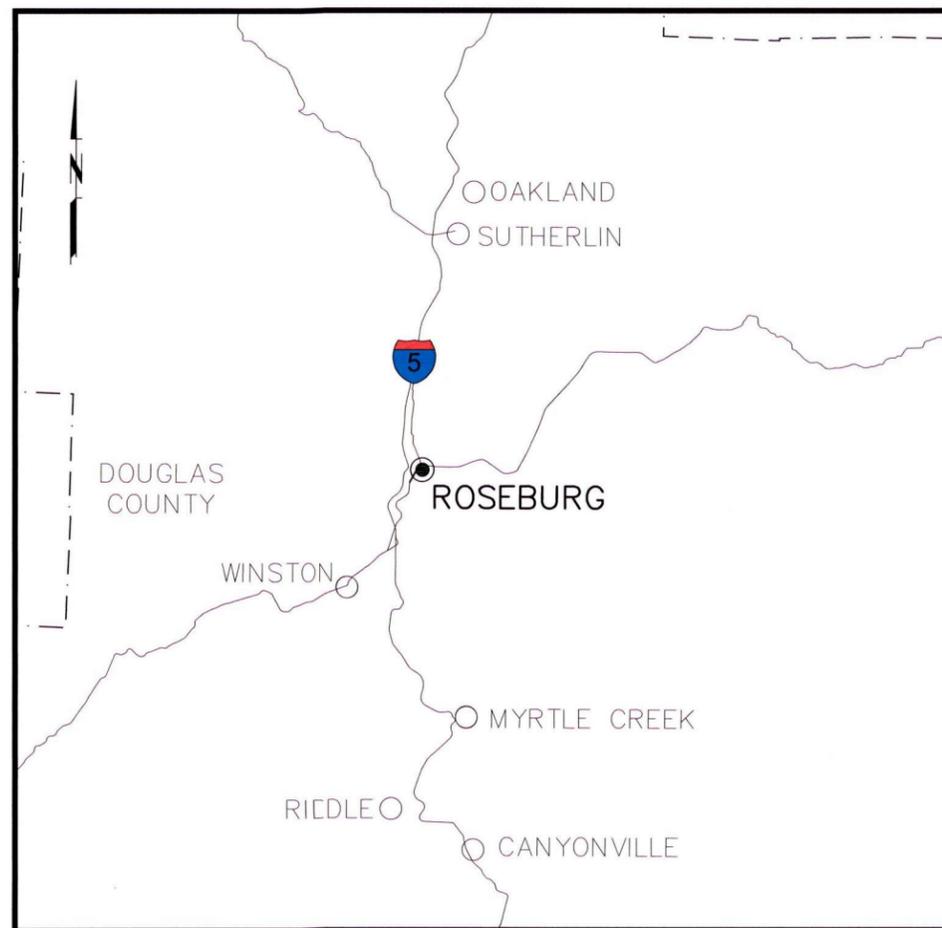


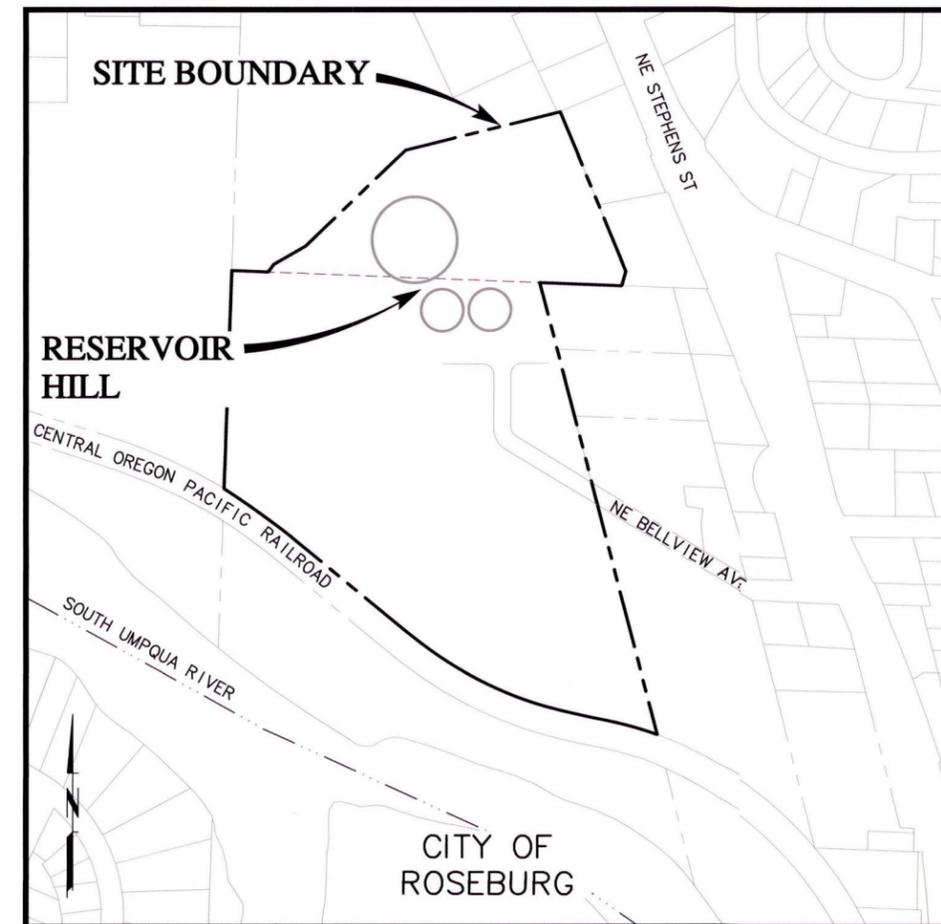
PROJECT #16WA13 RESERVOIR HILL YARD PIPING IMPROVEMENTS - PHASE II CITY OF ROSEBURG, OREGON

VOLUME 2 OF 2 DRAWINGS
OCTOBER 2016



REGIONAL MAP
SCALE: 1"=25,000'

MSA Murray, Smith & Associates, Inc.
Engineers/Planners
888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022



VICINITY MAP
SCALE: 1"=200'

G:\PDX_Projects2\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-G.dwg G-3 9/28/2016 8:24 AM RLF 20.0s (LMS Tech)

PIPE SYMBOLS

PLANT	SCHEMATIC	
		WELDED JOINT
		FLANGED JOINT
		GROOVED END JOINT
		MECHANICAL JOINT
		PUSH-ON JOINT (RUBBER GASKET)
		FLANGED COUPLING ADAPTER
		DOUBLE BALL FLEXIBLE EXTENSION COUPLING
		FLEXIBLE COUPLING W/THRUST RING
		ELBOW UP
		ELBOW DOWN
		TEE UP
		TEE DOWN
		LATERAL UP
		LATERAL DOWN
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		UNION
		BLIND FLANGE
		CAP
		LONG SLEEVE
		FLEXIBLE JOINT
		CAPPED END OR PLUGGED END
		FITTING

VALVE SYMBOLS

PLANT	SCHEMATIC	
		BUTTERFLY VALVE
		GATE VALVE
		GLOBE VALVE
		BALL VALVE
		BALANCING VALVE
		DIAPHRAGM VALVE
		PLUG VALVE (TOP)
		PLUG VALVE (SIDE)
		3-WAY PLUG VALVE
		SWING CHECK VALVE
		DOUBLE CHECK ASSEMBLY
		BALL SWING CHECK
		SILENT CHECK VALVE
		PRESSURE REDUCING VALVE
		ALTITUDE CONTROL VALVE
		SOLENOID VALVE
		RELIEF VALVE
		NEEDLE VALVE
		HOSE VALVE
		REDUCED PRESSURE BACKFLOW PREVENTER W/GATE VALVES
		HOSE BIBB

MISCELLANEOUS PIPING SYMBOLS

	STRAINER
	SIGHT GLASS
	PRESSURE GAUGE W/COCK
	PRESSURE SWITCH W/COCK
	METER

LEGEND AND ABBREVIATIONS FOR CORROSION MONITORING FACILITIES FOR DI PIPE

	EXISTING TEST STATION
	PROPOSED TEST STATION
TS	TEST STATION
IFC	INSULATED FLEXIBLE COUPLING
IFL	INSULATED FLANGE

PLAN AND PROFILE SYMBOLS

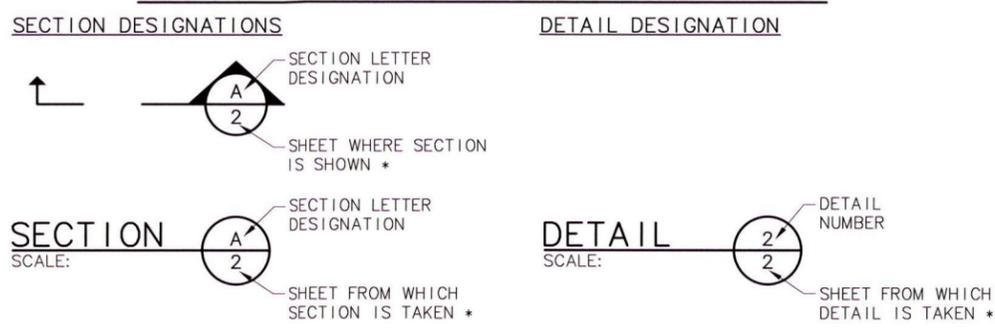
	COMPACTED GRANULAR TRENCH BACKFILL (CLASS D) AND AC SURFACE RESTORATION
	COMPACTED NATIVE TRENCH BACKFILL (CLASS B)
	COMPACTED GRANULAR TRENCH BACKFILL (CLASS D) -GRAVEL ROADWAYS
	COMPACTED GRANULAR TRENCH BACKFILL (CLASS D) AND NATIVE SURFACE RESTORATION
	CHECK DAMS (AT 500' SPACING UNLESS NOTED OTHERWISE AND AS DIRECTED BY ENGINEER)
	1 1/2" GRAVEL OVERLAY (3/4"-0") - FULL ROADWAY WIDTH (SEE SPEC SECTION 02505)
	CONTROLLED LOW STRENGTH MATERIAL TRENCH BACKFILL AND AC SURFACE RESTORATION

NOTE: SEE SHEET C-7 FOR SPECIFIC BACKFILL AND SURFACE RESTORATION REQUIREMENTS.

TOPOGRAPHIC LEGEND

	EXISTING	PROPOSED
WATERLINE	---10"W---	— 24" W —
ELECTRICITY	---E---	— E —
GAS	---4"G---	— 4"G —
TELEPHONE/TELEMETRY	---T---	— T —
CABLE TELEVISION	---CATV---	— CATV —
SANITARY SEWER LINE	---8"SS---	— 8"SS —
SANITARY SEWER FORCE MAIN	---6"FM---	— 6"FM —
STORM DRAIN	---8"SD---	— 8"SD —
CULVERT	== == ==	— 18"D —
ABANDON PIPE		//////////
DRAINAGE DITCH	-----	-----
FENCE	x x x	x x x
CHAIN LINK FENCE	o o o	o o o
TEMPORARY SILT FENCE		□ □ □
GUARDRAIL
ROCK WALL
TREE/BUSH LINE
CENTERLINE	-----	-----
EASEMENT/PROPERTY LINE	-----	-----
RIGHT-OF-WAY	-----	-----
EDGE OF PAVEMENT/AC	-----	-----
EDGE OF GRAVEL	-----	-----
CURB	-----	-----
SIDEWALK	-----	-----
STRUCTURE OR FACILITY	-----	-----
CONTOUR MINOR	-----	-----
CONTOUR MAJOR	-----	-----
MANHOLE	○	○
CLEAN-OUT	○	○
CATCH BASIN/FIELD INLET	□	□
THRUST BLOCK	△	▲
VALVE	⊗	⊗
AIR INJECTION ASSEMBLY	⊥	⊥
BLOW-OFF ASSEMBLY	∞	∞
AIR RELEASE ASSEMBLY	⊥	⊥
FIRE HYDRANT ASSEMBLY	⊙	⊙
WATER METER	○	○
PULL BOX/JUNCTION BOX	□	□
UTILITY POLE	○	○
GUY WIRE	←	←
LIGHT POST	⊙	⊙
MAILBOX	⊥	⊥
SIGN	⊥	⊥
BENCHMARK	⊕	⊕
TREE DECIDUOUS	☁	☁
TREE CONIFEROUS	☀	☀
TREE TO BE REMOVED	☀	☀
SURFACE ELEVATION	+ 426.00	+ 426.00

SECTION AND DETAIL DESIGNATIONS



* NOTE: IF PLAN AND SECTION FOR DETAIL CALL-OUT AND DETAIL ARE SHOWN ON THE SAME DRAWING, DRAWING NUMBER IS REPLACED WITH A DASH.

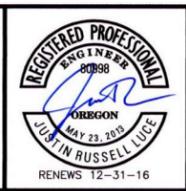
NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

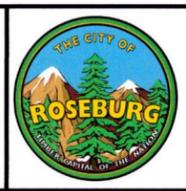
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL DESIGNED
DAK DRAWN
TPB CHECKED



MSA Murray, Smith & Associates, Inc.
Engineers/Planners

888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022



CITY OF ROSEBURG
RESERVOIR HILL
YARD PIPING
IMPROVEMENTS
PHASE II

SYMBOLS AND LEGEND			
PROJECT NO.: 16-1827.204	SCALE:	AS SHOWN	DATE: OCTOBER 2016

SHEET

G-3

3 of 15

G:\PDX_Projects2\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-G.dwg G=4 9/28/2016 8:24 AM RLF 20.0s (LMS Tech)

@	AT
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
AB	ANCHOR BOLT
ABAN (D)	ABANDON (ED)
ABS	ACRYLONITRILE BUTADIENE STYRENE
ABV	ABOVE
AC	ASPHALTIC CONCRETE/ASBESTOS CEMENT
ACP	ASPHALTIC CONCRETE PAVING
ADJ	ADJUSTABLE
ADJC	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHR	ANCHOR
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
APPVD	APPROVED
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
ARCH	ARCHITECTURAL
ARV	AIR RELEASE VALVE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASSN	ASSOCIATION
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
B&S	BELL & SPIGOT
BC	BOLT CIRCLE
BD	BOARD
BETW	BETWEEN
BF	BOTH FACE
BFD	BACKFLOW PREVENTION DEVICE
BFILL	BACK FILL
BFV	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BKGD	BACKGROUND
BLDG	BUILDING
BLK	BLOCK
BLVD	BOULEVARD
BM	BENCHMARK / BEAM
BO	BLOWOFF
BMP	BEST MANAGEMENT PRACTICE
BOC	BACK OF CURB
BS	BOTH SIDES
BSMT	BASEMENT
BTF	BOTTOM FACE
BTU	BRITISH THERMAL UNIT
BV	BALL VALVE
BW	BOTH WAYS
C	CELSIUS
C TO C	CENTER TO CENTER
CARV	COMBINATION AIR RELEASE VALVE
CATV	CABLE TELEVISION
CB	CATCH BASIN
CCP	CONCRETE CYLINDER PIPE
CCW	COUNTER CLOCKWISE
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHAN	CHANNEL
CHEM	CHEMICAL
CHFR	CHAMFER
CHKV	CHECK VALVE
CI	CAST IRON
CIP	CAST IRON PIPE
CIPC	CAST IN PLACE CONCRETE
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT
CL or C	CENTER LINE
CL2	CHLORINE
CLG	CEILING
CLJ	CONTROL JOINT
CLR	CLEAR
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CND	CONDUIT
CO	CLEANOUT
COL	COLUMN
COMB	COMBINATION
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS / CONTINUATION

CONTR	CONTRACT (OR)
COORD	COORDINATE
COP	COPPER
COPR	CENTRAL OREGON PACIFIC RAILROAD
CORP	CORPORATION
CORR	CORRUGATED
CP	CONTROL POINT
CPLG	COUPLING
CPVC	CHLORINATED POLYVINYL CHLORIDE
CR	CRUSHED ROCK
CS	COMBINED SEWER
CSP	CONCRETE SEWER PIPE
CT	COURT
CTR	CENTER
CU	CUBIC
CULV	CULVERT
CV	CONTROL VALVE
CW	CLOCKWISE / COLD WATER
CY	CUBIC YARDS
CYL	CYLINDER LOCK
D	DRAIN
DC	DIRECT CURRENT
DEFL	DEFLECTION
DET	DETAIL
D1	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DIR	DIRECTION
DIST	DISTANCE
DN	DOWN
DR	DRIVE
DS	DOWNSPOUT
DWG	DRAWING
DWL	DOWEL
DWV	DRAIN WASTE AND VENT
DWY	DRIVEWAY
EA	EACH
ECC	ECCENTRIC
EF	EACH FACE
EL	ELEVATION
ELB	ELBOW
ELEC	ELECTRICAL
ENCL	ENCLOSURE
EOP	EDGE OF PAVEMENT
EQL	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EW	EACH WAY
EXC	EXCAVATE
EXIST	EXISTING
EXIST GR	EXISTING GRADE
EXP	EXPANSION
EXP BT	EXPANSION BOLT
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
F	FAHRENHEIT
F TO F	FACE TO FACE
FAB	FABRICATE
FB	FLAT BAR
FCA	FLANGED COUPLING ADAPTER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDN	FOUNDATION
FEXT	FIRE EXTINGUISHER
FF	FAR FACE
FGL	FIBERGLASS
FH	FIRE HYDRANT
FIN FL	FINISH FLOOR
FIN GR	FINISH GRADE
FIPT	FEMALE IRON PIPE THREAD
FITG	FITTING
FL	FLOOR LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLL	FLOW LINE
FLR	FLOOR
FM	FORCE MAIN
FO	FIBER OPTIC
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET / FOOT
FTG	FOOTING
FPVC	FUSIBLE PVC
FUT	FUTURE
FXTR	FIXTURE
G	GAS
GA	GAUGE

GAL	GALLON
GALV	GALVANIZED
GC	GROOVED COUPLING
GFA	GROOVED FLANGE ADAPTER
GI	GALVANIZED IRON
GIP	GALVANIZED IRON PIPE
GU	GAS JOINT
GLV	GLOBE VALVE
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPS	GALLONS PER SECOND
GR	GRADE
GR LN	GRADE LINE
GRTG	GRATING
GV	GATE VALVE
GRVL	GRAVEL
GYP	GYPSPUM
HB	HOSE BIBB
HC	HOLLOW CORE
HDD	HORIZONTAL DIRECTIONAL DRILL
HDPE	HIGH DENSITY POLYETHYLENE
HDR	HEADER
HGR	HANGER
HGT	HEIGHT
HH	HANDHOLD
HM	HOLLOW METAL
HNDRL	HAND RAIL
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HORIZ	HORIZONTAL
HP	HIGH PRESSURE / HORSEPOWER
HPG	HIGH PRESSURE GAS
HPT	HIGH POINT
HR	HOUR
HSB	HIGH STRENGTH BOLT
HV	HOSE VALVE
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HWL	HIGH WATER LINE
HWY	HIGHWAY
HYD	HYDRANT
HYDR	HYDRAULIC
I&C	INSTRUMENTATION & CONTROL
I&W	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IFC	INSULATED FLEXIBLE COUPLING
IFL	INSULATED FLANGE
IMPVT	IMPROVEMENT
IN	INCH
INCC	INCLUDE (D) (ING)
INFL	INFLUENT
INJ	INJECTION
INSTL	INSTALLATION / INSTALL
INSUL	INSULATION
INTER	INTERCEPTOR
INTR	INTERIOR
INV	INVERT
IP	IRON PIPE
IPT	IRON PIPE THREAD
IR	IRON ROD
IRRIG	IRRIGATION
JT	JOINT
JUNC	JUNCTION
KPL	KICK PLATE
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWY	KEYWAY
L	LENGTH OF CURVE
LAB	LABORATORY
LAV	LAVATORY
LB	POUND
LF	LINEAL FOOT
LIN	LINEAL / LINEAR
LN	LANE
LOC	LOCATION
LONG	LONGITUDINAL
LP	LOW PRESSURE
LPT	LOW POINT
LRG	LARGE
LS	LONG SLEEVE / LUMP SUM
LT	LEFT
LVL	LEVEL
LWL	LOW WATER LINE

MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCP	MASTER CONTROL PANEL
MECH	MECHANICAL
MET	METAL
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM
MIPT	MALE IRON PIPE THREAD
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MON	MONUMENT / MONOLITHIC
MOT	MOTOR
MILEPOST	MILEPOST
MSL	MEAN SEA LEVEL
MTD	MOUNTED
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NF	NEAR FACE
NIC	NOT IN CONTRACT
NO / NO.	NORMALLY OPEN / NUMBER
NOM	NOMINAL
NORM	NORMAL
NRS	NON-RISING STEM
NTS	NOT TO SCALE
O TO O	OUT TO OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
ODOT	OREGON DEPARTMENT OF TRANSPORTATION
OF	OVERFLOW / OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
OVHD	OVERHEAD
P&ID	PROCESS & INSTRUMENTATION DIAGRAM
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PCVC	POINT OF CURVATURE ON VERTICAL CURVE
PE	PLAIN END
PERF	PERFORATED
PERM	PERMANENT
PERP	PERPENDICULAR
PG	PRESSURE GAUGE
PH	PIPE HANGER
PI	POINT OF INTERSECTION
PIVC	POINT OF INTERSECTION ON VERTICAL CURVE
PL or P	PROPERTY LINE / PLATE / PLASTIC
PLBG	PLUMBING
PNL	PANEL
POC	POINT OF CURVATURE
POLY	POLYETHYLENE
POT	POINT OF TANGENCY
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PRCST	PRECAST
PREP	PREPARATION
PRESS	PRESSURE
PRKG	PARKING
PROP	PROPERTY
PRV	PRESSURE REDUCING VALVE
PS	PUMP STATION
PSIG	POUNDS PER SQUARE INCH GAGE
PSL	PIPE SLEEVE
PSPT	PIPE SUPPORT
PT	POINT OF TANGENCY
PTVC	POINT OF TANGENCY ON VERTICAL CURVE
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER
QTY	QUANTITY
RAD	RADIUS
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD / ROOF DRAIN
RDCR	REDUCER
REF	REFERENCE
REINF	REINFORCE (D) (ING) (MENT)
REQD	REQUIRED
RESTR	RESTRAINED
RFCA	RESTRAINED FLANGE COUPLING ADAPTOR

RM	ROOM
RND	ROUND
RO	ROUGH OPENING
ROW or R/W	RIGHT OF WAY
RPBPD	REDUCED PRESSURE BACKFLOW PREVENTION DEVICE
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RST	REINFORCING STEEL
RT	RIGHT
SALV	SALVAGE
SAN	SANITARY
SC	SOLID CORE
SCHED	SCHEDULE
SD	STORM DRAIN
SDL	SADDLE
SDR	STANDARD DIMENSION RATIO
SECT	SECTION
SHLDR	SHOULDER
SHT	SHEET
SIM	SIMILAR
SLP	SLOPE
SLV	SLEEVE
SOLN	SOLUTION
SP	SOIL PIPE / SEWER PIPE
SPCL	SPECIAL
SPEC (S)	SPECIFICATION (S)
SPG	SPACING
SPL	SPOOL
SPRT	SUPPORT
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
SS	SANITARY SEWER
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
STR	STRAIGHT
STRUCT	STRUCTURE / STRUCTURAL
SUBMG	SUBMERGED
SUCT	SUCTION
SV	SOLENOID VALVE
S/W	SIDEWALK
SWD	SIDEWATER DEPTH
SWGR	SWITCH GEAR
SYMM	SYMMETRICAL
SYS	SYSTEM
T or TEL	TELEPHONE
T&B	TOP & BOTTOM
TAN	TANGENCY
TB	THRUST BLOCK
TBM	TEMPORARY BENCH MARK
TC	TOP OF CONCRETE / TOP OF CURB
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE / TEMPORARY
T&G	TONGUE & GROOVE
THK	THICKNESS
THRD	THREAD(ED)
THRU	THROUGH
TP	TEST PIT/TOP OF PAVEMENT/TURNING POINT
TRANS	TRANSITION
TS	TEST STATION
TSP	TRI-SODIUM PHOSPHATE
TST	TOP OF STEEL
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UN	UNION
UON	UNLESS OTHERWISE NOTED
USGS	UNITED STATES GEOLOGIC SURVEY
V	VENT / VOLT
VAC	VACUUM
VB	VACUUM BREAKER
VBOX	VALVE BOX
VC	VERTICAL CURVE
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
VCP	VITRIFIED CLAY PIPE
VTR	VENT THROUGH ROOF

W	WATER
W/	WITH
W/O	WITHOUT
W/W	WALL TO WALL
WD	WOOD
WF	WIDE FLANGE
WH	WALL HYDRANT
WHTR	WATER HEATER
WI	WROUGHT IRON
WM	WATER METER
WP	WORKING POINT / WATERPROOFING
WS	WATER SERVICE
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WT	WEIGHT
WTP	WATER TREATMENT PLANT
WTRT	WATERTIGHT
WWF	WELDED WIRE FABRIC
WWTF	WASTEWATER TREATMENT FACILITY
WWTP	WASTEWATER TREATMENT PLANT
X SECT	CROSS SECTION
XFMR	TRANSFORMER
YD	YARD DRAIN/YARD
YH	YARD HYDRANT
YR	YEAR
ZN	ZINC

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

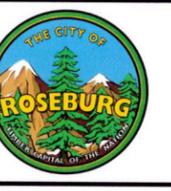
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL DESIGNED
DAK DRAWN
TPB CHECKED



MSA Murray, Smith & Associates, Inc.
Engineers/Planners

888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022



CITY OF ROSEBURG
RESERVOIR HILL
YARD PIPING
IMPROVEMENTS
PHASE II

ABBREVIATIONS

PROJECT NO.: 16-1827.204 SCALE: AS SHOWN DATE: OCTOBER 2016

SHEET

G-4

4 of 15

NOTES:

1. ACCESS TO RESERVOIR SITE PROVIDED FROM NE BELVIEW AVENUE. RESTORE ACCESS POINT TO PRECONSTRUCTION CONDITIONS.
2. EXISTING RESERVOIR ACCESS ROAD IS UNPAVED. PROVIDE ADDITIONAL GRAVEL AS REQUIRED TO MAINTAIN DURING CONSTRUCTION AND RESTORE TO PRECONSTRUCTION CONDITIONS ONCE PIPELINE WORK HAS BEEN COMPLETED.
3. PROTECT SURVEY CONTROL POINTS (CP'S).



PLAN
SCALE: 1"=50'

G:\PDX_Projects2\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-C.dwg C-1 9/28/2016 9:12 AM RLF 20.0s (LMS Tech)

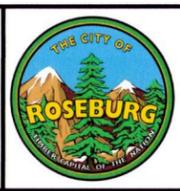
NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL
DESIGNED
DAK
DRAWN
TPB
CHECKED



MSA Murray Smith & Associates, Inc.
Engineers/Planners
888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022



**CITY OF ROSEBURG
RESERVOIR HILL
YARD PIPING
IMPROVEMENTS
PHASE II**

OVERALL RESERVOIR SITE PLAN
PROJECT NO.: 16-1827.204 SCALE: AS SHOWN DTE: OCTOBER 2016

SHEET
C-1
5 of 15

WATER PIPING SCHEDULES

SCHEDULE A/ALIGNMENT A

- ① STA A1+00
BEGIN ALIGNMENT 'A'
CONNECT TO EXIST PHASE I
24"DI W/ CUT-IN TEE, SEE
NOTE 10
FURNISH & INSTALL:
1-24" TEE, MJ
1-24" BFV, MJ
2-24" LS
- ② STA A2+38
FURNISH & INSTALL:
1-24" 1 1/4° BEND, MJ
- ③ STA A2+95
FURNISH & INSTALL:
1-24"x6" TEE, MJxFLG
1-6" BO ASSY, SEE DET 4,
SHT C-6
- ④ STA A3+00
FURNISH & INSTALL:
1-24" 90° BEND, MJ
- ⑤ STA A3+14
FURNISH & INSTALL:
1-24" 90° BEND, MJ
1-24" 1 1/4° BEND, MJ
- ⑥ STA A3+87
FURNISH & INSTALL:
1-24" 45° BEND, MJ
- ⑦ STA A4+18
FURNISH & INSTALL:
1-24" 45° BEND, MJ
- ⑧ STA A4+95
FURNISH & INSTALL:
1-24" 22 1/2° BEND, MJ
1-24" 1 1/4° BEND, MJ

- ⑨ STA A5+03
FURNISH & INSTALL:
1-2" ARV, SEE DET 2, SHT C-5
- ⑩ STA A5+74
FURNISH & INSTALL:
1-24" 45° BEND, MJ
- ⑪ STA A6+19
FURNISH & INSTALL:
1-24" 45° BEND, MJ
- ⑫ STA A6+24
REMOVE EXIST CONC TB & 24"
BLIND FLG & CONNECT TO EXIST
24" BFV, FLG
FURNISH & INSTALL:
1-24" SPL, FLGxPE, LENGTH AS
REQ'D
1-24" IFL
1-TS, SEE SHTS C-8 & C-9, TYP
- ⑬ REMOVE EXIST ARV VAULT & 8"
AIR VALVE
FURNISH & INSTALL:
1-8" BLIND FLG
TO ABAN ARV TEE BRANCH
OUTLET, PROVIDE VALVE BOX FOR
6" FH GV & BURY EXIST VAULT
PIPING IN PLACE

SCHEDULE B/ALIGNMENT B

- ⑭ STA B1+00
BEGIN ALIGNMENT 'B'
CONNECT TO EXIST 24" OD STL
@ TEE, PE
FURNISH & INSTALL:
1-24" IFC (24" OD x 24" DIPS),
SEE DET 2, SHTS C-8
- ⑮ STA B2+35
FURNISH & INSTALL:
1-24"x8" TEE, MJxFLG
1-8" IFL & TS
1-8" GV, MJxFLG
1-8"x6" RDCR, MJ
1-6" 22 1/2° BEND, MJ
1-6" LS
- ⑯ STA B2+42
FURNISH & INSTALL:
1-24" TEE, MJ
1-24" 22 1/2° BEND, MJ
1-24" LS
1-30"x24" RDCR, MJ
CONNECT TO EXIST 30" PHASE I
DI, SEE NOTE 10
- ⑰ STA B2+55
FURNISH & INSTALL:
1-24" 45° BEND, MJ
- ⑱ STA B2+84
FURNISH & INSTALL:
1-24" 45° BEND, MJ

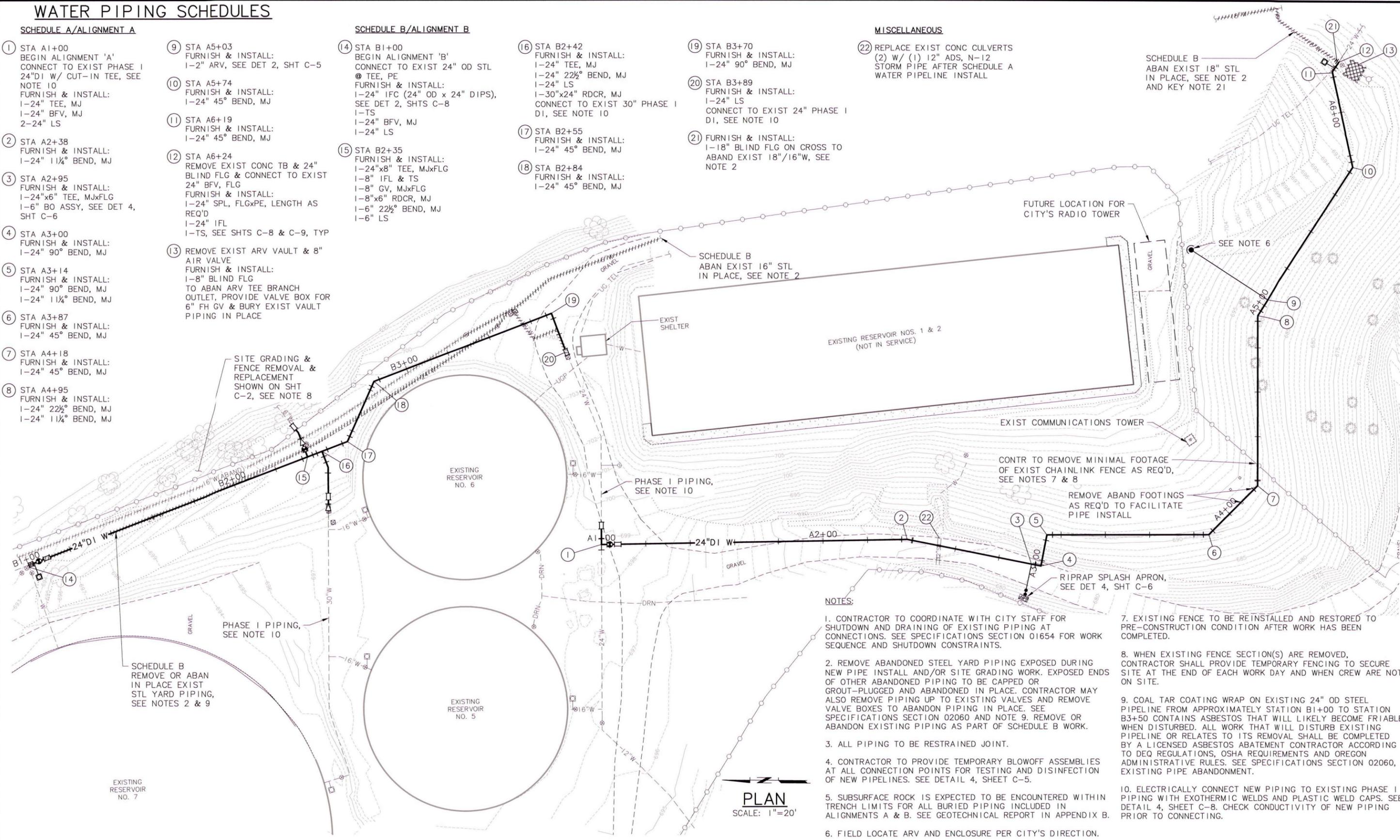
- ⑲ STA B3+70
FURNISH & INSTALL:
1-24" 90° BEND, MJ
- ⑳ STA B3+89
FURNISH & INSTALL:
1-24" LS
CONNECT TO EXIST 24" PHASE I
DI, SEE NOTE 10
- ㉑ FURNISH & INSTALL:
1-18" BLIND FLG ON CROSS TO
ABAND EXIST 18"/16"W, SEE
NOTE 2

MISCELLANEOUS

- ㉒ REPLACE EXIST CONC CULVERTS
(2) W/ (1) 12" ADS, N-12
STORM PIPE AFTER SCHEDULE A
WATER PIPELINE INSTALL

SCHEDULE B
ABAN EXIST 18" STL
IN PLACE, SEE NOTE 2
AND KEY NOTE 21

C:\PDX_Projects\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-C.dwg C-3 9/28/2016 9:12 AM RLF 20.0s (LMS Tech)



NOTES:

1. CONTRACTOR TO COORDINATE WITH CITY STAFF FOR SHUTDOWN AND DRAINING OF EXISTING PIPING AT CONNECTIONS. SEE SPECIFICATIONS SECTION 01654 FOR WORK SEQUENCE AND SHUTDOWN CONSTRAINTS.
2. REMOVE ABANDONED STEEL YARD PIPING EXPOSED DURING NEW PIPE INSTALL AND/OR SITE GRADING WORK. EXPOSED ENDS OF OTHER ABANDONED PIPING TO BE CAPPED OR GROUT-PLUGGED AND ABANDONED IN PLACE. CONTRACTOR MAY ALSO REMOVE PIPING UP TO EXISTING VALVES AND REMOVE VALVE BOXES TO ABANDON PIPING IN PLACE. SEE SPECIFICATIONS SECTION 02060 AND NOTE 9. REMOVE OR ABANDON EXISTING PIPING AS PART OF SCHEDULE B WORK.
3. ALL PIPING TO BE RESTRAINED JOINT.
4. CONTRACTOR TO PROVIDE TEMPORARY BLOWOFF ASSEMBLIES AT ALL CONNECTION POINTS FOR TESTING AND DISINFECTION OF NEW PIPELINES. SEE DETAIL 4, SHEET C-5.
5. SUBSURFACE ROCK IS EXPECTED TO BE ENCOUNTERED WITHIN TRENCH LIMITS FOR ALL BURIED PIPING INCLUDED IN ALIGNMENTS A & B. SEE GEOTECHNICAL REPORT IN APPENDIX B.
6. FIELD LOCATE ARV AND ENCLOSURE PER CITY'S DIRECTION.
7. EXISTING FENCE TO BE REINSTALLED AND RESTORED TO PRE-CONSTRUCTION CONDITION AFTER WORK HAS BEEN COMPLETED.
8. WHEN EXISTING FENCE SECTION(S) ARE REMOVED, CONTRACTOR SHALL PROVIDE TEMPORARY FENCING TO SECURE SITE AT THE END OF EACH WORK DAY AND WHEN CREW ARE NOT ON SITE.
9. COAL TAR COATING WRAP ON EXISTING 24" OD STEEL PIPELINE FROM APPROXIMATELY STATION B1+00 TO STATION B3+50 CONTAINS ASBESTOS THAT WILL LIKELY BECOME FRIABLE WHEN DISTURBED. ALL WORK THAT WILL DISTURB EXISTING PIPELINE OR RELATES TO ITS REMOVAL SHALL BE COMPLETED BY A LICENSED ASBESTOS ABATEMENT CONTRACTOR ACCORDING TO DEQ REGULATIONS, OSHA REQUIREMENTS AND OREGON ADMINISTRATIVE RULES. SEE SPECIFICATIONS SECTION 02060, EXISTING PIPE ABANDONMENT.
10. ELECTRICALLY CONNECT NEW PIPING TO EXISTING PHASE I PIPING WITH EXOTHERMIC WELDS AND PLASTIC WELD CAPS. SEE DETAIL 4, SHEET C-8. CHECK CONDUCTIVITY OF NEW PIPING PRIOR TO CONNECTING.

PLAN
SCALE: 1"=20'

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL	DESIGNED
DAK	DRAWN
TPB	CHECKED



MSA Murray, Smith & Associates, Inc.
Engineers/Planners
888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022



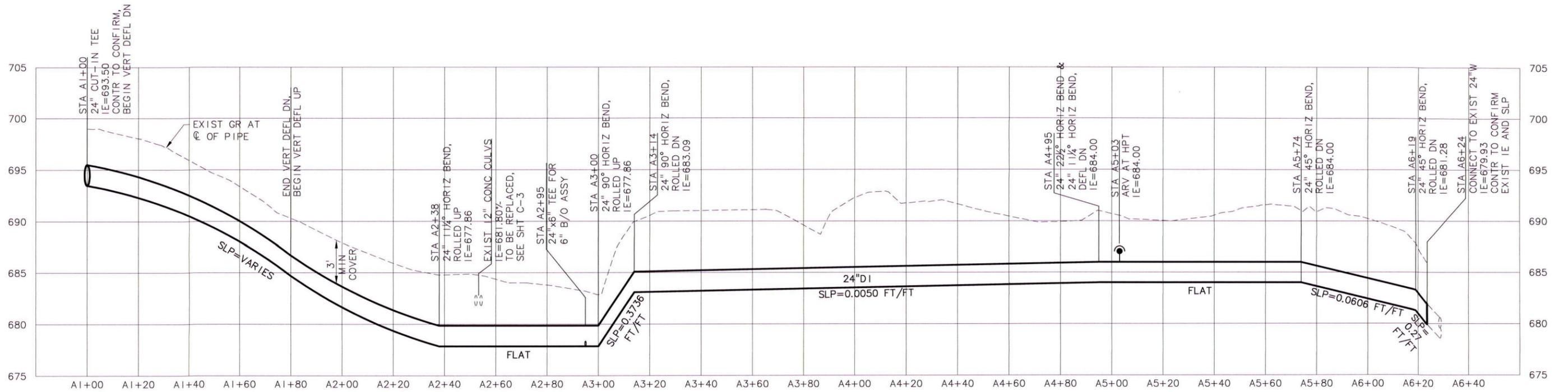
CITY OF ROSEBURG
RESERVOIR HILL
YARD PIPING
IMPROVEMENTS
PHASE II

PROJECT NO.: 16-1827.204	SCALE: AS SHOWN	DATE: OCTOBER 2016
--------------------------	-----------------	--------------------

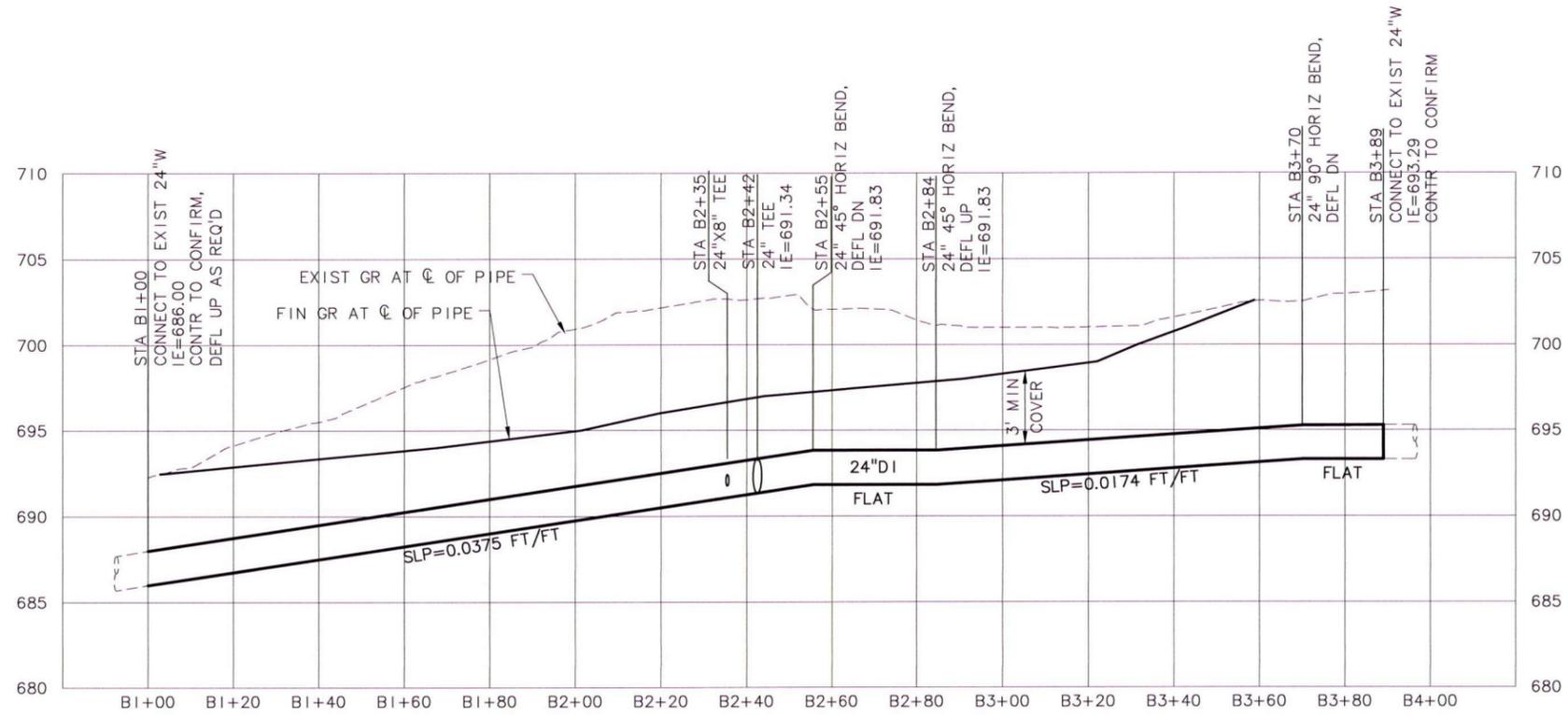
NO.	DATE	BY	REVISION

SHEET
C-3
7 of 15

C:\PDX_Projects\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-C.dwg C-4 9/28/2016 9:12 AM RLF 20.0s (LMS Tech)



PROFILE - WATERLINE 'A'
SCALE: 1"=20' HORIZ, 1"=5' VERT



PROFILE - WATERLINE 'B'
SCALE: 1"=20' HORIZ, 1"=5' VERT

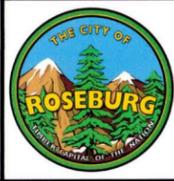
NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL
DESIGNED
DAK
DRAWN
TPB
CHECKED

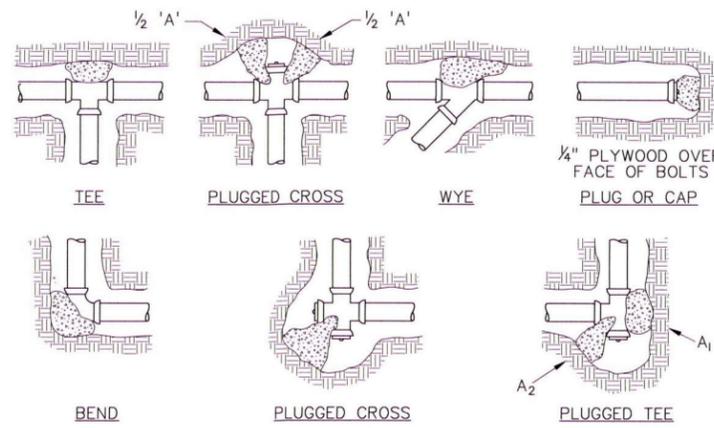


MSA Murray Smith & Associates, Inc.
Engineers/Planners
888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022



CITY OF ROSEBURG
RESERVOIR HILL
YARD PIPING
IMPROVEMENTS
PHASE II

YARD PIPING PROFILES
PROJECT NO.: 16-1827.204 SCALE: AS SHOWN DATE: OCTOBER 2016



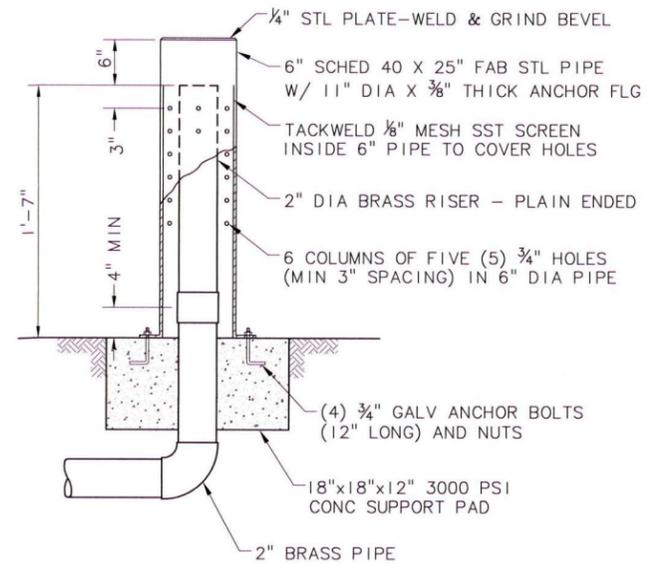
BEARING AREA, 'A', OF THRUST BLOCKS IN SQUARE FEET*

FITTING SIZE	TEE, WYE, PLUG OR CAP		90° BEND, PLUGGED CROSS		TEE PLUGGED ON RUN		45° BEND	22½° BEND	11¼° BEND
	A	A	A ₁	A ₂	A	A	A	A	A
4	1.4	1.9	2.7	1.9	1.0	-	-	-	-
6	2.8	4.0	5.6	4.0	2.1	-	-	-	-
8	4.8	6.8	9.6	6.8	3.7	1.9	0.9	-	-
10	7.3	10.3	14.5	10.3	5.6	2.8	1.4	-	-
12	10.3	14.5	20.4	14.5	7.9	4.0	2.0	-	-
14	13.8	19.5	27.5	19.5	10.6	5.4	2.7	-	-
16	17.8	25.2	35.5	25.2	13.6	7.0	3.5	-	-
18	22.4	31.7	44.7	31.7	17.1	8.7	4.4	-	-
20	27.5	38.9	54.8	38.9	21.0	10.7	5.4	-	-
24	39.2	55.5	78.3	55.5	30.0	15.3	7.7	-	-

*ABOVE BEARING AREAS BASED ON TEST PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING STRESS OF 2000 POUNDS PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION: BEARING AREA=(TEST PRESSURE/150) X (2000/SOIL BEARING STRESS) X (TABLE VALUE).

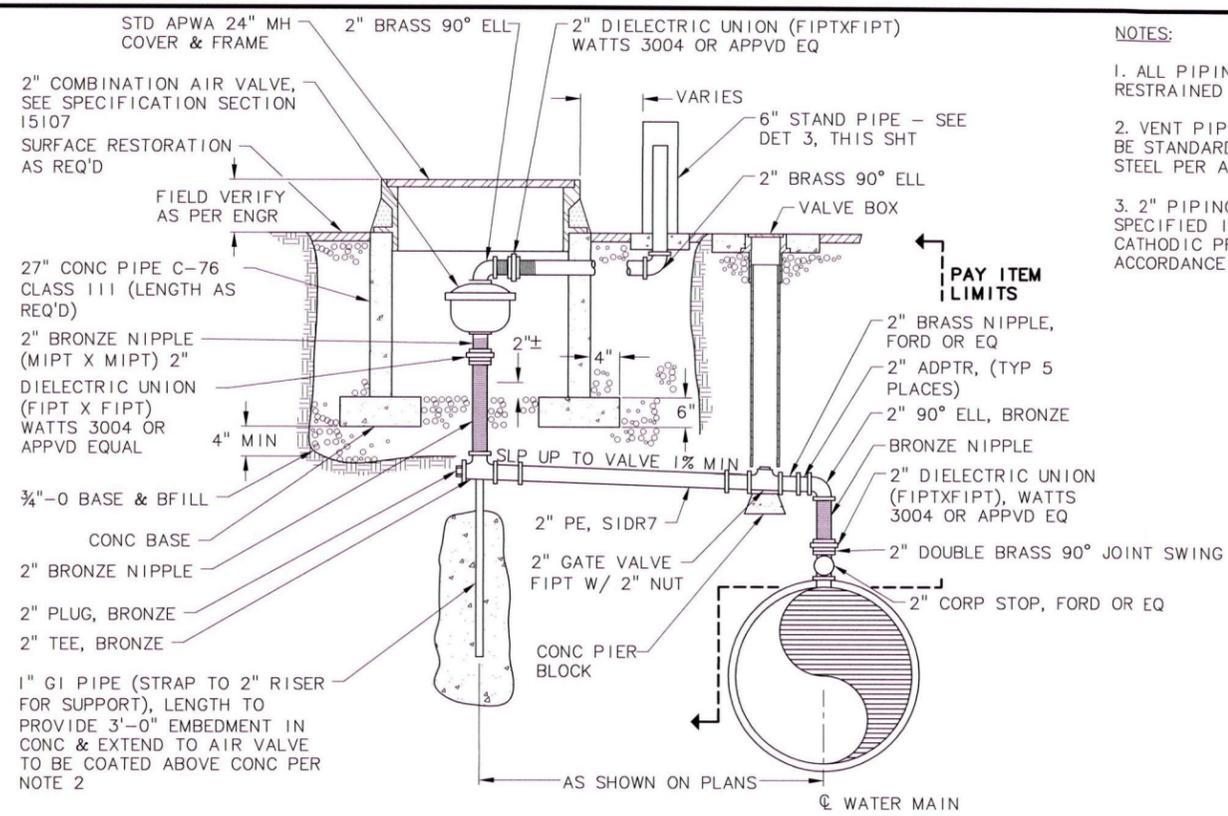
- NOTES:**
1. CONCRETE THRUST BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH.
 2. KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES. INSTALL ISOLATION MATERIAL BETWEEN PIPE AND/OR FITTINGS BEFORE POURING BLOCKING.
 3. THE REQUIRED THRUST BEARING AREAS FOR SPECIAL CONNECTIONS ARE SHOWN ENCIRCLED ON THE PLANS; e.g. 15 INDICATES 15 SQUARE FEET BEARING AREA REQUIRED
 4. IF NOT SHOWN ON PLANS, REQUIRED BEARING AREAS AT FITTING SHALL BE AS INDICATED IN TABLE, ADJUSTED IF NECESSARY, TO CONFORM TO THE TEST PRESSURE(S) AND ALLOWABLE SOIL BEARING STRESS(ES) STATED IN THE SPECIFICATIONS.
 5. BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN ON THIS DETAIL.
 6. CONCRETE SHALL BE 3000 PSI MINIMUM 28 DAY COMPRESSIVE STRENGTH.
 7. BEARING AREAS WHERE EXISTING PIPE WILL BE ABANDONED IN PLACE, AS SHOWN ON PLAN, SHALL INCLUDE ½" STEEL PLATE AT THE BASE OF THE THRUST BLOCK. THE MINIMUM BEARING AREA OF THE STEEL PLATE SHALL BE BASED ON DATA FROM THE TABLE.

STANDARD THRUST BLOCK DETAILS (1)



- NOTE:**
1. COMPLETE STANDPIPE ASSEMBLY TO BE FUSION-BONDED EPOXY (FBE) COATED. FBE COATING TO BE TINTED BLUE.

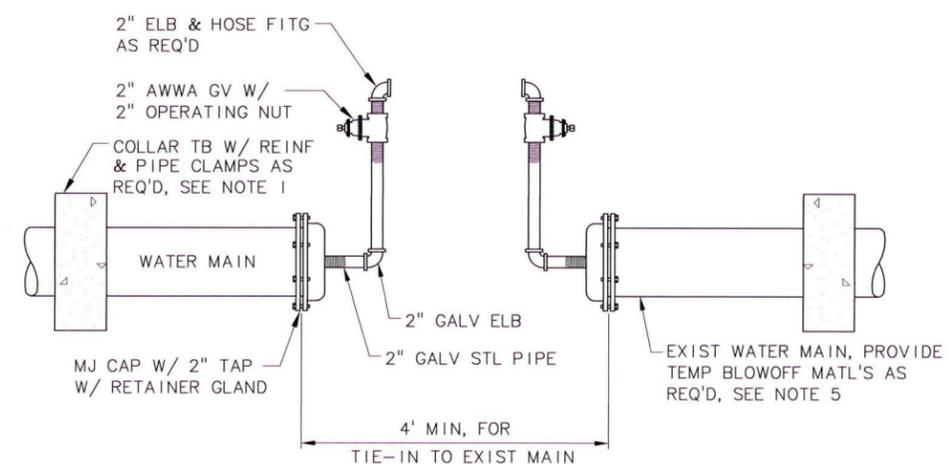
STANDPIPE DETAIL (3)



PAY ITEM LIMITS

- NOTES:**
1. ALL PIPING AND FITTINGS TO BE RESTRAINED JOINT.
 2. VENT PIPING ABOVE AIR VALVE TO BE STANDARD WEIGHT GALVANIZED STEEL PER ASTM A120, SCHEDULE 40.
 3. 2" PIPING AND APPURTENANCES SPECIFIED IN SECTION 15000. INSTALL CATHODIC PROTECTION TAPE WRAP IN ACCORDANCE WITH SPECIFICATIONS.

AIR RELEASE VALVE DETAIL (2)



- NOTES:**
1. CONTRACTOR SHALL PROVIDE TEMPORARY THRUST RESTRAINTS AS REQUIRED.
 2. SEE SPECIFICATIONS REGARDING DISPOSAL/DECHLORINATION FOR SUPERCHLORINATED WATER.
 3. PROVIDE LARGER BLOWOFF PIPING MATERIAL AT CONTRACTOR OPTION.
 4. WHERE BLOWOFF IS TO BE REMOVED, CONTRACTOR TO CONDUCT OPERATIONS SO AS TO PREVENT SUBSEQUENT CONTAMINATION OF APPROVED DISINFECTED WATER MAIN.
 5. PROVIDE TEMPORARY BLOWOFF ON EXISTING WATER MAIN AS REQUIRED TO FACILITATE TESTING AND DISINFECTION OF NEW MAINS AND RESERVOIR YARD PIPING. CONTRACTOR TO PROVIDE BACKFLOW PREVENTION DEVICE FOR TEMPORARY CONNECTION TO EXISTING WATER SYSTEM PER GENERAL NOTE 19, SHEET G-2. CONTRACTOR TO DISINFECT EXISTING WATER MAIN PER REQUIREMENTS OF AWWA C651 DURING INSTALLATION OF TEMPORARY BLOWOFF ASSEMBLY.

TEMPORARY BLOWOFF ASSEMBLY (4)

G:\PDX_Projects2\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-C.dwg C-5 9/28/2016 9:12 AM RLF 20.0s (LMS Tech)

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL DESIGNED
DAK DRAWN
TPB CHECKED

REGISTERED PROFESSIONAL ENGINEER

OREGON

JUSTIN RUSSELL LUZE

RENEWS 12-31-16

MSA Murray, Smith & Associates, Inc. Engineers/Planners

888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022

CITY OF ROSEBURG

RESERVOIR HILL YARD PIPING IMPROVEMENTS PHASE II

MISCELLANEOUS DETAILS - 1

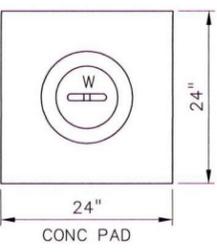
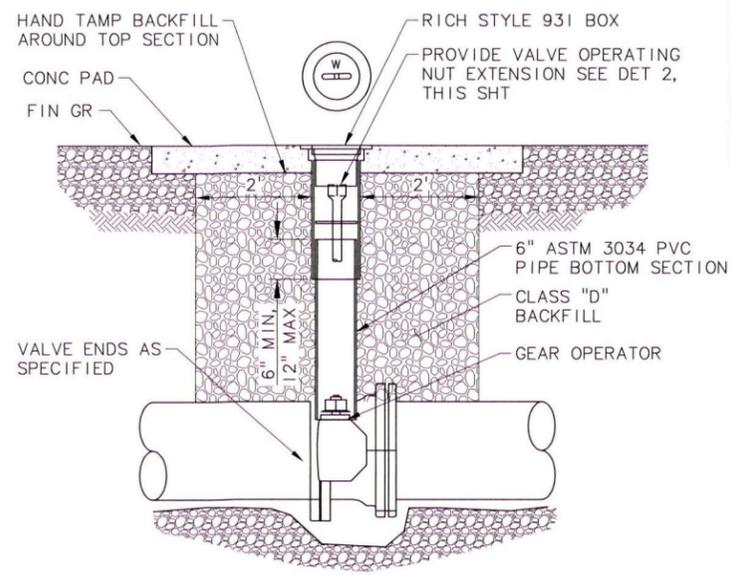
PROJECT NO.: 16-1827.204 SCALE: AS SHOWN DATE: OCTOBER 2016

SHEET

C-5

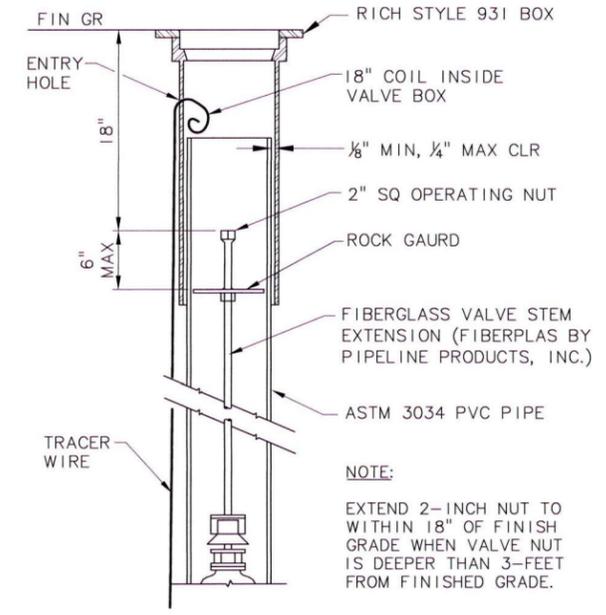
9 of 15

C:\PDX_Projects\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-C.dwg C-6 9/28/2016 9:12 AM RLF 20:0s (LMS Tech)



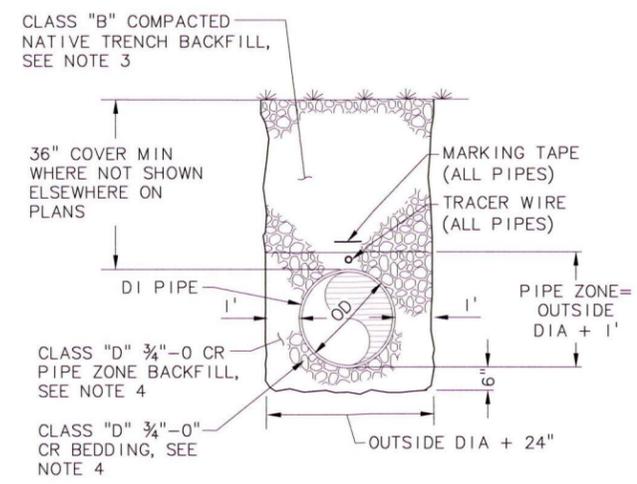
- NOTES:**
1. VALVE BOX NOT TO REST ON OPERATING ASSEMBLY.
 2. OPERATING NUT EXTENSION REQUIRED WHEN VALVE NUT IS DEEPER THAN 3- FEET FROM FINISHED GRADE. SEE DETAIL 2, THIS SHEET.
 3. CENTER VALVE BOX ON AXIS OF OPERATING NUT.
 4. PROVIDE 24-INCH SQUARE BY 6-INCH THICK CONCRETE PAD AROUND VALVE BOX AS SHOWN IN CONCRETE PAD DETAIL.
 5. ORIENT GEAR OPERATOR TO CENTERLINE SIDE IN ROADWAYS.
 6. USE CLASS D TRENCH BACKFILL A MINIMUM OF 2- FEET EACH SIDE OF VALVE

VALVE BOX DETAIL ①
SCALE: NTS



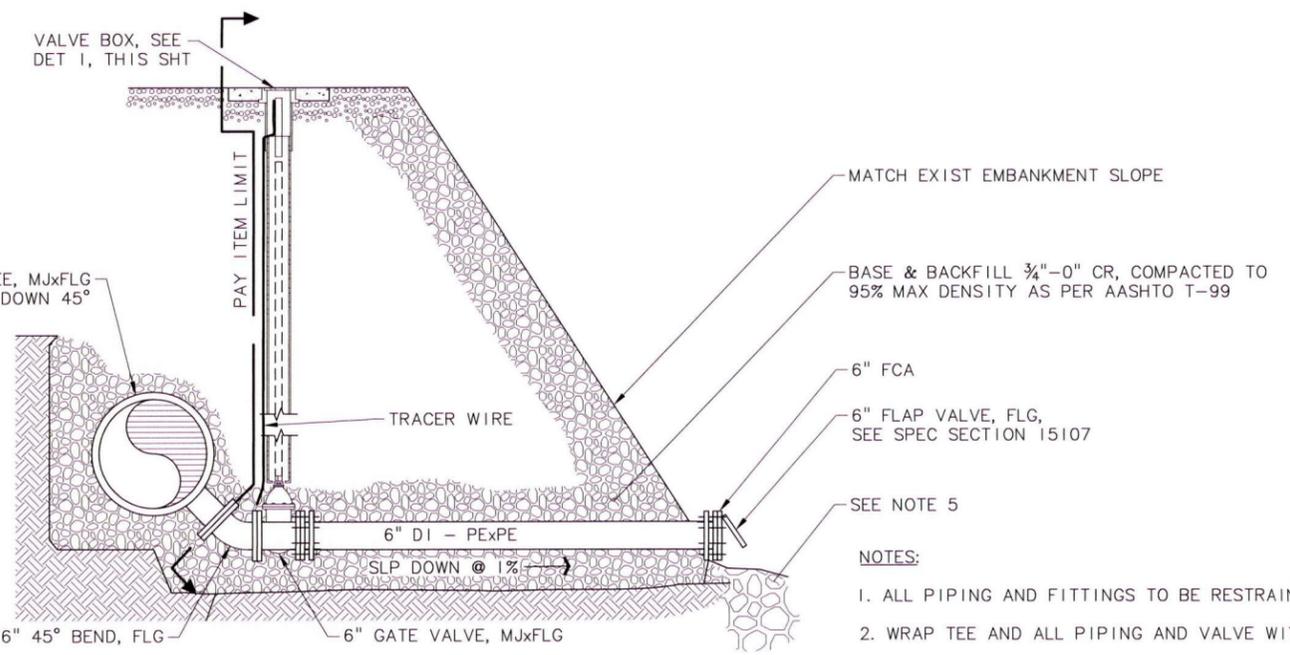
- NOTE:**
- EXTEND 2-INCH NUT TO WITHIN 18" OF FINISH GRADE WHEN VALVE NUT IS DEEPER THAN 3- FEET FROM FINISHED GRADE.

OPERATING NUT EXTENSION ②
SCALE: NTS



- NOTES:**
1. FURNISH & INSTALL CLASS "D" 3/4"-0" CR BEDDING AND PIPE ZONE BACKFILL COMPACTED TO 95% OF MAXIMUM DENSITY PER AASHTO T-99. FURNISH & INSTALL CLASS "B" NATIVE TRENCH BACKFILL COMPACTED TO 95% MAXIMUM DENSITY PER AASHTO T-99.
 2. FINISH TRENCH SURFACE TO MATCH ORIGINAL CONTOURS. REPLACE EXISTING LANDSCAPE.
 3. WHERE TRENCH IS LOCATED IN GRAVEL ACCESS ROAD AREAS, PROVIDE COMPACTED CLASS "D" 3/4"-0 CRUSHED ROCK FOR TRENCH BACKFILL. PROVIDE OPEN GRADED 1/2" CRUSHED ROCK FOR TOP 4", LEVELING COURSE.
 4. FROM STATION A3+07 TO STATION A6+24, PROVIDE COMPACTED CLASS 'B' NATIVE FOR PIPE ZONE BACKFILL AND BEDDING.

PIPE TRENCH DETAIL ③
SCALE: NTS



- NOTES:**
1. ALL PIPING AND FITTINGS TO BE RESTRAINED JOINT.
 2. WRAP TEE AND ALL PIPING AND VALVE WITH POLYETHYLENE TUBING.
 3. BOND ALL PIPE AND JOINTS TO MAIN.
 4. EXTEND TRACER WIRE INTO VALVE BOX AND MANHOLE.
 5. INSTALL CLASS 50 RIPRAP SPLASH APRON BELOW FLAP VALVE BLOWOFF OUTLET, SEE SPECIFICATION SECTION 02200.

6" BLOWOFF DETAIL ④
SCALE: NTS

NO.	DATE	BY	REVISION

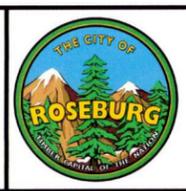
NOTICE

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL
DESIGNED
DAK
DRAWN
TPB
CHECKED

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAY 23, 2010
JUSTIN RUSSELL
RENEWS 12-31-16

MSA Murray Smith & Associates, Inc.
Engineers/Planners
888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022

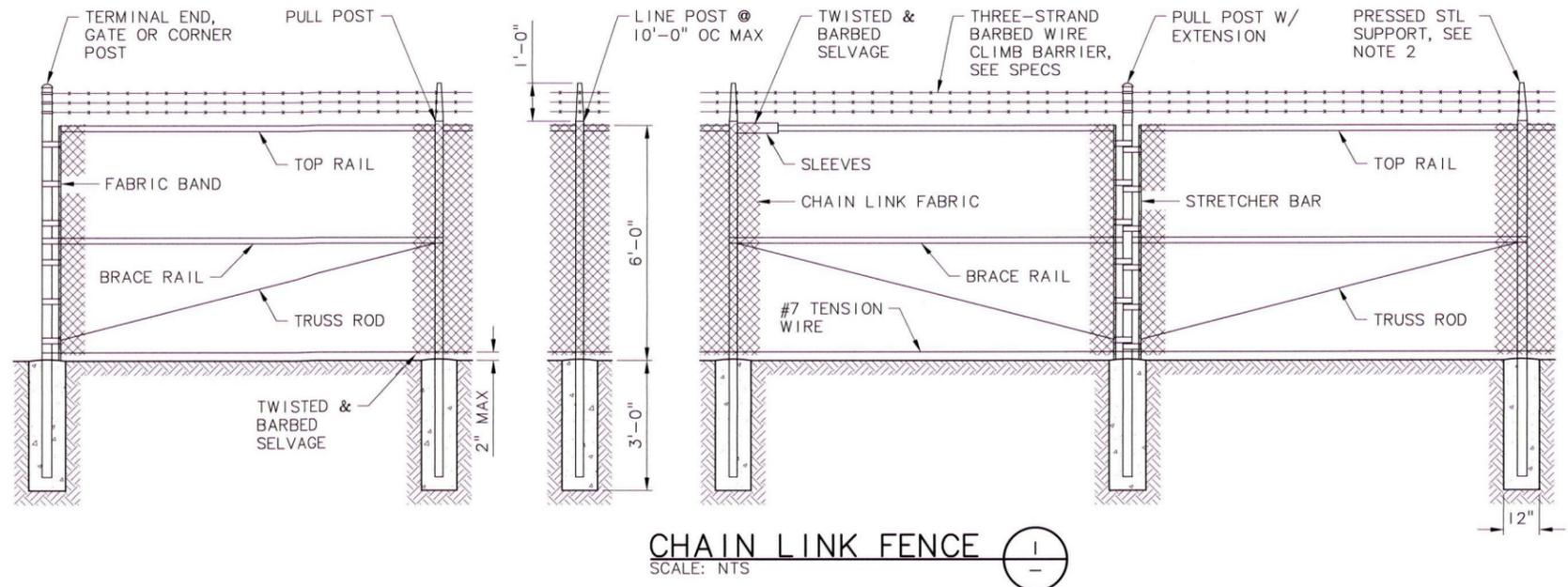


**CITY OF ROSEBURG
RESERVOIR HILL
YARD PIPING
IMPROVEMENTS
PHASE II**

MISCELLANEOUS DETAILS - 2

PROJECT NO.: 16-1827.204 SCALE: AS SHOWN DATE: OCTOBER 2016

G:\PDX_Projects2\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-C.dwg C-7 9/28/2016 9:12 AM RLF 20:0s (LMS Tech)



- FENCE NOTES:**
- LAYOUT AND INSTALL FENCE POSTS TO MAINTAIN MAXIMUM 2" SPACE BETWEEN BOTTOM OF FENCE AND GROUND SURFACE.
 - BARBED WIRE CLIMB BARRIER PRESSED STEEL SUPPORTS SHALL FACE AWAY FROM THE SITE. AT 45° ANGLE. TRANSITION TO VERTICAL BARB WIRE SUPPORT AT GATE LOCATION.
 - TENSION WIRES ARE NOT ALLOWED IN PLACE OF TOP OR BOTTOM RAILS.
 - CONCRETE FOOTINGS SHALL HAVE 12" MIN DIAMETER AND 3000 PSI MINIMUM 28 DAY COMPRESSIVE STRENGTH.

CHAIN LINK FENCE (1)
SCALE: NTS

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL
DESIGNED
DAK
DRAWN
TPB
CHECKED



MSA Murray Smith & Associates, Inc.
Engineers/Planners
888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022

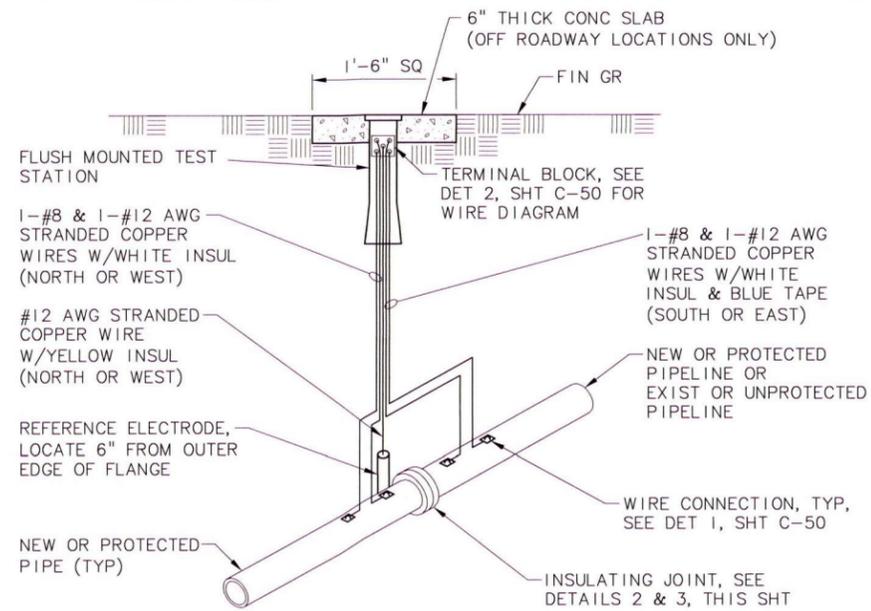


**CITY OF ROSEBURG
RESERVOIR HILL
YARD PIPING
IMPROVEMENTS
PHASE II**

MISCELLANEOUS DETAILS - 3	
PROJECT NO.: 16-1827.204	SCALE: AS SHOWN
DATE: OCTOBER 2016	

SHEET
C-7
11 of 15

C:\PDX_Projects2\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-C.dwg C-8 9/28/2016 9:12 AM RLF 20:0s (LMS Tech)

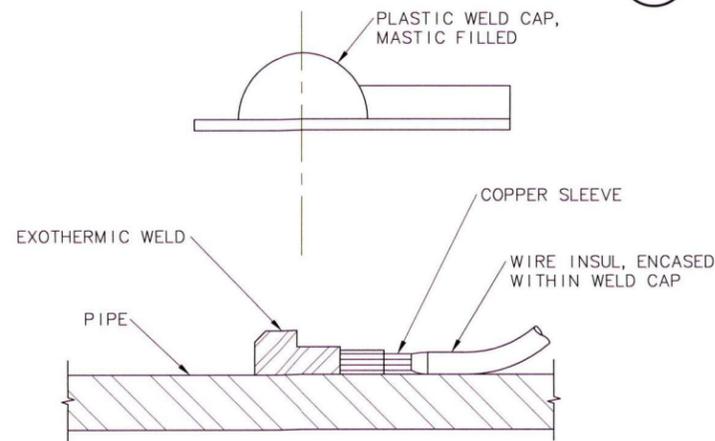


NOTES:

1. PROVIDE SUFFICIENT SLACK IN TEST WIRES TO ALLOW TERMINAL BLOCK TO EXTEND 18" OUT OF TEST STATION. COIL WIRES IN TEST STATION.
2. LOCATE TEST STATION ON ROADWAY CENTERLINE ON PAVED ROADWAYS AND WITHOUT CONCRETE SLAB.
3. LOCATE TEST STATION OFF ROADWAY ON GRAVEL ROADWAYS AND WITH CONCRETE SLAB.

FLUSH MOUNTED TEST STATION FOR INSULATED JOINTS

SCALE: NTS

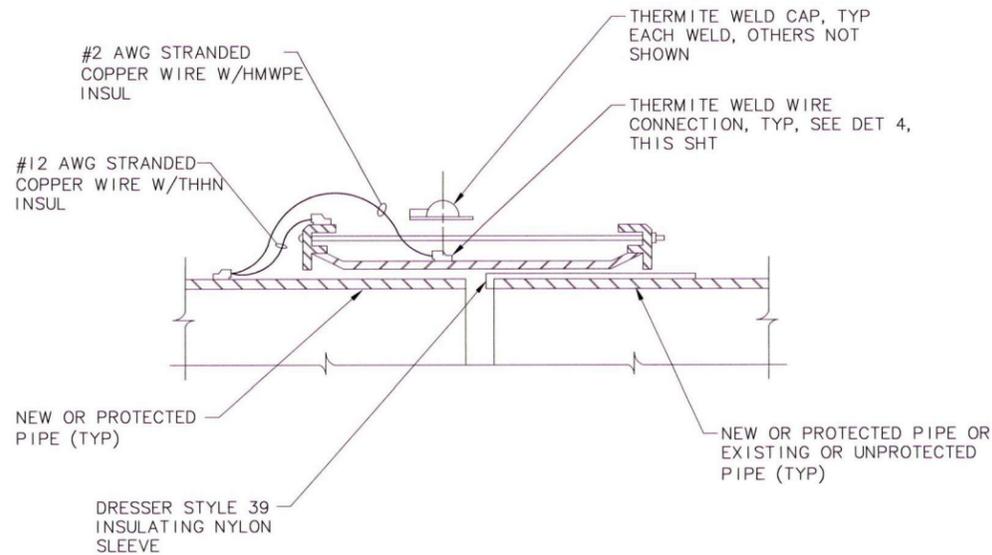


NOTES:

1. GRIND PIPE TO BRIGHT METAL BEFORE EXOTHERMIC WELDING.
2. APPLY WELD CAP DIRECTLY TO PIPE - NOT TO PIPE WRAP. USE PRIMER IF REQUIRED BY THE MANUFACTURER. COMPLETELY ENIRCLE WIRE WITHIN MASTIC.
3. ON CONNECTIONS TO UNCOATED PIPE AND CASINGS, USE MASTIC FILLED PLASTIC WELD CAP ONLY; SECURE WITH PIPE TAPE.

PLASTIC WELD CAP

SCALE: NTS

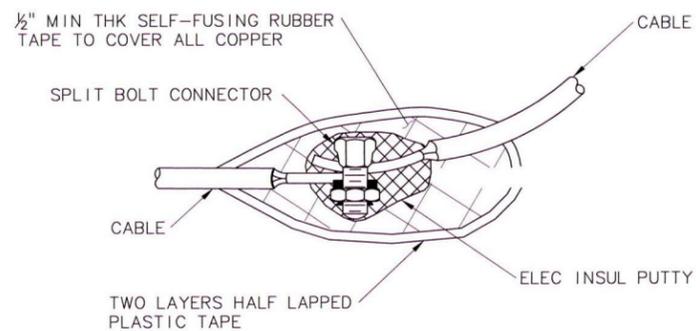


NOTES:

1. FITTINGS SHALL BE COMPLETELY ENCASED WITH CROSS LAMINATE POLYETHYLENE TUBES.

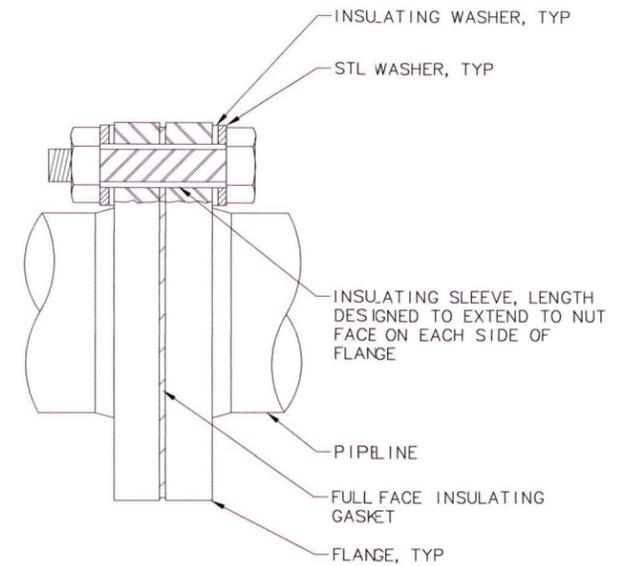
INSULATED FLEXIBLE COUPLING

SCALE: NTS



CABLE SPLICE

SCALE: NTS



NOTES:

1. ABOVE GRADE INSULATING FLANGE INSTALLATION SHOWN.
2. FOR BURIED OR SUBMERGED INSULATING FLANGE INSTALLATION INSTALL INSULATING WASHER ON ONE SIDE OF INSULATING FLANGE (PROTECTED SIDE PREFERRED).
3. FOR BURIED OR SUBMERGED INSULATING FLANGES, COMPLETELY ENCASE WITH CROSS LAMINATE POLYETHYLENE TUBES.

INSULATED FLANGE

SCALE: NTS



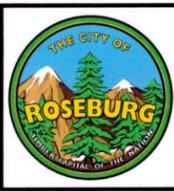
NO.	DATE	BY	REVISION

NOTICE

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL
DESIGNED
DAK
DRAWN
TPB
CHECKED

MSA Murray Smith & Associates, Inc.
Engineers/Planners
888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022



**CITY OF ROSEBURG
RESERVOIR HILL
YARD PIPING
IMPROVEMENTS
PHASE II**

**DUCTILE IRON PIPE
CORROSION MONITORING DETAILS - 1**

PROJECT NO.: 16-1827.204 SCALE: AS SHOWN DATE: OCTOBER 2016

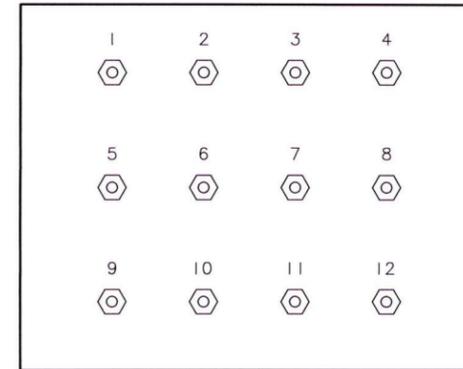
SHEET
C-8
12 of 15

C:\PDX_Projects\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-C.dwg C-9 9/28/2016 9:12 AM RLF 20.0s (LMS Tech)

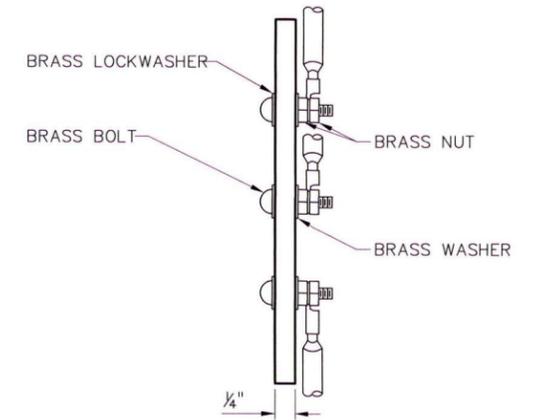
ITEM	CABLE AND NAME PLATE COLOR	CABLE	TERMINAL IDENTIFICATION ABBREVIATION
NEW PIPE (N/W)	WHITE	#8 HMWPE AND #12 THWN	(N/W)
NEW PIPE (S/E)	WHITE/BLUE	#8 HMWPE AND #12 THWN	(S/E)
ZINC REFERENCE CELL	YELLOW	#12 THWN	Z

NOTES:

1. COLOR-BLUE INDICATES BLUE TAPE, ETC.



TEST STATION TYPE A



TYPICAL TERMINAL BOARD SECTION

CORROSION CONTROL CABLE IDENTIFICATION TABLE (1)

SCALE: NTS

TERMINAL NUMBER	TEST STATION TYPE A
1	NP (N/W)
2	NP (S/E)
3	-
4	Z

TERMINAL BOARD WIRE DIAGRAM (2)

SCALE: NTS

TERMINAL IDENTIFICATION FOR TEST STATION (3)

SCALE: NTS

NO.	DATE	BY	REVISION

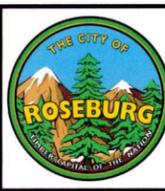
NOTICE

 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL
 DESIGNED
 DAK
 DRAWN
 TPB
 CHECKED



MSA Murray Smith & Associates, Inc.
 Engineers/Planners
 888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
 Portland, Oregon 97204 FAX 503-225-9022

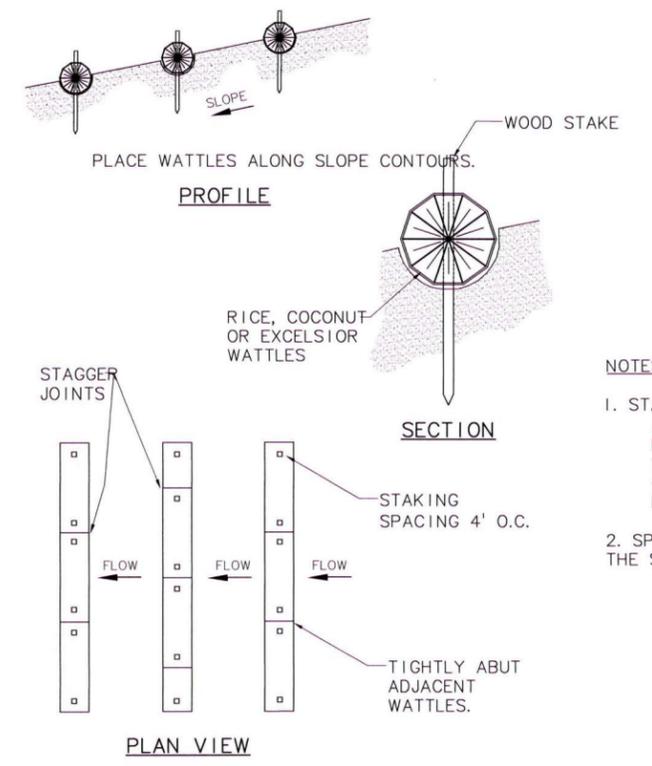
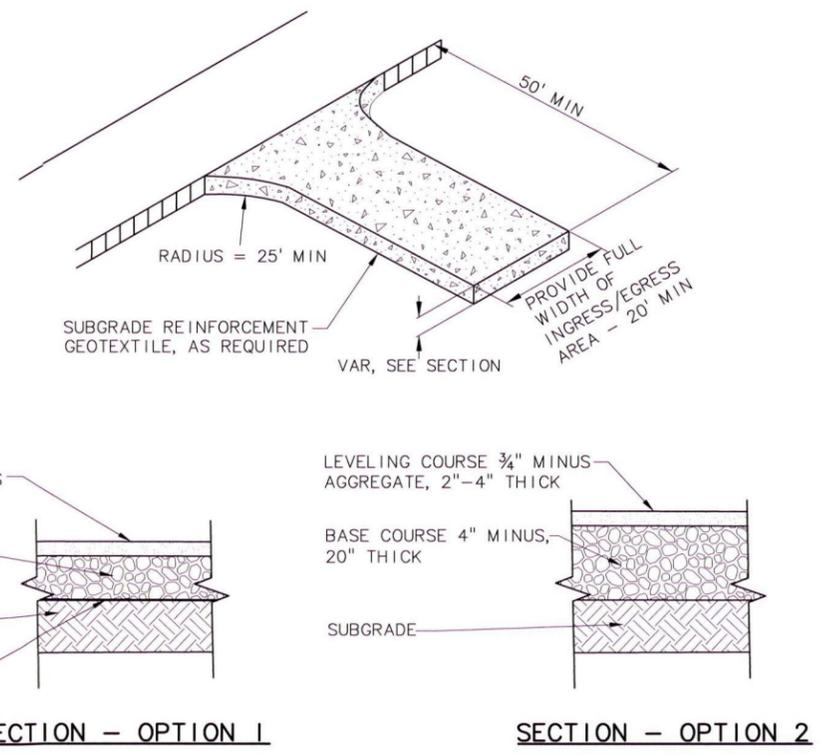


**CITY OF ROSEBURG
 RESERVOIR HILL
 YARD PIPING
 IMPROVEMENTS
 PHASE II**

**DUCTILE IRON PIPE
 CORROSION MONITORING DETAILS - 2**
 PROJECT NO.: 16-1827.204 SCALE: AS SHOWN DATE: OCTOBER 2016

SHEET
C-9
 13 of 15

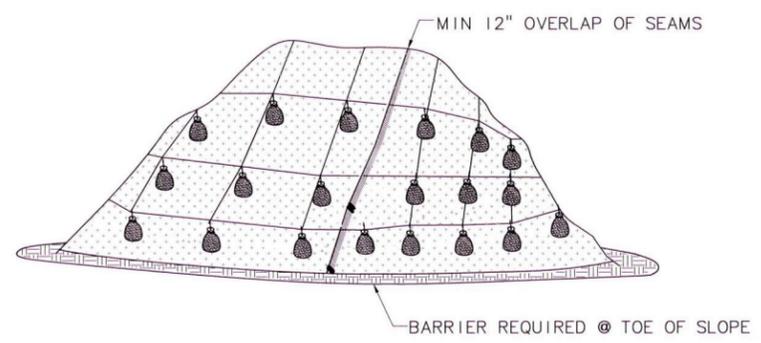
G:\PDX_Projects\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-C.dwg C-10 9/28/2016 9:12 AM RLF 20.0s (LMS Tech)



- NOTES:**
- STAKING SPECIFICATIONS:
 - 1"x2" WOODEN STAKED.
 - ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES, ON STEEP SLOPE OR HIGHLY EROSION SOILS.
 - SPACE WATTLES EVERY 25- FEET ALONG THE SLOPE.

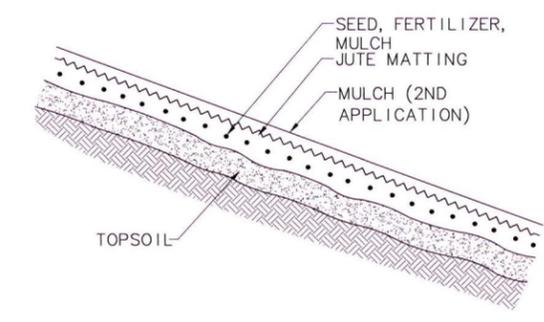
WATTLES DETAIL (2)
 SCALE: NTS

CONSTRUCTION ENTRANCE/ROAD (1)
 SCALE: NTS



- PLASTIC SHEETING**
- NOTES:**
- MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
 - BARRIER REQUIRED @ TOE OF STOCK PILE.
 - COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.

PLASTIC SHEETING DETAIL (3)
 SCALE: NTS



JUTE MATTING (4)
 SCALE: NTS

NO.	DATE	BY	REVISION

NOTICE

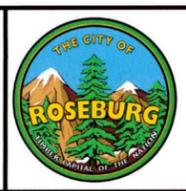
0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL DESIGNED
 DAK DRAWN
 TPB CHECKED

REGISTERED PROFESSIONAL ENGINEER
 OREGON
 MAY 23, 2005
 JUSTIN RUSSELL LUCE
 RENEWS 12-31-16

MSA Murray Smith & Associates, Inc.
 Engineers/Planners
 888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
 Portland, Oregon 97204 FAX 503-225-9022



CITY OF ROSEBURG
RESERVOIR HILL
YARD PIPING
IMPROVEMENTS
PHASE II

EROSION AND SEDIMENT CONTROL
DETAILS - 1

PROJECT NO.: 16-1827.204 SCALE: AS SHOWN DATE: OCTOBER 2016

SHEET
C-10
 14 of 15

G:\PDX_Projects2\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-C.dwg C-11 9/28/2016 9:12 AM RLF 20.0s (LMS Tech)

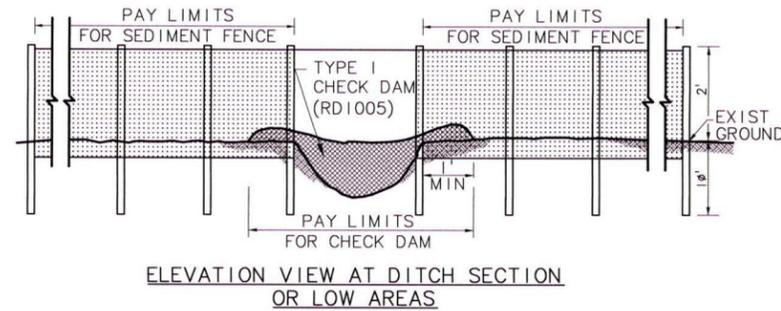
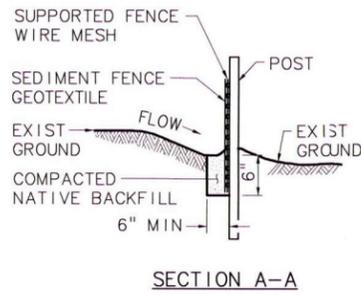
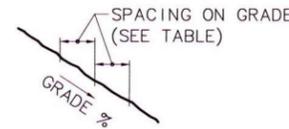
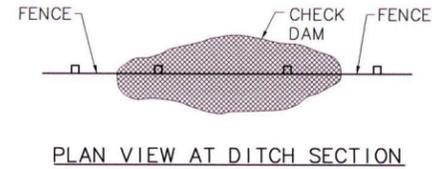
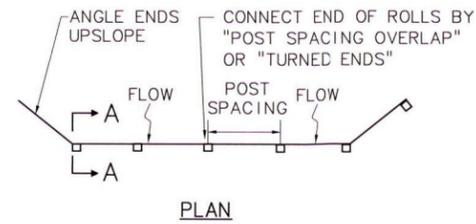


TABLE 1
FENCE SPACING FOR GENERAL APPLICATION
INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS

GRADE	MAX SPACING ON GRADE
GRADE <10%	300'
10% ≤ GRADE <15%	150'
15% ≤ GRADE <20%	100'
20% ≤ GRADE <30%	50'
30% ≤ GRADE	25'

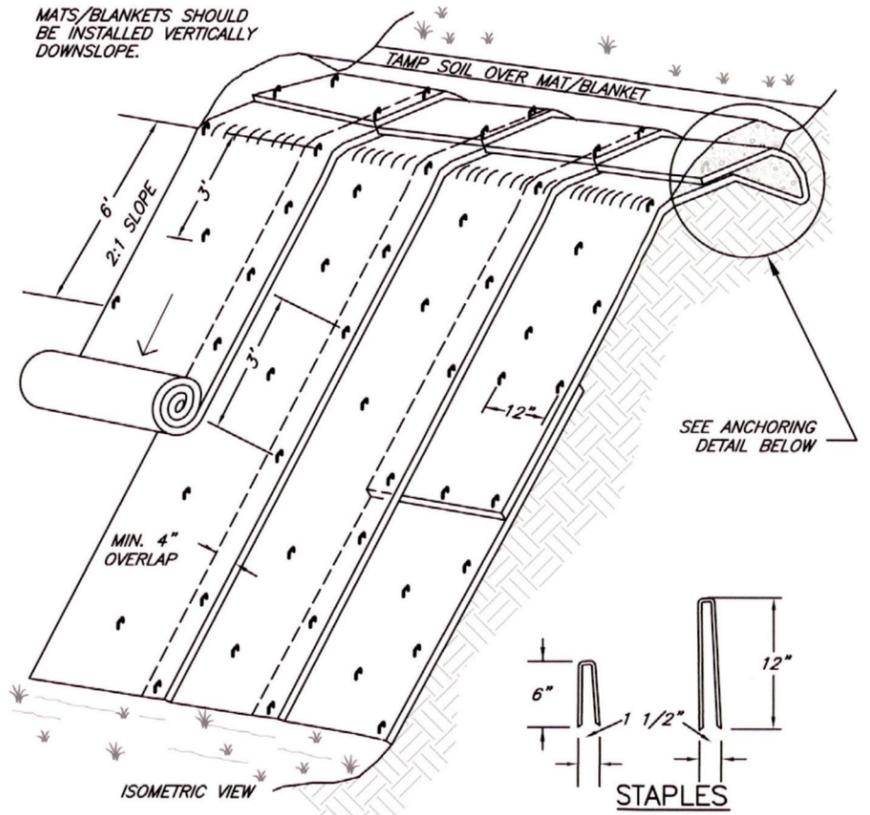
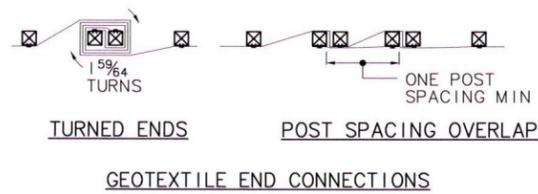
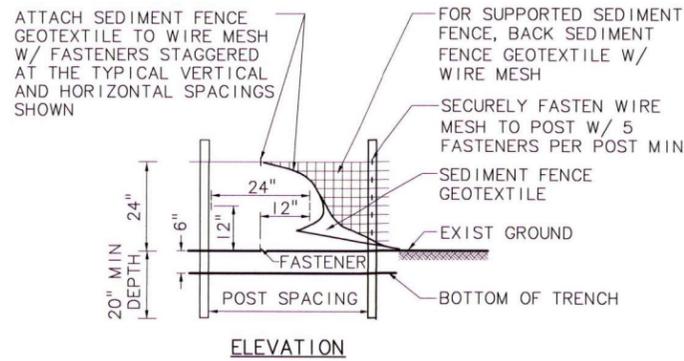


TABLE 2

POST SPACING	
4'	SUPPORTED SEDIMENT FENCE
6'	UNSUPPORTED SEDIMENT FENCE WITH GEOTEXTILE ELONGATION *LESS THAN 50%
4'	UNSUPPORTED SEDIMENT FENCE WITH GEOTEXTILE ELONGATION *MORE THAN 50%

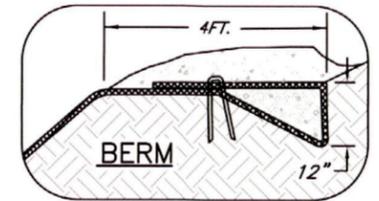
* GEOTEXTILE GRAB ELONGATION VALUE AS DOCUMENTED BY "LEVEL B" MANUFACTURER'S DOCUMENTATION (SEE STANDARD SPECIFICATIONS).



SEDIMENT FENCE, SUPPORTED SEDIMENT FENCE, UNSUPPORTED 1

SCALE: NTS

TYPICAL SLOPE SOIL STABILIZATION



EROSION BLANKETS 2

SCALE: NTS

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL
DESIGNED
DAK
DRAWN
TPB
CHECKED



MSA Murray, Smith & Associates, Inc.
Engineers/Planners
888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022



CITY OF ROSEBURG
RESERVOIR HILL
YARD PIPING
IMPROVEMENTS
PHASE II

EROSION AND SEDIMENT CONTROL
DETAILS - 2

PROJECT NO.: 16-1827.204 SCALE: AS SHOWN DATE: OCTOBER 2016

INDEX OF DRAWINGS

GENERAL

- 1 G-1 COVER SHEET, REGIONAL MAP, VICINITY MAP
- 2 G-2 INDEX OF DRAWINGS, GENERAL NOTES AND SURVEY CONTROL POINTS
- 3 G-3 SYMBOLS AND LEGEND
- 4 G-4 ABBREVIATIONS

CIVIL

- 5 C-1 OVERALL RESERVOIR SITE PLAN
- 6 C-2 GRADING, TREE REMOVAL, FENCING & EROSION CONTROL PLAN
- 7 C-3 YARD PIPING PLAN
- 8 C-4 YARD PIPING PROFILES
- 9 C-5 MISCELLANEOUS DETAILS - 1
- 10 C-6 MISCELLANEOUS DETAILS - 2
- 11 C-7 MISCELLANEOUS DETAILS - 3
- 12 C-8 DUCTILE IRON PIPE CORROSION MONITORING DETAILS - 1
- 13 C-9 DUCTILE IRON PIPE CORROSION MONITORING DETAILS - 2
- 14 C-10 EROSION AND SEDIMENT CONTROL DETAILS - 1
- 15 C-11 EROSION AND SEDIMENT CONTROL DETAILS - 2

GENERAL NOTES

1. THE CONTRACTOR SHALL POTHOLE AND VERIFY LOCATIONS, ELEVATIONS, TYPES AND SIZES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTING NEW PIPING FAR ENOUGH IN ADVANCE TO ALLOW NECESSARY ADJUSTMENTS IN GRADE AND SHALL NOTIFY ENGINEER OF NEED TO ADJUST PIPING INSTALLATION ACCORDINGLY. POTHOLING SHALL SUFFICIENTLY PRECEDE LAYING OF PIPE TO ALLOW REQUIRED ELEVATION ADJUSTMENTS TO BE ACCOMPLISHED WITHOUT REWORK. ELEVATION ADJUSTMENTS SHALL BE EXPECTED AND ARE INCIDENTAL TO THE WORK. DEFLECT PIPE AS REQUIRED AND WITHIN MANUFACTURER'S TOLERANCES TO AVOID EXISTING UTILITIES AND COMPLETE TIE-INS.
2. SEE SPECIFICATIONS FOR APPROVED TYPES OF PIPE RESTRAINT FOR PRESSURE PIPE.
3. SEE SPECIAL PROVISIONS OF SPECIFICATIONS FOR SPECIAL CONSTRUCTION SCHEDULING REQUIREMENTS.
4. ALL CONCRETE SHALL BE A MINIMUM OF 3000 PSI STRENGTH.
5. LOCATIONS OF EXISTING UTILITIES ARE BASED ON INFORMATION SUPPLIED BY THE UTILITIES AND SHALL BE CONSIDERED AS APPROXIMATE ONLY. AS REQUIRED BY STATE LAW, THE CONTRACTOR SHALL OBTAIN UTILITY LOCATES PRIOR TO COMMENCING CONSTRUCTION.
6. ALL PRESSURE PIPING SHALL BE TESTED UNDER A HYDROSTATIC TEST PRESSURE OF 150 PERCENT THE DESIGN PRESSURE, BUT NOT LESS THAN 150 PSI (7- 5 PSI), MEASURED FROM THE LOWEST POINT ALONG THE TEST SECTION OR AS SHOWN ON THE PLANS. SEE SPECIFICATIONS.
7. ALL EXISTING FEATURES INCLUDING BUT NOT LIMITED TO ROADWAYS, STRUCTURES, LOTS, CURBS, SIDEWALKS, FENCES, WALLS, PLANTING, DITCHES, MAILBOXES, SIGNS, PIPING AND UTILITIES DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO AS GOOD OR BETTER THAN EXISTING CONDITION AS DETERMINED BY THE OWNER. CONTRACTOR SHALL REPAIR ALL UTILITY SERVICES DAMAGED DURING CONSTRUCTION AND SUCH REPAIR SHALL BE CONSIDERED INCIDENTAL UNLESS PROVIDED FOR OTHERWISE IN THE SPECIFICATIONS.
8. <BLANK>
9. DO NOT REMOVE TREES UNLESS THEY HAVE BEEN PREVIOUSLY IDENTIFIED ON THE PLANS OR IN THE FIELD FOR REMOVAL PER CITY.
10. FINAL LOCATIONS OF ALL NEW FACILITIES SHALL BE FIELD VERIFIED WITH ENGINEER PRIOR TO CONSTRUCTION.
11. PROVIDE "AS CONSTRUCTED" DRAWINGS TO THE ENGINEER INDICATING ALL CHANGES IN GRADE, ALIGNMENT, FITTINGS AND MATERIALS INSTALLED AND ANY OTHER UTILITIES OR OBSTACLES NOT SO INDICATED ON THESE PLANS.
12. AT THE END OF EACH WORK DAY ALL OPEN TRENCHES SHALL BE BACKFILLED OR COVERED TO THE SATISFACTION OF THE ENGINEER.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING CONSTRUCTION SURVEYS. PRIOR TO CONSTRUCTION, FIELD LAYOUT SHALL BE APPROVED BY ENGINEER. SEE CONTRACT DOCUMENTS FOR SURVEY REQUIREMENTS.

14. ATTENTION: OREGON LAW REQUIRES THE CONTRACTOR TO FOLLOW THE RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. THE CONTRACTOR MAY OBTAIN COPIES OF THE RULES BY CALLING THE UTILITY NOTIFICATION CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 1-800-332-2344).

15. CONTRACTOR SHALL PROVIDE ENGINEER WITH MINIMUM 24 HOURS NOTICE WHEN POTHOLING WILL BE COMPLETE. ENGINEER WILL BE ON SITE DURING POTHOLING TO COORDINATE WITH CONTRACTOR TO REVIEW UTILITY INVESTIGATIONS AND ASSIST CONTRACTOR IN MAKING APPROPRIATE ADJUSTMENTS FOR ANY ALIGNMENT CONFLICTS WHERE CONNECTING TO EXISTING UTILITIES.

16. CONTRACTOR SHALL SUPPORT AND PROTECT AS NECESSARY ANY PIPE OR CONDUIT EXPOSED AS PART OF THE NEW PIPE TRENCH EXCAVATION. CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES IN SERVICE AT ALL TIMES AND SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES TO MAINTAIN AND PROTECT SERVICES.

17. THE CONTRACTOR SHALL CONSTRUCT THE WATER MAIN TO THE MINIMUM DEPTHS OF COVER INDICATED ON THE DRAWINGS FOLLOWING THE EXISTING GROUND CONTOURS. WHERE PIPING INVERTS ARE SHOWN ON THE PIPELINE PROFILES, THE PIPELINE SHALL BE CONSTRUCTED TO THOSE INVERTS WITH A UNIFORM SLOPE BETWEEN INVERTS, UNLESS OTHERWISE SPECIFIED.

18. CORROSION MONITORING FACILITIES SHALL BE INSTALLED ON THE DUCTILE IRON PIPE. JOINT BOND ALL DUCTILE IRON PIPE, VALVES AND FITTINGS BETWEEN ISOLATION JOINTS (INSULATED FLEXIBLE COUPLINGS OR INSULATED FLANGES) UNLESS NOTED OTHERWISE ON THE DRAWINGS. SEE SPECIFICATION SECTION 13989 FOR DETAILED REQUIREMENTS. SEE SHEET G-3 FOR CORROSION MONITORING LEGEND AND ABBREVIATIONS AND SHEETS C-8 AND C-9 FOR CORROSION MONITORING SYSTEM DETAILS.

19. NO CONNECTION TO EXISTING MAIN LINES WILL BE ALLOWED, EXCEPT BY MEANS OF AN APPROVED BACKFLOW PREVENTION DEVICE, PRIOR TO SATISFACTORY FLUSHING, TESTING, DISINFECTION, AND RECEIPT OF SATISFACTORY BACTERIOLOGICAL TESTS.

20. POLYETHYLENE ENCASEMENT SHALL BE INSTALLED ON ALL BURIED DUCTILE IRON PIPES PER THE REQUIREMENTS OF AWWA C105.

21. CONTRACTOR'S WORK WILL BE ON STEEP TERRAIN IN REMOTE LOCATION FOR SECTIONS OF THIS PROJECT. IT SHALL BE NOTED THAT IN THE EVENT OF A FIRE EMERGENCY, WATER WILL NOT BE READILY AVAILABLE TO THE CONTRACTOR FROM THE EXISTING PIPING CONFIGURATION AT THE RESERVOIR SITE UNLESS SPECIAL PROVISIONS ARE COORDINATED WITH THE CITY AHEAD OF PROGRESS OF WORK. CONTRACTOR TO EXERCISE CAUTION AS NECESSARY.

EROSION CONTROL NOTES

1. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION/SEDIMENT CONTROL DURING CONSTRUCTION (ANY TIME OF YEAR) IN ACCORDANCE WITH DOUGLAS COUNTY, DEQ AND OTHER APPLICABLE AGENCY REQUIREMENTS. THE STANDARD CONSTRUCTION SPECIFICATIONS FOR THIS PROJECT AND THE EROSION CONTROL NOTES INCLUDED BELOW AND WITHIN THESE PLANS.

2. THE IMPLEMENTATION OF ANY REQUIRED EROSION/SEDIMENT CONTROL (ESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.

3. INSTALL FILTER FENCE (SEDIMENT FENCE) ALONG BOUNDARY OF CLEARING AND OTHER AREAS AS REQUIRED.

4. ESC FACILITIES MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, WATERWAYS, ROADWAYS, OR VIOLATE APPLICABLE WATER QUALITY STANDARDS.

5. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING A STORM EVENT.

6. BIOFILTER BAGS SHALL BE PLACED AROUND INLETS AND ALONG DITCHES THROUGHOUT THE PROJECT TO FILTER SEDIMENT. BIOFILTER BAGS ARE TO BE CHECKED AND MAINTAINED DAILY AND REPLACED AS NEEDED.

7. ALL OFF-ROAD AREAS WITHIN THE PROJECT USED FOR CONSTRUCTION TRAFFIC SHALL BE PROTECTED WITH A GRAVEL CONSTRUCTION ENTRANCE AND WHEEL WASH AS NECESSARY TO KEEP ALL SEDIMENT OFF TRAVELED ROADWAYS. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT. SEE PLANS FOR GRAVEL CONSTRUCTION ENTRANCE.

8. UPON COMPLETION OF CONSTRUCTION AND AFTER VEGETATION/LANDSCAPING HAS BEEN ESTABLISHED, CONTRACTOR TO REMOVE SILT FENCING, BIOFILTER BAGS AND OTHER EROSION CONTROL MEASURES.

9. THE ESC FACILITIES SHOWN ON THESE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.

10. CONTRACTOR SHALL PROVIDE DUST CONTROL AS REQUIRED. SEE SPECIFICATIONS.

11. PERMANENT SEEDING SHALL BE PERFORMED BETWEEN APRIL 1 AND MAY 31.

SEDIMENT FENCE NOTES

12. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP AND BOTH ENDS SECURELY FASTENED TO THE POST.

13. THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS WHERE FEASIBLE. THE FENCE POSTS SHALL BE SPACED A MAXIMUM OF 8 FEET APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES.

14. WHEN STANDARD LENGTH FILTER FABRIC IS USED, A WIRE SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG. TIE WIRE OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

15. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 12 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.

16. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF THE ABOVE STANDARD NOTE FOR STANDARD STRENGTH FILTER FABRIC APPLYING.

17. SEDIMENT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

18. SEDIMENT FENCES SHALL BE INSPECTED BY CONTRACTOR IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

19. SEDIMENT FENCES SHALL BE INSTALLED AT THE TOE OF FILL SLOPES AND OTHER AREAS IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.

SURVEY CONTROL POINTS

NO.	NORTHING	EASTING	ELEVATION
CP4	578655.00	4162445.69	671.22
CP7	578713.47	4162641.15	698.15
CP11	578781.71	4162636.65	698.33
CP12	578810.30	4162539.13	698.02

SURVEY CONTROL

SYSTEM: HARN(HPGN) OREGON STATE PLANE 1983,
 ZONE: OREGON SOUTH ZONE
 DATUM: NAD 1983
 INTERNATIONAL FOOT

G:\PDX_Projects\16\1827 - Roseburg Reservoir Hill Yard Piping\CAD\Sheets\16-1827-OR-G.dwg G-2 9/28/2016 8:24 AM RLF 20:0s (LMS Tech)

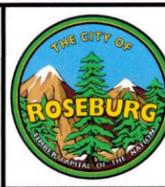
NO.	DATE	BY	REVISION

NOTICE
 0 1/2 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

JRL
 DESIGNED
 DAK
 DRAWN
 TPB
 CHECKED



MSA Murray Smith & Associates, Inc.
 Engineers/Planners
 888 S.W. 5th Ave, Suite 1170 PHONE 503-225-9010
 Portland, Oregon 97204 PAX 503-225-9022



CITY OF ROSEBURG
RESERVOIR HILL
YARD PIPING
IMPROVEMENTS
PHASE II

INDEX OF DRAWINGS, GENERAL NOTES AND SURVEY CONTROL POINTS

PROJECT NO.: 16-1827.204 SCALE: AS SHOWN DATE: OCTOBER 2016

SHEET
G-2
 2 of 15