CITY OF MOLALLA
MOLALLA AVENUE IMPROVEMENTS
URBAN RENEWAL PROJECT NO. 16-01

VOLUME 2 OF 2
JANUARY 2016

INDEX OF DRAWINGS

GENERAL

1	G-1	COVER SHEET
2	G-2	GENERAL NOTES
3	G-3	LEGEND & SYMBOLS
4	G-4	ABBREVIATIONS
5	G-5	DETAILS
6	G-6	STANDARD DETAILS
7	G-7	STANDARD DETAILS
8	G-8	STANDARD DETAILS
9	G-9	STANDARD DETAILS
10	G-10	STANDARD DETAILS
11	G-11	STANDARD DETAILS

EROSION CONTROL PLANS

12	ESC-1	EROSION & SEDIMENT CONTROL PLAN COVER SHEET
13	ESC-2	EROSION & SEDIMENT CONTROL PLAN - 1
14	ESC-3	EROSION & SEDIMENT CONTROL PLAN - 2
15	ESC-4	EROSION & SEDIMENT CONTROL PLAN - 3
16	ESC-5	EROSION & SEDIMENT CONTROL DETAILS

CIVIL

17	C-1	TYPICAL ROADWAY SECTIONS
18	C-2	MOLALLA AVE STREET PLAN & PROFILE STA 6+80 TO STA 10+20
19	C-3	MOLALLA AVE STREET PLAN & PROFILE STA 10+20 TO STA 15+40
20	C-4	MOLALLA AVE STREET PLAN & PROFILE STA 15+40 TO STA 20+60
21	C-5	MOLALLA AVE STREET PLAN & PROFILE STA 20+60 TO STA 25+80
22	C-6	MOLALLA AVE STREET PLAN & PROFILE STA 25+80 TO STA 27+70
23	C-7	CURB RETURN DETAILS - 1
24	C-8	CURB RETURN DETAILS - 2
25	C-9	CURB RETURN DETAILS - 3
26	C-10	CURB RETURN AND RAMP DETAILS
27	C-11	MOLALLA AVE STORM & SEWER PLAN & PROFILE STA 5+60 TO STA 10+20
28	C-12	MOLALLA AVE STORM & SEWER PLAN & PROFILE STA 10+20 TO STA 15+40
29	C-13	MOLALLA AVE STORM & SEWER PLAN & PROFILE STA 15+40 TO STA 20+60
30	C-14	MOLALLA AVE STORM & SEWER PLAN & PROFILE STA 20+60 TO STA 25+80
31	C-15	MOLALLA AVE STORM & SEWER PLAN & PROFILE STA 25+80 TO STA 29+00
32	C-16	MOLALLA AVE WATERLINE PLAN & PROFILE STA 1+00 TO STA 5+60
33	C-17	MOLALLA AVE WATERLINE PLAN & PROFILE STA 5+60 TO STA 10+20
34	C-18	MOLALLA AVE WATERLINE PLAN & PROFILE STA 10+20 TO STA 15+40
35	C-19	MOLALLA AVE WATERLINE PLAN & PROFILE STA 15+40 TO STA 20+60
36	C-20	MOLALLA AVE WATERLINE PLAN & PROFILE STA 20+60 TO STA 25+80
37	C-21	MOLALLA AVE WATERLINE PLAN & PROFILE STA 25+80 TO STA 29+00

TRAFFIC CONTROL PLANS

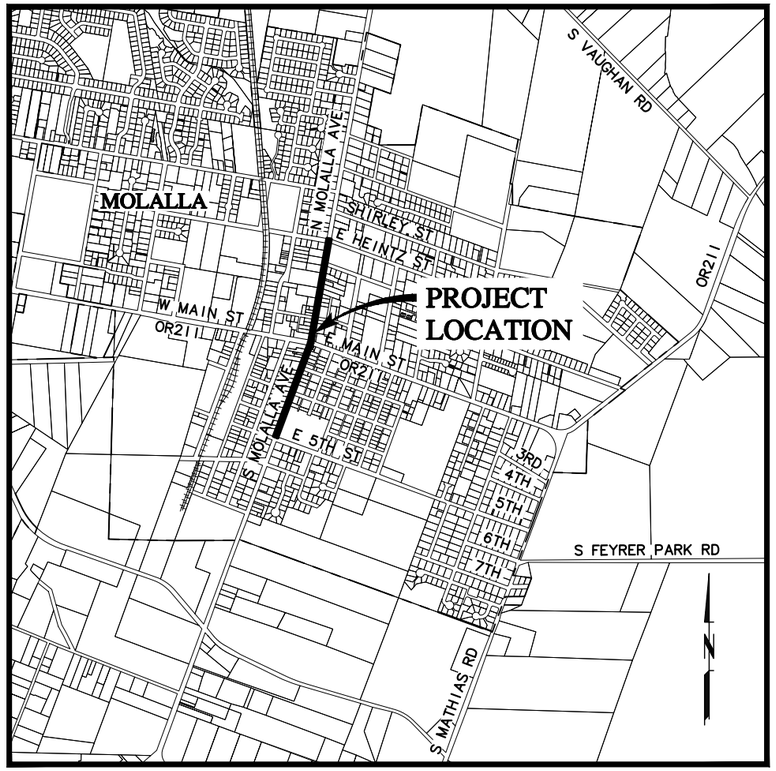
38	TC-1	TRAFFIC CONTROL LEGEND AND NOTES
39	TC-2	TRAFFIC CONTROL STAGE 1
40	TC-3	TRAFFIC CONTROL STAGE 2
41	TC-4	TRAFFIC CONTROL VEHICLE DETOUR STAGES 1 & 2
42	TC-5	TRAFFIC CONTROL TRUCK DETOUR

SIGNING, STRIPING & ILLUMINATION

43	S-1	MOLALLA AVE SIGNING, STRIPING & ILLUMINATION PLAN STA 1+00 TO STA 11+20
44	S-2	MOLALLA AVE SIGNING, STRIPING & ILLUMINATION PLAN STA 11+20 TO STA 21+40
45	S-3	MOLALLA AVE SIGNING, STRIPING & ILLUMINATION PLAN STA 21+40 TO STA 31+00
46	S-4	POLE AND ILLUMINATION SCHEDULE AND FOUNDATION DETAIL
47	S-5	SIGN DETAILS 1
48	S-6	SIGN DETAILS 2
49	S-7	STANDARD DETAILS

LANDSCAPE PLANS

50	LP01	LANDSCAPE REFERENCE PLAN, PLANT LIST AND NOTES
51	LP02	LANDSCAPE PLAN STA 6+00 TO 14+00
52	LP03	LANDSCAPE PLAN STA 14+00 TO 21+50
53	LP04	LANDSCAPE PLAN STA 21+50 TO 28+00
54	LP05	BIKE PLAZA PLAN
55	LP06	LANDSCAPE DETAILS
56	LL01	LANDSCAPE LIGHTING PLAN STA 6+00 TO 14+00
57	LL02	LANDSCAPE LIGHTING PLAN STA 14+00 TO 21+50
58	LL03	LANDSCAPE LIGHTING PLAN STA 21+50 TO 28+00
59	LL04	LANDSCAPE LIGHTING DETAILS



VICINITY MAP
SCALE: 1"=1,000'

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15-1670.205

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GENERAL NOTES

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY LOCAL, COUNTY, STATE, AND UTILITY CONSTRUCTION PERMITS, AND SHALL CONTACT EACH PERMITTING AGENCY AT LEAST TWO (2) BUSINESS DAYS PRIOR TO STARTING WORK. CONTRACTOR SHALL OBTAIN ALL REQUIRED LICENSES BEFORE STARTING CONSTRUCTION. CONTRACTOR TO SUBMIT TRAFFIC CONTROL PLAN AS REQUIRED FOR APPROVAL.

2. THE LOCATIONS OF ALL EXISTING UNDERGROUND FACILITIES SHOWN ON THE PLANS ARE BASED ON A FIELD SURVEY AND INFORMATION SUPPLIED BY UTILITY COMPANIES. LOCATIONS ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL POTHOLE AND VERIFY LOCATIONS, ELEVATIONS, TYPE AND SIZES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTING NEW PIPING/CONDUITS AND SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS NOT SHOWN ON THE PLANS AND THE NEED TO ADJUST PIPING INSTALLATION ACCORDINGLY. CONTRACTOR SHALL PROVIDE 72 HOUR NOTICE TO ENGINEER AND THE AFFECTED UTILITY. CONTRACTOR SHALL ARRANGE FOR THE RELOCATION OF ANY UTILITIES IN CONFLICT WITH THE PROPOSED CONSTRUCTION.

3. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF ORS 757.541 TO 757.571. THE CONTRACTOR SHALL NOTIFY EACH UNDERGROUND UTILITY AT LEAST 48 BUSINESS-DAY HOURS, BUT NOT MORE THAN 10 BUSINESS DAYS, PRIOR TO EXCAVATING, BORING, OR POTHOLING.

4. POTHOLING AND TRENCH EXCAVATION SHALL SUFFICIENTLY PRECEDE LAYING OF PIPE TO ALLOW REQUIRED ELEVATION AND ALIGNMENT ADJUSTMENTS TO BE ACCOMPLISHED WITHOUT REWORK. ADJUSTMENTS SHALL BE EXPECTED AND CONSIDERED INCIDENTAL.

5. NO ADDITIONAL PAYMENT SHALL BE MADE FOR UTILITY RELOCATION COORDINATION OR DELAYS CAUSED BY UTILITY CONFLICTS. ALL COSTS RELATED TO UTILITY COORDINATION AND RELOCATION, INCLUDING POTHOLING, ARE TO BE CONSIDERED INCIDENTAL AND INCLUDED IN THE UNIT PRICES OF BID.

6. UTILITIES OR INTERFERING PORTIONS OF UTILITIES THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDONED UTILITIES, UNLESS OTHERWISE REQUIRED BY THE ENGINEER OR SHOWN ON THE PLANS.

7. 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.)

8. TOPOGRAPHIC MAP WAS COMPLETED BY HDJ, INC. ELEVATIONS ARE BASED ON VERTICAL DATUM: NAVD88; HORIZONTAL DATUM: NGS83. CONTRACTOR SHALL PROTECT ALL PROPERTY CORNERS, SURVEY MONUMENTS AND CONTROL POINTS. SURVEY MONUMENTS OF THIS TYPE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED AT CONTRACTOR'S EXPENSE, WITH APPROPRIATE SURVEYS FILED WITH THE COUNTY SURVEYOR.

9. CONTRACTOR SHALL KEEP AND MAINTAIN A CURRENT SET OF DRAWINGS ON SITE. CONTRACTOR TO KEEP ACCURATE "AS-BUILT" RECORD COPY OF PLANS. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUBMIT A CLEAN SET OF FIELD RECORD DRAWINGS CONTAINING ALL AS-BUILT INFORMATION TO THE ENGINEER FOR USE IN THE PREPARATION OF AS-BUILT DRAWINGS FOR SUBMITTAL TO THE CITY.

10. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL HOMES AND BUSINESSES AT ALL TIMES. PROVIDE WRITTEN NOTICE TO ALL PROPERTY OWNERS AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE OF WORK IN AND/OR CROSSING DRIVEWAYS.

11. CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS BEFORE STARTING CONSTRUCTION, AND 24 HOURS BEFORE RESUMING WORK AFTER SHUTDOWNS EXCEPT FOR NORMAL RESUMPTION OF WORK FOLLOWING SATURDAYS, SUNDAYS, OR HOLIDAYS. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS PRIOR TO ANY TESTING OR REQUIRED INSPECTION.

12. ANY ALTERATION OR VARIANCE FROM THESE PLANS, EXCEPT MINOR FIELD ADJUSTMENT NOT AFFECTING DESIGN NEEDED TO MEET EXISTING FIELD CONDITIONS, SHALL FIRST BE APPROVED BY THE ENGINEER. ANY ALTERATIONS OR VARIANCE FROM THESE PLANS SHALL BE DOCUMENTED ON CONSTRUCTION FIELD PRINTS AND TRANSMITTED TO THE ENGINEER. ANY PROPOSED CHANGE IN CONSTRUCTION PLANS MUST BE SUBMITTED IN WRITING AND APPROVED BY ENGINEER PRIOR TO COMMENCING WORK.

13. THE CONTRACTOR SHALL DISPOSE OF ALL REMOVED OR REPLACED MATERIAL AND EQUIPMENT IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS, EXCEPT THOSE ITEMS DESIGNATED BY THE OWNER FOR SALVAGING. SALVAGED ITEMS SHALL REMAIN THE PROPERTY OF THE OWNER, AND SHALL BE CAREFULLY REMOVED AND STORED AS DIRECTED.

14. CONTRACTOR SHALL RESTORE ALL STRUCTURES, LOTS, SWALES, DITCHES, CURBS, FENCES, WALLS, MAILBOXES, SIGNS, POLES, GUY WIRES, PIPING, AND UTILITIES DISTURBED DURING CONSTRUCTION TO EXISTING CONDITIONS UNLESS OTHERWISE SPECIFIED. SUCH RESTORATION WILL BE CONSIDERED INCIDENTAL. UNLESS OTHERWISE DIRECTED BY THE GAS UTILITY, BACKFILL EXPOSED GAS LINES WITH SAND A MINIMUM OF ONE FOOT ALL SIDES OF EXPOSED GAS PIPE .

15. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY FOR APPROVAL. A COPY OF THE APPROVED TRAFFIC CONTROL PLAN SHALL BE PROVIDED TO THE ENGINEER AND AVAILABLE AT THE WORK SITE. THE CITY RESERVES THE RIGHT TO ADD TO OR MODIFY TRAFFIC CONTROL REQUIREMENTS AS MAY BE NECESSARY TO EFFECTIVELY CONTROL TRAFFIC AND TO ASSURE PUBLIC SAFETY. SEE SHEETS TC-1 THROUGH TC-5.

16. FOR STREET IMPROVEMENTS, ADJUST ALL MANHOLES, CLEANOUTS AND VALVE BOXES TO FINISH GRADE.

17. TRENCH COMPACTION: COMPACT PER ODOT STANDARDS AND THE MFTP. TESTS SHALL BE TAKEN AT THE LOCATION AND FREQUENCY ESTABLISHED BY THE ENGINEER.

18. ROADWAY MATERIALS COMPACTION: COMPACT PER ODOT STANDARDS AND THE MFTP. TESTS SHALL BE TAKEN AT THE LOCATION AND FREQUENCY ESTABLISHED BY THE ENGINEER.

19. RELOCATE ALL MAILBOXES IN CONFLICT WITH CONSTRUCTION PER ODOT STANDARD DRAWING RD101, AND AS SHOWN ON THE DRAWINGS.

20. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION AND SEDIMENTATION CONTROL (ESC) MEASURES DURING CONSTRUCTION (ANY TIME OF YEAR) PER THE REQUIREMENTS OF CLACKAMAS COUNTY, OREGON DEQ, THE CITY AND THE ENGINEER. CERTAIN ESC MEASURES ARE SHOWN ON THE PLANS. CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES AS REQUIRED. CONTRACTOR SHALL SUBMIT ESC PLAN FOR REVIEW. SEE SHEETS ESC-1 THRU ESC-5 FOR EROSION AND SEDIMENT CONTROL PLAN.

21. CONTRACTOR SHALL OBSERVE FIELD CONDITIONS, INCLUDING WORK ON PRIVATE PROPERTY, PRIOR TO BIDDING AND ADJUST BID ACCORDINGLY.

22. ALL REFERENCED ODOT STANDARD DRAWINGS, BEGINNING ON SHEET G-5, ARE INCLUDED AS PART OF THE CONTRACT DOCUMENTS.

23. CONTRACTOR TO MAINTAIN THE INTEGRITY OF PRIVATELY OWNED AND MAINTAINED DRIVEWAYS. DAMAGED SURFACES SHALL BE REPLACED IN KIND UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SUCH REPAIRS SHALL BE CONSIDERED INCIDENTAL.

24. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, STRAIGHT GRADES SHALL RUN BETWEEN ALL FINISH GRADE ELEVATIONS AND/OR FINISH CONTOUR LINES SHOWN. FINISH PAVEMENT GRADES AT TRANSITION TO EXISTING PAVEMENT SHALL MATCH EXISTING PAVEMENT GRADES OR BE FEATHERED PAST JOINTS WITH EXISTING PAVEMENTS AS REQUIRED TO PROVIDE A SMOOTH, FREE DRAINING SURFACE.

25. DUE TO THE EXISTING CONDITIONS OF ADJACENT STREETS, CUSTOM CONNECTIONS MAY NEED TO BE CONSTRUCTED AT THE INTERFACE OF PROPOSED AND EXISTING CURBS. PROPOSED CURBS ARE TO BE CONSTRUCTED TO THE EXTENT SHOWN ON THE PLANS, THEREFORE TAPERING OF CURBS SHALL BE COMPLETED BY THE DESIGNATED TIE-IN POINT.

26. ALL EXISTING FACILITIES SHALL BE MAINTAINED IN-PLACE BY THE CONTRACTOR UNLESS OTHERWISE SHOWN OR DIRECTED. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO SUPPORT, MAINTAIN, OR OTHERWISE PROTECT EXISTING UTILITIES AND OTHER FACILITIES AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR TO LEAVE EXISTING FACILITIES IN AN EQUAL OR BETTER-THAN-ORIGINAL CONDITION AND TO THE SATISFACTION OF THE ENGINEER.

27. AT THE END OF EACH WORK DAY, ALL TRENCHES AND EXCAVATIONS SHALL BE BACKFILLED AND NO TRENCH, ON SITE OR OFF-SITE, SHALL BE LEFT AT ANY TIME IN AN UNSAFE CONDITION. CONTRACTOR IS RESPONSIBLE FOR AND IS LIABLE FOR HAZARDS OR DAMAGE RESULTING FROM THE PROSECUTION OF THE WORK.

28. OVER-EXCAVATION OF UNSUITABLE MATERIALS AND BACKFILL WITH SUBGRADE STABILIZATION SHALL BE APPROVED BY THE ENGINEER ON AN AS NEEDED BASIS.

29. SAWCUTTING OF EXISTING SURFACES, WHICH INCLUDES ASPHALTIC CONCRETE AND CONCRETE SURFACES, SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE UNIT PRICES OF THE BID.

30. THE CONTRACTOR SHALL DEVELOP AND MAKE ALL DETAIL SURVEYS NECESSARY FOR LAYOUT AND CONSTRUCTION, INCLUDING EXACT COMPONENT LOCATION, WORKING POINTS, LINES AND ELEVATIONS. PRIOR TO CONSTRUCTION, THE FIELD LAYOUT SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ASSUME THAT ALL SURVEY STAKING IS TO BE COMPLETED USING INFORMATION CONTAINED IN THESE PLANS. ADDITIONAL INFORMATION OR CLARIFICATION BY THE ENGINEER MAY BE AVAILABLE UPON REQUEST.

31. THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO CAREFULLY PRESERVE BENCH MARKS, REFERENCE POINTS AND STAKES, AND IN THE CASE OF DESTRUCTION THEREOF BY THE CONTRACTOR RESULTING FROM ITS NEGLIGENCE, THE CONTRACTOR SHALL BE CHARGED WITH THE EXPENSE AND DAMAGE RESULTING THEREFORE AND SHALL BE RESPONSIBLE FOR ANY MISTAKES THAT MAY BE CAUSED BY THE UNNECESSARY LOSS OR DISTURBANCE OF SUCH BENCH MARKS, REFERENCE POINTS AND STAKES.

32. PROPERTY LINES SHOWN ON PLANS ARE APPROXIMATE AND ARE FOR INFORMATION ONLY.

33. IN ADDITION TO CULTURAL RESOURCE PROTECTION REQUIREMENTS CONTAINED IN SECTION 00290 OF THE STANDARD SPECIFICATIONS, THE CONTRACTOR SHALL CAREFULLY RECOVER WITHOUT DAMAGING, HANDLE AND STORE ANY AND ALL HISTORIC AND CULTURAL MATERIALS ENCOUNTERED AND PROVIDE TO THE CITY WITHIN 48 HOURS OF DISCOVERY.

34. ALL ELECTRICAL EQUIPMENT SHALL CONFORM TO THE CURRENT STANDARDS OF THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) AND THE UNDERWRITERS LABORATORIES, INC. (U.L.) WHEREVER APPLICABLE. IN ADDITION TO THE REQUIREMENTS OF THE PLANS, STANDARD SPECIFICATIONS, AND SPECIAL PROVISIONS, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CURRENT REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC), THE NATIONAL ELECTRICAL SAFETY CODE, STANDARDS OF THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), AND ANY LOCAL ORDINANCES WHICH MAY APPLY.

35. LOCATION OF ELECTRICAL CONDUITS AND JUNCTION BOXES ARE APPROXIMATE. COORDINATE WITH OTHER UTILITIES TO ENSURE PROPER INSTALLATION.

36. STREET CROSS SECTIONS WILL BE PROVIDED TO THE CONTRACTOR PRIOR TO CONSTRUCTION.

UTILITY CONTACT INFORMATION

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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 503-246-6699.)

811 Know what's **below.** **Call** before you dig.

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FAX 541.741.5975

REGISTERED PROFESSIONAL ENGINEER
OREGON
RANDALL P. STARK
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
GENERAL NOTES

REVISIONS
REV.: | DESCRIPTION:

DATE	1/5/2016
DESIGNED	CSL
DRAWN	DAK
CHECKED	RPS
JOB NO.:	15-1670.206
DRAWING NAME:	G-2
SHEET NO.	2/59

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TOPOGRAPHIC LEGEND

LEGEND:

- CONTROL POINT
- SITE BENCHMARK
- SET MONUMENT AS NOTED
- SET MONUMENT AS NOTED
- SET MONUMENT AS NOTED
- SET MONUMENT AS NOTED
- SET MONUMENT AS NOTED
- FOUND MONUMENT AS NOTED
- FOUND MONUMENT AS NOTED
- FOUND MONUMENT AS NOTED
- FOUND MONUMENT AS NOTED
- FOUND MONUMENT AS NOTED
- FOUND ONE-QUARTER CORNER AS NOTED
- FOUND SECTION CORNER AS NOTED
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE
- EXISTING BUILDING AS NOTED
- 1' CONTOUR INTERVAL
- 5' CONTOUR INTERVAL
- ROAD CENTERLINE
- EASEMENT LINE
- WETLANDS DELINIATION
- WIRE FENCE LINE
- CHAIN LINK FENCE LINE
- WOOD FENCE LINE
- OHW — OVERHEAD WIRE
- COM — COMMUNICATIONS LINE PER UTILITY LOCATE PAINT/VISUAL FIELD OBSERVATION
- (COM) — COMMUNICATIONS LINE PER ASBUILT DATA
- GAS LINE PER UTILITY LOCATE PAINT/VISUAL FIELD OBSERVATION
- (G) — GAS LINE PER ASBUILT DATA
- P — POWER/SIGNAL LINE PER UTILITY LOCATE PAINT/VISUAL FIELD OBSERVATION
- (P) — POWER/SIGNAL LINE PER ASBUILT DATA
- SD — STORM DRAINAGE LINE PER UTILITY LOCATE PAINT/VISUAL FIELD OBSERVATION
- (SD) — STORM DRAINAGE LINE PER ASBUILT DATA
- SS — SANITARY SEWER LINE PER UTILITY LOCATE PAINT/VISUAL FIELD OBSERVATION
- (SS) — SANITARY SEWER LINE PER ASBUILT DATA
- WATER LINE PER UTILITY LOCATE PAINT/VISUAL FIELD OBSERVATION
- (W) — WATER LINE PER ASBUILT DATA
- STORM DRAINAGE AREA DRAIN
- STORM DRAINAGE CATCH BASIN
- STORM DRAINAGE CURB INLET
- D — STORM DRAINAGE VAULT
- D — STORM DRAINAGE MANHOLE
- DITCH INLET @ FLOW LINE
- STORM DRAINAGE CLEANOUT
- RD — ROOF DRAIN
- S — SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- WATER METER
- W — WATER MANHOLE
- WV — WATER VALVE
- W — WATER VAULT
- W — WATER WELL HOUSE
- BO — WATER BLOW OFF VALVE
- WATER SPIGOT
- FDC — FIRE DEPT CONNECTION
- FIRE HYDRANT
- SV — SPRINKLER VALVE
- SPRINKLER HEAD
- GV — GAS VALVE
- GAS METER
- GF — GAS RISER/GAS FINK
- P — POWER/ELECTRICAL VAULT
- POWER/ELECTRICAL TRANSFORMER
- P — POWER/ELECTRIC MANHOLE
- POWER JUNCTION BOX
- POWER METER
- POWER RISER
- POWER POLE
- POWER POLE W/ LIGHT
- GUY WIRE/ANCHOR
- STREET LIGHT/LIGHT POLE
- GROUND LIGHT
- TCB — TRAFFIC/SIGNAL JUNCTION BOX
- TRAFFIC SIGNAL POLE
- TRAFFIC SIGNAL CROSSING POLE
- COMMUNICATIONS RISER AS NOTED
- C — COMMUNICATIONS MANHOLE AS NOTED
- C — COMMUNICATIONS VAULT
- U — UTILITY CABINET AS NOTED
- U — UNKNOWN UTILITY MANHOLE
- U — UNKNOWN UTILITY VAULT
- UNKNOWN UTILITY RISER/STANDPIPE
- UNKNOWN UTILITY CLEANOUT
- MONITOR WELL
- BOLLARD
- MAIL BOX
- SIGN
- TEST PIT
- BUILDING COLUMN
- GATE POST
- WETLAND FLAGGING
- BUSH/SHRUB
- CONIFEROUS TREE
- DECIDUOUS TREE
- BIKE
- RXR
- STOP

PROPOSED LEGEND

- 12" DI W — WATERLINE
- E — ELECTRICITY
- 4"G — GAS
- T — TELEPHONE/TELEMETRY
- CATV — CABLE TELEVISION
- 8"SS — SANITARY SEWER LINE
- 6"FM — SANITARY SEWER FORCE MAIN
- 8"SD — STORM DRAIN
- 18"D — CULVERT
- ABANDON PIPE
- DRAINAGE DITCH
- BARBWIRE FENCE
- CHAIN LINK FENCE
- TEMPORARY SILT FENCE
- CENTERLINE
- EASEMENT/PROPERTY LINE
- RIGHT-OF-WAY
- EDGE OF PAVEMENT/AC
- EDGE OF GRAVEL
- CURB
- S/W — SIDEWALK
- STRUCTURE OR FACILITY
- CONTOUR MINOR
- 200 — CONTOUR MAJOR
- MANHOLE
- CLEANOUT
- CATCH BASIN/FIELD INLET
- THRUST BLOCK
- VALVE
- AIR INJECTION ASSEMBLY
- BLOWOFF ASSEMBLY
- AIR RELEASE ASSEMBLY
- FIRE HYDRANT ASSEMBLY
- WATER METER
- PULL BOX/JUNCTION BOX
- UTILITY POLE
- GUY WIRE
- LIGHT POST
- STREETLIGHT
- MAILBOX
- SIGN
- TREE DECIDUOUS
- TREE CONIFEROUS
- TREE TO BE REMOVED
- + 176.63 — SURFACE ELEVATION

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REGISTERED PROFESSIONAL ENGINEER 50075 OREGON RANDALL P. MARSH STATE RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
LEGEND AND SYMBOLS

REVISIONS
REV.: | DESCRIPTION:

DATE	1/5/2016
DESIGNED	CSL
DRAWN	DAK
CHECKED	RPS

JOB NO.: 15-1670.206

DRAWING NAME: G-3

SHEET NO. 3/59

G:\PDX_Projects\15\1670 - Molalla\CAD\Sheets\15-1670-205-OR-G.dwg G-3 1/5/2016 8:19 AM DAK 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
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
BMP	BEST MANAGEMENT PRACTICE
BO	BLOWOFF
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 ℄	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
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
DI	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
D/W or DWY	DRIVEWAY
EA	EACH
ECC	ECCENTRIC
EF	EACH FACE
EL	ELEVATION
ELB	ELBOW
ELEC	ELECTRICAL
ENCL	ENCLOSURE
EOP	EDGE OF PAVEMENT
EQ	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
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
GJ	GRIP JOINT
GL	GLASS
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	GYPSUM
HB	HOSE BIBB
HC	HOLLOW CORE
HDPE	HIGH DENSITY POLYETHYLENE
HDR	HEADER
HDWE	HARDWARE
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
IAW	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
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	MOLALLA COMMUNICATIONS
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
MP	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 ⅊	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)
REQ'D	REQUIRED
RESTR	RESTRAINED
RFCA	RESTRAINED FLANGE COUPLING ADAPTER
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
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 BENCHMARK
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
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

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MOLALLA AVE IMPROVEMENTS

ABBREVIATIONS

REVISIONS

REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	CSL
DRAWN	DAK
CHECKED	RPS

JOB NO.: 14-1670.206

DRAWING NAME: G-4

G:\PDX_Projects\15\1670 - Molalla\CAD\Sheets\15-1670-205-OR-G.dwg G-4 1/5/2016 8:19 AM DAK 20.0s (LMS Tech)

THRUST BLOCKING

TABLE A
CONCRETE THRUST BLOCKING (HORIZONTAL)

PIPE DIA.	Table Pressure PSI	Thrust (T) at fittings in Pounds				
		A	B	C	D	E
		Tee & Dead Ends	90 deg Bend	45 deg Bend	22.5 deg Bend	11.25 deg Bend
4"	250	3035	4320	2315	1215	610
6"	250	6860	9735	5215	2720	1375
8"	250	12185	17310	9265	4835	2430
10"	250	19045	27045	14480	7560	3800
12"	250	27405	38940	20840	10880	5465
14"	250	37320	53010	28370	14815	7445
16"	250	48740	69245	37050	19360	9735

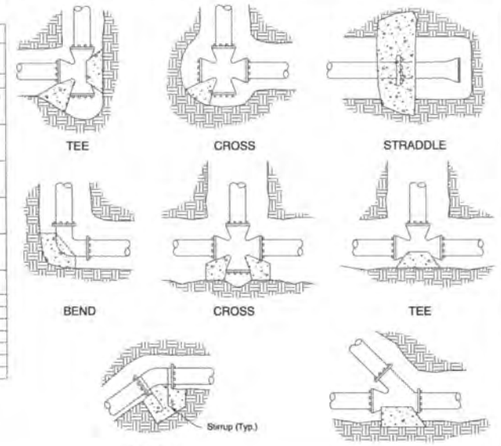
TABLE B

Soil Type	Soil Bearing Capacity (B) in PSF
Muck, peat, etc.	0
Soft Clay	1000
Sand	2000
Sand and gravel	3000
Sand and gravel cemented with clay	4000
Hard shale	10,000

TABLE C
CONCRETE BLOCKING FOR CONVEX VERTICAL BENDS

DIMENSION TABLE

PIPE DIA. In.	Table Pressure PSI	Bend Angle (deg)	Concrete Volume (cy)	Cube Size (ft)	Stirrup Dia. (in)	Stirrup Embmt. (in)	Stirrup Bar #
4"	250	11.25	0.21	1.8	⅝	17	5
		22.5	0.43	2.3			
		45	0.77	2.8			
6"	250	11.25	0.48	2.4	⅝	17	5
		22.5	0.95	3.0			
		45	1.79	3.6			
8"	250	11.25	0.86	2.9	⅝	17	5
		22.5	1.65	3.5			
		45	3.22	4.4			
10"	250	11.25	1.39	3.3	⅝	17	5
		22.5	2.62	4.1			
		45	4.97	4.1			
12"	250	11.25	1.94	3.7	¾	17	5
		22.5	3.91	4.7			
		45	6.89	5.7	⅞	24	7
14"	250	11.25	2.62	4.1	⅞	17	5
		22.5	5.26	5.2	⅞	20	6
		45	9.70	6.4	1	27	8
16"	250	11.25	3.44	4.5	⅞	17	5
		22.5	6.89	5.7	⅞	24	7
		45	12.63	7.0	1⅛	30	9



THRUST BLOCK BEARING AREA EQUATION

NOTE: WHEN THRUST BLOCK BEARING AREA IS NOT SPECIFIED ON THE PLANS OR DETERMINED BY THE ENGINEER, USE THE FOLLOWING PROCEDURE TO DETERMINE REQUIRED BEARING AREA.

1. Determine thrust (T) for type of fitting or joint and size of pipe from Table A
2. Determine Design (Test) Pressure from Standard Specifications or Special Provisions.
3. Determine Table Pressure from Table A.
4. Determine Soil Bearing Capacity (B) of soil from Table B
5. Determine required bearing area (A) in sq. ft. as follows:

$$\text{Thrust Block Bearing Area} = A = \left(\frac{T}{B}\right)\left(\frac{\text{Design (Test) Pressure}}{\text{Table Pressure}}\right)$$

Example: Design (Test) Pressure = 150 PSI, Pipe = 14", Fitting = Tee, Soil = Sand

From Table A, T = 37320
From Table B, B = 2000

$$A = \left(\frac{37320}{2000}\right)\left(\frac{150}{250}\right) = 11.2 \text{ sq ft}$$

GENERAL NOTES FOR ALL DETAILS:

1. Contractor to provide blocking adequate to withstand full test pressure.
2. Pour concrete blocking against undisturbed earth
3. All concrete shall be commercial grade concrete
4. Wrap pipe and/or fittings with 2 layers of polyethylene film where in contact with concrete
5. Keep concrete clear of all joints and accessories
6. Stirrups shall be deformed galvanized cold rolled steel AASHTO M31 (ASTM A615), Grade 60. Coat with coal tar epoxy after installation.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

THRUST BLOCKING

2015

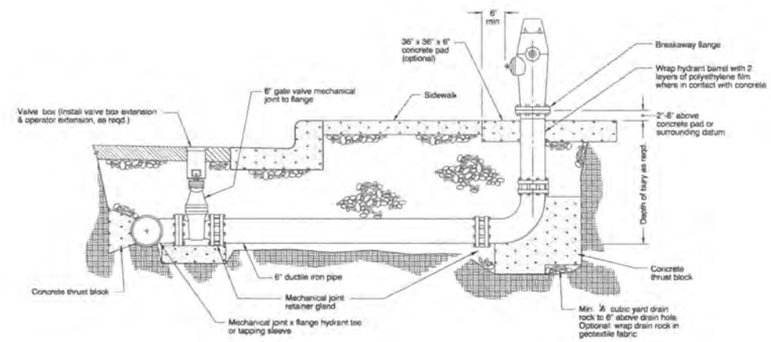
DATE	REVISION DESCRIPTION

rd250.dgn 14-JUL-2014

RD250

Effective Date: December 1, 2015 - May 31, 2016 RD250

HYDRANT ASSEMBLY



GENERAL NOTES FOR ALL DETAILS:

1. When pipe is shorter than 18', no joints allowed. Use mechanical joint retainer glands. Two ¾" galvanized tie rods may be used in lieu of thrust blocks for installations less than 18' long. Coat tie rods with two coats of coal tar epoxy
2. When pipe is longer that 18' retainer glands not required.
3. There shall be a minimum of 18" horizontal clearance around hydrant.
4. When placed adjacent to curb, hydrant port shall be 24" from face of curb.
5. Concrete thrust blocks shall be constructed as per thrust blocking Std. Drg. RD250. Do not block drain holes
6. Extensions required for hydrant systems shall be installed to the manufacturer's specifications.
7. Hydrants shall be placed to provide a minimum of 5' clearance from driveways, poles, and other obstructions.
8. Hydrant pumper port shall face direction of access.
9. Set hydrant plumb in all directions.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

HYDRANT INSTALLATION

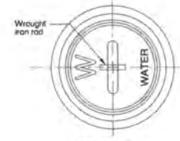
2015

DATE	REVISION DESCRIPTION

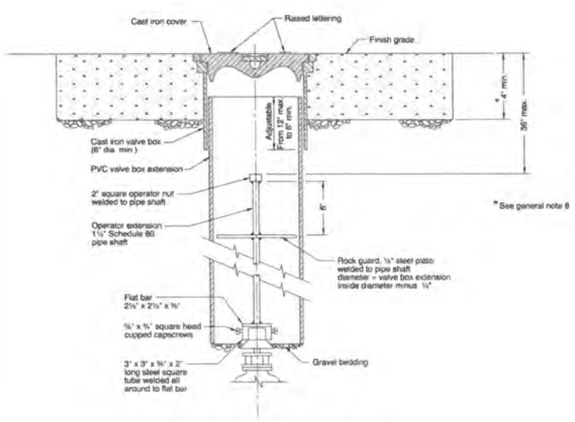
rd254.dgn 14-JUL-2014

RD254

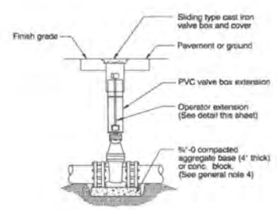
Effective Date: December 1, 2015 - May 31, 2016 RD254



COVER PLAN



VALVE BOX EXTENSION SECTION



VALVE BOX ASSEMBLY DETAIL

GENERAL NOTES FOR ALL DETAILS:

1. Valve box not to rest on operating assembly.
2. Operator extension required when valve nut is deeper than 4' from finish grade.
3. Center valve box on axis of operator nut.
4. Valves 12" and smaller shall be provided with compacted aggr. base on undisturbed ground. Valves greater than 12" shall be installed on precast concrete block, (4" thick)
5. Welds shall be minimum ¼" all around.
6. Hot dip galvanize operator extension after fabrication
7. Casting shall meet H20 load requirement
8. Provide concrete or asphalt pad (24" square, 4" thick), when required.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

VALVE BOX AND OPERATOR EXTENSION ASSEMBLY

2015

DATE	REVISION DESCRIPTION

rd258.dgn 14-JUL-2014

RD258

Effective Date: December 1, 2015 - May 31, 2016 RD258

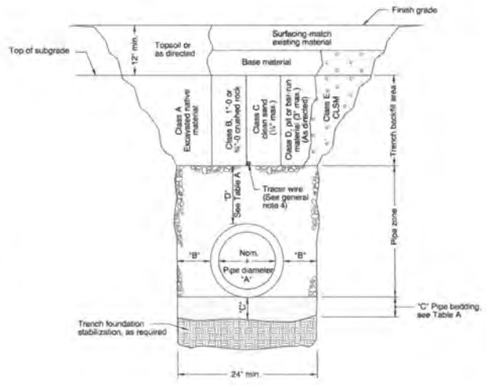


TABLE A

"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

For pipes over 72" diameter, see general note 3.

MULTIPLE INSTALLATIONS

DIAMETER	MIN. SPACE BETWEEN PIPES
Up to 48"	24"
48" to 72"	One half (½) dia. of pipe

GENERAL NOTES FOR ALL DETAILS:

1. Surfacing of paved areas shall comply with street cut Std. Drg. RD302.
2. For pipe installation in embankment areas where the trench method will not be used and the pipe is ≥ 36" diameter, increase dimension "B" to nominal pipe diameter.
3. Pipes over 72" diameter are structures, and are not applicable to the drawing
4. See Std. Drg. RD336 for tracer wire details (When required).

CALC. BOOK NO. N/A — BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

TRENCH BACKFILL, BEDDING, PIPE ZONE AND MULTIPLE INSTALLATIONS

2015

DATE	REVISION DESCRIPTION

rd300.dgn 14-JUL-2014

RD300

Effective Date: December 1, 2015 - May 31, 2016 RD300

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MOLALLA AVE IMPROVEMENTS

DETAILS

REVISIONS — REV.: — DESCRIPTION:

DATE	1/5/2016
DESIGNED	CSL
DRAWN	DAK
CHECKED	RPS
JOB NO.:	14-1670.206
DRAWING NAME:	G-5
SHEET NO.	5/59

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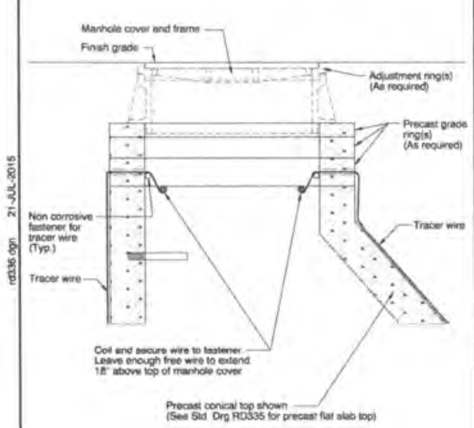
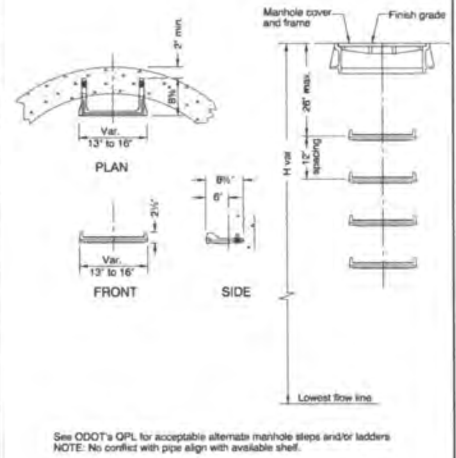
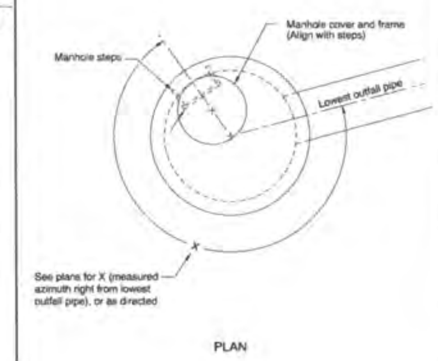


DETAIL "A"
TRACER WIRE
(See general note 6)



DETAIL "B"
MANHOLE STEPS
(See general note 7)



DETAIL "C"
PRECAST CONICAL TOP
OR
PRECAST FLAT SLAB TOP
AND MANHOLE STEPS ORIENTATION
(See general note 7)

GENERAL NOTES FOR ALL DETAILS:

1. All precast products shall conform to requirements of ASTM C478
2. Standard precast manhole section diameter shall be 48". Use 42" if specified by the Engineer
3. See Std. Drg. RD345 for pipe to manhole connections
4. See Std. Drg. RD344 for manhole base section
5. Adjust 24" maximum.
6. All connecting pipes shall have a tracer wire, or approved alternate. Place tracer wire directly over pipe centerline and on top of the pipe zone material.
7. Steps and ladders shall conform to requirements of ASTM C478
   See Std. Drg. RD337 for manhole safety ladder.
   When H=42" or less omit steps.
   See Detail "C" for alignment of steps, and manhole cover and frame.
8. See Std. Drg. RD335 for details not shown.
9. See Std. Drg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
10. Max. pipe diameter varies with pipe material.
11. See Std. Drg. RD342 for shallow manholes.
12. See project plans for details not shown.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 21-JUL-2015

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

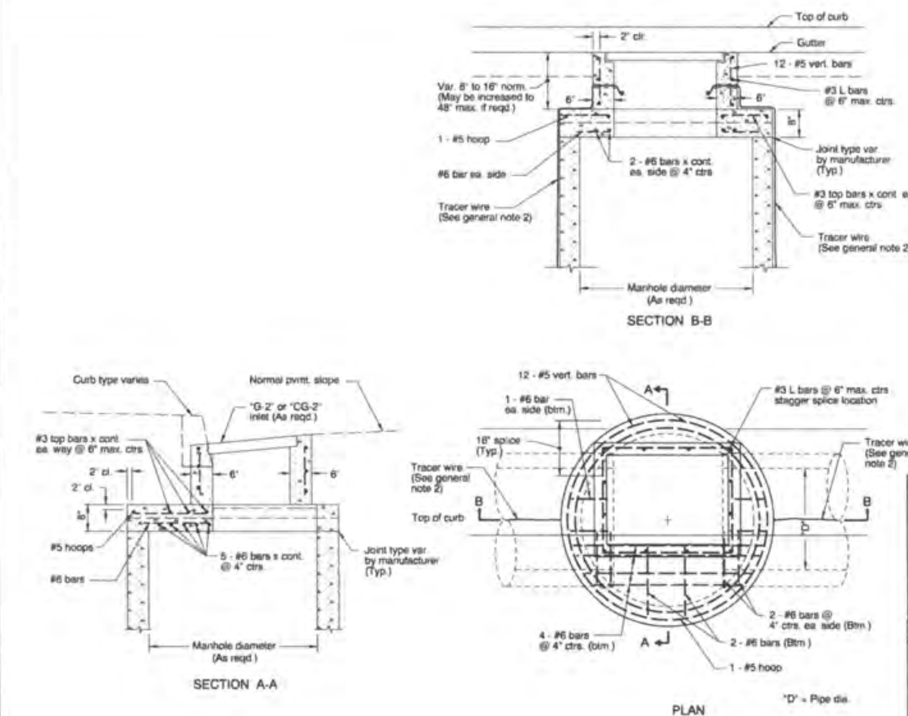
OREGON STANDARD DRAWINGS

STANDARD MANHOLE DETAILS

2015

RD336

Effective Date: December 1, 2015 - May 31, 2016 RD336



GENERAL NOTES FOR ALL DETAILS:

1. All reinforcement to be placed a minimum of 2" clear of nearest face of concrete unless otherwise shown or noted.
2. See Std. Drgs. RD335, RD336 & RD346 for manhole and related details.
3. See Std. Drgs. RD364 & RD366 for inlet and related details.
4. All precast products shall conform to the requirements of ASTM C478.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

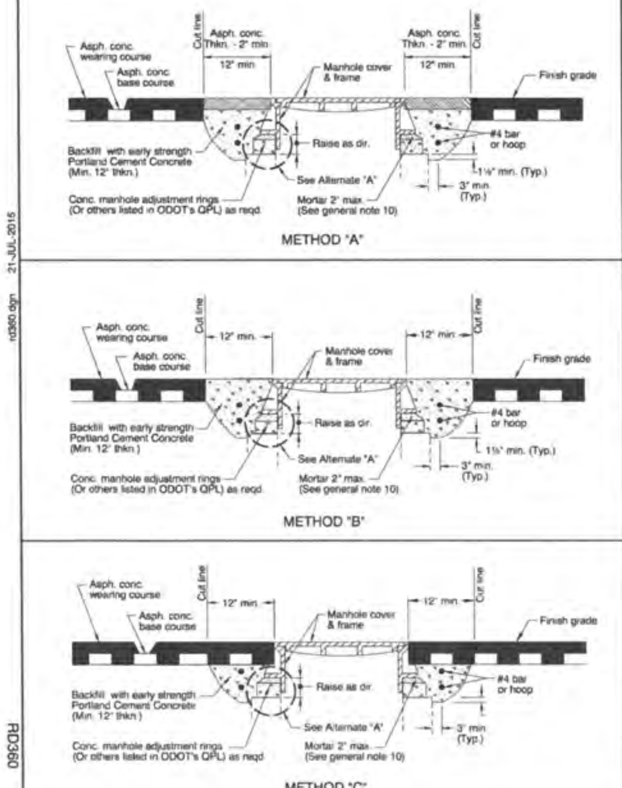
OREGON STANDARD DRAWINGS

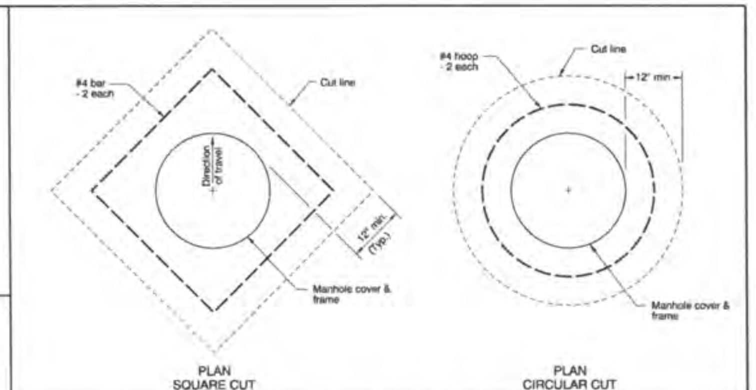
MANHOLE WITH INLET

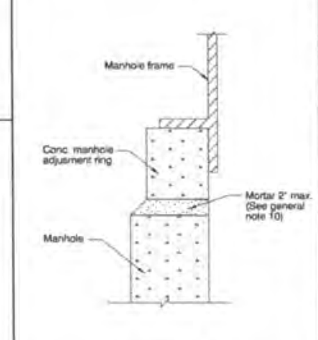
2015

RD348

Effective Date: December 1, 2015 - May 31, 2016 RD348







GENERAL NOTES FOR ALL DETAILS:

1. Cover manhole with building paper and const. asph. conc. base course and wearing courses.
2. Saw cut square or circular excavation around manhole 12" min. from manhole frame.
3. Raise manhole cover and frame to finish grade by installing conc. manhole adjustment rings and leveling mortar, as shown.
4. Backfill with early strength Portland Cement Concrete. All concrete shall be commercial grade concrete.
5. Protect from traffic loading until conc. has cured to 3000 psi.
6. Apply tack coat to edges of existing pavement before installing patch.
7. Finish joint with asphalt seal and sand.
8. See Std. Drg. RD336 for manhole steps details.
9. See appropriate manhole standard drawings for details not shown.
10. Use epoxy for synthetic grade rings.
11. See Std. Drg. RD336 for tracer wire details.
12. See Std. Drg. RD356 for manhole covers and frames.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 21-JUL-2015

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

MANHOLE FRAME ADJUSTMENT

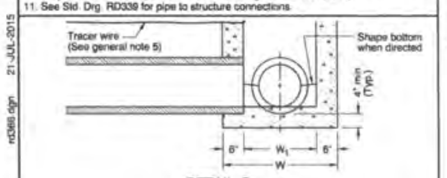
2015

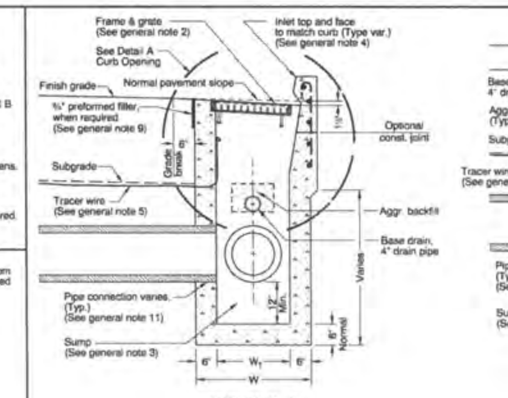
RD360

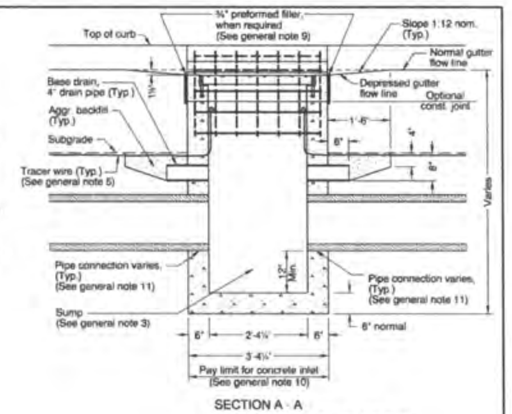
Effective Date: December 1, 2015 - May 31, 2016 RD360

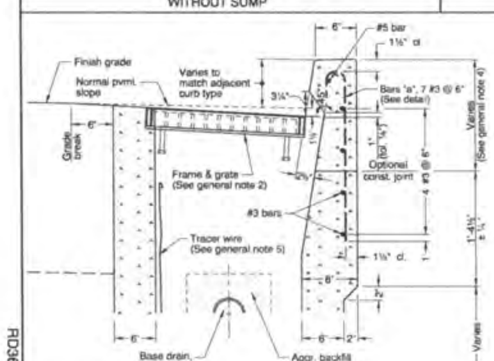
GENERAL NOTES FOR ALL DETAILS:

1. Where precast inlets are used as an alternate to cast-in-place inlets, a 4" compacted leveling bed of sand or ¾"-0 crushed aggregate shall be provided. All precast inlets shall conform to requirements of ASTM C913.
2. Graphics show CG-1 inlet with Type 2 grate. See Table A for inlet dimensions. Type 1 grate allowed only in locations not subject to bicycle or pedestrian use. For frame and grate details, see Std. Drg. RD365.
3. Provide sump only where shown on plans, and allowed by jurisdiction. See Detail B for inlet without sump.
4. For curb details, see Std. Drgs. RD700 & RD701.
5. See Std. Drg. RD336 for tracer wire details, or approved alternate.
6. Max. pipe diameter varies with pipe material.
7. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
8. All concrete shall be commercial grade concrete.
9. ¾" preformed filler (in concrete pavement or gutter only) to extend through thickness of concrete.
10. See Std. Drg. RD363 for gutter transition section, when curb and gutter are required. (Pay limit for inlet is expanded when curb and gutter are monolithic)
11. See Std. Drg. RD339 for pipe to structure connections.









NOTE:
Use details shown on Std. Drg. RD367 when curb inlet channels are used.

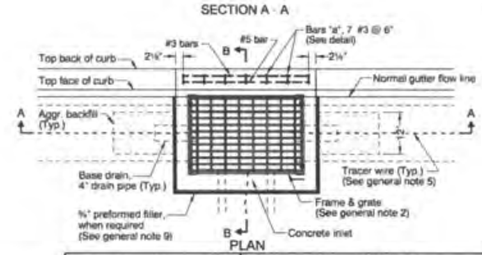
DETAIL A
CURB OPENING

TABLE A

INLET TYPE	W	W1
CG-1	2'-6½"	1'-6½"
CG-2	3'-3½"	2'-3½"

NOTES

1. #3 "a" bars to be placed during curb construction.
2. All bars to be placed 1½" clear of nearest face of concrete unless shown or noted otherwise.
3. All bars shall be full length.



CALC. BOOK NO. N/A — BASELINE REPORT DATE 21-JUL-2015

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

CONCRETE INLETS TYPE CG-1, CG-2

2015

RD366

Effective Date: December 1, 2015 - May 31, 2016 RD366

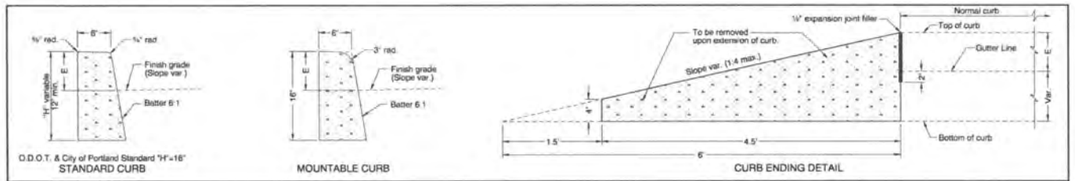
MSA Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 230
Eugene, Oregon 97401
PHONE 541.741.2975
FAX 541.744.3875

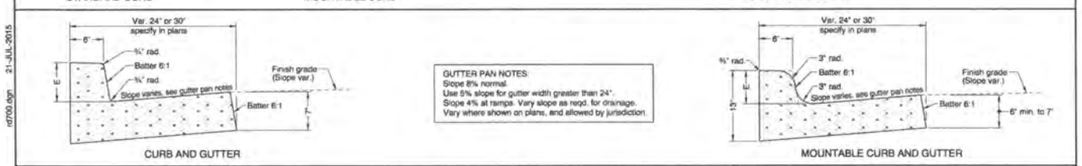
REGISTERED PROFESSIONAL ENGINEER — OREGON — RANDALL P. STARK — RENEWS 6-30-16

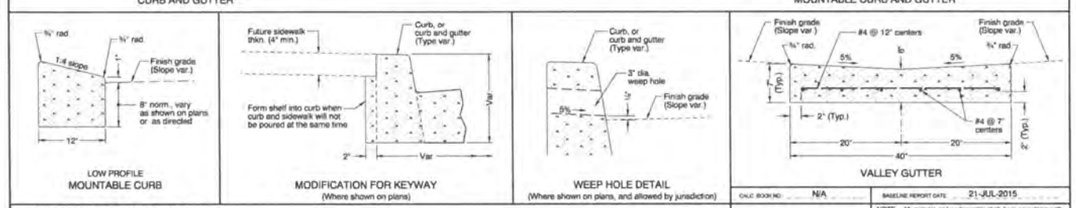
MOLALLA AVE IMPROVEMENTS
STANDARD DETAILS

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	CSL
DRAWN	DAK
CHECKED	RPS
JOB NO.:	14-1670.206
DRAWING NAME:	G-6
SHEET NO.	6/59







GENERAL NOTES FOR ALL DETAILS:

1. Curb exposure "E" = 6" to 9", as measured vertically from flowline to highest point on curb. Vary as shown on plans or as directed. O.D.O.T standard "E"=7".
2. Const. expansion joints at 200' maximum spacing, and at points of tangency, and at ends of each driveways.
3. Const. contraction joints at 15' maximum spacing, and at ends of each inlet and ramp.
4. Transitions shall be used to connect curbs of different exposures "E". ("E" is the total vertical dimension of those curb surfaces having a slope of 1:1 or steeper). Minimum desirable transition length shall be 20' for each 1" difference in "E".
5. Tops of all curbs shall slope toward the roadway at 1.5% design (2% max. construction), unless otherwise shown, or as directed.
6. Dimensions are nominal, vary to conform with curb machine approved by the engineer.
7. Dimensions adjacent to radii are measured to the point of intersection of curb surfaces.
8. For sidewalk details, and monolithic curb & sidewalk, see Std. Drg. RD720.
9. For drainage curbs, see Std. Drg. RD701.
10. For sidewalk ramp details, see Std. Drg. RD755.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

CALC. BOOK NO.: N/A — BASELINE REPORT DATE: 21-JUL-2015

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

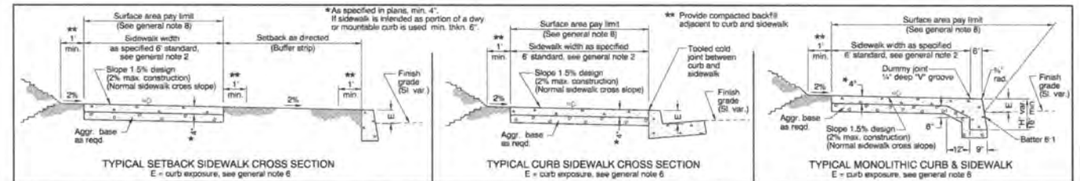
CURBS

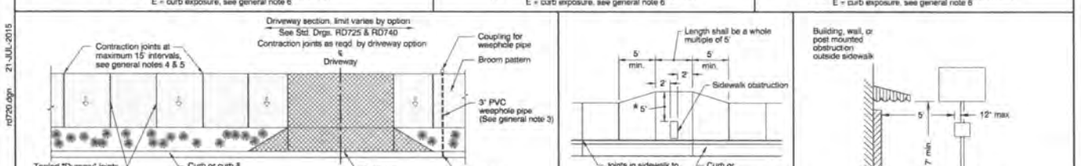
2015

DATE	REVISION DESCRIPTION
01-2015	REVISED NOTE
07-2015	REVISED NOTES

RD700 — rd700.dgn 21-JUL-2015

Effective Date: December 1, 2015 - May 31, 2016 RD700





GENERAL NOTES FOR ALL DETAILS:

1. Include additional paved or unpaved 2' clearance to vertical faces higher than 5' such as retaining walls, sound walls, fences and buildings.
2. Curb type and sidewalk width as shown on plans or as directed On sidewalks 8' and wider, provide a longitudinal joint at the midpoint.
3. Install 3" pvc weephole pipes in sidewalks where shown on plans, and allowed by jurisdiction. Place contraction joint over top of pipe.
4. Const. expansion joints at 200' maximum spacing, and at points of tangency, and at ends of each driveway For monolithic curb & sidewalk, const. expansion joints at 45' maximum spacing.
5. Const. contraction joints at 15' maximum spacing, and at ends of each driveway and ramp.
6. For curb details, see Std. Drgs. RD700 & RD701.
7. Sidewalk details are based on United States Access Board Standards
8. For driveway details not shown, see Std. Drgs. RD725, RD730, RD735, RD740, RD745 & RD750.
9. See project plans for details not shown

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

CALC. BOOK NO.: N/A — BASELINE REPORT DATE: 21-JUL-2015

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

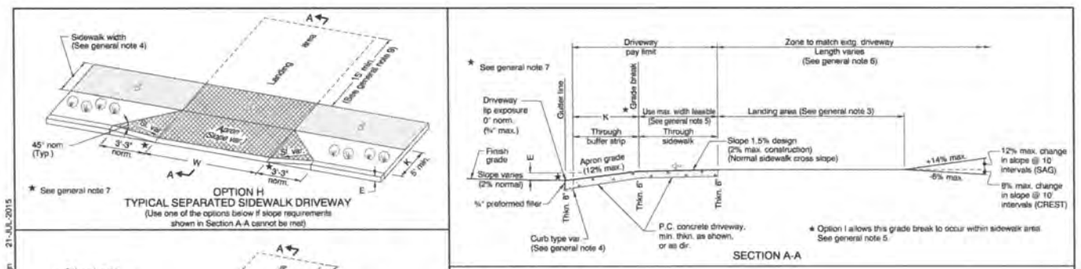
SIDEWALKS

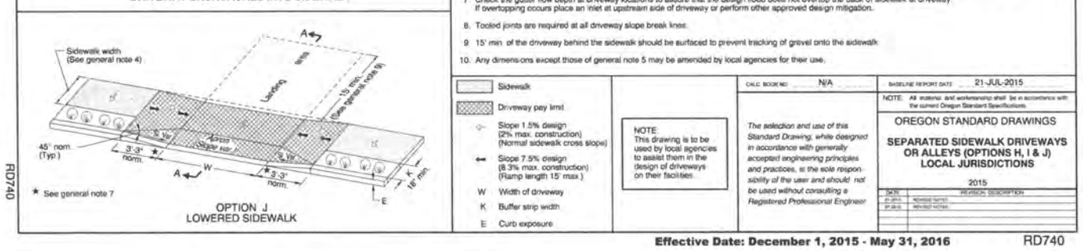
2015

DATE	REVISION DESCRIPTION
01-2015	REVISED DETAILS & NOTES NOTES
07-2015	REVISED NOTES

RD720 — rd720.dgn 21-JUL-2015

Effective Date: December 1, 2015 - May 31, 2016 RD720





GENERAL NOTES FOR ALL DETAILS:

1. Details are based on United States Access Board Standards.
2. Only use details allowed by jurisdiction.
3. The following dimensions are as shown on plans, or as directed; driveway width, driveway slope, sidewalk width, buffer strip width, curb exposure, driveway lip exposure, landing area length and width. See project plans for details not shown.
4. Curb, gutter, and sidewalk types varies, see plans See Std. Drgs. RD700 & RD701 for curb details. See Std. Drg. RD720 for sidewalk details.
5. 4' unobstructed clear passage with slope of 1.5% design (2% max. construction) is required behind driveway apron. 3.5' width is acceptable where sidewalk width is less than standard 6'
6. Where existing driveway is in good condition, and meets slope requirements, construct only as much as required for satisfactory connection with new work.
7. Check the gutter flow depth at driveway locations to assure that the design flood does not overtop the back of sidewalk at driveway. If overtopping occurs place an inlet at upstream side of driveway or perform other approved design mitigation.
8. Tooled joints are required at all driveway slope break lines.
9. 15' min. of the driveway behind the sidewalk should be surfaced to prevent tracking of gravel onto the sidewalk.
10. Any dimensions except those of general note 5 may be amended by local agencies for their use.

Sidewalk
Driveway pay limit
Slope 1.5% design (2% max. construction) (Normal sidewalk cross slope)
Slope 7.5% design (8.3% max. construction) (Ramp length 15' max.)
W Width of driveway
K Buffer strip width
E Curb exposure

NOTE: This drawing is to be used by local agencies to assist them in the design of driveways on their facilities.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

CALC. BOOK NO.: N/A — BASELINE REPORT DATE: 21-JUL-2015

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

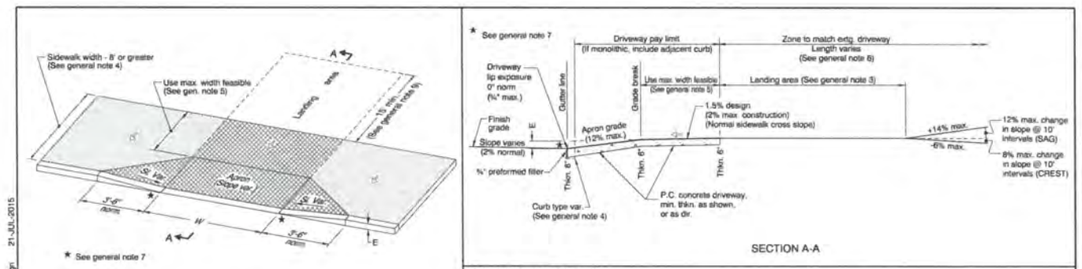
SEPARATED SIDEWALK DRIVEWAYS OR ALLEYS (OPTIONS H, I & J) LOCAL JURISDICTIONS

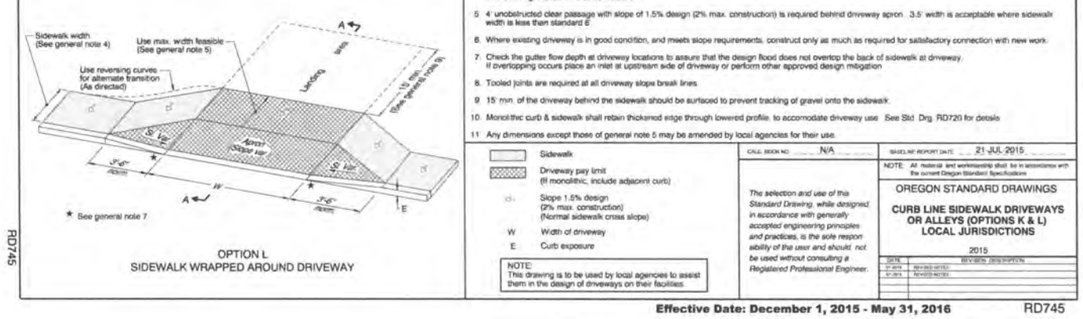
2015

DATE	REVISION DESCRIPTION
01-2015	REVISED NOTES
07-2015	REVISED NOTES

RD740 — rd740.dgn 21-JUL-2015

Effective Date: December 1, 2015 - May 31, 2016 RD740





GENERAL NOTES FOR ALL DETAILS:

1. Details are based on United States Access Board Standards.
2. Only use details allowed by jurisdiction.
3. The following dimensions are as shown on plans, or as directed; driveway width, driveway slope, sidewalk width, curb exposure, driveway lip exposure, landing area length and width. See project plans for details not shown.
4. Curb, gutter, and sidewalk types varies, see plans See Std. Drgs. RD700 & RD701 for curb details. See Std. Drg. RD720 for sidewalk details.
5. 4' unobstructed clear passage with slope of 1.5% design (2% max. construction) is required behind driveway apron. 3.5' width is acceptable where sidewalk width is less than standard 6'
6. Where existing driveway is in good condition, and meets slope requirements, construct only as much as required for satisfactory connection with new work.
7. Check the gutter flow depth at driveway locations to assure that the design flood does not overtop the back of sidewalk at driveway. If overtopping occurs place an inlet at upstream side of driveway or perform other approved design mitigation
8. Tooled joints are required at all driveway slope break lines
9. 15' min. of the driveway behind the sidewalk should be surfaced to prevent tracking of gravel onto the sidewalk.
10. Monolithic curb & sidewalk shall retain thickened edge through lowered profile, to accommodate driveway use. See Std. Drg. RD720 for details
11. Any dimensions except those of general note 5 may be amended by local agencies for their use.

Sidewalk
Driveway pay limit (If monolithic, include adjacent curb)
Slope 1.5% design (2% max. construction) (Normal sidewalk cross slope)
W Width of driveway
E Curb exposure

NOTE: This drawing is to be used by local agencies to assist them in the design of driveways on their facilities.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

CALC. BOOK NO.: N/A — BASELINE REPORT DATE: 21-JUL-2015

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

CURB LINE SIDEWALK DRIVEWAYS OR ALLEYS (OPTIONS K & L) LOCAL JURISDICTIONS

2015

DATE	REVISION DESCRIPTION
01-2015	REVISED DETAILS
07-2015	REVISED NOTES

RD745 — rd745.dgn 21-JUL-2015

Effective Date: December 1, 2015 - May 31, 2016 RD745

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2075
FAX 541.741.5075

REGISTERED PROFESSIONAL ENGINEER — OREGON — RANDALL P. STARK — 56075 — RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
STANDARD DETAILS

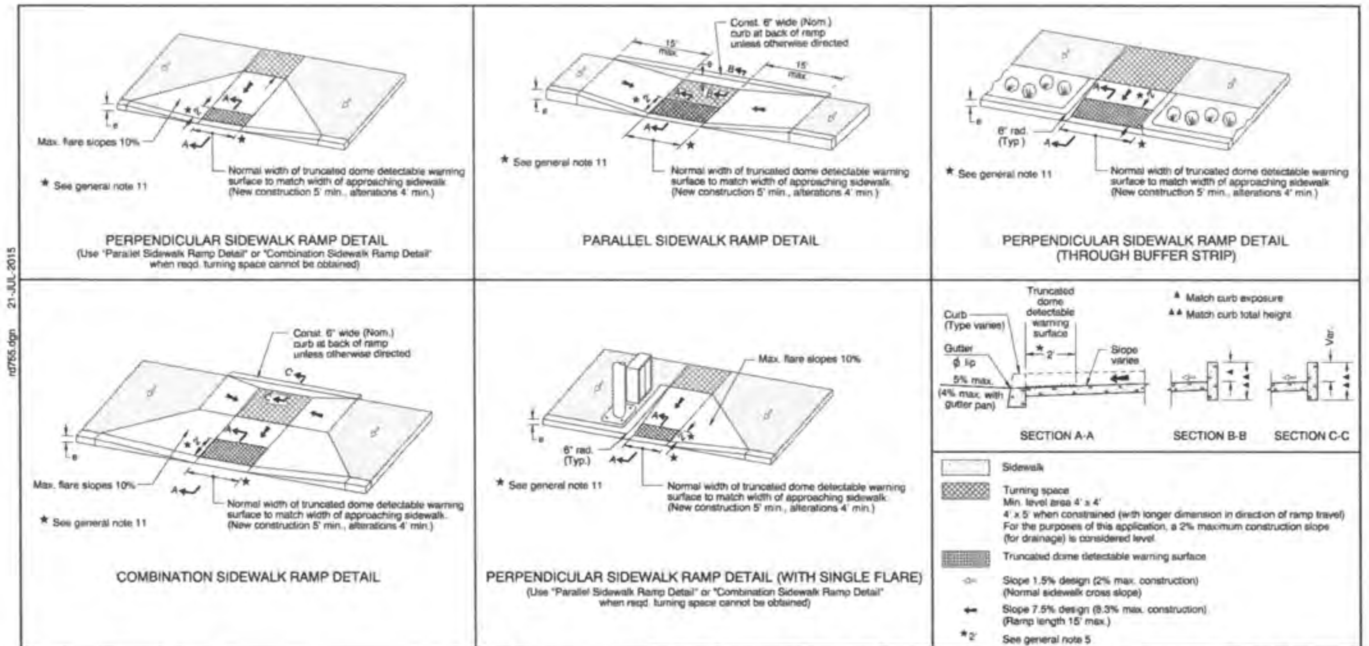
REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	CSL
DRAWN	DAK
CHECKED	RPS

JOB NO.: 14-1670.206

DRAWING NAME: G-7

SHEET NO. 7/59



GENERAL NOTES FOR ALL DETAILS:

1. Sidewalk ramp details are based on United States Access Board Standards.
2. See Std. Drgs. RD700 & RD701 for curbs. See Std. Drg. RD720 for sidewalks. See Std. Drgs. TM503 & TM530 for crosswalk markings, widths, etc.
3. Tooled joints are required at all sidewalk ramp slope break lines.
4. Sidewalk curb ramp slopes shown are relative to the true level horizon (Zero bubble).
5. Place truncated dome detectable warning surface in the lower 2' adjacent to traffic of throat of ramp only. For details not shown, see Std. Drg. RD759.
6. Side flares that are not part of the path of travel may be any slope.
7. Sidewalk flare is not necessary where the ramp is protected from pedestrian cross-travel.
8. For the purpose of this drawing, a curb ramp is considered "perpendicular" if the angle between the longitudinal axis of the ramp and a line tangent to the curb at the ramp center is 75° or greater.
9. Ramps for paths intersecting a roadway should be full width of path, excluding flares. When a ramp is used to provide bicycle access from a roadway to a sidewalk, the ramp should be 8' wide.
10. For sidewalk ramp placement options, see Std. Drgs. RD756 & RD757.
11. Check the gutter flow depth at ramp locations to assure that the design flood does not overtop the back of sidewalk at ramp. If overtopping occurs place an inlet at upstream side of ramp or perform other approved design mitigation.
12. Only use details allowed by jurisdiction.
13. Site conditions normally require a project specific design. See project plans for details not shown.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 21-JUL-2015

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

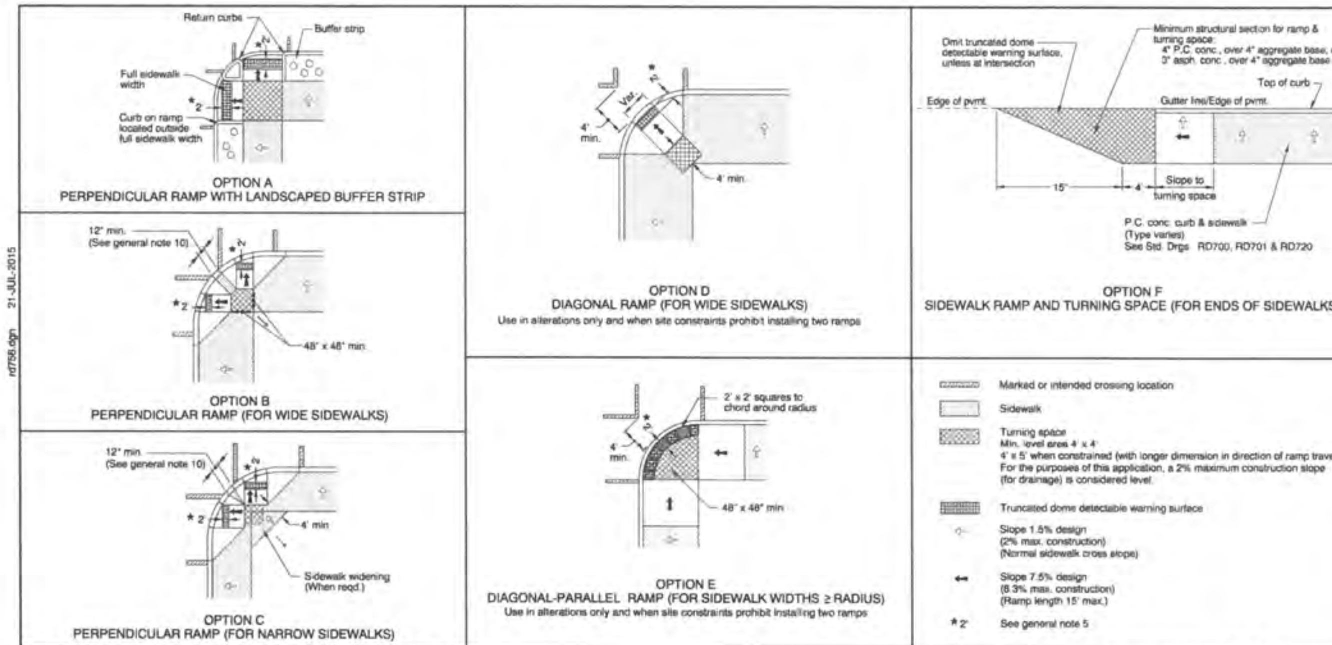
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

SIDEWALK RAMP DETAILS

2015

Effective Date: December 1, 2015 - May 31, 2016 RD755



GENERAL NOTES FOR ALL DETAILS:

1. Sidewalk ramp details are based on United States Access Board Standards.
2. See Std. Drgs. RD700 & RD701 for curbs. See Std. Drg. RD720 for sidewalks. See Std. Drgs. TM503 & TM530 for crosswalk markings, widths, etc. See Std. Drg. RD755 for sidewalk ramp details.
3. Tooled joints are required at all sidewalk ramp slope break lines.
4. Sidewalk curb ramp slopes shown are relative to the true level horizon (Zero bubble).
5. Place truncated dome detectable warning surface in the lower 2' adjacent to traffic of throat of ramp only. For details not shown, see Std. Drg. RD759.
6. Side flares that are not part of the path of travel may be any slope. Check the gutter flow depth to assure that the design flood does not overtop the back of sidewalk. If overtopping occurs place an inlet at upstream side or perform other approved design mitigation.
7. Sidewalk flare is not necessary where the ramp is protected from pedestrian cross-travel.
8. For the purpose of this drawing, a curb ramp is considered "perpendicular" if the angle between the longitudinal axis of the ramp and a line tangent to the curb at the ramp center is 75° or greater.
9. Ramps for paths intersecting a roadway should be full width of path, excluding flares. When a ramp is used to provide bicycle access from a roadway to a sidewalk, the ramp should be 8' wide.
10. When 2 curb ramps are immediately adjacent as in Options B & C, the curb exposure (e) between the adjacent side flares may range between 3" and full design exposure.
11. Only use options allowed by jurisdiction.
12. See project plans for details not shown.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 21-JUL-2015

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

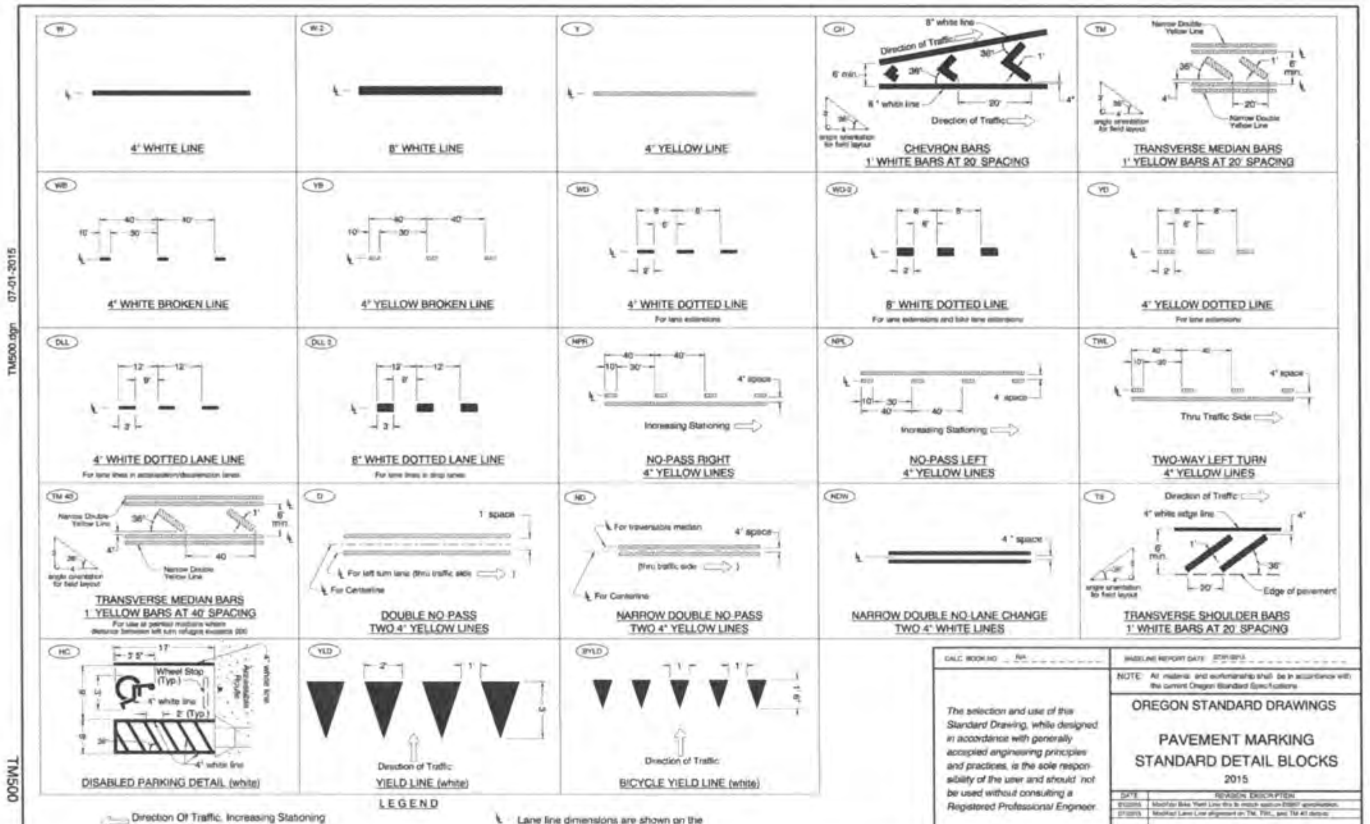
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

SIDEWALK RAMP PLACEMENT OPTIONS SMALL RADII

2015

Effective Date: December 1, 2015 - May 31, 2016 RD756



The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

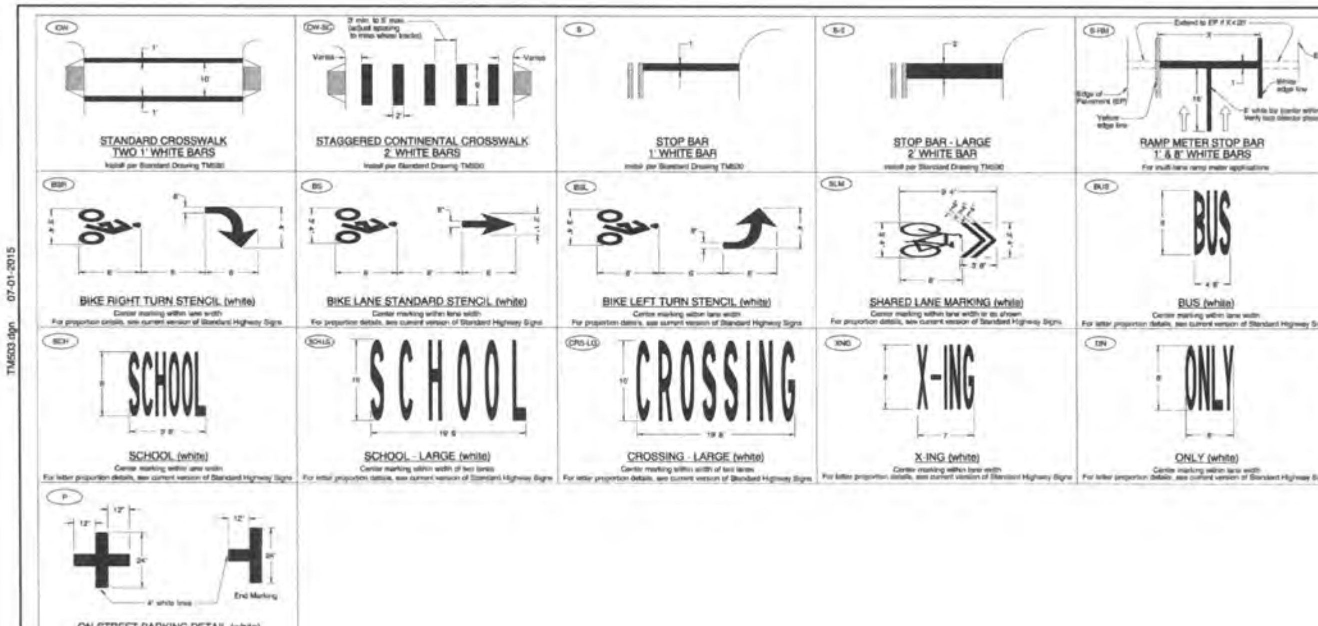
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

PAVEMENT MARKING STANDARD DETAIL BLOCKS

2015

Effective Date: December 1, 2015 - May 31, 2016 TM500



General Note:
1. Arrow, letter, and bike symbol dimensions nominal.

LEGEND
Direction of Travel

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

PAVEMENT MARKING STANDARD DETAIL BLOCKS

2015

Effective Date: December 1, 2015 - May 31, 2016 TM503

MSA
Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2975
FAX 541.744.3875

REGISTERED PROFESSIONAL ENGINEER 56075 OREGON MARCH 14, 2006 RANDALL P. STARK
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS

STANDARD DETAILS

REVISIONS

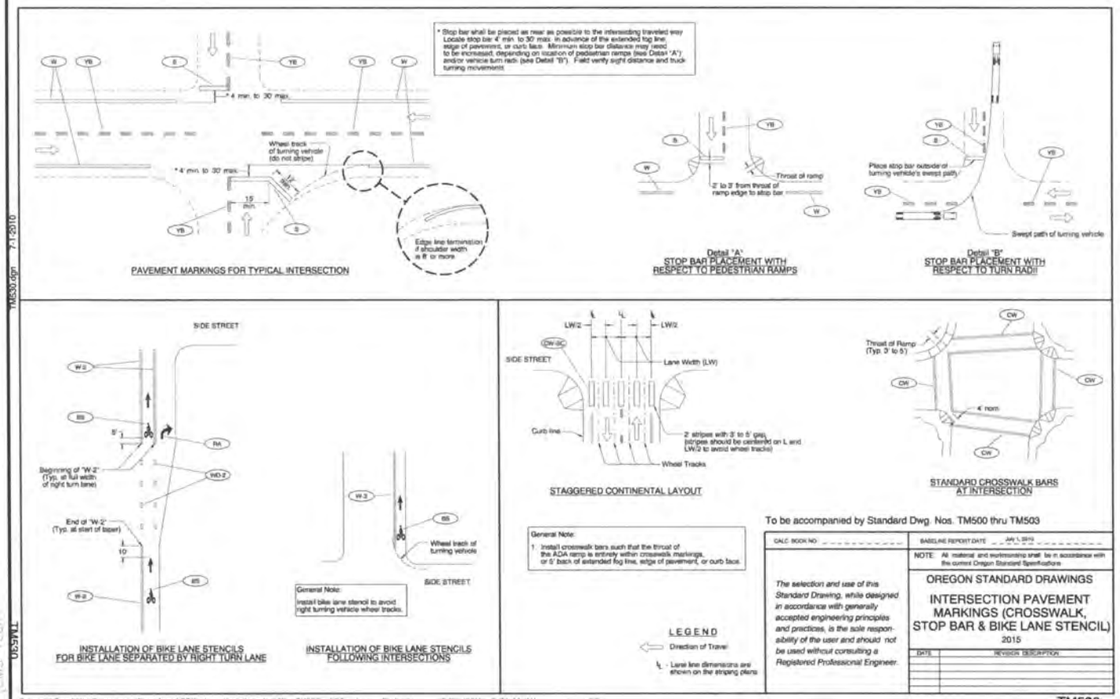
REV.:	DESCRIPTION:

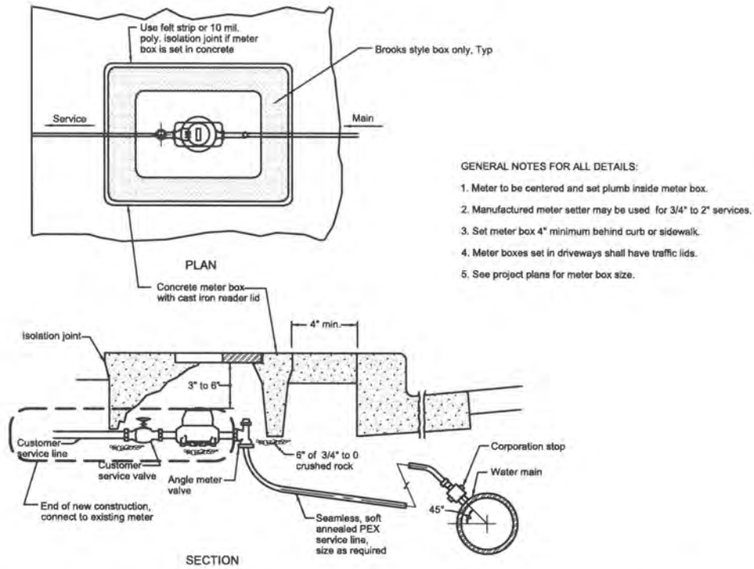
DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL

JOB NO.: 14-1670.206

DRAWING NAME: G-8

SHEET NO. 8/59



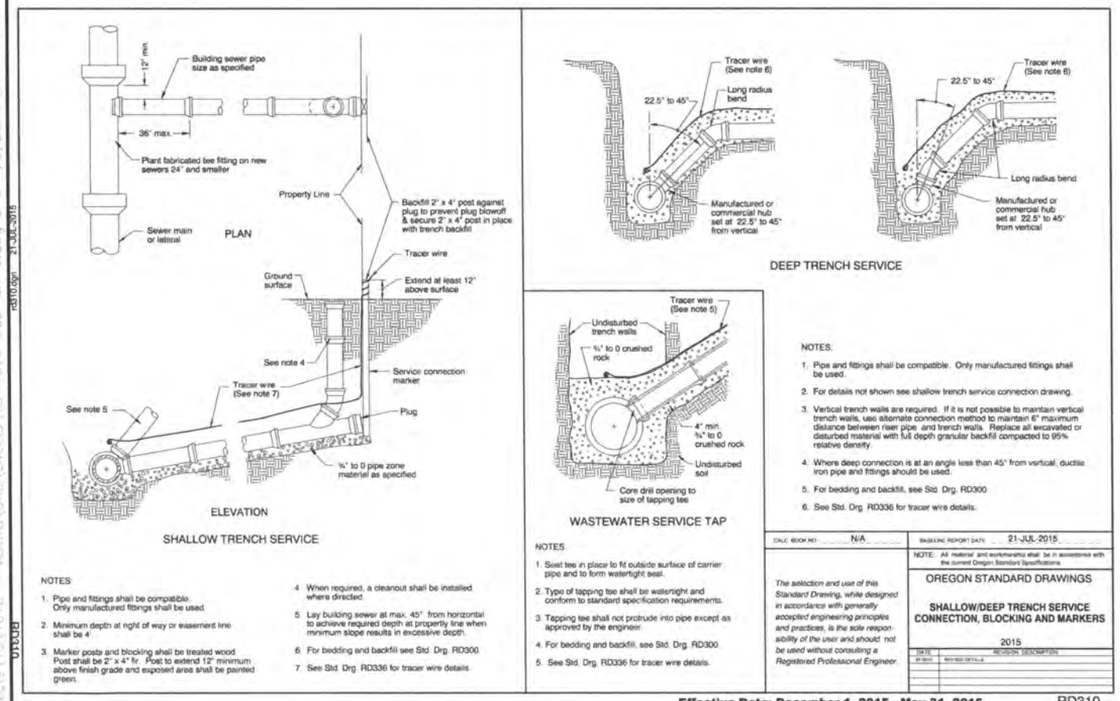


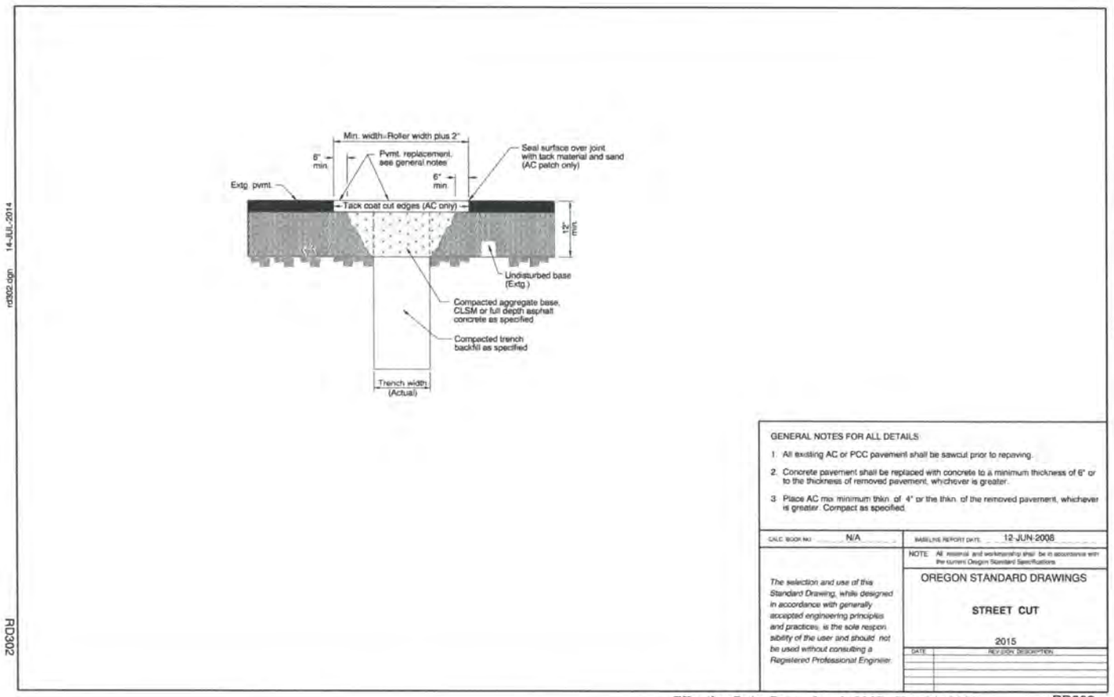
GENERAL NOTES FOR ALL DETAILS:

1. Meter to be centered and set plumb inside meter box.
2. Manufactured meter setter may be used for 3/4" to 2" services.
3. Set meter box 4" minimum behind curb or sidewalk.
4. Meter boxes set in driveways shall have traffic lids.
5. See project plans for meter box size.

3/4" TO 2" WATER SERVICE CONNECTION (1/-)

SCALE: NTS





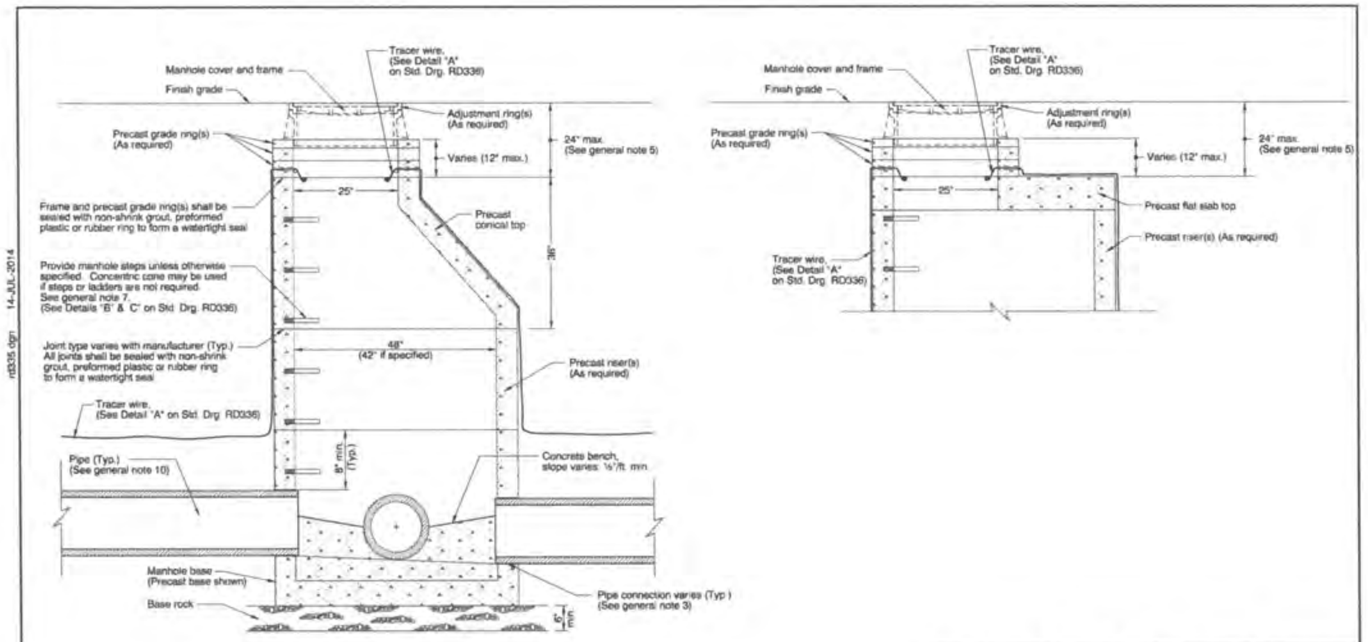
Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.5975
FAX 541.741.5975

REGISTERED PROFESSIONAL ENGINEER — OREGON — RANDALL P. SMITH — 56075 — STATE OF OREGON — 9-30-16

MOLALLA AVE IMPROVEMENTS
STANDARD DETAILS

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	CSL
DRAWN	DAK
CHECKED	RPS
JOB NO.:	14-1670.206
DRAWING NAME:	G-9
SHEET NO.	9/59



GENERAL NOTES FOR ALL DETAILS:

1. All precast products shall conform to requirements of ASTM C478.
2. Standard precast manhole section diameter shall be 48". Use 42" if specified by the Engineer.
3. See Std. Drg. RD345 for pipe to manhole connections.
4. See Std. Drg. RD344 for manhole base section.
5. Adjust 24" maximum.
6. All connecting pipes shall have a tracer wire, or approved alternate.
7. See Std. Drg. RD337 for manhole safety ladder.
8. See Std. Drg. RD336 for details not shown.
9. See Std. Drg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
10. Max. pipe diameter varies with pipe material.
11. See Std. Drg. RD342 for shallow manholes.
12. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

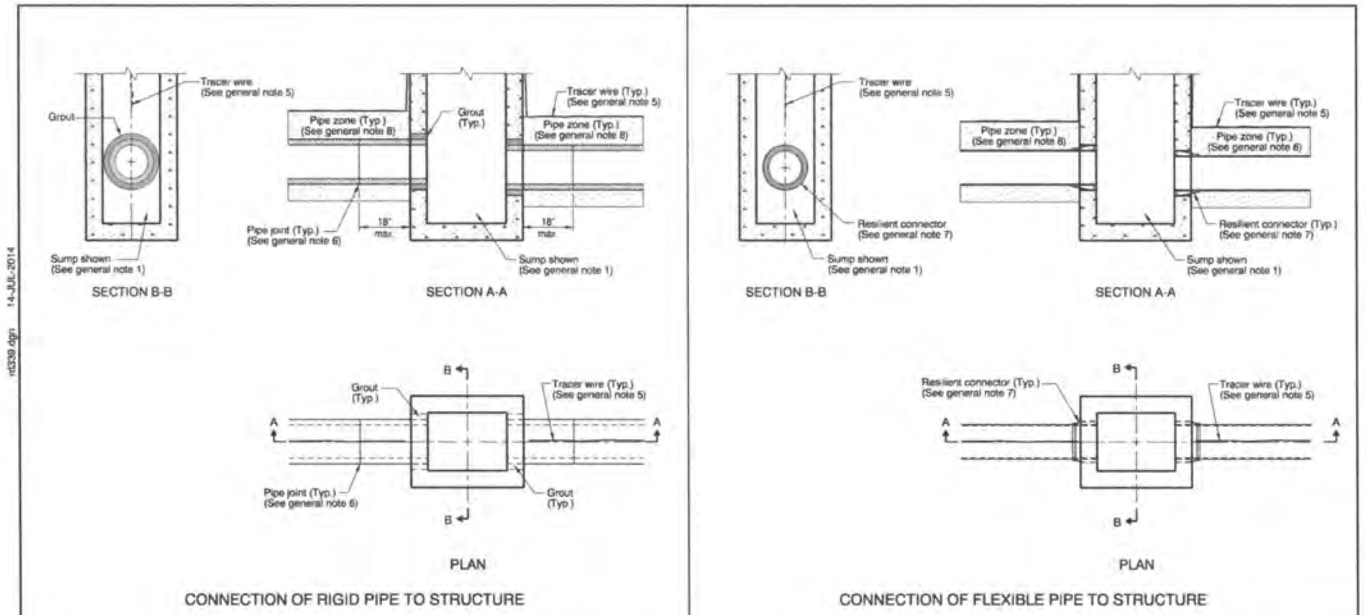
OREGON STANDARD DRAWINGS

STANDARD STORM SEWER MANHOLE

2015

DATE	REVISION DESCRIPTION

Effective Date: December 1, 2015 - May 31, 2016 RD335



GENERAL NOTES FOR ALL DETAILS:

1. See Std. Drgs. RD364, RD365, and RD366 for inlet details not shown.
2. See appropriate standard drawings or special project details for other similar structures.
3. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
4. Max. pipe diameter varies with pipe material.
5. All connecting pipes shall have a tracer wire, or approved alternate. See Std. Drg. RD336 for tracer wire details.
6. When rigid pipe is used, the connecting pipe shall have a flexible, gasketted and unrestrained joint within 18" of manhole wall. Joint type varies with manufacturer.
7. When flexible pipe is used, install resilient connectors conforming to requirements of ASTM C923.
8. Pipe zone varies, see Std. Drg. RD300.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

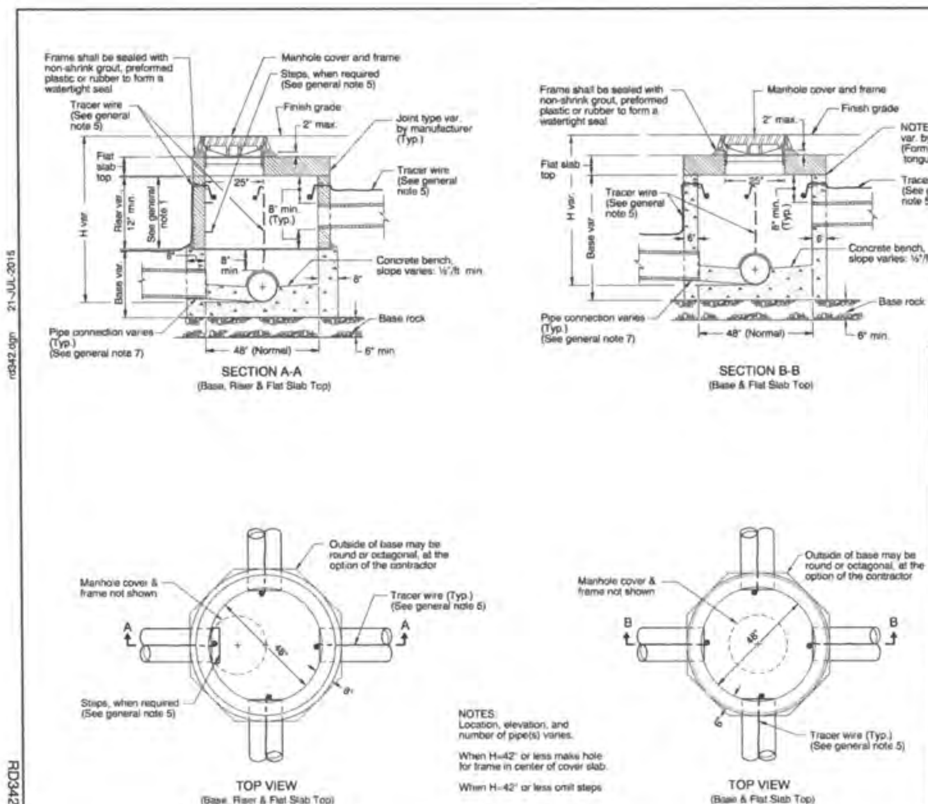
OREGON STANDARD DRAWINGS

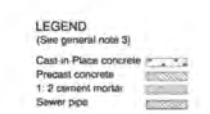
PIPE TO STRUCTURE CONNECTIONS

2015

DATE	REVISION DESCRIPTION

Effective Date: December 1, 2015 - May 31, 2016 RD339





GENERAL NOTES FOR ALL DETAILS:

1. Minimum length if laterals or connections are inserted: outside diameter of pipe + 17".
2. Use Section B-B when length of riser becomes less than minimum shown.
3. Base may be precast or cast-in-place.
4. All precast products shall conform to the requirements of ASTM C478.
5. See Std. Drg. RD336 for details not shown.
6. See Std. Drg. RD344 for manhole base section.
7. See Std. Drg. RD345 for pipe to manhole connections.
8. See Std. Drg. RD356 for manhole covers and frames.
9. All concrete shall be commercial grade concrete.
10. Max. pipe diameter varies with pipe material.
11. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 21-JUL-2015

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

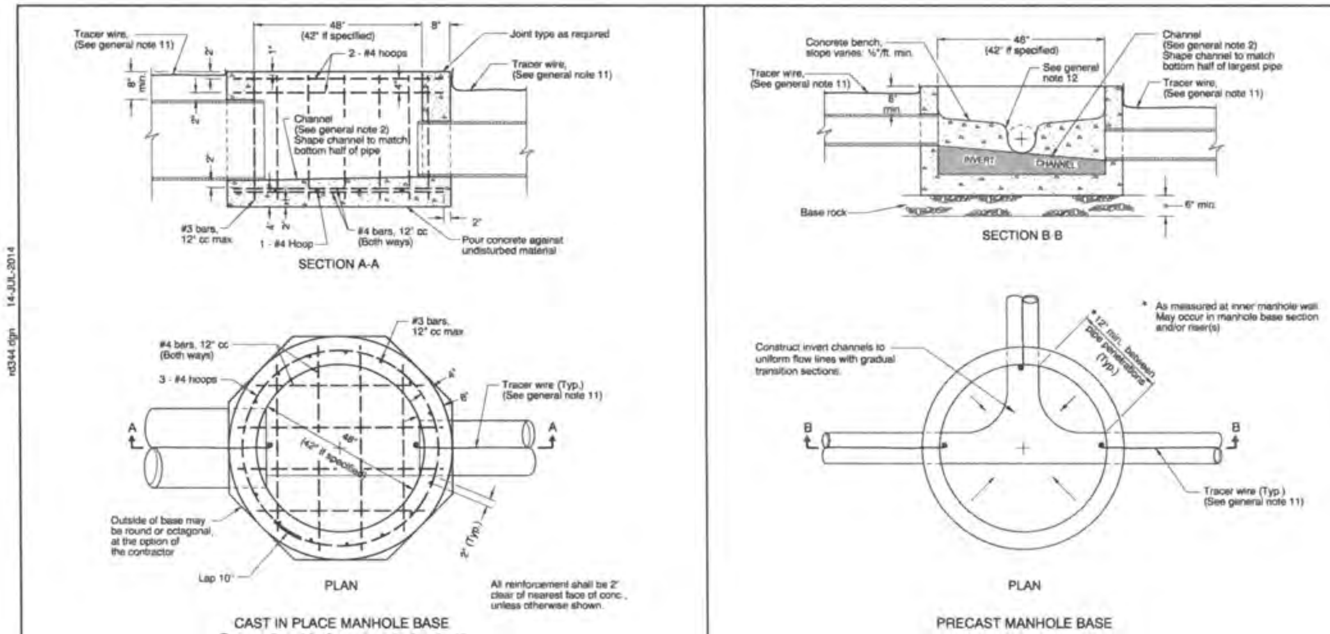
OREGON STANDARD DRAWINGS

SHALLOW MANHOLES

2015

DATE	REVISION DESCRIPTION

Effective Date: December 1, 2015 - May 31, 2016 RD342



GENERAL NOTES FOR ALL DETAILS:

1. All concrete shall be commercial grade concrete.
2. Channels shall be constructed to provide smooth slopes and radii to outlet pipe.
3. Bases may be precast or cast in place.
4. Max. pipe diameter varies with pipe material.
5. Use on 42" and 48" diameter manhole.
6. Extend pipe into manhole and grout smooth. Pipe(s) may extend 2" max. beyond the interior manhole wall.
7. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
8. All precast products shall conform to the requirements of ASTM C478.
9. See Std. Drg. RD345 for pipe to manhole connections.
10. See Std. Drg. RD336 for manhole steps details.
11. See Std. Drg. RD336 for tracer wire details.
12. At spring line of pipe, extend channel up to crown line on 12:1 batter.

CALC. BOOK NO. N/A — BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

STANDARD MANHOLE BASE SECTION

2015

DATE	REVISION DESCRIPTION

Effective Date: December 1, 2015 - May 31, 2016 RD344

MSA
Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
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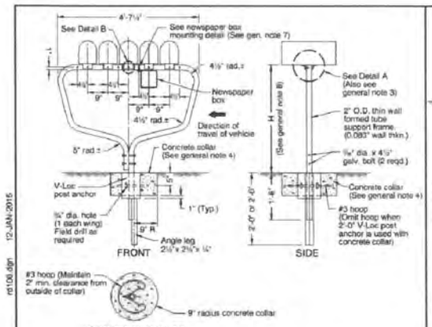
REGISTERED PROFESSIONAL ENGINEER — OREGON — RANDALL P. STARK — RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS

STANDARD DETAILS

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	CSL
DRAWN	DAK
CHECKED	RPS
JOB NO.:	14-1670.206
DRAWING NAME:	G-10
SHEET NO.	10/59



CONCRETE COLLAR
(See general note 4)

MULTIPLE SUPPORT
(Supports 5 standard (Sizes 1 & 1½) mailboxes or 4 large (Size 2) mailboxes)

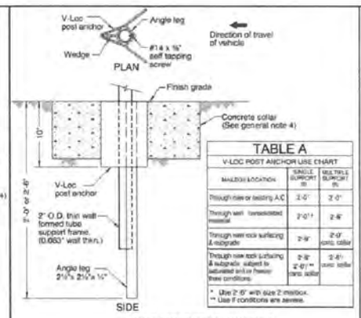
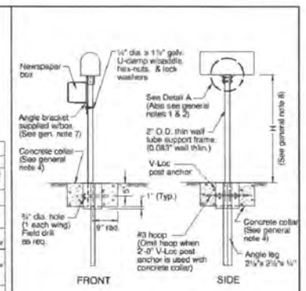


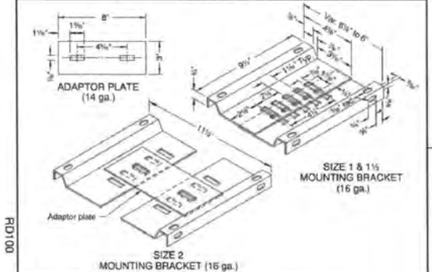
TABLE A V-LOC POST ANCHOR USE CHART		
MAILBOX LOCATION	SINGLE SUPPORT (1)	MULTIPLE SUPPORT (n)
Through new or existing A.C.	2'-0"	2'-0"
Through well compacted material	2'-0"*	2'-6"
Through new rock surfacing & subgrade	2'-6"	2'-0" (only collar)
Through new rock surfacing & subgrade subject to saturated soil or freeze thaw conditions	2'-6" 2'-0"** (only collar)	2'-6" (only collar)

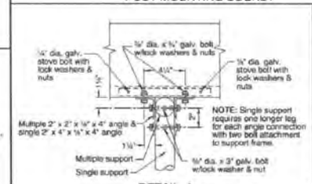
* Use 2'-6" with size 2 mailbox.
** Use if conditions are severe.

POST MOUNTING SOCKET



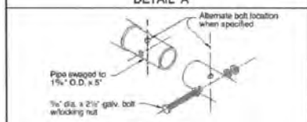
SINGLE SUPPORT





NOTE: Single support requires one longer leg for each angle connection with two bolt attachment to support frame.

DETAIL A



DETAIL B

GENERAL NOTES FOR ALL DETAILS:
1. Angle connections to be parallel to traffic flow for Size 2 mailbox mounted on single post.
2. All holes in the tube support frame are to be predrilled by the manufacturer.
3. Size 2 mailbox mounted on a multiple support requires 2 each ⅝" dia. x ⅝" galv. bolts with lock washers and nuts to attach the adaptor plate to the mounting bracket. This unit will then require 4 angle connections to attach to the formed tube support frame. See Detail A.
4. Provide concrete collar when any of the following conditions exist:
   a) when required in Table A
   b) when required by project plans.
   c) as directed by the Engineer
   Concrete collar, when required, to be poured in place after V-Loc post anchor has been installed, level and plumb. Do not excavate below bottom of V-Loc post anchor. Care shall be taken that no concrete is placed within anchor.
5. Other proprietary products available as listed in ODOT's QPL.
6. For mailbox installation locations, see Std. Drg. RD101 and project plans.
7. For Newspaper Box Mounting Detail, see Std. Drg. RD101.
8. Mounting height (H) shall be 42" nominal, measured from vehicle driving surface.

CALC. BOOKMAK: N/A BASELINE REPORT DATE: 12-JAN-2015

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

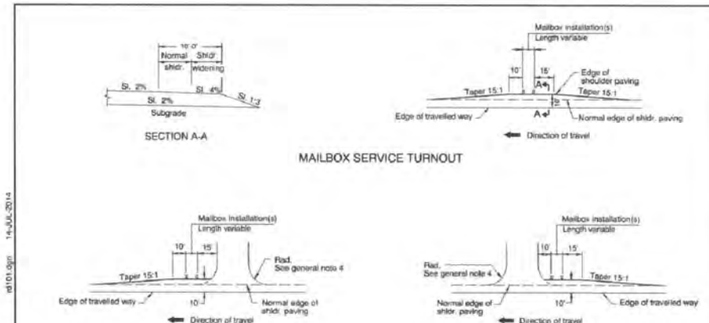
OREGON STANDARD DRAWINGS

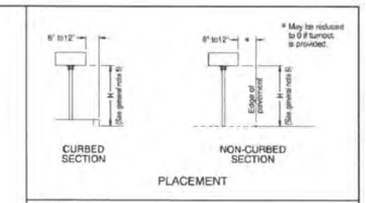
MAILBOX SUPPORT

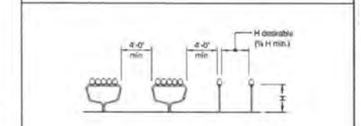
2015

DATE	REVISION DESCRIPTION
2-JAN	REVISED DETAILS & GENERAL

Effective Date: December 1, 2015 - May 31, 2016 RD100







GENERAL NOTES FOR ALL DETAILS:
1. All holes in the tube support frame are to be predrilled by the manufacturer.
2. Other proprietary products available as listed in ODOT's QPL.
3. For mailbox support details, see Std. Drg. RD100.
4. For approach details, see Std. Drg. RD715.
5. Mounting height (H) shall be 42" nominal, measured from vehicle driving surface.

CALC. BOOKMAK: N/A BASELINE REPORT DATE: 07-JUN-2011

The selection and use of the Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

MAILBOX INSTALLATION

2015

DATE	REVISION DESCRIPTION

Effective Date: December 1, 2015 - May 31, 2016 RD101

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2075
FAX 541.741.3075

REGISTERED PROFESSIONAL ENGINEER 56075 OREGON RANDALL P. STAPP
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
STANDARD DETAILS

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	CSL
DRAWN	DAK
CHECKED	RPS

JOB NO.: 14-1670.206

DRAWING NAME: G-11

SHEET NO. 11/59

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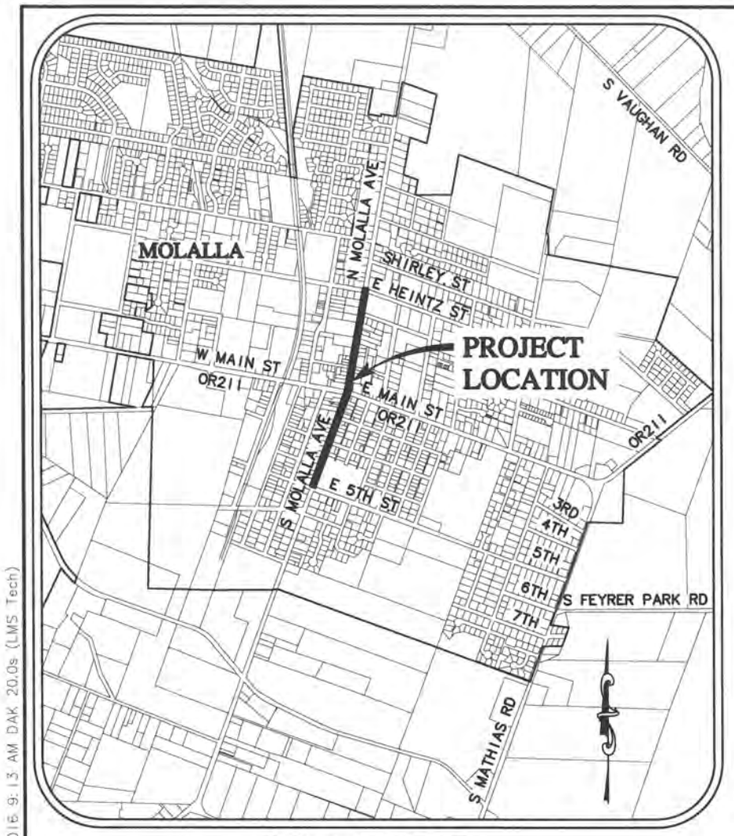

SITE MAP

SCALE: 1"=1,000'

PROJECT LOCATION:

MOLALLA AVENUE FROM 5TH STREET
TO HEINTZ STREET, MOLALLA, OREGON
LATITUDE = 45°8'51.09"N, LONGITUDE = 122°34'37.61"W

PROPERTY DESCRIPTION:

PUBLIC STREET RIGHT-OF-WAY OF MOLALLA AVENUE FROM 5TH STREET TO HEINTZ STREET, MOLALLA, OREGON

ATTENTION EXCAVATORS:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.

INSPECTION FREQUENCY:

SITE CONDITION	MINIMUM FREQUENCY
1. ACTIVE PERIOD	DAILY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOWMELT, IS OCCURRING. AT LEAST ONCE EVERY TWO (2) WEEKS REGARDLESS OF WETHER STORMWATER RUNOFF IS OCCURRING.
2. PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY.	ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE.
3. INACTIVE PERIODS GREATER THAN FOURTEEN (14) CONSECUTIVE CALENDAR DAYS.	ONCE EVERY TWO (2) WEEKS.
4. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER.	IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION.

* HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS. (Schedule A.8.c.i.(3))
* ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS.
* INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS.
* RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, RETAIN THE ESCP AT THE CONSTRUCTION SITE OR AT ANOTHER LOCATION. (Schedule B.2.a)

DEVELOPER

DEVELOPER/COMPANY: City of Molalla
CONTACT: Jennifer Cline, P.E.
P.O. Box 248
Molalla, OR 97038
PHONE: 503-759-0218
FAX: 503-829-3676

PLANNING / ENGINEERING / SURVEYING FIRM

ENGINEERING & SURVEY FIRM: Murray, Smith & Associates
CONTACT: Randall Stark, P.E.
400 E Mill Plain Blvd, Suite 203
Vancouver, Washington 98660
PHONE: 360-448-4230
FAX: 360-448-4239

NARRATIVE DESCRIPTIONS

EXISTING SITE CONDITIONS

2,000 LF OF PUBLIC STREET AND SIDEWALKS

DEVELOPED CONDITIONS

2,000 LF OF PUBLIC STREET AND SIDEWALKS

NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE

* CLEARING (N/A)
* MASS GRADING (FEBRUARY 2016 - JULY 2016)
* UTILITY INSTALLATION (MARCH 2016 - AUGUST 2016)
* STREET CONSTRUCTION (MARCH 2016 - OCTOBER 2016)
* FINAL STABILIZATION (APRIL 2016 - NOVEMBER 2016)

TOTAL SITE AREA = 123,000 SF = 2.82 ACRES

TOTAL DISTURBED AREA = 123,000 SF = 2.82 ACRES

SITE SOIL CLASSIFICATION:

17 - CLACKAMAS SILT LOAM
79B - SAWTELL SILT LOAM, 0 TO 8 PERCENT SLOPES

RECEIVING WATER BODIES:

NEAREST WATER BODY: CREAMERY CREEK

PERMITTEE'S SITE INSPECTOR: JENNIFER CLINE, PE

COMPANY/AGENCY: CITY OF MOLALLA
PHONE: 503-759-0218
FAX: 503-829-3676
E-MAIL: dpw@cityofmolalla.com
DESCRIPTION OF EXPERIENCE: PUBLIC WORKS DIRECTOR FOR THE CITY OF MOLALLA, MANAGER OF MULTIPLE CAPITAL IMPROVEMENT PROJECTS

LOCAL AGENCY-SPECIFIC EROSION CONTROL NOTES:

1. THE CONTRACTOR IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200C PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200C PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200C PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES AND DEVICES SHALL CONFORM TO THE SPECIFICATIONS AND ODOT/APWA STANDARD DRAWINGS.
3. THE CONSTRUCTION, ADJUSTMENT, MAINTENANCE, AND UPGRADING OF THESE EROSION CONTROL MEASURES IS THE RESPONSIBILITY OF THE CONTRACTOR FOR THE DURATION OF THE PROJECT.
4. DEVELOP A REVISED PLAN OF THE EROSION CONTROL MEASURES SHOWN AS REQUIRED BY SECTION 00280, OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION. IMPLEMENT THIS PLAN FOR ALL CLEARING AND GRADING ACTIVITIES AND IN SEGMENTS APPLICABLE TO EACH STAGING PHASE. CONSTRUCT IN SUCH A MANNER SO AS TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DOES NOT ENTER THE ROADWAY OR DRAINAGE SYSTEM, OR VIOLATE APPLICABLE WATER STANDARDS.
5. INSTALL MEASURES WITHIN THE RIGHT-OF-WAY UNLESS DIRECTED OTHERWISE.
6. PROTECT ALL INLETS DURING SURFACE GRINDING, PAVING, AND EARTHWORK OPERATIONS TO PREVENT POLLUTANTS FROM ENTERING STORM WATER SYSTEMS.

STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES:

1. HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS. (SCHEDULE A.8.C.i.(3))
2. ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS.
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS.
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, RETAIN THE ESCP AT THE CONSTRUCTION SITE OR AT ANOTHER LOCATION. (SCHEDULE B.2.A).
5. ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT (SCHEDULE A 8.A).
6. THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS. (SCHEDULE A.8.C.ii.(1)(C))
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT. (SCHEDULE A.12.C.iii).
8. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SCHEDULE A 8.C.ii.(1)(D)).
9. IDENTIFY, MARK, AND PROTECT (BY FENCING OFF OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. (SCHEDULE A.8.C.i.(1) & (2)).
10. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SCHEDULE A.7.B.iii(1) AND A.7.B.iii(3)).
11. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS. (SCHEDULE A.7.D.i AND A.8.C).
12. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SCHEDULE A.8.C.i.(6))
13. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS. (SCHEDULE A.8.C.ii.(2)).
14. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SCHEDULE A.8.C.i.(7)).
15. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SCHEDULE A 7.D.ii.(1) AND A.8.C.i.(4)).
16. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SCHEDULE A.7.D.ii.(3)).
17. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS. (SCHEDULE A.7.E.i.(2)).
18. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SCH A 7.E.iii.).
19. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SCHEDULE A 7.B.ii)
20. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE PERMIT. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SCHEDULE A.9.B.iii)
21. IF A STORMWATER TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SCHEDULE A.9.D).
22. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SCHEDULE A 7.B).
23. AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SCHEDULE A 7.E.ii.(2)).
24. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER. (SCHEDULE A.7.A.i).
25. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SCHEDULE A.9.C.i).
26. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT. AND BEFORE BMP REMOVAL. (SCHEDULE A.9.C.ii).
27. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SCHEDULE A.9.C.iii & iv).
28. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME. (SCHEDULE A.9.B.i).
29. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SCHEDULE A.9.B.ii).
30. THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE. (SCHEDULE A.7.F.i).
31. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SCHEDULE A.7.F.ii).
32. PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. HOWEVER, DO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPS. (SCHEDULE A.7.B.iii(2) AND A.8.C.iii).

THE PERMITTEE IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200C PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200C PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200C PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.

BMP MATRIX FOR CONSTRUCTION PHASES

REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S.

	CLEARING	MASS GRADING	UTILITY INSTALLATION	STREET CONSTRUCTION	FINAL STABILIZATION	WET WEATHER (OCT. 1 - MAY 31ST)
EROSION PREVENTION						
PRESERVE NATURAL VEGETATION	X	X			X	X
GROUND COVER					X	
HYDRAULIC APPLICATIONS					X	
PLASTIC SHEETING	X	X				
MATTING						X
DUST CONTROL	X	X	X	X		
TEMPORARY/ PERMANENT SEEDING					X	
BUFFER ZONE						
OTHER:						
SEDIMENT CONTROL						
SEDIMENT FENCE (PERIMETER)						
SEDIMENT FENCE (INTERIOR)						
STRAW WATTLES						
FILTER BERM						
INLET PROTECTION	X	X	X	X	X	X
DEWATERING			X	X		
SEDIMENT TRAP						
OTHER:						
RUN OFF CONTROL						
CONSTRUCTION ENTRANCE						
PIPE SLOPE DRAIN						
OUTLET PROTECTION			X			
SURFACE ROUGHENING						
CHECK DAMS			X			
OTHER:						
POLLUTION PREVENTION						
PROPER SIGNAGE	X	X	X	X	X	X
HAZ WASTE MGMT	X	X	X	X	X	X
SPILL KIT ON-SITE	X	X	X	X	X	X
CONCRETE WASHOUT AREA			X	X		
OTHER:						

** SIGNIFIES BMP THAT WILL BE INSTALLED PRIOR TO ANY GROUND DISTURBING ACTIVITY.

RATIONALE STATEMENT

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP'S WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS, AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

INITIAL

SHEET INDEX

EROSION AND SEDIMENT CONTROL PLANS

ESC-1 EROSION AND SEDIMENT CONTROL PLAN COVER SHEET
ESC-2 EROSION AND SEDIMENT CONTROL PLAN - 1
ESC-3 EROSION AND SEDIMENT CONTROL PLAN - 2
ESC-4 EROSION AND SEDIMENT CONTROL PLAN - 3
ESC-5 EROSION AND SEDIMENT CONTROL DETAILS

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REGISTERED PROFESSIONAL ENGINEER 56075 OREGON RANDALL P. STARK
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
EROSION AND SEDIMENT CONTROL PLAN - COVER SHEET

REVISIONS
REV.: DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK/RLF
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	ESC-1
SHEET NO.	12/59

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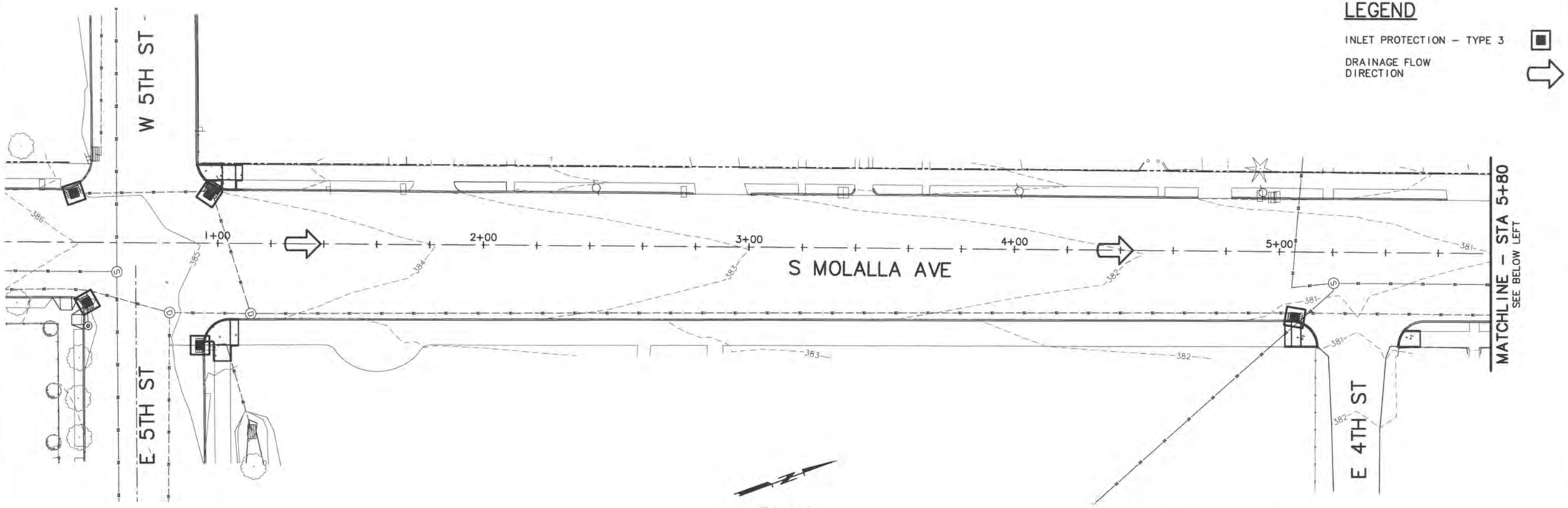


PLAN
SCALE: 1"=20'

LEGEND

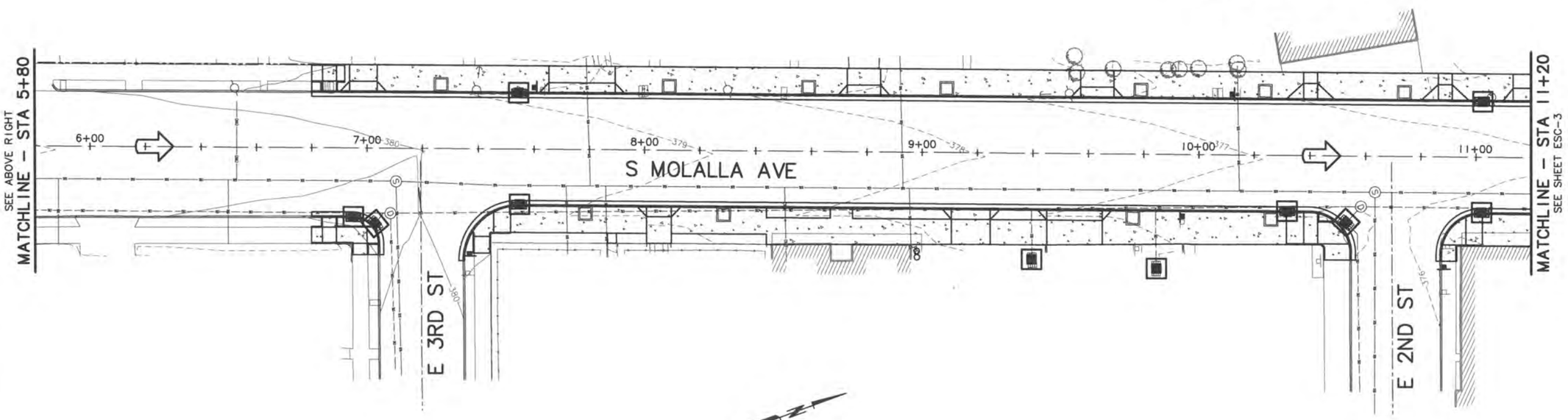
INLET PROTECTION – TYPE 3

DRAINAGE FLOW DIRECTION

NOTES:

1. INSTALL INLET PROTECTION TO ALL EXISTING STORM INLETS PRIOR TO CONSTRUCTION ACTIVITIES. MAINTIAN INLET PROTECTION UNTIL REMOVAL OF INLETS. INSTALL INLET PROTECTION ON ALL NEWLY CONSTRUCTED INLETS.

2. GRAPHIC SYMBOLS ARE APPROXIMATE. PLACE EROSION CONTROL MEASURES AS REQUIRED OR DIRECTED.



PLAN
SCALE: 1"=20'

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MOLALLA AVE IMPROVEMENTS
EROSION AND SEDIMENT CONTROL PLAN – 1

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK/RLF
CHECKED	CSL
JOB NO.:	15–1670.206
DRAWING NAME:	ESC–2
SHEET NO.	13/59

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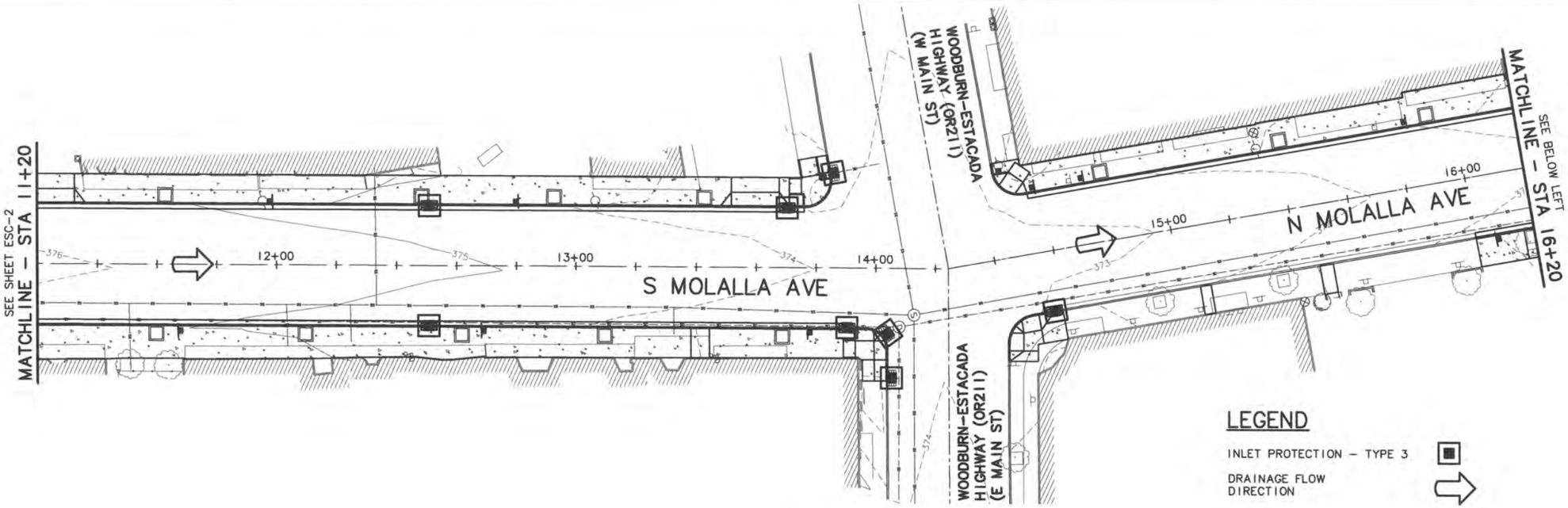


PLAN
SCALE: 1"=20'

LEGEND

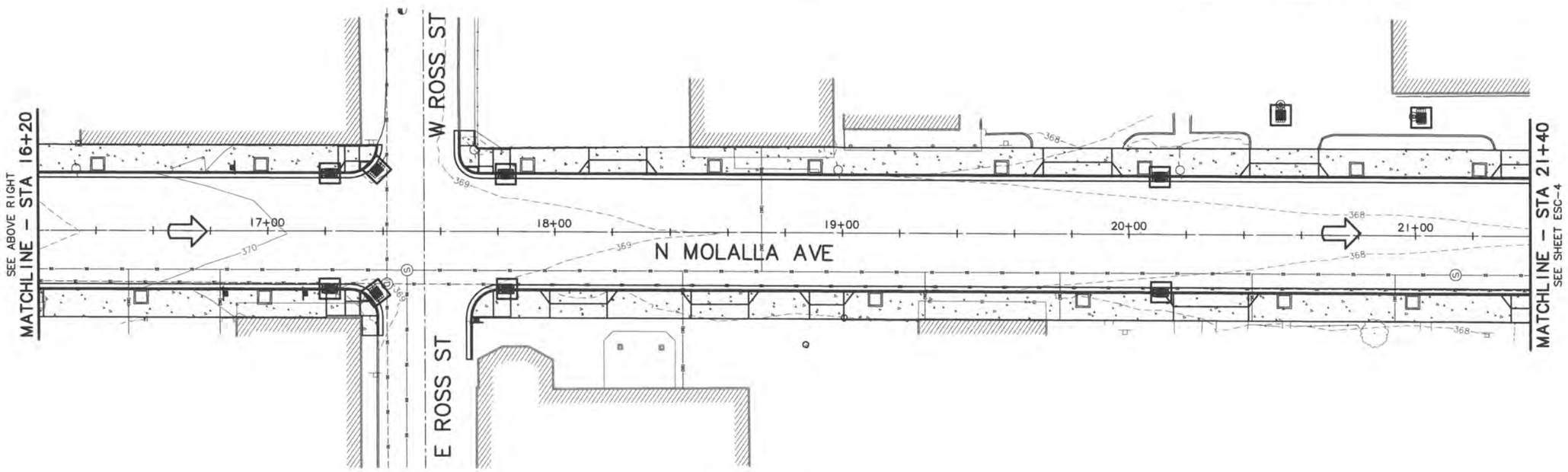
INLET PROTECTION – TYPE 3

DRAINAGE FLOW DIRECTION

NOTES:

1. INSTALL INLET PROTECTION TO ALL EXISTING STORM INLETS PRIOR TO CONSTRUCTION ACTIVITIES. MAINTIAN INLET PROTECTION UNTIL REMOVAL OF INLETS. INSTALL INLET PROTECTION ON ALL NEWLY CONSTRUCTED INLETS.

2. GRAPHIC SYMBOLS ARE APPROXIMATE. PLACE EROSION CONTROL MEASURES AS REQUIRED OR DIRECTED.



PLAN
SCALE: 1"=20'

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MOLALLA AVE IMPROVEMENTS
EROSION AND SEDIMENT CONTROL PLAN – 2

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK/RLF
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	ESC-3
SHEET NO.	14/59

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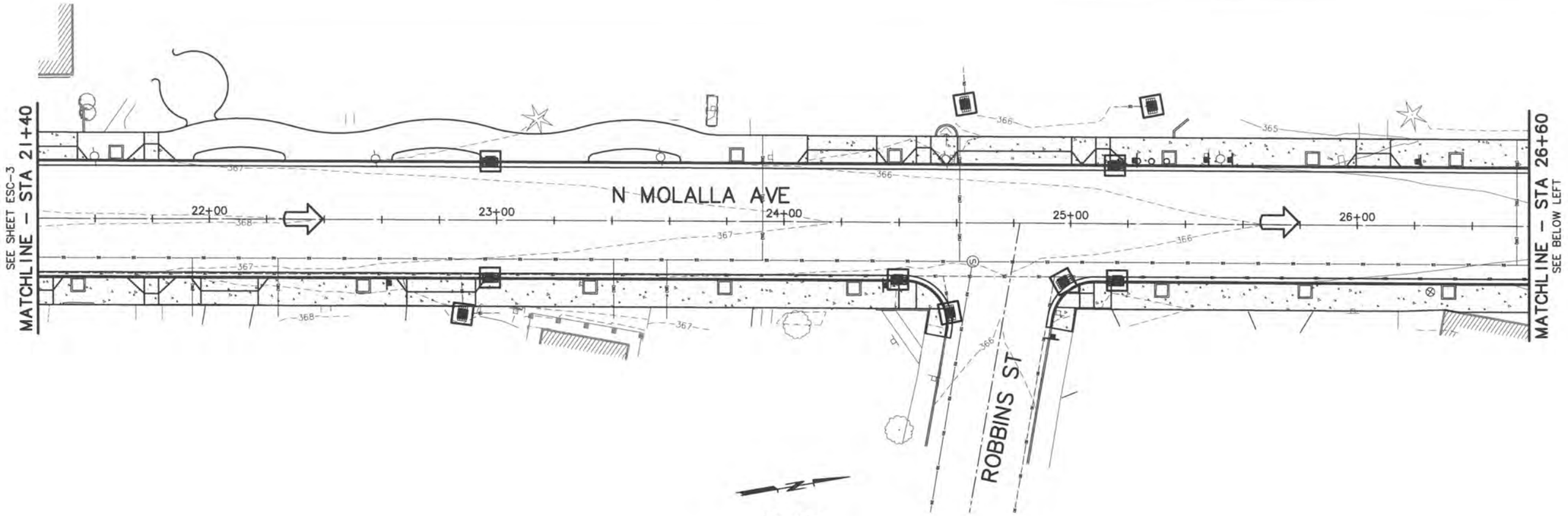

PLAN
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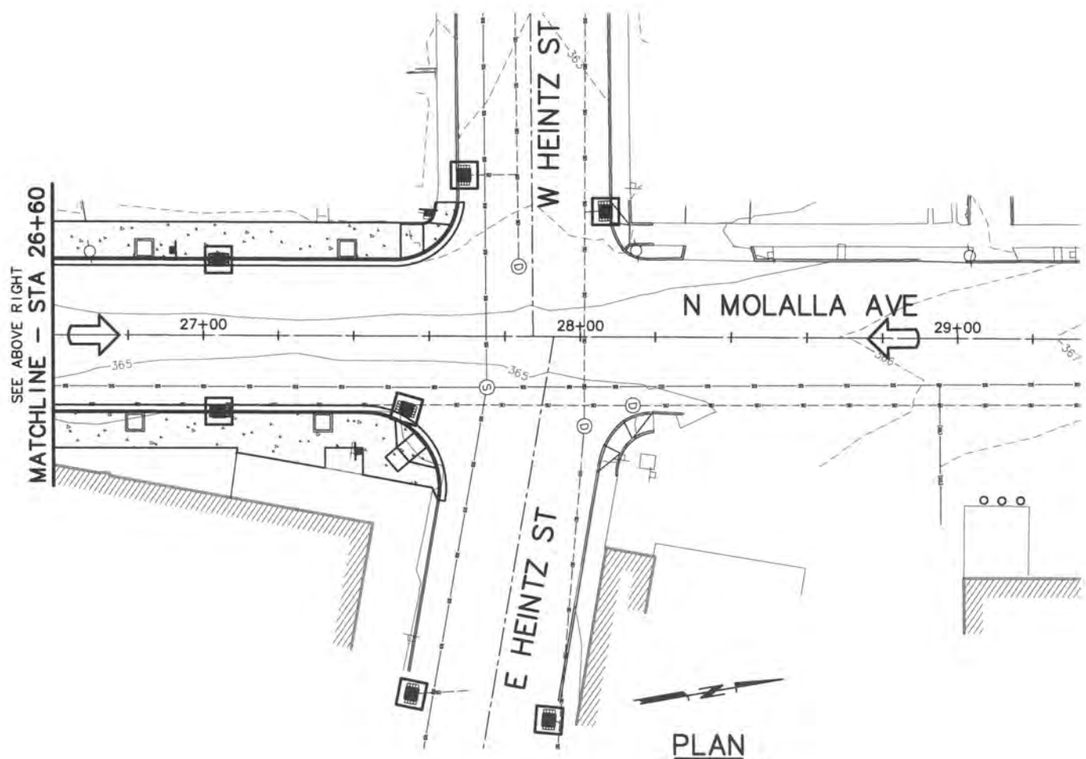

PLAN
SCALE: 1"=20'

LEGEND

INLET PROTECTION – TYPE 3

DRAINAGE FLOW DIRECTION

NOTES:

1. INSTALL INLET PROTECTION TO ALL EXISTING STORM INLETS PRIOR TO CONSTRUCTION ACTIVITIES. MAINTIAN INLET PROTECTION UNTIL REMOVAL OF INLETS. INSTALL INLET PROTECTION ON ALL NEWLY CONSTRUCTED INLETS.

2. GRAPHIC SYMBOLS ARE APPROXIMATE. PLACE EROSION CONTROL MEASURES AS REQUIRED OR DIRECTED.

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RANDALL P. SMITH
RENEWS 12-30-16

MOLALLA AVE IMPROVEMENTS
EROSION AND SEDIMENT CONTROL PLAN – 3

REVISIONS
REV.: | DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK/RLF
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	ESC-4
SHEET NO.	15/59

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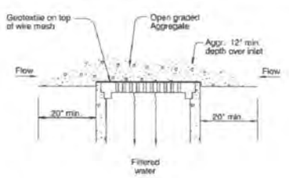
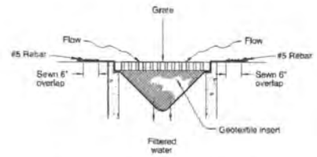
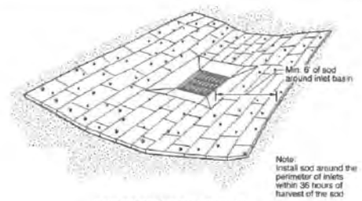


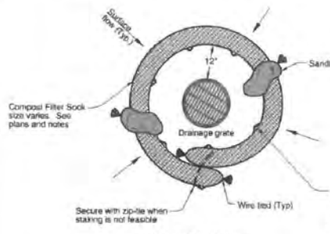
GEOTEXTILE/WIRE MESH/AGGREGATE - TYPE 2



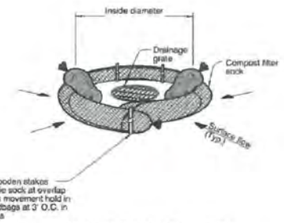
PREFABRICATED FILTER INSERT - TYPE 3



SOD PROTECTION - TYPE 6



AREA DRAIN PLAN



AREA DRAIN PERSPECTIVE VIEW

CURB INLET PERSPECTIVE VIEW

COMPOST FILTER SOCK OR WATTLE - TYPE 7

* Use sandbags to hold wattles in place. Sandbags are not necessary for compost filter socks

Notes:

Type 2 - Geotextile/wire mesh/aggregate
Place the wire mesh over the grate.
Place sediment fence geotextile over the wire mesh and perimeter area around structure
Install aggregate over the geotextile fabric

Type 3 - Prefabricated filter inserts
Install prefabricated filter inserts according to the plans.
Special provisions, and manufacturer recommendations.
Prefabricated inserts with provisions for overflow are allowed only when accompanied by additional BMP to prevent the potential of sediments entering project storm systems.
Field fabricated inserts are not allowed.

Type 7 - Compost filter sock
Drive 2"X2" wood stakes a minimum of 6" into ground and flush with the top of the sock
Overlap ends of sock per manufacturers recommendations (1' min, 3' max).
Use 8" to 12" dia sock on curbside in traffic areas.
Use 12" to 18" dia sock in non-traffic areas or areas where the larger sock can be used safely.

DWG. BOOK NO. N/A	BASELINE REPORT DATE 03-MAR-2015

NOTE: All materials and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS

INLET PROTECTION
TYPE 2, 3, 6, and 7

2015

DATE	REVISION DESCRIPTION

rd1010.dgn 02-02-2015

RD1010

Effective Date: June 1, 2015 - November 30, 2015 RD1010

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RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS

EROSION AND SEDIMENT CONTROL DETAILS

REV.:	DESCRIPTION:

REVISIONS

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK/RLF
CHECKED	CSL

JOB NO.: 15-1670.206

DRAWING NAME: ESC-5

SHEET NO. 16/59

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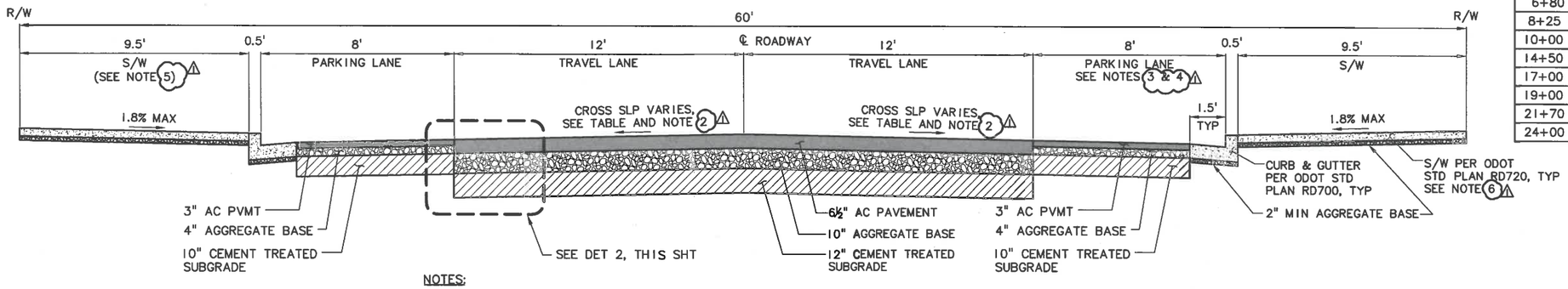


CROSS SLOPE TABLE		
℄ STATION RANGE	WEST SIDE	EAST SIDE
6+80 TO 8+25	3.0%	1.5%
8+25 TO 10+00	3.0%	2.5%
10+00 TO 13+90	2.0%	2.5%
14+50 TO 17+00	3.0%	2.0%
17+00 TO 19+00	3.0%	1.5%
19+00 TO 21+70	3.0%	2.0%
21+70 TO 24+00	3.0%	3.0%
24+00 TO 27+70	3.0%	1.5%

NOTES:

1. THE EXISTING ASPHALT PAVEMENT IS UNDERLAIN BY PORTLAND CEMENT CONCRETE PAVEMENT RANGING FROM 5.4 TO 7.1 INCHES THICK. SEE GEOTECHNICAL REPORT FOR MORE INFORMATION.

2. PROVIDE 50' CROSS SLOPE TRANSITION CENTERED ON TRANSITION STATION.

3. PARKING LANE WIDTH = 12.5' SOUTH OF 3RD STREET, MATCH EXISTING CURB LINE.

4. PARKING LANE WIDTH = 8' NORTH OF 3RD STREET.

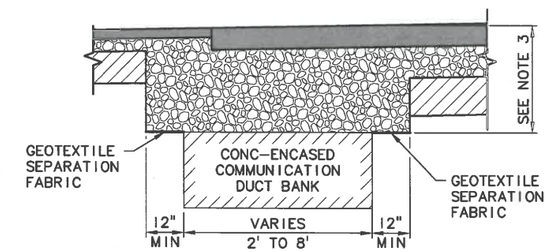
5. SEE SHEETS LP-03 AND LP-04 FOR MEANDERING S/W BETWEEN STA 21+82, 30' LEFT AND STA 23+76, 30' LEFT.

6. WHERE S/W CROSS SLOPES SHOWN ON THIS DETAIL DIFFER FROM THOSE SHOWN ON THE ODOT STD PLANS, THOSE SHOWN ON THIS DETAIL SHALL TAKE PRECEDENCE.

7. CONSTRUCT FULL-DEPTH TRAVEL LANE SECTION THROUGH INTERSECTIONS, FROM INTERSECTION CORNER POINT OF CURVATURE TO POINT OF TANGENCY ALONG MOLALLA AVENUE, AND WITHIN INTERSECTING ROAD LIMITS AS DEFINED BY SAWCUT LINE.

MOLALLA AVENUE TYPICAL SECTION (1 / C-2)

SCALE: NTS



NOTES:

1. DEPTH OF COVER BETWEEN EXISTING ROAD SURFACE AND TOP OF DUCT BANK VARIES. THE CONTRACTOR SHALL POTHOLE THE DUCT BANK PRIOR TO CONSTRUCTION TO DETERMINE THE VERTICAL AND HORIZONTAL LIMITS OF THE DUCT BANK.

2. AT LOCATIONS WHERE TOP OF DUCT BANK IS BELOW ELEVATION OF BOTTOM OF CEMENT-TREATED SUBGRADE SECTION, DO NOT TILL SUBGRADE WITHIN 12 INCHES OF TOP OF DUCT BANK. IN THESE LOCATIONS, PLACE AGGREGATE BASE BETWEEN DUCT BANK AND ASPHALTIC CONCRETE PAVEMENT SECTION.

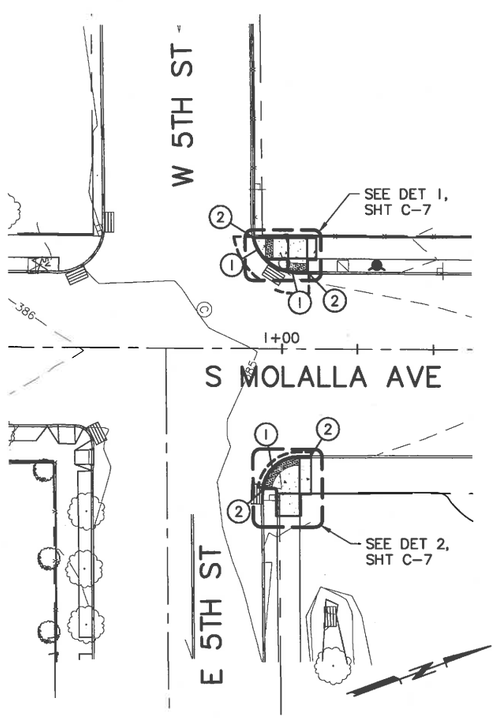
3. AGGREGATE DEPTH LEVEL WITH TOP OF DUCT BANK.

UTILITY ENLARGEMENT (2 / -)

SCALE: NTS

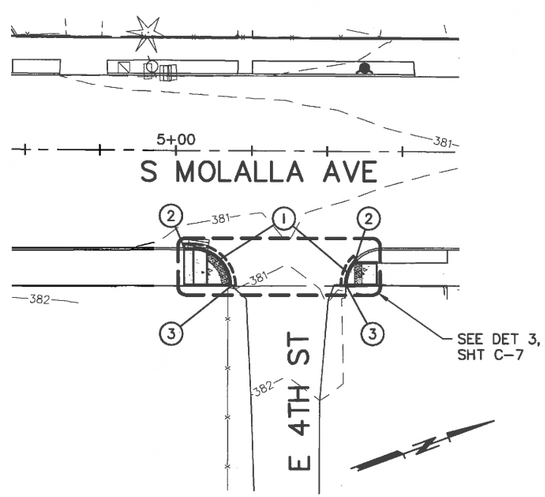
KEY NOTES

1. CONSTRUCT S/W RAMP, SEE GENERAL NOTE 3, USE STD CURB
2. MATCH EXIST CURB
3. TIE TO EXIST AC PAVEMENT



PLAN – 5TH STREET CURB RAMPS

SCALE: 1"=20'



PLAN – 4TH STREET CURB RAMPS

SCALE: 1"=20'

GENERAL NOTES:

1. SEE ODOT STD DRAWING RD700 FOR CURB AND GUTTER, E=6", FOR STD CURB, E=6".

2. S/W: SEE ODOT STD DRAWING RD720.

3. S/W RAMPS: SEE ODOT STD DRAWINGS RD755, RD756, RD757 AND RD759.

4. CONSTRUCT S/W RAMP AND CURB ON PUBLIC RIGHT-OF-WAY. DO NOT ENTER PRIVATE PROPERTY WITHOUT PRIOR WRITTEN APPROVAL FROM PROPERTY OWNER.

5. CONSTRUCT RESIDENTIAL DRIVEWAY PER ODOT STD DRAWING RD740, OPTION H. CONSTRUCT COMMERCIAL DRIVEWAY PER ODOT STD DRAWING RD745, OPTION K. COORDINATE WITH PROPERTY OWNERS TO MAINTAIN ACCESS AT ALL TIMES. CONSTRUCT DRIVEWAY AS SHOWN TO MATCH EXISTING CONDITIONS. APPROXIMATE LIMITS SHOWN. FIELD VERIFY ORIENTATION AND OBTAIN APPROVAL OF DRIVEWAY LAYOUT FROM ENGINEER PRIOR TO CONSTRUCTION. ALL DRIVEWAYS SHALL BE 6" THICK, AND REINFORCED WHERE NOTED. DRIVEWAY APRONS SHALL BE 4.5' DEEP.

6. CONSTRUCT WEEP HOLES IN ALL S/W AND CURBS PER ODOT STD DRAWINGS RD700 AND RD720. CONSTRUCT TWO (2) WEEP HOLES PER EACH PROPERTY AT 5-FOOT OFFSET FROM EACH PROPERTY LINE. RECONNECT DRAINLINES CONNECTED TO EXISTING WEEP HOLES AT EXISTING WEEP HOLE LOCATIONS. WHERE DRIVEWAYS ARE LOCATED AT PROPERTY LINES, CONSTRUCT WEEP HOLES AT 5-FOOT OFFSET FROM EDGE OF DRIVEWAY.

7. PLACE EXPANSION JOINT BETWEEN NEW S/W AND EXISTING BUILDING WALLS/FOUNDATIONS. SEE DETAIL, SHEET C-6.

8. PLACE EXPANSION JOINTS WHERE NEW S/WS AND CURBS CONNECT TO EXISTING S/WS AND CURBS.

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REGISTERED PROFESSIONAL ENGINEER 58075 OREGON RANDALL P. STARK
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
TYPICAL ROADWAY SECTION

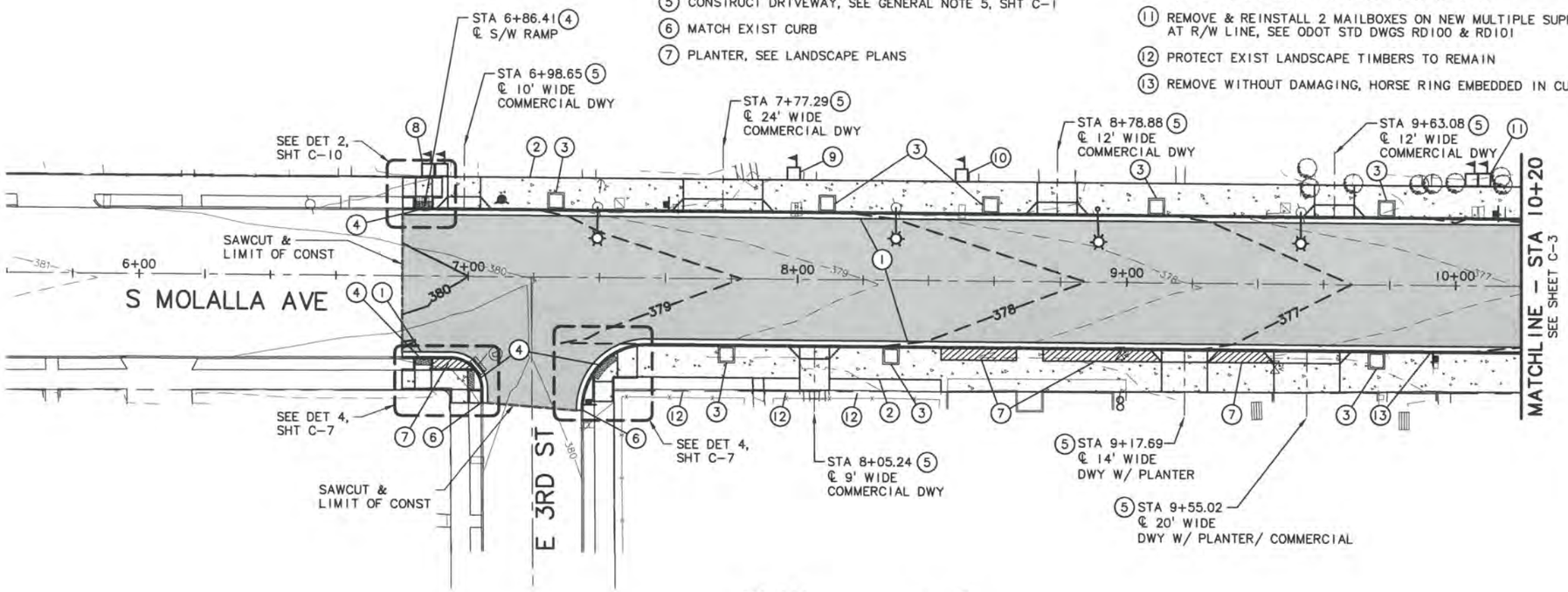
REVISIONS	
REV.:	DESCRIPTION:
1	BID ADDENDUM 1

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-1
SHEET NO.	17/59

G:\PDX_Projects\15\1670 - Molalla\CAD\Sheets\15-1670-205-OR-STPP.dwg C-1 1/20/2016 8:03 AM DAK 20.0s (LMS Tech)

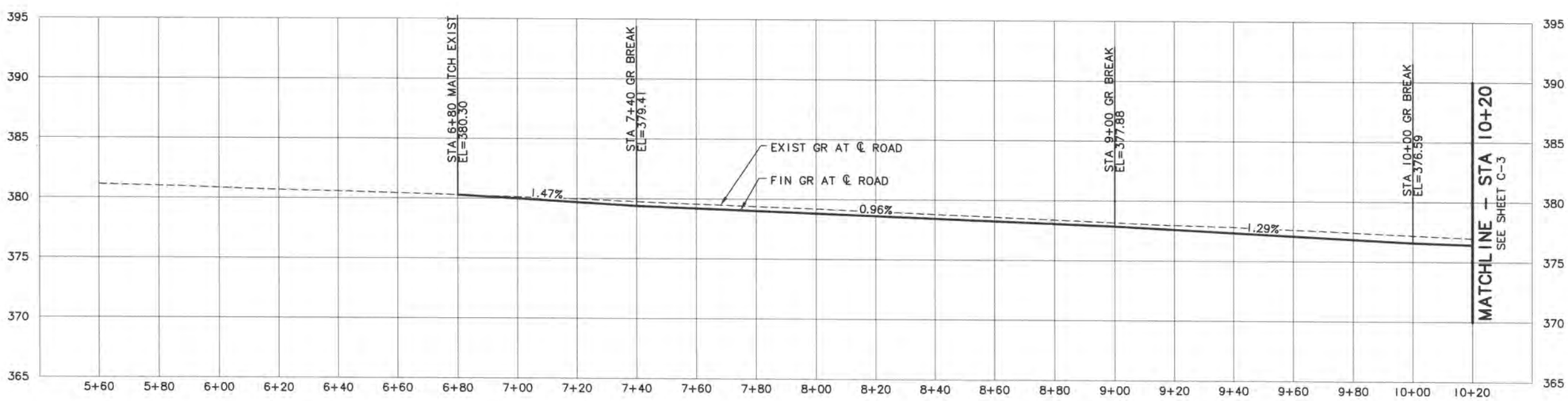
KEY NOTES

1. CONSTRUCT CURB & GUTTER, SEE GENERAL NOTE 1, SHT C-1
2. CONSTRUCT S/W, SEE GENERAL NOTE 2, SHT C-1
3. CONSTRUCT TREE WELL PER DET 2, SHT LP-06
4. CONSTRUCT S/W RAMP, SEE GENERAL NOTE 3, SHT C-1
5. CONSTRUCT DRIVEWAY, SEE GENERAL NOTE 5, SHT C-1
6. MATCH EXIST CURB
7. PLANTER, SEE LANDSCAPE PLANS
8. REMOVE & REINSTALL 2 MAILBOXES AND 1 NEWSPAPER BOX ON NEW MULTIPLE SUPPORT W/ CONC COLLAR AT R/W LINE, SEE ODOT STD DWGS RD100 & RD101
9. REMOVE & REINSTALL 1 MAILBOX AND 1 NEWSPAPER BOX ON NEW SINGLE SUPPORT W/ CONC COLLAR AT R/W LINE, SEE ODOT STD DWGS RD100 & RD101
10. REMOVE & REINSTALL 1 MAILBOX ON NEW SINGLE SUPPORT W/ CONC COLLAR AT R/W LINE, SEE ODOT STD DWGS RD100 & RD101
11. REMOVE & REINSTALL 2 MAILBOXES ON NEW MULTIPLE SUPPORT W/ CONC COLLAR AT R/W LINE, SEE ODOT STD DWGS RD100 & RD101
12. PROTECT EXIST LANDSCAPE TIMBERS TO REMAIN
13. REMOVE WITHOUT DAMAGING, HORSE RING EMBEDDED IN CURB AND RETURN TO CITY



PLAN

SCALE: 1"=20'



PROFILE

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

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RENEWS 6-30-16

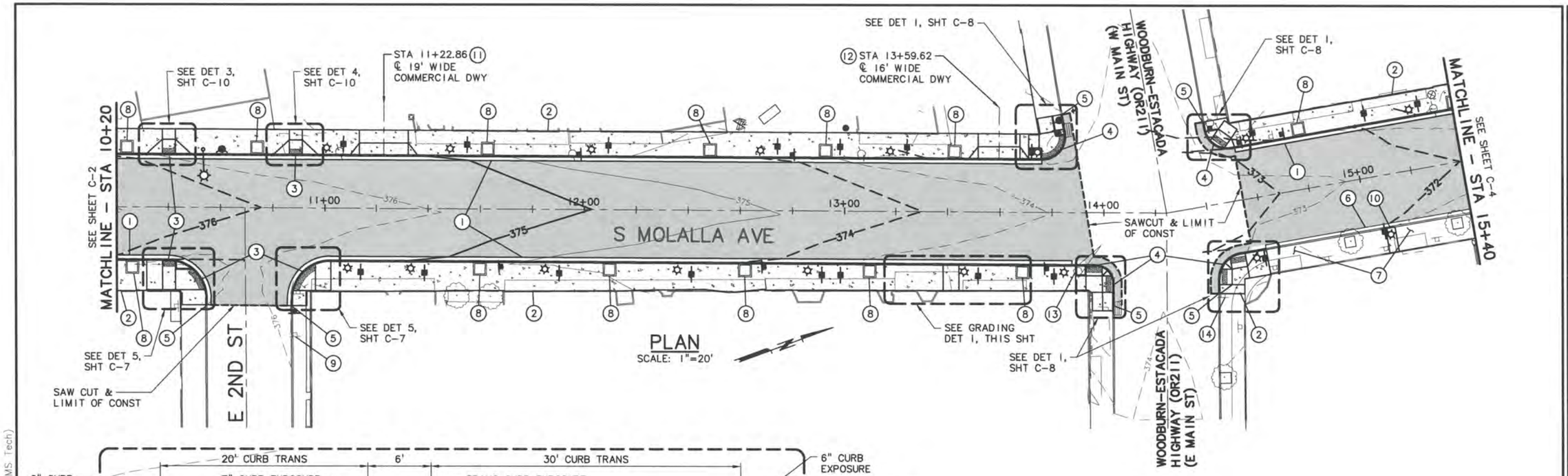
MOLALLA AVE IMPROVEMENTS

STREET PLAN AND PROFILE
STA 6+80 TO STA 10+20

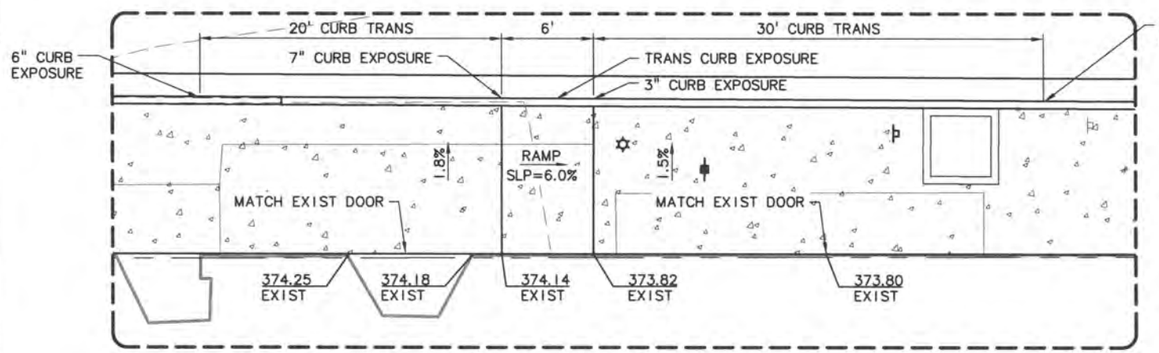
REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-2
SHEET NO.	18/59

G:\PDX_Projects\15\1670 – Molalla\CAD\Sheets\15-1670-205-OR-STPP.dwg C-2 1/5/2016 10:57 AM DAK 20.0s (LMS Tech)



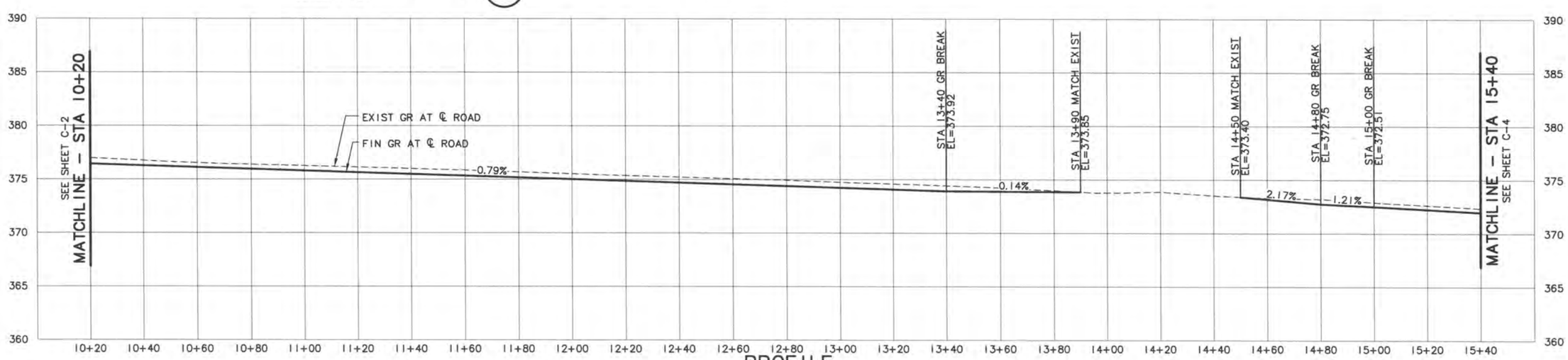
PLAN
SCALE: 1"=20'



GRADING DETAIL (1)
SCALE: 1"=5'

KEY NOTES

1. CONSTRUCT CURB & GUTTER, SEE GENERAL NOTE 1, SHT C-2
2. CONSTRUCT S/W, SEE GENERAL NOTE 2, SHT C-1
3. CONSTRUCT S/W RAMP, SEE GENERAL NOTE 3, SHT C-1
4. CONSTRUCT S/W RAMP, SEE GENERAL NOTE 3, SHT C-1; USE STD CURB ALONG GUTTER
5. MATCH EXIST CURB
6. PROTECT EXIST CURB & GUTTER TO REMAIN
7. PROTECT EXIST S/W TO REMAIN
8. CONSTRUCT TREE WELL PER DET 2, SHT LP-06
9. REMOVE UNUSED SIGN SUPPORT, CORE/SAWCUT CONC & PATCH AS NECESSARY TO PROVIDE A FLUSH SURFACE W/ SURROUNDING S/W.
10. REMOVE & REPLACE SINGLE PANEL OF S/W AS NECESSARY TO INSTALL LUMINAIRE FDN & JUNC BOX
11. CONSTRUCT REINF DWY, SEE GENERAL NOTE 3, SHT C-1; SEE REINF DET, SHT C-6
12. CONSTRUCT DWY, SEE GENERAL NOTE 5, SHT C-1
13. PROTECT EXIST SIGNAL POLE TO REMAIN
14. PROTECT EXIST SIGN SUPPORT TO REMAIN



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

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MOLALLA AVE IMPROVEMENTS
STREET PLAN AND PROFILE
STA 10+20 TO STA 15+40

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-3
SHEET NO.	19/59

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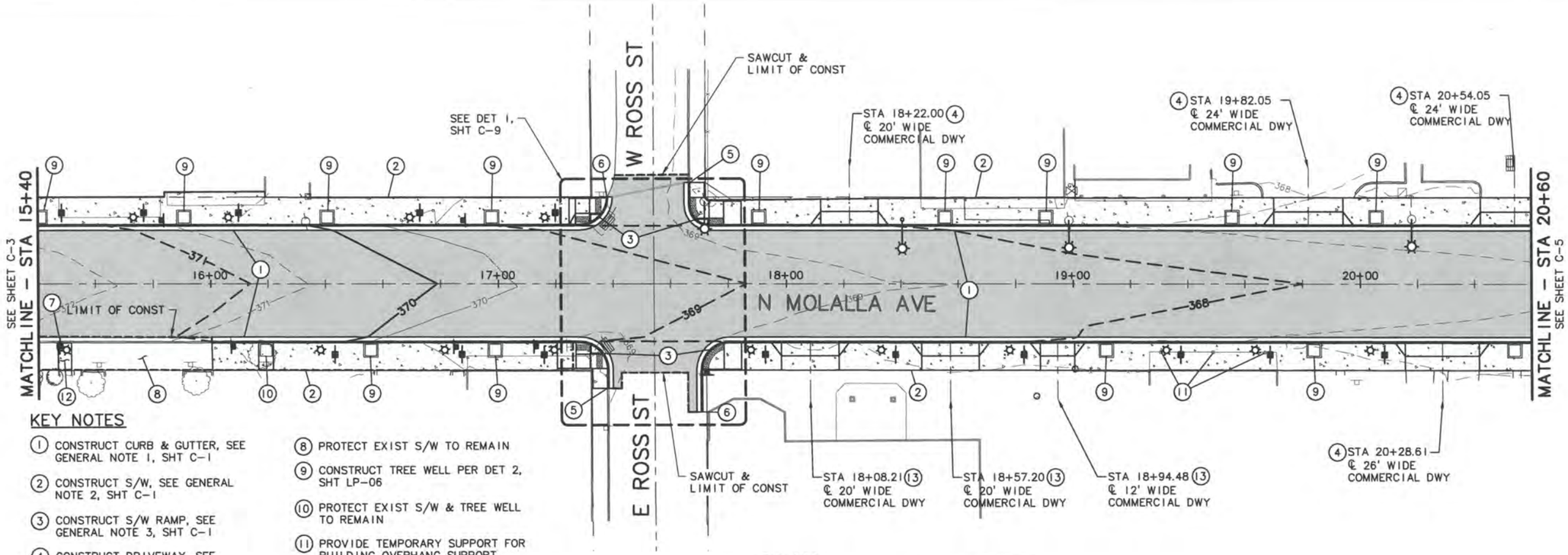
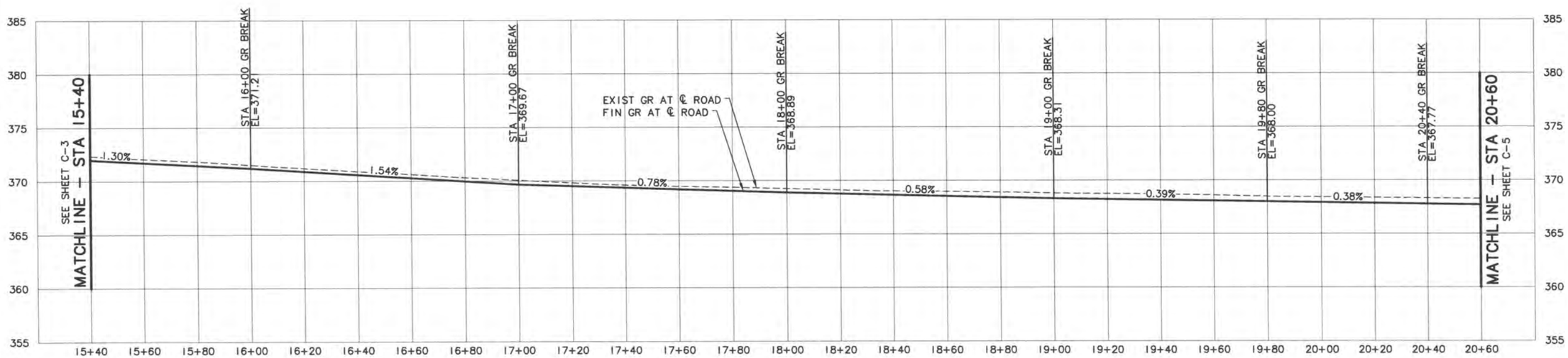


PLAN

SCALE: 1"=20'

KEY NOTES

1. CONSTRUCT CURB & GUTTER, SEE GENERAL NOTE 1, SHT C-1
2. CONSTRUCT S/W, SEE GENERAL NOTE 2, SHT C-1
3. CONSTRUCT S/W RAMP, SEE GENERAL NOTE 3, SHT C-1
4. CONSTRUCT DRIVEWAY, SEE GENERAL NOTE 5, SHT C-1
5. MATCH EXIST CURB
6. TIE TO EXIST AC PAVEMENT
7. PROTECT EXIST CURB & GUTTER TO REMAIN
8. PROTECT EXIST S/W TO REMAIN
9. CONSTRUCT TREE WELL PER DET 2, SHT LP-06
10. PROTECT EXIST S/W & TREE WELL TO REMAIN
11. PROVIDE TEMPORARY SUPPORT FOR BUILDING OVERHANG SUPPORT POSTS (3) DURING CONSTRUCTION
12. REMOVE & REPLACE SINGLE PANEL OF S/W AS NECESSARY TO INSTALL LUMINAIRE FDN & JUNC BOX
13. CONSTRUCT REINF DWY, SEE GENERAL NOTE 3, SHT C-1, SEE REINF DET, SHT C-6



PROFILE

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

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MOLALLA AVE IMPROVEMENTS

STREET PLAN AND PROFILE

STA 15+40 TO STA 20+60

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-4
SHEET NO.	20/59

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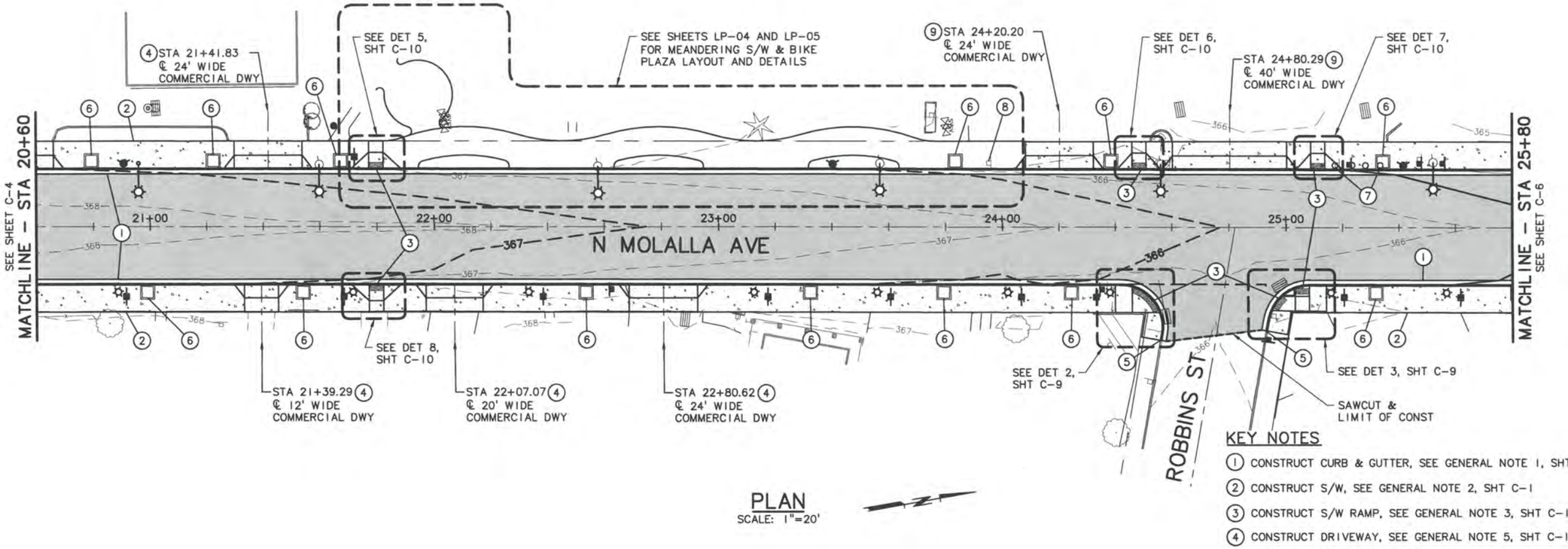
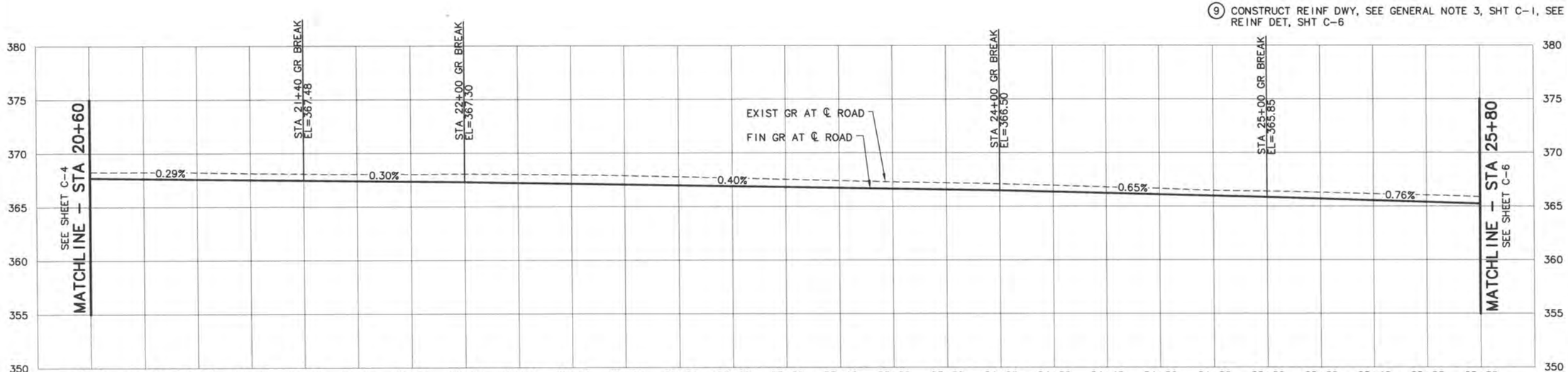


PLAN

SCALE: 1"=20'

KEY NOTES

1. CONSTRUCT CURB & GUTTER, SEE GENERAL NOTE 1, SHT C-1
2. CONSTRUCT S/W, SEE GENERAL NOTE 2, SHT C-1
3. CONSTRUCT S/W RAMP, SEE GENERAL NOTE 3, SHT C-1
4. CONSTRUCT DRIVEWAY, SEE GENERAL NOTE 5, SHT C-1
5. MATCH EXIST CURB
6. CONSTRUCT TREE WELL PER DET 2, SHT LP-06
7. REMOVE BOLLARDS (4 TOTAL)
8. REMOVE UNUSED SIGN SUPPORT
9. CONSTRUCT REINF DWY, SEE GENERAL NOTE 3, SHT C-1, SEE REINF DET, SHT C-6



PROFILE

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

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OREGON
RANDALL P. MARSH
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS

STREET PLAN AND PROFILE
STA 20+60 TO STA 25+80

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-5
SHEET NO.	21/59

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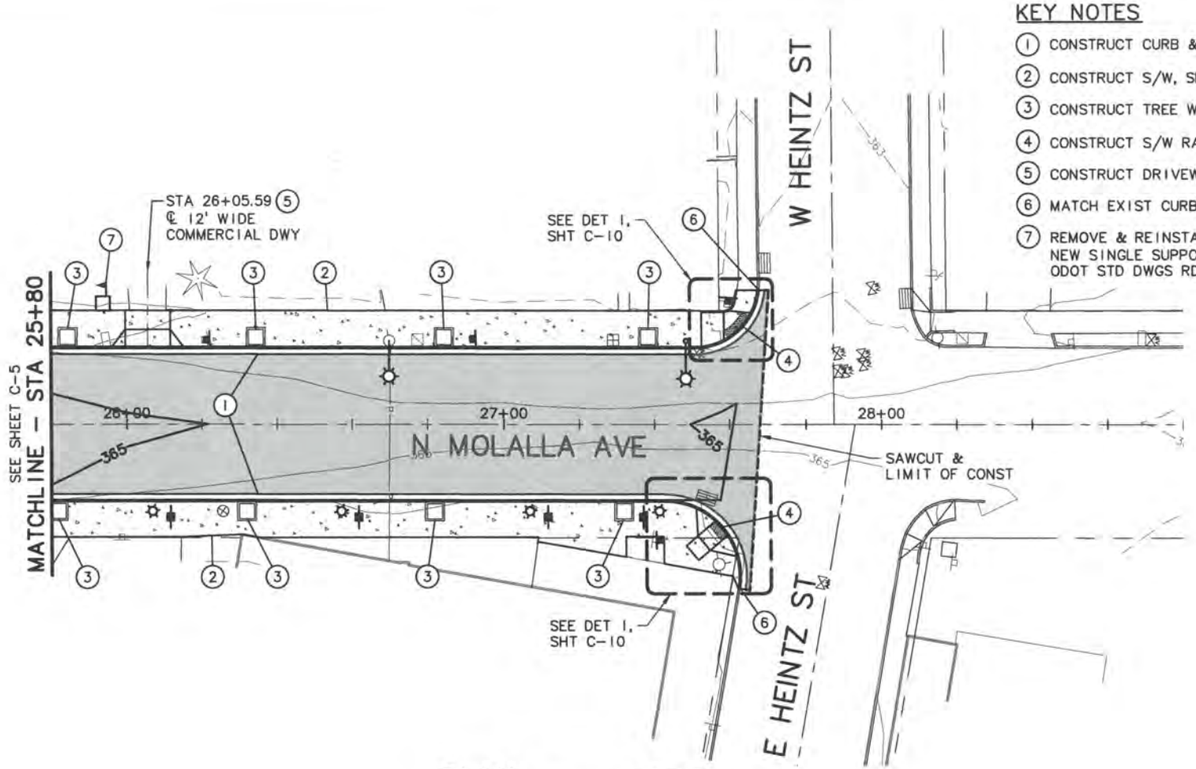
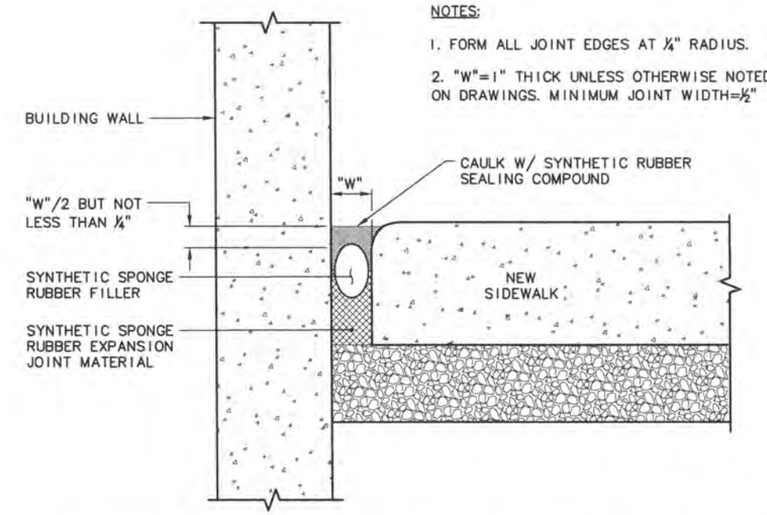
KEY NOTES

1. CONSTRUCT CURB & GUTTER, SEE GENERAL NOTE 1, SHT C-1
2. CONSTRUCT S/W, SEE GENERAL NOTE 2, SHT C-1
3. CONSTRUCT TREE WELL PER DET 2, SHT LP-06
4. CONSTRUCT S/W RAMP, SEE GENERAL NOTE 4, SHT C-1
5. CONSTRUCT DRIVEWAY, SEE GENERAL NOTE 5, SHT C-1
6. MATCH EXIST CURB
7. REMOVE & REINSTALL 1 MAILBOX & 1 NEWSPAPER BOX ON NEW SINGLE SUPPORT W/ CONC COLLAR AT R/W LINE, SEE ODOT STD DWGS RD100 & RD101



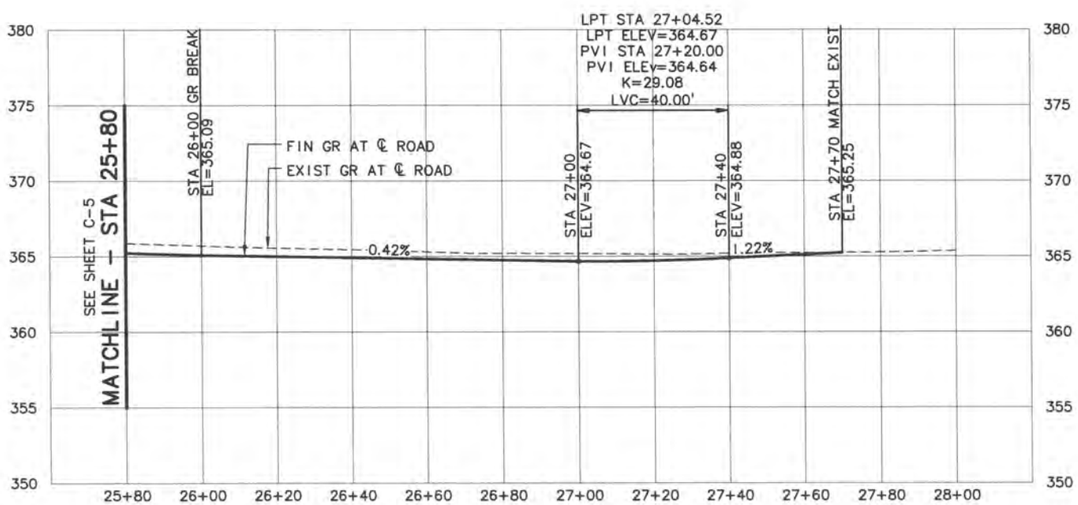
PLAN
SCALE: 1"=20'



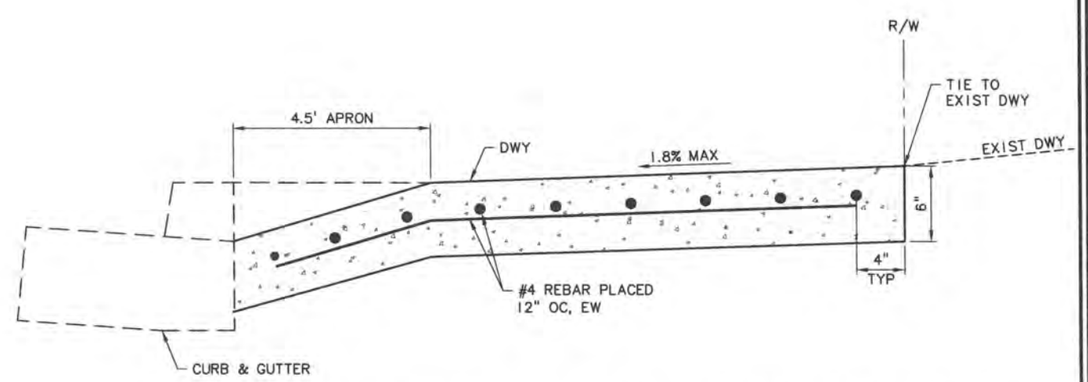
NOTES:

1. FORM ALL JOINT EDGES AT ¼" RADIUS.
2. "W"=1" THICK UNLESS OTHERWISE NOTED ON DRAWINGS. MINIMUM JOINT WIDTH=½"

EXPANSION JOINT AT BUILDINGS DETAIL (1/–)
SCALE: NTS



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



TYPICAL REINFORCED DRIVEWAY SECTION (2/–)
SCALE: NTS

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RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
STREET PLAN AND PROFILE
STA 25+80 TO STA 27+70

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-6
SHEET NO.	22/59

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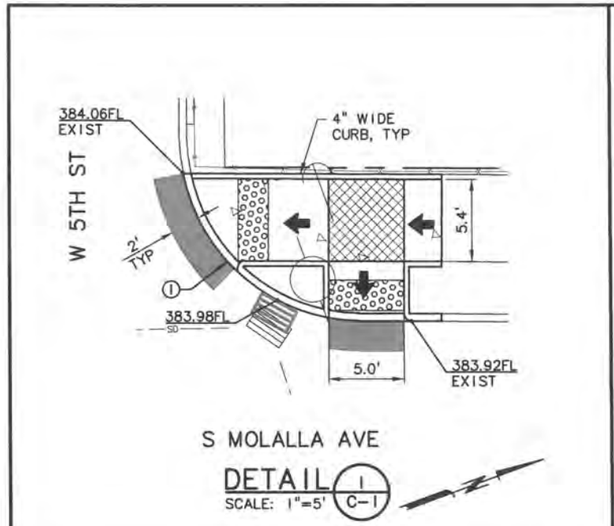
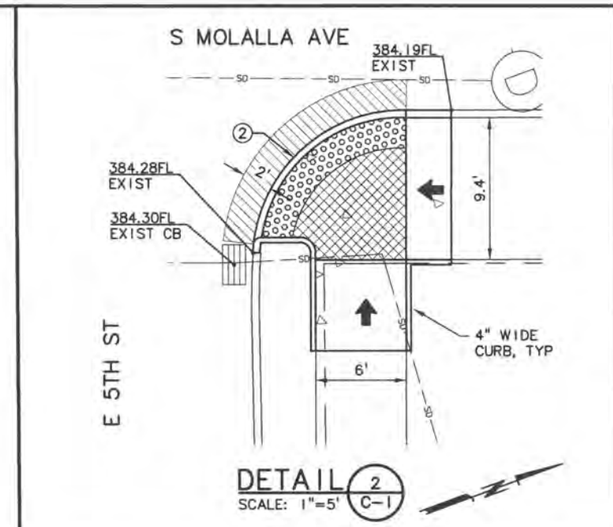
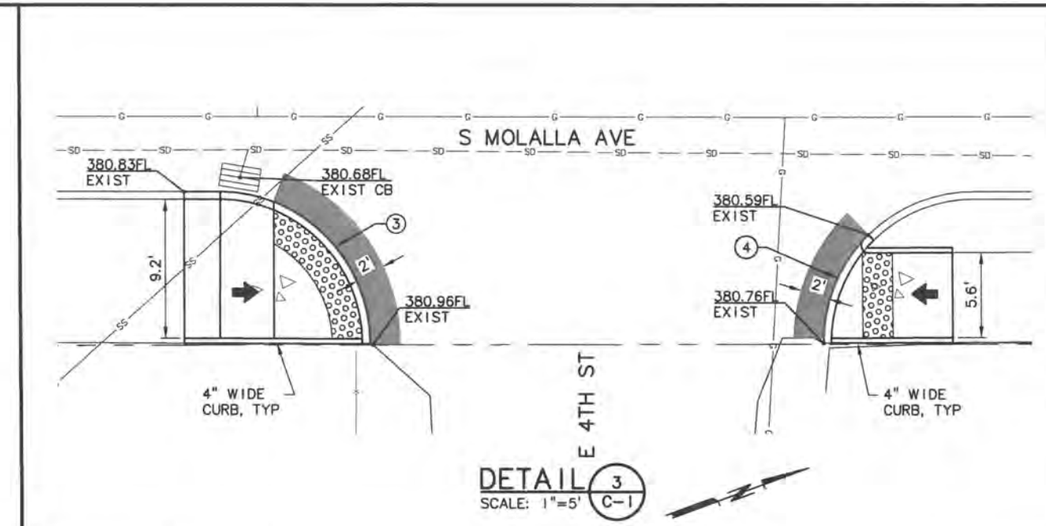


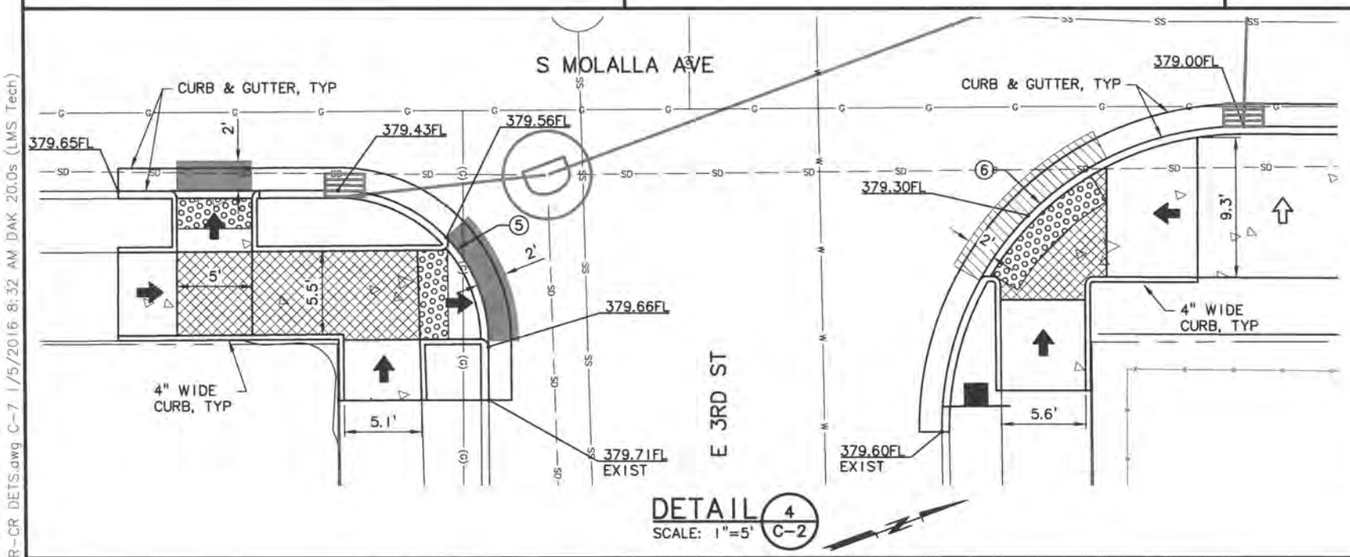
DETAIL 1 C-1
SCALE: 1"=5'



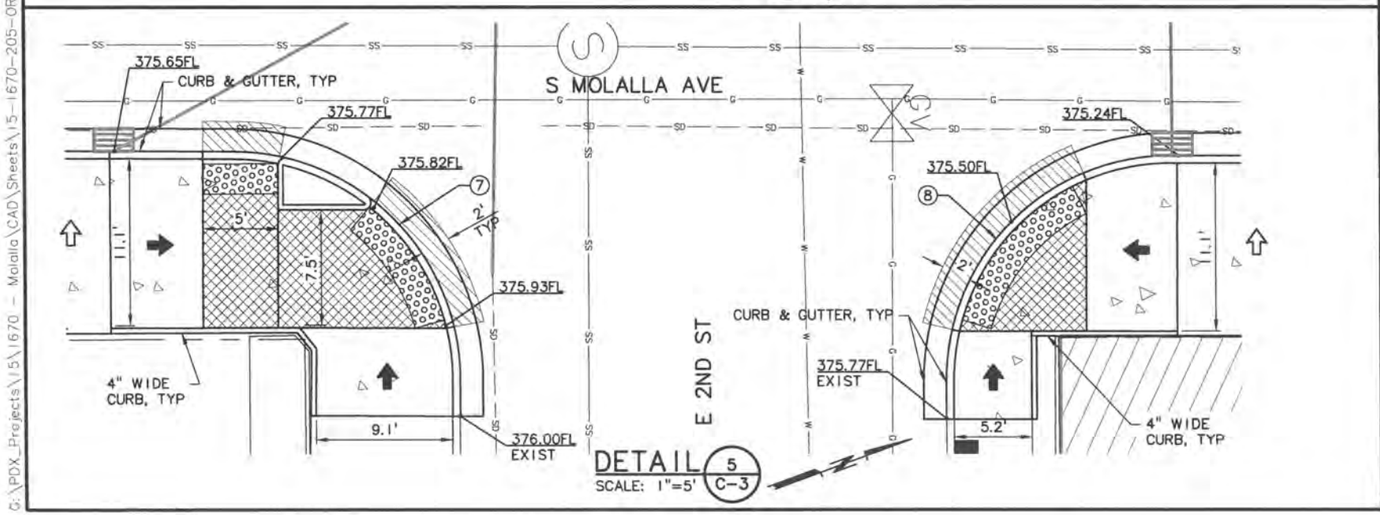
DETAIL 2 C-1
SCALE: 1"=5'



DETAIL 3 C-1
SCALE: 1"=5'



DETAIL 4 C-2
SCALE: 1"=5'



DETAIL 5 C-3
SCALE: 1"=5'

CURB RAMP NOTES:

1. ADJUST CURB RAMP LENGTH AS REQUIRED SO THAT RAMP SLOPE DOES NOT EXCEED 8.0%.

2. FOR CURB RAMP DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWINGS RD755 AND RD756.

3. PLACE TRUNCATED DOME DETECTABLE WARNING SURFACE IN THE LOWER 2 FEET ADJACENT TO TRAFFIC AT THROAT OF RAMP ONLY. FOR DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWINGS RD755 AND RD759.

4. TOOLED JOINTS ARE REQUIRED AT ALL CURB RAMP SLOPE BREAK LINES.

5. TRUNCATED DOME DETECTABLE WARNING PRODUCT SHALL BE ARMOR-TILE CAST-IN-PLACE SYSTEM, BLACK COLOR.

6. CURBS AT GUTTER LINE SHALL BE PER ODOT STANDARD DRAWING RD700.

7. WHERE RAMP SLOPES ON THIS SHEET DIFFER FROM SLOPES SHOWN ON STANDARD DRAWINGS, SLOPES SHOWN ON THIS SHEET SHALL TAKE PRECEDENCE.

8. MAXIMUM GRADE DIFFERENTIAL BETWEEN RAMP SLOPE AND RAMP CROSS SLOPE SHALL BE LESS THAN 11%.

CURB RETURN DATA

#	DESCRIPTION	RADIUS	DELTA	LENGTH
1	BCR: N545537.99 E7665792.74 ECR: N545545.62 E7665805.91	12.00'	78°43'48"	16.49'
2	BCR: N545529.53 E7665851.32 ECR: N545516.95 E7665856.70	10.00'	86°22'38"	15.08'
3	BCR: N545905.37 E7665988.62 ECR: N545911.24 E7666001.48	10.00'	89°58'10"	15.70'
4	BCR: N545939.49 E7666011.79 ECR: N545944.33 E7666006.32	10.00'	42°50'20"	7.47'
5	BCR: N546089.74 E7666066.57 ECR: N546083.86 E7666053.80	10.00'	89°20'14"	15.60'
6	BCR: N546141.63 E7666070.55 ECR: N546115.80 E7666082.58	20.00'	90°48'51"	31.70'
7	BCR: N546417.80 E7666189.42 ECR: N546408.96 E7666170.16	15.00'	89°51'02"	23.52'
8	BCR: N546467.25 E7666191.88 ECR: N546447.92 E7666200.78	15.00'	90°21'15"	23.65'

LEGEND

- CONCRETE SIDEWALK
- TURNING SPACE (MINIMUM LEVEL AREA 48"x48"). FOR THE PURPOSES OF THIS APPLICATION, 1.5% MAXIMUM SLOPE (FOR DRAINAGE) IS CONSIDERED LEVEL
- TRUNCATED DOME DETECTABLE WARNING SURFACE, SEE ODOT STANDARD DRAWING RD759
- RAMP COUNTER SLOPE – 3.0% MAXIMUM
- RAMP COUNTER SLOPE – 4.5% MAXIMUM
- SLOPE 1.8% MAXIMUM (NORMAL SIDEWALK CROSS SLOPE)
- SLOPE 8.0% MAXIMUM

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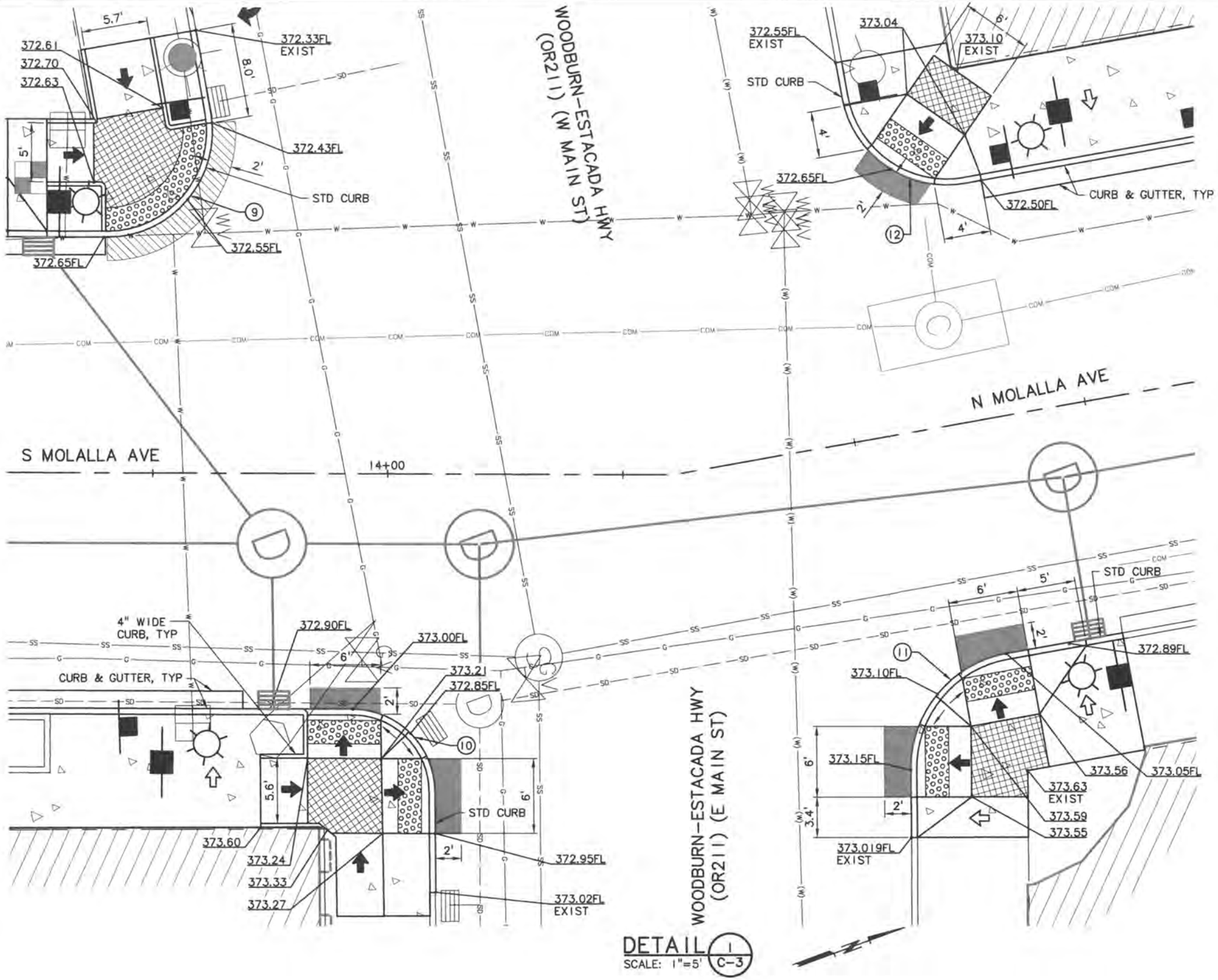
REGISTERED PROFESSIONAL ENGINEER
OREGON
RANDALL P. SMITH
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
CURB RETURN DETAILS – 1

REVISIONS
REV.: DESCRIPTION:

DATE	1/5/2016
DESIGNED	DAK
DRAWN	RPS
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-7
SHEET NO.	23/59

G:\PDX_Projects\15\1670 - Molalla\CAD\Sheets\15-1670-205-OR-CR DETS.dwg C-7 1/5/2016 8:32 AM DAK 20.0s (LMS Tech)



CURB RETURN DATA

#	DESCRIPTION	RADIUS	DELTA	LENGTH
9	BCR: N546738.00 E7666250.07 ECR: N546749.99 E7666243.31	9.00'	99°43'31"	15.66'
10	BCR: N546747.74 E7666303.79 ECR: N546743.60 E7666294.84	7.00'	89°31'25"	10.94'
11	BCR: N546797.51 E7666309.66 ECR: N546786.34 E7666316.11	10.00'	80°16'04"	14.01'
12	BCR: N546800.83 E7666260.61 ECR: N546808.11 E7666271.03	9.00'	89°49'28"	14.11'

LEGEND

- CONCRETE SIDEWALK
- TURNING SPACE (MINIMUM LEVEL AREA 48"x48"). FOR THE PURPOSES OF THIS APPLICATION, 1.5% MAXIMUM SLOPE (FOR DRAINAGE) IS CONSIDERED LEVEL
- TRUNCATED DOME DETECTABLE WARNING SURFACE, SEE ODOT STANDARD DRAWING RD759
- RAMP COUNTER SLOPE – 3.0% MAXIMUM
- RAMP COUNTER SLOPE – 4.5% MAXIMUM
- SLOPE 1.8% MAXIMUM (NORMAL SIDEWALK CROSS SLOPE)
- SLOPE 8.0% MAXIMUM

CURB RAMP NOTES:

1. ADJUST CURB RAMP LENGTH AS REQUIRED SO THAT RAMP SLOPE DOES NOT EXCEED 8.0%.
2. FOR CURB RAMP DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWINGS RD755 AND RD756.
3. PLACE TRUNCATED DOME DETECTABLE WARNING SURFACE IN THE LOWER 2 FEET ADJACENT TO TRAFFIC AT THROAT OF RAMP ONLY. FOR DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWINGS RD755 AND RD759.
4. TOOLED JOINTS ARE REQUIRED AT ALL CURB RAMP SLOPE BREAK LINES.
5. TRUNCATED DOME DETECTABLE WARNING PRODUCT SHALL BE ARMOR-TILE CAST-IN-PLACE SYSTEM, BLACK COLOR.
6. CURBS AT GUTTER LINE SHALL BE PER ODOT STANDARD DRAWING RD700.
7. WHERE RAMP SLOPES ON THIS SHEET DIFFER FROM SLOPES SHOWN ON STANDARD DRAWINGS, SLOPES SHOWN ON THIS SHEET SHALL TAKE PRECEDENCE.
8. MAXIMUM GRADE DIFFERENTIAL BETWEEN RAMP SLOPE AND RAMP CROSS SLOPE SHALL BE LESS THAN 11%.

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2075
FAX 541.741.3075

REGISTERED PROFESSIONAL ENGINEER 56075 OREGON RANDALL P. SMITH
RENEWS 6-30-16

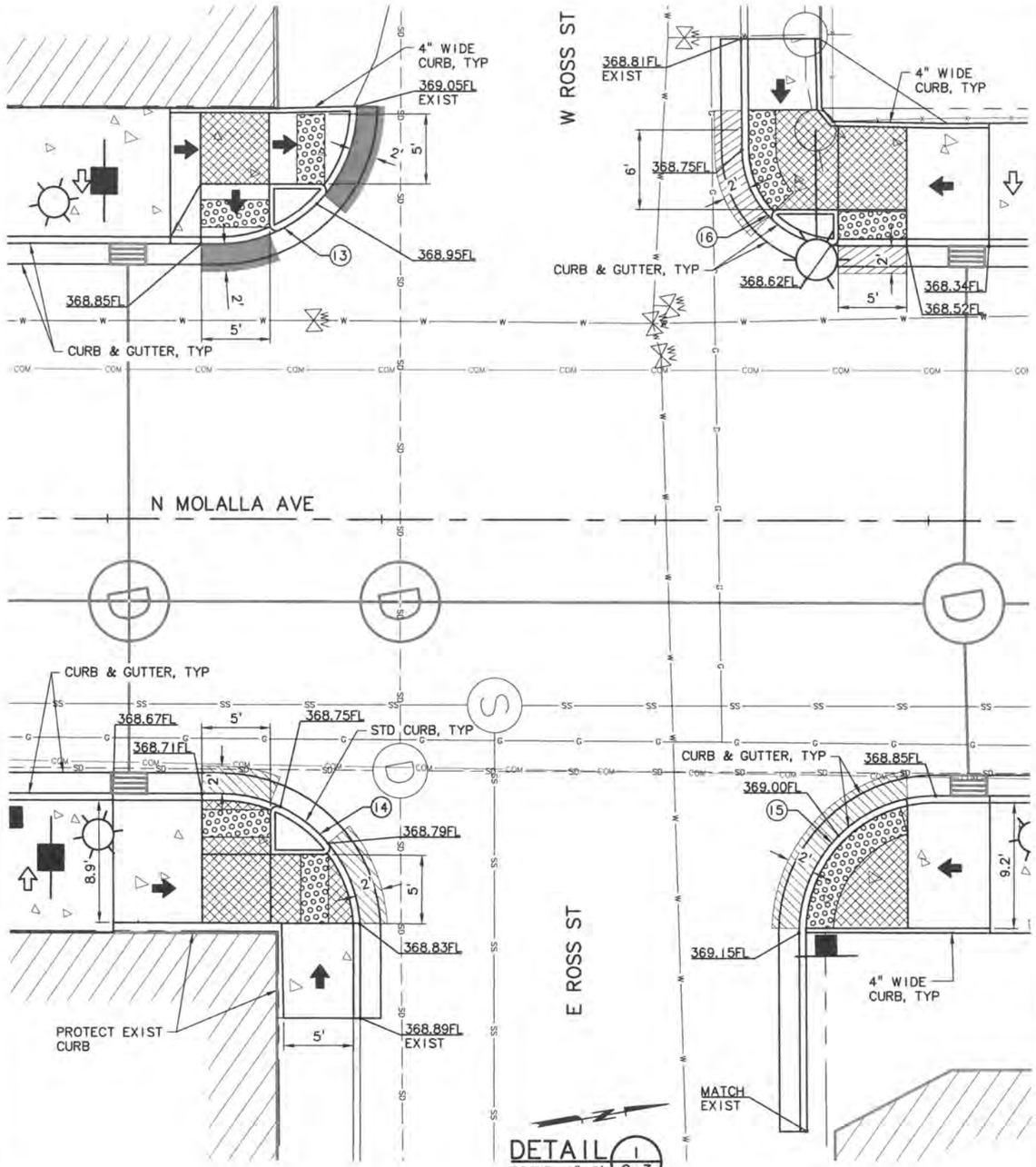
MOLALLA AVE IMPROVEMENTS
CURB RETURN DETAILS – 2

REV.:	DESCRIPTION:

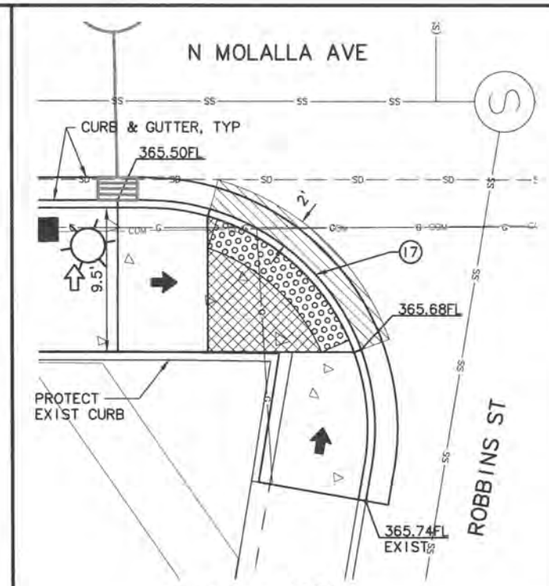
REVISIONS

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-8
SHEET NO.	24/59

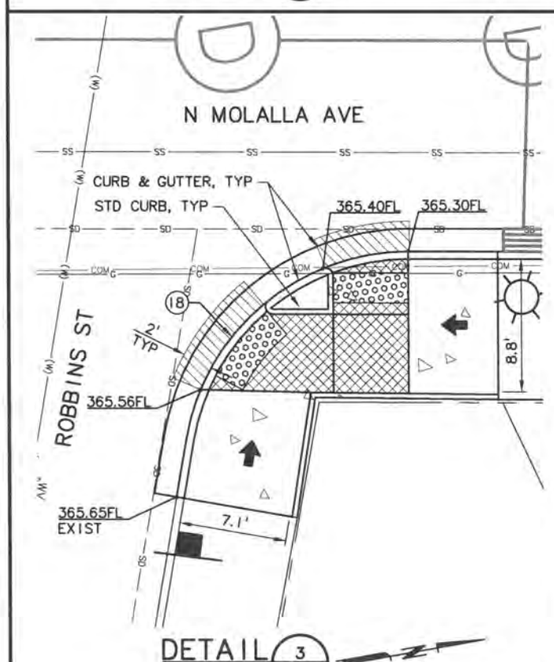
G:\PDX_Projects\15\1670 – Molalla\CAD\Sheets\15-1670-205-OR-CR DETS.dwg C-8 1/5/2016 8:32 AM DAK 20.0s (LMS Tech)



DETAIL 1 / C-3
SCALE: 1"=5'



DETAIL 2 / C-5
SCALE: 1"=5'



DETAIL 3 / C-5
SCALE: 1"=5'

CURB RETURN DATA

#	DESCRIPTION	RADIUS	DELTA	LENGTH
13	BCR: N547078.86 E7666319.43 ECR: N547090.47 E7666311.32	10.00'	90°10'34"	15.74'
14	BCR: N547080.05 E7666370.47 ECR: N547071.97 E7666358.83	10.00'	90°10'29"	15.74'
15	BCR: N547123.27 E7666368.00 ECR: N547111.66 E7666376.12	10.00'	90°10'32"	15.74'
16	BCR: N547117.64 E7666319.32 ECR: N547123.31 E7666327.38	7.00'	89°28'34"	10.93'
17	BCR: N547785.90 E7666504.30 ECR: N547774.44 E7666484.42	15.00'	99°48'39"	26.13'
18	BCR: N547839.73 E7666496.09 ECR: N547822.98 E7666505.76	15.00'	80°17'14"	21.02'

LEGEND

- CONCRETE SIDEWALK
- TURNING SPACE (MINIMUM LEVEL AREA 48"x48"). FOR THE PURPOSES OF THIS APPLICATION, 1.5% MAXIMUM SLOPE (FOR DRAINAGE) IS CONSIDERED LEVEL
- TRUNCATED DOME DETECTABLE WARNING SURFACE, SEE ODOT STANDARD DRAWING RD759
- RAMP COUNTER SLOPE – 3.0% MAXIMUM
- RAMP COUNTER SLOPE – 4.5% MAXIMUM
- SLOPE 1.8% MAXIMUM (NORMAL SIDEWALK CROSS SLOPE)
- SLOPE 8.0% MAXIMUM

CURB RAMP NOTES:

1. ADJUST CURB RAMP LENGTH AS REQUIRED SO THAT RAMP SLOPE DOES NOT EXCEED 8.0%.

2. FOR CURB RAMP DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWINGS RD755 AND RD756.

3. PLACE TRUNCATED DOME DETECTABLE WARNING SURFACE IN THE LOWER 2 FEET ADJACENT TO TRAFFIC AT THROAT OF RAMP ONLY. FOR DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWINGS RD755 AND RD759.

4. TOOLED JOINTS ARE REQUIRED AT ALL CURB RAMP SLOPE BREAK LINES.

5. TRUNCATED DOME DETECTABLE WARNING PRODUCT SHALL BE ARMOR-TILE CAST-IN-PLACE SYSTEM, BLACK COLOR.

6. CURBS AT GUTTER LINE SHALL BE PER ODOT STANDARD DRAWING RD700.

7. WHERE RAMP SLOPES ON THIS SHEET DIFFER FROM SLOPES SHOWN ON STANDARD DRAWINGS, SLOPES SHOWN ON THIS SHEET SHALL TAKE PRECEDENCE.

8. MAXIMUM GRADE DIFFERENTIAL BETWEEN RAMP SLOPE AND RAMP CROSS SLOPE SHALL BE LESS THAN 11%.

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777 High Street, No. 200
Eugene, Oregon 97401
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FAX 541.741.3075

REGISTERED PROFESSIONAL ENGINEER
OREGON
RANDALL P. SMITH
RENEWS 12-30-16

MOLALLA AVE IMPROVEMENTS
CURB RETURN DETAILS – 3

REVISIONS	
REV.:	DESCRIPTION:

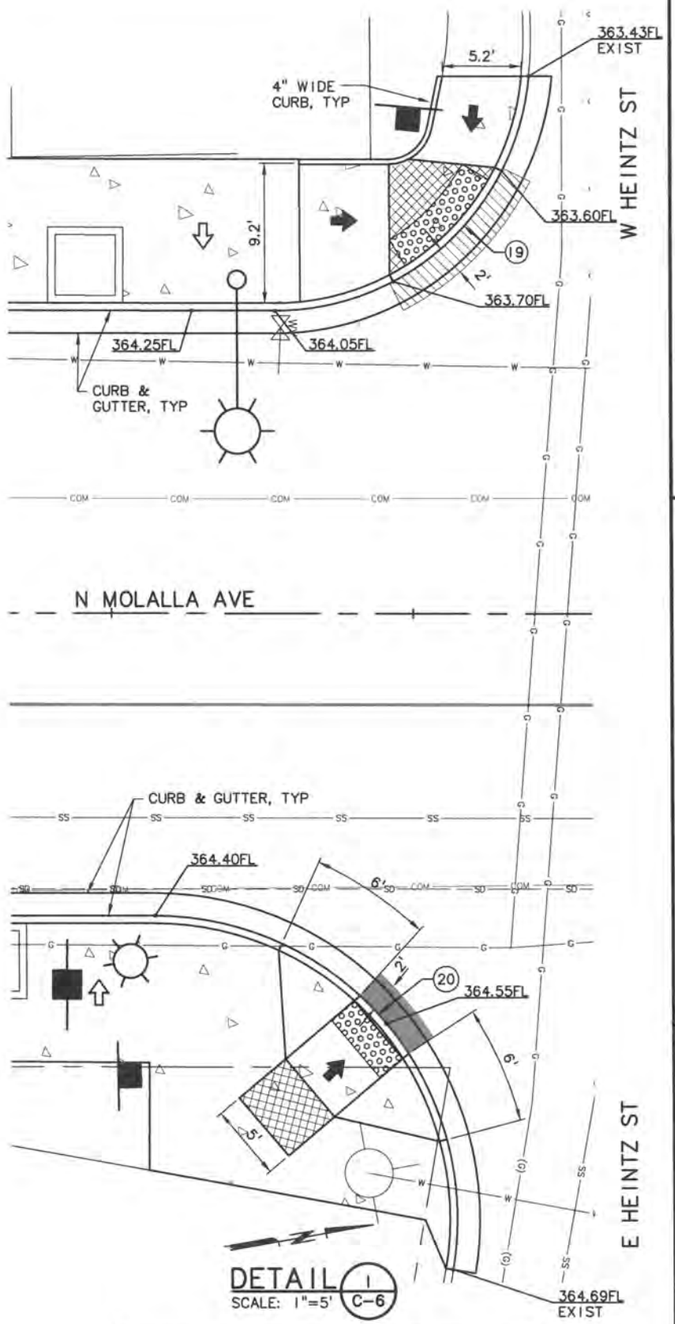
DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL

JOB NO.: 15-1670.206

DRAWING NAME: C-9

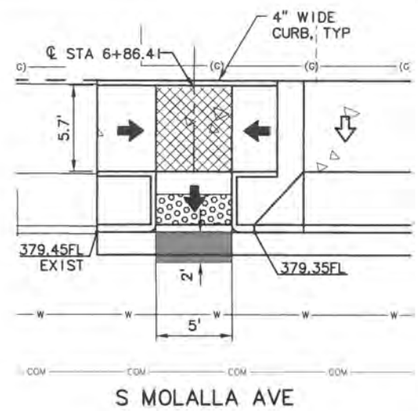
SHEET NO. 25/59

G:\PDX_Projects\15\1670 – Molalla\CAD\Sheets\15-1670-205-DR-CR DETS.dwg C-9 1/5/2016 8:32 AM DAK 20.0s (LMS Tech)

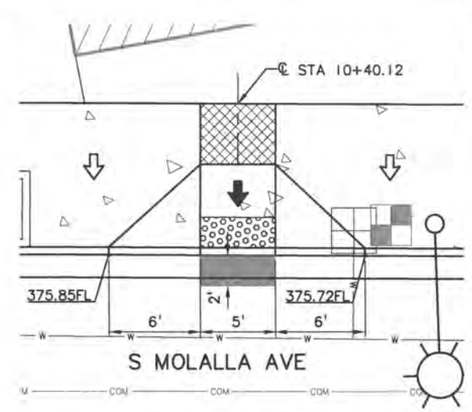


DETAIL 1 C-6
SCALE: 1"=5'

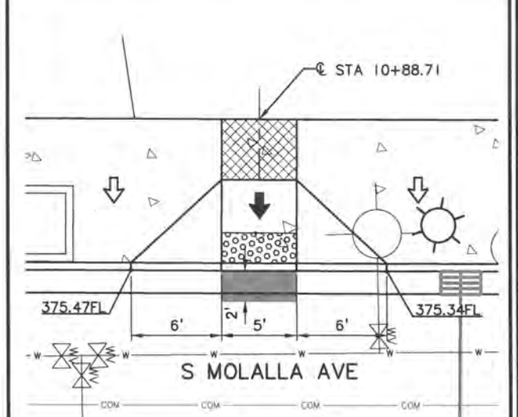
CURB RETURN DATA				
#	DESCRIPTION	RADIUS	DELTA	LENGTH
19	BCR: N548085.51 E7666499.40 ECR: N548104.90 E7666487.12	17.00'	84°55'01"	25.20'
20	BCR: N548085.90 E7666563.86 ECR: N548070.61 E7666537.37	20.00'	99°45'01"	34.82'



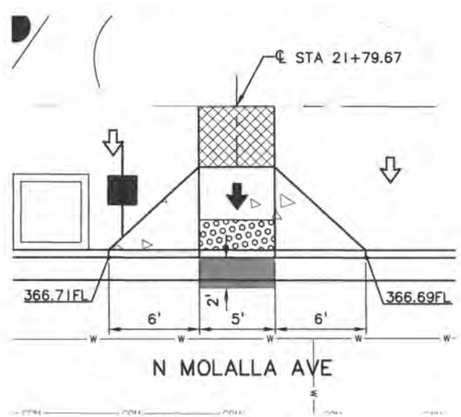
DETAIL 2 C-2
SCALE: 1"=5'



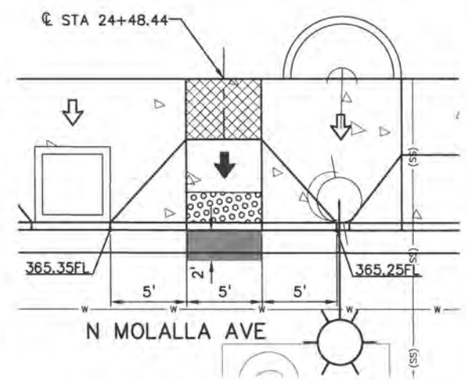
DETAIL 3 C-3
SCALE: 1"=5'



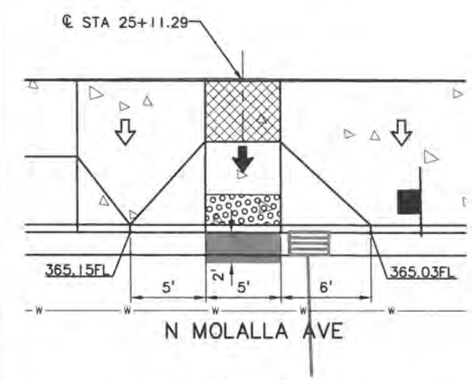
DETAIL 4 C-3
SCALE: 1"=5'



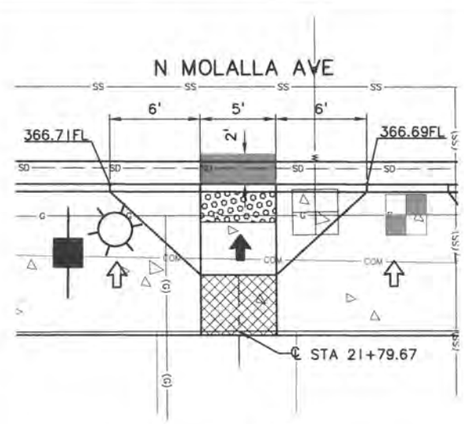
DETAIL 5 C-5
SCALE: 1"=5'



DETAIL 6 C-5
SCALE: 1"=5'



DETAIL 7 C-5
SCALE: 1"=5'



DETAIL 8 C-5
SCALE: 1"=5'

LEGEND

- CONCRETE SIDEWALK
- TURNING SPACE (MINIMUM LEVEL AREA 48"x48"). FOR THE PURPOSES OF THIS APPLICATION, 1.5% MAXIMUM SLOPE (FOR DRAINAGE) IS CONSIDERED LEVEL
- TRUNCATED DOME DETECTABLE WARNING SURFACE, SEE ODOT STANDARD DRAWING RD759
- RAMP COUNTER SLOPE – 3.0% MAXIMUM
- RAMP COUNTER SLOPE – 4.5% MAXIMUM
- SLOPE 1.8% MAXIMUM (NORMAL SIDEWALK CROSS SLOPE)
- SLOPE 8.0% MAXIMUM

CURB RAMP NOTES:

1. ADJUST CURB RAMP LENGTH AS REQUIRED SO THAT RAMP SLOPE DOES NOT EXCEED 8.0%.
2. FOR CURB RAMP DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWINGS RD755 AND RD756.
3. PLACE TRUNCATED DOME DETECTABLE WARNING SURFACE IN THE LOWER 2 FEET ADJACENT TO TRAFFIC AT THROAT OF RAMP ONLY. FOR DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWINGS RD755 AND RD759.
4. TOOLED JOINTS ARE REQUIRED AT ALL CURB RAMP SLOPE BREAK LINES.
5. TRUNCATED DOME DETECTABLE WARNING PRODUCT SHALL BE ARMOR-TILE CAST-IN-PLACE SYSTEM, BLACK COLOR.
6. CURBS AT GUTTER LINE SHALL BE PER ODOT STANDARD DRAWING RD700.
7. WHERE RAMP SLOPES ON THIS SHEET DIFFER FROM SLOPES SHOWN ON STANDARD DRAWINGS, SLOPES SHOWN ON THIS SHEET SHALL TAKE PRECEDENCE.
8. MAXIMUM GRADE DIFFERENTIAL BETWEEN RAMP SLOPE AND RAMP CROSS SLOPE SHALL BE LESS THAN 11%.

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REGISTERED PROFESSIONAL ENGINEER
OREGON
RANDALL P. SMITH
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
CURB RETURN AND RAMP DETAILS

REVISIONS
REV.: DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL

JOB NO.: 15-1670.206

DRAWING NAME: C-10

SHEET NO. 26/59

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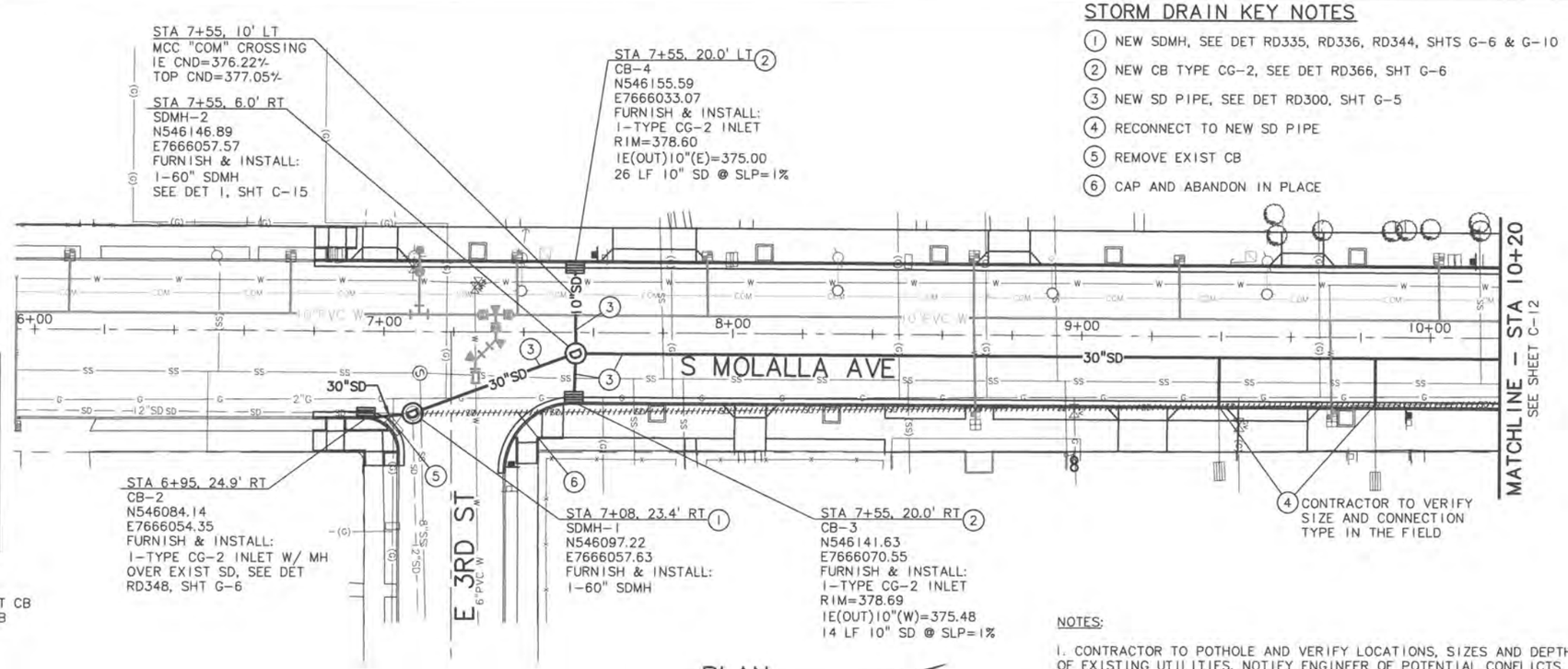
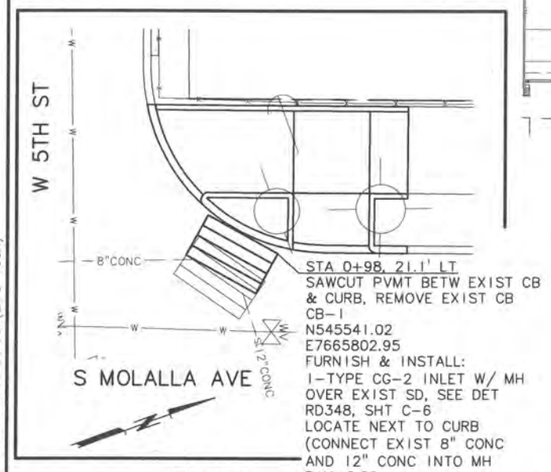
STORM DRAIN KEY NOTES

1. NEW SDMH, SEE DET RD335, RD336, RD344, SHTS G-6 & G-10
2. NEW CB TYPE CG-2, SEE DET RD366, SHT G-6
3. NEW SD PIPE, SEE DET RD300, SHT G-5
4. RECONNECT TO NEW SD PIPE
5. REMOVE EXIST CB
6. CAP AND ABANDON IN PLACE



PLAN
SCALE: 1"=20'



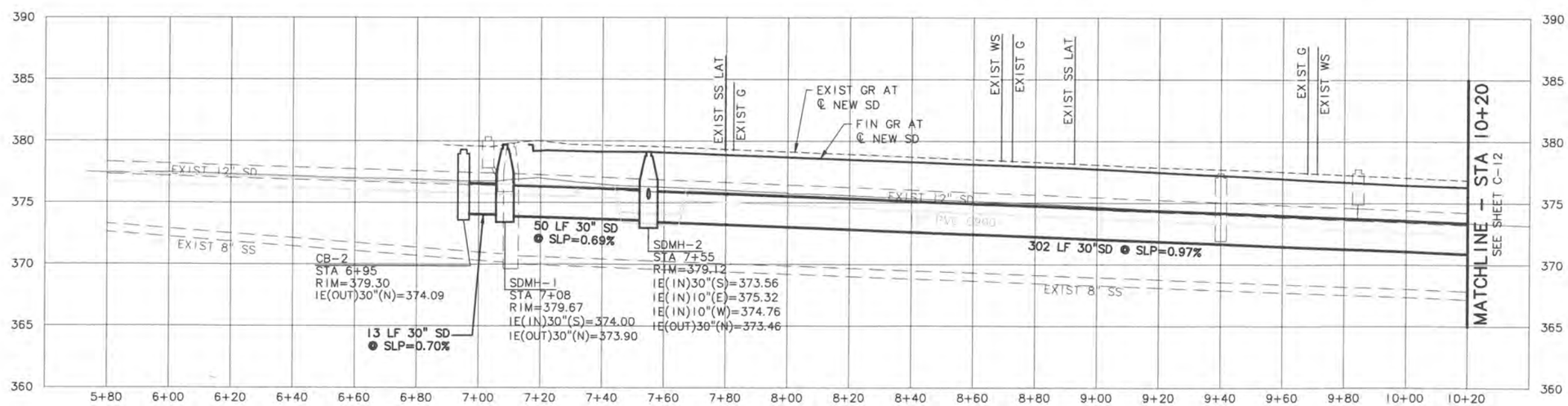
PLAN
SCALE: 1"=5'

NOTES:

1. CONTRACTOR TO POTHOLE AND VERIFY LOCATIONS, SIZES AND DEPTHS OF EXISTING UTILITIES. NOTIFY ENGINEER OF POTENTIAL CONFLICTS 72-HOURS IN ADVANCE OF UTILITY INSTALLATION TO ALLOW FOR CHANGES IN ALIGNMENT OR GRADE.

2. CONTRACTOR TO RECONNECT EXISTING STORM SEWER LATERALS INTO PROPOSED STORM SEWER. WHEN EXISTING STORM LATERALS ARE DISCONNECTED FROM STORM SEWER, CONTRACTOR TO OBSERVE WHETHER EXISTING LATERALS COULD BE SANITARY SEWER LATERALS. NOTIFY CITY AND ENGINEER IF ANY DISCONNECTED STORM LATERALS APPEAR TO BE SANITARY SEWER LATERALS CROSS CONNECTED INTO STORM SEWER. LATERALS ARE TO BE CONNECTED INTO SANITARY SEWER IF DETERMINED TO BE SANITARY SEWER LATERALS. ALL OTHER LATERALS SHALL BE RECONNECTED INTO PROPOSED STORM SEWER.

3. DURING CONSTRUCTION OF PROPOSED STORM SEWER, EXISTING 12" - 15" CONCRETE STORM SEWER TO BE ABANDONED ALONG ALIGNMENT OF PROPOSED STORM SEWER.



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

Murray, Smith & Associates, Inc.
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777 High Street, No. 200
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PHONE 541.741.2575
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REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 21, 1989
DAVID A. KNAPP
RENEWS 12-31-16

MOLALLA AVE IMPROVEMENTS
STORM & SEWER PLAN & PROFILE
STA 5+80 TO STA 10+20

REV.:	DESCRIPTION:

REVISIONS

DATE	1/5/2016
DESIGNED	DAM
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-11
SHEET NO.	27/59

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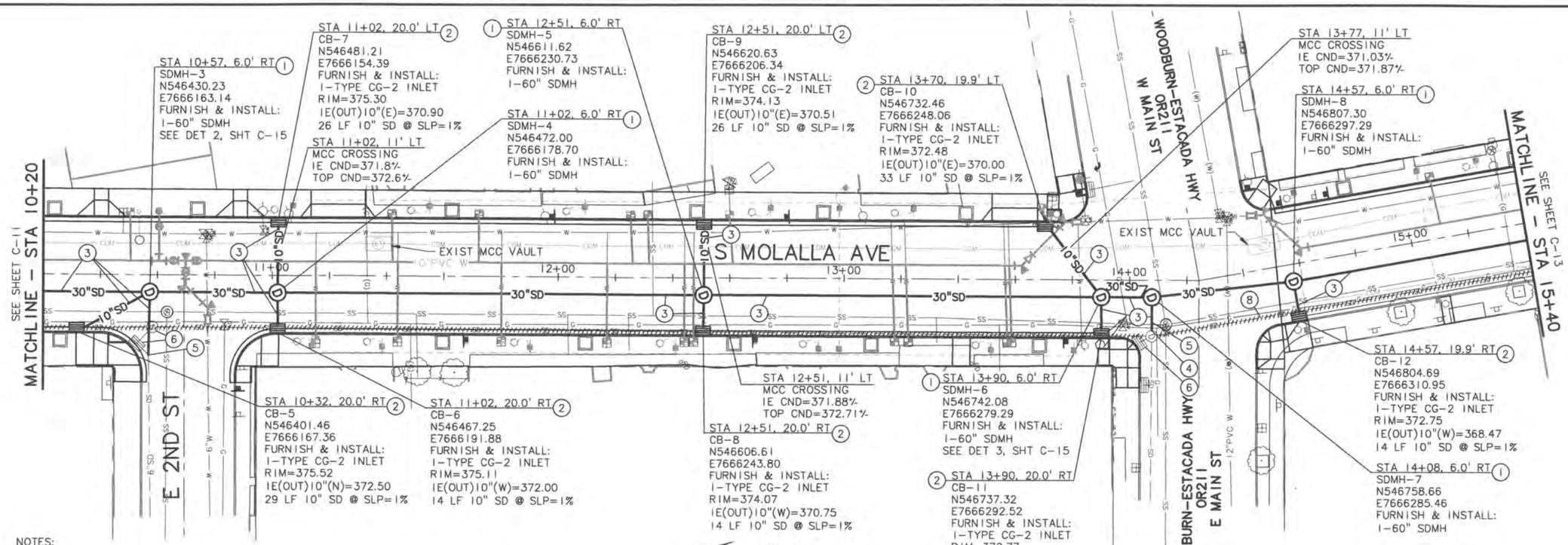


PLAN

SCALE: 1"=20'

NOTES:

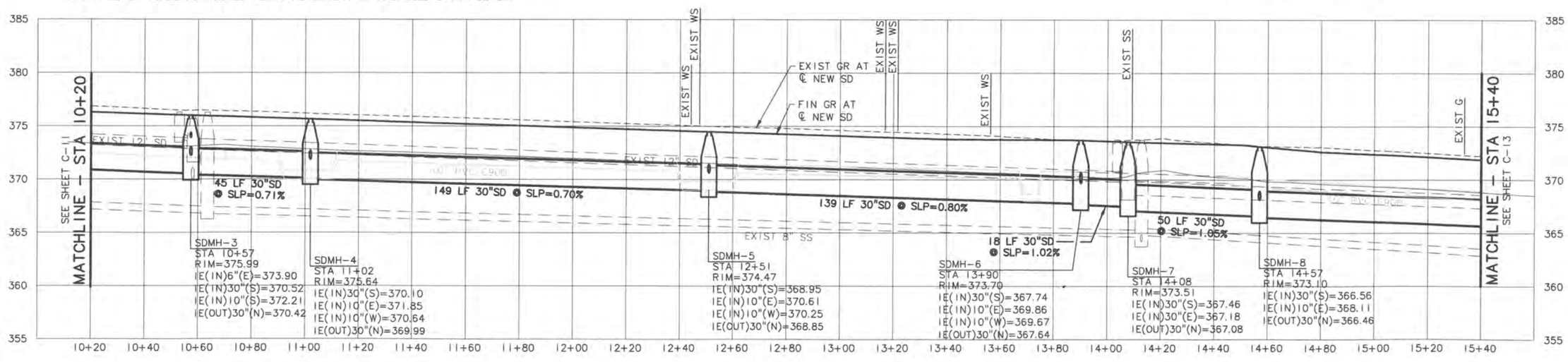
1. CONTRACTOR TO POTHOLE AND VERIFY LOCATIONS, SIZES AND DEPTHS OF EXISTING UTILITIES. NOTIFY ENGINEER OF POTENTIAL CONFLICTS 72-HOURS IN ADVANCE OF UTILITY INSTALLATION TO ALLOW FOR CHANGES IN ALIGNMENT OR GRADE.

2. CONTRACTOR TO RECONNECT EXISTING STORM SEWER LATERALS INTO PROPOSED STORM SEWER. WHEN EXISTING STORM LATERALS ARE DISCONNECTED FROM STORM SEWER, CONTRACTOR TO OBSERVE WHETHER EXISTING LATERALS COULD BE SANITARY SEWER LATERALS. NOTIFY CITY AND ENGINEER IF ANY DISCONNECTED STORM LATERALS APPEAR TO BE SANITARY SEWER LATERALS CROSS CONNECTED INTO STORM SEWER. LATERALS ARE TO BE CONNECTED INTO SANITARY SEWER IF DETERMINED TO BE SANITARY SEWER LATERALS. ALL OTHER LATERALS SHALL BE RECONNECTED INTO PROPOSED STORM SEWER.

3. DURING CONSTRUCTION OF PROPOSED STORM SEWER, EXISTING 12" - 15" CONCRETE STORM SEWER TO BE ABANDONED ALONG ALIGNMENT OF PROPOSED STORM SEWER.

STORM DRAIN KEY NOTES

1. NEW SDMH, SEE DET RD335, RD336, RD344, SHT G-6 AND SHT G-10
2. NEW CB TYPE CG-2, SEE DET RD366, SHT G-6
3. NEW SD PIPE, SEE DET RD300, SHT G-5
4. RECONNECT TO EXIST STRUCTURE, SEE DET RD339, SHT G-10
5. RECONNECT TO NEW SDMH
6. REMOVE EXIST STRUCTURES



PROFILE

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

Murray, Smith & Associates, Inc.
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777 High Street, No. 200
Eugene, Oregon 97401
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FAX 541.744.3075

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 19, 2005
DAVID A. MARTIN
RENEWS 12-31-16

MOLALLA AVE IMPROVEMENTS

STORM & SEWER PLAN & PROFILE
STA 10+20 TO STA 15+40

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	DAM
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-12
SHEET NO.	28/59

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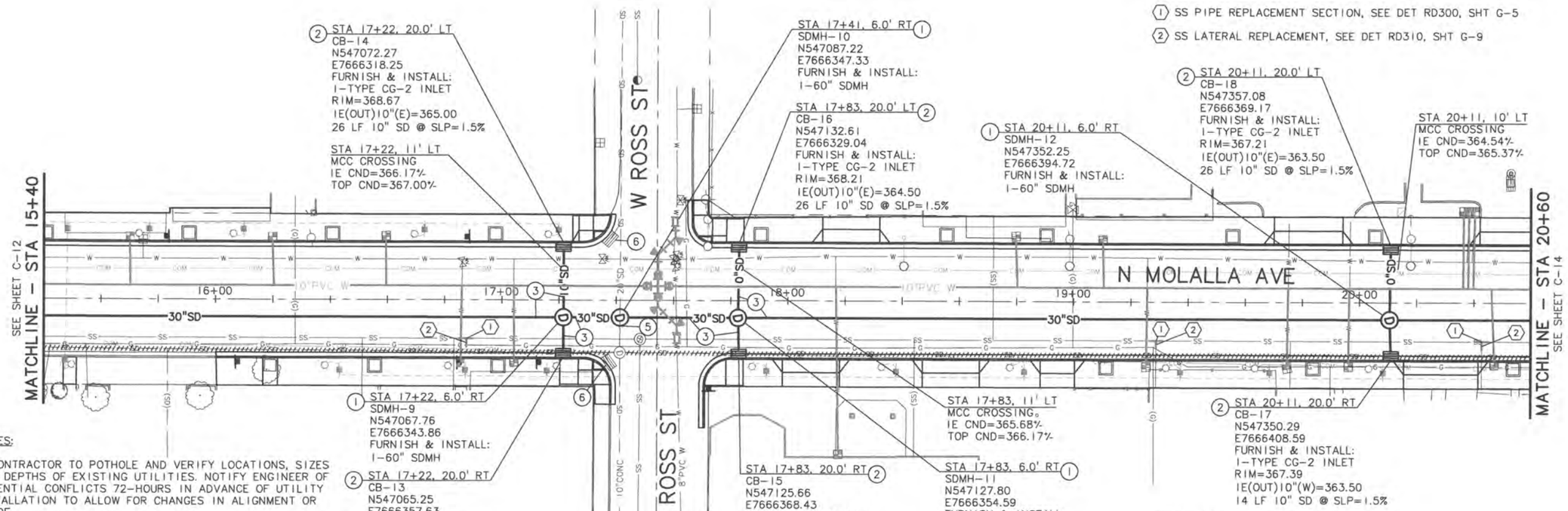
SANITARY SEWER KEY NOTES

1. SS PIPE REPLACEMENT SECTION, SEE DET RD300, SHT G-5
2. SS LATERAL REPLACEMENT, SEE DET RD310, SHT G-9



PLAN

SCALE: 1"=20'

NOTES:

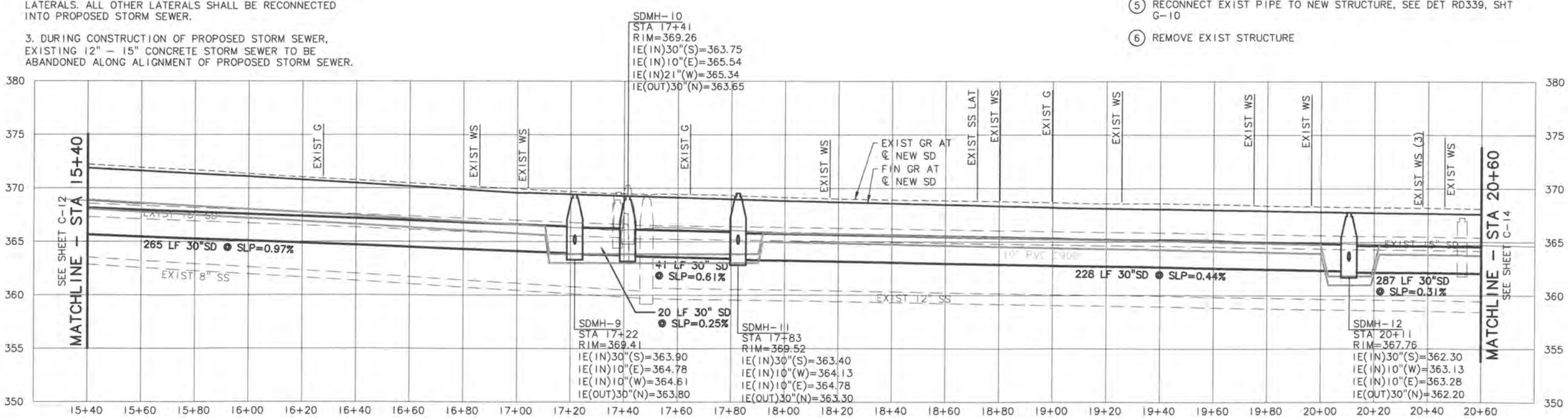
1. CONTRACTOR TO POTHOLE AND VERIFY LOCATIONS, SIZES AND DEPTHS OF EXISTING UTILITIES. NOTIFY ENGINEER OF POTENTIAL CONFLICTS 72-HOURS IN ADVANCE OF UTILITY INSTALLATION TO ALLOW FOR CHANGES IN ALIGNMENT OR GRADE.

2. CONTRACTOR TO RECONNECT EXISTING STORM SEWER LATERALS INTO PROPOSED STORM SEWER. WHEN EXISTING STORM LATERALS ARE DISCONNECTED FROM STORM SEWER, CONTRACTOR TO OBSERVE WHETHER EXISTING LATERALS COULD BE SANITARY SEWER LATERALS. NOTIFY CITY AND ENGINEER IF ANY DISCONNECTED STORM LATERALS APPEAR TO BE SANITARY SEWER LATERALS CROSS CONNECTED INTO STORM SEWER. LATERALS ARE TO BE CONNECTED INTO SANITARY SEWER IF DETERMINED TO BE SANITARY SEWER LATERALS. ALL OTHER LATERALS SHALL BE RECONNECTED INTO PROPOSED STORM SEWER.

3. DURING CONSTRUCTION OF PROPOSED STORM SEWER, EXISTING 12" - 15" CONCRETE STORM SEWER TO BE ABANDONED ALONG ALIGNMENT OF PROPOSED STORM SEWER.

STORM DRAIN KEY NOTES

1. NEW SDMH, SEE DET RD335, RD336, RD344, SHT G-6 AND SHT G-10
2. NEW CB TYPE CG-2, SEE DET RD366, SHT G-6
3. NEW SD PIPE, SEE DET RD300, SHT G-5
4. NOT USED
5. RECONNECT EXIST PIPE TO NEW STRUCTURE, SEE DET RD339, SHT G-10
6. REMOVE EXIST STRUCTURE



PROFILE

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

Murray, Smith & Associates, Inc.
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777 High Street, No. 200
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FAX 541.744.3075

REGISTERED PROFESSIONAL ENGINEER
OREGON
D. PAINE A. MAYNARD
RENEWS 12-31-16

MOLALLA AVE IMPROVEMENTS
STORM & SEWER PLAN & PROFILE
STA 15+40 TO STA 20+60

REV.:	DESCRIPTION:

REVISIONS

DATE	1/5/2016
DESIGNED	DAM
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-13
SHEET NO.	29/59

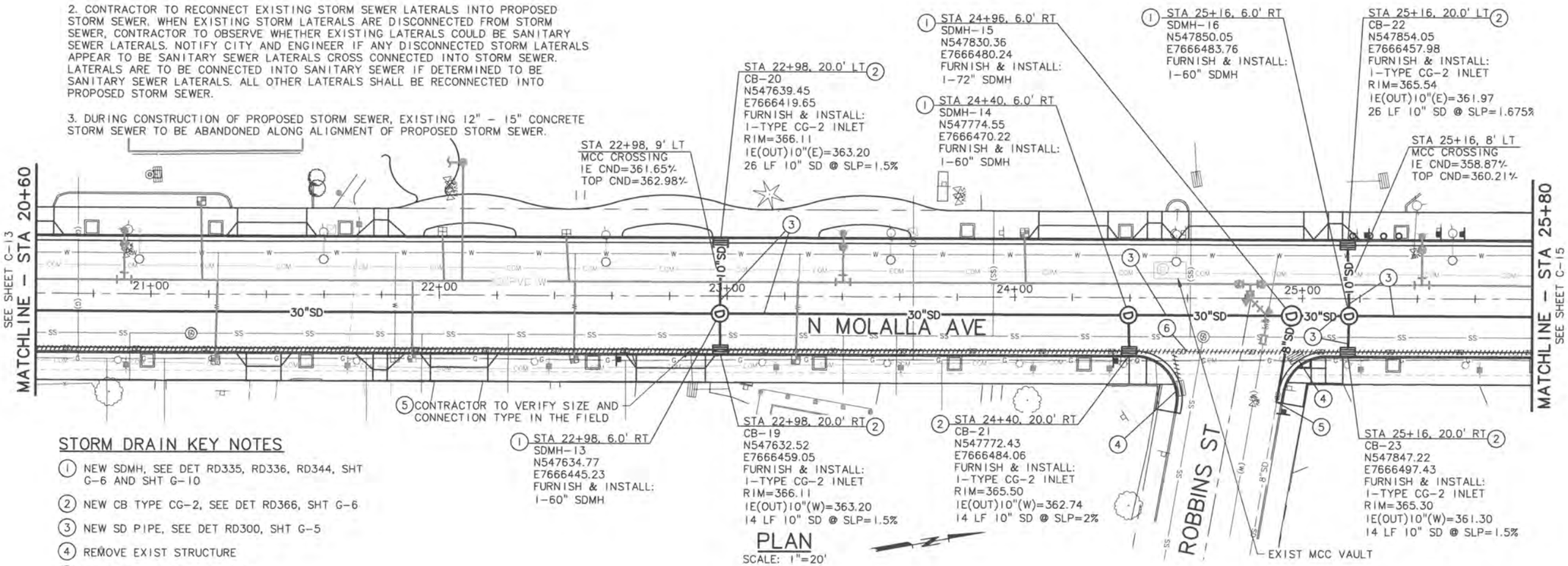
G:\PDX_Projects\15\1670 - Molalla\CAD\Sheets\15-1670-205-OR-UTPP.dwg C-13 1/5/2016 1:07 PM DAK 20.0s (LMS Tech)

NOTES:

1. CONTRACTOR TO POTHOLE AND VERIFY LOCATIONS, SIZES AND DEPTHS OF EXISTING UTILITIES. NOTIFY ENGINEER OF POTENTIAL CONFLICTS 72-HOURS IN ADVANCE OF UTILITY INSTALLATION TO ALLOW FOR CHANGES IN ALIGNMENT OR GRADE.

2. CONTRACTOR TO RECONNECT EXISTING STORM SEWER LATERALS INTO PROPOSED STORM SEWER. WHEN EXISTING STORM LATERALS ARE DISCONNECTED FROM STORM SEWER, CONTRACTOR TO OBSERVE WHETHER EXISTING LATERALS COULD BE SANITARY SEWER LATERALS. NOTIFY CITY AND ENGINEER IF ANY DISCONNECTED STORM LATERALS APPEAR TO BE SANITARY SEWER LATERALS CROSS CONNECTED INTO STORM SEWER. LATERALS ARE TO BE CONNECTED INTO SANITARY SEWER IF DETERMINED TO BE SANITARY SEWER LATERALS. ALL OTHER LATERALS SHALL BE RECONNECTED INTO PROPOSED STORM SEWER.

3. DURING CONSTRUCTION OF PROPOSED STORM SEWER, EXISTING 12" - 15" CONCRETE STORM SEWER TO BE ABANDONED ALONG ALIGNMENT OF PROPOSED STORM SEWER.

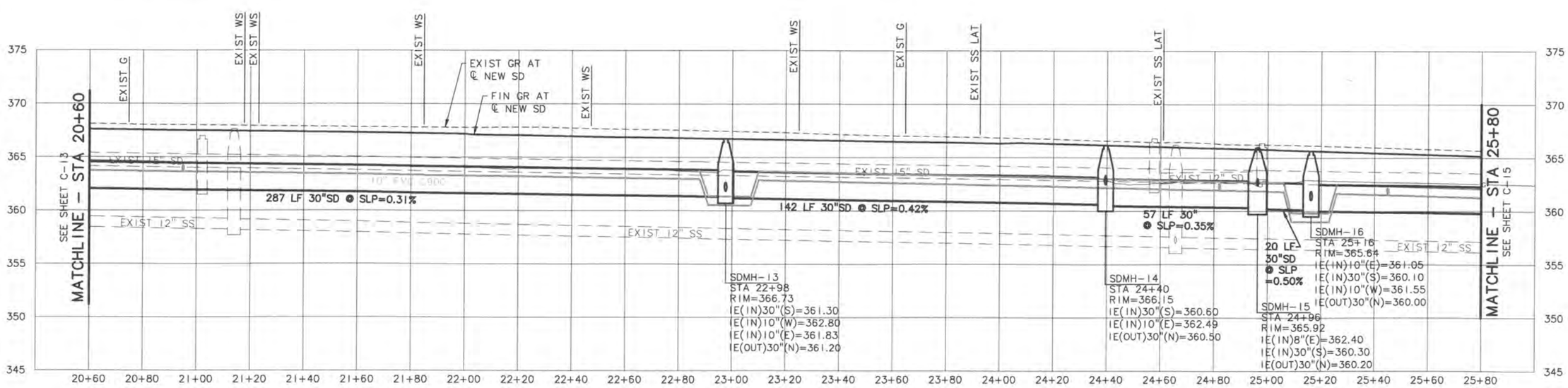


STORM DRAIN KEY NOTES

1. NEW SDMH, SEE DET RD335, RD336, RD344, SHT G-6 AND SHT G-10
2. NEW CB TYPE CG-2, SEE DET RD366, SHT G-6
3. NEW SD PIPE, SEE DET RD300, SHT G-5
4. REMOVE EXIST STRUCTURE
5. RECONNECT TO NEW SD PIPE
6. CAP AND ABANDON IN PLACE

PLAN

SCALE: 1"=20'



PROFILE

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

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2075
FAX 541.744.3075

REGISTERED PROFESSIONAL ENGINEER 28697 OREGON JULY 19, 1988 DAMIAN A. MARSH

RENEWS 12-31-16

MOLALLA AVE IMPROVEMENTS
STORM & SEWER PLAN & PROFILE
STA 20+60 TO STA 25+80

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	DAM
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-14
SHEET NO.	30/59

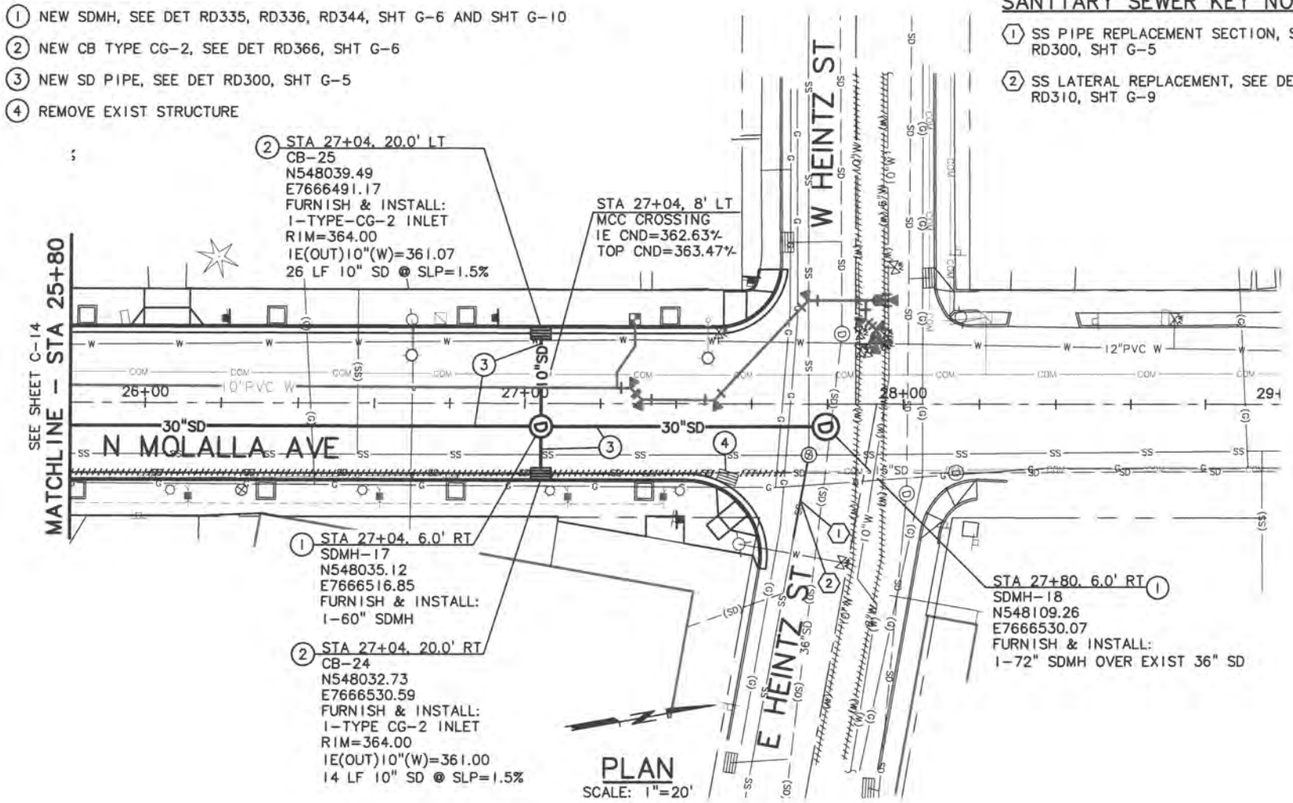
G:\PDX_Projects\15\1670 - Malalla\CAD\Sheets\15-1670-205-OR-UTPP.dwg C-14 1/5/2016 1:07 PM DAK 20.0s (LMS Tech)

STORM DRAIN KEY NOTES

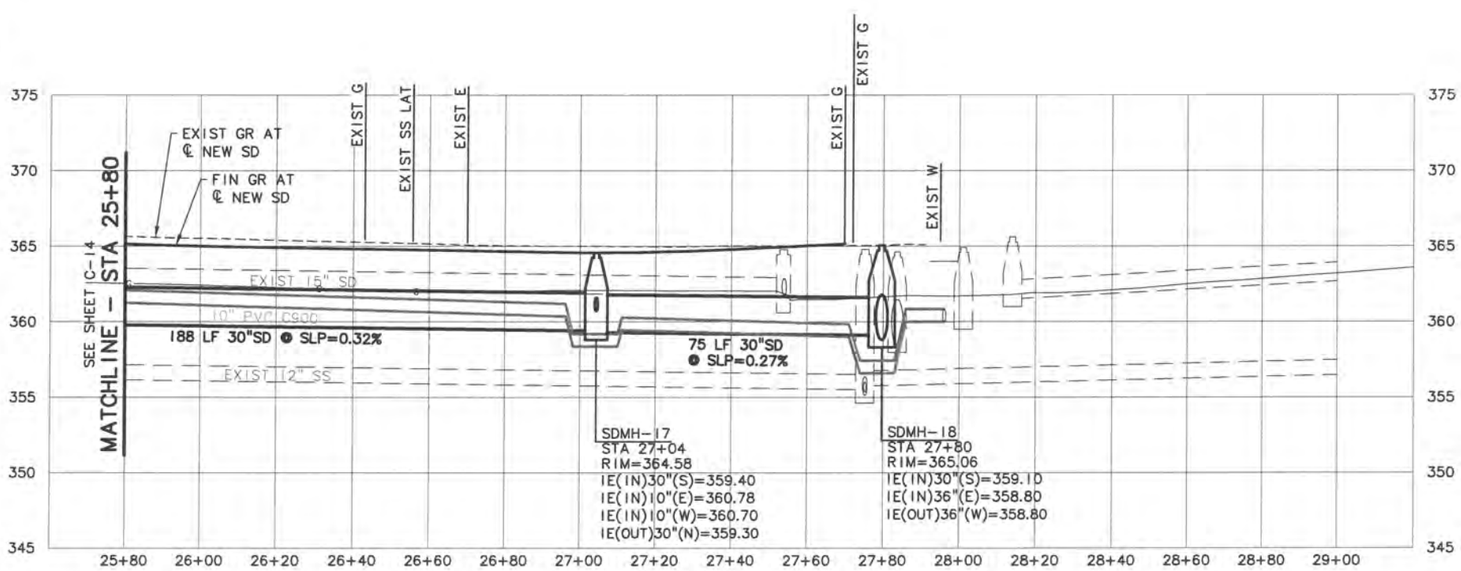
1. NEW SDMH, SEE DET RD335, RD336, RD344, SHT G-6 AND SHT G-10
2. NEW CB TYPE CG-2, SEE DET RD366, SHT G-6
3. NEW SD PIPE, SEE DET RD300, SHT G-5
4. REMOVE EXIST STRUCTURE

SANITARY SEWER KEY NOTES

1. SS PIPE REPLACEMENT SECTION, SEE DET RD300, SHT G-5
2. SS LATERAL REPLACEMENT, SEE DET RD310, SHT G-9



PLAN
SCALE: 1"=20'



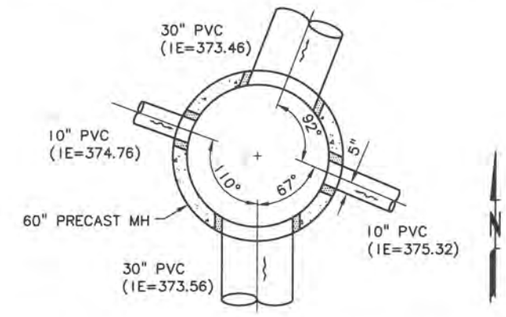
PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

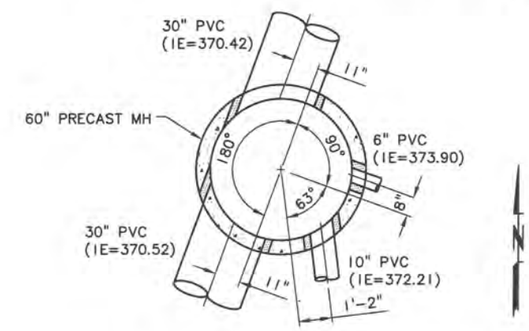
1. CONTRACTOR TO POTHOLE AND VERIFY LOCATIONS, SIZES AND DEPTHS OF EXISTING UTILITIES. NOTIFY ENGINEER OF POTENTIAL CONFLICTS 72-HOURS IN ADVANCE OF UTILITY INSTALLATION TO ALLOW FOR CHANGES IN ALIGNMENT OR GRADE.

2. CONTRACTOR TO RECONNECT EXISTING STORM SEWER LATERALS INTO PROPOSED STORM SEWER. WHEN EXISTING STORM LATERALS ARE DISCONNECTED FROM STORM SEWER, CONTRACTOR TO OBSERVE WHETHER EXISTING LATERALS COULD BE SANITARY SEWER LATERALS. NOTIFY CITY AND ENGINEER IF ANY DISCONNECTED STORM LATERALS APPEAR TO BE SANITARY SEWER LATERALS CROSS CONNECTED INTO STORM SEWER. LATERALS ARE TO BE CONNECTED INTO SANITARY SEWER IF DETERMINED TO BE SANITARY SEWER LATERALS. ALL OTHER LATERALS SHALL BE RECONNECTED INTO PROPOSED STORM SEWER.

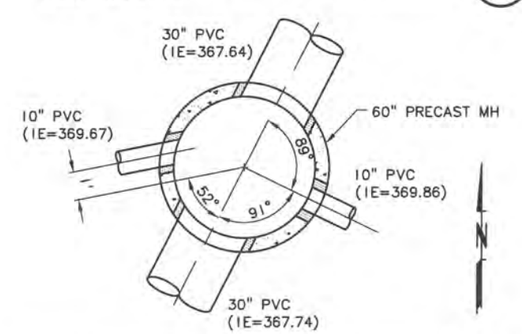
3. DURING CONSTRUCTION OF PROPOSED STORM SEWER, EXISTING 12" – 15" CONCRETE STORM SEWER TO BE ABANDONED ALONG ALIGNMENT OF PROPOSED STORM SEWER.



SDMH-2 DETAIL (SHEET 27) 1/–
SCALE: 3/8"=1'-0"



SDMH-3 DETAIL (SHEET 28) 2/–
SCALE: 3/8"=1'-0"



SDMH-6 DETAIL (SHEET 28) 3/–
SCALE: 3/8"=1'-0"

Murray, Smith & Associates, Inc.
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777 High Street, No. 200
Eugene, Oregon 97401
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FAX 541.744.5975

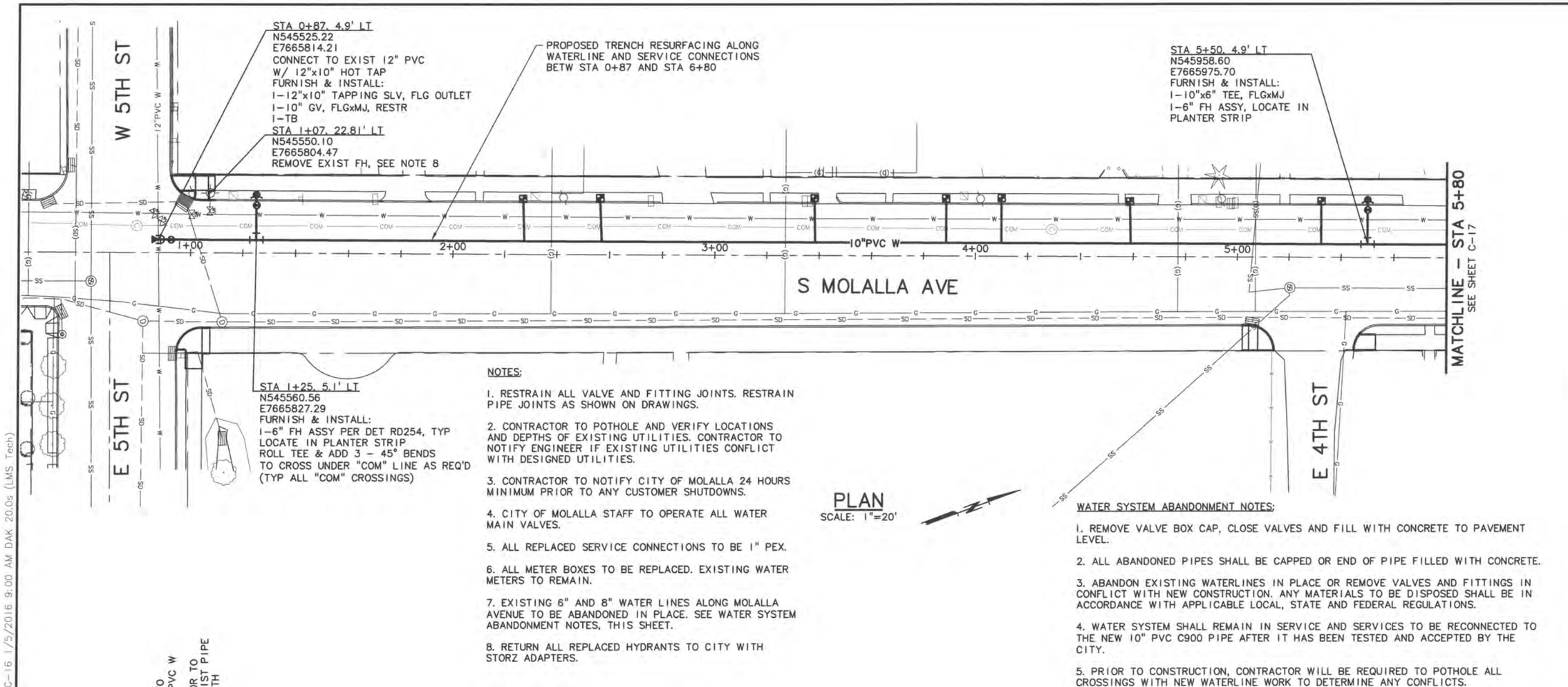
REGISTERED PROFESSIONAL ENGINEER
DAPHNE A. MAYS
RENEWS 12-31-16

MOLALLA AVE IMPROVEMENTS
STORM & SEWER PLAN & PROFILE
STA 25+80 TO STA 29+00

REVISIONS
REV.: DESCRIPTION:

DATE	1/5/2016
DESIGNED	DAM
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-15
SHEET NO.	31/59

G:\PDX_Projects\15\1670 - Molalla\CAD\Sheets\15-1670-205-OR-UTPP.dwg C-15 1/5/2016 9:00 AM DAK 20.0s (LMS Tech)



PLAN

SCALE: 1"=20'

NOTES:

1. RESTRAIN ALL VALVE AND FITTING JOINTS. RESTRAIN PIPE JOINTS AS SHOWN ON DRAWINGS.

2. CONTRACTOR TO POTHOLE AND VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES. CONTRACTOR TO NOTIFY ENGINEER IF EXISTING UTILITIES CONFLICT WITH DESIGNED UTILITIES.

3. CONTRACTOR TO NOTIFY CITY OF MOLALLA 24 HOURS MINIMUM PRIOR TO ANY CUSTOMER SHUTDOWNS.

4. CITY OF MOLALLA STAFF TO OPERATE ALL WATER MAIN VALVES.

5. ALL REPLACED SERVICE CONNECTIONS TO BE 1" PEX.

6. ALL METER BOXES TO BE REPLACED. EXISTING WATER METERS TO REMAIN.

7. EXISTING 6" AND 8" WATER LINES ALONG MOLALLA AVENUE TO BE ABANDONED IN PLACE. SEE WATER SYSTEM ABANDONMENT NOTES, THIS SHEET.

8. RETURN ALL REPLACED HYDRANTS TO CITY WITH STORZ ADAPTERS.

WATER SYSTEM ABANDONMENT NOTES:

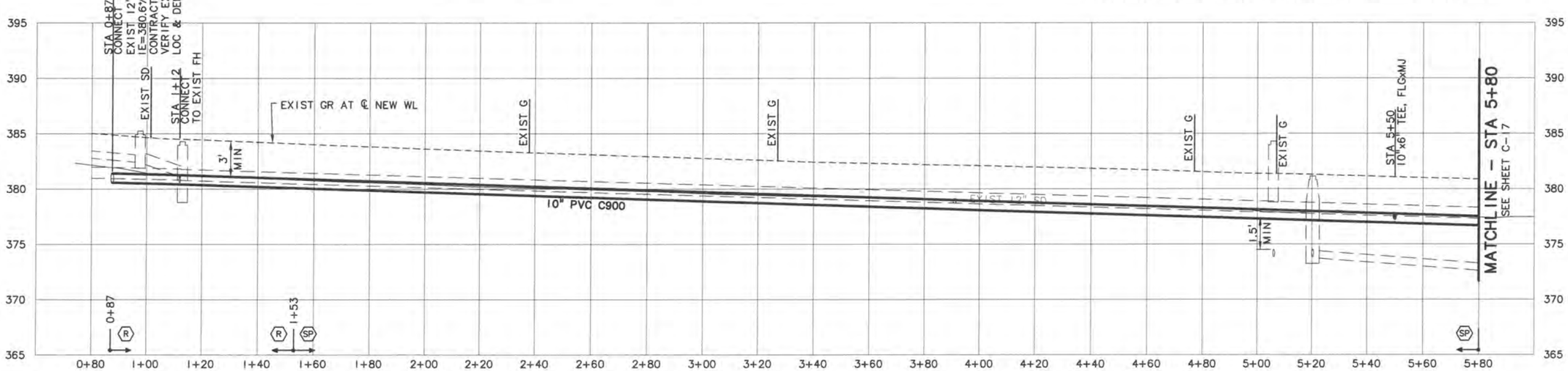
1. REMOVE VALVE BOX CAP, CLOSE VALVES AND FILL WITH CONCRETE TO PAVEMENT LEVEL.

2. ALL ABANDONED PIPES SHALL BE CAPPED OR END OF PIPE FILLED WITH CONCRETE.

3. ABANDON EXISTING WATERLINES IN PLACE OR REMOVE VALVES AND FITTINGS IN CONFLICT WITH NEW CONSTRUCTION. ANY MATERIALS TO BE DISPOSED SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

4. WATER SYSTEM SHALL REMAIN IN SERVICE AND SERVICES TO BE RECONNECTED TO THE NEW 10" PVC C900 PIPE AFTER IT HAS BEEN TESTED AND ACCEPTED BY THE CITY.

5. PRIOR TO CONSTRUCTION, CONTRACTOR WILL BE REQUIRED TO POTHOLE ALL CROSSINGS WITH NEW WATERLINE WORK TO DETERMINE ANY CONFLICTS.



PROFILE

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

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.5975
FAX 541.741.5975

REGISTERED PROFESSIONAL ENGINEER 78907 DAPHNE A. MARTIN OREGON JULY 28, 2015 RENEWS 12-31-16

MOLALLA AVE IMPROVEMENTS

WATERLINE PLAN & PROFILE STA 1+00 TO STA 5+80

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	DAM
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-16
SHEET NO.	32/59

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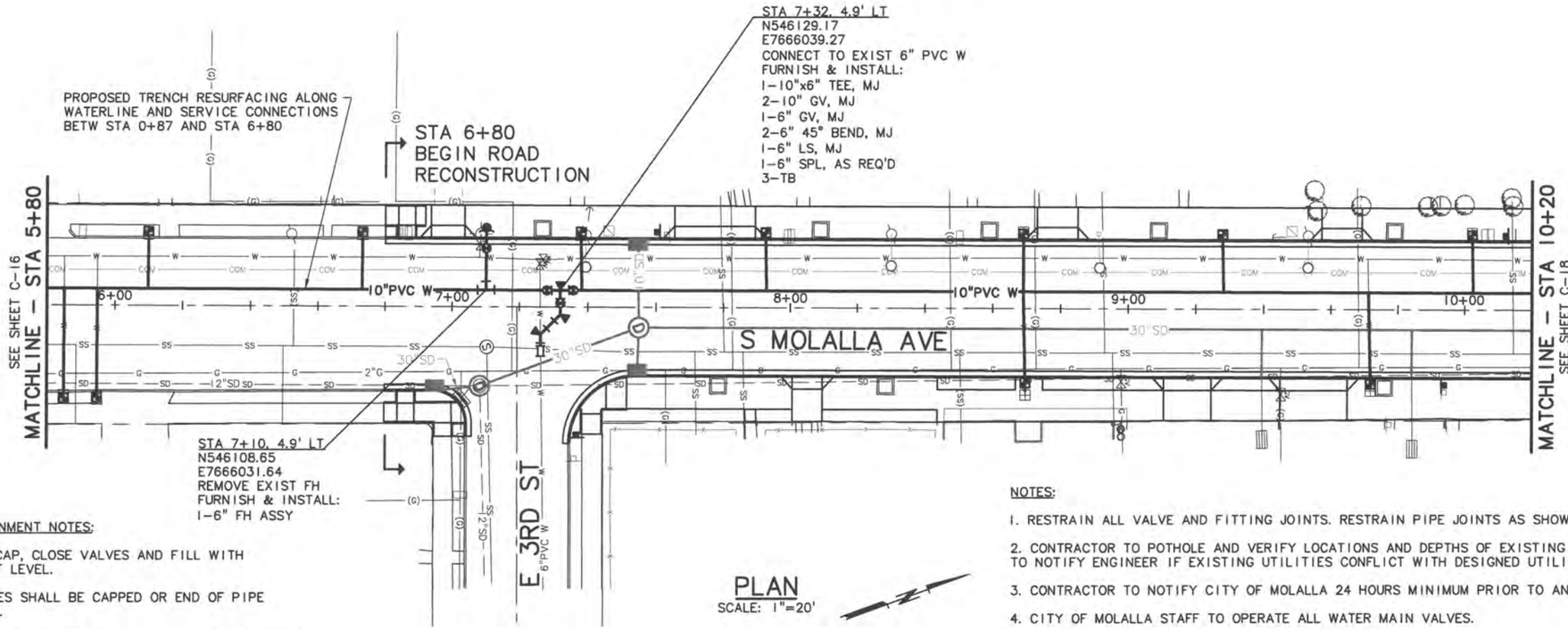


PLAN
SCALE: 1"=20'

WATER SYSTEM ABANDONMENT NOTES:

1. REMOVE VALVE BOX CAP, CLOSE VALVES AND FILL WITH CONCRETE TO PAVEMENT LEVEL.

2. ALL ABANDONED PIPES SHALL BE CAPPED OR END OF PIPE FILLED WITH CONCRETE.

3. ABANDON EXISTING WATERLINES IN PLACE OR REMOVE VALVES AND FITTINGS IN CONFLICT WITH NEW CONSTRUCTION. ANY MATERIALS TO BE DISPOSED SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

4. WATER SYSTEM SHALL REMAIN IN SERVICE AND SERVICES TO BE RECONNECTED TO THE NEW 10" PVC C900 PIPE AFTER IT HAS BEEN TESTED AND ACCEPTED BY THE CITY.

5. PRIOR TO CONSTRUCTION, CONTRACTOR WILL BE REQUIRED TO POTHOLE ALL CROSSINGS WITH NEW WATERLINE WORK TO DETERMINE ANY CONFLICTS.

NOTES:

1. RESTRAIN ALL VALVE AND FITTING JOINTS. RESTRAIN PIPE JOINTS AS SHOWN ON DRAWINGS.

2. CONTRACTOR TO POTHOLE AND VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES. CONTRACTOR TO NOTIFY ENGINEER IF EXISTING UTILITIES CONFLICT WITH DESIGNED UTILITIES.

3. CONTRACTOR TO NOTIFY CITY OF MOLALLA 24 HOURS MINIMUM PRIOR TO ANY CUSTOMER SHUTDOWNS.

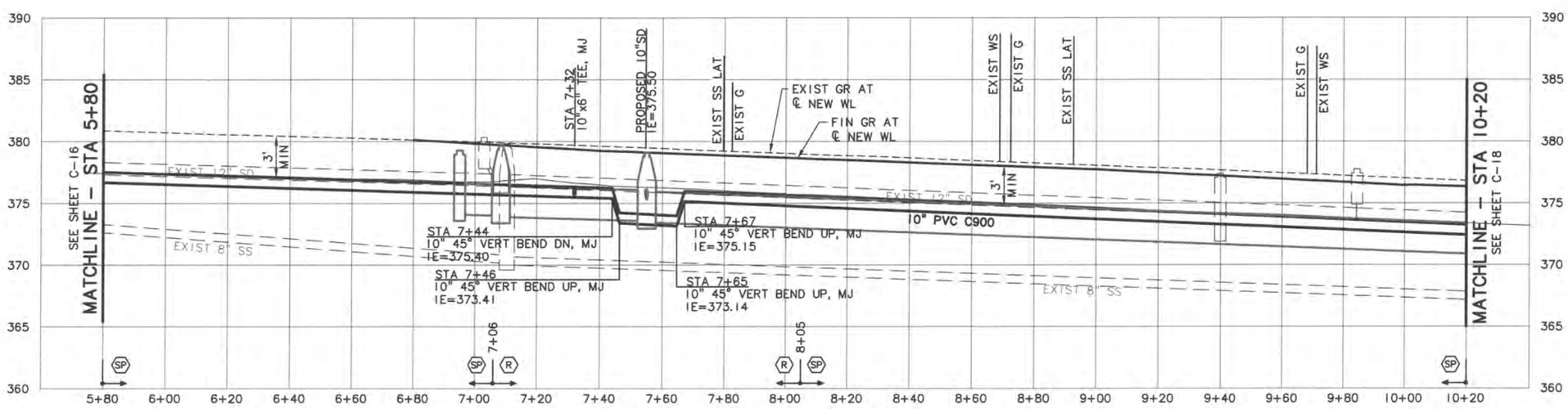
4. CITY OF MOLALLA STAFF TO OPERATE ALL WATER MAIN VALVES.

5. ALL REPLACED SERVICE CONNECTIONS TO BE 1" PEX.

6. ALL METER BOXES TO BE REPLACED. EXISTING WATER METERS TO REMAIN.

7. EXISTING 6" AND 8" WATER LINES ALONG MOLALLA AVENUE TO BE ABANDONED IN PLACE. SEE WATER SYSTEM ABANDONMENT NOTES, THIS SHEET.

8. RETURN ALL REPLACED HYDRANTS TO CITY WITH STORZ ADAPTERS.



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

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.5975
FAX 541.744.3975

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 28, 1992
DARYNE A. MARSHALL
RENEWS 12-31-16

MOLALLA AVE IMPROVEMENTS
WATERLINE PLAN & PROFILE
STA 5+80 TO STA 10+20

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	DAM
DRAWN	DAK
CHECKED	CSL

JOB NO.: 15-1670.206

DRAWING NAME: C-17

SHEET NO. 33/59

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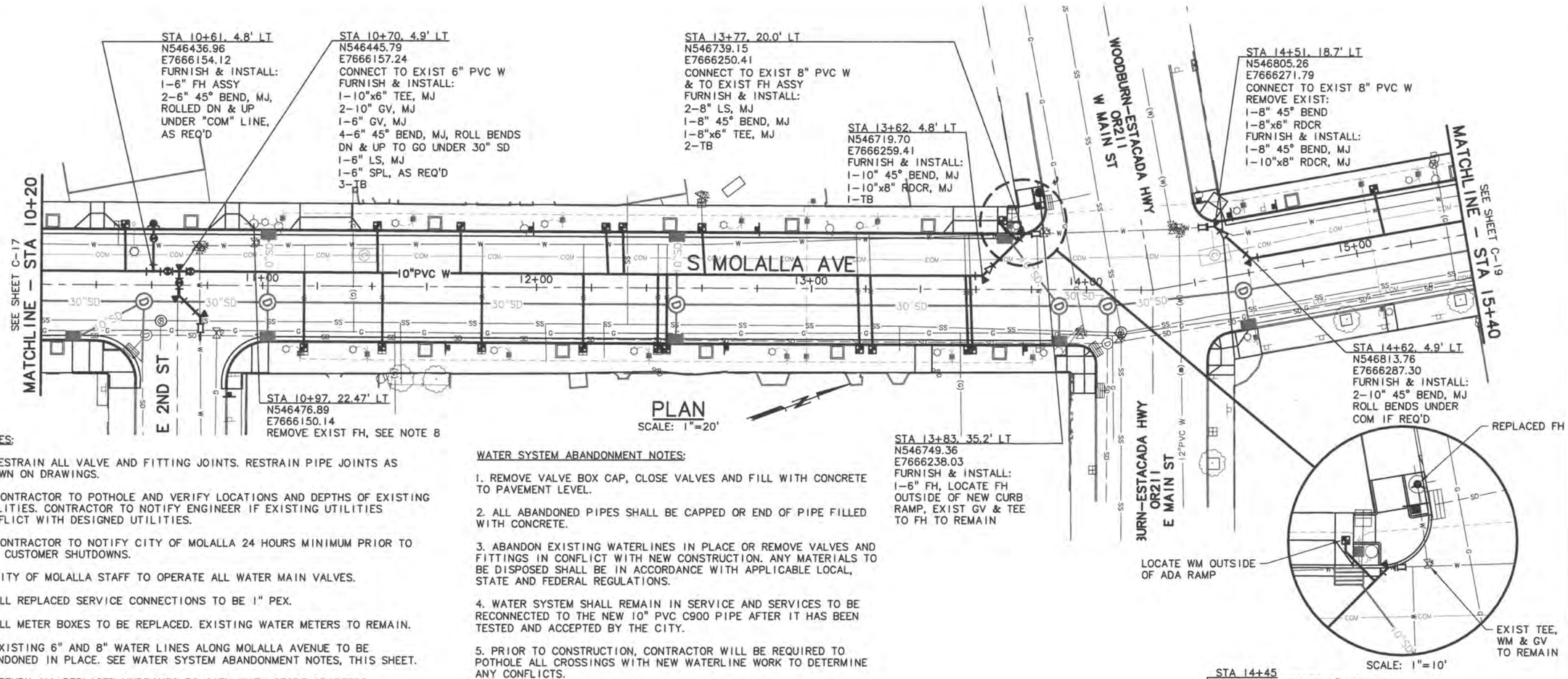


PLAN

SCALE: 1"=20'

NOTES:

1. RESTRAIN ALL VALVE AND FITTING JOINTS. RESTRAIN PIPE JOINTS AS SHOWN ON DRAWINGS.

2. CONTRACTOR TO POTHOLE AND VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES. CONTRACTOR TO NOTIFY ENGINEER IF EXISTING UTILITIES CONFLICT WITH DESIGNED UTILITIES.

3. CONTRACTOR TO NOTIFY CITY OF MOLALLA 24 HOURS MINIMUM PRIOR TO ANY CUSTOMER SHUTDOWNS.

4. CITY OF MOLALLA STAFF TO OPERATE ALL WATER MAIN VALVES.

5. ALL REPLACED SERVICE CONNECTIONS TO BE 1" PEX.

6. ALL METER BOXES TO BE REPLACED. EXISTING WATER METERS TO REMAIN.

7. EXISTING 6" AND 8" WATER LINES ALONG MOLALLA AVENUE TO BE ABANDONED IN PLACE. SEE WATER SYSTEM ABANDONMENT NOTES, THIS SHEET.

8. RETURN ALL REPLACED HYDRANTS TO CITY WITH STORZ ADAPTERS.

WATER SYSTEM ABANDONMENT NOTES:

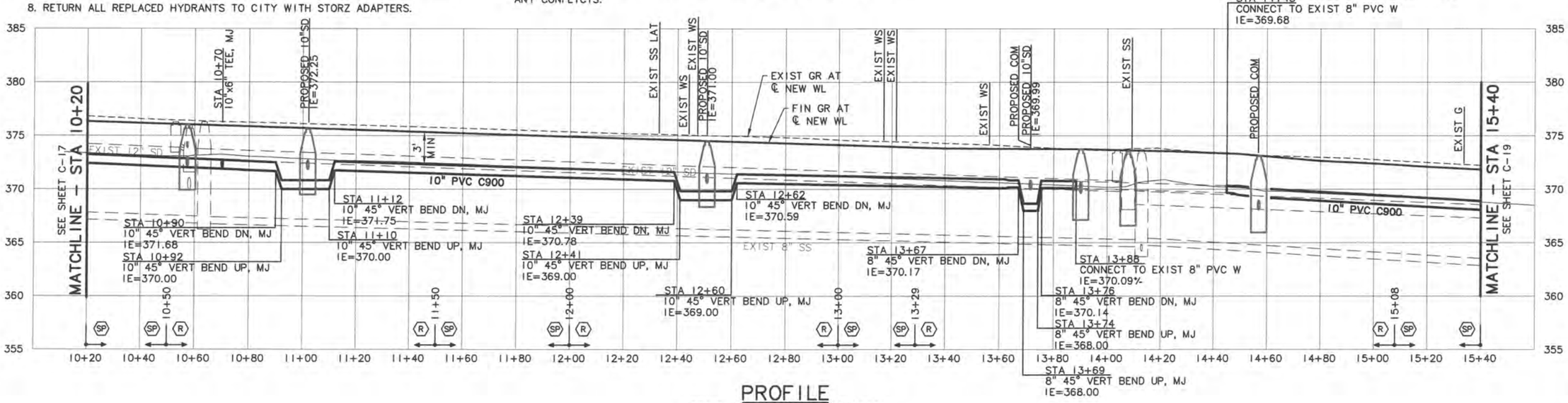
1. REMOVE VALVE BOX CAP, CLOSE VALVES AND FILL WITH CONCRETE TO PAVEMENT LEVEL.

2. ALL ABANDONED PIPES SHALL BE CAPPED OR END OF PIPE FILLED WITH CONCRETE.

3. ABANDON EXISTING WATERLINES IN PLACE OR REMOVE VALVES AND FITTINGS IN CONFLICT WITH NEW CONSTRUCTION. ANY MATERIALS TO BE DISPOSED SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

4. WATER SYSTEM SHALL REMAIN IN SERVICE AND SERVICES TO BE RECONNECTED TO THE NEW 10" PVC C900 PIPE AFTER IT HAS BEEN TESTED AND ACCEPTED BY THE CITY.

5. PRIOR TO CONSTRUCTION, CONTRACTOR WILL BE REQUIRED TO POTHOLE ALL CROSSINGS WITH NEW WATERLINE WORK TO DETERMINE ANY CONFLICTS.



PROFILE

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

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2075
FAX 541.741.5075

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 9, 1987
DAPHNE A. MARCY
RENEWS 12-31-16

MOLALLA AVE IMPROVEMENTS

WATERLINE PLAN & PROFILE
STA 10+20 TO STA 15+40

REVISIONS	
REV.:	DESCRIPTION:

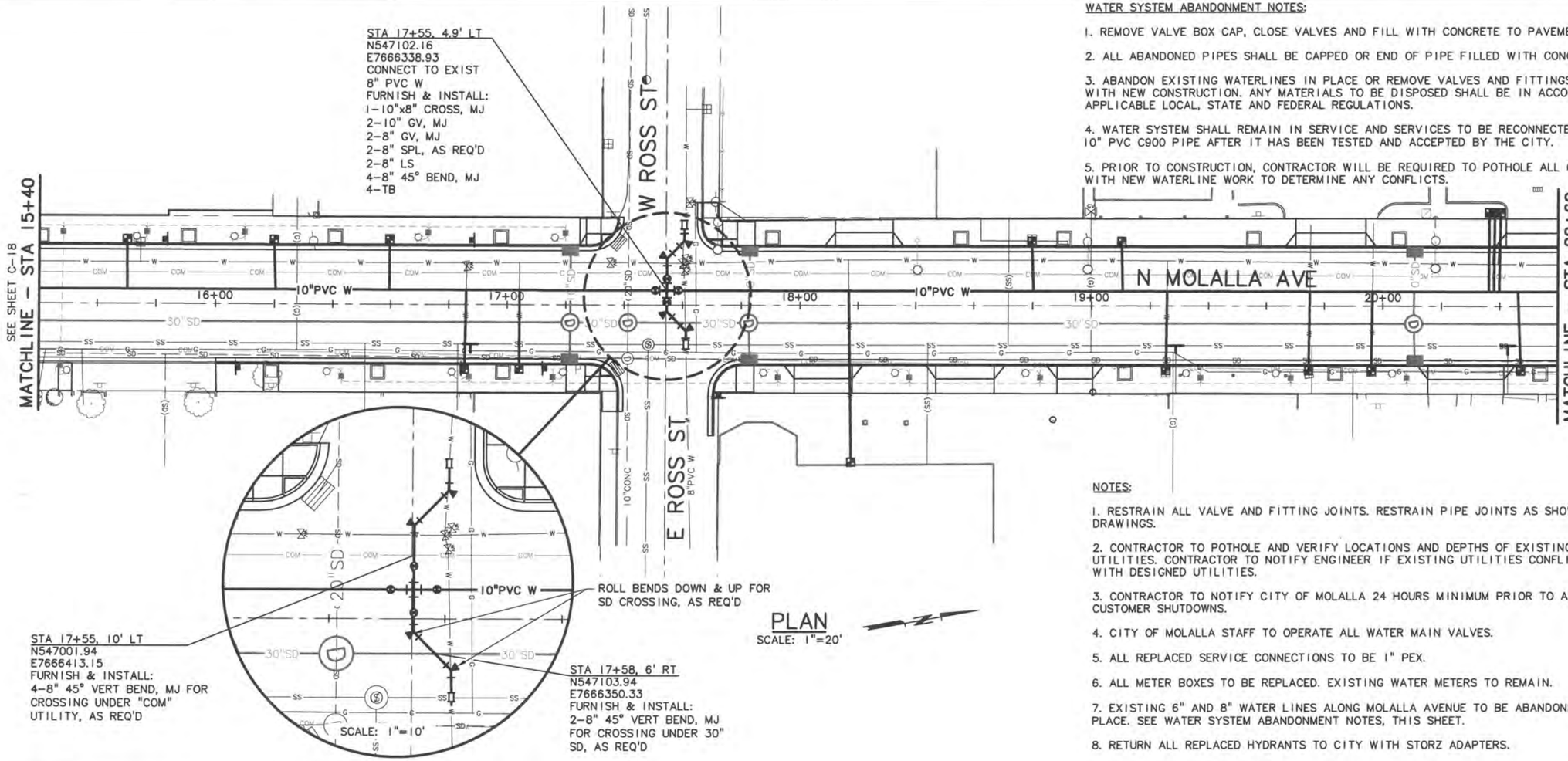
DATE	1/5/2016
DESIGNED	DAM
DRAWN	DAK
CHECKED	CSL

JOB NO.: 15-1670.206

DRAWING NAME: C-18

SHEET NO. 34/59

G:\PDX_Projects\15\1670 - Molalla\CAD\Sheets\15-1670-205-OR-UTPP.dwg C-18 1/5/2016 9:00 AM DAK 20.0s (LMS Tech)



PLAN

SCALE: 1"=20'

WATER SYSTEM ABANDONMENT NOTES:

1. REMOVE VALVE BOX CAP, CLOSE VALVES AND FILL WITH CONCRETE TO PAVEMENT LEVEL.

2. ALL ABANDONED PIPES SHALL BE CAPPED OR END OF PIPE FILLED WITH CONCRETE.

3. ABANDON EXISTING WATERLINES IN PLACE OR REMOVE VALVES AND FITTINGS IN CONFLICT WITH NEW CONSTRUCTION. ANY MATERIALS TO BE DISPOSED SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

4. WATER SYSTEM SHALL REMAIN IN SERVICE AND SERVICES TO BE RECONNECTED TO THE NEW 10" PVC C900 PIPE AFTER IT HAS BEEN TESTED AND ACCEPTED BY THE CITY.

5. PRIOR TO CONSTRUCTION, CONTRACTOR WILL BE REQUIRED TO POTHOLE ALL CROSSINGS WITH NEW WATERLINE WORK TO DETERMINE ANY CONFLICTS.

NOTES:

1. RESTRAIN ALL VALVE AND FITTING JOINTS. RESTRAIN PIPE JOINTS AS SHOWN ON DRAWINGS.

2. CONTRACTOR TO POTHOLE AND VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES. CONTRACTOR TO NOTIFY ENGINEER IF EXISTING UTILITIES CONFLICT WITH DESIGNED UTILITIES.

3. CONTRACTOR TO NOTIFY CITY OF MOLALLA 24 HOURS MINIMUM PRIOR TO ANY CUSTOMER SHUTDOWNS.

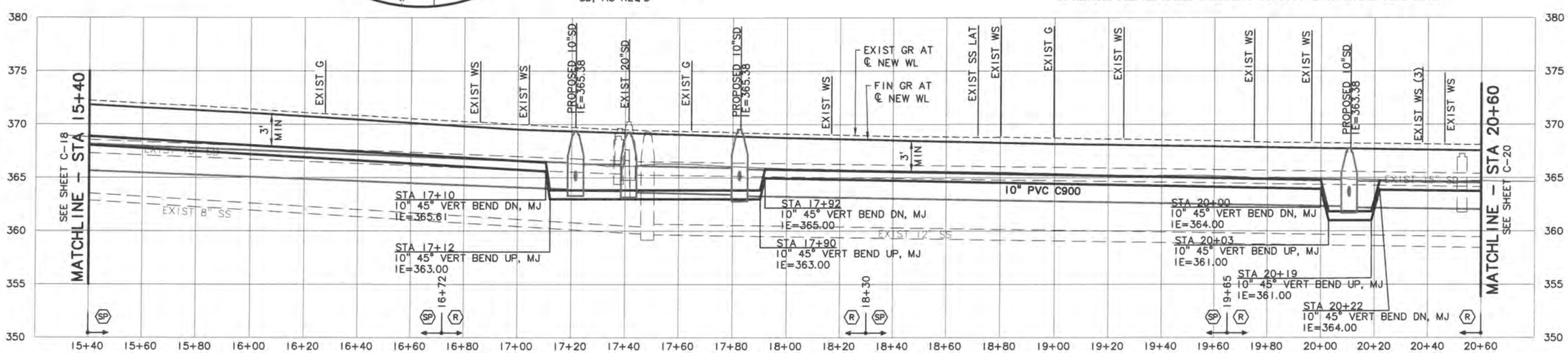
4. CITY OF MOLALLA STAFF TO OPERATE ALL WATER MAIN VALVES.

5. ALL REPLACED SERVICE CONNECTIONS TO BE 1" PEX.

6. ALL METER BOXES TO BE REPLACED. EXISTING WATER METERS TO REMAIN.

7. EXISTING 6" AND 8" WATER LINES ALONG MOLALLA AVENUE TO BE ABANDONED IN PLACE. SEE WATER SYSTEM ABANDONMENT NOTES, THIS SHEET.

8. RETURN ALL REPLACED HYDRANTS TO CITY WITH STORZ ADAPTERS.



PROFILE

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

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2075
FAX 541.741.3075

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 19, 1983
CLAYTON S. PINE A. MAYS
RENEWS 12-31-16

MOLALLA AVE IMPROVEMENTS

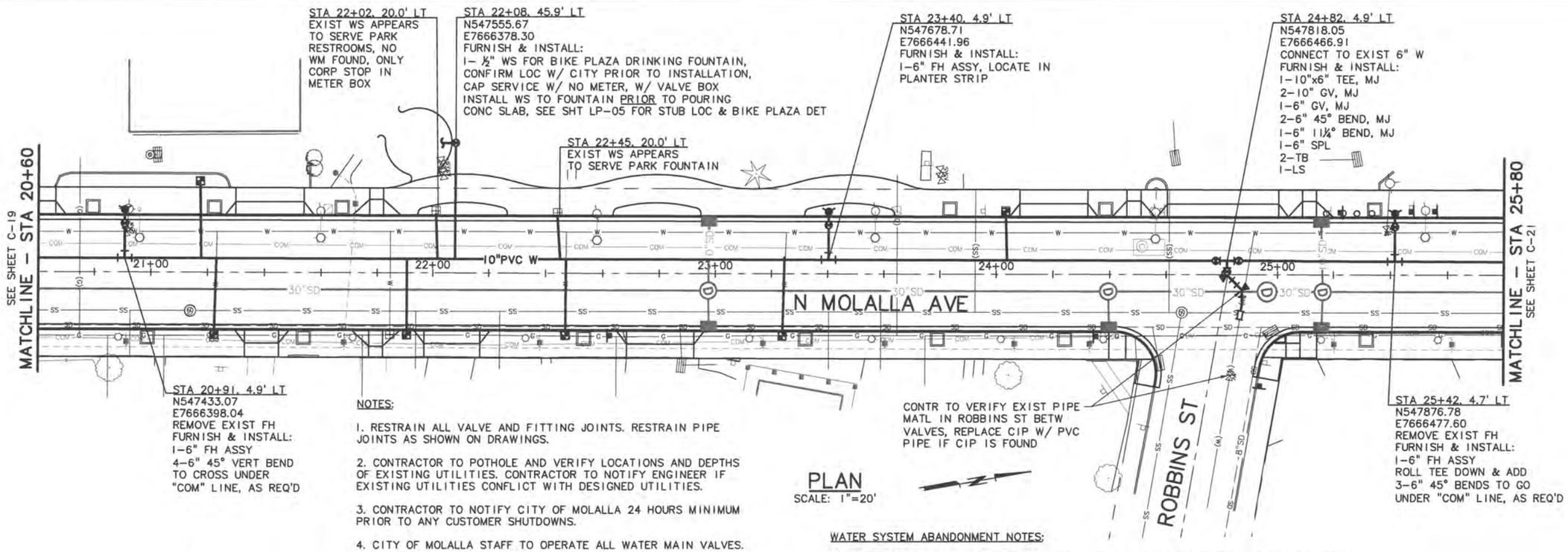
WATERLINE PLAN & PROFILE STA 20+60 TO STA 15+40

REV.:	DESCRIPTION:

REVISIONS

DATE	1/5/2016
DESIGNED	DAM
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	C-19
SHEET NO.	35/59

G:\PDX_Projects\15\1670 - Molalla\CAD\Sheets\15-1670-205-OR-UTPP.dwg C-19 1/5/2016 9:00 AM DAK 20.0s (LMS Tech)



PLAN
SCALE: 1"=20'

NOTES:

1. RESTRAIN ALL VALVE AND FITTING JOINTS. RESTRAIN PIPE JOINTS AS SHOWN ON DRAWINGS.

2. CONTRACTOR TO POTHOLE AND VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES. CONTRACTOR TO NOTIFY ENGINEER IF EXISTING UTILITIES CONFLICT WITH DESIGNED UTILITIES.

3. CONTRACTOR TO NOTIFY CITY OF MOLALLA 24 HOURS MINIMUM PRIOR TO ANY CUSTOMER SHUTDOWNS.

4. CITY OF MOLALLA STAFF TO OPERATE ALL WATER MAIN VALVES.

5. ALL REPLACED SERVICE CONNECTIONS TO BE 1" PEX.

6. ALL METER BOXES TO BE REPLACED. EXISTING WATER METERS TO REMAIN.

7. EXISTING 6" AND 8" WATER LINES ALONG MOLALLA AVENUE TO BE ABANDONED IN PLACE. SEE WATER SYSTEM ABANDONMENT NOTES, THIS SHEET.

8. RETURN ALL REPLACED HYDRANTS TO CITY WITH STORZ ADAPTERS.

WATER SYSTEM ABANDONMENT NOTES:

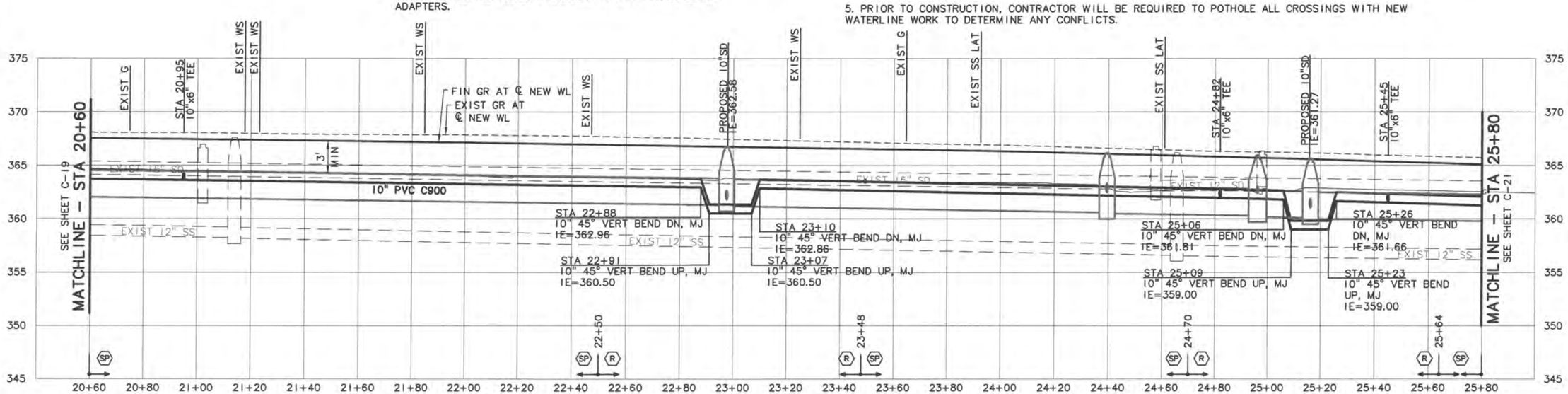
1. REMOVE VALVE BOX CAP, CLOSE VALVES AND FILL WITH CONCRETE TO PAVEMENT LEVEL.

2. ALL ABANDONED PIPES SHALL BE CAPPED OR END OF PIPE FILLED WITH CONCRETE.

3. ABANDON EXISTING WATERLINES IN PLACE OR REMOVE VALVES AND FITTINGS IN CONFLICT WITH NEW CONSTRUCTION. ANY MATERIALS TO BE DISPOSED SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

4. WATER SYSTEM SHALL REMAIN IN SERVICE AND SERVICES TO BE RECONNECTED TO THE NEW 10" PVC C900 PIPE AFTER IT HAS BEEN TESTED AND ACCEPTED BY THE CITY.

5. PRIOR TO CONSTRUCTION, CONTRACTOR WILL BE REQUIRED TO POTHOLE ALL CROSSINGS WITH NEW WATERLINE WORK TO DETERMINE ANY CONFLICTS.



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

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.5075
FAX 541.741.5075

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 19, 1983
MATTHEW A. MILNER
RENEWS 12-31-16

MOLALLA AVE IMPROVEMENTS
WATERLINE PLAN & PROFILE
STA 20+60 TO STA 25+80

REVISIONS	
REV.:	DESCRIPTION:

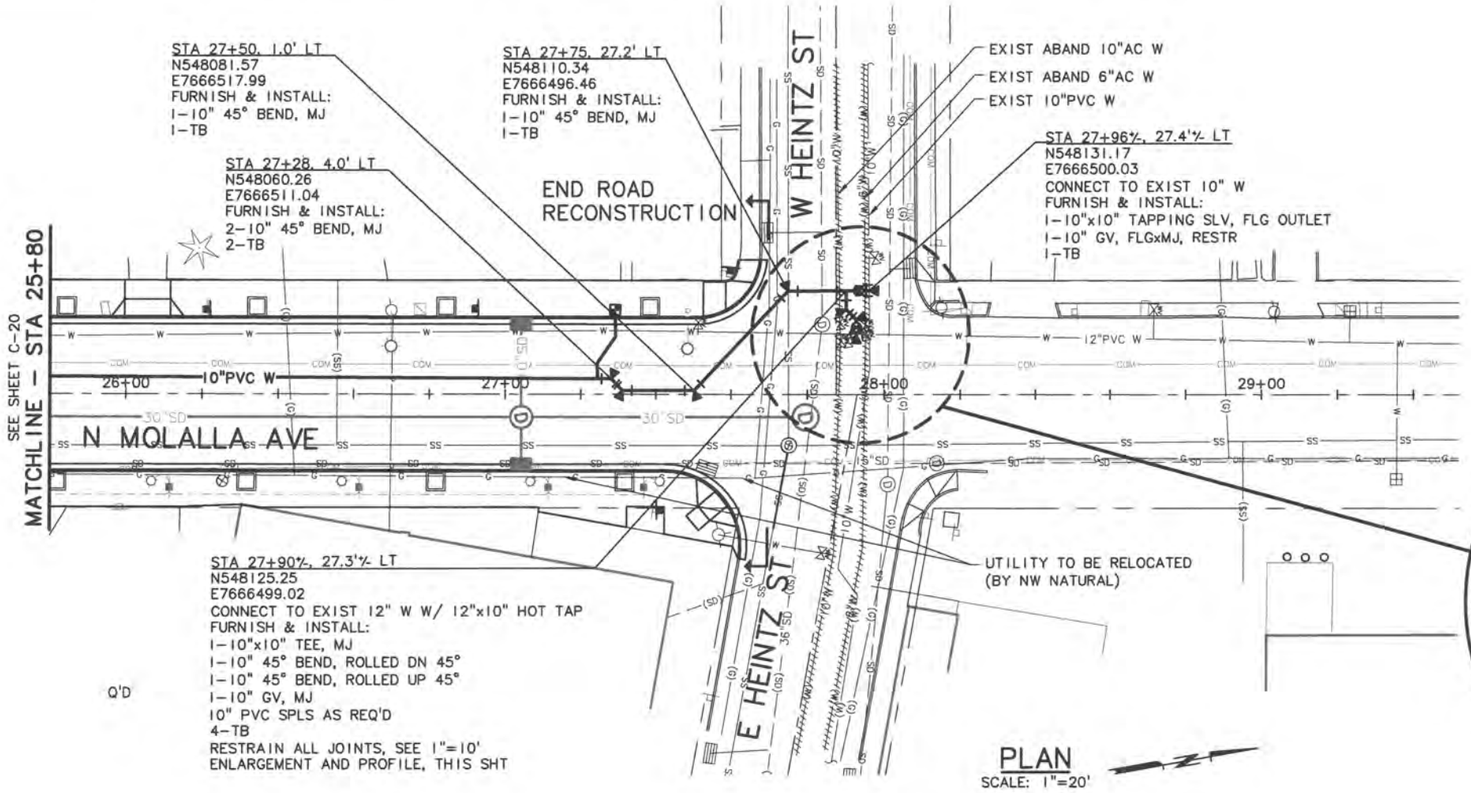
DATE	1/5/2016
DESIGNED	DAM
DRAWN	DAK
CHECKED	CSL

JOB NO.: 15-1670.206

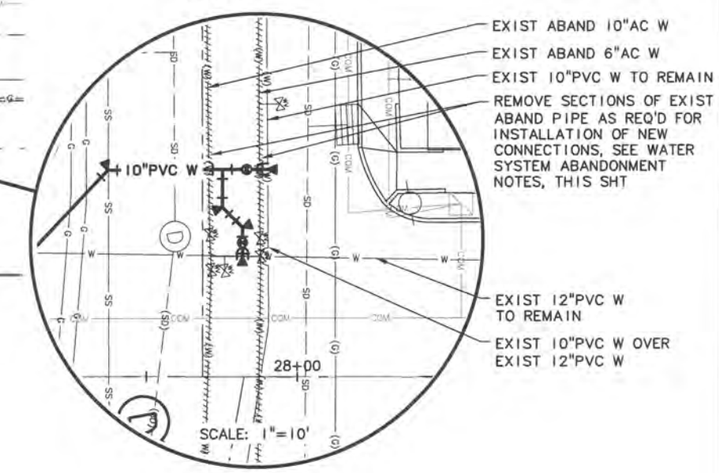
DRAWING NAME: C-20

SHEET NO. 36/59

G:\PDX_Projects\15\1670 - Molalla\CAD\Sheets\15-1670-205-OR-UTPP.dwg C-20 1/5/2016 9:00 AM DAK 20.0s (LMS Tech)



PLAN
SCALE: 1"=20'



SCALE: 1"=10'

NOTES:

1. RESTRAIN ALL VALVE AND FITTING JOINTS. RESTRAIN PIPE JOINTS AS SHOWN ON DRAWINGS.

2. CONTRACTOR TO POTHOLE AND VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES. CONTRACTOR TO NOTIFY ENGINEER IF EXISTING UTILITIES CONFLICT WITH DESIGNED UTILITIES.

3. CONTRACTOR TO NOTIFY CITY OF MOLALLA 24 HOURS MINIMUM PRIOR TO ANY CUSTOMER SHUTDOWNS.

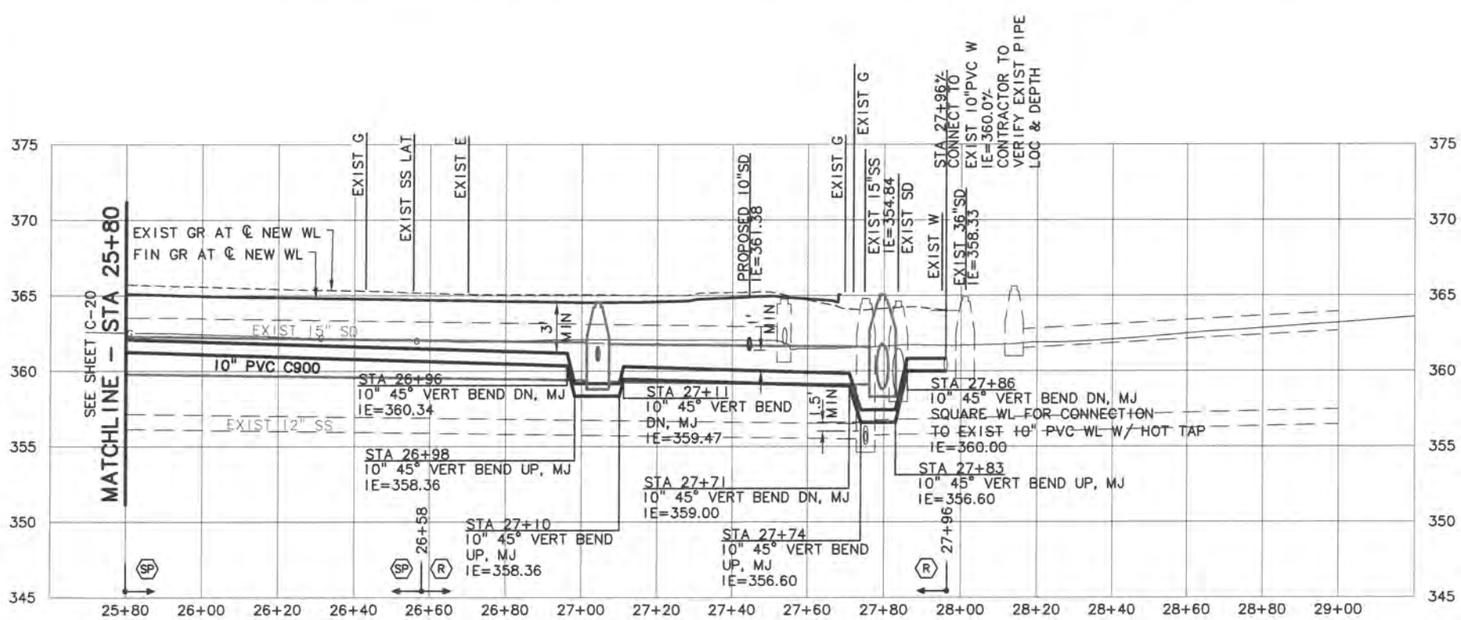
4. CITY OF MOLALLA STAFF TO OPERATE ALL WATER MAIN VALVES.

5. ALL REPLACED SERVICE CONNECTIONS TO BE 1" PEX.

6. ALL METER BOXES TO BE REPLACED. EXISTING WATER METERS TO REMAIN.

7. EXISTING 6" AND 8" WATER LINES ALONG MOLALLA AVENUE TO BE ABANDONED IN PLACE. SEE WATER SYSTEM ABANDONMENT NOTES, THIS SHEET.

8. RETURN ALL REPLACED HYDRANTS TO CITY WITH STORZ ADAPTERS.



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

WATER SYSTEM ABANDONMENT NOTES:

1. REMOVE VALVE BOX CAP, CLOSE VALVES AND FILL WITH CONCRETE TO PAVEMENT LEVEL.

2. ALL ABANDONED PIPES SHALL BE CAPPED OR END OF PIPE FILLED WITH CONCRETE.

3. ABANDON EXISTING WATERLINES IN PLACE OR REMOVE VALVES AND FITTINGS IN CONFLICT WITH NEW CONSTRUCTION. ANY MATERIALS TO BE DISPOSED SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

4. WATER SYSTEM SHALL REMAIN IN SERVICE AND SERVICES TO BE RECONNECTED TO THE NEW 10" PVC C900 PIPE AFTER IT HAS BEEN TESTED AND ACCEPTED BY THE CITY.

5. PRIOR TO CONSTRUCTION, CONTRACTOR WILL BE REQUIRED TO POTHOLE ALL CROSSINGS WITH NEW WATERLINE WORK TO DETERMINE ANY CONFLICTS.

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2975
FAX 541.741.3075

REGISTERED PROFESSIONAL ENGINEER
OREGON
DAVID PAUL A. MARCY
RENEWS 12-31-16

MOLALLA AVE IMPROVEMENTS
WATERLINE PLAN & PROFILE
STA 25+80 TO STA 29+00

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	DAM
DRAWN	DAK
CHECKED	CSL

JOB NO.: 15-1670.206

DRAWING NAME: C-21

SHEET NO. 37/59

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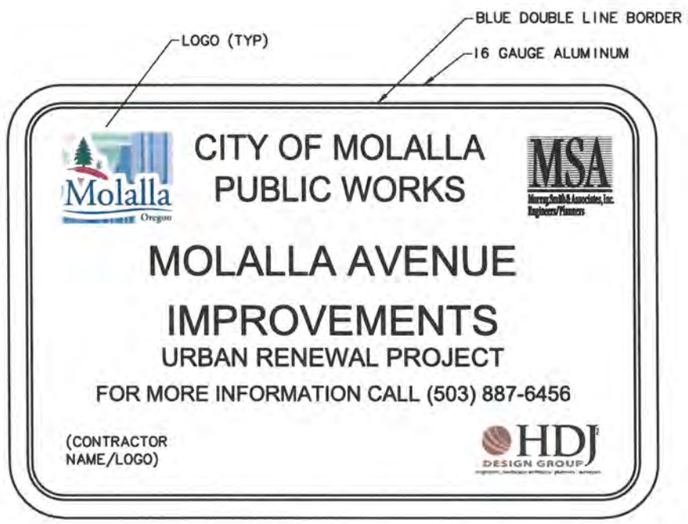
LEGEND

- WORK AREA
- UNDER TRAFFIC
- 28" TUBULAR MARKERS ON 20' MAXIMUM SPACING
- TEMPORARY TRAFFIC FLOW
- TEMPORARY SIGN LOCATION
- 8' TYPE 3 BARRICADE



NOTE: INSTALL SIGN BOARDS (4 TOTAL) PRIOR TO BEGINNING OF CONSTRUCTION AT ENDS OF PROJECT. COORDINATE WITH CITY TO DETERMINE LOCATION.

PROJECT INFORMATION SIGN BOARD DETAIL

TRAFFIC CONTROL NOTES

1. ALL MATERIALS AND WORKMANSHIP INVOLVING TRAFFIC SIGNALIZATION, SIGNING, STRIPING, AND ILLUMINATION SHALL CONFORM TO CITY ORDINANCES AND STANDARD SPECIFICATIONS, THE OREGON STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST REVISION) AND THE OREGON STANDARD DRAWINGS (LATEST REVISION).

2. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY FOR APPROVAL. A COPY OF THE APPROVED TRAFFIC CONTROL PLAN SHALL BE AVAILABLE AT THE WORK AREA. THE CITY RESERVES THE RIGHT TO ADD OR MODIFY TRAFFIC CONTROL REQUIREMENTS AS MAY BE NECESSARY TO EFFECTIVELY CONTROL TRAFFIC AND TO ASSURE PUBLIC SAFETY.

3. PUBLIC ROADWAY SHALL NOT BE CLOSED TO TRAFFIC, AT ANY TIME, WITHOUT HAVING FIRST OBTAINED WRITTEN APPROVAL FROM THE CITY ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR PROVISION OF TIMELY NOTIFICATION OF TRAFFIC FLOW DISRUPTIONS TO AREA WIDE EMERGENCY SERVICES, TRASH COLLECTORS, POSTAL SERVICE, SOUTH CLACKAMAS TRANSPORTATION DISTRICT, AND SCHOOL DISTRICT.

4. ADVANCE WARNING OF IMMINENT TRAFFIC DISRUPTION SHALL BE PROVIDED TO THE GENERAL MOTORING PUBLIC BY PLACEMENT OF AN ADVANCE NOTIFICATION SIGN AT EACH END OF THE CONSTRUCTION AREA 72 HOURS (MINIMUM) BEFORE INITIATION OF CONSTRUCTION WORK.

5. ACCESS TO EXISTING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES, INCLUDING NORMAL DELIVERY SERVICE AND MAIL SERVICE AND IF NOT, SHALL BE CAUSE FOR WORK STOPPAGE UNTIL EFFECTIVE ACCESS IS ESTABLISHED.

6. TRAFFIC CONTROL DEVICES, FLAGPERSON, ETC., SHALL BE IN PLACE PRIOR TO INITIATION OF CONSTRUCTION WORK AND SHALL BE EFFECTIVELY MAINTAINED.

7. THE FOLLOWING TRAFFIC CONTROL PLAN IS CONCEPTUAL IN NATURE AND IS NOT INTENDED TO BE COMPLETE IN DESIGN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO ALL TRAFFIC CONTROL REQUIREMENTS IN THE SPECIFICATIONS AND PROVIDE SUFFICIENT DETAIL IN THE SUBMITTAL TRAFFIC CONTROL PLAN TO MANAGE THE WORK ELEMENTS.

8. WHEN CONSTRUCTION ACTIVITIES BLOCK OR INTERFERE WITH NORMAL PEDESTRIAN ROUTING, PROVIDE SAFE PASSAGE FOR PEDESTRIANS THROUGH THE CONSTRUCTION AREA UTILIZING OREGON STANDARD DRAWING TM840 AND THE REQUIREMENTS OF THE 2015 OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION.

9. ANY IMPACTS TO THE ACTIVE TRAFFIC LANES ON THE STATE HIGHWAY LASTING LONGER THAN 72 HOURS ARE REQUIRED TO FOLLOW THE TEMPORARY SIGNING AND DELINEATION REQUIREMENTS OF OREGON STANDARD DRAWINGS TM800, TM840, TM841 AND TM843.

10. ANY ABRUPT EDGE GREATER THAN 2 INCHES IN DEPTH, CLOSER THAN 4 FEET FROM AN ACTIVE TRAFFIC LANE, AND HAVING A DURATION LONGER THAN 72 HOURS SHALL BE REQUIRED TO FOLLOW THE "TYPICAL ABRUPT EDGE SIGNING DETAIL" PER OREGON STANDARD DRAWING TM800.

11. WHEN CONSTRUCTION ACTIVITIES ARE ANTICIPATED TO CLOSE AN ACTIVE TRAFFIC LANE ON THE STATE HIGHWAY, SUBMIT A WORK ZONE TRAFFIC CONTROL PLAN TO THE ODOT DISTRICT 3 PERMIT OFFICE FOR REVIEW AND APPROVAL PRIOR TO THE CLOSURE. THE WORK ZONE TRAFFIC CONTROL PLAN SHALL MEET APPLICABLE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.

12. ANY IMPACTS TO ACTIVE TRAFFIC LANES ON OR211, THE WOODBURN-ESTACADA HIGHWAY, ARE REQUIRED TO FOLLOW THE SEASONALLY ADJUSTED, DAY-OF-THE-WEEK, TIME-OF-DAY, ODOT DISTRICT 2 LANE RESTRICTIONS FOR THIS SEGMENT OF HIGHWAY. THESE DISTRICT LANE RESTRICTIONS ARE USUALLY ASSOCIATED WITH THE DISTRICT PERMITTING PROCESS AND OUTLINED IN THE APPROVED ODOT PERMIT OF ENTRY. DAYTIME LANE CLOSURE IS ALLOWED FROM 9 AM TO 3 PM.

13. OR211, THE WOODBURN-ESTACADA HIGHWAY, IS AN ODOT DESIGNATED OVER-DIMENSION VEHICLE ROUTE. MAINTAIN A MINIMUM 20-FOOT THRU LANE WIDTH FOR OVER-DIMENSION VEHICLES AT ALL TIMES.

14. ALL SIGNS SHALL BE TYPE "04" UNLESS OTHERWISE NOTED.

15. PROVIDE AND MAINTAIN IN A SAFE CONDITION TEMPORARY ACCESS TO AT ALL RESIDENCE DRIVEWAYS, TEMPORARY INTERSECTIONS, AND TEMPORARY CONNECTIONS WITH ROADS, STREETS, BIKEWAYS, SIDEWALKS AND FOOTPATHS THROUGHOUT THE LIFE OF THE PROJECT. COMMUNICATE WITH ALL ADJACENT PROPERTIES A MINIMUM OF 48 HOURS IN ADVANCE OF ANY WORK TO ALLOW NECESSARY ARRANGEMENTS TO TAKE PLACE BETWEEN THE PROPERTY OWNER, AGENCY AND CONTRACTOR. COMMUNICATIONS SHALL BE IN THE FORM OF WRITTEN TEXT, VERBAL COMMUNICATION OR OTHER MEANS AND SHALL BE DOCUMENTED BY THE CONTRACTOR AND THAT DOCUMENTATION SHALL BE AVAILABLE TO THE AGENCY. UNLESS SPECIFICALLY AGREED UPON IN WRITING BY THE PROPERTY OWNERS, NO CLOSURE TO PROPERTY ACCESSES MAY OCCUR DURING THIS CONTRACT.

16. UTILIZE ODOT/APWA STANDARD DRAWINGS OR OTHER APPROVED DRAWINGS FOR WORK AREA CLOSURES.

17. MAINTAIN/PROVIDE STREET PARKING FOR ALL NON-WORK AREAS DURING CONSTRUCTION.

18. LOCATIONS OF PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE IN CONFORMANCE WITH OREGON DEPARTMENT OF TRANSPORTATION DESIGN GUIDELINES AND APPROVED BY THE ENGINEER.

SEQUENCING NOTES

1. THE MAXIMUM STREET CLOSURE LENGTH SHALL BE TWO BLOCKS. DUE TO ITS RELATIVELY LONG LENGTH, THE SECTION BETWEEN ROSS AND ROBBINS STREETS SHALL BE CONSIDERED TWO BLOCKS.

2. SEE SHEET TC-2 FOR SEQUENCING PLAN WITHIN EACH WORK AREA. CONSTRUCT UTILITIES, CURB AND STREET FIRST, FOLLOWED BY SIDEWALK CONSTRUCTION. MAINTAIN EXISTING SIDEWALKS AND ACCESS DURING STREET CONSTRUCTION.

3. MAINTAIN BUSINESS ACCESS AT ALL TIMES. PROVIDE TEMPORARY PEDESTRIAN ACCESS BRIDGES BETWEEN BUSINESS DOORWAY THRESHOLDS AND STREET WHEN SIDEWALKS ARE BEING CONSTRUCTED.

4. MAINTAIN PEDESTRIAN/ADA ACCESS AT ALL TIMES. COMPLETE SIDEWALK DEMOLITION AND CONSTRUCTION FOR A GIVEN AREA IN A MAXIMUM TWO (2) WEEK PERIOD.

5. MAINTAIN VEHICLE TRAFFIC ON ALL STREETS, EXCEPT WHERE CLOSURES ARE SHOWN.

6. CONTRACTOR TO PROVIDE A MINIMUM 48 HOUR NOTICE TO ALL PROPERTIES IN PROJECT AREA FOR ANY CHANGE/INTERRUPTION IN ACCESS.

7. CONTRACTOR TO INSTALL "DOWNTOWN OPEN FOR BUSINESS SIGNS" AT EACH END OF THE PROJECT END OF THE PROJECT AREA.

8. FURNISH TEMPORARY TRAFFIC CONTROL SIGNS AND SUPPORTS AS NECESSARY TO COMPLETE THE WORK AND AS REQUIRED BY THE ENGINEER. TEMPORARY SIGNS INCLUDE TOURIST-ORIENTED DIRECTIONAL SIGNS (TODS) TO NOTIFY THE PUBLIC THAT DOWNTOWN BUSINESSES ARE OPEN.

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REGISTERED PROFESSIONAL ENGINEER 56075 OREGON RANDALL P. STAHL
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
TRAFFIC CONTROL LEGEND AND NOTES

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	TC-1
SHEET NO.	38/59

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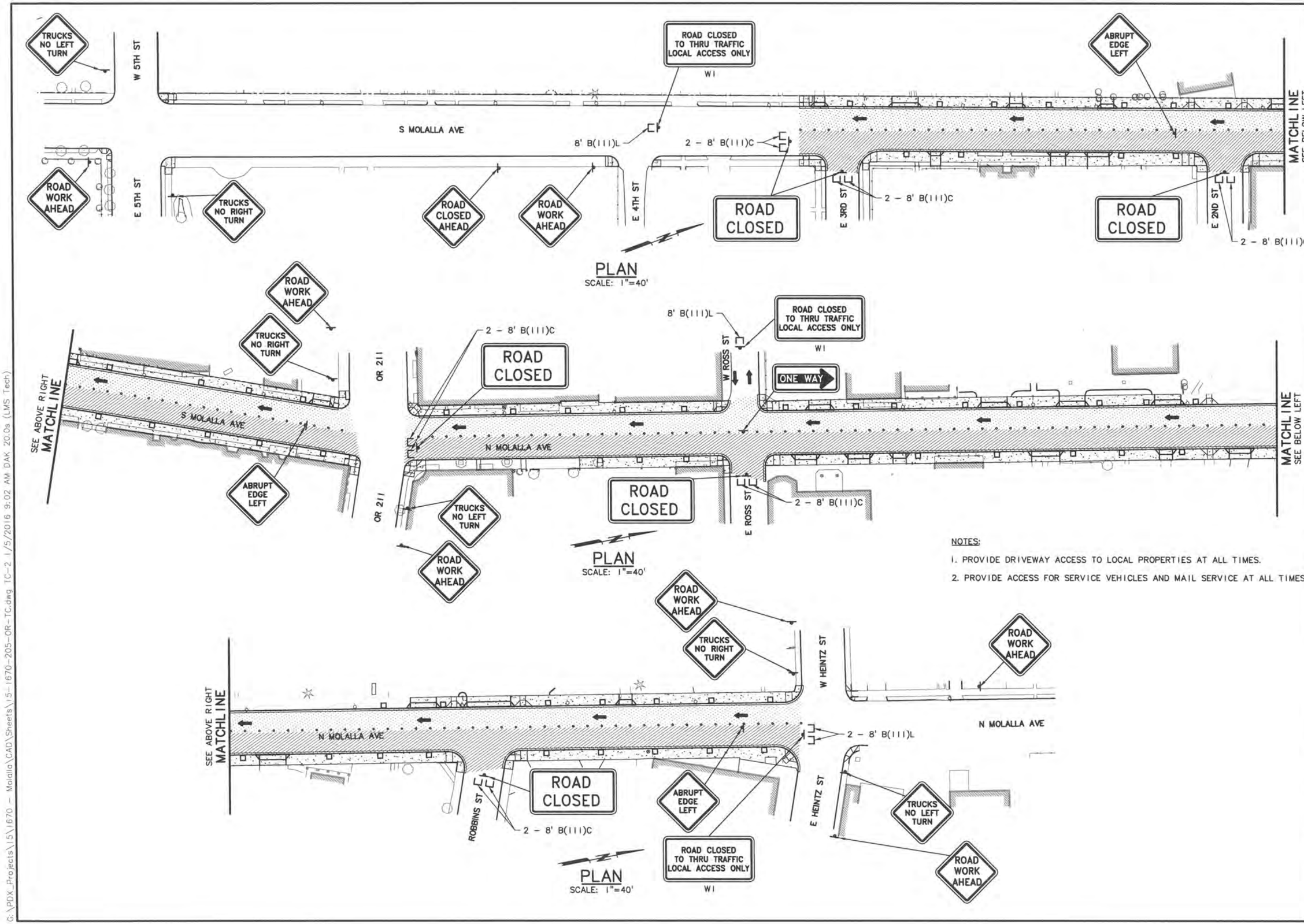

NOTES:

1. PROVIDE DRIVEWAY ACCESS TO LOCAL PROPERTIES AT ALL TIMES.
2. PROVIDE ACCESS FOR SERVICE VEHICLES AND MAIL SERVICE AT ALL TIMES.

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REGISTERED PROFESSIONAL ENGINEER
OREGON
MICH. 11, 2014
RANDALL P. SWART
58075
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
TRAFFIC CONTROL PLAN
STAGE 1

REVISIONS

REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL

JOB NO.: 15-1670.206

DRAWING NAME: TC-2

SHEET NO. 39/59

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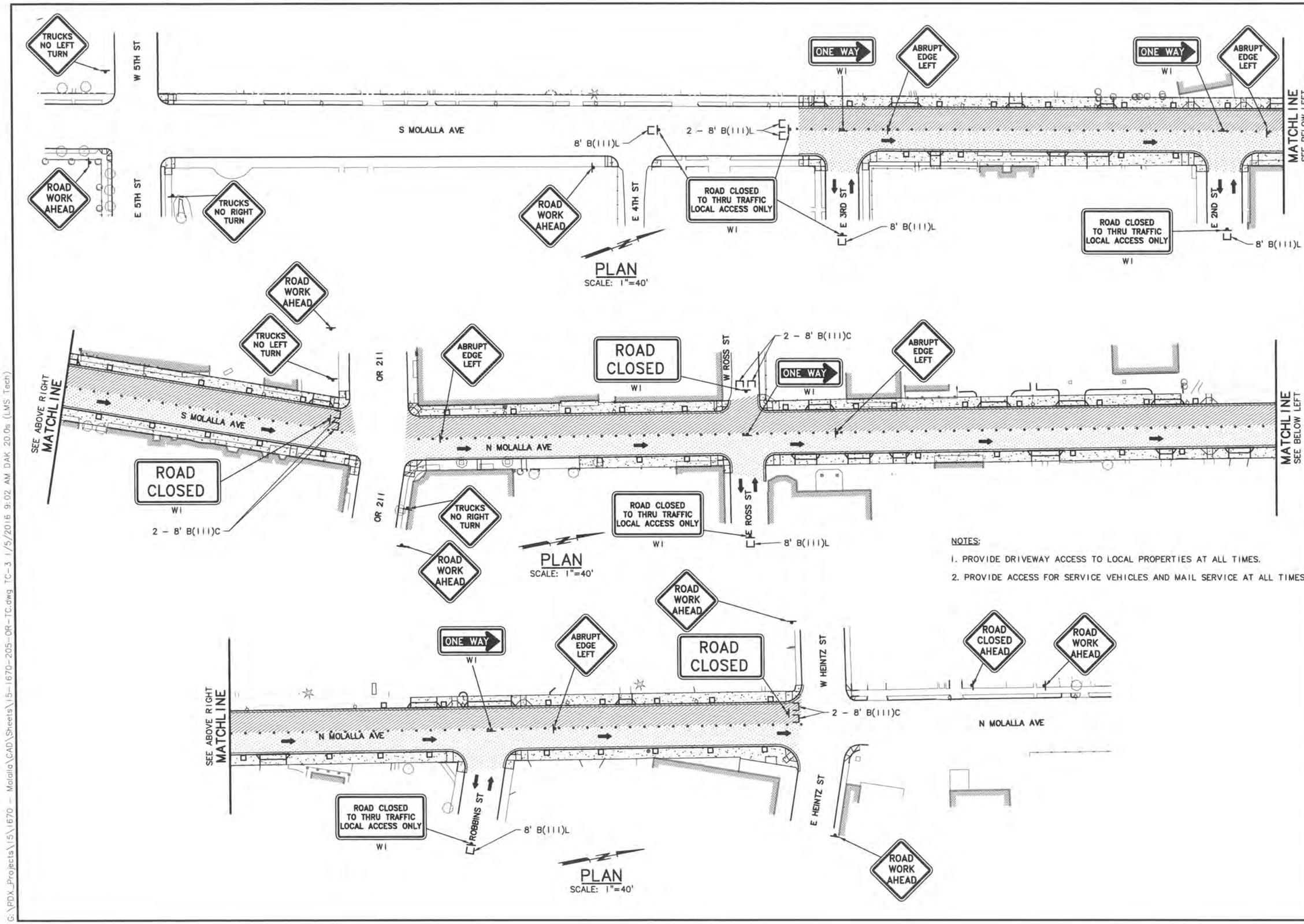

NOTES:

1. PROVIDE DRIVEWAY ACCESS TO LOCAL PROPERTIES AT ALL TIMES.
2. PROVIDE ACCESS FOR SERVICE VEHICLES AND MAIL SERVICE AT ALL TIMES.

Murray, Smith & Associates, Inc.
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REGISTERED PROFESSIONAL ENGINEER
OREGON
MICHAEL P. BANDALL
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
TRAFFIC CONTROL PLAN
STAGE 2

REVISIONS

REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL

JOB NO.: 15-1670.206

DRAWING NAME: TC-3

SHEET NO. 40/59

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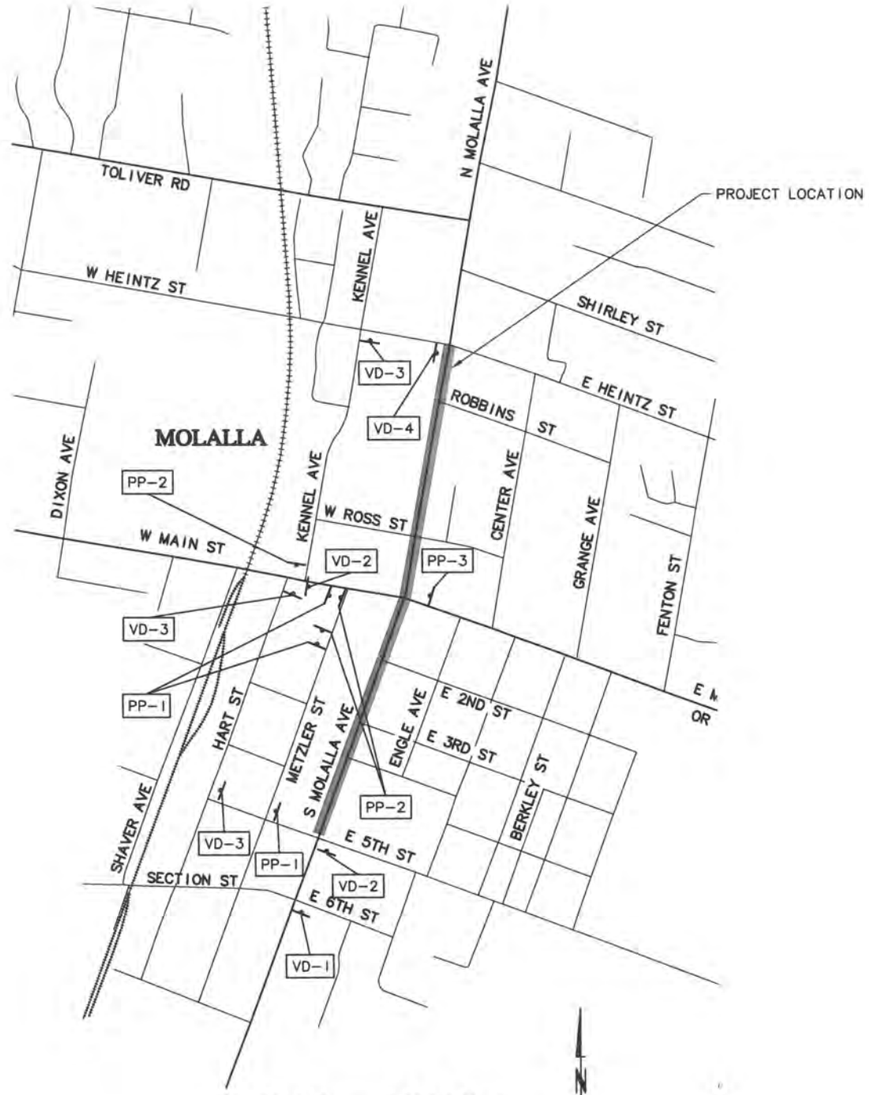
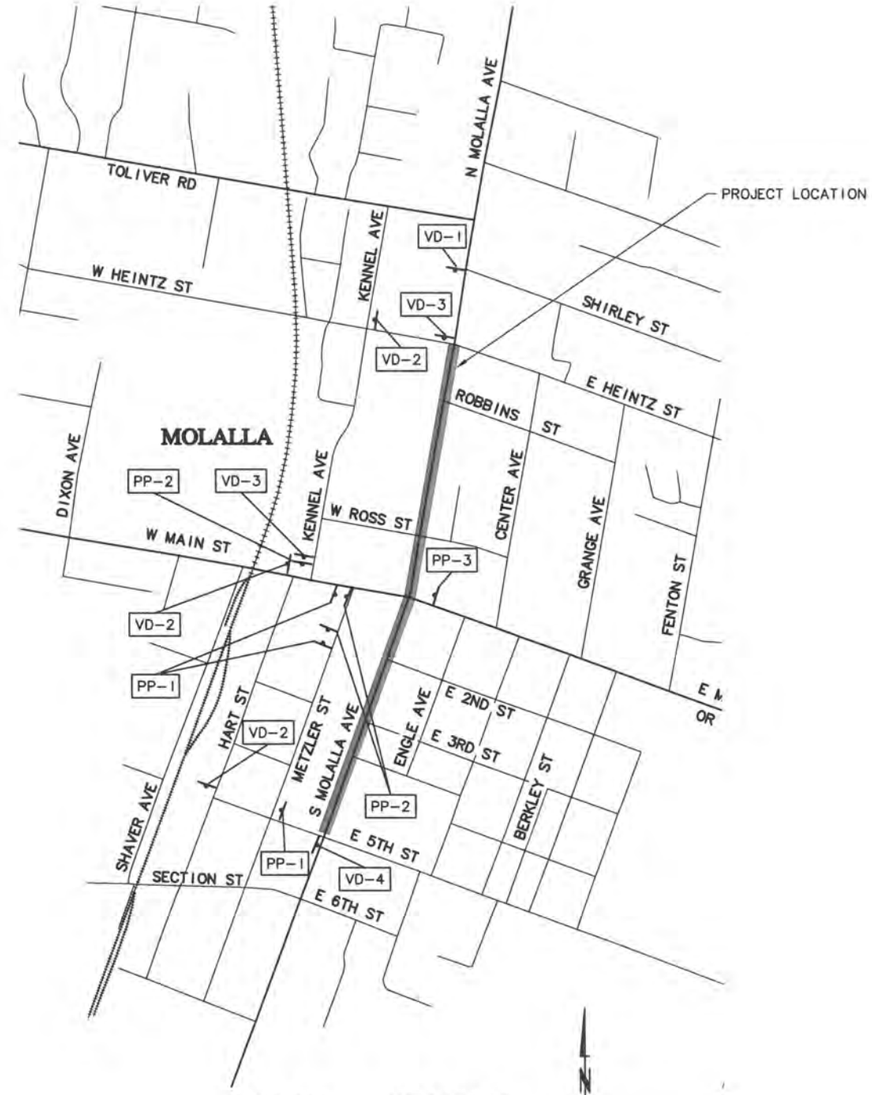


PLAN – STAGE 1
SCALE: 1"=400'



PLAN – STAGE 2
SCALE: 1"=400'

VEHICLE DETOUR SIGNING DETAILS

VD-1 VD-2 VD-3 VD-4

PUBLIC PARKING SIGNING DETAILS

PP-1 PP-2 PP-3

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FAX 541.744.3075

REGISTERED PROFESSIONAL ENGINEER 56075 OREGON RANDALL P. SMITH
RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
TRAFFIC CONTROL PLAN
VEHICLE DETOUR, STAGES 1 & 2

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	TC-4
SHEET NO.	41/59

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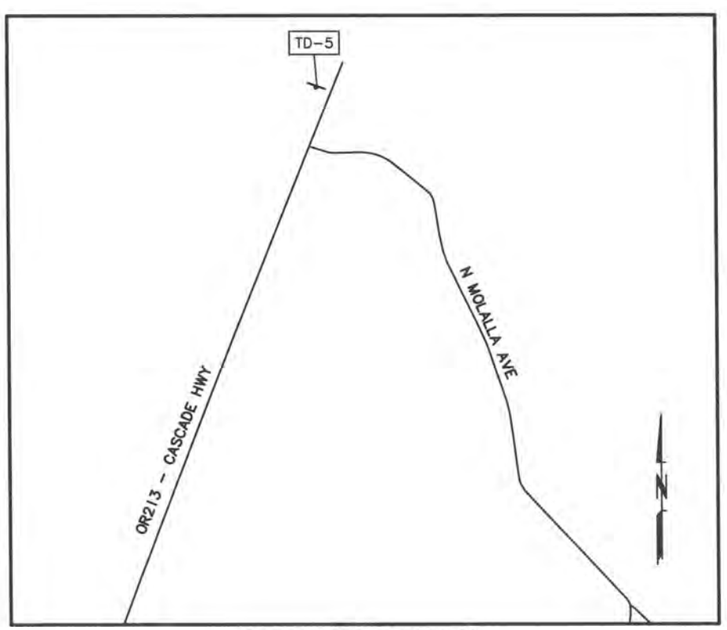
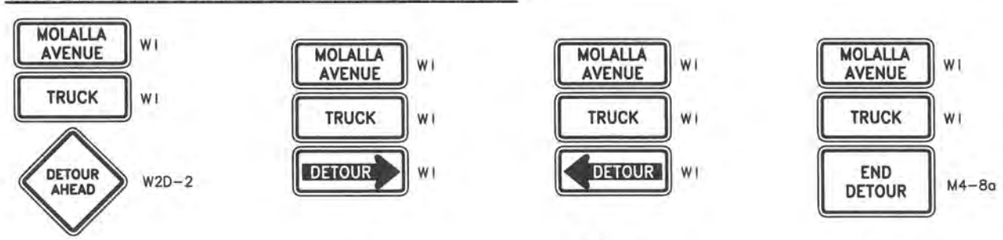
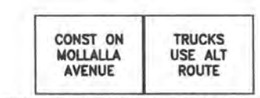
PLAN
SCALE: 1"=400'



OFFSITE DETAIL
SCALE: 1"=1000'

TRUCK DETOUR SIGNING DETAILS





PORTABLE CHANGEABLE MESSAGE SIGN
(SUGGESTED MESSAGE)
LOCATE A MIN OF 500 FT AHEAD OF MOLALLA AVE ON SOUTHBOUND HWY 213, AND AT APPROX LOC SHOWN ON WESTBOUND HWY 211

TD-5

Murray, Smith & Associates, Inc.
Engineers/Planners
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Eugene, Oregon 97401
PHONE 541.741.3975
FAX 541.744.3975

REGISTERED PROFESSIONAL ENGINEER 56075 OREGON RANDALL L. SMITH
RENEWS 6-30-18

MOLALLA AVE IMPROVEMENTS
TRAFFIC CONTROL PLAN
TRUCK DETOUR

REVISIONS
REV.: | DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	TC-5
SHEET NO.	42/59

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SIGNING LEGEND

(S#) REINSTALL OR REPLACE EXISTING SIGN ON NEW SIGN SUPPORT. SEE SHEETS S-5 & S-6 FOR SIGN DETAILS, SEE SHEET S-7 FOR SIGN SUPPORT DETAILS

STRIPING LEGEND

(YB) 4" YELLOW BROKEN LINE

(CW-SC) STAGGERED CONTINENTAL CROSSWALK

(P-NP) YELLOW PAINTED TOP AND FACE OF CURB, SEE DET 1, SHT S-3

* SEE ODOT STANDARD DRAWINGS TM500, TM501 AND TM503 FOR STRIPING DETAILS.

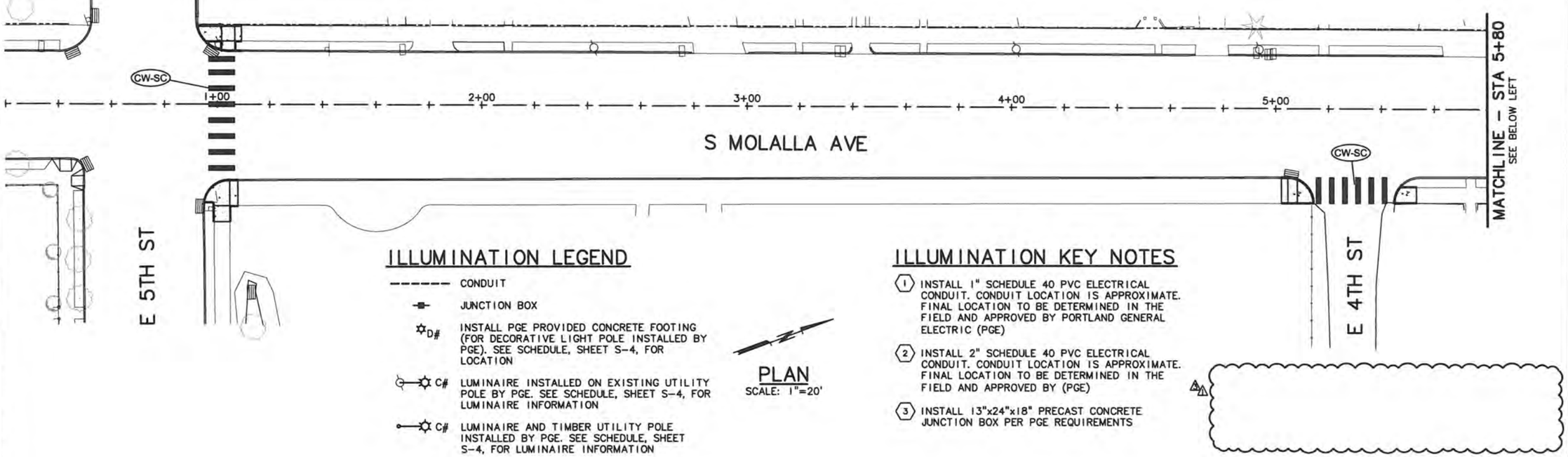
PROFESSIONAL ENGINEER STAMP NOTES:

1. RANDALL P. STARK IS RESPONSIBLE FOR SIGNING & STRIPING DESIGN.

2. JONATHAN MATTHEW GELLINGS IS RESPONSIBLE FOR ILLUMINATION DESIGN.

REGISTERED PROFESSIONAL ENGINEER 89065 OREGON JONATHAN MATTHEW GELLINGS RENEWS: 6-30-17

Jonathan Gellings Digitally signed by Jonathan Gellings DN: C=US, E=jon.gellings@msa-ep.com, O=Murray, Smith & Associates, Inc., CN=Jonathan Gellings Date: 2016.01.26 17:16:15-07'00'



ILLUMINATION LEGEND

------ CONDUIT

JUNCTION BOX

D# INSTALL PGE PROVIDED CONCRETE FOOTING (FOR DECORATIVE LIGHT POLE INSTALLED BY PGE). SEE SCHEDULE, SHEET S-4, FOR LOCATION

C# LUMINAIRE INSTALLED ON EXISTING UTILITY POLE BY PGE. SEE SCHEDULE, SHEET S-4, FOR LUMINAIRE INFORMATION

C# LUMINAIRE AND TIMBER UTILITY POLE INSTALLED BY PGE. SEE SCHEDULE, SHEET S-4, FOR LUMINAIRE INFORMATION

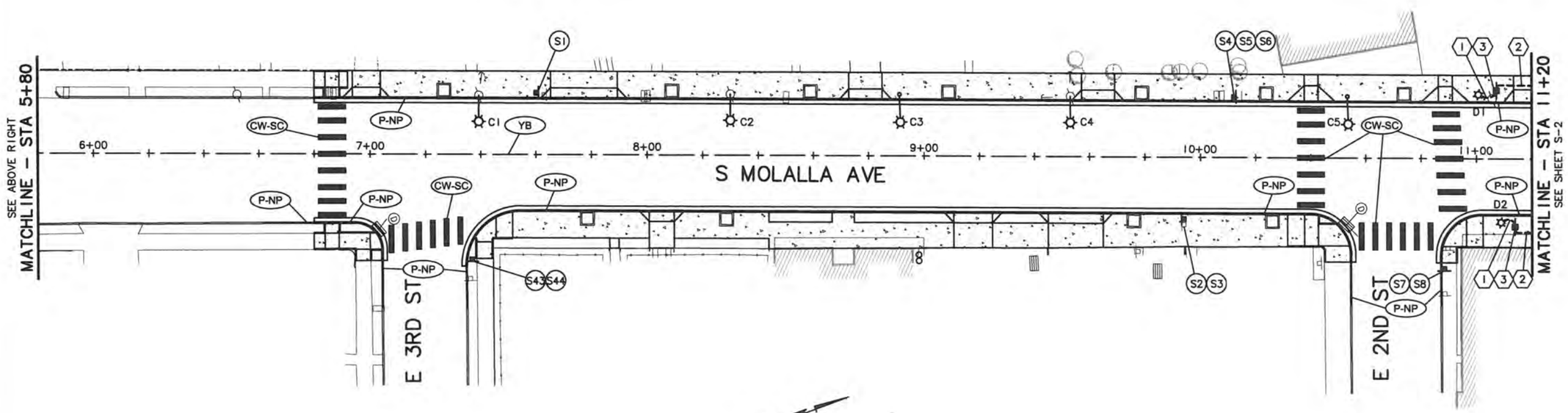
PLAN
SCALE: 1"=20'

ILLUMINATION KEY NOTES

(1) INSTALL 1" SCHEDULE 40 PVC ELECTRICAL CONDUIT. CONDUIT LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED IN THE FIELD AND APPROVED BY PORTLAND GENERAL ELECTRIC (PGE)

(2) INSTALL 2" SCHEDULE 40 PVC ELECTRICAL CONDUIT. CONDUIT LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED IN THE FIELD AND APPROVED BY (PGE)

(3) INSTALL 13"x24"x18" PRECAST CONCRETE JUNCTION BOX PER PGE REQUIREMENTS



PLAN
SCALE: 1"=20'

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.3575
FAX 541.744.3575

REGISTERED PROFESSIONAL ENGINEER 80075 OREGON RANDALL P. STARK RENEWS: 6-30-18

MOLALLA AVE IMPROVEMENTS

SIGNING, STRIPING AND ILLUMINATION PLAN – 1

REVISIONS	
REV.:	DESCRIPTION:
1	BID ADDENDUM 1
3	BID ADDENDUM 3

DATE	1/5/2016
DESIGNED	RPS/JMG
DRAWN	DAK/DKH
CHECKED	CSL

JOB NO.: 15-1670.206

DRAWING NAME: S-1

SHEET NO. 43/59

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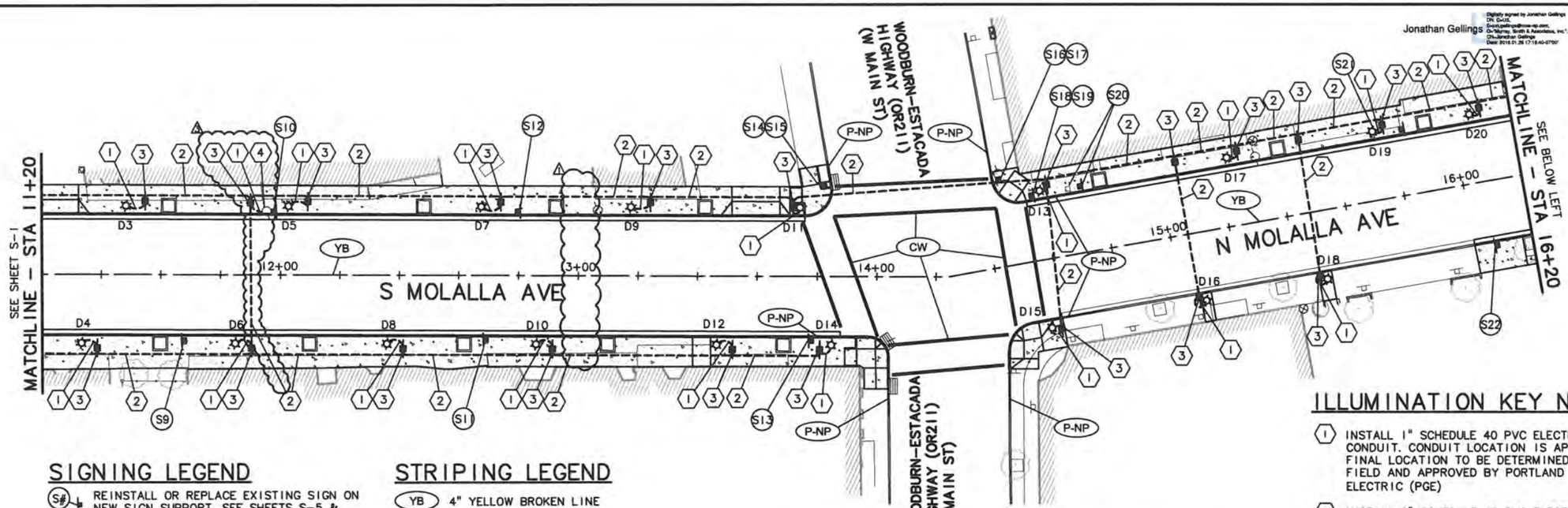

SIGNING LEGEND

S# REINSTALL OR REPLACE EXISTING SIGN ON NEW SIGN SUPPORT. SEE SHEETS S-5 & S-6 FOR SIGN DETAILS, SEE SHEET S-7 FOR SIGN SUPPORT DETAILS

STRIPING LEGEND

- YB — 4" YELLOW BROKEN LINE
- CW — STANDARD CROSSWALK
- CW-SC — STAGGERED CONTINENTAL CROSSWALK
- P-NP — ON-STREET PARKING DESIGNATION

• SEE ODOT STANDARD DRAWINGS TM500, TM501 AND TM503 FOR STRIPING DETAILS.

PLAN

SCALE: 1"=20'

ILLUMINATION LEGEND

- CONDUIT
- JUNCTION BOX
- D# — INSTALL PGE PROVIDED CONCRETE FOOTING (FOR DECORATIVE LIGHT POLE INSTALLED BY PGE). SEE SCHEDULE, SHEET S-4, FOR LOCATION
- C# — LUMINAIRE INSTALLED ON EXISTING UTILITY POLE BY PGE. SEE SCHEDULE, SHEET S-4, FOR LUMINAIRE INFORMATION
- C# — LUMINAIRE AND TIMBER UTILITY POLE INSTALLED BY PGE. SEE SCHEDULE, SHEET S-4, FOR LUMINAIRE INFORMATION

ILLUMINATION KEY NOTES

1. INSTALL 1" SCHEDULE 40 PVC ELECTRICAL CONDUIT. CONDUIT LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED IN THE FIELD AND APPROVED BY PORTLAND GENERAL ELECTRIC (PGE)
2. INSTALL 2" SCHEDULE 40 PVC ELECTRICAL CONDUIT. CONDUIT LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED IN THE FIELD AND APPROVED BY (PGE)
3. INSTALL 13"x24"x18" PRECAST CONCRETE JUNCTION BOX PER PGE REQUIREMENTS
4. PGE ELECTRICAL SERVICE DROP LOCATION. CONTRACTOR TO INSTALL CONDUIT TO BASE OF UTILITY POLE AND PGE SHALL MAKE THE FINAL SERVICE CONNECTION. CONTRACTOR TO COORDINATE WITH PGE.

PROFESSIONAL ENGINEER STAMP NOTES:

1. RANDALL P. STARK IS RESPONSIBLE FOR SIGNING & STRIPING DESIGN.
2. JONATHAN MATTHEW GELLINGS IS RESPONSIBLE FOR ILLUMINATION DESIGN.

PLAN

SCALE: 1"=20'

Jonathan Gellings
Digitally signed by Jonathan Gellings
DN: C=US, email=jgellings@murray-smith.com, O=Murray, Smith & Associates, Inc., CN=Jonathan Gellings
Date: 2016.01.26 17:18:40-07'00'
REGISTERED PROFESSIONAL ENGINEER 80051 OREGON JONATHAN MATTHEW GELLINGS
RENEWS 12-31-16

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
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FAX 541.744.3075

REGISTERED PROFESSIONAL ENGINEER 50075 OREGON RANDALL P. STARK
RENEWS 6-30-16

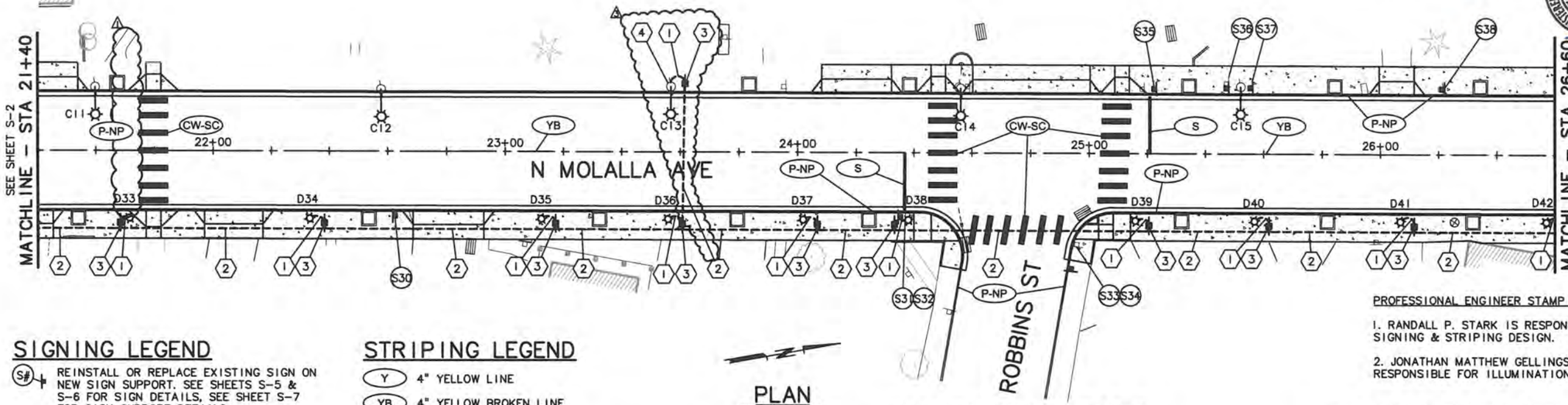
MOLALLA AVE IMPROVEMENTS

SIGNING, STRIPING AND ILLUMINATION PLAN – 2

REV.:	DESCRIPTION:
1	BID ADDENDUM 1
2	BID ADDENDUM 3

DATE	1/5/2016
DESIGNED	RPS/JMG
DRAWN	DAK/DKH
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	S-2
SHEET NO.	44/59

G:\PDX_Projects\15\1670 – Molalla\CAD\Sheets\15-1670-205-OR-S-ST.dwg S-2 1/25/2016 2:46 PM DAK 20.0s (LMS Tech)



PLAN

SCALE: 1"=20'

SIGNING LEGEND

(S#) REINSTALL OR REPLACE EXISTING SIGN ON NEW SIGN SUPPORT. SEE SHEETS S-5 & S-6 FOR SIGN DETAILS, SEE SHEET S-7 FOR SIGN SUPPORT DETAILS

STRIPING LEGEND

- (Y) 4" YELLOW LINE
- (YB) 4" YELLOW BROKEN LINE
- (S) STOP BAR
- (CW-SC) STAGGERED CONTINENTAL CROSSWALK
- (P-NP) YELLOW PAINTED TOP AND FACE OF CURB, SEE DET 1, THIS SHT

* SEE ODOT STANDARD DRAWINGS TM500, TM501 AND TM503 FOR STRIPING DETAILS.

ILLUMINATION LEGEND

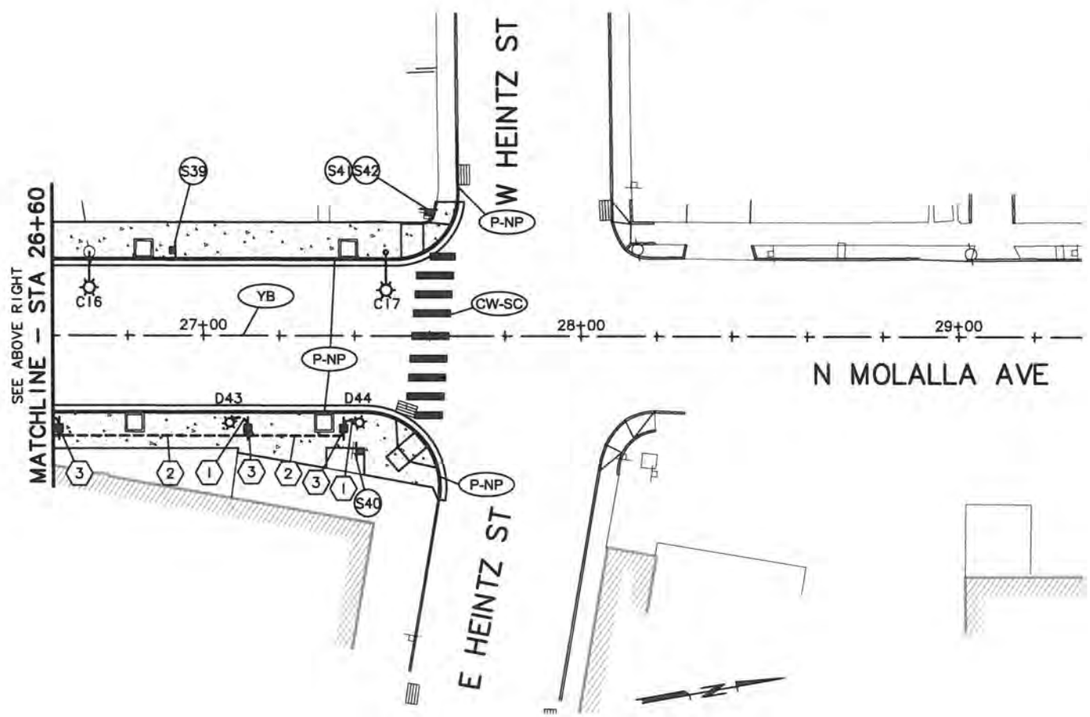
- CONDUIT
- JUNCTION BOX
- D# INSTALL PGE PROVIDED CONCRETE FOOTING (FOR DECORATIVE LIGHT POLE INSTALLED BY PGE). SEE SCHEDULE, SHEET S-4, FOR LOCATION
- C# LUMINAIRE INSTALLED ON EXISTING UTILITY POLE BY PGE. SEE SCHEDULE, SHEET S-4, FOR LUMINAIRE INFORMATION
- C# LUMINAIRE AND TIMBER UTILITY POLE INSTALLED BY PGE. SEE SCHEDULE, SHEET S-4, FOR LUMINAIRE INFORMATION

ILLUMINATION KEY NOTES

1. INSTALL 1" SCHEDULE 40 PVC ELECTRICAL CONDUIT. CONDUIT LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED IN THE FIELD AND APPROVED BY PORTLAND GENERAL ELECTRIC (PGE)
2. INSTALL 2" SCHEDULE 40 PVC ELECTRICAL CONDUIT. CONDUIT LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED IN THE FIELD AND APPROVED BY (PGE)
3. INSTALL 13"x24"x18" PRECAST CONCRETE JUNCTION BOX PER PGE REQUIREMENTS
4. PGE ELECTRICAL SERVICE DROP LOCATION. CONTRACTOR TO INSTALL CONDUIT TO BASE OF UTILITY POLE AND PGE SHALL MAKE THE FINAL SERVICE CONNECTION. CONTRACTOR TO COORDINATE WITH PGE.

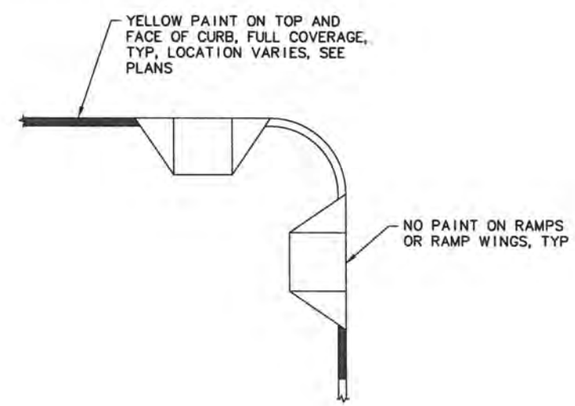
PROFESSIONAL ENGINEER STAMP NOTES:

1. RANDALL P. STARK IS RESPONSIBLE FOR SIGNING & STRIPING DESIGN.
2. JONATHAN MATTHEW GELLINGS IS RESPONSIBLE FOR ILLUMINATION DESIGN.



PLAN

SCALE: 1"=20'



CURB PAINTING PAVEMENT MARKINGS (1/-)

SCALE: NTS

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2075
FAX 541.741.3075

MOLALLA AVE IMPROVEMENTS
SIGNING, STRIPING AND ILLUMINATION PLAN – 3

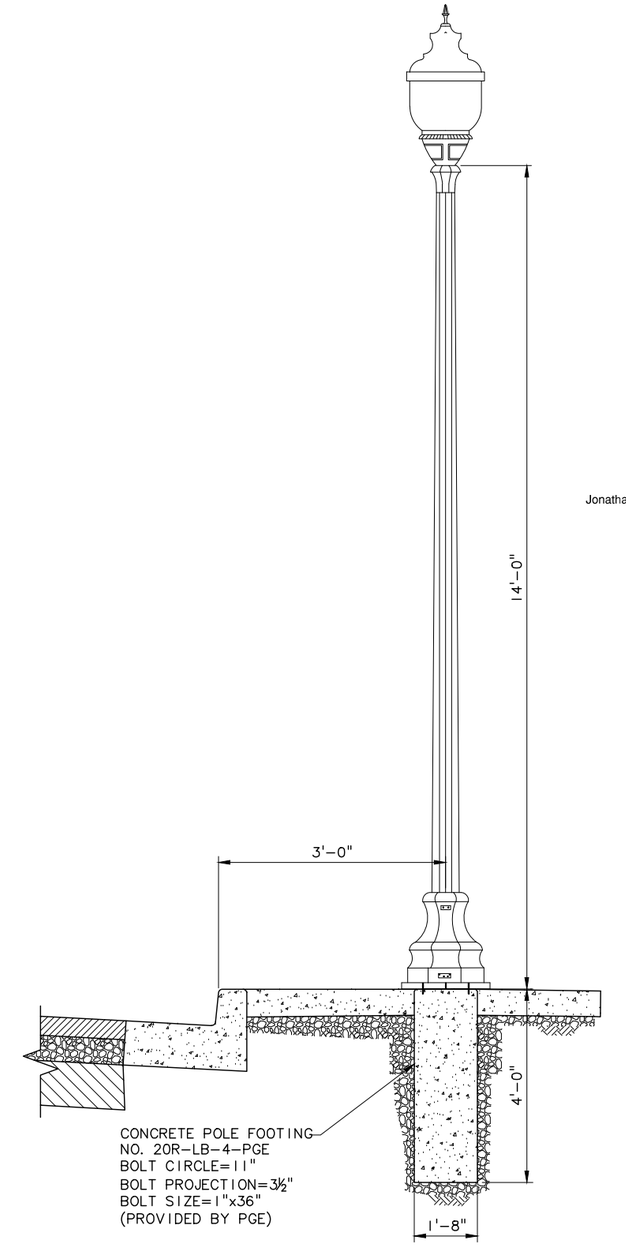
REVISIONS	
REV.:	DESCRIPTION:
1	BID ADDENDUM 1
2	BID ADDENDUM 3

DATE	1/5/2016
DESIGNED	RPS/JMG
DRAWN	DAK/DKH
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	S-3
SHEET NO.	45/59

G:\PDX_Projects\15\1670 – Molalla\CAD\Sheets\15-1670-205-OR-S-ST.dwg S-3 1/25/2016 2:43 PM DAK 20.0s (LMS Tech)

POLE AND LUMINAIRE SCHEDULE

POLE NO.	STATION	OFFSET	FOUNDATION	MOUNTING HEIGHT	MAST ARM LENGTH	LUMINAIRE LED'S	LUMINAIRE TYPE	LUMINAIRE DISTRIBUTION	WATTAGE	DRIVE CURRENT	MAKE/MODEL
C1	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C2	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C3	8+91.00	23.50' LT	PGE	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C4	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C5	10+53.00	23.50' LT	PGE	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C6	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C7	18+40.50	23.50' LT	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C8	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C9	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C10	20+96.00	23.50' LT	PGE	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C11	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C12	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C13	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C14	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C15	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C16	EXISTING	EXISTING	EXISTING	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
C17	27+48.50	23.50' LT	PGE	20'	10'	30	LED	M-C-III	53	530 mA	LEOTEK: GCI-30F-MV-3-GY-530
D1	11+00.50	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D2	11+09.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D3	11+48.00	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D4	11+33.50	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D5	12+03.00	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D6	11+85.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D7	12+68.00	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D8	12+36.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D9	13+18.00	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D10	12+86.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D11	13+74.50	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D12	13+46.50	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D13	14+59.50	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D14	13+85.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D15	14+56.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D16	15+08.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D17	15+23.50	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D18	15+49.50	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D19	15+73.00	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D20	16+06.00	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D21	16+38.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D22	16+69.00	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D23	16+81.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D24	17+16.00	23.50' LT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D25	17+19.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D26	17+88.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D27	18+33.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D28	18+78.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D29	19+32.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D30	19+63.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D31	20+03.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D32	20+89.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D33	21+71.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D34	22+33.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D35	23+12.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D36	23+56.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D37	24+02.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D38	24+38.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D39	25+16.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D40	25+57.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D41	26+07.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D42	26+57.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D43	27+07.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S
D44	27+41.00	23.50' RT	SLIP	14'	N/A	N/A	LED	VS-C-III	70	350 mA	HOLOPHANE: WFL-070-4K-AS-B-L3-S



DECORATIVE LIGHT POLE (1/-)

SCALE: NTS

NOTES:

1. DECORATIVE POLE, LUMINAIRE, WIRING AND ALL ASSOCIATED APPURTENANCES WILL BE PROVIDED AND INSTALLED BY PORTLAND GENERAL ELECTRIC (PGE). CONCRETE POLE FOOTING WILL BE PROVIDED BY PGE. CONTRACTOR TO INSTALL CONCRETE POLE FOOTING. CONTRACTOR TO PROVIDE AND INSTALL CONDUIT, JUNCTION BOX AND GROUND ROD FOR CONCRETE POLE FOOTING.
2. ORIENT ALL LUMINAIRE OPTICS PERPENDICULAR TO THE CENTERLINE OF THE ROADWAY.
3. CONTRACTOR TO CONFIRM LIGHT POLE WILL NOT BE IN CONFLICT WITH EXISTING BUILDING AWNING PRIOR TO INSTALLING CONCRETE POLE FOOTING.

Jonathan Gellings

Digitally signed by Jonathan Gellings
DN: C=US, E=jon.gellings@msa-ep.com, O=Murray, Smith & Associates, Inc., CN=Jonathan Gellings
Date: 2016.01.05 11:48:34-07'00'

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2075
FAX 541.744.3075

REGISTERED PROFESSIONAL ENGINEER 80051 OREGON JULY 31, 1981 JONATHAN MATTHEW GELLINGS
RENEWS 6-30-17

MOLALLA AVE IMPROVEMENTS
POLE AND LUMINAIRE SCHEDULE
AND FOUNDATION DETAIL

REVISIONS
REV.: | DESCRIPTION:

DATE	1/5/2016
DESIGNED	JMG
DRAWN	DAK
CHECKED	CSL

JOB NO.: 15-1670.206

DRAWING NAME: S-4

SHEET NO. 46/59

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EXISTING
"RECREATION"
SIGN

S1 (EXISTING)

REINSTALL SIGN ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAIL S1

R7-108

EXISTING
"NO SKATEBOARDING"
SIGN

S2 (NEW) **S3 (REINSTALL EXISTING)**

INSTALL SIGNS ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S2 & S3

SHARED SIGN SUPPORT

R2-1

R7-108

EXISTING
"NO SKATEBOARDING"
SIGN

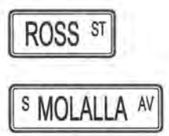
S4 (EXISTING) **S5 (EXISTING)** **S6 (EXISTING)**

REINSTALL SIGNS ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S4, S5 & S6

SHARED SIGN SUPPORT

R1-1



R2-56P

S7 (REINSTALL EXISTING) **S8 (NEW)**

INSTALL SIGNS ON NEW 2½" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S7 & S8

SHARED SIGN SUPPORT

R7-108

S9 (EXISTING)
S10 (EXISTING)
S11 (EXISTING)
S12 (EXISTING)
S13 (EXISTING)

REINSTALL SIGN ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S9 THROUGH S13

R1-1

EXISTING
ODOT DIRECTIONAL
SIGN

R1-3P

S14 (EXISTING & NEW) **S15 (REINSTALL EXISTING)**
S18 (EXISTING & NEW) **S19 (REINSTALL EXISTING)**

INSTALL SIGNS ON NEW 4"x6" WOOD SUPPORT W/ 5' SUPPORT BURY DEPTH PER ODOT STANDARD DRAWING TM670; SEE DETAIL, SHEET S-7

SIGN DETAILS S14, S15, S18 & S19

SHARED SIGN SUPPORT

EXISTING
"CITY HALL, POLICE, LIBRARY"
SIGN

EXISTING
"DRIBBLE HOUSE MUSEUM"
SIGN

S16 (EXISTING) **S17 (EXISTING)**

INSTALL SIGNS ON NEW 2½" – 10 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & SLIP BASE FDN PER ODOT STANDARD DRAWINGS TM681 & TM688; SEE DETAILS, SHEET S-7

SIGN DETAILS S16 & S17

SHARED SIGN SUPPORT

R7-108

S20 (NEW)
S21 (NEW)

INSTALL SIGN ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S20 & S21

R7-108

S22 (NEW)
S23 (NEW)

INSTALL SIGN ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S22 & S23

R7-108

EXISTING
"NO SKATEBOARDING"
SIGNS (2)

S24 (NEW) **S25 (REINSTALL EXISTING)**

INSTALL SIGNS ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S24 & S25

SHARED SIGN SUPPORT

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2075
FAX 541.744.3075

REGISTERED PROFESSIONAL ENGINEER 58075 OREGON RANDALL P. STAHR 11-15-15 RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
SIGN DETAILS I

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	S-5
SHEET NO.	47/59

G:\PDX_Projects\15\1670 – Molalla\CAD\Sheets\15-1670-205-OR-S-ST.dwg S-5 1/5/2016 9:07 AM DAK 20.0s (LMS Tech)

EXISTING
"NO SKATEBOARDING"
SIGNS (2)

EXISTING
"PUBLIC PARKING"
SIGNS (2)

S26 (EXISTING) **S27 (EXISTING)**

REINSTALL SIGNS ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S26 & S27
SHARED SIGN SUPPORT

R1-1 R2-56P

S28 (EXISTING) **S29 (EXISTING)**

REINSTALL SIGNS ON NEW PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT PER ODOT STANDARD DRAWINGS TM602 & TM688; SEE DETAILS, SHEET S-7

SIGN DETAILS S28 & S29
SHARED SIGN SUPPORT

W3-1A

S30 (EXISTING)

REINSTALL SIGN ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAIL S30

R1-1
FLASHING LED
W/ SOLAR PANEL

EXISTING
"BUS STOP"
SIGN

S31 (EXISTING) **S32 (EXISTING)**

REINSTALL SIGNS ON NEW 2½" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S31 & S32
SHARED SIGN SUPPORT

R1-1 R2-56P

S33 (EXISTING) **S34 (EXISTING)**

REINSTALL SIGNS ON NEW 2½" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S33 & S34
SHARED SIGN SUPPORT

R1-1
FLASHING LED
W/ SOLAR PANEL

S35 (EXISTING)

REINSTALL SIGN ON NEW 2½" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAIL S35

EXISTING
"NO SKATEBOARDING"
SIGNS (2)

S36 (EXISTING)

REINSTALL SIGN ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAIL S36

R7-109

S37 (NEW)

INSTALL SIGN ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAIL S37

R7-109

S38 (NEW)

INSTALL SIGN ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAIL S38

W3-1A

S39 (EXISTING)

REINSTALL SIGN ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAIL S39

EXISTING
"NO SKATEBOARDING"
SIGNS (2)

S40 (EXISTING)

REINSTALL SIGN ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAIL S40

R1-1 R2-56P

S41 (NEW) **S42 (REINSTALL EXISTING)**

INSTALL SIGNS ON NEW 2½" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S41 & S42
SHARED SIGN SUPPORT

R1-1 R2-56P

S43 (NEW) **S44 (REINSTALL EXISTING)**

REMOVE EXISTING WOOD POLE. INSTALL SIGNS ON NEW 2" – 12 GA PERFORATED STEEL SQUARE TUBE (PSST) SUPPORT & AHR FDN PER ODOT STANDARD DRAWINGS TM681 & TM687; SEE DETAILS, SHEET S-7

SIGN DETAILS S43 & S44
SHARED SIGN SUPPORT

Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.5075
FAX 541.741.5075

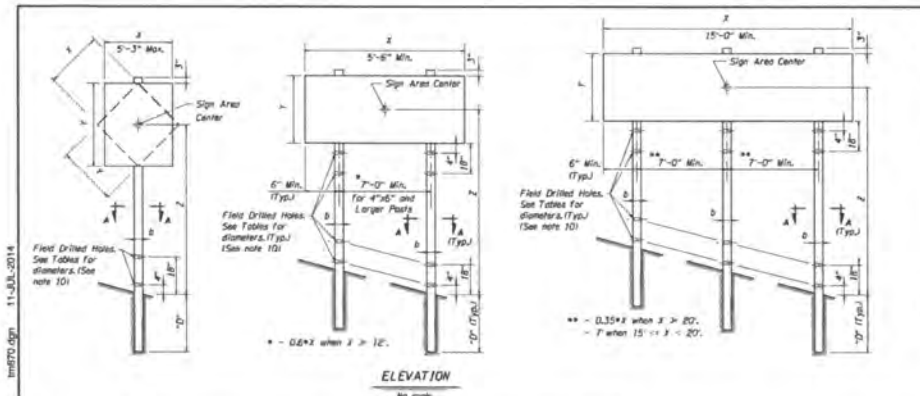
REGISTERED PROFESSIONAL ENGINEER 58075 OREGON RANDALL P. SMITH
RENEWS 12-30-16

MOLALLA AVE IMPROVEMENTS
SIGN DETAILS 2

REVISIONS
REV.: DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	S-6
SHEET NO.	48/59

G:\PDX_Projects\15\1670 – Molalla\CAD\Sheets\15-1670-205-OR-S-ST.dwg S-6 1/5/2016 9:07 AM DAK 20.0s (LMS Tech)



General Notes:

1. Wood posts are available in the following commercial lengths: 12', 14', 16', 18', 20', 22', 24', 26'.
2. Material shall be Douglas Fir No. 1 and according to Section 02110.40.
3. For horizontal and vertical clearances of permanent signs refer to TM200 and of temporary signs refer to TM821.
4. Wood post design in accordance with the 5th Edition 2009 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.
5. Use the 3 second gust wind speeds shown on TM671 for the site specific sign location.
6. General design parameters are Kz = 0.87, SIF (duration factor) = 1.6, Cd (sign) = 1.20, and G = 1.14.
7. The sign width to sign height or sign height to sign width ratio shall not exceed 5.0.
8. Permanent signing uses an Ir = 0.71 for a recurrence interval of 10 years.
9. Temporary signing uses an Ir = 0.45 for a recurrence interval of 1.5 years.
10. Posts protected by barrier or guardrail do not require field drilled holes.
11. 4" x 4" posts should not be used in snow plow areas.

Post Embedment Installation:

1. Excavate the hole at least 12" larger in diameter than the diagonal dimension of the post. Maintain at least 6" of space around the edges of the post to accommodate compaction equipment.
2. Align the post in the hole to a vertical position.
3. The space around the wood post shall be backfilled to finished ground surface.
4. Backfill with selected general backfill meeting the requirements of 00330.13.
5. Place in layers not greater than 6 inches.
6. Solidly ram and tamp the layers into the excavation area around the post.
7. Dampen during placement if too dry to compact properly.
8. Replace and finish the surface around the post to match the surrounding surface.

POST SIZE b x d	(X * Y * Z) in ft³ — 3 Second Gust Wind Speed (TM671) — 85 MPH — Number of Posts: 1	2	3* X=15'	3* X>=20'	95 MPH: 1	2	3* X=15'	3* X>=20'	105 and 110 MPH: 1	2	3* X=15'	3* X>=20'	Field Drilled Hole Diameters	Post Embedment Depth "D"
4" x 4"	77	154	165	231	62	124	132	186	56	112	120	168	Not Req'd	4' - 0"
4" x 6"	162	324	347	486	130	260	278	390	117	234	250	351	1½"	5' - 0"
6" x 6"	270	540	578	810	216	432	462	648	195	390	417	585	2"	5' - 0"
6" x 8"	494	988	1058	1482	395	790	846	1185	356	712	762	1068	3"	7' - 0"

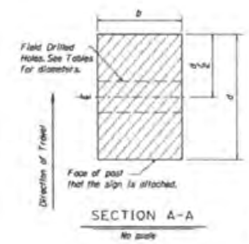
PERMANENT WOOD POST TABLE**

* - Linear Interpolate X*Y*Z 3 post values for signs greater than 15' and less than 20'.
** - See note 8

POST SIZE b x d	(X * Y * Z) in ft³ — 3 Second Gust Wind Speed (TM671) — 85 MPH — Number of Posts: 1	2	3* X=15'	3* X>=20'	95 MPH: 1	2	3* X=15'	3* X>=20'	105 and 110 MPH: 1	2	3* X=15'	3* X>=20'	Field Drilled Hole Diameters	Post Embedment Depth "D"
4" x 4"	122	244	261	366	98	196	210	294	88	176	188	264	Not Req'd	4' - 0"
4" x 6"	257	514	550	771	205	410	439	615	185	370	396	555	1½"	5' - 0"
6" x 6"	426	852	912	1278	341	682	730	1023	308	616	660	924	2"	5' - 0"
6" x 8"	779	1558	1669	2337	624	1248	1337	1872	563	1126	1206	1689	3"	7' - 0"

TEMPORARY WOOD POST TABLE**

* - Linear Interpolate X*Y*Z 3 post values for signs greater than 15' and less than 20'.
** - See note 9



SECTION A-A
No scale

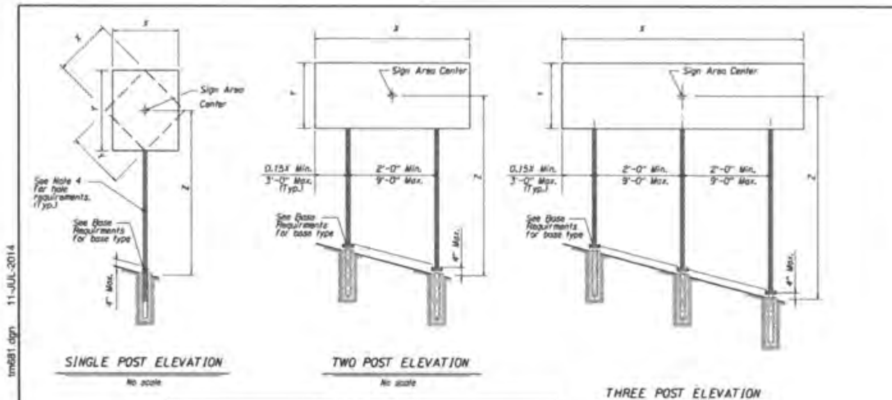
5660 | 08-JAN-2010 | TM200, TM671, TM821 | 1 of 1

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS
WOOD POST SIGN SUPPORTS
2015

Effective Date: December 1, 2015 - May 31, 2016 TM670



GENERAL NOTES:

1. Perforated Steel Square Supports are designed in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals 4th Edition, 2001, 2002, 2003, and 2006 Interim revisions.
2. The design basic wind speed (3 second gust) shall be according to the wind map shown on TM671.
3. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
4. Use 7/16" diameter holes at 1" spacing on each of the 4 sides.
5. Steel post shall have a minimum yield stress of 50 ksi.
6. Steel shall be galvanized according to ASTM A653 with coating designation G140.
7. General design parameters are Kz = 0.87, Cd (sign) = 1.20, and G = 1.14.
8. Permanent signing uses an Ir = 0.71 for a recurrence interval of 10 years.
9. Temporary signing uses an Ir = 0.45 for a recurrence interval of 1.5 years.
10. The sign width to sign height or sign height to sign width ratio shall not exceed 5.0.
11. For horizontal and vertical clearances of permanent signs refer to TM200 and of temporary signs refer to TM821.
12. Posts protected by barrier or guardrail do not require slip bases.

Square Tube Size	(X * Y * Z) in ft³ — 3 Second Gust Wind Speed (TM671) — 85 MPH — Number of Posts: 1	2	3	95 MPH: 1	2	3	105 or 110 MPH: 1	2	3
2"-12 ga.	79	158	237	63	126	189	57	114	171
2½"-12 ga.	136	272	408	109	218	327	98	196	294
2½"-10 ga.	165	330	495	132	264	396	119	238	357
2¼" & 2½"-12 ga.*	231	462	693	185	370	555	167	334	501

PERMANENT PERFORATED STEEL SQUARE TUBE TABLE

Square Tube Size	(X * Y * Z) in ft³ — 3 Second Gust Wind Speed (TM671) — 85 MPH — Number of Posts: 1	2	3	95 MPH: 1	2	3	105 or 110 MPH: 1	2	3
2"-12 ga.	125	250	375	100	200	300	90	180	270
2½"-12 ga.	215	430	645	172	344	516	155	310	465
2½"-10 ga.	261	522	783	209	418	627	189	378	567
2¼" & 2½"-12 ga.*	364	728	1092	292	584	876	263	526	789

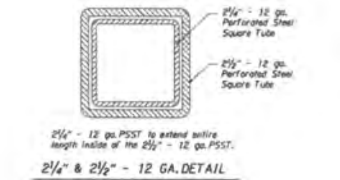
TEMPORARY PERFORATED STEEL SQUARE TUBE TABLE

Square Tube Size	Number of Posts: 1	2	3
2"-12 ga.	Anchor	Anchor	N/A
2½"-12 ga.	Anchor	Slip	Slip
2½"-10 ga.	Slip	Slip	Slip
2¼" & 2½"-12 ga.*	Slip	Slip	Slip

1. Anchor - See Drawing TM687 for PSST anchor foundation details.
2. Slip - See Drawing TM688 for PSST slip base foundation details.
3. N/A - Do not use this option.

BASE REQUIREMENTS

* - See 2¼" & 2½" - 12 ga. detail.



2¼" & 2½" - 12 GA. DETAIL
No scale

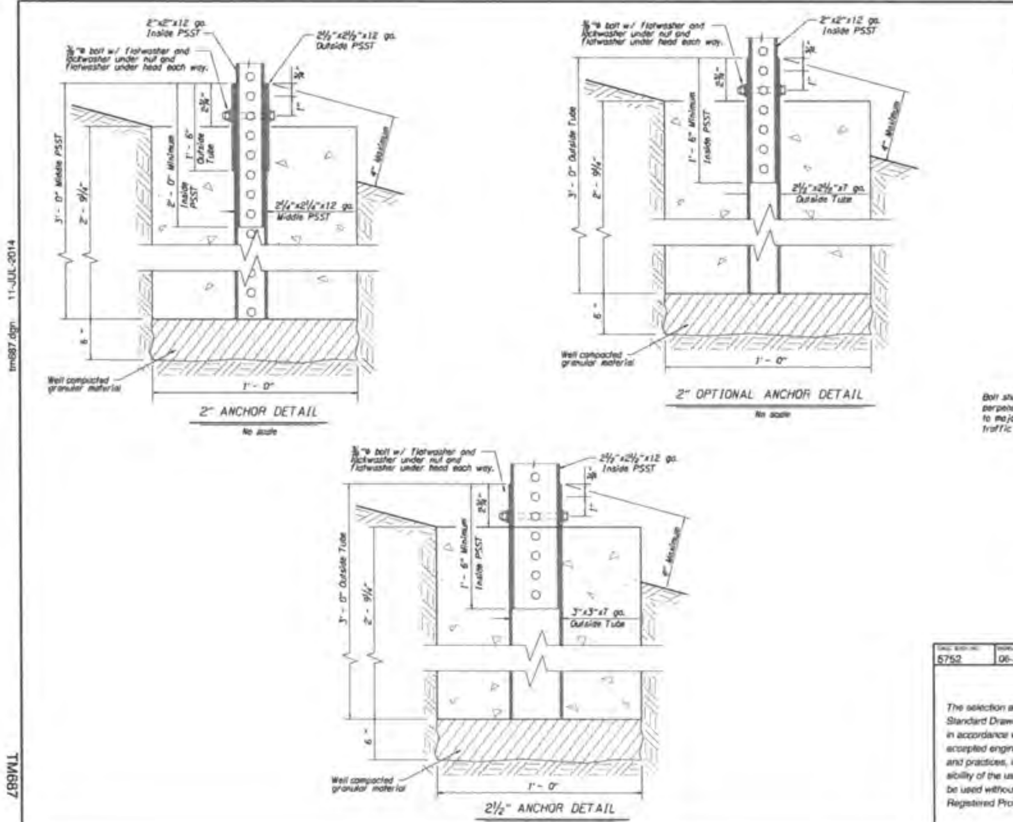
5752 | 06-JAN-2012 | TM200, TM671, TM687, TM688, TM775 | 1 of 3

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

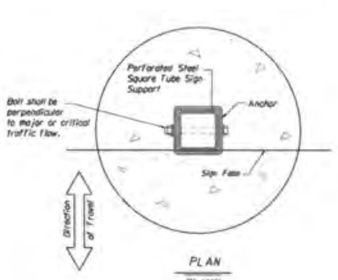
OREGON STANDARD DRAWINGS
PERFORATED STEEL SQUARE TUBE (PSST) SIGN SUPPORT INSTALLATION
2015

Effective Date: December 1, 2015 - May 31, 2016 TM681



General Notes:

1. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
2. Anchor steel shall be hot dipped galvanized or approved equal.
3. Footing concrete shall be Commercial Grade Concrete (fc = 3000 psi) per Specification 00440. The CGC mixture may be accepted at the site of placement according to 00440.14.
4. The estimated concrete volume is .09 cubic yards.



PLAN
No scale

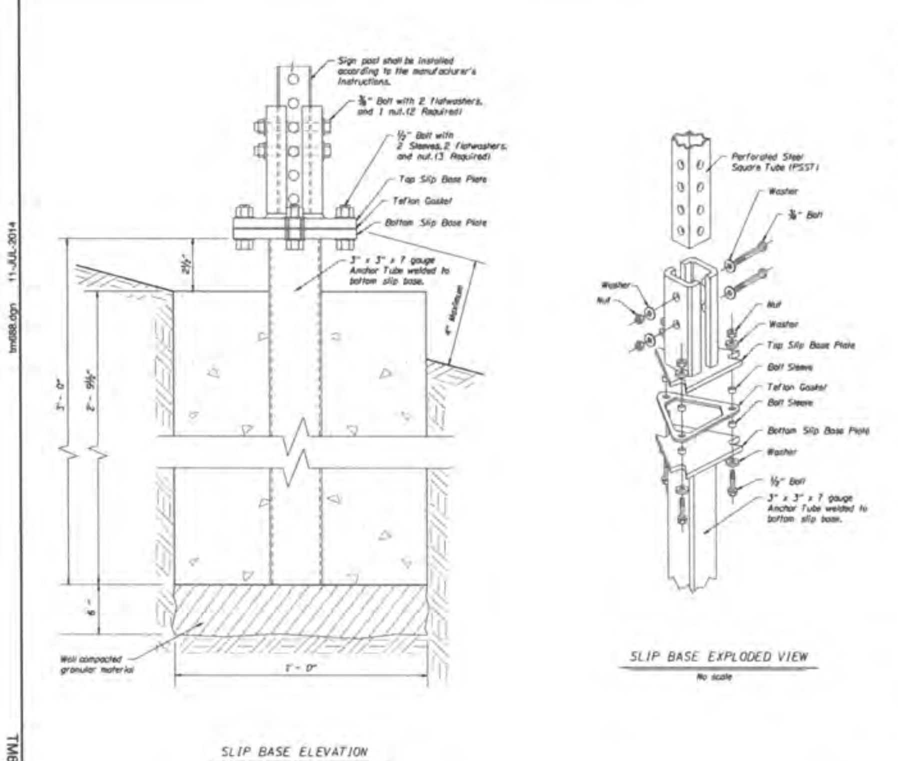
5752 | 06-JAN-2012 | TM681, TM688 | 2 of 3

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

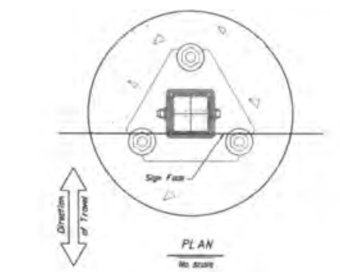
OREGON STANDARD DRAWINGS
PERFORATED STEEL SQUARE TUBE (PSST) ANCHOR FOUNDATION
2015

Effective Date: December 1, 2015 - May 31, 2016 TM687



General Notes:

1. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
2. Slip base steel shall be hot dipped galvanized or approved equal.
3. Footing concrete shall be Commercial Grade Concrete (fc = 3000 psi) per Specification 00440. The CGC mixture may be accepted at the site of placement according to 00440.14.
4. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
5. All slip bases shall be pre-assembled by the manufacturer and shall be installed according to the manufacturer's instructions.
6. Use slip bases listed on the ODOT Qualified products list or submit crash testing data, installation instructions, and unstamped working drawings according to 00150.35.
7. Slip base details shown are not for a specific manufacturer and are only shown to convey general pieces of a slip base system. Specific slip base material will be according to the manufacturer's documentation.



PLAN
No scale

5752 | 06-JAN-2012 | TM681, TM687 | 3 of 3

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS
PERFORATED STEEL SQUARE TUBE (PSST) SLIP BASE FOUNDATION
2015

Effective Date: December 1, 2015 - May 31, 2016 TM688

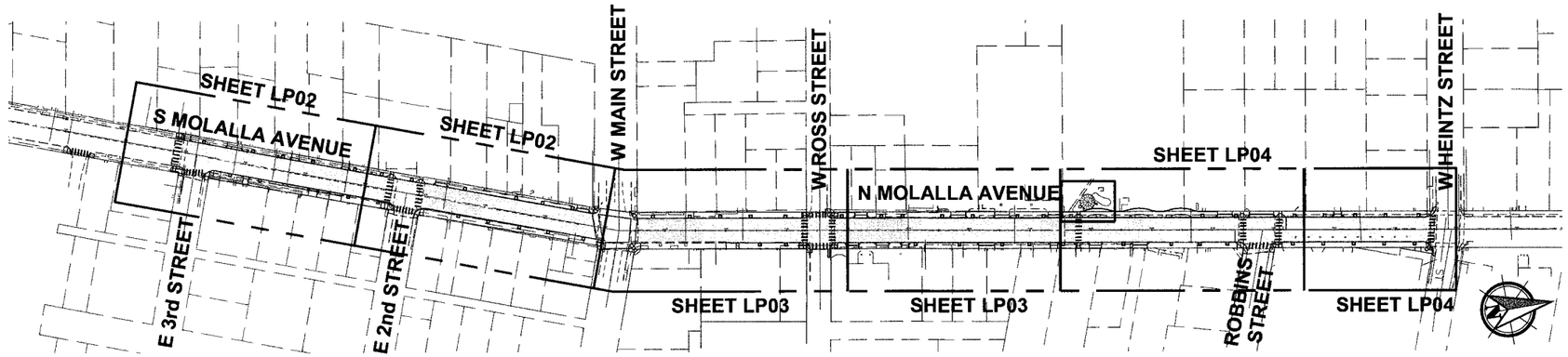
MSA
Murray, Smith & Associates, Inc.
Engineers/Planners
777 High Street, No. 200
Eugene, Oregon 97401
PHONE 541.741.2975
FAX 541.744.3875

REGISTERED PROFESSIONAL ENGINEER — OREGON — RANDALL P. STARK — RENEWS 6-30-16

MOLALLA AVE IMPROVEMENTS
STANDARD DETAILS

REVISIONS	
REV.:	DESCRIPTION:

DATE	1/5/2016
DESIGNED	RPS
DRAWN	DAK
CHECKED	CSL
JOB NO.:	15-1670.206
DRAWING NAME:	S-7
SHEET NO.	49/59



1 LP01 **Landscape Reference Plan**
NOT TO SCALE

GENERAL NOTES:

1. Refer to Civil Engineer's drawings for utility information; including storm drain, sewer, water, electrical, gas, telephone and cable.
2. Refer to city and/or county standard plans and specifications where applicable.
3. Contractor shall be responsible for any coordination with subcontractors as required to accomplish all construction operations.
4. Contractor shall be responsible to consult with city representative, appropriate agencies and plans, for the locations of all underground utilities, pipes and structures. Contractor shall take sole responsibility for all damages cause as a result of their work.
5. Contractor shall not willfully proceed with construction as designed when it is obvious that obstructions, area discrepancies and/or grade difference exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the owner's authorized representative. The contractor shall assume full responsibility for all necessary revisions due to failure to give such notifications.

PLANTING NOTES:

OWNER'S RESPONSIBILITY FOR MAINTENANCE:

After the completion of the construction contract, and the contractor's maintenance periods, the property owner and/or their landscape maintenance service shall maintain the site in a safe condition, including but not limited to the: trees, shrubs, groundcovers, grass, and irrigation system. Landscape plantings shall be maintained in a healthy condition throughout the year. Replace all plants that die with like varieties and match with size of adjacent plants. Maintenance may include but is not limited to: pruning, mowing, trimming, vegetation debris removal and other methods necessary to maintain safe pedestrian access, vehicular access, utility access, sight visibility, and to preserve public safety.

INSTALLATION:

1. The contractor shall install the landscape according to these plans, details, and the specifications.
2. Verify locations of all pertinent site improvements under other sections. If any part of this plan cannot be followed due to site conditions, contact the owner's authorized representative for instruction prior to commencing work.
3. Exact locations of plant materials shall be reviewed by the owner's authorized representative in the field prior to installation. Owner's authorized representative reserves the right to adjust plants to exact location in the field.
4. All plants shall be grown for this region or shall be adequately climatized.
5. Do not make substitutions. If specified landscape material is not obtainable, submit proof of non-availability from at least five (5) sources to the Landscape Architect, together with the proposal for use of equivalent material for final approval.
6. Contractor shall contact the Landscape Architect or owner's representative for plant material inspection prior to installation.
7. Contractor shall repair or replace any existing landscape affected by construction to its original condition. Contact Landscape Architect if any areas not originally landscaped, become landscape.

PLANTING LIST, SPECIFICATIONS, AND DETAILS:

Planting list is on this sheet.
For planting details see sheet LP06.
For planting specifications see associated special provisions.

IRRIGATION:

Water will be provided for trees using tree watering bags, Treegator brand or approved equal.

TREE PRUNING:

All trees or shrubs hereafter planted or substantially pruned in any public right-of-way shall only be pruned or planted with permission of the controlling agency.

Pruning of deciduous street trees adjacent to streets and sidewalks shall be performed pursuant to the following schedule and standards:

YEAR 1: Only dead, broken or crossing branches shall be pruned when the tree is planted.

YEAR 2: A Class I prune, pursuant to National Arborist Association Standards, shall be performed during year 2. The purpose of this pruning is to establish proper scaffold branching, raise the crown for road / sidewalk clearance, and remove any dead dying or crossing branches.

SUCCEEDING YEARS: Perform a Class I prune during succeeding years to continue to establish proper scaffold branching, remove any dead, dying, or crossing branches, and continue to raise the crown until road and sidewalk clearances standards have been met.

PLANT LIST

SYM	QTY	NAME	SIZE	CONTAINER	SPACING	COMMENTS
TREES						
TAG	18	*Acer glabrum* Rocky Mountain Maple	2" Cal. / 8' Height	B&B	As Shown	
TAR	13	*Acer rubrum 'Armstrong'* Armstrong Red Maple	2" Cal. / 10' Height	B&B	As Shown	
TPJ	16	*Pyrus calleryana 'Jackzam'* Jack Pear	2" Cal. / 8' Height	B&B	As Show	
TPR	14	*Pyrus calleryana 'Red Spire'* Red Spire Pear	2" Cal. / 10' Height	B&B	As Shown	
SHRUBS						
SKL	10	*Kalmia latifolia 'Elf'* Elf Mountain Laurel	18"-24" Height	5 Gal	As Shown	
SRO	10	*Rosmarinus officinalis 'Roman Beauty'* Roman Beauty Rosemary	12" Height	3 Gal	As Shown	
GROUNDCOVER						
GCD	15	*Cotoneaster dammari 'Lowfast'* Bearberry Cotoneaster	Fully Rooted	1 Gal	30" O.C.	
SEED MIX						
	352 SF	30% *Lolium perenne var Express II* - Express II Perennial Rye Grass 30% *Lolium perenne var Blazer 4* - Blazer 4 Perennial Rye Grass 20% *Festuca rubra var Game* - Garnet Creeping Red Fescue 20% *Festuca rubra sp fallex var Windward* - Windward Chewings Fescue	25 LB Bag	8 LBS / 1000 SF	

HDJ DESIGN GROUP PLLC
engineers | landscape architects | planners | surveyors
314 W 15th Street
Vancouver, WA 98660-2927
360/695-3488
503/924-4005
360/695-8767 fax
www.hdjdg.com

REGISTERED 440 JOHN A. NUTTBROCK OREGON 11-12-1999 LANDSCAPE ARCHITECT

MOLALLA URBAN RENEWAL PROJECT - MOLALLA AVENUE
CITY OF MOLALLA

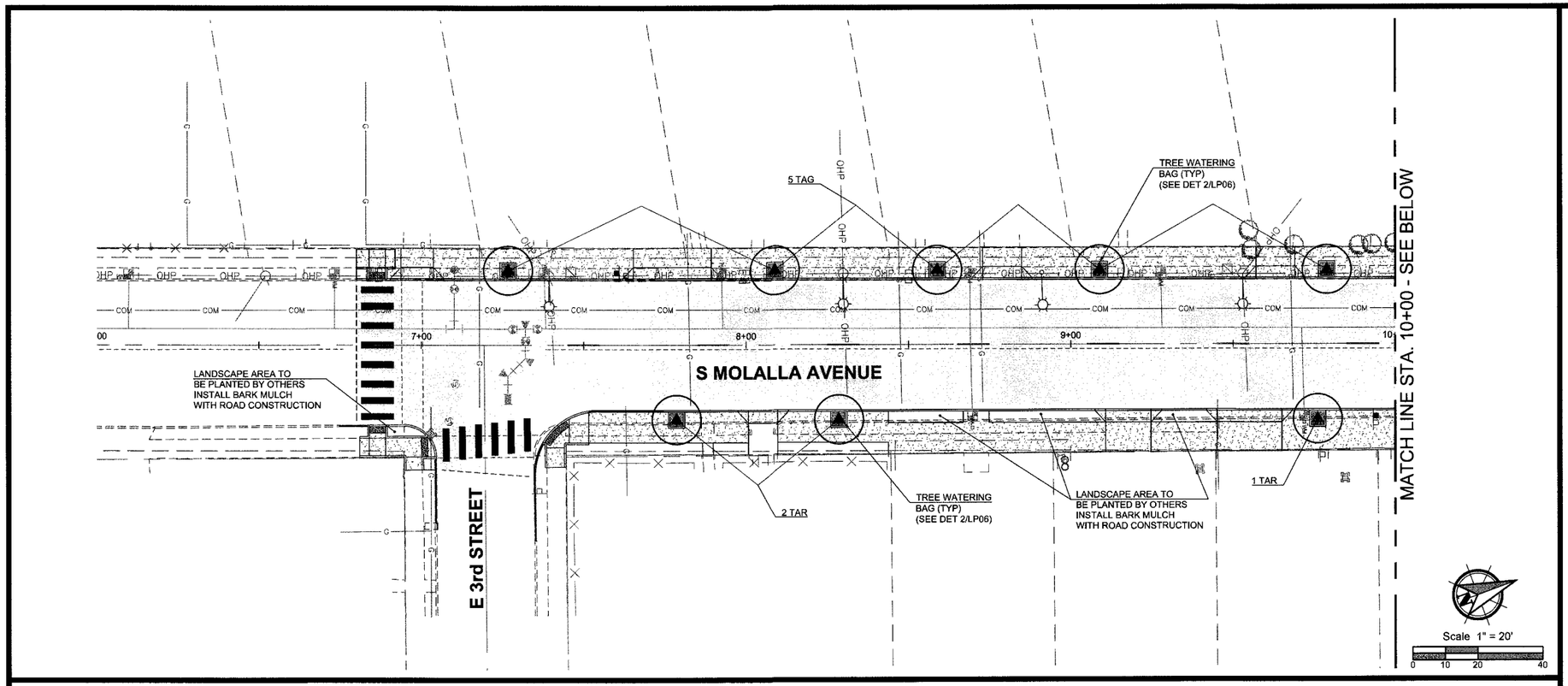
LANDSCAPE REFERENCE PLAN, PLANT LIST, AND NOTES

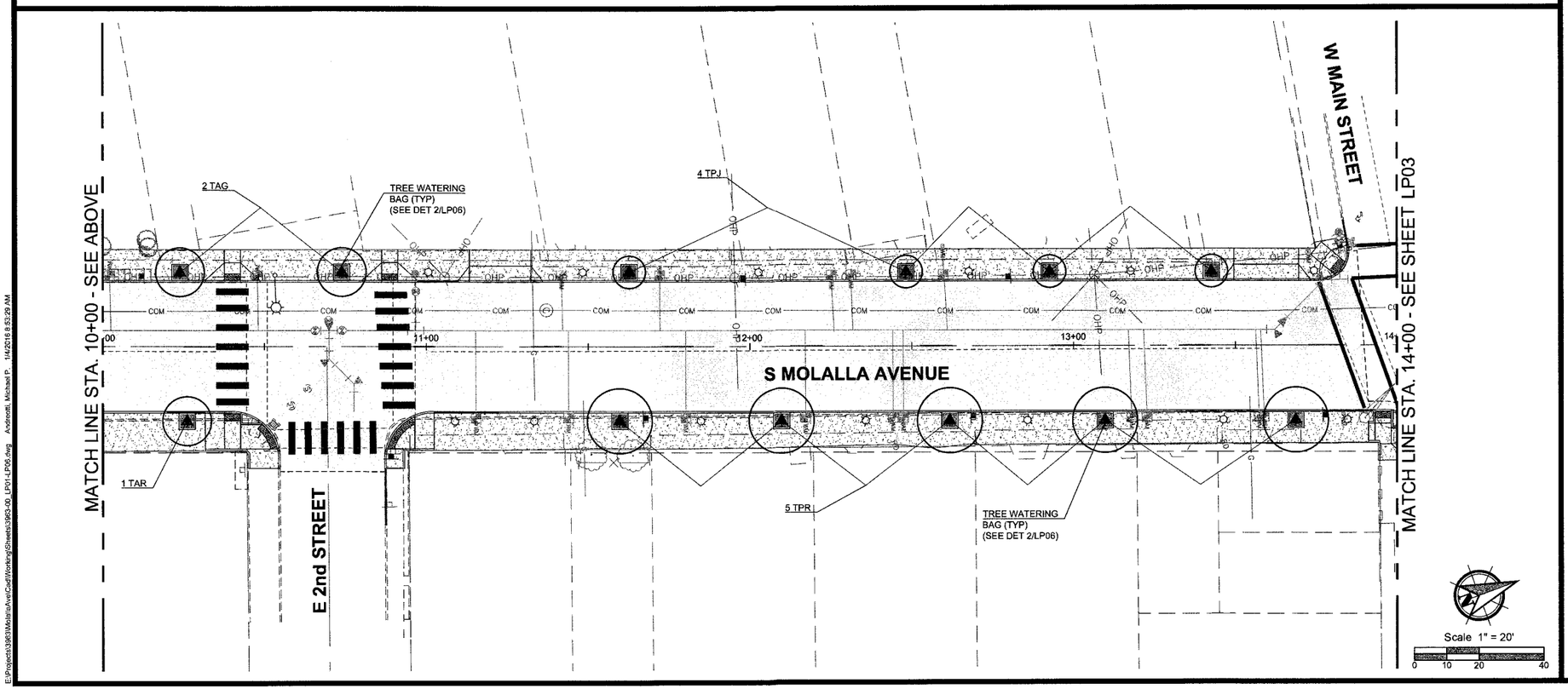
City of Molalla
117 N Molalla Ave
PO Box 248
Molalla, OR 97038
T: 503-829-6855
F: 503-829-3676
www.cityofmolalla.com

Know what's below. Call before you dig.

DESIGNED: MPA
DRAWN BY: MPA
SCALE: H: N/A V: N/A
JANUARY 06, 2015
3963-00
SHEET ID
LP01
SHEET 50 OF 59

E:\Projects\3963\Molalla Ave\Cad\Working\Sheets\3963-00_LP01-LP06.dwg Andreoeti, Michael P. 1/4/2016 8:53:18 AM





CONSTRUCTION NOTES:

GENERAL NOTES

1. SEE SHEET LP01 FOR PLANTING LIST AND NOTES.
2. ANY EXISTING LANDSCAPE DISTURBED BY CONSTRUCTION THAT IS NOT SHOWN ON THESE PLANS IS TO BE REPLACED IN KIND AT NO COST TO OWNER.
3. EXISTING IRRIGATION DISTURBED OR DISPLACED BY CONSTRUCTION IS TO BE REPAIRED OR RELOCATED TO ENSURE PROPER OPERATION. PROPOSED LANDSCAPE AREAS IN OR ADJACENT TO THE PARK SHALL BE IRRIGATED.

LEGEND

•	PROPOSED TREE
TAG	*ACER GINNALA 'FLAME'* FLAME MAPLE
TAR	*ACER RUBRUM 'ARMSTRONG'* ARMSTRONG RED MAPLE
TPJ	*PYRUS CALLERYANA 'JACKZAM'* JACK PEAR
TPR	*PYRUS CALLERYANA 'RED SPIRE'* RED SPIRE PEAR
	TURF SEED MIX. SEE SHEET LP01.
△	TREE WATERING BAG. SEE SHEET LP06.
	TREE GRATE. SEE SHEET LP06.

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503/924-4005
360/695-8767 fax
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REGISTERED LANDSCAPE ARCHITECT
440
JOHN A. NUTTBROCK
OREGON
11-12-1999

MOLALLA URBAN RENEWAL PROJECT - MOLALLA AVENUE
CITY OF MOLALLA

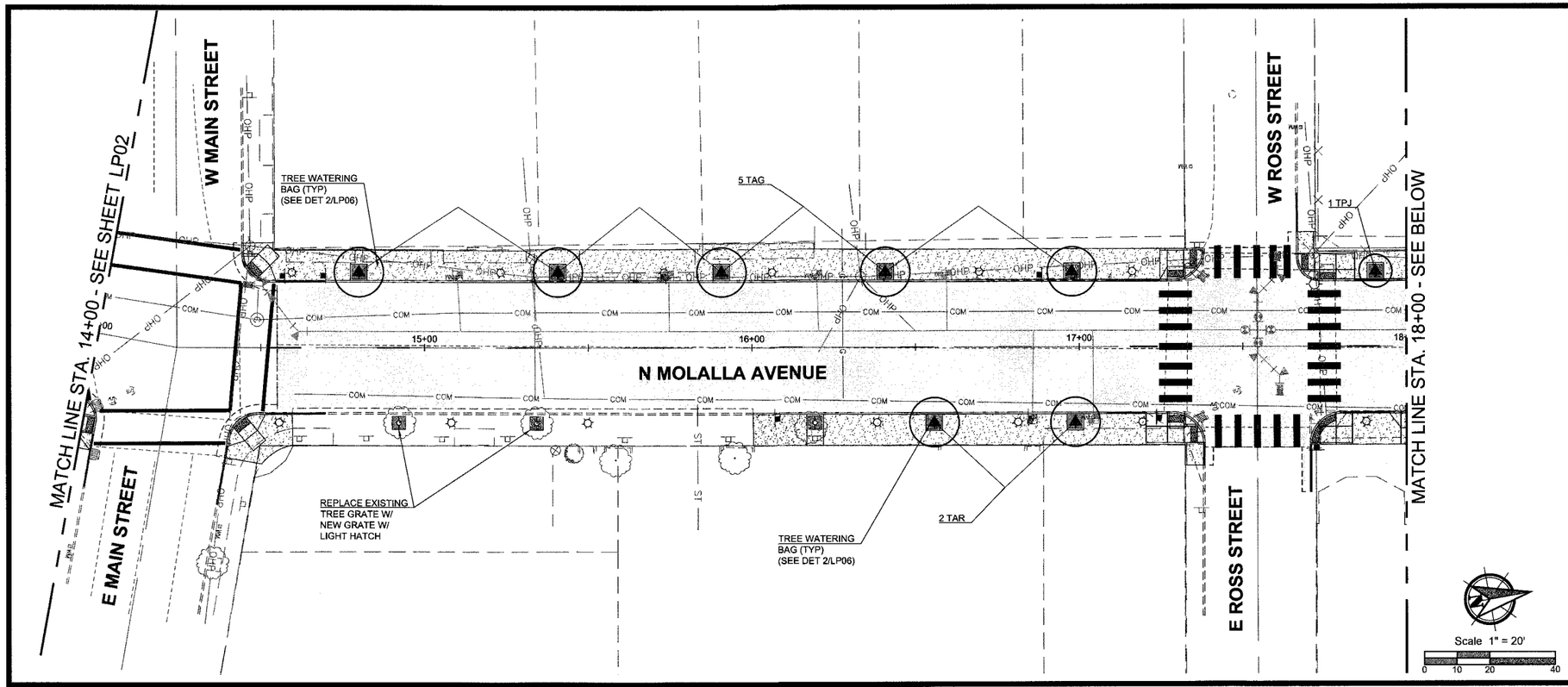
LANDSCAPE PLAN - STA. 6+00 TO STA. 14+00

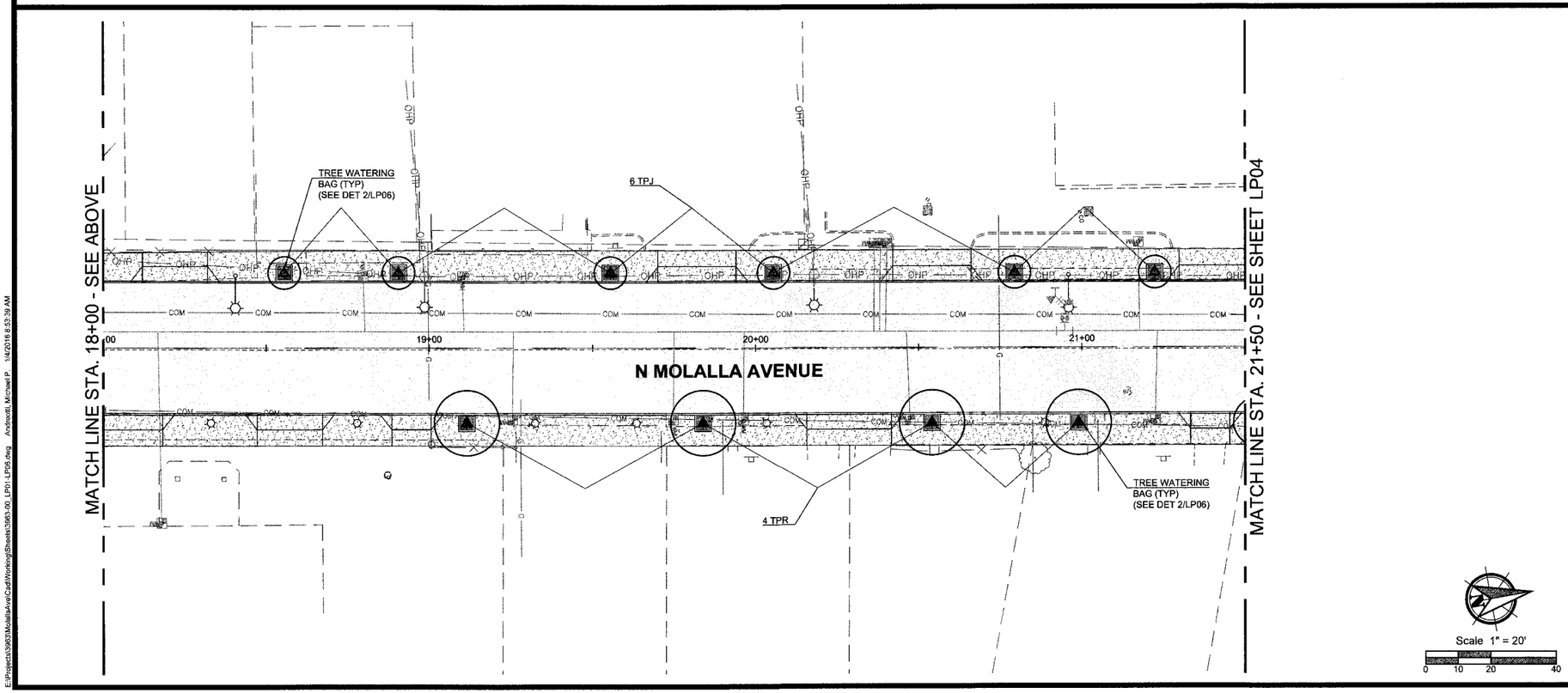
City of Molalla
117 N Molalla Ave
PO Box 248
Molalla, OR 97038
T: 503-829-6855
F: 503-829-3676
www.cityofmolalla.com

Know what's below. Call before you dig.

DESIGNED:	MPA
DRAWN BY:	MPA
SCALE:	H: 1"=20' V: N/A
JANUARY 06, 2015	3963-00
SHEET ID	LP02

E:\Projects\3963\Molalla\Ave\Cadd\Working\Sheets\3963-00_LP01-LP06.dwg Andreoetti, Michael P. 1/4/2016 8:53:29 AM





CONSTRUCTION NOTES:

GENERAL NOTES

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LEGEND

•	PROPOSED TREE
TAG	*ACER GINNALA 'FLAME'* FLAME MAPLE
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TPJ	*PYRUS CALLERYANA 'JACKZAM'* JACK PEAR
TPR	*PYRUS CALLERYANA 'RED SPIRE'* RED SPIRE PEAR
	TURF SEED MIX. SEE SHEET LP01.
△	TREE WATERING BAG. SEE SHEET LP06.
	TREE GRATE. SEE SHEET LP06.

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CITY OF MOLALLA

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SCALE: H: 1"=20' V: N/A
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SHEET ID
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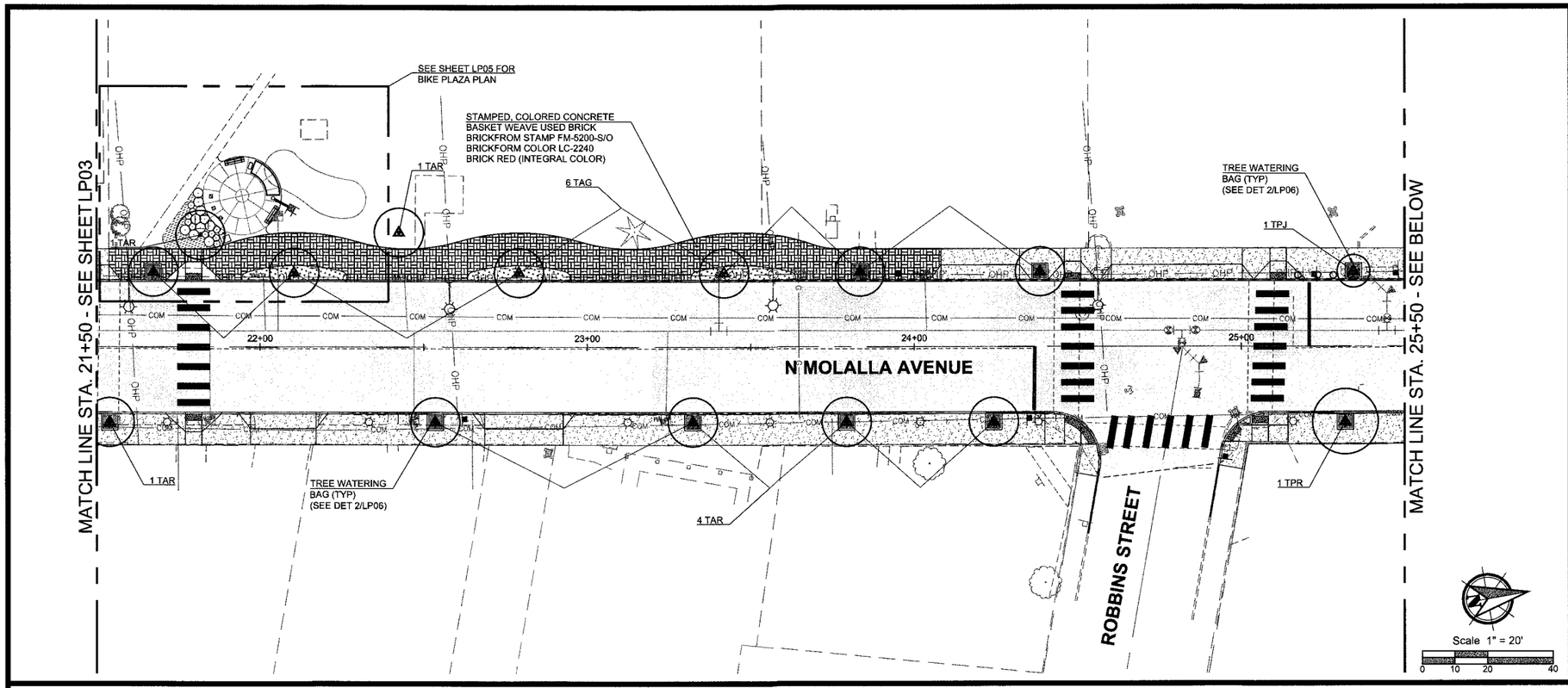

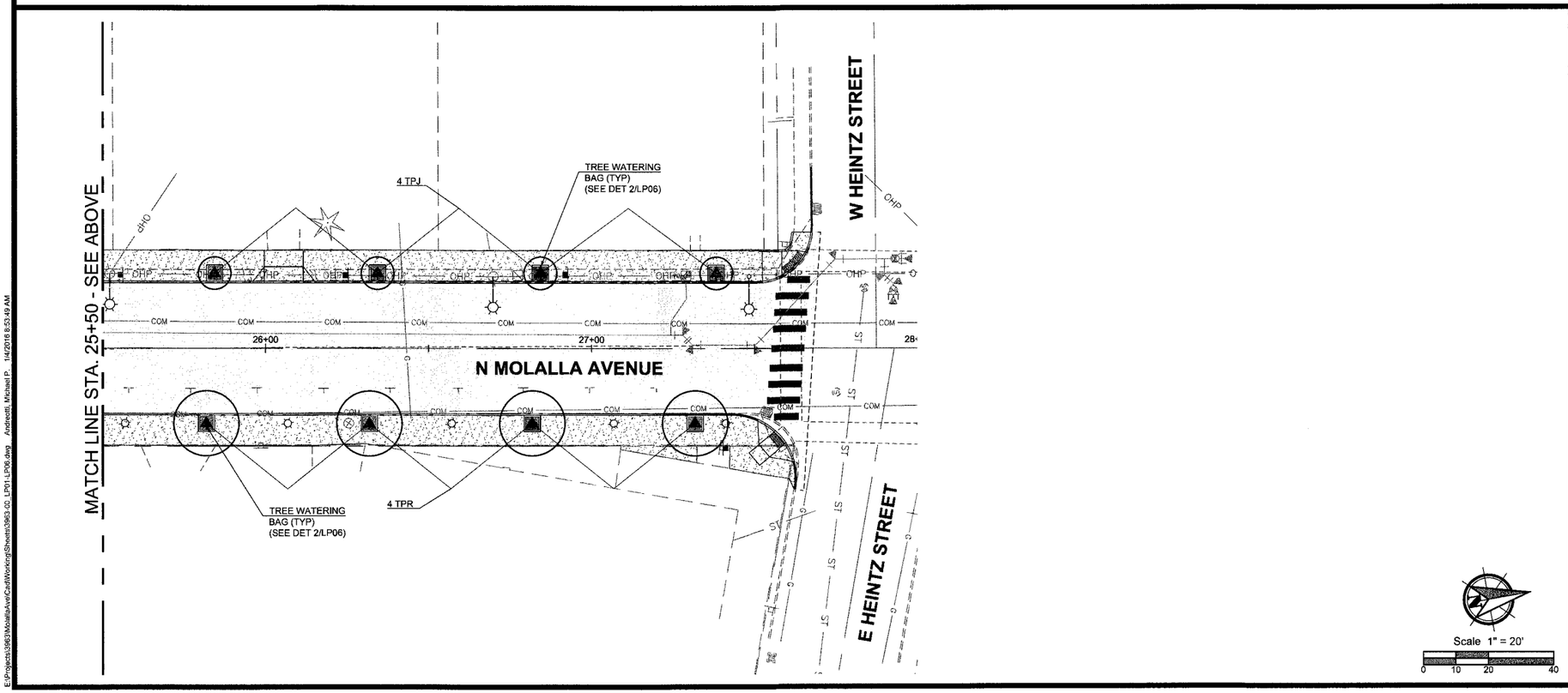

CONSTRUCTION NOTES:

GENERAL NOTES

1. SEE SHEET LP01 FOR PLANTING LIST AND NOTES.
2. ANY EXISTING LANDSCAPE DISTURBED BY CONSTRUCTION THAT IS NOT SHOWN ON THESE PLANS IS TO BE REPLACED IN KIND AT NO COST TO OWNER.
3. EXISTING IRRIGATION DISTURBED OR DISPLACED BY CONSTRUCTION IS TO BE REPAIRED OR RELOCATED TO ENSURE PROPER OPERATION. PROPOSED LANDSCAPE AREAS IN OR ADJACENT TO THE PARK SHALL BE IRRIGATED.

LEGEND

•	PROPOSED TREE
TAG	*ACER GINNALA 'FLAME'* FLAME MAPLE
TAR	*ACER RUBRUM 'ARMSTRONG'* ARMSTRONG RED MAPLE
TPJ	*PYRUS CALLERYANA 'JACKZAM'* JACK PEAR
TPR	*PYRUS CALLERYANA 'RED SPIRE'* RED SPIRE PEAR
	TURF SEED MIX. SEE SHEET LP01.
△	TREE WATERING BAG. SEE SHEET LP06.
	TREE GRATE. SEE SHEET LP06.

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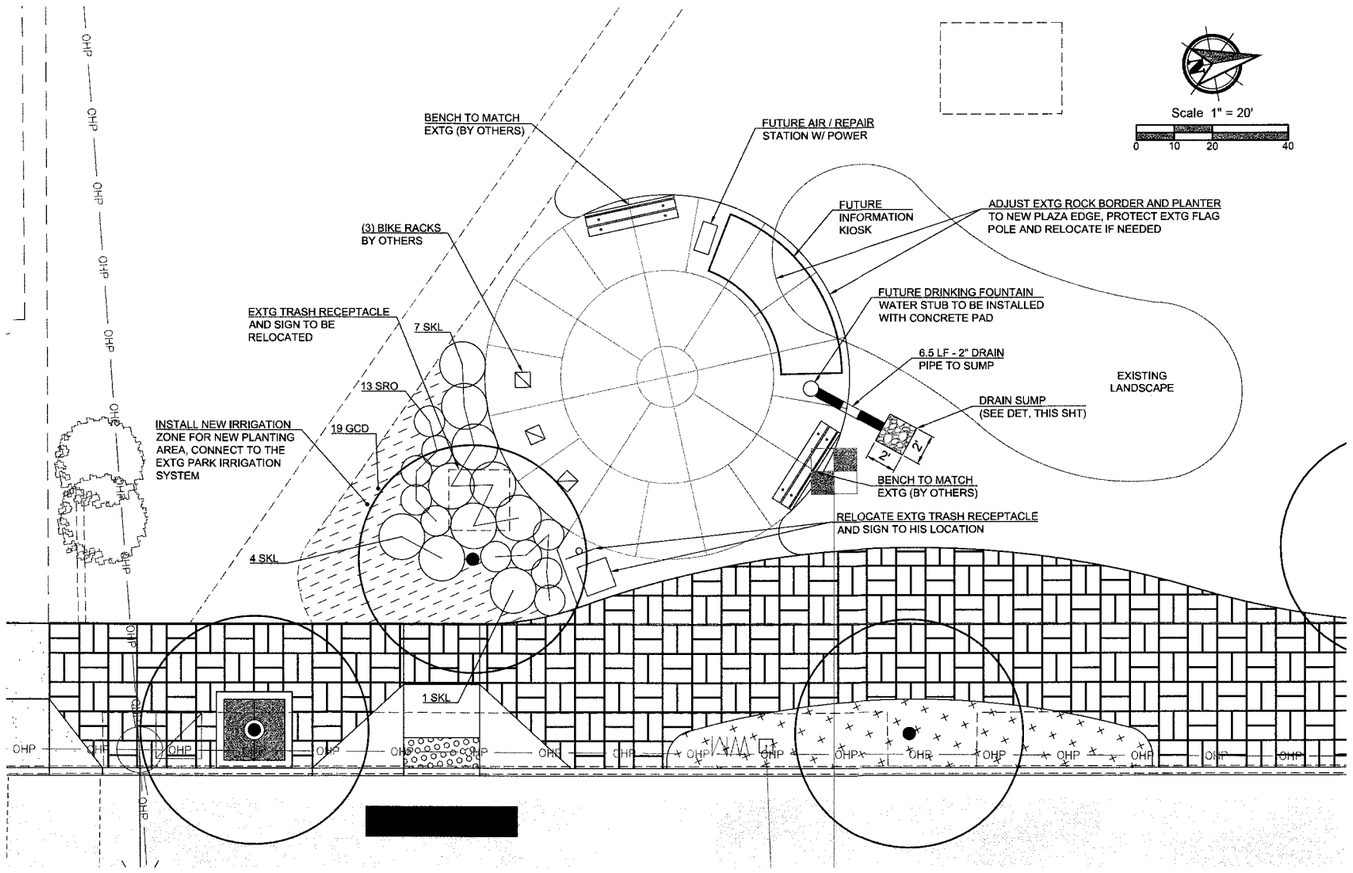
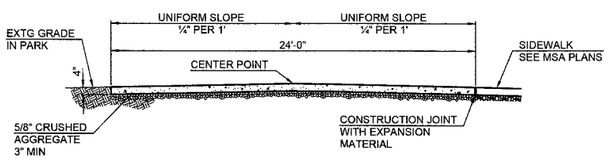




Notes:

Concrete shall be Commercial Grade.

Finish shall be textured finish unless otherwise directed.

All joints shall be finished with ¼" radius edger.

See plans by MSA for sidewalk and curb details.

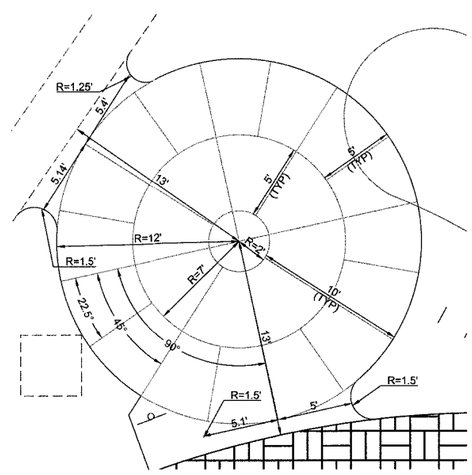
Compact subgrade & aggregate to 95% of max. dry density.

Expansion material required around all structures & at buildings.

All existing edges shall be sawcut.

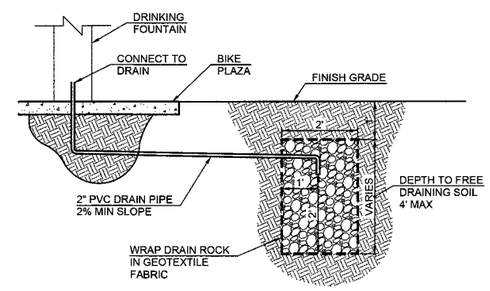
Bike Plaza Concrete Section

NTS



Bike Plaza Scoring Plan

NTS



Drinking Fountain Drain Sump

NTS

CONSTRUCTION NOTES:

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LEGEND

- PROPOSED TREE
- PROPOSED SHRUB
- SKL — *KALMIA LATIFOLIA 'ELF'* ELF MOUNTAIN LAUREL
- SRO — *ROSMARINUS OFFICINALIS 'ROMAN BEAUTY'* ROMAN BEAUTY ROSEMARY
- *COTONEASTER DAMMERI 'LOWFAST'* BEARBERRY COTONEASTER
- TREE GRATE. SEE SHEET LP06.

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BIKE PLAZA PLAN

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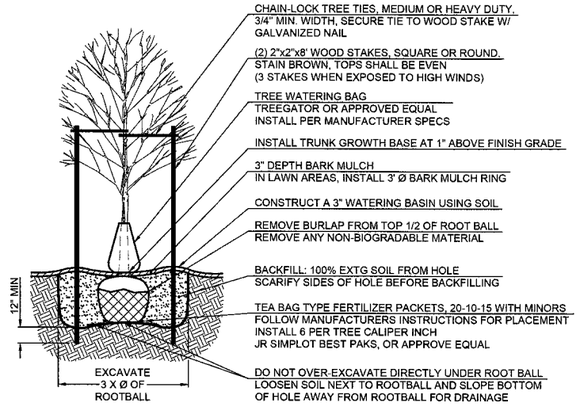
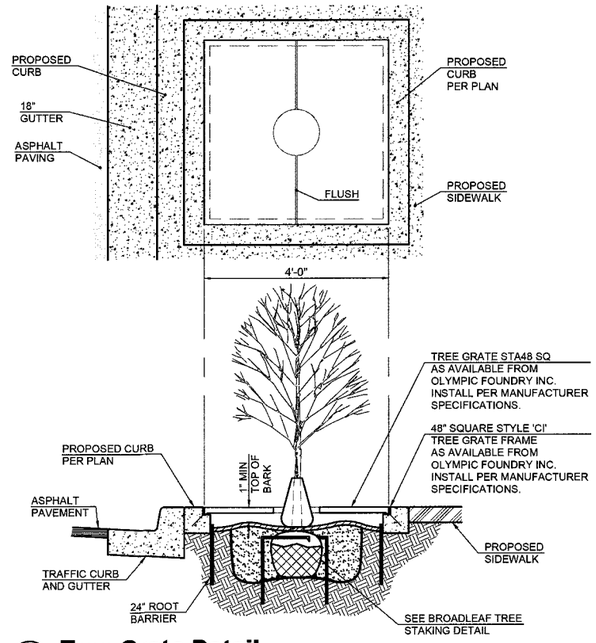


NOTE: AFTER PLANTING AND THOROUGHLY WATERING, APPLY ANTI-DESICCANT SPRAY IF TREE IS IN LEAF.

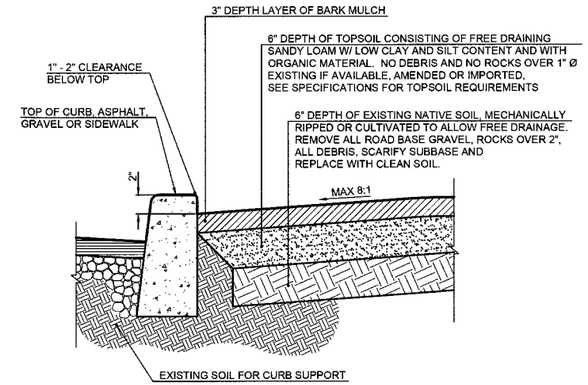
1 LP06 Broadleaf Tree Detail - Staked

NOT TO SCALE *USE FOR TREES W/OUT TREE GRATES



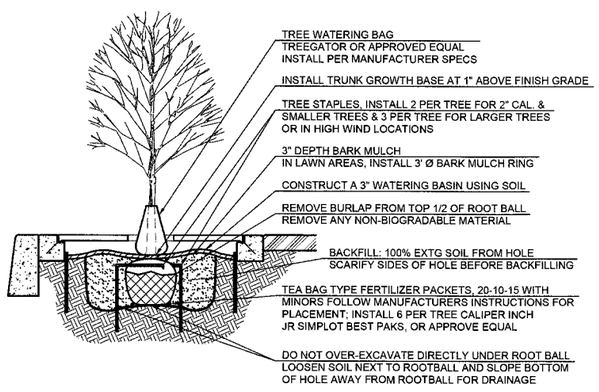
2 LP06 Tree Grate Detail

NOT TO SCALE



3 LP06 Planting Area Soil Cross Section

NOT TO SCALE



NOTE: AFTER PLANTING AND THOROUGHLY WATERING, APPLY ANTI-DESICCANT SPRAY IF TREE IS IN LEAF.

4 LP06 Broadleaf Tree Detail - Stapled

NOT TO SCALE *USE FOR TREES W/ TREE GRATES

UB 18-2 Specifications

Specified root barriers are a mechanical barrier are root deflector to prevent tree roots from damaging hardscapes and landscapes. Assembled in 2' long modules to create varying sizes of cylinders for surrounding rootballs or for linear applications directly beside a hardscape adjacent to one side of the trees.

A. Materials

1. The contractor shall furnish and install tree root barriers as specified. The tree root barriers shall be product # UB 18-2 as manufactured by Deep Root Partners, L.P. or approved equal. The barrier shall be black injection molded panels, of .080" wall thickness in modules 24" long by 18" deep; manufactured with a min. 50% post consumer recycled polypropylene plastic with added ultraviolet inhibitors; recyclable.

   Not less than 4 molded integral vertical root deflecting ribs of at least 0.06" thickness protruding 1/2" at 90° from interior of the barrier panel, spaced 6" apart.

   A double top edge consisting of two parallel, integral, horizontal ribs at the top of the panel of a min. 0.06" thickness 3/8" wide and 1/4" apart with the lower rib attached to the vertical root deflecting ribs (Detail "A").

   A min. of 9 anti-lift ground lock tabs consisting of integral horizontal ridges of a min. 0.06" thickness in the shape of a segment of a circle, the 2-1/4" chord of the segment joining the panel wall and the segment, protruding 3/8" from the panel. The 9 ground locks on the each panel shall be about equally spaced between each of the vertical root deflecting ribs (Detail "B").

   An integrated zipper joining system providing for instant assembly by sliding on panel into another (Detail "C").

2. The basic properties of the material shall be:

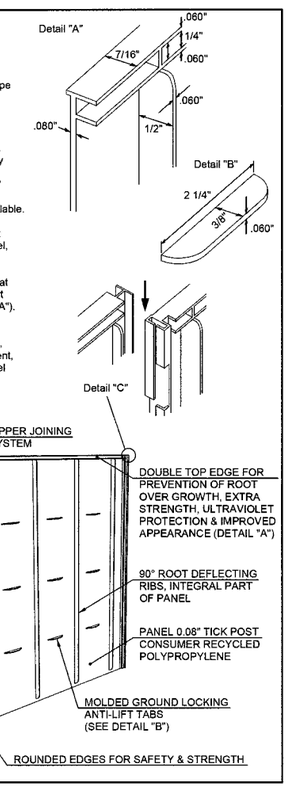
Test	ASTM Test Method	Typical Value Copolymer Polypropylene
Tensile strength @ yield - Wall	D638	2,383 PSI
Tensile str. @ yield - Hinge	D638	2,483 PSI
Yield Elongation - Wall	D638	7.71%
Yield Elongation - Hinge	D638	7.58%
Flexural Modulus	D790B	120,785 PSI
Notched Izod Impact - Wall	D256A	2.54 (ft-lbs)
Rockwell Hard. r. scale - Wall	D785A	84.1

B. Construction and Installation

1. The contractor shall install the tree root barriers with the number of panels and in the manner shown on the plans. The vertical root deflecting ribs shall be 1/2" above grade. Each of the required number of panels shall be connected to form a circle around the rootball or joined in a linear fashion and placed along the adjacent hardscape.

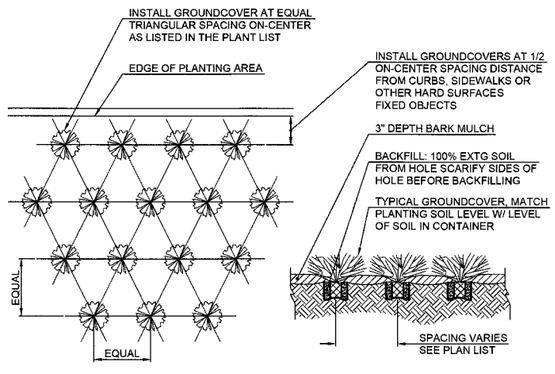
2. Excavation and soil preparation shall conform to the plans.

3. The tree root barriers shall be backfilled on the outside with 3/4" to 1-1/2" grave or crushed rock as shown on the plans. No gravel backfill is required for linear planting.



7 LP06 18" Deep Root Barrier

NOT TO SCALE



5 LP06 Groundcover Detail

NOT TO SCALE

Linear Style Planting with DeepRoot Barriers

Determine the number of panels to be used.

A. Dig the trench to the depth based upon the particular barrier.

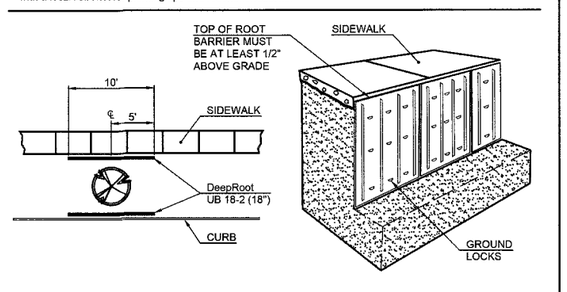
B. Next place the barrier in the trench with the vertical ribs facing toward the tree and align in a straight fashion. It is helpful to place the barrier against the hardscape. Use the hardscape as a guide to backfill against the barriers to promote a clean, smooth fit to the hardscape. Be sure to keep the barrier's double to edge at least 1/2" above grade to ensure roots do not grow over the top.

C. Plant the tree(s). The linear style offer a more expansive rooting growth area, however adverse soil and drainage conditions may exist in the actual planting area. Take steps to ensure healthy growth of the tree at planting. Consult with a local Arborist for planting tips and recommendations.

For additional information please visit our website at www.deeproot.com

For information regarding distributors please call: 1-800-ILV-ROOT (458-7668). For help with drainage or other difficult installation questions please call DeepRoot Technical Support at: 1-800-ROOT-TEK (766-8835).

Install root barriers at all trees when the tree is within 8' of hardscape on any side.



6 LP06 Linear Root Barrier Installation

NOT TO SCALE

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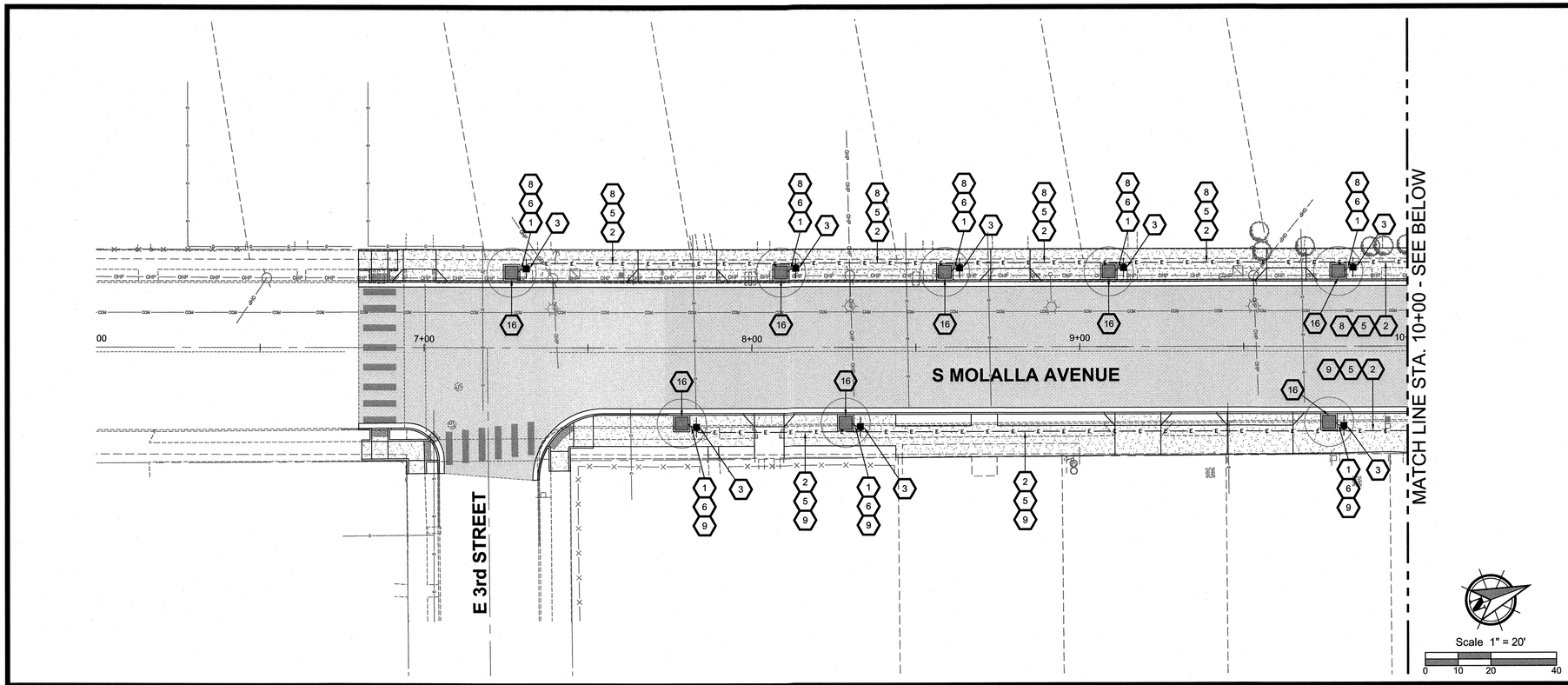

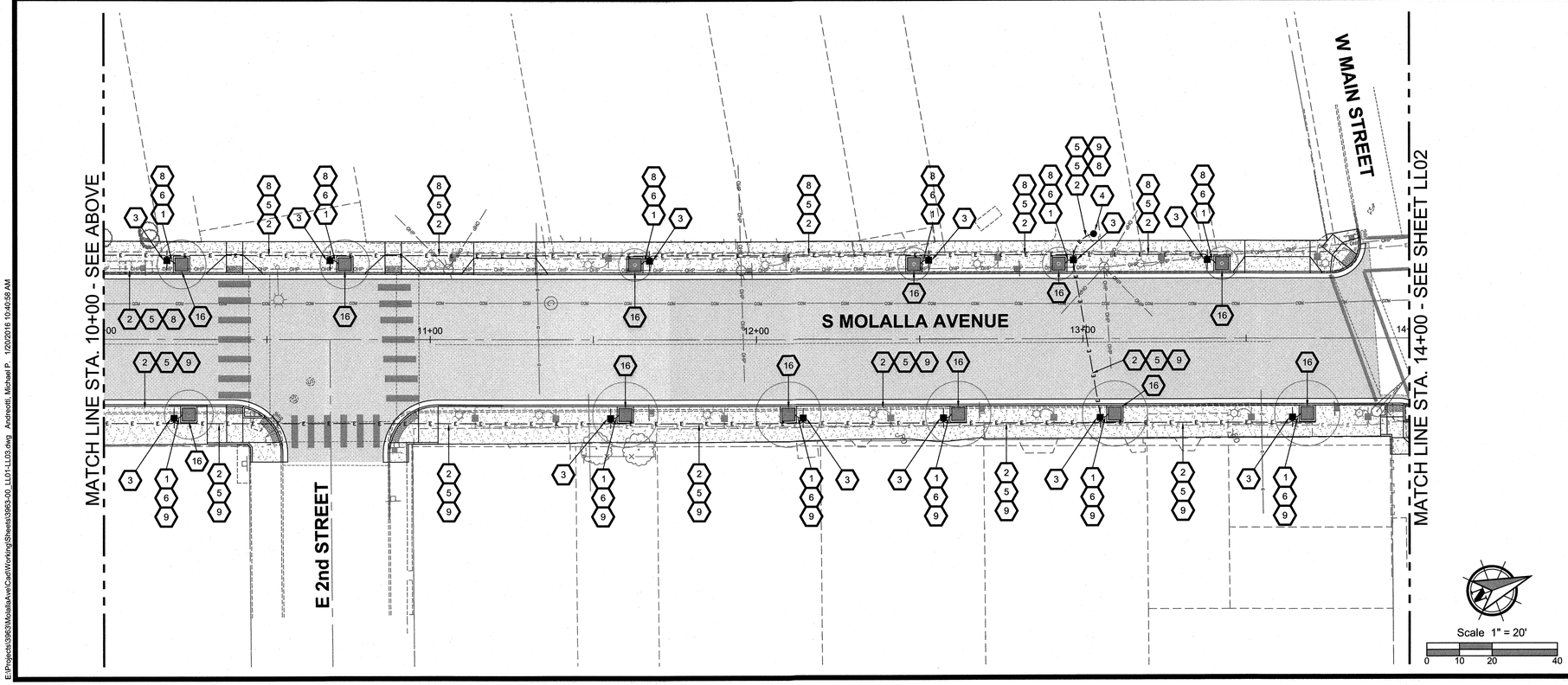

CONSTRUCTION NOTES:

LEGEND

- SERVICE CABINET
- JUNCTION BOX
- CONDUIT

KEY NOTES

1. INSTALL 1" SCHEDULE 40 PVC ELECTRICAL CONDUIT. CONDUIT LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED IN THE FIELD AND APPROVED BY PORTLAND GENERAL ELECTRIC (PGE).
2. INSTALL 2" SCHEDULE 40 PVE ELECTRICAL CONDUIT. CONDUIT LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED IN THE FIELD AN APPROVED BY PGE.
3. INSTALL 13"x24"x18" PRECAST CONCRETE JUNCTION BOX PER PGE REQUIREMENTS.
4. SERVICE CABINET PER DETAIL ON LL04. PGE TO PROVIDE AND INSTALL METER. CONTRACTOR TO COORDINATE WITH PGE FOR SERVICE CONNECTION FOR GFCI AT STREET TREES. (1)
5. INSTALL 2 #6 AWG. CONDUCTORS AND 1 #6 AWG. STRANDED COPPER WIRE (GROUNDING).
6. INSTALL 2 #8 AWG. CONDUCTORS AND 1 #6 AWG. STRANDED COPPER WIRE (GROUNDING).
7. INSTALL 2 #4 AWG. CONDUCTORS AND 1 #6 AWG. STRANDED COPPER WIRE (GROUNDING).
8. CIRCUIT 1-A
9. CIRCUIT 2-A
10. CIRCUIT 3-A
11. CIRCUIT 4-A
12. CIRCUIT 5-A
13. CIRCUIT 6-A
14. CIRCUIT 7-A
15. INSTALL 3" SCHEDULE 40 PVE ELECTRICAL CONDUIT. CONDUIT LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED IN THE FIELD AN APPROVED BY PGE.
16. INSTALL GFCI JUNCTION BOX IN TREE WELL PER DETAIL ON SHEET LL04.
17. INSTALL GFCI IN 10" ROUND RECEPTACLE, PER DETAIL ON SHEET LL04.
18. EXISTING PGE SERVICE CABINET. CONTRACTOR TO COORDINATE WITH PGE FOR SERVICE CONNECTION FOR GFCI AT STREET TREES. (1)

(1) ADDENDUM #1 - 01/20/2016

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REGISTERED PROFESSIONAL ENGINEER 85811PE OREGON JAN. 9, 2014 JOHN ANDREW MANTA 1/20/16

EXPIRES: DECEMBER 31, 2016

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CITY OF MOLALLA

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SHEET ID	LL01

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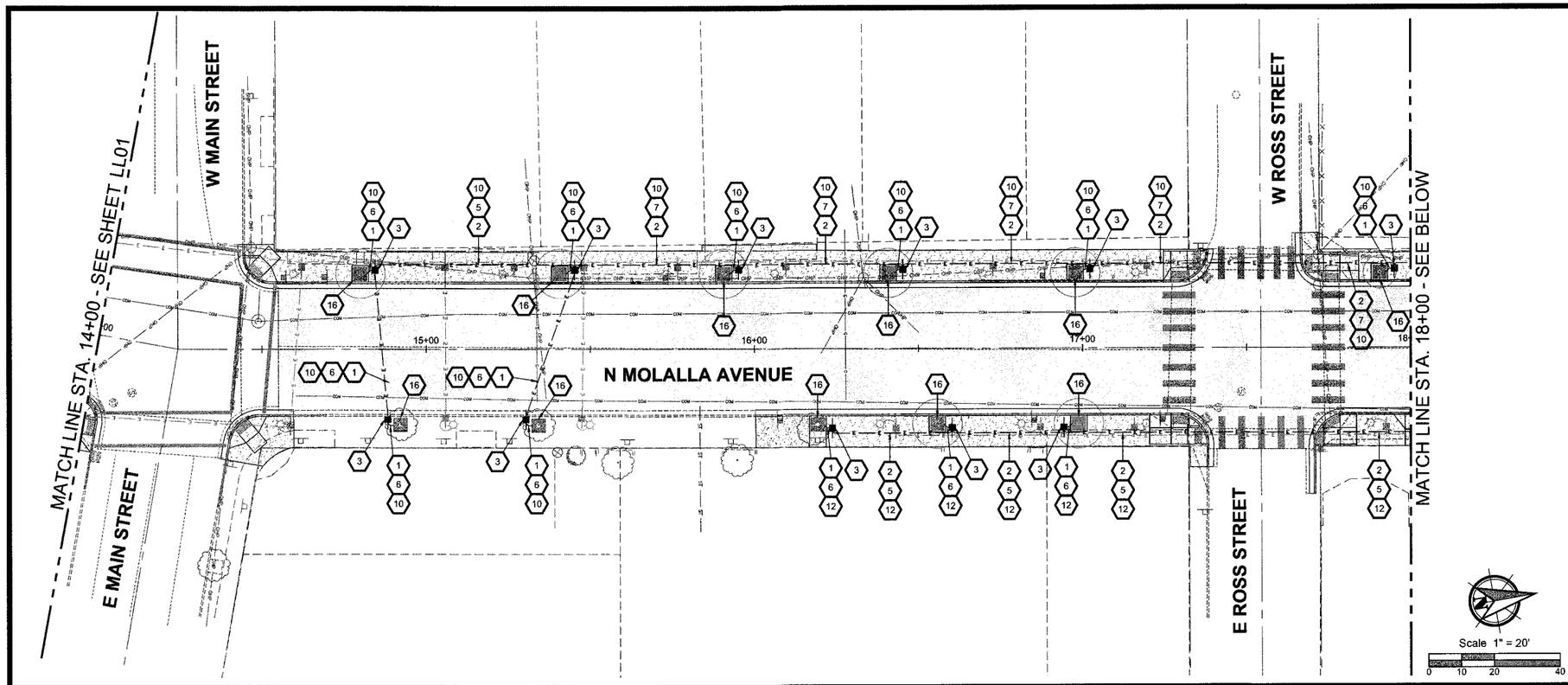

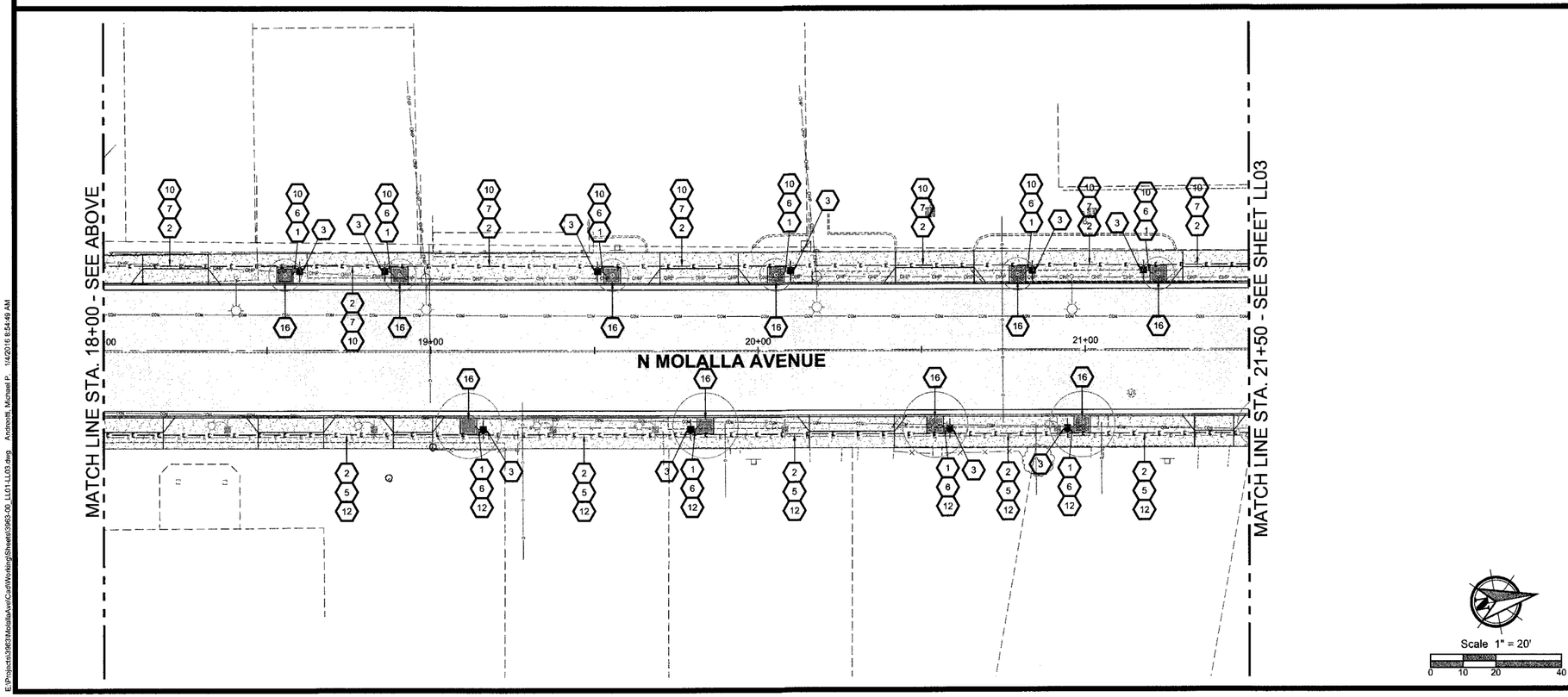

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SHEET ID
LL02
SHEET 57 OF 59

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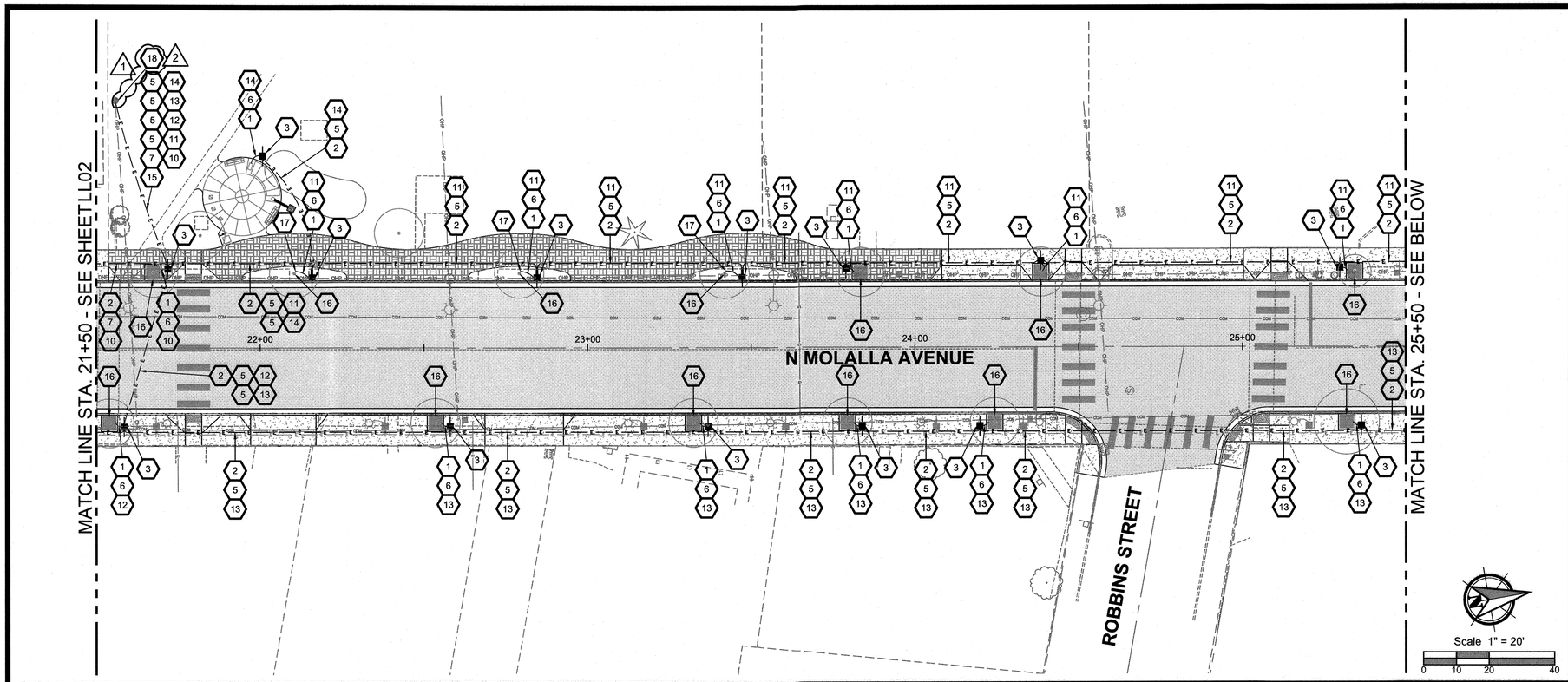

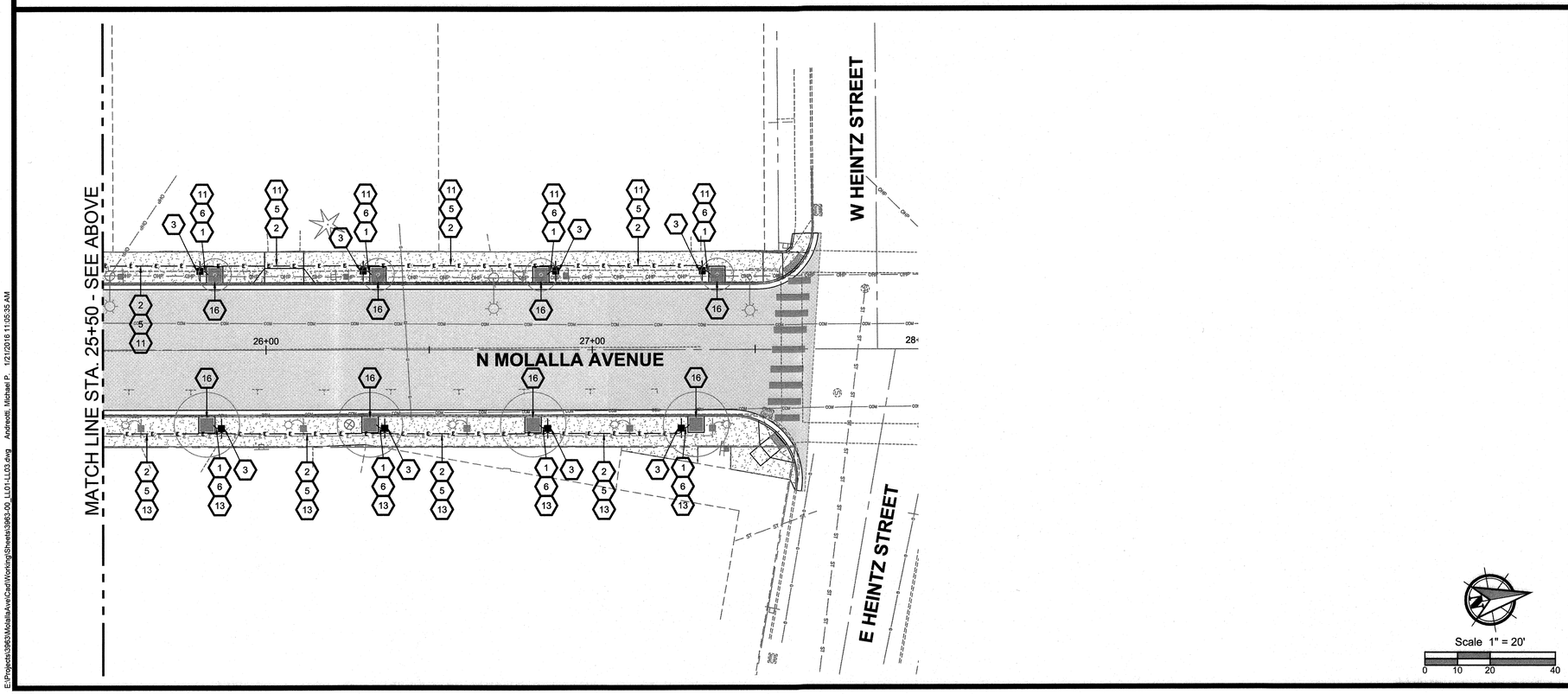

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(1) ADDENDUM #1 - 01/20/2016

(2) ADDENDUM #2 - 01/21/2016

HDJ DESIGN GROUP PC
engineers | landscape architects | planners | surveyors
314 W 15th Street
Vancouver, WA 98660-2927
360/695-3488
503/924-4005
360/695-8767 fax
www.hdjdg.com

REGISTERED PROFESSIONAL ENGINEER 85811PE OREGON NOV. 9, 2011 JOHN ANDREW MANIX
1/21/16
EXPIRES: DECEMBER 31, 2016

MOLALLA URBAN RENEWAL PROJECT - MOLALLA AVENUE
CITY OF MOLALLA
LANDSCAPE LIGHTING PLAN - STA. 21+50 TO 28+00

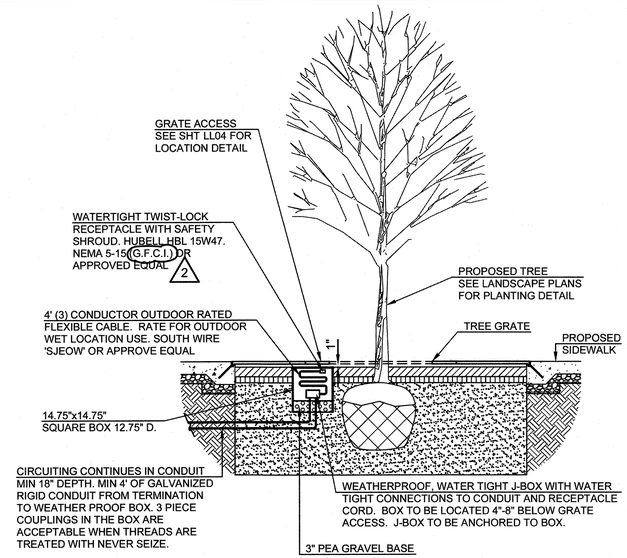
City of Molalla
117 N Molalla Ave
PO Box 248
Molalla, OR 97038
T: 503-829-6855
F: 503-829-3676
www.cityofmolalla.com

811 Know what's below. Call before you dig.

DESIGNED: DKS
DRAWN BY: MPA
SCALE: H: 1"=20' V: N/A
JANUARY 06, 2015
3963-00
SHEET ID
LL03
SHEET 58 OF 59

E:\Projects\3963\MolallaAve\CadWorking\Sheets\3963-00_LL01-LL03.dwg Andreotti, Michael P. 1/21/2016 11:05:35 AM

DETAIL TM302 REMOVED 2



Tree Grate G.F.C.I. Outlet Detail

NTS

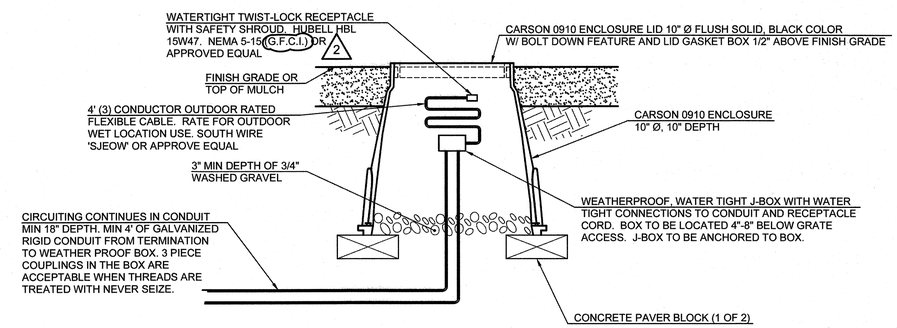
2 SERVICE CABINET 1 AT STATION ± 13+00 LT IN CITY POCKET PARK (EXACT LOCATION TO BE DETERMINED BY PGE)

CIRCUIT	DESCRIPTION	BREAKER RATING	CONTACTOR RATING
MAIN	MAIN BREAKER	250 AMP	NA
1-A	GFCI AT STREET TREES	30 AMP	NA
2-A	GFCI AT STREET TREES	30 AMP	NA

2 EXISTING CABINET AT APPROXIMATE STATION ± 21+60 LT IN CITY PARK

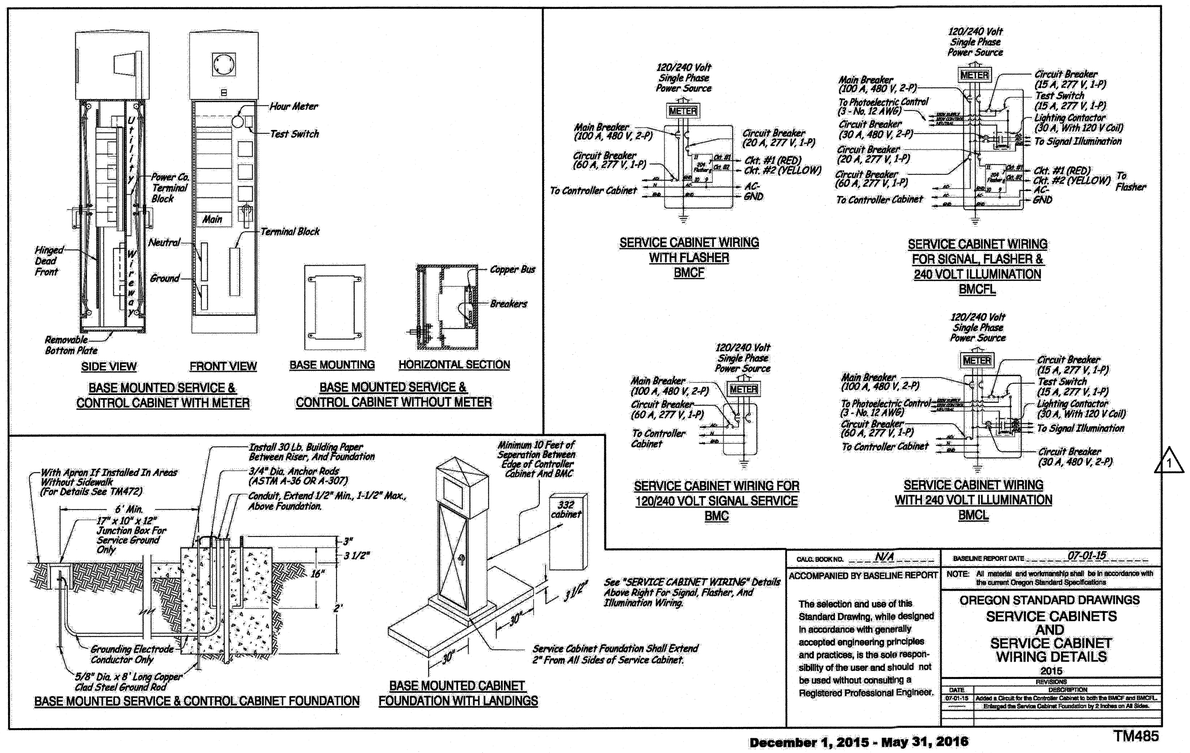
CIRCUIT	DESCRIPTION	BREAKER RATING	CONTACTOR RATING
MAIN	MAIN BREAKER	250 AMP	NA
3-A	GFCI AT STREET TREES	30 AMP	NA
4-A	GFCI AT STREET TREES	30 AMP	NA
5-A	GFCI AT STREET TREES	30 AMP	NA
6-A	GFCI AT STREET TREES	30 AMP	NA
7-A	BIKE PLAZA	30 AMP	NA

Breaker Schedule



Planter G.F.C.I. Outlet Detail

NTS



1

CALC. BOOK NO. N/A — BASELINE REPORT DATE 07-01-15

ACCOMPANIED BY BASELINE REPORT

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

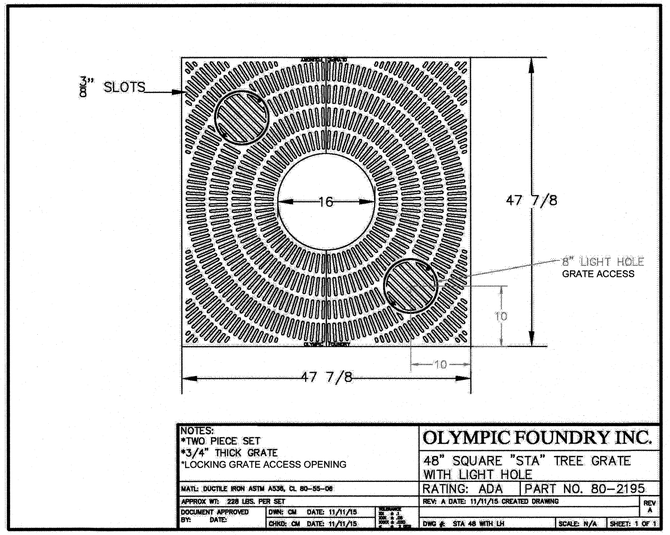
OREGON STANDARD DRAWINGS
SERVICE CABINETS
AND
SERVICE CABINET
WIRING DETAILS
2015

REVISIONS

DATE	DESCRIPTION
07-01-15	Added a Circuit for the Controller Cabinet to both the BMCF and BMCFL.
-------	Enlarged the Service Cabinet Foundation by 2 Inches on All Sides.

December 1, 2015 - May 31, 2016

TM485



NOTES:
*TWO PIECE SET
*3/4" THICK GRATE
*LOCKING GRATE ACCESS OPENING

OLYMPIC FOUNDRY INC.
48" SQUARE "STA" TREE GRATE WITH LIGHT HOLE
MATL: DUCTILE IRON ASTM A536, CL 80-55-06 — RATING: ADA — PART NO. 80-2195
APPROX WT: 228 LBS. PER SET — REV: A DATE: 11/11/15 CREATED DRAWING — REV A
DOCUMENT APPROVED BY: DATE: — DWN: CM DATE: 11/11/15 — CHKD: CM DATE: 11/11/15 — DWG #: STA 48 WITH LH — SCALE: N/A — SHEET: 1 OF 1

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2 ADDENDUM #2 - 01/21/2016

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EXPIRES: DECEMBER 31, 2016

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CITY OF MOLALLA

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Know what's below. Call before you dig.

DESIGNED:
DRAWN BY:
SCALE: H: N/A V: N/A
JANUARY 06, 2015
3963-00
SHEET ID
LL04
SHEET 59 OF 59

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