

FOR GAS COMPANY		2# GAS	METER 1 (2# METER) BY GAS COMPANY	
EQUIPMENT	INPUT		MINIMUM DISTANCE BETWEEN GAS LINE AND UNDERGROUND SERVICES - 3 FEET.	BUILDING ROOF ELEV. _____m
RTU-1	145 MBH			
RTU-2	145 MBH			
RTU-3	145 MBH			
FUTURE GAS FIRED GENERATOR	450 MBH			
FUTURE GAS FIRED HOT WATER TANK	300 MBH			
TOTAL 2# GAS USAGE			PULSE TYPE METER	
			1185 MBH	

FOR MECHANICAL CONTRACTOR

PRIOR TO COMMENCING INSTALLATION WITHIN THE BUILDING, THE MECHANICAL CONTRACTOR SHALL CHECK THE LOCATION AND INVERT ELEVATIONS OF ALL SERVICE LINES INCLUDING SANITARY SEWER, STORM SEWER, WATER MAINS, AND GAS MAINS WITH LOCAL AUTHORITIES TO ENSURE THAT THESE SERVICES CAN BE INSTALLED AS SHOWN.

PROJECT - DOMESTIC WATER AND FIRE PROTECTION DEMAND				
DESCRIPTION	LOAD (COMBINED)	LOAD (COLD WATER)	PIPE SIZE (mm)	LOAD (HOT WATER)
MAIN BUILDING (FUTURE)	120 FU	-	50 ø	-
TOTAL	120 FU	48.0 GPM	50 ø	-
TOTAL FIRE PROTECTION STANDPIPES / AUTO-SPRINKLER SYSTEM	(300 GPM)	-	-	-
NOTE: ALL DOMESTIC HOT AND COLD WATER SIZING ARE BASED ON TYPE L COPPER WITH:				
- 0.914 M/S (3 FPS) FOR 60°C (140°F) & OVER				
- 1.524 M/S (5 FPS) FOR COLD WATER				
TOTAL		348.0 GPM	150 (6") ø	

PROJECT - STORM WATER			
DESCRIPTION	ROOF AREA (SQ. METER)	LOAD 10 (L/15min)	PIPE SIZE (mm)
TOTAL PROJECT STORM WATER LOAD	700	7,000.00	150 ø

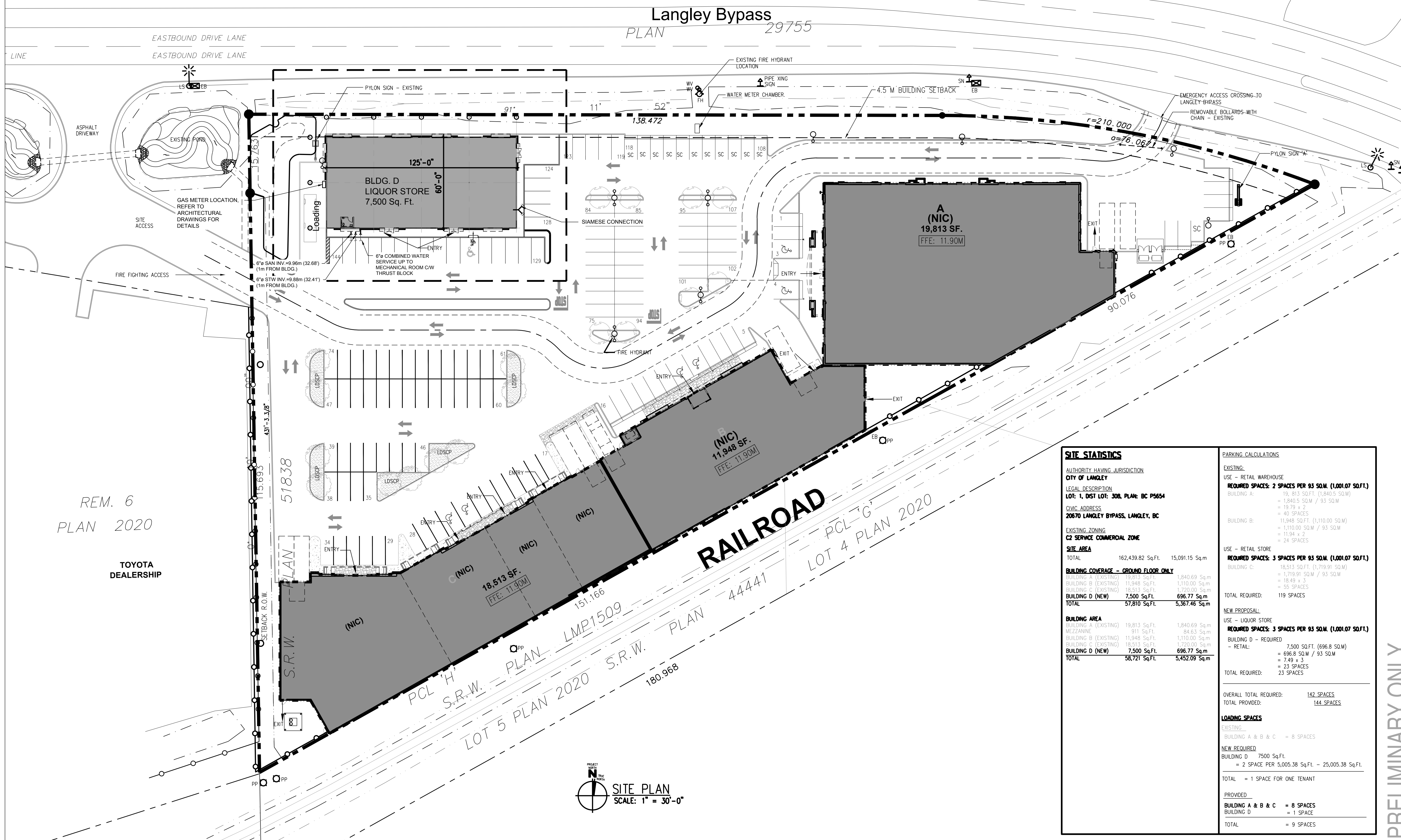
INV. PROPERTY LINE - REFER TO CIVIL
INV. AT BUILDING = _____m (_____')

PROJECT - SANITARY		
DESCRIPTION	TOTAL LOAD (FU)	PIPE SIZE (mm)
MAIN BUILDING (FUTURE)	500.00	150ø
TOTAL PROJECT SANITARY LOAD		150 ø

INV. PROPERTY LINE - REFER TO CIVIL
INV. AT BUILDING = _____m (_____')

* PIPE SLOPE = 1.0%

REV	DATE	DESCRIPTION
03	21/03/17	ISSUED FOR BUILDING PERMIT
02	09/03/17	RE-ISSUED FOR DP
01	07/02/17	ISSUED FOR DP



SITE STATISTICS	
AUTHORITY HAVING JURISDICTION CITY OF LANGLEY	
LEGAL DESCRIPTION LOT: 1, DIST LOT: 308, PLAN: BC P5654	
CIVIC ADDRESS 20670 LANGLEY BYPASS, LANGLEY, BC	
EXISTING ZONING C2 SERVICE COMMERCIAL ZONE	
SITE AREA	TOTAL 162,439.82 Sq.Ft. 15,091.15 Sq.m
BUILDING COVERAGE - GROUND FLOOR ONLY	
BUILDING A (EXISTING)	11,948 Sq.Ft. 1,110.00 Sq.m
BUILDING B (EXISTING)	11,948 Sq.Ft. 1,110.00 Sq.m
BUILDING C (EXISTING)	18,513 Sq.Ft. 1,720.00 Sq.m
BUILDING D (NEW)	7,500 Sq.Ft. 696.77 Sq.m
TOTAL	57,810 Sq.Ft. 5,367.46 Sq.m
BUILDING AREA	
BUILDING A (EXISTING)	19,813 Sq.Ft. 1,840.69 Sq.m
MEZZANINE	911 Sq.Ft. 84.63 Sq.m
BUILDING B (EXISTING)	11,948 Sq.Ft. 1,110.00 Sq.m
BUILDING C (EXISTING)	18,513 Sq.Ft. 1,720.00 Sq.m
BUILDING D (NEW)	7,500 Sq.Ft. 696.77 Sq.m
TOTAL	58,721 Sq.Ft. 5,452.09 Sq.m
PARKING CALCULATIONS	
EXISTING	
USE - RETAIL WAREHOUSE	
REQUIRED SPACES: 2 SPACES PER 93 SQ.M. (1,001.07 SQ.FT.)	
BUILDING A	11,948 SQ.FT. (1,110.00 SQ.M.) = 19.79 x 2 = 40 SPACES
BUILDING B	11,948 SQ.FT. (1,110.00 SQ.M.) = 11.94 x 2 = 24 SPACES
BUILDING C	18,513 SQ.FT. (1,719.91 SQ.M.) = 1,719.91 SQ.M. / 93 SQ.M. = 18.49 x 3 = 55 SPACES
TOTAL REQUIRED:	119 SPACES
NEW PROPOSAL:	
USE - LIQUOR STORE	
REQUIRED SPACES: 3 SPACES PER 93 SQ.M. (1,001.07 SQ.FT.)	
BUILDING D	7,500 SQ.FT. (696.8 SQ.M.) = 7.49 x 3 = 23 SPACES
TOTAL REQUIRED:	23 SPACES
OVERALL TOTAL REQUIRED:	142 SPACES
TOTAL PROVIDED:	144 SPACES
LOADING SPACES	
EXISTING	
BUILDING A & B & C = 8 SPACES	
NEW REQUIRED	
BUILDING D	7,500 Sq.Ft. = 2 SPACE PER 5,005.38 Sq.Ft. = 25,005.38 Sq.Ft.
TOTAL	= 1 SPACE FOR ONE TENANT
PROVIDED	
BUILDING A & B & C = 8 SPACES	
BUILDING D = 1 SPACE	
TOTAL	= 9 SPACES

Alberto Bicol Consulting Inc.
7968 Wedgewood Street
Burnaby, B.C. Canada V5E 2E8
778.998.9511 Telephone
E-Mail: alberto.bicol@AlbertoBicolConsulting.com
Project Reference No: 20161202

CONSULTANT
CONSULTANT SEAL

CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE. DRAWINGS SHALL NOT BE SCALED.

ARCHITECT
LOVICK SCOTT ARCHITECTS
3707 1st AVENUE
BURNABY, BRITISH COLUMBIA
V5C 3V6 E-MAIL: pjlovick@pjlovick.com
tel: 604-298-3700 fax: 604-298-6081

Member of the AIBC Member of the SAA
Member of the RAIC Member of the AAA
Certified Professional Member of the NWTAA
ARCHITECTURAL SEAL

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DRAWN BY: APPROVED

RMR PROJECT
Langley Bypass Commercial
20670 LANGLEY BYPASS
LANGLEY, BC

PROJECT NUMBER: 13-94 DRAWING NUMBER: M-1
SCALE: 1" = 30'-0"
DATE: MARCH 2017 REVISION: 09/03/17

SITE PLAN

Langley Bypass 13-94

REV	DATE	DESCRIPTION
03	21/03/17	ISSUED FOR BUILDING PERMIT
02	09/03/17	RE-ISSUED FOR DP
01	07/02/17	ISSUED FOR DP

Alberto Bicol Consulting Inc.
 7968 Wedgewood Street
 Burnaby, B.C. Canada V5E 2E8
 778.998.9651 Telephone
 E-Mail: albert.bicol@AlbertoBicolConsulting.com
 Project Reference No: 20161202

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ARCHITECT



3707 1st AVENUE
 BURNABY, BRITISH COLUMBIA
 V5C 3V6 E-MAIL: pjlovick@pjlovick.com
 tel: 604-298-3700 fax: 604-298-6081

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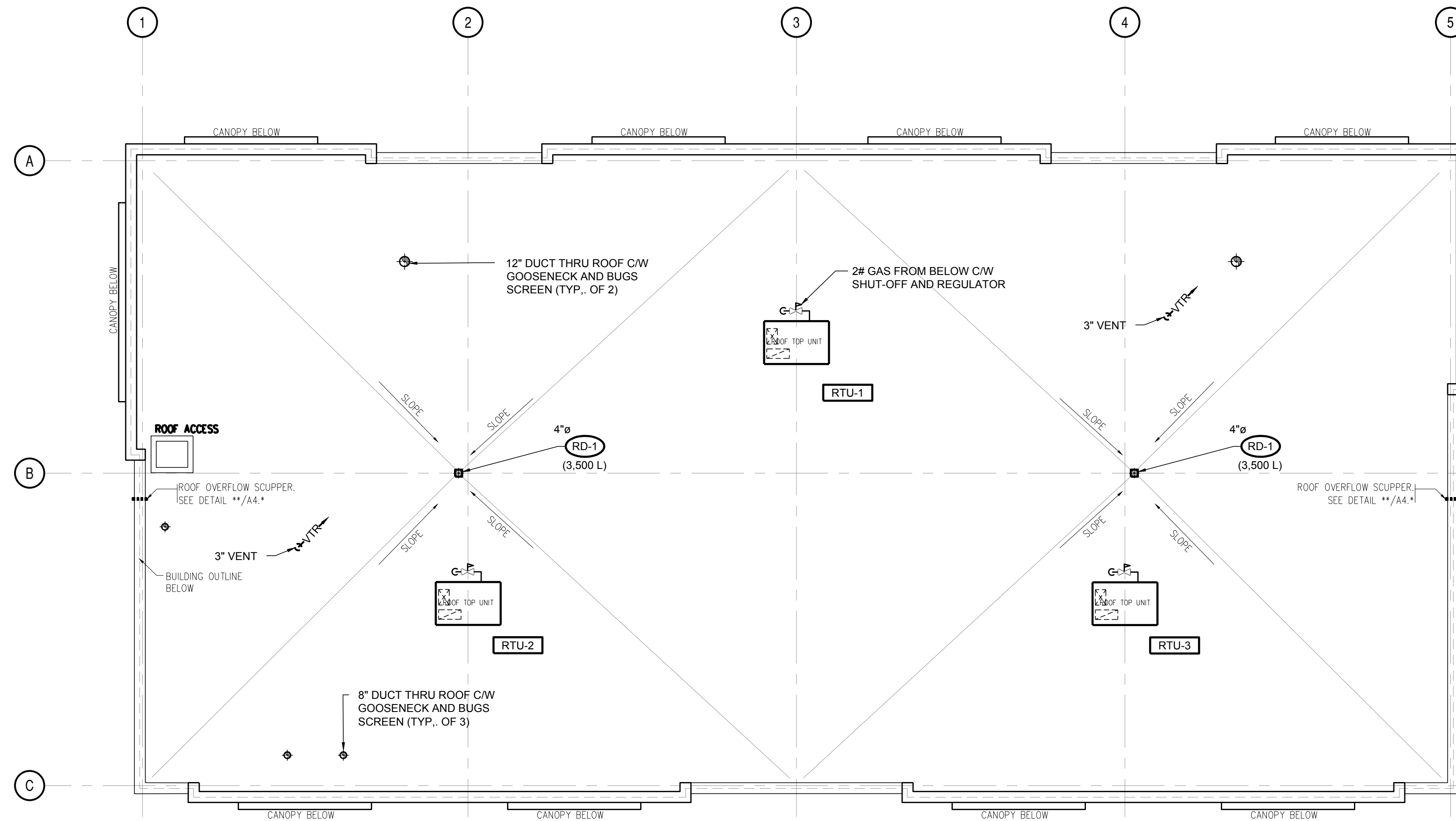
PROJECT
Langley Bypass Commercial
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 LANGLEY, BC

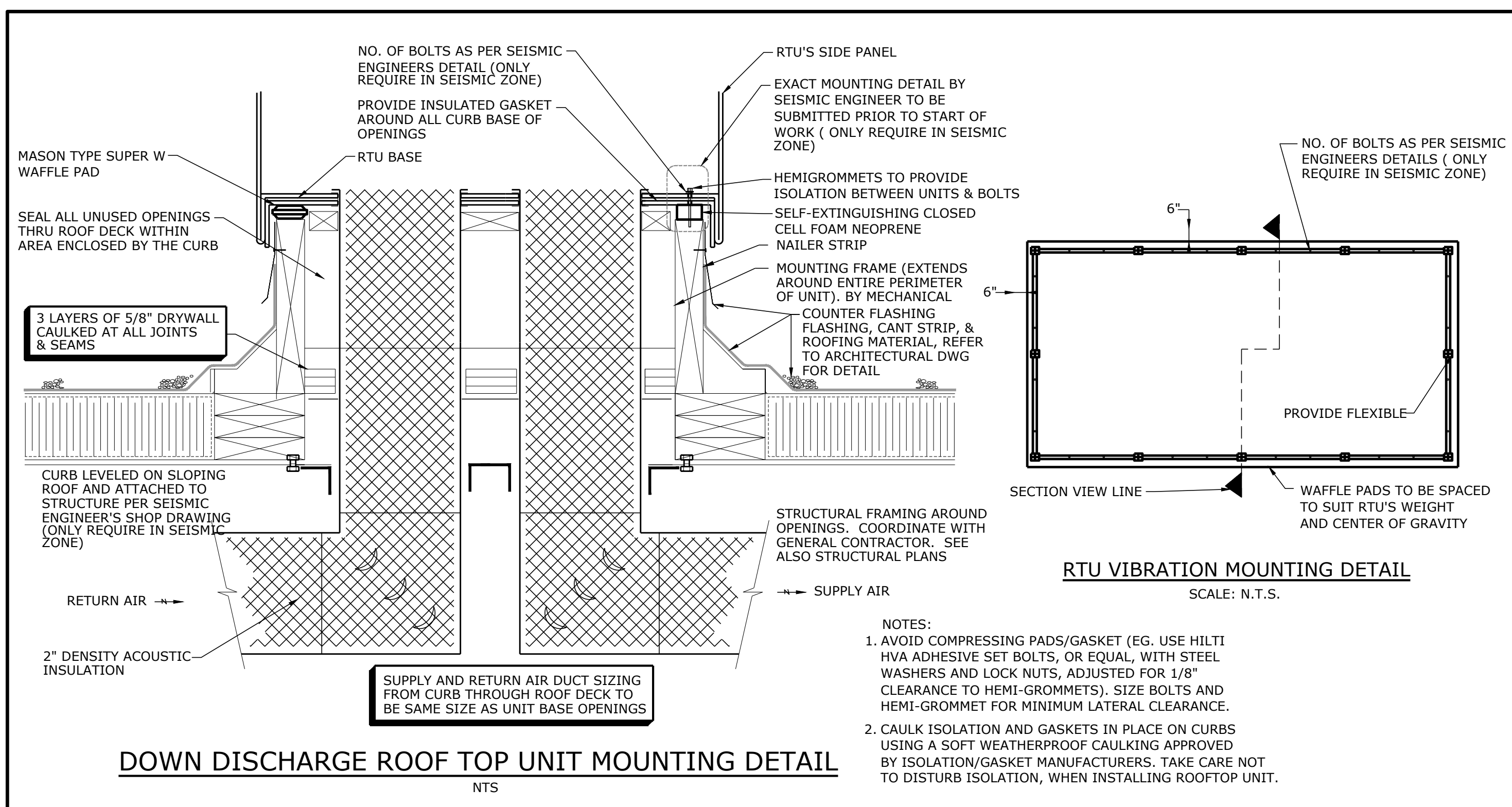
DRAWING

ROOF PLAN

PROJECT NUMBER	DRAWING NUMBER
13-94	M-4
SCALE 1" = 30'-0"	
DATE MARCH 2017	REVISION 09/03/17

Langley Bypass 13-94





NOTES FOR SPRINKLER SYSTEM DESIGN

- THE SPRINKLER CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM OF SPRINKLERS AND STANDPIPE PROTECTION FOR THE BUILDING IN ACCORDANCE WITH THE SPECIFICATIONS, NFPA 13 STANDARD, REQUIREMENTS OF THE BC BUILDING CODE 2012 AND CODE COMPLIANCE CONSULTANTS REPORT.
- THE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY DESIGNED BASED ON THE FOLLOWING CRITERIA:

AREA	SYSTEM	DENSITY GPM/ft ²	DESIGN AREA (ft ²)	HAZARD GROUP	MAX AREA PER HEAD (ft ²)
OFFICE AREAS	WET	0.10	1500	LIGHT	225
RETAIL	WET	0.20	1500	ORD. GROUP II	130
MECHANICAL SERVICE	WET	0.15	1500	ORD. GROUP I	130

* AREA REDUCTION PERMITTED UTILIZING QUICK RESPONSE SPRINKLERS PER NFPA 13 - 11.2.3.2.3
- PROVIDE SEISMIC SWAY BRACING IN ACCORDANCE WITH NFPA 13, & LOCAL BUILDING BYLAW ON SPRINKLER SYSTEM.
- REVIEW ELECTRICAL, MECHANICAL, STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR DETAILS BEFORE START OF SPRINKLER SHOP DRAWINGS.
- SPRINKLER TYPES:**
 - RETAIL - QUICK RESPONSE UPRIGHT / SIDEWALL TYPE
 - STORAGE: EXTENDED COVERAGE LISTED BRASS TYPE
- PIPE ROUTING:** COORDINATION OF PIPE ROUTES, SLEEVING, CORING, DRILLING AND PUNCHING OF STEEL STUDS IN PARTITION WALL IS THE RESPONSIBILITY OF THE SPRINKLER SUBTRADE.
 - COORDINATE PIPE ROUTES WITH THE MECHANICAL CONTRACTOR AND OTHER SUB TRADES ON THE SITE TO AVOID CONFLICTS WITH OTHER SERVICES.
 - ELECTRICAL CLOSETS: STANDARD 212" F UPRIGHT c/w GUARD GAGE.
 - ON THE SITE TO AVOID CONFLICTS WITH OTHER SERVICES.
- CONSTRUCTION: DO NOT START CONSTRUCTION UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED BY THE ARCHITECT AND CONSULTANTS AND SPRINKLER PERMIT OBTAINED FROM CITY OF SURREY.
- OBSTRUCTIONS:** SPRINKLER SPACES AND LOCATIONS ADJACENT TO ALL STRUCTURAL OBSTRUCTIONS TO CONFORM NFPA 13.

COORDINATION:

 - REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT OF AREAS WITH DROPPED CEILING IN SUITES. ALL PLUMBING AND SPRINKLER LINES SHALL RUN IN WALLS EXCEPT WHERE DROP CEILING AND BULKHEADS PROVIDED.
 - LOCATION OF PIPING IS GENERALLY SHOWN ON THE DRAWING. THE SPRINKLER SUB-TRADE TO PROVIDE SHOP DRAWINGS INCLUDING NECESSARY CALCULATIONS. PIPING LAYOUTS AND SIZING DATA REQUIRED TO MEET NFPA 13.
 - COORDINATE LOCATION OF OPENING THROUGH STRUCTURE WALL AND FLOOR SLAB WITH STRUCTURAL ENGINEER.
 - ALL SPRINKLER HEADS SHALL BE COORDINATED WITH THE LIGHTING LAYOUT AND REFLECTED CEILING PLANS PRIOR TO START OF INSTALLATION. PROVIDE ADDITIONAL HEADS AS REQUIRED FOR DROPS AND OTHER CONSTRUCTION COMPONENTS.
- INSTALLATION: WHERE THE SPRINKLER PIPING RUNS IN THE PARTY WALL CAVITY AND PENETRATES ON BOTH SIDES OF THE SUITES, THE SPRINKLER PIPE DRYWALL PENETRATIONS SHALL BE CAULKED WITH A SOFT FIREPROOF CAULKING.
- OBTAIN AND REVIEW FIRE AND LIFE SAFETY REPORT (CODE REPORT) AND RELATED ALTERNATIVE SOLUTIONS PRIOR TO SUBMIT SHOP DRAWINGS.
- WATER FLOW / PRESSURIZATION INFORMATION:**

STATIC PRESSURE (MAX. DAY): ___ psi
 STATIC PRESSURE (THEORETICAL MAXIMUM): ___ psi
 ESTIMATED SUMMER RESIDUAL IN CITY MAIN ___ psi
 FOR FLOW AT ___ IMP. GPM
 CALCULATED AT THE ADDRESS OF _____

CONTRACTOR TO PROVIDE FLOW TEST RESULTS TO AB CONSULTING LTD. PRIOR TO ANY CALCULATION.

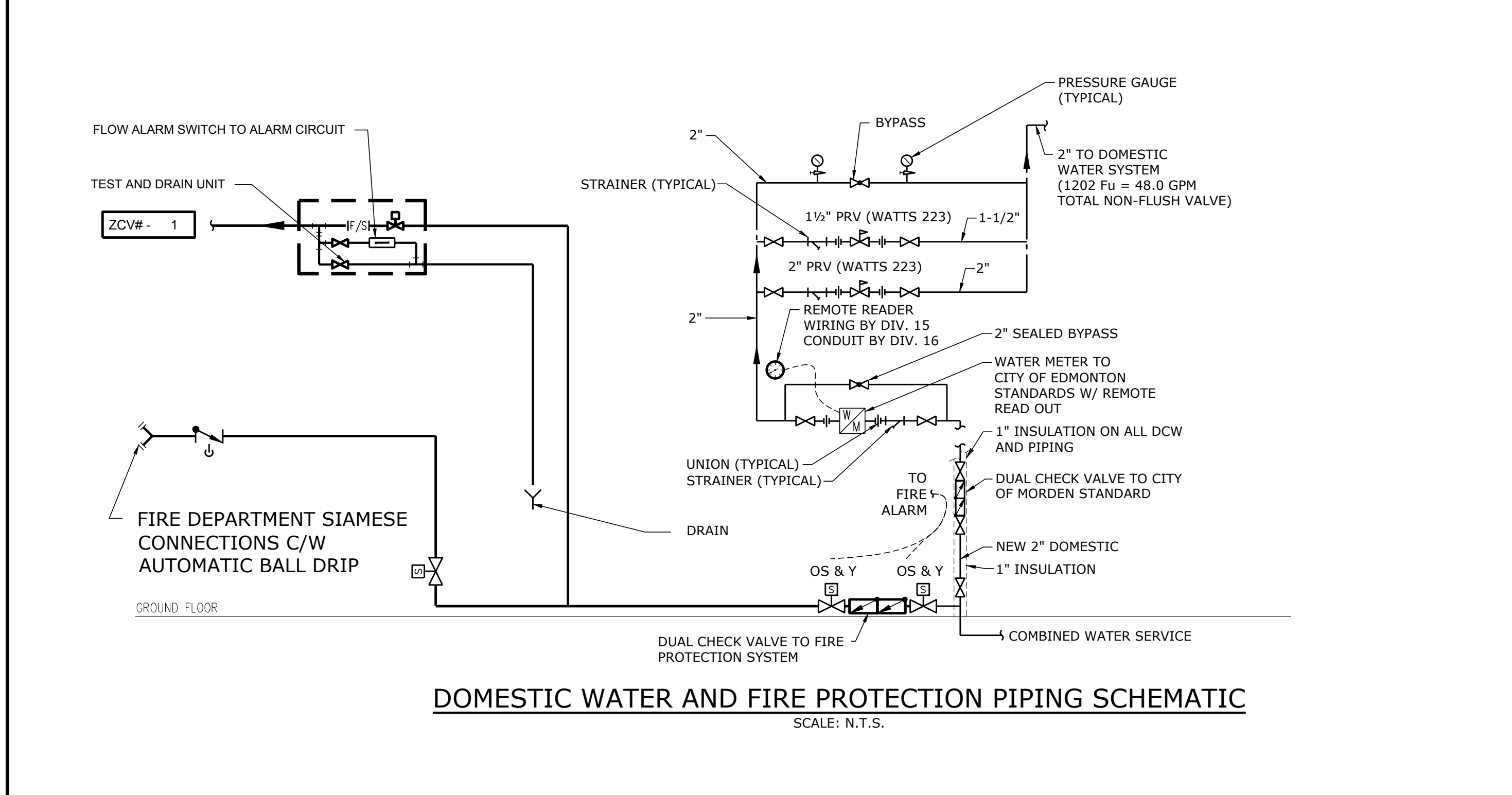
DRAIN SCHEDULE

TYPE	FIXTURE	DESCRIPTION	ACCESSORIES
FD-1	GENERAL PURPOSE FLOOR DRAIN	ZURN ZN-415-B-P-V, EPOXY COATED CAST IRON BODY AND CLAMP COLLAR, POLISHED 5" ROUND NICKEL BRONZE STRAINER HEAD AND GRATE WITH 3"x8" OVAL FUNNEL, 3" CONNECTION.	-TRAP PRIMER AND TRAP PRIMER CONNECTION -VANDAL PROOF SCREWS
FD-2	GENERAL PURPOSE FUNNEL FLOOR DRAIN	ZURN ZN-415-BF-P-M, EPOXY COATED CAST IRON BODY AND CLAMP COLLAR, POLISHED 5" ROUND NICKEL BRONZE STRAINER HEAD AND GRATE WITH 3"x8" OVAL FUNNEL, 3" CONNECTION.	-TRAP PRIMER AND TRAP PRIMER CONNECTION -SEDIMENT BUCKET.
FD-3	HUB FUNNEL FLOOR DRAIN	ZURN ZN-415-S, EPOXY COATED CAST IRON BODY AND CLAMP COLLAR, 3" HUB	-TRAP PRIMER AND TRAP PRIMER CONNECTION -SEDIMENT BUCKET
RD-1	ROOF DRAIN	ZURN Z-121-EBC EPOXY COATED CAST IRON BODY AND CLAMP COLLAR WITH 12" INTEGRAL GRAVEL GUARD, HARDWARE AND CAST IRON DOME, 3" CONNECTION.	-ROOF SUMP RECEIVER -UNDERDECK CLAMP -WATERPROOF FLANGE -CAST IRON EXTENSION TO SUIT ROOF THICKNESS.
HB-1	EXPOSED EXTERIOR HOSE BIBB	ZURN ZN-1315-VB, 1" ENCASED NON-FREEZE HYDRANT WITH BRASS INTERIOR PARTS, GALVANIZED STEEL CASING, CHROME PLATE BRASS HEAD, STRAIGHT HOSE THREAD OUTLET, REMOVABLE KEY.	-SELF DRAINING ATMOSPHERIC VACUUM BREAKER

ROOF TOP UNIT SCHEDULE

TAG No.	RTU-1	RTU-2	RTU-3
MANUFACTURER & MODEL	YORK ZXG06E2A1AA1B111A2	YORK ZXG06E2A1AA1B111A2	YORK ZXG06E2A1AA1B111A2
SERVICE	SEE DRAWING	SEE DRAWING	SEE DRAWING
NOMINAL TONS	5.0	5.0	5.0
AIR VOLUME			
TOTAL (cfm)	1,800	1,800	1,800
MIN. OUTSIDE AIR (cfm)	32.5%	32.5%	32.5%
EXT. S.P. (" w.g.)	1.00	1.00	1.00
HEATING			
MIN. INPUT (mbh) HIGH/LOW	145 / 70	145 / 70	145 / 70
MIN. OUTPUT (mbh) HIGH/LOW	116 / 56	116 / 56	116 / 56
COOLING			
MIN. SENSIBLE (mbh)	59.0	59.0	59.0
MIN. TOTAL (mbh)	63.7	63.7	63.7
ENTERING DB/WB (°F)	80.5/66.1	80.5/66.1	80.5/66.1
OUTDOOR DB/WB (°F)	82.6/67.1	82.6/67.1	82.6/67.1
VOLTAGE/PHASE	208/3	208/3	208/3
MCA	-	-	-
EFFICIENCY	80%	80%	80%
WEIGHT (lbs.)	560	560	560
OPTIONS	-14" CURB -ECONOMIZER -PROGRAM, T-STAT C/W 50" WIRING	-14" CURB -ECONOMIZER -PROGRAM, T-STAT C/W 50" WIRING	-14" CURB -ECONOMIZER -PROGRAM, T-STAT C/W 50" WIRING

NOTES:
 -UNITS c/w STAINLESS STEEL HEAT EXCHANGER
 -REFER TO SPECIFICATIONS ON THIS SHEET
 -UNITS c/w STARTER & DISCONNECT
 -UNITS c/w C.O.C SENSOR



DHW HEATER SCHEDULE

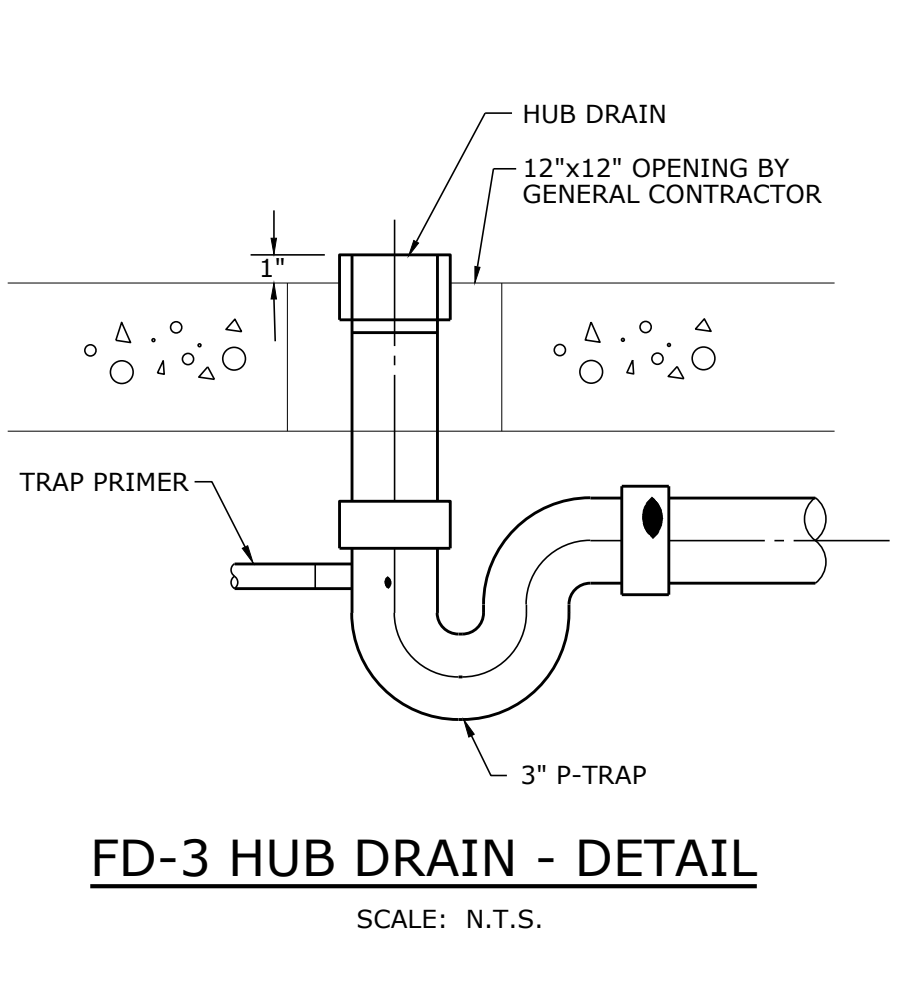
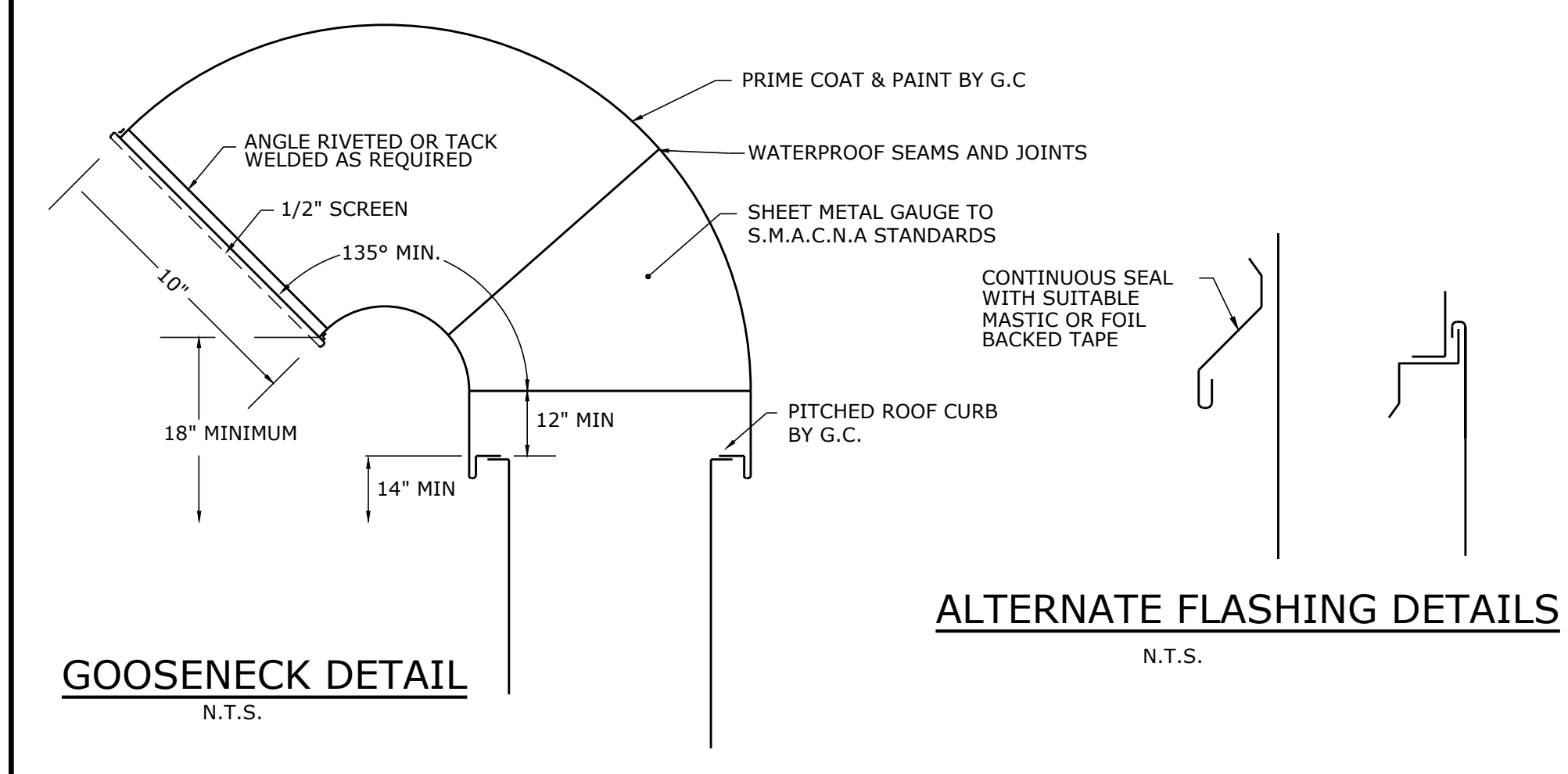
TAG No.	DHW-1
MANUFACTURER	A. O. SMITH
MODEL	ENLB-30
LOCATION	SEE DRAWING
SIZE (DIA. x HEIGHT)	20.0" x 30.0"
INPUT (KW)	4.5
No. INPUT STAGES	-
STORAGE CAPACITY (GAL)	28.0
RECOVERY @ 90°F (GPH)	21.0
VOLTAGE/PHASE	240/1
SHIPPING WEIGHT (LBS)	100

NOTES:

PLUMBING FIXTURE SCHEDULE

TYPE	FIXTURE	DESCRIPTION	TRIM	ACCESSORIES
L-1	LAVATORY	AMERICAN STANDARD MODEL CADET 9495 001 CENTRE HOLE ONLY COUNTERTOP SINK, BARRIER FREE, VITREOUS CHINA, SELF-RIMMING, TWO REAR OVERFLOW HOLES, FAUCET DECK	AMERICAN STANDARD MODEL SEVA 1480 101 SINGLE CONTROL CENTERSET CONNECTION, WITH POP-UP DRAIN, ESCUTCHEON PLATE, WITH INTEGRAL HOT LIMIT SAFETY STOP	- P-TRAP - SHUT-OFF VALVE - ESCUTCHEON PLATE
WC-2	WATER CLOSET	AMERICAN STANDARD MODEL 3703.100 YORKVILLE FLOWWISE RIGHT HEIGHT EL PRESSURE-ASSISTED TOILET, 1.1 GPF/4 ZLPP, ELONGATED 16-1/2" BOWL WITH 4 BOLT CAPS, FLOOR MOUNTED, BACK-OUTLET TOILET, WITH TANK COVER LOCKING LEVER, COLOR WHITE (CONFIRM WITH ARCHITECTS)		- SHUT-OFF VALVE - ESCUTCHEON PLATE - VACUUM BREAKER - SEAT

NOTE: - ALL PLUMBING FIXTURE MUST BE CONFIRMED BY THE ARCHITECTS, PROVIDE SHOP DRAWINGS FOR REVIEW WITH COLOR FINISH.
 - RE-CONFIRM MODEL NUMBER WITH MANUFACTURERS AND SUPPLIERS
 - LAVATORY, SINK, AND TOILET C/W CHROME PLATED POLISHED BRASS, HEAVY DUTY ANGLE STOP, WHEEL HANDLES, ESCUTCHEONS AND FLEXIBLE COPPER RISER
 - ALL EXPOSED P-TRAP SHALL BE CHROME PLATED, HEAVY CAST BRASS ADJUSTABLE BODY, WITH SLIP NUT, CLEANOUT, WALL FLANGE AND SEAMLESS TUBULAR WALL BEND



FAN SCHEDULE

TAG No.	EF-1
MANUFACTURER	PANASONIC
MODEL	WHISPERSENSE FV-11VQC5
LOCATION	REFER TO DRAWINGS
SERVICE	EXHAUST
CAPACITY (CFM)	91
STATIC PRESSURE (in.)	0.25
FAN (rpm)	1170
MOTOR (HP)	24.2 W
VOLTAGE/PHASE	120 / 1
SONES/ Dba	0.5 / -
WEIGHT (LBS)	13.1
ACCESSORIES:	- BUILT IN BACKDRAFT DAMPER - BUILT IN MOTION AND HUMIDITY SENSOR - ADJUSTABLE DELAY TIMER

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Alberto Bicol Consulting Inc.
 7968 Wedgewood Street
 Burnaby, B.C. Canada V5E 2E8
 T: 778.998.9551 Telephone
 E-Mail: albert.bicol@AlbertoBicolConsulting.com
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ARCHITECT

LOVICK SCOTT ARCHITECTS

3707 1st AVENUE
 BURNABY, BRITISH COLUMBIA
 V5C 3V6 E-MAIL: pjlovick@pjlovick.com
 tel: 604-298-3700 fax: 604-298-6081

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DRAWN BY: APPROVED:

RMR PROJECT
Langley Bypass Commercial

20670 LANGLEY BYPASS
 LANGLEY, BC

DRAWING

DETAILS AND SCHEDULES

PROJECT NUMBER: 13-94 DRAWING NUMBER: M-5
 SCALE: 1" = 30'-0"
 DATE: MARCH 2017 REVISION: 09/03/17

Langley Bypass 13-94

