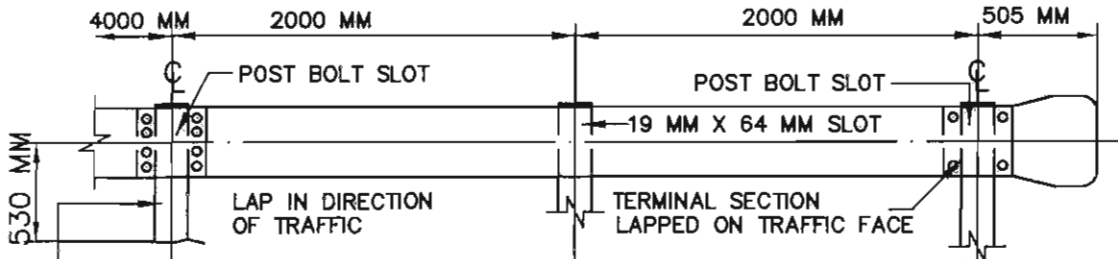


HARDWOOD TIMBER POST (SEE NOTE 1) MUST BE USED AS THE FIRST TWO POSTS ON THE APPROACH END AND FOR THE FIRST POST ON THE DEPARTURE END. END POSTS SHALL BE OF 175 X 125 X 1800 LONG HARDWOOD WITH A MAXIMUM STRESS GRADE OF F27 AND A MINIMUM OF F7.

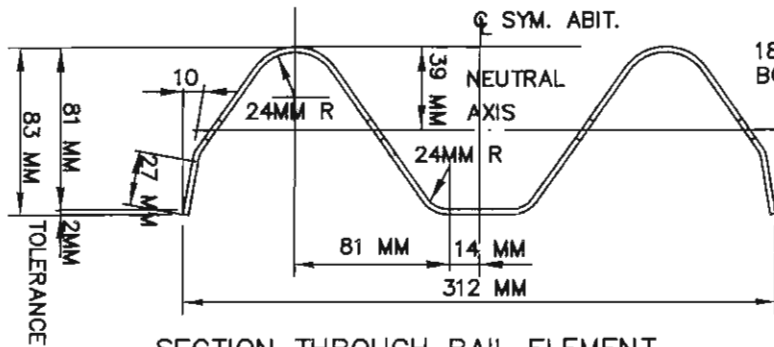


178 X 76 MM X 6.0 X 1670 MM LONG COLD ROLLED CHANNEL POST SET INTO 300 MM SQ. OR 300 MM DIA. CONCRETE FOOTING.

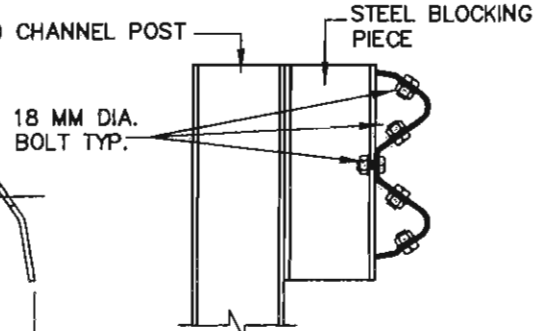
INSTALLATION

NOTE: BULLNOSE - APPROACH END
FISHTAIL - DEPARTURE END

178 X 76 X 6.0 CHANNEL POST

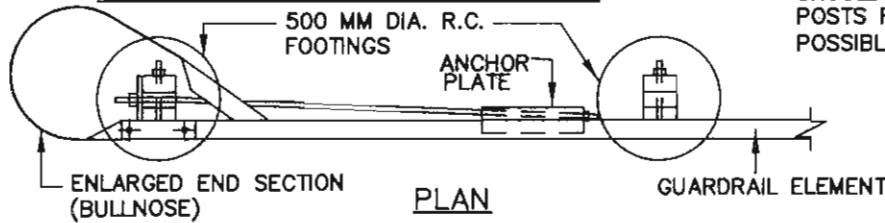


SECTION THROUGH RAIL ELEMENT



ARRANGEMENT AT POST

NOTE: STEEL BLOCKING PIECES SHOULD BE USED TO SEPARATE POSTS FROM RAIL WHERE POSSIBLE.

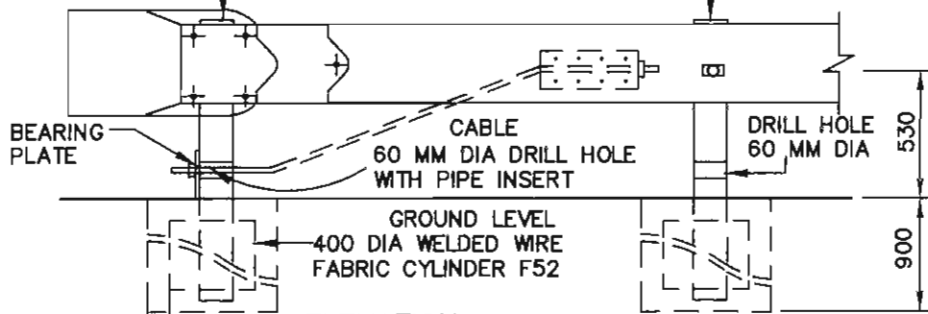


PLAN

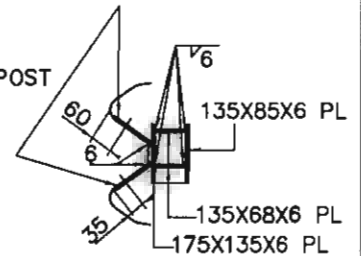
22X38 HOLES SLOTTED AT RIGHT ANGLES TO RAIL CENTRELINE.

175 X 125 TIMBER POST WITHOUT BLOCK

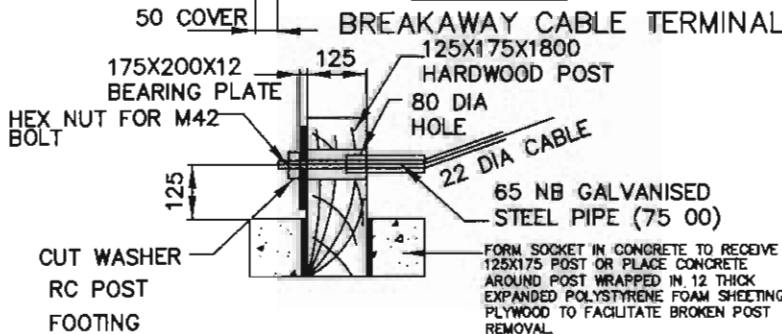
175 X 125 TIMBER POST WITHOUT BLOCK



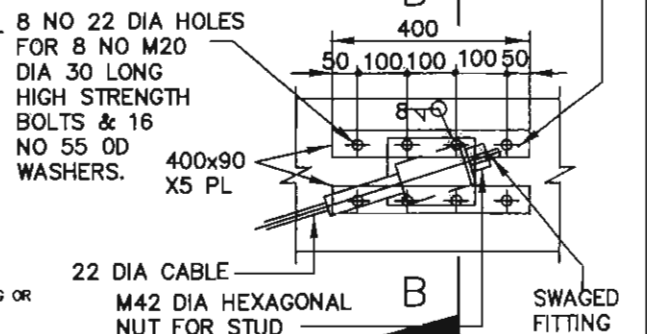
ELEVATION



SECTION B - B



ANCHOR DETAILS AT POST



DETAIL OF CABLE END ANCHOR

CHECKED	<i>Jan Stacey</i>
APPROVED	<i>Jim Conway</i>
SCALE	N.T.S.

KNOX CITY COUNCIL

STEEL BEAM GUARD RAIL

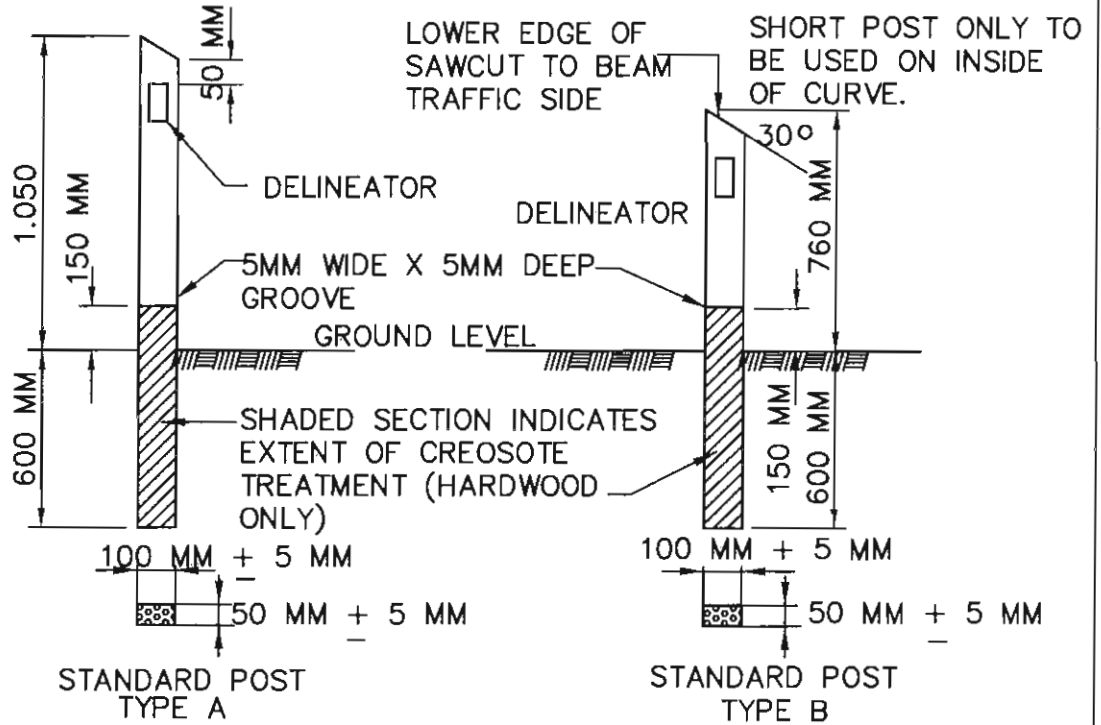
DATE	1-8-2001
REVISION	
CAD FILE NAME	S 410.1

ATTACHMENT OF DELINEATORS

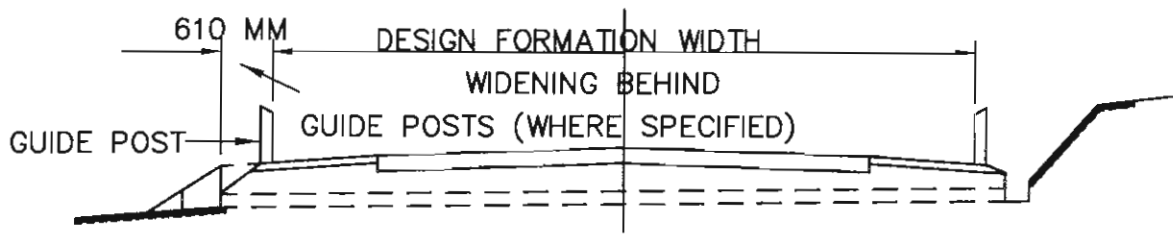
(WHERE SPECIFIED)

WHITE DELINEATORS 25MM X 100MM RIGHT SIDE OF ROAD

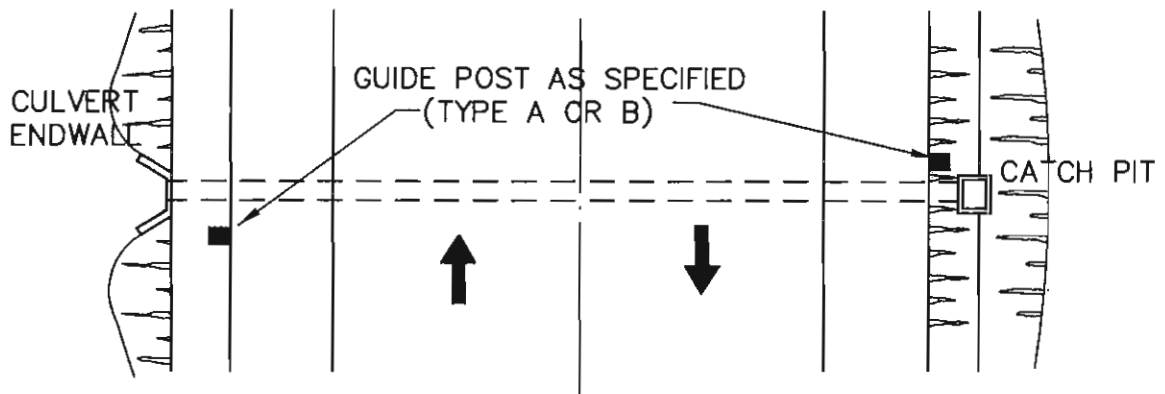
RED DELINEATORS 50MM X 100MM LEFT SIDE OF ROAD



STANDARD GUIDE POSTS (100 MM X 50 MM)



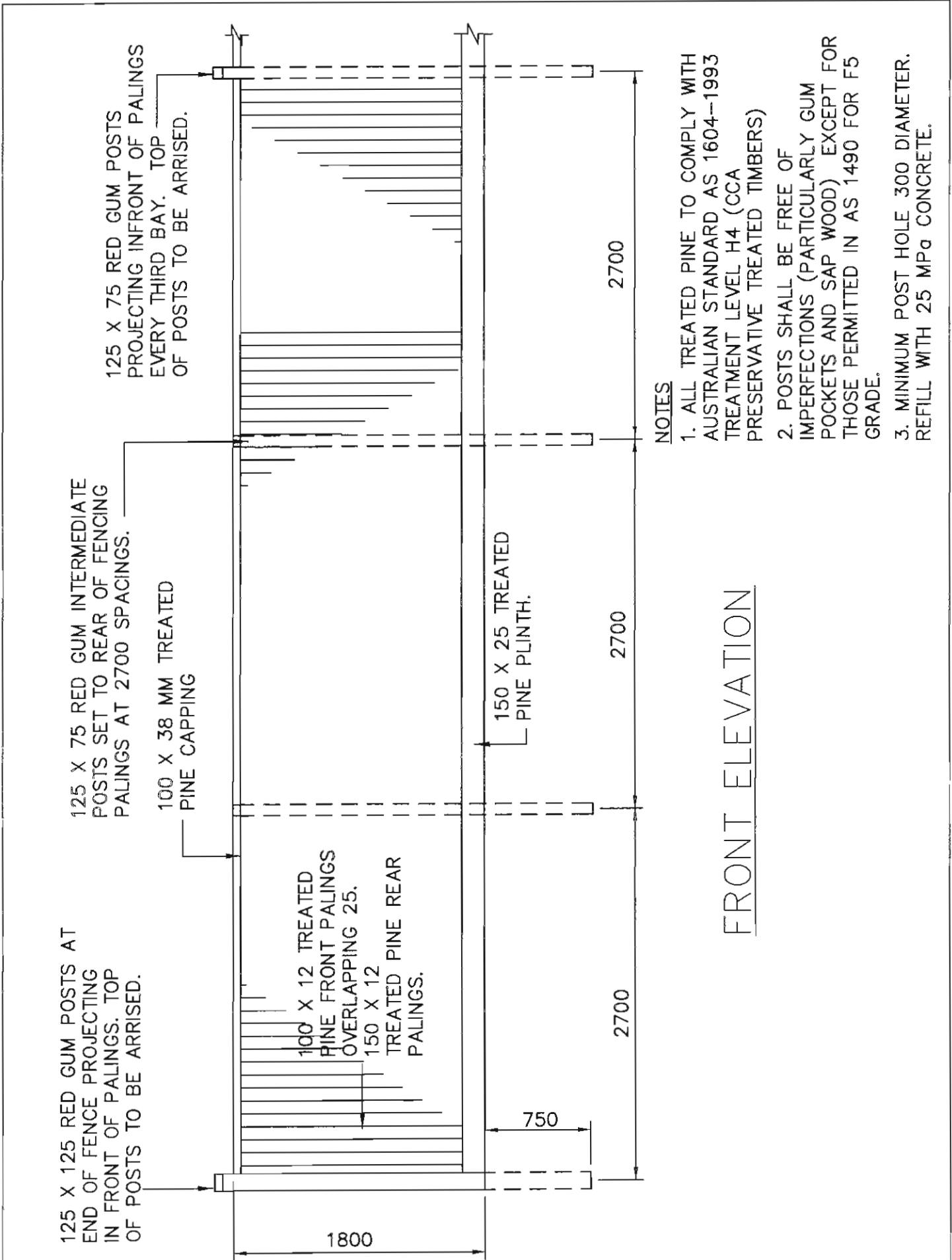
LATERAL LOCATION OF GUIDE POSTS



LOCATION OF CULVERT END POSTS

CHECKED <i>Jon Stacey</i>	<h1>KNOX CITY COUNCIL</h1>	DATE 1-8-2001
APPROVED <i>Julian Stacey</i>		REVISION
SCALE N.T.S.		CAD FILE NAME S 411.1

GUIDE POSTS



NOTES

1. ALL TREATED PINE TO COMPLY WITH AUSTRALIAN STANDARD AS 1604-1993 TREATMENT LEVEL H4 (CCA PRESERVATIVE TREATED TIMBERS)
2. POSTS SHALL BE FREE OF IMPERFECTIONS (PARTICULARLY GUM POCKETS AND SAP WOOD) EXCEPT FOR THOSE PERMITTED IN AS 1490 FOR F5 GRADE.
3. MINIMUM POST HOLE 300 DIAMETER. REFILL WITH 25 MPa CONCRETE.

FRONT ELEVATION

CHECKED <i>Jan Stacey</i>	<h1>KNOX CITY COUNCIL</h1> <p>SUBDIVISION TREE RESERVE CAPPED PALING FENCE</p>	DATE 3-3-2003
APPROVED <i>[Signature]</i>		REVISION A
SCALE N.T.S.		CAD FILE NAME S 412.1

125 X 75 MM RED GUM POSTS
PROJECTING INFRONT OF PALINGS
EVERY THIRD BAY. TOP OF POSTS TO
BE ARRISED.

75 X 50 MM OBHW RAIL
(HORIZONTAL)

100 X 38 MM TREATED PINE
CAPPING

75 X 50 MM OBHW RAIL

100 X 12 MM TREATED PINE FRONT
PALINGS, OVERLAPPING 25 MM
150 X 12 MM TREATED PINE REAR
PALINGS.

125 X 75 RED GUM
INTERMEDIATE POSTS SET
TO REAR OF FACING
PALINGS.

75 X 50 MM OBHW RAIL

150 X 25 MM TREATED PINE PLINTH.

GROUND LINE

PLINTH NAILED TO 75 X 50 MM
OBHW CLEAT CHECKED INTO
POST AND PROJECTING 100 MM
EITHER SIDE OF POST.

POSTS SET INTO HOLE MIN 250 MM DIA
X 750 MM DEEP AND CEMENT
STABILISED BACKFILL.

SECTION

NOTE

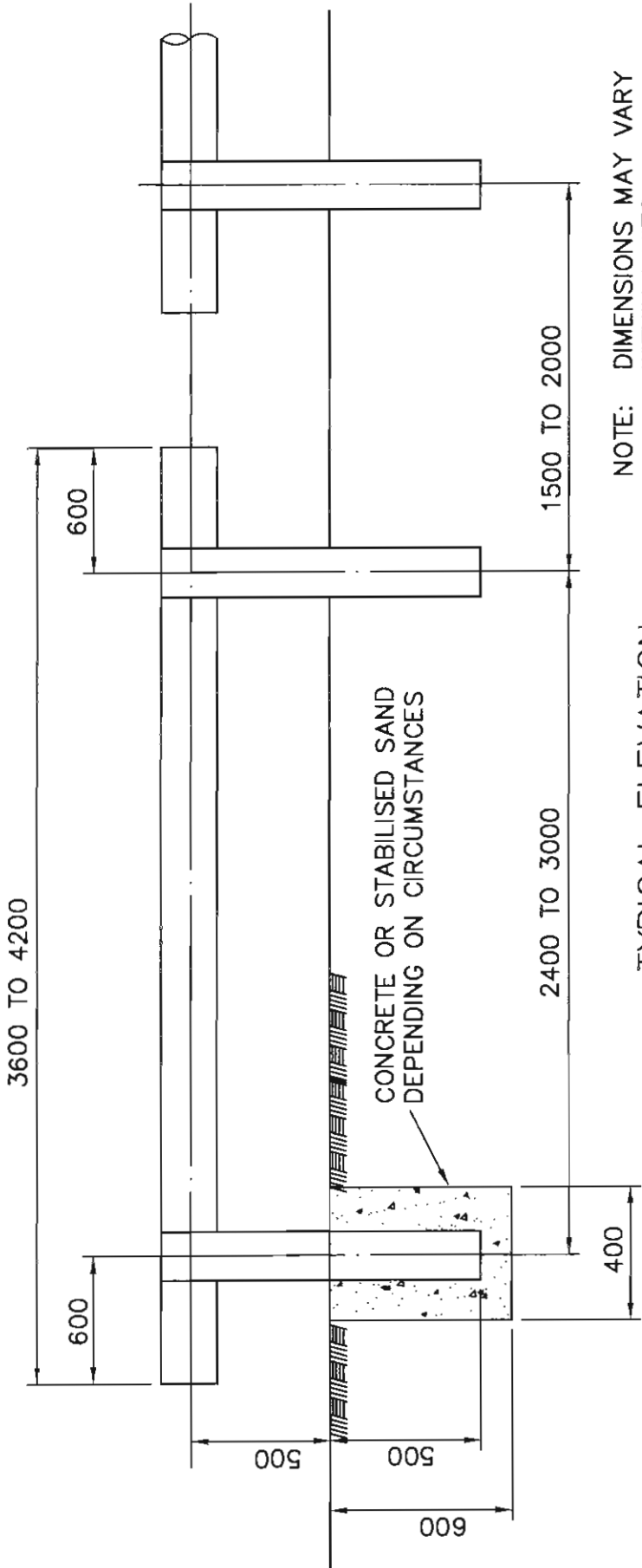
- ALL TREATED PINE TO COMPLY WITH AUSTRALIAN STANDARD AS 1604-1993 TREATMENT LEVEL H4. (CCA PRESERVATIVE TREATED TIMBERS)
- POSTS SHALL BE FREE OF IMPERFECTIONS (PARTICULARLY GUM POCKETS AND SAP WOOD) EXCEPT FOR THOSE PERMITTED IN AS 1490 FOR F5 GRADE.

CHECKED <i>Jan Stacey</i>
APPROVED <i>Jim Corboy</i>
SCALE N.T.S.

KNOX CITY COUNCIL

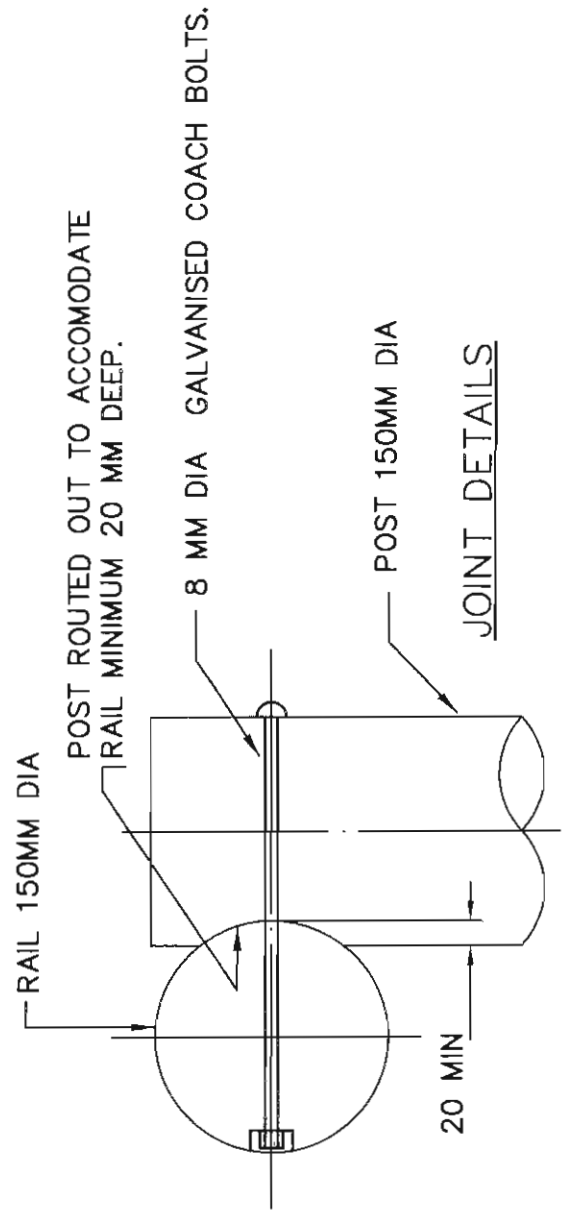
SUBDIVISION TREE RESERVE
CAPPED PALING FENCE

DATE 1-8-2001
REVISION
CAD FILE NAME S 412.2



NOTE: DIMENSIONS MAY VARY WITHIN LIMITS.

TYPICAL ELEVATION



COUNTER BORE NUTS 20 MM LONG. BURR OVER END OF BOLT AFTER TIGHTENING.

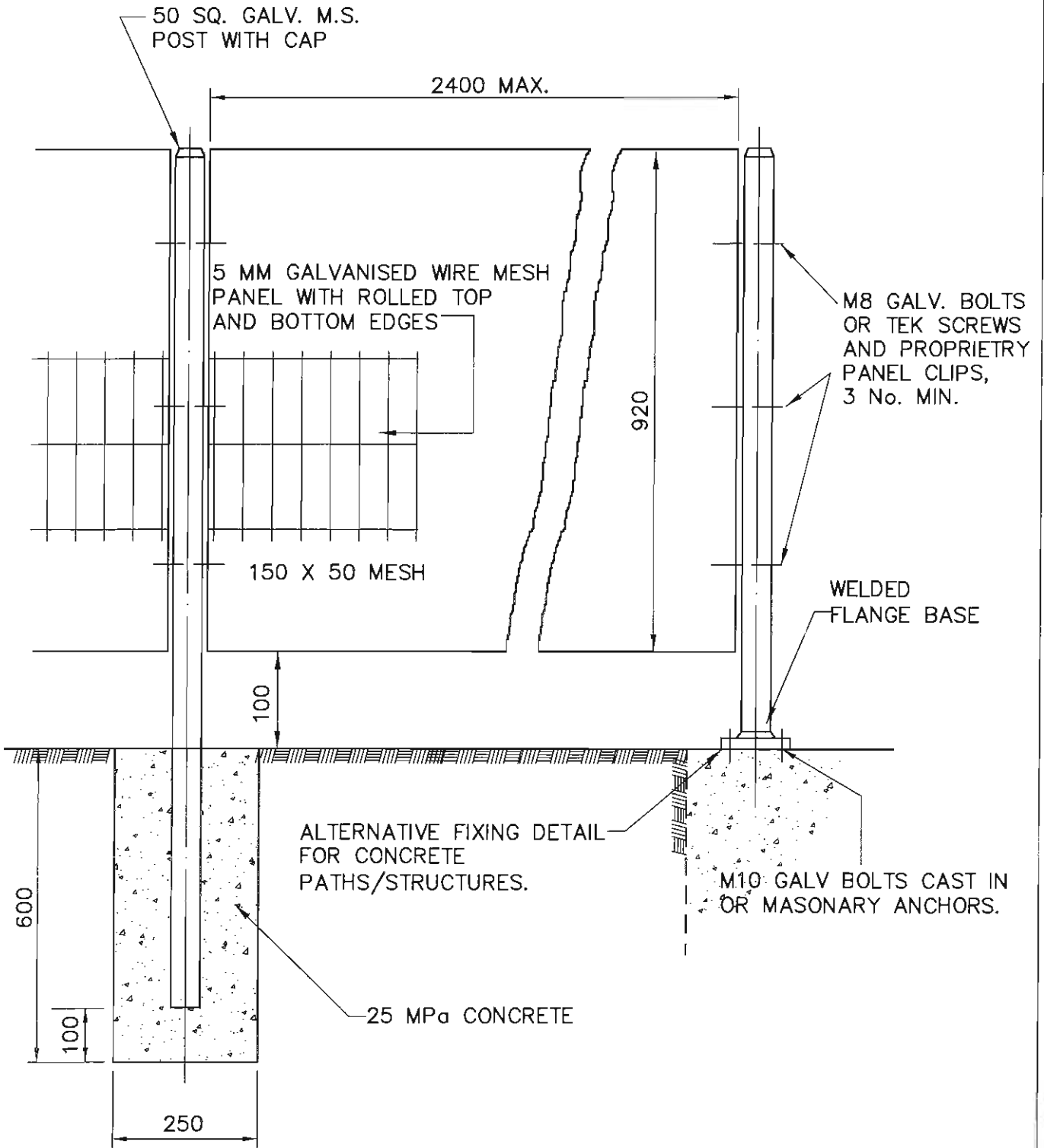
JOINT DETAILS

CHECKED <i>Jan Stacey</i>
APPROVED <i>Jim Gantley</i>
SCALE N.T.S.

KNOX CITY COUNCIL

TREATED PINE LOG FENCE

DATE 1-8-2001
REVISION
CAD FILE NAME S 413.1



NOTE
 POWDER COATED GALVANISED MESH, POSTS AND FITTINGS ARE AVAILABLE IN A RANGE OF COLOURS. COLOUR SHALL BE DETERMINED BY THE SUPERINTENDENT.

CHECKED
Jo. Stoney

APPROVED
K Ward

SCALE
 N.T.S.

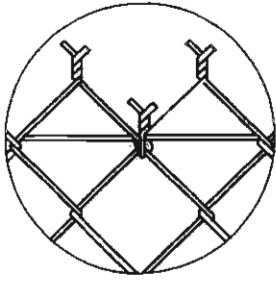
KNOX CITY COUNCIL

FOOTPATH SAFETY FENCE (WELDED MESH)

DATE
 1-12-2005

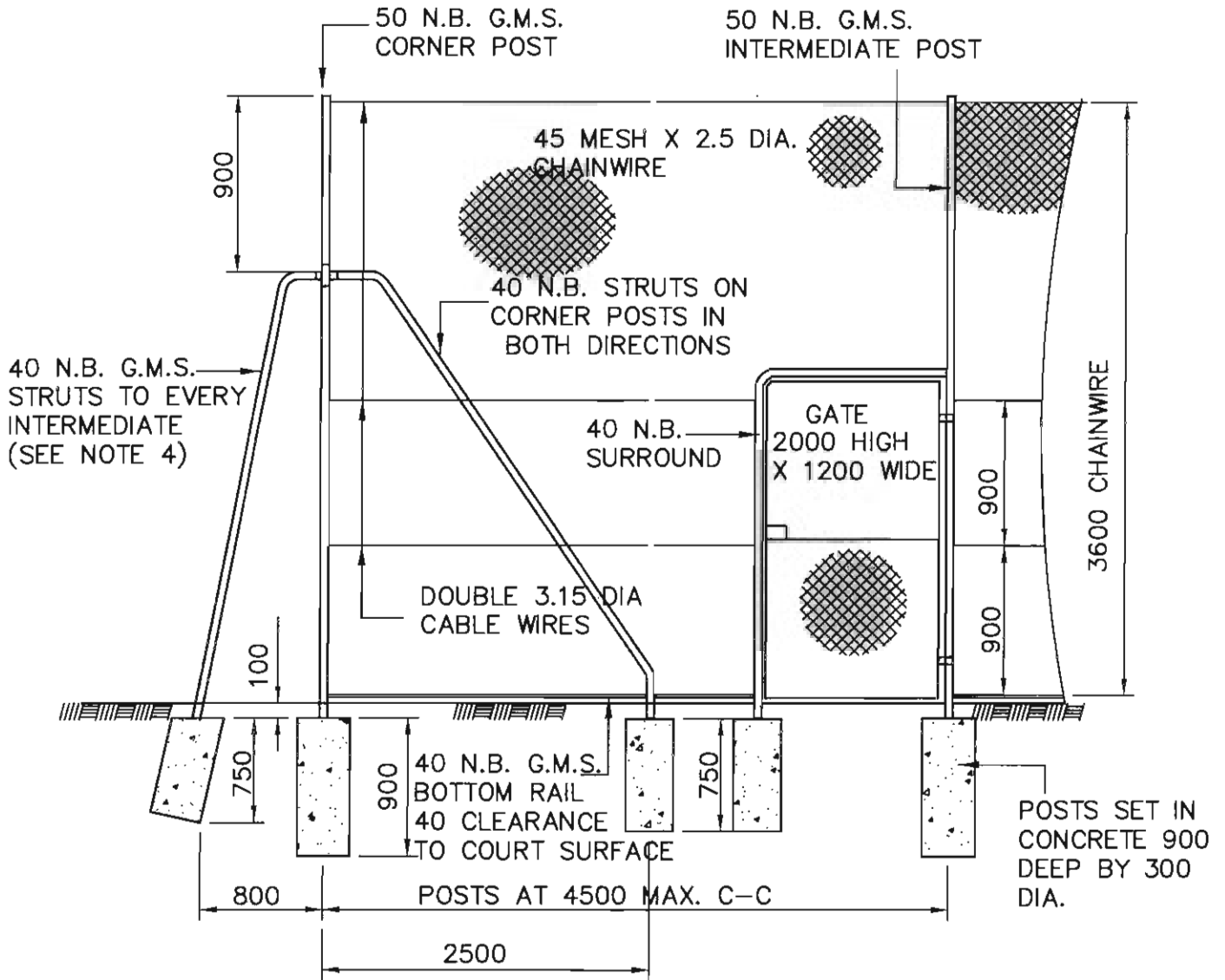
REVISION
 A

CAD FILE NAME
 S 414.1



CHAINWIRE MESH TIED TO STRAINED CABLE WIRE AT 500 CENTRES.

DETAIL BARBED SELVEDGE



NOTES:

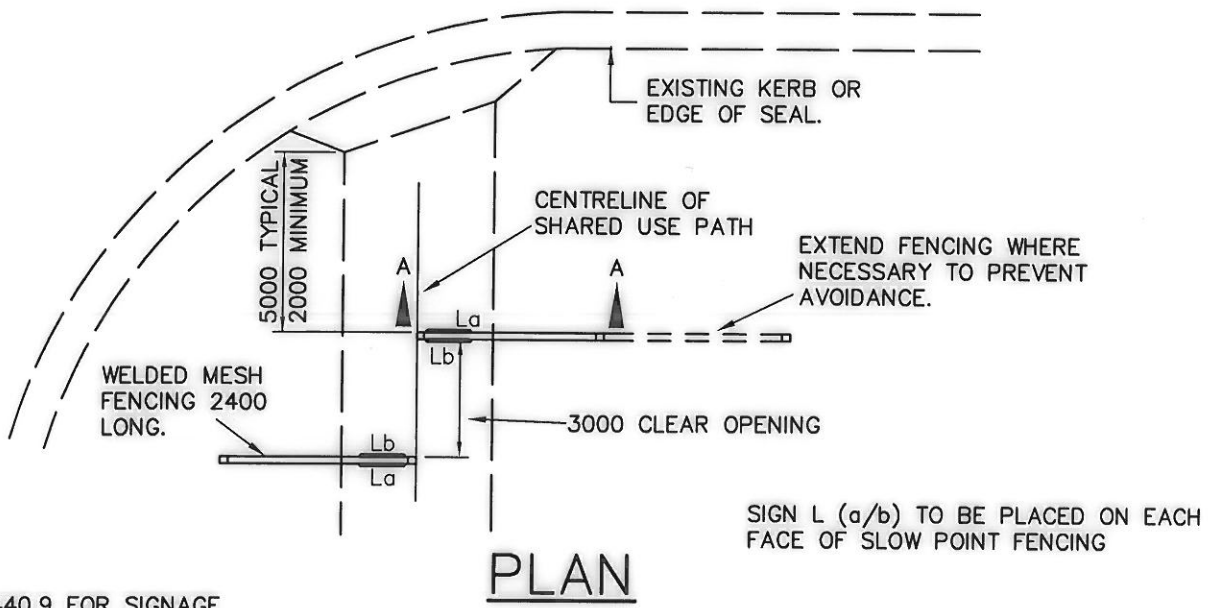
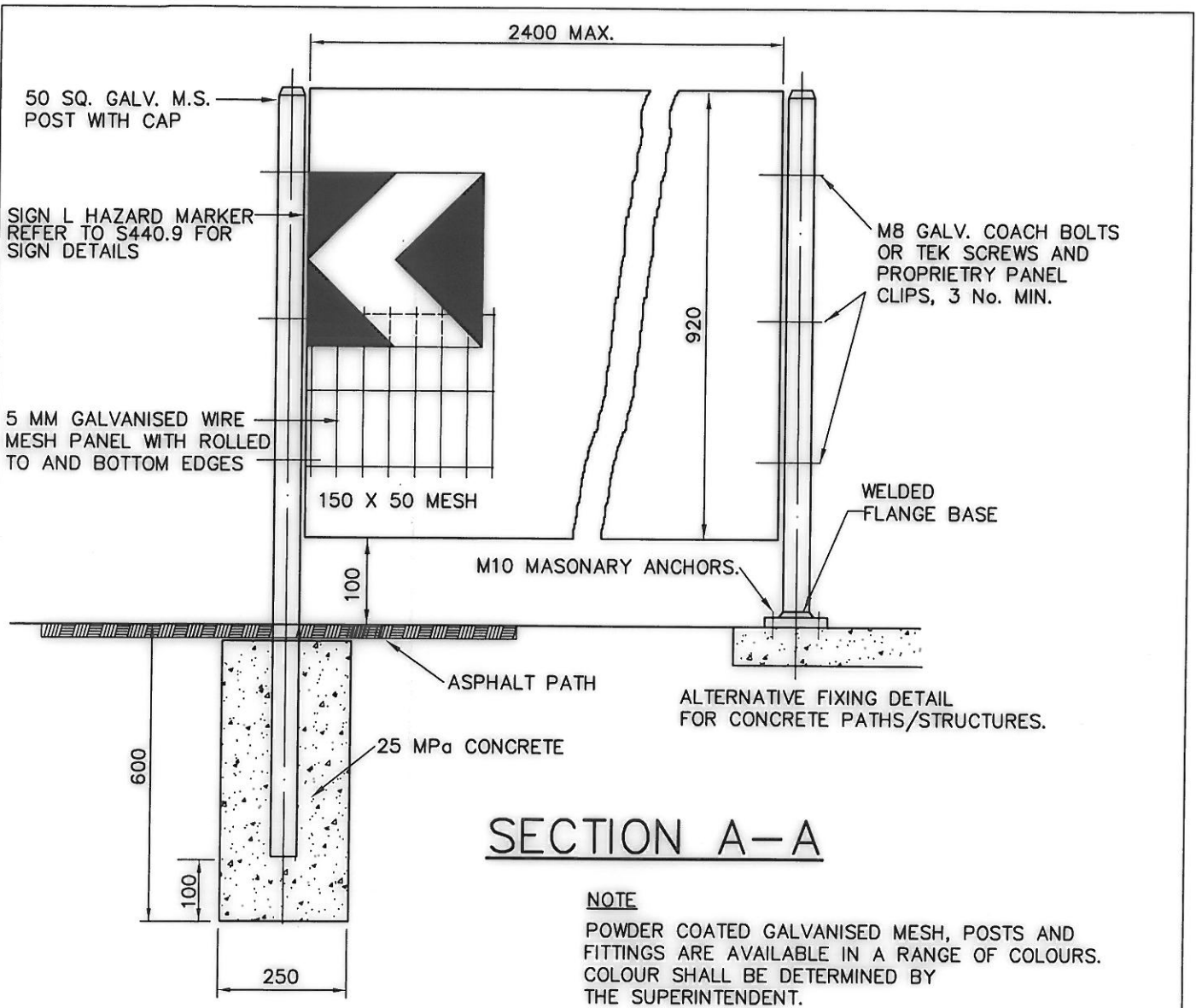
1. GATE LOCATION TO BE DETERMINED BY THE CITY ENGINEERS REPRESENTATIVE.
2. MESH SHALL BE GALVANISED OR PLASTIC COATED AS REQUIRED BY THE CITY ENGINEERS REPRESENTATIVE.
3. ALL POSTS SHALL BE CAPPED.
4. WHERE WIND/SHADE PROTECTORS ARE TO BE ATTACHED TO CHAINWIRE, EXTERNAL STRUTS ARE REQUIRED.
5. CONCRETE SHALL CONTAIN 320 KG OF CEMENT, PER CUBIC METRE.

CHECKED <i>Jan Stacey</i>
APPROVED <i>Jim Corboy</i>
SCALE N.T.S.

KNOX CITY COUNCIL

TENNIS COURT FENCE

DATE 1-8-2001
REVISION
CAD FILE NAME S 415.1



NOTE
REFER S440.9 FOR SIGNAGE

CHECKED *[Signature]*

APPROVED *[Signature]*

SCALE
N.T.S.

KNOX CITY COUNCIL

SHARED USE PATH SLOW POINT

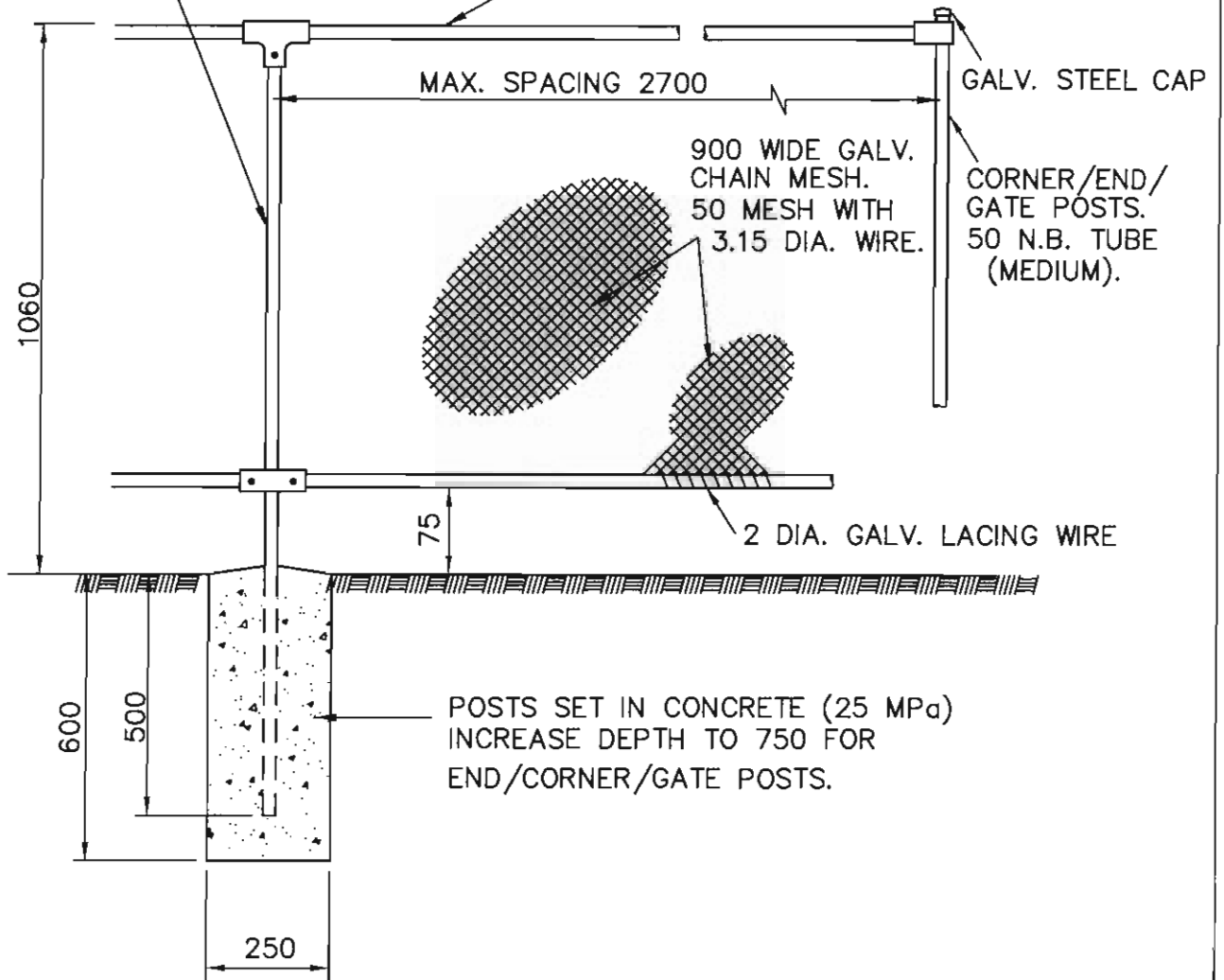
DATE
04-12-2012

REVISION
B

CAD FILE NAME
S 416.1

40 N.B. GALVANISED
TUBE (MEDIUM) POSTS.

32 N.B. GALVANISED TUBE(MEDIUM)
TOP AND BOTTOM RAILS.



NOTE:

1. NOT TO BE USED ADJACENT TO ANY CARRIAGEWAY.
WHERE FENCING IS REQUIRED ADJACENT TO A CARRIAGEWAY, USE MESH FENCING PER S414.1.

CHECKED
Jan Stacey

APPROVED
Jan Stacey

SCALE
N.T.S.

KNOX CITY COUNCIL

CHAINMESH FENCE FOR OVALS

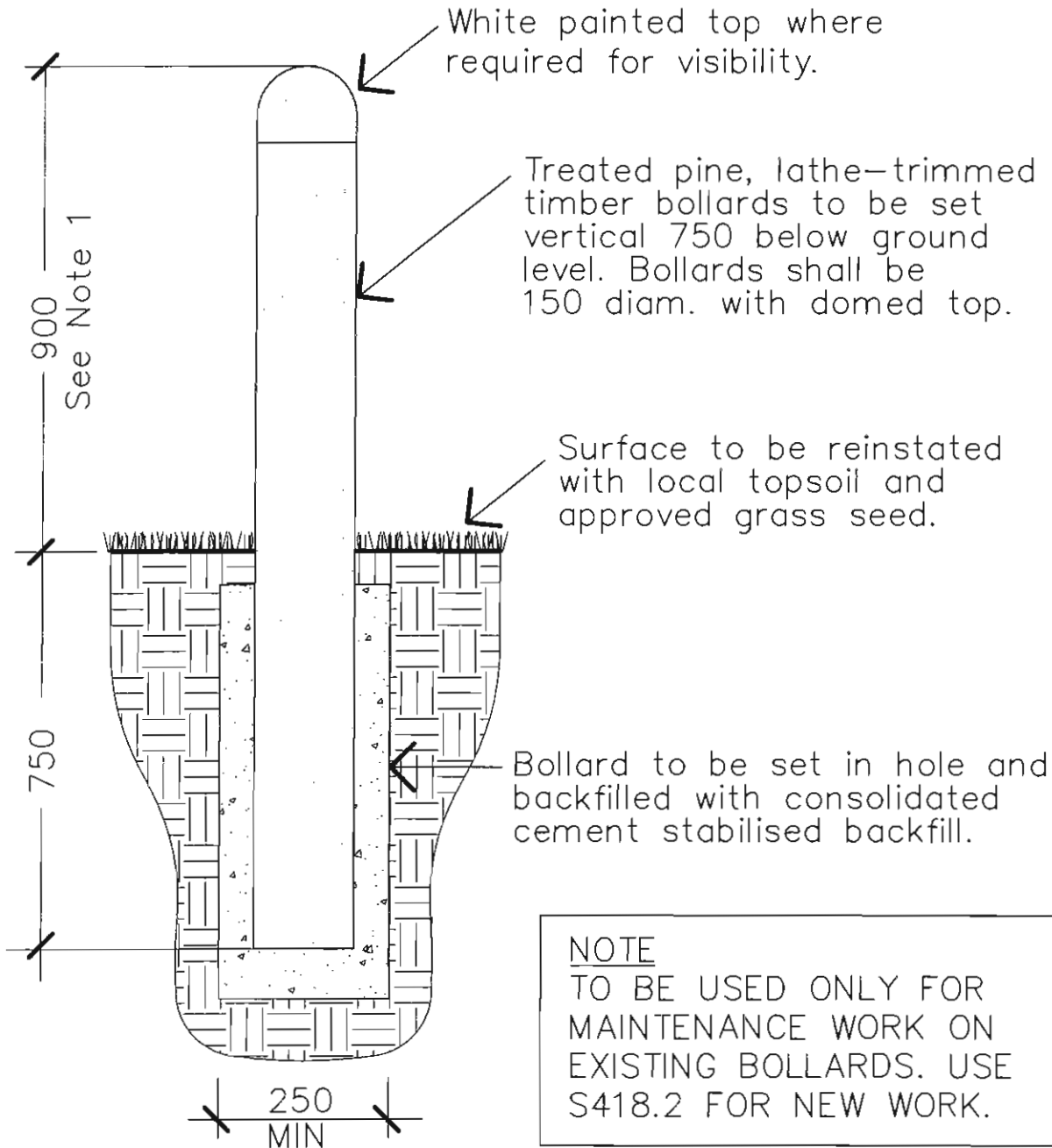
DATE
1-8-2001

REVISION

CAD FILE NAME
S 417.1

NOTES

1. Bollard height of 900 shall be used adjacent to vehicle parking areas. Height may be reduced to 750 with the approval of the superintendent where visual or architectural considerations prevail.
2. Bollards shall be set at a maximum of 1.5 metre centres where prevention of vehicular access is required. Spacing may be increased with the approval of the superintendent in other situations.



NOTE
 TO BE USED ONLY FOR MAINTENANCE WORK ON EXISTING BOLLARDS. USE S418.2 FOR NEW WORK.

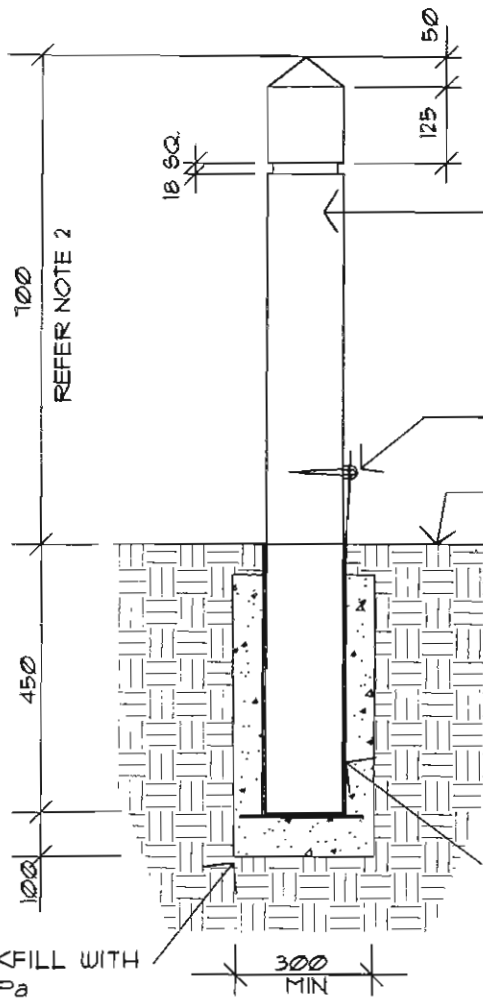
WHERE BOLLARDS ARE SPECIFIED ADJACENT TO ROADS, ADVICE SHALL BE OBTAINED FROM COUNCIL'S TRAFFIC ENGINEERING DEPARTMENT REGARDING APPROPRIATE CLEAR ZONES.

CHECKED
Jan Stacey
 APPROVED
R Ward
 SCALE
 N.T.S.

KNOX CITY COUNCIL

TREATED PINE BOLLARD
 FOR VEHICLE CONTROL

DATE
 21-06-04
 REVISION
 A
 CAD FILE NAME
 S 418.1



PROVIDE RECESS WHERE REFLECTORS ARE REQUIRED (REFER TO NOTE 3).

REMOVABLE PLASTIC BOLLARD
1150 LONG X 125 SQUARE.
COLOUR: BLACK

FIXED PLASTIC BOLLARD
1300 LONG X 125 SQUARE.
COLOUR: BLACK

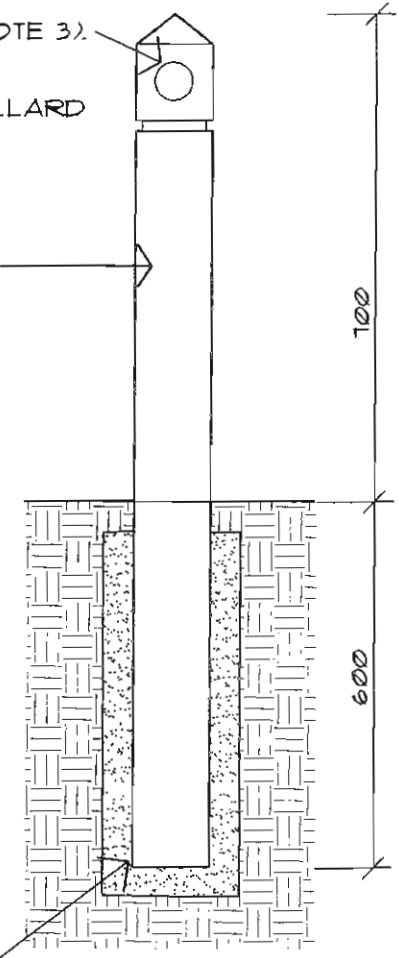
75X9 DIAM. EYE BOLT
FOR PADLOCK. DRILL
POST TO RECEIVE
EYE BOLT.

CUT PATH OR SURFACE
TO ACCOMODATE
BOLLARD OR SLEEVE.
REINSTATE SURFACE TO
MATCH EXISTING.

GALVANISED STEEL
SLEEVE. REFER TO
DETAIL BELOW.

BACKFILL WITH
25 MPa
CONCRETE

300
MIN



BACKFILL WITH CEMENT STABILISED
CONSOLIDATED BACKFILL.

REMOVABLE BOLLARD

NOTES

1. THE 'KNOX BOLLARD' IS SUPPLIED BY REPEAT PRODUCTS (8790 8888) OR SIMILAR APPROVED SUPPLIER. OTHER COLORS AND SPECIFICATIONS (eg WHITE MAY BE REQUIRED BY THE SUPERINTENDENT FOR TRAFFIC LOCATIONS) ARE ONLY AVAILABLE BY SPECIAL ORDER

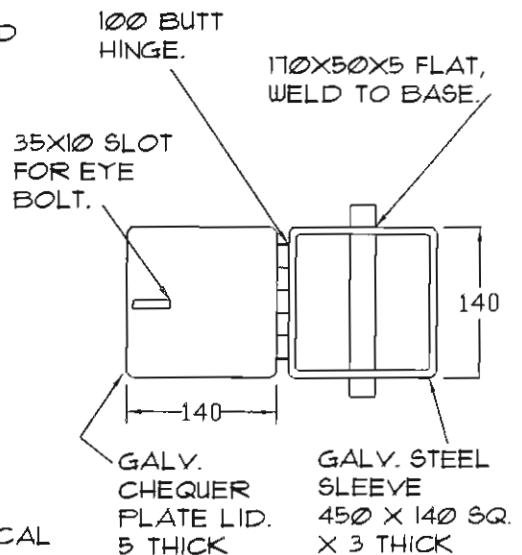
2. BOLLARD HEIGHT OF 900 SHALL BE USED ADJACENT TO VEHICLE PARKING AREAS. HEIGHT MAY BE REDUCED TO 700 WITH THE APPROVAL OF THE SUPERINTENDENT WHERE VISUAL OR ARCHITECTURAL CONSIDERATIONS PREVAIL.

3. BOLLARDS SHALL BE SET AT A MAXIMUM OF 1.5 METRE CENTRES WHERE PREVENTION OF VEHICULAR ACCESS IS REQUIRED. SPACING MAY BE INCREASED WITH THE APPROVAL OF THE SUPERINTENDENT. REFLECTORS ARE REQUIRED ON ALL BOLLARDS ADJACENT TO ROADS AND SHARED USE PATHS AND TOP 300 OF BOLLARD TO BE PAINTED WITH WHITE REFLECTIVE PAINT. BOLLARDS SHALL BE SET A MINIMUM OF 300 OFFSET FROM FACE TO EDGE OF ANY PATH.

4. GRASS REINSTATEMENT SHALL BE COMPLETED USING LOCAL TOPSOIL AND SEED APPROVED BY THE SUPERINTENDENT.

5. WHERE BOLLARDS ARE SPECIFIED ADJACENT TO ROADS, ADVICE SHALL BE OBTAINED FROM COUNCIL'S TRAFFIC ENGINEERING DEPARTMENT REGARDING APPROPRIATE CLEAR ZONES.

FIXED BOLLARD



SLEEVE DETAIL PLAN

CHECKED
J. D. Stacey
APPROVED
K. Ward
SCALE
N.T.S.

KNOX CITY COUNCIL

RECYCLED PLASTIC BOLLARD

DATE
21-06-2004
REVISION
CAD FILE NAME
S 418.2