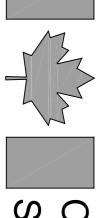
DING 65, SHIRLEY'S BAY

Yves Saulnier

Executive Director, Corporate Services & Human Resources

S N N MP REPLACEMENT CLEAN ROOMS



Canadian
Space Agency canadienne Agence spatiale

DAVID FLORIDA LABORATORY
BUILDING No. 65, SHIRLEY'S BAY, ONTARIO

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(B) A

SUMP PUMP REPLACEMENT NON-CLEAN ROOMS

COVER SHEET

CSA15-M5A

no. du pro

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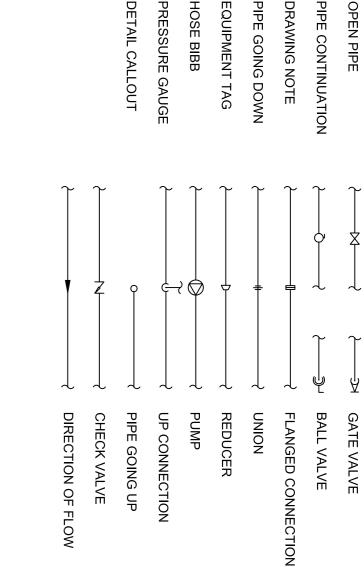
SEPTEMBER 2015

Canadian Space Age Agence spat canadienne

JOSEE BERGERON
Director, Security & Facilities

M. FARID, P. Eng.

MECHANICAL LEGEND



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P-E4-A

E100	E001		M103	M102	M101	M100		DRAWING #	
PARTIAL BASEMENT POWER LAYOUTS - DEMOLITION AND NEW	GENERAL NOTES, LEGEND & DRAWING LIST	ELECTRICAL	DETAILS & SCHEDULES	DETAILS	DETAILS	AREA OF WORK	MECHANICAL	DRAWING TITLE	GENERAL

DR. AWING LIST

GENERAL NOTES

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS AND SPECIFICATIONS FROM THIS AND ALL OTHER DISCIPLINES.

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- CONTRACTOR SHALL BE RESPONSIBLE FOR CAREFUL AND DETAILED COORDINATION OF ALL SERVICE OUTAGES REQUIRED TO EXECUTE THIS PROJECT. COORDINATE AND SCHEDULE ALL OUTAGES TO OWNER'S SATISFACTION.
- WHERE PENETRATIONS ARE CREATED IN EXISTING BUILDING PARTITIONS, CONTRACTOR SHALL PROVIDE FIRESTOP AND FIRE-RATED SEALANT AROUND INSTALLED SERVICES TO MAINTAIN THE FIRE RATING OF THE EXISTING PARTITIONS. CONTRACTOR TO PROTECT ALL ARCHITECTURAL FINISHES & FLOORING DURING CONSTRUCTION, BE RESPONSIBLE FOR ANY DAMAGES TO EXISTING SURFACES RESULTING FROM ALL PROJECT'S WORK. THE CONTRACTOR SHALL MAKE GOOD ALL DAMAGED SURFACES INCLUDING ANY PAINT TOUCH-UPS REQUIRED. REPAIR ALL WALLS, FLOORS & CEILINGS IN CORE AREA WHERE MECHANICAL & ELECTRICAL SERVICES PASS THROUGH.
- TEMPORARY SUMP PUMPS CONNECTED TO EXISTING BUILDING SERVICES MUST BE SUPPLIED AND USED BY CONTRACTOR DURING DEMOLITION OF EXISTING EQUIPMENT TO ELIMINATE FLOODING RISK TO ADJACENT AREAS. PROVIDE 72 HOURS NOTICE TO CSA TO ARRANGE FOR ANY SERVICES SHUTDOWNS. CONTRACTOR SHALL CONFIRM LOCATIONS OF TEMPORARY SEQUIPMENT ON SITE PRIOR TO COMMENCING DEMOLITION AND NEW WORKS.
- PROVIDE FLOOR PROTECTION TO ENTIRE PROJECT AREAS AS FOLLOW:

 FLOOR TO BE WIPED CLEAN FROM ANY DEBRIS OR DUST PARTICLES.

 PROVIDE MIN. 1/8" FOAM LAYER DIRECTLY ON ALL FLOORING.

 PROVIDE HARD SHEETS ON TOP OF FOAM LAYER, ALL SHEETS SEAMS TO BE DUCK-TAPED TO PREVENT DEBRIS / DUST FROM GETTING TRAPPED UNDER THE PROTECTION SHEETS. USE OF OSB SHEETS IS NOT PERMITTED.

- CONTRACTOR TO PROVIDE BILINGUAL CONSTRUCTION, ACCESS & SAFETY SIGNAGE, SIGNS TO POSTED ON ALL PROJECT BOARDERS & ENTRANCES AT THE START OF THE PROJECT AND BEFORE COMMENCING ANY WORK.

- SITE PLANS AND ARCHITECTURAL BACKGROUNDS IN DRAWINGS ARE REPRESENTATIVE ONLY. THESE BACKGROUNDS ARE BASED ON THE EXISTING DRAWINGS MADE AVAILABLE BY THE OWNER. ACTUAL SITE CONDITIONS AND LATEST ARCHITECTURAL DOCUMENTS MAY VARY FROM DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW THE SITE CONDITIONS DURING THE TENDER PERIOD AND EXAMINE THE EXTENT OF THE DEMOLITION, REMOVALS & NEW INSTALLATIONS TO INCLUDE IN THE TENDER PRICE ALL NECESSARY LABOR AND MATERIAL REQUIRED FOR A FULLY OPERABLE SYSTEM AS INTENDED. COORDINATE EXACT LOCATIONS OF NEW EQUIPMENT WITH EXISTING STRUCTURES, OTHER SERVICES AND TRADES.

1. EXACT TARPING LIMITS AND ACCESS ROUTES TO BE DETERMINED ON SITE IN COORDINATION WITH CSA PROJECT MANAGER.

• ALL TARPS TO BE **NEW** HEAVY DUTY POLYETHYLENE, WATER / MILDEW / TEAR RESISTANT, **WHITE**, TIGHT SEALED FROM DECK TO FLOOR, CONTRACTOR TO PROVIDE ACCESS ZIPPERS OR DOORS AS REQUIRED BY CSA, USE METAL STUDS AS FRAMING SUPPORTS, NO WOOD MATERIALS TO BE USED IN TARPS CONSTRUCTION UNLESS APPROVED BY CSA.

• APPROVED METHODS TO ATTACH STUDS / TARPS TO BUILDING AS FOLLOW:
-ON FLOORS: HEAVY DUTY COMMERCIAL DOUBLE SIDED TAPE TO SECURE METAL STUDS TO FLOORS, USE OF SCREWS OR TAPCONS ARE NOT PERMITTED.

M FARID, P

Eng.

JOSEE BERGERON

DRYWALLS / MASONRY / METAL SIDING WALLS: DUCT OR TUCK TAPE IS DRYWALLS / MASONRY / METAL SIDING WALLS: DUCT OR TUCK TAPE IS ALLOWED DIRECTLY ON BUILDING FINISHES AS IT WILL DAMAGE THEM NEMOVED; APPLY MASKING PAINT GREEN TAPE FIRST AND THEN DUCT K TAPE ON TOP OF IT. STUDS CAN BE SCREWED TO DRYWALL / DNRY WALLS GIVING THAT ALL HOLES WILL BE PATCHED & PAINTED LE WALL / AREA TO BE PAINTED, SMALL / LOCAL PAINT PATCHES ARE

ACCESS TO THE SITE FOR MATERIAL, WORK FORCES AND FOR WASTE REMOVAL IS TO BE COORDINATED WITH CSA PROJECT MANAGER, USE ONLY ELEVATORS DESIGNATED BY CSA AND PROTECT THEM FROM DAMAGE.

GENERAL NOTES

Canadian Agency

- CSA SHALL BE GIVEN THE OPTION OF RETAINING ANY REMOVED COMPONENTS OR EQUIPMENT. COORDINATE AND HAND OVER TO CSA PROJECT MANAGER AS REQUIRED. DISPOSE OF ANY REMAINING OR UNWANTED EQUIPMENT OR SERVICES AND REMOVE OFF SITE IN A LEGAL MANNER AND COMPLY WITH THE ENVIRONMENTAL PROTECTION ACT, ONTARIO REGULATIONS FOR WASTE MANAGEMENT PROGRAM. CERTIFICATE OF DISPOSAL TO BE HANDED OVER TO OWNER AFTER REMOVALS ARE DONE.

5

NOT PERMITTED).
TARPS COULD BE HEARTH CABLE TO CROSS RUNS OR TO HANGING TARPS FER SUPPORTS, HANGER SUPPORTS, HANGER SUPPORTS H

BE HANGED OFF BUILDING STEEL STRUCTURAL USING HIGH BE HANGED OFF BUILDING STEEL STRUCTURAL USING HIGH TO DISTRIBUTE TARPS LOAD.
R TO DISTRIBUTE TARPS LOAD.
PS FROM BUILDING SERVICES (DUCTWORK, CONDUITS, PIPES, IGERS, ETC.) IS NOT PERMITTED.
IS RESPONSIBLE FOR CLEANING, PATCHING, REPAIRING & AMAGED SURFACES & TAPE MARKS AFTER REMOVING TARPS Y UNISTRUTS.

CONTRACTOR SHALL BE RESPONSIBLE TO KEEP THE OWNER'S ACCESS AREAS AND CORRIDORS CLEAN AT ALL TIMES.

• CLEAN AND REMOVE ALL DEMOLITION AND CONSTRUCTION WASTE FROM PROJECT SITE ON DAILY BASIS AND UPON COMPLETION OF PROJECT.

• DO NOT USE CSA WASTE CONTAINERS. AN AREA WILL BE DESIGNATED FOR LOCATING CONTRACTOR WASTE BINS.

CONTRACTOR TO PROVIDE ALL CLEANING EQUIPMENT & SUPPLIES, USE OF BUILDING CLEANING EQUIPMENT OR SUPPLIES ARE NOT PERMITTED.

SMOKE EATERS & POWERED EXHAUST FANS VENTED TO OUTSIDE OF BUILDING MUST BE USED DURING ALL BRAZING / WELDING / SOLDERING / CUTTING / GRINDING ACTIVITIES TO MINIMIZE CONTAMINATION & ODOR TO ADJACENT AREAS PARTICULARLY IN CLEAN ROOMS. PROVIDE 72 HOURS NOTICE TO CSA TO ARRANGE FOR HOT WORK PERMITS.

3

DO NOT SUBJECT ANY PART OF THE BUILDING TO ANY NOISE, DUST OR ANY OTHER UNACCEPTABLE ENVIRONMENTAL CONDITIONS DURING THE COURSE OF THE PROJECT. ANY NOISY / DUSTY / SMELLY ACTIVITIES SHALL BE DONE AFTER REGULAR WORKING HOURS OR WEEKENDS, COORDINATE WITH CSA PROJECT MANAGER WITH A MINIMUM NOTICE OF 72 HOURS.

- WHILE IN BUILDING AND ON CAMPUS.

 CSA WILL PROVIDE SECURITY COMMISSIONAIRES TO ESCORT.

 PRIOR TO PROJECT START, GC TO PROVIDE A FULL LIST OF ALL PERSONNEL WORKING ON THE PROJECT AS WELL ENGINEERS, SUPPLIERS & INSPECTORS IF POSSIBLE TO ISSUE NECESSARY FORMS FOR SITE AND BUILDING ACCESS. PROVIDE AT LEAST 72 HOURS NOTICE FOR ANY ADDITIONAL NAMES OR FOR AFTER HOURS OR WEEKEND WORK.

 NOTIFY CSA IMMEDIATELY OF ANY CHANGE IN SCHEDULE THAT AFFECTS THE NEED FOR SECURITY ESCORTS. INDIVIDUALS WHO ARE NOT ON THAT LIST WILL BE DENIED ACCESS WITH NO EXCEPTION.
- GENERAL CONTRACTOR REPRESENTATIVE HAS TO BE PRESENT ON SITE AT ALL TIMES AND ACCOMPANY ALL SUB-TRADES WORKERS; SUB-TRADES ARE NOT ALLOWED TO BE ON SITE OR TO WORK WITHOUT THE PRESENCE OF GC-NO EXCEPTIONS.

15.

CSA IS COMMITTED TO ENSURING A HEALTHY AND SAFE ENVIRONMENT FOR ITS EMPLOYEES, CONTRACTORS AND VISITORS AND WILL ALIGN ITSELF WITH CONTRACTORS WHO SHARE IN THIS VISION.

• THE REQUIREMENTS OUTLINED BELOW ARE PROVIDED AS REFERENCE AND ARE THERE TO ASSIST THE CONTRACTING COMPANY WHO PERFORMS THE WORK AND ACCEPTS THIS COMMITMENT COMPLETELY:

- ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT:

<u>1</u>6.

- S.GOV.ON.CA
 HEALTH AND SAFETY ASSOCIATION "GUIDE TO
 'H AND SAFETY POLICIES AND PROGRAMS IN
 COMPREHENSIVE GUIDE GEARED TO MID- TO LARGE-SIZED
 TORS FOR DEVELOPING AND IMPLEMENTING AN
 AND SAFETY PROGRAM:
- HEALTH AND SAFETY ASSOCIATION "CONSTRUCTION MANUAL". GUIDANCE ON HAZARD CONTROLS FOR
- LL APPLICABLE TRAINING CERTIFICATES MUST BE PROVIDED

 MMENCING ANY WORK. CERTIFICATES MUST SHOW EXACT

 AME AND ADDRESS THAT PROVIDED THE TRAINING. CSA

 HE RIGHT TO REQUEST THE COURSE OUTLINE FROM THE

 HAT PROVIDED THE TRAINING. IF THE PROOF OF TRAINING DOES

 STRATE THE WORKER AS BEING COMPETENT OPERATORS,

 AINING MAY BE REQUESTED BY THE CSA PRIOR TO COMMENCING

 IT NO ADDITIONAL COST.

 GENERAL CONTRACTOR MUST BE ON SITE TO RECEIVE THE

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ES TO FOLLOW BUILDING SERVICE ELEVATIONS STANDARD AS	HE LIFT FROM THE COMPANY.	TOR SCHEDULED TO USE THE EQUIPMENT MUST INSPECT AND	. IF THE DELIVERY PERTAINS TO LIFTING EQUIPMENT, THE QUALIFIED	יט. מראביאלי ממש האמי מי מד מש מייר יס ארמבייר
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			CLEAR MAINTENANCE & HEAD ROOM ZONE - MINIMUM OF 8"
SUSPENDED		ZONE 5	ZONE 4: • COMMUNICATION TRAYS (NETWORK, FIBER OPTICSETC.)
		ZONE 3	 MECHANICAL PIPING (CHWS/R, HWS/R, DCW, DHW, CAETC.)
~	1	ZONE 2	 ZONE 2: SUPPLY / RETURN DUCTWORK EXHAUST DUCTWORK
CEILING STRUCTURE		ZONE 1	ZONE 1: • ELECTRIC EMT CONDUITS (POWER, CONTROLS, FIREETC.) • DRAINS & WELDED MECHANICAL PIPING W/ MINIMUM POSSIBLE LEAKAGE

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Revision

A detail no.
no. du detail
B location drawir
sur dessin no.
C drawing no.
dessin no.

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DAVID FLORIDA LABORATORY BUILDING No. 65, SHIRLEY'S BAY, ONTARIO

SUMP PUMP REPLACEMENT NON-CLEAN ROOMS

MECHANICAL

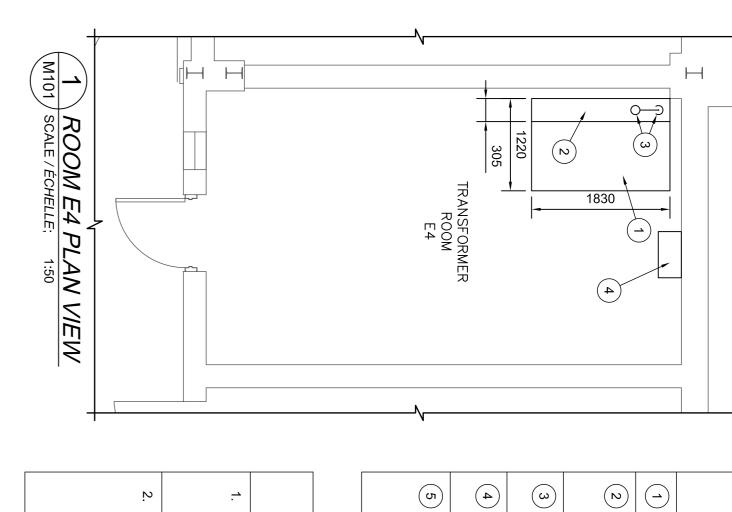
DRAWING LIST, GENERAL NOTES LEGEND AND AREA OF WORK

A. OVODOV 2015-09-08 M. FARID 2015-09-08 NTS no du proje

CSA15-M5A M100

1 AREA O

F WORK



DRAWINGS NOTES

EXISTING 1830 × 1220 × 2360 DEEP SUMP PIT E4 WITH DOUBLE-OPENING HATCHES.

305mm WIDE PERMANENT SUMP COVER PLATE TO BE REPLACED. EXISTING SUMP PIT OUTLET PIPES FOR PUMPS E4-A AND E4-B ARE ROUTED THROUGH COVER PLATE.

6

EXISTING 100ø SUMP PIT INSULATED OUTLET PIPING CONNECTED TO EXISTING SUBMERSIBLE SUMP PUMPS E4-A AND E4-B.

 \bigcirc

4

- EXISTING CONTROL PANEL FOR DUPLEX SUMP PUMPS E4-A AND E4-B. CONTROL PANEL TO BE REPLACED WITH NEW AND CONNECTED TO EXISTING BAS.
- SHADED AREA IS DEMOLITION AND NEW INSTALLATION SCOPE. NEW WORK TO TIE INTO EXISTING PIPING IN SAME MANNER AS EXISTING LAYOUT. REFER TO 1-M103 FOR GENERAL INSTALLATION DETAIL FOR SUBMERSIBLE SUMP PUMPS.

SCOPE OF WORK

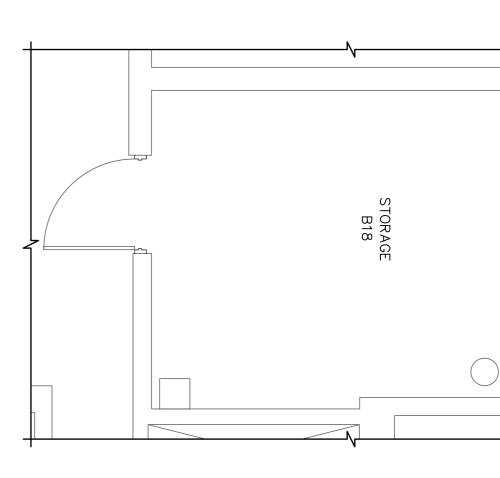
- 2 DEMOLISH SUMP PUMPS P-E4-A AND P-E4-B, INCLUDING DISCHARGE ELBOWS, DISCHARGE GATE AND CHECK VALVES, DISCHARGE PIPING UP TO GATE VALVES, GUIDE BARS, CONTROL PANEL, COVER PLATE, AND CONTROL DEVICES.
- INSTALL NEW SUMP PUMPS AS PER PUMP SCHEDULE, INCLUDING NEW DISCHARGE PIPING UP TO DEMOLITION POINT. INSTALL NEW UNION ON DISCHARGE PIPING WITHIN PIT. PROVIDE AND INSTALL NEW COVER PLATE, DISCHARGE VALVES, GUIDE BARS, DISCHARGE ELBOWS, CONTROL PANEL, AND CONTROL DEVICES. CONNECT NEW CONTROL PANEL TO BAS SYSTEM. REFER TO BAS CONNECTION REQUIREMENTS ON DRAWING M103.

4 ROOM B18 PLAN VIEW

M101 SCALE / ÉCHELLE; 1:50

(o)

(8)







SCOPE OF WORK

- DEMOLISH SUMP PUMPS P-B18-A AND P-B18-B, INCLUDING DISCHARGE ELBOWS, DISCHARGE GATE AND CHECK VALVES, DISCHARGE PIPING UP TO GATE VALVES, GUIDE BARS, CONTROL PANEL, COVER PLATE, AND CONTROL DEVICES.
- INSTALL NEW SUMP PUMPS AS PER PUMP SCHEDULE, INCLUDING NEW DISCHARGE PIPING UP TO DEMOLITION POINT. INSTALL NEW UNION ON DISCHARGE PIPING WITHIN PIT. PROVIDE AND INSTALL NEW COVER PLATE, DISCHARGE VALVES, GUIDE BARS, DISCHARGE ELBOWS, CONTROL PANEL, AND CONTROL DEVICES. CONNECT NEW CONTROL PANEL TO BAS SYSTEM. REFER TO BAS CONNECTION REQUIREMENTS ON DRAWING M103.

SHADED AREA IS DEMOLITION AND NEW INSTALLATION SCOPE. NEW WORK TO TIE INTO EXISTING PIPING IN SAME MANNER AS EXISTING LAYOUT. REFER TO 1-M103 FOR GENERAL INSTALLATION DETAIL FOR SUBMERSIBLE SUMP PUMPS.

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DRAWINGS NOTES

M. FARID, P. Eng. Manager, Building Operations & Security

- EXISTING TOPENING I 760 × 760 × 1270 DEEP SUMP PIT B18 WITH HATCH.
- 200mm WIDE PERMANENT SUMP COVER PLATE. EXISTING SUMP PIT OUTLET PIPES FOR P-B18-A AND P-B18-B ARE ROUTED THROUGH COVER PLATE.

(2)

' (_) '

75ø SUMP PIT OUTLET PIPING CONNECTED TO PUMPS P-B18-A AND P-B18-B.

 \bigcirc

- EXISTING EXISTING EXISTING 75ø VENT PIPING FOR SUMP PIT B18.
- EXISTING OP-B18-A AN CONTROL PANEL FOR DUPLEX SUMP PUMPS ND P-B18-B. CONTROL PANEL TO BE REPLACED V AND CONNECTED TO EXISTING BAS

(5)

4

EXISTING 50ø DRAIN LINE THROUGH COVER PLATE INTO SUMP PIT B18.

(b)

(7)

- COVER PLATE WITH OPENING HATCH PROVIDING ACCESS TO SUMP PIT B18.
- EXISTING 75ø SUMP PIT B18 DISCHARGE PIPING THROUGH ROOM TO TIE INTO 100ø BUILDING SANITARY LINE.

(8)

- EXISTING T 75ø SUMP PIT B18 VENT LINE THROUGH ROOM REAR WALL.
- 50ø DRAIN LINE, OPEN TO SUMP PIT B18, CONTINUES THROUGH ROOM.

(d)

(o)

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DAVID FLORIDA LABORATORY BUILDING No. 65, SHIRLEY'S BAY, ONTARIO

SUMP PUMP REPLACEMENT NON-CLEAN ROOMS

MECHANICAL DETAILS

A. OVODON 2015-09-08 M. FARID 2015-09-08

CSA15-M5A M101

3 SUMP PIT E4 EXISTING/DEMOLITION
M101 SCALE / ÉCHELLE; NTS

SUMP PIT E4

(0)

2360

M101

SUMP PIT E4 PHOTO
SCALE / ÉCHELLE; NTS

100ø

M101

1270

P-B18-A

P-B18-B

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SUMP PIT B18

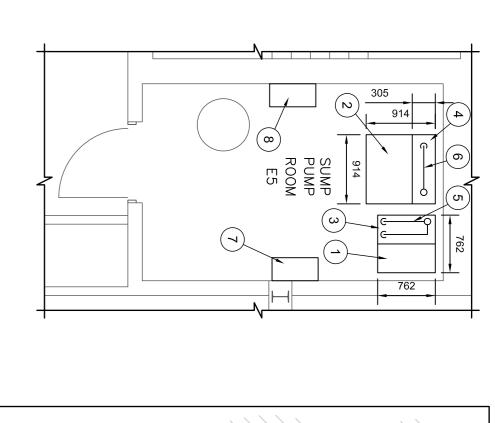
75ø

(a)

SUMP PIT B18 EXISTING/DEMOLITION
SCALE / ÉCHELLE; NTS

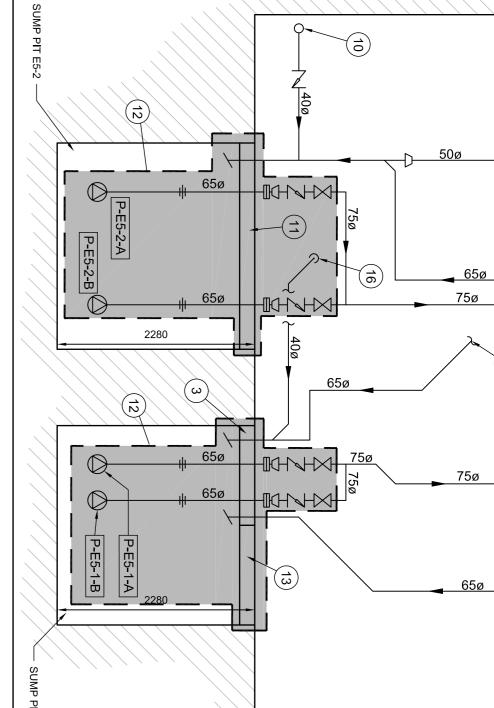
JOSEE BERGERON

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ROOM E5 PLAN VIEW
SCALE / ÉCHELLE; 1:50

SUMP PITS E5-1/E5-2 EXISTING/DEMO





SUMP PITS E5-1 AND E5-2 SCALE / ÉCHELLE; NTS

SCOPE 유 WORK

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INSTALL NEW SUMP PUMPS AS PER PUMP SCHEDULE, INCLUDING NEW DISCHARGE PIPING UP TO DEMOLITION POINT. INSTALL NEW UNION ON DISCHARGE PIPING WITHIN PIT. PROVIDE AND INSTALL NEW COVER PLATE, DISCHARGE VALVES, GUIDE BARS, DISCHARGE ELBOWS, CONTROL PANEL, AND CONTROL DEVICES. CONNECT NEW CONTROL PANEL TO BAS SYSTEM. REFER TO BAS CONNECTION REQUIREMENTS ON DRAWING M103.

PHOTO

DEMOLISH SUMP PUMPS P-E5-1-A, P-E5-1-B, P-E5-2-A AND P-E5-2-B, INCLUDING DISCHARGE ELBOWS, DISCHARGE GATE AND CHECK VALVES, DISCHARGE PIPING UP TO GATE VALVES, GUIDE BARS, CONTROL PANEL, COVER PLATE, AND CONTROL DEVICES.

4

7 (D) (ŋ)

EXISTING CONTROL PANEL FOR DUPLEX SUMP PUMPS P-E5-1-A AND P-E5-1-B. CONTROL PANEL TO BE REPLACED WITH NEW AND CONNECTED TO EXISTING BAS.

EXISTING CONTROL PANEL FOR DUPLEX SUMP PUMPS P-E5-2-A AND P-E5-2-B. CONTROL PANEL TO BE REPLACED WITH NEW AND CONNECTED TO EXISTING BAS.

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 $50\emptyset$ VENT LINE FOR SUMP PIT E5-2.

(o)

SHADED AREA IS DEMOLITION AND NEW INSTALLATION SCOPE. NEW WORK TO TIE INTO EXISTING PIPING IN SAME MANNER AS EXISTING LAYOUT. REFER TO 1-M103 FOR GENERAL INSTALLATION DETAIL FOR SUBMERSIBLE SUMP PUMPS. COVER PLATE WITH OPENING HATCH PROVIDING ACCESS TO SUMP PIT E5-2. DRAIN LINE, OPEN TO SUMP PIT E5-2, CONTINUES THROUGH ROOM.

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 $(\frac{1}{2})$

(a)

COVER PLATE WITH OPENING HATA TCH PROVIDING

(<u>1</u>)

EXISTING 75ø SUMP PIT E5-1 DISCHARGE PIPING THROUGH ROOM TO TIE INTO 100ø BUILDING SANITARY LINE.

EXISTING 75ø SUMP PIT E5-2 DISCHARGE PIPING THROUGH ROOM TO TIE INTO 100ø BUILDING STORM LINE. DRAIN LINE, OPEN TO SUMP PIT E5-1, CONTINUES THROUGH ROOM.

(15)

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M₁₀₂

4 ROOM M5 PLAN VIEW
M102 SCALE / ÉCHELLE; 1:50

MECHANICAL ROOM M5



SUMP PITS M5 PHOTO SCALE / ÉCHELLE; NTS

DRAWINGS NOTES

(<u>-</u> 5 WITH RAISED PIT NEATH STAIRS. PIT D REPLACED WITH NEW

EXISTING 32ø SUMP PIT M5 DISCHARGE LINE THROUGH ROOM.

EXISTING 135mm HIGH PIT COVER TO BE REPLACED.

SHADED AREA IS DEMOLITION AND NEW INSTALLATION SCOPE. NEW WORK TO TIE INTO EXISTING PIPING IN SAME MANNER AS EXISTING LAYOUT. REFER TO 1-M103 FOR GENERAL INSTALLATION DETAIL FOR SUBMERSIBLE SUMP PUMPS.

SCOPE OF ≶ ORK

M102 5

SUMP PIT M5 EXISTING/DEMOLITION
SCALE / ÉCHELLE; NTS

EXISTING 610 x 610 SUMP PIT M5 W COVER. PIT IS LOCATED UNDERNE. COVER TO BE DEMOLISHED AND R COVER PLATE.

EXISTING CONTROL PANEL FOR PUMP M5-A. CONTROL PANEL TO BE REPLACED WITH NEW AND CONNECTED TO EXISTING BAS. PANEL IS LOCATED UNDERNEATH STAIRS. EXISTING 25ø SPRINKLER DRAIN LINES FROM SPRINKLER NETWORK TO SUMP PIT M5.

EXISTING 65ø SANITARY PIPING THROUGH ROOM TO SANITARY MAIN.

(J

(b)

4

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(N)

DEMOLISH SUMP PUMP P-M5-A, INCLUDING DISCHARGE ELBOWS, DISCHARGE GATE AND CHECK VALVES, DISCHARGE PIPING UP TO GATE VALVES, GUIDE BARS, CONTROL PANEL, COVER PLATE, AND CONTROL DEVICES.

INSTALL NEW SUMP PUMPS AS PER PUMP SCHEDULE, INCLUDING NEW DISCHARGE PIPING UP TO DEMOLITION POINT. INSTALL NEW UNION ON DISCHARGE PIPING WITHIN PIT. PROVIDE AND INSTALL NEW COVER PLATE, DISCHARGE VALVES, GUIDE BARS, DISCHARGE ELBOWS, CONTROL PANEL, AND CONTROL DEVICES. CONNECT NEW CONTROL PANEL TO BAS SYSTEM. REFER TO BAS CONNECTION REQUIREMENTS ON DRAWING M103.

DRAWINGS NOTES

EXISTING 915 \times 915 \times 2280 DEEP SUMP PIT E5-2 WITH OPENING HATCH. EXISTING 760 × 760 × 2280 DEEP SUMP PIT E5-1 WITH OPENING HATCH.

(N)

(<u>-</u>

380mm WIDE PERMANENT SUMP COVER PLATE TO BE REPLACED. EXISTING SUMP PIT OUTLET PIPES FOR P-E5-1-A AND P-E5-1-B ARE ROUTED THROUGH COVER PLATE.

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305mm WIDE PERMANENT SUMP COVER PLATE TO BE REPLACED. EXISTING SUMP PIT OUTLET PIPES FOR P-E5-2-A AND P-E5-2-B ARE ROUTED THROUGH COVER PLATE.

EXISTING 75ø SUMP PIT OUTLET PIPING CONNECTED TO EXISTING PUMPS P-E5-1-A AND P-E5-1-B.

EXISTING 75ø SUMP PIT OUTLET PIPING CONNECTED TO EXISTING PUMPS P-E5-2-A AND P-E5-2-B.

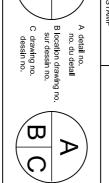
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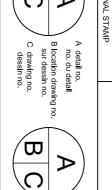
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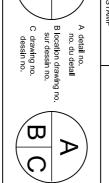
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	FLORIDA LABORATORY		dessin no.
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SUMP PUMP REPLACEMENT NON-CLEAN ROOMS

		MECHANICAL	
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CSA15-M5A no. du proje

A. OVODOV 2015-09-08 M. FARID 2015-09-08

M102

M. FARID, P. Eng.
Manager, Building Operations & Security

JOSEE BERGERON

	PRETE SUMP PITS SHALL DRAINED OUT TO CONTAL BE CLEANED AND DRIED. CONTRACTOR SHALL RISELF-LEVEL BOTTOM OF SMEPPITS INCLUDING MATURE STATES INCLUDING STATES INCLUD	(19)
	NEW SENSOR SETPOINTS: PUMP OFF - 40% PIT DEPTH PUMP ON - 60% PIT DEPTH HIGH LEVEL ALARM - 90% PIT DEPTH EXISTING PIT SENSORS ARE TO BE DEMOLISHED.	
	NEW FLOAT LEVEL CONTROLS FOR SIMPLEX SYSTEM SUMP PIT. FLOATS ARE TO PROVIDE SETPOINTS FOR PUMP OFF, ONE PUMP ON, AND HIGH LEVEL ALARM SETPOINTS. FLOATS TO BE CONNECTED TO NEW PIT CONTROLLER VIA CONDUIT FROM PIT TO CONTROLLER.	(18)
	NEW 50ø CONDUIT FROM PIT CONTROL PANEL TO NEW FLOOR-MOUNTED FLOOD SENSOR. CONDUIT IS TO BE WALL-MOUNTED WHERE POSSIBLE, AND FLOOR-MOUNTED WHERE WALLS ARE INACCESSIBLE. ONE FLOOD SENSOR IS REQUIRED FOR EACH PUMP ROOM.	(17)
	NEW FLOAT LEVEL CONTROLS FOR SUMP PIT. FLOAT LEVEL CONTROLS ARE TO BE TIED BACK TO PIT CONTROLLER AND ACT AS BACKUP SENSORS TO NEW LEVEL SENSOR. FLOATS ARE TO BE SET TO ACTIVATE AT "ONE PUMP ON" AND "HIGH LEVEL ALARM" LEVELS SET FOR LEVEL SENSOR.	(16)
	NEW 50¢ CONDUIT FROM PIT CONTROL PANEL TO FLOAT LEVEL CONTROLS. CONDUIT IS TO BE WALL-MOUNTED WHERE POSSIBLE, AND FLOOR-MOUNTED WHERE WALLS ARE INACCESSIBLE. TERMINATE CONDUIT THROUGH COVER PLATE INTO SUMP PIT. WIRING FOR FLOAT LEVEL CONTROLS TO BE BY DIVISION 22.	(15)
	IS TO BE CONNECTED TO EXISTING BAS (SEE 2-M103). POWER TO CONTROLLER AND FROM CONTROLLER TO SUMP PUMPS BY DIVISION 26. CONTROLLER AND FROM CONTROLLER TO SUMP PUMPS BY DIVISION 22. CONDUIT AND WIRING FROM CONTROLLER TO SENSORS BY DIVISION 22. CONNECTION TO BAS BY DIVISION 25. DIVISION 25 TO SUPPLY AND INSTALL NEW NETWORK AUTOMATION ENGINE NAE-35 (OR NCE-25), NEW FIELD SERVER MODULE TO CONNECT NEW PUMP CONTROL PANEL (BACNET COMPATIBLE) TO EXISTING NETWORK CONTROL MODULE (N2 COMMUNICATION PROTOCOL) AND PERSON MACHINE INTERFACE (PMI). DIVISION 25 IS RESPONSIBLE TO RUN NEW MS/TP 18 GAUGE CABLES FROM ALL NEW PUMP PANELS TO COMMUNICATION CLOSET LOCATED IN M4 MECHANICAL ROOM AND CONNECT VIA NEW NETWORK AUTOMATION ENGINE NAE-35 (OR NCE-25) AND NEW FIELD SERVER MODULE TO EXISTING BAS.	
	PROVIDE AND INSTALL NEW PITWALL-MOUNTED GUIDE BARS FOR SUMP PUMP. DEMOLISH EXISTING GUIDE BARS WHERE PRESENT. NEW WALL-MOUNTED PIT CONTROLLER AND CONTROL PANEL. CONTROLLER	
	O TIEN I	(12)
	NEW 50¢ CONDUIT FROM PIT CONTROL PANEL TO NEW PUMPS. CONDUIT IS TO BE WALL-MOUNTED WHERE POSSIBLE, AND FLOOR-MOUNTED WHERE WALLS ARE INACCESSIBLE. TERMINATE CONDUIT THROUGH COVER PLATE INTO SUMP PIT. POWER WIRING FOR NEW PUMPS TO BE SUPPLIED AND INSTALLED BY DIVISION 26.	=
	NEW 50ø CONDUIT FROM PIT CONTROLLER TO LEVEL SENSOR. CONDUIT IS TO BE WALL-MOUNTED WHERE POSSIBLE, AND FLOOR-MOUNTED WHEN WALLS ARE INACCESSIBLE. TERMINATE CONDUIT THROUGH COVER PLATE INTO SUMP PIT.	(5)
	NEW LEVEL SENSOR WIRING INTO CONDUIT TO PIT CONTROLLER. WIRING IS TO BE HUNG FROM PITWALL-MOUNTED BRACKET AND SECURED TO ENSURE SENSOR WILL NOT CHANGE DEPTHS DURING ROUTINE OPERATION.	9
M103	EXISTING PIT SENSORS ARE TO BE DEMOLISHED. COORDINATE SENSOR SETPOINTS WITH DEPARTMENTAL REPRESENTATIVE BEFORE SHOP DRAWING SUBMISSION.	
)	NEW SENSOR SETPOINTS: PUMP OFF - 40% PIT DEPTH ONE PUMP ON - 60% PIT DEPTH BOTH PUMPS ON - 75% PIT DEPTH HIGH LEVEL ALARM - 90% PIT DEPTH	
	NEW SUMP PIT LEVEL SENSOR. SENSOR IS TO PROVIDE LEVEL READINGS FOR PUMP OFF, ONE PUMP ON, BOTH PUMPS ON, AND HIGH LEVEL ALARM SETPOINTS. SENSOR TO BE CONNECTED TO NEW PIT CONTROLLER VIA CONDUIT FROM PIT TO CONTROLLER.	8
	EXISTING COMMON PIT DISCHARGE PIPING.	7
	PROVIDE AND INSTALL NEW DISCHARGE SHUTOFF VALVE AND DEMOLISH EXISTING VALVE.	60
	PROVIDE AND INSTALL NEW CHECK VALVE ON DISCHARGE PIPING OF EACH SUMP PUMP AND DEMOLISH EXISTING VALVE. NEW CHECK VALVES ARE TO BE	(5)
. ∨. \ ₹.1	EXISTING VENT/ABOVE GRADE INLET PIPING. IF PIPING INTERFERES WITH NEW INSTALLATION, DEMOLISH OUT OF PIT AND REINSTATE UPON COMPLETION OF NEW WORK. NEW PIPING TO MATCH EXISTING DIAMETER.	4
(17)	EXISTING INSPECTION DOOR IN COVER PLATE. PROVIDE NEW INSPECTION DOOR FOR SUMP PITS.	(3)
	PLATE FOR ALL SUMP PITS. PLATE TO BE SUPPLIED AND INSTALLED BY DIVISION 22 AND BOLTED DOWN TO PROVIDE AIR-TIGHT SEAL. REPLACE EXISTING ANGLE BRACKETS WITH NEW CORROSION RESISTANT STEEL ANGLE BRACKETS ON SUMP PIT PERMIETER TO SUPPORT NEW COVER PLATE. BRACKETS SHALL BE ANCHORED TO THE STRUCTURE AND SEALED PROPERLY TO AVOID ESCAPE OF SEWER GASES OUT OF PIT. ANGLE BRACKETS AND COVER PLATE TO BE CAPABLE OF SUPPORTING 500 kg. CONTRACTOR TO PROVIDE SHOP DRAWING STAMPED BY STRUCTURAL ENGINEER FOR NEW COVER PLATES. PROVIDE NEW FLOAT BRACKETS, RAIL-GUARDS, GUIDE BARS, DISCHARGE/VENT PIPING THROUGH COVER PLATE, AND ALL OTHER COVER PLATE ACCOUTREMENTS FOR EACH PIT.	(N
	EXISTING BELOW GRADE INLET PIPING INTO SUMP PIT.	
	DRAWINGS NOTES	

ROOM ID

E5 P-E5-1-A-ST P

E5 P-E5-1-B-ST P

E5 E5-1-HLA P

E5 P-E5-2-B-ST P

E6 P-E18-A-ST P

B18 P-B18-B-ST P

B18 B18-FL-ST R

B18 B18-FL-ST R

E4 P-E4-A-ST P

E4 P-E4-B-ST P

E4 P-E4-B-ST P

E4 P-E4-B-ST P

E4 B18-FL-ST R

E4 P-E4-B-ST P

E4 B18-FL-ST R

E4 P-E4-B-ST P

E4 B18-FL-ST R

E6 B18-FL-ST R

E7 B18-FL-ST R

E8 B18-FL-ST R

E9 B18-FL-ST R

E9 B18-FL-ST R

E1 B18-FL-ST R

E1 B18-FL-ST R

E2 B18-FL-ST R

E3 B18-FL-ST R

E4 B18-FL-ST R

E4 B18-FL-ST R

E5 B18-FL-ST R

B18 B18-FL-ST R

T PUMP P-E5-1-A-STATUS
T PUMP P-E5-1-B-STATUS
ROOM E5 FLOOD SENSOR STATUS
PIT E5-1 HIGH LEVEL ALARM
T PUMP P-E5-2-A STATUS
PIT E5-2 HIGH LEVEL ALARM
PUMP P-B18-A STATUS
PIT E5-2 HIGH LEVEL ALARM
PUMP P-B18-B STATUS
ROOM B18 FLOOD SENSOR STATUS
PUMP P-E4-A STATUS
PUMP P-E4-B STATUS
PUMP P-E4-B STATUS
PUMP P-E4-B STATUS
PUMP P-E4-B STATUS
ROOM E4 FLOOD SENSOR STATUS
PIT E4 HIGH LEVEL ALARM
PUMP P-M5 STATUS
ROOM M5 FLOOD SENSOR STATUS
PIT M5 HIGH LEVEL ALARM

| DIVISION | SUPPLY BY DIV | INSTALL BY DIV | WIRED BY DIV | NOT ALL BY DIV | WIRED BY DIV | NOT ALL BY DIV | WIRED BY DIV | NOT ALL BY DIV | WIRED BY DIV | NOT ALL BY DIV | WIRED BY DIV | NOT ALL BY DIV | WIRED BY DIV | NOT ALL BY DIV | WIRED BY DIV | NOT ALL BY DIV | WIRED BY DIV | WIRED

1. CONTROL PANELS OF SUMP PUMPS TO HAVE CONNECTION ABILITY TO REFER TO SPECIFICATION FOR DETAILS.

EXISTING

BAS

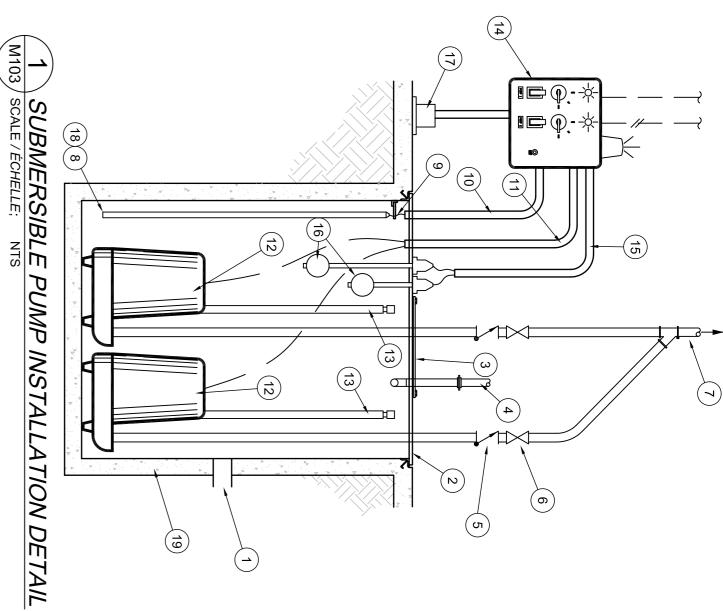
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PUMP ID MANUFACTURER MODEL SUMP PIT TYPE [L/s] [m/otor [fip] VOLTAGE [V] PHASE [ph] FREQUENCY [Hz] CURRENT [A] DIAMETER [mm] COMMEN P-E5-1-A XYLEM FLYGT CP-3068 E5-1 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 1, 2, 3, 4, 5 P-E5-1-B XYLEM FLYGT CP-3088 E5-1 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 1, 2, 3, 4, 5 P-E5-2-A XYLEM FLYGT CP-3085 E5-2 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 1, 2, 3, 4, 5 P-E5-2-B XYLEM FLYGT CP-3085 E5-2 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 3.3 160 1, 2, 3, 4, 5 P-B18-A XYLEM FLYGT CP-3085 E1-2 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8				FLOW			j	ELECTRIC	AL		IMPELLER	
A XYLEM FLYGT CP-3068 E5-1 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 B XYLEM FLYGT CP-3068 E5-1 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 A XYLEM FLYGT CP-3085 E5-2 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 A XYLEM FLYGT CP-3085 E5-2 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 3.3 160 A XYLEM FLYGT CP-3068 B18 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 A XYLEM FLYGT CP-3068 B18 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 A XYLEM FLYGT CP-3068 E4 SUBMERSIBLE 6.1 8.9 2.7 <	MODEL	SUMP PIT	TYPE	[L/s]		MOTOR [hp]	VOLTAGE [V]	PHASE [ph]	FREQUENCY [Hz]	CURRENT [A]	DIAMETER [mm]	COMMENTS
B XYLEM FLYGT CP-3068 E5-1 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 A XYLEM FLYGT CP-3085 E5-2 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3.3 160 9 B XYLEM FLYGT CP-3085 E5-2 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3.3 160 3 A XYLEM FLYGT CP-3068 B18 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 2.8 94 XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 2.8 94 XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 2	FLYGT CP-3068	E5-1		6.1	8.9	2.7	600	ω	60	2.8	94	1, 2, 3, 4, 5, 6,
A XYLEM FLYGT CP-3085 E5-2 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3.3 160 3 B XYLEM FLYGT CP-3085 E5-2 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 94 A XYLEM FLYGT CP-3068 B18 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 94 XYLEM FLYGT CP-3068 B18 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 94 XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3.3 160 3.3 160 3.3 160 3.3 160 3.3 160 3.3 160 3.3 160 3.3 160 3.0 3.0 3.0 3.0 3.0	FLYGT CP-3068	E5-1	SUBMERSIBLE	6.1	8.9	2.7	600	ω	60	2.8	94	1, 2, 3, 4, 5, 6, 9
B XYLEM FLYGT CP-3085 E5-2 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 2.7 A XYLEM FLYGT CP-3068 B18 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 94 B XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 2.8 94 94 B XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3.3 160 3 B XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3 3 60 3.3 160 3 3 60 3.3 160 3 160 3 60 3.3 160 3 60 3 60	FLYGT CP-3085	E5-2	SUBMERSIBLE	20.2	6.4	ω	600	ω	60	3.3	160	1, 2, 3, 4, 5, 6,
XYLEM FLYGT CP-3068 B18 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 94 3 XYLEM FLYGT CP-3068 B18 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 94 XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3 XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3 XYLEM FLYGT DS-3045 M5 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3 XYLEM FLYGT DS-3045 M5 SUBMERSIBLE 1.1 6.7 1.1 120 1 60 10 78 7	FLYGT CP-3085	E5-2		20.2	6.4	ω	600	ω	60	ა. ა	160	1, 2, 3, 4, 5, 6,
3 XYLEM FLYGT CP-3068 B18 SUBMERSIBLE 6.1 8.9 2.7 600 3 60 2.8 94 94 XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3 XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3 XYLEM FLYGT DS-3045 M5 SUBMERSIBLE 1.1 6.7 1.1 120 1 60 3 10 78 7	FLYGT CP-3068	B18	SUBMERSIBLE	6.1	8.9	2.7	600	ω	60	2.8	94	1, 2, 3, 4, 5, 6,
XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 9 XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 3 XYLEM FLYGT DS-3045 M5 SUBMERSIBLE 1.1 6.7 1.1 120 1 60 10 78 7	FLYGT CP-3068	B18		6. 1	8.9	2.7	600	ω	60	2.8	94	1, 2, 3, 4, 5, 6, 9
XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 6.4 3 600 3 60 3.3 160 7 XYLEM FLYGT DS-3045 M5 SUBMERSIBLE 1.1 6.7 1.1 120 1 60 10 78 7	FLYGT CP-3085	E4		20.2	6.4	3	600	3	60	3.3	160	1, 2, 3, 4, 5, 6, 9
XYLEM	FLYGT CP-3085	E4		20.2	6.4	З	600	3	60	3.3	160	1, 2, 3, 4, 5, 6, 9
	FLYGT DS-3045	M5		1.1	6.7	1.1	120	1	60	10	78	1, 2, 3, 4, 5, 6, 9, 10
1 - PROVIDE AND INSTALL NEW CONTROL PANEL FOR SUMP PIT. COMPLETE WITH POWER SUPPLIES TO PIT PUMPS AND PIT CONTROLLER.	CONTROL PANEL FOR SU LEVEL SENSOR FOR SUMP GUIDE BARS FOR SUMP DISCHARGE ELBOW AND	JMP PIT, C MP PIT. PUMP, CO D DISCHAR	OMPLETE WITH I	OWER	SUPPL	IES TO PIT P	UMPS AND P	IT CONTROLL	E R			
COMMENTS: 1 - PROVIDE AND INSTALL NEW		PUMP ID MANUFACTURER MODEL P-E5-1-A XYLEM FLYGT CP-3068 P-E5-2-A XYLEM FLYGT CP-3068 P-E5-2-B XYLEM FLYGT CP-3085 P-B18-A XYLEM FLYGT CP-3085 P-B18-A XYLEM FLYGT CP-3068 P-B18-B XYLEM FLYGT CP-3068 P-E4-A XYLEM FLYGT CP-3068 P-E4-B XYLEM FLYGT CP-3085 P-E5-2-B XYLEM FLYGT	PUMP ID MANUFACTURER MODEL SUMP PIT -E5-1-A XYLEM FLYGT CP-3068 E5-1 -E5-2-A XYLEM FLYGT CP-3068 E5-2 -E5-2-B XYLEM FLYGT CP-3085 E5-2 -B18-A XYLEM FLYGT CP-3085 E5-2 -B18-B XYLEM FLYGT CP-3086 B18 -B18-B XYLEM FLYGT CP-3068 B18 -E4-A XYLEM FLYGT CP-3068 B18 -E4-A XYLEM FLYGT CP-3068 B18 -E4-B XYLEM FLYGT CP-3068 B18 -C4-B XYLEM FLYGT CP-3085 E4 -M5-A XYLEM FLYGT CP-3085 E4 -M5-A XYLEM FLYGT CP-3085 E4 -PROVIDE AND INSTALL NEW CONTROL PANEL FOR SUMP PIT, C-PROVIDE AND INSTALL NEW GUIDE BARS FOR SUMP PUMP, CO-PROVIDE AND INSTALL NEW GUIDE BARS FOR SUMP PUMP, CO-PROVIDE AND INSTALL NEW GUIDE BARS FOR SUMP PUMP, CO-PROVIDE AND INSTALL NEW GUIDE BARS FOR SUMP PUMP, CO-PROVIDE AND INSTALL NEW GUIDE BARS FOR SUMP PUMP, CO-PROVIDE AND INSTALL NEW DISCHARGE ELBOW AND DISCHAR	URER MODEL SUMP PIT TYPE FLYGT CP-3068 E5-1 SUBMERSIBLE FLYGT CP-3085 E5-2 SUBMERSIBLE FLYGT CP-3085 E5-2 SUBMERSIBLE FLYGT CP-3085 E4 SUBMERSIBLE FLYGT CP-3068 B18 SUBMERSIBLE FLYGT CP-3068 B18 SUBMERSIBLE FLYGT CP-3085 E4 SUBMERSIBLE FLYGT CP-30	PUMP ID MANUFACTURER MODEL SUMP PIT TYPE [L/s] P-E5-1-A XYLEM FLYGT CP-3068 E5-1 SUBMERSIBLE 6.1 P-E5-1-B XYLEM FLYGT CP-3068 E5-1 SUBMERSIBLE 6.1 P-E5-2-A XYLEM FLYGT CP-3068 E5-2 SUBMERSIBLE 20.2 P-E5-2-B XYLEM FLYGT CP-3085 E5-2 SUBMERSIBLE 20.2 P-B18-A XYLEM FLYGT CP-3088 B18 SUBMERSIBLE 6.1 P-B18-B XYLEM FLYGT CP-3088 B18 SUBMERSIBLE 6.1 P-E4-B XYLEM FLYGT CP-3088 E4 SUBMERSIBLE 6.1 P-E4-B XYLEM FLYGT CP-3088 E4 SUBMERSIBLE 20.2 P-M5-A XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 P-M5-A XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2 P-M5-A XYLEM FLYGT CP-3085 E4 SUBMERSIBLE 20.2	HEAD 8.9 8.9 8.9 8.9 8.9 8.9 8.9 6.4 6.4 6.4 6.4 6.7 CHAIN FO	HEAD [m] 8.9 8.9 8.9 8.9 8.9 8.9 8.9 6.4 6.4 6.4 6.7 6.7 CHAIN FO	HEAD [m] 8.9 8.9 8.9 8.9 8.9 8.9 8.9 6.4 6.4 6.4 6.7 6.7	HEAD [m] 8.9 8.9 8.9 8.9 8.9 8.9 6.4 6.4 6.4 6.4 6.7 6.7 CHAIN FO	HEAD [m] 8.9 8.9 8.9 8.9 8.9 8.9 8.9 8.9 8.9 8.9	HEAD [m] 8.9 8.9 8.9 8.9 8.9 8.9 8.9 8.9 8.9 8.9	HEAD [m] 8.9 8.9 8.9 8.9 8.9 8.9 8.9 6.4 6.4 6.4 6.7 6.7 CHAIN FO

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Director, Security & F

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M. FARID, P.

Eng.

5 - PROVIDE AND INSTALL NEW FLOATS FOR SUMP PIT.
6 - PROVIDE AND INSTALL NEW FLOOR-MOUNTED FLOOD SENSOR FOR SUMP PIT.
7 - PROVIDE AND INSTALL NEW WALL-MOUNTED HOIST FOR SUMP PIT.
8 - NEW WALL-MOUNTED HOIST CAN BE SHARED BETWEEN BOTH PITS WITHIN ROOM.
9 - PROVIDE AND INSTALL NEW COVER PLATE, COMPLETE WITH ANGLE FRAMES, BRACKETS FOR FLOATS, RAIL-GUARDS, GUIDE BARS, PIT.
10 - PROVIDE AND INSTALL ADDITIONAL VALVE ON DISCHARGE PIPING, DOWNSTREAM OF ISOLATION VALVE, THAT CAN BE THROTTLED. AND OTHE R ACCOUTREMENTS, WITH INSPECTION DOOR, FOR SUMP

AND INSTALL ADDITIONAL VALVE ON DISCHARGE PIPING, DOWNSTREAM OF ISOLATION VALVE, THAT CAN BE THROTTLED TO PRODUCE 0.6m OF ADDITIONAL HEAD ON SYSTEM.

CONTROL POINT SCHEDULE

FIELD DEVICE

PUMPS OI PIT LEVEL SENSOR (BY DIV 22)	HIGH LEVEL ALARM BOTH PUMPS ON ONE PUMP ON	FLOOD SENSOR (BY DIV 22)	CONTROL WIRING FOR SENSORS (BY DIV 22)	CONTROL PANEL (BY DIV 22)	CONTROL WIRING FROM CONTROL PANEL TO BAS (BY DIV 25) REFER TO 1-M100 FOR LOCATION	REMOVE EXISTING COMMUNICATION WIRING OUT OF CONDUITS TO RE-USE CONDUITS AND SUPPORTS. REMOVE EXISTING CONDUITS THAT ARE NOT REQUIRED FOR NEW INSTALLATIONS BACK TO MAIN SERVICES. INSTALL NEW CONDUITS (NO CABLE TRAYS) AND WIRING TO COMPLETE COMMUNICATION CONNECTIONS FROM SUMP PUMP CONTROL PANELS TO COMMUNICATION CONDUITS AS PER BUILDING STANDARDS.
PUMPS OFF PUMPS (BY DIV 22)	LEVEL ALARM ONE PUMP ON FLOAT LEVEL CONTROLS (BY DIV 22)	(BY DIV 22)	CONTROL WIRING FOR SENSORS	POWER AND CONTROL WIRING TO PUMPS (BY DIV 26)	CONNECT TO EXISTING (CTE) (BY DIV 25) MECHANICAL ROOM M4. SEE 1-M100 FOR LOCATION (BY DIV 26) MECHANICAL ROOM M4. SEE 1-M100 FOR LOCATION	SUPPLY, INSTALL & TEST (BY DIV 25) NETWORK AUTOMATION ENGINE NAE-35 (OR NCE-25). BACNET PROTOCOL NEW EXISTING MACHINE INTERFACE (PMI), 3RD FLOOR MODULE (N2 COMMUNICATION PROTOCOL)

2 INSTALLATION SCHEMATIC AND CONTROLS
M103 SCALE / ÉCHELLE; NTS

DIAGRAM

CSA15-M5A

M103

DMPATIBLE DATA COMMUNICATION PROTOCOLS.	UPON C COPIES DESTRA	UPON COMPLETION OF SUCH USE, ALL HARD COPIES AND ELECTRONIC FILES MUST BE DESTROYED AND/OR RETURNED TO THE "CSA" PROJECT AUTHORITY.
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	4.	
	ώ	
MACHINE INTERFACE	2.	ISSUED FOR TENDER 15/09/21
3RD FLOOR		ISSUED 99% REVIEW 15/04/02
	No.	Revision Date
NETWORK CONTROL MODULE (N2 COMMUNICATION PROTOCOL)		
PEOR I OCATION	PROFESSIONAL STAMP	NAL STAMP
CONTROL WIRING Y DIV 26)		B location drawing no. Sur dessin no. C drawing no. dessin no.
)	project DAV BUILI	projet DAVID FLORIDA LABORATORY BUILDING No. 65, SHIRLEY'S BAY, ONTARIO
	REF	SUMP PUMP REPLACEMENT NON-CLEAN ROOMS
**	drawing	dessin
	00	MECHANICAL DETAILS & SCHEDULES
	designed	concu
	drawn date	dessine

GENERAL NOTES

- 1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS AND SPECIFICATIONS FROM THIS AND ALL OTHER DISCIPLINES.

 2. SITE PLANS AND ARCHITECTURAL BACKGROUNDS IN DRAWINGS ARE REPRESENTATIVE ONLY. THESE BACKGROUNDS ARE BASED ON THE EXISTING DRAWINGS MADE AVAILABLE BY THE OWNER. ACTUAL SITE CONDITIONS AND LATEST ARCHITECTURAL DOCUMENTS MAY VARY FROM DRAWINGS. CONTRACTOR SHALL FIELD VERIFY AND CONFIRM LOCATIONS OF ALL EXISTING EQUIPMENT AND SERVICES, LOCATIONS OF WALLS, PARTITIONS AND ALL OTHER HARD SURFACES ON SITE PRIOR TO COMMENCING DEMOLITION AND NEW WORKS. COORDINATE EXACT LOCATIONS OF NEW EQUIPMENT WITH EXISTING STRUCTURES, OTHER SERVICES AND TRADES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CAREFUL AND DETAILED COORDINATION OF ALL SERVICE OUTAGES REQUIRED TO EXECUTE THIS PROJECT. COORDINATE AND SCHEDULE ALL OUTAGES TO OWNER'S SATISFACTION.
- 4. CSA SHALL BE GIVEN THE OPTION OF RETAINING ANY REMOVED COMPONENTS OR EQUIPMENT. COORDINATE AND HAND OVER TO CSA PROJECT MANAGER AS REQUIRED. DISPOSE OF ANY REMAINING OR UNWANTED EQUIPMENT OR SERVICES AND REMOVE OF FITE IN A LEGAL MANNER AND COMPLY WITH THE ENVIRONMENTAL PROTECTION ACT. ONTARIO REGULATIONS FOR WASTE MANAGEMENT PROGRAM. CERTIFICATE OF DISPOSAL TO BE HANDED OVER TO OWNER AFTER REMOVALS ARE DONE.

 5. WHERE PENETRATIONS ARE CREATED IN EXISTING BUILDING PARTITIONS. CONTRACTOR SHALL PROVIDE FIRESTOP AND FIRE-RATED SEALANT AROUND INSTALLED SERVICES TO MAINTAIN THE FIRE RATING OF THE EXISTING PARTITIONS. CONTRACTOR TO PROTECT ALL ARCHITECTURAL FINISHES & FLOORING DURING CONSTRUCTION, BE RESPONSIBLE FOR ANY DAMAGES TO EXISTING SURFACES RESULTING FROM ALL PROJECT'S WORK. THE CONTRACTOR SHALL MAKE GOOD ALL DRAMAGED SURFACES INCLUDING ANY PAINT TOUCH-UPS REQUIRED EXHAUST FANS VENTED TO OUTSIDE OF BUILDING MUST BE USED DURING ALL BRAZING / WELDING / SOLDERING / CUTTING / CRINIDING ACTIVITIES TO MINIMIZE CONTAMINATION & DODRY TO ADJACENT AREAS PARTICULARLY IN CLEAN ROOMS. PROVIDE 72 HOURS NOTICE TO CSA TO ARRANGE FOR HOT WORK PERMITS.

 6. SMOKE EATERS & POWERED EXHAUST FANS VENTED TO OUTSIDE OF BUILDING MUST BE SUPPLIED AND USED BY CONTRACTOR DURING DEMOLITION OF EXISTING BUILDING SERVICES SHUTDOWNS. CONTRACTOR SHALL CONFIRM LOCATIONS OF TEMPORARY EQUIPMENT ON SITE PRIOR TO CSA TO ARRANGE FOR ANY SERVICES SHUTDOWNS. CONTRACTOR SHALL CONFIRM LOCATIONS OF TEMPORARY EQUIPMENT ON SITE PRIOR TO COMMENCING DEMOLITION AND NEW WORKS.

 PROVIDE FLOOR PROTECTION TO ENTIRE PROJECT AREAS AS FOLLOW:
 FLOOR TO BE WIPPED CLEAN FROM ANY DEBRIS OR DUST PARTICLES.
 PROVIDE HARD SHEETS ON TOP OF FOAM LAYER, ALL SHEETS SEAMS TO BE DUCK-TAPED TO PREVENT DEBRIS / DUST FROM GETTING TRAPPED UNDER THE PROVIDE TO PREVENT DEBRIS / DUST FROM GETTING TRAPPED UNDER THE PROVIDE TO SEATH OF THE PROJECT OF THE PROJECT
- CONTRACTOR TO PROVIDE BILINGUAL CONSTRUCTION, ACCESS & SAFETY SIGNAGE, SIGNS TO POSTED ON ALL PROJECT BOARDERS & ENTRANCES AT THE START OF THE PROJECT AND BEFORE COMMENCING ANY WORK.

 ELECTRICAL CONTRACTOR TO TRACE, IDENTIFY AND LABEL ALL EXISTING BRANCH CIRCUIT POWER WIRING BEFORE REMOVAL.
- ELECTRICAL CONTRACTOR TO PROVIDE ELECTRICAL SAFETY AUTHORITY (ESA) INSPECTION CERTIFICATE AFTER WORK COMPLETION.

- 2. EXACT TARPING LIMITS AND ACCESS ROUTES TO BE DETERMINED ON SITE IN COORDINATION WITH CSA PROJECT MANAGER.

 ALL TARPS TO BE NEW HEAVY DUTY POLYETHYLENE, WATER / MILDEW / TEAR RESISTANT, WHITE, TIGHT SEALED FROM DECK TO FLOOR, CONTRACTOR TO PROVIDE ACCESS ZIPPERS OR DOORS AS REQUIRED BY CSA, USE METAL STUDS AS FRAMING SUPPORTS, NO WOOD MATERIALS TO BE USED IN TARPS CONSTRUCTION UNLESS APPROVED BY CSA.

 APPROVED METHODS TO ATTACH STUDS / TARPS TO BUILDING AS FOLLOW:
 ON PLOORS: HEAVY DUTY COMMERCIAL DOUBLE SIDED TAPE TO SECURE METAL STUDS TO FLOORS, USE OF SCREWS OR TAPCONS ARE NOT PERMITTED.

 ON DRYWALLS / MASONRY / METAL SIDING WALLS: DUCT OR TUCK TAPE IS NOT ALLOWED DIRECTLY ON BUILDING FINISHES AS IT WILL DAMAGE THEM WHEN REMOVED; APPLY MASKING PAINT GREEN TAPE FIRST AND THEN DUCT / TUCK TAPE ON TOP OF IT. STUDS CAN BE SCREWED TO DRYWALL / MASONRY WALLS GIVING THAT ALL HOLES WILL BE PATCHED & PAINTED (WHOLE WALL / AREA TO BE PAINTED, SMALL / LOCAL PAINT PATCHES ARE NOT PERMITTED).

 TARPS COULD BE HANGED OFF BUILDING STEEL STRUCTURAL USING HIGH STRENGTH CABLE TIES, PROVIDE HEAVY GAUGE UNISTRUTS AS NEEDED FOR CROSS RUNS OR TO DISTRIBUTE TARPS LOAD.

 HANGING TARPS FROM BUILDING SERVICES (DUCTWORK, CONDUITS, PIPES, SUPPORTS, HANGERS, ETC.) IS NOT PERMITTED.

 CONTRACTOR IS RESPONSIBLE FOR CLEANING, PATCHING, REPAIRING & AND TEMPORARY UNISTRUTS.

GENERAL NOTES

- 3. ACCESS TO THE SITE FOR MATERIAL, WORK FORCES AND FOR WASTE REMOVAL IS TO BE COORDINATED WITH CSA PROJECT MANAGER, USE ONLY ELEVATORS DESIGNATED BY CSA AND PROTECT THEM FROM DAMAGE.

 4. CONTRACTOR SHALL BE RESPONSIBLE TO KEEP THE OWNER'S ACCESS AREAS AND CORRIDORS CLEAN AT ALL TIMES.

 CLEAN AND REMOVE ALL DEMOLITION AND CONSTRUCTION WASTE FROM PROJECT SITE ON DAILY BASIS AND UPON COMPLETION OF PROJECT.

 DO NOT USE CSA WASTE CONTAINERS. AN AREA WILL BE DESIGNATED FOR LOCATING CONTRACTOR WASTE BINS.

 CONTRACTOR TO PROVIDE ALL CLEANING EQUIPMENT & SUPPLIES, USE OF BUILDING CLEANING EQUIPMENT OR SUPPLIES ARE NOT PERMITTED.

 5. DO NOT SUBJECT ANY PART OF THE BUILDING TO ANY NOISE, DUST OR ANY OTHER UNACCEPTABLE ENVIRONMENTAL CONDITIONS DURING THE COURSE OF THE PROJECT. ANY NOISY / DUSTY / SMELLY ACTIVITIES SHALL BE DONE AFTER REGULAR WORKING HOURS OR WEEKENDS, COORDINATE WITH CSA PROJECT MANAGER WITH A MINIMUM NOTICE OF 72 HOURS.

 6. CONTRACTOR & SUB-TRADE WORKERS HAVE TO BE ESCORTED AT ALL TIMES WHILE IN BUILDING AND ON CAMPUS.
- TO ESCORT. L LIST OF ALL PERSONNEL SUPPLIERS & INSPECTORS E AND BUILDING ACCESS.
- 6. CONTRACTOR & SUB-TRADE WORKERS HAVE TO BE ESCORTED AT ALL TIMES

 CSA WILLE IN BUILDING AND ON CAMPUS.

 CSA WILL PROVIDE SECURITY COMMISSIONAIRES TO ESCORT.

 PRIOR TO PROJECT START, GC TO PROVIDE A FULL LIST OF ALL PERSONNEL WORKING ON THE PROJECT AS WELL ENGINEERS, SUPPLIERS & INSPECTORS IF POSSIBLE TO ISSUE NECESSARY FORMS FOR SITE AND BUILDING ACCESS. PROVIDE AT LEAST 72 HOURS NOTICE FOR ANY ADDITIONAL NAMES OR FOR AFTER HOURS OR WEEKEND WORK.

 NOTIFY CSA IMMEDIATELY OF ANY CHANGE IN SCHEDULE THAT AFFECTS THE NEED FOR SECURITY ESCORTS. INDIVIDUALS WHO ARE NOT ON THAT LIST WILL BE DENIED ACCESS WITH NO EXCEPTION.

 7. GENERAL CONTRACTOR REPRESENTATIVE HAS TO BE PRESENT ON SITE AT ALL TIMES AND ACCOMPANY ALL SUB-TRADES WORKERS; SUB-TRADES ARE NOT ALLOWED TO BE ON SITE OR TO WORK WITHOUT THE PRESENCE OF GC-NO EXCEPTIONS.
- 3E PRESENT ON SITE AT RKERS; SUB-TRADES ARE T THE PRESENCE OF GC -

- 18. CSA IS COMMITTED TO ENSURING A HEALTHY AND SAFE ENVIRONMENT FOR ITS EMPLOYEES, CONTRACTORS AND VISITORS AND WILL ALIGN ITSELF WITH CONTRACTORS WHO SHARE IN THIS VISION.

 THE REQUIREMENTS OUTLINED BELOW ARE PROVIDED AS REFERENCE AND ARE THERE TO ASSIST THE CONTRACTING COMPANY WHO PERFORMS THE WORK AND ACCEPTS THIS COMMITMENT COMPLETELY:

 ONTARIO OCCUPATIONAL HEALTH AND SAFETY ASSOCIATION "GUIDE TO DEVELOPING HEALTH AND SAFETY PROGRAMS IN CONSTRUCTION" A COMPREHENSIVE GUIDE GEARED TO MID- TO LARGE-SIZED GENERAL CONTRACTORS FOR DEVELOPING AND IMPLEMENTING AN EFFECTIVE HEALTH AND SAFETY PROGRAM:

 INFRASTRUCTIORE HEALTH AND SAFETY PROGRAM:

 INFRASTRUCTIOR AND ADDRESS THAT PROVIDED THE TRAINING, CSA PROME ERROM THE COMPANY THAT PROVIDED THE TRAINING, IF THE PROOF OF TRAINING DOES OF TRAINING MAY BE REQUESTED BY THE CSA PRIOR FOR ANY WORK AT NO ADDITIONAL COST.

 ONTARCTOR SCHEMENAL CONTRACTOR MUST BE ON SITE TO RECEIVE THE SHIPMENT, THE DELIVERY PROFILED TO USE THE EQUIPMENT, THE QUALIFIED CONTRACTOR SCHEDULED TO USE THE EQUIPMENT MUST INSPECT AND RECEIVE THE LIFT FROM THE COMPANY.
- ZONE 2:

 SUPPLY / RETURN DUCTY

 EXHAUST DUCTWORK ELECTRIC EMT CONDUITS (POWER, CONTROLS, FIRE ..ETC.)
 DRAINS & WELDED MECHANICAL PIPING W/ MINIMUM POSSIBLE LEAKAGE MECHANICAL PIPING (CH DCW, DHW, CA ..ETC.) ZONE 5:

 • CLEAR MAINTENANCE & HEAD ZONE - MINIMUM OF 8" ZONE 4:

 • COMMUNICATION TRAYS (NET FIBER OPTICS ..ETC.) CEILING STRUCTURE OWSJ

DEMOLITION NOTES

- DISCONNECT AND MAKE SAFE ALL SYSTEMS TO BE DEMOLISHED INCLUDING PANELS, FEEDERS, BRANCH CIRCUITS AND EQUIPMENT BY OTHER DIVISIONS. COORDINATE WITH OTHER DIVISIONS.

 MAINTAIN EXISTING REMAINING CIRCUITS, SYSTEMS, ETC., WHICH PASS THROUGH AREA OF CONSTRUCTION. PROVIDE NECESSARY COMPONENTS TO MAINTAIN SYSTEMS. ENSURE COMPONENTS WILL BE CONCEALED WHEN CONSTRUCTION IS COMPLETE.
- REINSTATE IMMEDIATELY ANY REMAINING EXISTING SYSTEMS ARE IN-ADVERTENTLY INTERRUPTED DURING CONSTRUCTION.
- THE DRAWINGS INDICATE KNOWN CONDITIONS AND MAY NOT INDICATE ALL DEMOLITION REQUIREMENTS, ELECTRICAL SHALL VISIT THE SITE PRIOR TO TENDER SUBMISSION AND VERIFY REQUIREMENTS AND INCLUDE ALL COSTS IN TENDER.
- ALL SUPPLIED MATERIALS, FIXTURES & EQUIPMENT TO BE NEW, FREE FROM DEFECTS, CERTIFIED & APPROVED BY CODE. REUSE OF ANY EXISTING PARTS IS NOT PERMITTED UNLESS APPROVED BY DEPARTMENTAL REPRESENTATIVE.

 AFTER DEMOLITION WORK IS COMPLETE AND PRIOR TO PROCEEDING WITH NEW WORK, ELECTRICAL SHALL NOTIFY THE DEPARTMENTAL REPRESENTATIVE FOR INSPECTION. REMOVE REDUNDANT CONDUIT AND WIRING BACK TO SOLOTHERWISE NOTED, AND MAKE SAFE.
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CONDUIT DOWN	CONDUIT UP	MANUAL MOTOR STARTER COMBINATION DISCONNECT SWITCH WITH STARTER	THREE PHASE MOTOR CONNECTION	SINGLE PHASE MOTOR CONNECTION	DISCONNECT SWITCH, FUSED IF NOTED	PANELBOARD FLUSH MOUNTED / SURFACE MOUNTE	JUNCTION/PULL BOX SIZE AS REQUIRED	FLEXIBLE CONNECTION	HOME RUN TO SOURCE	WIRING IN / ON WALL OR CEILING

NOTES:

E100	E001	DRAWING No.	
ELECTRICAL - PARTIAL BASEMENT POWER LAYOUTS - DEMOLITION AND NEW	ELECTRICAL - GENERAL NOTES, LEGEND & DRAWING LIST	DRAWING TITLE	ELECTRICAL DRAWING LIST

	LEGEND	
SYMBOL	DESCRIPTION	
Ф	DUPLEX RECEPTACLE 120V, 15A.	
<u> </u>	GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE 120V, 15A.	
₫	DUPLEX RECEPTACLE SPLIT CIRCUIT 120V, 15A.	
	DUPLEX RECEPTACLE DEDICATED CIRCUIT 120V, 15A.	
\overline{\pi}	SPECIAL PURPOSE RECEPTACLE.	
⋑ _⋿ ⊕ ©	RECEPTACLE ON EMERGENCY CIRCUIT	
3	DIRECT CONNECTION TO EQUIPMENT	
	WIRING IN FLOOR OR UNDERGROUND	
	WIRING IN / ON WALL OR CEILING	
ļ	HOME RUN TO SOURCE	
6	FLEXIBLE CONNECTION	
<u></u>	JUNCTION/PULL BOX SIZE AS REQUIRED	
	PANELBOARD FLUSH MOUNTED / SURFACE MOUNTED	
νQ	DISCONNECT SWITCH, FUSED IF NOTED	
(V)	SINGLE PHASE MOTOR CONNECTION	
Ó	THREE PHASE MOTOR CONNECTION	
	MANUAL MOTOR STARTER	
	COMBINATION DISCONNECT SWITCH WITH STARTER	
φ	CONDUIT UP	
ዋ	CONDUIT DOWN	
С	CONDUIT STUB	

	ELECTRICAL DRAWING LIST
No.	DRAWING TITLE
	ELECTRICAL - GENERAL NOTES, LEGEND & DRAWING LIST
	ELECTRICAL - PARTIAL BASEMENT POWER LAYOUTS - DEMOLITION AND NEW

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DAVID FLORIDA LABORATORY BUILDING No. 65, SHIRLEY'S BAY, ONTARIO

SUMP PUMP REPLACEMENT NON-CLEAN ROOMS

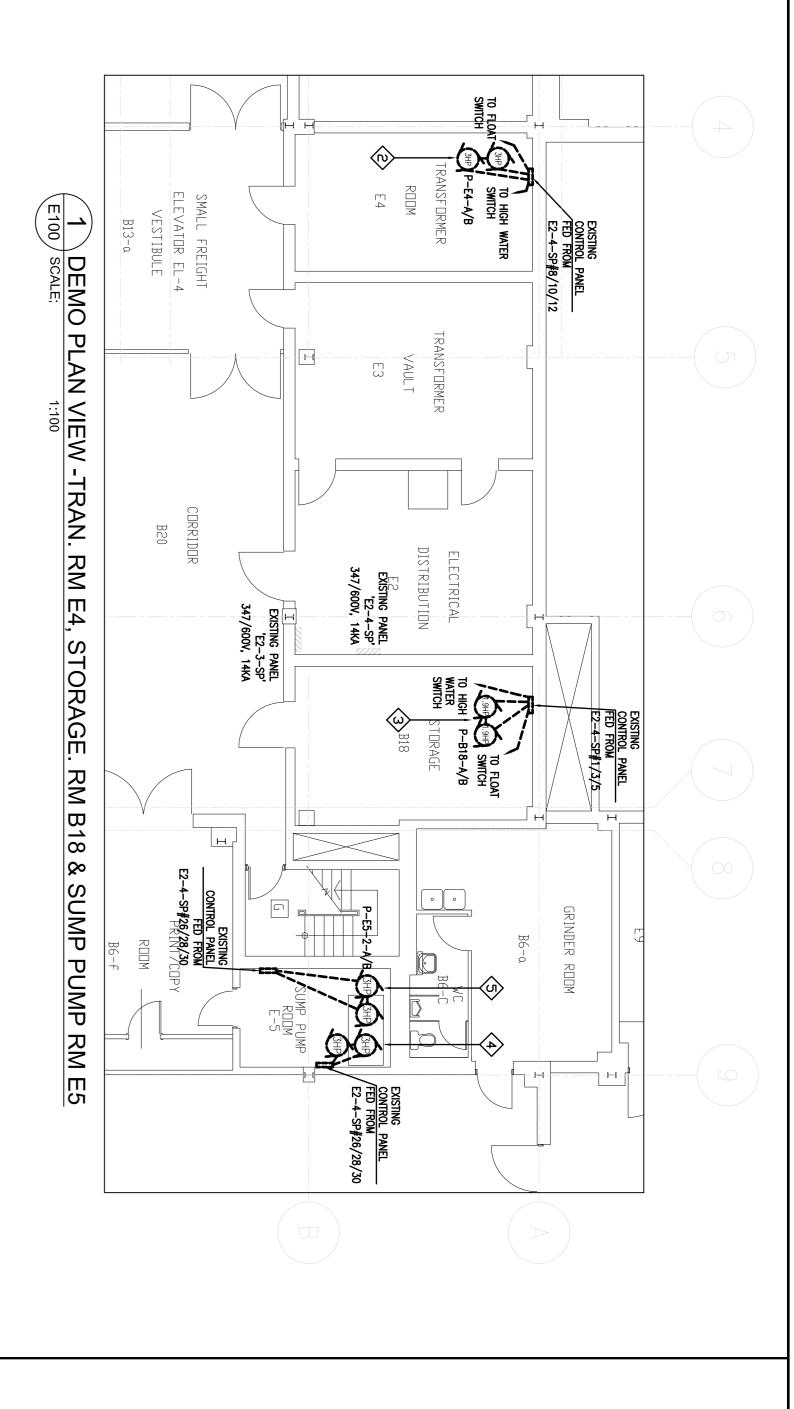
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GENERAL NOTES, LEGEND, DRAWING LIST

A. OVODOV 2015-09-08 M. FARID 2015-09-08

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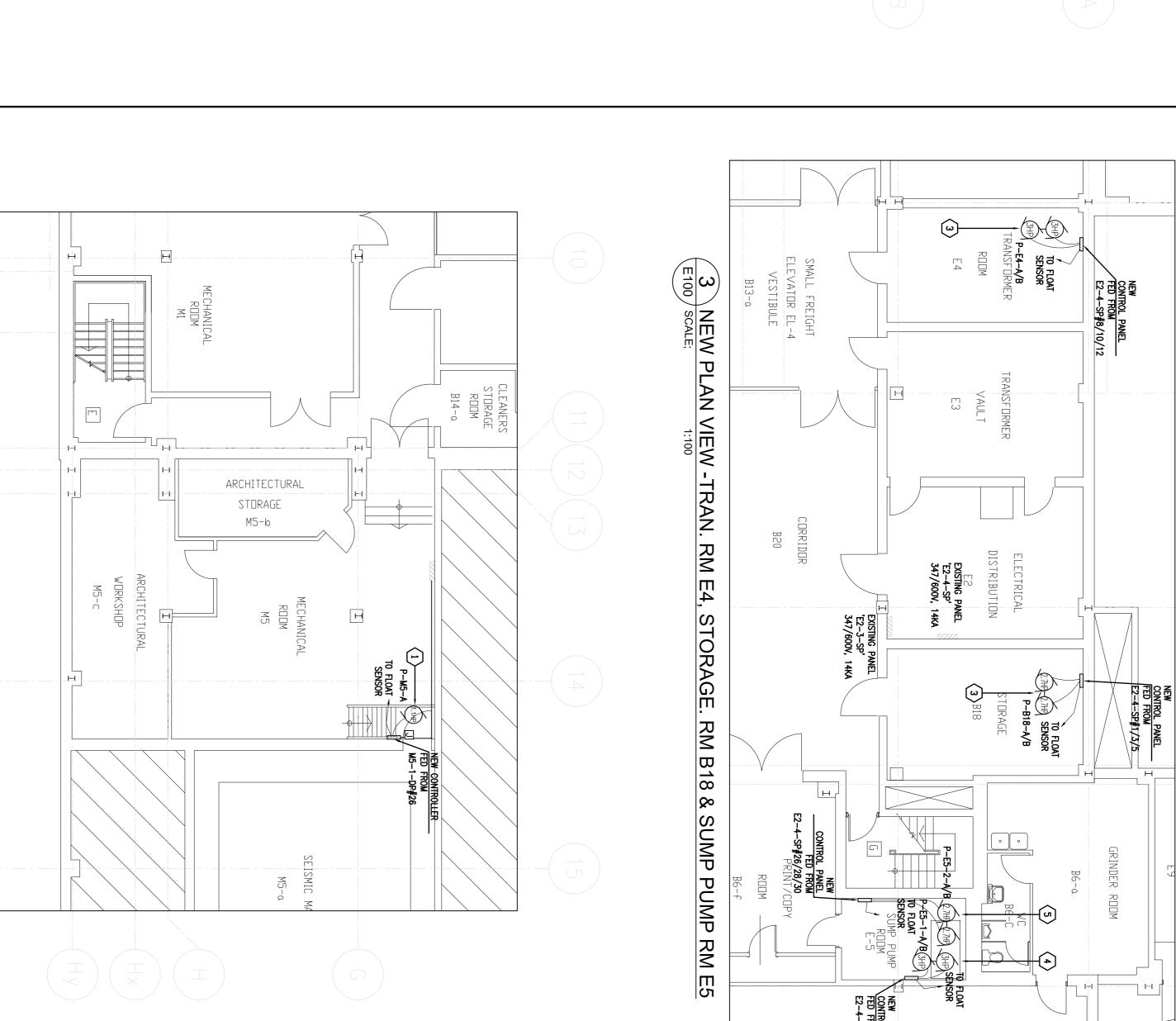


M. FARID, P. Manager, Building Operations & S

Eng.

JOSEE BERGERON

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NEW DRAWING NOTES:

4 NEW PLAN VIEW - MECHANICAL ROOM M5

(1) NEW COLUMN SUMP PUMP P-M5-A C/W SUBCAB CABLE AND CONTROLLER BY MECHANICAL, 120V, 10, 2P, 1.1HP, FLA 10A. DIVISION 26 TO REPLACE A EXISTING 1P SPARE BREAKER WITH A NEW 25A, 1P BREAKER IN PANEL 'M5-1-DP' C/W NEW WIRING 2#12+GND-21MMC UP TO CONTROLLER AND CONTROLLER TO PUMP MOTOR. FLOAT SWITCH AND HIGH WATER DEVICES ARE BY MECHANICAL, TO BE WIRED BY ELECTRICAL. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT CONNECTION AT PUMP. COORDINATE WORK WITH MECHANICAL. REFER TO MANUFACTURER MANUAL FOR WIRING DIAGRAM.

(3) NEW DUPLEX SUMP PUMP P-B18-A/B C/W 16M SUBCAB CABLE AND DUPLEX CONTROL PANEL BY MECHANICAL, 575V, 30, 2.7HP, FLA 2.8A. DIVISION 26 TO MAKE POWER RE-CONNECTION TO CONTROL PANEL, EXISTING WIRES AND CONDUIT MAY BE REUSED PER CONDITION. MAKE PUMP MOTOR, FLS (LEAKAGE SENSOR) AND FLOATS SENSOR CABLE CONNECTION TO CONTROL PANEL. PROVIDE ADDITIONAL WIRING AND CONDUIT IF REQUIRED. REFER TO MANUFACTURER MANUAL FOR WIRING DIAGRAM. COORDINATE WORK WITH MECHANICAL. FASTEN CABLE SECURELY AND PROVIDE UNISTRUT SUPPORT IF REQUIRED. (2) NEW DUPLEX SUMP PUMP P-E4-A/B C/W 16M SUBCAB CABLE AND DUPLEX CONTROL PANEL BY MECHANICAL, 575V, 30, 3HP, FLA 3.3A. DIVISION 26 TO MAKE POWER RE-CONNECTION TO CONTROL PANEL, EXISTING WIRES AND CONDUIT MAY BE REUSED PER CONDITION. MAKE PUMP MOTOR, FLS (LEAKAGE SENSOR) AND FLOATS SENSOR CABLE CONNECTIONS TO CONTROL PANEL. PROVIDE ADDITIONAL WIRING AND CONDUIT IF REQUIRED. REFER TO MANUFACTURER MANUAL FOR WIRING DIAGRAM. COORDINATE WORK WITH MECHANICAL FASTEN CABLE SECURELY AND PROVIDE UNISTRUT SUPPORT IF REQUIRED.

EXISTING DUPLEX PERIMETER SUMP PUMP IN ELECTRICAL ROOM E5 TO BE REMOVED BY MECHANICAL.

WIRES FOR RE-CONNECTION. MAKE ELECTRICALLY SAFE. COORDINATE WORK WITH MECHANICAL.

DIVISION 26 TO DISCONNECT POWER FEEDER AT PL

MP MOTOR AND COIL

OR AND COIL

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WIRES FOR

CTION BOX.

RE-CONNECTION. MAKE ELECTRICALLY SAFE. COORDINATE WORK WITH MECHANICAL.

(3) EXISTING DUPLEX SUMP PUMP IN STORAGE ROOM B18 TO BE REMOVED BY MECHANICAL. DIVISION 26 TO DISCONNECT POWER FEEDER AT PUMP RE—CONNECTION. MAKE ELECTRICALLY SAFE. COORDINATE WORK WITH MECHANICAL.

(2) EXISTING DUPLEX SUMP PUMP IN ELECTRICAL ROOM E4 TO BE REMOVED BY MECHANICAL. DIVISION 26 TO DISCONNECT POWER FEEDER AT PUMP MOTOR RE—CONNECTION. MAKE ELECTRICALLY SAFE, COORDINATE WORK WITH MECHANICAL.

(1) EXISTING SIMPLEX SUMP PUMP IN MECHANICAL ROOM M5 TO BE REMOVED BY MECHANICAL. MOTOR STARTER TO BE REMOVED BY DIVISION 26. COORDINATE WORK WITH MECHANICAL.

DIVISION 26 TO REMOVE

DEMOLITION DRAWING NOTES:

DEMO PLAN VIEW -

MECHANICAL ROOM M5

WORKSHOP

ARCHITECTURAL

ARCHITECTURAL

STORAGE

M5-b

MECHANICAL ROOM M5

SEISMIC MA

M5-a

No.

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(4) NEW DUPLEX PERIMETER SUMP PUMP P-E5-1-A/B C/W 16M SUBCAB CABLE AND DUPLEX CONTROL PANEL BY MECHANICAL, 575V, 30, 2.7HP, FLA 2.8A. DIVISION 26 TO MAKE POWER RE-CONNECTION TO CONTROL PANEL, EXISTING WIRES AND CONDUIT MAY BE REUSED PER CONDITION. MAKE PUMP MOTOR, FLS (LEAKAGE SENSOR) AND FLOAT SENSOR CABLE SENSOR CONNECTIONS TO CONTROL PANEL. PROVIDE ADDITIONAL WIRING AND CONDUIT IF REQUIRED. REFER TO MANUFACTURER MANUAL FOR WIRING DIAGRAM. COORDINATE WORK WITH MECHANICAL FASTEN CABLE SECURELY AND PROVIDE UNISTRUT SUPPORT IF REQUIRED.

(5) NEW DUPLEX SEWAGE PUMP P-E5-2-A/B C/W 16M SUBCAB CABLE AND DUPLEX CONTROL PANEL BY MECHANICAL, 575V, 30, 3HP, FLA 3.3A. DIVISION 26 TO MAKE POWER RE-CONNECTION TO CONTROL PANEL, EXISTING WIRES AND CONDUIT MAY BE REUSED PER CONDITION. MAKE PUMP MOTOR, FLS (LEAKAGE SENSOR) AND FLOAT SENSOR CABLE SENSOR CONNECTIONS TO CONTROL PANEL. PROVIDE ADDITIONAL WIRING AND CONDUIT IF REQUIRED. REFER TO MANUFACTURER MANUAL FOR WIRING DIAGRAM. COORDINATE WORK WITH MECHANICAL FASTEN CABLE SECURELY AND PROVIDE UNISTRUT SUPPORT IF REQUIRED.

SUMP PUMP REPLACEMENT NON-CLEAN ROOMS

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ELECTRICAL

PARTIAL BASEMENT POWER LAYOUTS - DEMO & NEW

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CSA15-M5A no. du pro

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