

Appendix A

**WORK PROCESS SCHEDULE
AND
RELATED INSTRUCTION OUTLINE**

DRAFT

Appendix A

WORK PROCESS SCHEDULE

OCCUPATION TITLE: Field Service Technician (Maintenance Tech, Municipal)

O*NET-SOC CODE: 47-2061.00

RAPIDS CODE: 1049

This schedule is attached to and a part of these Standards for the above identified occupation.

1. TYPE OF OCCUPATION

Time-based Competency-based Hybrid

2. TERM OF APPRENTICESHIP

The term of the occupation is approximately six (6) years with an OJL attainment of 9,000 hours, supplemented by the minimum recommended 144 hours of related instruction per year.

3. RATIO OF APPRENTICES TO JOURNEYWORKERS

The apprentice to journeyworker ratio is: five (5) Apprentices to one (1) Journeyworker on the jobsite.

4. APPRENTICE WAGE SCHEDULE

Apprentices shall be paid a progressively increasing schedule of wages as outlined below:

Period of Apprenticeship	Requirement for advancement	Wage
1 st Period	<ul style="list-style-type: none">• One year from anniversary date plus satisfactory evaluation• FS 1 thru FSST 8• RTI- Completion of Module 1	\$13.86 per hour
2 nd Period	<ul style="list-style-type: none">• Satisfactory Job Performance• One year; FST 1-3• RTI-Completion of Module 2, Units 1-3	\$15.40 per hour
3 rd Period	<ul style="list-style-type: none">• Satisfactory Job Performance• One year; FST 4 and FSTW 1-2• RTI-Completion of Module 2, Unit 4 and Unit 5: Laps 2.5.1 and 2.5.2	\$16.63 per hour
4 th Period	<ul style="list-style-type: none">• Satisfactory Job Performance• One year; FSTW 3-4 and FSTWW 1• RTI-Completion of Module 2, Unit 5: Laps 2.5.3, 2.5.4 and Unit 6: Lap 2.6.1	\$17.46 per hour
5 th Period	<ul style="list-style-type: none">• Satisfactory Job Performance• One year; FSTWW 2-4• RTI-Completion of Module 2, Unit 6: Laps 2.6.2, 2.6.3 and 2.6.4	\$18.28 per hour
6 th Period	<ul style="list-style-type: none">• Satisfactory Job Performance• One year; FSTST 1-4• RTI-Completion of Module 2, Unit 7: Laps 2.7.1 thru 2.7.4	\$19.12 per hour
At Completion	All of the above requirements are met	\$19.95 per hour

5. WORK PROCESS SCHEDULE (See attached Work Process Schedule)

6. RELATED INSTRUCTION OUTLINE (See attached Related Instruction Outline)

WORK PROCESS SCHEDULE

OCCUPATION TITLE: Field Service Technician (Maintenance Tech, Municipal)

O*NET-SOC CODE: 47-2061.00

RAPIDS CODE: 1049

<u>Track</u>	<u>Comp</u>	<u>Code</u>	<u>Skill Description</u>
FS1	<input type="checkbox"/>	B101	ICS/NIMS Certification
	<input type="checkbox"/>	B102	WMD Certification
	<input type="checkbox"/>	B103	Hazmat Awareness Certification
	<input type="checkbox"/>	B104	Competent Person Certification
	<input type="checkbox"/>	B105	First Aid/CPR Certification
	<input type="checkbox"/>	B106	Hazard Communication
	<input type="checkbox"/>	B107	Blood Borne Pathogens
	<input type="checkbox"/>	B108	Confined Space Entry
	<input type="checkbox"/>	B109	Collection System Hazards
	<input type="checkbox"/>	B110	Storm Drain Hazards
	<input type="checkbox"/>	B111	Defensive Driving
	<input type="checkbox"/>	B112	OSHA Standard Part 1926
	<input type="checkbox"/>	B113	Work Zone Certification
	<input type="checkbox"/>	B114	Flagging Certification
	<input type="checkbox"/>	B115	PPE
	<input type="checkbox"/>	B116	Promo & Safe Workplace
FS2	<input type="checkbox"/>	B201	On-the-job Injury
	<input type="checkbox"/>	B202	Organizational Structure
	<input type="checkbox"/>	B203	SBP Program
	<input type="checkbox"/>	B204	Attendance Policy
	<input type="checkbox"/>	B205	Customer Service Training
FS3	<input checked="" type="checkbox"/>	B301	Hand Tools
FS4	<input type="checkbox"/>	B401	Compact Non-Paving
	<input type="checkbox"/>	B402	Finish Grade/Clean Up
	<input type="checkbox"/>	B403	Sod Placement
FS5	<input type="checkbox"/>	B501	Chainsaw
	<input type="checkbox"/>	B502	Pole Saw
	<input type="checkbox"/>	B503	Impact Wrench
	<input type="checkbox"/>	B504	Skill Saw
	<input type="checkbox"/>	B505	Walk Behind Saw
	<input type="checkbox"/>	B506	Air Compressor/Hammer
	<input type="checkbox"/>	B507	Air/Hydraulic Systems
	<input type="checkbox"/>	B507	Cut-off Saw
	<input type="checkbox"/>	B509	Grinder – Drill
	<input type="checkbox"/>	B510	2" Pumps
	<input type="checkbox"/>	B511	Compactors
FS6	<input type="checkbox"/>	B512	Tapping Machine
	<input type="checkbox"/>	B601	Intro to Light Equipment
	<input type="checkbox"/>	B602	Dump Truck
	<input type="checkbox"/>	B603	Equipment Manuals
	<input type="checkbox"/>	B604	Bobcat
	<input type="checkbox"/>	B605	Backhoe Operation
	<input type="checkbox"/>	B606	Load Parts/Equipment on Trailer
	<input type="checkbox"/>	B607	Tractors

<u>Track</u>	<u>Comp</u>	<u>Code</u>	<u>Skill Description</u>
FS7	<input type="checkbox"/>	B608	Daily Equipment Check
	<input type="checkbox"/>	B701	Dist/Coll Cert within 6 months
	<input type="checkbox"/>	B702	Completing a Work Order
FSW1	<input type="checkbox"/>	B703	Manual of Operations
	<input type="checkbox"/>	BW101	Hydrant Components
	<input type="checkbox"/>	BW102	Water Mains
	<input type="checkbox"/>	BW103	Service Connections
FSW2	<input type="checkbox"/>	BW104	Identify Tapping Machine
	<input type="checkbox"/>	BW201	Install Repair Clamp
	<input type="checkbox"/>	BW202	Install Fittings
	<input type="checkbox"/>	BW203	Install Water Meters
	<input type="checkbox"/>	BW204	Install Service Connects
FSW3	<input type="checkbox"/>	BW205	Repair Main Break
	<input type="checkbox"/>	BW301	Water Valve Operation
	<input type="checkbox"/>	BW302	Water Valve Adjustment
	<input type="checkbox"/>	BW303	Install Water Valve
FSW4	<input type="checkbox"/>	BW304	Fire Hydrant Operation
	<input type="checkbox"/>	BW401	Water System Map Reading
	<input type="checkbox"/>	BW402	Water Chlorine Test
	<input type="checkbox"/>	BW403	OKIE Locate
	<input type="checkbox"/>	BW404	Water De-Chlorination
	<input type="checkbox"/>	BW405	Water System Drawings
FSWW1	<input type="checkbox"/>	BW406	Disinfection & Sampling
	<input type="checkbox"/>	BWW101	Identify Sewer Mains
	<input type="checkbox"/>	BWW102	Sewer Service Connects
FSWW2	<input type="checkbox"/>	BWW103	Sewer Manhole Comps
	<input type="checkbox"/>	BWW201	Install Fittings
	<input type="checkbox"/>	BWW202	Install Manhole Ring/Lid
	<input type="checkbox"/>	BWW203	Install Service Connects
	<input type="checkbox"/>	BWW204	Repair Sewer Main Break
FSWW3	<input type="checkbox"/>	BWW205	Repair Sewer Manhole
	<input type="checkbox"/>	BWW301	CMOM & SSO
	<input type="checkbox"/>	BWW302	OKIE Locate
	<input type="checkbox"/>	BWW303	Sewer System Drawings
FSST1	<input type="checkbox"/>	BWW304	Sewer System Map Reading
	<input type="checkbox"/>	BST101	3 Types Street Construction
	<input type="checkbox"/>	BST102	3 Street Repair Methods
	<input type="checkbox"/>	BST103	Typical ROW Limits
FSST2	<input type="checkbox"/>	BST104	Drainage System Component
	<input type="checkbox"/>	BST201	Replace Inlet Hoods/Grades
FSST3	<input type="checkbox"/>	BST202	Flush Dirt & Debris
	<input type="checkbox"/>	BST301	Restore Grades
	<input type="checkbox"/>	BST302	Identify Soil Type
FSST4	<input type="checkbox"/>	BST303	Trim Trees & Dispose
	<input type="checkbox"/>	BST401	Operate Snowplow Truck
	<input type="checkbox"/>	BST402	Dispose of Snow/Ice
	<input type="checkbox"/>	BST403	Know Winter Emergency Plan
FSST5	<input type="checkbox"/>	BST404	Operate Salt Spreader
	<input type="checkbox"/>	BST501	Remove Paving & Failed Base

<u>Track</u>	<u>Comp</u>	<u>Code</u>	<u>Skill Description</u>
FSST6	<input type="checkbox"/>	BST502	Place, Level & Comp Base
	<input type="checkbox"/>	BST601	Remove Damaged Concrete
	<input type="checkbox"/>	BST602	Lay & Tie Steel
	<input type="checkbox"/>	BST603	Place & Drag Concrete
	<input type="checkbox"/>	BST604	Concrete Plant Procedures
FSST7	<input type="checkbox"/>	BST701	Truck/Paver Safety
	<input type="checkbox"/>	BST702	Manually Place Asphalt
	<input type="checkbox"/>	BST703	Asphalt Plant Procedures
FSST8	<input type="checkbox"/>	BST801	Blow Out Cracks
	<input type="checkbox"/>	BST802	Traffic Issues
FST1	<input type="checkbox"/>	T101	Calibrate Air-Monitoring Equip.
	<input type="checkbox"/>	T102	Soil Characteristics
	<input type="checkbox"/>	T103	Set Up Pre-Fab Shoring
	<input type="checkbox"/>	T104	Intermediate Trench Safety
	<input type="checkbox"/>	T105	Intermediate Confined Space
	<input type="checkbox"/>	T106	Intermediate Work Zone Safety
FST2	<input type="checkbox"/>	T201	Investigating Complaints
	<input type="checkbox"/>	T202	Knowledge of Policies/Procedures
	<input type="checkbox"/>	T203	Dispatch Operations
FST3	<input type="checkbox"/>	T301	Underground Utilities
	<input type="checkbox"/>	T302	Estimate Volume of Material
	<input type="checkbox"/>	T303	Basic Surveying
	<input type="checkbox"/>	T304	Project Planning
	<input type="checkbox"/>	T305	Basic GIS
	<input type="checkbox"/>	T306	City Works System
	<input type="checkbox"/>	T307	OKIE Requirements
FST4	<input type="checkbox"/>	T401	Compact Under Paving
	<input type="checkbox"/>	T402	Fine Grading Base
FSTST 1	<input type="checkbox"/>	TST101	Asphalt Mix Designs
	<input type="checkbox"/>	TST102	Operate Asphalt Roller
	<input type="checkbox"/>	TST103	Operate Patch Truck
	<input type="checkbox"/>	TST104	Lay-Down Proc's/Tech's
	<input type="checkbox"/>	TST105	Hot Pour Sealing Material
	<input type="checkbox"/>	TST106	Shoot &/or Establish Grade
	<input type="checkbox"/>	TST201	Set Forms
FSTST2	<input type="checkbox"/>	TST202	Finish Concrete-Flat/C&G
	<input type="checkbox"/>	TST203	Concrete Mix Design
	<input type="checkbox"/>	TST301	Adjust Storm Inlet to Grade
FSTST3	<input type="checkbox"/>	TST302	Install Pipe/Str's to Grade
	<input type="checkbox"/>	TST401	Tractor/Mower Operation
FSTST4	<input type="checkbox"/>	TST402	Recognize R/W Maint Issues
	<input type="checkbox"/>	TWW101	Problem/Corrective Action
FSTWW1	<input type="checkbox"/>	TWW102	Investigate Odor Complaint
	<input type="checkbox"/>	TWW103	Disinfection Procedures
	<input type="checkbox"/>	TWW201	Operate Vactor Truck
FSTWW2	<input type="checkbox"/>	TWW202	Stoppages
	<input type="checkbox"/>	TWW301	Operation of Video Camera
FSTWW3	<input type="checkbox"/>	TWW302	Catalog Videos
	<input type="checkbox"/>	TWW401	Collapsed Main Line Rep
FSTWW4	<input type="checkbox"/>	TWW402	By-pass Pumping
	<input type="checkbox"/>	TWW403	Service Saddle Connection

<u>Track</u>	<u>Comp</u>	<u>Code</u>	<u>Skill Description</u>
FSTW1	<input type="checkbox"/>	TW101	Evaluate/Determine Action
	<input type="checkbox"/>	TW102	Make Repair (if possible)
FSTW2	<input type="checkbox"/>	TW201	Repair Water Leaks
	<input type="checkbox"/>	TW202	Repair Water Main Breaks
	<input type="checkbox"/>	TW203	Install All Main Line Fittings
	<input type="checkbox"/>	TW204	Flush for Residue/Taste/Odor
	<input type="checkbox"/>	TW205	Service Tap Existing Main
	<input type="checkbox"/>	TW206	Locate/Repair Ser Leak in Street
	<input type="checkbox"/>	TW207	Disinfection of Repairs
FSTW3	<input type="checkbox"/>	TW301	Raise to Grade
	<input type="checkbox"/>	TW302	Install New Hydrant
	<input type="checkbox"/>	TW303	Disassemble/Reassemble
FSTW4	<input type="checkbox"/>	TW401	Replace Bonnet, Gasket, etc.
	<input type="checkbox"/>	TW402	Install Valve up to 12%
	<input type="checkbox"/>	TW403	Turn Off Water

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RELATED INSTRUCTION OUTLINE

OCCUPATION TITLE: Field Service Technician (Maintenance Tech, Municipal)
O*NET-SOC CODE: 47-2061.00 **RAPIDS CODE: 1049**

The related training instruction is provided by Francis-Tuttle Technology Center and consists of the following modules:

Module 1 (Units 1 –8) must be completed during the first six (6) months of training.

Module 1: Trainee

UNIT 1: SAFETY

- LAP 1.1.1 Incident Command System/National Incident Management System (B101)
- LAP 1.1.2 Weapons of Mass Destruction (B102)
- LAP 1.1.3 Hazmat Awareness (B103)
- LAP 1.1.4 Trenching & Shoring Awareness (trenching and shoring) (B104)
- LAP 1.1.5 First Aid/CPR Cert (B105)
- LAP 1.1.6 Hazard communication (B106)
- LAP 1.1.7 Blood Borne Pathogens (B107)
- LAP 1.1.8 Confined Space Entry (B108)
- LAP 1.1.9 Collection System Hazards (B109)
- LAP 1.1.10 Storm Drain Hazards (B110)
- LAP 1.1.11 Defensive Driving (B111)
- LAP 1.1.12 OSHA Standards Part 1926 (B112)
- LAP 1.1.13 Work Zone Traffic Safety Certification (B113)
- LAP 1.1.14 Work Zone Flagging Certification (within 1yr) (B114)
- LAP 1.1.15 Personal Protective Equipment (B115)
- LAP 1.1.16 Promoting a Safe Workplace (B116)

UNIT 2: POLICIES AND PROCEDURES

- LAP 1.2.1 On-the-job injury (B201)
- LAP 1.2.2 Organizational Structure (B202)
- LAP 1.2.3 SBP Program (B203)
- LAP 1.2.4 Attendance Policy (B204)
- LAP 1.2.5 Customer Service Training (B205)

UNIT 3: BASIC MATH SKILLS

- LAP 1.3.1 Fractions
- LAP 1.3.2 Volume
- LAP 1.3.3 Metric Conversion

UNIT 4: HAND TOOLS AND EQUIPMENT

LAP 1.4.1 Hand Tools (B301)

- Hammer / sledge hammer
- Crescent Wrench
- Pipe Wrench
- Chisel
- Tapes / levels
- Shovels
- Picks
- Copper Tube Cutters
- Wrenches And Sockets
- Rake
- Screwdriver/Pliers
- Straight Edge (10 – 12")

LAP 1.4.2 Dirt Work (B400 series)

- Compact non-paving (B401)
- Finish grade/clean up (B402)
- Sod placement (B403)

LAP 1.4.3 Power Tools (B500 series)

- Chainsaw (B501)
- Pole Saw (B502)
- Impact Wrench (B503)
- Skill saw (B504)
- Walk Behind Saw (B505)
- Air compressor/hammer (B506)
- Air/hydraulic systems (B507)
- Cut-off saw (B508)
- Grinder-Drill (B509)
- 2" pumps (B510)
- Compactors (B511)
- Tapping machine (B512)

LAP 1.4.4 Basic Equipment Operation (B600 series)

- Introduction to Light Equipment (B601)
- Dump Truck (B602)
- Equipment Manuals (B603)
- Bobcat (B604)
- Backhoe Operation (B605)
- Loading parts and equipment onto a trailer (B606)
- Tractors (B607)

- Daily Equipment Check (B608)

UNIT 5: PUBLIC WORKS OPERATIONS

- LAP 1.5.1 Distribution/collection certification (within 6 months) (B701)
- LAP 1.5.2 Completing a Work Order (B702)
- LAP 1.5.3 Manual of Operations (B703)

UNIT 6: BASIC WATER SYSTEMS AND SERVICE

LAP 1.6.1 Basic Water System Identification

- Hydrant Components (BW101)
- Water Mains (BW102)
- Service Connections (BW103)
- Identify Tapping Machines (BW104)

LAP 1.6.2 Basic Water Maintenance and Service

- Install Repair Clamp (BW201)
- Install Fittings (BW202)
- Install Water Meter (BW203)
- Install Service Connections (BW204)
- Repair Main Break (BW205)

LAP 1.6.3 Basic Water Valves and Hydraulics

- Water valve operation (BW301)
- Water Valve Adjustment (BW302)
- Install water Valve (BW303)
- Fire Hydrant Operation (BW304)

LAP 1.6.4 Basic Water Maintenance

- Water System Map Reading (BW401)
- Water Chlorine Test (BW402)
- Electronic Detection (BW403)
- Water De-Chlorination (BW404)
- Water System Drawings (BW405)
- Disinfection & Sampling (BW406)

UNIT 7: BASIC WASTEWATER SYSTEMS

LAP 1.7.1 Basic Wastewater Identification

- Identify Sewer Mains (BWW101)
- Sewer Service Connections (BWW102)
- Sewer Manhole Components (BWW103)

LAP 1.7.2 Basic Wastewater Maintenance and Service

- Install Fittings (BWW 201)
- Install Manhole Ring/Lid (BWW202)
- Install Service Connections (BWW203)
- Repair Sewer Main Break (BWW204)
- Repair Sewer Manhole (BWW205)

LAP 1.7.3 Basic Wastewater Maintenance

- CMOM & SSO (BWW301)
- Electronic Detection (BWW302)
- Sewer System Drawings (BWW303)
- Sewer System Map reading (BWW304)

UNIT 8: BASIC STREET REPAIR AND MAINTENANCE

LAP 1.8.1 Basic Street Identification

- 3 types of street construction (BST101)
- 3 street repair methods (BST102)
- Typical Right of Way limits (BST103)
- Drainage system components (BST104)

LAP 1.8.2 Basic Street Drainage

- Replace inlet hoods/grates (BST201)
- Flush dirt and debris (BST202)

LAP 1.8.3 Basic Street Right of Way Maintenance

- Restore grass (BST301)
- Hand clean weeds in Right of Way (BST302)
- Trim trees and dispose (BST303)

LAP 1.8.4 Basic Street Snow Removal and Procedures

- Operate snowplow truck (BST401)
- Dispose of snow/ice (BST402)
- Know winter emergency plan (BST403)
- Operate Salt Spreader (BST404)

LAP 1.8.5 Basic Street - Base

- Remove paving & failed base (BST501)
- Place, level, & compact base (BST502)

LAP 1.8.6 Basic Street - Concrete

- Remove damaged concrete (BST601)
- Lay and tie steel (BST602)
- Place & drag concrete (BST603)
- Concrete plant procedures (BST604)

LAP 1.8.7 Basic Street - Asphalt

- Truck/Paver Safety (BST701)
- Manually Place Asphalt (BST702)
- Asphalt Plant Procedures (BST703)

LAP 1.8.8 Basic Street – Sealing

- Blow Out Cracks (BST801)
- Traffic Issues (BST802)

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