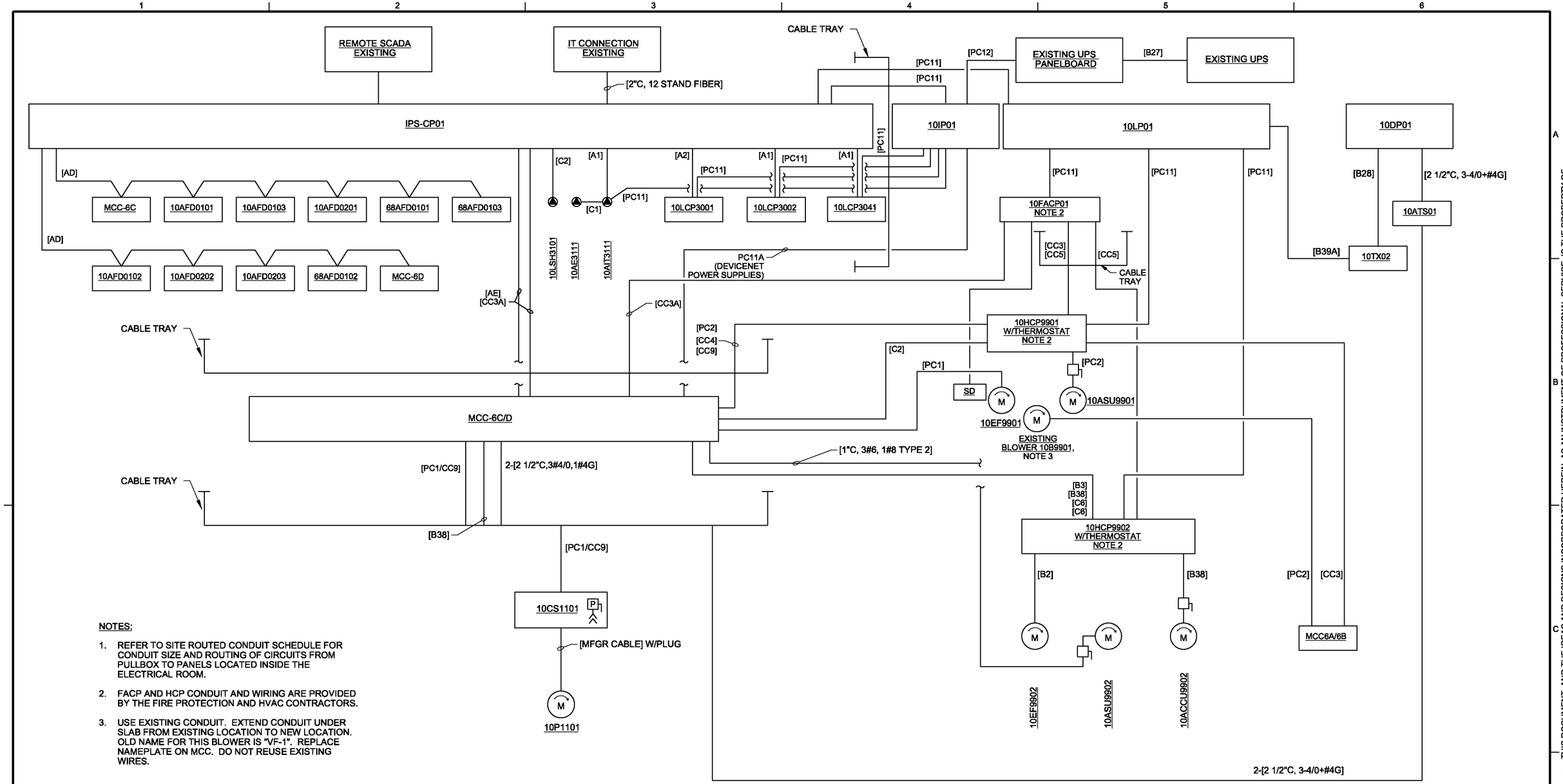
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INFLUENT PUMP STATION

RISER DIAGRAM

SHEET	208
DWG	10-E-501
DATE	MAY 19 2006
PROJ	326918

FILENAME: 10ne501_326918.dgn PLOT DATE: 5/10/2010 PLOT TIME: 1:08:04 PM



NOTES:

1. REFER TO SITE ROUTED CONDUIT SCHEDULE FOR CONDUIT SIZE AND ROUTING OF CIRCUITS FROM PULLBOX TO PANELS LOCATED INSIDE THE ELECTRICAL ROOM.
2. FACP AND HCP CONDUIT AND WIRING ARE PROVIDED BY THE FIRE PROTECTION AND HVAC CONTRACTORS.
3. USE EXISTING CONDUIT. EXTEND CONDUIT UNDER SLAB FROM EXISTING LOCATION TO NEW LOCATION. OLD NAME FOR THIS BLOWER IS "VF-1". REPLACE NAMEPLATE ON MCC. DO NOT REUSE EXISTING WIRES.

INFLUENT PUMP STATION RISER DIAGRAM - MCC-6. DEVICENET, FIRE & HVAC

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY GREG BEBOIS STATE OF OREGON, P.E. NO. 77671.

DSGN BR RODGERS						VERIFY SCALE
DR RB CAVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
CHK GJ DeBOIS			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
APVD RS SHANLEY		01/20/10	AS-BUILT	GRW	KLM	
	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

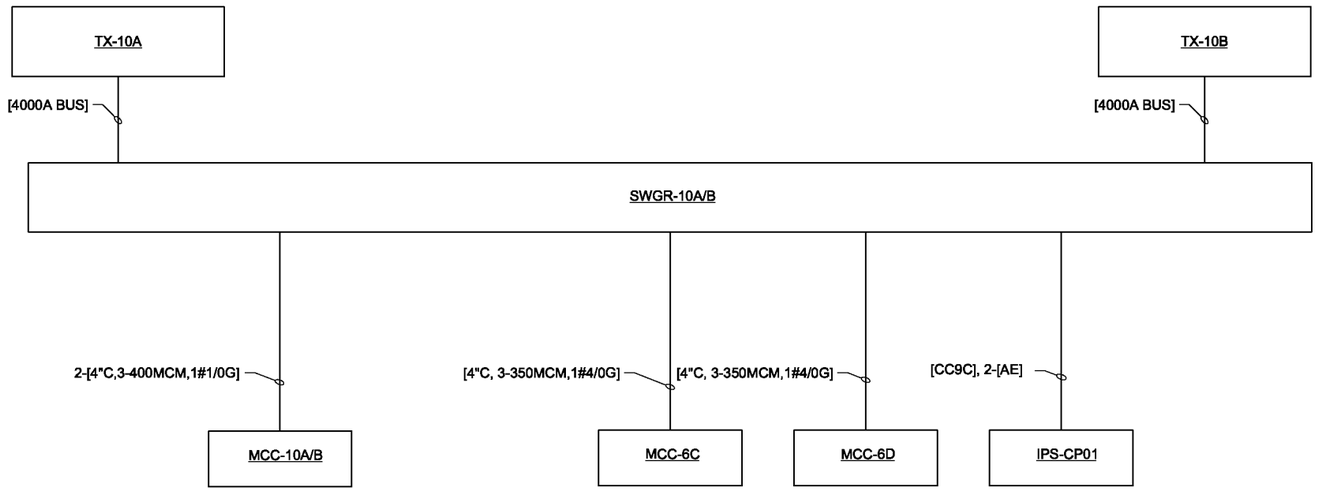
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INFLUENT PUMP STATION

RISER DIAGRAM

SHEET	209
DWG	10-E-502
DATE	MAY 19 2006
PROJ	326916

FILENAME: 10ne502_326916.dgn PLOT DATE: 5/10/2010 PLOT TIME: 1:10:19 PM



NOTES:

1. REFER TO SITE ROUTED CONDUIT SCHEDULE FOR CONDUIT SIZE AND ROUTING OF CIRCUITS FROM PULLBOX TO PANELS LOCATED INSIDE THE ELECTRICAL ROOM.

INFLUENT PUMP STATION RISER DIAGRAM - SWITCHGEAR 10A/B

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY GREG BEBOIS STATE OF OREGON, P.E. NO. 77671.

DSGN BR RODGERS						VERIFY SCALE
DR RB CAVE						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK GJ DeBOIS		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GRW	KLM	
APVD RS SHANLEY	NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

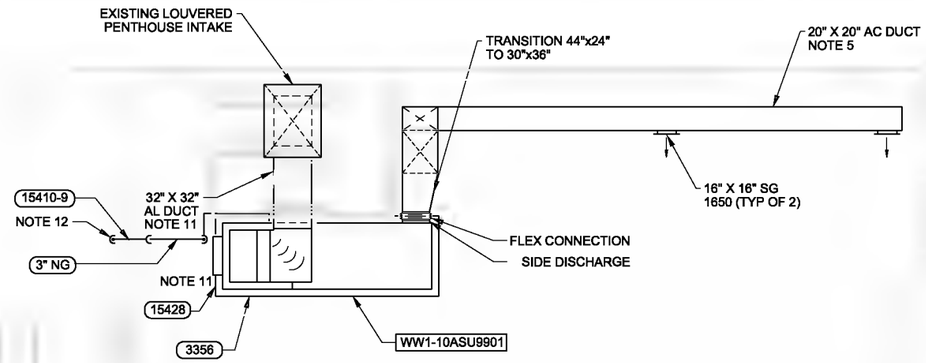
CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-03-01
LINN COUNTY, OREGON

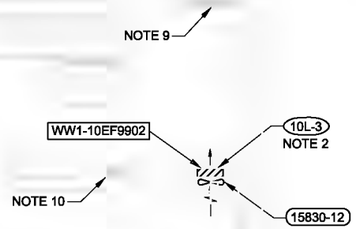
INFLUENT PUMP STATION

RISER DIAGRAM

SHEET	210
DWG	10-E-503
DATE	MAY 19 2006
PROJ	326918

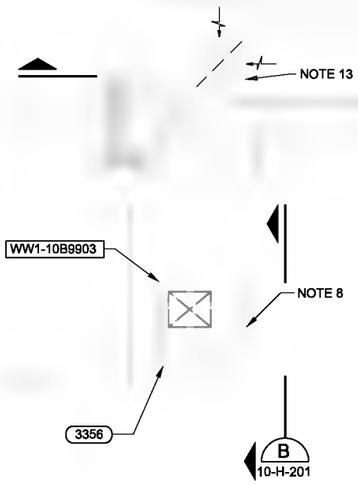
FILENAME: 10ne503_326918.dgn PLOT DATE: 5/10/2010 PLOT TIME: 1:14:23 PM

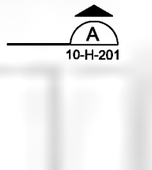


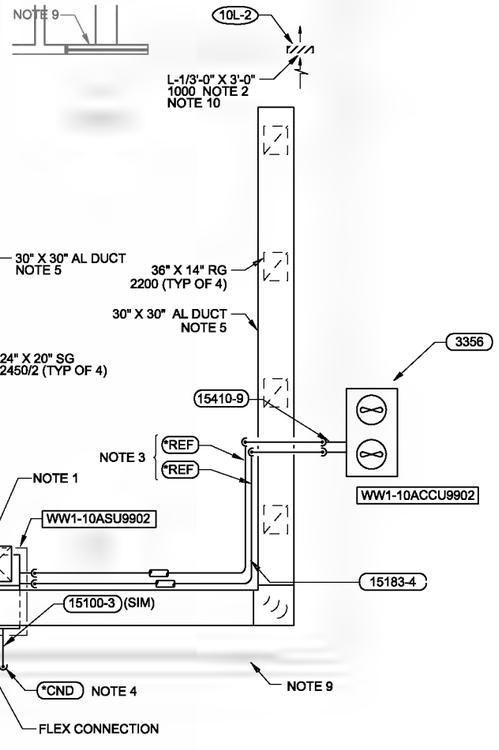


NOTES:

1. TRANSITION AS NECESSARY TO MATCH EQUIPMENT DIMENSIONS. CONNECT TO EQUIPMENT WITH FLEXIBLE CONNECTION.
2. MOUNT IN EXISTING WALL PENETRATION. SIZE EQUIPMENT TO MATCH EXISTING WALL OPENING.
3. SIZE REF PER EQUIPMENT CONNECTION SIZES. INSULATE PER SPECIFICATION.
4. SIZE CND PER EQUIPMENT MANUFACTURER REQUIREMENTS. PROVIDE TRAPPING, ETC. AS REQUIRED BY CODE AND MANUFACTURER REQUIREMENTS. SLOPE 1/8" PER FT. PENETRATE WALL AND TERMINATE 6" ABOVE GRADE.
5. MOUNT TOP OF DUCT 1'-6" BELOW ROOF BEAMS.
6. ROUTE ALL DUCT WORK AND PIPING TO AVOID PASSING OVER ELECTRICAL EQUIPMENT.
7. WHERE SUPPORTS NOT SHOWN MOUNT PER SPECIFICATION AND SMACNA.
8. RELOCATE EXISTING BLOWER FROM ORIGINAL LOCATION.
9. FILL PENETRATION REMAINING FROM EXISTING HVAC DEMO PER 10-S-201 .
10. FILL PENETRATIONS REMAINING FROM EXISTING HVAC DEMOLITION LOCATED PENETRATIONS BELOW LOUVER. SEE NOTE 9.
11. INSTALL FLEXIBLE CONNECTION AT UNIT.
12. INSTALL 3" SHUTOFF VALVE, (V405) TAG 10V8101, OUT SIDE BUILDING.
13. FAN WW1-10EF9901 LOCATE ABOVE DUCT ON ROOF.







GROUND FLOOR HVAC PLAN

3/16"=1'-0"

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY RICHARD S. SHANELY STATE OF OREGON, P.E. NO. 18,933.

DSGN	EL GOLDSTEIN				
DR	MJ GABEL				
CHK	T MÜSSINGER				
APVD	RS SHANLEY				
NO.	DATE	REVISION	BRK BY	AGC APVD	
	01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

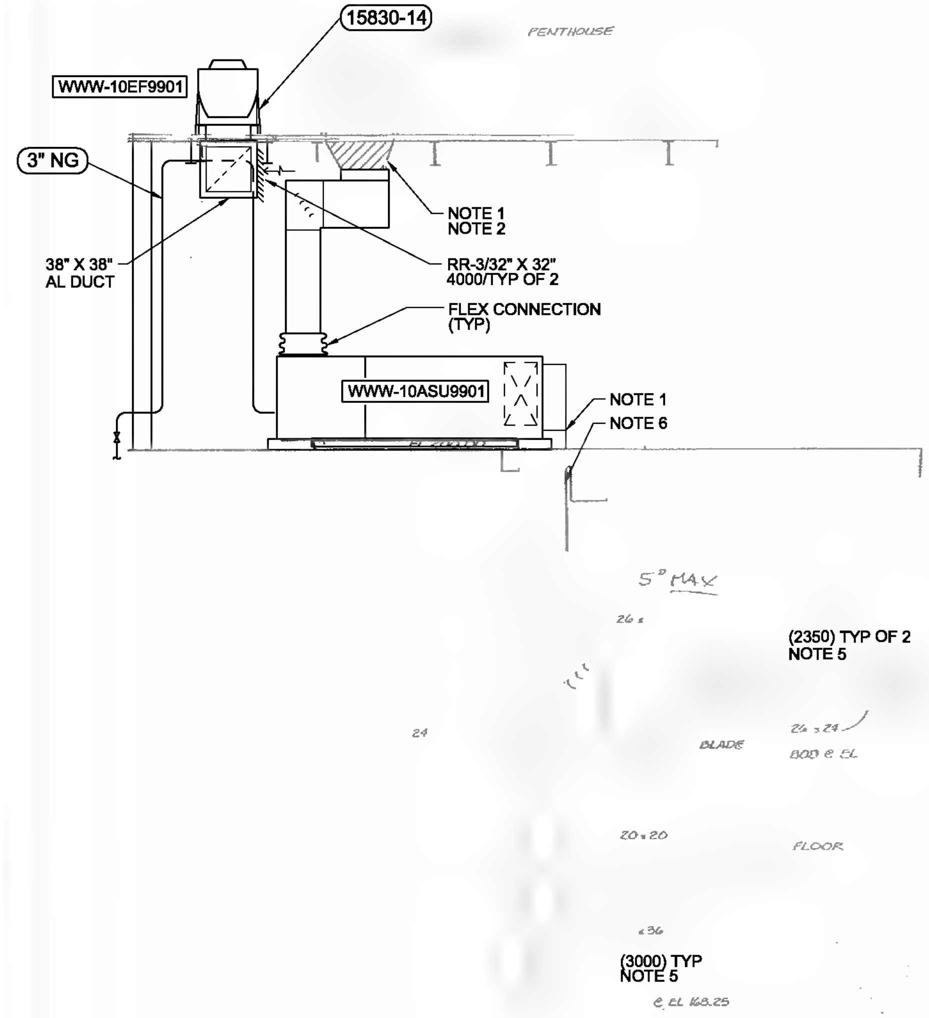
INFLUENT PUMP STATION

GROUND FLOOR PLAN

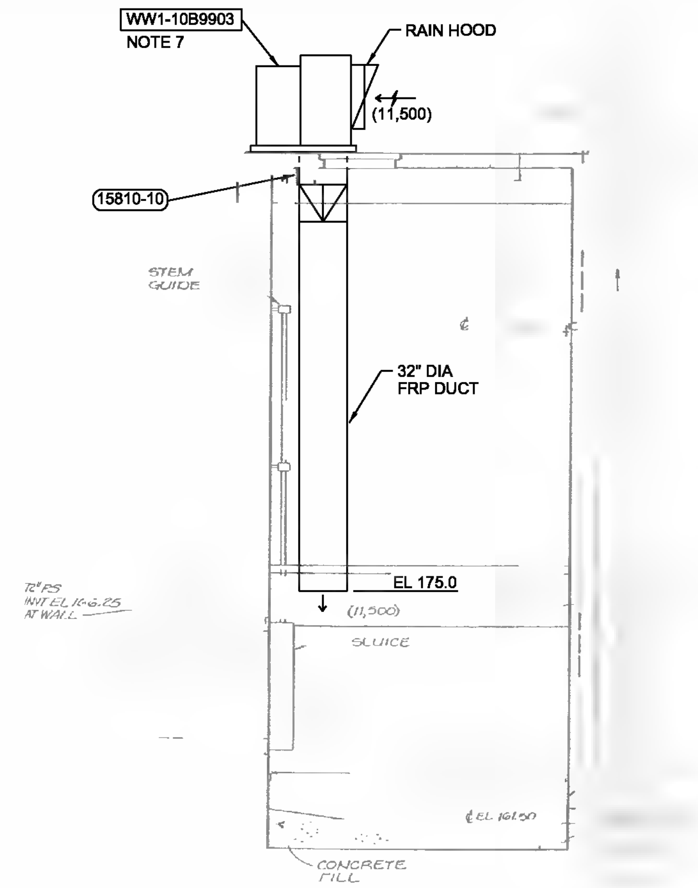
SHEET	211
DWG	10-H-141
DATE	MAY 19 2006
PROJ	326918

FILENAME: 10hh140d_326918.dgn PLOT DATE: 5/10/2010 PLOT TIME: 1:17:43 PM

NOTES:
1. ATTACH TO EXISTING DUCT AS SPECIFIED IN 15810.
2. TRANSITION AS NECESSARY TO MATCH DUCT SIZE IF EXISTING TRANSITION DOES NOT MATCH DIMENSIONS INDICATED. DEMOLISH AND REPLACE.
3. ROUTE ALL DUCT WORK AND PIPING TO AVOID PASSING OVER ELECTRICAL EQUIPMENT.
4. WHERE SUPPORTS NOT SHOWN MOUNT PER SPECIFICATION AND SMACNA.
5. REBALANCE REGISTERS AS INDICATED.
6. CONNECT NEW DUCT TO EXISTING DUCT. EXISTING DUCT SHOWN FOR CLARITY.
7. RELOCATE EXISTING BLOWER FROM ORIGINAL LOCATION.



SECTION A
3/16"=1'-0" 10-H-141



BLOWER RELOCATION B
3/16"=1'-0" 10-H-141

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY RICHARD S. SHANELY STATE OF OREGON, P.E. NO. 18,933.

DSGN E. GOLDSTEIN
DR R. DAVE
CHK T. MUSSINGER
APVD R.S. SHANLEY

(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT — BRK — AGC

NO. | DATE | REVISION | BY | APVD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 — 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

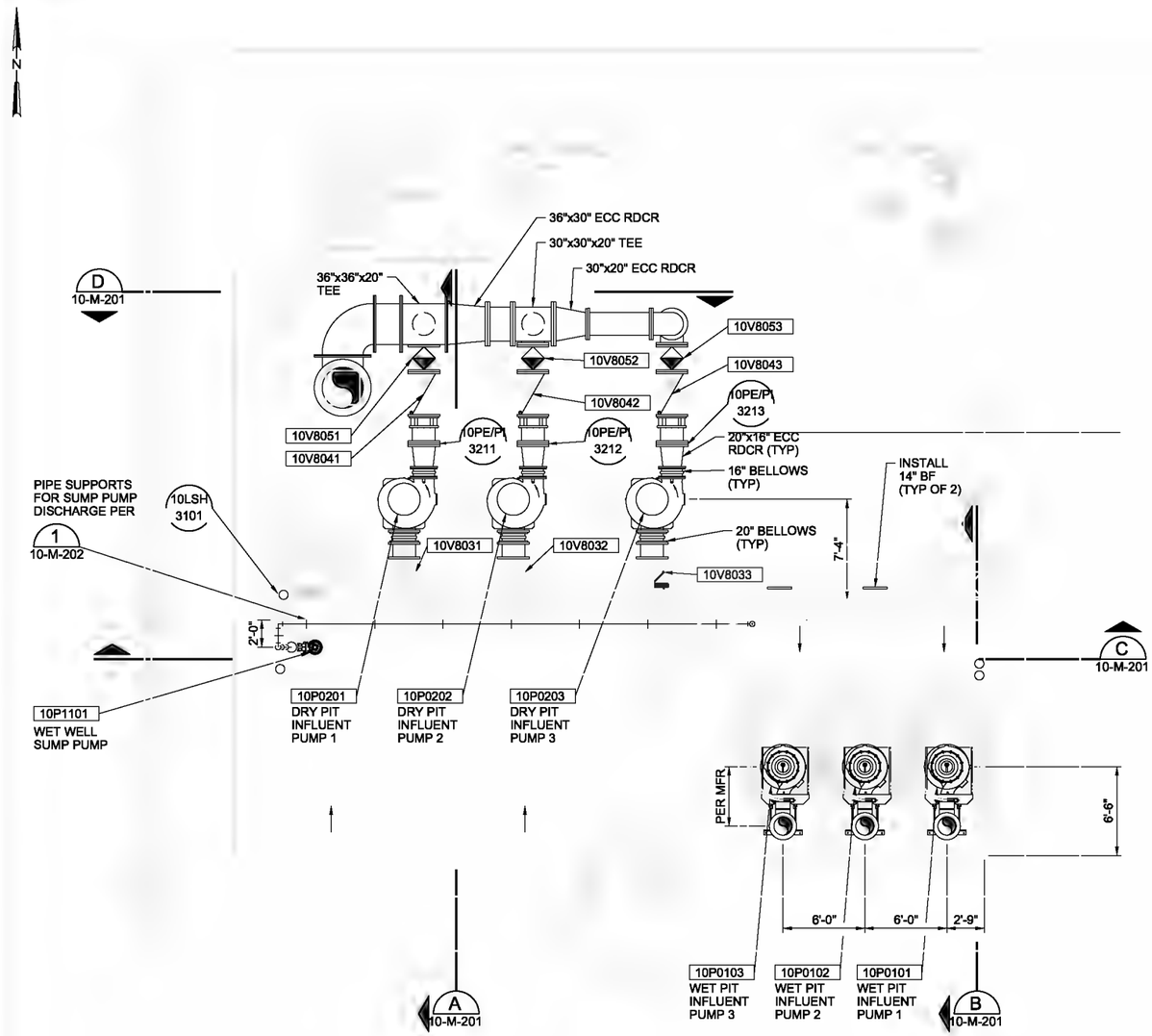
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INFLUENT PUMP STATION
SECTIONS

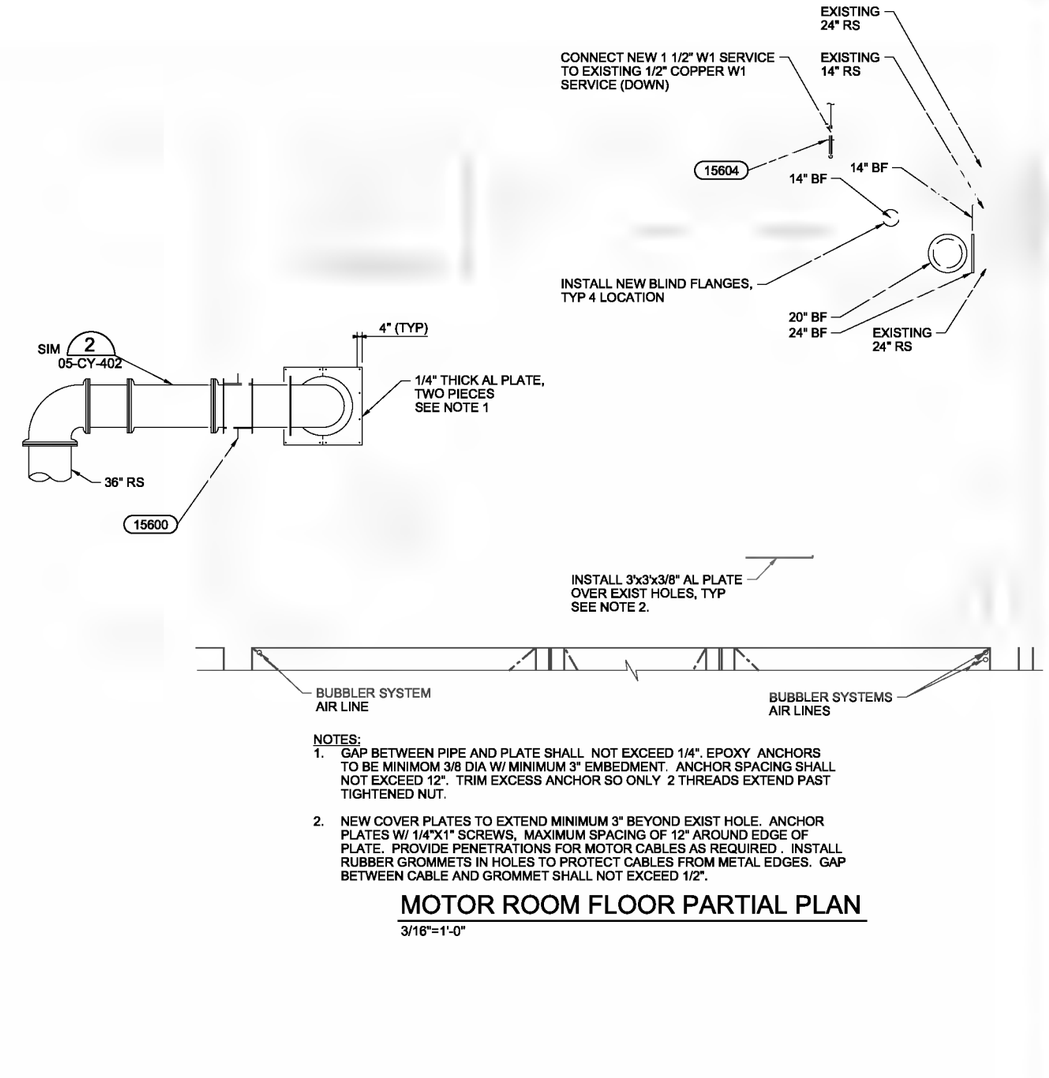
SHEET	212
DWG	10-H-201
DATE	MAY 19 2006
PROJ	326918

PLOT TIME 1:16:57 PM



PUMP FLOOR PLAN

3/16"=1'-0"



NOTES:

1. GAP BETWEEN PIPE AND PLATE SHALL NOT EXCEED 1/4". EPOXY ANCHORS TO BE MINIMOM 3/8 DIA W/ MINIMUM 3" EMBEDMENT. ANCHOR SPACING SHALL NOT EXCEED 12". TRIM EXCESS ANCHOR SO ONLY 2 THREADS EXTEND PAST TIGHTENED NUT.
2. NEW COVER PLATES TO EXTEND MINIMUM 3" BEYOND EXIST HOLE. ANCHOR PLATES W/ 1/4"X1" SCREWS, MAXIMUM SPACING OF 12" AROUND EDGE OF PLATE. PROVIDE PENETRATIONS FOR MOTOR CABLES AS REQUIRED . INSTALL RUBBER GROMMETS IN HOLES TO PROTECT CABLES FROM METAL EDGES. GAP BETWEEN CABLE AND GROMMET SHALL NOT EXCEED 1/2".

MOTOR ROOM FLOOR PARTIAL PLAN

3/16"=1'-0"

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY BRIAN M CASEY STATE OF OREGON, P.E. NO. 73,447.

DSGN	BM CASEY						
DR	MJ GAGE						
CHK	D TEAL						
APVD	RS SHANLEY						
NO.	DATE	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT REVISION	BRK BY	AGC APVD	VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.		

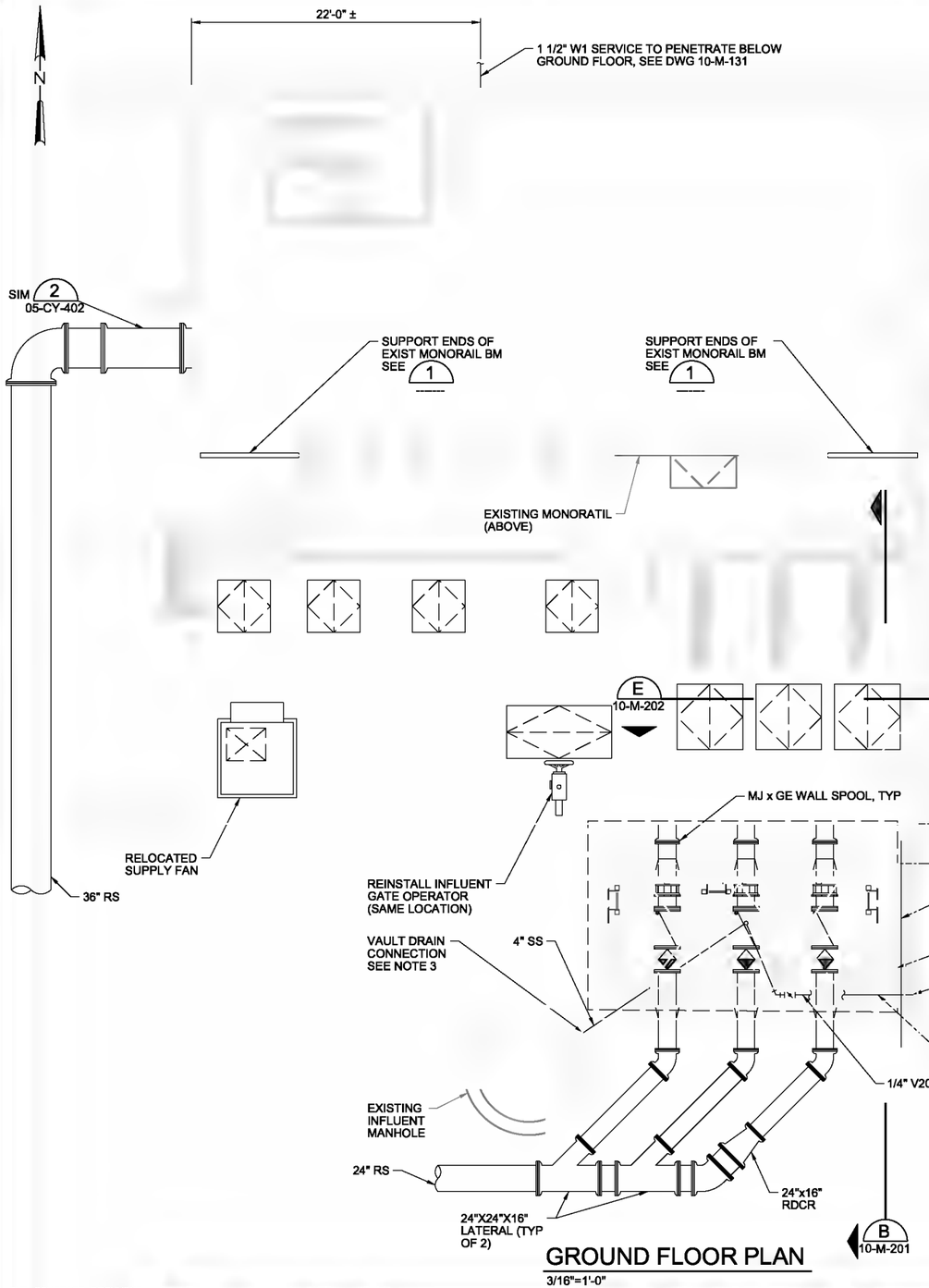
CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INFLUENT PUMP STATION
PUMP FLOOR AND MOTOR FLOOR PLANS

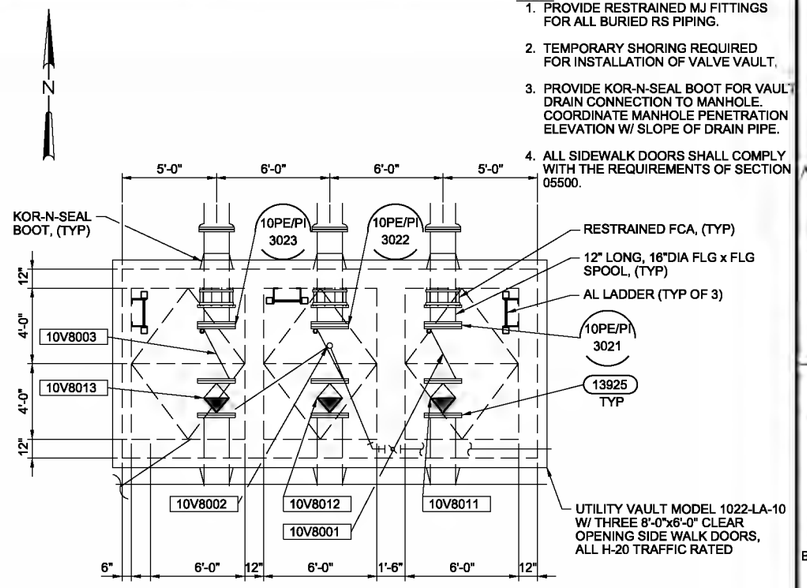
SHEET	213
DWG	10-M-131
DATE	MAY 19 2006
PROJ	326918

FILENAME: 10xm110d_326918.dgn PLOT DATE: 6/19/2010 PLOT TIME: 1:19:01 PM



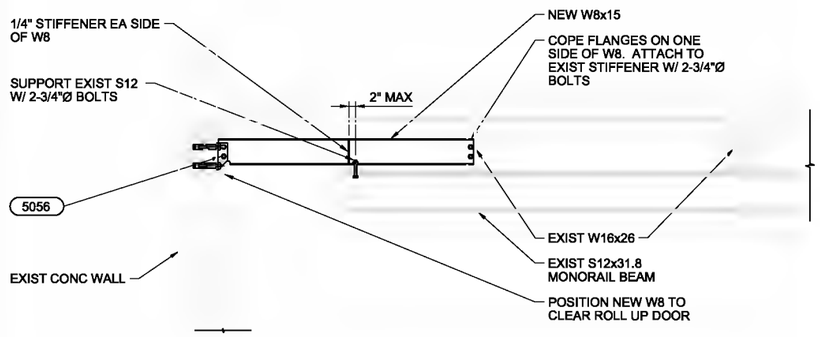
GROUND FLOOR PLAN

3/16"=1'-0"



PARTIAL PLAN A

1/4" = 1'-0"



DETAIL 1

1/2" = 1'-0"

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY BRIAN M CASEY STATE OF OREGON, P.E. NO. 73,447.

DSGN	BM CASEY					
DR	MJ GABEL					
CHK	D TEAL					
APVD	DS SHANLEY					
NO.	DATE	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT REVISION	BRK BY	AGC APVD	VERIFY SCALE: BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	
1	8/17/2010					

CH2MHILL carollo engineers

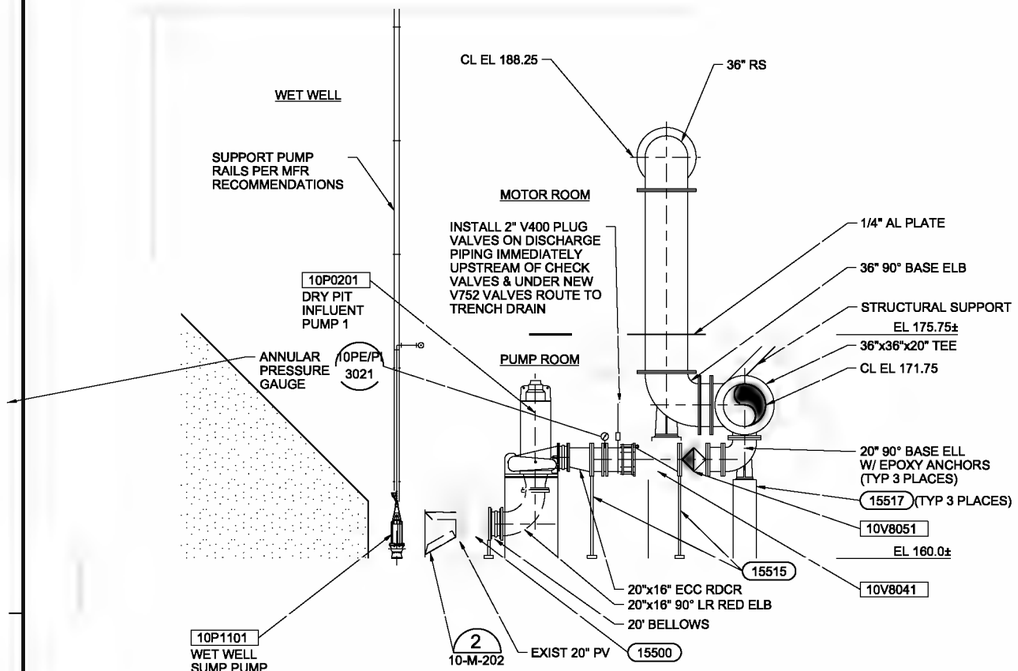
CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

INFLUENT PUMP STATION

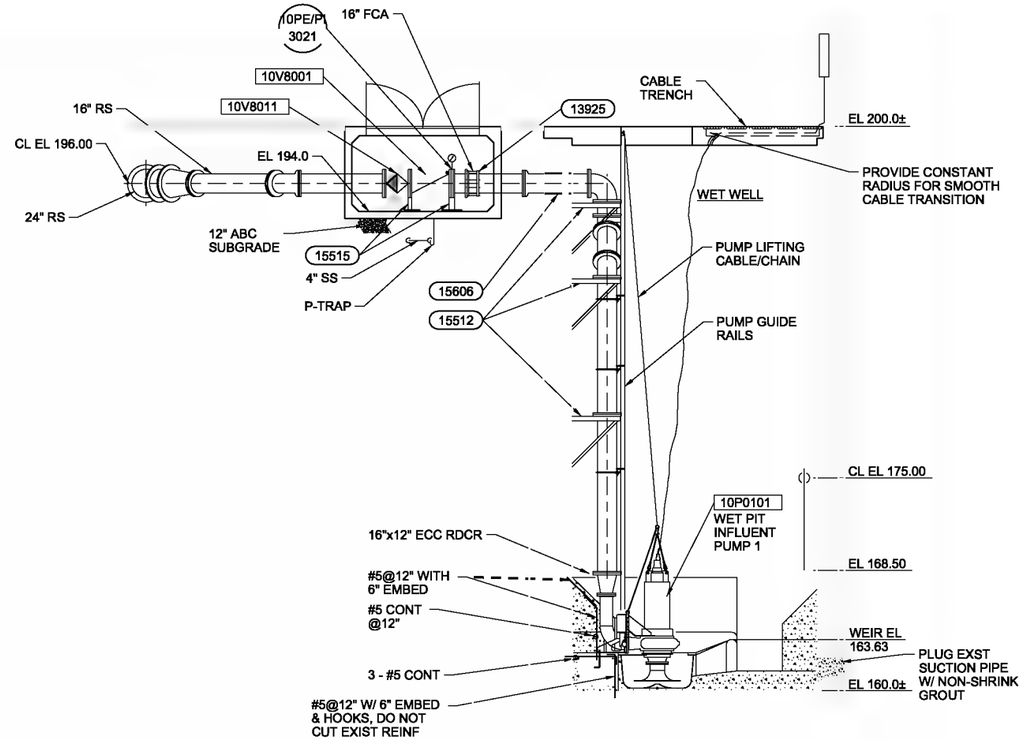
GROUND FLOOR PLAN

SHEET	214
DWG	10-M-141
DATE	MAY 19 2006
PROJ	326918

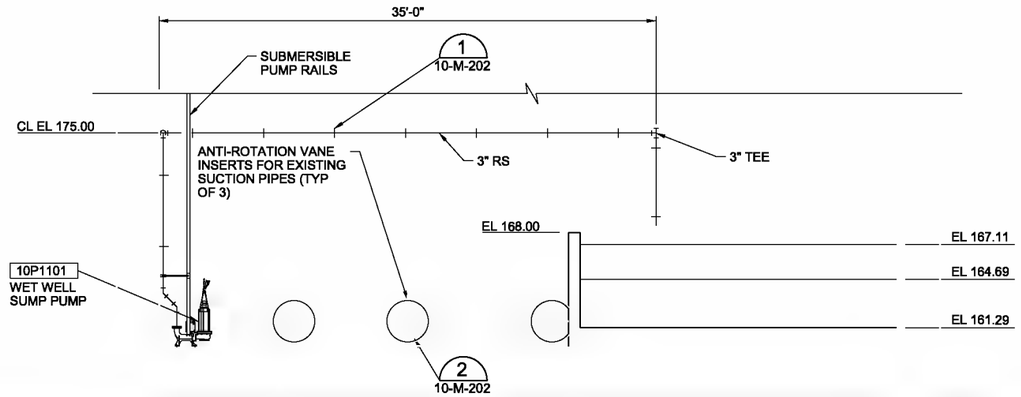
FILENAME 10m140d_326918.dgn PLOT DATE 8/19/2010 PLOT TIME 1:19:22 PM



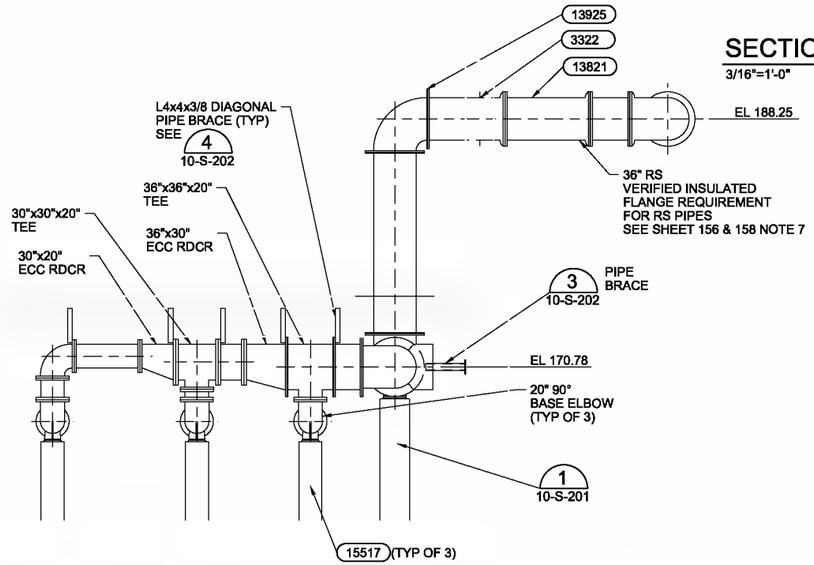
SECTION A
3/16"=1'-0" 10-M-131



SECTION B
3/16"=1'-0" 10-M-131



SECTION C
3/16"=1'-0" 10-M-131



SECTION D
3/16"=1'-0" 10-M-131

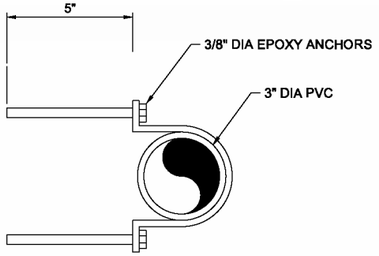
DSGN BM CASEY						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-O3-01 LINN COUNTY, OREGON
DR MJ GABEL						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
CHK CHECKED-BY			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	BRK	AGC	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	
APVD APPROVED-BY	NO.	DATE	REVISION	BY	APVD		
		01/20/10					

CH2MHILL carollo engineers

INFLUENT PUMP STATION
MECHANICAL
SECTIONS
PUMP SECTIONS AND DETAILS

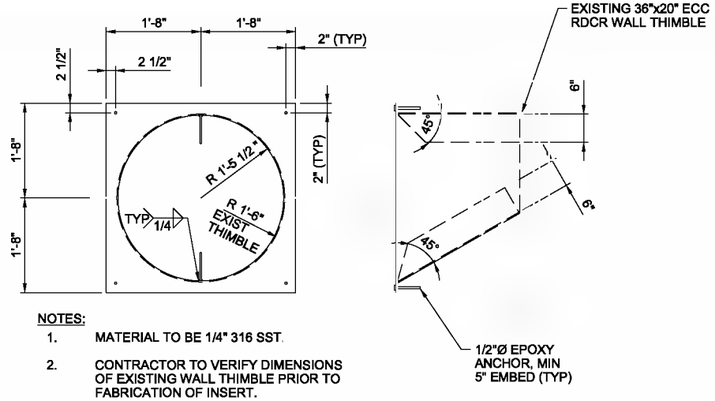
SHEET	215
DWG	10-M-201
DATE	MAY 19 2006
PROJ	326918

FILENAME: 10xm201d_326918.dgn PLOT DATE: 5/10/2010 PLOT TIME: 1:21:51 PM



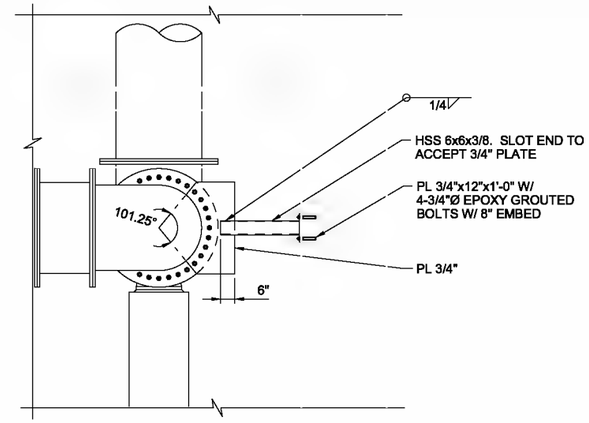
NOTES:
1. FOR BOTH VERTICAL AND HORIZONTAL LOCATIONS.
2. MAX SPACING OF 5 FEET.

DETAIL 1
3"=1'-0" 10-M-131 10-M-201

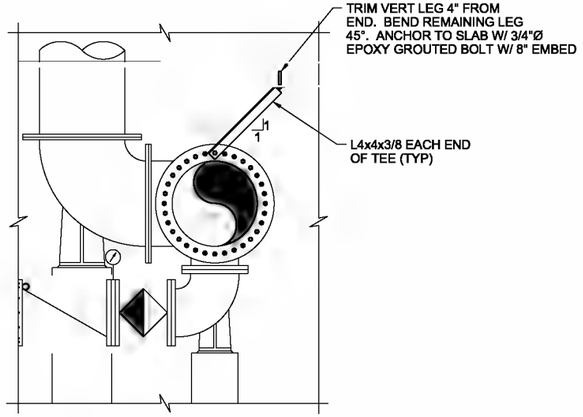


NOTES:
1. MATERIAL TO BE 1/4" 316 SST.
2. CONTRACTOR TO VERIFY DIMENSIONS OF EXISTING WALL THIMBLE PRIOR TO FABRICATION OF INSERT.

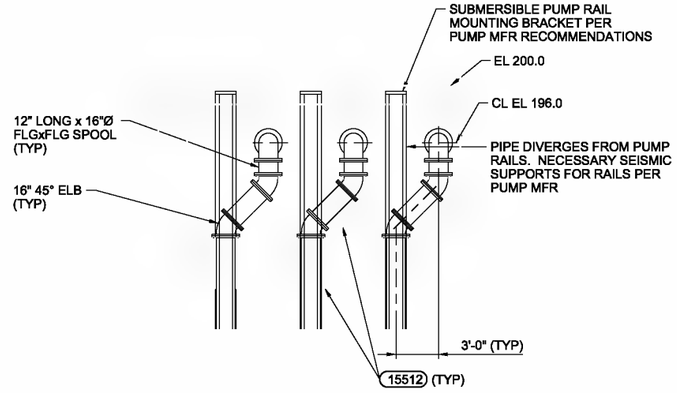
DETAIL 2
3/4"=1'-0" 10-M-201



DETAIL 3
3/8"=1'-0" 10-M-202



DETAIL 4
3/8"=1'-0" 10-M-202



SECTION E
3/16"=1'-0" 10-M-141

DESIGN	BM CASEY
DR	MJ GABEL
CHK	D TEAU
APPV	RS SHANLEY

(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT

BRK BY

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

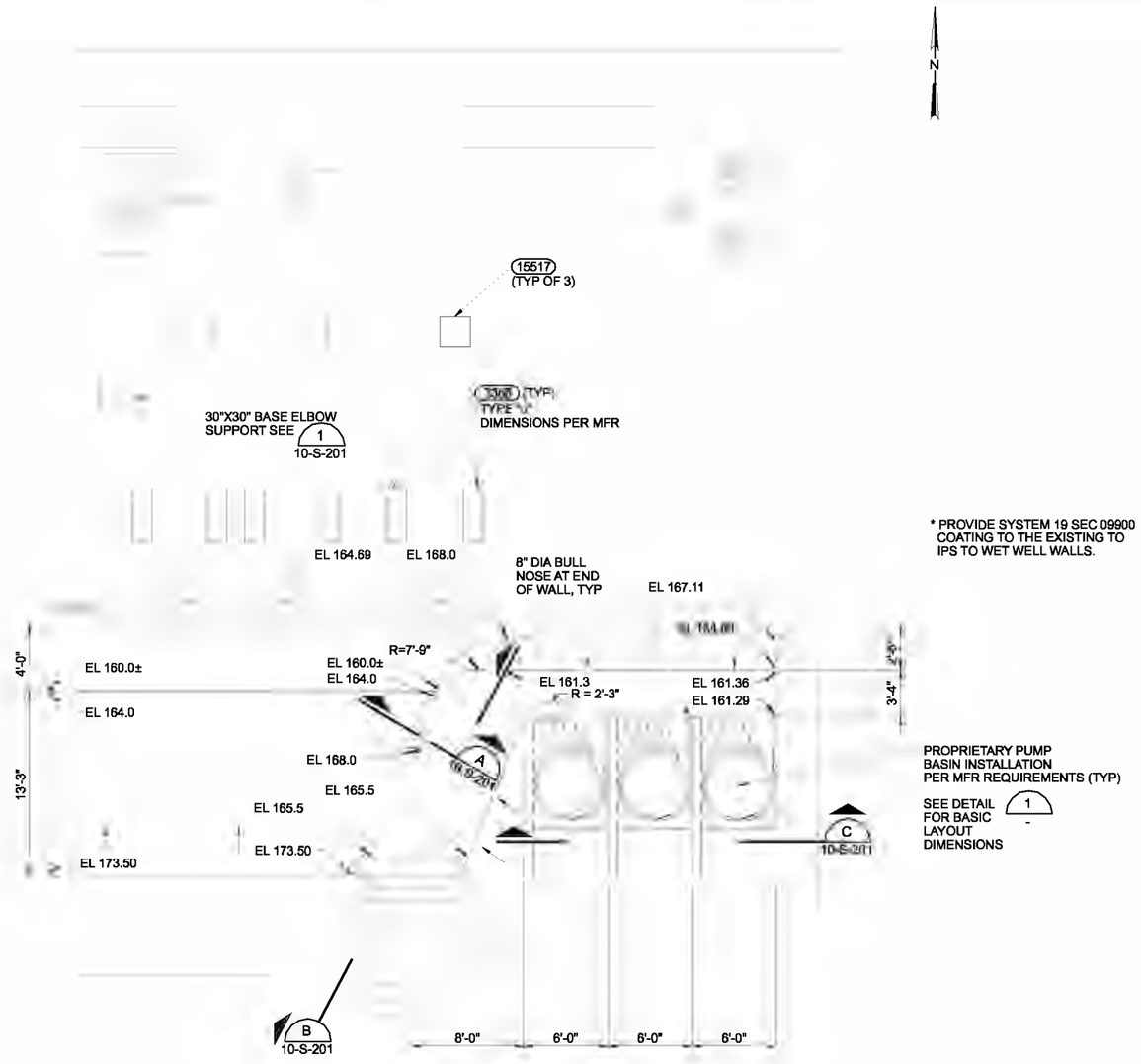
CH2MHILL carollo engineers

CITY OF ALBANY
SYSTEM IMPROVEMENTS
WWTP-O3-01
LINN COUNTY, OREGON

INFLUENT PUMP STATION

PUMP SECTION AND DETAILS

SHEET	216
DWG	10-M-202
DATE	MAY 19 2006
PROJ	326918



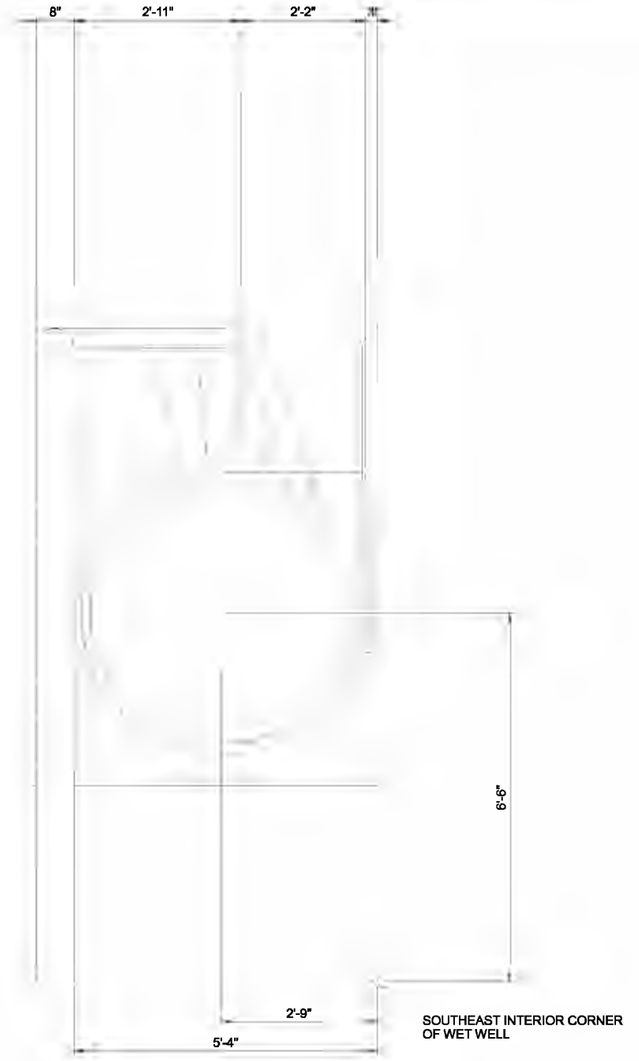
* PROVIDE SYSTEM 19 SEC 09900 COATING TO THE EXISTING TO IPS TO WET WELL WALLS.

PROPRIETARY PUMP
BASIN INSTALLATION
PER MFR REQUIREMENTS (TYP)

SEE DETAIL 1 - FOR BASIC LAYOUT DIMENSIONS

NOTES:
1. COORDINATE ALL EQUIPMENT AND PIPING SUPPORTS WITH MECHANICAL DRAWINGS.

PUMP FLOOR PLAN
3/16"=1'-0"



DETAIL 1
3/4"=1'-0"

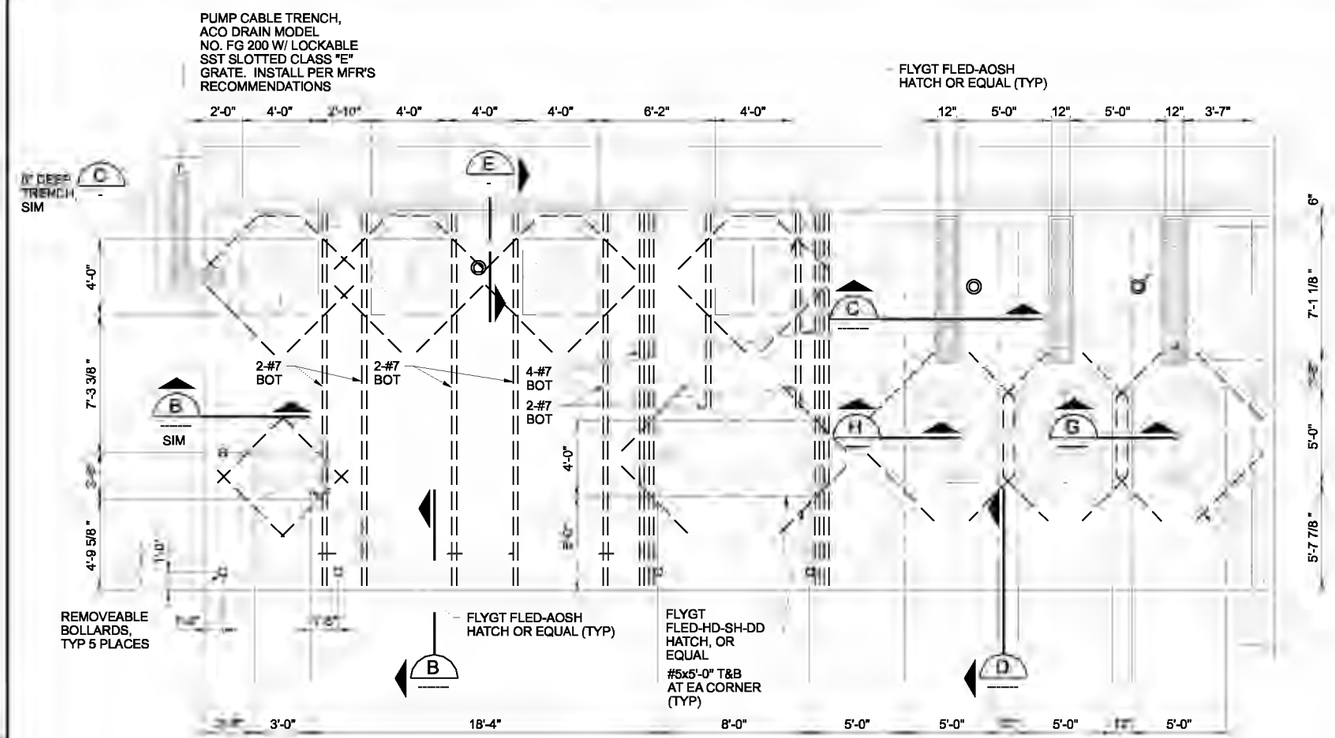
NOTES:
1. DIMENSIONS ARE PRELIMINARY ONLY. CONTRACTOR TO VERIFY DIMENSIONS W/ APPROVED MFR DWGS.

DSGN KA MARTIN						VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-03-01 LINN COUNTY, OREGON	INFLUENT PUMP STATION PUMP FLOOR PLAN AND DETAIL	SHEET 217
DR ED LONGORIA						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"			DWG 10-S-131
CHK CA GENTRY			(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1)			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DATE MAY 19 2006
APVD RS SHANLEY	NO.	DATE	REVISION	BRK	RAH				PROJ 326918
		01/20/10	AS-BUILT						

CH2MHILL carollo engineers

16,276.

FILENAME: 10s1104_326918.dgn PLOT DATE: 3/29/2011 PLOT TIME: 4:03:51 PM



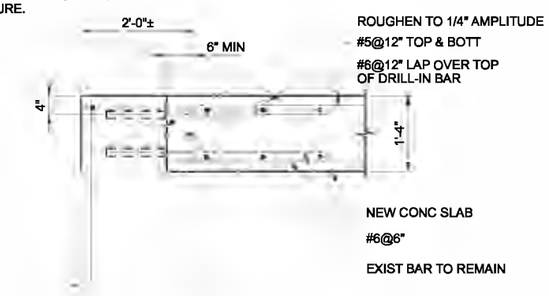
CORE HOLE FOR LEVEL SENSOR TYP 3 PL

PROVIDE OPENNING AND SMOOTH TRANSITION TO ACCOMMODATE PUMP CABLE (TYP SEE DWG 10-M-201)

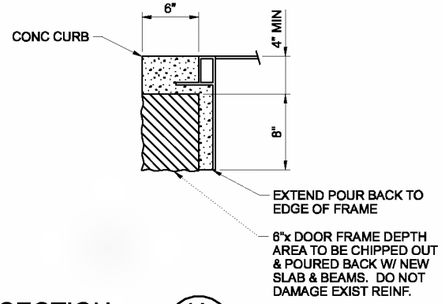
FLYGT FLED-AOSH HATCH, 60"x60" CLEAR OPENING, H20 RATED, OR EQUAL (TYP)

NOTE:

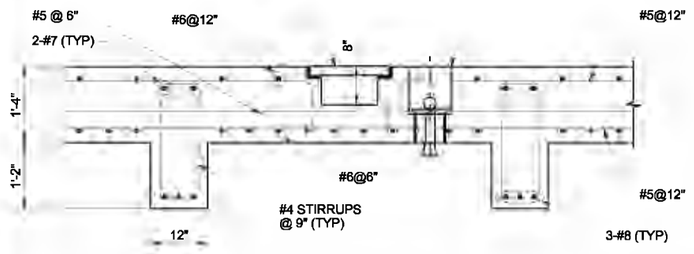
1. FOR STRUCTURAL NOTES, SEE DWGS 01-G-09 AND 01-G-10.
2. ALL HATCHES OVER WET WELL TOP SLAB SHALL BE H20 RATED SIDEWALK DOORS PER SECTION 05500 WITH SAFETY GRATE FEATURE. HATCHES OVER WET WELL DO NOT REQUIRE DRAIN CHANNEL FEATURE.



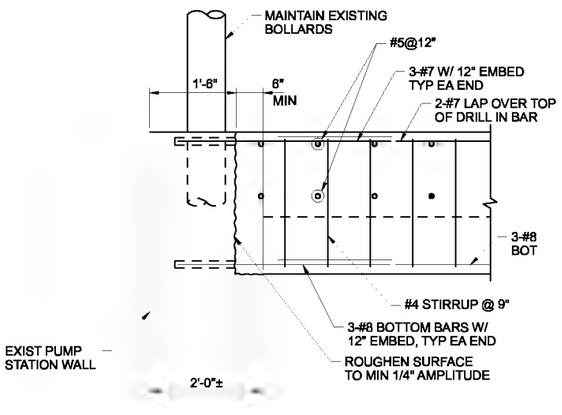
SECTION B
3/4"=1'-0"



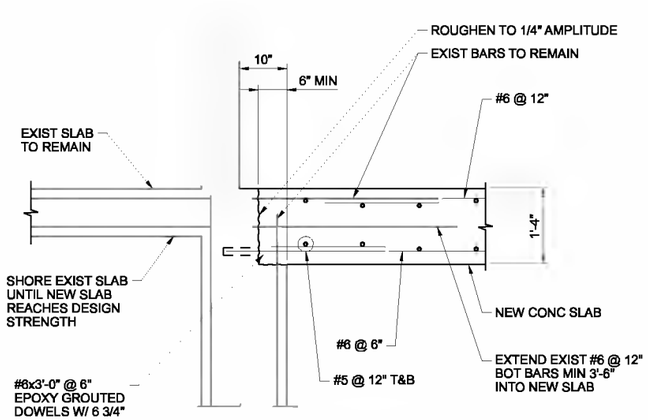
PARTIAL GROUND FLOOR PLAN
1/4"=1'-0"



SECTION C
3/4"=1'-0"

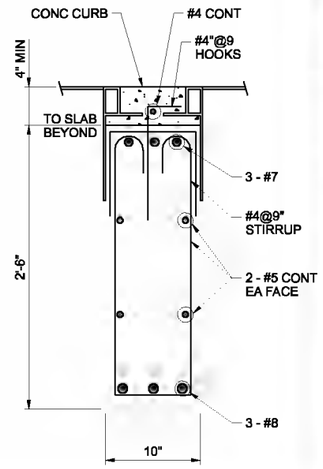


SECTION D
3/4"=1'-0"



SECTION E
3/4"=1'-0"

SECTION H
NTS



SECTION G
NTS

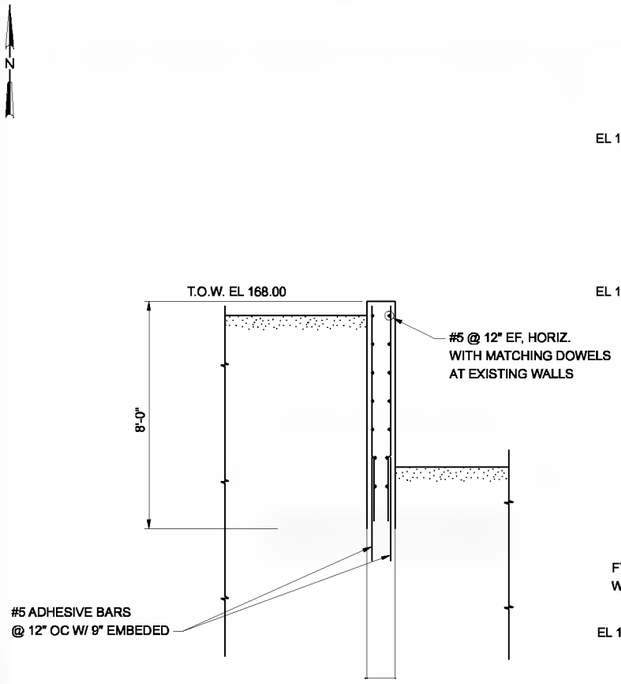
DSGN	RA MARTIN					VERIFY SCALE	CH2MHILL carollo engineers	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-O3-01 LINN COUNTY, OREGON	INFLUENT PUMP STATION
DR	MJ TABER					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			PARTIAL GROUND FLOOR PLAN AND SECTIONS
CHK	EA BENTRY								
APVD	RS SHANLEY								
		NO.	DATE	REVISION	BRK BY	RAH APVD			

(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT 01/00/10

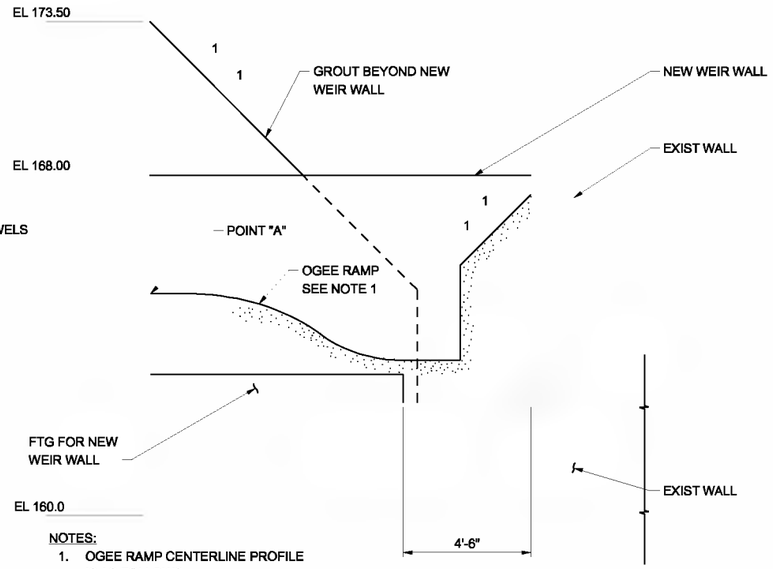
SHEET	218
DWG	10-S-141
DATE	MAY 19 2006
PROJ	326918

16,276.

FILENAME: 10s141c 326918.dgn PLOT DATE: 5/17/2010 PLOT TIME: 2:15:25 PM



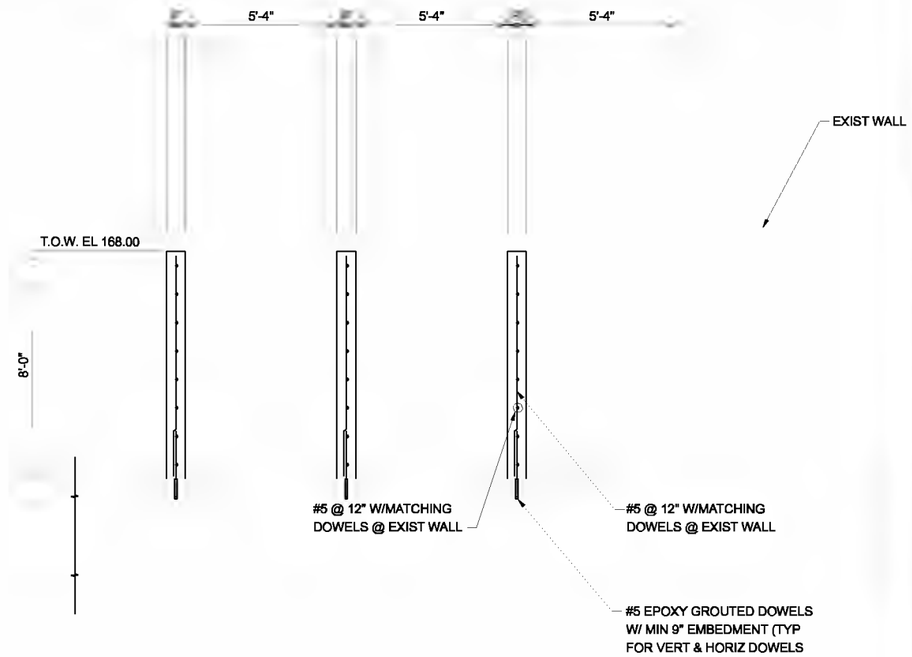
SECTION A
3/8"=1'-0" 10-S-131



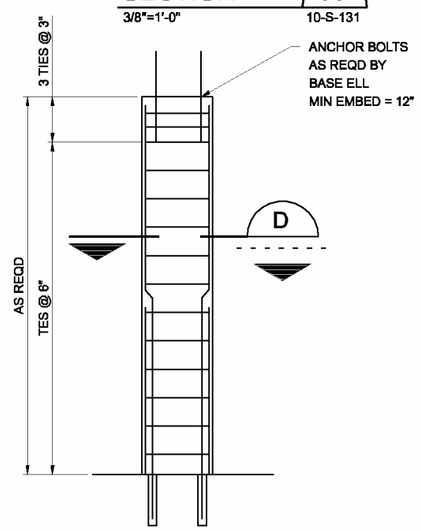
NOTES:
1. OGEE RAMP CENTERLINE PROFILE IS AS FOLLOWS.

DIST FROM PT "A"	ELEVATION NOTE	NOTE
Ø	165.5	BEGIN RAMP
4'-1"	164.5	
8'-2"	163.4	
12'-3"	162.4	
16'-4"	161.3	END

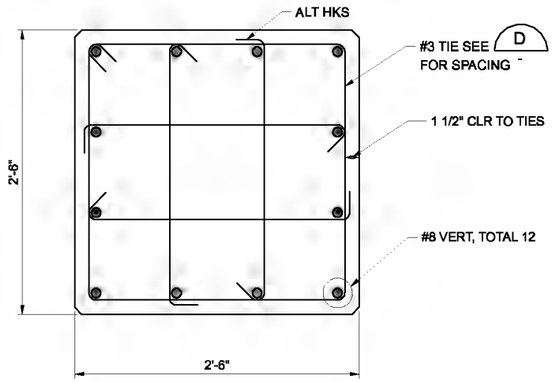
SECTION B
3/8"=1'-0" 10-S-131



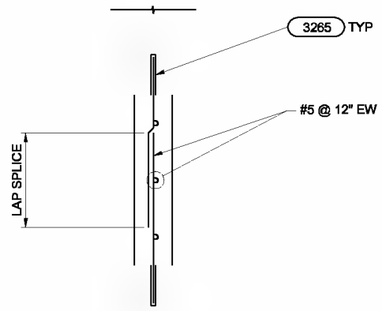
SECTION C
3/4"=1'-0" 10-S-131



DETAIL 1
3/8"=1'-0" 10-S-131
10-M-201



SECTION D
3/4"=1'-0" ——



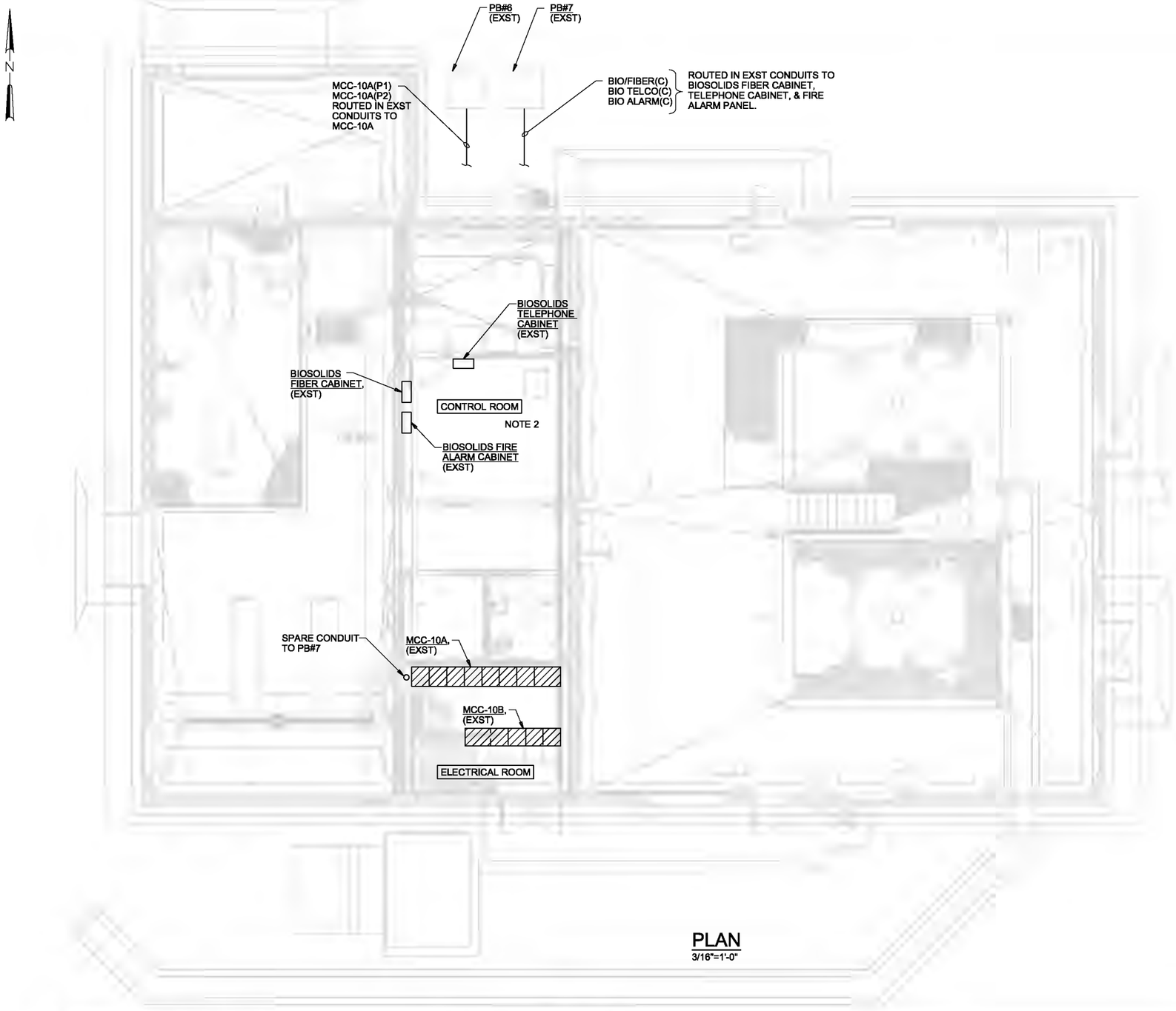
NOTES:
1. SEE HVAC DRAWINGS FOR LOCATIONS OF OPENINGS TO BE FILLED.
2. LAP HORIZ AND VERT BARS IN MIDDLE OF OPENING

DETAIL 2
3/4"=1'-0" 10-H-141

DSGN	KA MARTIN					VERIFY SCALE	CITY OF ALBANY WASTEWATER SYSTEM IMPROVEMENTS PROJECT WWTP-03-01 LINN COUNTY, OREGON	INFLUENT PUMP STATION	SHEET 219
DR	ED LONGORIA					BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.		SECTIONS	DWG 10-S-201
CHK	CA GENTRY								DATE MAY 19 2006
APVD	RS SHANLEY								PROJ 326918
		NO.	DATE	REVISION	BRK	APVD			
			01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT					

CH2MHILL carollo engineers

16,276.



PLAN
3/16"=1'-0"

NOTES:

1. REFER TO THE SITE ROUTED CIRCUIT SCHEDULE AND SITE ROUTED CONDUIT SCHEDULE FOR CIRCUITING REQUIREMENTS ON THE SITE.
2. VERIFY LOCATION OF EQPT. IN CONTROL ROOM.

THE CONTRACT DOCUMENT DRAWINGS ARE PRINTED DOCUMENTS WHICH DEFINE THE SCOPE, EXTENT, AND CHARACTER OF THE WORK. THE ORIGINAL DOCUMENT DRAWINGS WERE SEALED AND SIGNED 05/06 BY KANDI L. MAESTRI, STATE OF OREGON, P.E. NO. 53785PE

DSGN	KL MAESTRI						VERIFY SCALE
DR	DW CLARK						BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
CHK	JB MAURAIS						
APVD	CW MASSIE		01/20/10	(FOR LIMITATIONS SEE RECORD DRAWING NOTE ON SHEET 1) AS-BUILT	GRW	KLM	
		NO.	DATE	REVISION	BY	APVD	

CH2MHILL carollo engineers

CITY OF ALBANY
WASTEWATER SYSTEM IMPROVEMENT PROJECT
WWTP-O3-01
LINN COUNTY, OREGON

BIOSOLIDS DEWATERING BUIDLING MODIFICATIONS

ELECTRICAL
PLAN

SHEET	220
DWG	15-E-141
DATE	MAY 19 2006
PROJ	326918

FILENAME: 15nE141d_326918.dgn PLOT DATE: 5/10/2010 PLOT TIME: 1:26:54 PM