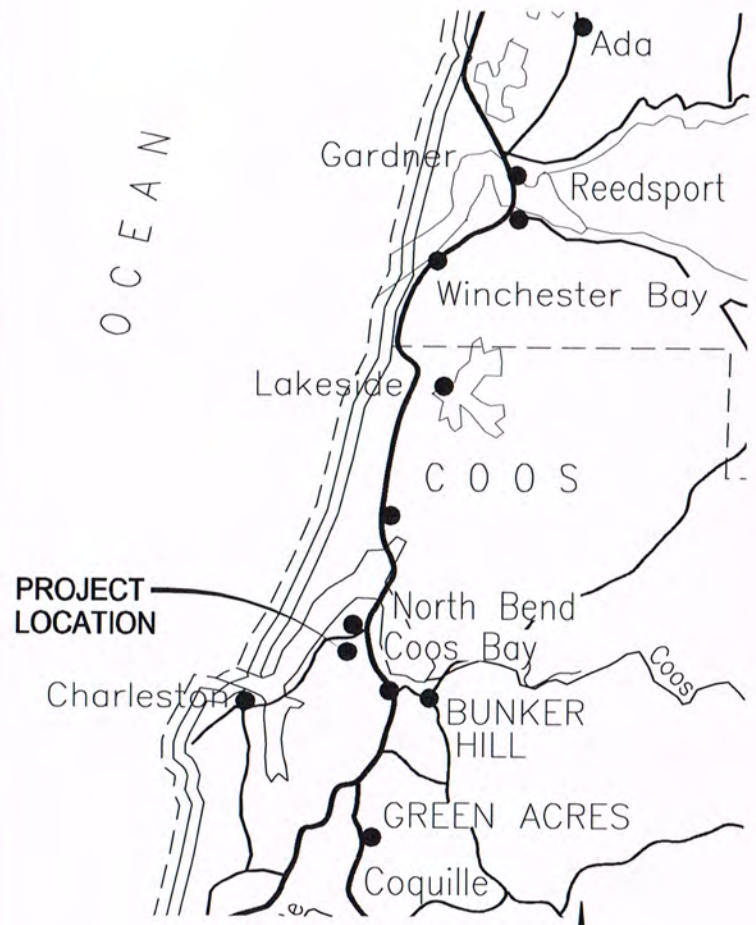
CITY OF COOS BAY

10TH ST & WEST LOCKHART SEWER IMPROVEMENTS

COOS BAY, OREGON



LOCATION MAP
NTS

VICINITY MAP
NTS

PREPARED BY:

Consulting Engineers
& Geologists, Inc.

FEBRUARY, 2013

OWNER

CITY OF COOS BAY
500 CENTRAL AVENUE
COOS BAY, OREGON 97420

APPROVALS

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Sheet List Table

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NOTES:

1. *THE FIELD WORK FOR THE ACQUISITION OF DESIGN DATA FOR THIS PROJECT COMMENCED ON 4/25/11 AND WAS COMPLETED ON 06/13/11.*
2. *THE BASIS OF BEARING IS ASSUMED.*
3. *THIS SURVEY HAS BEEN ADJUSTED TO NAVD88 BASED ON CITY OF COOS BAY BENCHMARK #14.*
4. *THE EQUIPMENT USED FOR SURVEY DATA ACQUISITION: TRIMBLE 5603 ROBOTIC TOTAL STATION.*

All underground Utilities and substructures shown hereon were obtained from the best available sources, and are presumed to be accurate, and complete. It shall be the contractor's sole responsibility to verify, locate, and protect all utilities and substructures shown or not shown.

CALL THE STATEWIDE UTILITIES LOCATING SERVICE AT: 1 (800) 424-5555 W/ YOUR SCHEDULE AT LEAST TWO DAYS PRIOR TO BEGINNING WORK.

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
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CONSULTING ENGINEERS & GEOLOGISTS, INC.
275 MARKET AVENUE COOS BAY, OR 97420 (541)266-8890 FAX (541)266-9496

NO.	DATE	REVISION	BY

DSGN RFS DR RFS CHK SKD APVD

CITY OF COOS BAY
10TH ST & WEST LOCKHART SEWER IMPROVEMENTS
COOS BAY, OREGON

COVER SHEET

DRAWING G-1
SHT 1
DATE 2/2013
PROJ. NO. 611026.000

\\Coosbayvr1\projects\2011\611026-10th-Lockhart-Sewer\Dwgs\611026-000-G1-COV.dwg

ABBREVIATIONS

A

ABS — ACRYLONITRILE–BUTADIENE–STYRENE
AB — ANCHOR BOLT, AGGREGATE BASE
AC — ASPHALTIC CONCRETE
ACP — ASBESTOS CEMENT PIPE
ACI — AMERICAN CONCRETE INSTITUTE
ADJ — ADJUSTABLE
AGGR — AGGREGATE
AISC — AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AL — ALUMINUM
ALT — ALTERNATE
APPROX — APPROXIMATELY
ARCH — ARCHITECTURAL
ASTM — AMERICAN SOCIETY FOR TESTING & MATERIALS
AUTO — AUTOMATIC
AUX — AUXILIARY
@ — AT
ASSY — ASSEMBLY
ADWF — AVERAGE DRY WEATHER FLOW
AWWF — AVERAGE WET WEATHER FLOW

B

BC — BEGIN CURVE
BCR — BEGIN CURB RETURN
BD — BOARD
BF — BLIND FLANGE
BFE — BASE FLOOD ELEVATION
BFV — BUTTERFLY VALVE
BK — BOOK OR BACK
BLDG — BUILDING
BM — BENCH MARK, BEAM
BOT — BOTTOM
BRG — BEARING
BTWN — BETWEEN
BV — BALL VALVE
BVC — BEGINNING OF VERTICAL CURVE
BW — BACK OF WALK
BOD — BIOLOGICAL OXYGEN DEMAND

C

C — CHANNEL (STRUCTURAL SHAPE)
CATV — CABLE TELEVISION
CB — CATCH BASIN
CEIL — CEILING
CFM — CUBIC FEET PER MINUTE
CFS — CUBIC FEET PER SECOND
CHEM — CHEMICAL
CI — CAST IRON
CIP — CAST IRON PIPE
C.I.P. — CAST IN PLACE
CJ — CONSTRUCTION JOINT
CLR — CLEAR
℄ — CENTERLINE
CLSM — CONTROLLED LOW STRENGTH MATERIAL
CMP — CORRUGATED METAL PIPE
CMU — CONCRETE MASONRY UNIT
CTSK — COUNTERSINK
CO — CLEANOUT
COL — COLUMN
CONC — CONCRETE
CONT — CONTINUOUS OR CONTINUED
COORD — COORDINATE
CPLG — COUPLING
CRS — COLD ROLLED STEEL
CTR — CENTER
CU — CUBIC
CF — CUBIC FEET
CV — CHECK VALVE
CW — COLD WATER
CY — CUBIC YARD

D

° — DEGREE (ANGLE)
d — PENNY (NAIL SIZE)
DB — DISTRIBUTION BOX
DBL — DOUBLE
DF — DOUGLAS FIR
DI — DROP INLET OR DUCTILE IRON
DIA — DIAMETER
DIAG — DIAGONAL
DIM — DIMENSION
DMJ — DUCTILE IRON MECHANICAL JOINT
DIP — DUCTILE IRON PIPE
DIS — DIGESTED SLUDGE
DET — DETAIL
DWG — DRAWING
D/W — DRIVEWAY

E

(E) — EXISTING
EA — EACH
EC — END CURVE
ECR — END CURB RETURN
EF — EACH FACE
EFL — EFFLUENT
EL — ELBOW, ELEVATION
ELEC — ELECTRIC OR ELECTRICAL
ELEV — ELEVATION
ENGR — ENGINEER
EP — EDGE OF PAVING
EQ — EQUAL
EQUIP — EQUIPMENT
ER — EDGE OF ROAD
EVC — END OF VERTICAL CURVE
EW — EACH WAY
EWEF — EACH WAY, EACH FACE
EXC — EXCAVATE
EXP — EXPOSED OR EXPANSION
EXP JT — EXPANSION JOINT
EXST — EXISTING
EXT — EXTERIOR
EG — EXISTING GROUND

F

FC — FLEXIBLE COUPLING OR FACE OF CURB
FCA — FLANGED COUPLING ADAPTER
FD — FLOOR DRAIN
FDN — FOUNDATION
FF — FINISHED FLOOR
FG — FINISHED GRADE
FH — FIRE HYDRANT
FIG — FIGURE
FIN — FINISH
FL — FLOW LINE
FLG — FLANGE
FLR — FLOOR
FT — FOOT, FEET
FT/SEC — FEET PER SECOND

G

G — GAS
GA — GAGE
GALV — GALVANIZED
GIP — GALVANIZED IRON PIPE
GPD — GALLONS PER DAY
GPH — GALLONS PER HOUR
GPM — GALLONS PER MINUTE
GRD — GRADE OR GROUND
GSP — GALVANIZED STEEL PIPE
GV — GATE VALVE
GYP — GYPSUM
GAL — GALLONS

H

HB — HOSE BIBB
HDR — HEADER
HDW — HARDWARE
HP — HORSEPOWER, HIGH POINT
HORIZ — HORIZONTAL
HR — HOUR
HT — HEIGHT
HW — HOT WATER
HWR — HOT WATER RETURN
HWS — HOT WATER SUPPLY

I

ID — INSIDE DIAMETER
IE — INVERT ELEVATION
IN — INCH
INFL — INFLUENT
INSUL — INSULATE OR INSULATION
INT — INTERIOR
INV — INVERT

J

JT — JOINT
JP — JOINT POLE

K

KIP — THOUSAND POUNDS
KW — KILOWATT

L

∠ — ANGLE (DEGREES)
L — ANGLE (STRUCTURAL SHAPE)
LB — POUND
LF — LINEAR FEET
LG — LONG
LH — LEFT HAND
LP — LOW POINT
LPA — LOW PRESSURE AIR
LPG — LIQUEFIED PETROLEUM GAS
LR — LONG RADIUS
LT — LEFT
LONG — LONGITUDINAL

M

MATL — MATERIAL
MAX — MAXIMUM
MECH — MECHANICAL
MF — MEGA–FLANGE PIPE JOINT
MFR — MANUFACTURER
MGD — MILLION GALLONS PER DAY
MH — MANHOLE
MIN — MINIMUM OR MINUTE
MISC — MISCELLANEOUS
MJ — MECHANICAL JOINT
MTL — METAL
MWS — MAXIMUM WATER SURFACE
MG/L — MILLIGRAM PER LITER

N

(N) — NEW
NC — NORMALLY CLOSED
NIC — NOT IN CONTRACT
NF — NON–FREEZE
NO — NUMBER OR NORMALLY OPEN
NOM — NOMINAL
NPT — NATIONAL PIPE THREAD
NTS — NOT TO SCALE
— NUMBER

O

OC — ON CENTER
OD — OUTSIDE DIAMETER
OG — ORIGINAL GROUND
OVFL — OVERFLOW
OZ — OUNCE
OH — OVERHEAD
OPWS — OPERATING WATER SURFACE
OPS — OPERATIONS

P

PC — POINT OF CURVE
PCF — POUNDS PER CUBIC FOOT
PE — PLAIN END, PLANT EFFLUENT
PERF — PERFORATED
PEP — POLYETHYLENE PIPE
PI — POINT OF INTERSECTION
PL — PLATE
PL — PROPERTY LINE
PLCS — PLACES
PLYWD — PLYWOOD
PMP — PERFORATED METAL PIPE
POC — POINT ON CURVE
PP — POWER POLE
PRC — POINT OF REVERSE CURVE
PREFAB — PREFABRICATED
PRELIM — PRELIMINARY
PRESS — PRESSURE
PROP — PROPERTY
PSF — POUNDS PER SQUARE FOOT
PSI — POUNDS PER SQUARE INCH
PSIG — POUNDS PER SQUARE INCH, GAUGE
PT — POINT OF TANGENCY, POINT
PV — PLUG VALVE
PVC — POLYVINYL CHLORIDE PLASTIC
PVMT — PAVEMENT
PS — PUMP STATION
PIPE SUPPORT
PPR — POLYPROPYLENE REINFORCED GEOMEMBRAIN
PRV — PRESSURE REDUCING VALVE

Q

QTY — QUANTITY

R

RAS — RETURN ACTIVATED SLUDGE
R — RADIUS
RCP — REINFORCED CONCRETE PIPE
RD — ROAD
RDCR — REDUCER
RWD — REDWOOD
REF — REFER OR REFERENCE
REINF — REINFORCED, REINFORCING OR REINFORCE
REQD — REQUIRED
RET — RETURN
RH — RIGHT HAND
RM — ROOM
RO — ROUGH OPENING
RS — RAW SEWAGE
RSP — ROCK SLOPE PROTECTION
RT — RIGHT OR RING TIGHT
R/W — RIGHT OF WAY
RWL — RAIN WATER LEADER
RPM — REVOLUTION PER MINUTE

S

S — SEWER
SC — SCUM
SCHED — SCHEDULE
SD — STORM DRAIN
SECT — SECTION
SHT — SHEET
SI — SECONDARY INFLUENT
SIM — SIMILAR
SL — SLOPE
SOG — SLAB ON GRADE
SP — SPACE OR SPACES
SPEC — SPECIFICATIONS
SQ — SQUARE
SQ FT — SQUARE FOOT
SQ IN — SQUARE INCH
SS — SANITARY SEWER
SSFM — SANITARY SEWER FORCE MAIN
SST — STAINLESS STEEL
STA — STATION
STD — STANDARD
STL — STEEL
STR — STRUCTURAL
STRUCT — STRUCTURE
SUSP — SUSPENDED
SYMM — SYMMETRICAL
SEC — SECONDS
SEC/CM — SECONDS PER CENTIMETER SQUARED

T

TAN — TANGENT
T&B — TOP AND BOTTOM
T&G — TONGUE AND GROOVE
TBM — TEMPORARY BENCH MARK
TC — TEMPORARY CONSTRUCTION EASEMENT
TCE —
TEL — TELEPHONE
TELEM — TELEMETRY
TEMP — TEMPERATURE OR TEMPORARY
THD — THREAD
TOC — TOP OF CONCRETE
TOG — TOP OF GRATE
TOW — TOP OF WALL
TP — TURNING POINT, TOP OF PAVEMENT OR TELEPHONE POLE
TRANSV — TRANSVERSE
TS — TUBE, STRUCTURAL
TYP — TYPICAL

U

UBC — UNIFORM BUILDING CODE
UOS — UNLESS OTHERWISE SPECIFIED
UG — UNDERGROUND
UTIL — UTILITY
UWATT — MICRO WATT
UV — ULTRA VIOLET

V

V — VOLT
VAC — VACUUM
VC — VERTICAL CURVE
VCP — VITRIFIED CLAY PIPE
VERT — VERTICAL
VLF — VERTICAL LINEAL OR INTERSECTION
VPI — VERTICAL POINT

W

W3 — WATER OR WIDE FLANGE
W — WATER OR WIDE FLANGE
WAS — WASTING
W/ — WITH
W/O — WITHOUT
WP — WORK POINT
WS — WATER SURFACE, WATER STOP
WWF — WELDED WIRE FABRIC
WE — WETLAND EFFLUENT
WWWTP — CITY OF WILLITS WASTE WATER TREATMENT PLANT

X

XFMR — TRANSFORMER

Y

YD — YARD
YD² — SQUARE YARD
YD³ — CUBIC YARD

UTILITIES LEGEND

PROPOSED	EXISTING	
	⊗	GATE VALVE
	⊗PV	PLUG VALVE
	⊗BV	BALL VALVE
	⊗BFV	BUTTERFLY VALVE
		AUTOMATICALLY OPERATED VALVE (P= PNEUMATIC, E= ELECTRIC, S= SOLENOID, H= HYDRAULIC, D= DIAPHRAGM ACTUATOR)
		3–WAY VALVE
		GLOBE VALVE
		ANGLE VALVE
		PRESSURE REGULATING VALVE
		PRESSURE RELIEF VALVE
		CHECK VALVE
		AIR OR VACUUM RELEASE VALVE
AV	AV	AIR AND VACUUM VALVE
CA	CA	COMBINATION AIR VALVE
		FLOW METER
	NF	HOSE BIBB (NF= NON–FREEZE)
		REDUCER
		FIRE HYDRANT
		DROP INLET
		MANHOLE
		CLEANOUT
LPA	LPA	LOW PRESSURE AIR
DIS	DIS	DIGESTED SLUDGE
DRN	DRN	DRAIN
ELEC	ELEC	UNDERGROUND ELECTRICAL
EMEL	EMEL	EMERGENCY ELECTRIC
IRR	IRR	IRRIGATION
JT	JT	JOINT UTILITIES
ML	ML	MIXED LIQUOR
OF	OF	OVER FLOW
OHEL	OHEL	OVERHEAD ELECTRICAL
OHTEL	OHTEL	OVERHEAD TELEPHONE LINE
OHTM	OHTM	OVERHEAD TELEMETRY LINE
RAS	RAS	RETURN ACTIVATED SLUDGE
STD	STD	STORM DRAIN
T	T	UNDERGROUND TELEPHONE LINE
TM	TM	UNDERGROUND TELEMETRY LINE
UW2	UW2	PROCESS WATER
UW3	UW3	UTILITY WATER 3 (NON–POTABLE)
WAS	WAS	WASTE ACTIVATED SLUDGE
W	W	WATER LINE
SS	SS	SANITARY SEWER LINE
PD	PD	PLANT DRAIN LINE
GAS	GAS	GAS LINE
SE	SE	SECONDARY EFFLUENT
SI	SI	SECONDARY INFLUENT
SSFM	SSFM	SANITARY SEWER FORCE MAIN
WE	WE	WETLAND EFFLUENT
SC	SC	SCUM LINE
PE	PE	PLANT EFFLUENT
WD	WD	WETLANDS DISCHARGE
		CULVERT
		POLE MOUNTED ROADWAY LUMINAIRE
	NOT USED	ITEM TO BE REMOVED
	NOT USED	ITEM TO BE ABANDONED IN PLACE
		WATER SERVICE
3	PB	PULL BOX AND DESIGNATION
R4–4		SIGN AND DESIGNATION
	03	DOOR SCHEDULE (NUMBER)
	A	WINDOW SCHEDULE (LETTER)

SIZE AND MATERIAL OF EXISTING PIPING MAY BE SHOWN WHEN KNOWN.

SIZE AND MATERIAL OF NEW PIPING MAY BE SHOWN ON PLAN OR IN PROFILE.

GRAPHIC LEGEND

PROPOSED	EXISTING	
		P.I. (POINT OF INTERSECTION)
NOT USED		TEMPORARY BENCH MARK
47.55	NOT USED	FINISH GRADE ELEVATION
NOT USED	42.6 X	ELEVATION OF ORIGINAL GROUND
		RADIAL POINT
		FLOW LINE AND DIRECTION
		TOP OF CUT
		TOP OF FILL
		TOE OF CUT OR FILL
200	180	CONTOUR LINE
		GROUT (IN SECTION)
		CONCRETE (IN SECTION)
		PAVEMENT
NOT USED		ROCKS
NOT USED		STUMPS
		TREES
		ROADS
	TP	UTILITY POLE (PP=POWER POLE, TP= TEL POLE, JP=JOINT POLE)
		GUY WIRE
		FIELD FENCE
		CHAIN LINK SECURITY FENCE
		BOUNDARY LIMITS, W/DESIGNATION
		CENTERLINE
NOT USED		MARSH
		WETLAND
NOT USED		SPRING
TP–4	TP–4	TEST PIT AND DESIGNATION
		EXPLORATION BORE HOLE
		PROPERTY CORNER
		SURVEY MONUMENT
		CONTROL POINT
1345		BASE FLOOD ELEVATION
		BUILDING
		EARTH

CURVE DATA

R (RADIUS)
L (LENGTH)
△ (DELTA)
T (TANGENT)

GRAPHIC LEGEND

PROPOSED	EXISTING	
		GRAVEL ROAD
		WETLANDS MITIGATION

DETAIL AND SECTION DESIGNATION

SECTION (LETTER) OR DETAIL (NUMBER) DESIGNATION — A / C–1

ON DRAWING WHERE SECTION OR DETAIL IS TAKEN:
SHEET NUMBER WHERE SHOWN

ON DRAWING WHERE SECTION OR DETAIL IS SHOWN:
SHEET NUMBER WHERE TAKEN

STANDARD DETAIL NUMBER (DETAIL WILL BE SHOWN ON THE SD DRAWINGS) — 006

NOTES

1. CONTACT THE ENGINEER FOR SYMBOLS NOT LISTED THIS IS A STANDARD SHEET, THEREFORE, SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET WHICH DO NOT APPEAR ON THE PLANS.
2. SITE AND UTILITY SYMBOLS SHOWN ON THIS SHEET ARE NOT INTENDED TO REPRESENT THE PHYSICAL SCALE OR SHAPE OF ANY ITEMS.
3. WHERE LARGE–SCALE PLANS ARE PRESENTED, THE SYMBOLS SHOWN HEREON MAY BE REPLACED BY DETAILS MORE SUITED TO THE DRAWING SCALE.
4. FOR PIPE MATERIALS AND ABBREVIATIONS SEE DRAWING M–0–1.
5. CONTRACTOR SHALL APPLY APPROPRIATE BEST MANAGEMENT PRACTICES (BMPs) FOR CONTROLLING EROSION, SEDIMENT AND STORMWATER RUNOFF RELATED TO THE PROJECT. APPROPRIATE BMP's MAY BE FOUND AT: HTTP://CFPUBLEPA.GOV/NPDES/STORMWATER/MENUOFBMPS/INDEX.CFM?ACTION=MIN_MEASUREMIN_MEASURE_ID=4
6. FOR ELECTRICAL ABBREVIATIONS SEE DRAWINGS E1, EIC1 AND PID1.

REGISTERED PROFESSIONAL ENGINEER
11,146
OREGON
JULY 17, 1981
RONALD F. STILLMAKER
EXPIRES 06/30/2014

VERIFY SCALES
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(541)266–0880 FAX (541)266–9498

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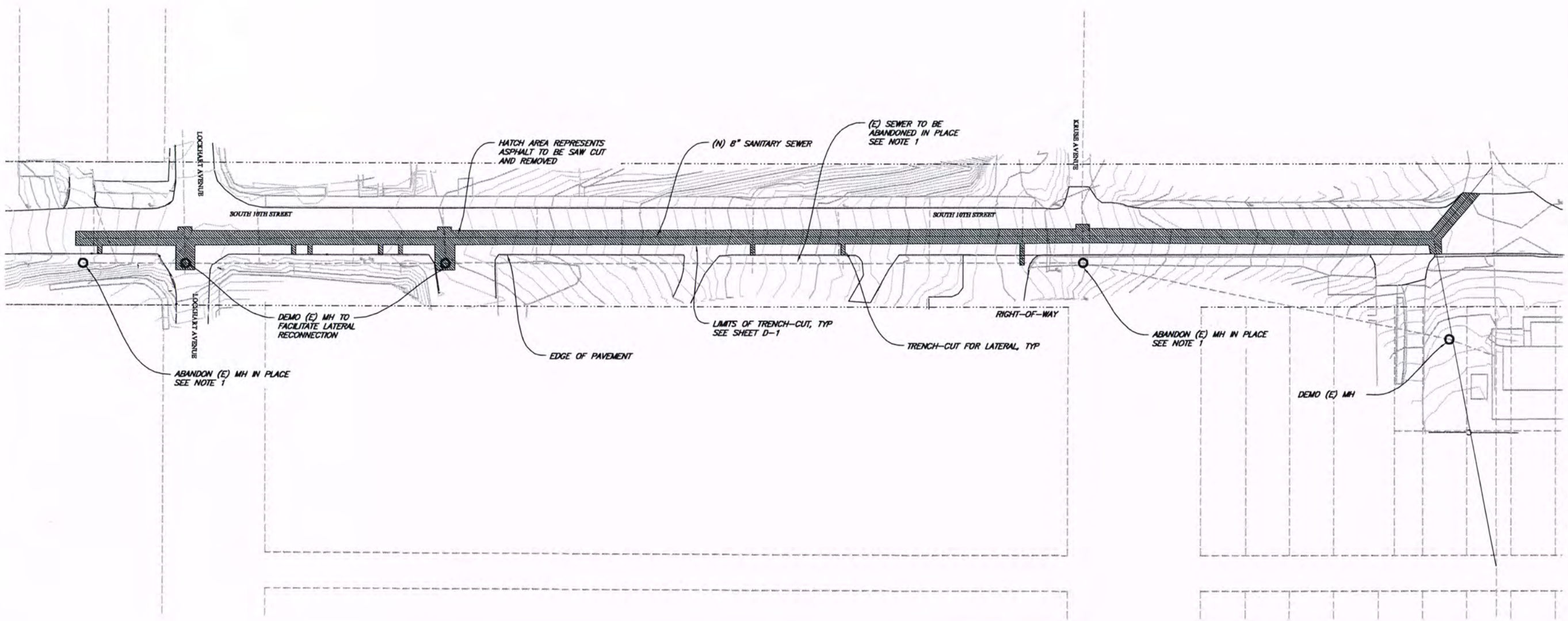
DSGN RFS
DR ESR
CHK SKD
APVD

CITY OF COOS BAY
10TH ST & WEST LOCKHART SEWER IMPROVEMENTS
COOS BAY, OREGON

ABBREVIATIONS AND LEGENDS

DRAWING G–2
SHT 2
DATE 2/2013
PROJ. NO. 611026.000

\\Coosbay\projects\2011\611026–10th–Lockhart–Sewer\Dwgs\611026–000–G2–ABBV–LGND.dwg



PLAN
1"=30'

NOTES:

1. ALL CONCRETE AND ASPHALT SURFACES ASSOCIATED WITH CONSTRUCTION DEMOLITION SHALL BE SAW CUT IN STRAIGHT LINES PRIOR TO REMOVAL.
2. EXISTING SANITARY SEWER TO BE ABANDONED IN PLACE THROUGH FOLLOWING PROCEDURE:
   A. PLUG ALL INLETS AND OUTLETS AT EXISTING MANHOLES TO BE ABANDONED WITH MECHANICAL PLUG.
   B. FILL ALL MANHOLES TO BE ABANDONED WITH CLEAN, FINE SAND TO TOP.
   C. REMOVE LID FRAME, LID AND TOP RISER, RESTORE SURFACE TO MATCH EXISTING.
3. UNDERGROUND UTILITY LOCATIONS BASED UPON REQUESTED UNDERGROUND UTILITY LOCATE MARKINGS. UTILITY BURY DEPTH IS ESTIMATED ONLY, CONTRACTOR TO CONFIRM DEPTH PRIOR TO CONSTRUCTION.
4. PRIOR TO ASPHALT RESURFACING AND AFTER PIPELINE INSTALLATION AND TRENCH BACKFILL, AN ADDITIONAL 12" WIDTH STRIP OF ASPHALT ON EITHER SIDE OF THE ORIGINAL TRENCH SHALL BE SAW CUT AND REMOVED, (ALSO KNOWN AS THE "T-CUT" METHOD).
5. EXISTING CONCRETE CURB SHALL BE PRESERVED DURING CONSTRUCTION. IF CURB IS DAMAGED OR REMOVED TO FACILITATE CONSTRUCTION, CONTRACTOR SHALL REPLACE CURB WITH SIMILAR MATERIAL AND DESIGN, COSTS FOR REPLACEMENT SHALL BE INCIDENTAL TO SURFACE RESTORATION COST.

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JULY 17, 1981
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VERIFY SCALES
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0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

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275 Market Ave. (541)269-0930
Coos Bay, OR 97420 FAX (541)269-0406

NO.	DATE	REVISION	BY

DSGN
DR
CHK
APVD

CITY OF COOS BAY
10TH ST & WEST LOCKHART SEWER IMPROVEMENTS
COOS BAY, OREGON

DEMOLITION PLAN

SHEET C-1
3
DATE 2/2013
PROJ. NO. 611026.000

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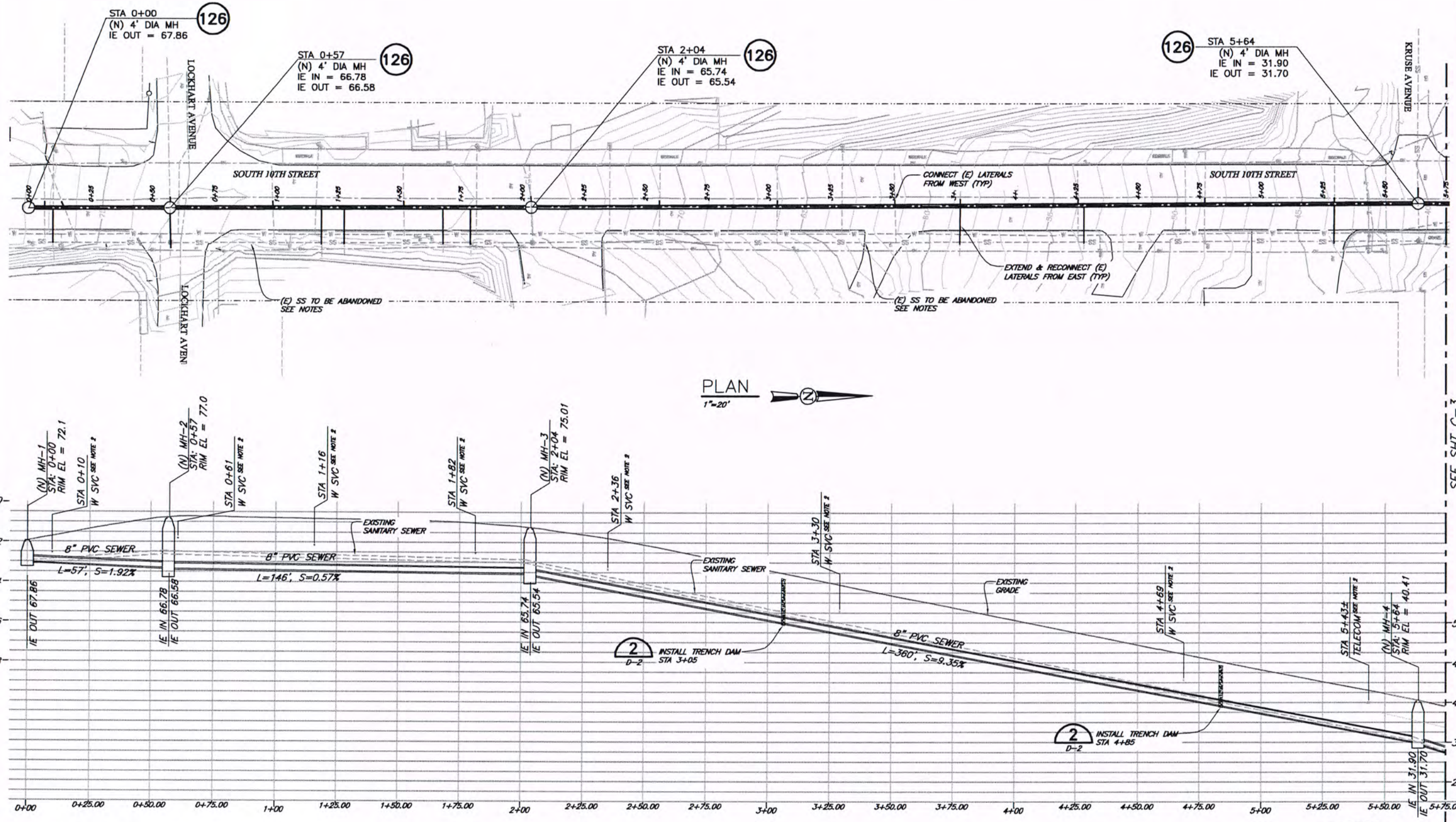

PLAN
1"=20'

PROFILE
SCALE: H: 1"=20'
V: 1"=10'

SEE SHT C-3

NOTES:

1. EXISTING SANITARY SEWER TO BE ABANDONED IN PLACE THROUGH FOLLOWING PROCEDURE:
   A. PLUG ALL INLETS AND OUTLETS AT EXISTING MANHOLES TO BE ABANDONED WITH MECHANICAL PLUG.
   B. FILL ALL MANHOLES TO BE ABANDONED WITH CLEAN, FINE SAND TO TOP.
   C. REMOVE LID FRAME, LID AND TOP RISER, RESTORE SURFACE TO MATCH EXISTING.
2. UNDERGROUND UTILITY LOCATIONS BASED UPON REQUESTED UNDERGROUND UTILITY LOCATE MARKINGS. UTILITY BURY DEPTH IS ESTIMATED ONLY, CONTRACTOR TO CONFIRM DEPTH PRIOR TO CONSTRUCTION.

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FAX (541)269-0498

NO.	REVISION	BY	DATE

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DR RFS/ESR
CHK SKO
APVD

CITY OF COOS BAY
10TH ST & WEST LOCKHART SEWER IMPROVEMENTS
COOS BAY, OREGON

PLAN & PROFILE SHEET 1

SHEET C-2
4
DATE 2/2013
PROJ. NO. 611026.000

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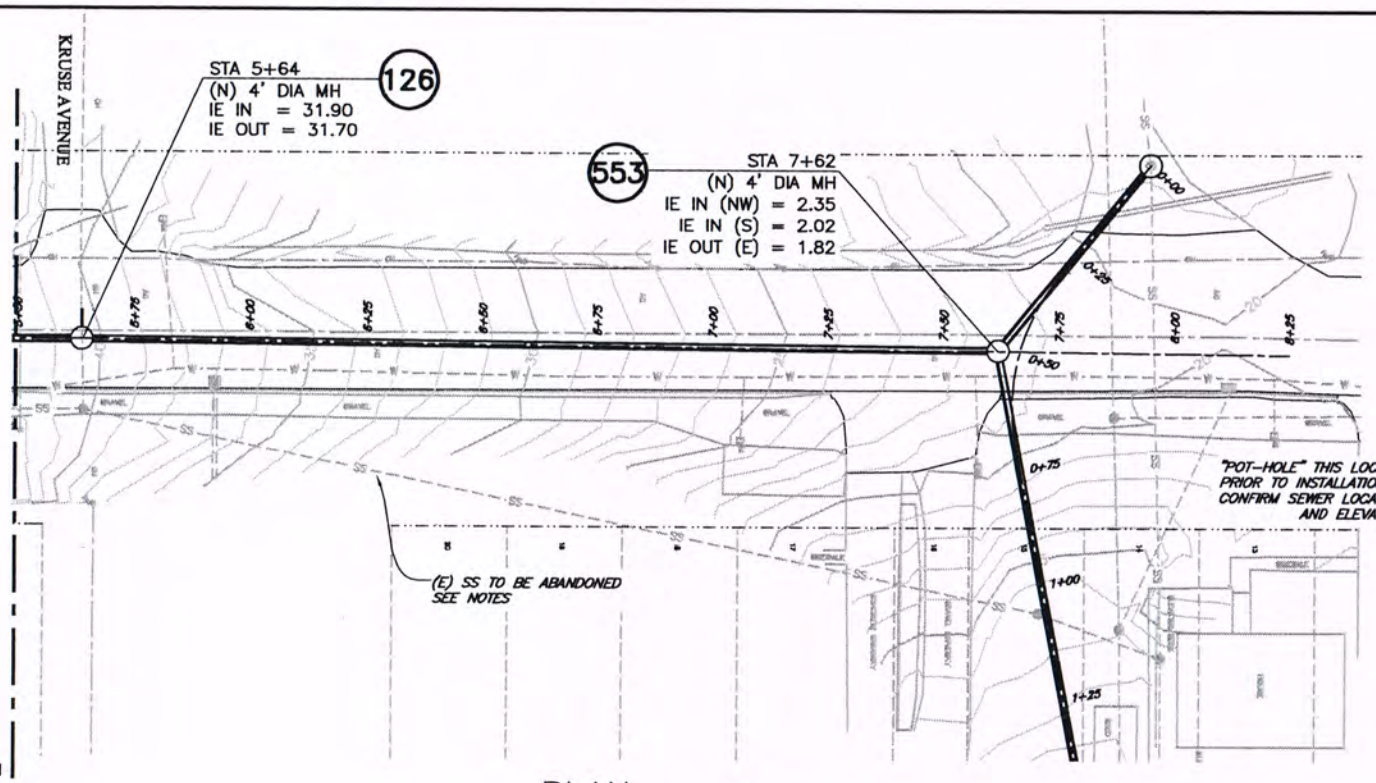
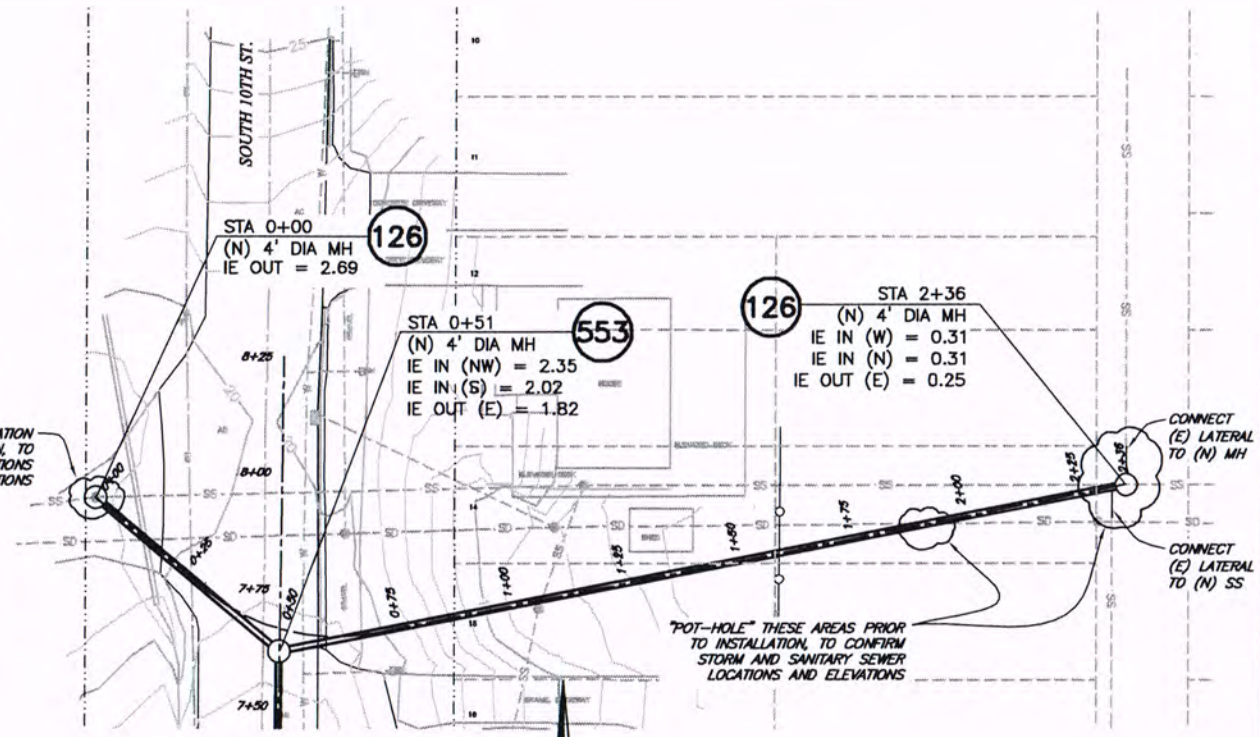
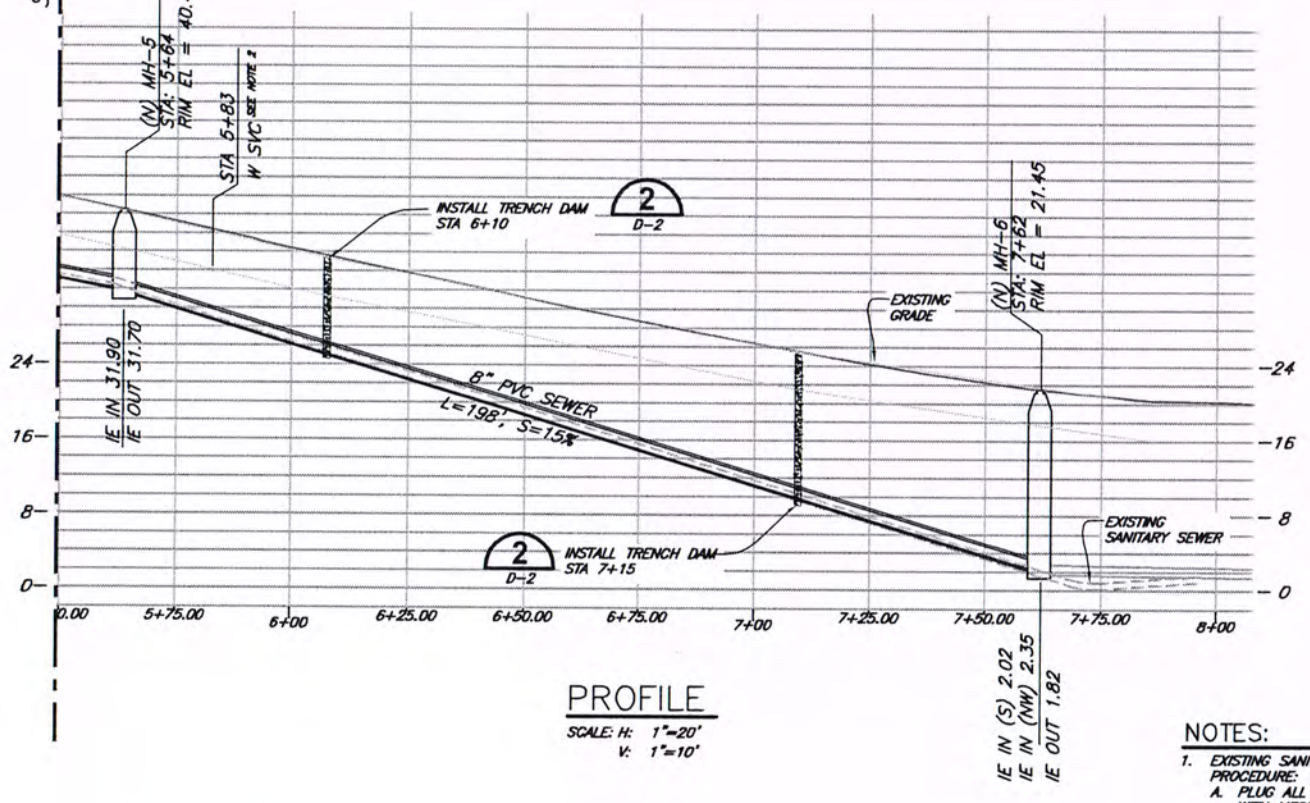


PLAN
1"=20'

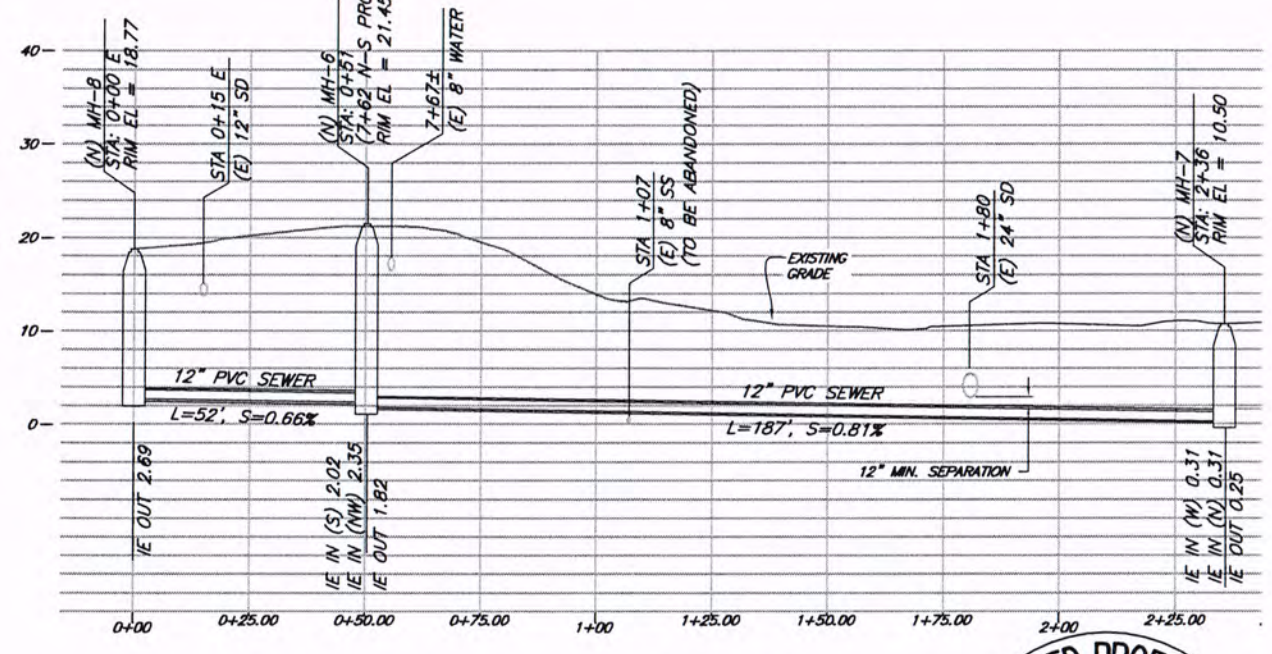


PLAN
1"=20'

SEE SHEET C-2



PROFILE
SCALE: H: 1"=20'
V: 1"=10'



PROFILE
SCALE: H: 1"=20'
V: 1"=10'

NOTES:

1. EXISTING SANITARY SEWER TO BE ABANDONED IN PLACE THROUGH FOLLOWING PROCEDURE:
   A. PLUG ALL INLETS AND OUTLETS AT EXISTING MANHOLES TO BE ABANDONED WITH MECHANICAL PLUG.
   B. FILL ALL MANHOLES TO BE ABANDONED WITH CLEAN, FINE SAND TO TOP.
   C. REMOVE LID FRAME, LID AND TOP RISER, RESTORE SURFACE TO MATCH EXISTING.
2. UNDERGROUND UTILITY LOCATIONS BASED UPON REQUESTED UNDERGROUND UTILITY LOCATE MARKINGS. UTILITY BURY DEPTH IS ESTIMATED ONLY. CONTRACTOR TO CONFIRM DEPTH PRIOR TO CONSTRUCTION.

REGISTERED PROFESSIONAL ENGINEER
11,146
OREGON
JULY 17, 1981
RONALD F. STILLMAKER
EXPIRES 06/30/2014

VERIFY SCALES
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CONSULTING ENGINEERS & GEOLOGISTS, INC.
275 Market Ave. Coos Bay, OR 97420
(541)266-0900 FAX (541)266-0486

NO.	DATE	REVISION	BY

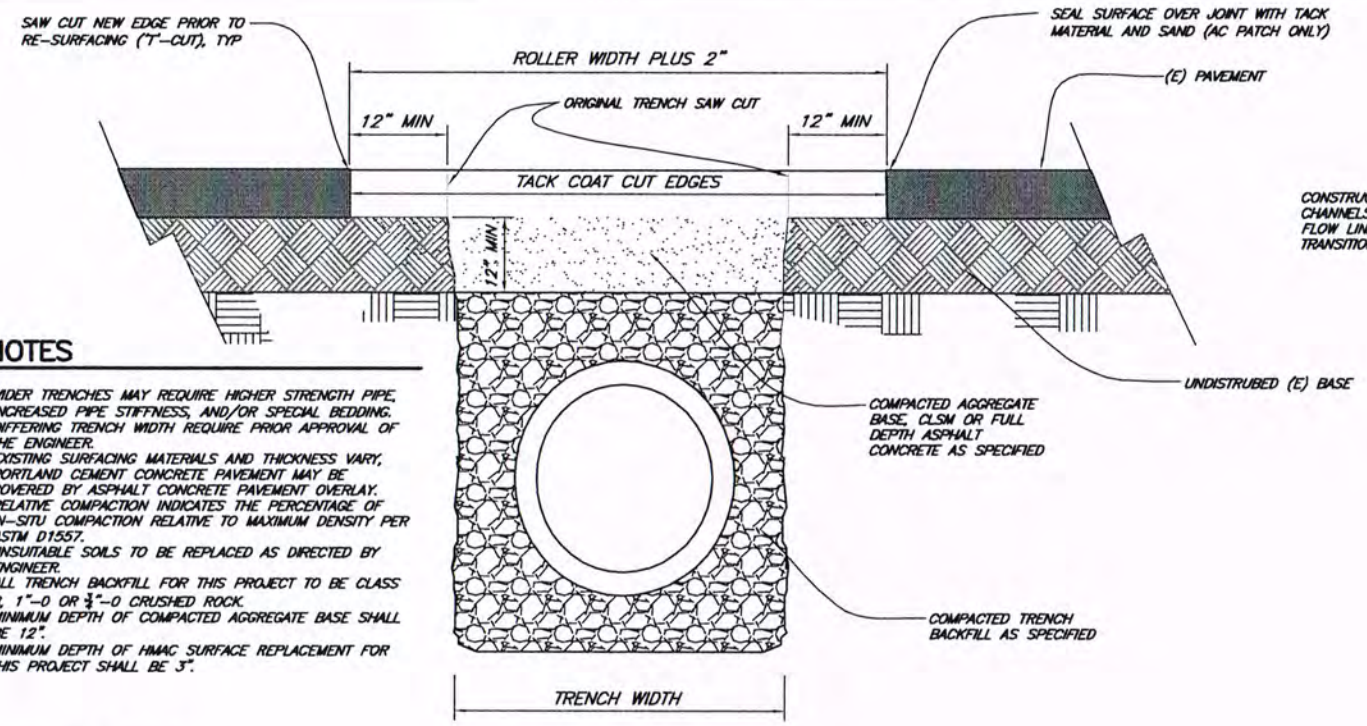
DSGN RFS
DR RFS/ESR
CHK SKD
APVD

CITY OF COOS BAY
10TH ST & WEST LOCKHART SEWER IMPROVEMENTS
COOS BAY, OREGON

PLAN & PROFILE SHEET 2

SHEET C-3
5
DATE 2/2013
PROJ. NO. 611026.000

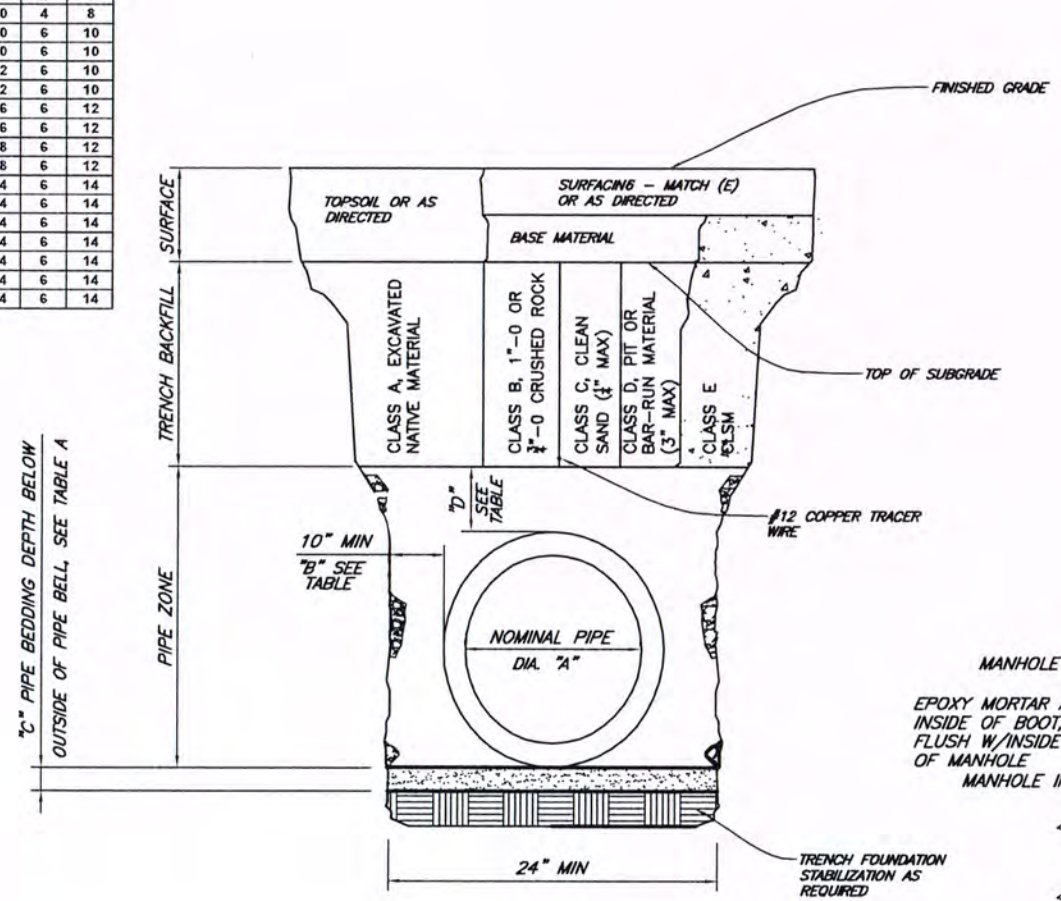
\\Coosbayswr1\projects\2011\611026-10th-Lockhart-Sewer\Dwgs\611026-000-C1CIVIL-D1DTLS.dwg



NOTES

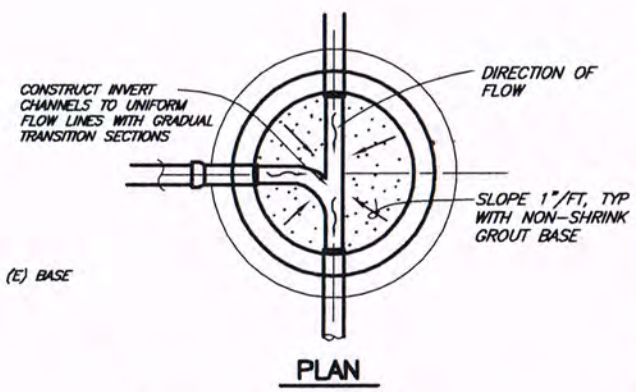
1. WIDER TRENCHES MAY REQUIRE HIGHER STRENGTH PIPE, INCREASED PIPE STIFFNESS, AND/OR SPECIAL BEDDING.
2. DIFFERING TRENCH WIDTH REQUIRE PRIOR APPROVAL OF THE ENGINEER.
3. EXISTING SURFACING MATERIALS AND THICKNESS VARY, PORTLAND CEMENT CONCRETE PAVEMENT MAY BE COVERED BY ASPHALT CONCRETE PAVEMENT OVERLAY.
4. RELATIVE COMPACTION INDICATES THE PERCENTAGE OF IN-SITU COMPACTION RELATIVE TO MAXIMUM DENSITY PER ASTM D1557.
5. UNSUITABLE SOILS TO BE REPLACED AS DIRECTED BY ENGINEER.
6. ALL TRENCH BACKFILL FOR THIS PROJECT TO BE CLASS B, 1"-0 OR ¾"-0 CRUSHED ROCK.
7. MINIMUM DEPTH OF COMPACTED AGGREGATE BASE SHALL BE 12".
8. MINIMUM DEPTH OF HMAC SURFACE REPLACEMENT FOR THIS PROJECT SHALL BE 3".

TABLE A			
"A" (in)	"B" (in)	"C" (in)	"D" (in)
4	10	4	8
6	10	4	8
8	10	6	10
10	10	6	10
12	12	6	10
15	12	6	10
18	16	6	12
21	16	6	12
24	18	6	12
30	18	6	12
36	24	6	14
42	24	6	14
48	24	6	14
54	24	6	14
60	24	6	14
66	24	6	14
72	24	6	14



SANITARY SEWER TRENCH DETAILS 127

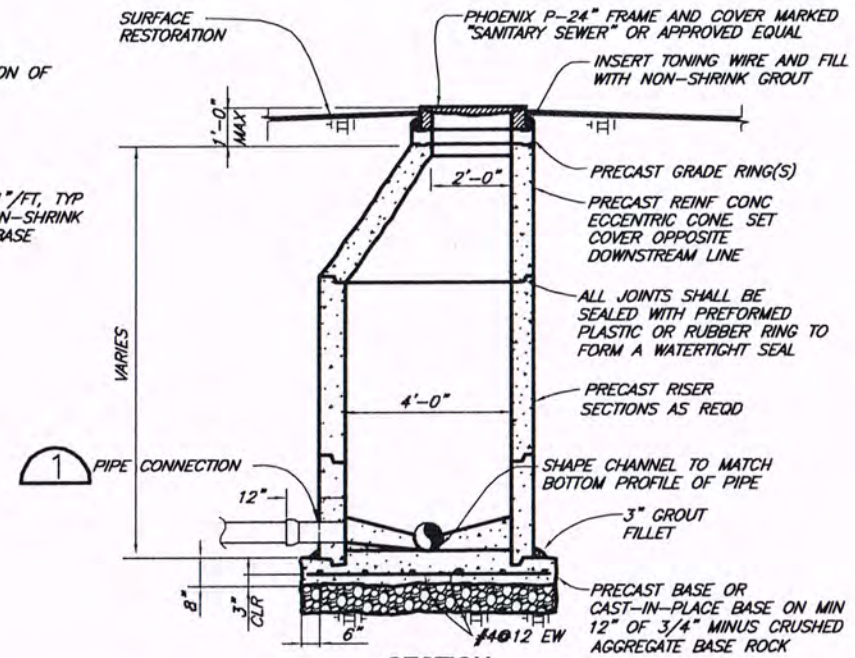
NTS ODOT/APWA DRAWING FORMATED TO SHN DRAFTING STANDARD



PLAN

NOTES:

1. CONCRETE SHALL BE CLASS 3000.
2. CHANELS SHALL BE CONSTRUCTED TO PROVIDE SMOOTH SLOPES AND RADII TO OUTLET PIPE.
3. BASES MAY BE PRECAST OR POURED IN PLACE.
4. THIS MANHOLE BASE SECTION SHALL BE USED FOR PIPE SIZES UP TO 24".



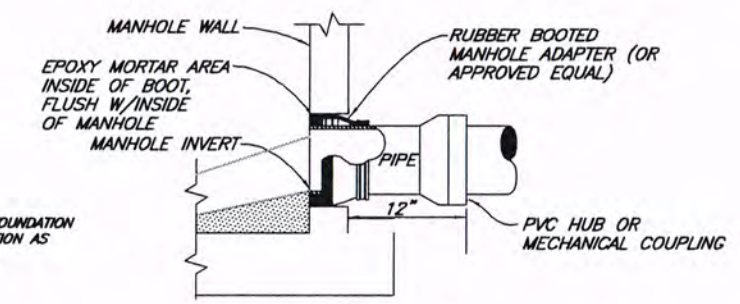
SECTION

NOTES:

1. POURED IN PLACE MANHOLE CONNECTIONS SHALL BE FACTOR SANDED COLLAR CONNECTORS WITH NON-SHRINK GROUT. ALL OTHER MANHOLE CONNECTIONS SHALL BE CORED HOLE WITH FLEXIBLE BOOT. IE KOR-N-SEAL.
2. GROUT USED TO INSTALL HEIGHT ADJUSTING RINGS, LID FRAMES AND BASES SHALL BE NON-SHRINK GROUT.
3. CHANNELS SHAL BE VERTICAL WALLED AND PROVIDE SMOOTH SLOPES & RADIUS TO OUTLET PIPE.
4. CONTRACTOR SHALL USE COMMERCIAL CONCRETE BONDING AGENT ON ALL CONCRETE FACES, BOTH INTERIOR AND EXTERIOR, TO BE GROUTED OR WHERE NEW CONCRETE WILL BE PLACED AGAINST EXISTING CONCRETE SURFACES.
5. ALL MANHOLES GREATER THAN 5 FEET IN DEPTH SHALL BE 48" DIAMETER WITH CONCENTRIC CONES.
6. ALL MANHOLES LESS THAN 5 FEET IN DEPTH SHALL BE 48" DIAMETER WITH LOW PROFILE 18" CONCENTRIC CONES.
7. BASE MAY BE PRECAST OR POURED IN PLACE ON 12" BEDDING MATERIAL.
8. MANHOLE BASE TO BE FINISHED AT TIME OF CONCRETE PLACEMENT. CHANNEL SHAPE TO MATCH BOTTOM HALF OF PIPE, WITH VERTICAL SIDES TO BASE SHELF.
9. BASE CHANNEL WIDTH SHALL REMAIN UNIFORM & MATCH OUTLET PIPE DIAMETER WITHOUT FLARING.
10. LIFTING EYELETS SHALL BE REMOVED BELOW FINISHED SURFACE & FINISHED WITH NON-SHRINK GROUT. LIFTING LUGS SHALL BE GROUTED WITH 2" MINIMUM COVER.
11. ALL JOINTS SHALL BE SEALED WITH A PREFORMED BITUMINOUS SEAL TO FORM A WATER TIGHT SEAL. VOID SPACE FILLED AND SEALED INSIDE AND OUT WITH NON-SHINK GROUT WITH BONDING AGENT.
12. MANHOLES IN TRAVELED WAYS SHALL BE BE INSTALLED WITH TOP OF RIM AND MANHOLE LID FLUSH WITH FINISHED SURFACE.

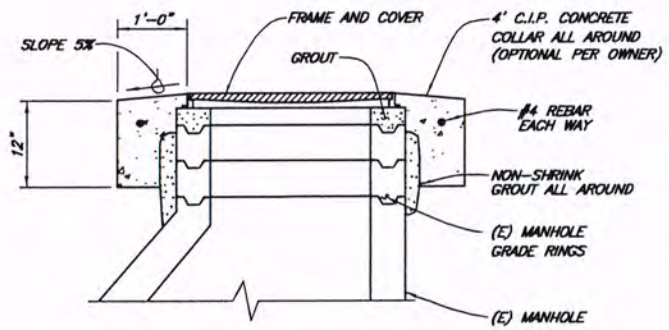
STANDARD MANHOLE 126

NTS



FLEXIBLE MANHOLE PIPE CONNECTION 1

NTS



NOTES:

1. REMOVE (E) COVER, FRAME AND TOP 6" GRADE RING.
2. GROUT BELOW FRAME AS REQD FOR DESIGN RIM ELEVATION.
3. RESET (E) FRAME AND COVER.
4. GROUT AROUND OUTSIDE OF (E) GRADE RINGS AND MANHOLE FOR WATERTIGHT SEAL.
5. PLACE C.I.P. CONCRETE RING.

MANHOLE COVER RAISING 110

NTS

REGISTERED PROFESSIONAL ENGINEER 11,146 OREGON JULY 17, 1981 RONALD F. STILLMAKER EXPIRES 06/30/2014

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NO.	DATE	REVISION	BY

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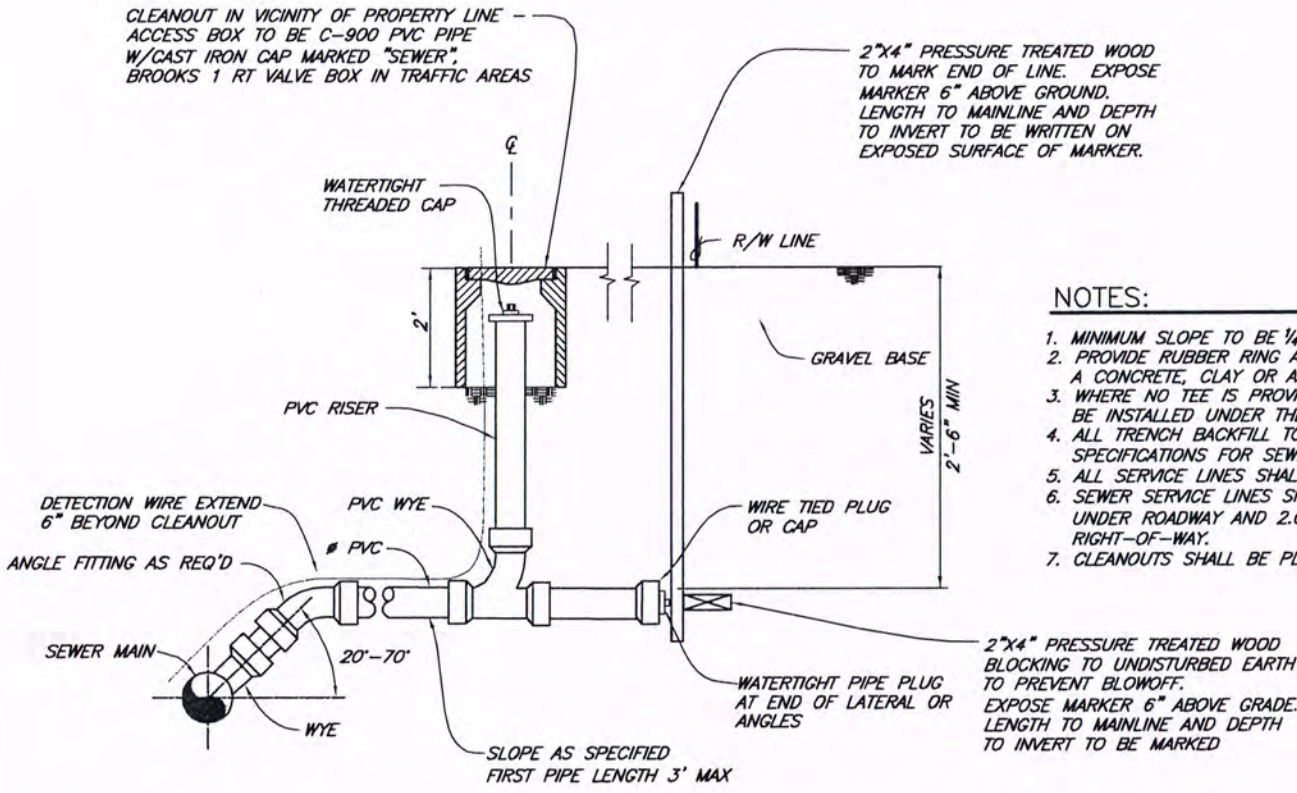
APVD

CITY OF COOS BAY
10TH ST & LOCKHART SEWER IMPROVEMENTS
COOS BAY, OREGON

DETAILS SHEET 1

SHEET D-1
6
DATE 2/2013
PROJ. NO. 611026.000

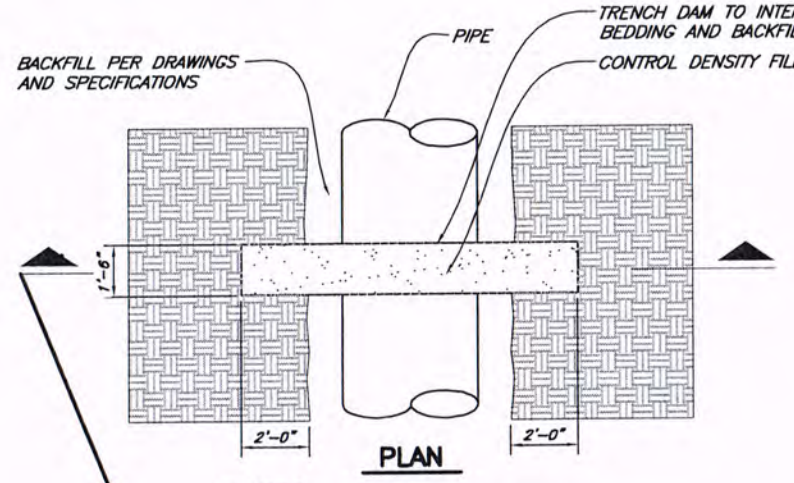
\\Coosbaysvr1\projects\2011\611026-10th-Lockhart-Sewer\Dwgs\611026-000-C1CIVIL-D1DTLS.dwg



NOTES:

1. MINIMUM SLOPE TO BE ¼" PER FOOT OR AS APPROVED BY THE ENGINEER.
2. PROVIDE RUBBER RING ADAPTER FOR CONNECTION TO SERVICE LINE WITH A CONCRETE, CLAY OR ASBESTOS CEMENT TEE.
3. WHERE NO TEE IS PROVIDED, A SERVICE SADDLE OF PROPER SIZE SHALL BE INSTALLED UNDER THE SUPERVISION OF THE CITY.
4. ALL TRENCH BACKFILL TO CONFORM TO CITY STANDARDS AND SPECIFICATIONS FOR SEWER MAIN. MINIMUM SERVICE TRENCH WIDTH IS 24".
5. ALL SERVICE LINES SHALL END WITH A CLEANOUT AT THE PROPERTY LINE.
6. SEWER SERVICE LINES SHALL NOT HAVE LESS THAN 3.0' OF COVER UNDER ROADWAY AND 2.0' OF COVER TO NATURAL GROUND IN THE RIGHT-OF-WAY.
7. CLEANOUTS SHALL BE PLACED NOT MORE THAN 100' APART.

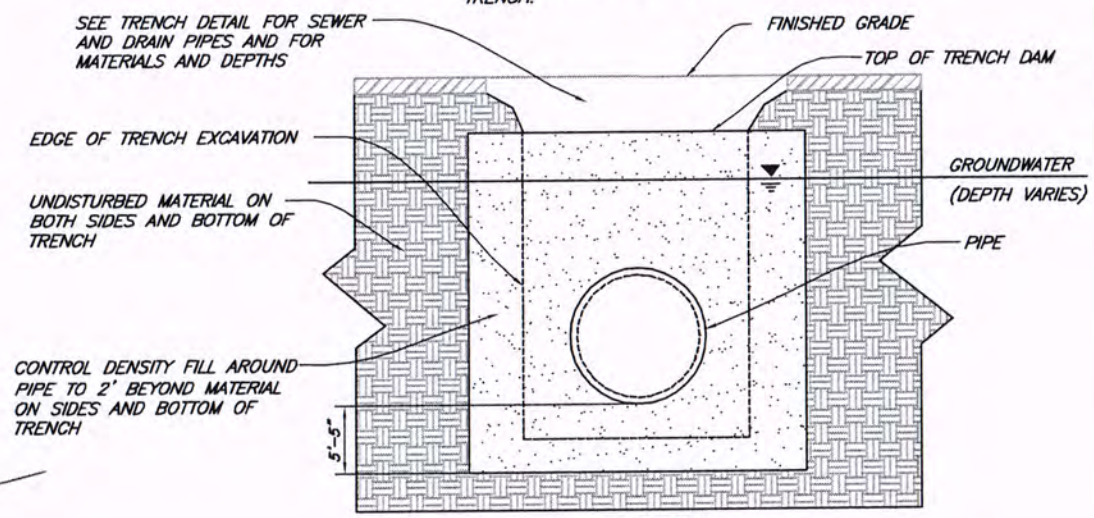
CLEANOUT (108)
NTS



PLAN

NOTES:

1. NOTCH TRENCH DAM A MINIMUM OF 2'-0" BEYOND UNDISTURBED MATERIAL ON SIDES AND BOTTOM OF TRENCH.



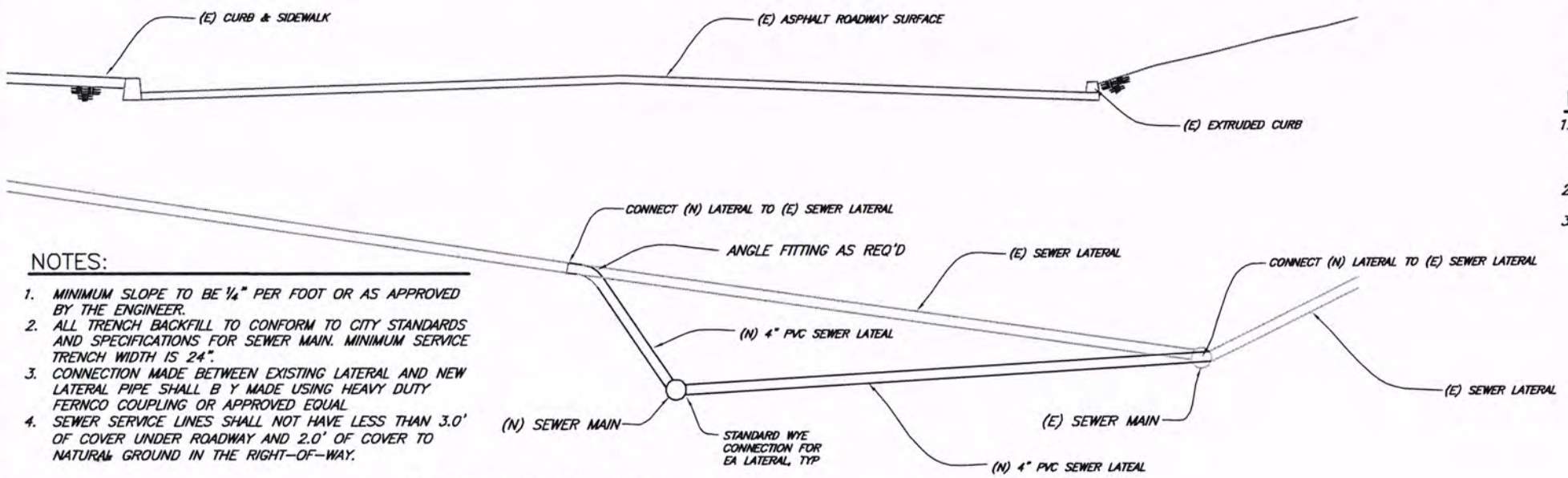
SECTION

NOTES:

1. THE TOP OF THE TRENCH DAM SHALL EXTEND A MINIMUM OF 5'-0" ABOVE GROUND WATER LEVEL, AS DETERMINED BY THE NEAREST BORING OR BY THE ENGINEER, BUT SHALL EXCEED A DEPTH OF 1'-0" BELOW FINISHED GRADE.
2. TRENCH DAMS SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.
3. IF PIPE MATERIAL IS DUCTILE IRON, USE A NON FLY ASH BASED CONTROL DENSITY FILL.

DETAIL (2) C-2, C-3
NTS

(TRENCH DAM)



NOTES:

1. MINIMUM SLOPE TO BE ¼" PER FOOT OR AS APPROVED BY THE ENGINEER.
2. ALL TRENCH BACKFILL TO CONFORM TO CITY STANDARDS AND SPECIFICATIONS FOR SEWER MAIN. MINIMUM SERVICE TRENCH WIDTH IS 24".
3. CONNECTION MADE BETWEEN EXISTING LATERAL AND NEW LATERAL PIPE SHALL B Y MADE USING HEAVY DUTY FERNCO COUPLING OR APPROVED EQUAL
4. SEWER SERVICE LINES SHALL NOT HAVE LESS THAN 3.0' OF COVER UNDER ROADWAY AND 2.0' OF COVER TO NATURAL GROUND IN THE RIGHT-OF-WAY.

TYPICAL SECTION LATERAL RECONNECTION (1)
NTS

REGISTERED PROFESSIONAL ENGINEER 11,146 OREGON JULY 17, 1981 RONALD F. STILLMAKER EXPIRES 06/30/2014

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COOS BAY, OREGON

DETAILS SHEET 2

SHEET D-2
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DATE 2/2013
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