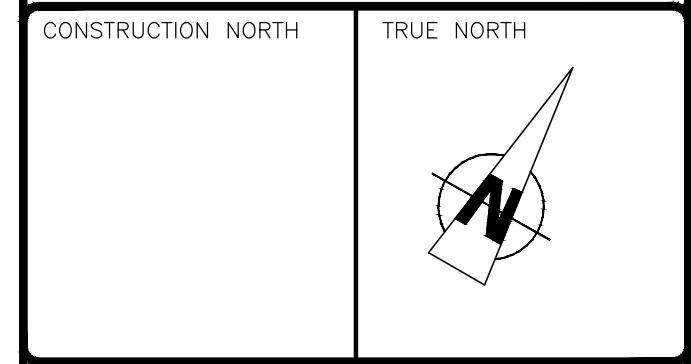
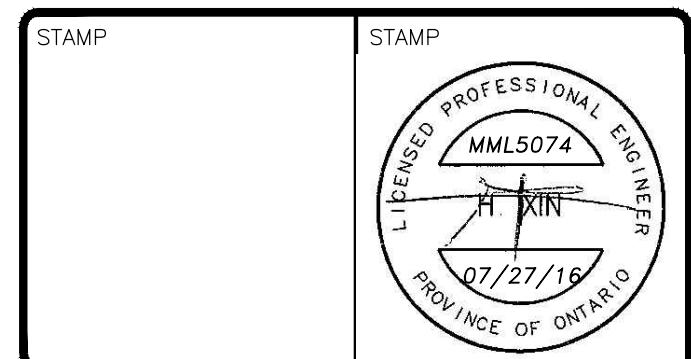


ROXTON ROAD



REVISIONS		PLOT SCALE: 1=1
3	07.27.16	ISSUED FOR TENDER/PERMIT
2	06.30.16	ISSUED FOR FINAL REVIEW
1	06.01.16	ISSUED FOR CLIENT REVIEW

CONTRACTOR WILL CHECK AND VERIFY ALL DIMENSIONS AND CHECK ALL JOB CONDITIONS ON THE JOB BEFORE PROCEEDING WITH THE WORK.

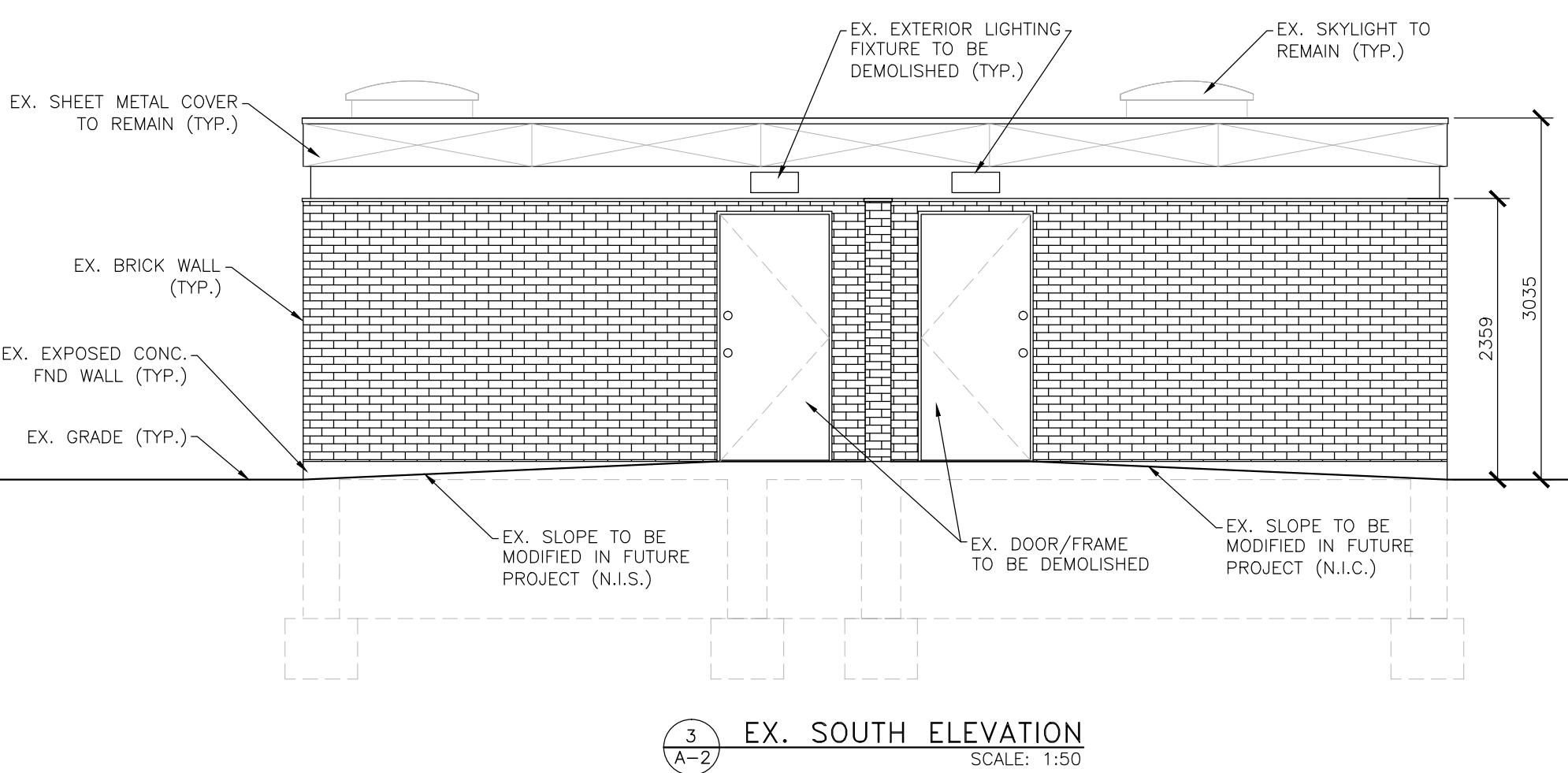
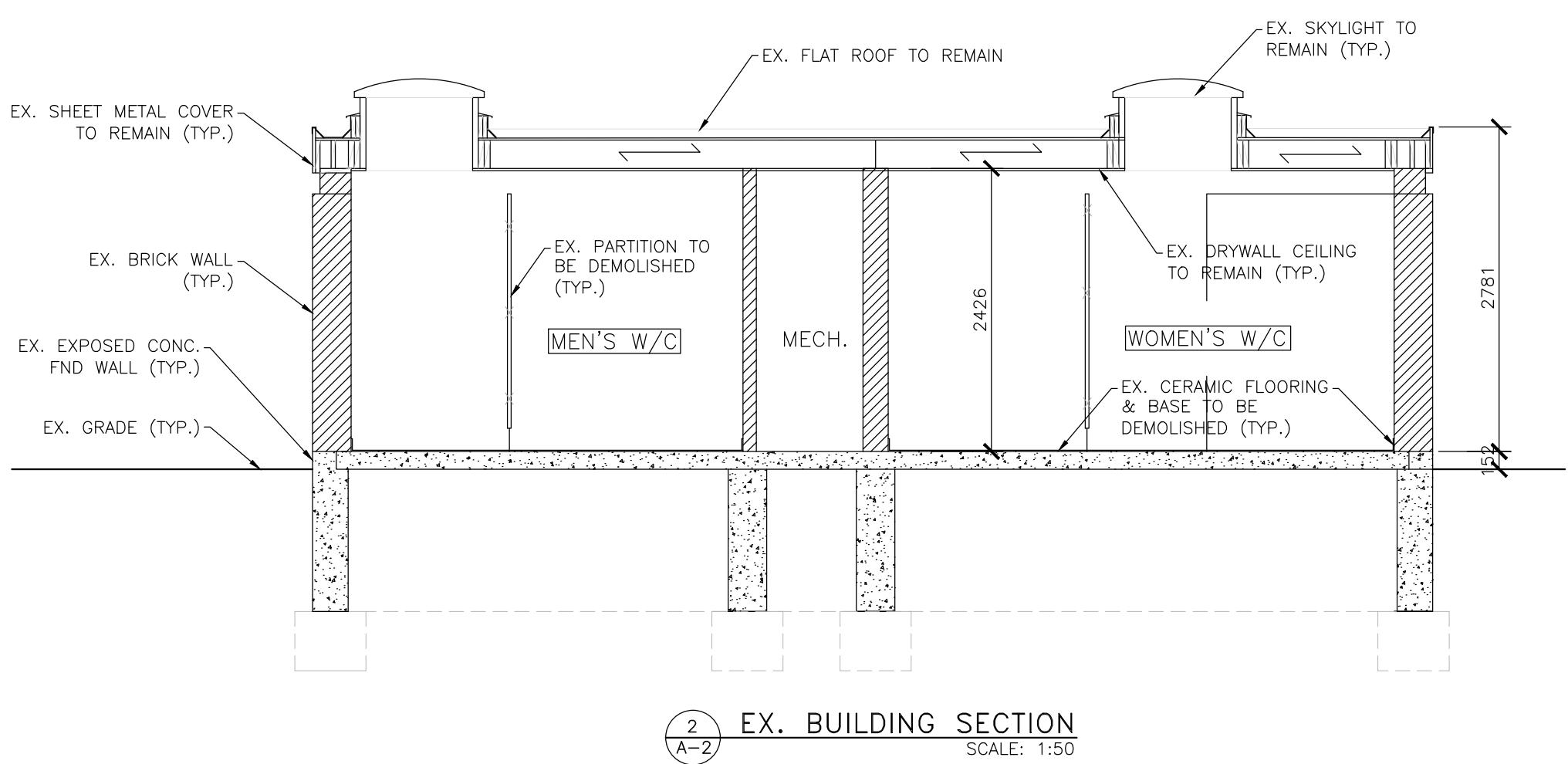
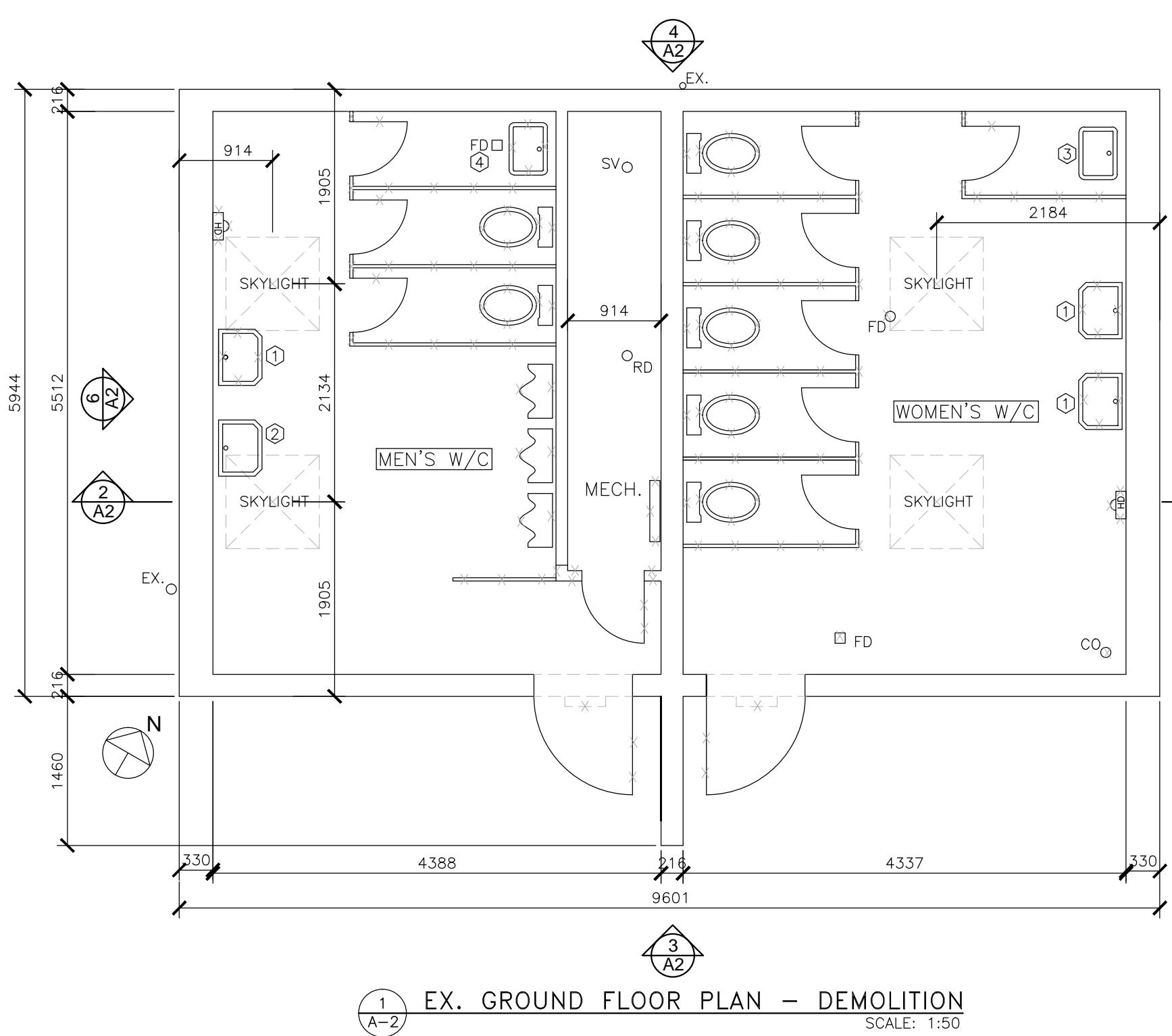


PROJECT
FRED HAMILTON PARK FIELD HOUSE

LOCATION
155 ROXTON ROAD
TORONTO, ONTARIO

SITE PLAN

SCALE	AS NOTED	JOB No.
DRAWN BY	B.L.	5074
CHECKED BY	H.X.	
DATE	JUNE, 2016	
CAD FILE	5074A	OF 4

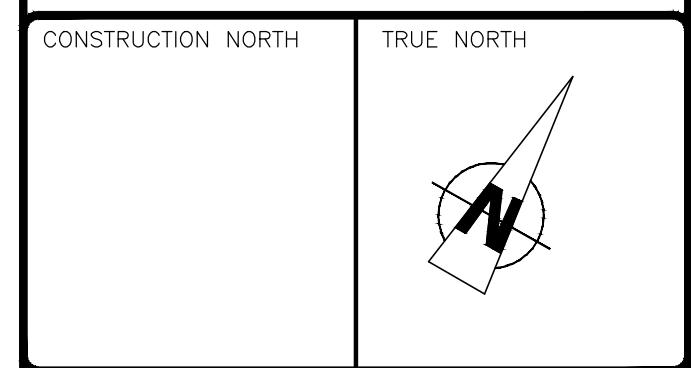
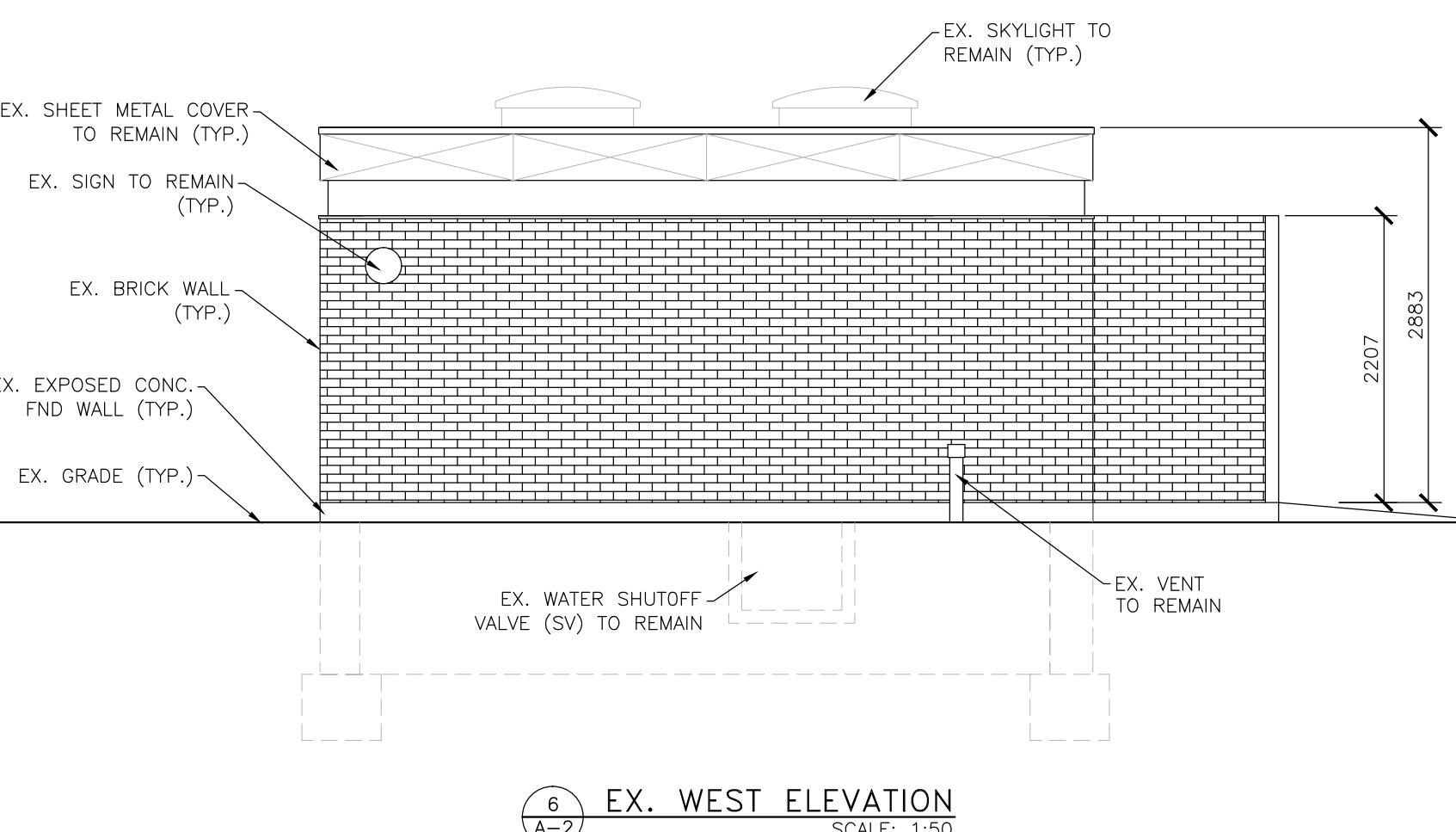
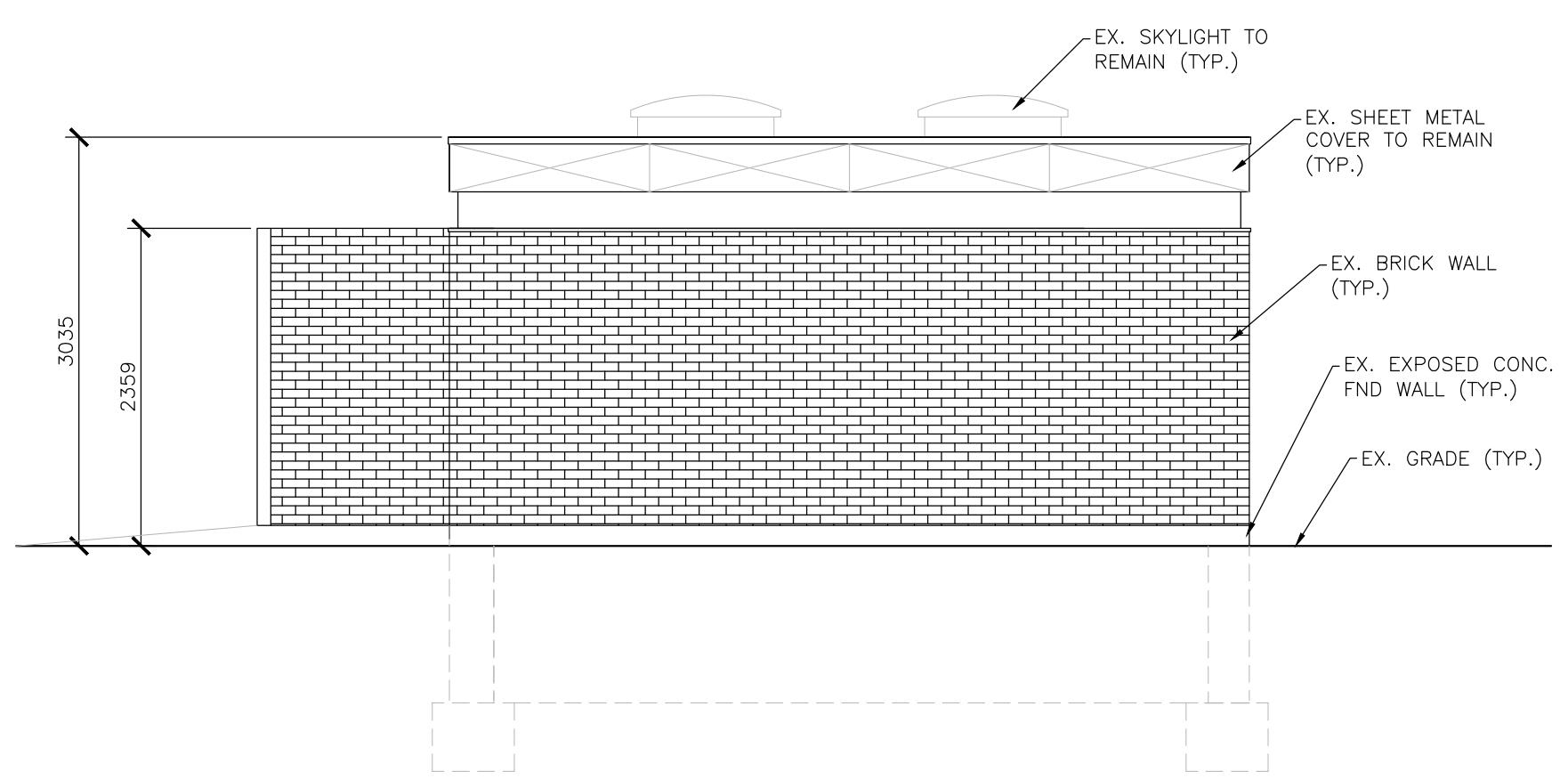
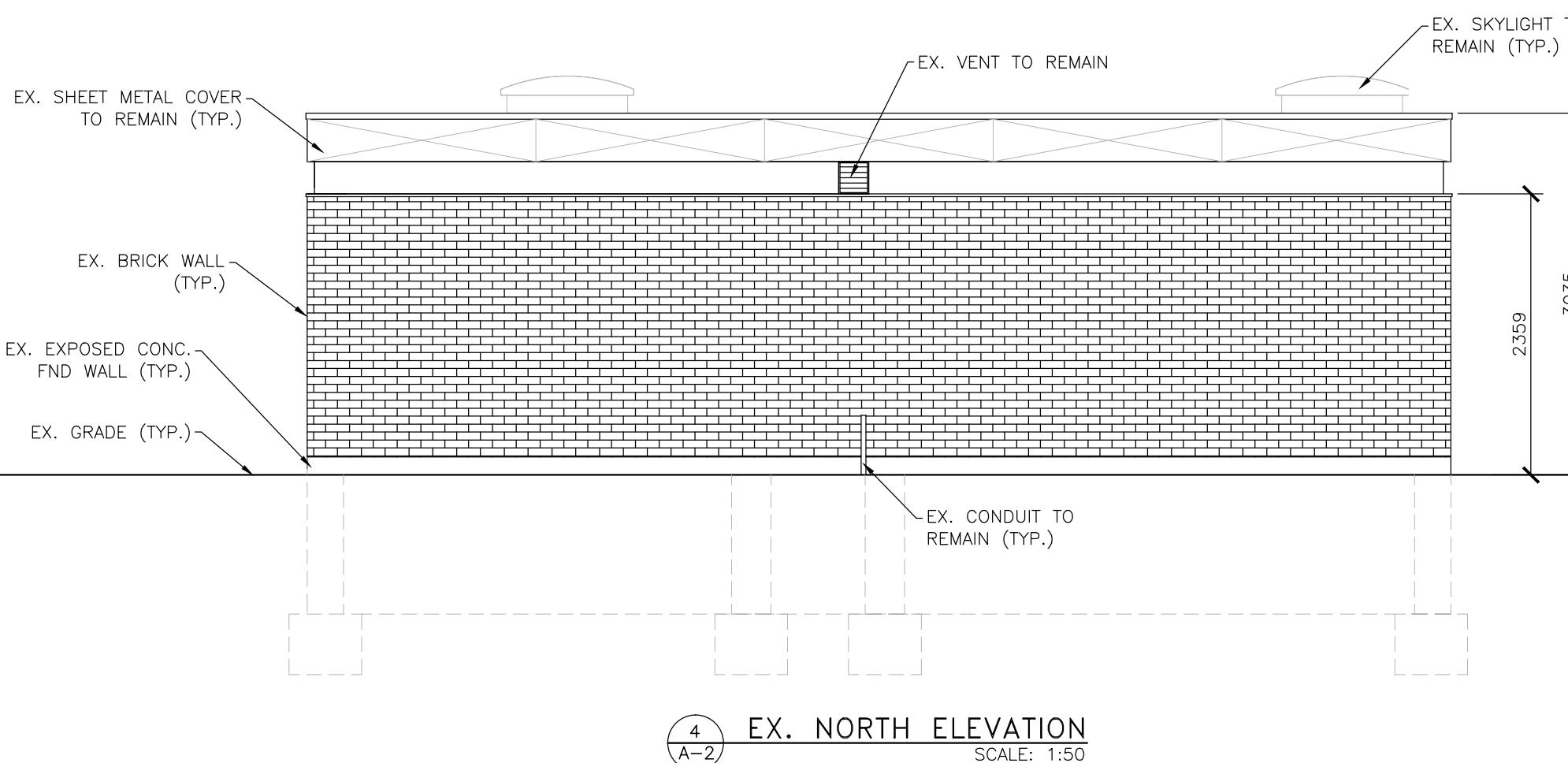


GENERAL DEMOLITION NOTES:

- DEMOLISH EXISTING WALLS, TOILET PARTITIONS, COUNTERS, TOILET PAPER DISPENSERS, SOAP DISPENSERS, MIRRORS AND OTHER MISCELLANEOUS ITEMS THAT WILL BE ABANDONED IN THE NEW CONSTRUCTION.
- DEMOLISH EXISTING TOILETS, URINALS, SINKS, FLOOR DRAINS (FD), CLEANOUTS (CO) AND EXPOSED ABOVE GROUND PLUMBING PIPING. CAP ABANDONED UNEXPOSED PLUMBING PIPING. DEMOLITION OF PLUMBING WORK SHALL BE PERFORMED BY A QUALIFIED PLUMBER.
- DEMOLISH EXISTING ELECTRICAL SERVICE PANELS, RECEPTACLES, SWITCHES, LIGHTING FIXTURES, HAND DRYERS AND ASSOCIATED WIRING. DEMOLITION OF ELECTRICAL WORK SHALL BE PERFORMED BY A QUALIFIED ELECTRICIAN.
- DEMOLISH EXISTING DOORS, FRAMES AND LINTELS ABOVE THE DOORS. PROVIDE ADEQUATE SUPPORT FOR THE WALLS ABOVE THE LINTELS PRIOR TO DEMOLISHING THE LINTELS.
- DEMOLISH EXISTING CERAMIC FLOORING AND CERAMIC WALL BASE; PREPARE AND CLEAN SUBFLOOR & WALL BASE AS REQUIRED FOR NEW PORCELAIN FLOOR TILES & WALL BASE.

SINK DEMOLITION NOTES:

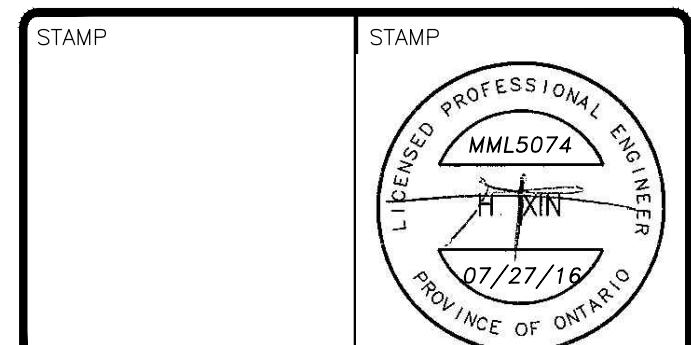
- CAREFULLY REMOVE THIS SINK FIXTURE & STORE ON SITE FOR OWNER TO SELECT ONE TO BE REINSTALLED IN THE NEW UNISEX WASHROOM.
- UPON OWN'S SELECTION, REPLACE THIS SINK WITH THE ONE SELECTED BY THE OWNER AND DISPOSE OFF THE ONES NOT SELECTED BY THE OWNER.
- MOP SINK & WATER SUPPLY REMAIN UNCHANGED. THOROUGHLY CLEAN AND PROTECT AS REQUIRED DURING DEMOLITION & NEW CONSTRUCTION.
- FLOOR DRAIN REMAINS UNCHANGED. CLEAN FLOOR DRAIN & DRAIN PIPING & PROTECT AS REQUIRED DURING DEMOLITION & NEW CONSTRUCTION.



No.	Date	Description
3	07.27.16	ISSUED FOR TENDER/PERMIT
2	06.30.16	ISSUED FOR FINAL REVIEW
1	06.01.16	ISSUED FOR CLIENT REVIEW

REVISIONS PLOT SCALE: 1=1

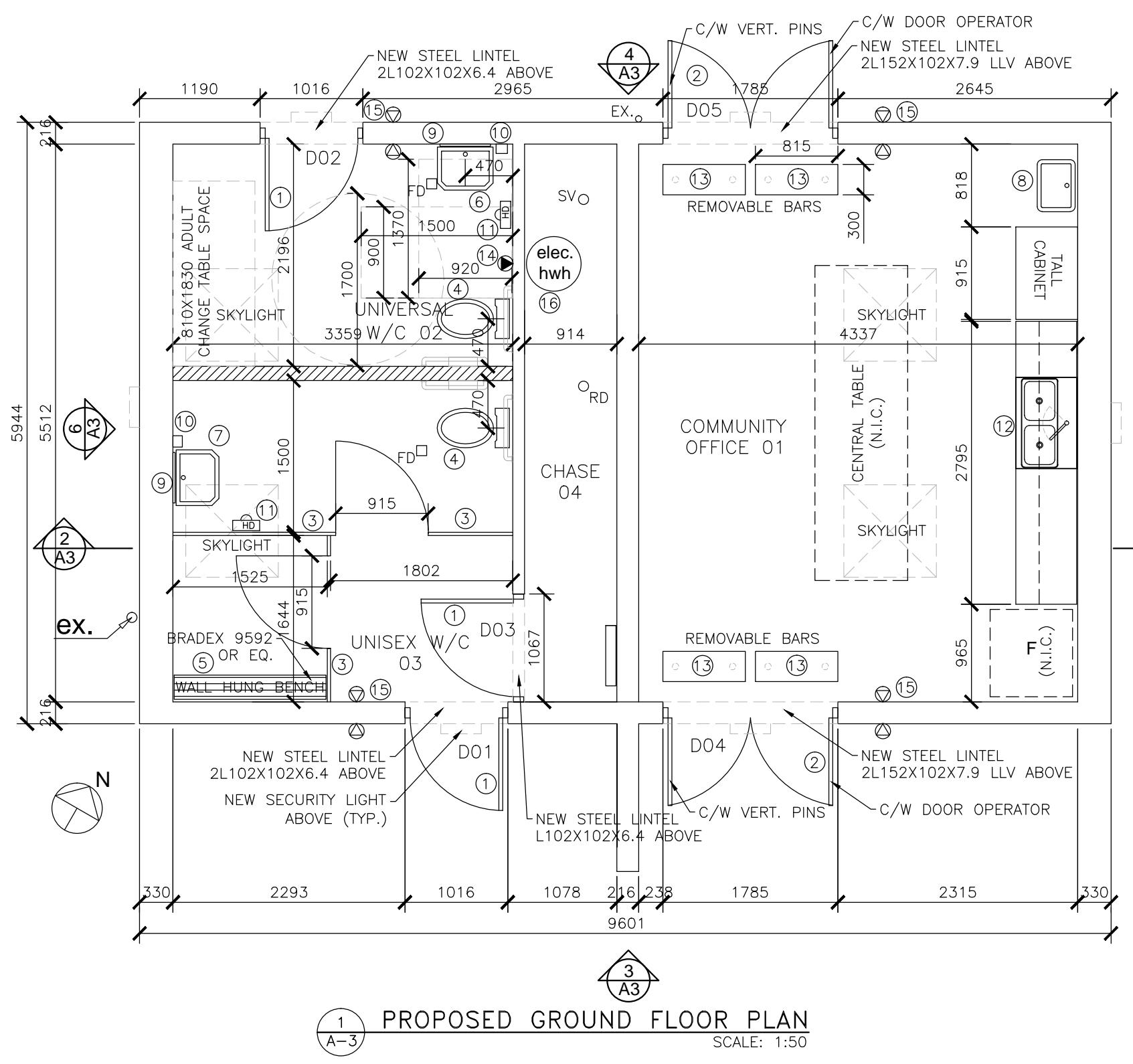
CONTRACTOR WILL CHECK AND VERIFY ALL DIMENSIONS AND CHECK ALL JOB CONDITIONS OF THE JOB BEFORE PROCEEDING WITH THE WORK.



EXISTING FLOOR PLAN,
SECTION, ELEVATIONS AND
DEMOLITION NOTES

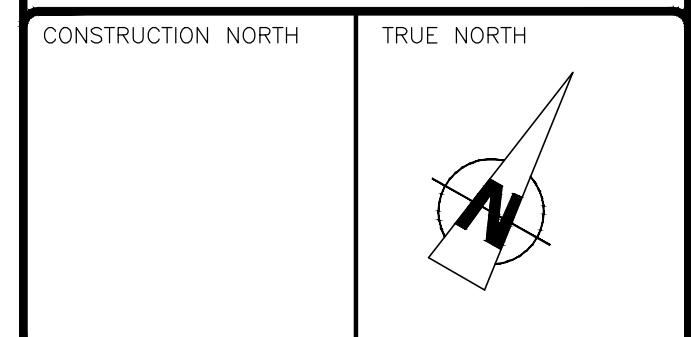
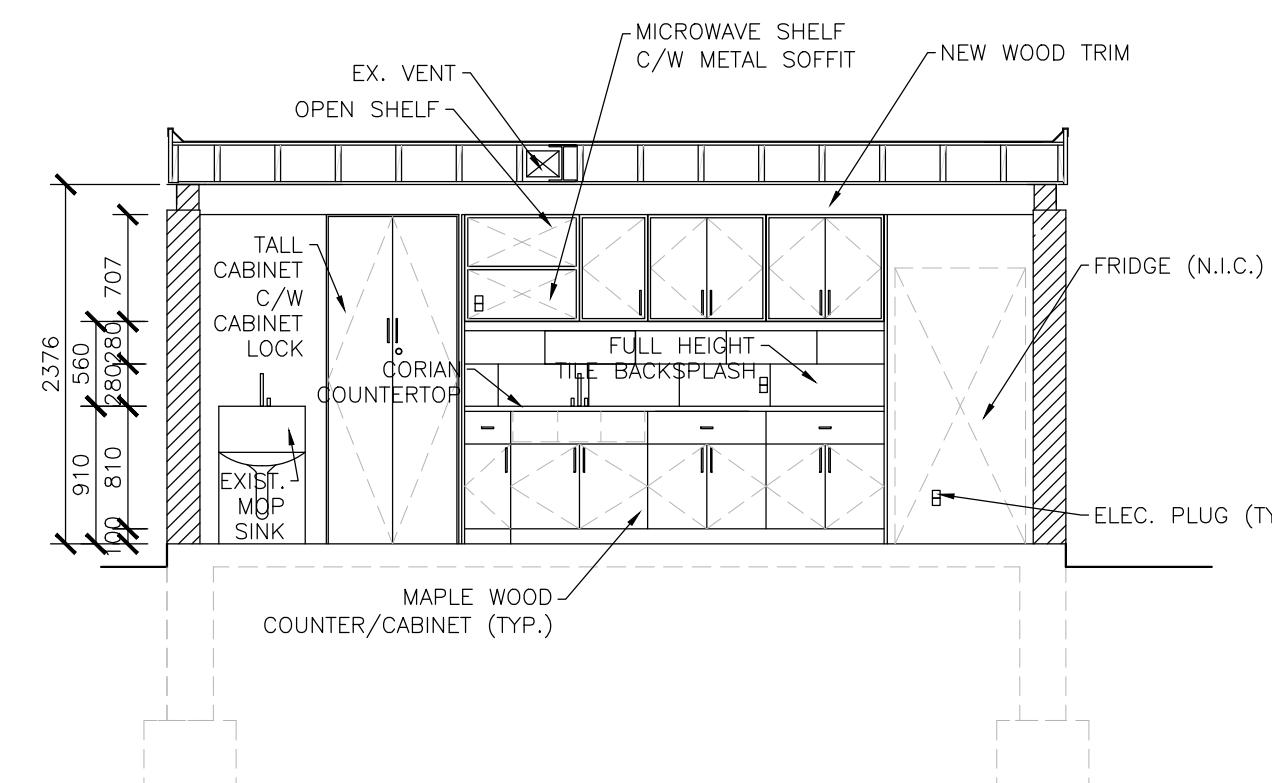
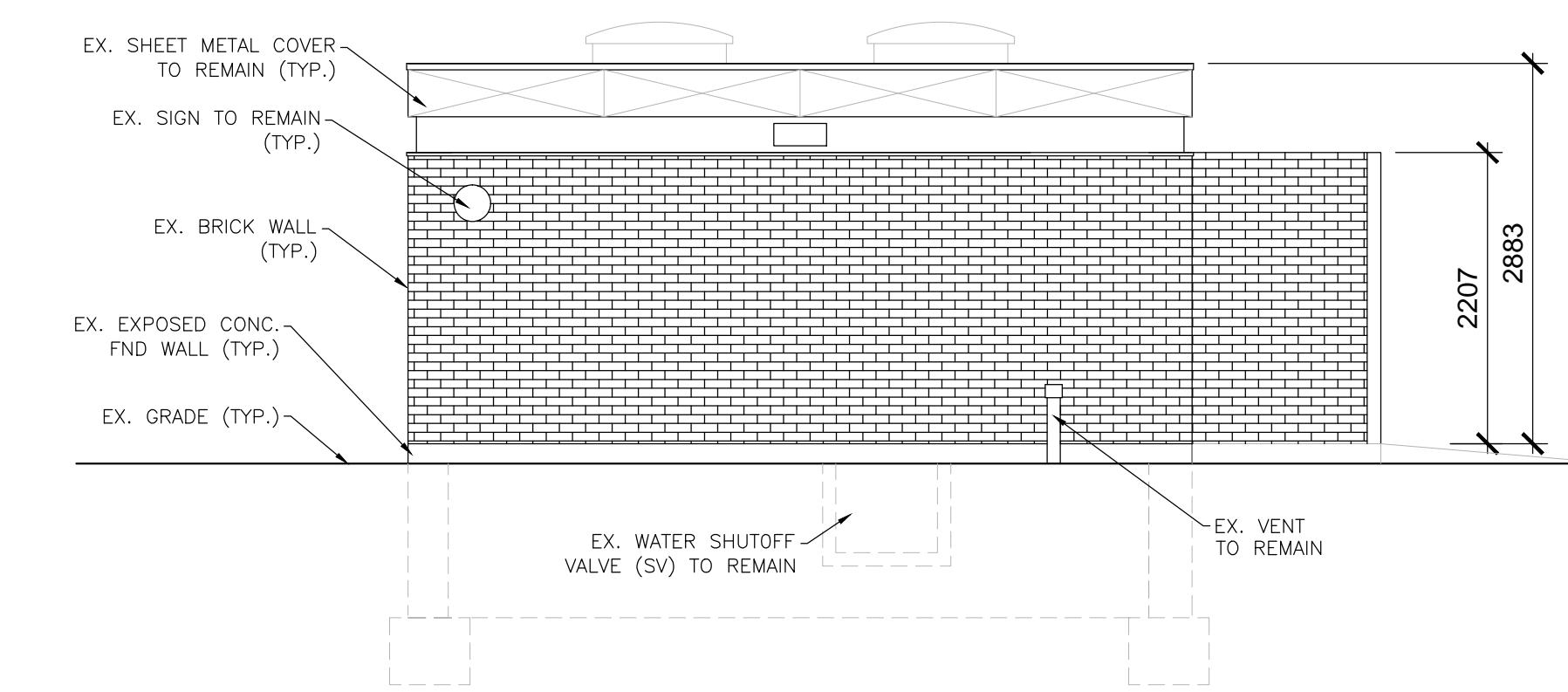
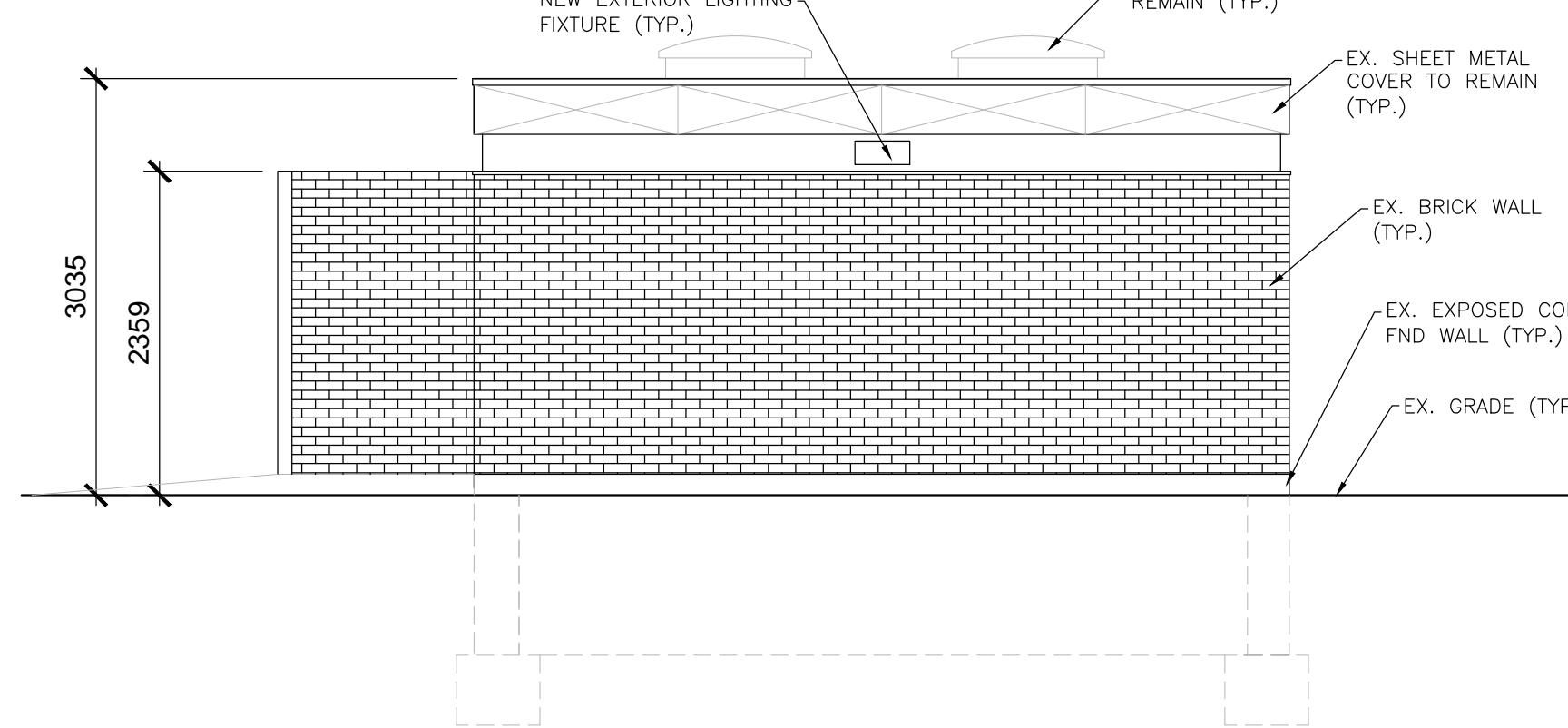
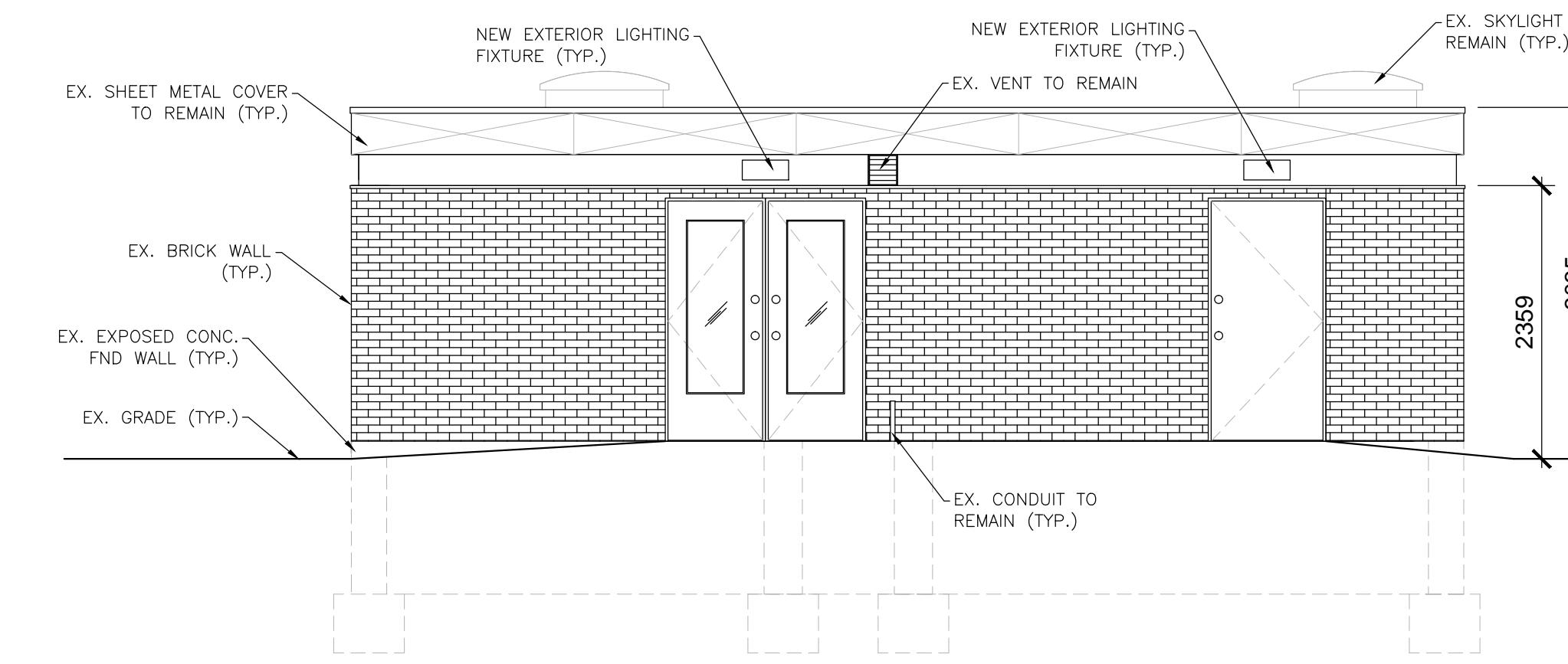
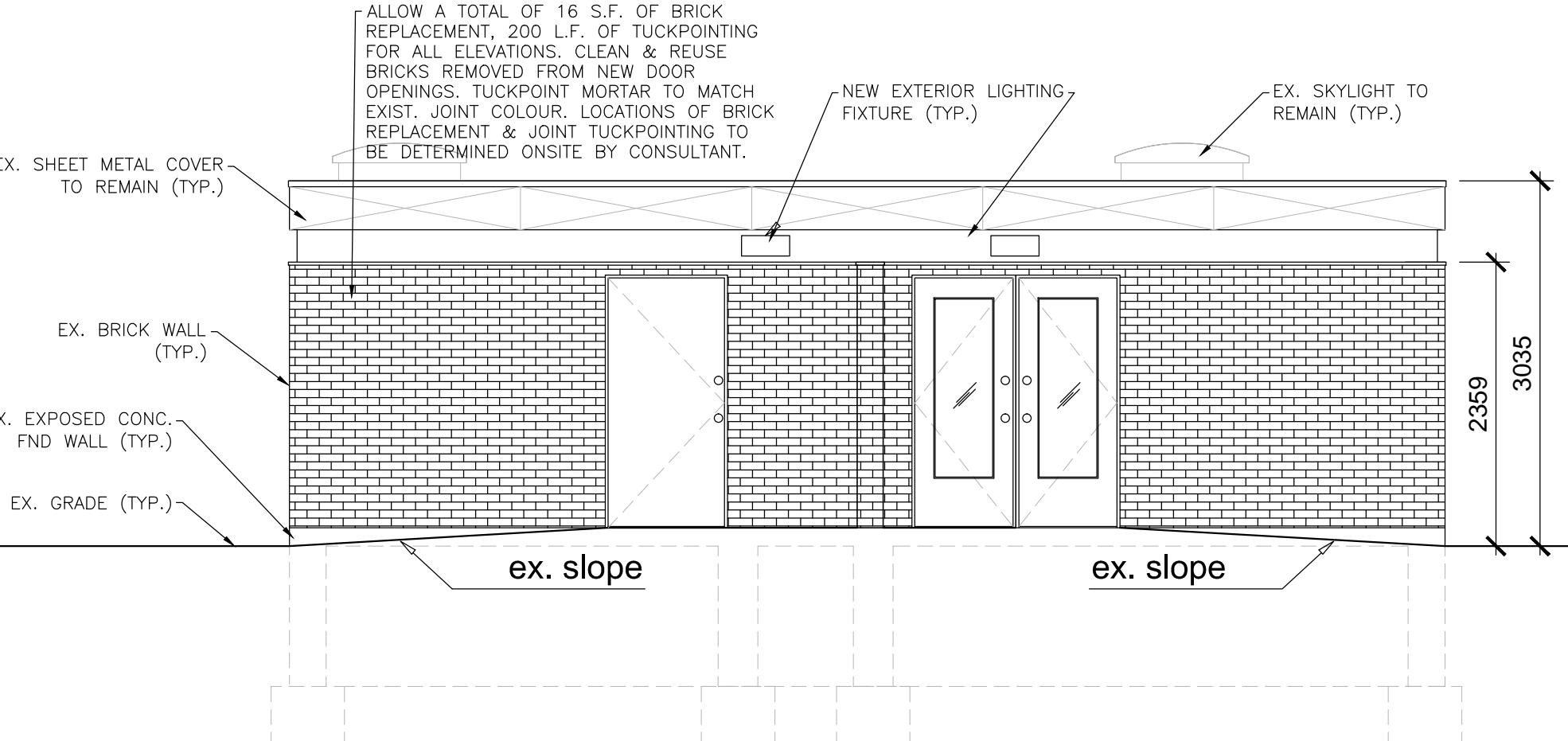
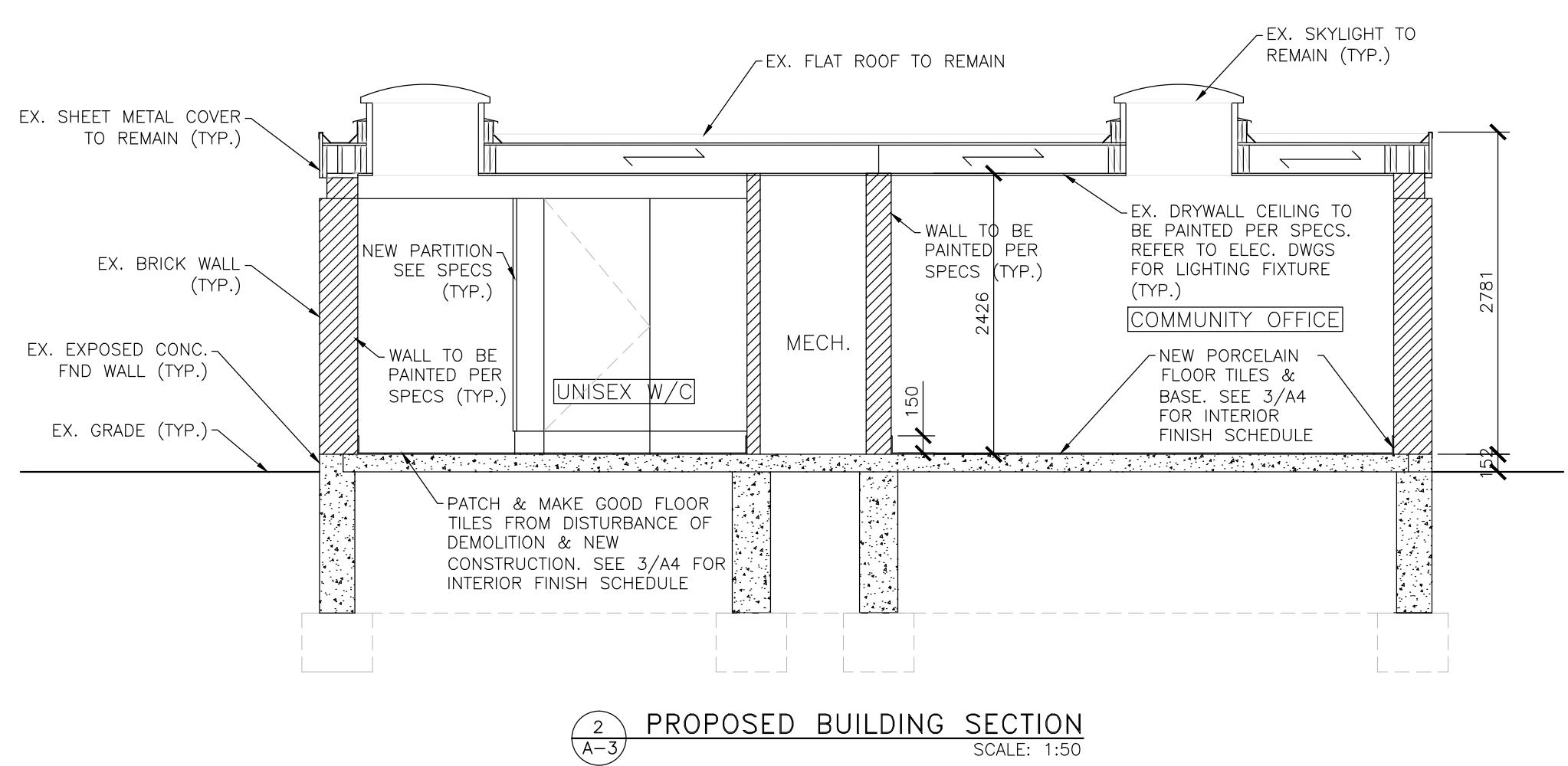
SCALE	AS NOTED	JOB No.	5074
DRAWN BY	B.L.		
CHECKED BY	H.X.		
DATE	JUNE, 2016		
CAD FILE	5074A		

A-2 OF 4



DESIGN NOTES: (TO BE REVISED)

- 1 NEW HOLLOW METAL DOOR AND FRAME. REFER TO 2/A4 FOR DETAIL.
- 2 NEW HOLLOW METAL DOOR AND FRAME, C/W LAMINATED SAFETY GLASS LITE. REFER TO 2/A4 FOR DETAIL.
- 3 NEW HIGH DENSITY POLYETHYLENE (HDPE) SOLID PLASTIC TOILET/SCREEN PARTITIONS (INCLUDING LOCK HARDWARE, COAT HOOKS, AND MOUNTING HARDWARE) TO MATCH EXISTING MOUNTING DETAILS. PARTITION TO BE HOMOGENEOUS COLOUR, 225 MOCHA AS MANUFACTURED BY HADRIAN OR EQ. THICKNESS TO BE 25mm C/W EXTRUDED ALUMINUM HEAT SINK STRI ATTACHED TO THE LOWER EDGE WITH COLOUR TO MATCH PARTITIONS. SUBMIT SHOP DRAWINGS TO CONSULTANT FOR APPROVAL BEFORE INSTALLATION.
- 4 NEW BARRIER-FREE TOILET, REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR PLUMBING NOTES AND PRODUCT SPECIFICATIONS.
- 5 NEW WALL HUNG CHANGE SEAT BRADEX 9592 OR EQ. SUBMIT SHOP DWGS FOR CONSULTANT FOR REVIEW.
- 6 NEW BARRIER-FREE WALL MOUNTED LAVATORY. REFER TO MECHANICAL DRAWINGS FOR PLUMBING NOTES AND PRODUCT SPECIFICATIONS.
- 7 RECLAIMED WALL MOUNTED LAVATORY.
- 8 EXISTING MOP SINK TO REMAIN.
- 9 NEW MIRROR. REFER TO DRAWING 1/A4 FOR DETAIL.
- 10 NEW SOAP DISPENSER. REFER TO 1/A4 FOR DETAIL.
- 11 NEW HAND DRYER. REFER TO 1/A4 FOR DETAIL.
- 12 NEW DOUBLE SINK. REFER TO MECHANICAL DRAWINGS FOR PRODUCT SPECIFICATION.
- 13 PROVIDED NEW REMOVABLE SERVICE BAR C/W SOLID HARD WOOD COUNTERTOP, METAL POSTS, FLOOR LEVEL BASE SLEEVES EMBEDDED IN THE FLOOR SLAB, AND SCREWED SLEEVE COVERS (TO PREVENT TRIP HAZARD WHEN THE SERVICE BAR IS REMOVED). THE SERVICE BAR SHALL BE PAINTED WITH ONE COAT OF PRIMER AND TWO COATS OF FINISH AS PER OWNER'S REQUIREMENT. REFER TO PICTURE 4/A4 FOR A SAMPLE PRODUCT FOR SIMILAR CONSTRUCTION. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR CONSULTANT TO REVIEW.
- 14 NEW EMERGENCY CALL BUTTON.
- 15 NEW DOOR OPERATOR.
- 16 NEW 5 GAL ELEC. WATER HEATER. SEE MECH. DWGS FOR PRODUCT REQUIREMENT.



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No. Date		Description
REVISIONS		PLOT SCALE: 1=1
CONTRACTOR WILL CHECK AND VERIFY ALL DIMENSIONS AND CHECK ALL JOB CONDITIONS OF THE JOB BEFORE PROCEEDING WITH THE WORK.		
STAMP		STAMP
 LICENSED PROFESSIONAL ENGINEER MML5074 07/27/16 PROVINCE OF ONTARIO		



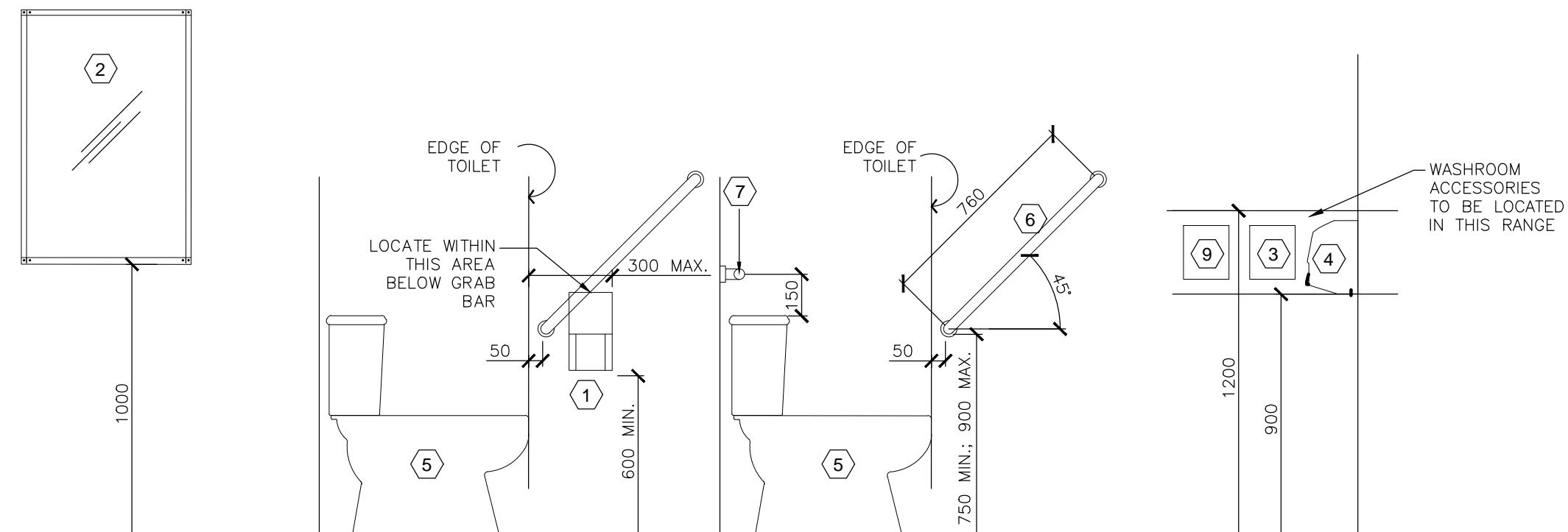
PROJECT
FRED HAMILTON PARK FIELD HOUSE
LOCATION
155 ROXTON ROAD
TORONTO, ONTARIO

PROPOSED FLOOR PLAN,
SECTION, ELEVATIONS AND
DESIGN NOTES

SCALE	AS NOTED
DRAWN BY	B.L.
CHECKED BY	H.X.
DATE	JUNE, 2016
CAD FILE	5074A
JOB No. 5074	
DRAWING NO.	
A-3	

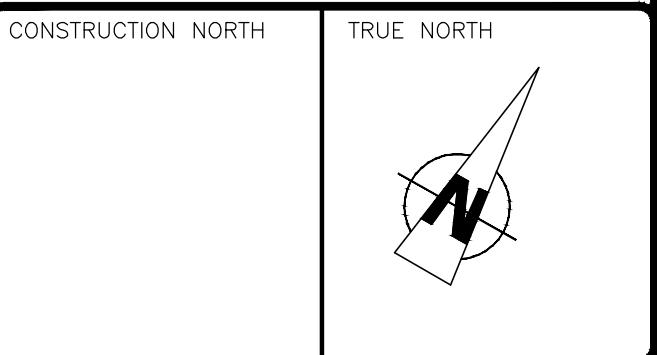
GENERAL NOTES:

- THE DRAWINGS AND SPECIFICATIONS SHALL BE READ IN CONJUNCTION WITH OTHER ARCHITECTURAL DRAWINGS, CONTRACT REQUIREMENTS, THE LEGEND AND SPECIFICATIONS OF THE DRAWINGS. MAXIMUM CONDITIONS WILL GOVERN.
- ACCURATE DIMENSIONS FOR THE WORK MUST BE OBTAINED FROM ACTUAL MEASUREMENT ON SITE.
- VERIFY ALL CONDITIONS AND DIMENSIONS DURING THE MANDATORY SITE VISIT, INCLUDING LOCATIONS OF EXISTING CAPED SERVICES, AND ALLOW FOR ANY REROUTING OF EXISTING AND/OR NEW SERVICES AND EQUIPMENT IN TENDER PRICE. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY.
- REPORT TO THE CONSULTANT ALL AMBIGUITIES (INCLUDING CONSTRUCTION STAGES), DISCREPANCIES, OMISSIONS, ERRORS, DEPARTURES FROM BUILDING BYLAWS AND/OR FROM GOOD PRACTICE PRIOR TO TENDER CLOSING.
- PROVIDE ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GOVERNING AUTHORITIES, AND LOCAL BY-LAWS.
- APPLY FOR, OBTAIN AND PAY FOR ALL PERMITS, EXCEPT FOR BUILDING PERMIT, AND INSPECTIONS REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION INCLUDING PROVINCIAL AND FEDERAL SALES TAXES.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPROVED SCHEDULE TO MEET THE PROJECT COMPLETION DATE AND ALL SPECIFIED INTERIM SCHEDULES AS PROVIDED BY THE OWNER.
- COMPLY WITH OWNER'S OVERALL CONSTRUCTION SCHEDULE.
- MAKE GOOD ALL DAMAGES OR Affected AREA TO ADJACENT WORK. PROVIDE ALL CUTTING, PATCHING, FLASHING WORK AND CLEANUP OF FLOORS, WALLS, CEILINGS, WINDOWS, DOORS, ETC.
- PROVIDE PROPER SHOP DRAWINGS OF ALL SPECIFIED PRODUCTS AND SUBMIT FOR APPROVAL TO THE CONSULTANT.
- DURING PROGRESS OF WORK, SUBSTITUTE PRODUCTS WILL ONLY BE CONSIDERED WHEN TENDERED PRODUCTS BECOME UNOBTAINABLE AND WRITTEN PROOF IS SUBMITTED.
- THE QUALITY AND PERFORMANCE CHARACTERISTICS OF SUBSTITUTE PRODUCTS SHALL BE EQUAL TO THE SPECIFIED PRODUCTS. IMPLEMENTATION OF SUBSTITUTE PRODUCTS IS SUBJECT TO THE REVIEW OF PROPERLY SUBMITTED SHOP DRAWINGS TO THE CONSULTANT.
- ASSUME RESPONSIBILITY AND PAY FOR ANY ADDITIONAL INSTALLATION COSTS INCURRED BY ALL DIVISIONS RESULTING FROM THE ALTERNATES AND/OR SUBSTITUTIONS. MAKE REVISIONS TO RECORD DRAWINGS INCORPORATING ALL ALTERNATES AND/OR SUBSTITUTIONS AND ALL RELATED CHANGES.
- PROVIDE THE OWNER WITH A WRITTEN WARRANTY, FOR ALL LABOUR, MATERIALS, AND EQUIPMENT IN THIS CONTRACT, FOR A PERIOD OF TWO YEARS OR LONGER TIME AS OTHERWISE SPECIFIED BY THE CONSULTANT, COMMENCING AT SUCH TIME AS THE OWNER, OR THE CONSULTANT DEEMS THE WORK ACCEPTABLE.
- PROVIDE A COMPLETE COST BREAKDOWN OF ALL MATERIALS, EQUIPMENT AND LABOUR COSTS ASSOCIATED WITH EACH SUBMISSION FOR EXTRA OR DELETED WORK.
- CONFER WITH ALL TRADES INSTALLING EQUIPMENT WHICH MAY AFFECT THE CONSTRUCTION WORK AND ARRANGE THE WORK IN PROPER RELATION WITH EQUIPMENT INSTALLED UNDER ALL DIVISIONS OF THE CONTRACT.
- INSTALL ALL MATERIAL IN THE BEST WORKMANLIKE MANNER AND IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADE.
- REUSE EXISTING MATERIALS AND/OR EQUIPMENT ONLY WITH WRITTEN PERMISSION FROM THE CONSULTANT. ALL EQUIPMENT, MATERIALS AND ASSOCIATED CONTROLS NOT USED IN THIS CONTRACT SHALL BE RETURNED TO OWNER OR PROPERLY DISPOSED OF OFF SITE AS DIRECTED BY OWNER OR CONSULTANT.
- ALL DEFICIENCIES MUST BE COMPLETED WITHIN 2 WEEKS UPON NOTICE ISSUED BY THE OWNER. THE OWNER MAY HAVE THE DEFICIENCIES COMPLETED BY OTHERS AT THE CONTRACTOR'S EXPENSE, IF THE DEFICIENCIES ARE NOT CORRECTED WITHIN THIS TIME LIMITED.
- UNDER NO CIRCUMSTANCES SHALL THE CONSTRUCTION WORK WILL INTERFERE WITH OWNER'S OPERATION SCHEDULE.
- THE CONTRACTOR IS TO SUBMIT VALID WORKER COMPENSATION COVERAGE LETTER AND PROOF OF LIABILITY INSURANCE FOR ALL OF THE WORK.
- THE CONSTRUCTION OF THIS PROJECT SHALL COMPLY WITH THE CURRENT ONTARIO BUILDING CODE, AND ALL OTHER LEGISLATION HAVING JURISDICTION.

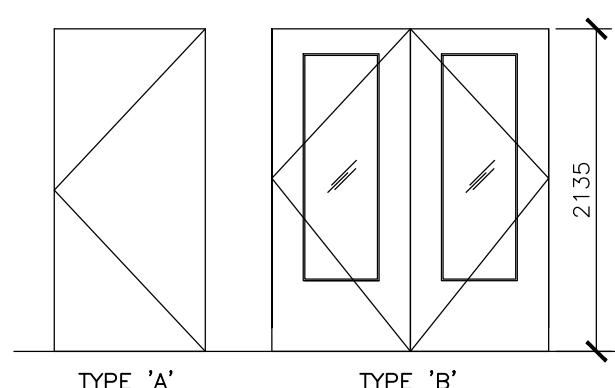


1 TYPICAL BARRIER-FREE WASHROOM ACCESSORIES
SCALE: 1:20

NO.	DESCRIPTION
①	TOILET PAPER DISPENSER: EXISTING TO REINSTALL. PROTECT DURING CONSTRUCTION.
②	BARRIER FREE MIRROR: STOCK SERIES MIRRORS, FIXED TILT (9416FT), 16"X24" HEAVY DUTY MIRRORS, 6mm, BY FROST PRODUCT LTD., OR EQUAL;
③	NON BARRIER FREE MIRROR: STAINLESS STEEL HEAVY DUTY MIRROR (9416MM), 18"X24" HEAVY DUTY MIRRORS, 6mm, BY FROST PRODUCT LTD., OR EQUAL.
④	SURFACE MOUNTED SOAP DISPENSER-BOBRICK MODEL B-2111 CLASSIC SERIES S.S. SURFACE MOUNTED SOAP DISPENSER
⑤	SURFACE MOUNTED HAND DRIER: GLOBAL GX SERIES CHROME FINISH, MODEL GX1-C BY AMERICAN DRYER OR EQ.
⑥	HANDICAPPED ACCESSIBLE TOILET, ELONGATED TYPE. SEE PLUMBING SPECS ON MECHANICAL DRAWINGS.
⑦	H/C 760 mm (Ø38mm) STAINLESS STEEL ANGLED GRAB BAR.
⑧	H/C 610 mm (Ø38mm) STAINLESS STEEL GRAB BAR.



DOOR NO.	LOCATION		DOOR			FRAME			HARDWARE			REMARKS	
	FROM	TO	TYPE	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISHES	MATERIAL	FINISHES	DOOR HAND	SETS OF HINGES REQ'D	
D1	EXTERIOR	UNISEX W/C	A	965	2135	45	SOLID CORE, WOOD	EXTRUDED ALUMINUM	HOLLOW METAL	ANODIZED ALUMINUM	•	3	
D2	EXTERIOR	UNIVERSAL W/C	A	965	2135	45	•	•	•	•	•	3	•
D3	UNISEX W/C	CHASE	A	1019	2135	45	•	•	•	•	•	4	•
D4	EXTERIOR	COMMUNITY OFFICE	B	865X2	2135	45	•	•	•	•	•	3	•
D5	EXTERIOR	COMMUNITY OFFICE	B	865X2	2135	45	•	•	•	•	•	3	•

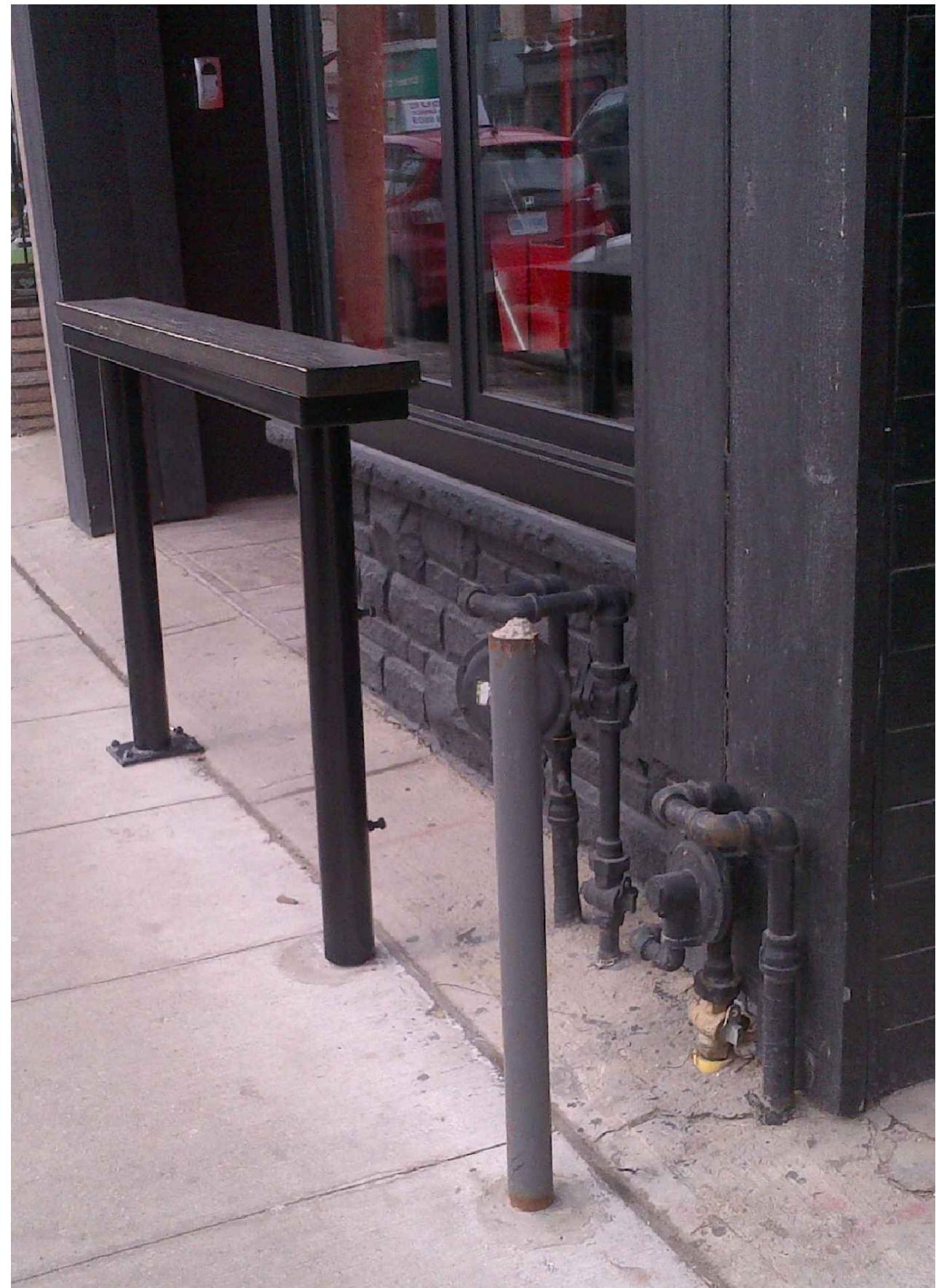


2 DOOR SCHEDULE
SCALE: N.T.S.

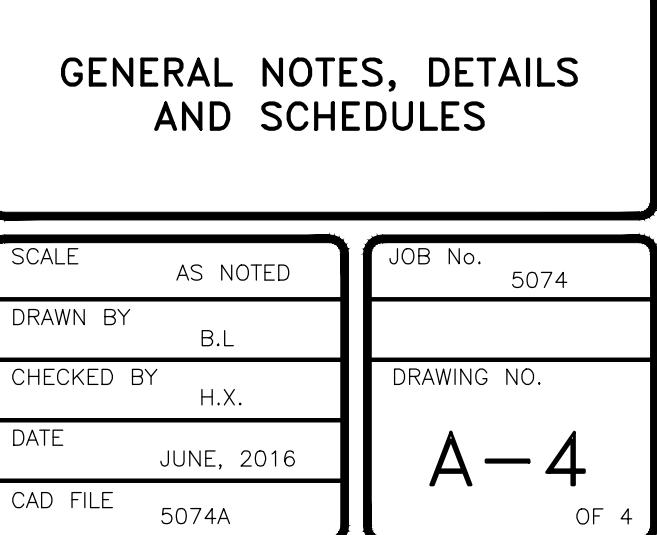
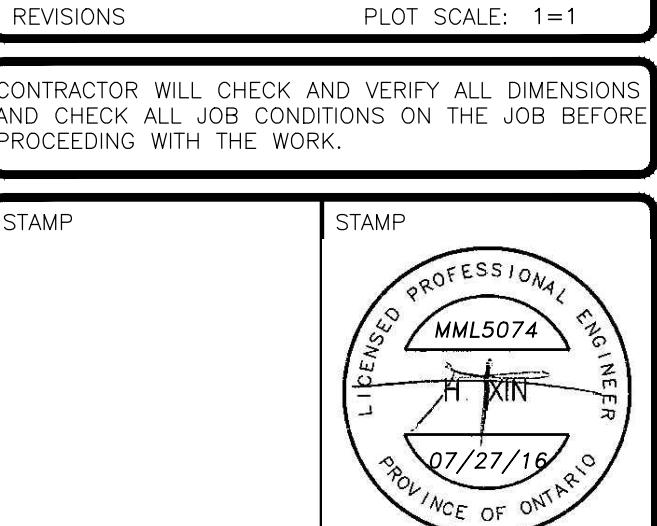
INTERIOR ROOM FINISH SCHEDULE

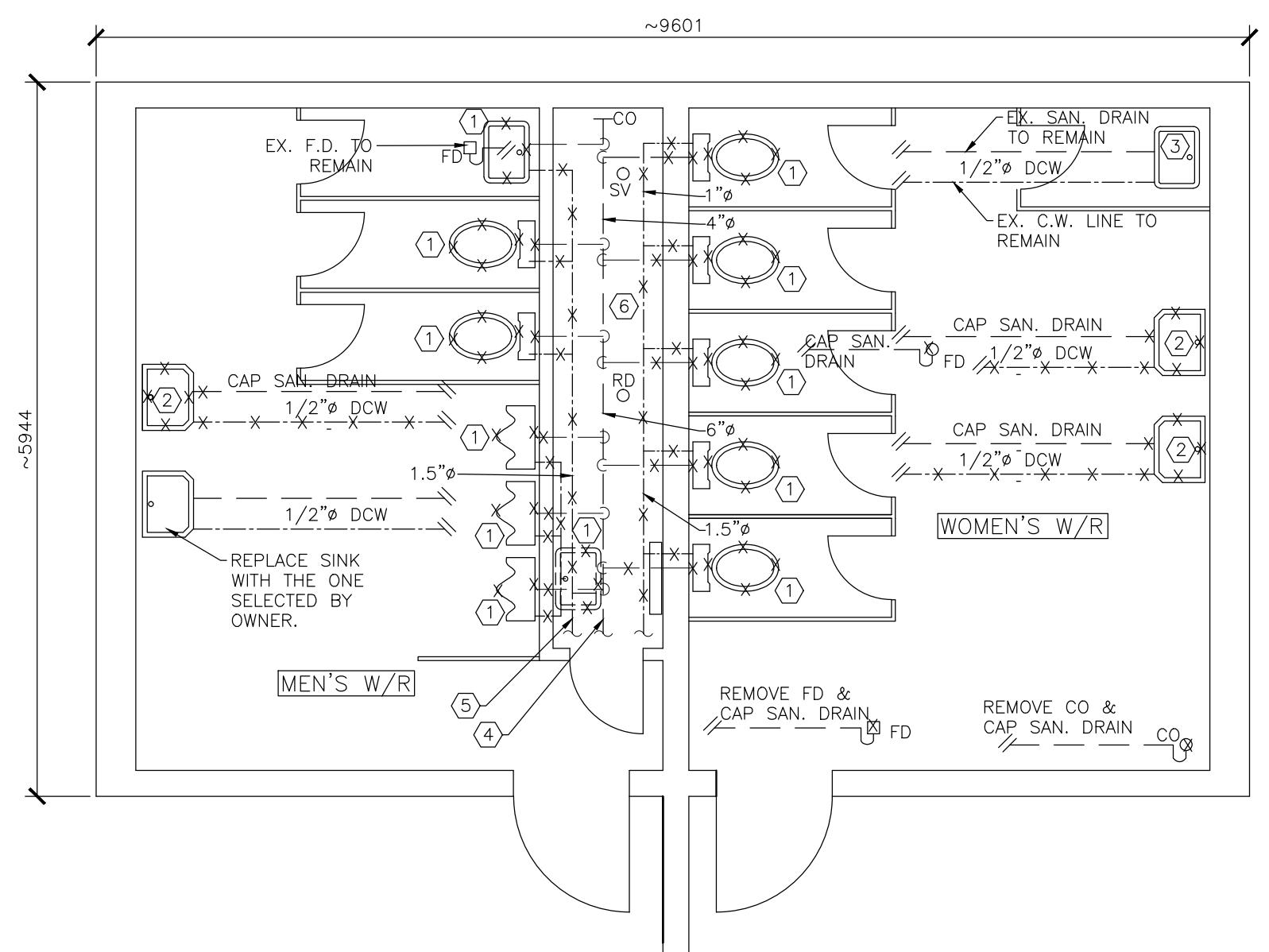
DESCRIPTION	FINISH	COLOUR	COMMENTS
COMMUNITY OFFICE (01)	CEILING	NEW PAINT: 1 COAT PRIMER & 2 COATS FINISH	BY OWNER
	WALLS	NEW PAINT: 1 COAT PRIMER & 2 COATS FINISH	BY OWNER
	FLOOR	NEW PORCELAIN TILES, OLYMPIA, 12"X24"	BY OWNER
UNIVERSAL W/C (02) UNISEX W/C (03)	CEILING	NEW PAINT: 1 COAT PRIMER & 2 COATS FINISH	BY OWNER
	WALLS	NEW PAINT: 1 COAT PRIMER & 2 COATS FINISH	BY OWNER
	FLOOR	EXIST. FLOOR TILES TO BE REPAIRED AS REQUIRED.	EXISTING.
UTILITY CHASE (04)	CEILING	EXISTING TO REMAIN	EXISTING.
	WALLS	EXISTING TO REMAIN	EXISTING.
	FLOOR	EXISTING TO REMAIN	EXISTING.

3 INTERIOR FINISH SCHEDULE
SCALE: N.T.S.



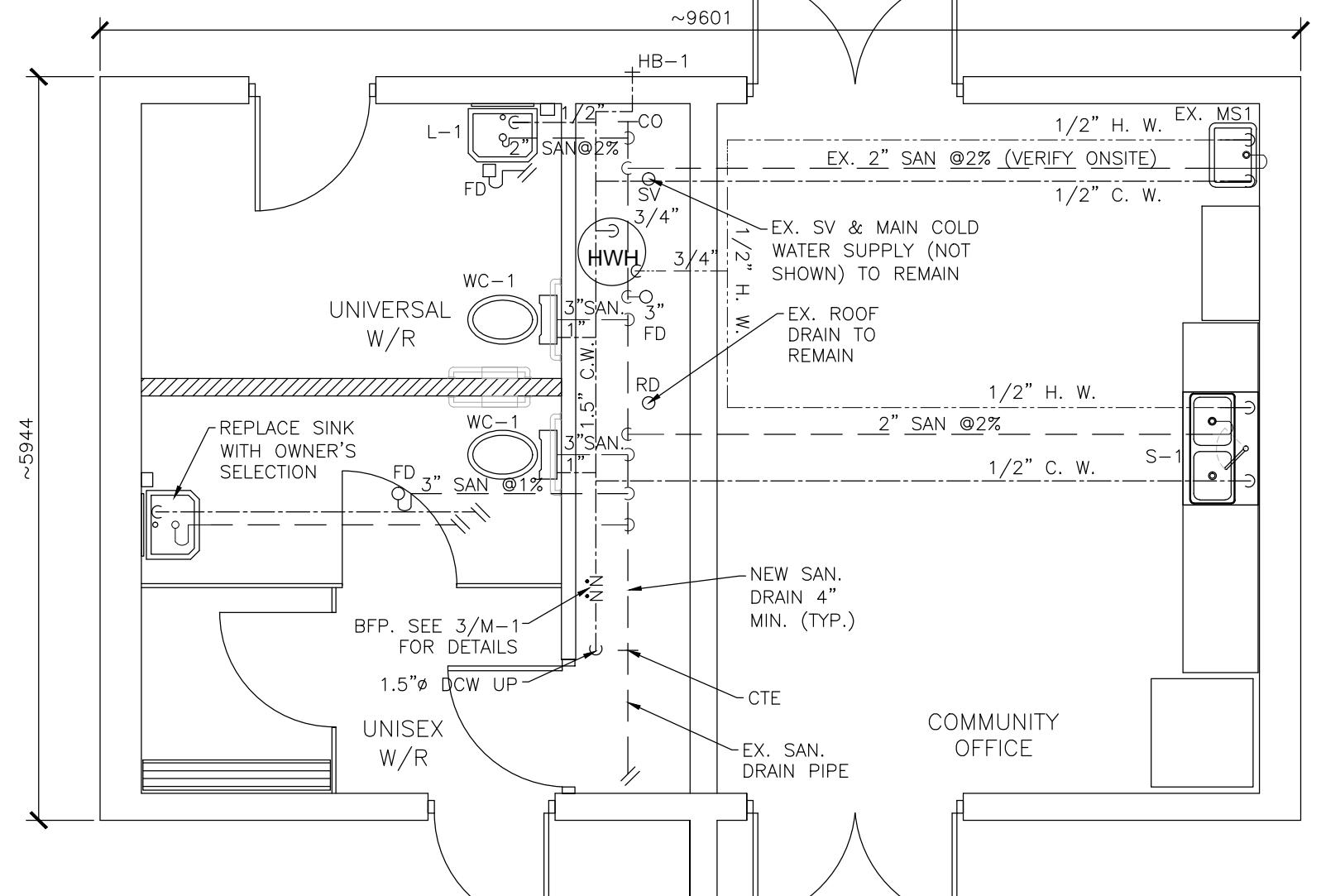
4 SAMPLE SERVICE BAR PICTURE
SCALE: N.T.S.





1a PLUMBING & SAN. DRAIN PLAN - DEMOLITION
M-1
SCALE: 1:50

- REMOVE EXISTING PLUMBING FIXTURES C/W CARRIER, C.W. LINE, CONCEALED FLUSH VALVE AND ACCESSORIES. CAP EXIST. DRAIN PIPING. CUT/CAP/PATCH AS REQUIRED TO SUIT CONSTRUCTION.
- CAREFULLY DISCONNECT SINK. STORE ON SITE FOR OWNER TO SELECT FOR REPLACEMENT OF THE SINK IN THE NEW UNISEX WASHROOM. REMOVE WATER LINE AND VALVES. CAP EXIST. SAN. DRAIN PIPING. CUT/CAP/PATCH AS REQUIRED TO SUIT NEW CONSTRUCTION.
- EXISTING MOP SINK LOCATED IN WOMEN'S W/C SHALL REMAIN. CLEAN MOP SINK & FLUSH DRAIN LINE AS REQUIRED.
- SIZE AND ROUTINGS OF EXISTING BURIED SANITARY DRAIN PIPING ARE NOT AVAILABLE. THE SIZE AND ROUTINGS SHOWN ARE TENTATIVE AND APPROXIMATE. PRIOR TO COMMENCING OF WORK, THOROUGHLY INVESTIGATE AT SITE AND ENSURE THAT THE EXISTING PIPES ARE ADEQUATELY SIZED TO PROVIDE A PROPER FUNCTIONING SYSTEM FOR THE NEW PLUMBING FIXTURES.



2a PLUMBING & SAN. DRAIN PLAN - NEW
M-1
SCALE: 1:50

GENERAL NOTES:

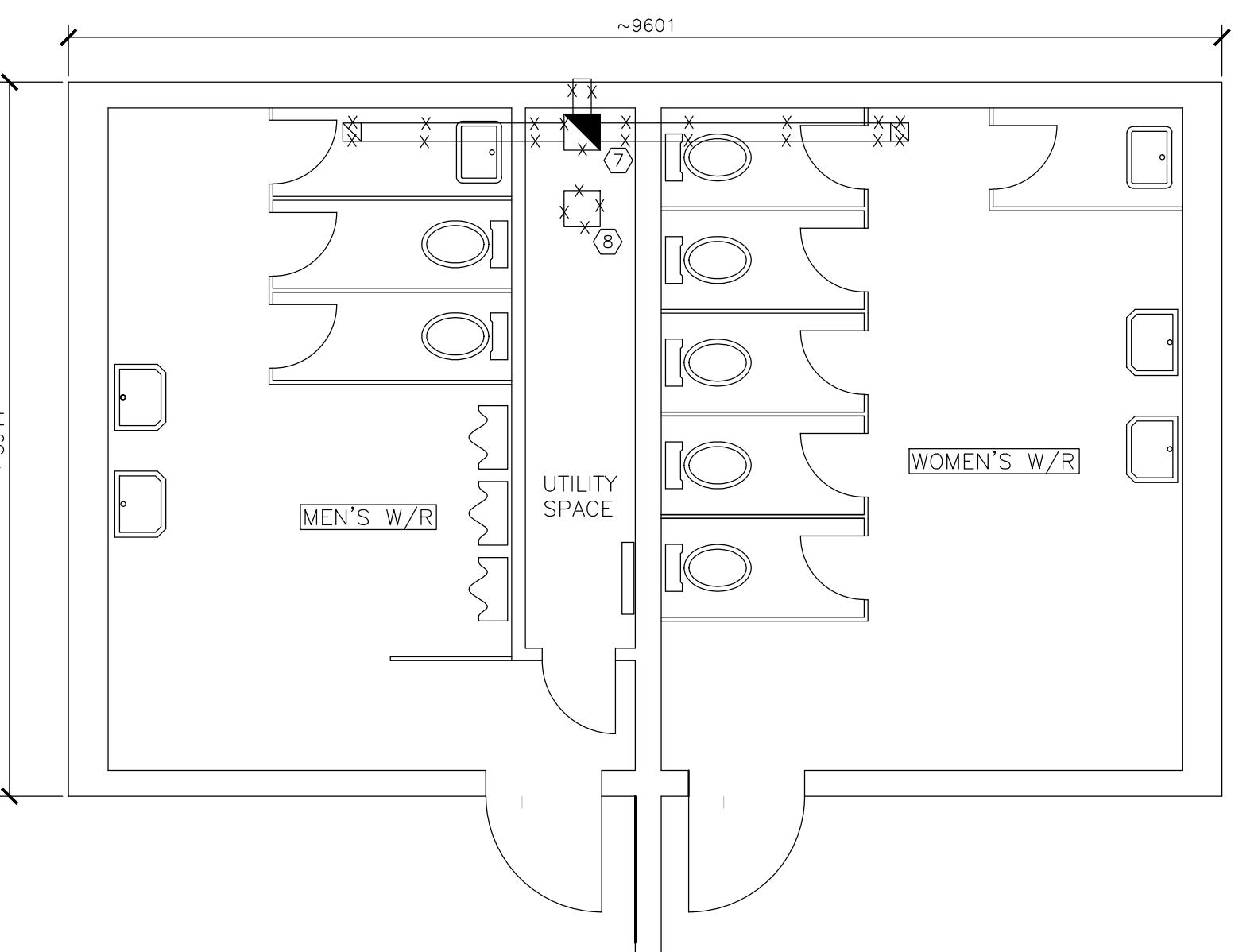
- THE DESIGN DOCUMENTS HAVE BEEN PREPARED ON THE BASIS OF INFORMATION OBTAINED FROM THE GENERAL SITE REVIEW AND FROM THE EXISTING DOCUMENTS. MAKE NECESSARY ADJUSTMENTS TO LOCATIONS OF EQUIPMENT, DUCTWORK, ETC. TO SUIT EXISTING SITE CONDITIONS. MAKE ALLOWANCES FOR ADDITIONAL ELBOWS, FITTINGS, SUPPORTS, ETC. REQUIRED TO PROVIDE OFFSETS IN THE PIPING, ETC. TO SUIT EXISTING SITE CONDITIONS. NO EXTRAS WILL BE ALLOWED FOR THE INTENDED SCOPE OF WORK SHOWN IN THE TENDER DOCUMENTS.
- PRIOR TO COMMENCING OF WORK, THOROUGHLY REVIEW AND VERIFY AT SITE SIZES AND ROUTINGS OF THE EXISTING DUCTWORK, PIPING, CONTROLS AND ELECTRICAL POWER SUPPLY, AND ENSURE THAT THE NEW EQUIPMENT/COMPONENTS CAN BE INSTALLED TO PROVIDE A FULLY FUNCTIONAL SYSTEM. OBTAIN APPROVALS FROM THE CONSULTANTS OF DEFICIENCIES AFFECTING INTENDED EXECUTION OF WORK.

EXHAUST FAN SCHEDULE								
EQUIP. NO.	TYPE	CAPACITY CFM	S.P. IN WC	MAKE	MODEL	FAN MOTOR HP	POWER SUPPLY V/PH/Hz	REMARKS
EF-1	INLINE	145	0.5	GREEN HECK	CSP-A200	0.06	115/1/60	OPERATES VIA TIMER
EF-2	INLINE	145	0.5	GREEN HECK	CSP-A200	0.06	115/1/60	MANUAL ON/OFF

NOTE: 1. VERIFY POWER SUPPLY AT SITE PRIOR TO ORDERING OF FAN.
2. FAN EF-1 SHALL BE C/W 7 DAY 24 HOUR ELECTRONIC PROGRAMMABLE TIMER.

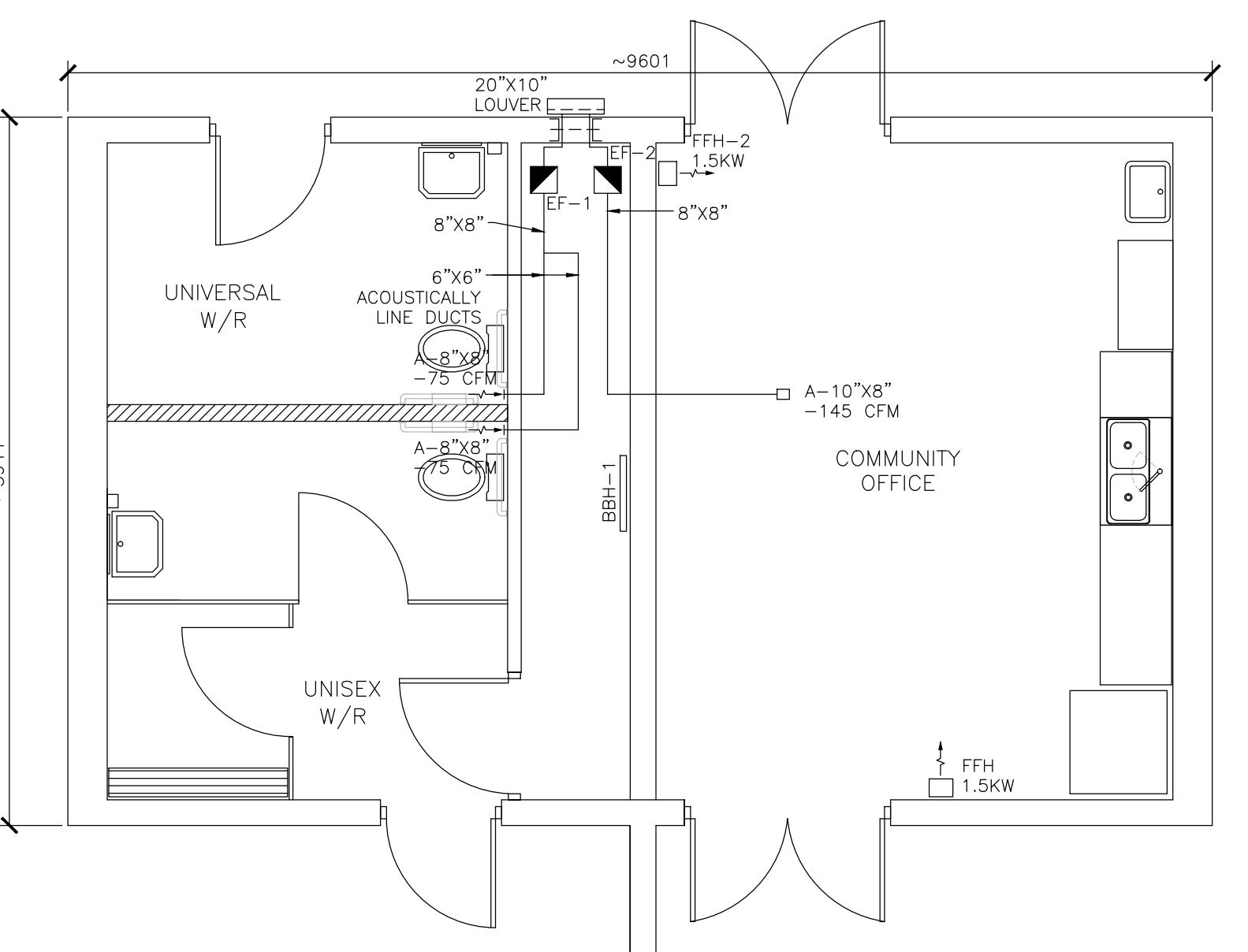
EQUIP. NO.	STORAGE CAP. GAL	HEATING CAP. # OF ELEMENTS KW	MAKE/MODEL	POWER SUPPLY V/PH	APPROX. WEIGHT Kg	REMARKS
HWH-1	5	3	AO SMITH DES-5	120/1/60	40	

NOTE: 1. PROVIDE ADEQUATELY SIZED WALL SUPPORT STRUCTURE FOR HWH-1, ALL WELDED CONSTRUCTION PRIME AND PAINT STRUCTURAL FRAME. BOTTOM OF HEATER APPROX INSTALLED 2.0 METERS AFF.



1b HEATING & VENTILATION PLAN - DEMOLITION
M-1
SCALE: 1:50

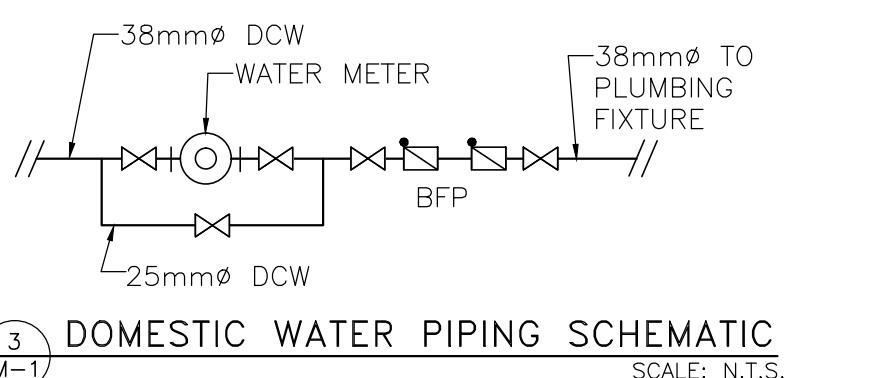
- SIZE AND ROUTINGS OF EXISTING DOMESTIC WATER LINES SHOWN ARE APPROXIMATE.
- EXISTING VENT PIPING IS NOT SHOWN FOR CLARITY. CUT/CAP/MODIFY/RECONNECT VENT PIPING AS REQUIRED TO ACCOMMODATE NEW PLUMBING/DRAINAGE CONSTRUCTION.
- REMOVE EXISTING EF C/W DUCT WORK, LOUVER, SUPPORT, WIRING AND CONDUIT.
- REMOVE EXISTING ELECTRIC HEATER C/W WIRING AND CONDUITS.



2b HEATING & VENTILATION PLAN - NEW
M-1
SCALE: 1:50

LEGEND:

- EXISTING PIPework/ Ductwork/Equipment
- REMOVE EXISTING PIPework/ Ductwork/Equipment
- NEW PIPework/ Ductwork/Equipment
- DOMESTIC COLD WATER SUPPLY
- DOMESTIC HOT WATER SUPPLY



3 DOMESTIC WATER PIPING SCHEMATIC
M-1
SCALE: N.T.S.

SPECIFICATIONS

1.0 GENERAL REQUIREMENTS

- THIS SECTION OF THE SPECIFICATIONS FORM AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND SHALL BE READ ACCORDINGLY.
- CONFORM TO ALL RELATED REQUIREMENTS OF THE ONTARIO BUILDING CODE, & OTHER APPLICABLE CODES AND STANDARDS, AND AUTHORITIES HAVING JURISDICTION.
- PROVIDE ALL ITEMS, ARTICLES, MATERIALS, SERVICES AND INCIDENTALS, WHETHER OR NOT EXPRESSLY SPECIFIED OR SHOWN ON DRAWINGS, TO MAKE FINISHED WORK COMPLETE AND FULLY OPERATIONAL, CONSISTENT WITH THE INTENT OF THE CONTRACT DOCUMENTS.
- EXAMINE THE EXISTING BUILDING, THE SITE AND SURROUNDING AREAS AND BE FULLY INFORMED AS TO THE CONDITIONS AND LIMITATIONS UNDER WHICH THE WORK HAS TO BE EXECUTED. CLAIMS FOR ADDITIONAL COSTS WILL NOT BE ENTERTAINED WITH RESPECT TO CONDITIONS WHICH COULD REASONABLY HAVE BEEN ASCERTAINED BY AN INSPECTION PRIOR TO TENDER CLOSING.
- PRIOR TO ORDERING OF ANY EQUIPMENT, THOROUGHLY REVIEW AT SITE AND ENSURE THAT THE EQUIPMENT CAN BE INSTALLED IN THE LOCATION, THERE IS ADEQUATE SPACE FOR INSTALLATION, INCLUDES REQUIRED CLEARANCES, AND THAT THE EQUIPMENT CAN BE INSTALLED TO PROVIDE A FULLY FUNCTIONAL SYSTEM.
- WHERE LICENSES AND INSPECTION FEES ARE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION FOR THE SPECIFIC TRADE FUNCTIONS, THEY SHALL BE PAID AND OBTAINED BY PARTICULAR SUB TRADE RESPONSIBLE FOR THAT WORK. SUBMIT CERTIFICATES OF APPROVALS WHEN GIVEN BY THE AUTHORITIES TO OWNER.
- DO ALL CUTTING, PATCHING AND MAKING GOOD TO LEAVE IN A FINISHED CONDITION AND TO MAKE THE SEVERAL PARTS OF THE WORK COME TOGETHER PROPERLY. CO-ORDINATE WORK TO KEEP CUTTING AND PATCHING TO A MINIMUM.
- QUALITY OF WORKMANSHIP AND MATERIALS USED IN PATCHING, MAKING GOOD AND REFINISHING OF EXISTING CONSTRUCTION AND/OR COMPARTMENTS SHALL BE OF A STANDARD EQUAL TO THAT SPECIFIED FOR NEW CONSTRUCTION AND IF NOT SPECIFIED, EQUAL TO OR EXCEEDING THAT OF ORIGINAL EXISTING WORK.
- BE GOVERNED BY PERTINENT SAFETY REQUIREMENTS OF FEDERAL AND PROVINCIAL GOVERNMENTS AND OF MUNICIPAL BODIES HAVING AUTHORITY; PARTICULARLY THE ONTARIO CONSTRUCTION SAFETY ACT AND REGULATIONS OF ONTARIO MINISTRY OF LABOR; AND WORK IN CONJUNCTION WITH PROPER SAFETY ASSOCIATIONS OPERATING UNDER THE AUTHORITY OF ONTARIO WORKER'S COMPENSATION ACT.
- SUBMIT FOUR COPIES OF SHOP DRAWINGS FOR ALL EQUIPMENT TO THE CONSULTANT FOR REVIEW.
- PROVIDE THREE COPIES OF OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT INSTALLED, C/W ALL TESTS AND BALANCING DATA, A COPY OF REVIEWED SHOP DRAWINGS, COMPLETE EXPLANATION OF RECOMMENDED MAINTENANCE PRACTICES, PRECAUTIONS AND CERTIFICATES OF GUARANTEES. ALL WORK SHALL HAVE A WARRANTY OF TWO (2) YEARS FROM THE DATE OF SUBSTANTIAL COMPLETION.

- OBTAIN A SET OF PRINTS OF DRAWINGS AND MARK-UP THE CHANGES NEATLY AS THE JOB PROGRESSES TO ACCURATELY INDICATE THE WORK "AS-BUILT". MAINTAIN THE "AS-BUILT" WHITE PRINTS AT SITE FOR PERIODIC INSPECTION. ON COMPLETION INCLUDE A CD CONTAINING AS-BUILT DRAWINGS IN AUTO CAD FORMAT AND HARD COPY OF THE SAME IN EACH OPERATION AND MAINTENANCE MANUAL.
- ALL EQUIPMENT, DEVICES AND MATERIALS SHALL BE NEW AND COMMERCIAL GRADE, AND SHALL CARRY APPROPRIATE CSA, UL, ETC. APPROVAL.
- UNLESS NOTED OTHERWISE, ALL EQUIPMENT AND MATERIALS SHALL BE PROVIDED AS SPECIFIED. SUBSTITUTION OF EQUIPMENT AND MATERIALS ARE NOT PERMITTED UNLESS SPECIFICALLY APPROVED BY THE CONSULTANT.
- IF OBVIOUS AMBIGUITIES OR OMISSIONS ARE NOTICED WHEN TENDERING REFER THE SAME TO THE CONSULTANT FOR A RULING AND OBTAIN THE RULING IN WRITING IN THE FORM OF AN ADDENDUM. CLAIMS FOR ADDITIONAL COSTS FOR AMBIGUITIES OR OMISSIONS OF ITEMS BROUGHT TO THE ATTENTION OF THE CONSULTANT AND FOR AWARD OF CONTRACT WHICH DUE TO THE NATURE OF THE AMBIGUITY OR OMISSION, SHOULD HAVE BEEN BROUGHT TO THE ATTENTION OF THE CONSULTANT DURING THE TENDERING PERIOD, WILL NOT BE ALLOWED.

- THE LOCATIONS SHOWN ARE APPROXIMATE, AND MAY BE ALTERED, WHEN APPROVED BY THE CONSULTANT, TO MEET REQUIREMENTS OF THE BUILDING. DO NOT SCALE DRAWINGS.
- ALL EQUIPMENT, MATERIALS AND WORKMANSHIP SHALL BE UNCONDITIONALLY GUARANTEED FOR A MINIMUM PERIOD OF TWO YEARS FROM THE DATE OF ACCEPTANCE.
- INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S INSTRUCTIONS. CO-ORDINATE AND PROVIDE TRAINING TO OPERATION SYSTEM. ALL DETAILS ARE NOT SHOWN ON THE DRAWINGS. PRIOR TO COMMENCEMENT OF WORK, MAKE CAREFUL EXAMINATION OF THE ATTACHED DRAWING, SPECIFICATION AND THE EXISTING WORK. NOTIFY THE CONSULTANT OF ANY DISCREPANCIES AFFECTING INTENDED EXECUTION OF THE WORK AND OBTAIN APPROVAL BEFORE PROCEEDING WITH THE WORK.

- PROVIDE OPERATING AND MAINTENANCE INSTRUCTIONS TO THE OWNER'S OPERATING STAFF. CO-ORDINATE AND PAY FOR ALL MUNICIPAL AND UTILITY CONNECTIONS AND SERVICES AS REQUIRED, COMPLETE WITH ALL REQUIRED METERING. INSTALL METERING EQUIPMENT IN ACCORDANCE WITH MUNICIPAL AND UTILITY REQUIREMENTS.
- CLEARLY IDENTIFY ALL MECHANICAL EQUIPMENT USING BLACK LAMICOID NAMEPLATE, 9.5MM (3/8") ENGRAVED WHITE LETTERS, SECURELY FASTENED TO THE EQUIPMENT.
- PAINT ALL STEEL MATERIALS THAT ARE NOT FACTORY FINISHED WITH RED LEAD PRIMER AND TOUCH-UP ALL DAMAGED PAINTED EQUIPMENT SURFACES.
- CO-ORDINATE WITH ELECTRICAL AND OTHER TRADES PRIOR TO COMMENCING OF WORK AND PRIOR TO ORDERING OF THE EQUIPMENT.

- EXAMINE THE EXISTING BUILDING, THE SITE AND SURROUNDING AREAS AND BE FULLY INFORMED AS TO THE CONDITIONS AND LIMITATIONS UNDER WHICH THE WORK HAS TO BE EXECUTED. CLAIMS FOR ADDITIONAL COSTS WILL NOT BE ENTERTAINED WITH RESPECT TO CONDITIONS WHICH COULD REASONABLY HAVE BEEN ASCERTAINED BY AN INSPECTION PRIOR TO TENDER CLOSING.
- DO WORK IN EXISTING AREAS TO BEST SUIT AVAILABLE SPACE AND NOT INTERFERE WITH OR OBSTRUCT USE OF EXISTING FACILITIES.
- CUT, MODIFY, OR EXTEND AS NECESSARY OR AS DIRECTED BY THE ARCHITECT, THE EXISTING MATERIAL OR EQUIPMENT TO BE REUSED OR RELOCATED TO SUIT WORK UNDER THIS CONTRACT.
- WHERE DISRUPTIONS OF EXISTING SERVICES ARE REQUIRED, COORDINATE SHUT DOWN WITH THE OPERATING STAFF AND DO THE WORK AT A TIME AND IN A MANNER MUTUALLY ACCEPTABLE. CAREFULLY SCHEDULE DISRUPTIONS TO KEEP DOWN TIME TO A MINIMUM.
- DO ALL CUTTING, PATCHING AND MAKING GOOD TO LEAVE IN A FINISHED CONDITION AND TO MAKE THE SEVERAL PARTS OF THE WORK COME TOGETHER PROPERLY. CO-ORDINATE WORK TO KEEP CUTTING AND PATCHING TO A MINIMUM.
- QUALITY OF WORKMANSHIP AND MATERIALS USED IN PATCHING, MAKING GOOD AND REFINISHING OF EXISTING CONSTRUCTION AND/OR COMPARTMENTS SHALL BE OF A STANDARD EQUAL TO THAT SPECIFIED FOR NEW CONSTRUCTION AND IF NOT SPECIFIED, EQUAL TO OR EXCEEDING THAT OF ORIGINAL EXISTING WORK.
- EXISTING MATERIALS AND EQUIPMENT WHICH ARE TO BE USED IN NEW WORK SHALL BE REPAIRED AND REFINISHED AS NECESSARY. PROVIDE ADDITIONAL NEW MATERIALS AND COMPONENTS AS REQUIRED TO FACILITATE REINSTALLATION OF SUCH EXISTING MATERIALS AND EQUIPMENT.
- PRIOR TO CUTTING OPENINGS, EXAMINE WALL, FLOOR AND CEILING CONSTRUCTION FOR BURIED ELECTRICAL CABLES AND PIPES, AND TAKE ADEQUATE PROTECTION. CONDUCT CABLE LOCATING TESTS TO LOCATE BURIED CABLES IN EXISTING WORK.

- CONTRACTORS SHALL HAVE A MINIMUM FIVE YEAR WORKING EXPERIENCE IN THEIR RESPECTIVE TRADES IN CONSTRUCTION, TESTING AND COMMISSION OF COMPARABLE AND SIMILAR SYSTEM. APPLY, PAY AND OBTAIN ALL PERMITS (EXCLUDING BUILDING PERMIT) REQUIRED FOR MECHANICAL WORK.

- COMPLETE MECHANICAL WORK OF THIS SECTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS AND IN COMPLIANCE WITH OBC, THE CITY OF TORONTO STANDARDS AND AUTHORITIES HAVING JURISDICTION.

- EXECUTE WORK OF THIS SECTION ONLY BY LICENSED TRADES REGULARLY EMPLOYED IN THE INSTALLATION OF PLUMBING, DRAINAGE & VENTILATION SYSTEMS FOR A MINIMUM PERIOD OF 5 YEARS.

- THE CONTRACTOR SHALL ENSURE THAT THE ENTIRE SYSTEM HAS BEEN TESTED AND OPERATED PROPERLY, AND ANY DAMAGED AND IMPROPERLY INSTALLED MATERIALS OR LEAKS SHALL BE REPAIRED IMMEDIATELY.

2.0 QUALITY ASSURANCE

- PROVIDE BACKFLOW PREVENTERS AS INDICATED ON THE DRAWINGS.
- BACKFLOW PREVENTERS SHALL BE WATTS SERIES Q07QT OR APPROVED EQUAL SUITABLE FOR POTABLE WATER APPLICATION. SIZES AS INDICATED ON DRAWINGS.
- INSTALLATION AND OPERATION CERTIFICATION OF PREVENTERS SHALL BE BY AN INDEPENDENT COMPANY C/W REPORT.

3.0 SCOPE OF WORK

- DEMOLITION AND DISPOSAL OF PLUMBING FIXTURES C/W PIPING AND CARRIERS, PLUMBING FIXTURES, EXHAUST FAN, DUCTWORK, ETC. AS INDICATED ON DRAWINGS AND AS REQUIRED.
- DISPOSAL OF EXHAUST FAN, DUCTWORK, EXHAUST FAN C/W DUCTWORK, WIRING AND SUPPORTS.
- PROVISION OF PLUMBING FIXTURES C/W PIPING AND CARRIERS.
- PROVISION OF EXHAUST FANS C/W DUCTWORK, WIRING AND SUPPORTS.
- PROVISION OF HOT WATER HEATER.
- PLUMBING, DRAINAGE AND VENT PIPING MODIFICATIONS.
- PROVISION OF ELECTRIC HEATERS.
- PROVISION OF PIPING INSULATION AND DUCTWORK INSULATION.
- CUTTING, PATCHING AND PAINTING.
- START-UP, TESTING, ADJUSTING AND AIR BALANCING.

4.0 DUCTWORK

- ALL DUCTWORK TO BE FABRICATED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS, USING MINIMUM 26 GA. GALVANIZED STEEL. SEAL ALL DUCTWORK JOINTS WITH "BAKELITE" #530.09 LOW VISCOSITY DUCT SEALER.

- ALL 90° ELBOWS SHALL HAVE TURNING RADIUS ONE AND HALF TIMES THE DUCT WIDTH. PROVIDE TURNING VENES IN 90 DEG ELBOWS HAVING TURNING RADIUS LESS THAN ONE TIME THE DUCT WIDTH.

5.0 WATER PIPING

- DOMESTIC WATER PIPING SHALL BE TYPE "L" COPPER TO ASTM B88 WITH WROUGHT COPPER OR CAST BRONZE SOLDER FITTINGS TO ANSI B18.1 AND ANSI B16.18 AND SHALL BE FABRICATED OF LEAD FREE SOLDER JOINTS.

- WATER PIPING SHALL BE RATED FOR WORKING PRESSURE OF 1035KPA.

6.0 SANITARY DRAIN PIPING

- CAST IRON PIPE AND FITTINGS TO CSA B70-M1978. BURIED DRAIN PIPING SHALL BE PVC OR ABS PIPE AND FITTINGS TO CSA B181.1/B181.2.

7.0 VENT PIPING

- DWV GRADE COPPER TO ASTM B306 WITH 50-50 SOLDERED CAST BRASS OR WROUGHT COPPER DRAINAGE FITTINGS TO CSA B158.1 AND ANSI B16-29 RESPECTIVELY OR CAST IRON PIPE AND FITTINGS TO CSA B70-M1978.

8.0 VALVES

- ISOLATION VALVES SHALL BE BRONZE BALL VALVES SUITABLE FOR POTABLE WATER APPLICATION.

9.0 INSULATION/ACOUSTIC LINING

- INSULATE HOT WATER PIPING WITH 1" THICK FIBER GLASS SECTIONAL INSULATION. EXPOSED PIPING SHALL HAVE CANVAS FINISH.

- INSULATE DOMESTIC COLD WATER PIPING WITH 1" THICK FIBERGLASS SECTIONAL INSULATION. EXPOSED PIPING SHALL HAVE CANVAS FINISH.

- ACOUSTICALLY LINE COUPLE DUCTWORK CONNECTED TO EF-1 WITH 1" THICK FIBERGLASS RIGID MATERIALS C/W WELDED PINS AND WASHERS AT 12" CENTRES.

10.0 AIR BALANCING

- AIR BALANCING SHALL BE PERFORMED BY A CERTIFIED TESTING AND BALANCING FIRM, A MEMBER OF AABC IN GOOD STANDING.

- TESTING AND BALANCING PROCEDURES SHALL FOLLOW GUIDELINES RECOMMENDED BY ASHRAE AND SMACNA.

- REVIEW THE DRAWING, SPECIFICATIONS AND THE INSTALLATION, AND REPORT PROBLEMS REQUIRING CORRECTION. DO NOT PROCEED UNTIL SATISFIED THAT SYSTEMS ARE COMPLETE AND READY FOR BALANCING.

- WHEN ALL SYSTEMS ARE BALANCED AS SPECIFIED, SUBMIT THREE COPIES OF THE REPORT WHICH SHALL INCLUDE SCHEMATIC DIAGRAMS, DESIGN AND ACHIEVED AIR QUANTITIES AT THE UNIT AND OUTLETS, MOTOR HP, CURRENT DRAW, POWER SUPPLY, ETC.

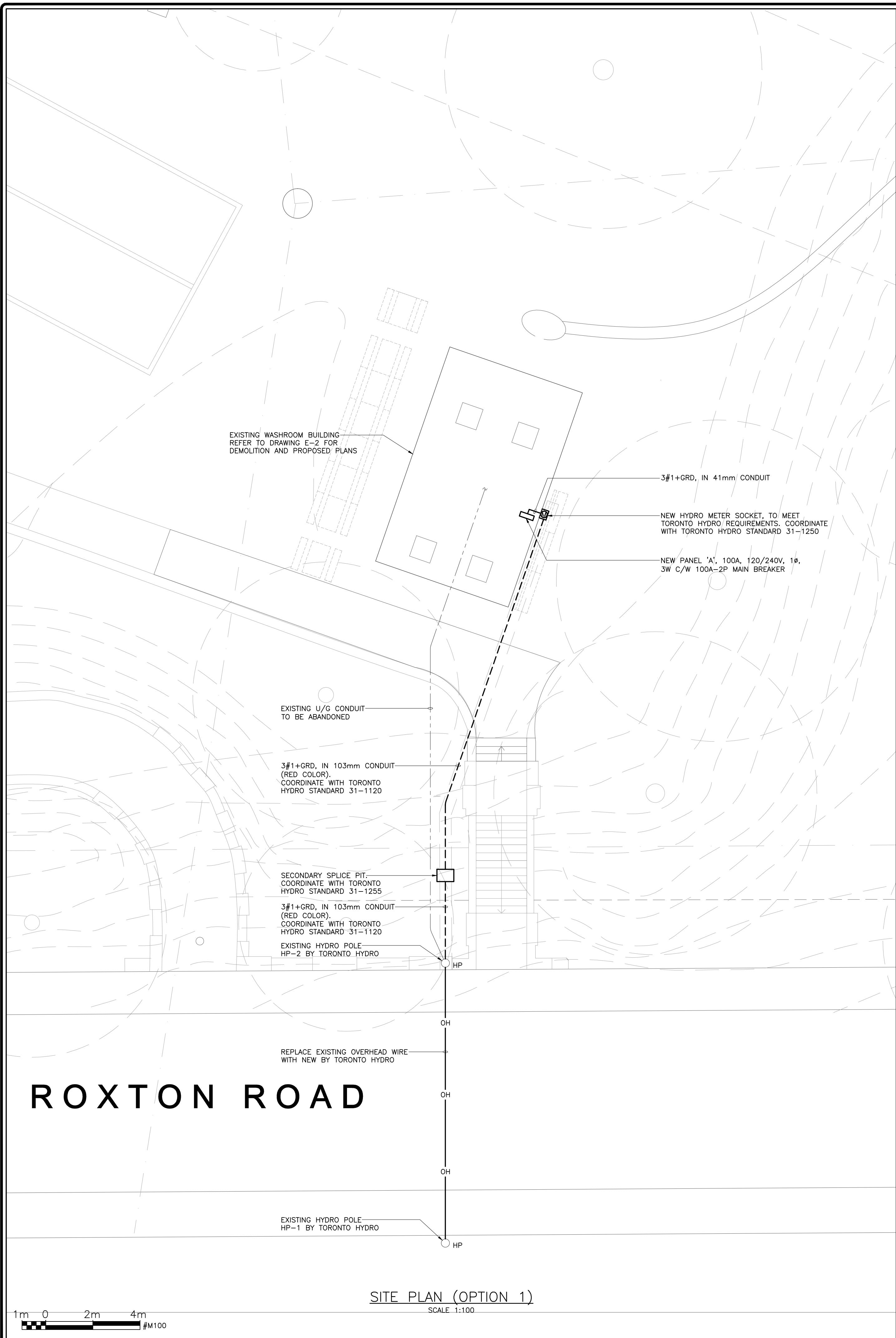
11.0 EXHAUST FANS

- PROVIDE EXHAUST FANS AS INDICATED ON THE DRAWINGS AND AS DESCRIBED IN THE EQUIPMENT SCHEDULES. FAN SHALL BE STATICALLY AND DYNAMICALLY BALANCED AND CONSTRUCTED IN CONFORMANCE WITH AMCA 240B-89. FAN SHALL CARRY THE AMCA SEAL.

- PROVIDE ELECTRIC MOTORS, STARTERS, VIBRATION ISOLATORS, AND BACK DRAFT DAMPER FOR ALL FANS.

12.0 PLUMBING FIXTURES

- WC-1 FLOOR MTD TOILET BARRIER FREE - FOR FLUSHOMETER - EXPOSED - MANUAL AMERICAN STANDARD MADERA FLUSHOMETER #461.001.020 HET TOILET, WHITE VITREOUS CHINA WITH EVERCLEAN ANTIMICROBIAL SURFACE WHICH INHIBITS THE GROWTH OF STAIN AND ODOR CAUSING BACTERIA MOLD AND MILDEW. WALL HUNG, SINK JET FLUSH ACTION, OPERATES IN THE RANGE 4.2 L TO 6 L (1.1 US GAL TO 1.6 US GAL) PER FLUSH. CONDENATE CHANNEL, 305 MM X 254 MM (12" X 10



LEGEND:

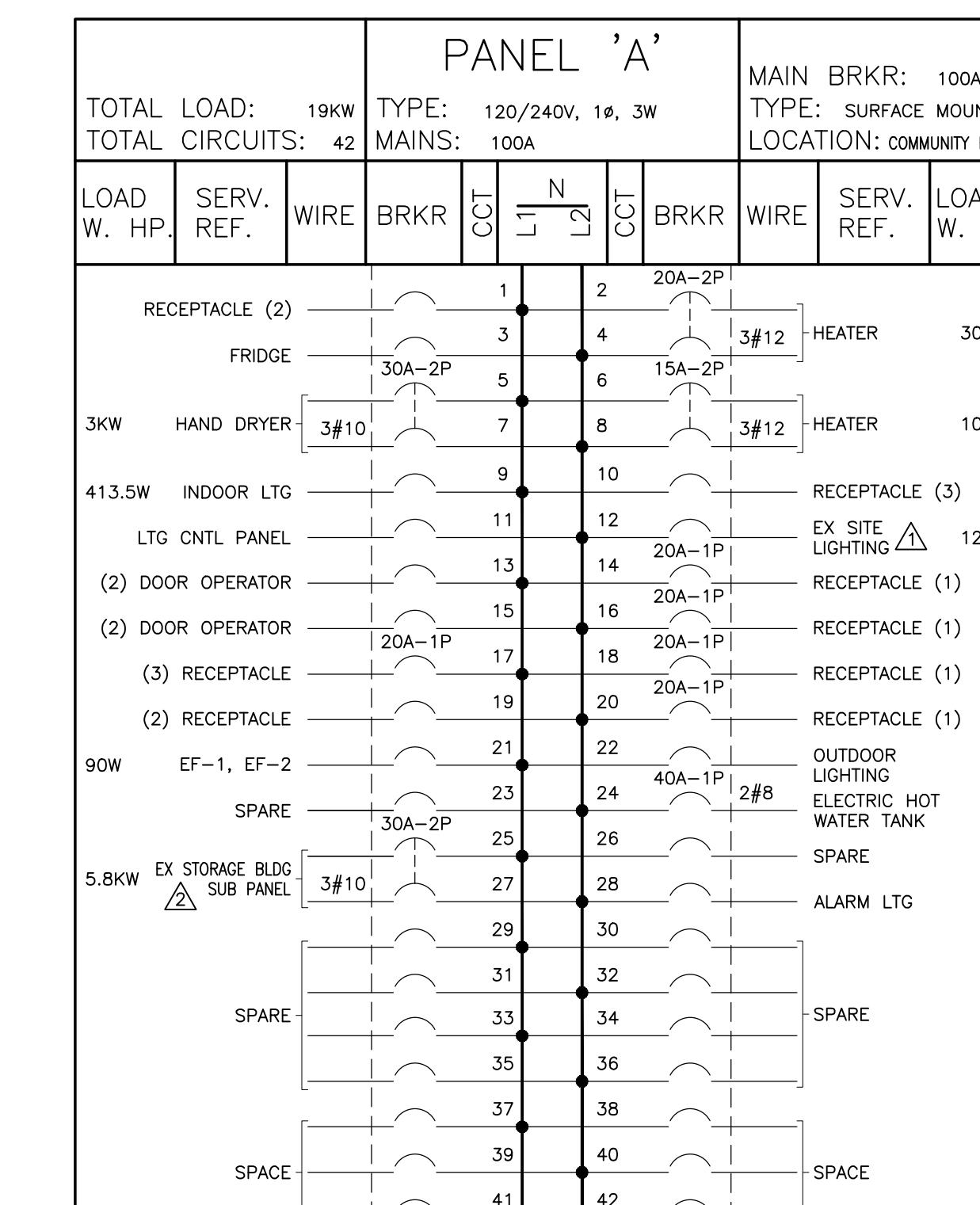
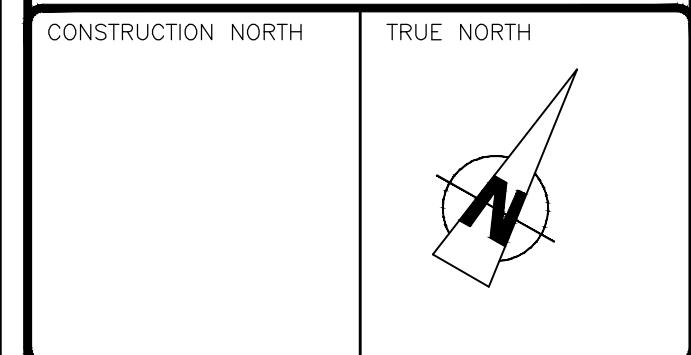
A	LINEAR LIGHT FIXTURE, REFER TO SCHEDULE FOR TYPE.
B	WALL MOUNTED LIGHT FIXTURE, REFER TO SCHEDULE FOR TYPE.
3	EXIT LIGHT WALL MOUNTED, REFER TO LIGHTING FIXTURE SCHEDULE.
EM1	WALL MOUNTED SWITCH, '3' DENOTES - 3 WAY.
RE1	EMERGENCY BATTERY PACK C/W EMERGENCY HEADS, PLUG, CORD AND MOUNTING BRACKET.
EM1	SINGLE AND TWIN REMOTE HEADS FOR EMERGENCY LIGHTING.
HP	HYDRO POLE.
CONDUIT UNDERGROUND, REFER TO PLANS FOR QUANTITY AND SIZING.	
SURFACE CONDUIT, REFER TO PLANS FOR QUANTITY AND SIZING.	
OVERHEAD WIRE.	
#4/0 BARE COPPER GROUND CABLE.	
△	GROUND ROD 21mm DIA. COPPER CLAD.
15A, 120V, 1φ, 3W GROUNDED DUPLEX RECEPTACLE, UNLESS OTHERWISE INDICATED. 'GFI' DENOTES - CLASS 'A' GFI TYPE RECEPTACLE.	
20A, 120V, 1φ, 3W GFI DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER, UNLESS OTHERWISE INDICATED. 'GFI' DENOTES - CLASS 'A' GFI TYPE RECEPTACLE.	
120V, 1φ DIRECT CONNECTION FOR USE AS NOTES.	
240V, 1φ DIRECT CONNECTION FOR USE AS NOTED.	
NON FUSED DISCONNECT SWITCH SINGLE PHASE EEMAC 3R ENCLOSURE; WHERE REQUIRED TO WEATHERPROOF PROVIDE CSA TYPE '4X' ENCLOSURE.	
COMBINATION MAGNETIC MOTOR STARTER.	
○	SINGLE PHASE MOTOR.
—	FORCE FLOW HEATER.
—	PANELBOARD.
HD	HAND DRYER, 240V, XLERATOR MODEL #XL-SB OR APPROVED EQUIVALENT.
PC	PHOTOCELL.
—	PUSH BUTTON FOR DOOR OPERATOR.
—	POWER DOOR OPERATOR - PROVIDE 120V SUPPLY AND LOW VOLTAGE WIRING IN CONCEALED 13mm CONDUIT FROM OPERATOR TO PUSHBUTTONS.
—	RED FLASHING ALARM LIGHT.
—	CIRCUIT BREAKER 2 POLE UNLESS OTHERWISE INDICATED.
LA	LIGHTNING ARRESTER.
—	CONTACT NORMALLY OPEN.
—	CONTACT NORMALLY CLOSED.

ABBREVIATIONS:

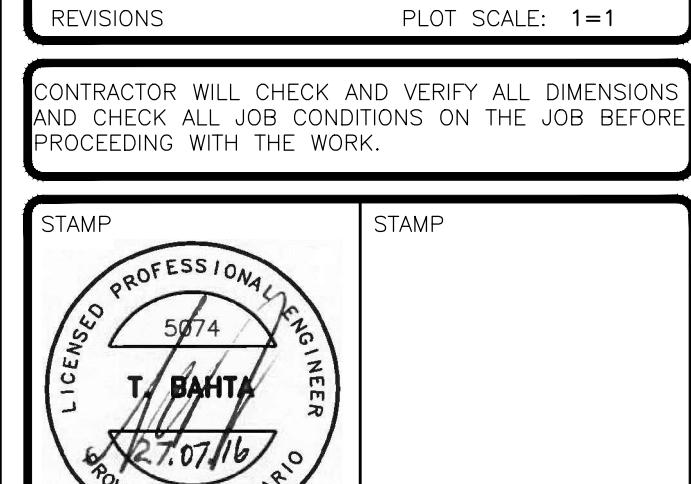
RPVC	RIGID PVC CONDUIT.
RGS	RIGID GALVANIZED STEEL CONDUIT.
GFI	GROUND FAULT INTERRUPTER.
JB	JUNCTION BOX.
TYP.	TYPICAL.
A/C	ABOVE COUNTER.
W/P	WEATHER PROOF.
C/W	COMPLETE WITH.
PC	PHOTOCELL.
EX	EXISTING EQUIPMENT TO REMAIN.
R	EXISTING EQUIPMENT TO BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED.
FR	FRIDGE.

SYMBOLS	BASE MANUFACTURER (AS SPECIFIED)	CATALOGUE NUMBER	CEILING TYPE		WALL TYPE	BALLAST VOLTAGE	ACCEPTABLE ALTERNATE MANUFACTURER	REMARKS
			SURFACE	RECESSED				
A	LITHONIA	VAP-4000LM-FST-MD-120-G210-40K-80CRI-QMB	●		LED	42W	●	CREE 1x4 FIXTURE VANDAL RESISTANT
B	LITHONIA	OLVTW		●	LED	15W	●	CREE VAPOR TIGHT WALL PACK
EM1	EMERGI-LITE	12LSM36-2-LG-CP		●	LED	2x4W	●	LITHONIA EMERGENCY BATTERY UNIT C/W 2 REMOTE HEADS
RE1	EMERGI-LITE	EF40-LG-T		●	LED	4W	●	LITHONIA SINGLE HEAD EMERGENCY LIGHT VANDAL RESISTANT
RE2	EMERGI-LITE	W-12SV36M-2-LG-D		●	LED	2x4W	●	LITHONIA DOUBLE HEAD EMERGENCY LIGHT VANDAL RESISTANT
H	EMERGI-LITE	EN-1-W-U00		●	LED	2.5W	●	LITHONIA EXIT SIGN VANDAL RESISTANT

LOAD CALCULATION			
EQUIPMENT	CONNECTED	FACTOR	SERVICE (VA)
EXISTING STORAGE BUILDING	5760W	0.4	2304
EXISTING SITE LIGHTING	1200W	1.0	1200
TOTAL EXISTING LOAD			3504VA
INTERIOR LIGHTING	413.5W	1.0	413.5
OUTDOOR LIGHTING	90W	1.0	90
EMERGENCY/EXIT LIGHTING	40W	1.0	40
FRIDGE	500W	1.0	500
MICROWAVE OVEN	1000W	1.0	1000
ELECTRIC HEATERS	4000W	0.8	3200
HAND DRYERS	3000W	0.5	1500
ELECTRIC HOT WATER TANK	3000W	0.8	2400
MISC.	7000W	0.8	5600
MECHANICAL EQUIPMENT	90W	1.0	90
TOTAL PROPOSED LOAD			14833.5VA
TOTAL ELECTRICAL LOAD (EXISTING PLUS PROPOSED) = 18337.5VA			
AMPS = $18.4\text{KVA} \times 1000 = 77\text{A}$ THEREFORE 100A SERVICE IS SUFFICIENT			240



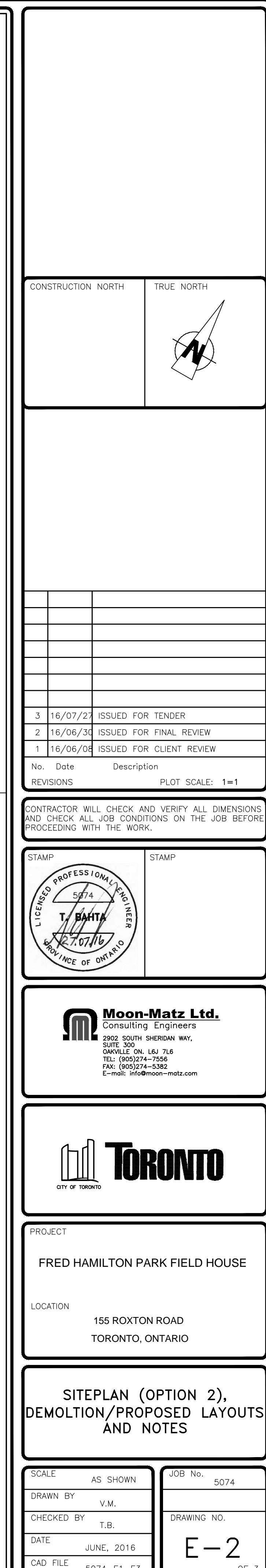
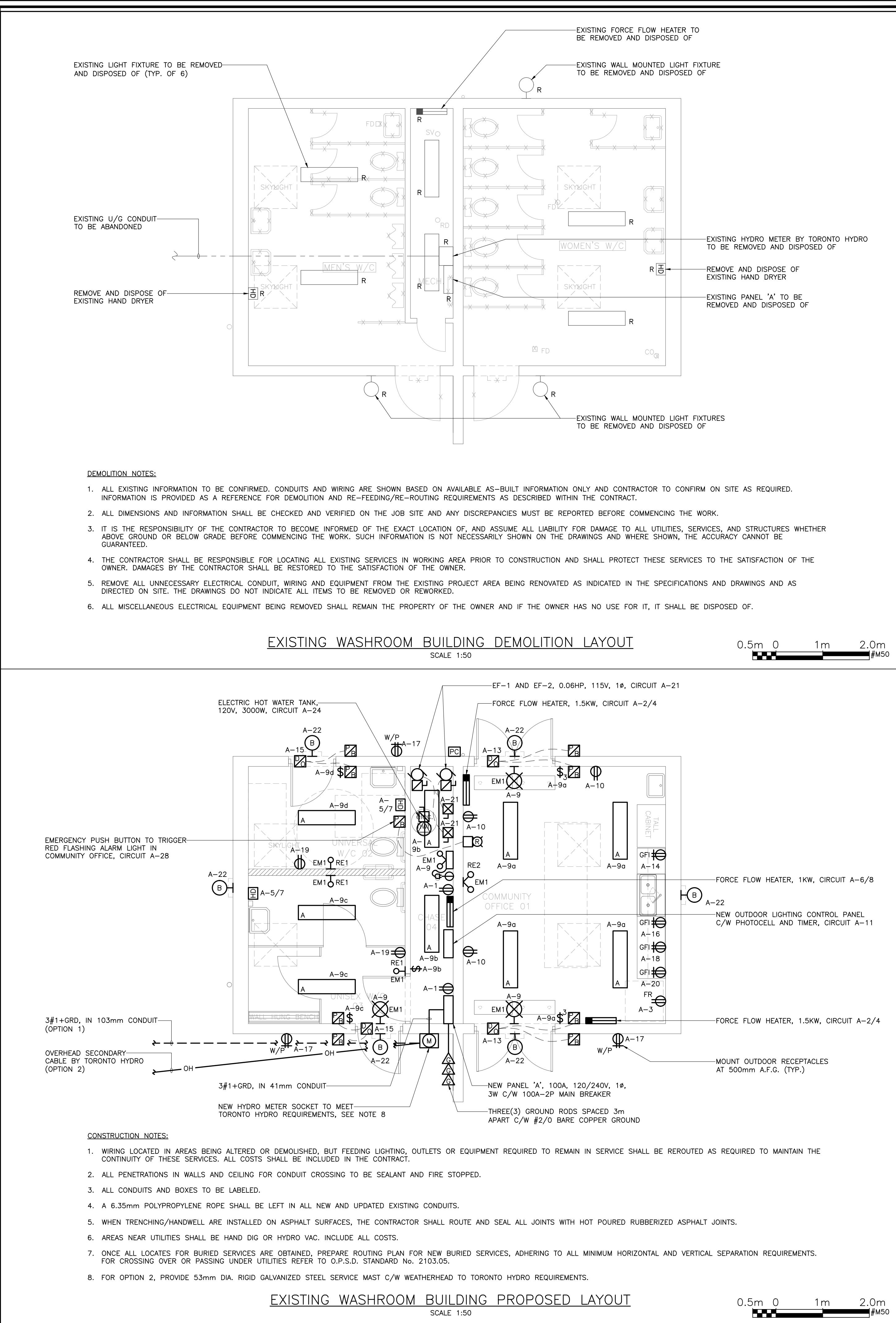
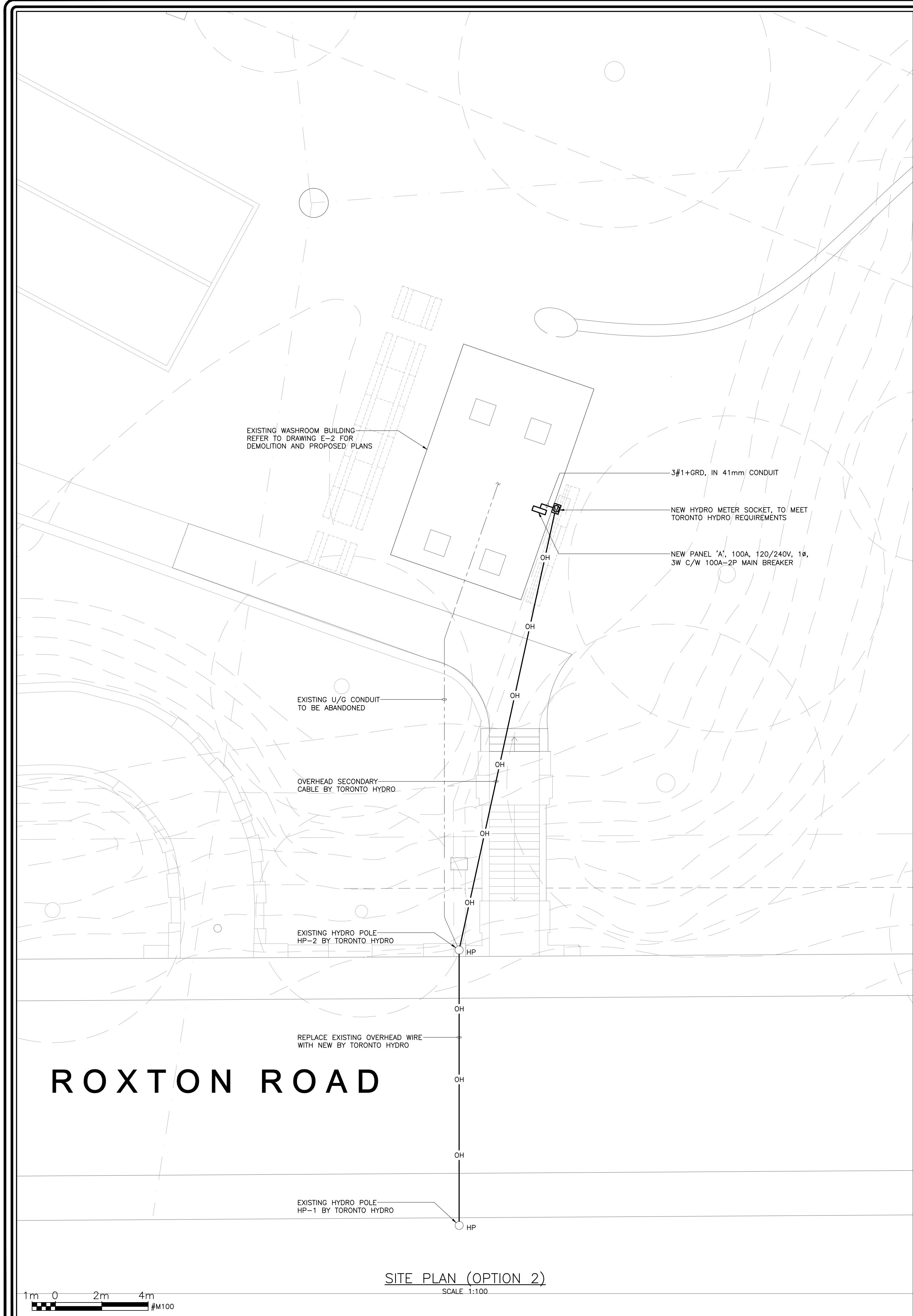
△ SPLICE, EXTEND AND RECONNECT EXISTING SITE LIGHTING TO NEW PANEL.
△ SPLICE, EXTEND AND RECONNECT EXISTING STORAGE SHED SUB PANEL TO NEW PANEL.

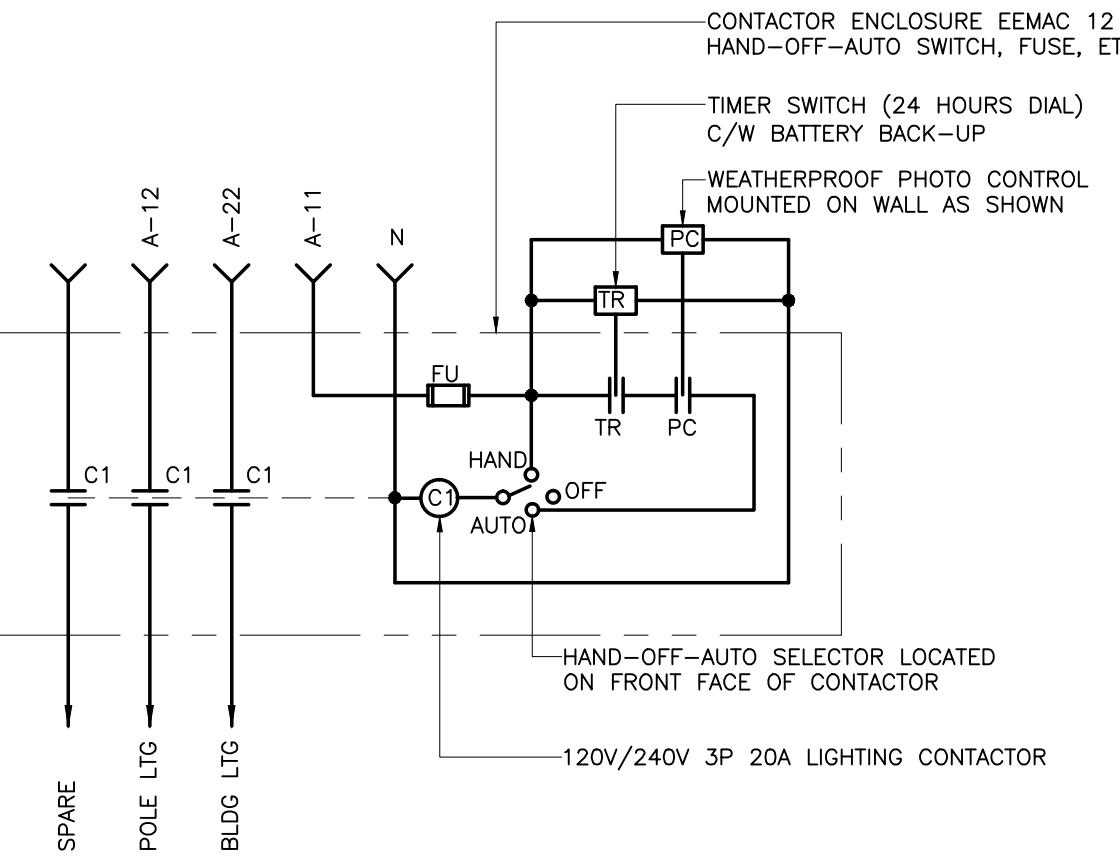


PROJECT
FRED HAMILTON PARK FIELD HOUSE
LOCATION
155 ROXTON ROAD
TORONTO, ONTARIO

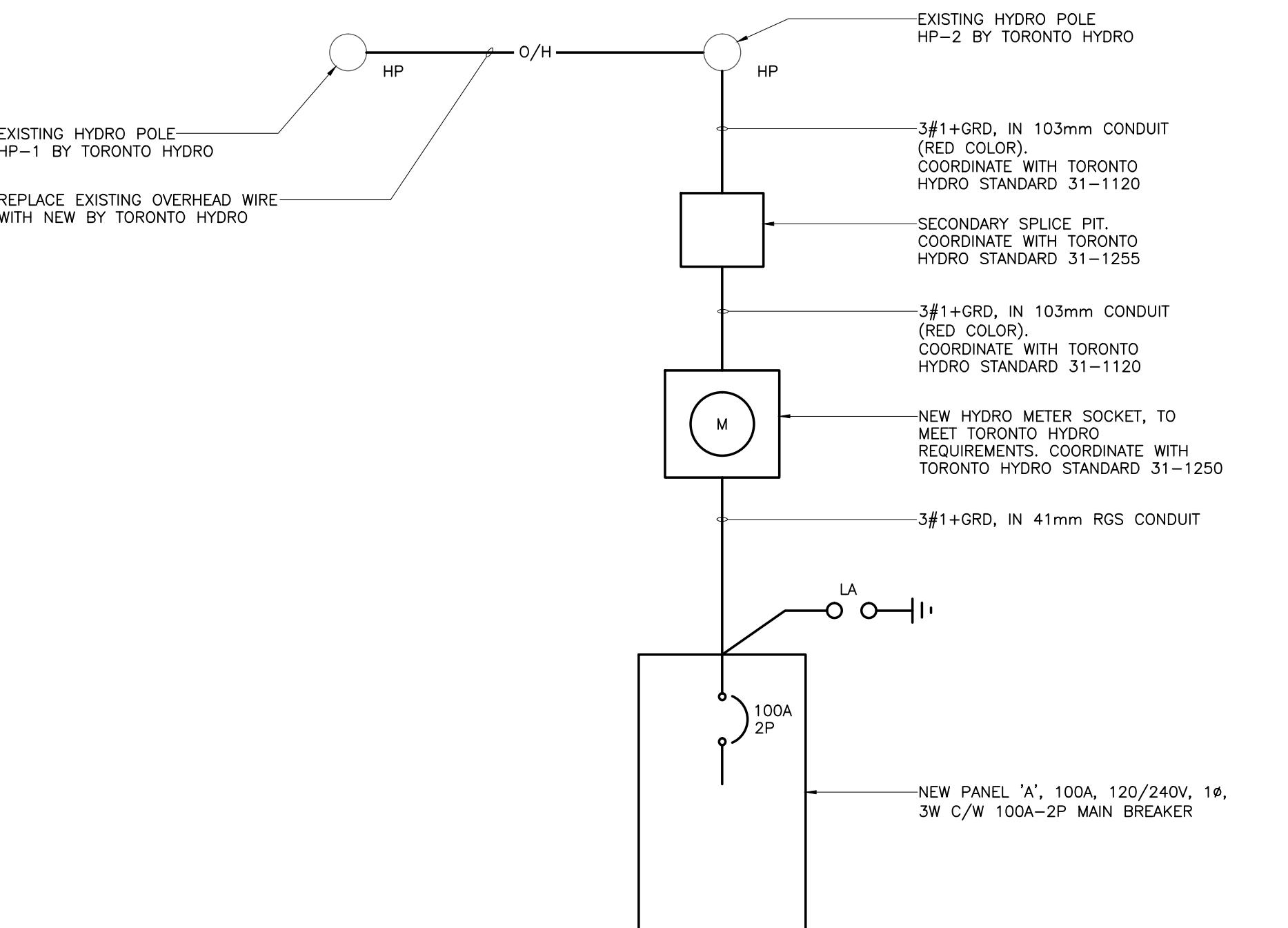
**SITEPLAN (OPTION 1),
LEGEND AND SCHEDULES**

SCALE 1:100	JOB No. 5074
DRAWN BY V.M.	
CHECKED BY T.B.	
DATE JUNE, 2016	
CAD FILE 5074-E1-E3	OF 3
E - 1	

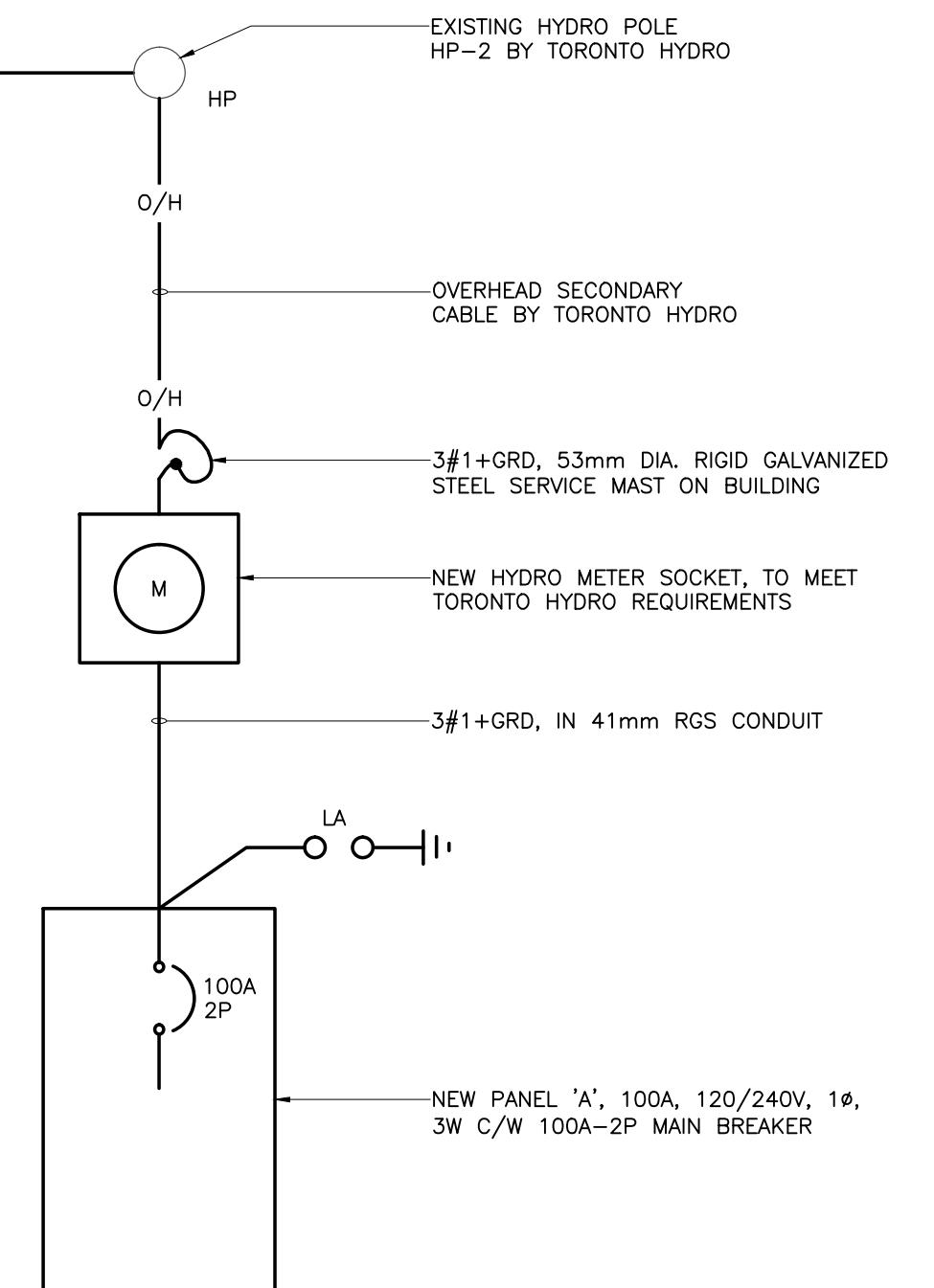




LIGHTING CONTROL SCHEMATIC



SINGLE LINE DIAGRAM (OPTION 1)



SINGLE LINE DIAGRAM (OPTION 2)

SPECIFICATION:

1. THIS DIVISION SHALL INCLUDE THE SUPPLY OF ALL MATERIALS, THE REMOVALS, AND THE INSTALLATION OF ALL ELECTRICAL WORK INCLUDING ALL LABOR, EQUIPMENT, TOOLS, NECESSARY TO COMPLETE THE INSTALLATION IN THE BUILDING AND ON THE SITE AS HERIN SPECIFIED AND SHOWN ON THE DRAWINGS. PROVIDE A COMPLETE OPERATING SYSTEM.
2. THE WORK SHALL "GENERALLY" CONSIST OF THE FOLLOWING:
 - ALL EXISTING LIGHTING FIXTURES.
 - EXISTING SWITCHES.
 - REMOVE WIRING BACK TO SOURCE, PREPARE FOR NEW WORK.
 - HIDE DRAWS.
 - DISTRIBUTION PANEL.
 - HYDRO METER.
3. USE ONLY SPECIFIED MATERIALS AND EQUIPMENT EXCEPT WHERE DESIGNATED "OR APPROVED ALTERNATE".
4. ALL ALTERNATES TO SPECIFIED MATERIALS MUST BE APPROVED BY THE CONSULTANT.
5. ALL MATERIALS SHALL BE OF HIGH QUALITY COMMERCIAL GRADE AND SHALL BE CSA APPROVED.
6. THIS DIVISION SHALL CONSULT ALL CONSTRUCTION DRAWINGS AND BE FAMILIAR WITH ALL CONDITIONS AFFECTING THE WORK.
7. WHEN REQUIRED BY THE CONSULTANT, EQUIPMENT SHALL BE RELOCATED UP TO 3 METERS WITHOUT ADDITIONAL CHARGE PROVIDED IT HAS NOT BEEN INSTALLED.
8. ALL DIMENSIONS MUST BE CHECKED AND VERIFIED ON THE JOB SITE.
9. SUBMIT SHOP DRAWINGS (6 SETS) FOR APPROVAL BEFORE ORDERING THE FOLLOWING MATERIALS:
 - SWITCHES.
 - LIGHTING FIXTURES.
 - BREAKERS.
 - PLUGS.
 - HAND DRYERS.
 - DISCONNECT SWITCHES.
 - DISTRIBUTION PANEL.
 - LIGHTING CONTROL PANEL.
10. 120 VOLT LIGHT SWITCHES SHALL BE TOGGLE TYPE SPECIFICATION GRADE HUBBELL CAT# HBL-1201 IVORY FINISH. PROVIDE STAINLESS STEEL COVERPLATES.
11. 120V, 15A, U-GROUND RECEPTACLES SHALL BE HUBBELL MODEL #5262. PROVIDE GFI RECEPTACLES WHERE SHOWN ON DRAWING.
12. 120V, 20A, U-GROUND RECEPTACLES SHALL BE HUBBELL MODEL #5392. PROVIDE GFI RECEPTACLES WHERE SHOWN ON DRAWING.
13. PRIOR TO SUBMITTING A TENDER CAREFULLY EXAMINE CONDITIONS AT THE SITE WHICH MAY OR WILL AFFECT THE WORK. REFER TO AND EXAMINE ALL CONTRACT DOCUMENTS TO DETERMINE FINISHED, PARTIALLY FINISHED AND UNFINISHED AREAS OF THE BUILDING.
14. ENSURE THAT MATERIALS AND EQUIPMENT ARE DELIVERED TO THE SITE AT THE PROPER TIME AND IN THE APPROPRIATE QUANTITIES AND SIZES SO AS TO ENTER THE BUILDING AND TO BE MOVED INTO THE SPACES WHERE THEY ARE TO BE LOCATED WITHOUT DIFFICULTY. BE RESPONSIBLE FOR CUTTING AND PATCHING INVOLVED IN GETTING ASSEMBLIES INTO PLACE.

15. THE CONTRACTOR SHALL ENSURE HE IS FAMILIAR WITH THE EXTENT OF REMOVALS PRIOR TO SUBMITTING HIS TENDER.

16. COORDINATE DIVISION 16 WORK WITH THE WORK OF ALL TRADES TO ENSURE A PROPER AND COMPLETE INSTALLATION. NOTIFY ALL TRADES CONCERNED OF THE REQUIREMENT FOR OPENINGS, SLEEVES, INSERTS AND OTHER HARDWARE NECESSARY IN THEIR WORK FOR THE ELECTRICAL INSTALLATION, AND, WHERE ELECTRICAL WORK IS TO BE INTEGRATED WITH THE WORK OF OTHER TRADES OR IS TO BE INSTALLED IN CLOSE PROXIMITY WITH THE WORK OF OTHER TRADES, CAREFULLY COORDINATE THE WORK PRIOR TO INSTALLATION.

17. PROVIDE ALL NECESSARY SLEEVES, INSERTS, BEAM CLAMPS AND HANGERS - LOCATE AND SECURELY PLACE SAME. CO-ORDINATE THE INSTALLATION OF THE FIXTURES WITH THE EXISTING STRUCTURE. DETAILS ON DRAWINGS ARE DIAGRAMMATIC. INCLUDE ALL ACCESSORIES REQUIRED.

18. THE WORK SHALL BE EXECUTED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF ONTARIO ELECTRICAL SAFETY CODE, THE CANADIAN ELECTRICAL CODE, THE ONTARIO BUILDING CODE AND ALL AUTHORITIES HAVING JURISDICTION.

19. IN THE EVENT THAT ANY DEVIATIONS FROM THE ELECTRICAL DRAWINGS ARE NECESSARY, THIS DIVISION SHALL CONSULT WITH THE CONSULTANT AND OBTAIN WRITTEN APPROVAL BEFORE PROCEEDING.

20. SUBMIT THE REQUISITE NUMBER OF SETS OF PLANS AND SPECIFICATIONS, TO THE ELECTRICAL SAFETY AUTHORITY. CONTRACTOR TO GET FINAL APPROVALS FROM ALL AUTHORITIES AND PAY ALL FEES.

21. THIS DIVISION SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL NECESSARY PERMITS AND PAY ALL FEES. FURNISH ALL USUAL CERTIFICATES NEEDED AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION, BEFORE FINAL PAYMENT OF CONTRACT IS MADE.

22. INSTALL EQUIPMENT, DUCTWORK, CONDUIT AND CABLES IN A WORKMANLIKE MANNER TO BEST SUIT SPACE, TO PRESENT A NEAT APPEARANCE AND TO FUNCTION PROPERLY TO THE SATISFACTION OF THE CONSULTANT. INSTALL EQUIPMENT AND APPARATUS REQUIRING MAINTENANCE, ADJUSTMENT OR EVENTUAL REPLACEMENT WITH DUE ALLOWANCE THEREFOR.

23. REPLACE WORK UNSATISFACTORY TO THE CONSULTANT WITHOUT EXTRA COST.

24. PROTECT FROM DAMAGE ALL EQUIPMENT DELIVERED TO THE SITE AND DURING INSTALLATION. ANY DAMAGE OR MARKING OF FINISHED SURFACES SHALL BE MADE GOOD TO THE SATISFACTION OF THE CONSULTANT.

25. MOUNTING HEIGHT OF EQUIPMENT IS FROM FINISHED FLOOR TO CENTERLINE OF EQUIPMENT UNLESS SPECIFIED OR INDICATED OTHERWISE. IF MOUNTING HEIGHT OF EQUIPMENT IS NOT INDICATED, VERIFY BEFORE PROCEEDING WITH INSTALLATION. INSTALL ELECTRICAL EQUIPMENT AT THE FOLLOWING HEIGHTS UNLESS INDICATED OTHERWISE.

26. FOR WORK BEYOND SCOPE OF THE CONTRACT SUBMIT A QUOTATION WITH A BREAK-DOWN OF MATERIALS, LABOR AND MARK-UPS AND OBTAIN A WRITTEN ORDER FROM THE GENERAL CONTRACTOR BEFORE PROCEEDING. ALL QUOTATIONS TO BE APPROVED BY THE CONSULTANT AND THE OWNER.

27. ALL EQUIPMENT, MATERIALS AND WORKMANSHIP SHALL BE UNCONDITIONALLY GUARANTEED FOR A MINIMUM PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE INCLUDING LAMPS.

28. PURCHASE TWO SETS OF WHITE PRINTS AND AS THE JOB PROGRESSES, MARK THESE PRINTS TO ACCURATELY INDICATE INSTALLED WORK. HAVE THE WHITE PRINTS AVAILABLE FOR INSPECTION AT THE SITE AT ALL TIMES, AND PRESENT FOR SCRUTINY AND INSPECTION BY THE CONSULTANT. CONTRACTOR SHALL PROVIDE FOR INSPECTION, PURCHASE A SET OF REPRODUCIBLE MYLAR PRINTS OF ALL THE CONTRACT DRAWINGS AND AMEND SAME IN A NEAT FASHION IN ACCORDANCE WITH THE MARKED WHITE PRINTS MENTIONED ABOVE. THE CONSULTANT SHALL PROVIDE TO THE CONTRACTOR DIGITAL FILES IN AUTOCAD FORMAT. THE CONTRACTOR SHALL AMEND THE DRAWINGS AS THEY PROGRESS AND PROVIDE THE CONSULTANT WITH A COPY OF THE AS-BUILT MYLAR PRINTS AND DIGITAL FILES TO THE CONSULTANT FOR CHECKING DURING THE FINAL INSPECTION PERIOD. SHOW THE RECORD DRAWINGS AS-BUILT, ALL OUTLETS AND EQUIPMENT.

29. BEFORE ENERGIZING ANY SYSTEMS, INSPECT AND CLEAN THE INSIDE OF PANEL BOARDS, AND CABINETS TO ENSURE THAT THEY ARE COMPLETELY FREE FROM DUST AND DEBRIS. CLEAN ALL POLISHED, PAINTED AND PLATED WORK BRIGHT, CLEAN ALL LIGHTING FIXTURES, ETC. REMOVE DEBRIS, DUST AND MATERIALS FROM ALL TOOLS, TO ENSURE ADDITIONAL CLEANING OPERATIONS OF SYSTEMS AS SPECIFIED IN OTHER SECTIONS OF THIS DIVISION. CLEAN UP ALL DEBRIS ON SITE ON A DAILY BASIS AND REMOVE AND DISPOSE OF OFF SITE BEFORE THE FINAL COMPLETION OF THE CONTRACT.

30. DO ALL CUTTING, PATCHING AND MAKING GOOD TO LEAVE IN A FINISHED CONDITION AND TO MAKE THE SEVERAL PARTS OF THE WORK COME TOGETHER. PROPERLY COORDINATE WORK TO KEEP CUTTING AND PATCHING TO A MINIMUM.

31. THIS DIVISION SHALL CLEARLY IDENTIFY ALL ELECTRICAL EQUIPMENT. ALL EXISTING REVISED PANEL DIRECTORIES SHALL BE TYPEWRITTEN AND ALL OTHER EQUIPMENT SHALL BE PERMANENTLY IDENTIFIED WITH ETCHED LAMINIC PLATES $\frac{1}{8}$ " ENGRAVED WHITE SECURE TO CLEAN SURFACES.

32. SUPPLY AND INSTALL WIRING DEVICES AS INDICATED ON THE DRAWINGS.

33. RIGID GALVANIZED STEEL CONDUIT, TO C.S.A. C22.2 NO. 45, WITH EXTERIOR ZINC AND INTERIOR ENAMEL COATINGS, GALVANIZED THREADS WHERE FACTORY CUT, RED LEAD COATED THREADS WHERE SITE CUT, FACTORY MADE BENDS WHERE SITE BENDING IS NOT POSSIBLE, FACTORY MADE AND THREADED FITTINGS, AND "TOMIC" JOINTS AND TERMINATIONS MADE WITH RIGID COUPLINGS, CONCRETE TIGHT WHERE REQUIRED. USE RIGID GALVANIZED STEEL CONDUIT WHERE CONDUIT IS EXPOSED TO MECHANICAL INJURY.

34. UNDERGROUND CONDUIT SHALL BE RIGID P.V.C. (R.P.V.C.) CONDUIT UNLESS OTHERWISE SHOWN AND SHALL BE THICK WALL SCHEDULE 40 CONFORMING TO CSA STANDARD C22.2, NO. 211.2. STANDARD OF ACCEPTANCE EQUAL TO IPEX INCORPORATED, ROBAL PIPE SYSTEMS OR REVIEWED EQUIVALENT.

35. EM (THINWALL) CONDUIT SHALL NOT BE USED.

36. GALVANIZED STEEL FLEXIBLE LIQUID-TIGHT METALLIC CONDUIT, TO C.S.A. C22.2 NO. 56, COMPLETE WITH PROPER AND SUITABLE LIQUID-TIGHT FLEXIBLE CONDUIT CONNECTORS AT TERMINATIONS FOR DROPS TO LIGHTING FIXTURES.

37. INSTALL CONDUIT AND CONDUCTORS CONCEALED IN ALL FINISHED AREAS AND CONCEALED TO THE DEGREE MADE POSSIBLE BY FINISHES IN PARTIALLY FINISHED AND UNFINISHED AREAS. CONDUIT MAY BE EXPOSED IN UNFINISHED AREAS UNLESS OTHERWISE NOTED ON THE DRAWINGS OR SPECIFIED THEREIN.

38. WHERE CONDUIT AND/OR CONDUCTORS ARE EXPOSED ARRANGE SAME TO AVOID INTERFERENCE WITH OTHER CONDUIT AND PARALLEL TO BUILDING LINES. WHERE HORIZONTAL CONDUIT AND CONDUCTORS ARE EXPOSED, INSTALL AS HIGH AS POSSIBLE. DO NOT INSTALL CONDUIT AND/OR CONDUCTORS WITHIN 150mm OF FLUE OR HEATING PIPES OR EQUIPMENT.

39. CONDUCTORS SHALL BE COPPER "RW90" SINGLE CONDUCTOR TO C.S.A. C22.2, COLOR CODED, 75 DEG. C, RATED WITH APPROVED MANUFACTURED CONNECTORS AT JOINTS IN CONDUIT. ALL CONDUIT SHALL BE RIGID PVC THICKWALL CONDUIT.

40. CONDUCTORS UNDERGROUND SHALL BE COPPER "RW90" SINGLE CONDUCTOR TO CSA C22.2 COLOR CODED, 90°C RATED WITH APPROVED MANUFACTURED CONNECTOR AT JOINTS IN CONDUIT. UNDERGROUND CONDUIT SHALL BE RIGID PVC THICKWALL CONDUIT.

41. BRANCH CIRCUIT CONDUCTORS UP TO AND INCLUDING #10AWG MAY BE SOLID CONDUCTORS GREATER THAN #10AWG SHALL BE STRANDED. ALL CONDUCTORS SHALL BE CONSTRUCTED OF HIGH CONDUCTIVITY COPPER. MINIMUM POWER CONDUCTOR SIZE SHALL BE #12AWG. MINIMUM CONDUIT SIZE SHALL BE 21mm.

42. SAFETY SWITCHES SHALL BE HEAVY DUTY SERIES SAFETY SWITCHES. EACH SAFETY SWITCH SHALL BE FRONT OPERATED WITH RED HANDLE SUITABLE FOR PADLOCKING IN THE "OFF" POSITION AND ARRANGED SO THAT THE ENCLOSURE COVER CANNOT BE OPENED WITH THE HANDLE IN THE "ON" POSITION. OPERATING MECHANISMS SHALL BE QUICK-MAKE, QUICK-BREAK, POSITIVE ACTING WITH VISIBLE BLADES, AND A LINE TERMINAL SHELL. FUSIBLE UNITS SHALL BE COMPLETE WITH USEABLE AND SUITABLE FOR 120V, 15A, 20A, 30A, 40A, 50A, 60A, 70A, 80A, 100A, 120A, 150A, 170A, 200A, 250A, 300A, 350A, 400A, 500A, 600A, 700A, 800A, 900A, 1000A, 1200A, 1500A, 1700A, 2000A, 2500A, 3000A, 3500A, 4000A, 5000A, 6000A, 7000A, 8000A, 9000A, 10000A, 12000A, 15000A, 17000A, 20000A, 25000A, 30000A, 35000A, 40000A, 50000A, 60000A, 70000A, 80000A, 90000A, 100000A, 120000A, 150000A, 170000A, 200000A, 250000A, 300000A, 350000A, 400000A, 500000A, 600000A, 700000A, 800000A, 900000A, 1000000A, 1200000A, 1500000A, 1700000A, 2000000A, 2500000A, 3000000A, 3500000A, 4000000A, 5000000A, 6000000A, 7000000A, 8000000A, 9000000A, 10000000A, 12000000A, 15000000A, 17000000A, 20000000A, 25000000A, 30000000A, 35000000A, 40000000A, 50000000A, 60000000A, 70000000A, 80000000A, 90000000A, 100000000A, 120000000A, 150000000A, 170000000A, 200000000A, 250000000A, 300000000A, 350000000A, 400000000A, 500000000A, 600000000A, 700000000A, 800000000A, 900000000A, 1000000000A, 1200000000A, 1500000000A, 1700000000A, 2000000000A, 2500000000A, 3000000000A, 3500000000A, 4000000000A, 5000000000A, 6000000000A, 7000000000A, 8000000000A, 9000000000A, 10000000000A, 12000000000A, 15000000000A, 17000000000A, 20000000000A, 25000000000A, 30000000000A, 35000000000A, 40000000000A, 50000000000A, 60000000000A, 70000000000A, 80000000000A, 90000000000A, 100000000000A, 120000000000A, 150000000000A, 170000000000A, 200000000000A, 250000000000A, 300000000000A, 350000000000A, 400000000000A, 500000000000A, 600000000000A, 700000000000A, 800000000000A, 900000000000A, 1000000000000A, 1200000000000A, 1500000000000A, 1700000000000A, 2000000000000A, 2500000000000A, 3000000000000A, 3500000000000A, 4000000000000A, 5000000000000A, 6000000000000A, 7000000000000A, 8000000000000A, 9000000000000A, 10000000000000A, 12000000000000A, 15000000000000A, 17000000000000A, 20000000000000A, 25000000000000A, 30000000000000A, 35000000000000A, 40000000000000A, 50000000000000A, 60000000000000A, 70000000000000A, 80000000000000A, 90000000000000A, 100000000000000A, 120000000000000A, 150000000000000A, 170000000000000A, 200000000000000A, 250000000000000A, 300000000000000A, 350000000000000A, 400000000000000A, 500000000000000A, 600000000000000A, 700000000000000A, 800000000000000A, 900000000000000A, 1000000000000000A, 1200000000000000A, 1500000000000000A, 1700000000000000A, 2000000000000000A, 2500000000000000A, 3000000000000000A, 3500000000000000A, 4000000000000000A, 5000000000000000A, 6000000000000000A, 7000000000000000A, 8000000000000000A, 9000000000000000A, 10000000000000000A, 12000000000000000A, 15000000000000000A, 17000000000000000A, 20000000000000000A, 25000000000000000A, 30000000000000000A, 35000000000000000A, 40000000000000000A, 50000000000000000A, 60000000000000000A, 70000000000000000A, 80000000000000000A, 90000000000000000A, 100000000000000000A, 120000000000000000A, 150000000000000000A, 170000000000000000A, 200000000000000000A, 250000000000000000A, 300000000000000000A, 350000000000000000A, 400000000000000000A, 500000000000000000A, 600000000000000000A, 700000000000000000A, 800000000000000000A, 900000000000000000A, 1000000000000000000A, 1200000000000000000A, 1500000000000000000A, 1700000000000000000A, 2000000000000000000A, 2500000000000000000A, 3000000000000000000A, 3500000000000000000A, 4000000000000000000A, 5000000000000000000A, 6000000000000000000A, 7000000000000000000A, 8000000000000000000A, 9000000000000000000A, 10000000000000000000A, 1200000