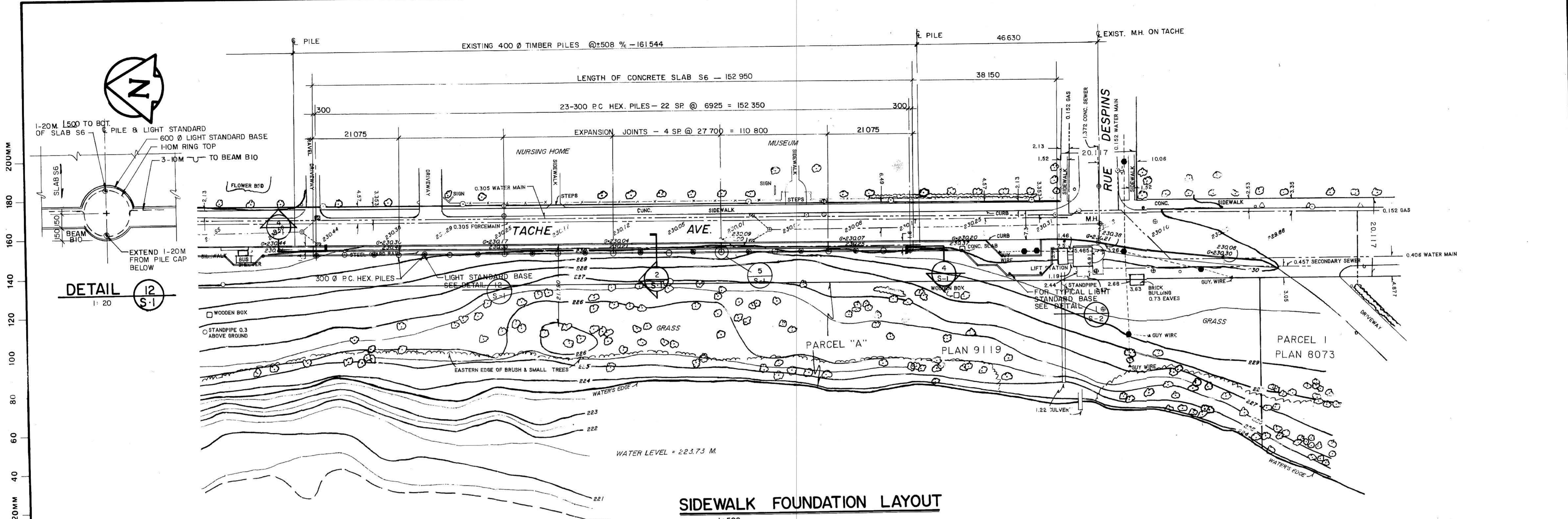
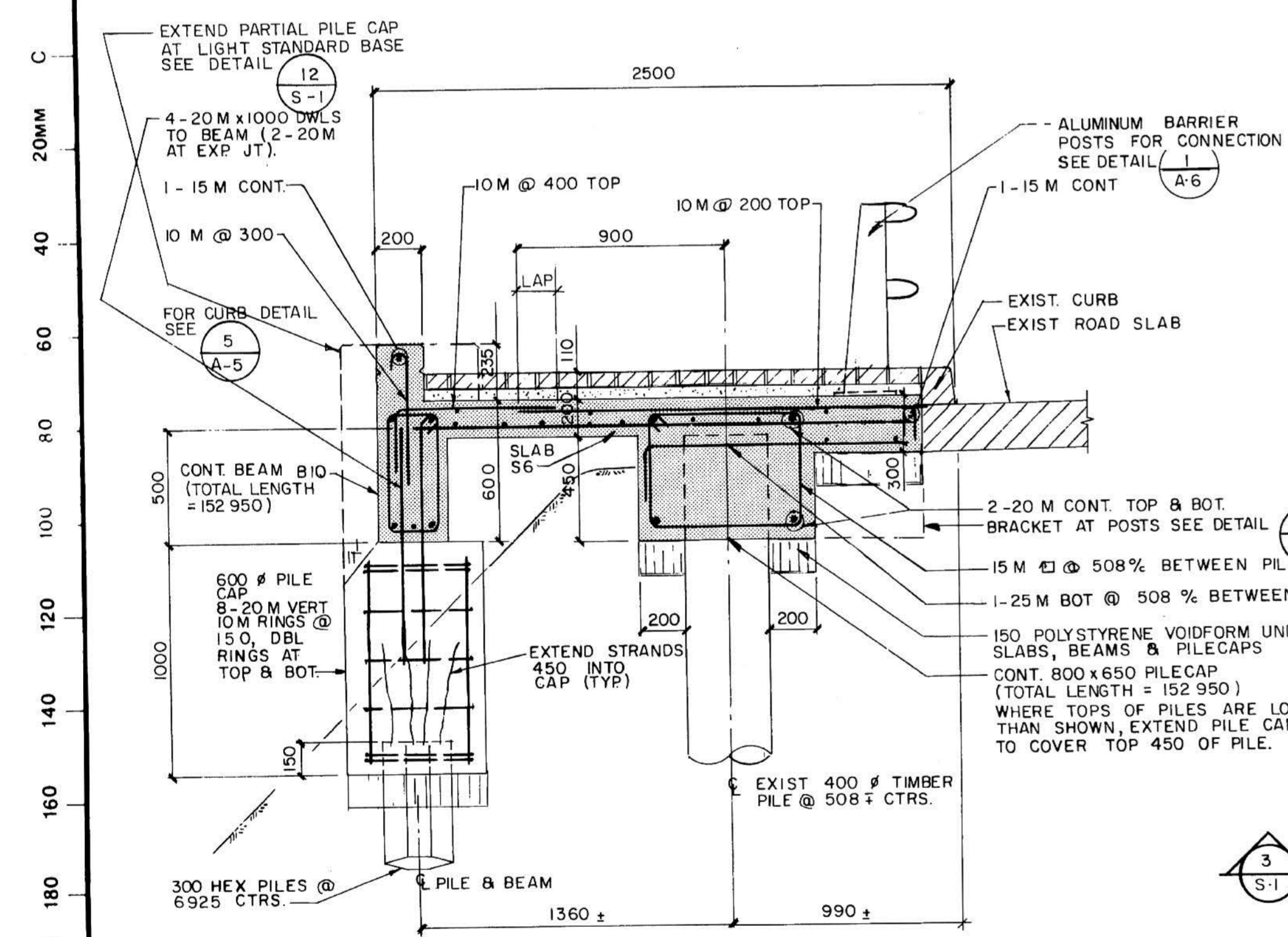


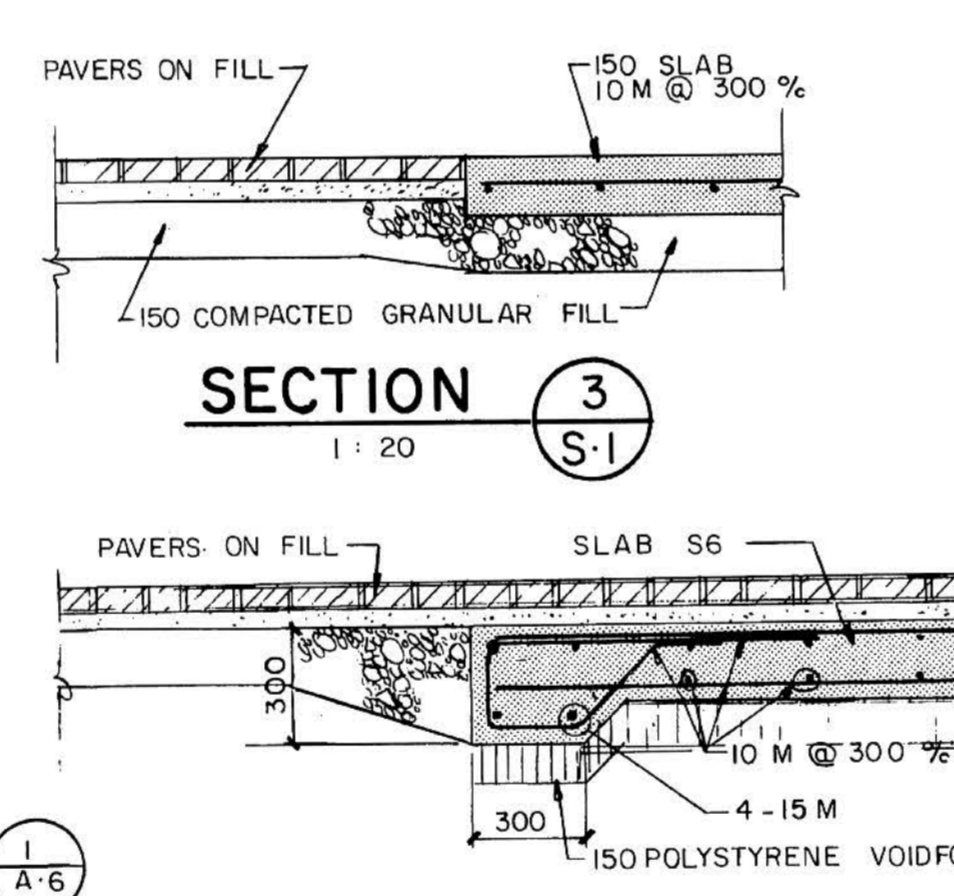
APPENDIX E – RW754 1983 WORKS



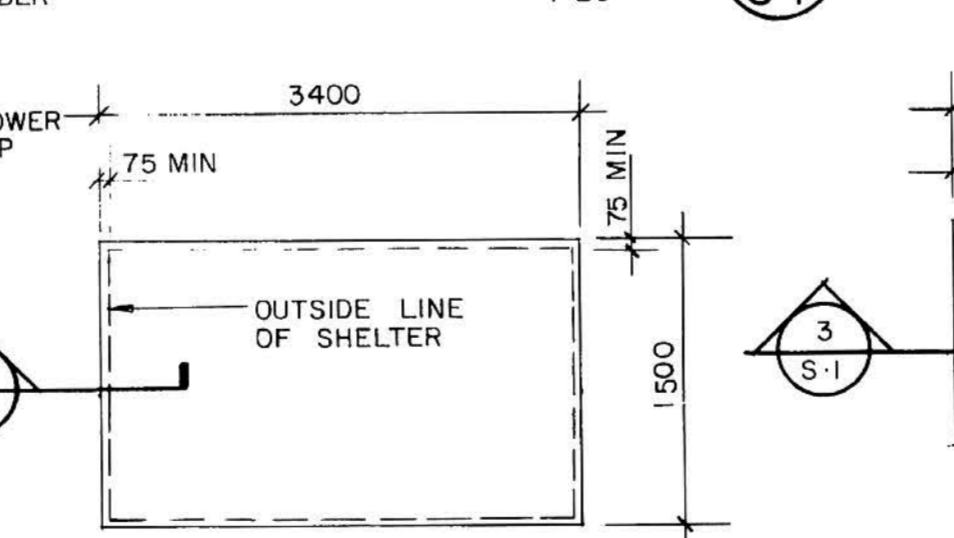
SIDEWALK FOUNDATION LAYOUT
1:500



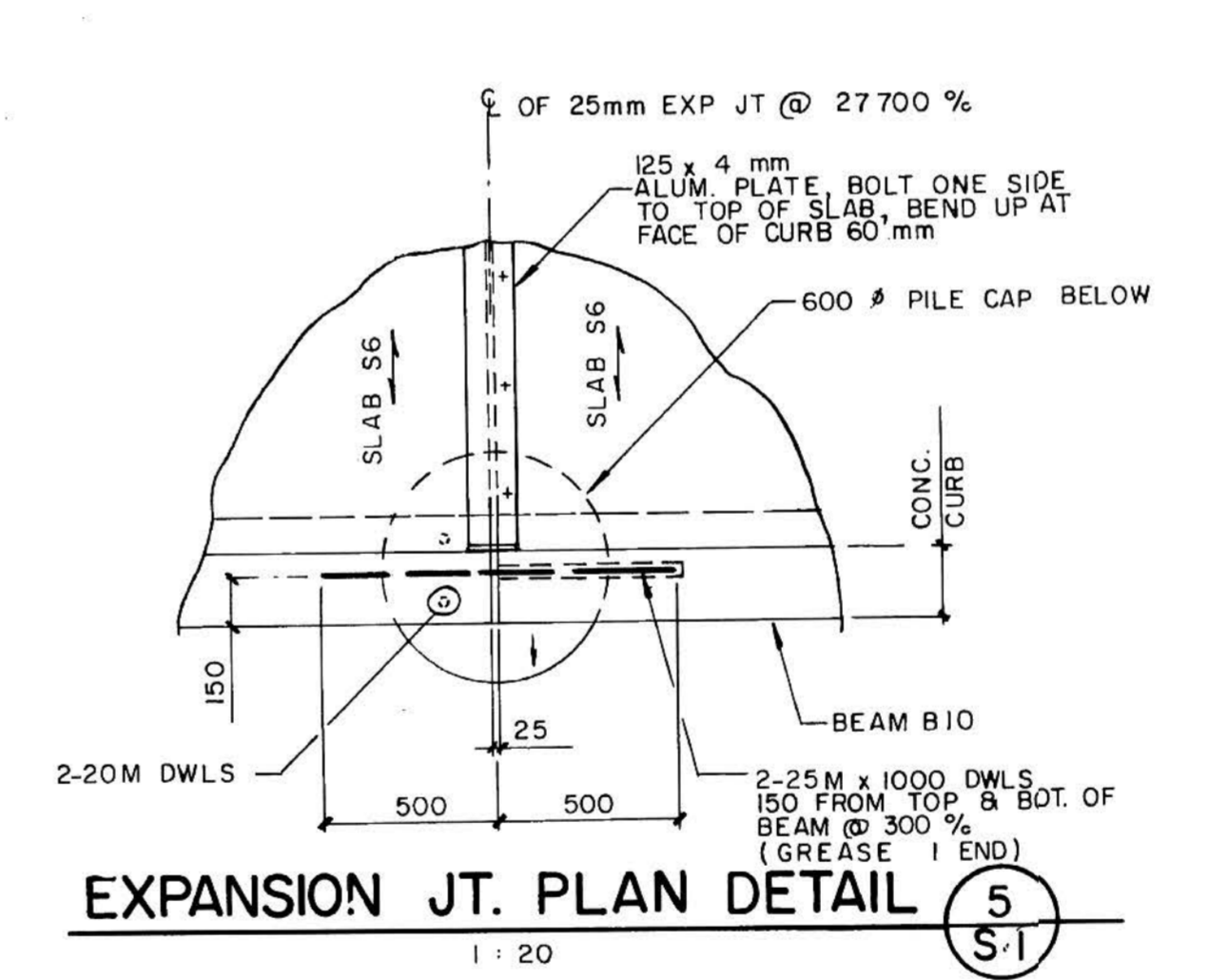
TYPICAL STRUCTURAL SIDEWALK SECTION 2 S-1
1:20



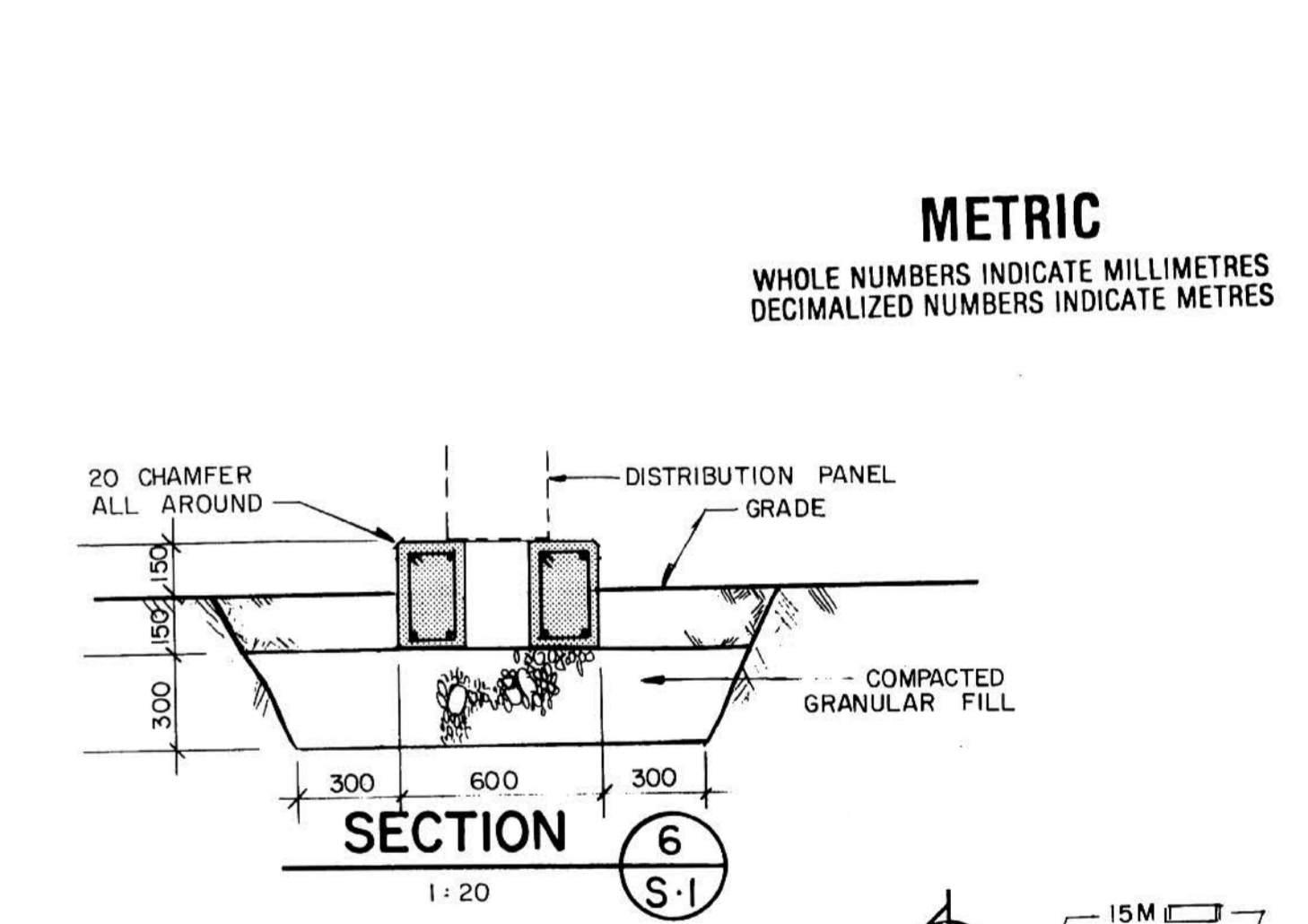
SECTION 3 S-1
1:20



SECTION 4 S-1
1:20



EXPANSION JT. PLAN DETAIL 5 S-1
1:20



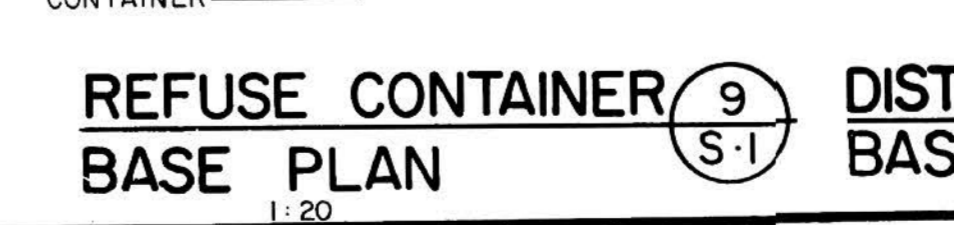
SECTION 6 S-1
1:20



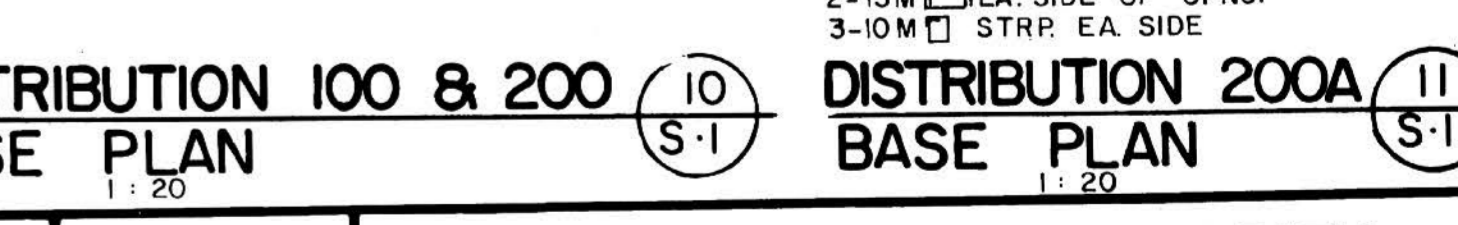
BUS SHELTER BASE PLAN 7 S-1
1:50



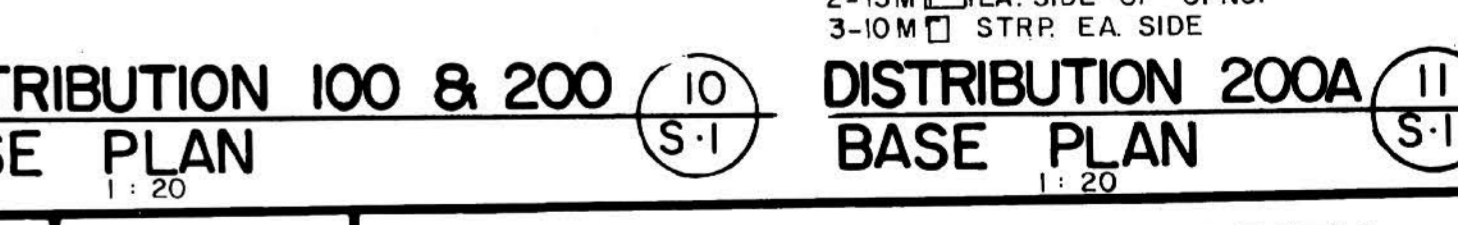
BENCH BASE PLAN 8 S-1
1:20



REFUSE CONTAINER BASE PLAN 9 S-1
1:20



DISTRIBUTION 100 & 200 BASE PLAN 10 S-1
1:20



DISTRIBUTION 200A BASE PLAN 11 S-1
1:20

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

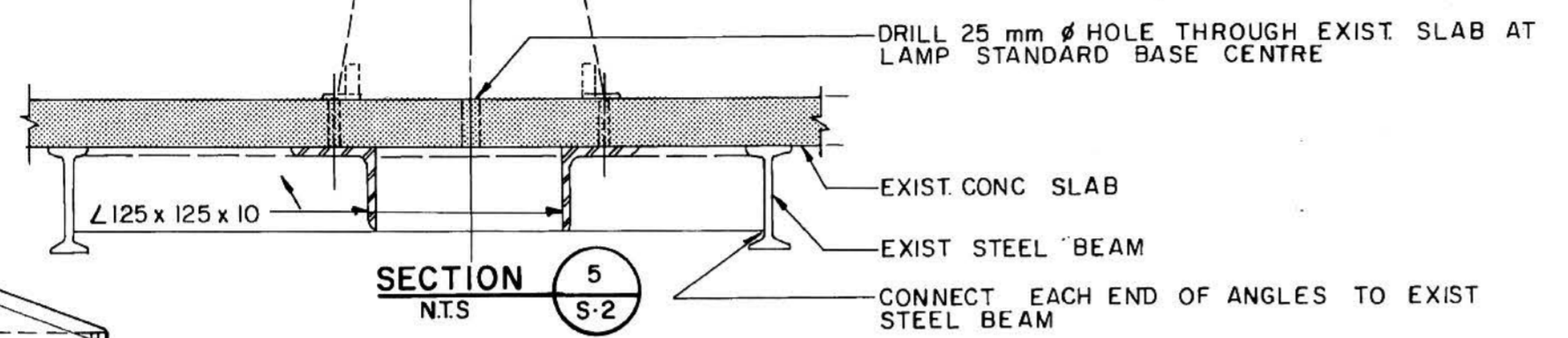
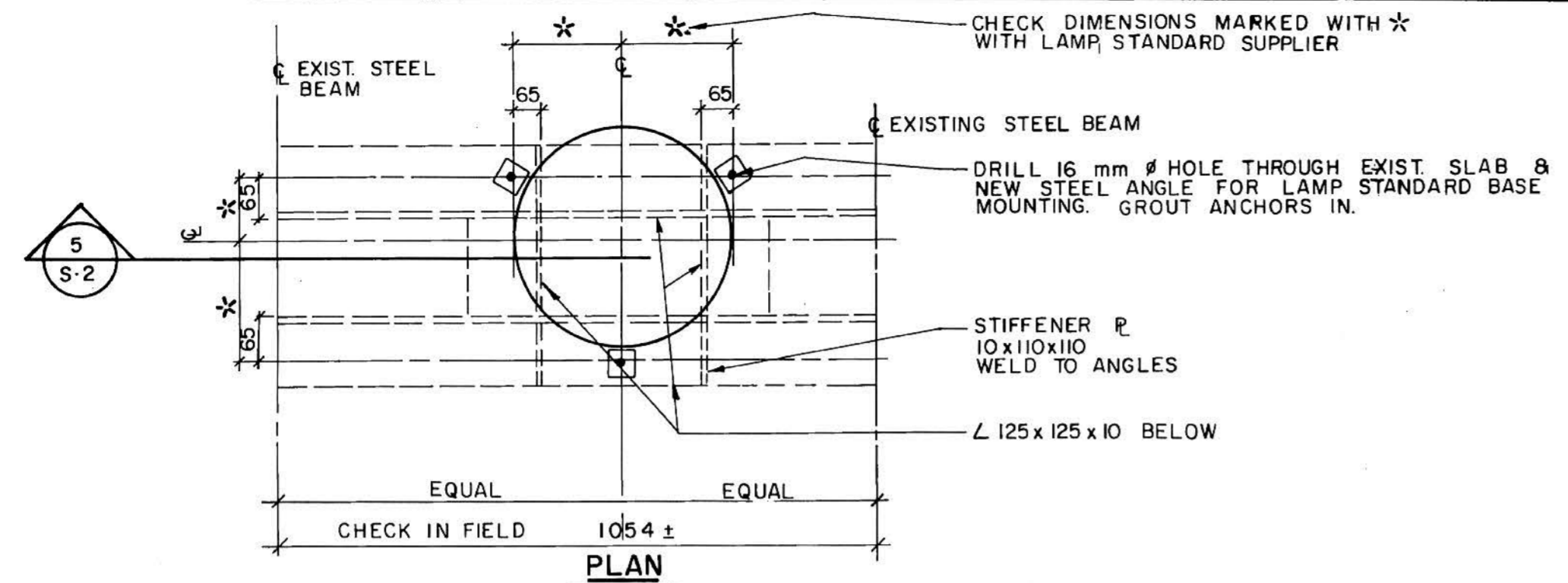
NOTE: ALL REINFORCING STEEL TO BE EPOXY COATED.

DATE	REV	ISSUED

REV	DESCRIPTION	DWN	APP	DATE

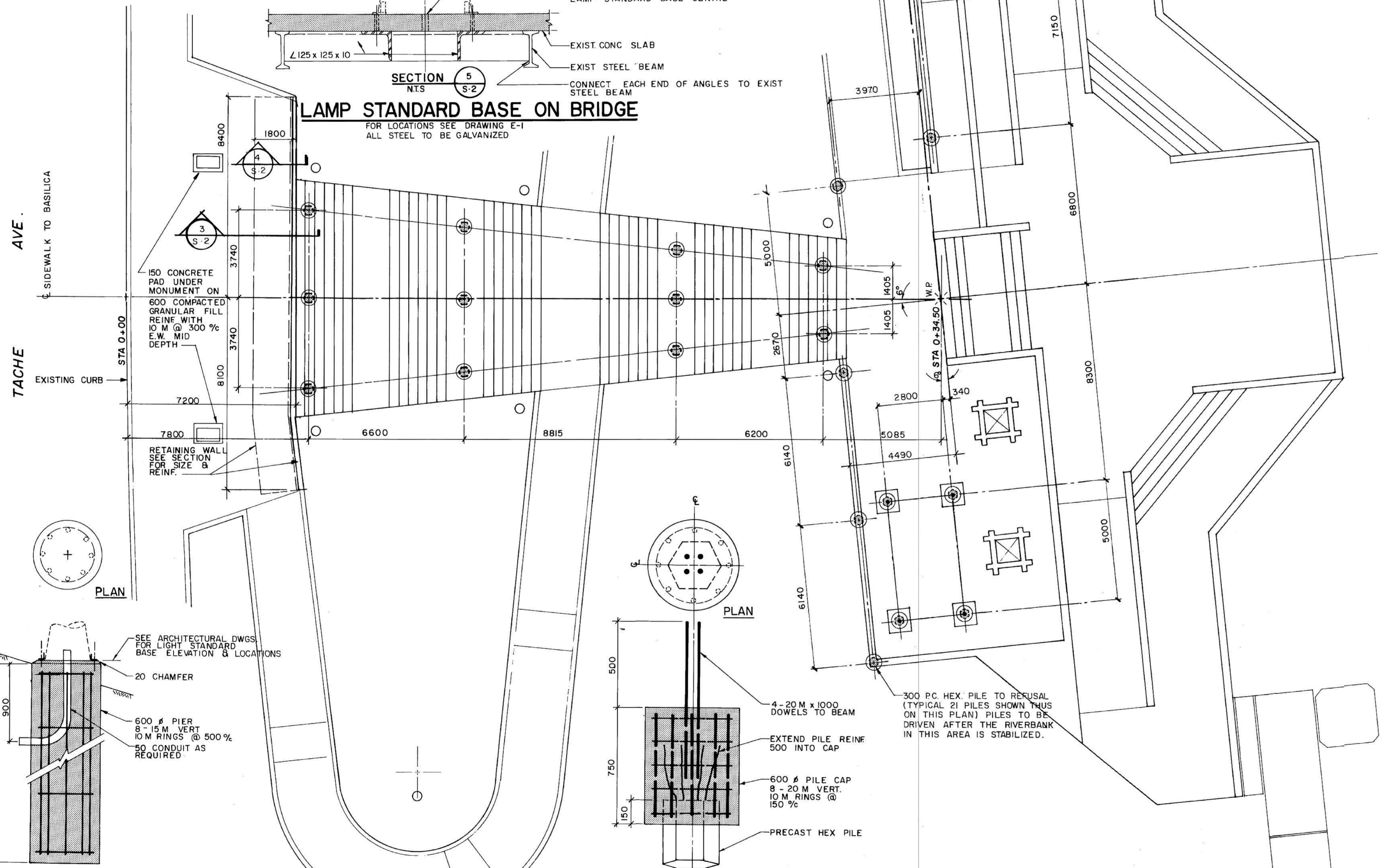
Underwood McLellan Ltd.
Consulting Engineers and Planners
APPROVED BY: *[Signature]* DATE: *Sept 27/03*
DRAWN BY: AT, NVS DESIGNED BY: T HUNG
CHECKED BY: *[Signature]* CHECKED BY: D.R.
SCALE: AS NOTED JOB No. 4084-003-01

MANITOBA ARC AUTHORITY
ST. BONIFACE DOCKS & RIVERBANK PROJECT
STRUCTURAL FOUNDATION LAYOUT SIDEWALK SOUTH OF STAIRWAY
S-1 0
DWG. No. REV.



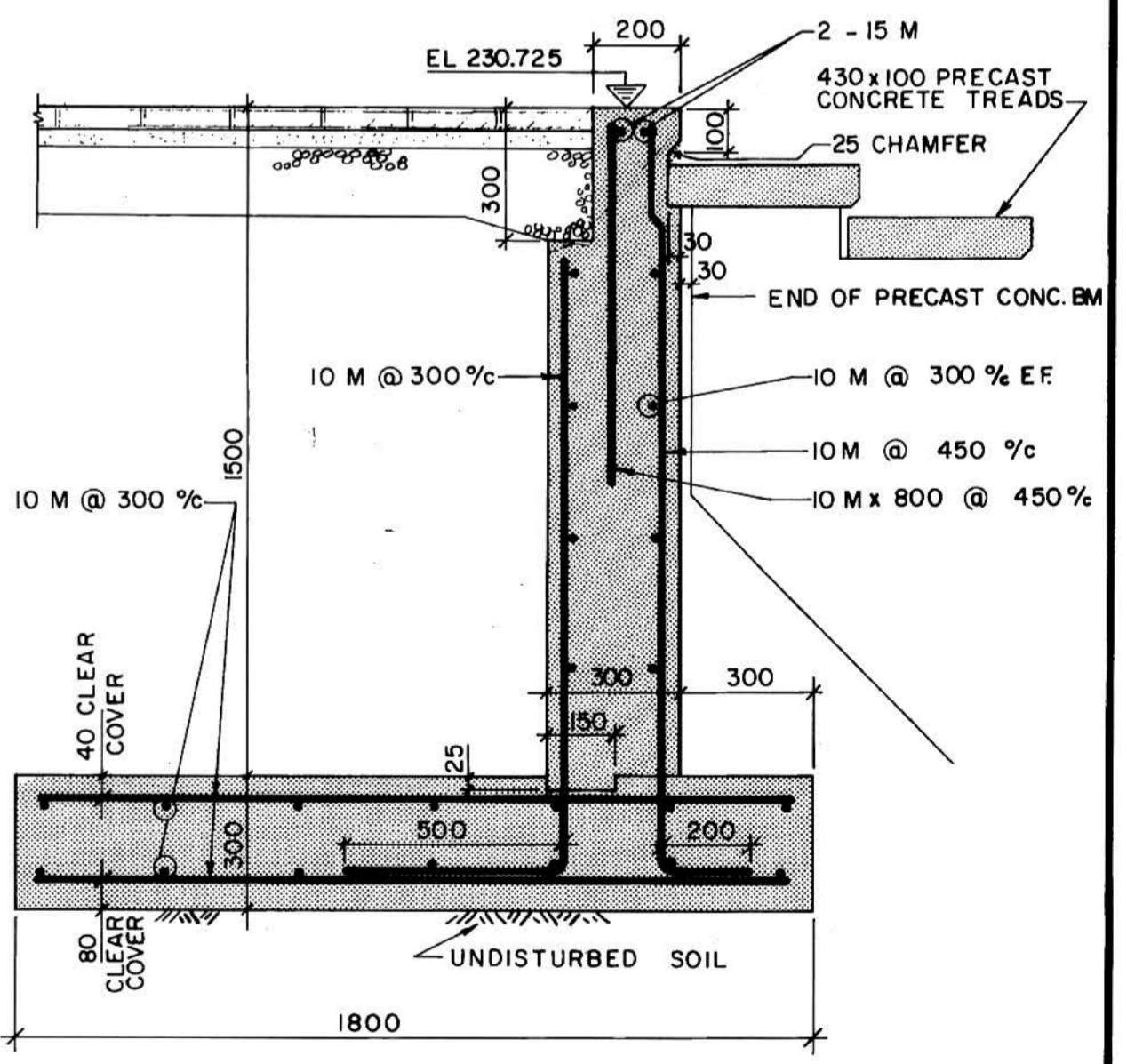
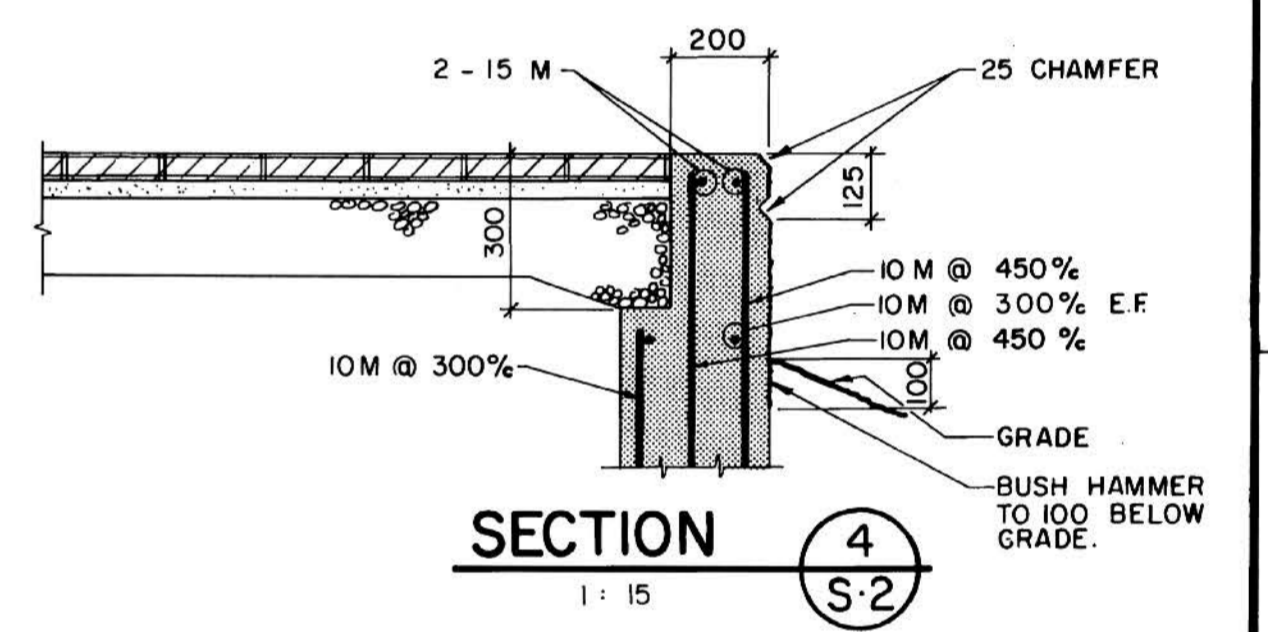
LAMP STANDARD BASE ON BRIDGE

FOR LOCATIONS SEE DRAWING E-1
ALL STEEL TO BE GALVANIZED



GENERAL NOTES

1. ALL PILES SHALL BE 300mm HEXAGONAL PRECAST CONCRETE PILES CAPABLE OF SUSTAINING A DESIGN LOAD OF 450 kN.
2. ALL PILES SHALL BE DRIVEN DOWN TO THE REFUSAL UNLESS OTHERWISE NOTED. PREDRILL FOR PILES 350 Ø x 7000 DEEP HOLES.
3. ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF $f_c = 30 \text{ MPa}$ AT AGE OF 28 DAYS.
4. CEMENT SHALL CONFORM TO CSA STANDARD CAN3-A5-M77. USE SULPHATE RESISTANT CEMENT (SYMBOL 50) FOR PILES; PILE CAPS, RETAINING WALLS & CONCRETE IN CONTACT WITH SOIL. USE NORMAL PORTLAND CEMENT (SYMBOL 10) FOR ALL OTHER CONCRETE.
5. CONCRETE MIXTURE REQUIREMENTS:
 - a) MAXIMUM AGGREGATE SIZE - 20 mm
 - b) SLUMP - 60 ± 20 mm
 - c) ENTRAINED AIR - 5% ± 1%
6. DO ALL CONCRETE WORK, FORMING & REINFORCEMENT IN ACCORDANCE WITH THE CSA STANDARD CAN 3-A23.1-M77, CAN3-A23.2-M77 AND CAN3-A23.3-M77.
7. REINFORCING STEEL SHALL BE HIGH STRENGTH STEEL DEFORMED BARS WITH A MINIMUM YIELD STRENGTH OF $f_y = 400 \text{ MPa}$, CONFORMING TO CSA STANDARD G30.12 M.
8. FABRICATION, DETAILING & PLACING OF REINFORCING STEEL & ACCESSORIES SHALL BE IN ACCORDANCE WITH THE DRAWINGS AND AS REQUIRED BY THE CSA STANDARD.
9. THE PRECAST CONCRETE MANUFACTURER IS RESPONSIBLE TO DESIGN THE PRECAST CONCRETE STEPS & LANDINGS FOR THE STAIR & THE PRECAST CONCRETE BEAMS IN ACCORDANCE WITH THE CSA STANDARDS.
10. ALL REINFORCING STEEL FOR STRUCTURAL SIDEWALK, INCLUDING SLAB, BEAMS & CURB TO BE EPOXY COATED.



TYP. 'LIGHT ST'D. BASE DETAIL 1 S-2

TYP. PILE CAP DETAIL 2 S-2

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

DATE	REV	ISSUED

REV	DESCRIPTION	DWN	APP	DATE

REV	DESCRIPTION	DWN	APP	DATE

MANITOBA ARC AUTHORITY

Stamp: OFFICE OF MANITOBA (Sept 27/83)

Stamp: A.T.J.

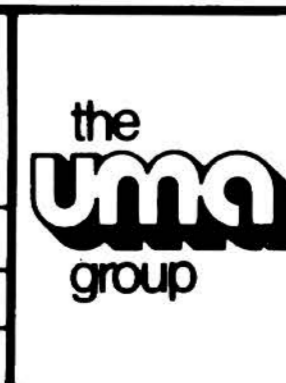
Underwood McLellan Ltd.
Consulting Engineers and Planners

APPROVED BY: *[Signature]* DATE: 8/27/83

DRAWN BY: NVS DESIGNED BY: T.HUNG

CHECKED BY: *[Signature]* CHECKED BY: D.R.

SCALE: 1:100 JOB No: 4084-003-01



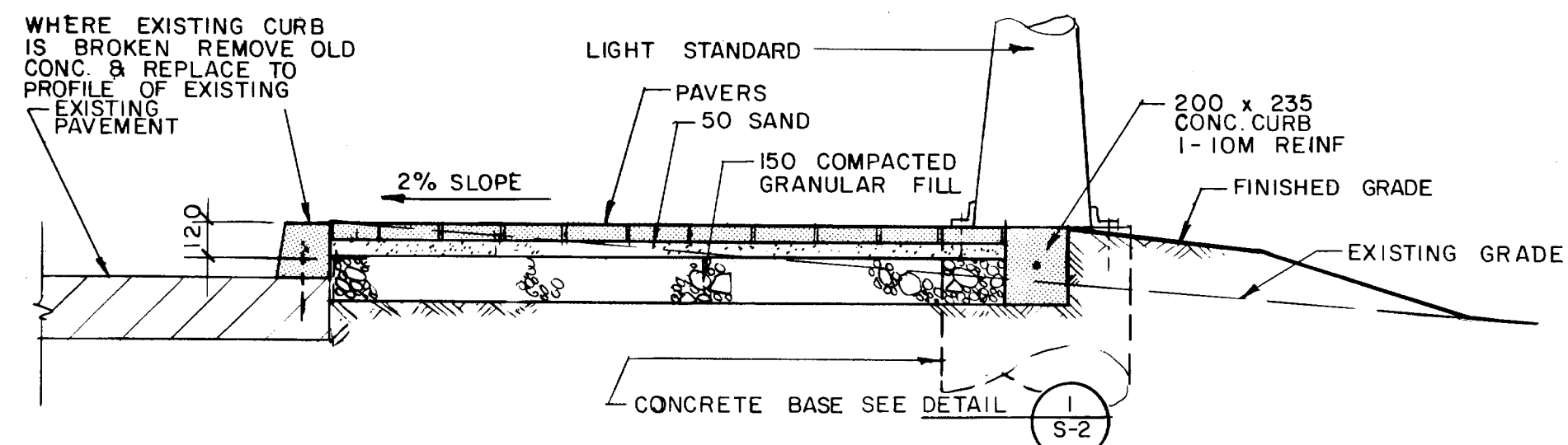
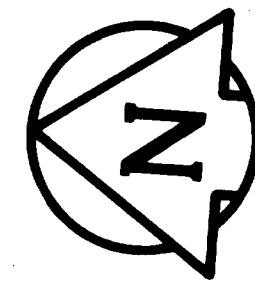
MANITOBA ARC AUTHORITY

ST. BONIFACE DOCKS & RIVERBANK PROJECT

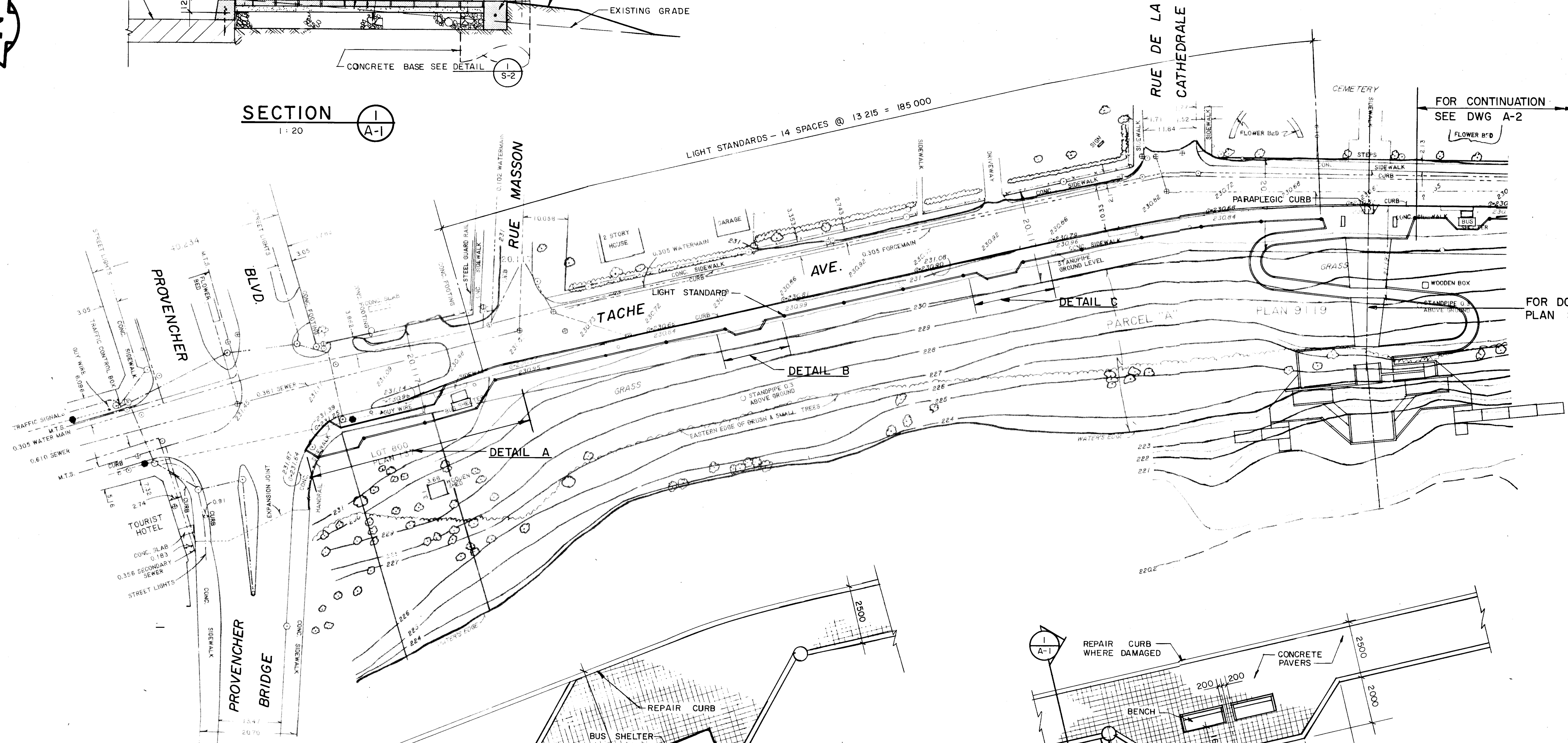
STRUCTURAL PILING LAYOUT DOCK & STAIRWAY

S-2 0

DWG. No. REV.

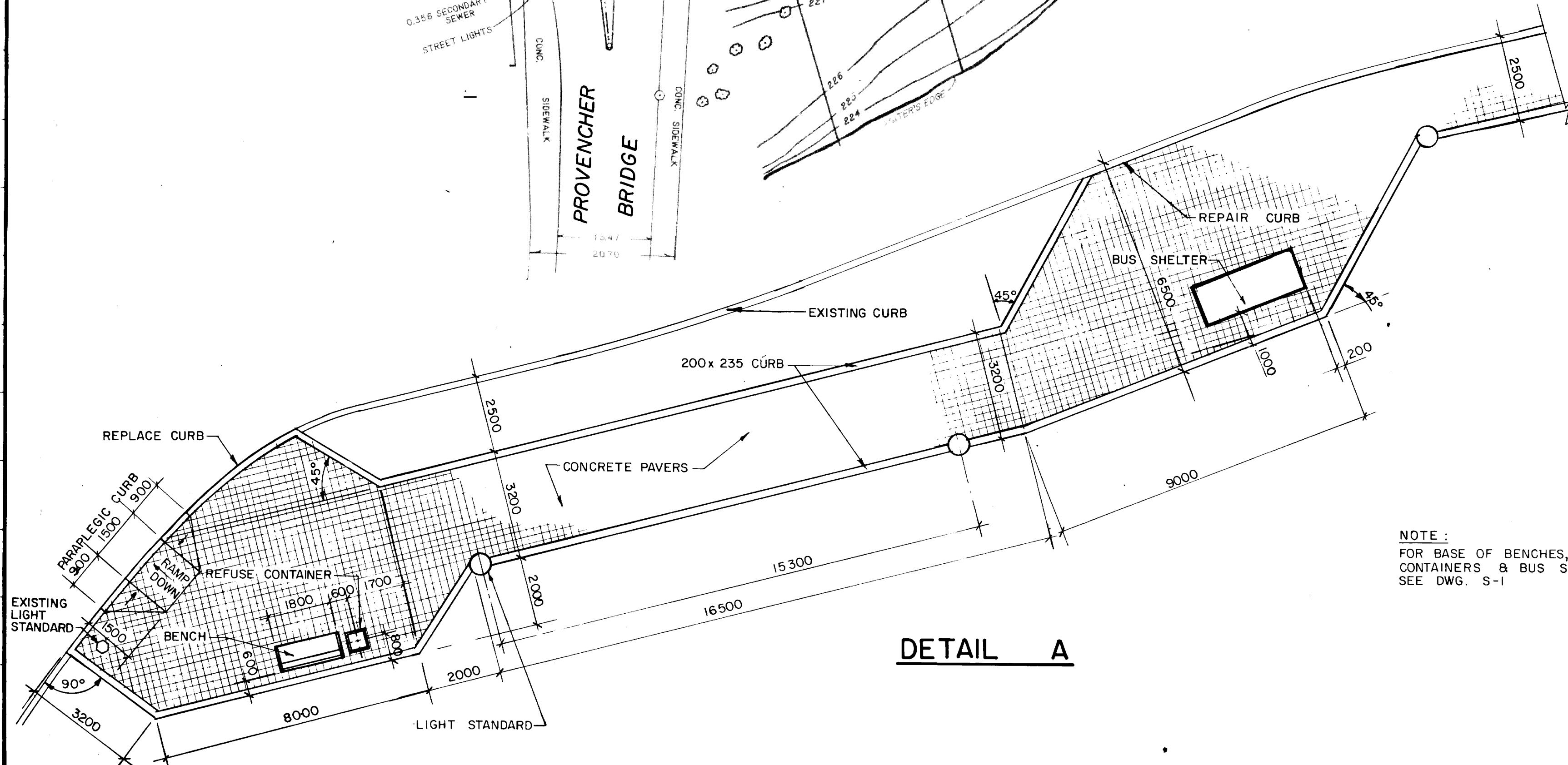


SECTION I A-1
1:20

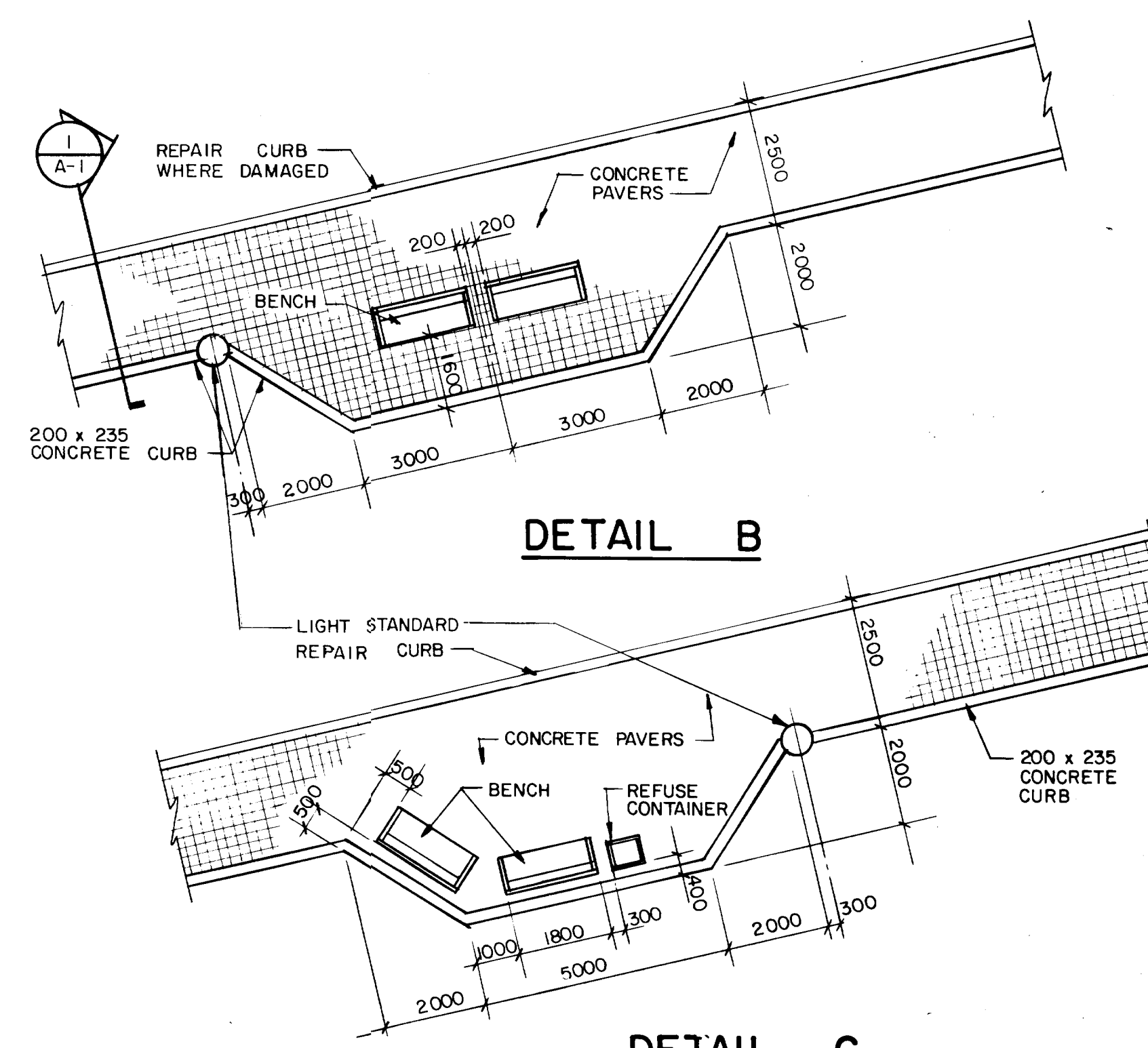


FOR CONTINUATION SEE DWG A-2

FOR DOCK & STAIRWAY PLAN SEE DWG A-3



DETAIL A



DETAIL B

DETAIL C

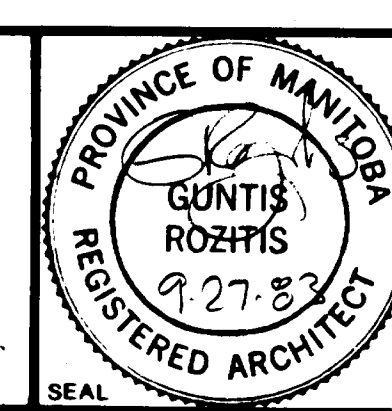
NOTE:
FOR BASE OF BENCHES, REFUSE CONTAINERS & BUS SHELTERS SEE DWG. S-1

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

DATE	REV	ISSUED

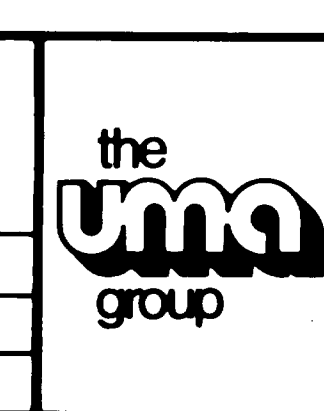
REV	DESCRIPTION	OWN	APP	DATE



Underwood McLellan Ltd.
Consulting Engineers and Planners

APPROVED BY: *[Signature]* DATE: *Apr 27/03*

DESIGNED BY: G. ROZITIS
CHECKED BY: *[Signature]*
SCALE: PLAN 1:500, DETAIL 1:100
JOB No. 4084-003-01

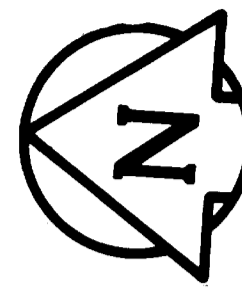


MANITOBA ARC AUTHORITY

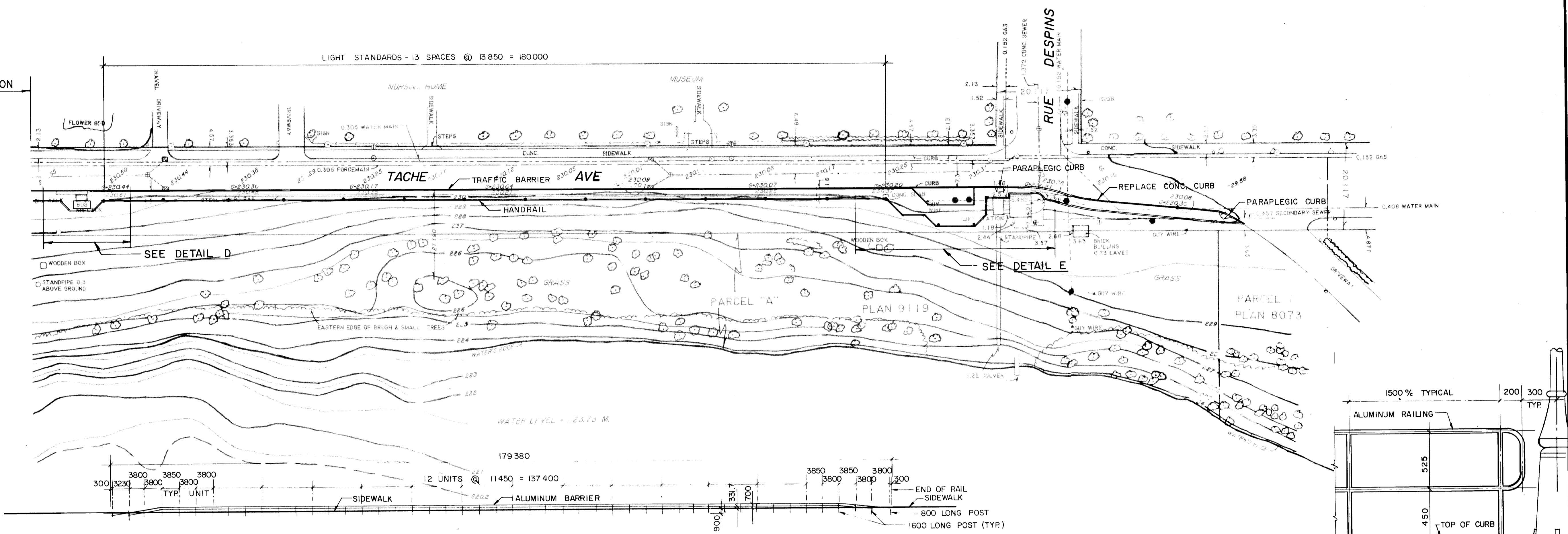
ST. BONIFACE DOCKS & RIVERBANK PROJECT

ARCHITECTURAL
SIDEWALK PLAN
NORTH OF STAIRWAY

A-1 0
DWG. No. REV.



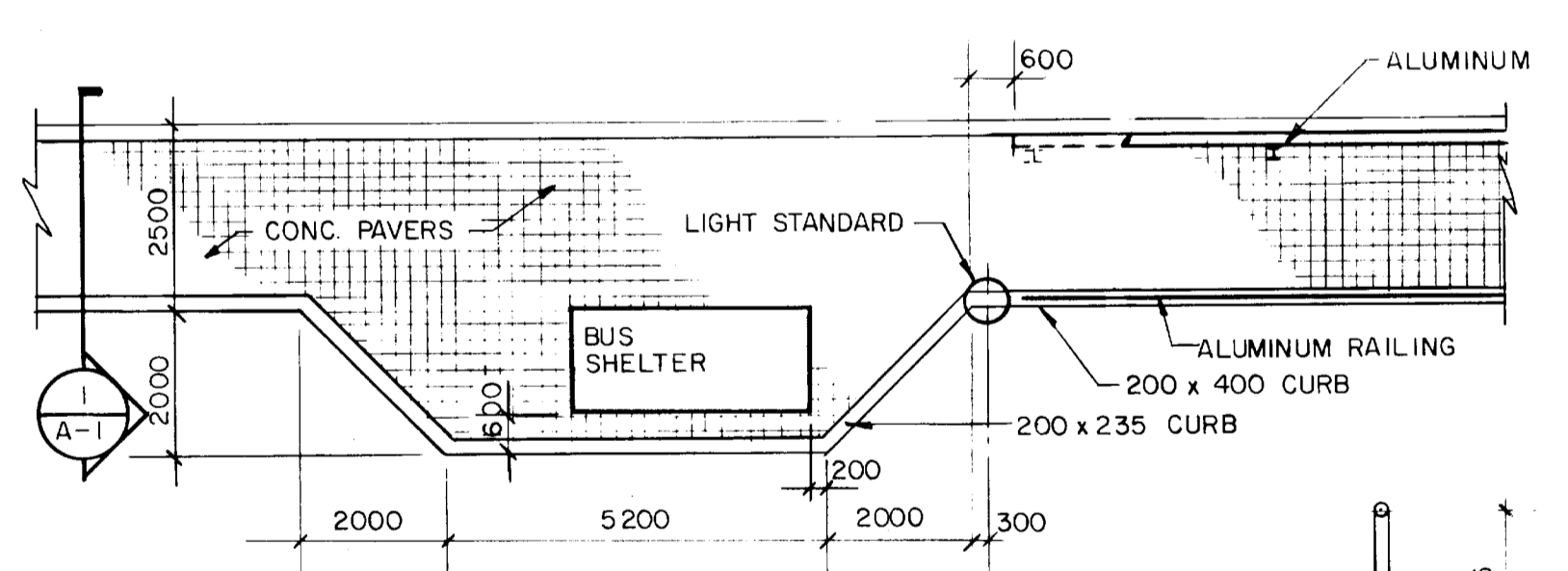
FOR CONTINUATION
SEE DWG A-1



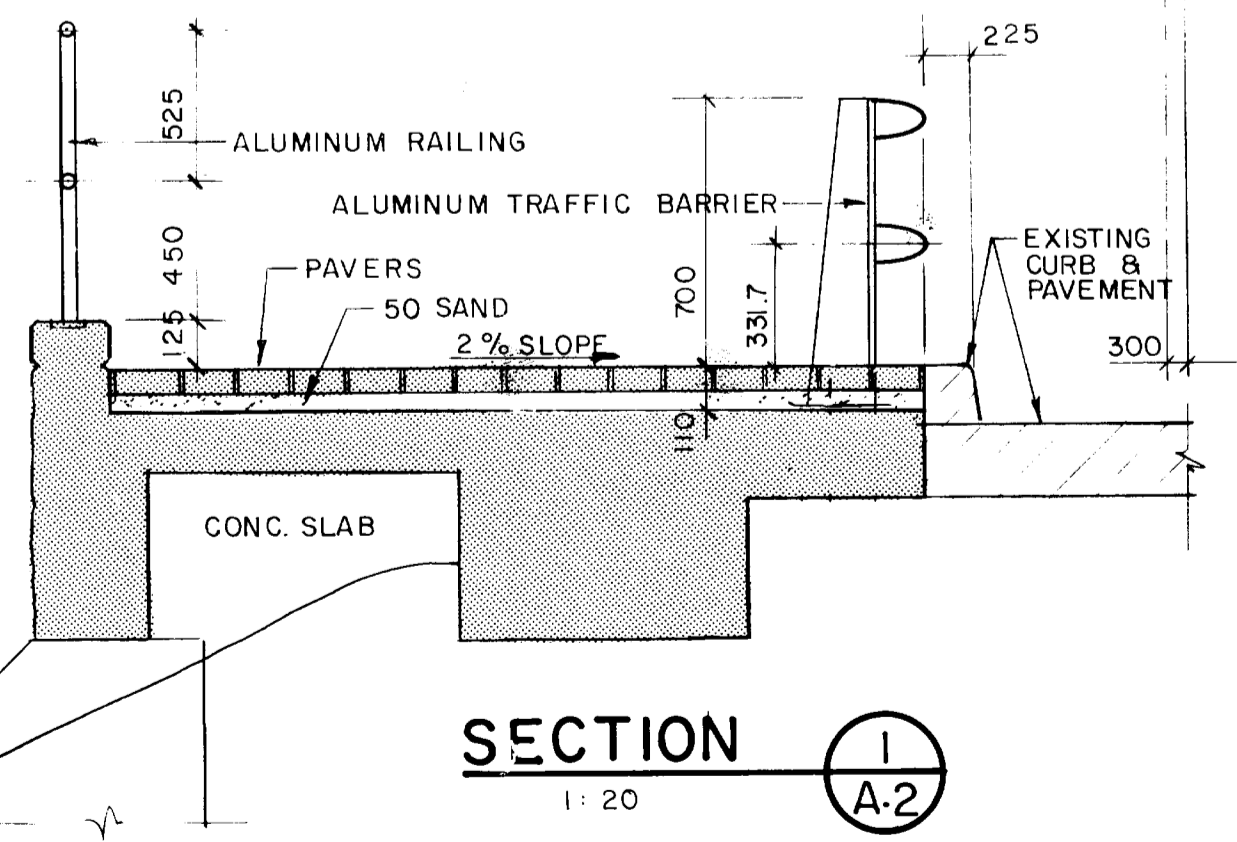
BARRIER ELEVATION

FOR DETAILS SEE DWG. A-6

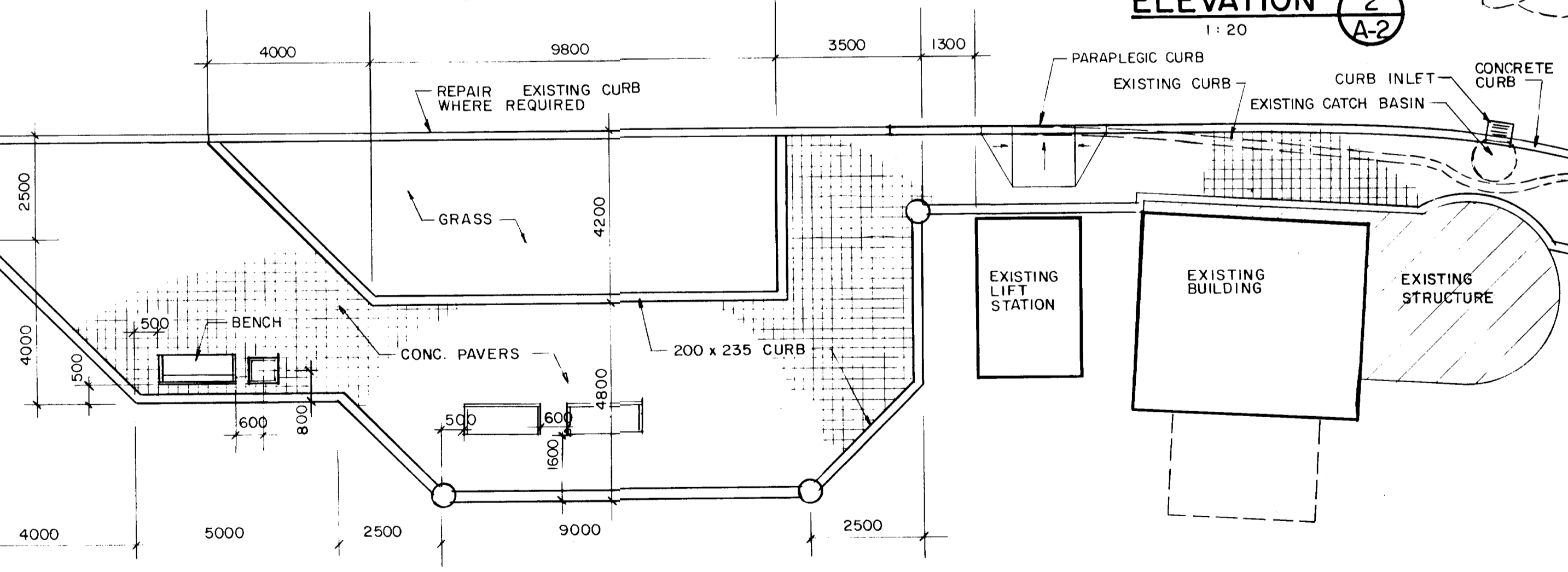
ELEVATION 2
1:20
A-2



DETAIL D



SECTION 1
1:20
A-2



DETAIL E

NOTE:
FOR BASES OF BENCHES, REFUSE
CONTAINERS & BUS SHELTERS
SEE DWG S-1

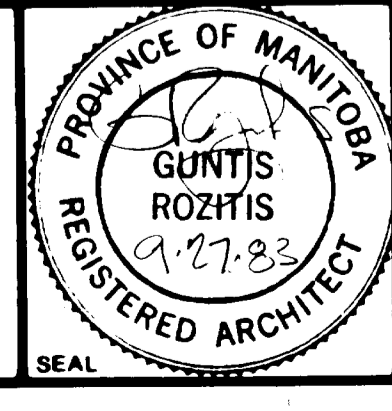
METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMAL NUMBERS INDICATE METRES

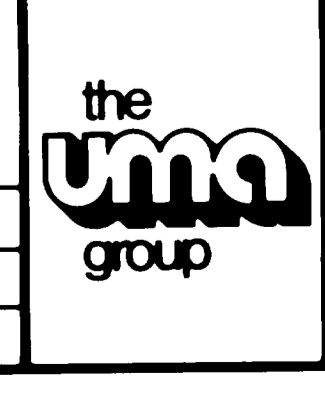
DATE	REV	ISSUED

REV	DESCRIPTION	DWN	APP	DATE

REV	DESCRIPTION	DWN	APP	DATE



Underwood McLellan Ltd.
Consulting Engineers and Planners
APPROVED BY: *[Signature]* DATE: *Sept 27/13*
DRAWN BY: J.R.C. DESIGNED BY: G. ROZITIS
CHECKED BY: *[Signature]* CHECKED BY: *[Signature]*
SCALE: PLAN 1:500 DETAIL 1:100 JOB No. 4084-003-01



MANITOBA ARC AUTHORITY
ST. BONIFACE DOCKS & RIVERBANK PROJECT
ARCHITECTURAL
SIDEWALK PLAN
SOUTH OF STAIRWAY
A-2
DWG. No. REV