



ATTACHMENT 19

LTWP Detailed Design Report - Appendix D - Draft Specification

Appendix D

Draft Specifications

DIVISION 1 – 16 - TABLE OF CONTENTS

DIVISION 1 – 16 – TABLE OF CONTENTS

FINAL NMS NUMBERING FORMAT TO BE DETERMINED

Section	Title
Division 1 – General Requirements	
01000	General Requirements
01110	Summary of Work
01115	Sequence of Construction
01050	Construction Layout
01060	Regulatory Requirements
01070	Abbreviations
01300	Submittals
01310	Project Management and Coordination
01320	CPM Construction Schedule
01351	Health and Safety
01353	Special Project Procedures
01400	Quality Control and Quality Assurance
01500	Temporary Facilities
01505	Mobilization and Demobilization
01560	Environmental Control
01570	Traffic Control and Management
01600	Materials and Equipment
01610	Site Cleaning and Maintenance
01630	Alternatives and Substitutions
01640	Manufacturers Services
01660	Facility Commissioning
01720	Preparation
01730	Operation and Maintenance Manual

01740	Cleaning
01760	Warranty Work
01780	Project Closeout Procedures
01800	Permits
01810	Testing and Commissioning
01820	Demonstration and Training

Division 2 – Site Works

02137	Bracing and Shoring
02140	Dewatering
02150	Temporary Pumping Facilities
02170	Cofferdams
02200	Excavation and fill for structures
02202	Trenching and backfilling
02231	Clearing and Grubbing
02606	Manhole and Vault Covers and Accessories
02300	Earthwork and Related Work
02311	Site Grading
02315	Excavation, Trenching and Backfilling
02316	Rock Removal
02317	Roadway
02362	Dust Control
02370	Erosion and Sediment Control
02379	Preservation of Watercourses
02389	Rock Anchors
02511	Watermains
024116	Structure Demolition
024119	Selective Structure Demolition
02634	HDPE Pressure Pipe
02641	Pipe Culverts
02675	Cleaning and Disinfection of Water Pipelines
02701	Aggregates

02704	Pipeline Pressure and Leakage Testing
02721	Granular Base
02723	Granular sub-Base
02911	Topsoil and Finish Grading
XXXXX	Geotextile and Geomembrane

Division 3 – Concrete

033300	Architectural concrete
03200	Concrete Forming
03200	Concrete Reinforcing
03300	Cast-In-Place Concrete
03362	Concrete Floors and Finishing

Division 4 – Masonry

Division 5 – Metals

05121	Structural Steel For Buildings
05310	Metal Decking
05510	Metal Stairs And Ladders

Division 6 – Wood and Plastics

061000	Rough Carpentry
--------	-----------------

Division 7 – Thermal and Moisture Protection

071300	Water Proofing
072100	Thermal Insulation
072700	Sheet Air Vapour Barriers
076000	Flashing and Sheet Metal
079200	Joint Sealants
074213	Metal Wall Panels
076113	Standing Seam Sheet Metal Roofing

Division 8 – Doors and Windows

081113	Hollow Metal Doors and Frames
--------	-------------------------------

087100	Finish Hardware
084500	Translucent Panel Assemblies
089100	Louvres and Vents

Division 9 – Finishes

099100	Painting
--------	----------

Division 10 – Specialties

102813	Washroom Accessories
--------	----------------------

Division 11 – Equipment

11010	Equipment General Requirements
11090	Identification of Equipment, Piping and Valves
11100	Piping, Valves, and Fittings
11156	Intake Screen and Air Burst System
11170	Pipeline Pressure and Leakage Testing
11190	Pipe Supports
11282	Fabricated Slide Gates
11435	Submersible Pumps

Division 13 – Instrumentation and Control

13010	Process Control – General Requirements
13015	Training
13040	Equipment Tagging
13050	I&C Documentation
13105	General Instrumentation Standards
13110	Ultrasonic Level Transmitter
13940	Smoke Detector
13120	Ambient Temperature Switch
13130	Magnetic Flowmeter
13140	Pressure Transmitter

13300	Testing and Commissioning
13310	PLC Control Panel
13401	Instrumentation and Control Testing
13430	Level Switch Float
13480	Software Programming Requirements
13485	Systems Integrator
13510	Structured Cabling System
13940	Field Wiring

Division 14 – Conveying Systems

Hoists

Division 15 – Mechanical

150500 (21 05 00)	Common Works for Fire Suppression
150500 (22 05 00)	Common Works for Plumbing
15141 (22 11 00)	Facility Water Distribution
151123 (22 11 23)	Potable Water Pumps
151300 (22 13 00)	Facility Sanitary Sewerage
151323 (22 13 23)	Sanitary Waste Interceptors
151329 (22 13 29)	Sanitary Sewerage Pumps
15480 (22 33 00)	Electric Water Heaters Potable Water
15411 (22 42 00)	Commercial Plumbing Fixtures
15010 (23 05 01)	Basic Mechanical Requirements
15053 (23 05 13)	Motors and Wiring For Mechanical
15121 (23 05 19)	Meters
150523(23 05 23)	Pipes, Fittings, and Valves
150524(23 05 24)	Piping Specialties
15061 (23 05 29)	Pipe Hangers and Supports
15072 (23 05 48)	Noise and Vibration Control

15071 (23 05 49)	Seismic Restraint
15075 (23 05 53)	Mechanical Identification
15082 (23 07 13)	Duct Insulation
15083 (23 07 16)	Equipment Insulation
15081 (23 07 19)	Piping Insulation
15970 (23 08 13)	Start-up and Performance Testing
15950 (23 08 16)	Testing, Adjusting and Balancing
150819 (23 08 19)	Rotating Equipment Vibration Testing
150823 (23 08 23)	Mechanical Commissioning
150833 (23 08 33)	Project Close-Out
153100 (23 31 00)	HVAC Ducts and Casings
15820 (23 33 00)	HVAC Duct Accessories
15831 (23 34 00)	HVAC Fans
15852 (23 37 13)	Diffusers, Registers and Grilles
15861 (23 41 00)	Particulate Air Filtration
156543 (23 65 43)	Water Storage Tanks
15722 (23 73 13)	Modular Air Handling Units
153500 (25 35 00)	Building Automation Instrumentation and Terminal Devices for Mechanical
159500 (25 95 00)	Building Automation Control Sequences

Division 16 – Electrical

26 05 01	Common Work Results for Electrical
26 05 02	Electrical Basic Materials and Methods
26 05 03	Basic Electrical Equipment Requirements
26 05 26	Grounding
26 05 53	Underground Electrical Services
26 05 54	Electrical Identification for Electrical Systems

26 08 06	Field Testing and Commissioning Low Voltage
26 24 19	Motor Control Centres
26 20 02	Service and Distribution Equipment
26 29 02	Variable Frequency Drive
26 32 02	Diesel Generator Systems
26 50 00	Lighting