

West Linn

SANITARY SEWER CAPITAL IMPROVEMENTS FOURTH STREET TO WILLAMETTE FALLS DRIVE

JUNE 2008

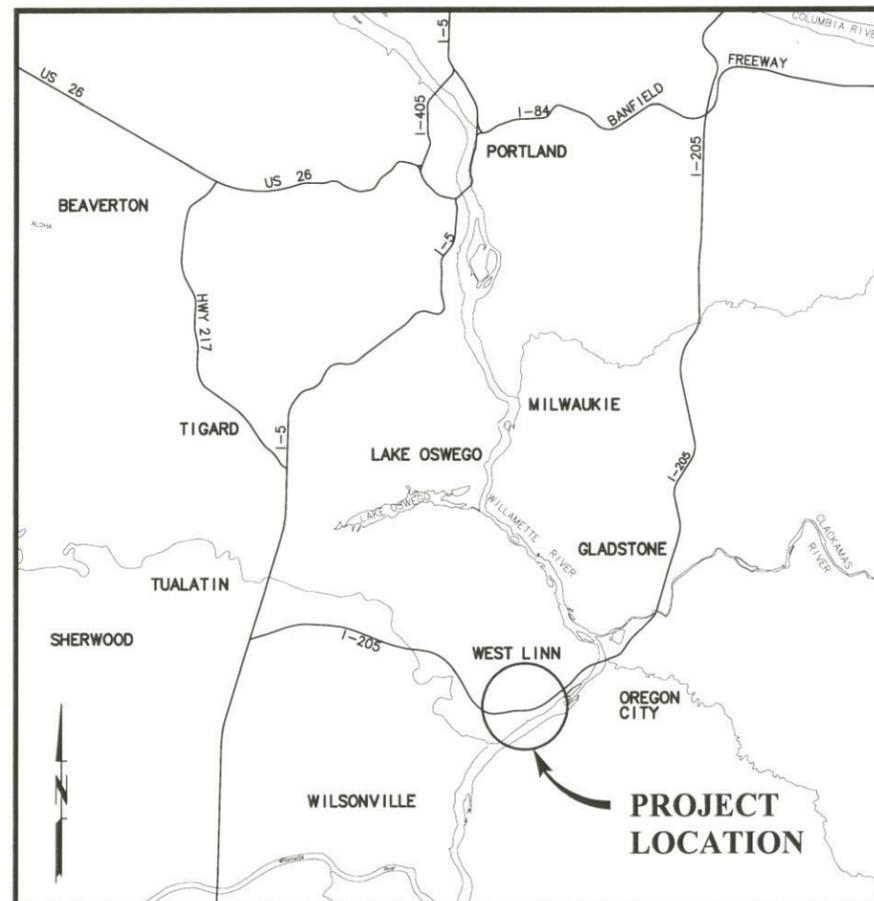
SHEET INDEX

GENERAL

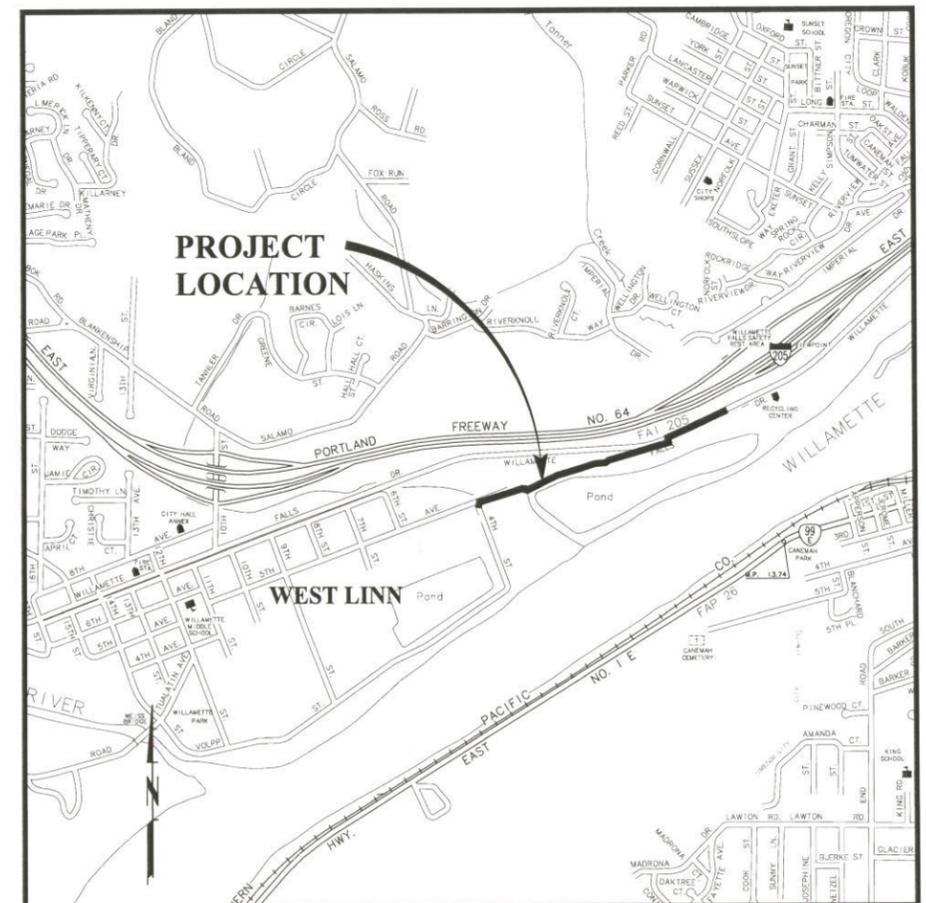
- 1 G-1 TITLE SHEET, VICINITY MAP, LOCATION MAP AND SHEET INDEX
- 2 G-2 GENERAL NOTES, LEGEND AND ABBREVIATIONS
- 3 G-3 EROSION/SEDIMENTATION CONTROL PLAN

CIVIL

- 4 C-1 PLAN & PROFILE STA 0+00 TO STA 12+20
- 5 C-2 PLAN & PROFILE STA 12+20 TO STA 26+00
- 6 C-3 PLAN & PROFILE STA 26+00 TO STA 30+96



VICINITY MAP
SCALE: 1"=10000'



LOCATION MAP
SCALE: 1"=1000'

MSA Murray, Smith & Associates, Inc.
Engineers/Planners
121 S.W. Salmon, Suite 900 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022

GENERAL NOTES

- 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.
- THE LOCATIONS OF ALL EXISTING UNDERGROUND FACILITIES SHOWN ON THE PLANS ARE BASED ON GIS INFORMATION AND INFORMATION SUPPLIED BY UTILITY COMPANIES. LOCATIONS ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL VERIFY LOCATIONS, ELEVATIONS, TYPE AND SIZES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTING NEW PIPING/CONDUITS AND SHALL ADJUST NEW PIPING/CONDUITS AS REQUIRED. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS NOT SHOWN ON THE PLANS AND SHALL KEEP EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION. WHERE INTERRUPTION OF EXISTING FACILITIES IS REQUIRED, CONTRACTOR SHALL PROVIDE 72 HOUR NOTICE TO ENGINEER AND THE AFFECTED UTILITY. CONTRACTOR SHALL ARRANGE FOR THE RELOCATION OF ANY IN CONFLICT WITH THE PROPOSED CONSTRUCTION.
- CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF ORS 757.541 TO 757.571. 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.
- 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 ADDITIONAL POTHOLING, ARE TO BE CONSIDERED INCIDENTAL AND INCLUDED IN THE UNIT PRICES OF THE BID.
- 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. CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDONED UTILITIES, UNLESS OTHERWISE REQUIRED BY THE ENGINEER.
- CITY GIS TOPOGRAPHIC INFORMATION, INCLUDING TAX LOTS, CONTOURS, PROFILE GRADE, AND AERIAL PHOTO ARE SHOWN AND APPROXIMATE IN NATURE. MANHOLE RIM ELEVATIONS, HORIZONTAL LOCATION AND SEWER PIPE INVERTS WERE SURVEYED BY NLV SERVICES. HORIZONTAL DATUM: NAD 83, VERTICAL DATUM: NAVD 83.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE PLANS AND PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL KEEP AND MAINTAIN A CURRENT SET OF DRAWINGS ON SITE. CONTRACTOR TO KEEP ACCURATE "AS-BUILT" RECORD COPY OF PLANS. "AS-BUILT" PLANS TO BE RETURNED TO ENGINEER AT COMPLETION OF PROJECT.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY TAPS AND BLOW-OFFS AND THRUST RESTRAINTS AS REQUIRED TO FACILITATE TESTING OF PIPELINES. AT COMPLETION, REMOVE TEMPORARY TEST TAPS AND REPLACE WITH PERMANENT PLUGS.
- CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER 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.
- ANY ALTERATION OR VARIANCE FROM THESE PLANS, EXCEPT MINOR FIELD ADJUSTMENT 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 CHANGES IN CONSTRUCTION PLANS MUST BE SUBMITTED IN WRITING AND APPROVED BY ENGINEER PRIOR TO COMMENCING WORK.
- 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 PRE-CONSTRUCTION AND POST CONSTRUCTION SURVEYS FILED WITH THE COUNTY SURVEYOR.
- 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.
- ALL STRUCTURES, LOTS, SWALES, DITCHES, CURBS, FENCES, WALLS, MAILBOXES, SIGNS, POLES, GUY WIRES, PIPING, LANDSCAPING FEATURES AND UTILITIES DISTURBED DURING CONSTRUCTION TO BE RESTORED TO EXISTING CONDITION UNLESS OTHERWISE SPECIFIED.
- CONTRACTOR SHALL PROTECT TRAFFIC AT ALL TIMES DURING CONSTRUCTION. ALL TRAFFIC CONTROL MEASURES SHALL BE APPROVED BY CITY, COUNTY AND STATE AS REQUIRED AND IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS TO THE ENGINEER PRIOR TO COMMENCING ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL HOMES AND BUSINESSES AT ALL TIMES. PROVIDE WRITTEN NOTICE TO ALL PROPERTY OWNERS AT LEAST TWO BUSINESS DAYS IN ADVANCE OF WORK IN AND/OR CROSSING OF DRIVEWAYS.
- CONTRACTOR SHALL USE ALL APPLICABLE CITY OF WEST LINN STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION AS PROVIDED IN THE CONTRACT DOCUMENTS.
- PROPOSED SANITARY SEWER PIPING IS SHOWN AS OPEN TRENCH INSTALLATION WITH RESPECT TO PIPE MATERIAL. AT THE CONTRACTOR'S OPTION, THE PROPOSED PIPING CAN BE INSTALLED USING PIPE BURSTING METHODS USING HDPE PIPE MATERIAL IN ACCORDANCE WITH THE SPECIFICATIONS UNLESS OTHERWISE NOTED FOR SPECIFIC PIPING SEGMENTS. WITH EITHER PIPE INSTALLATION METHOD, THE EXISTING MANHOLES CAN BE MAINTAINED OR REPLACED AT THE CONTRACTOR'S OPTION. ENGINEERS APPROVAL IS REQUIRED PRIOR TO REMOVAL AND REPLACEMENT OF EXISTING MANHOLES. IF MANHOLES ARE DAMAGED OR REMOVED WITHOUT ENGINEER'S APPROVAL OR DUE TO CONTRACTOR NEGLIGENCE, NO ADDITIONAL PAYMENT WILL BE MADE AND THE CONTRACTOR SHALL REPLACE THE MANHOLES AT HIS EXPENSE.

LEGEND

EXISTING		EXISTING		PROPOSED
MAIL BOX		SANITARY SEWER	-----SS-----	-----15"SS-----
UTILITY POLE		WATERLINE	-----W-----	
LIGHT POLE		STORM DRAIN	-----SD-----	
GUY WIRE ANCHOR		UNDERGROUND POWER	-----P-----	
UTILITY RISER/PEDESTAL		GAS	-----G-----	
TREE (CONIFEROUS)		FORCE MAIN	-----FM-----	
TREE (DECIDUOUS)		TO BE ABANDONED		//////////
FIRE HYDRANT		UNDERGROUND TELEPHONE	-----UT-----	
TRAFFIC SIGN		OVERHEAD POWER	-----OVHD-----	
CENTER LINE	----- -----	CULVERT	>-----<	
DITCH	----- -----	EASEMENT	-----E-----	
FENCE	-----X-----	RIGHT-OF-WAY/PROPERTY LINE	-----R/W-----	
BUSH/SHRUB		EDGE OF PAVEMENT	-----EOP-----	
CATCH BASIN		CASING	-----C-----	
VALVE		MANHOLE/MANHOLE COVER		
WATER METER		MAJOR CONTOUR	-----80-----	
GAS METER		MINOR CONTOUR	-----79-----	
BORE HOLE OR POT HOLE		EDGE OF GRAVEL	-----EG-----	
SURVEY MONUMENT		ASPHALT RESURFACING		
IRON ROD		GRAVEL RESURFACING		
TRAFFIC PAD		NATIVE RESURFACING		
BOLLARD				
BOULDER				

ABBREVIATIONS

ABAN(D)	ABANDON(ED)	EL	ELEVATION	OC	ON CENTER	STA	STATION
AC	ASPHALTIC CONCRETE/ASBESTOS CEMENT	EOP	EDGE OF PAVEMENT	OD	OUTSIDE DIAMETER	STL	STEEL
ACI	AMERICAN CONCRETE INSTITUTE	EPSC	EROSION PREVENTION AND SEDIMENT(ATION) CONTROL	ODOT	OREGON DEPARTMENT OF TRANSPORTATION	STD	STANDARD
APPROX	APPROXIMATELY	EQ	EQUAL	OVHD	OVERHEAD LINE	TEMP	TEMPORARY
APPVD	APPROVED	EW	EACH WAY	P	POWER	THK	THICKNESS
APWA	AMERICAN PUBLIC WORKS ASSOCIATION	EXIST	EXISTING	PGE	PORTLAND GENERAL ELECTRIC	THRD	THREAD(ED)
BETW	BETWEEN	FAB	FABRICATE	R	PLATE	THRU	THROUGH
BLVD	BOULEVARD	FLG	FLANGE(D)	PL	PROPERTY LINE	TYP	TYPICAL
BTM	BOTTOM	FDS	FLOW DIVERSION STRUCTURE	PP	PROPOSED	UP	UTILITY POLE
CL	CENTER LINE	FLL	FLOWLINE	PROP	PROPOSED	UT	UNDERGROUND TELEPHONE
CB	CATCH BASIN	FM	FORCE MAIN	PVC	POLYVINYL CHLORIDE	VERT	VERTICAL(LY)
CDF	CONTROLLED DENSITY FILL	FO	FIBER OPTIC	RCP	REINFORCED CONCRETE PIPE	W	WATER
CHAN	CHANNEL	G	GAS	RD	ROAD	W/	WITH
CIP	CAST IN PLACE	GALV	GALVANIZED	REINF	REINFORCE(D)(ING)(MENT)	W/I	WITHIN
CL	CLASS	GEN	GENERAL	REQ'D	REQUIRED	W/O	WITHOUT
CLR	CLEARANCE	GR	GRADE	RMVD	REMOVED	WS	WATER SERVICE
CONC	CONCRETE	GR	GRADE	RR	RAILROAD	WTRT	WATER TIGHT
COORD	COORDINATE	HWY	HIGHWAY	R/W	RIGHT OF WAY	WWTP	WASTEWATER TREATMENT PLANT
CR	CRUSHED ROCK	I	INTERSTATE	SCHED	SCHEDULE		
CSP	CONCRETE SEWER PIPE	IE	INVERT ELEVATION	SD	STORM DRAIN		
CY	CUBIC YARD	INC	INCORPORATED	SHT(S)	SHEET(S)		
DET	DETAIL	INSTL	INSTALL	SIM	SIMILAR		
DIA	DIAMETER	JT(S)	JOINT(S)	SLP	SLOPE		
DIM	DIMENSION	LOC	LOCATION	SPL	SPECIFICATIONS		
DWG	DRAWING	MATL(S)	MATERIAL(S)	SQ	SQUARE		
DWY	DRIVEWAY	MAX	MAXIMUM	SQ FT	SQUARE FOOT		
EA	EACH	MFR	MANUFACTURER	SS	SANITARY SEWER		
EASE	EASEMENT	MH	MANHOLE	SST	STAINLESS STEEL		
ECC	ECCENTRIC	MIN	MINIMUM				
EF	EACH FACE	NEC	NATIONAL ELECTRIC CODE				
EFFL	EFFLUENT	NTS	NOT TO SCALE				

G:\08\0938\203 Design Drawings\CAD\08-0938-203-OR-G-1.dwg G-2 6/17/2008 11:33 AM MBE 17.0s (LWS Tech)

NO.	DATE	BY	REVISION

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

RTM
DESIGNED
MBE
DRAWN
GEC/MLH
CHECKED



MSA Murray, Smith & Associates, Inc.
Engineers/Planners
121 S.W. Salmon, Suite 900 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022

West Linn
**SANITARY SEWER
CAPITAL IMPROVEMENTS
FOURTH STREET
TO WILLAMETTE
FALLS DRIVE**

**GENERAL NOTES, LEGEND AND
ABBREVIATIONS**
PROJECT NO.: 08-0938.203 SCALE: AS SHOWN DATE: JUNE 2008

SHEET
G-2
2 of 6

G:\08\0938\203 Design Drawings\CAD\08-0938-202-OR-G-3.dwg G-3 6/16/2008 4:27 PM MBE 17.0s (LMS Tech)



EROSION CONTROL NOTES

1. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROL DURING CONSTRUCTION (ANY TIME OF YEAR) PER THE REQUIREMENTS OF THE CITY OF WEST LINN AND THE OREGON DEQ.
2. APPROVAL OF THIS EROSION, SEDIMENT AND POLLUTION CONTROL PLAN (ESPCP) DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G.: SIZE AND LOCATION OF ROADS, PIPES, RESTRICTIONS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
3. THE IMPLEMENTATION OF THIS ESPCP AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESPCP FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
4. SEDIMENT FENCING SHOWN IS AN APPROXIMATE LOCATION AND AMOUNT. CONTRACTOR SHALL PROVIDE SEDIMENT FENCING AS REQUIRED BY ACTUAL SITE CONDITIONS DURING CONSTRUCTION. SEDIMENT FENCES SHALL BE INSPECTED BY CONTRACTOR IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
5. THE ESPCP FACILITIES SHOWN ON THESE PLANS MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
6. THE ESPCP FACILITIES SHOWN ON THESE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THE ESPCP FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.
7. THE ESPCP FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
8. THE ESPCP FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING A STORM EVENT.
9. STABILIZED CONSTRUCTION ENTRANCES AND SEDIMENT FENCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
10. ESPCP MEASURES SHALL BE REMOVED BY THE CONTRACTOR UPON SUBSTANTIAL COMPLETION.
11. ALL DEWATERING DISCHARGES SHALL BE TREATED USING A DISCHARGE LINE FILTER IN ADDITION TO INLET PROTECTION AT THE FIRST DOWNSTREAM CATCH BASIN. UNFILTERED DEWATERING DISCHARGE CANNOT BE DISPOSED OF IN THE STORM SYSTEM.
12. PUBLIC STREETS SHALL BE SWEEPED DAILY, IF NECESSARY, TO ALLEVIATE SEDIMENT DISCHARGE TO THE STORM WATER MANAGEMENT SYSTEM. UNFILTERED WASH WATER CANNOT BE DISCHARGED TO THE STORM SYSTEM.
13. IF PIPE BURSTING METHOD OF INSTALLATION IS USED, ESPCP MEASURES MAY BE REDUCED TO THOSE DISTURBED AREAS IF APPROVED BY ENGINEER. ANY CHANGES TO THIS ESPCP PLAN MUST BE SUBMITTED AND APPROVED BY THE ENGINEER.
14. JUTE MATTING SHALL BE INSTALLED ON ALL SLOPES WITH A SLOPE RATIO OF 2H:1V AND GREATER AND ON OTHER DISTURBED SLOPES AS NECESSARY.
15. REFER TO SUPPLEMENTAL DOCUMENTS INFORMATION FOR ESPCP DETAILS.

LEGEND

	PERMANENT SEEDING
	SEDIMENT FENCE
	CONSTRUCTION ENTRANCE
	BIO-FILTER BAGS
	CHECK DAMS

PLAN
SCALE: 1"=100'

NO.	DATE	BY	REVISION

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

RTM DESIGNED
MBE DRAWN
GEC/MLH CHECKED

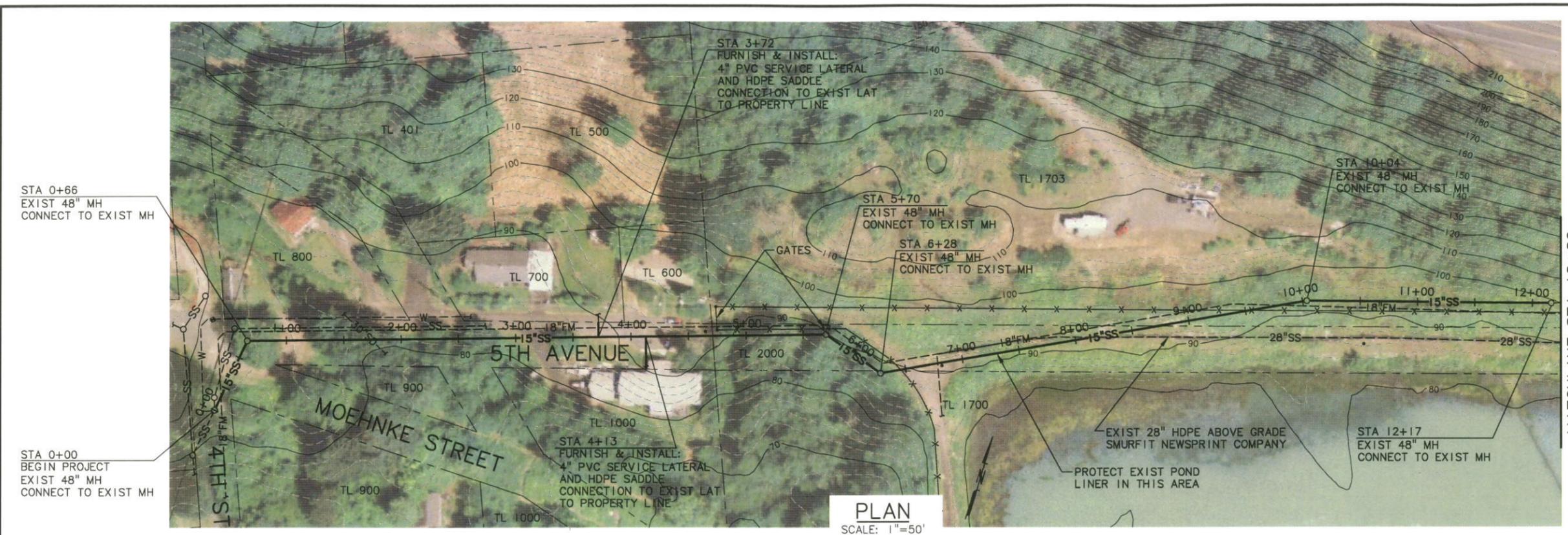


MSA Murray, Smith & Associates, Inc.
Engineers/Planners
121 S.W. Salmon, Suite 900 PHON 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022

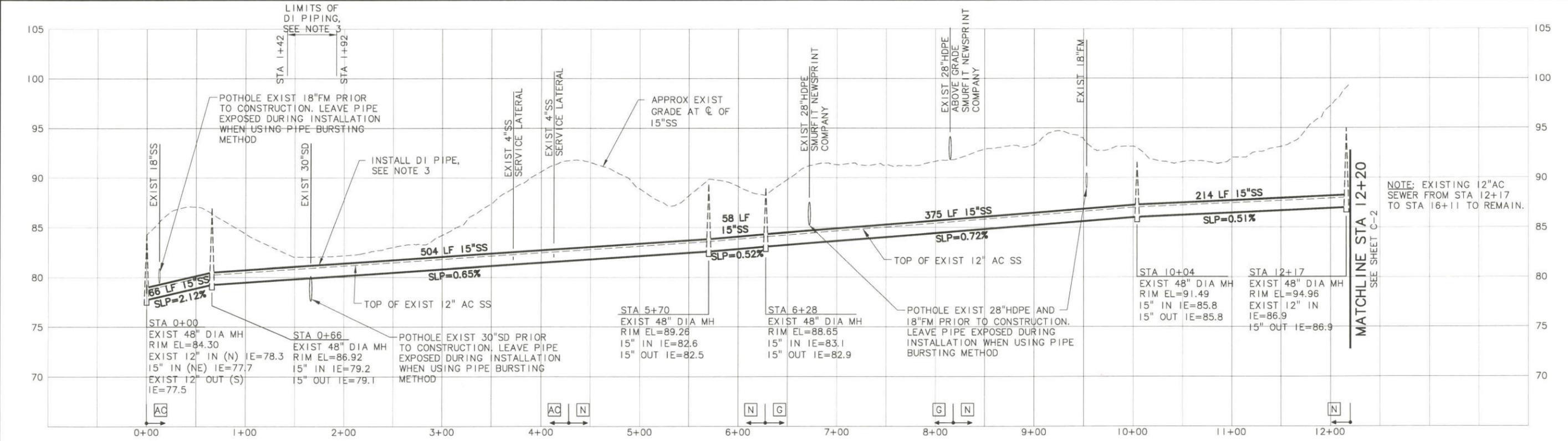
West Linn
SANITARY SEWER CAPITAL IMPROVEMENTS
FOURTH STREET TO WILLAMETTE FALLS DRIVE

EROSION/SEDIMENTATION CONTROL PLAN
PROJECT NO.: 08-0938.203 SCALE: AS SHOWN DATE: JUNE 2008

G:\08\0938\203 Design Drawings\CAD\08-0938-203-OR-C-1.dwg C-1 6/16/2008 4:25 PM MBE 17.0s (LMS Tech)



- NOTES:**
- PIPE MATERIAL SHALL BE PVC 3034 SDR35 FOR ALL OPEN TRENCH CONSTRUCTION UNLESS OTHERWISE SHOWN. HDPE DR21 (MINIMUM WALL THICKNESS) MAY BE USED WHEN PIPE BURSTING PER THE SPECIFICATIONS.
 - MANHOLE RIM ELEVATIONS SHOWN ARE SURVEYED ELEVATIONS. EXISTING PROFILE GRADE SHOWN IS APPROXIMATE BASED ON CITY GIS CONTOURS.
 - FROM STA 1+42 TO STA 1+92, FURNISH AND INSTALL 16" DUCTILE IRON CLASS 52 PIPE. USE APPROVED TRANSITION COUPLINGS PER SPECIFICATIONS.



PROFILE
SCALE: 1"=50' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

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

RTM DESIGNED
DAK/MBE DRAWN
GEC/MLH CHECKED

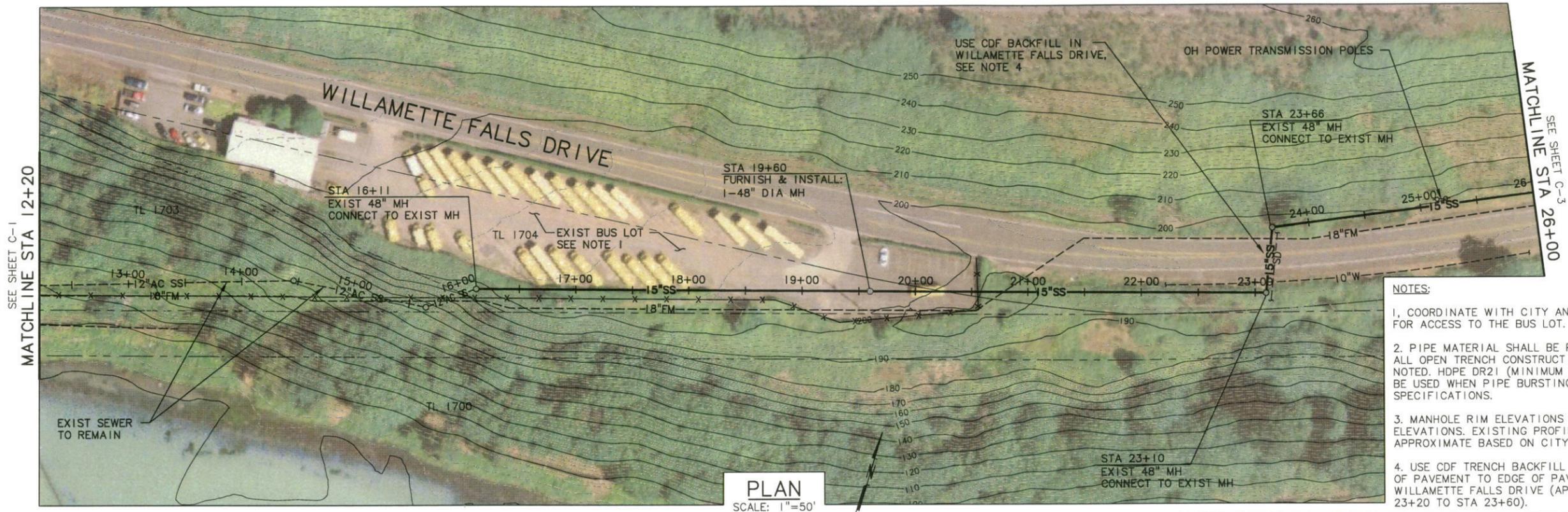


MSA Murray, Smith & Associates, Inc.
Engineers/Planners
121 S.W. Salmon, Suite 900 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022

West Lim
**SANITARY SEWER CAPITAL IMPROVEMENTS
FOURTH STREET TO WILLAMETTE FALLS DRIVE**

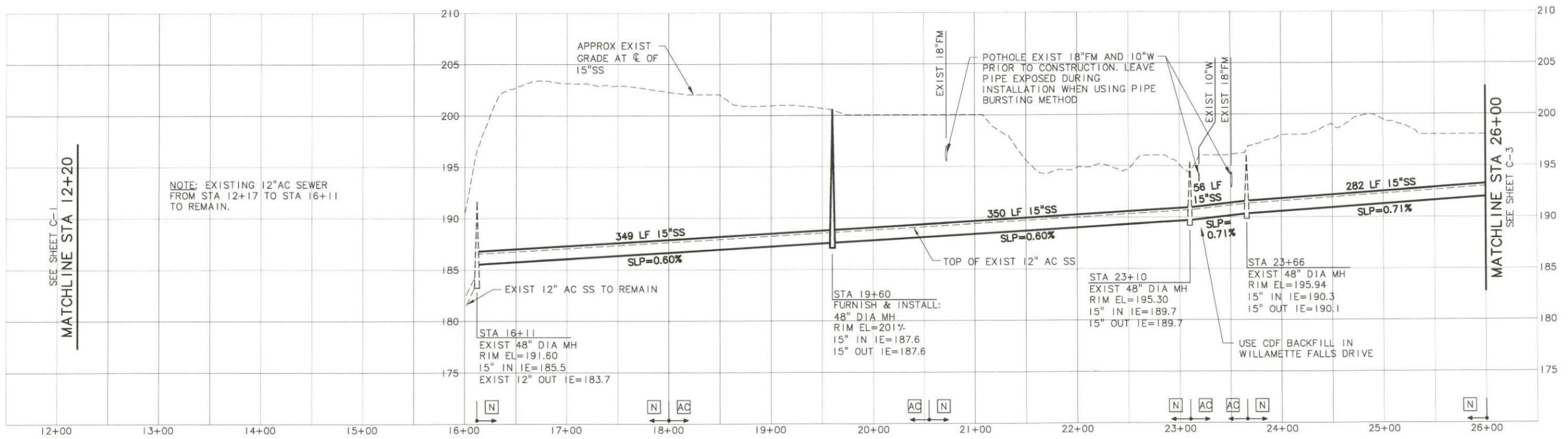
**STA 0+00 TO STA 12+20
PLAN & PROFILE
15-INCH GRAVITY SEWER**

PROJECT NO.: 08-0938.203 SCALE: AS SHOWN DATE: JUNE 2008



PLAN
SCALE: 1"=50'

- NOTES:**
1. COORDINATE WITH CITY AND PROPERTY OWNER FOR ACCESS TO THE BUS LOT.
 2. PIPE MATERIAL SHALL BE PVC 3034 SDR35 FOR ALL OPEN TRENCH CONSTRUCTION UNLESS OTHERWISE NOTED. HDPE DR21 (MINIMUM WALL THICKNESS) MAY BE USED WHEN PIPE BURSTING PER THE SPECIFICATIONS.
 3. MANHOLE RIM ELEVATIONS SHOWN ARE SURVEYED ELEVATIONS. EXISTING PROFILE GRADE SHOWN IS APPROXIMATE BASED ON CITY GIS CONTOURS.
 4. USE CDF TRENCH BACKFILL MATERIAL FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT WITHIN WILLAMETTE FALLS DRIVE (APPROXIMATELY STA 23+20 TO STA 23+60).



PROFILE
SCALE: 1"=50' HORIZ, 1"=5' VERT

G:\08\0938\203 Design Drawings\CAD\08-0938-203-OR-C-1.dwg C-2 6/16/2008 4:25 PM MBE 17.0s (LMS Tech)

NO.	DATE	BY	REVISION

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

RTM DESIGNED
DAK/MBE DRAWN
GEC/MLH CHECKED



MSA Murray, Smith & Associates, Inc.
Engineers/Planners
121 S.W. Salmon, Suite 900 PHON: 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022

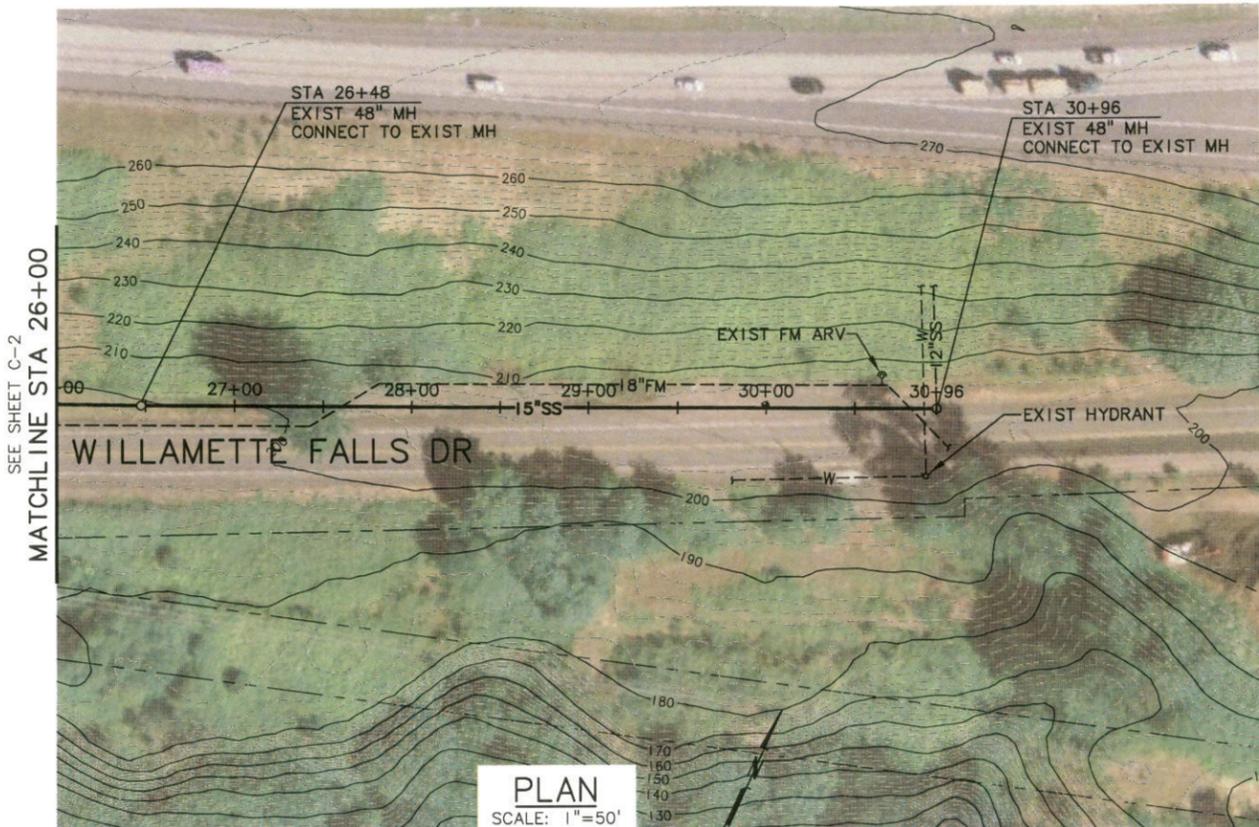
West Limb
**SANITARY SEWER CAPITAL IMPROVEMENTS
FOURTH STREET TO WILLAMETTE FALLS DRIVE**

**STA 12+20 TO STA 26+00
PLAN & PROFILE
15-INCH GRAVITY SEWER**

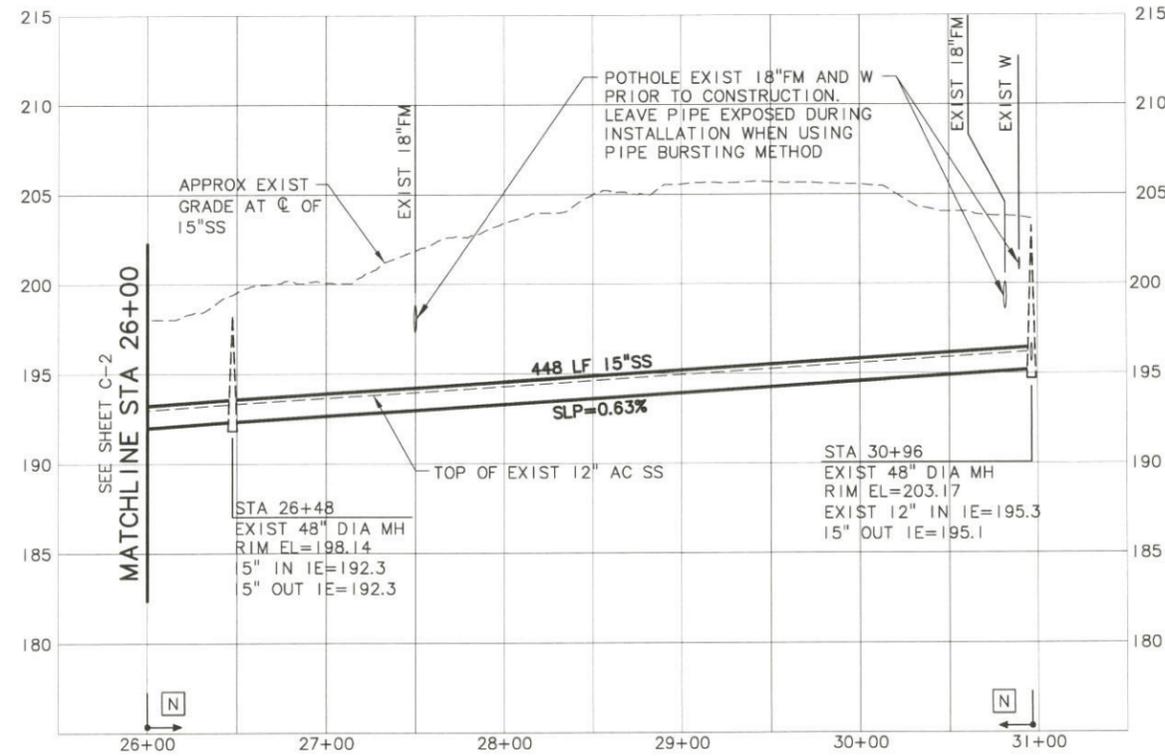
PROJECT NO.: 08-0938.203 SCALE: AS SHOWN DATE: JUNE 2008

SHEET
C-2
5 of 6

G:\08\0938\203 Design Drawings\CAD\08-0938-203-OR-C-1.dwg C-3 6/16/2008 4:25 PM MBE 17.0s (LWS Tech)



PLAN
SCALE: 1"=50'



PROFILE
SCALE: 1"=50' HORIZ, 1"=5' VERT

- NOTES:**
1. PIPE MATERIAL SHALL BE PVC 3034 SDR35 FOR ALL OPEN TRENCH CONSTRUCTION UNLESS OTHERWISE NOTED. HDPE DR21 (MINIMUM WALL THICKNESS) MAY BE USED WHEN PIPE BURSTING PER THE SPECIFICATIONS.
 2. MANHOLE RIM ELEVATIONS SHOWN ARE SURVEYED ELEVATIONS. EXISTING PROFILE GRADE SHOWN IS APPROXIMATE BASED ON CITY GIS CONTOURS.

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

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

RTM DESIGNED
DAK/MBE DRAWN
GEC/MLH CHECKED



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

121 S.W. Salmon, Suite 900 PHONE 503-225-9010
Portland, Oregon 97204 FAX 503-225-9022

West Limb

**SANITARY SEWER CAPITAL IMPROVEMENTS
FOURTH STREET TO WILLAMETTE FALLS DRIVE**

**STA 26+00 TO STA 30+96
PLAN & PROFILE
15-INCH GRAVITY SEWER**

PROJECT NO.: 08-0938.203 SCALE: AS SHOWN DATE: JUNE 2008