

REINFORCING STEEL SCHEDULE (A.S.T.M. A-615 GRADE 60) LOCATION, DIRECTION WGT FLOOR, LONG. 445 FLOOR, LATERAL 12'-8 415 FOOTERS, LONG. 5'-0 140 FOOTERS, LATERAL 12'-8 463 APPROACH, LATERAL 223 END WALLS, LATERAL 23 APPROACH, LONG. 9'-6 217 APPROACH TO END TIES 2'-6 2'-6 115 SIDE WALLS, LONG. (SEE DETAIL ITEM T1) 7'-4 **2**29 WALL TO FLOOR TIES 2'-6 3'-0 624 (SEE DETAIL ITEM T1) 1'-0 2'-0 125 2'-0 6'-10 SIDE WALLS, LONG. 392 (SEE DETAIL ITEM T1) WALL TO FLOOR TIES 2'-6 5'-0 851 (SEE DETAIL ITEM T1) 1'-0 4'-0 209 2'-0 6'-10

THIS DRAWING CONTAINS INFORMATION TO BUILD EITHER A 2' OR 4' NOMINAL CLEARANCE PIT FOUNDATION. CONTRACTOR MUST KNOW DESIRED DEPTH BEFORE ORDERING MATERIALS.

MATERIAL SUMMARY * &	"Y" DIMENSI	ON CHART
NOMINAL CLEARANCE BETWEEN FLOOR AND SCALE	5.	4'
CONCRETE (CU. YDS.)	46	56
REINFORCING STEEL	3262	3969
Y1 (ELEVATION A-A)	2'-8 1/2	4'-8 1/2
Y2 MINIMUM (ELEVATION A-A)	4'-0	6'-0

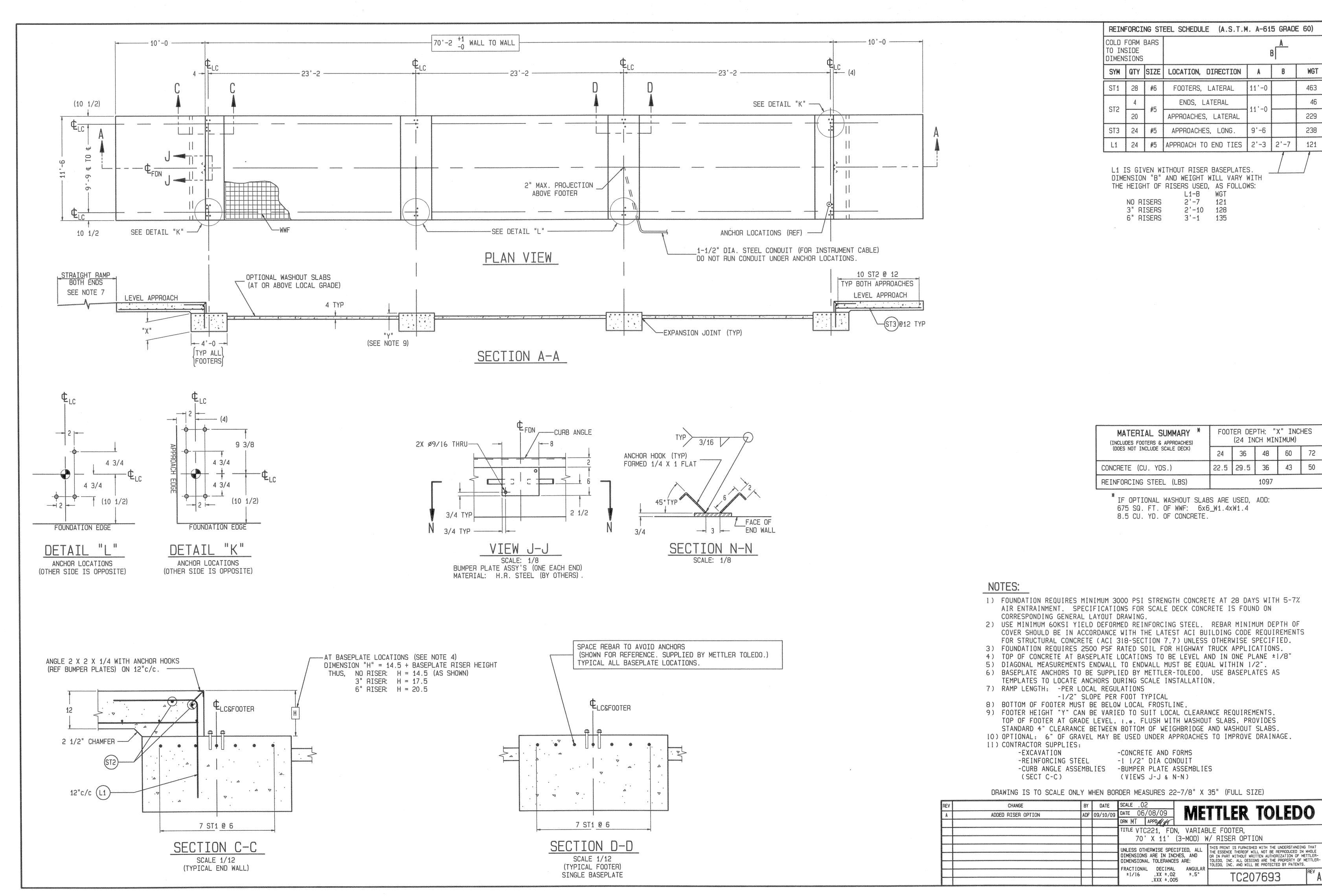
QUANTITIES GIVEN ARE FOR FOUNDATION ONLY. IF CONCRETE PLATFORMS ARE USED, REFER TO GENERAL LAYOUT DRAWING FOR DECK CONCRETE AND REINFORCING STEEL QUANTITIES & SPECS.

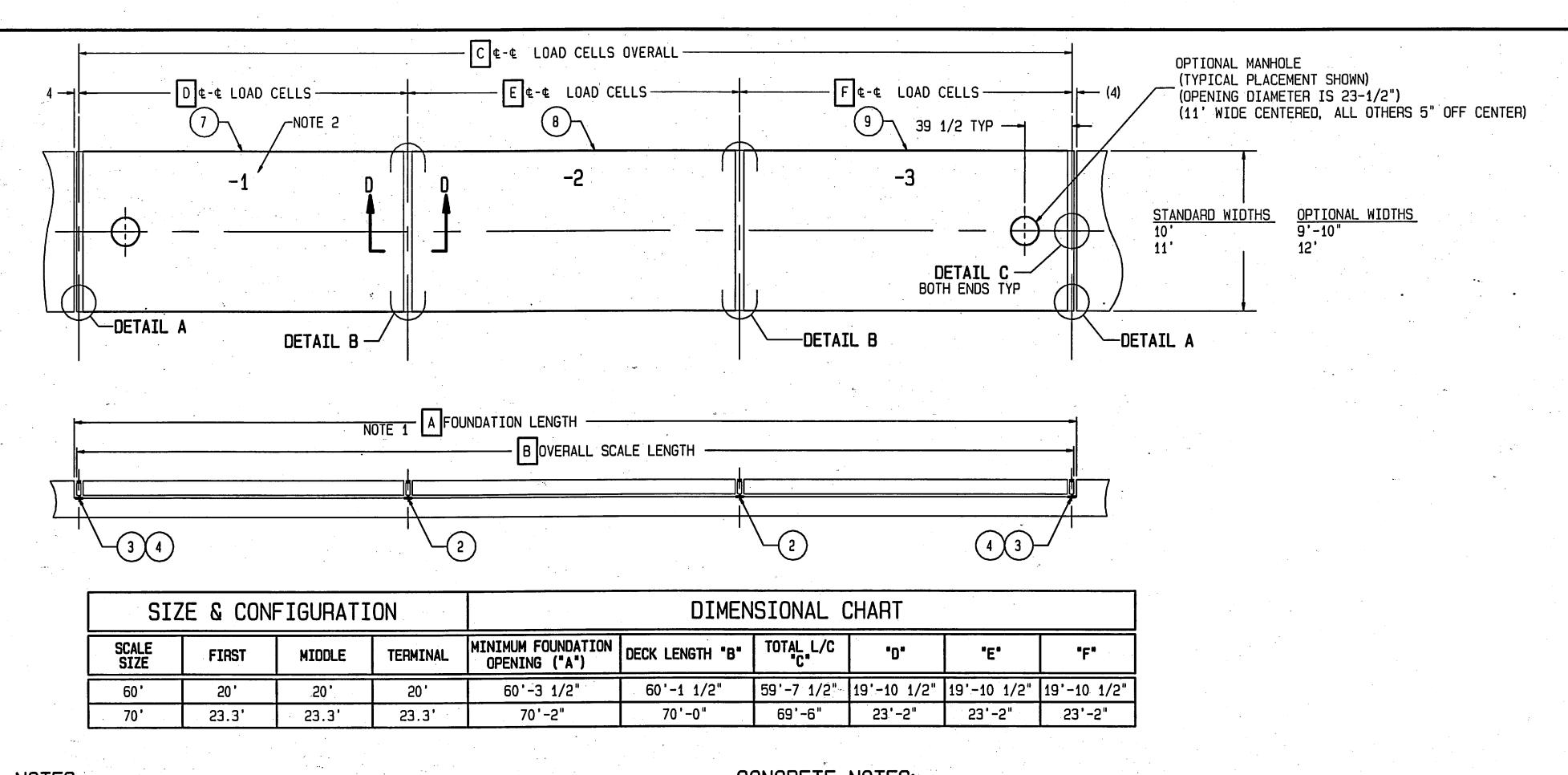
- 1) USE MINIMUM 3000 PSI STRENGTH CONCRETE AT 28 DAYS WITH

- SUPPLIED BY TOLEDO. USE BASEPLATES AS TEMPLATES TO LOCATE EXPANSION BOLTS DURING SCALE INSTALLATION.
- 8) BOTTOM OF FOOTERS MUST BE BELOW LOCAL FROSTLINE. IF LOCAL FROSTLINE IS UNKNOWN. REFER TO DRAWING TA201033

-CONCRETE AND FORMS -1 1/2" DIA CONDUIT (VIEWS J-J & N-N)

REV	CHANGE	ВУ	DATE	SCALE NOTED		
A	REVISED REBAR SCHEDULE. INCREASED BASE SLAB	ALS	7-17-91	DATE 3/5/91	MF	TTLER TOLEDO
В	CORRECT SECTION B-B: REVISED REBAR SCHEDULE	RMR	10/28/91	DRN RMR APPO		
C	ADDED 6" TO FOOTER AND CLR FOR FOOTER REBAR	TDA	4/28/93	TITLE 7560A/B FOL	JNDATION:	PIT (2' OR 4' DP) 70x11
D	REMOVED NOTE #10 FROM NOTES	DGR	8/19/96			
				UNLESS OTHERWISE SPEC DIMENSIONS ARE IN INC DIMENSIONAL TOLERANCES FRACTIONAL DECIMAL	HES, AND	THIS PRINT IS FURNISHED WITH THE UNDERSTANDING THAT THE ESSENCE THEREOF WILL NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT WRITTEN AUTHORIZATION OF METTLERTOLEDO, INC. ALL DESIGNS ARE THE PROPERTY OF METTLERTOLEDO, INC. AND WILL BE PROTECTED BY PATENTS.
				±1/32 .XX ±.02 .XXX ±.005	*.5°	TC201567 REV D





CONCRETE NOTES:

1. FOUNDATION LENGTH DIMENSION SHOWN IS NOMINAL, ACTUAL TOLERANCE IS -0 +1".

4. IF NO DIELECTRIC COMPOUND IS PRESENT, APPLY A 1/4" BEAD OF DIELECTRIC

5. IF DIELECTRIC COMPOUND BECOMES CONTAMINATED, CLEAN CONNECTOR WITH

7. COUPLER VERTICAL SHIMS MAY BE USED IF NECESSARY TO LEVEL MODULES.

COMPOUND IN THE MALE CONNECTOR OF LOAD CELL BEFORE FINAL CONNECTION.

TB202627 CONNECTOR CLEANER. REAPPLY NEW COMPOUND TO THE CONNECTOR

6. COUPLER LONGITUDINAL SHIMS MAY BE USED TO CORRECT MISALIGNMENT. A SINGLE

1/8" SHIM SHOULD BE USED AT EACH COUPLER IN THE STANDARD CONFIGURATION.

SEE NOTE 7 17 18

2. MODULE SUFFIX IS USED TO DESIGNATE MODULE ASSEMBLY AND HARDWARE

3. APPLY LOCTITE #242 TO ALL GAP COVER BOLTS.

CONFIGURATION.

- C1. USE 4000 PSI CONCRETE AT 28 DAY AGE. AIR ENTRAINMENT SHALL BE 5%-7%. MAXIMIUM AGGREGATE SIZE IS 3/4". MAXIMUM SLUMP AS PLACED SHALL BE 4". THE REQUIRED FIBER REINFORCEMENT WILL BE PROVIDED BY METTLER TOLEDO AND SHALL BE ADDED TO THE CONCRETE MIX AT THE RATE OF ONE BAG PER CUBIC YARD.
- C2. BEFORE PLACING CONCRETE, ALL MODULES LONGER THAN 20' MUST BE SHORED, WITH THE MINIMAL REQUIREMENT BEING FULL SUPPORT ACROSS THE WIDTH OF EACH MODULE WHERE THE SHORING IS LOCATED AT THE CENTER OF EACH MODULE (LENGTHWISE)
- C3. CONCRETE SHALL BE DIRECT CHUTE PLACED AND THOROUGHLY CONSOLIDATED USING A SPUD TYPE VIBRATOR. C4. USE OF CALCIUM CHLORIDE ADMIXTURE IS NOT PERMITTED.
- C5. AFTER FINISHING, A STYRENE BUTADIENE TYPE (30% SOLIDS MIN) CURING COMPOUND SHALL BE APPLIED.
- C6. REFER TO DRAWING TN206090 FOR CONCRETE SPECIFICATION. C7. ESTIMATED CONCRETE PER MODULE IN CUBIC YARDS (REF ONLY):
- 15' X 11' = 3.8 17'6 X 11' = 4.5 20' X 11' = 5.2 23' X 11' = 6.1

METTLER TOLLEDO SECTION D-D

BY METTLER TOLEDO: DRILL TWO #29 HOLES IN SUPPORT TUBE AND FASTEN DATA PLATE WITH 1/8" ALUMINUM AB4-4 POP RIVETS (MZ0904000031).

**IMPORTANT:** 

INSTALLATION.

1/2" MAXIMUM SHIMS

THE INTERIOR SURFACE OF ALL LOAD CELL

GREASED WITH TN203217 DURING CELL

RECEIVERS (BOTH TOP AND BOTTOM) MUST BE

LOWER RECEIVER SHIM, 11 GA (.125) TA207315-2 TA207315-1 LOWER RECEIVER SHIM, 1/4" MZ0901030062 WASHER, 5/8, ASTM F436 NUT, 5/8-11, HEX, GR8, ZN MZ0901020066 SCR, 5/8-11 X 3.5, HHCS, GR5, ZN MZ0901010462 MZ0901030154 WASHER, 1" DIA, GALV MZ0901020047 NUT, 1-8, HEX, GR-5, ZN SCR, 1-8 X 4, HEAVY HEX MA0901010663 TN207607-2 COUPLER SHIM, LONG., 16 GA (.062) TN207607-1 COUPLER SHIM, LONG., 11 GA (.125) TN207606-2 COUPLER SHIM, VERTICAL, 16 GA (.062) TN207606-1 COUPLER SHIM, VERTICAL, 11 GA (.125) TA200856-3 END BUMPER SHIM 16 GA (.062) END BUMPER SHIM 11 GA (.125) TA200856-2 TA200856-1 END BUMPER SHIM 1/4" ITEM QTY | PART NUMBER DESCRIPTION

HARDWARE KIT OF PARTS: TC207803-1

FIBER REINFORCEMENT, 1.5# BAG

WIRING KIT OF PARTS

CAPLUG, #16, FOR SIDE LIFTING HOLES

HHCS, 1/4-20 x 1 3/4", SS (IN -1 KOP)

HHCS, 1/4-20 x 3/4", SS (IN -3 KOP)

CAPLUG, #19, FOR ENDPLATE HOLES

SIDE COVER CLAMP PLATE

LUBRICANT, LOADCELL-RECEIVER

LOCTITE #242 THREADLOCKER

TOP RECEIVER WITH O-RING

LOWER RECEIVER SHIM, 16 GA (.062)

SIDE COVER

ANCHOR BOLT

CONNECTOR CLEANER

BOTTOM HEX RECEIVER

40 | 12 | MZ0909000043

36

34 | 32 |

MZ0909000031

MZ0901010609

MZ0901010065

TN202152

TA202172

TN203217

TN203216

TB202627

TA207197

TA207633

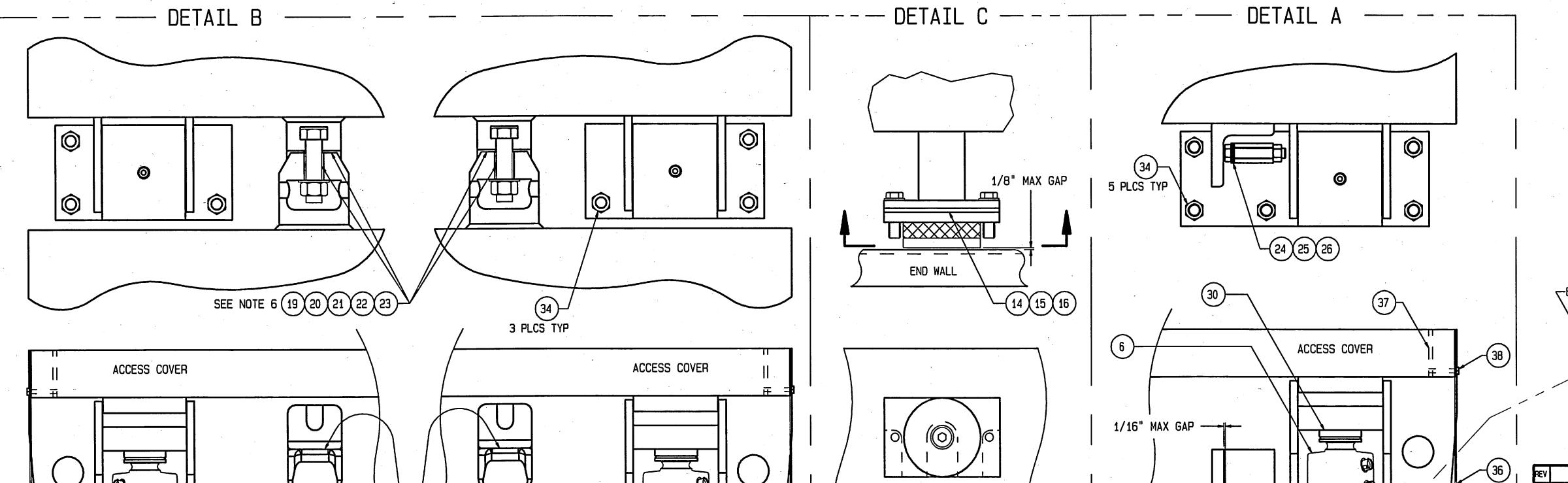
TA207315-3

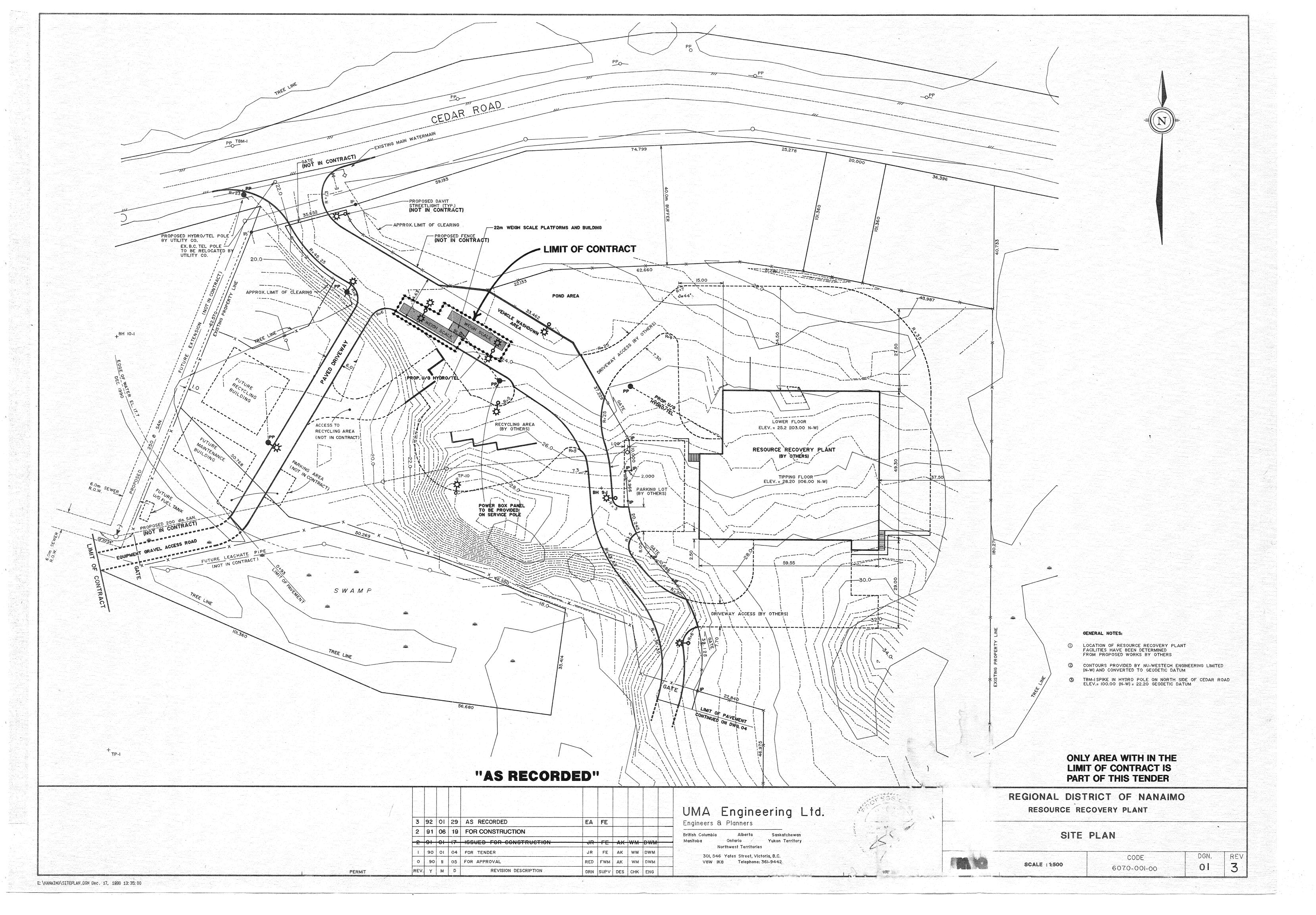
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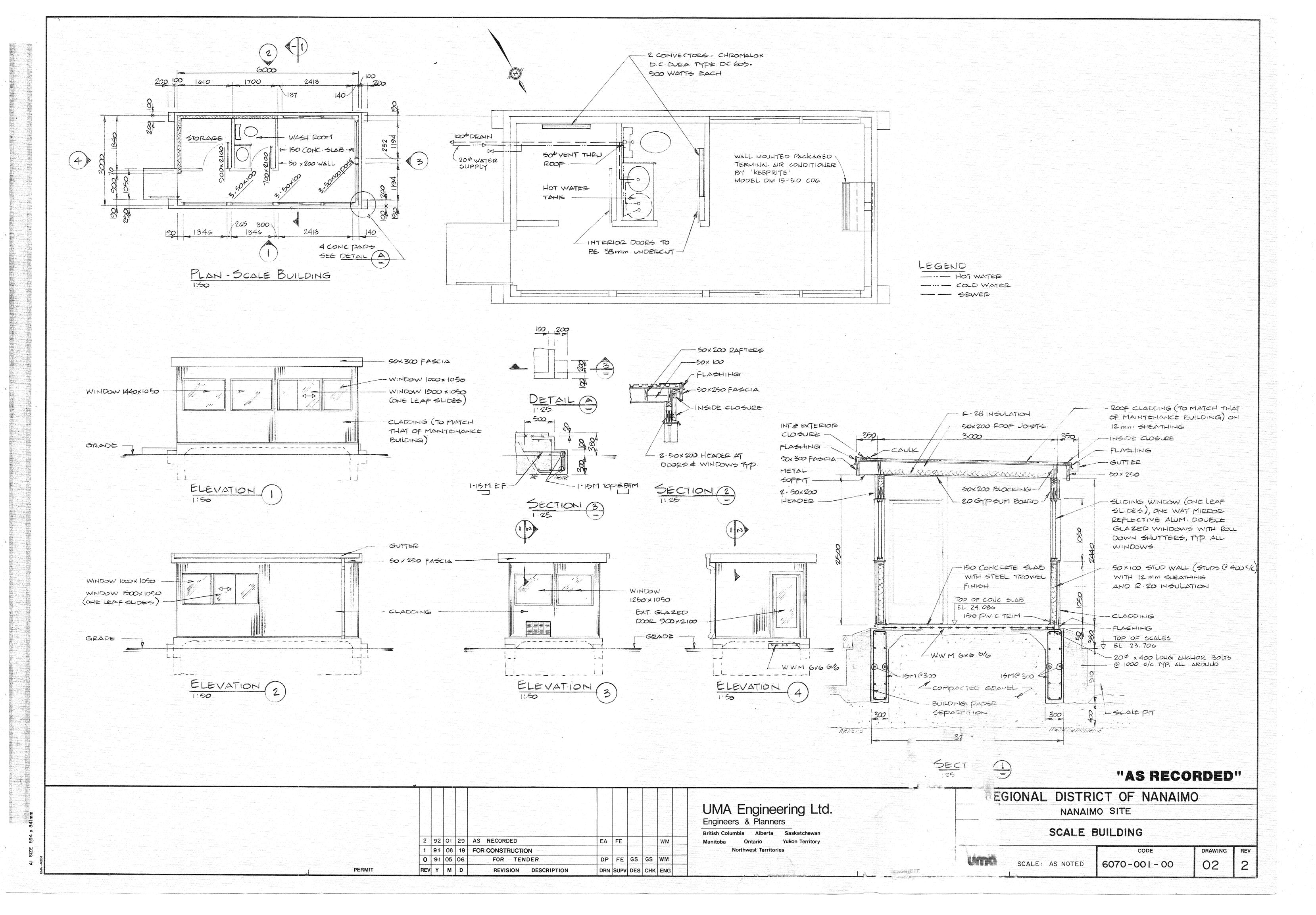
STANDARD HARDWARE KIT OF PARTS TC207803-1 HARDWARE KOP FOR 9'-10 WIDE SCALES TC207803-3 TN207502 TOUCH-UP PAINT KIT STANDARD TERMINAL MODULE ASSEMBLY REF 3 SUFFIX REF 2 SUFFIX STANDARD MIDDLE MODULE ASSEMBLY REF 1 SUFFIX STANDARD FIRST MODULE ASSEMBLY 42904891 LOAD CELL, PDX, 50mt CAPACITY TN207198 LOWER RECEIVER MOUNTING PIN TB207261-4 BASEPLATE, RIGHT BUMPER TB207261-3 BASEPLATE, LEFT BUMPER TA207608 BASEPLATE, NO BUMPER MN31004 DATA PLATE ITEM QTY | PART NUMBER DESCRIPTION

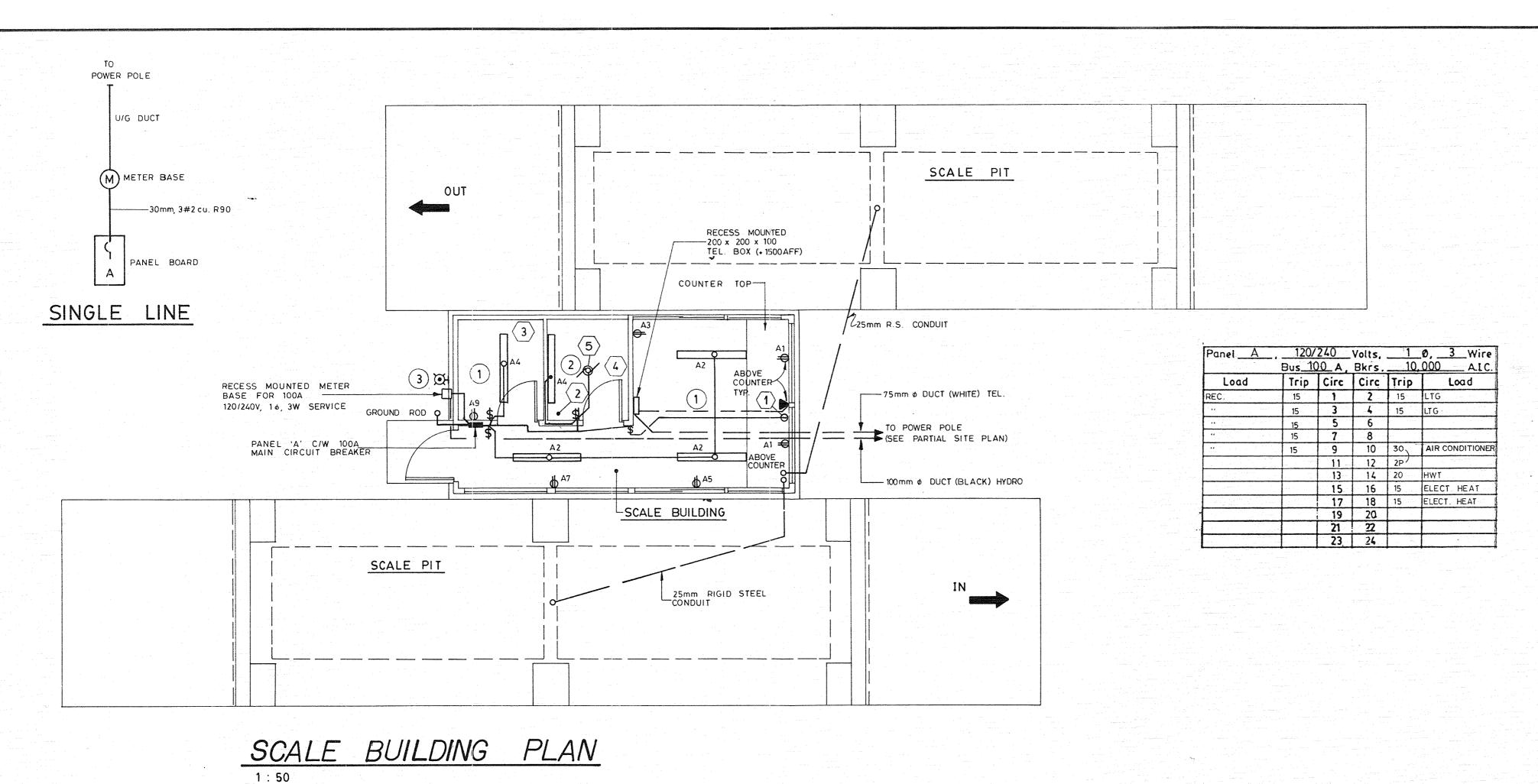
-BASEPLATE DETAIL MAJOR BILL OF MATERIAL SCALE .25 BY DATE REMOVED DIELECTRIC COMPOUND ADF 12/14/09 DAN ADF APPOLAT TITLE VTC221, GENERAL LAYOUT AND KIT-OF-PARTS, 3-MODULE SCALE THIS PRINT IS FURNISHED WITH THE UNDERSTANDING THAT THE ESSENCE THEREOF WILL NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT WRITTEN AUTHORIZATION OF METTLERTOLEDO, INC. ALL DESIGNS ARE THE PROPERTY OF METTLERTOLEDO, INC. AND WILL BE PROTECTED BY PATENTS. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES, AND DIMENSIONAL TOLERANCES ARE: FRACTIONAL DECIMAL ±1/32 .XX ±.02 TC207803 .XXX ±.005

TN206082









SPECIFICATIONS

Division 16 to provide all labour, materials and equipment unless specifically noted otherwise to complete and put in operating condition all electrical systems as indicated on the drawings and specified herein. Any work and/or detail even if not shown or specified, which are obviously necessary or reasonably implied to complete the work and/or to meet the Code requirements shall be done as if both shown and specified.

MATERIALS AND WORKMANSHIP

All materials to be new, of minimum quality specified, and bear C.S.A. approval. All work to be performed by competent tradesmen, in workmanlike manner. Clean up all debris at completion of this project.

CODES, PERMITS AND NSPECTIONS

Installation shall comply with the current edition of the Canadian Electrical Code, governing National Building Code and regulations of the Electrical Inspection Authority. Obtain permits and pay the applicable fees. After completion of the work, furnish to the Engineer a Certificate of Final Inspection and Approval from the Inspection Department.

VISIT TO SITE

Examine the site and local conditions affecting the work before submitting tender. No extra will be allowed for work resulting from conditions which would have been evident upon a thorough examination of the site.

Substitution of materials, equivalent to those specified, may be made only after written approval has been obtained from the Engineer before closing of Tender.

GUARANTEE

Division 16 shall guarantee the satisfactory operation of all work and apparatus installed under this contract and shall replace forthwith at his own expense, any part which may fail or prove defective within a period of 12 months after final acceptance of the complete contract, always provided that such failure is not due to improper usage or ordinary wear and tear.

DRAWINGS AND SPECIFICATIONS

Should any discrepancy appear between drawings and specifications, which leaves doubt as to the true intent and meaning, obtain a ruling from the Engineer before submitting tender. Failing this, allow for most expensive alternative.

Drawings indicate general location and route to be followed by conduit and/or wire. Follow architectural, structural and mechanical drawings for details of this work and install electrical conduit, boxes and fittings to co-ordinate with architectural, structural and mechanical work and details. Refer to architectural and structural drawings for accurate dmensions.

LOCATION OF OUTLETS

Engineer reserves the right to change location of outlets to within ten (10) feet of points indicated on plans without extra charge providing Division 16 is advised prior to installation.

GROUNDING

Ground all non current carrying parts as per Section 10 of the Canadian Electrical Code. Install a ground rod as shown on the plans.

LIGHTING SYSTEM

Supply and install luminaires, lamps, ballasts, supports and accessories as shown and specified on the drawings. Provide wiring and connections to all luminaires as shown on the drawings.

PANELBOARD

PERMIT

Supply and install a panelboard similar to Westinghouse Type NBA complete with bolt-on circuit breakers as shown on the panel schedule. Provide shop drawing for Panelboard.

1 91 06 19 FOR CONSTRUCTION

REVISION DESCRIPTION

0 91 4 5 FOR TENDER

REV Y M D

MOUNTING HEIGHTS

Unless otherwise noted on the drawings or in the specifications, mounting heights for electrical devices to be as follows: Telephone Outlets - 12"

Switches - 54" Receptacles - 12";

SHOP DRAWINGS

Submit shop drawings for lighting fixtures.

MECHANICAL EQUIPMENT WIRING

Provide power wiring exhaust fan.

CONDUITS Provide rigid conduit to the Scale Pit as shown on the drawings. Extend existing conduit in to the Scale Building with rigid PVC conduit as shown on the drawings.

All conductors shall be copper with RW90 x-link insulation. No. 12 minimum to be used for branch circuit wiring. Use NMD-7 wiring for all branch circuit wiring in the Scale Buiding.

BOXES

Except where noted otherwise, boxes shall be pressed sheet steel galvanized to C.S.A. Standards. Handy boxes or sectional boxes shall not be used.

SWITCHES

Line voltage switches shall be quiet, slow make, slow break design, toggle handle with totally enclosed case, rated at 15 amps, 120/277 volt A.C., specification grade type. No residential grade type shall be permitted. Colour to be ivory.

RECEPTACLES

Full gang size, polarized, duplex, parallel blade, U-grounding slot, rated at 15 amps, 125 volt, A.C., specification grade type. No residential grade type shall be permitted. Colour to be ivory.

AS RL RL

DRN SUPV DES CHK ENG

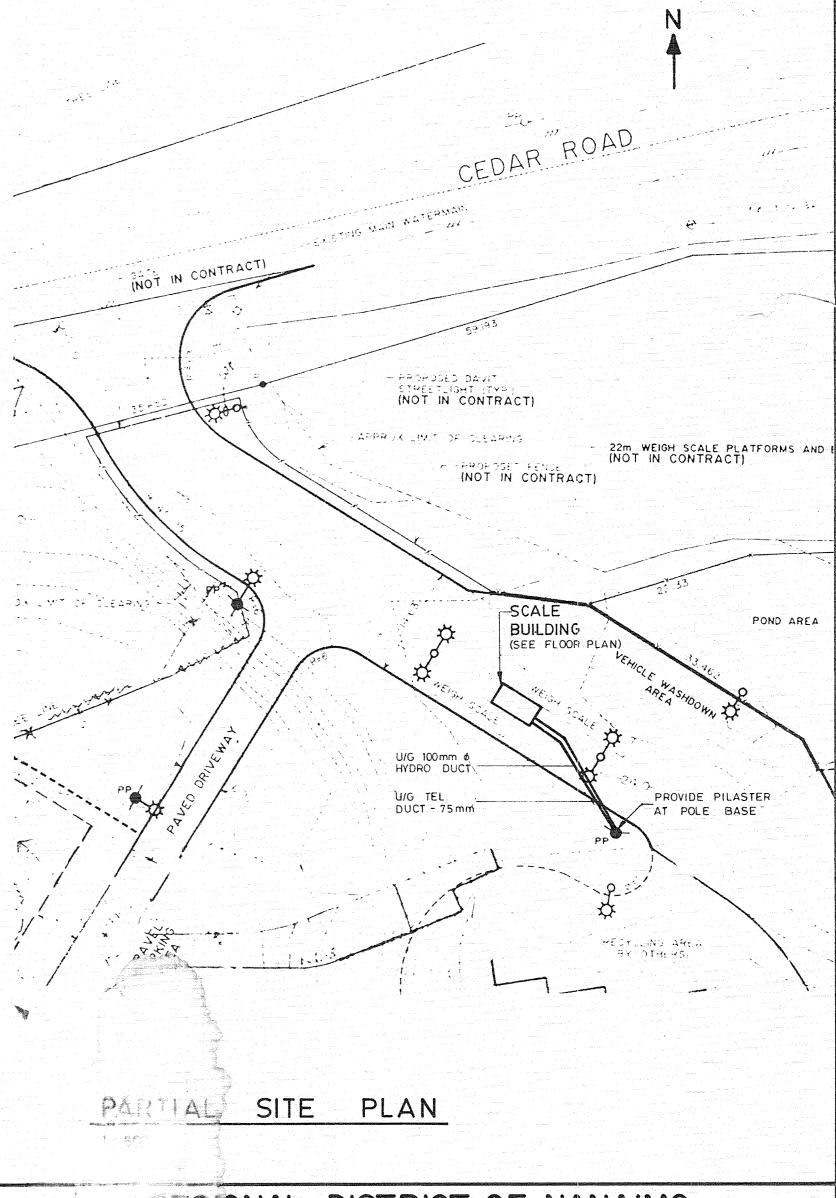
A full complement of plates shall be provided for switches, receptacles. Plates shall be stainless steel throughout.

		FIXTURE	SCHE	DU	LE			
TYPE		UMINAIRE	INAIRE			L	SEE	
'''	MANUFACTURER	CATALOGUE NO	MOUNTING	QTY	WATT	VOLT	TYPE	NOT
1	YORK	CP248	SURFACE	2	34	120	F40CWX/RS/WM	1
2	YORK	MWA148HPF	SURFACE	1	34	120	F40 CW X/R S/WM	1
3	KEENE	113 - 35 NLXL	SURFACE	1	35	120	HPS	2
				1				

NOTES: 1) C/W MAGNETIC BALLAST & ENERGY SAVING LAMPS 2) C/W MINI PHOTO CONTROL - 120V, KEENE F105A

DESCRIPTION	FEEDER	CIRCUIT	C.BKR.	LOAD	VOLT	ø	STARTE	EO	DIS	TIWS.	HNOTE
							W _	TED	0.	ED	}
							SUPPLI	CONNECT	SUPPLIE	INSTALL	
CONDITIONER		A10 - 12	30	5.0KW	230	1				9 (	) 1
WATER TANK		A14	20	1.5KW	120	1	e Ne				
CT. HEAT		A16	15	.5KW	120	1					
CT. HEAT		A18	15	.5KW	120	1					
(	WATER TANK CT. HEAT CT. HEAT	WATER TANK CT. HEAT	WATER TANK A14 CT. HEAT A16 CT. HEAT A18	WATER TANK         A14         20           CT. HEAT         A16         15           CT. HEAT         A18         15	WATER TANK         A14         20         1.5 KW           CT. HEAT         A16         15         .5 KW           CT. HEAT         A18         15         .5 KW	WATER TANK         A14         20         1.5 KW         120           CT. HEAT         A16         15         .5 KW         120           CT. HEAT         A18         15         .5 KW         120	WATER TANK         A14         20         1.5KW         120         1           CT. HEAT         A16         15         .5KW         120         1           CT. HEAT         A18         15         .5KW         120         1	WATER TANK         A14         20         1.5KW         120         1           CT. HEAT         A16         15         .5KW         120         1           CT. HEAT         A18         15         .5KW         120         1	WATER TANK         A14         20         1.5 KW         120         1           CT. HEAT         A16         15         .5 KW         120         1           CT. HEAT         A18         15         .5 KW         120         1	WATER TANK         A14         20         1.5KW         120         1           CT. HEAT         A16         15         .5KW         120         1           CT. HEAT         A18         15         .5KW         120         1	WATER TANK     A14     20     1.5KW     120     1       CT. HEAT     A16     15     .5KW     120     1       CT. HEAT     A18     15     .5KW     120     1

NOTE 1: C/W WEATHERPROOF DISC. SWITCH.



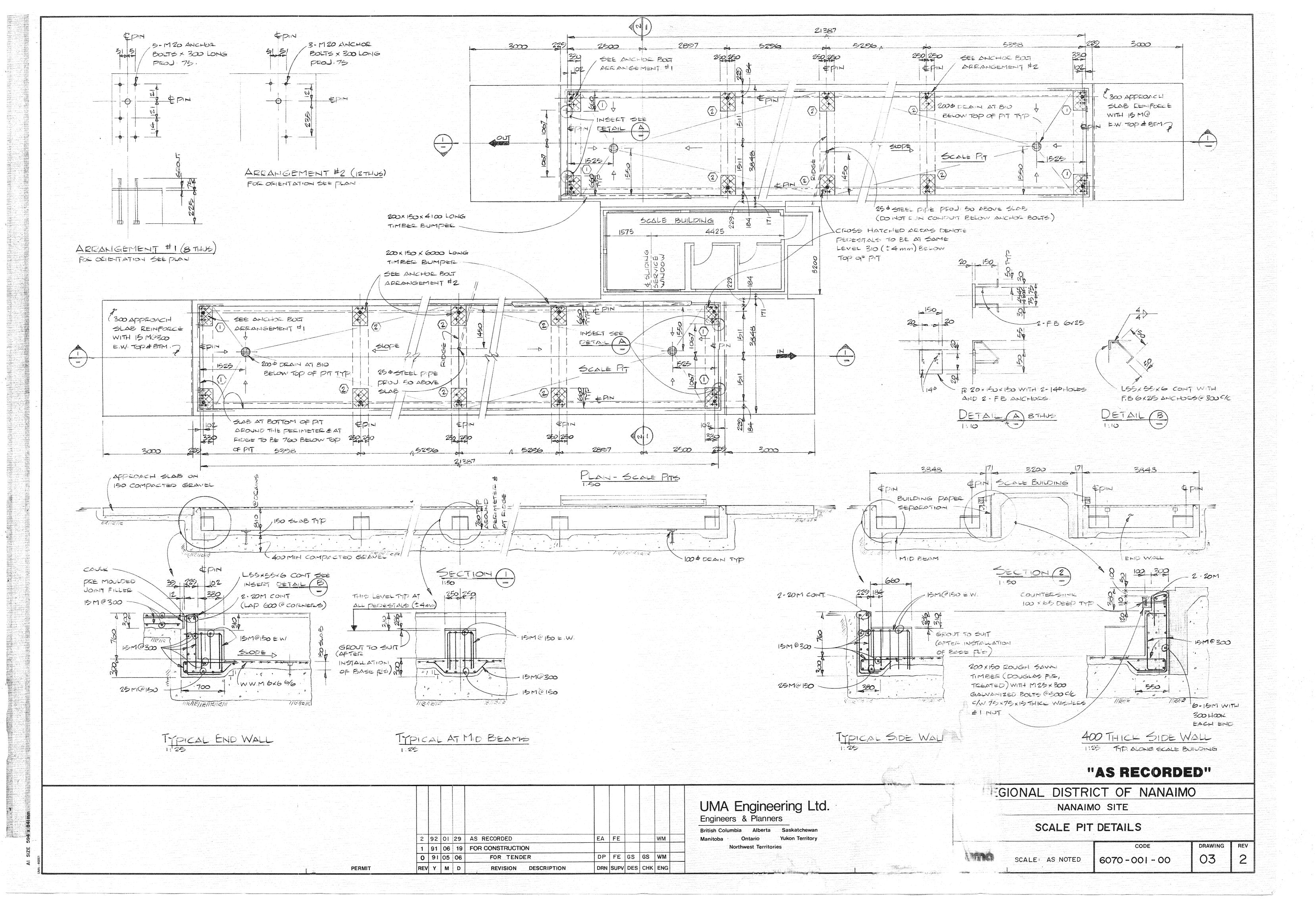


Alberta Saskatchewan British Columbia Yukon Territory Northwest Territories

LICH ENGINEERING LTD. CAL CONSULTING ENGINEERS REGIONAL DISTRICT OF NANAIMO NANAIMO SITE

SCALE BUILDING ELECTRICAL

DRAWING 6070-001-00





November 24, 2016

3233-003

Via email: helmut@hbheconsulting.com

HBHE Consulting 3366 Limerick Road Duncan, BC V9L 4P8

Attn: Helmut Blanken, P.Eng., Principal

Re: RDN Landfill Weigh-Scale Foundation Review

Dear Helmut:

Herold Engineering Limited visited the above mentioned site on October 12, 2016 to review the surface condition of the weigh-scale foundation. Access to the underside of the weigh scale was limited and so it was agreed to hire Pipe Eye to do a camera survey of the scale foundations so that a visual review could be conducted.

We then met with Pipe Eye on site on October 27, 2016 to discuss the process and work required to review the inbound scale foundation and subsequently reviewed the Pipe Eye video. From this review, we found the foundations to appear to be in reasonable condition. There are some minor cracks which are probably shrinkage related but no significant spalling was noted.

Furthermore, we reviewed the Pipe Eye videos for the outbound scale performed on November 16, 2016 and the condition appears slightly worse than the inbound scale. Main items noted were some wider cracks in the grade beam and a horizontal crack at the south end which may indicate some spalling. The damage appears repairable and Herold Engineering can confirm that the foundations are structurally suitable for re-use. Please note, we recommend making an allowance of \$5,000 for miscellaneous concrete repairs for both scales, as some of the embedded rusted metal work may have damaged the concrete.

Should you need any further information do not hesitate to contact me.

Yours truly,

HEROLD ENGINEERING LIMITED

Lee Rowley, P.Eng., M. Struct. E., M.I.C.E., LEED AP

Principal Enclosure





April 7, 2017 3233-004

Via email: MWarren@rdn.bc.ca

Regional District of Nanaimo 6300 Hammond Bay Road Nanaimo, BC V9T 6N2

Attn: Maggie Warren, Superintendent Scale and Transfer Service

Re: Scale House Relocation on Existing Weigh Scale Slab

## Dear Maggie:

As requested, Herold Engineering Limited (HEL) visited the Cedar Landfill site on March 31<sup>st</sup> to review the configuration of the slab supporting the existing scale house. We have reviewed the Scale Building Drawings produced by UMA in 1991 versus the configuration that was built and would comment as follows:

- The drawing shows the extent of the supporting slab to end at the edge of the existing scale building. However onsite, the slab appears to carry on past the west end of the scale house.
- It is understood that a larger scale building of similar construction to the existing is to be constructed on this extended portion of the slab and that confirmation that the slab is adequate for this purpose is required.
- A slab of similar construction to that shown on the drawing is adequate to carry the proposed building.
- Note that it is highly likely that the slab is adequate to support the proposed configuration however, to verify this HEL would recommend a test hole be dug at the end of the slab (as indicated in the attached photograph) to confirm that the foundation does extend down as indicated on the drawing. During the time that the test hole is reviewed, HEL will use our in-house pachometer to review the reinforcing in the slab.

Should you have any further questions please do not hesitate to contact me.

Yours truly,

## HEROLD ENGINEERING LIMITED

Lee Rowley, P.Eng., M.I.Struct.E., M.I.C.E., LEED AP Principal

Enclosure



