

TABLE OF CONTENTS

		Pages
DIVISION – 01000	- GENERAL REQUIREMENT	01000-1 TO 01000-34
DIVISION – 02000	- SITE WORK	
SECTION – 02100	- SITE PREPARATION	02000-1 TO 02000-1
SECTION – 02110	- SITE CLEARING	02000-1 TO 02000-2
SECTION – 02120	- SETTING OUT	02000-2 TO 02000-3
SECTION – 02140	- DEMOLITION	02000-3 TO 02000-4
SECTION – 02210	- EARTHWORK	02000-5 TO 02000-14
SECTION – 02310	- TERMITE PROOFING	02000-15 TO 02000-17
SECTION – 02400	- DEWATERING	02000-18 TO 02000-21
SECTION – 02510	- PAVING AND SURFACING	02000-22 TO 02000-25
SECTION – 02910	- FLAG POLES	02000-26 TO 02000-28
DIVISION – 03000	- CONCRETE WORK	
SECTION – 03310	- PLAIN AND REINFORCED CONCRETE	03000-1 TO 03000-36
SECTION – 03320	- WATER STOPPERS	03000-36 TO 03000-37
DIVISION – 04000	- MASONRY WORKS	
SECTION – 04200	- CEMENT CONCRETE BLOCK MASONRY	04000-1 TO 04000-6
SECTION – 04300	- BRICK MASONRY	04000-7 TO 04000-9
DIVISION – 05000	- METAL WORKS	
SECTION – 05120	- STRUCTURAL STEEL WORKS	05000-1 TO 05000-8
SECTION – 05130	- STRUCTURAL WELDING	05000-9 TO 05000-15
SECTION – 05510	- MISCELLANEOUS METAL WORKS	05000-16 TO 05000-29
DIVISION – 07000	- THERMAL & MOISTURE PROTECTION	
SECTION – 07100	- ROOF WATER PROOFING AND HEAT INSULATION	07000-1 TO 07000-5

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

SECTION – 07110	- WATER PROOFING	07000-6 TO 07000-9
DIVISION – 08000	- DOORS AND WINDOWS	
SECTION – 08110	- ALUMINIUM DOORS AND WINDOWS	08000-1 TO 08000-10
SECTION – 08120	- FINISH HARDWARE	08000-11 TO 08000-23
SECTION – 08130	- STEEL DOORS	08000-24 TO 08000-26
SECTION – 08210	- WOODEN DOORS	08000-27 TO 08000-37
SECTION – 08900	- STRUCTURAL GLAZED CURTAIN WALL & SKYLIGHTS	08000-38 TO 08000-47
DIVISION – 09000	- FINISHES	
SECTION – 09110	- ARCHITECTURAL HAND RAILS & RAILING	09000-1 TO 09000-6
SECTION – 09200	- PLASTERING	09000-7 TO 09000-11
SECTION – 09310	- CERAMIC & PORCELAIN TILE WORKS	09000-12 TO 09000-14
SECTION – 09320	- SPLIT TILE WORK	09000-15 TO 09000-16
SECTION – 9380	- TAXILA STONE TILES	09000-17 TO 09000-19
SECTION – 09410	- TERRAZO WORK	09000-20 TO 09000-22
SECTION – 09510	- SUSPENDING CEILING	09000-23 TO 09000-28
SECTION – 09600	- GRANITE WORK OVER FLOOR / WALL	09000-29 TO 09000-32
SECTION – 09700	- TEXTURED WALL COATING	09000-33 TO 09000-34
SECTION – 09710	- CEMENT / GRANOLITHIC FLOORING	09000-35 TO 09000-38
SECTION – 09910	- PAINTING AND POLISHING	09000-39 TO 09000-44
SECTION – 09950	- GRANITE WORK OVER FACE	09000-45 TO 09000-48

PLUMBING WORKS

ELECTRICAL WORKS

DIVISION 01000 – GENERAL REQUIREMENTS

Table of Contents

	Page No.
01010 SUMMARY OF WORK	1
01011 General	1
01012 Scope of Work	1
01013 Scope of Contract	1
01014 Work not Included	1
01015 Employer Furnished Items	1
01040 COORDINATION	1
01041 Project Coordination	1
01042 Progress and Implementation	2
01310 CONSTRUCTION SCHEDULE, PROGRESS AND MONITORING REPORTS	2
01311 Construction Schedules	2
01312 Procedures and Updates	3
01313 Manpower & Procurement Schedules	3
01314 Submittal and Distribution	4
01315 Progress Reports	4
01340 CONTRACTOR MATERIALS, EQUIPMENT, AND DRAWING SUBMITTALS	5
01341 Schedule of Required Submittals	5
01342 General	5
01343 Material Submittals	6
01344 Drawing Submittals	9
01345 Submittal Numbering System	13
01400 QUALITY CONTROL	13
01401 Quality System	13

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

01402	Quality Standards	13
01403	Quality Control Programme	14
A-	Quality Control Plan	14
B-	Quality Meetings	14
C-	Quality Control Personnel	14
D-	Recurring Deficiencies	15
E-	Inspection	15
F-	Test Procedure Test Results	15
01500	TEMPORARY FACILITIES AND SERVICES	15
01510	TEMPORARY UTILITIES	15
01511	Electricity	15
01514	Telephone and Radio Communication Facility	15
01515	Water	16
01516	Waste Disposal	16
01517	Medical Services	16
01518	Air Pollution Control	16
01519	Dust Control	16
01520	Construction Site Drainage	17
01521	Dewatering	17
01540	Safety, Fire Prevention Security on Programmes	17
A-	Safety Programme	17
B-	Fire Prevention and Protection Programme	18
01541	Weather Protection and Ventilation	18
01580	Project Sign	19
01590	Offices, Vehicles, Sheds & Equipment	19
01600	MATERIAL AND EQUIPMENT	20
01610	Material Handling, Storage and Delivery	20
01630	Approval Procedure and Product Substitutions	20
01631	Product Certification	20
01632	Manufacturer's Review	20
01633	Approved Applicator or Installer	20

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

01634	On Site Instruction	21
01635	Manufacturer's Supervision	21
01636	Substitutions	22
01700	CONTRACT CLOSE-OUT	23
01710	Project Record Documents	23
A	Definitions	23
B	Drawings and Specifications at the Site	23
C	Record Drawings	23
01740	WARRANTIES	23
01770	Completion and Final Acceptance Certificate	25

DIVISION 02000 – SITE WORK

Table of Contents

	Page No.
02100 SITE PREPARATION	1
02101 General	1
02110 SITE CLEARING	1
02111 General	1
02112 Location of Work	1
02113 Execution	1
A- Grubbing and Cutting	1
B- Disposal	1
C- Burning	2
D- Protection and Restoration	2
02114 Measurement and Payment	2
02120 SETTING OUT	2
02121 General	2
A- Instruments	2
B- Submittals	2
02122 Execution	3
A- Setting out	3
02123 Measurement and Payment	3
02140 DEMOLITION WORKS	3
02141 General	3
02142 Execution	4
A- Demolition	4
B- Sorting, Stacking and Disposal	4
02143 Measurement and Payment	4
02210 EARTH WORKS	5
02211 Scope of Work	5
02212 General	5
02213 Submittal	6
02214 Codes and Standards	6
02215 Execution	6

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

A-	Site Preparation	6
B-	Excavations	7
C-	Excavation Tolerances	10
D-	Back Filling	11
E-	Back Filling Tolerances	12
F-	Disposal of Surplus Materials	12
02216	Measurement and Payment	13
A-	General	13
B-	Excavation	13
C-	Imported Fills	14
02310	TERMITE PROOFING	15
02311	General	15
A-	Scope	15
B-	Submittals	15
C-	Codes and Standards	15
D-	Quality Assurance	15
02312	Products	15
A-	Insecticides	15
02313	Execution	16
A-	Method of Application	16
02314	Measurement and Payment	17
A-	General	17
B-	Measurement	17
C-	Payment	17
02400	Dewatering	18
02401	scope	18
04202	Quality Assurance	18
02403	Submittals	18
02404	Design of Dewatering System	19
02405	Dewatering of the Excavation	19
02406	Observations	21
02407	Payments	21
02500	PERMANENT WELLS	22
02501	General	22
A-	Number and Sizes of Wells	22
B-	Drilling	22
02502	Execution	22
A-	Method of Drilling	22

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

B-	Formation Sample	23
C-	Furnishing of Well Casing	23
D-	Slotting and Open Area	24
E-	Bail Plug	24
F-	Installation of Casing and Screen	24
G-	Guides and Centralizers	25
H-	Gravel Shrouding	25
02503	Development and Testing	25
A-	General	25
B-	Development	26
C-	Development by Airlift Method	26
D-	Development by Pumping Method	27
02504	Measurement for Payment	27
A-	Drilling	27
B-	Furnishing of Gravel	27
C-	Development and Testing of Wells	27
02510	PAVING AND SURFACING	28
02511	General	28
A-	Description	28
(01)	Principal Work	28
(02)	Related Work Specified Elsewhere	28
B-	Applicable codes and Standards	28
C-	Submittals	28
02512	Products	28
A-	Materials	28
(01)	Cement	28
(02)	Water	29
(03)	Aggregates	29
(04)	Pavers	29
B-	Setting Materials	29
(01)	Sand for Setting Beds	29
(02)	Sand for Joints	29
(03)	Un-grouted Mortar less Setting Materials for Concrete Pavers	29
02513	Execution	29
A-	Installation – General	29
B-	Types of Paving	30
C-	Placing Concrete Pavers (Type 1)	30
D-	Placing Concrete Pavers (Type 2)	30
C-	Repair	31
02514	Measurement and Payment	31
A-	Measurement	31
B-	Rate and Payments	31

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

02910	FLAG POLES	32
02911	General	32
A-	Related Documents	32
B-	Description of Work	32
C-	Quality Assurance	32
D-	Submittals	32
E-	Delivery, Storage and Handling	32
02912	Materials	32
A-	Acceptable Manufacturers	32
B-	Flag Pole Type	33
C-	Flag Pole Mounting	33
D-	Fittings	33
02913	Execution	33
A-	Installation	33
02914	Measurement and Payment	34
A-	Measurement	34
B-	Rate and Payment	34

DIVISION 03000 – CONCRETE WORK

Table of Contents

	Page No.
03310 PLAIN AND REINFORCED CONCRETE	1
03311 General	1
A- Scope of Work	1
B- General Requirements	1
C- Codes and Standards	1
(01) British Standards	1
(02) ASTM Standards	2
(03) ACI Standards	3
D- Submittals	3
03312 Products	8
A- Materials	8
(01) Aggregates (Except for light-weight concrete)	8
(02) Cement	9
(03) Water	10
(04) Reinforcement	10
B- Mix Proportions	11
(01) General	11
(02) Strength	11
(03) Durability	11
(04) Slump	11
(05) Admixtures	12
(06) Methods of Obtaining Mix Design	12
03313 Execution	12
A- Plant and Workmanship	12
(01) Formwork	12
(02) Reinforcement	16
(03) Batching	17
(04) Mixing	18
(05) Transport	18
(06) Placing	18
(07) Construction Joints	19
(08) Embedded Items	20
(09) Consolidation	21
(10) Curing and Protection	21
(11) Works in Extreme Weather	23

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

B-	Test for Concrete Quality	24
(01)	General	24
(02)	Samples	24
(03)	Adequacy of Mix	24
C-	Finishing of Formed Concrete	24
(01)	General	24
(02)	As-Cast Finishes	25
(03)	Architectural Finishes	25
(04)	Rubbed Finishes	25
(05)	Unspecified Finishes	26
(06)	Related Unformed Surfaces	27
D-	Repair of Source Defects	27
(01)	General	27
(02)	Repair of Defective Areas	27
(03)	Tie and Bolt Holes	28
(04)	Proprietary Materials	28
E-	Concrete Construction Tolerance	28
(01)	Variation from the plumb	28
(02)	Variation from the levels or the grades indicated on Drawings	29
(03)	Variation of the entire building lines from established position in plan and related position of columns, walls and partitions	29
(04)	Variation of the size and locations of sleeves, floors openings and wall opening	29
(05)	Variation in cross-sectional dimensions of columns and beams and in the thickness of slabs and walls	29
(06)	Footings	29
(07)	Variation in Steps	30
(08)	Tolerance for Precast Concrete	30
(09)	Tolerance for Pavements	30
(10)	Pavements for Parking Areas	30
03314	Acceptance of structure	31
A-	General	31
B-	Dimensional Tolerances	31
C-	Appearance	31
D-	Strength of Structure	31
03315	Methods of Measurement of Concrete Works	32
A-	General	32
B-	Concrete	33
C-	Formwork	34
D-	Reinforcement	35
03316	Rate and Payment	36

03320	WATER STOPPERS	37
03321	General	37
A-	Scope of Work	37
B-	General	37
C-	Related Specifications	37
03322	Products	37
A-	Materials	37
B-	Technical Data	37
C-	Storage	38
03323	Execution	38
A-	Preparation	38
B-	Placing	38
03324	Rate and Payment	38
03340	BORED REINFORCED CONCRETE CAST-IN-SITU PILES	39
(01)	Scope of work	39
(02)	Related Specifications	39
(03)	Description of Piles	39
(04)	Penetration of Piles	39
(05)	Samples and Borehole Logs	39
(06)	Tolerances	40
(07)	Sub-soil Information	40
(08)	Location of Piles	40
(09)	Sequence of Work Execution	40
(10)	Pile Tops	41
(11)	Drainage at Site	41
(12)	Execution of Piles	41
(12.1)	General	41
(12.2)	Boring / Drilling of Holes for the Piles	41
(12.3)	Boring / Drilling and using Temporary Casing	42
(12.4)	Placement of Steel Reinforcement	42
(12.5)	Mixing and Placing of Concrete	43
(12.6)	Load Test	45
(12.7)	Methods of Measurement of Piling Works	48
(13)	Measurement and Payment	49
(13.1)	General	48
(13.2)	Drilling of Boreholes for Piles	50
(13.3)	Dummy Concrete	50

DIVISION 04000 – MASONRY

Table of Contents

	Page No.
04200 CEMENT CONCRETE BLOCK MASONRY	1
04201 General	1
A- Scope of Work	1
B- Codes and Standards	1
C- Submittals	1
(01) Samples	1
(02) Test Reports	1
04202 Products	2
A- Materials for Blocks	2
B- Concrete Block Making	2
C- Properties of Blocks	2
D- Suction Rate	3
E- Soluble salt Content	3
F- Mortar Constituents	3
(01) Cement	3
(02) Sand (Aggregate)	3
(03) Water	4
(04) Lime	4
(05) Mortar Proportion and Mixing	4
G- Reinforcing and Anchors	4
04203 Execution	4
A- Installation	4
B- Curing	5
C- Scaffolding	5
D- Tolerances	5
04204 Measurement and Payment	5

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

04300	Brick Masonry	7
04301	General	7
A-	Scope of Work	7
B-	Applicable Standards	7
04302	Products	7
A-	General	7
B-	Mortar	7
C-	Brick	7
D-	Placing	8
E-	Curing, Repair and Cleaning	8
F-	Scaffolding	9
G-	Tolerances	9
04303	Measurement and Payment	9
A-	General	9
B-	Measurement	9
C-	Payment	9

DIVISION 05000 – METAL WORKS

Table of Contents

	Page No.
05120 STRUCTURAL STEEL WORKS	1
05121 General	1
A- Description	1
B- Applicable Code and Standards	1
C- Submittals	2
D- Transportation, Handling, Storage and Protection	2
E- Quality Control	2
05122 Products	3
A- Material	3
B- Shop Fabrication	4
C- Connections	4
D- Bolting	5
E- Welding	5
F- Surface Preparation	6
G- Painting	6
H- Galvanizing	7
05123 Execution	7
A- Erection	7
B- Field Painting	7
05124 Measurement and Payment	8
05130 STRUCTURAL WELDING	9
05131 General	9
A- Description	9
B- Applicable Codes and Standards	9
C- Submittals	9
(01) Test Reports	9
(02) Procedures	10
05132 Products	10
A- Materials	10
B- Welding Requirements	10
(01) Welding Processes	10
(02) Alternative Welding Processes	10

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

(03)	Joints Subject to Lamellar Tearing	10
C-	Welding Process Restrictions	11
D-	Preheat and Interpass Temperature (P & IPT)	12
E-	Postweld Heat Treatment (PWHT)	12
F-	Workmanship, Visual Quality Examination and Inspection	12
G-	Inspection and Testing	13
05510	MISCELLANEOUS METAL WORKS	16
05511	General	16
A-	Description	16
B-	Applicable Codes and standards	16
C-	Submittals	18
D-	Galvanizing	18
05512	Products	19
A-	Materials	19
B-	Workmanship	22
C-	Shop Fabrication	22
D-	Shop Painting	23
E-	Fabrication – Specific items	24
(01)	Steel Ladder	24
(02)	Open Riser stairs	24
(03)	Sixty Degree Ladders	25
(04)	Ladder Rungs	25
(05)	Railings	25
(06)	Loose Lintels	25
(07)	Miscellaneous Framing and supports	25
(08)	Structural steel Door Frames	26
(09)	Hatch Doors	26
(10)	Angle Window Frames	26
(11)	Metal stair Nosing	26
(12)	Corner Guards	26
(13)	Checkered Plate	27
(14)	Steel Frames	27
(15)	Pipe Sleeves	27
(16)	Stairways	27
(17)	Anchor Bolts	27
(18)	Traffic Barriers	27
05513	Execution	27
A-	Installation	27
05514	Measurement and Payment	28

DIVISION 07000 – THERMAL AND MOISTURE PROTECTION

Table of Contents

	Page No.
07100 ROOF WATER PROOFING AND HEAT INSULATION	1
07101 General	1
A- Scope of Work	1
07102 Products	1
A- Codes and Standards	1
B- Submittals	1
C- Materials	1
07103 Execution	2
A- Product Handling and Delivery	2
B- Preparatory Work	2
C- Application of Roofing	2
(01) Base Layer (Screed)	2
(02) Water Proofing	3
(03) Heat Insulation	4
D- Roof finish	4
07104 Measurement and Payment	5
07110 WATER PROOFING	6
A- Scope of Work	6
07112 External Water Proofing Through Bituminous Membrane	6
A- Codes and Standards	6
B- Submittals	6
C- Transportation, Handling, Storage and Protection	6
D- Products	6
E- Execution	6
07113 Internal Water Proofing Through Surface Coating	7

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

A-	General	7
B-	Submittals	7
C-	Product Handling	8
D-	Products	8
E-	Execution	8
(01)	Condition of Surfaces	8
(02)	Preparation	8
(03)	Mixing, Application and Curing	9
(04)	Cleaning	9
(05)	Certification	9
07114	Measurement and Payment	9

DIVISION 08000 - DOORS AND WINDOWS

Table of Contents

	Page No.
08110 ALUMINIUM DOORS AND WINDOWS	1
08111 General	1
A- Scope of Work	1
B- General Requirement	1
(01) Codes and Standards	1
(02) Design Requirements	1
(03) Work Sizes	1
(04) Weather Tightness	1
(05) Air Tightness	1
(06) Acoustic Performance	2
C- Technical and Fabrication Requirements	2
(01) Appearance	2
(02) Design	2
(03) Structure	2
D- Submittals	3
(01) General	3
(02) Manufacturer's Coordination and Services	3
(03) Warranty	3
(04) Samples	3
(05) Shop Drawings	4
(06) Maintenance Instructions	4
08112 Products	4
A- Materials	4
(01) Aluminium	4
(02) Support Devices	5
(03) Accessory Materials	5
B- Aluminium Finishes	5
(01) Natural Colour Anodizing	5

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

(02)	Kynar Coating	6
C-	Dissimilar Materials	7
08113	Execution	7
A-	Construction Requirements	7
(01)	Wind Pressure	7
(02)	Fixing	8
(03)	Handling	8
B-	Protection	8
C-	Glazing	8
(01)	General	8
(02)	Glazing Gaskets	8
(03)	Standards and Performances	8
(04)	Preparation for Glazing	9
(05)	Cure, Protection Cleaning	9
08114	Measurement and Payment	10
A-	Measurement	10
B-	Rate and Payment	10
08120	FINISH HARDWARE	11
08121	General	11
A-	Description	11
B-	Applicable Codes and Standards	11
C-	Submittals	11
D-	Quality Assurance	12
E-	Product Handling	12
F-	Job Conditions	12
G-	Tools and Spare Parts	12
H-	Shipping	13
I-	Security Control Hardware	13
08122	Products	13
A-	Materials	13
(01)	General Metals and Finishes	13
(02)	Templates	14

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

(03)	Hand of Door	14
(04)	Bi-Lingual Identification	14
(05)	Fasteners	14
(06)	Butts and Hinges	15
(07)	Pivots	15
(08)	Locksets and Latchets	16
(09)	Cylinders	16
(10)	Padlocks	16
(11)	Keying and Mater Keying	17
(12)	Exit Devices	17
(13)	Closers	17
(14)	Flush Bolts	18
(15)	Surface Bolts	18
(16)	Automatic Flush Bolts	18
(17)	Push Plates	18
(18)	Pull Plates	18
(19)	Push Bars	18
(20)	Offset Pulls	18
(21)	Stops	18
(22)	Holders	19
(23)	Overhead Holders	19
(24)	Thresholds	19
(25)	Head and Jamb Weather-strip	20
(26)	Stripping and Seals	20
(27)	Astragal Seals	20
(28)	Magnetic Astragals	20
(29)	Lock Astragals	20
(30)	Kick Plates	20
(31)	Armour Plates	20
(32)	Roller Latches	20
(33)	Unscheduled Hardware	21
(34)	Bi-Fold Door Hardware	21
(35)	Hardware	22
08123	Execution	22

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

A-	Shipping	22
B-	Installation	22
(01)	General	22
(02)	Locations	22
(03)	Removal for Finishes	22
(04)	Alignment	22
(05)	Preparation for Fasteners	22
(06)	Surface Closers	22
(07)	Thresholds	22
(08)	Kickplates and Armour Plates	23
(09)	Lubrication	23
(10)	Instructions	23
(11)	Key Tagging and Verification	23
C-	Inspection and Testing	23
08124	Measurement and Payment	23
08130	STEEL DOORS	24
08131	General	24
A-	Description	24
B-	Applicable Codes and Standards	24
C-	Submittals	24
(01)	Shop Drawings	24
(02)	Sample	24
(03)	Installation Manuals	24
(04)	Manufacturer's Data	24
(05)	Operation and Maintenance Manuals	24
(06)	Quality Standard	24
08132	Products	24
A-	Steel Doors	24
08133	Execution	25
A-	Product Delivery and Storage	25
B-	Installation	25
C-	Cleaning and Protection	25

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

(01)	Cleaning	25
(02)	Protection	26
08134	Measurement and Payment	26
A-	Measurement	26
B-	Rate and Payment	26
08210	WOODEN DOORS	27
08211	General	27
A-	Scope of Work	27
B-	Submittals	27
C-	Quality Assurance	27
D-	Product Delivery Storage and Handling	28
E-	Job Conditions	28
08212	Product	28
A-	Materials	28
(01)	Timber	28
(02)	Ply Wood	29
(03)	Boards	31
08213	Execution	32
A-	Carpentry Work	32
(01)	General	32
(02)	Preservative Treatment	32
(03)	Moisture Content	33
(04)	Workmanship and Construction	33
(05)	Procedure	33
(06)	Protection of Materials	33
(07)	Inspection	33
(08)	Joinery Work	34
(09)	Finish Hardware and Mongery	36
(10)	Glazing	37
(11)	Painting	37
(12)	Made Good Defective Works	37
08214	Measurement and Payment	37
A-	Measurement	37
B-	Rate and Payment	37

08900	STRUCTURAL GLAZED CURTAIN WALL AND SKYLIGHTS	38
08901	General	38
A-	Scope of Work	38
B-	General Performance Requirements	38
C-	Design Requirements	38
D-	technical and Fabrication Requirements	39
(01)	Appearance	39
(02)	Design	39
(03)	Workmanship	39
E-	Submittals	40
(01)	General	40
(02)	Shop Drawing	40
(03)	Manufacturer's Coordination and Services	40
(04)	Warranty	40
(05)	Samples	40
(06)	Maintenance Instructions	41
08902	Products	41
A-	Materials	41
(01)	Materials Specification	41
(02)	Aluminium	41
(03)	Support Devices	42
(04)	Accessory Materials	42
B-	Powder Coating	42
(01)	Materials	42
C-	Dissimilar Materials	43
08903	Execution	43
A-	Construction Requirements	43
B-	Fixing	44
C-	Handling	44
D-	Protection	44
E-	Glazing	44
08904	Measurement and Payment	47
A-	Measurement	47
B-	Rate and Payment	47

DIVISION 09000 - FINISHES

Table of Contents

	Page No.
09110 ARCHITECTURAL HAND RAILS & RAILING	1
09111 General	1
A- Description	1
B- Applicable Codes and Standards	1
C- Submittals	1
D- Mock-Ups	1
(01) Handrails	1
(02) Glass Railing	1
09112 Products	2
A- Materials	2
(01) Aluminium Section	2
(02) Steel Pipe	2
(03) Brackets, Flanges, and Anchors	2
(04) Grout	2
(05) Glass for Railings	2
(06) Sleeves	2
(07) Sealants and Gaskets	2
(08) Clearance, Primer and Sealers	2
B- Design Requirements	2
(01) General	2
(02) Load	3
C- Railings and Handrails	3
(01) General	3
(02) Securing	3
(03) Wall returns	3
D- Fabrication	3
(01) Workmanship	3
(02) Forming	4
(03) Welding	4
(04) Connections	4
(05) Non-Welded Connections	4
(06) Welded Connection	4
(07) Bent Rails	4

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

09113	Execution	4
A-	Inspection	4
B-	Installation	4
C-	Cleaning and Protection	5
09114	Measurement and Payment	6
A-	Measurement	6
B-	Rate and Payment	6
09200	PLASTERING	7
09201	General	7
A-	Scope of Work	7
B-	General	7
09202	Products	7
A-	Materials	7
09203	Execution	7
A-	Proportioning of Plaster	7
B-	Mixing	8
C-	Care of Tools and Plant	8
D-	Mechanical Mixer	8
E-	Cleanliness and Protection	8
F-	Fixing Applied Back Grounds	8
G-	Back Grounds	9
H-	Application of the Various Coats	9
(01)	General	9
(02)	Undercoat	10
(03)	Finishing Coat	10
I-	Water Proof Plaster for Water Retaining Structures	10
J-	Sampling of Plaster	11
K-	Patching	11
09204	Measurement and Payment	11
A-	Measurement	11
B-	Rate and Payment	11
09310	CERAMIC & PORCELAIN TILE WORKS	12
09311	General	12
A-	Scope of Work	12

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

B-	Submittals	12
09312	Products	12
A-	Materials	12
(01)	Tiles	12
(02)	Joint Filler	12
(03)	Adhesives	12
B-	Samples and Tests	12
C-	Shop Drawings	12
09313	Execution	13
A-	Construction Requirements	13
(01)	In Cement Sand Mortar	13
(02)	In Thin Set Mortar	14
09314	Measurement and Payment	14
A-	Measurement	14
B-	Rate and Payment	14
09320	SPLIT TILE WORK	15
09321	General	15
A-	Scope of Work	15
09322	Products	15
A-	Materials	15
(01)	Tiles	15
(02)	Adhesive / Joint Filler	15
B-	Samples and Tests	15
09323	Execution	15
A-	Construction Requirements	15
(01)	Tile Base	15
(02)	Laying, Jointing and Grouting of Tiles	15
09324	Measurement and Payment	16
A-	Measurement	16
B-	Rate and Payment	16
09380	TAXILA STONE TILES	17
09381	General	17

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

A-	Scope of Work	17
B-	Submittals	17
C-	Delivery, Storage and Handling	17
09382	Products	17
A-	General	17
B-	Type	17
C-	Beds and Backings	18
D-	Podium, steps	18
09383	Execution	18
A-	Paving on Podium and steps	18
B-	Repair and Cleaning	18
C-	Protection	18
09384	Measurement and Payment	18
A-	General	18
B-	Measurement	19
C-	Payment	19
09410	TERRAZZO WORK	20
09411	General	20
A-	Scope of Work	20
B-	Submittals	20
09412	Products	20
A-	Materials Requirements	20
B-	Samples	20
09413	Execution	20
A-	Construction Requirements in Situ Terrazzo Flooring	20
B-	Terrazzo Dado and Skirting	21
C-	Terrazzo on Stairs	22
09414	Measurement and Payment	22
A-	Measurement	22
B-	Rate and Payment	22
09510	SUSPENDED CEILING	23
09511	General	23
A-	Scope of Work	23
B-	Applicable Code and Standards	23
C-	Submittals	23

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

D-	Mock-Up	23
09512	Products	23
A-	Materials	23
B-	Suspension System Materials	24
(01)	General	24
(02)	Edge Mouldings	25
09513	Execution	25
A-	Installation	25
(01)	General	25
(02)	Suspended Ceiling Installation	25
B-	Coordination	27
C-	Tools & Equipment	27
D-	Samples	27
E-	Quality	27
F-	Job Site Conditions	27
09514	Measurement and Payment	28
A-	Measurement	28
B-	Payment	28
09600	GRANITE WORK OVER FLOOR / WALL	29
09601	General	29
A-	Description	29
B-	Related Documents	29
C-	System	29
(01)	Typical Granite Fixing	29
D-	Submittals	29
E-	samples	29
09602	Products	29
A-	Granite	29
B-	Fixing Materials	30
C-	Mortar	30
09603	Execution	30
A-	Preparation	30
B-	Layout and Finish	30
C-	Cutting Stone	31
D-	Granite Stair, Treads, Copings	31
E-	Installation	31

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

F-	Cleaning and Pointing	31
G-	Protection and Maintenance	32
09604	Measurement and Payment	32
A-	Measurement	32
B-	Rate and Payment	32
09700	TEXTURED WALL COATING	33
09701	General	33
A-	Scope of Work	33
B-	Submittals	33
09702	Product	33
A-	Acrylic Based Wall Coating (Sand Tex)	33
B-	Mixing	33
C-	Application	33
D-	Cleaning UP	33
09703	Warranty	33
09704	Measurement and Payment	34
A-	Measurement	34
B-	Payment	34
09710	CEMENT / GRANOLITHIC FLOORING	35
09711	General	35
A-	Description	35
B-	Applicable Codes and Standards	35
C-	submittals	35
09712	Products	35
A-	Materials	35
09713	Execution	36
A-	Cement Concrete Flooring	36
B-	Dado / Skirting	37
09714	Measurement and Payment	38
A-	Measurement	38
B-	Rate and Payment	38

09910	PAINTING AND POLISHING	39
09911	General	39
A-	Scope of Work	39
B-	Submittals	39
C-	General	39
09912	Products	39
A-	Materials	39
B-	Protective Paints to be Applied	40
C-	Sample and Test	40
09913	Execution	40
A-	Preparation of Surface and Application of Paint	40
(01)	General	40
(02)	Concrete and Masonry	41
(03)	Metal Work	41
(04)	Plaster Work	41
(05)	Wood Work	41
B-	Schedule of Paint Finishes	42
C-	Buried Piping	43
D-	Samples	43
E-	Protection	43
F-	Touching up	43
G-	Cleaning	43
H-	Polishing Deodar Wood Doors and Frames	44
09914	Measurement and Payment	44
A-	Measurement	44
B-	Rate and Payment	44
09950	GRANITE WORK OVER FACE	45
09951	General	45
A-	Description	45
B-	Related Documents	45
C-	Typical Granite Fixing	45
D-	Submittals	45
E-	Samples	45
09952	Products	45

Infrastructure Development of 500 Acres Land at S.I.T.E. Larkana

A-	Granite	45
B-	Anchorage Material	46
C-	Fabrication	46
D-	Fabrication Tolerances	46
09953	Execution	47
A-	Inspection and Preparation	47
B-	Installation	47
C-	Erection	47
D-	Adjust and Clean	48
09954	Measurement and Payment	48
A-	Measurement	48
B-	Rate and Payment	48