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U.S. CONSULATE, CAPE TOWN, SOUTH AFRICA  
LOCAL CONTRACTOR PACKAGE  
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08/07/15

**APPROVED**



LOCAL CONTRACTOR PACKAGE for CAPE TOWN, SOUTH AFRICA

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DESIGN CONCEPT APPROVAL	DATE
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**TITLE/INDEX PAGE**

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PHASE

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NONE

PROJECT NUMBER  
CAPE TOWN-PME-15026

DRAWN BY KS	DRAWING NUMBER
DESIGNED BY KL	<b>C1.01</b>
DATE 02/12/15	SHEET 1 OF 6

CLASSIFICATION  
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REV.

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NOTE:  
NOT ALL SYMBOLS AND ABBREVIATIONS LISTED  
ARE APPLICABLE TO THIS DRAWING PACKAGE.



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for  
CAPE TOWN, SOUTH AFRICA**

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**SYMBOLS AND ABBREVIATIONS**

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SHEET 2 OF 6

REV.

**SYMBOLS**

- SIGNAL CONDUIT (NEW OR DEMOLITION)
- (U) — UNDER FLOOR OR GROUND CONDUIT (NEW OR DEMOLITION)
- ∞ — CONDUIT UP
- ⊗ POLE
- ▣ PB PULL BOX (SIGNAL/AUDIO/POWER)
- ▣ HH HANDHOLE
- ⊕ NEW WORK KEY NOTE

**ABBREVIATIONS**

A	AMPERE	KO	KNOCKOUT
AC	ALTERNATING CURRENT	KW	KILOWATT(S)
AFF	ABOVE FINISHED FLOOR	L	LENGTH, LONG, LITER(S)
AFG	ABOVE FINISHED GRADE	LED	LIGHT EMITTING DIODE
AMP	AMPERE	LFMC	LIQUID-TIGHT FLEXIBLE METAL CONDUIT
APPROX	APPROXIMATE(LY)	LRAD	LONG RANGE ACOUSTIC DEVICE
ARCH	ARCHITECT(URAL)	LxWxH	LENGTH x WIDTH x HEIGHT
ATC	ACOUSTICAL TILE CEILING	m	METER
AUTO	AUTOMATIC	MAX	MAXIMUM
AUX	AUXILIARY	MECH	MECHANICAL
AVG	AVERAGE	MDP	MAIN DISTRIBUTION PANEL
AVR	AUTOMATIC VOLTAGE REGULATOR	MED	MEDICAL
AWG	AMERICAN WIRE GAUGE	MFR	MANUFACTURER
BFC	BELOW FINISHED CEILING	MH	MOUNTING HEIGHT, MANHOLE
BFF	BELOW FINISHED FLOOR	MIC	MICROPHONE
BFG	BELOW FINISHED GRADE	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BSMT	BASEMENT	mm	MILLIMETER
C	CONDUIT/COMMON	MSGQ	MARINE SECURITY GUARD QUARTERS
CAA	CONTROLLED ACCESS AREA	MTD	MOUNTED
CAC	COMPOUND ACCESS CONTROL	MTG	MOUNTING
CAM	CAMERA	N	NORTH
CAT	CATALOG	NC	NORMALLY CLOSED
CB	CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL CODE
CCTV	CLOSED CIRCUIT TELEVISION	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CDU	CABINET POWER DISTRIBUTION UNIT	NFSS	NON-FUSED SAFETY SWITCH
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	NO	NORMALLY OPEN
CFE	CONTRACTOR FURNISHED EQUIPMENT	NOM	NOMINAL
CKT	CIRCUIT	NSTISSI	NATIONAL SECURITY TELECOMMUNICATIONS AND INFORMATION SECURITY INSTRUCTION
CLG	CEILING	OD	OUTSIDE DIAMETER
CLO	COMMUNITY LIAISON OFFICE	OH	OVERHEAD
COL	COLUMN	OSC	OPEN SOURCE CENTER
COM	COMMON	P	POWER
CONF	CONFERENCE	PAC	PEDESTRIAN ACCESS CONTROL
CONT	CONTINUE, CONTINUOUS	PB	PULL BOX
DAO	DEFENSE ATTACHE OFFICE	PDS	PROTECTED DISTRIBUTION SYSTEMS
DB	DECIBEL, DIRECT BURIAL	PIR	PASSIVE INFRARED
DC	DIRECT CURRENT	PME	PROJECT MANAGEMENT AND ENGINEERING
DCM	DEPUTY CHIEF OF MISSION	PMO	POST MANAGEMENT OFFICE
DET	DETAIL	POL/ECON	POLITICAL AND ECONOMICS OFFICE
DIA	DIAMETER	PWR	POWER
DIM	DIMENSION	PNL	PANEL
DN	DOWN	PRELIM	PRELIMINARY
DPDT	DOUBLE POINT DOUBLE THROW	PSO	POST SECURITY OFFICER
DPST	DOUBLE POINT SINGLE THROW	PSU	POWER SUPPLY UNIT
DOS	UNITED STATES DEPARTMENT OF STATE	PTZ	PAN TILT ZOOM
DVR	DIGITAL VIDEO RECORDER	PVC	POLY VINYL CHLORIDE
DWG	DRAWING	QAL	QUALITY ASSURANCE AND LIAISON
E	EAST	R	RADIUS, RISER
(E)	EXISTING	RECPT	RECEPTACLE
EA	EACH	REINF	REINFORCEMENT
EG	EQUIPMENT GROUND	REG	REGULATOR
EL	ELEVATION	REQD	REQUIRED
ELEC	ELECTRIC(AL)	REV	REVISION
EMT	ELECTROMETALLIC TUBING	RFC	REQUEST FOR CHANGE
ENS	EMERGENCY NOTIFICATION SYSTEM	RFI	REQUEST FOR INFORMATION
EOL	END OF LINE	RGS	RIGID GALVANIZED STEEL
EQ	EQUAL	RM	ROOM
EQUIP	EQUIPMENT	RMS	ROOT MEAN SQUARE
ESC	ENGINEERING SECURITY CENTER	RSO	REGIONAL SECURITY OFFICER
ESO	ENGINEERING SECURITY OFFICE	S	SIGNAL, SOUTH
ETC	ET CETERA	SCH	SCHEDULE
EXT	EXTERIOR	SECT	SECTION
FA	FIRE ALARM	SEO	SECURITY ENGINEERING OFFICER
FLEX	FLEXIBLE	SH	SHIELD
FMC	FLEXIBLE METAL CONDUIT	SHT	SHEET
FSE	FACILITY SECURITY ENGINEERING DIVISION	SIC	SECURITY INTERFACE CABINET
FSS	FUSED SAFETY SWITCH	SMSe	SECURITY MANAGEMENT SYSTEM ENTERPRISE
FT	FEET, FOOT	SPD	SURGE PROTECTION DEVICE
GA	GAUGE	SPDT	SINGLE POLE DOUBLE THROW
GALV	GALVANIZED	SPEC	SPECIFICATION
GFCI	GROUND FAULT CKT INTERRUPTER	SQ	SQUARE
GFE	GOVERNMENT FURNISHED EQUIPMENT	STS	SECURITY TECHNICAL SPECIALIST
GFGI	GOVERNMENT FURNISHED GOVERNMENT INSTALLED	SUSP	SUSPENDED
GOVT	GOVERNMENT	SW	SWITCH
GRND	GROUND	TB	TERMINAL BLOCKS
GSA	GENERAL SERVICES ADMINISTRATION	TDB	TECHNOLOGY DEVELOPMENT BRANCH
GSO	GENERAL SERVICES OFFICE	TEMP	TEMPORARY, TEMPERATURE
GTM	GOVERNMENT TECHNICAL MONITOR	THHN	THERMOPLASTIC HIGH HEAT RESISTANT NYLON
GYM	GYMNASIUM	THRU	THROUGH
H, HT	HEIGHT	TYP	TYPICAL
HDW	HARDWARE	U	UNSHIELDED
HEX	HEXAGONAL	(U)	UNDERGROUND
HH	HANDHOLE	UFAS	UNIFORMED FEDERAL ACCESSIBILITY STANDARDS
HOR	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
HSAS	HIGH SECURITY ALARM SYSTEM	UPS	UNINTERRUPTIBLE POWER SUPPLY
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	V	VOLT(S)
IAW	IN ACCORDANCE WITH	VERT	VERTICAL
ID	INSIDE DIAMETER/IDENTIFICATION	W	WIDTH, WIDE, WEST, WATT(S)
IDNS	IMMINENT DANGER NOTIFICATION SYSTEM	W/	WITH
INSUL	INSULATION, INSULATED	W/O	WITHOUT
I/O	INPUT AND OUTPUT	WT	WEIGHT
IP	INTERNET PROTOCOL	WTMD	WALK THROUGH
IRM	INFORMATION RESOURCE MANAGEMENT	ZN	ZONE
ISC	INFORMATION SYSTEM CENTER	±	PLUS/MINUS
JBOX	JUNCTION BOX		
KG	KILOGRAM(S)		

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# SCOPE OF WORK (SOW)

THE CONSULATE COMPOUND, (CAPE TOWN, SOUTH AFRICA) HEREAFTER KNOWN AS THE CONSULATE COMPOUND, WILL RETAIN THE SERVICES OF A LOCAL CONTRACTOR TO PERFORM THE BELOW SCOPE OF WORK FOR THE HANDHOLE, POLE INSTALLATION AND UNDERGROUND CONDUIT CONSTRUCTIONS. THE CONSULATE COMPOUND WILL HANDLE ALL THE CONTRACT LEGAL REQUIREMENTS WITH THE LOCAL CONTRACTOR. DS/FSE/PME (HEREAFTER REFERRED TO AS PME) WILL PROVIDE THE DESIGN DRAWINGS AND SCOPE OF WORK.

THIS DOCUMENT OUTLINES THE SCOPE OF WORK AND SPECIFICATIONS FOR THE LOCAL CONTRACTOR AS FOLLOWS:

## 1. GENERAL

### 1.A. DESIGN DRAWINGS AND SPECIFICATIONS

PME WILL PROVIDE THE DESIGN PACKAGE AND SPECIFICATIONS FOR THE CONSTRUCTION OF THE UNDERGROUND INFRASTRUCTURE, POLE INSTALLATION, AND HANDHOLES. IT IS THE LOCAL CONTRACTORS RESPONSIBILITY TO REVIEW AND UNDERSTAND THE WORK INVOLVED AND WHAT IS REQUIRED TO COMPLETE THE PROJECT. IF ANY ERROR OR INCONSISTENCIES ARE FOUND ON THE DRAWINGS, THE LOCAL CONTRACTOR WILL BRING THESE TO THE ATTENTION OF THE CONSULATE COMPOUND AND/OR PME.

THE LOCAL CONTRACTOR WILL INSTALL THE POLES AND THE INFRASTRUCTURE FOR THE HANDHOLES AND UNDERGROUND CONDUIT AS OUTLINED IN THIS DRAWING PACKAGE.

THE LOCAL CONTRACTOR SHALL HAVE A RESIDENT REGISTERED/CERTIFIED/LICENSED CIVIL ENGINEER OR GRADUATE ARCHITECT ON SITE OR A QUALIFIED CONSTRUCTION SUPERVISOR AT ALL TIMES, WHO SHOULD HAVE AT LEAST TWO YEARS EXPERIENCE IN SIMILAR WORK AND CAN SPEAK, WRITE AND READ ENGLISH AT A MODERATE OR HIGHER LEVEL. THE LOCAL CONTRACTOR SHALL SUBMIT THE CURRICULUM VITAE OF THE RESIDENT ENGINEER TO THE CONSULATE COMPOUND FOR APPROVAL.

THE LOCAL CONTRACTOR WILL PROVIDE A DETAILED PROJECT SCHEDULE, WITH START AND END DATES FOR WORK ACTIVITIES AND STATING A CRITICAL PATH.

THE LOCAL CONTRACTOR WILL PROVIDE THE CONSULATE COMPOUND WITH WEEKLY WORK PROGRESS REPORTS AND CONSTRUCTION SCHEDULE UPDATES DURING THE DURATION OF THE PROJECT.

THE CONSULATE COMPOUND WILL HAVE FINAL APPROVAL OF ALL WORK PERFORMED BY THE LOCAL CONTRACTOR.

### 1.B. MATERIALS

#### 1.B.1. PME PROVIDED MATERIALS

PME WILL PROVIDE THE FOLLOWING MATERIALS FOR THIS CONTRACTORS PACKAGE:  
 ALL PVC AND RGS CONDUIT, FITTINGS AND PREP/BONDING AGENTS  
 ALL HANDHOLES  
 ALL ENCLOSURES SPECIFIED ON C2.01  
 ALL FOLD DOWN POLES

#### 1.B.2. CONTRACTOR PROVIDED MATERIALS

LOCAL CONTRACTOR WILL PROVIDE ALL ADDITIONAL MATERIALS REQUIRED, TO INCLUDE, BUT NOT LIMITED TO:  
 ALL SOIL AND BACKFILL MATERIAL SUCH AS SAND, GRAVEL, CONCRETE AND ASPHALT, AND ANY OTHER MATERIALS NOT INCLUDED IN 1.B.1 NEEDED TO COMPLETE THE SCOPE OF WORK.

### 1.C. SITE AND SAFETY REQUIREMENTS

#### 1.C.1. SITE INSTALLATION OVERSIGHT

A SECURITY INSTALLATION SUPERVISOR REPRESENTING PME WILL BE ON SITE TO PROVIDE DESIGN INSTALLATION OVERSIGHT FOR ALL WORK IN THIS CONTRACTORS PACKAGE.

THE INSTALLATION CONTRACTOR WILL BE RESPONSIBLE FOR MANAGING AND SUPERVISING ALL ACTIVITIES UNDERTAKEN BY LOCAL CONTRACTOR.

THE INSTALLATION CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING POST APPROVED, SECURITY ESCORTS FOR ALL LOCAL CONTRACTOR PERSONNEL.

#### 1.C.2. SITE PREPARATION

THE LOCAL CONTRACTOR WILL BE RESPONSIBLE FOR CLEANING AND REMOVING ALL DEBRIS GENERATED BY THE PROJECT FROM THE CONSULATE COMPOUND TO THE NEAREST AUTHORIZED DUMP FACILITY (AUTHORIZED BY THE TOWN). THE AREAS AFFECTED BY THE LOCAL CONTRACTOR'S WORK MUST BE RETURNED BACK TO PRE-CONSTRUCTION CONDITIONS AFTER THE WORK IS COMPLETED. (E.G. GRASS, GRAVEL, SIDEWALK, LANDSCAPING, ASPHALT ETC.)

THE LOCAL CONTRACTOR SHALL LIMIT THE SITE DISTURBANCE TO A MAXIMUM 6 FEET (1829 MM) ON EACH SIDE OF TRENCH. EXCAVATED MATERIAL WILL BE PLACED NEXT TO THE EXCAVATED AREA TO BE USED AS SELECT BACKFILL.

#### 1.C.3. SITE SAFETY

THE EXCAVATION WORK ZONE MUST BE CLEARLY MARKED WITH WARNING SIGNS AND YELLOW PLASTIC SAFETY TAPE FIXED TO WOOD POSTS. LOCAL CONTRACTOR MUST COMPLY WITH ALL APPLICABLE SAFETY STANDARDS TO PROTECT THE CONSULATE COMPOUND EMPLOYEES, THE PUBLIC AND LOCAL CONTRACTOR WORKERS FROM INJURIES AND ACCIDENTS. THE LOCAL CONTRACTOR WILL BE HELD LIABLE FOR INJURIES OR ACCIDENTS SUSTAINED DUE TO NEGLIGENCE BY THE LOCAL CONTRACTOR DURING THE COURSE OF THIS PROJECT.

### 1.C.4. PROTECTION OF THE CONSULATE COMPOUND EQUIPMENT

THE LOCAL CONTRACTOR MUST ENSURE THAT THE CONSULATE COMPOUND EQUIPMENT AND PROPERTY IN THE WORK ZONE OR SURROUNDING AREAS ARE PROTECTED TO PREVENT DAMAGE DURING CONSTRUCTION. SHOULD ANY REPAIR OR CHANGE BE REQUIRED AS A RESULT OF NEGLIGENCE BY THE LOCAL CONTRACTOR OR ITS WORKERS, THE LOCAL CONTRACTOR WILL BE RESPONSIBLE FOR THE COSTS INCURRED IN THE REPAIR.

### 1.C.5. THE CONSULATE COMPOUND SECURITY REQUIREMENTS

TO BE DETERMINED BY POST SECURITY.

## 2. INFRASTRUCTURE SUPPORT SYSTEM

### 2.A. HANDHOLE/UNDERGROUND CONDUIT SYSTEM

#### 2.A.1. TRENCH

THE LOCAL CONTRACTOR WILL VERIFY EXISTING UTILITIES AND PROVIDE AS-BUILT DRAWINGS PRIOR TO EXCAVATION OF TRENCH. IF THE EXCAVATION WORK INTERFERES WITH DRAIN OR PIPING, THE LOCAL CONTRACTOR SHALL INFORM THE CONSULATE COMPOUND AND/OR PME AND PROVIDE SUITABLE PROTECTION FOR THESE STRUCTURES PRIOR TO PROCEEDING WITH THE WORK. IF EXCAVATION CANNOT PROCEED DUE TO EXISTING OBSTACLES THEN THE CONSULATE COMPOUND AND OR THE PME CONSTRUCTION SUPERVISOR WILL PROVIDE A NEW CONDUIT ROUTE.

ALL TRENCHES WILL BE EXCAVATED TO THE REQUIRED DEPTH ACCORDING TO SPECIFICATIONS AND CONDUIT TYPE AS SHOWN ON DRAWINGS.

THE LOCAL CONTRACTOR MUST KEEP ALL DEBRIS AND EXCAVATED MATERIAL CLEAR OF SERVICE NETWORK DRAINS, COVERS AND SUMPS NEAR THE TRENCHES, TO PREVENT CLOGS OR DAMAGE.

THE LOCAL CONTRACTOR MUST INSTALL WARNING AND SAFETY SIGNS TO ALERT PEDESTRIANS AND VEHICLE TRAFFIC OF CONSTRUCTION OF TRENCH.

THE LOCAL CONTRACTOR MUST INSTALL BARRICADE LINES TO CORDON OFF WORK AREA AROUND TRENCH.

THE LOCAL CONTRACTOR MUST DISPOSE OF EXCAVATED MATERIAL THAT WILL NOT BE USED TO BACKFILL TRENCH.

#### 2.A.2. HANDHOLE (WITH DRAINAGE)

NEW LOCKABLE HANDHOLES WILL BE INSTALLED BY THE LOCAL CONTRACTOR AS SPECIFIED ON DETAIL DRAWINGS.

ALL NEW HANDHOLE(S) WILL BE INSTALLED WHEN CONDUIT RUNS EXCEED 180 DEGREES OR AT 200FT AND WILL HAVE PROPER DRAINAGE.

LOCAL CONTRACTOR WILL MAKE HOLE PENETRATIONS TO THE HANDHOLES ACCORDING TO NUMBER OF CONDUITS ENTERING AND EXITING THE HANDHOLE.

THE BASE OF THE HANDHOLE(S) SHALL BE PLACED OVER BASE CONSISTING OF CRUSHED NON-POROUS ROCK BASE OR GRAVEL AND SAND. THE GRAVEL SIZE SHALL NOT EXCEED 1/2 INCH (13MM).

#### 2.A.3. CONDUIT

ALL EXISTING CONDUIT SHOULD BE LEFT IN PLACE.

UNDER GRASS, DIRT, SIDEWALK OR ASPHALT, INSTALL SCHEDULE 80 PVC CONDUIT 24 INCHES (610MM) BELOW FINISH GRADE TO THE TOP OF THE CONDUIT AS SPECIFIED ON THE DRAWINGS.

ALL UNDERGROUND 90 DEGREE BENDS WITH A 12 INCH (305MM) RADIUS SHALL BE MADE WITH PRE-FABRICATED 90 DEGREE SWEEPING BEND.

ALL UNDERGROUND CONDUIT SHALL BE CONVERTED FROM SCHEDULE 80 PVC TO RGS FIVE FEET BEFORE TRANSITIONING ABOVE GROUND USING PVC TO RGS COUPLERS.

LOCAL CONTRACTOR SHALL LEAVE A PULL LINE IN ALL INSTALLED CONDUIT PATHS.

LOCAL CONTRACTOR WILL INSTALL THE CONDUIT FROM HANDHOLE TO HANDHOLE OR TO THE EXTERIOR PULL BOX AS SHOWN ON DRAWINGS.

#### 2.A.4. JUNCTION BOXES

LOCAL CONTRACTOR WILL INSTALL JUNCTION BOXES IN ALL LOCATIONS AS SHOWN ON DRAWINGS. ALL ENCLOSURES WILL BE PROVIDED BY PME.

#### 2.A.5. CONCRETE

LOCAL CONTRACTOR WILL PROVIDE LABOR AND MATERIALS TO REPAIR CONCRETE WHERE DISTURBED. CONCRETE COLOR, TYPE AND THICKNESS SHALL MATCH EXISTING.

CONCRETE USED SHALL BE 25MPA.

CONCRETE MAY NOT BE POURED IF WEATHER CONDITIONS DO NOT PERMIT.

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APPROVAL FROM THE SECURITY INSTALLATION SUPERVISOR MUST BE OBTAINED 24 HOURS PRIOR TO POURING OF CONCRETE. THE CONSULATE COMPOUND AND LOCAL CONTRACTOR CREW SUPERVISOR MUST BE PRESENT DURING THE POURING OF CONCRETE.

## CONCRETE PLACEMENT

COMPLY WITH REQUIREMENTS AND WITH RECOMMENDATIONS IN ACI 304R FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE.

CONSOLIDATE CONCRETE BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND-SPADING, RODDING, OR TAMPING. USE EQUIPMENT AND PROCEDURES TO CONSOLIDATE CONCRETE ACCORDING TO RECOMMENDATIONS IN ACI 309R.

SCREED PAVEMENT SURFACES WITH A STRAIGHTEDGE AND STRIKE OFF. COMMENCE INITIAL FLOATING USING BULL FLOATS OR DARBIES TO FORM AN OPEN TEXTURED AND UNIFORM SURFACE PLANE BEFORE EXCESS MOISTURE OR BLEED WATER APPEARS ON THE SURFACE. DO NOT FURTHER DISTURB CONCRETE SURFACES BEFORE BEGINNING FINISHING OPERATIONS OR SPREADING DRY-SHAKE SURFACE TREATMENTS.

## CONCRETE FINISHING

GENERAL: WETTING OF CONCRETE SURFACES DURING SCREEDING, INITIAL FLOATING, OR FINISHING OPERATIONS IS PROHIBITED.

FLOAT FINISH: BEGIN THE SECOND FLOATING OPERATION WHEN BLEED-WATER SHEEN HAS DISAPPEARED AND THE CONCRETE SURFACE HAS STIFFENED SUFFICIENTLY TO PERMIT OPERATIONS. FLOAT SURFACE WITH POWER-DRIVEN FLOATS, OR BY HAND FLOATING IF AREA IS SMALL OR INACCESSIBLE TO POWER UNITS. FINISH SURFACES TO TRUE PLANES. CUT DOWN HIGH SPOTS, AND FILL LOW SPOTS. REFLOAT SURFACE IMMEDIATELY TO UNIFORM GRANULAR TEXTURE

- BURLAP FINISH: DRAG A SEAMLESS STRIP OF DAMP BURLAP ACROSS FLOAT-FINISHED CONCRETE, PERPENDICULAR TO LINE OF TRAFFIC, TO PROVIDE A UNIFORM, GRITTY TEXTURE

- MEDIUM-TO-FINE-TEXTURED BROOM FINISH: DRAW A SOFT BRISTLE BROOM ACROSS FLOAT-FINISHED CONCRETE SURFACE PERPENDICULAR TO LINE OF TRAFFIC TO PROVIDE A UNIFORM, FINE-LINE TEXTURE

- MEDIUM-TO-COARSE-TEXTURED BROOM FINISH: PROVIDE A COARSE FINISH BY STRIATING FLOAT-FINISHED CONCRETE SURFACE 1/16-INCH (1.6MM) TO 1/8-INCHES (3MM) DEEP WITH A STIFF-BRISTLED BROOM, PERPENDICULAR TO LINE OF TRAFFIC

### 2.A.6. SOIL MATERIALS

SELECT BACKFILL: ASTM D 2487 SOIL CLASSIFICATION GROUPS SW, SP, AND SM, OR A COMBINATION OF THESE GROUPS; FREE OF ROCK OR GRAVEL LARGER THAN 3-INCHES (75MM) IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATTER.

(ASPHALT/CONCRETE) BASE COURSE: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D 2940; WITH AT LEAST 95 PERCENT PASSING A 1-1/2-INCH (40MM) SIEVE AND NOT MORE THAN 8 PERCENT PASSING A 1/4-INCH (6.4MM) SIEVE.

BASE GRAVEL: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D 2940; EXCEPT WITH 100 PERCENT PASSING A 1-INCH (25MM) SIEVE AND NOT MORE THAN 8 PERCENT PASSING A 1/4-INCH (6.4MM) SIEVE.

SAND CUSHION: ASTM C 33; FINE AGGREGATE, NATURAL, OR MANUFACTURED SAND.

#### COMPACTION OF SOIL BACKFILLS AND FILLS

PLACE BACKFILL AND FILL SOIL MATERIALS IN LAYERS NOT MORE THAN 8-INCHES (203MM) IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4-INCHES (102MM) IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.

PLACE BACKFILL AND FILL SOIL MATERIALS EVENLY ON ALL SIDES OF STRUCTURES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE.

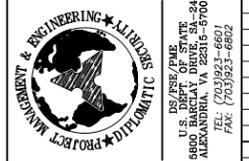
COMPACT SOIL MATERIALS TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 1557:

- UNDER STRUCTURES, BUILDING SLABS, STEPS, AND PAVEMENTS, SCARIFY AND RE-COMPACT TOP 11-INCHES (280MM) OF EXISTING SUB GRADE AND EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL AT 95 PERCENT

- UNDER WALKWAYS, SCARIFY AND RE-COMPACT TOP 6-INCHES (152MM) BELOW SUB GRADE AND COMPACT EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL AT 92 PERCENT

- UNDER LAWN OR UNPAVED AREAS, SCARIFY AND RE-COMPACT TOP 6-INCHES (152MM) BELOW SUB GRADE AND COMPACT EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL AT 85 PERCENT

- FOR UTILITY TRENCHES, COMPACT EACH LAYER OF INITIAL AND FINAL BACKFILL SOIL MATERIAL AT 85 PERCENT



**LOCAL CONTRACTOR PACKAGE for CAPE TOWN, SOUTH AFRICA**

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**SCOPE OF WORK (SOW)**

DRAWING TITLE

CAD FILE NAME: CPTD103.dwg

DRAWING SCALE: NONE

PROJECT NUMBER: CAPE TOWN-PME-15026

DRAWN BY: KS

CHECKED BY: KL

DATE: 02/12/15

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DRAWING NUMBER: **C1.03**

SHEET 3 OF 6

REV.

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**DRAWING NOTES**

1. ALL CONDUIT IS (2)2" (51mm) PVC UNLESS NOTED OTHERWISE.

**DRAWING KEY NOTES**

- ① TRANSITION FROM PVC TO RGS USING A 2"(51mm) RGS 90° SWEEP. (14 PLACES)
- ② STUB RGS ABOVE GROUND AND CAP WITH FITTING AT A MINIMUM OF 32" (813mm) ABOVE GROUND. (12 PLACES)

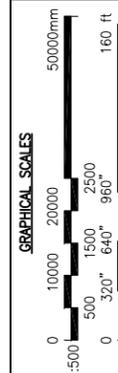


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KEYPLAN



**SITE PLAN OVERALL NEW WORK**

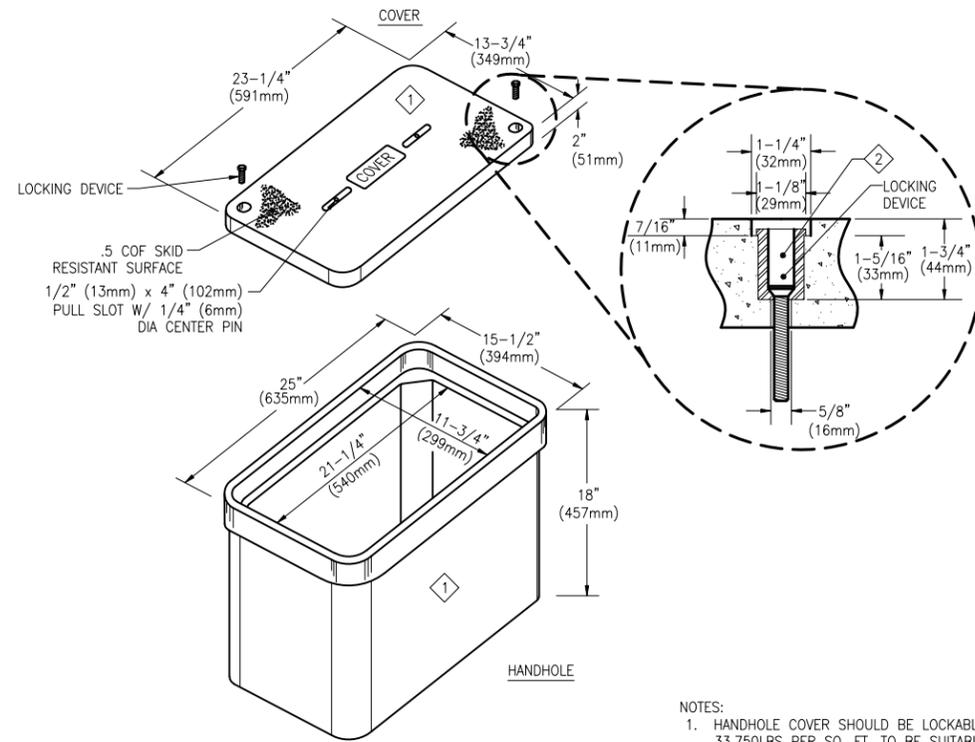
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1 SITE PLAN - OVERALL  
 C2.01 | C2.01 SCALE: 1:500



UNCLASSIFIED



ID	DESCRIPTION	CATALOG #	QTY
1	QUAZITE HANDHOLE WITH COVER	QUAZITE-PG1324Z86409	1
2	LOCK DOWN KEYED LOCK FOR QUAZITE HANDHOLE	LOCKDOWN-LD-LO	2

NOTES:  
 1. HANDHOLE COVER SHOULD BE LOCKABLE AND A TIER 22 AND HAVE A LOAD TEST RATING OF 33,750LBS PER SQ. FT. TO BE SUITABLE FOR LIGHT VEHICULAR TRAFFIC.

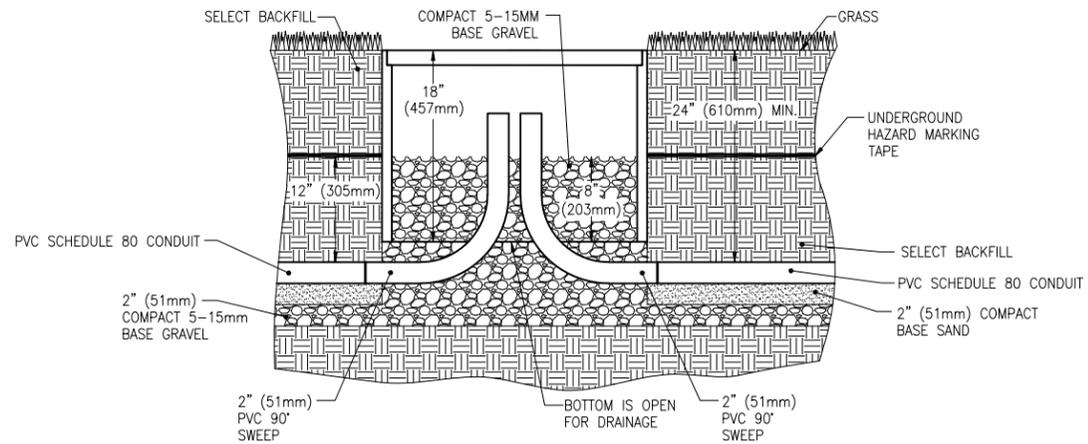
1 MEDIUM QUAZITE PRE-FAB HANDHOLE DETAIL  
 C5.01 | C5.01 SCALE: NONE



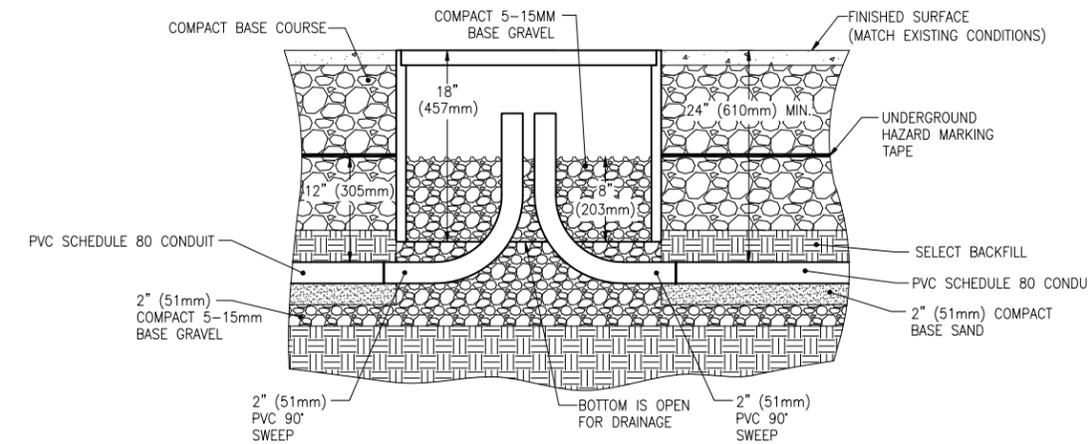
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LOCAL CONTRACTOR  
 PACKAGE  
 for  
 CAPE TOWN, SOUTH AFRICA

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2 HANDHOLE AND CONDUIT INSTALLATION  
 DETAIL - GRASS AREA  
 C5.01 | C5.01 SCALE: NONE



3 HANDHOLE AND CONDUIT INSTALLATION  
 DETAIL - FINISHED ROAD  
 C5.01 | C5.01 SCALE: NONE

**DETAILS**

DRAWING TITLE

PHASE

30%  90%  100%  AS-BUILT

CAD FILE NAME  
 CPTD501.dwg

DRAWING SCALE  
 NONE

PROJECT NUMBER  
 CAPE TOWN-PME-15026

DRAWN BY  
 KS

DESIGNED BY  
 KL

DATE  
 02/12/15

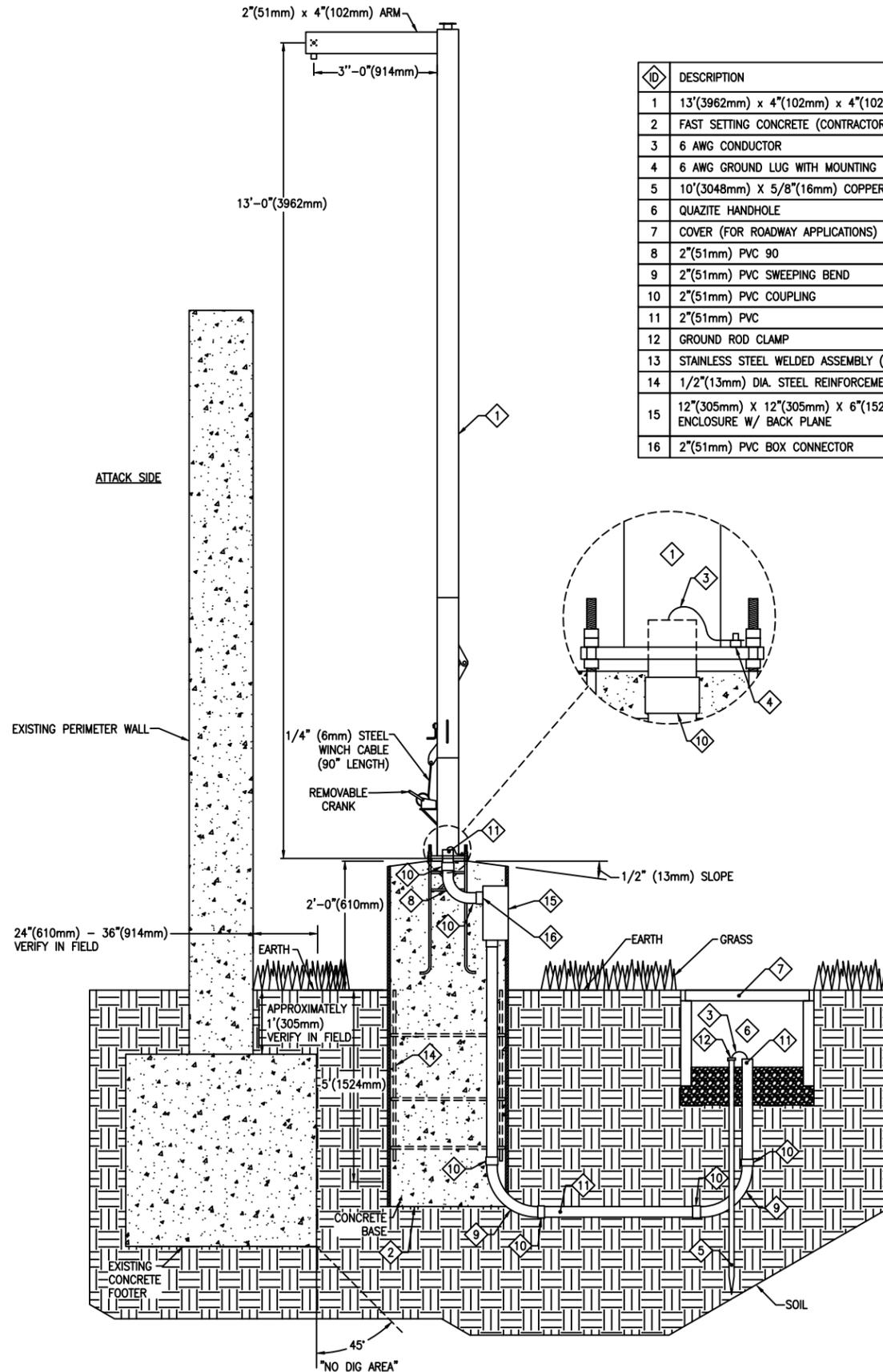
CLASSIFICATION  
 UNCLASSIFIED

DRAWING NUMBER  
**C5.01**

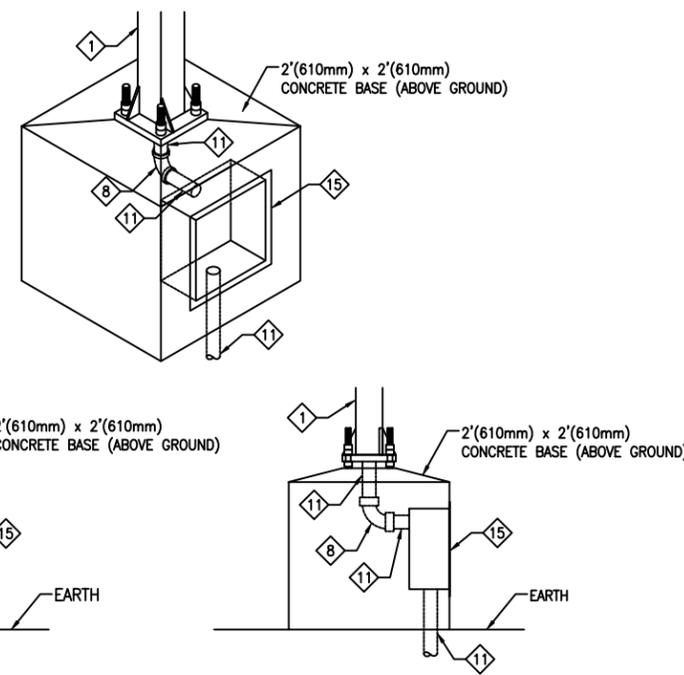
SHEET 5 OF 6

REV.

ID	DESCRIPTION	QTY
1	13'(3962mm) x 4"(102mm) x 4"(102mm) STEEL SQUARE POLE	1
2	FAST SETTING CONCRETE (CONTRACTOR SUPPLIED)	3
3	6 AWG CONDUCTOR	20'
4	6 AWG GROUND LUG WITH MOUNTING SCREW	1
5	10'(3048mm) X 5/8"(16mm) COPPER GROUND ROD	1
6	QUAZITE HANDHOLE	1
7	COVER (FOR ROADWAY APPLICATIONS)	1
8	2"(51mm) PVC 90	1
9	2"(51mm) PVC SWEEPING BEND	2
10	2"(51mm) PVC COUPLING	6
11	2"(51mm) PVC	20'
12	GROUND ROD CLAMP	1
13	STAINLESS STEEL WELDED ASSEMBLY (INCLUDED WITH POLE)	-
14	1/2"(13mm) DIA. STEEL REINFORCEMENT BARS	16
15	12"(305mm) X 12"(305mm) X 6"(152mm) FLUSH MOUNT ENCLOSURE W/ BACK PLANE	1
16	2"(51mm) PVC BOX CONNECTOR	2



1 BASE AND POLE INSTALLATION DETAIL  
C5.02 | C5.02 SCALE: NONE



2 FLUSH MOUNT ENCLOSURE MOUNTING DETAILS  
C5.02 | C5.02 SCALE: NONE

- NOTES:
- USE ASTM A615 GRADE 420 REINFORCEMENT BARS.
  - THE SPACING FOR THE REINFORCING MEMBER SHALL NOT BE SPACED FARTHER APART THAN 5 TIMES THE SLAB THICKNESS NOR 18(457mm) INCHES PER ACI 318 7.12.
  - REFER TO MEDIUM QUIAZITE PRE-FAB HANDHOLE DETAIL FOR INSTALLATION DETAILS.
  - GROUND ROD TO BE 10'(3048mm) DEEP MINIMUM BELOW GRADE AT ITS BOTTOM MOST TIP.
  - GROUND CONDUCTOR SHOULD NOT BE EXPOSED EXCEPT AT POINT AT WHICH IT CONNECTS TO POLE BASE.
  - CONTRACTOR SHALL NOT EXCAVATE WITHIN A 45 DEGREE ANGLE OF THE BASE OF THE PERIMETER WALL FOOTER. POSITION POLE AS CLOSE TO WALL AS FOOTER ALLOWS.
  - CONTRACTOR IS TO ENSURE POLE SWINGS AWAY FROM THE PERIMETER WALL AND ANY OBSTRUCTIONS.
  - ONCE CONCRETE HAS CURED AROUND FLUSH MOUNT ENCLOSURE, INSTALL LAG SHIELDS AND SCREWS THROUGH INTERIOR SIDES OF BOX INTO CONCRETE.
  - ENSURE WINCH COVER IS PLACED OVER WINCH AFTER INSTALL AND CRANK IS GIVEN TO ESC PERSONNEL.



**LOCAL CONTRACTOR PACKAGE for CAPE TOWN, SOUTH AFRICA**

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DETAILS

PHASE

30%  90%  100%  AS-BUILT

DRAWING TITLE

CAD FILE NAME  
CPTD502.dwg

DRAWING SCALE  
NONE

PROJECT NUMBER  
CAPE TOWN-PME-15026

DRAWN BY  
KS

DESIGNED BY  
KL

DATE  
02/12/15

DRAWING NUMBER  
C5.02

SHEET 6 OF 6

CLASSIFICATION  
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REV.