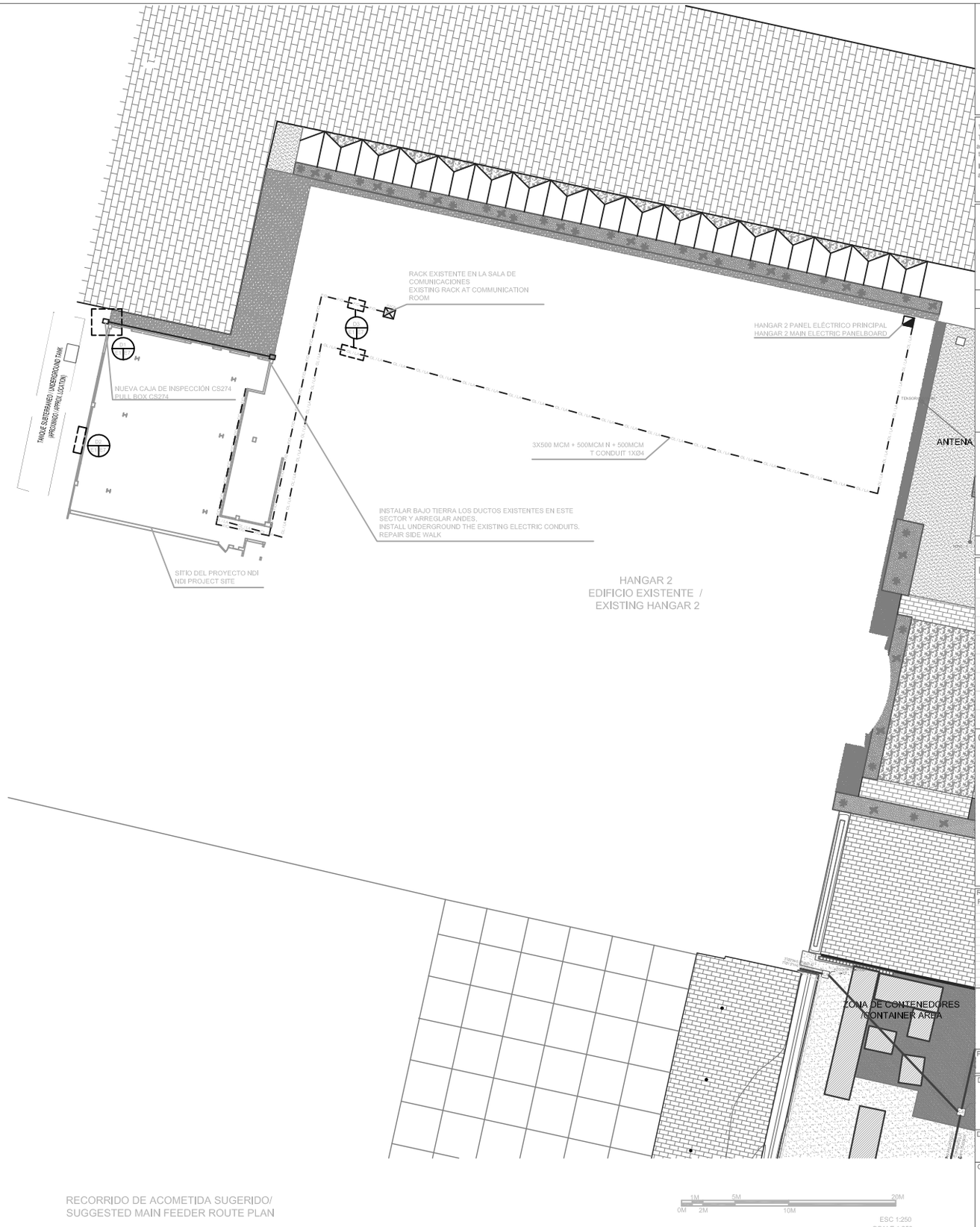
CONVENCIONES /LEGEND

SYMBOL	DESCRIPCIÓN	DESCRIPTION
	TABLERO ELÉCTRICO	ELECTRIC PANELBOARD
	INTERRUPTOR ROTATIVO DE TRES POSICIONES	ROTARY SELECTOR SWITCH THREE POSITION
	CONTACTOR EN CAJA DE SOBREPONER	WALL MOUNT - CONTACTOR IN BOX
	INTERRUPTOR TERMOMAGNÉTICO CAJA MOLDEADA	THERMO MAGNETIC MOLDED CASE CIRCUIT BREAKER
	TRANSFERENCIA AUTOMÁTICA (ATS)	AUTOMATIC TRANSFER SWITCH
	TRANSFORMADOR SECO	DRY TYPE TRANSFORMER
QPM	ANALIZADOR DE REDES	POWER METER SWITCH BOARD
	TOMA 2 POLOS - ALTA RESISTENCIA	WALL OUTLET -2 POLES RECEPTACLE - HEAVY DUTY
	TOMA MONOFÁSICA CON POLO A TIERRA, ALTA RESISTENCIA, NEMA 5-20R - PARED	WALL OUTLET, DUPLEX RECEPTACLE. SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R
	TOMA MONOFÁSICA CON POLO A TIERRA, ALTA RESISTENCIA, NEMA 5-20R - PISO	FLOOR OUTLET, DUPLEX RECEPTACLE. SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R
	TOMA MONOFÁSICA CON POLO A TIERRA, ALTA RESISTENCIA, NEMA 5-20R - TECHO	CEILING OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R
GFCI	TOMA MONOFÁSICA CON POLO A TIERRA, GRADO HOSPITALARIO, CON PROTECCION TIPO GFCI	DOUBLE OUTLET, SINGLE PHASE, WITH GROUND CONNECTION, HOSPITAL GRADE, GFCI
	TOMA TRIFÁSICA , ALTA RESISTENCIA, NEMA 15-30R	THREE PHASE OUTLET, - HEAVY DUTY, NEMA 15-30R
	PARADA DE EMERGENCIA, ALTA RESISTENCIA	EMERGENCY STOP PUSH BUTTON, HEAVY DUTY
	INTERRUPTOR SENCILLO DE PALANCA, GRADO INDUSTRIAL, DE SOBREPONER,20 A	WALL SWITCH - SINGLE TOGGLE TYPE,INDUSTRIAL GRADE 20 AMPERE, SPST
	INTERRUPTOR DOBLE DE PALANCA, GRADO INDUSTRIAL DE SOBREPONER, 20 A	WALL SWITCH - DOUBLE TOGGLE TYPE,INDUSTRIAL GRADE 20 AMPERE, DPST
	INTERRUPTOR CONMUTABLE DE PALANCA, DE SOBREPONER, GRADO INDUSTRIAL DE SOBREPONER, 20 A	WALL SWITCH - 3 WAY TOGGLE TYPE,INDUSTRIAL GRADE 20 AMPERE, 3 PST
D	INTERRUPTOR DIMMER	DIMMER SWITCH
	CONTROL DE ALUMBRADO CON CONTACTOR	LIGHTING CONTROL OPERATED BY CONTACTOR
SALIDA	AVISO DE SALIDA LUMINOSO CON BATERÍA	EXIT SIGN BATTERY OPERATED
	LUZ DE EMERGENCIA CON BATERIA	EMERGENCY LIGHT BATTERY OPERATED
	TOMA DE VOZ Y DATOS	VOICE AND DATA OUTLET
	EXTRACTOR	EXHAUST FAN
	TOMA DATOS	DATA OUTLET
VGA	TOMA CON CABLE VGA	OUTLET WITH VGA TYPE CABLE
SPD	DISPOSITIVO DE PROTECCIÓN CONTRA TRANSITORIOS	TRANSIENT VOLTAGE SURGE SUPPRESOR
	UPS TRUE ONLINE, 30 MINUTOS DE AUTONOMIA	TRUE ON LINE UPS 30 MIN AUTONOMY
	BANDEJA PORTACABLES - 40 cm ANCHO X 10 cm ALTO	40X10 cm CABLE TRAY WITH PARTITION
	CANALETA METÁLICA , 10cm X 4cm - CON DIVISIÓN EN EL CENTRO	10cm x 4cm METAL RACEWAY WITH PARTITION
	GABINETE DE COMUNICACIONES	COMMUNICATION CABINET (RACK)
	LINEA DE ACCIÓN DE INTERRUPTOR	SWITCH OPERATING LINE
3X60A 3X4+4T - Ø1 1/2	INTERRUPTOR DE 3FASES DE 60 AMPERIOS - ACOMETIDA 3 CABLES NR 4 POR FASE + UN CABLE 4 DE TIERRA . EN DUCTO DE 1 ½" DE DIÁMETRO	CIRCUIT BREAKER (DISCONNECTING DEVICE) OF 3 PHASES 60 AMPS - FEEDER 3 CABLES PER PHASE NR 4 + ONE CABLE GROUND NR 4 . CONDUIT DIAMETER 1 ½"
	VARILLA DE TIERRA ⅝" X 2,4 m - COBRE	COPPER WELD GROUND ROD, 2,4 m X ⅝"
	PUESTA A TIERRA PARA EQUIPOS	GROUND FOR EQUIPMENT
	VARILLA DE TIERRA CON CAJA DE INSPECCION	GROUND ROD WITH INSPECTION BOX
—F/O—	FIBRA ÓPTICA	FIBER OPTIC
—OL / LA—	LINEA AÉREA	OVERHEAD LINE
	CONDUCTO ENTRE TABLEROS Y APARATOS	CONDUIT CONNECTING PANEL BOARD AND OUTLETS



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INTERNATIONAL NARCOTICS AND LAW ENFORCEMENT SECTION
EMBASSY OF THE UNITED STATES,
BOGOTA, COLOMBIA

COR: I.N.L. PROJECT ARCHITECT/ENGINEER

PROJECT DESIGN / MANAGEMENT

HCSgroup
Engineering and Technical Solutions
8401 Crossland Loop, Montg. AL 36117

NDI SHOP, SIMULATOR AND INSTRUCTION ROOM BUILDING
CNP HANGAR 2, GUAYMARAL
BOGOTÁ, CUNDINAMARCA

Contract/PO No.:	Contract/PO date:
SC015013M0030	OCT. 2012

Legends/Remarks

General location
Hangar 2
N.T.S. / Sin escala
Taller de hidráulicos y NDI
Existing hydraulic and NDI Shop
Lugar de proyecto
Project Site

ALL UNITS IN METRIC SYSTEM

Revisions

Rev.No.	Description	Date
1		
2		
3	90% SUBMITTAL	JULY 16
4	90% SUBMITTAL	SEPT. 11
5		
6		
7		
8		
9		
10		

AS-BUILT

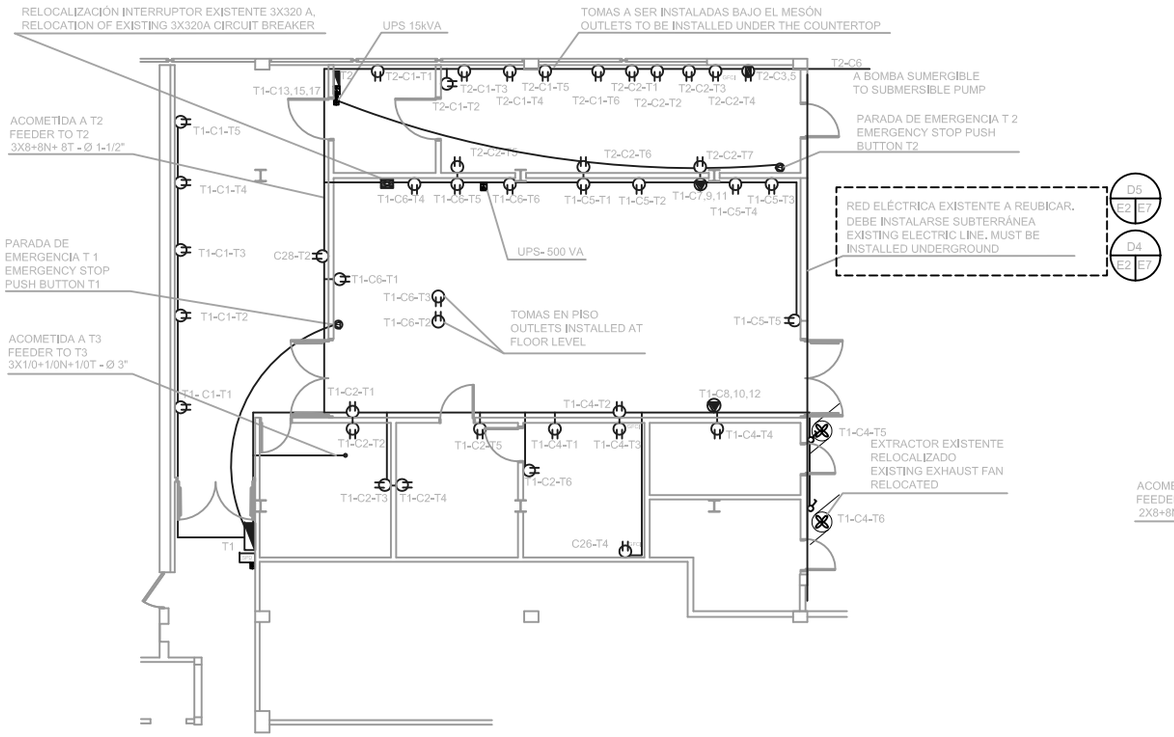
Phase:
☐ 35% ☐ 60% ☐ 90% ☒ 100% ☐ AS BUILT

Drawing title:
CONVENCIONES / LEGEND

Drawing file:	Scale:
NDI E1-E2.DWG	ESC 1:250 SCALE 1:250

Code
E-1

Drawing date:	OCTOBER 2013
Designed by:	ANDRES CALDERON
Profession:	ELECTRICAL ENGINEER
Professional ID:	CN 205-1550
Signature:	

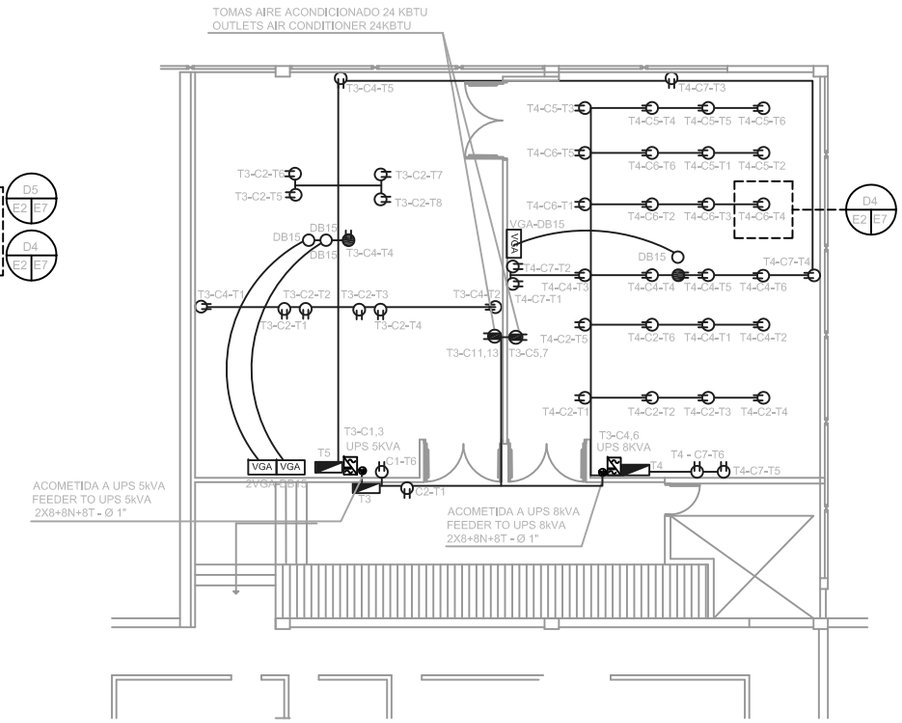


PRIMER PISO
FIRST FLOOR

PLANTA DE TOMAS / OUTLET PLAN

0M 1M 0,5M 2M 5M

ESC 1:100
SCALE 1:100



SEGUNDO PISO
SECOND FLOOR

PLANTA DE TOMAS / OUTLET PLAN

0M 1M 0,5M 2M 5M

ESC 1:100
SCALE 1:100

NOTAS / NOTES

1. EL CONTRATISTA DEBERÁ COORDINAR LA CONSTRUCCIÓN DEL MESÓN Y LOS TRABAJOS ELÉCTRICOS PARA DEJAR LAS SALIDAS.
CONTRACTOR SHALL COORDINATE THE ELECTRICAL WORK AND THE COUNTERTOP CONSTRUCTION , SO THE REQUIRED OPENINGS IN THE COUNTERTOP ARE LEFT.

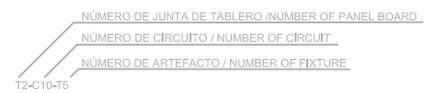
2. LAS TOMAS UBICADAS EN LAS ÁREAS CENTRALES DEBEN SER INSTALADAS A NIVEL DE PISO, EXCEPTO DONDE SE INDIQUE LO CONTRARIO. LAS TOMAS PERIMETRALES VAN A LA PARED.
THE OUTLETS LOCATED IN THE CENTRAL AREA SHALL BE INSTALLED AT FLOOR LEVEL, EXCEPT WHERE OTHER INSTRUCTION IS SHOWN. THE PERIMETER OUTLETS SHALL BE INSTALLED AT THE WALL.

3. LAS TOMAS DE PARED, PISO Y TECHO SON IDÉNTICAS SEGÚN ESPECIFICACIONES SECCIÓN 16 - 08.
THE OUTLETS LOCATED IN THE WALL, FLOOR AND CEILING ARE IDENTICAL ACCORDING SPECIFICATIONS SECTION 16 - 08.

4. TODA LA ELABORACIÓN DE CIRCUITOS DEBERÁ CUMPLIR CON LO MOSTRADO EN LOS CUADROS DE TABLEROS.
ALL CIRCUITING TO BE PER THE PANEL SCHEDULES.

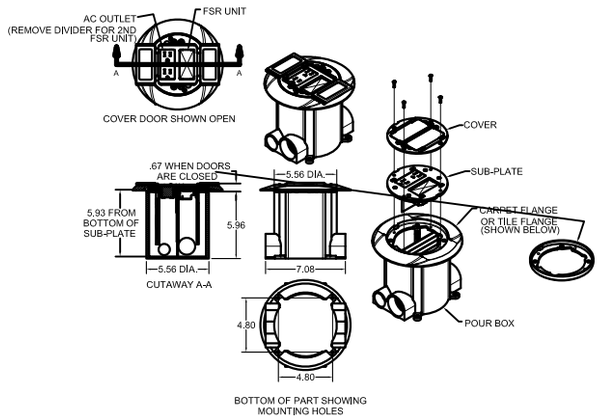
5. EL CONTRATISTA DEBE VERIFICAR LA COORDINACIÓN DE PROTECCIONES DE LOS INTERRUPTORES
CONTRACTOR SHALL VERIFY THE COORDINATION OF PROTECTIONS OF THE CIRCUIT BREAKERS.

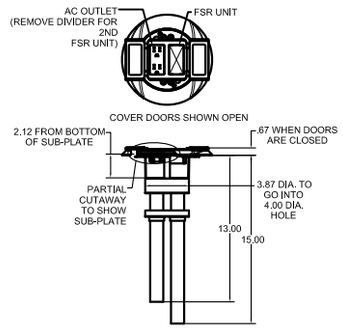
6. LAS TOMAS PARA VIDEO DB15 SE DEBEN INSTALAR EL EL TECHO Y LA CORRESPONDIENTE TOMA VGA EN LA PARED A 5cm DEL PISO. USAR DUCTO EMT.
THE OUTLETS FOR VIDEO DB15 SHALL BE INSTALLED AT CEILING, AND THE VGA OUTLET SHALL BE INSTALLED AT 5cm HEIGHT. USE CONDUIT EMT.

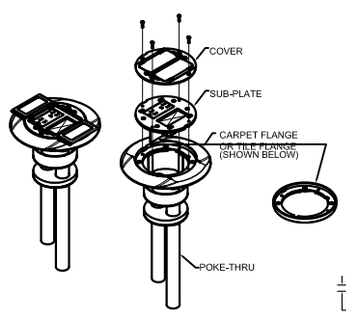


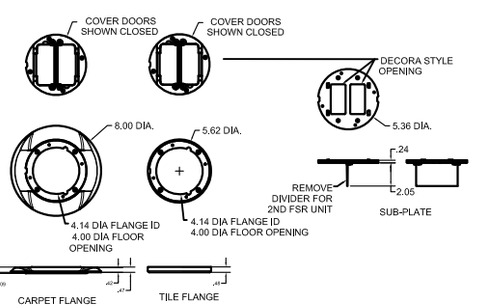
DESCRIPCIÓN DE NOMENCLATURA PARA TOMAS Y LÁMPARAS
DESCRIPTION OF LEGEND FOR OUTLETS AND
LIGHTING FIXTURES

CONVENCIÓN / LEGEND









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COR: I.N.L. PROJECT ARCHITECT/ENGINEER

PROJECT DESIGN / MANAGEMENT

HCSgroup
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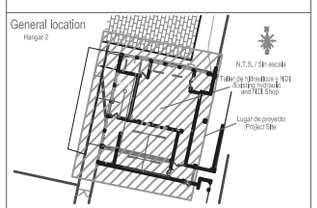
NDI SHOP, SIMULATOR AND INSTRUCTION ROOM BUILDING
CNP HANGAR 2, GUAYMARAL
BOGOTÁ, CUNDINAMARCA

Contract/PO No.:	Contract/PO date:
SC015013M0030	OCT. 2012

Legends/Remarks



ALL UNITS IN METRIC SYSTEM

Revisions

Rev.No.	Description	Date
1		
2		
3	90% SUBMITTAL	JULY 16
4	90% SUBMITTAL	SEPT. 11
5		
6		
7		
8		
9		
10		

AS-BUILT

Phase:
☐35% ☐60% ☐90% ☒100% ☐AS BUILT

Drawing title:
PLANTA DE TOMAS / OUTLET PLAN

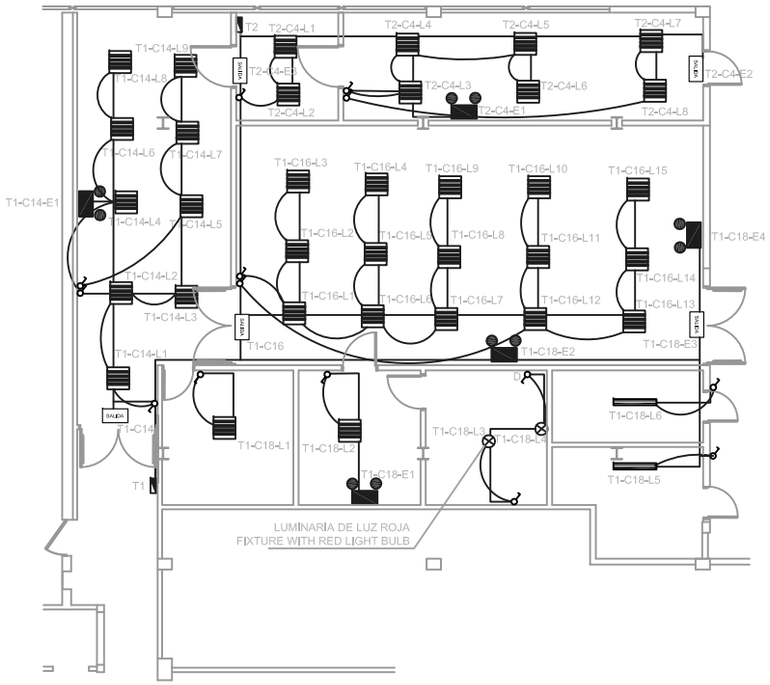
Drawing file: NDI E1-E2.DWG

Scale:
ESC 1:100
SCALE 1:100

Code
E-2

Drawing date: OCTOBER 2013
Designed by: ANDRES CALDERON
Profession: ELECTRICAL ENGINEER
Professional ID: CN 205-1550

Signature:

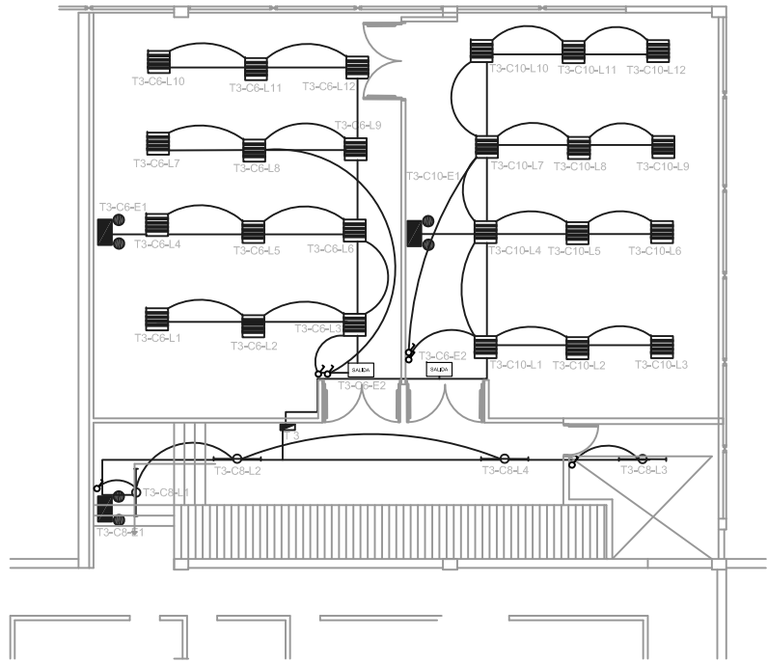


PRIMER PISO
FIRST FLOOR

ILUMINACIÓN / LIGHTING PLAN

0M 0.5M 1M 2M 5M

ESC 1:100
SCALE 1:100



SEGUNDO PISO
SECOND FLOOR

ILUMINACIÓN / LIGHTING PLAN

0M 0.5M 1M 2M 5M

ESC 1:100
SCALE 1:100

CUADRO DE LUMINARIAS / LIGHTING SCHEDULE			
FABRICANTE / MANUFACTURER - CELSA - ILURAM			
SYMBOL	TIPO / TYPE	DESCRIPCIÓN	DESCRIPTION
	LUMINARIA HERMÉTICA 2X28W / 2X54 W T5	LAMPARA HERMÉTICA, 2X54WT5, 1,2m X 20 cm, DIFUSOR EN POLICARBONATO, CON REFLECTOR EN ALUMINIO ESPECULAR	HERMETIC LAMP, 2X54WT5, 1,2mX 20cm, POLYCARBONATE DIFFUSER WITH SPECULAR ALUMINUM REFLECTOR
	LÁMPARA 60x60 4X24WT5	LÁMPARA 60x60 1,5P 4X24WT5, CON LÁMPARAS DE 24 W FLUORESCENTE DE INCRUSTAR CON ACRÍLICO PRISMÁTICO, 60X60 cm, BALASTRO ELECTRÓNICO, ARMÓNICOS MENORES AL 10% (THD<10%), FACTOR DE POTENCIA 0,998, 120-277VAC ± 10%, 0,55 A, CLASIFICACIÓN SONORA TIPO A, 60Hz.	LAMP 60x60, 1,5P, 4X24WT5, WITH 24W, FLUORESCENT, WITH PRISMATIC ACRYLIC, 60X60CM, ELECTRONIC BALAST, HARMONICS LESS THAN 10% (THD<10%), POWER FACTOR 0,998, 120-277 VAC ± 10%, 0.55 A, SOUND CLASSIFICATION TYPE A, 60 HZ
	MÓDULO INDUSTRIAL HIGH BAY	LUMINARIA FLUORESCENTE INDUSTRIAL - CUERPO EN LÁMINA COLD ROLLED. 2X54W T5. BALASTO ELECTRÓNICO "PROGRAMMED RAPID START" PARA TUBO T5. TIPO ALTO MONTAJE	T5 FLUORESCENT INDUSTRIAL HIGH BAY LIGHTING FIXTURE, 2X54W, COLD-ROLLED STEEL HOUSING, "PROGRAMMED RAPID START" ELECTRONIC BALLAST FOR T5 LAMPS
	WALL PACK 70W HPS	REFLECTOR DE SOBREPONER EN PARED, 70W HPS, UL 1572, 220 V, IP55, COLOR ANOLOG, CARCAZA EN ALUMINIO, POLICARBONATO O EQUIVALENTE, ACCESO FRONTAL LÁMPARA Y BALASTRO,	WALL- MOUNT FLOOD LIGHT, 70W HPS, UL1572,220V, IP55, ANOLOG COLOR, ALUMINUM CASE, POLICARBONATE OR EQUIVALENT LENS, FRONTAL ACCESS
	ALUMBRADO EMERGENCIA	LUZ DE EMERGENCIA - 2 LUMINARIAS HALOGENAS -CAJA METALICA - BATERIA 12 VDC - T DESCARGA 2,5 H	EMERGENCY LIGHT - 2 HALOGEN LAMPS - METALIC BOX - BATTERY 12VDC - DESCHARGE T 2,5 H
SALIDA	AVISO DE SEÑALIZACION DE SALIDA SD-1AL	AVISO SD-1AL - CARAS SEÑALIZADAS 2 - 12 VDC - OPERACION 8 H	SIGN SD-1AL - SIGNED FACES 2 - 12 VDC - OPERATION 8 H

NOTAS / NOTES

1. LA ILUMINACIÓN SE DISEÑÓ BASADA EN PRODUCTOS CELSA. SI EL CONTRATISTA DESEA UTILIZAR UN PRODUCTO DIFERENTE, DEBERÁ PRESENTAR UN NUEVO DISEÑO PARA LA APROBACIÓN DE COR
LIGHTING DESIGN WAS BASED ON CELSA PRODUCTS. IF THE CONTRACTOR WANTS TO USE A DIFFERENT PRODUCT, HE SHALL SUBMIT A NEW DESIGN FOR COR´S APPROVAL

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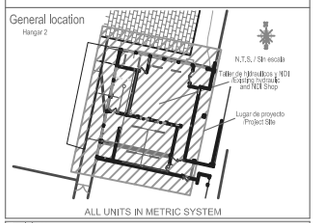
CNP HANGAR 2, GUAYMARAL
BOGOTÁ, CUNDINAMARCA

Contract/PO No.:	Contract/PO date:
SC015013M0030	OCT. 2012

Legends/Remarks

General location
Hangar 2



ALL UNITS IN METRIC SYSTEM

Revisions

Rev.No.	Description	Date
1		
2		
3	90% SUBMITTAL	JULY 16
4	90% SUBMITTAL	SEPT. 11
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7		
8		
9		
10		

AS-BUILT
REPRODUCIDO

Phase:
☐35% ☐60% ☐90% ☒100% ☐AS BUILT

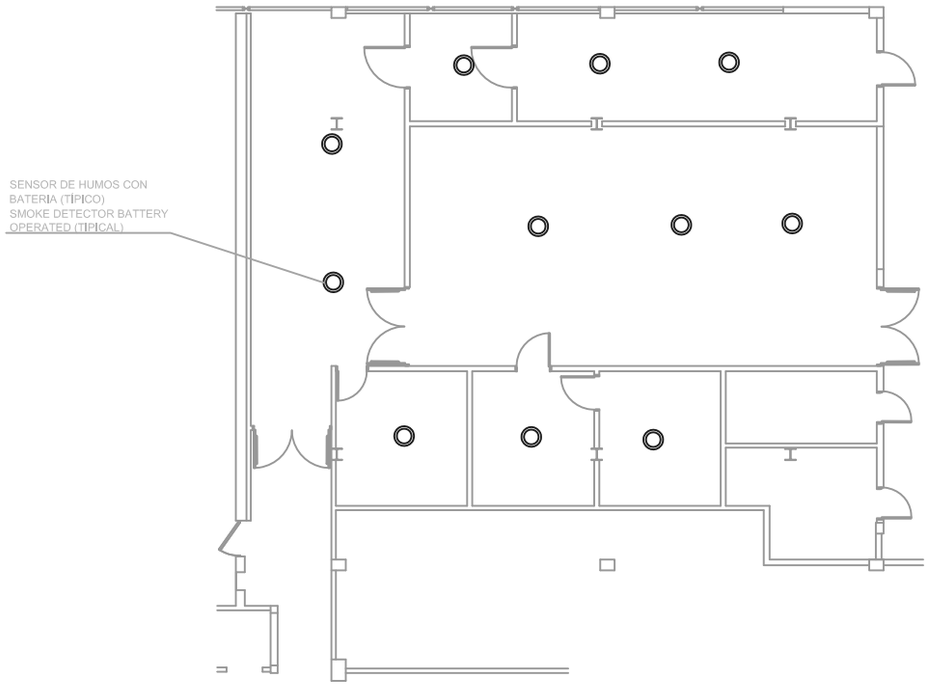
Drawing title:
ILUMINACIÓN / LIGHTING PLAN

Drawing file: NDI E1-E3.DWG
Scale: ESC 1:100 SCALE 1:100

Code: E-3

Drawing date: OCTOBER 2013
Designed by: ANDRES CALDERON
Profession: ELECTRICAL ENGINEER
Professional ID: CN 205-1550

Signature:

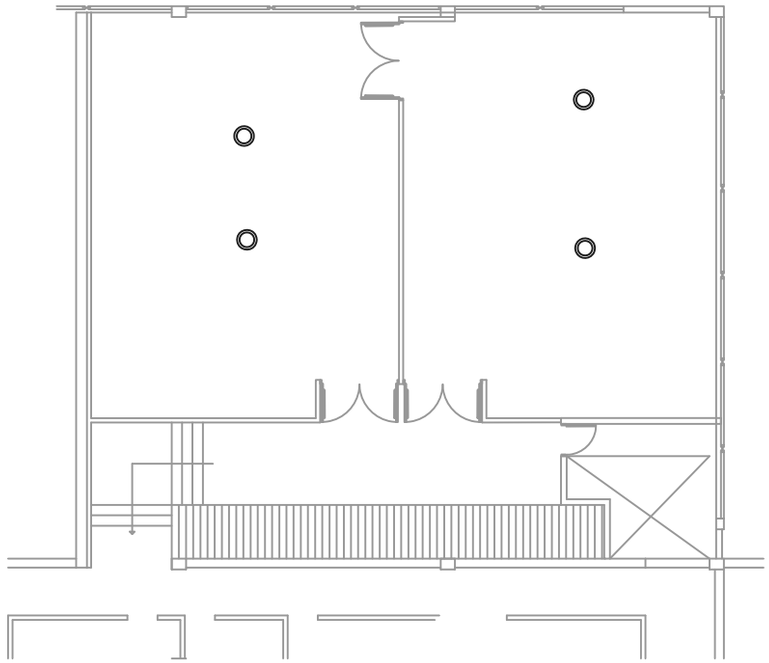


PRIMER PISO
FIRST FLOOR

SENSORES DE HUMO / SMOKE DETECTOR PLAN

0M 1M 0,5M 2M 5M

ESC 1:100
SCALE 1:100



SEGUNDO PISO
SECOND FLOOR

SENSORES DE HUMO / SMOKE DETECTOR PLAN

0M 1M 0,5M 2M 5M

ESC 1:100
SCALE 1:100

NOTAS / NOTES

1. DETECTORES DE HUMO IONIZADA, ALARMA 85DB, BATERIA DE 9V , TEST SWITCH, LED ROJO QUE INDICA ALARMA O QUE ESTA ENCENDIDO. NFPA 72
SMOKE SENSING CHAMBER, AN 85DB HORN, A SUPERVISED 9V BATTERY POWER SUPPLY, A FULL FUNCTION TEST SWITCH, A SILENCE FEATURE TO SILENCE UNWANTED NUISANCE ALARMS, A RED LED LIGHT THAT INDICATES DC POWER OR ALARM. NFPA 72

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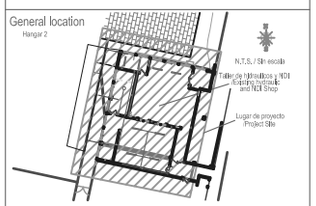
Legends/Remarks

General location
Hangar 2



ALL UNITS IN METRIC SYSTEM

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2		
3	90% SUBMITTAL	JULY 16
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9		
10		

AS-BUILT

Phase:
☐35% ☐60% ☐90% ☒100% ☐AS BUILT

Drawing title:
SENSORES DE HUMO / SMOKE DETECTOR PLAN

Drawing file: NDI E14S2.DWG

Scale: ESC 1:100 SCALE 1:100

Code
E-4

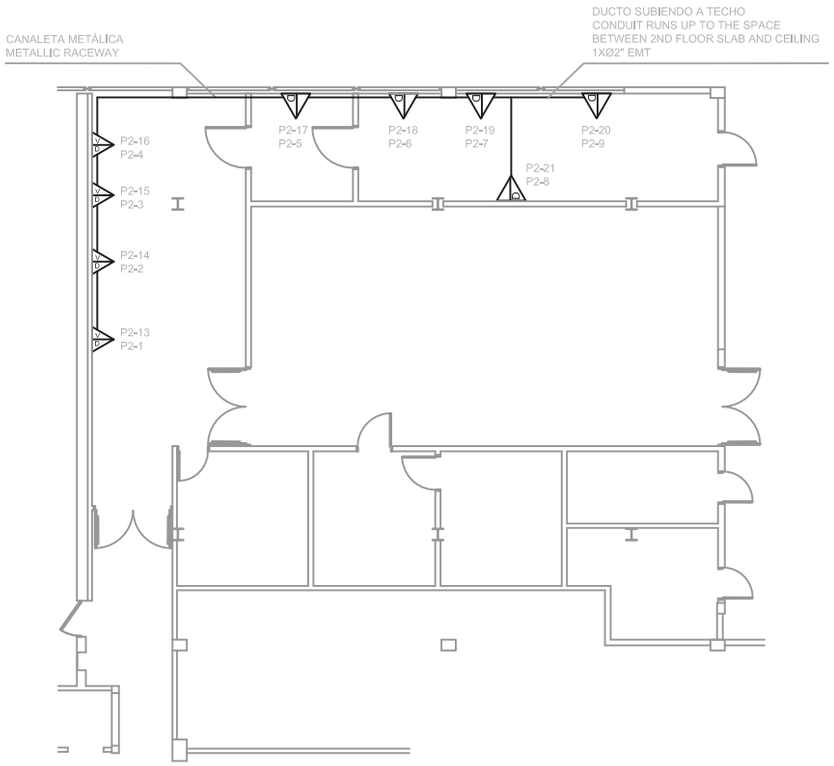
Drawing date: OCTOBER 2013

Designed by: ANDRES CALDERON

Profession: ELECTRICAL ENGINEER

Professional ID: CN 205-1550

Signature:

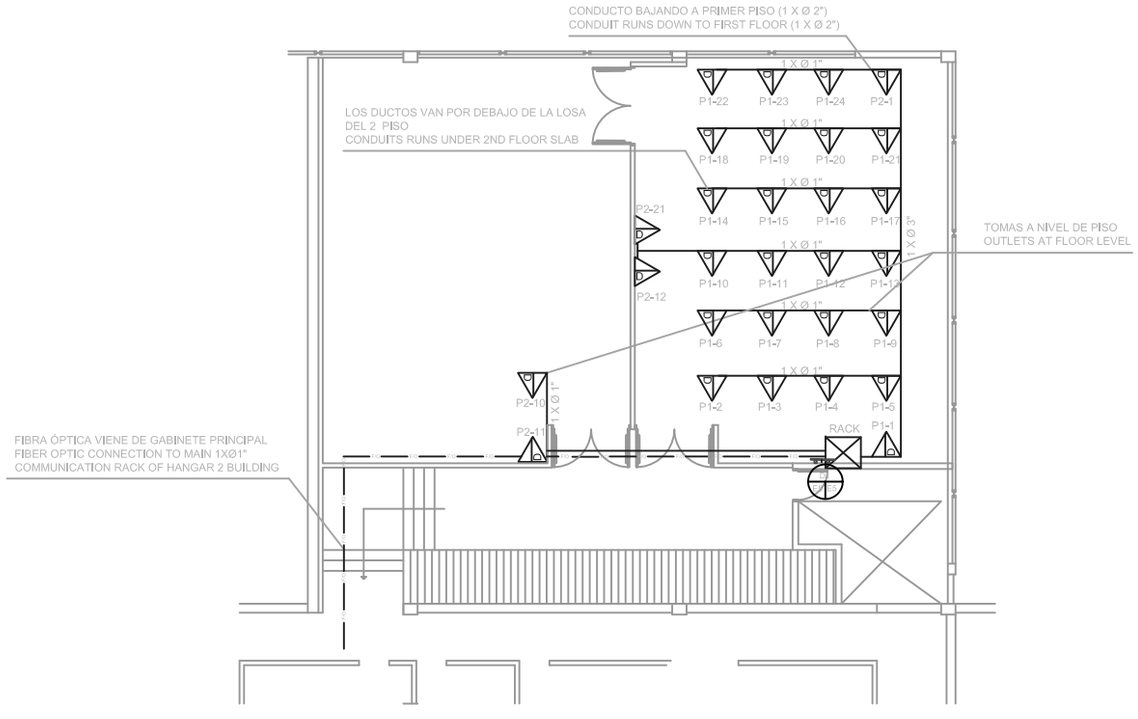


PRIMER PISO
FIRST FLOOR

CABLEADO ESTRUCTURADO /
STRUCTURED CABLING SYSTEM PLAN

0M 1M 0,5M 2M 5M

ESC 1:100
SCALE 1:100



SEGUNDO PISO
SECOND FLOOR

CABLEADO ESTRUCTURADO /
STRUCTURED CABLING SYSTEM PLAN

0M 1M 0,5M 2M 5M

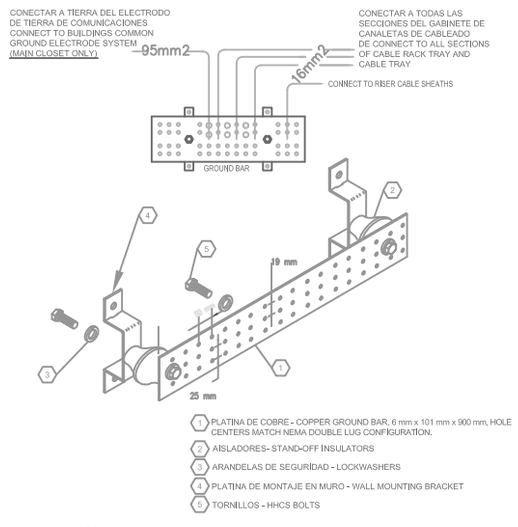
ESC 1:100
SCALE 1:100

NOTAS / NOTES

1. TOMAS A 30 cm DE NIVEL DE PISO.
OUTLETS MOUNTED 30 cmFROM FLOOR LEVEL.

2. VÉASE ESPECIFICACIONES SOBRE LOS REQUERIMIENTOS PARTICULARES DE TOMAS Y CAIDAS.
SEE SPECIFICATIONS FOR SPECIFIC OUTLET AND DROP REQUIREMENTS .

LEGEND / CONVENCIONES



DETALLE DE BARRAJE DE TIERRA
GROUNDING BUSBAR DETAIL

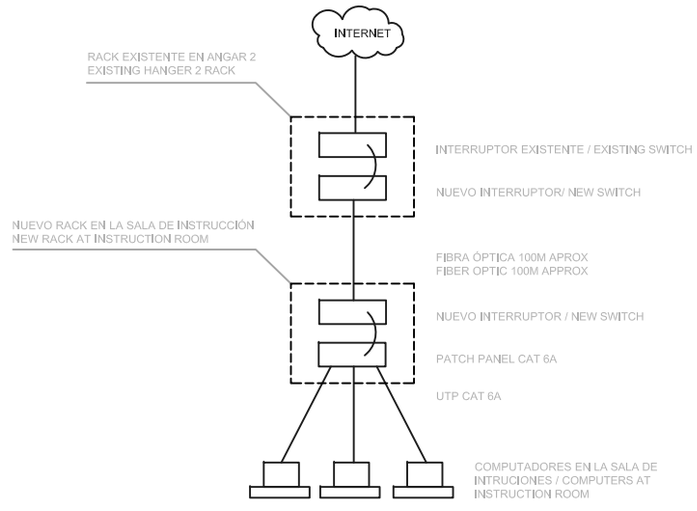


DIAGRAMA ESQUEMÁTICO PARA COMUNICACIONES
SCHEMATIC DIAGRAM FOR COMMUNICATIONS

CANTIDAD MÁXIMA DE CABLES UTP EN TUBERÍA		
CONDUIT CAPACITY CHART FOR UTP CABLES		
(40% DE OCUPACIÓN DE LA SECCIÓN) (40% LIMIT OF CONDUIT FILL)		
CONDUIT SIZE	CATEGORÍA Y DIÁMETRO EXTERIOR / CATEGORY AND OUTER DIAMETER	
CAT.	CAT. 6A	CAT. 6A
CABLE / CABLE	0,354"	0,330"
DIÁMETRO / DIAMETER (PULGADAS / INCHES)	Nº CABLES	
3/4	2	2
1	3	4
1 1/4	5	6
1 1/2	7	8
2	13	15
2 1/2	20	23
3	29	33

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BOGOTA , COLOMBIA

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I.N.L.
INTERNATIONAL NARCOTICS AND LAW ENFORCEMENT SECTION
EMBASSY OF THE UNITED STATES,
BOGOTA, COLOMBIA

COR: I.N.L. PROJECT ARCHITECT/ENGINEER

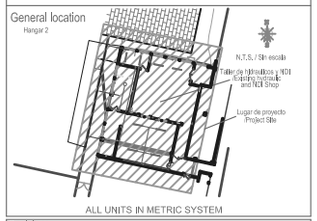
PROJECT DESIGN / MANAGEMENT

HCSgroup
Engineering and Technical Solutions
8401 Crossland Loop, Montg. AL 36117

NDI SHOP, SIMULATOR AND INSTRUCTION ROOM BUILDING
CNP HANGAR 2, GUAYMARAL
BOGOTÁ, CUNDINAMARCA

Contract/PO No.:	Contract/PO date:
SC015013M0030	OCT. 2012

Legends/Remarks



ALL UNITS IN METRIC SYSTEM

Revisions

Rev.No.	Description	Date
1		
2		
3	90% SUBMITTAL	JULY 16
4	90% SUBMITTAL	SEPT. 11
5		
6		
7		
8		
9		
10		

AS-BUILT

Phase:
☐35% ☐60% ☐90% ☒100% ☐AS BUILT

Drawing title:
CABLEADO ESTRUCTURADO / STRUCTURED CABLING SYSTEM PLAN

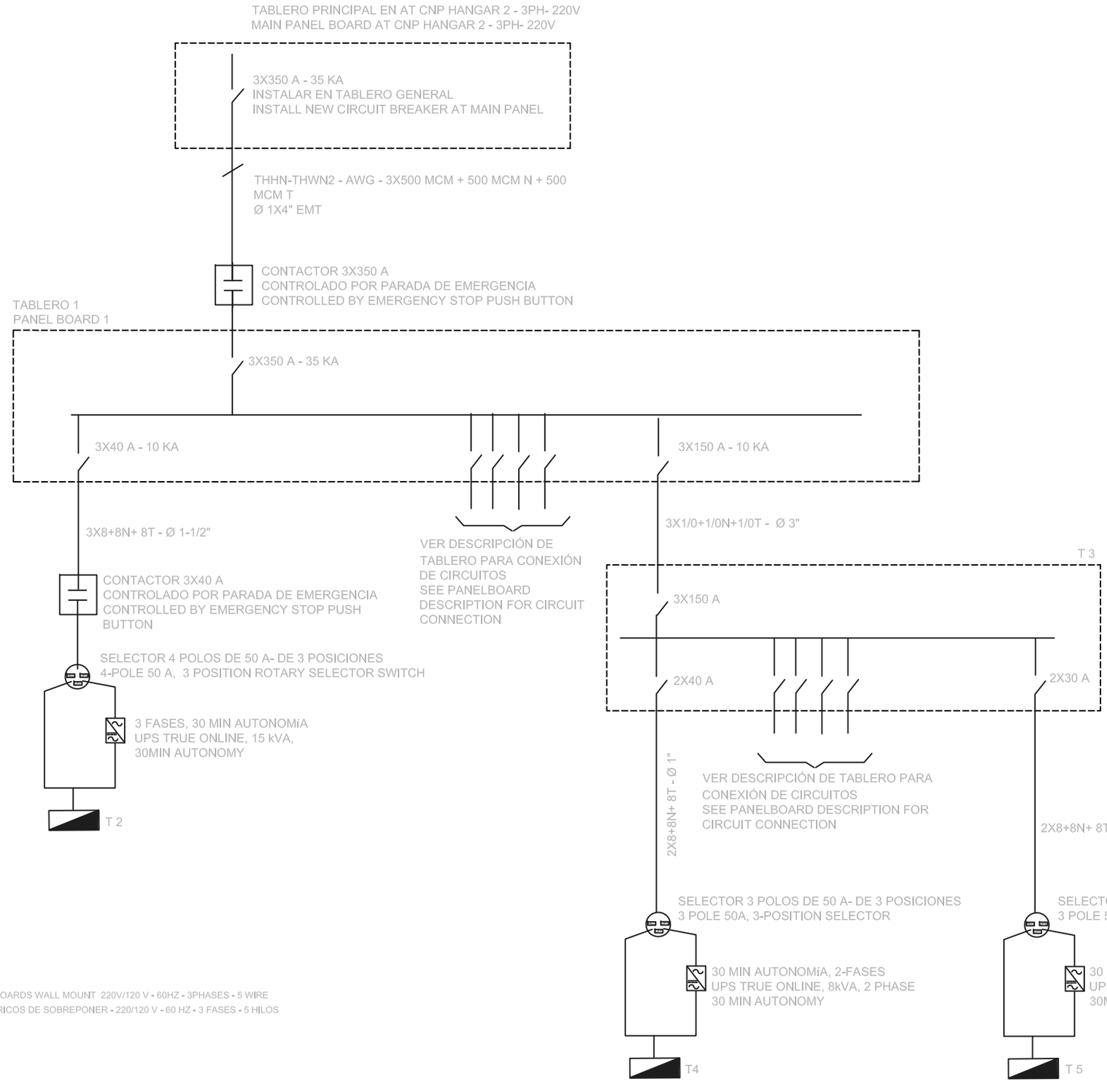
Drawing file: NDI E1-E3.DWG

Scale: ESC 1:100 SCALE 1:100

Code: E-5

Drawing date: OCTOBER 2013
Designed by: ANDRES CALDERON
Profession: ELECTRICAL ENGINEER
Professional ID: CN 205-1550

Signature:



ELECTRIC PANELBOARDS WALL MOUNT 220V/120 V - 60HZ - 3PHASES - 5 WIRE
TABLEROS ELECTRICOS DE SOBREPONER - 220/120 V - 60 HZ - 3 FASES - 5 HILOS

DIAGRAMA UNIFILAR / SINGLE LINE DIAGRAM

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CNP HANGAR 2, GUAYMARAL
BOGOTÁ, CUNDINAMARCA

Contract/PO No.:	Contract/PO date:
SC015013M0030	OCT. 2012

Legends/Remarks

General location
Hangar 2
N.T.S. / Sin escala
Lugar de proyecto
Project Site

ALL UNITS IN METRIC SYSTEM

Revisions

Rev.No.	Description	Date
1		
2		
3	90% SUBMITTAL	JULY 16
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6		
7		
8		
9		
10		

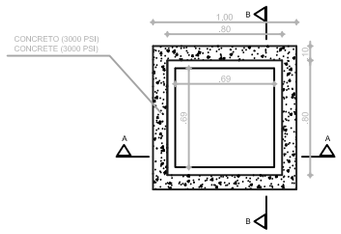
AS-BUILT

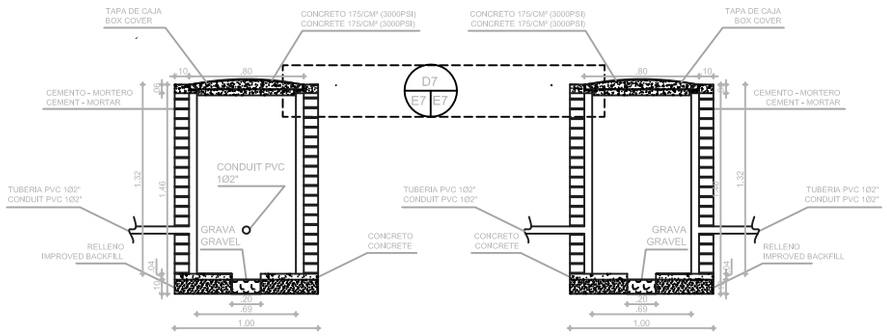
Phase:
☐35% ☐60% ☐90% ☒100% ☐AS BUILT

Drawing title:
DIAGRAMA UNIFILAR / SINGLE LINE DIAGRAM

Drawing file: NDI E1-E3.DWG
Scale: NOT TO SCALE

Code: E-6
Drawing date: OCTOBER 2013
Designed by: ANDRES CALDERON
Profession: ELECTRICAL ENGINEER
Professional ID: CN 205-1550
Signature:





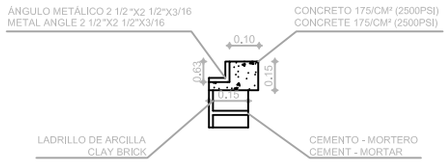
SECTION B-B

SECTION A-A

ESC 1:25
SCALE 1:25

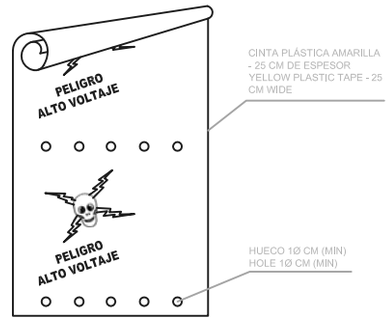
D1 E7 E1 D5 E7 E2

DATALLES DE CAJA DE LA RED ELECTRICA SUBTERRANEA /
PULL BOXES ELECTRICAL DETAILS UNDERGROUND NETWORK
PULL BOX
CS-274 TYPE



D7 E7 E7

DATALLE DEL ANCLAJE /
ANCHOR DETAIL



NOTA NOTE

1 LA INSTALACIÓN DE LA CINTA DEBE SER SUBTERRANEA A 20 CM (MIN) PLASTIC TAPE MUST BE INSTALLED AT LEAST 20 CM BELOW GRADE.

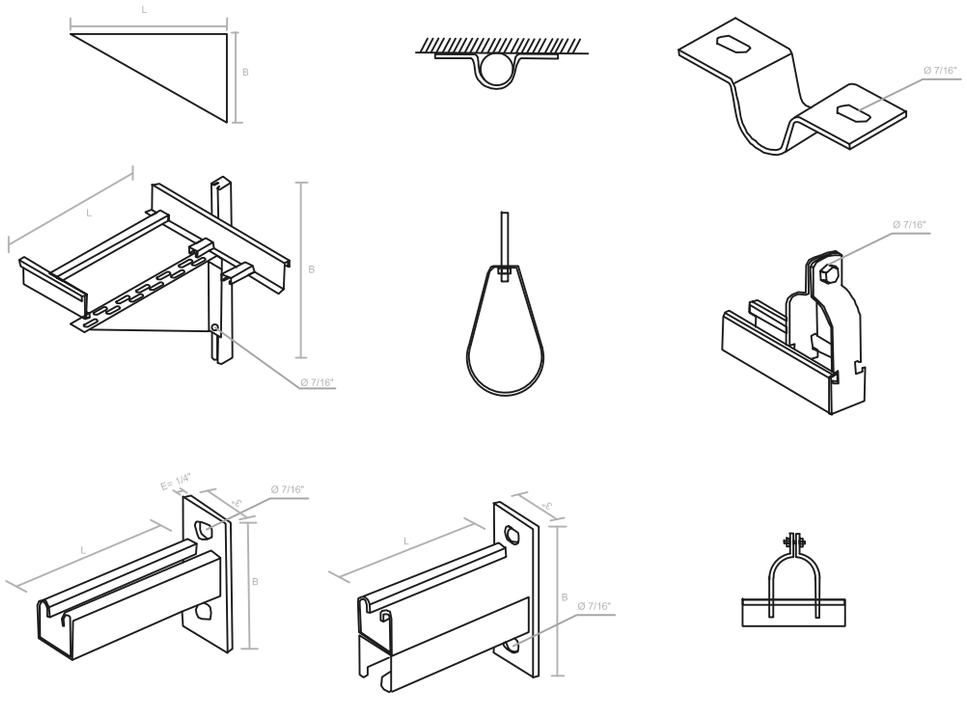
DATALLE DE LA CINTA PLÁSTICA /
PLASTIC TAPE DETAIL
SIN ESCALA
NOT TO SCALE

NOTAS / NOTES

1. SI SE REQUIERE UNA CANTIDAD DE DUCTOS Y/O DIÁMETROS DIFERENTES A LOS MOSTRADOS, EL CONTRATISTA DEBERÁ SEGUIR LA DISTRIBUCIÓN DE DUCTOS DE ACUERDO A LAS NORMAS DE CODENSA.

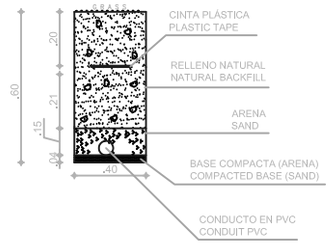
IF DUCT SIZES AND/OR DUCT QUANTITIES ARE DIFFERENT FROM THE ONES SHOWN HERE, CONTRACTOR SHALL FOLLOW PROPER DUCT DISTRIBUTION ACCORDING TO CODENSA STANDARDS.

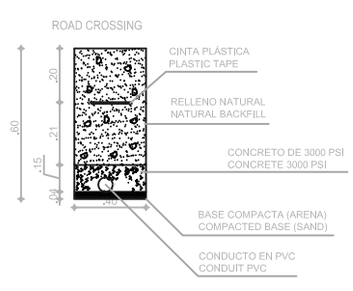
L	B
126	176
226	182
326	188
426	194
526	290
626	294
726	298

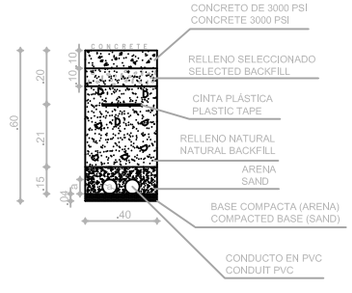


D3 E7 E1

ELEMENTOS DE ANCLAJE PARA INSTALACIÓN DE DUCTOS /
ANCHOR DETAIL FOR DUCTS INSTALLATION
SIN ESCALA
NOT TO SCALE







ESC NO ESCALADOS
NOT TO SCALE

D2 E7 E1 D4 E7 E2

DUCTOS ELÉCTRICOS SUBTERRANEOS/
ELECTRICAL UNDERGROUND DUCTS
SIN ESCALA
NOT TO SCALE

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I.N.L. SECTION
BOGOTA , COLOMBIA

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PROJECT DESIGN / MANAGEMENT

HCSgroup
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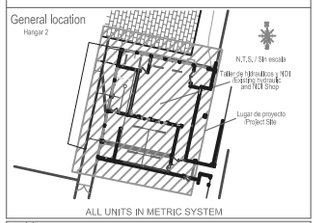
NDI SHOP, SIMULATOR AND INSTRUCTION ROOM BUILDING
CNP HANGAR 2, GUAYMARAL
BOGOTÁ, CUNDINAMARCA

Contract/PO No.:	Contract/PO date:
SC015013M0030	OCT 2012

Legends/Remarks



ALL UNITS IN METRIC SYSTEM

Revisions

Rev.No.	Description	Date
1		
2		
3	90% SUBMITTAL	JULY 16
4	90% SUBMITTAL	SEPT. 11
5		
6		
7		
8		
9		
10		

AS-BUILT

Phase:
☐ 35% ☐ 60% ☐ 90% ☒ 100% ☐ AS BUILT

Drawing title:
DETALLE DE CANALIZACIÓN E INSTALACIÓN DE DUCTOS/ DETAIL OF UNDERGROUND AND INSTALATION OF CONDUIT

Drawing file: NDI E1-E3.DWG

Scale: ESCALAS DIFERENTES / DIFFERENT SCALES

Code: E-7

Drawing date: OCTOBER 2013
Designed by: ANDRES CALDERON
Profession: ELECTRICAL ENGINEER
Professional ID: CN 205-1550

Signature:

REGULACIÓN - ACOMETIDA - DUCTOS
DROP VOLTAGE - WIRING - CONDUIT

ESPECIFICACIÓN	SPECIFICATION	TABLERO PRINCIPAL - MAIN CIRCUIT PANEL - T1	TABLERO LABORATORIO - LABORATORY CIRCUIT PANEL - T2	TABLERO PISO 2 - FLOOR 2 CIRCUIT PANEL - T3	SIMULADOR - SIMULATOR ROOM - T4	AULA DE INSTRUCCIÓN - INSTRUCTION ROOM - T5
MÁXIMA CAIDA DE VOLTAJE	MAXIMUM DROP VOLTAGE	3%	3%	3%	3%	3%
VOLTAJE NOMINAL F-F (V)	NOMINAL VOLTAGE	220	220	220	220	220
SISTEMA	SYSTEM	3 PH, TRIFASICO - 5 HILOS WIRE	3 PH, TRIFASICO - 5 HILOS WIRE	3 PH, TRIFASICO - 5 HILOS WIRE	2 PH, BIFASICO - 4 HILOS WIRE	2 PH, BIFASICO - 4 HILOS WIRE
FACTOR DE POTENCIA	POWER FACTOR	0,9	0,9	0,9	0,9	0,9
DISTANCIA DE LA ACOMETIDA (ML)	DISTANCE (ML)	120	15	30	15	15
FACTOR DE TEMPERATURA	TEMPERATURE FACTOR	1	1	1	1	1
NÚMERO DE CONDUCTORES EN EL DUCTO CON CORRIENTE	CURRENT-CARRYING CONDUCTORS IN A RACEWAY	3	3	3	2	2
NÚMERO TOTAL DE CONDUCTORES EN EL DUCTO	NUMBER OF TOTAL FEEDERS IN THE CONDUIT	5	5	5	4	4
CORRIENTE ESPERADA (A)	EXPECTED CURRENT (A)	339	25,58	131	15	15
CABLES DE LA ACOMETIDA	CABLE SIZE	3X500 MCM+500MCM N+500 MCM T	3X8+8N+ 8T	3X1/0+1/0N+1/0T -	2X8+8N+8T	2X8+8N+8T
DIÁMETRO DEL DUCTO	CONDUIT DIAMETER	1X4"	1-1/2"	1X3"	1X1"	1X1"
REGULACIÓN	VOLTAGE DROP	2,27%	1,64%	1,04%	0,96%	0,96%
CONDUCTOR	CABLE	COBRE SUAVE, SOFT COPPER, ASTM B3,	COBRE SUAVE, SOFT COPPER, ASTM B3,	COBRE SUAVE, SOFT COPPER, ASTM B3,	COBRE SUAVE, SOFT COPPER, ASTM B3,	COBRE SUAVE, SOFT COPPER, ASTM B3,
AISLAMIENTO	ISOLATION	THHN - THWN2,	THHN - THWN2,	THHN - THWN2,	THHN - THWN2,	THHN - THWN2,
NORMAS	CODES	UL83, NTC-2050 -1332 ICONTEC	UL83, NTC-2050 -1332 ICONTEC	UL83, NTC-2050 -1332 ICONTEC	UL83, NTC-2050 -1332 ICONTEC	UL83, NTC-2050 -1332 ICONTEC
DUCTO	CONDUIT	EMT	EMT	EMT	EMT	EMT

TABLERO GENERAL - MAIN ELECTRIC PANEL - T1
TABLERO DE SOBREPONER, 10KA, 3X350 A, 220 V, 60 HZ, ESPACIO PARA TOTALIZADOR Y PUERTA, 5 HILOS - 3 FASES
WALL-MOUNT , 10KA, 3X350 A , 220 V, 60 HZ, DOOR AND SPACE FOR MAIN CIRCUIT BREAKER, 5 WIRE, 3 PHASE

DESCRIPCIÓN / DESCRIPTION	DESCRIPCIÓN / DESCRIPTION	LOCALIZACIÓN / LOCATION	ACOMETIDA - DUCTO / WIRE - CONDUIT	CANT / QTY.	CARGA UNITARIA VA / UNIT LOAD	CARGA TOTAL (VA) / TOTAL LOAD	CURRENT A / CURRENT A	INTERRUPTOR (A) / CIRCUIT BREAKER	CIRCUITO / CIRCUIT	FASE (VA) / PHASE R	FASE (VA) / PHASE S	FASE (VA) / PHASE T	CIRCUITO / CIRCUIT	INTERRUPTOR (A) / CIRCUIT BREAKER	CURRENT A / CURRENT A	CARGA TOTAL (VA) / TOTAL LOAD	CARGA UNITARIA VA / UNIT LOAD	CANT / QTY.	ACOMETIDA - DUCTO / WIRE - CONDUIT	LOCALIZACIÓN / LOCATION	DESCRIPCIÓN / DESCRIPTION	DESCRIPCIÓN / DESCRIPTION
TOMA MONOFÁSICA CON POLO A TIERRA GRADO ALTA RESISTENCIA NEMA 5-20R	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	1	1X12+12N+12T - 3/4"	5	200	1.000	8,3	20	1	2.200			2	20	10,0	1.200	200	6	1X12+12N+12T - 3/4"	4,5,6	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	TOMA MONOFÁSICA CON POLO A TIERRA GRADO ALTA RESISTENCIA NEMA 5-20R
RESERVA	SPARE								3		1.200		4	20	10,0	1.200	200	6	1X12+12N+12T - 3/4"	4,7,8,9	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	
TOMA MONÓFASICA CON POLO A TIERRA GRADO HOSPITALARIO Y EXTRACTORES	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	4	1X12+12N+12T - 3/4"	5	200	1.000	8,3	20	5			2.200	6	20	10,0	1.200	200	6	1X12+12N+12T - 3/4"	4	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	TOMA MONÓFASICA CON POLO A TIERRA GRADO ALTA RESISTENCIA NEMA 5-20R
						3.811	31,8		7	8.891			8		40,0	5.081						
HORNO DE SECADO	DRYING FURNACE	4	3X10 - 3/4"	1		3.811	31,8	3x30	9		8.891		10	3X40	40,0	5.081		1	3X8 - 1"	4	EXISTING EXHAUST FAN	EXTRACTOR DE AIRE EXISTENTE- CARACOL
						3.811	31,8		11			8.891	12		40,0	5.081						
INTERRUPTOR ROTATIVO 3 POSICIONES 4 POLOS- UPS QUE ALIMENTA A TABLERO LABORATORIO DE ACEITES 15 KVA	ROTARY SWITCH THREE POSITION - 4 POLES, FEEDS THE 15 KVA UPS	2	3X8+8N+8T - 1-1/2"	1	5.000	5.000	39,4	3X40	13	5.612			14	20	5,1	612	68	9	1X12+12N+12T - 3/4"	1	OFFICE LIGHTING	ALUMBRADO OFICINAS
					5.000	5.000			15		6.020		16	20	8,5	1.020	68	15	1X12+12N+12T - 3/4"	4	WORKSHOP LIGHTING	ALUMBRADO TALLER
					5.000	5.000			17			5.700	18	20	5,8	700	100	7	1X12+12N+12T - 3/4"	5,6,7,8,9	LIGHTING - ZONES	ALUMBRADO ÁREAS
TABLERO 3	T3 PANEL BOARD	12	3X1/0+1/0N+ 1/0T - 1X3"	1		16.691	43,8	3X150	19	16.691			20	3X30							TVSS- 200 KA - L-L,L-N,L-G,-N-G	SUPRESOR DE PICOS - 200 KA, L-L,L-N,L-G,-N-G
						16.500	43,3		21		16.500		22									
						16.667	43,7		23			16.667	24									
RESERVA	SPARE								25	-			26								SPARE	RESERVA
RESERVA	SPARE								27		-		28								SPARE	RESERVA
RESERVA	SPARE								29			-	30								SPARE	RESERVA
RESERVA	SPARE								31	-			32								SPARE	RESERVA
RESERVA	SPARE								33		-		34								SPARE	RESERVA
RESERVA	SPARE								35			-	36								SPARE	RESERVA
										33,394	32,611	33,459										

TOTAL R	33.394	VA
TOTAL S	32.611	VA
TOTAL T	33.459	VA
SUBTOTAL	**99,464**	**VA**

RESERVA - SPARE 30%	29.839	VA
TOTAL	**129.303**	**VA**
CORRIENTE - AMPERAGE	**339**	A
TOTALIZADOR - MAIN BREAKER	3X350	**A**

CABLES DE LA ACOMETIDA - MAIN BRANCH	3X500 MCM+500MCM N+500 MCM T
AISLAMIENTO - ISOLATION	THHN - THWN2
CABLE	COBRE SEGÚN NORMA NTC 2050, COPPER
CONDUIT DIAMETRO - DIAMETER	1X4"
CONDUIT TIPO - TYPE	EMT
REGULACIÓN - VOLTAGE DROP	2,27%

LABORATORIO DE ACEITES - OIL LAB -T2
TABLERO DE SOBREPONER, 10KA, 3X40 A, 220 V, 60 HZ, ESPACIO PARA TOTALIZADOR Y PUERTA, 5 HILOS - 3 FASES
WALL-MOUNT, 10KA, 3X40 A , 220 V, 60 HZ, DOOR AND SPACE FOR MAIN CIRCUIT BREAKER, 5 WIRE, 3 PHASE

DESCRIPCIÓN / DESCRIPTION	DESCRIPCIÓN / DESCRIPTION	CANT / QTY.	ACOMETIDA - DUCTO / WIRE - CONDUIT	CARGA UNITARIA VA / UNIT LOAD	CARGA TOTAL VA / TOTAL LOAD	CURRENT A / CURRENT A	INTERRUPTOR (A) / CIRCUIT BREAKER	CIRCUITO / CIRCUIT	FASE (VA) / phase R	FASE (VA) / phase S	FASE (VA) / phase T	CIRCUITO / CIRCUIT	INTERRUPTOR (A) / CIRCUIT BREAKER	CURRENT A / CURRENT A	CARGA TOTAL VA / TOTAL LOAD	CARGA UNITARIA VA / UNIT LOAD	ACOMETIDA - DUCTO / WIRE - CONDUIT	CANT / QTY.	DESCRIPCIÓN / DESCRIPTION	DESCRIPCIÓN / DESCRIPTION
TOMA MONÓFASICA CON POLO A TIERRA GRADO ALTA RESISTENCIA NEMA 5-20R	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	6	1X12+12N+12T - 3/4"	200	1200	10,0	1X20	1	2.600			2	1X20	11,7	1400	200	1X12+12N+12T - 3/4"	7	WALL OUTLET, DUPLEX RECEPTACLE. SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	TOMA MONOFÁSICA CON POLO A TIERRA GRADO ALTA RESISTENCIA NEMA 5-20R
TOMA 2 FASES - ALTA RESISTENCIA	2 PHASES OUTLET - HEAVY DUTY	1	2x10+10T - 3/4"		1905,25589	5,0	2x30	3		2.449		4	1X20	4,5	544	544	1X12+12N+12T - 3/4"	8	LIGHTING	ALUMBRADO
					1905,25589	5,0		5			2.449	6	1X20	4,5	544	544	1X12+12N+12T - 3/4"	8	SUMP PUMP	BOMBA SUMERGIBLE
SUPRESOR DE PICOS - 100 KA L-L,L-N,L-G,-N-G	TVSS 100 KA L-L,L-N,L-G,-N-G						3X30	7		-		8							SPARE	RESERVA
								9			-	10							SPARE	RESERVA
								11	-			12							SPARE	RESERVA
									2.600	2.449	2.449									

TOTAL R	2.600	VA
TOTAL S	2.449	VA
TOTAL T	2.449	VA
SUBTOTAL	**7.499**	**VA**

RESERVA - SPARE 30%	2.250	VA
TOTAL	9.748	VA
CORRIENTE - AMPERAGE	**26**	A
TOTALIZADOR - MAIN BREAKER	3X40	**A**

CABLES DE LA ACOMETIDA - MAIN BRANCH	3X8+8N+ 8T
AISLAMIENTO - ISOLATION	THHN - THWN2
CABLE	UL83, NTC-2050 -1332 ICONTEC
CONDUIT DIAMETRO - DIAMETER	1-1/2"
CONDUIT TIPO - TYPE	EMT
REGULACIÓN - VOLTAGE DROP	1,64%

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BOGOTA , COLOMBIA

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SUPERVISED BY:
I.N.L.
INTERNATIONAL NARCOTICS AND LAW ENFORCEMENT SECTION
EMBASSY OF THE UNITED STATES,
BOGOTA, COLOMBIA

COR: I.N.L. PROJECT ARCHITECT/ENGINEER

PROJECT DESIGN / MANAGEMENT

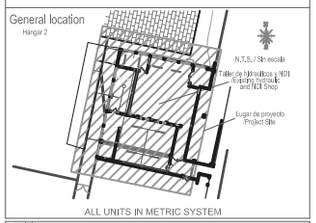
HCSgroup
Engineering and Technical Solutions
8401 Crossland Loop, Montg. AL 36117

NDI SHOP, SIMULATOR AND INSTRUCTION ROOM BUILDING
CNP HANGAR 2, GUAYMARAL
BOGOTÁ, CUNDINAMARCA

Contract/PO No.: SC015013M0030
Contract/PO date: OCT. 2012

Legends/Remarks

General location
Hangar 2



ALL UNITS IN METRIC SYSTEM

Revisions

Rev.No.	Description	Date
1		
2		
3	90% SUBMITTAL	JULY 16
4	90% SUBMITTAL	SEPT. 11
5		
6		
7		
8		
9		
10		

AS-BUILT
TERM FECHA

Phase:
☐35% ☐60% ☐90% ☒100% ☐AS BUILT

Drawing title:
TABLEROS ELÉCTRICOS / ELECTRIC PANEL BOARDS

Drawing file: NDI E1-E3.DWG
Scale: NOT TO SCALE

Code: E-8
Drawing date: OCTOBER 2013
Designed by: ANDRES CALDERON
Profession: ELECTRICAL ENGINEER
Professional ID: CN 205-1550
Signature:

SEGUNDO PISO- SECOND FLOOR - T3

TABLERO DE SOBREPONER, 10KA, 3X150 A, 220 V, 60 HZ, ESPACIO PARA TOTALIZADOR Y PUERTA, 5 HILOS - 3 FASES

WALL-MOUNT , 10KA, 3X150 A , 220 V, 60 HZ, DOOR AND SPACE FOR MAIN CIRCUIT BREAKER, 5 WIRE, 3 PHASE

DESCRIPCIÓN / DESCRIPTION	DESCRIPCIÓN / DESCRIPTION	CANT / QTY.	ACOMETIDA - DUCTO / WIRE - CONDUIT	CARGA UNITARIA VA / UNIT LOAD	CARGA TOTAL VA / TOTAL LOAD	CURRENT A / CURRENT A	INTERRUPTOR (A) / CIRCUIT BREAKER	CIRCUITO / CIRCUIT	FASE (VA) / phase R	FASE (VA) / phase S	FASE (VA) / phase T	CIRCUITO / CIRCUIT	INTERRUPTOR (A) / CIRCUIT BREAKER	CURRENT A / CURRENT A	CARGA TOTAL VA / TOTAL LOAD	CARGA UNITARIA VA / UNIT LOAD	ACOMETIDA - DUCTO / WIRE - CONDUIT	CANT / QTY.	DESCRIPCIÓN / DESCRIPTION	DESCRIPCIÓN / DESCRIPTION
3 POLOS INTERRUPTOR ROTATIVO - UPS QUE ALIMENTA TABLERO 4 - 8KVA	3 POLE - ROTARY BREAKER - FEEDS PANEL BOARD T4 - 8 KVA UPS	1	2X8+8T - 1"	3250	3250	12,79	2X40A	1	4,066			2	20	7	816	68	1X12+12N+12T - 3/4"	12	CLASSROOM LIGHTING	ALUMBRADO CLASE
				3250	3250	12,79		3		8,450		4	2X30A	20	5200	5200	2X8+8T - 1"	1	3 POLES - ROTATIVE BREAKER - FEEDS ELECTRIC PANEL BOARD T5 - 5 KVA UPS	3 POLOS INTERRUPTOR ROTATIVO - UPS QUE ALIMENTA TABLERO 5 - 5KVA
AIRE ACONDICIONADO 1	AIR CONDITIONER 1	1	3X8+8T - 1"		3811		2X30	5			9,011	6			5200	5200				
					3811			7	4,963			8	20	10	1152	96	1X12+12N+12T - 3/4"	12	SIMULATOR LIGHTING	ALUMBRADO SIMULADOR
RESERVA	SPARE							9		432		10	20	4	432	108	1X12+12N+12T - 3/4"	4	CIRCULATION ÁREA LIGHTING	ALUMBRADO ÁREA CIRCULACIÓN
AIRE ACONDICIONADO 2	AIR CONDUITIONER 2	1	3X8+8T - 1"		3811		3X30	11			3,611	12							SPARE	RESERVA
					3811			13	3,811			14							SPARE	RESERVA
RESERVA	SPARE				3811			15		3,811		16	3X30							
RESERVA	SPARE							17				18							TVSS 100 KA L-L,L-N,L-G,N-G	SUPRESOR DE PICOS 100 KA L-L,L-N,L-G,N-G
RESERVA	SPARE							19				20								
RESERVA	SPARE							21				22							SPARE	RESERVA
RESERVA	SPARE							23				24							SPARE	RESERVA
									12,839	12,693	12,821									

TOTAL R	12,839	VA
TOTAL S	12,693	VA
TOTAL T	12,821	VA
SUBTOTAL	**38,353**	**VA**

RESERVA - SPARE 30%	11,506	VA
TOTAL	49,858	VA
CORRIENTE - AMPERAGE	**131**	A
TOTALIZADOR - MAIN BREAKER	3X150	**A**

CABLES DE LA ACOMETIDA - MAIN BRANCH	3X1/0+1/0N+1/0T -
AISLAMIENTO - ISOLATION	THHN - THWN2
CABLE	UL83, NTC-1332 ICONTEC
CONDUIT DIAMETRO - DIAMETER	1X3"
CONDUIT TIPO - TYPE	IMC, NORMA NTC169- NTC 2050 (345)
REGULACIÓN - VOLTAGE DROP	1,04%

AREA DE INSTRUCCIÓN - INSTRUCTION ROOM- T4

TABLERO DE SOBREPONER, BIFÁSICO, 10KA, 2X40 A, 120 V, 60 HZ,

WALL-MOUNT , 10KA, 2X40 A , 220 V, 60 HZ, 4 WIRE, 2 PHASE

DESCRIPCIÓN / DESCRIPTION	DESCRIPCIÓN / DESCRIPTION	PUNTOS / QTY.	ACOMETIDA - DUCTO / WIRE - CONDUIT	CARGA UNITARIA VA / UNIT LOAD	CARGA TOTAL VA / TOTAL LOAD	CURRENT A / CURRENT A	INTERRUPTOR (A) / CIRCUIT BREAKER	CIRCUITO / CIRCUIT	FASE (VA) / phase S	FASE (VA) / phase T	CIRCUITO / CIRCUIT	INTERRUPTOR (A) / CIRCUIT BREAKER	CURRENT A / CURRENT A	CARGA TOTAL VA / TOTAL LOAD	CARGA UNITARIA VA / UNIT LOAD	ACOMETIDA - DUCTO / WIRE - CONDUIT	PUNTOS / QTY.	DESCRIPCIÓN / DESCRIPTION	DESCRIPCIÓN / DESCRIPTION
3 POLOS INTERRUPTOR ROTATIVO - UPS QUE ALIMENTA TABLERO 4 - 8KVA	3 POLES - ROTARY SWITCH - FEEDS 8 KVA UPS WHICH FEEDS T4	1	2X8+8N+8T	5200	5200	43,3	2X30	1	1,200		2	15	10	1200	200	1X12+12N+12T - 3/4"	6	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	TOMA MONOFÁSICA CON POLO A TIERRA GRADO ALTA RESISTENCIA NEMA 5-20R
				5200	5200	43,3		3		1,200	4	15	10	1200	200	1X12+12N+12T - 3/4"	6	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	TOMA MONOFÁSICA CON POLO A TIERRA GRADO ALTA RESISTENCIA NEMA 5-20R
TOMA MONOFÁSICA CON POLO A TIERRA GRADO ALTA RESISTENCIA NEMA 5-20R	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	6	1X12+12N+12T - 3/4"	200	1200	10,0	15	5	2,400		6	15	10	1200	200	1X12+12N+12T - 3/4"	6	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	TOMA MONOFÁSICA CON POLO A TIERRA GRADO ALTA RESISTENCIA NEMA 5-20R
TOMA MONOFÁSICA CON POLO A TIERRA GRADO ALTA RESISTENCIA NEMA 5-20R	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	6	1X12+12N+12T - 3/4"	200	1200	10,0	15	7		1,200	8							SPARE	RESERVA
RESERVA	SPARE							9			10							SPARE	RESERVA
RESERVA	SPARE							11			12							SPARE	RESERVA
									3,600	2,400									

TOTAL S	3,600	VA
TOTAL T	2,400	VA
SUBTOTAL	**6,000**	**VA**

RESERVA - SPARE 30%	1,800	VA
TOTAL	7,800	VA
CORRIENTE - AMPERAGE	**31**	A
TOTALIZADOR - MAIN BREAKER	2X40A	**A**

CABLES DE LA ACOMETIDA - MAIN BRANCH	2X8+8N+8T
AISLAMIENTO - ISOLATION	THHN - THWN2
CABLE	UL83, NTC-1332 ICONTEC
CONDUIT DIAMETRO - DIAMETER	1X1"
CONDUIT TIPO - TYPE	IMC, NORMA NTC169- NTC 2050 (345)
REGULACIÓN - VOLTAGE DROP	0,96%

SIMULADOR - SIMULATOR - T5

TABLERO DE SOBREPONER, BIFÁSICO, 10KA, 2X20 A, 120 V, 60 HZ,

WALL-MOUNT , 10KA, 20 A , 220 V, 60 HZ, 4 WIRE, 2 PHASE

DESCRIPCIÓN / DESCRIPTION	DESCRIPCIÓN / DESCRIPTION	PUNTOS / QTY.	ACOMETIDA - DUCTO / WIRE - CONDUIT	CARGA UNITARIA VA / UNIT LOAD	CARGA TOTAL VA / TOTAL LOAD	CURRENT A / CURRENT A	INTERRUPTOR (A) / CIRCUIT BREAKER	CIRCUITO / CIRCUIT	FASE (VA) / phase R	FASE (VA) / phase S	CIRCUITO / CIRCUIT	INTERRUPTOR (A) / CIRCUIT BREAKER	CURRENT A / CURRENT A	CARGA TOTAL VA / TOTAL LOAD	CARGA UNITARIA VA / UNIT LOAD	ACOMETIDA - DUCTO / WIRE - CONDUIT	PUNTOS / QTY.	DESCRIPCIÓN / DESCRIPTION	DESCRIPCIÓN / DESCRIPTION
3 POLOS INTERRUPTOR ROTATIVO - UPS QUE ALIMENTA TABLERO 5 - 5KVA	3 POLES - ROTARY SWITCH - FEEDS 5 KVA UPS WHICH FEEDS T5	1	2X8+8T - 1"	3250	3250	27,1	2X30	1	1,600		2	15	13	1600	200	X12+12N+12T - 3/4"	8	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, ISOLATED WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	TOMA MONOFÁSICA CON POLO A TIERRA AISLADA GRADO ALTA RESISTENCIA NEMA 5-20R
				3250	3250	27,1		3		1,000	4	15	8	1000	200	X12+12N+12T - 3/4"	5	WALL OUTLET, DUPLEX RECEPTACLE, SINGLE PHASE, ISOLATED WITH GROUND CONNECTION, HEAVY DUTY, NEMA 5-20R	TOMA MONOFÁSICA CON POLO A TIERRA AISLADA GRADO ALTA RESISTENCIA NEMA 5-20R
RESERVA	SPARE							5	-		6							SPARE	RESERVA
RESERVA	SPARE							7		-	8							SPARE	RESERVA
RESERVA	SPARE							9			10							SPARE	RESERVA
RESERVA	SPARE							11			12							SPARE	RESERVA
									1,600	1,000									

TOTAL R	1,600	VA
TOTAL S	1,000	VA
SUBTOTAL	**2,600**	**VA**

RESERVA - SPARE 30%	780	VA
TOTAL	5,000	VA
CORRIENTE - AMPERAGE	**20**	A
TOTALIZADOR - MAIN BREAKER	2X30A	**A**

CABLES DE LA ACOMETIDA - MAIN BRANCH	2X8+8N+8T
AISLAMIENTO - ISOLATION	THHN - THWN2
CABLE	UL83, NTC-1332 ICONTEC
CONDUIT DIAMETRO - DIAMETER	1X1"
CONDUIT TIPO - TYPE	IMC, NORMA NTC169- NTC 2050 (345)

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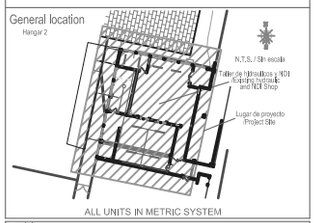
General location
Hangar 2



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Revisions

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1		
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3	90% SUBMITTAL	JULY 16
4	90% SUBMITTAL	SEPT. 11
5		
6		
7		
8		
9		
10		

AS-BUILT

Phase:
☐35% ☐60% ☐90% ☒100% ☐AS BUILT

Drawing title:
TABLEROS ELÉCTRICOS / ELECTRIC PANEL BOARDS

Drawing file:
NDI E1432.DWG

Scale:
NOT TO SCALE

Code
E-9

Drawing date: OCTOBER 2013
Designed by: ANDRES CALDERON
Profession: ELECTRICAL ENGINEER
Professional ID: CN 205-1550
Signature: