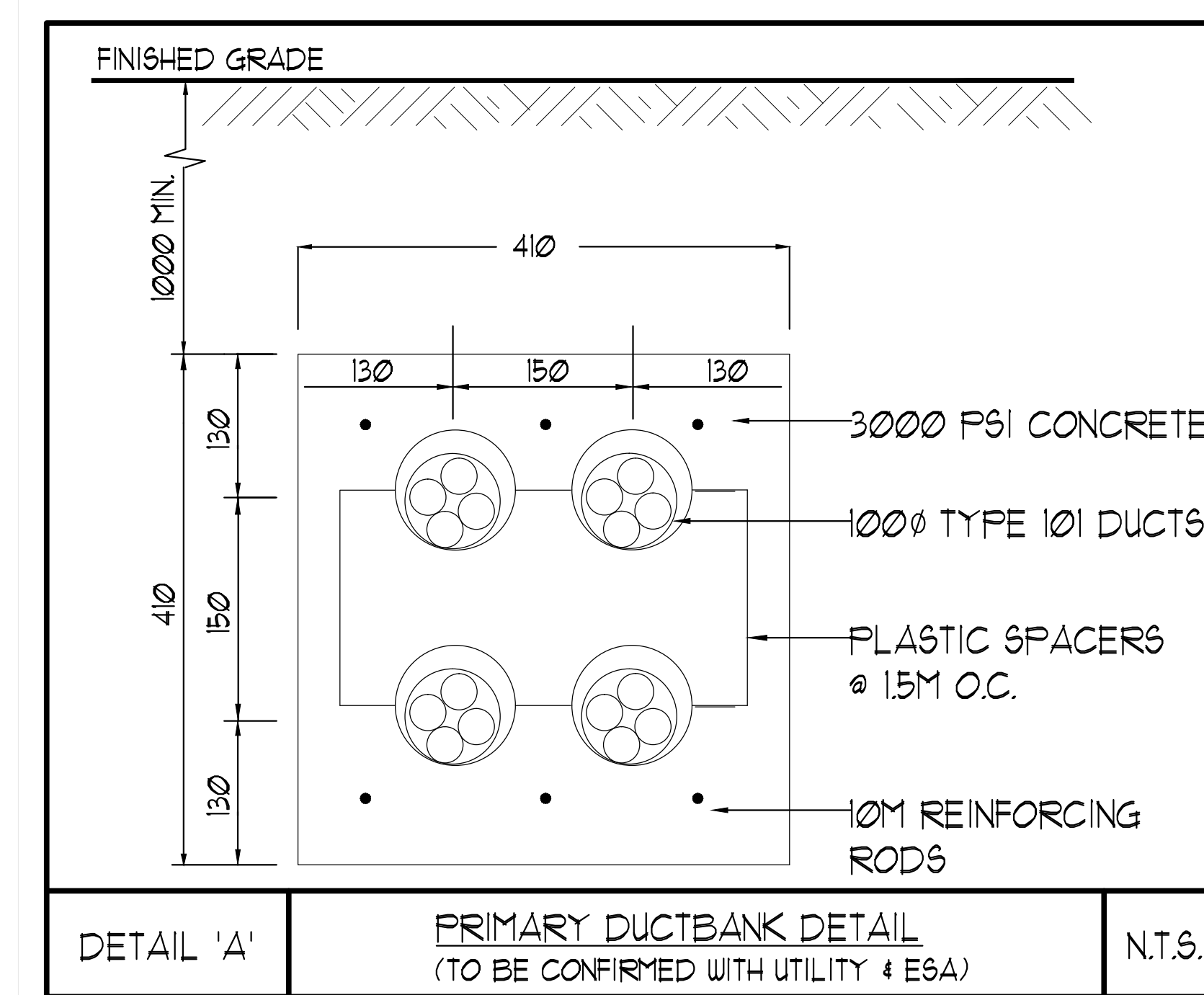
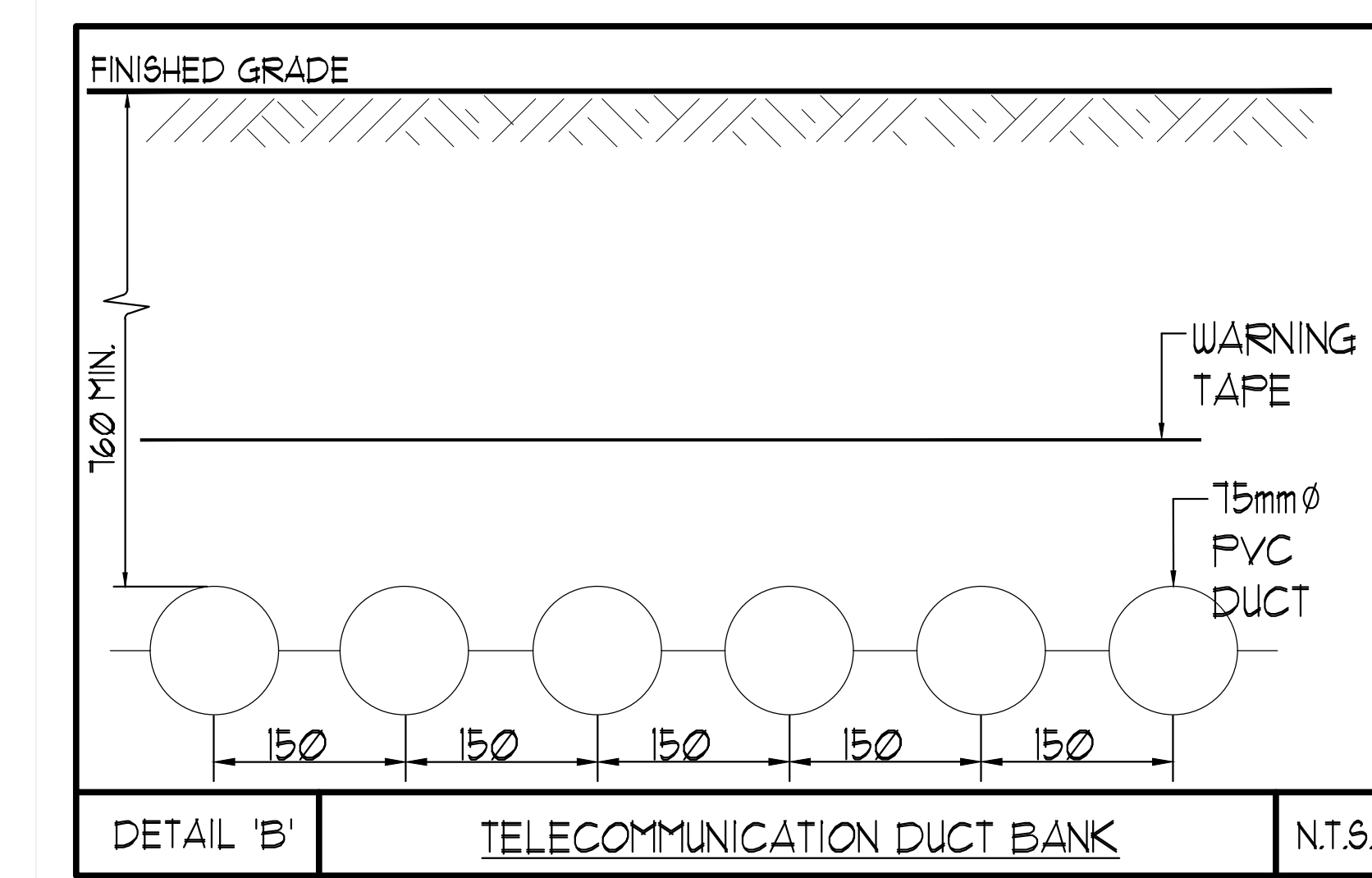


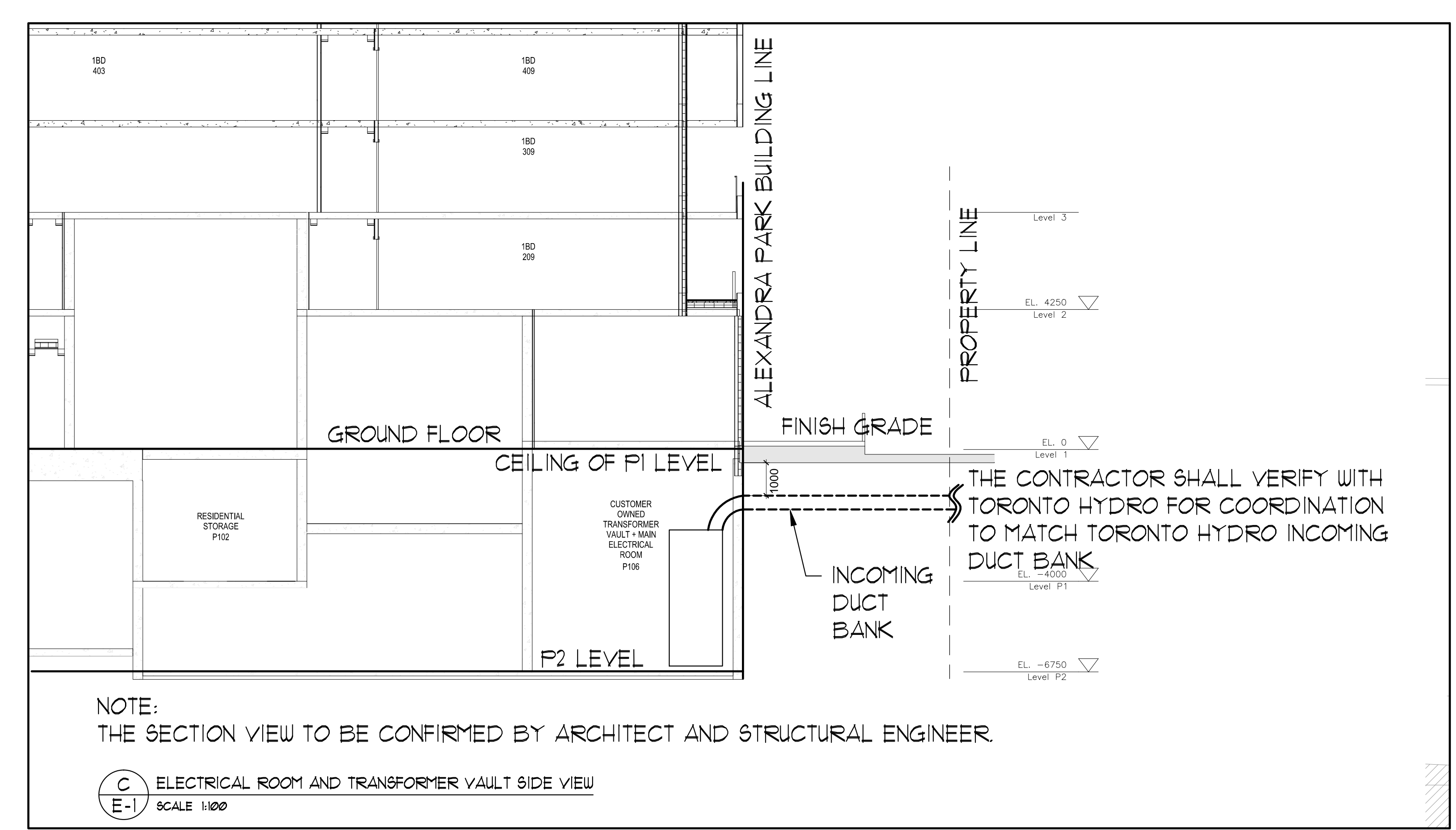
SITE PLAN



DETAIL 'A' PRIMARY DUCTBANK DETAIL (TO BE CONFIRMED WITH UTILITY & ESA) N.T.S.



DETAIL 'B' TELECOMMUNICATION DUCT BANK N.T.S.



NOTE: THE SECTION VIEW TO BE CONFIRMED BY ARCHITECT AND STRUCTURAL ENGINEER.  
 SECTION C ELECTRICAL ROOM AND TRANSFORMER VAULT SIDE VIEW  
 E-1 SCALE 1/8" = 1'-0"

ACOUSTIC NOTES:

- THE POWER TRANSFORMER LOCATED IN THE CUSTOMER OWNED SUBSTATION SHOULD BE SELECTED FOR LOW NOISE. TRANSFORMER CORES SHOULD BE INTERNALLY ISOLATED WITH SPRINGS OR NEOPRENE IN-SHEAR MOUNT. ISOLATED 150MM HOUSE KEEPING POURED ON 50MM THICK UNDERLAY (1 LAYER OF ISO-SP HD OR 2 LAYERS OF DURACOUSTIC) SHOULD BE INCLUDED BELOW THE UNIT. SHALL BE INSTALLED BELOW THE TRANSFORMER AND ASSOCIATED SWITCHGEAR AND THE SPRINGS OR MOUNTS SHOULD BE SELECTED FOR A MINIMUM OF 6MM DEFLECTION UNDER THE WEIGHT OF THE CORE.
- THE INCOMING DUCT BANK MUST BE WELL ISOLATED AT ANY POINTS OF SUSPENSION FROM UNDERSIDE OF THE GROUND FLOOR SLAB OR ANY SHEAR WALLS, USING RUBBER COMPRESSION MOUNTS IN SERIES WITH THE RODS SUPPORTING THE UNISTRUT ASSEMBLIES TO WHICH THE CABLES OR CONDUITS ARE ATTACHED, OR RUBBER PADS OR SLEEVES IN CLAMPS. THIS ISOLATION LAYER SHALL BE INCLUDED BELOW THE HOUSE KEEPING PAD FOR THE SWITCHGEAR.
- ALL CONDUITS OR CABLES THAT ARE SUSPENDED FROM THE GROUND FLOOR SLAB ABOVE SHOULD BE VIBRATION ISOLATED AT ANY POINT OF SUSPENSION FROM THE STRUCTURE USING RUBBER COMPRESSION MOUNTS IN SERIES WITH THE RODS SUPPORTING THE UNISTRUT ASSEMBLIES TO WHICH THE CABLES OR CONDUITS ARE ATTACHED, IN A MANNER SIMILAR TO THAT DESCRIBED ABOVE. CONDUITS OR CABLES FOR THESE TRANSFORMERS SHOULD NOT BE BURIED IN THE GROUND FLOOR SLAB, BUT SURFACE MOUNTED TO FACILITATE ISOLATION FROM THE BUILDING STRUCTURE, TO PREVENT BRIDGING OF THE ISOLATION PADS THROUGH CONDUIT CONNECTION.
- SHALL TO MEDIUM TRANSFORMERS (30kVA, 45kVA TO 75kVA) LOCATED IN P1 AND ON THE BOILER ROOM AT 9TH FLOOR (HUNG TRANSFORMERS) PADS LOCATED BETWEEN THE CASING AND THE UNISTRUT, OR CAN BE INCLUDED IN THE RODS). ALL TRANSFORMERS ARE TO BE ISOLATED ON DOUBLE-LAYER RUBBER PADS (25mm THICK, 50 DIAMETER MAXIMUM).
- THE GENERATOR SHALL BE LOCATED ON A 100MM THICK HOUSEKEEPING CONCRETE PAD ABOVE THE FLOATING FLOOR. THE GENERATOR SUPPORTED FROM THIS HOUSEKEEPING PAD WITH SPRING ISOLATORS HAVING A NORMAL 25mm STATIC DEFLECTION, WITH RIBBED RUBBER PADS UNDER THE SPRING BASE. THE FLOATING FLOOR ITSELF SHOULD CONSIST OF A 100MM THICK CONCRETE SLAB, WITH BATT INSULATION IN THE CAVITY BELOW AND ISOLATION PADS THAT ARE MINIMUM 50MM THICK, SIZED AND SPACED TO ACHIEVE A FUNDAMENTAL FREQUENCY OF 15Hz OR LESS.
- BACK TO BACK ELECTRICAL OUTLETS ARE TO BE AVOIDED IN SUITE DEMISING WALLS. THEY SHOULD BE STAGGERED BY A MINIMUM OF 12" (300MM) (IN CONCRETE WALLS) OR 1 STUD SPACE (IN DRYWALL), TO PREVENT REDUCING THE SOUND INSULATION PERFORMANCE OF THOSE WALLS. THIS ALSO APPLIES TO COMMUNICATIONS OUTLETS AND FIRE ALARM SUPPRESSION SWITCHES, IF THESE ARE TO BE INCLUDED IN THIS DEVELOPMENT.

KEY NOTES:

- ELECTRICAL CONTRACTOR TO PROVIDE CONCRETE ENCASED DUCT BANKS AND TO VERIFY ON SITE EXACT LOCATION AND DEPTH OF HV CABLES FOR MATCH-UP WITH HV DUCTS AT PROPERTY LINE. INSTALLATION OF HV CABLES AND TERMINATION ARE DONE BY TORONTO HYDRO.
- ELECTRICAL CONTRACTOR SHALL PROVIDE 6-3" DUCTS FOR TELECOMMUNICATION SERVICES FROM THE BUILDING UP TO PROPERTY LINE. INSTALLATION OF DUCTS AND TERMINATION UP TO THE PROPERTY LINE ARE DONE BY THE ELECTRICAL CONTRACTOR. TELECOMMUNICATION SERVICE PROVIDERS ARE RESPONSIBLE FOR DUCTS AND CABLING BEYOND PROPERTY LINE. DUCTS SHALL CONTINUE AS SLEEVES AS THEY PENETRATE THE GARAGE WALL.
- DIV. 16 CONTRACTOR SHALL PAINT RED WARNING SIGNS FOR HIGH VOLTAGE DUCT BANK IN ACCORDANCE WITH LATEST TORONTO HYDRO STANDARDS.
- ALL UNDERGROUND INSTALLATION OF ELECTRICAL DUCTS/CONDUITS SHALL COMPLY WITH THE LATEST ESA CODE RULE 12-012 (BULLETIN 12-2-15) WHICH SPECIFIES "CONTINUOUS RED PLASTIC MARKER TAPES WITH BLACK LETTERS IDENTIFYING THE POWER LINE UNDERGROUND INSTALLATION."
  - PLACED APPROXIMATELY HALF WAY BETWEEN THE INSTALLATION AND GRADE LEVEL,
  - INSTALLED COVERING THE WIDTH OF THE INSTALLATION, AND
  - WHERE MULTIPLE MARKER TAPES ARE REQUIRED TO COVER THE WIDTH OF THE INSTALLATION MARKER TAPES SHALL BE PLACED A MAXIMUM OF 600mm APART.
- RUN 1" CONDUIT TO GENERATOR CONTROL PANEL AND CACF ROOM FROM INCOMING GAS STATION CONTROL VALVE.
- ELECTRICAL CONTRACTOR SHALL KEEP MINIMUM CLEARANCE OF 600mm HORIZONTAL AND 300mm VERTICAL BETWEEN SERVICES GAS LINE AND HYDRO DUCT BANK.

- COMMUNICATION CONDUIT REQUIREMENTS:
  - PLACE 2" FULL BOX ON BUILDING WALL WHERE ENTRANCE SUB DUCT ENTERS BUILDING SO DUCT CAN BE SEALED AFTER ENTRANCE CABLE IS PLACED TO PREVENT WATER AND GASES SEEPING INTO BUILDING.
  - CONDUIT TERMINATION AT THE PROPERTY LINE TO BE MARKED WITH A 2"x4" STAKED INTO THE GROUND APPROXIMATELY 3' HIGH MARKED "BELL".
  - INSIDE THE BUILDING CONDUIT MUST BE EMT (FIRE RATED ELECTRICAL METALLIC TUBING) 29mm (35") OR 100mm (4") INSIDE DIAMETER TO ENSURE THE SUCCESSFUL PLACEMENT AND TO AVOID DAMAGING THE CABLE DURING THE PULGING OPERATION. 11 METERS FULL BOXES ARE REQUIRED AT 90 DEGREE BENDS WITHIN THE BUILDING.
  - CONDUIT LENGTHS OVER 30m HAVE A FULL ROPE.
  - ALL CONDUITS TO BE FREE AND CLEAR OF OBSTRUCTIONS AS A BLOCKAGE AT THE TIME OF CABLE PLACEMENT WILL RESULT IN A DELAY OF SERVICE UNTIL THE PATH HAS BEEN CLEARED AT THE OWNER'S EXPENSE.
  - 4"x8"x3/4" FIRE RETARDANT FLYWOOD BACKBOARD FASTENED TO WALL IN AN AREA ACCESSIBLE WITHOUT THE USE OF A LADDER WHERE IT IS POSSIBLE FOR A TECHNICIAN TO WORK WITHOUT BLOCKING A PASSAGEWAY AND WHERE THE EQUIPMENT MOUNTED WILL NOT BE DAMAGED BY DOORS OR ANY MOVING OBJECTS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF TELECOMMUNICATION DUCT BANK WITH BELL/ROGERS.
- REFER TO LANDSCAPE DRAWINGS FOR DETAILED LAYOUT, LANDSCAPE LIGHTS SHALL BE CONTROLLED BY A TIMER/CONTROLLER LOCATED NEAR ELP-E1 AND CONNECT TO ELP-E2.
- PROVIDE 1" CONDUIT C/W FULL STRING FROM IRRIGATION CONTROL PANEL TO IRRIGATION CONTROL POINT. FOR QUANTITY AND LOCATIONS OF IRRIGATION POINTS REFER TO IRRIGATION DRAWINGS.
- RESERVED.
- RESERVED.
- FOR CIRCUITING REFER TO TABLE \*.
- RESERVED.
- RESERVED.
- W2 LIGHT FIXTURES FOR GRADE SUITES TO BE CONNECTED TO SUITE ELECTRICAL PANEL. MOUNTING HEIGHT FOR W2 IS CENTERED 2350mm AFF. REFER TO ARCHITECTURAL/LANDSCAPE DRAWINGS FOR MOUNTING HEIGHT AND EXACT LOCATION OF LIGHT FIXTURE.
- MOUNTING HEIGHT FOR W2 IS CENTERED 2350mm AFF. REFER TO ARCHITECTURAL/LANDSCAPE DRAWINGS FOR MOUNTING HEIGHT AND EXACT LOCATION OF LIGHT FIXTURE.

ALEXANDRA PARK (#1313)  
ELECTRICAL DRAWING LIST

NO.	DESCRIPTION	SCALE	ISSUED FOR PERMIT MAY 30, 2014	RE-ISSUED FOR PERMIT JULY 01, 2014	RE-ISSUED FOR PERMIT SEPTEMBER 2, 2014	RE-ISSUED FOR TENDER SEPTEMBER 23, 2014	RE-ISSUED FOR TENDER OCTOBER 31, 2014	ISSUED FOR PTA FEBRUARY 20, 2015
E-1	SITE PLAN	1:200	✓	✓	✓	✓	✓	✓
E-2	F-2 FLOOR PLAN - ELECTRICAL LAYOUT	1:200	✓	✓	✓	✓	✓	✓
E-3	F-1 FLOOR PLAN - ELECTRICAL LAYOUT	1:200	✓	✓	✓	✓	✓	✓
E-4	G/F SOUTH FLOOR PLAN - POWER LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-5	G/F NORTH FLOOR PLAN - POWER LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-6	G/F SOUTH FLOOR PLAN - LIGHTING LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-7	G/F NORTH FLOOR PLAN - LIGHTING LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-8	2/F SOUTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-9	2/F NORTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-10	3/F SOUTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-11	3/F NORTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-12	4/F SOUTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-13	4/F NORTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-14	5/F SOUTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-15	5/F NORTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-16	6/F SOUTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-17	6/F NORTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-18	7/F SOUTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-19	7/F NORTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-20	8/F SOUTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-21	8/F NORTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-22	9/F SOUTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-23	9/F NORTH FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-24	10/F FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-25	11/F FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-26	12/F FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-27	13/F FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-28	14/F FLOOR PLAN - ELECTRICAL LAYOUT	1:50	✓	✓	✓	✓	✓	✓
E-29	ROOF FLOOR PLAN - ELECTRICAL LAYOUT	N.T.S.	✓	✓	✓	✓	✓	✓
E-30	SINGLE LINE DIAGRAM	N.T.S.	✓	✓	✓	✓	✓	✓
E-31	SUITE DISTRIBUTION PANEL, TELECOMMUNICATIONS & SECURITY RISER DIAGRAMS	N.T.S.	✓	✓	✓	✓	✓	✓
E-32	FIRE ALARM RISER DIAGRAM	N.T.S.	✓	✓	✓	✓	✓	✓
E-33	FIRE ALARM SCHEDULES AND DETAILS	N.T.S.	✓	✓	✓	✓	✓	✓
E-34	ELECTRICAL PANEL SCHEDULES & LIGHTING SCHEDULES	N.T.S.	✓	✓	✓	✓	✓	✓
E-35	ELECTRICAL DETAILS	N.T.S.	✓	✓	✓	✓	✓	✓
E-36	SYSTEM WATER RISER DIAGRAM	N.T.S.	✓	✓	✓	✓	✓	✓

16

CAT #	DESCRIPTION	QUANTITY
RYOTENAX SUBS	HDPE JACKETED COPPER SHEATHED MI HEATING CABLE (R)	6 EACH
RYOTENAX DISTTRER#4	JUNCTION BOX (3 ENTRY)	6 EACH
DIGITRACE SPMG3	SNOW MELTING AND DE-ICING POWER DISTRIBUTION AND CONTROL PANEL 600V	1 EACH
ETI GIT-1	OVERHEAD SNOW SENSOR	1 EACH
ETI S1T-6E	PAVEMENT MOUNTED SENSOR - (OPTIONAL REPLACEMENT FOR OVERHEAD SENSOR FOR BETTER SENSING)	0 EACH
SPCS	SNOW MELT CAUTION SIGN	2 EACH
RYOTENAX SPACER#ALV	GALVANIZED PREPUNCHED STRAPPING (REQUIRED FOR TPO-FOUR CONCRETE AND FOR ALL ASPHALT INSTALLATIONS)	5 ROLL

- NOTES:
- THE SYSTEM SHALL BE PENTAIR 600V, 3Ø, 54kW.
  - THE INSTALLATION SHALL COMPLY WITH PENTAIR'S MANUFACTURER'S RECOMMENDATION.
  - CONTRACTOR TO VERIFY MATERIAL LIST IS SUITABLE FOR THE ACTUAL SITE MEASUREMENTS AND CONDITIONS.

- THE CABLES RUNNING TO AND FROM HV TRANSFORMER IN DUCT BANKS SHALL BE EXTERNALLY RUBBER LINED BY CONTRACTOR TO PREVENT VIBRATION TRANSMISSION TO GROUND FLOOR SLAB. (FOR CUSTOM OWNED TRANSFORMERS - SOME CASES ONLY.)
- THE CABLES RUNNING TO AND FROM THE HV TRANSFORMER IN DUCT BANKS SHALL BE EXTERNALLY RUBBER LINED BY CONTRACTOR TO PREVENT VIBRATION TRANSMISSION TO GROUND FLOOR SLAB. (FOR CUSTOM OWNED TRANSFORMERS - SOME CASES ONLY.)

TRENCH DRAIN - TO BE EMBEDDED IN CONCRETE - 208V, 1FH

NO.	DESCRIPTION
1	EA B/61E4820/150/3300/208/15/425A/1/N/2 FOR TRENCH DRAIN 350MM X 2280MM. ECOPLA - ENGINEERED JACKETED COPPER HEATING UNIT DESIGN A - 46', 3800W, 208V, 15' B' GOLD LEAD MADE TO ORDER - FREIGHT EXTRA

- MOUNTING HEIGHT FOR S1 LIGHT FIXTURE IS 3250mm AFF. REFER TO ARCHITECTURAL/LANDSCAPE DRAWINGS FOR MOUNTING HEIGHT AND EXACT LOCATION OF LIGHT FIXTURE.
- TRUCK WARNING SYSTEM DESIGN REQUIREMENTS SHALL BE CONFIRMED BY SUPPLIER. THIS LAYOUT FOR INFORMATION ONLY.

REVISIONS

NO.	DESCRIPTION	DATE
01/01/15	ISSUED FOR PTA #1	01/13/15
02/01/15	RE-ISSUED FOR TENDER	02/02/15
03/01/15	RE-ISSUED FOR PERMIT	03/02/15
04/01/15	RE-ISSUED FOR PERMIT	04/02/15
05/01/15	RE-ISSUED FOR PERMIT	05/02/15
06/01/15	RE-ISSUED FOR PERMIT	06/02/15
07/01/15	RE-ISSUED FOR PERMIT	07/02/15
08/01/15	RE-ISSUED FOR PERMIT	08/02/15
09/01/15	RE-ISSUED FOR PERMIT	09/02/15
10/01/15	RE-ISSUED FOR PERMIT	10/02/15
11/01/15	RE-ISSUED FOR PERMIT	11/02/15
12/01/15	RE-ISSUED FOR PERMIT	12/02/15
13/01/15	RE-ISSUED FOR PERMIT	13/02/15
14/01/15	RE-ISSUED FOR PERMIT	14/02/15
15/01/15	RE-ISSUED FOR PERMIT	15/02/15
16/01/15	RE-ISSUED FOR PERMIT	16/02/15
17/01/15	RE-ISSUED FOR PERMIT	17/02/15
18/01/15	RE-ISSUED FOR PERMIT	18/02/15
19/01/15	RE-ISSUED FOR PERMIT	19/02/15
20/01/15	RE-ISSUED FOR PERMIT	20/02/15
21/01/15	RE-ISSUED FOR PERMIT	21/02/15
22/01/15	RE-ISSUED FOR PERMIT	22/02/15
23/01/15	RE-ISSUED FOR PERMIT	23/02/15
24/01/15	RE-ISSUED FOR PERMIT	24/02/15
25/01/15	RE-ISSUED FOR PERMIT	25/02/15
26/01/15	RE-ISSUED FOR PERMIT	26/02/15
27/01/15	RE-ISSUED FOR PERMIT	27/02/15
28/01/15	RE-ISSUED FOR PERMIT	28/02/15
29/01/15	RE-ISSUED FOR PERMIT	29/02/15
30/01/15	RE-ISSUED FOR PERMIT	30/02/15
31/01/15	RE-ISSUED FOR PERMIT	31/02/15
32/01/15	RE-ISSUED FOR PERMIT	32/02/15
33/01/15	RE-ISSUED FOR PERMIT	33/02/15
34/01/15	RE-ISSUED FOR PERMIT	34/02/15
35/01/15	RE-ISSUED FOR PERMIT	35/02/15
36/01/15	RE-ISSUED FOR PERMIT	36/02/15
37/01/15	RE-ISSUED FOR PERMIT	37/02/15
38/01/15	RE-ISSUED FOR PERMIT	38/02/15
39/01/15	RE-ISSUED FOR PERMIT	39/02/15
40/01/15	RE-ISSUED FOR PERMIT	40/02/15
41/01/15	RE-ISSUED FOR PERMIT	41/02/15
42/01/15	RE-ISSUED FOR PERMIT	42/02/15
43/01/15	RE-ISSUED FOR PERMIT	43/02/15
44/01/15	RE-ISSUED FOR PERMIT	44/02/15
45/01/15	RE-ISSUED FOR PERMIT	45/02/15
46/01/15	RE-ISSUED FOR PERMIT	46/02/15
47/01/15	RE-ISSUED FOR PERMIT	47/02/15
48/01/15	RE-ISSUED FOR PERMIT	48/02/15
49/01/15	RE-ISSUED FOR PERMIT	49/02/15
50/01/15	RE-ISSUED FOR PERMIT	50/02/15

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS THE PROPERTY OF THE ENGINEER AND NOT BE REPRODUCED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.

DRAWINGS ARE NOT TO BE SCALED

**NOVA TRENDS**  
175 West Beaver Creek Road, Unit 31  
Richmond Hill, Ontario L4B 3P1  
Tel: 905-882-5445  
Fax: 905-882-5441  
Email: info@novatrend.com

PROJECT TITLE: ALEXANDRA PARK  
38 CAMERON STREET, BLOCK II  
TORONTO, ONTARIO

DATE: FEB, 13  
DRAWN BY: S.O.  
CHECKED BY: S.T.  
SCALE: 1:200  
PROJECT NUMBER: 1313  
DRAWING NUMBER: E-1