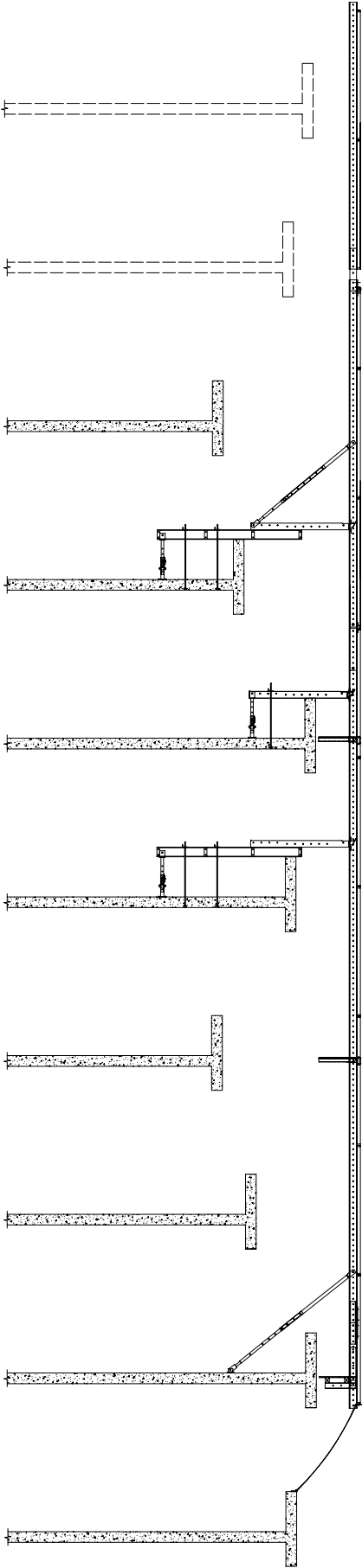
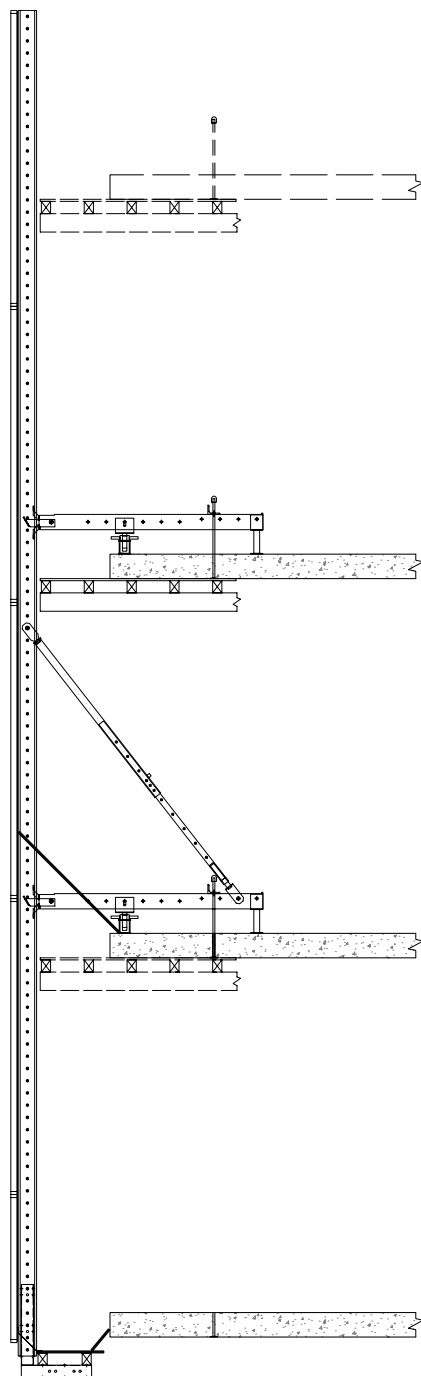


VARYING PROFILES



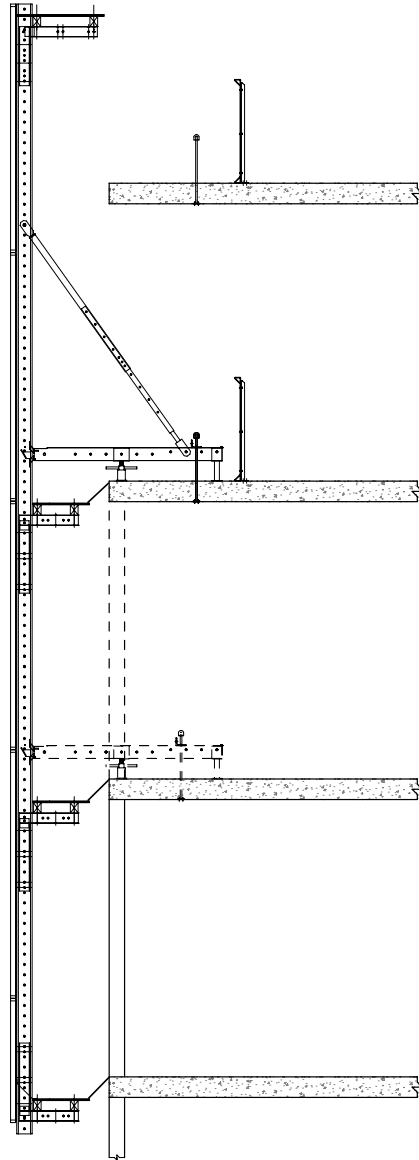




THREE LEVEL SCREEN SYSTEM



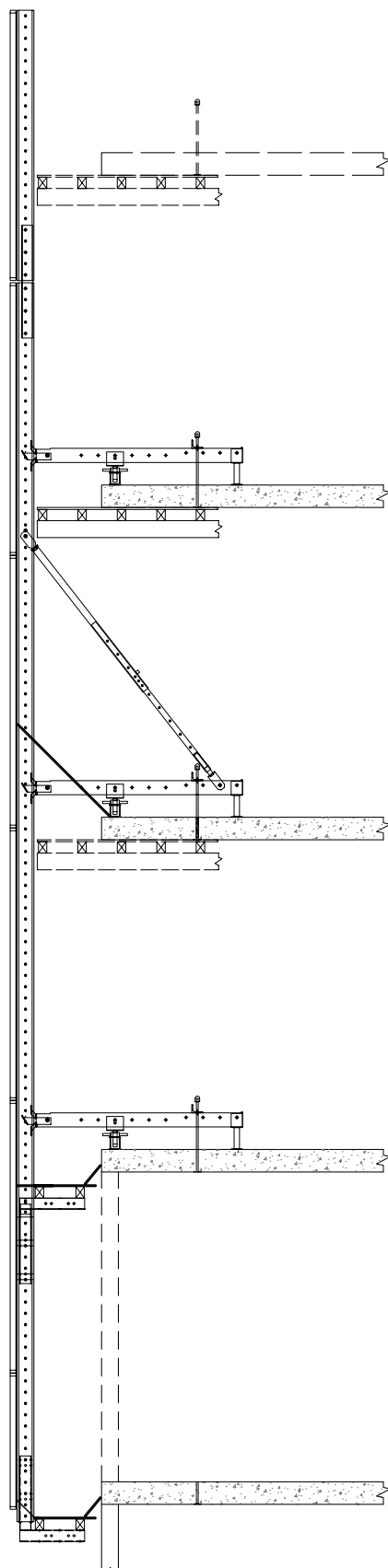




## FINISHING TRADES SECONDARY SCREENS





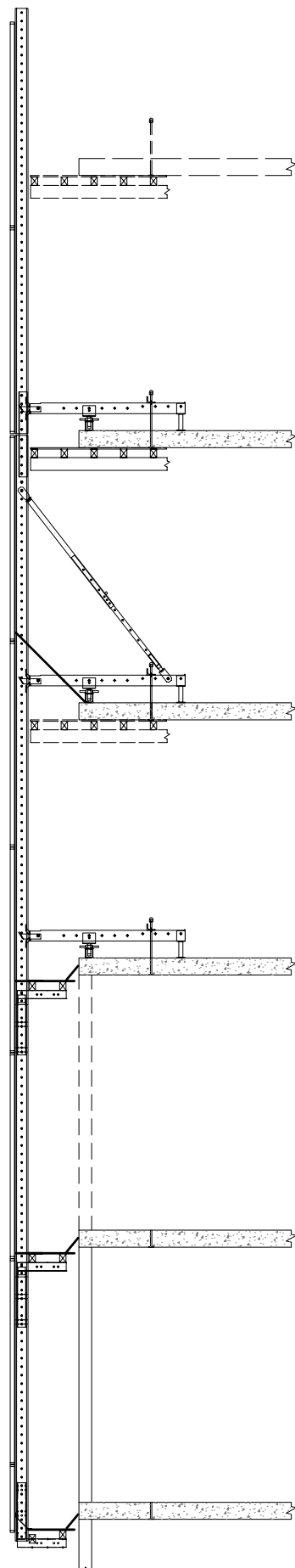


FOUR LEVEL SCREEN SYSTEM





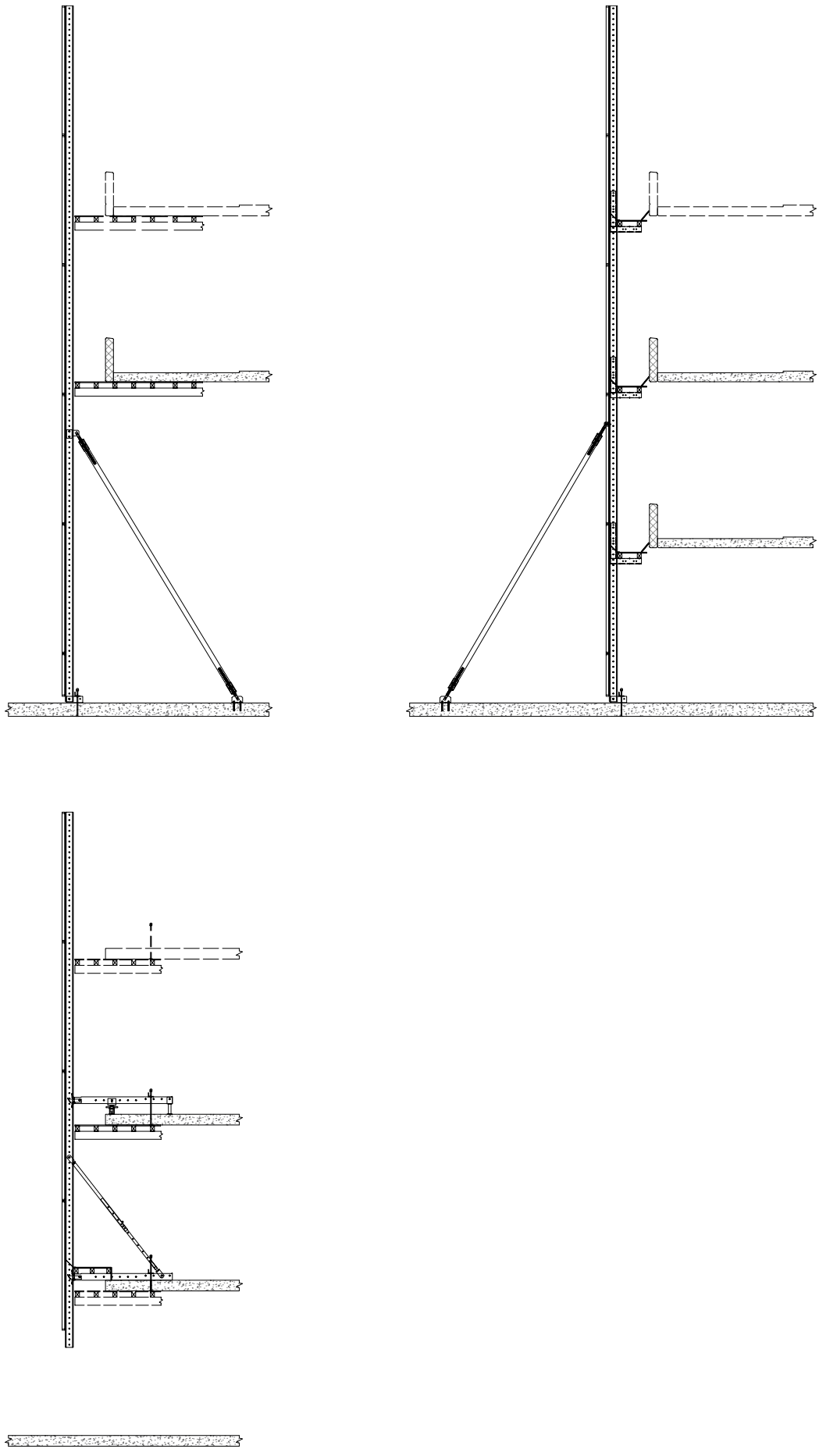




FIVE LEVEL SCREEN SYSTEM



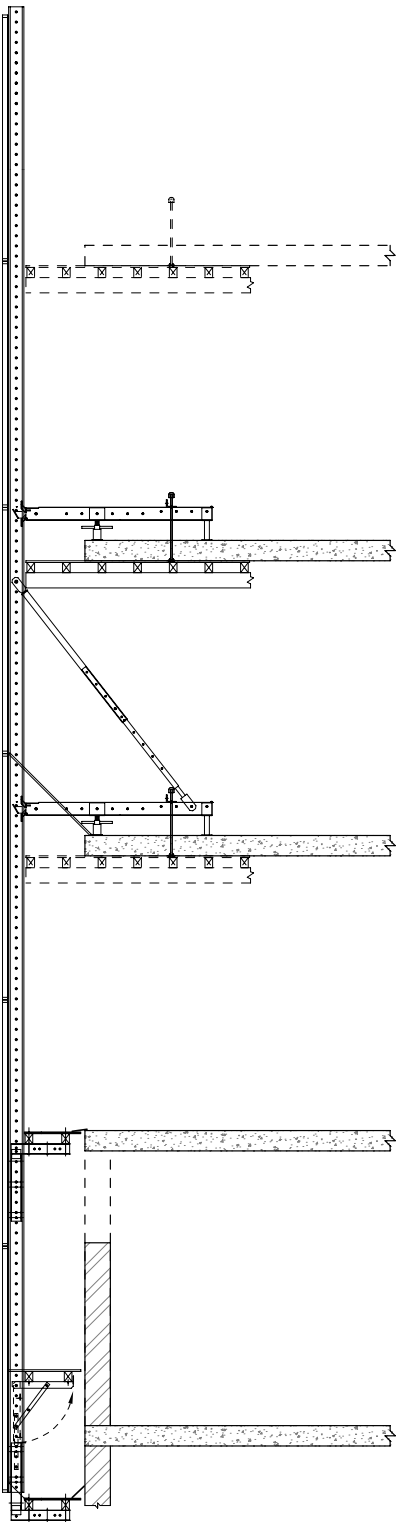




LOW RISE STATIC SCREENS



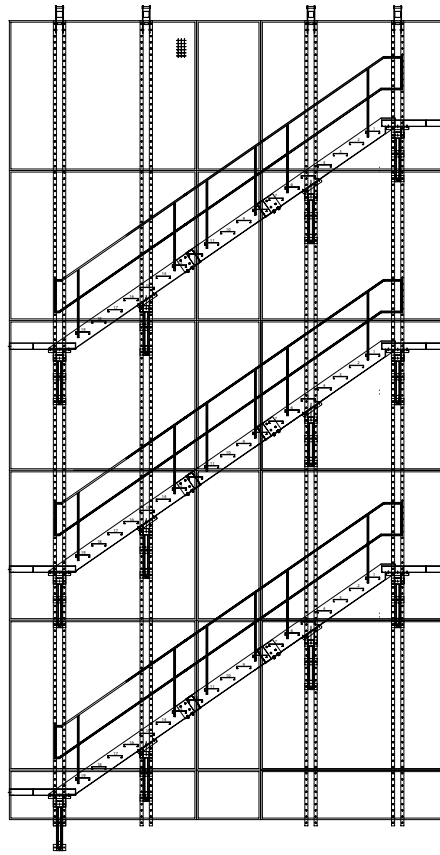
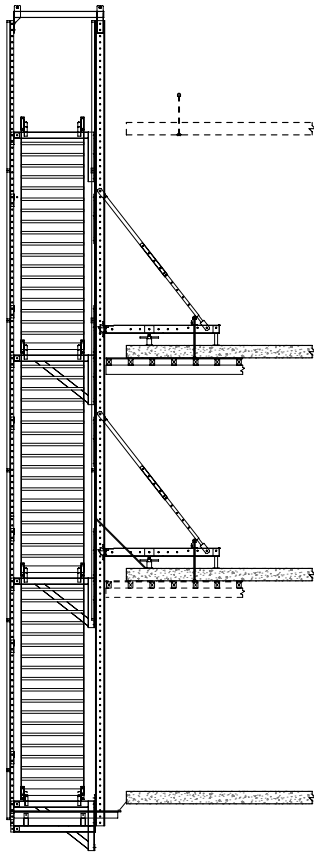




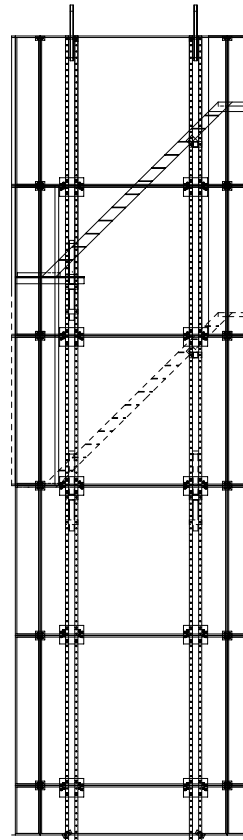
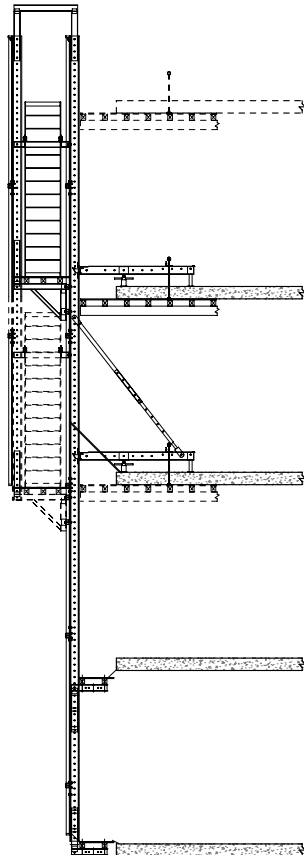
BRICKWORK SCREENS







THREE LEVEL STRETCHER STAIRS ACCESS



SINGLE OR TWO LEVEL PERSONNEL STAIR ACCESS

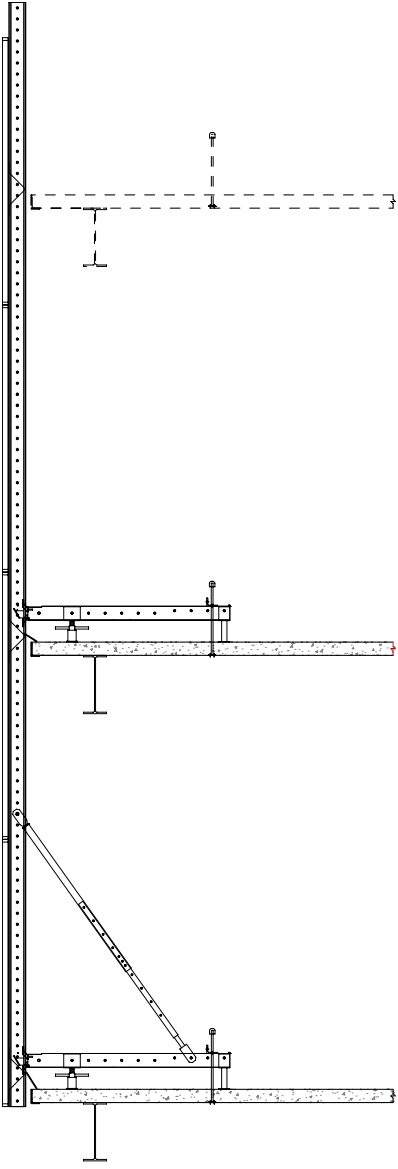


**STRETCHER STAIRS**



**TWO LEVEL PERSONNEL STAIR ACCESS**



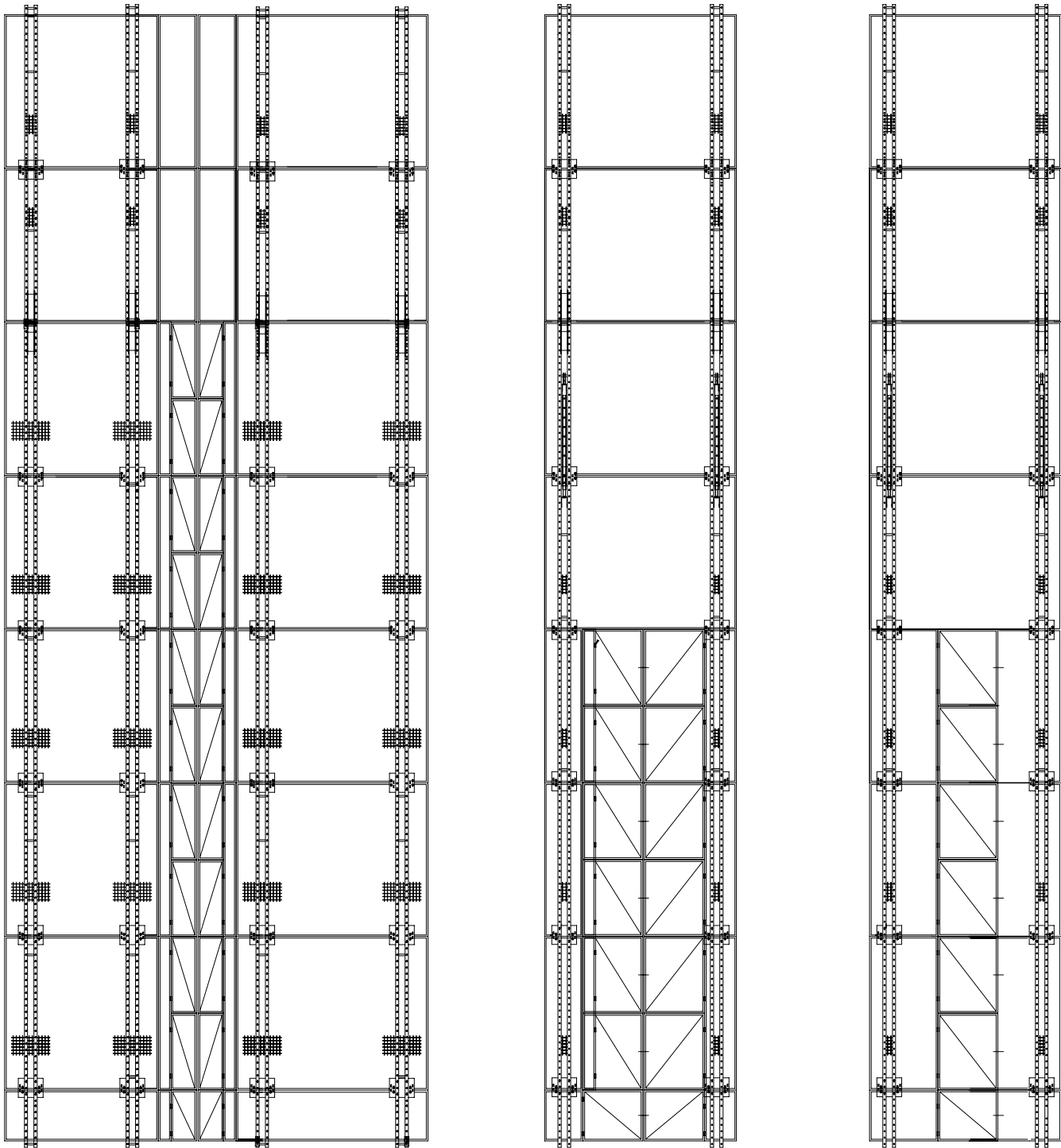


STRUCTURAL STEEL CONSTRUCTION



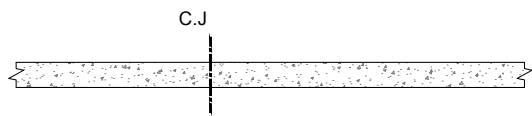
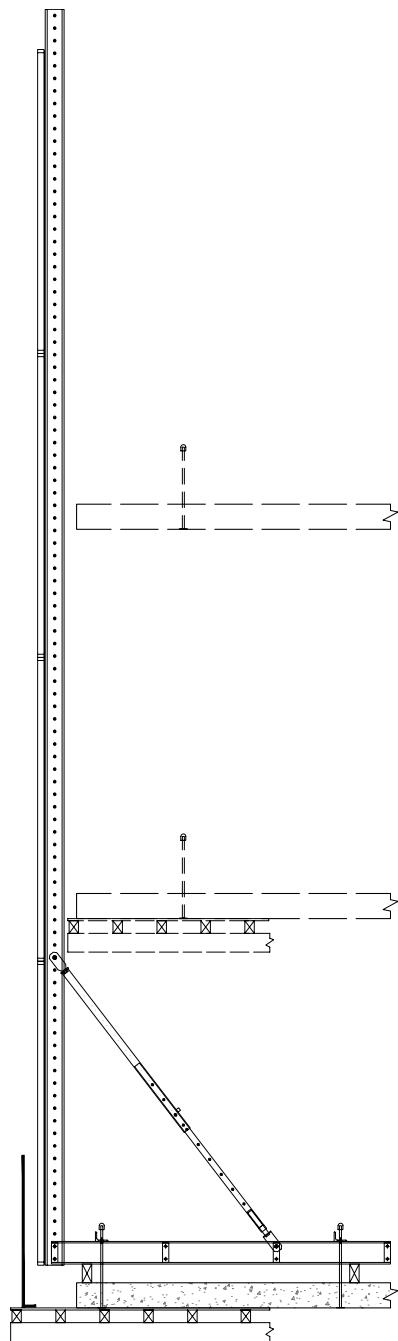
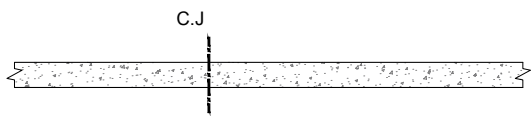
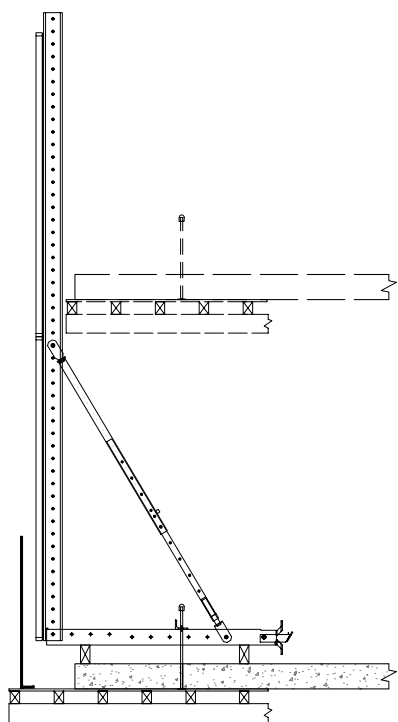


CRANE TIE AREAS





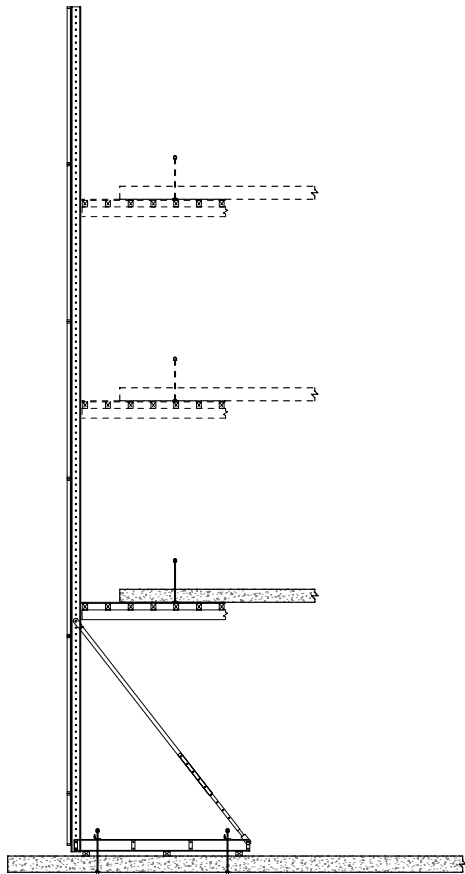
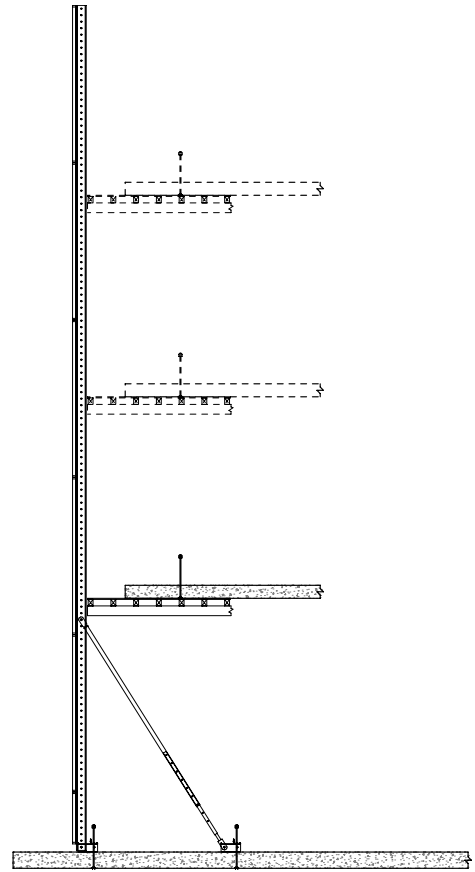
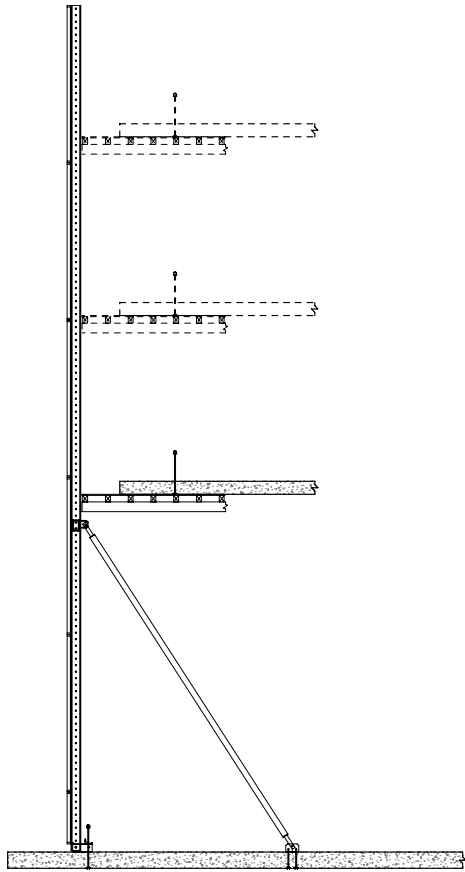




## CONSTRUCTION JOINT SCREENS



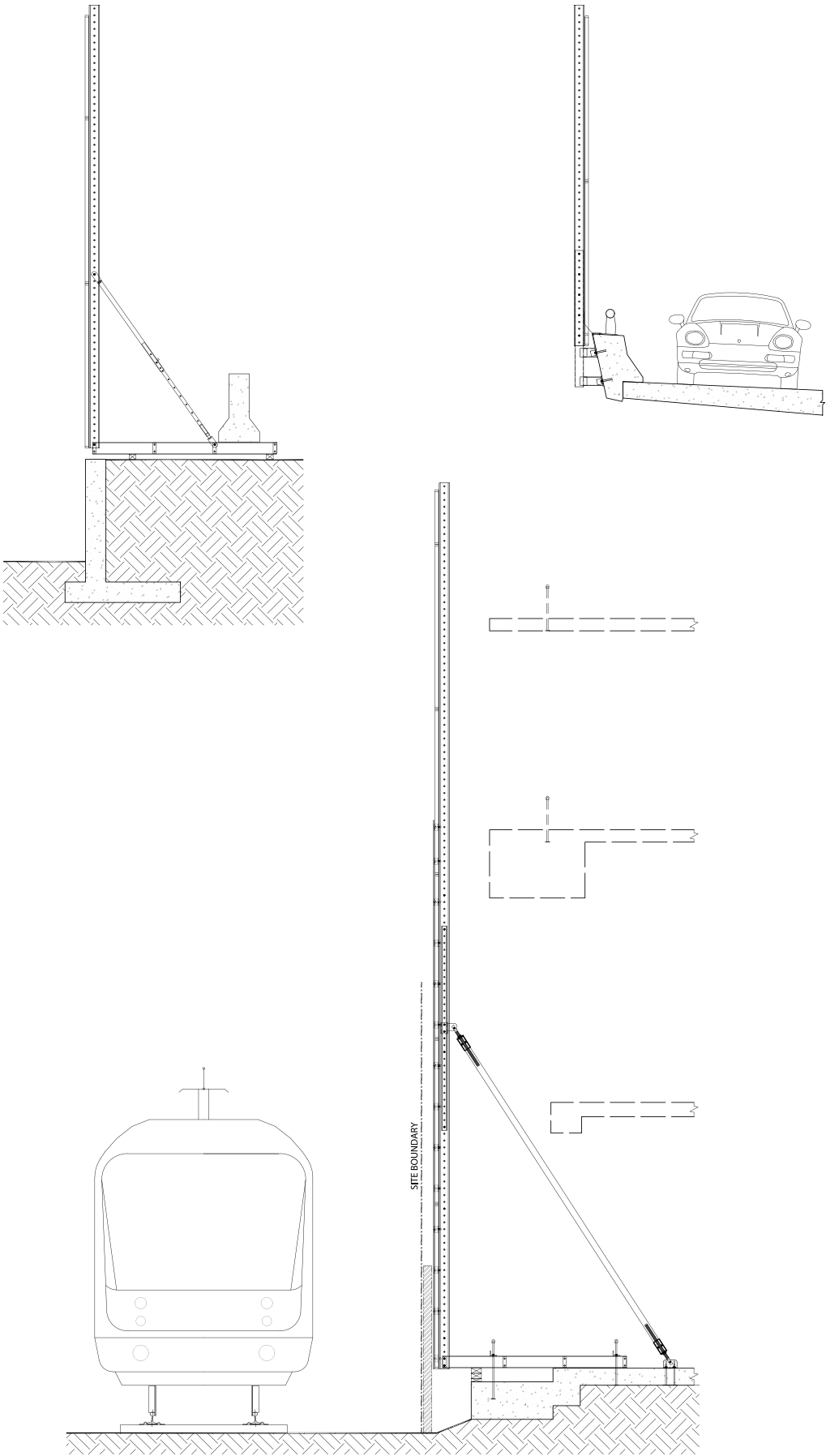




INITIAL SITE ERECTION OFF GROUND  
(LOADS PERMITTING)







BRIDGES/ROADWORK/TRAIN STATIONS







#### BUILDING EXTENSIONS;

- COMMERCIAL
- SHOPPING CENTRES
- RESIDENTIAL
- CAR PARKS







FAN SCREENS  
FOR MINOR DEBRIS ONLY







**TRANSPORTING**



**UNLOADING/LIFTING**



**SITE STORAGE**



**NEEDLE DELIVERY & REMOVAL**

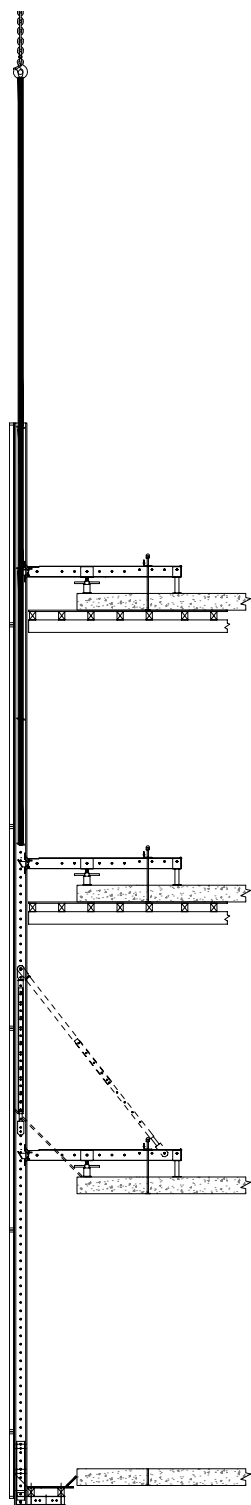


**GAP  
CLOSURE**

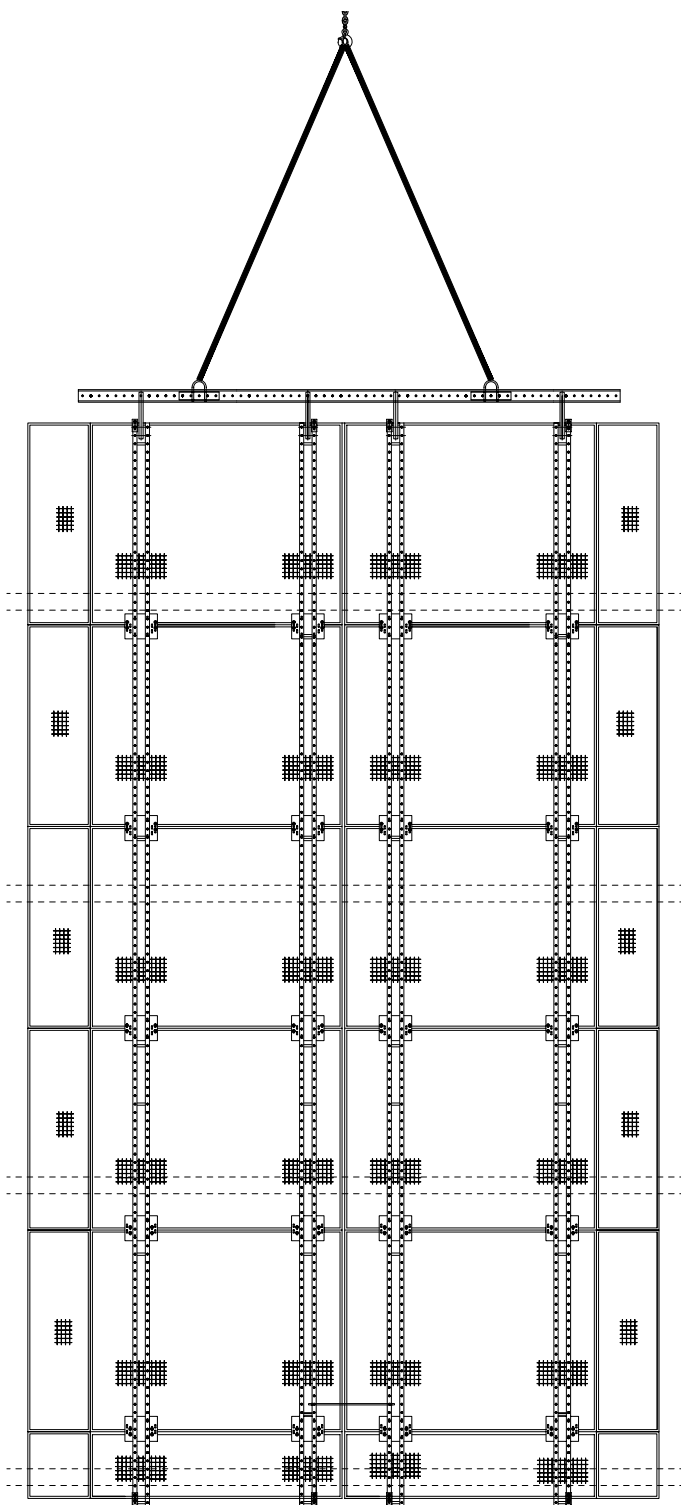
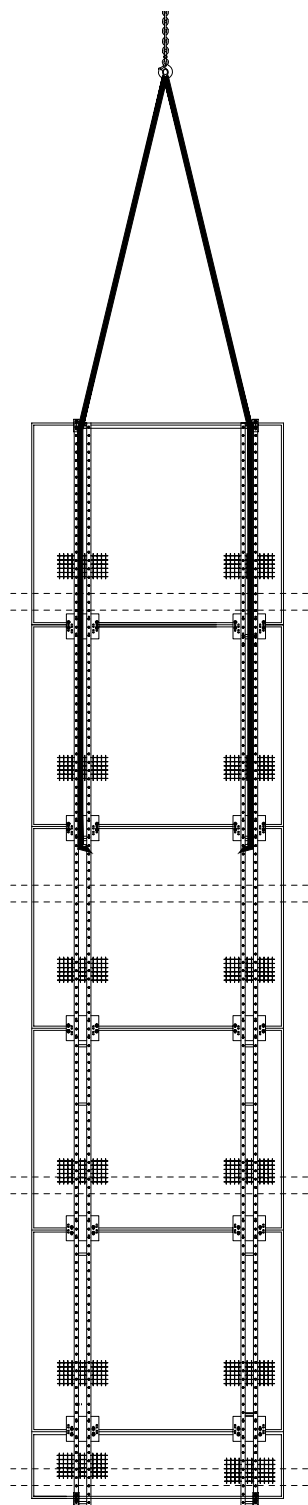


# LIFTING

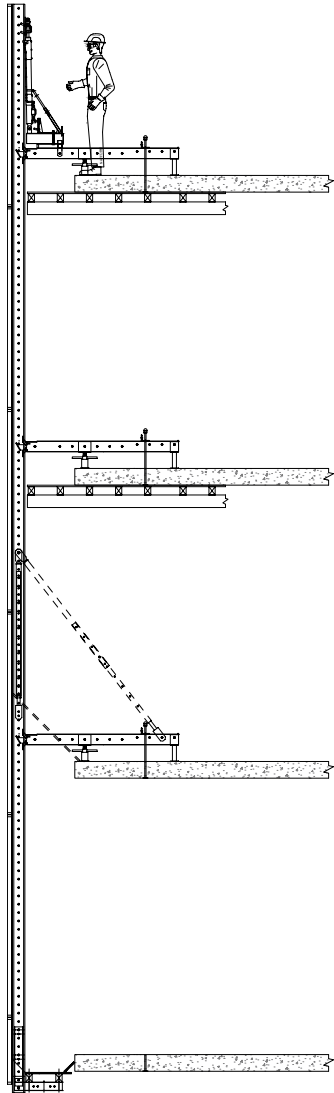




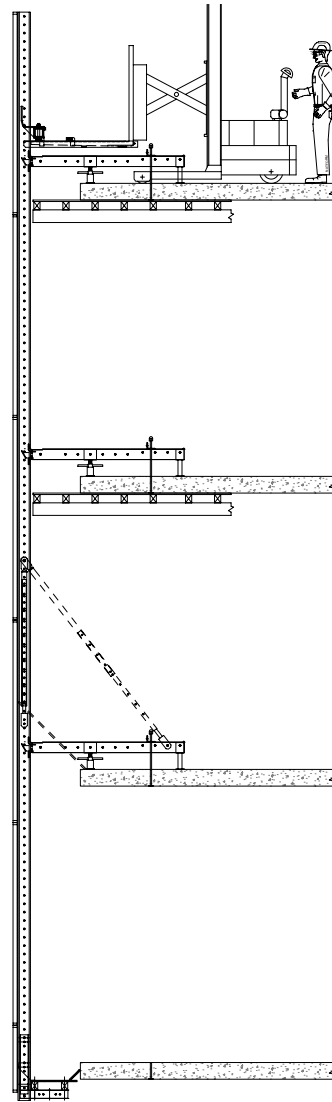
SOFT SLINGS USED FOR  
SCREEN ERECTION AND  
CLIMBING



SCREENS GANGED TO  
REDUCE HOOK TIME ON  
CRANE



SCREEN CLIMBING BY  
MEANS OF HYDRAULIC  
RAMS. HYDRAULIC  
RAMS MAY BE LOCATED  
AT LEVEL BELOW THAT  
SHOWN



SCREEN CLIMBING BY  
MEANS OF PEDESTRIAN  
FORKLIFT





# SCREEN SYSTEM COMPONENTS



back prop outer - 400 H



back prop outer - 500 H



back prop inner - 500 H



back prop inner - 700 H



jack



stand



holding down bolt - flat plate



holding down bolt - bent plate



folding platform bkt - 550



folding platform bkt - 750



hop-up



wall needle bkt



550 platform bkt



750 platform bkt



750 platform bkt extension



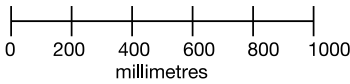
screen plate stand



screen plate 100 offset



soldier rubber



restraint



prop - short



kickplate



prop - standard



needle - 460 lg



needle - 915 lg



needle - 1330 lg



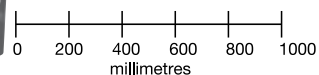
needle std - 1830 lg



channel needle



prop - long





R-clip



screen clip



spacer



U-bolt



U-bolt plate



saddle - std



saddle - long



soldier/prop bkt



soldier/prop shoe



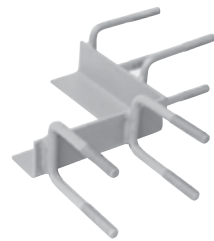
prop bkt



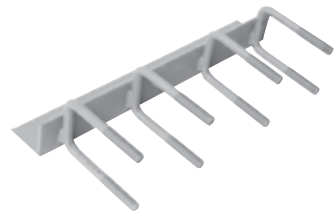
U-clamp



90° ext wing bkt



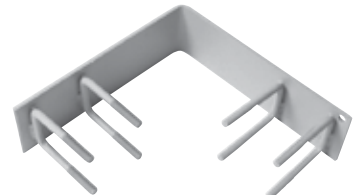
straight wing bkt



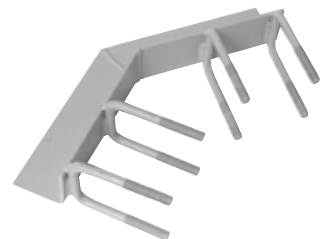
90° int wing bkt/angle



90° int wing bkt/plate



135° int wing bkt





channel soldier  
splice



angle soldier  
splice



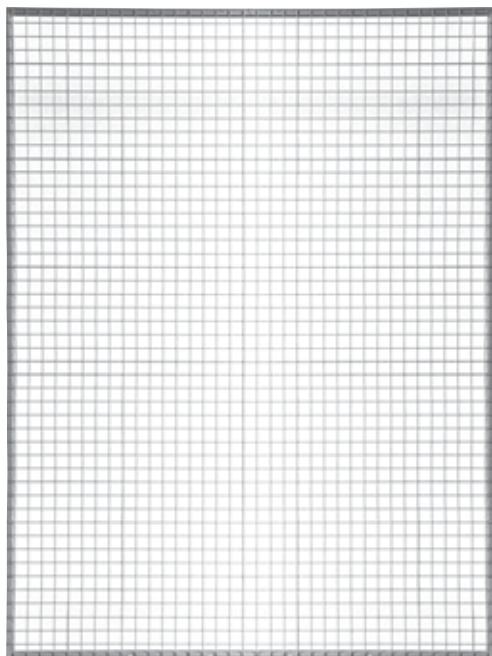
extension post



fixed wall bkt



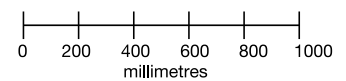
screen soldier



mesh panel



storage box







## GENERAL INFORMATION REQUIRED FOR SCREEN SYSTEM DESIGN

- Drawings to be supplied in pdf and AutoCAD formats.
- All approved drawings reflecting structural concrete dimensions together with any "changeovers", penetrations, set downs etc.
- Relevant levels, depths of slabs and edge beams (i.e. sections).
- Stressing positions and jack clearance requirements (normally 750mm clearance from slab edge to screen mesh).
- Location(s) of adjoining building(s) and hoarding(s) together with their relative height(s).
- External or internal formwork hoist(s) position(s) and exact profiles with clearances required.
- Men and material hoist(s) location(s) and exact profiles with clearances required.
- Construction Joint(s) and sequence of pouring.
- Loading platform(s) size(s) & position(s).
- Crane(s) location(s) and capacity.
- Crane(s) ties location(s) and levels.
- Area(s) of difficult craneage access for screens erection and dismantling.
- Columns free area(s) for screen assembly.





## **SCREEN SYSTEM RELATED WORK CARRIED OUT ON SITE BY CLIENT/CONTRACTOR**

1. Unload semi-trailers.
2. Fix wings to screens.
3. Supply timber & ply for platforms and ply flaps.
4. Fabricate platforms & fit screens, cut metal sheeting kickplates to size and fit to platforms (ignore if platforms not required).
5. Fit ply flaps to screens, provide fixings for flaps.
6. Fit jacks and stands to needles.
7. Set-out and fix holding down bolts to formwork deck.
8. Fix needles to concrete.
9. Erect & plumb screens, close off gaps between screen platforms and other areas as required.
10. Provide edge protection where formwork is stripped at initial erection stage prior to climbing screens to typical position.
11. Climb screens, relocate needles & fixings from floor to floor re-use.
12. Cut off redundant anchors.
13. Relocate props from initial erection position to typical position, also through non-typical floors and final climb.
14. Dismantle platforms and wings, stack materials in boxes or on pallets, strap wings, needles etc.
15. Remove screens off the building.
16. Supply support chairs to underside of Holding Down Bolts if required.
17. Supply bar caps to Holding Down Bolts if required.

### **YOU WILL NEED:**

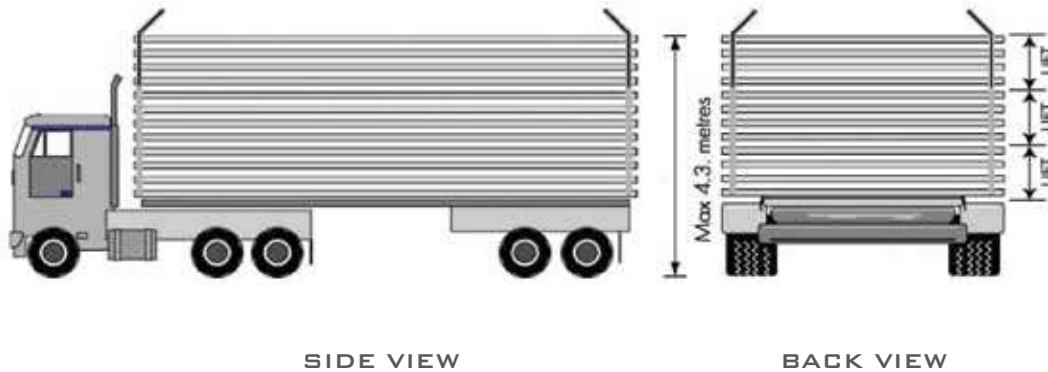
- Extension leads and power
- 1 x Impact Wrench
- 1 x 18mm Deep Socket for M12 Nut
- 1 x Ratchet – 10" handle, 1/2" Drive
- 1 x 24mm Deep Socket for M16 Nut
- Tape Measure, Marking Crayon, Spirit Level
- Tube Spanner – made ex 24mm 1/2" Drive Socket – 300mm long



# METHOD STATEMENT

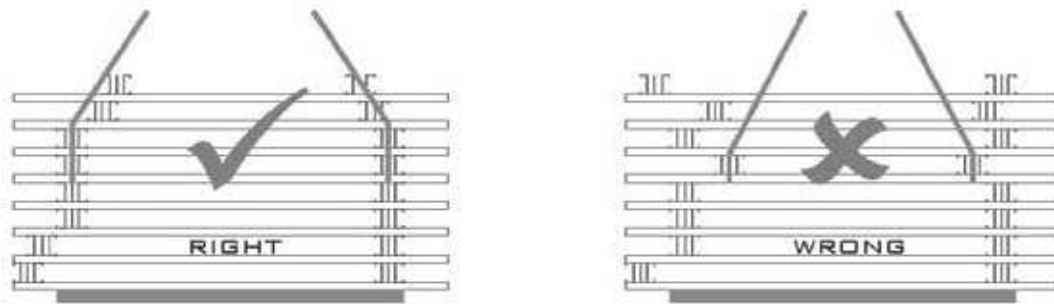


## MAKING UNLOADING SAFE



## THE RIGHTS AND WRONGS OF SCREEN LOADING

- SCREEN LIFTING SPACERS MUST BE SECURELY FIXED PRIOR TO LIFTING.



- 12 METRE LONG CHAINS MUST BE CONNECTED TO LIFTING SPACERS AT THE ENDS OF THE BOTTOM SCREEN SOLDIERS.
- DO NOT SLING AROUND LOAD.
- CRANE MUST HAVE ADEQUATE LIFTING CAPACITY.
- LONGER SCREENS TO BE LOADED AT THE BOTTOM OF THE SEMITRAILER.
- UNLOAD LIKE SIZED (LENGTH) BUNDLES ONLY WHEN LIFTING LOAD.

NO. OF SCREENS LIFTED AT ONE TIME STD WIDTH - 3 METRES	SCREEN LENGTH	MASS TOTAL
MAX FIVE (5)	10 METRES	3200 KG
MAX FOUR (4)	13 METRES	3200 KG

- \* Sketch is schematic only.
- Screen quantities, sizes and soldiers offset vary for each load

# INSTALLING A SCREEN SYSTEM WITHOUT PLATFORMS

## PREPARATION WORK

1. Tape off areas where screen erection is to occur and remove handrails as necessary.
2. Locate needles between the previously cast-in holding down bolts and secure them into position, using saddles and nuts. Ensure that the rear of the needles are at the required offsets and the fronts (toes) are at the same level. Use a straight piece of timber and along spirit level to carry this out.
3. Follow this procedure for all needles.

## INSTALLATION

1. With screen lying flat, attach wing panels to main screen assembly using brackets and fasteners. *Use an impact wrench to save time.*
2. Check that props and support spacers are located in required positions and prop inners are fixed to prop outers by means of pin and R-clip. Ensure that props will be hanging down during lifting.
3. **Thread slings between topmost lifting spacers and mesh panel**, then attach to lifting points just above props (*max. screen mass 1000kg*).
4. Using crane, lift screen slowly to vertical, then lower into relevant needles. While lowering, restrain “toes” of the needles back to vertical.
5. Swing props out to concrete slab before soldier support spacers rest on relevant “toes”.
6. Fix ends of props to needles using pins and R-clips.
7. Fit prop outers to inners with connecting pins and install R-clips.
8. Using jacks and props, plumb screen in both directions.
9. Check all connections for soundness then release weight off crane.
10. Remove crane lifting hooks, then slowly withdraw upwards until clear of soldiers.
11. Close off any gaps as required.
12. Follow this procedure for all screens.
13. At the time of platform attachment (if required), ply and timber must be bolted to the platform brackets as detailed on section drawings.

## INSTALLING A SCREEN SYSTEM WITH PLATFORMS

### PREPARATION WORK

1. Tape off areas where screen erection is to occur and remove handrails as necessary.
2. Position needles, saddles and nuts at holding down bolts locations. **Do not fix to concrete.**

### INSTALLATION

1. With screen lying flat, attach wing panels to main screen assembly using brackets and fasteners. *Use an impact wrench to save time.*
2. Fix assembled platforms to screens. Ply and timber to be bolted to the platform bracket as shown on section drawings.
3. Check that props and support spacers are located in required positions and that prop inners are fixed to prop outers by means of pins and R-clips. Ensure that props will be hanging down during lifting.
4. **Thread slings between topmost lifting spacers and mesh panel**, then attach to lifting points just above props (*max. screen mass 1000kg*).
5. Using crane, lift screen slowly to vertical.
6. Lower to relevant level. Swing props out to concrete slab.
7. With screen hanging opposite, rotate and engage needles to soldiers.
8. Lower needles between holding down bolts and fix to concrete at required offset.
9. Rest soldier support spacers on “toes” of needles.
10. Using pins and R-clips, fix ends of props to needles.
11. Fit prop outers to inners with connecting pins and R-clips.
12. Using jacks and props, plumb screen in both directions.
13. Check all connections for soundness then release weight totally off crane.
14. Remove crane lifting hooks, then slowly withdraw slings upwards until clear of soldiers.
15. Close off any gaps as required.
16. Follow this procedure for all screens.



## LIFTING A SCREEN SYSTEM

### STAGE 1

1. Check that all work requiring screens is completed.
2. Sweep edge of slab and clean all screen platforms of debris and loose items.
3. Install edge protection at the bottom screen platform level.
4. Install needles at the top level with correct offsets.
5. Remove ply flaps, gap covers and restraints.
6. **Attach crane hooks to topmost screen lifting spacers. Do not lift.** Ensure that the line of lifting chains is vertical.
7. Remove pins at prop to needle connections. Collapse props and fold in to hang positions between soldier lipped channels ensuring that inners to outers connecting pins are in positions and locking **R-clips are fitted.**
8. Check for any formwork interference with screen.

### STAGE 2

1. Slowly lift screen to next level, continuously checking for possible snagging.
2. Overclimb by approximately 200mm to allow needle “toes” to drop below support spacers.
3. Lower screen so that support spacers rests on the “toes” of upper needles.

### STAGE 3

1. Swing props out and fix ends of props to needles using pins and R-clips.
2. Fit prop outers to inners with connecting pins and **install R-clips.**
3. Remove lifting hooks and withdraw chains upwards.
4. Using props and jacks, plumb screen in both directions. Check soldier offset at top level.
5. Close off any gaps as required.
6. Remove lowest needles by lifting them clear of holding down bolts, rotate and disengage from soldiers.
7. After concrete pour install needles as in Stage 1.

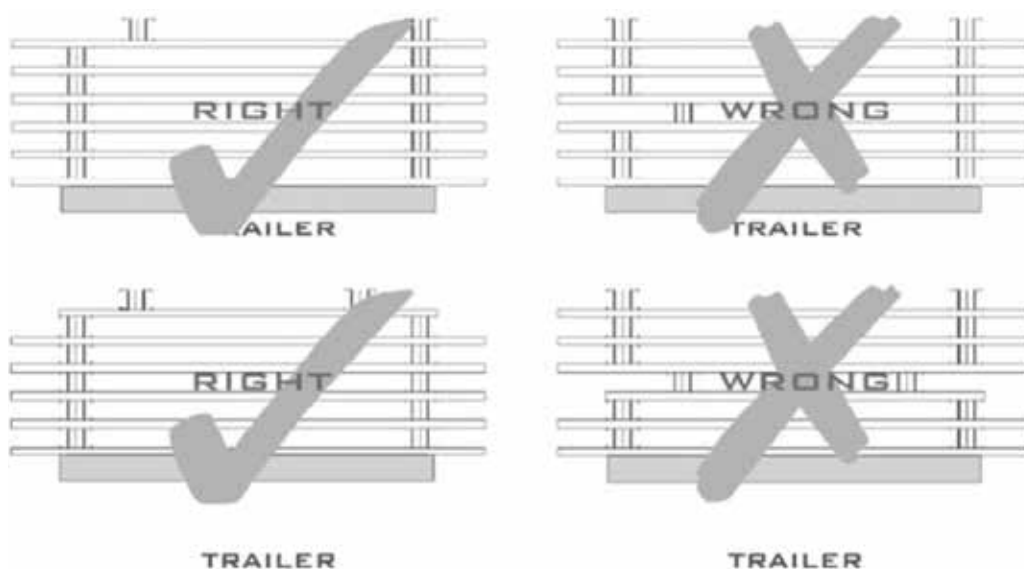
## PRE-SITE DISMANTLING

1. Check that all work requiring screen protection is complete at all affected levels.
2. Ensure that all handrails are fixed in positions at all affected levels.
3. Prepare a screen removal priority list to allow the widest screen to be at the bottom of the load and label screens accordingly.
4. Prepare dismantling areas for laying screens down. *Two such areas required, 6 screens per area, 12 per load (full load) – check local height requirements.*
5. Sweep edges of slab and clean all screen platforms of debris etc.
6. Prepare tools at support needles area.

## SITE DEMOBILISATION

1. Hook up to crane at topmost screen lifting spacers.
2. Take load of screen, **do not lift** but ensure that the line of lifting is vertical and the screen will not swing away when needles are loosened.
3. Remove nuts on saddles over support needles. Place on deck on inside of edge protection.
4. Remove pins at prop to needle connections, collapse props and fold in to hang positions **ensuring that inner to outer connecting pins are in positions and locking R-clips are fitted.**
5. Lift needles clear of holding down bolts, rotate and remove from soldiers. Place needles on inside of edge protection.
6. Slowly lift screen and lay flat onto dismantling area.
7. Remove wings and fixing brackets from main screens.
8. If screens are fitted with platforms, remove platforms then timber and ply from platform brackets, prepare brackets for removal off site.
9. **Reinstall lifting spacers to top and bottom of soldiers.**
10. Lay down screens flat on concrete slab and place them one on top of each other (*max. lifting bundle is four (4) or five (5) screens – refer to table on Page 52*).
11. Lift like sized (length) bundles using 12 metre long chains with hooks attached to lifting spacers at ends of bottom screen soldiers. **Do not sling around bundles.**
12. Load screens on the truck. *Max load height – 4.3 metres from street level.*
13. **Always use straps not chains to secure screens during transport. Ensure that straps are at screen panel junctions.**
14. On completion of main screen removal, collect all miscellaneous items i.e. Needles, brackets, wing panels etc. and prepare for removal off site.

## THE RIGHTS AND WRONGS OF SCREEN LOADING



- Max twelve screens per load.
- To avoid screen damage loads must be strapped, not chained to semi trailer.
- Same length screen bundles to be unloaded and loaded when lifting.
- Materials stacked on top of screen loads to be unloaded independently of screens.

## REMOVAL OF ALL COMPONENTS

**Wings:** to be strapped in bundles of 10 maximum Use timber between bundles.

**Needles:** placed and strapped to pallets after jacks and supports are removed.

**Other items:** i.e. brackets, plates, saddles, jacks, supports etc. – to be placed into site boxes.

Wide loads can only travel in non-peak periods – 10am to 3pm. Travel time ex site to Yard must be allowed for.

### NSW Natform Yard Opening Hours:

07am to 3pm – Monday to Friday

### QLD Natform Yard Opening Hours:

07am to 3pm – Monday to Friday





# JOB SAFETY ANALYSIS

## JOB SAFETY ANALYSIS

	TASK	RISK	RATING	CONTROLS	RESIDUAL RISK
01	UNLOADING ASSEMBLED SCREENS	Falling screens	H	Lifting spacers must be used at both ends. Do not sling around load. Follow Instructions (Page 52).	L
02	WINGS INSTALLATION USING IMPACT WRENCH	Electric shock Hand injuries	H H	Read manufacturer's instructions. Ensure electrical equipment is tagged as per current guidelines	L L
03	NEEDLES INSTALLATION	Back injury	H	Use correct lifting techniques.	L
04	SCREENS INSTALLATION:  <i>General</i>  <i>Lifting</i>  <i>Lowering into position</i>  <i>Prop to needle connection</i>  <i>Lifting using chain / sling</i>	Fall from slab edge  Falling screen Head injuries Jamming fingers  Falling prop inner  Head injury	H  H H H M	Use safety harness and attachments, if required. (Pages 53 & 54). Thread slings between topmost lifting spacers and mesh panel. Ensure props are hanging down. (Pages 53 & 54). Restrain the "toes" of the needles in vertical position. Keep hands clear from front of needles. (Pages 53 & 54). Extend prop by holding out over slab, then use pin and R-clip to connect them. (Pages 53 & 54). Withdraw chains/slugs upwards after disconnection. (Pages 53 & 54).	L  L L L L
05	PLY FLAP INSTALLATION	Falling ply	H	Exercise care.	L
06	PLATFORM INSTALLATION	Falling from height	H	Exercise care.	L
07	SCREENS IN POSITION	Falling screens  Falling debris  Overloading platform  Falling objects	H  H H H	Needles must be securely fixed to concrete, check all connections for soundness. Keep platforms clean by sweeping regularly. Close all gaps at bottom platform. Install maximum load limit signage and do not exceed that specified. No stacking or leaning of any objects against screens.	L  L L M

	TASK	RISK	RATING	CONTROLS	RESIDUAL RISK
07	SCREENS IN POSITION (CONTINUED)	Falling through platform  Body injury	H  H	Timber and ply must conform to grade specified and be in good condition. Check ply to timber and timber to bracket connections for soundness. Be vigilant and wear protective clothing when handling wire, steel and rough timber. (Page 55).	L  L
08	SCREENS LIFTING	Falling debris  Falling prop inner  Snagging	H  H  H	Sweep all platforms clean before lifting. (Page 55).  Pin and R-clip must be used to connect prop inners to prop outers. (Page 55). Maintain visual contact and remove any obstacles. (Page 55).	  L  L
09	REMOVAL OF SCREEN SYSTEM FROM BUILDING PERIMETER: <i>General</i>  <i>Stacking screens</i>  <i>Loading</i>  <i>Removal</i>  <i>Transporting screens</i>	Falling debris  Falling prop inner  Falling from slab edge  Unbalanced stack  Falling screens  Falling screens  Falling screens	H  H  H  H  H  H	Sweep all platforms clean and carefully remove all ply flaps.  Collapse prop when holding out over slab, then use pin and R-Clips to connect them. (Page 56). Use safety harness and attachments if required. Ensure lifting points have been reinstalled and used. (Page 56). Follow Natform handbook samples. (Pages 52 & 56)).  Lifting spacers must be used at both ends. (Pages 52 & 56)  Follow Natform handbook – demobilisation, samples, removal. (Pages 52 and 56). Strap load securely at mesh panel junctions.	L  L  L  L  L  L
10	CUTTING OFF REDUNDANT HOLDING DOWN BOLTS	Foreign object in eye Electric Shock Body Injury	H H H	Use safety goggles. Ensure electrical equipment is tagged as per current guidelines. Exercise care during cutting operation.	L L L





# LIST OF PROJECTS

## LIST OF PROJECTS

PROJECT	BUILDER	PROJECT	BUILDER
Southern Hotel, Drlg Hbr.	Multiplex	Centra Hotel, Mascot	A.W. Edwards
130 Elizabeth St, Syd	Amacon	74 Castlereagh St, Syd	CCL
210 Clarence St, Syd	CCL	400 Kent St, Syd	Condux
Syd Central, Hymrkt	Holland Stolte	Great West Hwy, Pmta	Meriton
Piccadilly Plaza, Syd	Multiplex	65 Epping Rd, Epp	Triden
16-24 Elsie St, Bur	Triden	Chtswd Tel Excha	CCL
ANA Hotel, Circ Qy	C&C	160 Sussex St, Syd	BHL
ATO, Bnkstwn	Jennings	Carrington St, Syd	Multiplex
45 Clarence St, Syd	Mirvac	Grace Bros. Chtswd	Westfield
400 Pitt St, Syd	Meriton	Family Law Court, Syd	BHL
NSW Uni, Carpark, Rndwk	A.W. Edwards	Metroplaza, Nth Syd	Multiplex
330-370 Wattle St, Ult	Meriton	Anzac Bridge, Glebe	BHL
301-303 Anzac Pde, Kngsfd	Meriton	Meeks St, Kngsfd	Meriton
William Henry St. Ult	Meriton	Market City, Hymrkt	Multiplex
Baiyoke II, Bang, Thail	CCL Thailand	ATO, Wllng	B+B
ATO, Hstvie	B+B	York Park, Cnbra	CCL
Ibis Hotel, Drlg Hbr	Multiplex	Northern Hotel, Drlg Hbr	Multiplex
Port Jackson Tower, Mlsns Pt	CCL	304-308 Pitt St, Syd	Meriton
Westfield Chtswd Ext	Westfield	Westfield Pmta Ext	Westfield
Hyde Park Tower, Hyde Prk	CCL	Sun Alliance, Chtswd	CCL
Montgomery Ave, Main Bh Qld.	Meriton	616 Pacific Hwy, Rckdle	Meriton
Westmead Hosp Car Park Ext	Leighton	City West Centre, Pymnt	A.W. Edwards
Herbert St, St Lnrds	Meriton	NSW Uni Car Park, Kngsgtn	C&C
Royal Women's Hosp, Rndwk	CCL	261 Harris St, Pymnt	CCL
224-232 Sussex St, Syd	Meriton	473 Pacific Hwy, Artrm	Meriton
107 Pacific Hwy. Hnsby	Meriton	Syd Casino	Leighton
Kirra St, Mrnda	Meriton	Radio Tower - 3rd Runway	Leighton
Observatory Tower, Syd	BHL & B+B	Willcock Ave, Mrnda	Meriton
Chtswd Chase, Chtswd	Multiplex	Hughes Ave, Main Bh, Qld.	Meriton
"Chatsworth", Victor St, Chtswd	Mirvac	Glen St. Mlsns Pt	Walker
Bunn & Murray Sts. Pymnt	Meriton	20 Hunter St, Syd	CCL
Prima Tower, Syd	BHL	Prince of Wales Hosp - Ext	Thiess
Network Ten, Pymnt	A.W. Edwards	347 Kent St, Syd	BHL
Southern Cross Tower	Abigroup	Shopping Centre, Rckdle	City Freehold
Charlestown Car Park - Ext	C&C	Pitt & Castlereagh Sts, Syd	Meriton
"The Elan", Kngs Crs	CCL	Canterbury Hosp, Cntrbry	CCL
Campbell St, Sry Hls	St. Hilliers	Russell Re-develop, Cnbra	C&C
Sussex & Day Sts, Syd	Meriton	OSW World Sq	CCL
2 Bulletin Place, Syd	Multiplex	"The Horizon", Drlghst	Grocon
Stafford Ave, Main Bh	Meriton	400 George St, Syd	Grocon
"Forum", St Lnrds	CCL	Landmark Centre, Syd	Multiplex
60 Castlereagh St, Syd	CCL	Chelsea Apts, Chtswd	Multiplex
Macquarie Uni, Mcqrie	BHL	Campbell St, Tower	Meriton
Exchange Centre, Syd	BHL	Rockwell Grdns, Potts Pt	Kell & Rigby
Pacific Waves, Manly	Barclay Mowlem	102 Miller St, Pymnt	Meriton
Rshct Bay Hotel, Rshct Bay	Multiplex	Hbrside Grdns, Darl Harb	Abigroup
Multi Use Arena, Hmbsh	D.M.&G.	Pinnacle, Mlsons Pt	Multiplex
Hmbsh Bay Hotels, Hmbsh	C&C	Multi Use Arena	Abigroup
Citivilla Apts	H&Y	Forum, St Lnrds	WCG
Merchant Court Hotel, Syd	Multiplex	Jamison St, Syd	CCL
Angel Place, Syd	Leighton	2 Park St, Podium, Syd	D.M.&G.
88 Phillip St - Lift Lobby, Syd	Lend Lease	155 Macquarie St, Syd	Lend Lease
Riverside, N Ryde	BHL	Cook & Phillip Park, Syd	BHL
Stamford Hotel, Syd	Multiplex	Railway Sq Hotel, Syd	Multiplex
Angel Place, Syd	Leighton	Capcount - Bldg C	A.W. Edwards
Henry Dean Park, Hymrkt	BHL	Oracle, Riverside, Ryde	St. Hilliers
Serv Club, Twd Hds	Multiplex	"The Marbury", Sry Hls	SXC
Travelodge, Syd	WCG	Rckdle Plaza	City Freehold
Wales House, Syd	CCL	80 Pacific Hwy	Thiess
Pmta Central	Develop & Bldg	40 Miller St, N Syd	A.W. Edwards
Westfield, Brwd	Westfield	R.P.A. Hosp, Cmprdwn	Thiess
Rckdle Paza - Tower "B&C"	City Freehold	123 Epping Rd, N Ryde	Lipman
BOC, Riverside Park	Richard Crookes	Arthur St Bridge, Coffs Hbr	Public Works
35 Clarence St, Syd	Barclay Mowlem	Capcount, Pymnt	A.W. Edwards
"Altair", Kngs Crs	Walker	Regency, Chtswd	Grocon

## LIST OF PROJECTS

PROJECT	BUILDER	PROJECT	BUILDER
Adelaide St, Bondi Jn	Walker	Sunlord Tower, Syd	Moonfare
Establishment Hotel, Syd	Multiplex	Transgrid Station, Hymrkt	WCG
Rawson St., Aubn	Cameron	Gold Coast Hwy, Sufers Pdse	Deena
Westfield, Hnsby	Westfield	Flynn Apts, Spring Hill, Bris	BHL
515 Kent St, Syd	Grocon	Magistrates' Court, Bris	WCG
Castle Towers, Cstl HI	BLL	38 Hickson Road, Mrs Pt	BLL
St. Vincents Hosp Drlghst	Leighton	"Quadrant", Syd	BHL
"Marquise" Apts, Melb	WCG	Neeta City, Frfld	Barclay Mowlem
298 Sussex St, Syd	Meriton	"Brdbch on the Park", Brdbch	BHL
"Madison", Hnsby	Waracon	Shoppingtown, Bondi Jn	Westfield
Henry Deane Park - Stg 2	BHL	Latitude World Square, Syd	Multiplex
"The Chelsea", Wtara	Meriton	Distillery Hill, Syd	BLL
ABC Bldg, Ult	Leighton	McArthur Chambers, Bris	Watpac
207 Pacific Hwy, St Lnrds	WCG	95 Pacific Hwy, N Syd	Timwin
ACI Stage 1, Wtrloo	Meriton	Corp. Posh Bldg G, Rhodes	Australand
Walsh Bay, Syd	Mirvac	LOT 301, Zetland	WCG
Chapel St, South Yarra, Melb	Mirvac	Chiswick Apts	Meriton
Westfield EastGrdns	Westfield	Aust. Custom, Mascot	Multiplex
Commuter Carpark, Kog	Richard Crookes	J. Whiteway Dr, Gsfrd	Barclay Mowlem
Centre Carpark, Cnbra	BLL	Hilton, Syd	Multiplex
Railway St "Altour", Chtswd	Mirvac	Grey St., Bris	Mirvac
"Leura" Apts, Chtswd	Meriton	Pivotal, Sufers Pdse	Multiplex
Lang Park Redevelop, Bris	Multiplex	Beau Monde, N Syd	Multiplex
"Top of the Town", Knags Crs	Barclay Mowlem	Astrazeneca, N Ryde	Austin
Riparian Apts, Bris	Multiplex	Waterline Apt, Brdbch	Junipers
Rex Apts, Syd	Grocon	Pink Poodle, Sufers Pdse	Regency
Legal Chambers, Pmta	Buildcorp	Railway St "Epica", Chtswd	Mirvac
Linea Apts, St Lnrds	Australand	ACI Stage 4, Wtloo	Meriton
NSW Police, Pmta	Multiplex	Moore St, Cnbra	BLL
38 Talavera Rd, N Ryde	ICA	126 Phillip St, Syd	BLL
"Abode", St Lnrds	BHL	Scots Church, Syd	Westpoint
120 Mary St, Bris	BHL	Walker St, Rhodes	Meriton
"Habitat" Apts, St Lnrds	Grindley	60-70 William St, Syd	Zonie
Lobana Apts, Syd	Grocon	The Common, Sry Hls	WBHO
Greenknowe Ave, Eliz By	Cordukes	LOT 302, ZtInd	Walter
Lane Cove Rd. Bldg A+B	ICA	Westpoint Shpgtwn, Blktwn	BHL
King St Wharf, Syd	Multiplex	Pacific Square, Mrbra	Abigroup
Botany Rd, Alex	IDD	Queens Plaza, Bris	Watpac
120 Edward St, Bris	Forrester Kurts	Kens Project, Syd	Leightons
Cameron Offices, Cnbra	BLL	Rhodes Waterside, Rhodes	Walker
Binary Centre, N Ryde	BLL	9 Railway St, Bldg F, Chtswd	Mirvac
Main Bh Pde, Main Bh Qld.	Meriton	Oxford Square, Drlghst	Multiplex
11 Chater Rd, Hong Kong	Gammon	Azure Apts, Mlsns Pt	Interco
383 Kent St, Syd	Leighton	Altro City Quarter, Cmprdwn	Abigroup
Croydon Grdns, Crydn	Meriton	Albany St, St Lnrds	SXC
Gallery Tower, Melb	WCG	Argyle St, Pmta	Dyldam
Henry Deane Park, Brdway	BHL	Southpoint, Hlsdle	Richard Crookes
Bay Centre, Pymnt	Mirvac	Bathurst St, Syd	Atlen
Waterloo Rd, Macq Pk	Fletcher	Scarborough House, Cnbra	BHL
Holden St, Ash	Meriton	The Observatory, Cindra	Reed
Boral Indus, Grystns	Barclay Mowlem	Linear Auchenflower, Bris	Abigroup
77 Pacific Hwy, St Lnrds	BHL	Trilogy, Gold Cst	BHL
82 Queens Rd, Melb	Mackie & Staff	"Ramada", Sunshine Cst	Reed
Bunda St Bridge Cnbra	BLL	Parklands Crescent, Bris	Pradella
Bonar St, Arnclf	Meriton	Brisbane Square	BHL
11 Talavera Rd, Macq Pk	ICA	Altitude Apts, Auckland, NZ	Scarbro
Railway Station, Pdsw	WCG	Sundale B2, Sthprt	Meriton
Global Chambers, Hstvl	SXC	Regent Place, Tower B, Syd	Multiplex
"Cove" Apts, Syd	Grocon	140 Church St, Pmta	Citilink (Wedmora)
"Fiore", Hassall St, Pmta	Meriton	100 Pacific Hwy, N Syd	Thiess
Bayside Apts, Rshct By	SXC	Centre Court, N Ryde	BHL
646 Harris St, Ult	BJ Metro	Westfield Livpl	Westfield
"Malcolm", Sth Yarra	Mirvac	Westfield Pmta	Westfield
Syd Park Rd, Ersknvl	Multiplex	Stamford Marque Apts, Syd	Barclay Mowlem
"Linc" Apts, Sry Hls	Australand	50-72 Union St, Pymnt	BHL

## LIST OF PROJECTS

PROJECT	BUILDER	PROJECT	BUILDER
Dist. Hill Bldg H Carpark, Pyrmont	BLL	64 Allara St, Cnbra	Koundouris
12-24 Talavera Rd, N Ryde	Barclay Mowlem	16 Marcus Clarke, Cnbra	BLL
Mater Car Park, Bris	Watpac	20-24 Alfred St, Mlsns Pt	Probuild
Section 88, Cnbra	Const. Control	AMP Bldg 4, Milt	Adco
Metropolitan Apts, Cnbra	John Hindmarsh	Brisbane Central Bldg 175	Watpac
Volt Apts, Auckland, NZ	Scarbro	Channel 7 ATP, Evlgh	Watpac
Sky Plaza, Cnbra	Multiplex	City West Offices, Cnbra	Leighton
Epping Station	A.W. Edwards	Energex, Bris	FKP
Epping Station	Thiess	19 Marcus Clarke, Cnbra	PBS
Darling Park Stage 3, Syd	BLL	154 Melbourne St, Bris	Pradella
Section 84, Precinct B, Cnbra	BLL	54-58 Mounts Bay Rd, Prth	Broad
ISPT Bldg, Cnbra	BLL	Nirvana, Kirra	Glenzeil
Regent Place, Tower A, Syd	Multiplex	Nth Shore Hosp Car Park	BLL
Sydney Olympic Park, Bldg 5	Grant	Section 68 City West, Cnbra	Baulderstone
101 George St, Pmta	John Holland	The Dalgety, Twnsvle	Parkview
100 Arthur St, N Syd	BLL	The Oracle, Brdbch	Grocon
Westfield Chermshire	Westfield	Top Ryde Shopping Centre	BLL
Rhodes Station	Arenco	122 Walker St, Twnsvle	CMC
Breakfast Pt, Lot 5J	BHL	710-722 George St, Syd	Parkview
The Wave, Sufrs Pdse	Multiplex	Charlestown Sq. Shpgcnt	Bovis
Section 84, Precinct C, Cnbra	BLL	The Ark, 40 Mount St, N Syd	Thiess
Latitude East, World Square	Multiplex	The Hyde, 157 Liverpool St Syd	Grocon
Circle on Cavill, Gold Cst	Sunland	Dee Why Hotel Redev	Southern Cross
Sundale D1 & D2, Sthprt	Meriton	Liverpool Hosp	Bovis
18 Marcus Clarke St, Cnbra	Thiess	19-25 Grosvenor St, Neut By	Probuild
7 London Circuit, Cnbra	Thiess	Hurstville Car Park	Hansen Yuncken
95 Epping Rd, Mcqrie Pk	BHL	Westfield Syd City Zone 1	Westfield
299 Adelaide St, Bris	Hutchinson	Sussex Hay Centre, Hymrkt	Built
25 Smith St, Pmta	Broad	Sugar Dock, Distillery Hill	Bovis
Westfield Ktra	Westfield	123 Albert St, Bris	Laing O'Rourke
Pmta Justice Precinct	Multiplex	Hilton Hotel West Tower	Brookfield Multiplex
Aura Apts, Auckland, NZ	Scarbro	380 Little Lonsdale St, Melb	Brady
Rhdes Waterside, Lot 12	Meriton	Hancock St Car Park, Bris	Laing O'Rourke
Pmta Trial Courts	Multiplex	6 National Circuit, Cnbra	HDL Projects
St Vincent's Hosp	A.W. Edwards	6 Mort St, Cnbra	St Hilliers
Electrolux, Mascot	St Hilliers	Scott St, Kang Pt, Bris	Hutchinson
Aspect Apts, Syd	SaabCorp	Doha Offices, Cnbra	Doma Group
Rhdes, Bldg 4	Mirvac	Westfield Syd City Podium	Westfield
Rsbry, Bldgs B & C	Meriton	Hilton Hotel East Tower	Brookfield Multiplex
Evolve, Distillery Hill, Syd	BLL	Cochlear HQ, Mcqrie Pk	Watpac
Federal St, Auckland, NZ	Scarbro	4-10 Campbell St, Syd	Meriton
Links Seaside Resort	Wideform	Urbanest, Quay St, Hymrkt	Built
Tabitha Offices, Hmbsh	BLL	Sundale, Stage C	Meriton
Belmore Station	Arenco	Victoria Towers, Sthprt	Hutchinson
Kirra Surf Apts, Kirra	Parkview	Supreme Court, Bris	Bovis
City Beach, WIngng	Parkview	Gold Coast Hospital	Bovis
Hyundai, H.Q., Mcqrie Pk	Lucas Stuart	Canberra Hospital Car Park	J. Hindmarsh
Elysee Apts, Kirra	Laing O'Rourke	H20, Southport Tower 1	Phillip Usher
Milan, Main Bh	Matrix	Red Cross, O'Riordan St, Alex	Buildcorp
Evolution, Bris	Hutchinson	Hyde Park Apts, Syd	Hutchinson
Grande Pacific, Sthprt	Glenzeil	UTS Student Accommodation	Hutchinson
Police Barracks, Bris	Hutchinson	Darling Walk	Bovis
1 Rivett Rd, N Ryde	F.D.C.	Cent. Terrace Bldg, Syd Airport	Abigroup
2 Short St, Sry Hls	TepCorp	UOW, Innovation Campus	Baulderstone
39 Delhi Rd, N Ryde	BHPL	VINE Discovery Pt, Site 4	PBS
Pinnacle, Epp Rd	Laing O'Rourke	UOW, Bldg C, WIngng	Baulderstone
Stonecutters, Dist. HI, Pyrmnt	BLL	Royal Nth Shore Hospital	Thiess
Sydney Water, Pmta	Multiplex	Westfield Syd City Tower	Westfield
420 George St, Syd	BLL	H20, Southport Tower 2	Phillip Usher
67 Epp Rd, Mcqrie Pk	Whitehorse	Commonwealth Offices, Cnbra	BLL
Syd Int'l Airport, Departures T1	BLL	Kingston Place, Block 1	Amalgamated
SCG New Hill Grand Stand	AW Edwards	Kingston Place, Block 2	Amalgamated
Suncorp Tower, Bris	Amalgamated	Translational Research Institute	Watpac
Wesley Hospital East Wing	BHPL	1 Bligh St, Syd	Grocon
One30 Esplanade, Drwn	Halikos	Elinya, Rhodes Waterside	Mirvac
Kinston Place, Block 3, ACT	Amalgamated	Gasometer 2, QLD	Hutchinson



## LIST OF PROJECTS

PROJECT	BUILDER	PROJECT	BUILDER
QLD Childrens Hospital, Bris	BLL	Proj Waters, QLD	PBS
Westfield Crndale	Westfield	Victoria Square 4, Bldg E	Meriton
111 Eagle Street, Bris	Leighton	Mount Gravatt, QLD	Westfield
Distillery Hill – Silk, Pymnt	BLL	East Village, Zetland	Dasco
ATO - Albry	Doma	Urba Tower, Redfern	Deicorp
One Central Park, Brdwy	Watpac	Bldg C, Walker St, Rhodes	Billbergia
Womens & Childrens Hosp. ACT	BLL	Aspire, Albert St, Syd	Hindmarsh
Axis, Canberra (3 Buildings)	Amalgamated	B1 Square, Brwd	Icon
New Acton Nishi, ACT	PBS	Botanic Apts, Lne Cve	Icon
Eclipse Broadbeach, QLD	Amalgamated	699 Bourke St, Melb	Mirvac
Collins on Bourke, Alex	SXC	Bldg D, Walker St, Rhodes	Billbergia
Mackay Base Hosp, Crns	BHPL	Summit, B2, Disc. Pt, Wolli Ck	Hutchinson
8 Chifley Sq, NSW	Mirvac	Diversity St 4, Block C, Wtrloo	Becton
Kingston Place Block 4, ACT	Amalgamated	Botanica Residential	PBS
52 Walker St, Lot 101, Rhdes	Meriton	34 Hunter St, Syd	Probuild
Wintergarden Redev. Bris	MPX	5 Martin Plce, Syd	Grocon
Metro Towers, Chtswd	Hutchinson	20 Martin Plce, Syd	Built
Uni of QLD, St Lucia Campus	Cockram	IGLU, 65 Mary St, Bris	Probuild
Charlotte St, Bris	Hutchinson	Railway Terrace, Milton QLD	FKP
Ann St – Residential, Bris	Laing O'Rourke	One Central Park, B 4S, Syd	R. Crookes
Ann St – Commercial, Bris	Laing O'Rourke	OTB Tower, Perth	Mirvac
QUT, Bris	Leighton	Otto, Rosebery	Icon
G-40, Griffith Uni, QLD	Laing O'Rourke	Pacific Fair, Brdbch	Westfield
52 Walker St, Lot 102, Rhdes	Meriton	Pinnacle Portside, Hamilton	Hutchinson
Uni of Adelaide, SA	BHPL	Project Waters, Fort Valley	PBS
UNSW – Tyree Bldg	BHPL	Queens Residences, Auckland	Scarbro
Gold Coast Hosp. Crprk	Laing O'Rourke	Rhapsody, QLD	BMPX
1 Railway Pde, Bur	Steve Nolan	RNA Stage 1, QLD	BLL
Lifhouse, RPA Hosp.	BDMG	Sunshine Coast Uni Carpark	BLL
Belvedere, N Syd	Buildcorp	161 Sussex St, West. Dist, Syd	BMPX
Gore Hill Tech. Park	FDC	Synergy Brdbeach	Morris
495 Bunnerong Rd, Mtrville	Nahas	600 Victoria Rd, Ryde	Taylor
UNSW Wallace Wurth Bldg	BLL	Welles Thomas Bldg 1, Chtswd	Meriton
Altitude Apts, Blcnn	Hindmarsh	Welles Thomas Bldg 2, Chtswd	Meriton
Syd Airport, T1 Crprk	Abigroup	1 William St, Bris	BMPX
Bldg O, Victoria Park	Meriton	Westmark Milton	Divine
Syd Adv Hosp, Multideck Crprk	Buildcorp	Newstead Towers, QLD	BMPX
Macquarie Cntr	Westfield	88 Archer Street, Chtswd	Icon
Pinnacle, Rhdes	Mirvac	Skye By Crown, Nth Syd	Crown
CODCD, Syd. Uni.	BMPX	Bankstown Travelodge	Paynter Dixon
Metro Towers, Chtswd	Hutchinson	161 Sussex St, Tower, Syd	BMPX
Rowe St. Estwd	SXC	Darling H. Exhibition Cent. C.J.	BLL
Royal Randwck Racecourse	BDMG	Civic Centre, Melb.	Kane
Manhattan Aprtmnts	Chase	Broadway on Ann, Bris	Hindmarsh
Green Sq, QLD	Leighton	Lucent, Nth Syd	R. Crookes
Madison Aprtmnts	PBS	Urbanest, Darling Dr.	Buildcorp
Hall St, Bondi	Toga	Woollooware Bay, Stage 1	Parkview
Adel Oval, SA	Baulderstone	Disc. Point Bldgs 8 & 10	Probuild
Indrpily SC	BMPX	Macquarie Park Village	Parkview
Block 1, Section 199, Blcnn	Morris	Aqua Apartments, Bondi Jct	R. Crookes
Castlereagh St, 163	Grocon	Futra Mascot	Hamilton Marino
Gold Coast Hosp.	Laing O'Rourke	Mayfair Apts, ACT	Morris
Mort Street, ACT	BLOC	Queens Residences, N.Z.	Scarbro
Victoria St	Buildcorp	333 George St, Syd	Watpac
Verde, Flinders St	Hutchinson	Canterbury Towers, QLD	PBS
O'Connell Tce	Hutchinson	Abian Tower, Bris	Sunland
Felicity Hotel, QLD	Hutchinson	Capitol, Bondi Jct.	Icon
Westfield Miranda, Zone P	Westfield	Talavera Rd, Mac Park	Holdmark
150 Collins St, Melb	Grocon	Lot 9C, Wntwrth Pt	Parkview
Transgrid, Ultimo	Built	Zen Apts, Wntwrth Pt	Billbergia
Talavera Rd	FDC	80 Arthur St, Nth Syd	Meriton
Australia Towers, SOP	Parkview	330 Church St, Prmta	Meriton
West Keira	H&Y	POWH, Rndwck	AW Edwards
SCG Redevelopment	AW Edwards	Wayfarer, Belconnen, ACT	Geocon
UNSW Student Accom.	R. Crookes	Vue, Bondi Jct	Hutchinson
Padstow Car Park	AW Edwards	Ikea, Northlakes, QLD	Westfield

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## **Annexure E Erosion & Sediment Control Plans**

### **Bonacci Drawings**

**200116401-C-082-B, 083-B, 084-B**



## TYPICAL DETAIL DRAWING OF TYPE D/F SEDIMENT BASIN

## SOIL WATER MANAGEMENT PLAN

### NOTE:

- VERIFY THE SOIL TEXTURE GROUP. IF TYPE D (DISPERSIBLE SOIL) FLOCCULATE WATER IN BASIN TO SETTLE AS REQUIRED FOR DISCHARGING PRIOR TO STORMWATER.

6-19

## 1. Erosion Hazard and Sediment Basins

Site Name: PEMULWUY PROJECT

Site Location: REDFERN

Precinct/Stage: PRECINCT 1 AND 3

Other Details:

Site area	Sub-catchment or Name of Structure						Notes
	PC1	PC3					
Total catchment area (ha)	0.68	0.25					
Disturbed catchment area (ha)	0.68	0.25					

### Soil analysis (enter sediment type if known, or laboratory particle size data)

Sediment Type (C, F or D) if known:	D	D					From Appendix C (if known)
% sand (fraction 0.02 to 2.00 mm)							Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)							
% clay (fraction finer than 0.002 mm)							
Dispersion percentage							E.g. enter 10 for dispersion of 10%
% of whole soil dispersible							See Section 6.3.3(e). Auto-calculated
Soil Texture Group	D	D					Automatic calculation from above

### Rainfall data

Design rainfall depth (no of days)	5	5					See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25.
Design rainfall depth (percentile)	75	75					
x-day, y-percentile rainfall event (mm)	43.6	43.6					
Rainfall R-factor (if known)							Only need to enter one or the other here
IFD: 2-year, 6-hour storm (if known)	13	13					

### RUSLE Factors

Rainfall erosivity (R-factor)	3650	3650					Auto-filled from above
Soil erodibility (K-factor)	0.06	0.06					RUSLE LS factor calculated for a high rill/interrill ratio.
Slope length (m)	80	80					
Slope gradient (%)	6	4.5					
Length/gradient (LS-factor)	1.47	1.05					
Erosion control practice (P-factor)	1.3	1.3	1.3	1.3	1.3	1.3	
Ground cover (C-factor)	1	1	1	1	1	1	

### Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins)

Storage (soil) zone design (no of months)	2	2	2	2	2	2	Minimum is generally 2 months
Cv (Volumetric runoff coefficient)	0.69	0.69					See Table F2, page F-4 in Appendix F

### Calculations and Type D/F Sediment Basin Volumes

Soil loss (t/ha/yr)	418	299					
Soil Loss Class	4	3					See Table 4.2, page 4-13
Soil loss (m <sup>3</sup> /ha/yr)	322	230					Conversion to cubic metres
Sediment basin storage (soil) volume (m <sup>3</sup> )	36	10					See Sections 6.3.4(i) for calculations
Sediment basin settling (water) volume (m <sup>3</sup> )	205	75					See Sections 6.3.4(i) for calculations
Sediment basin total volume (m <sup>3</sup> )	241	85					

NB for sizing of Type C (coarse) sediment basins, see Worksheet 3 (if required).

## SEDIMENT BASIN CALCULATION

PEMULWAY PROJECT  
REDFERN, NSW

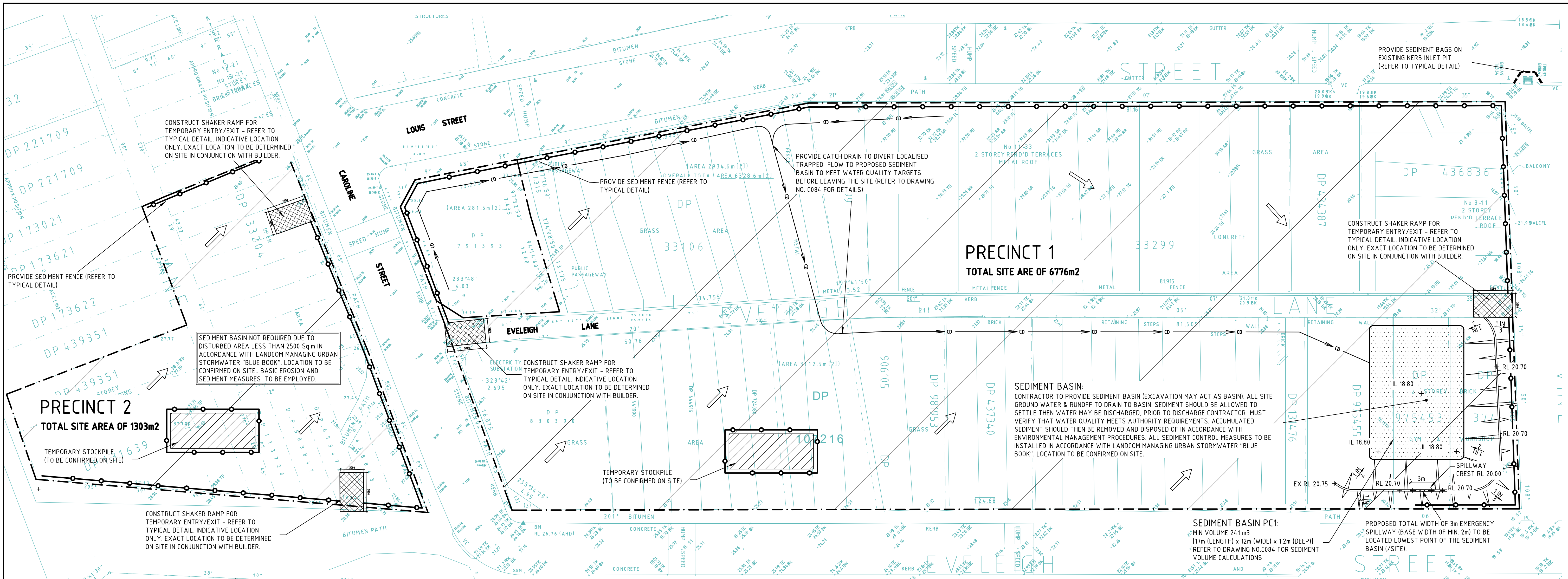
**BONACCI**

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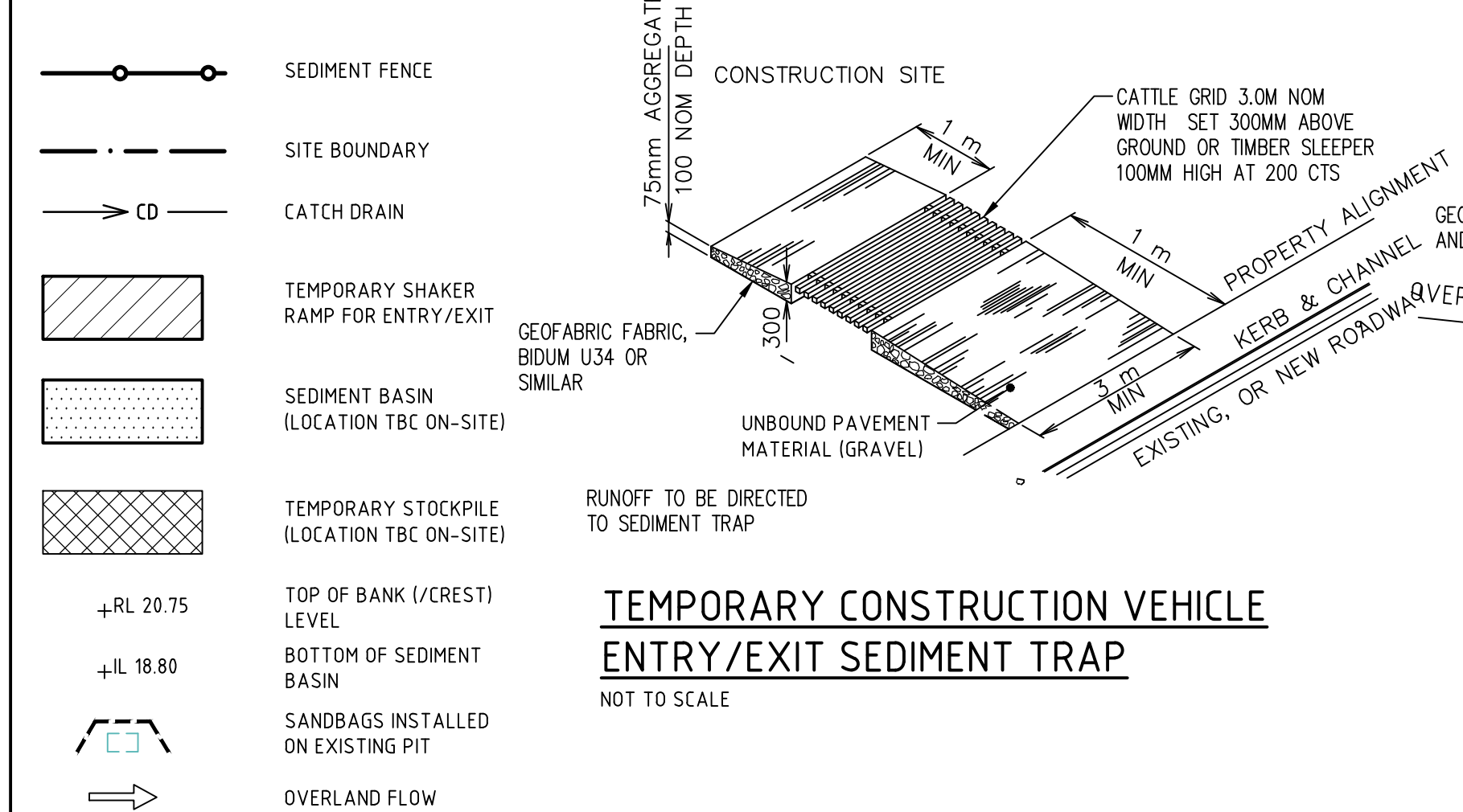
SEDIMENT BASIN DETAIL  
DRAWING AND CALCULATION  
REDFERN

FOR CONSTRUCTION			
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Drawn	AS	SN	North
Scale	NOTED	Project Ref	Drawing No
Date	MAR 11	200116401	C084
Sheet			B



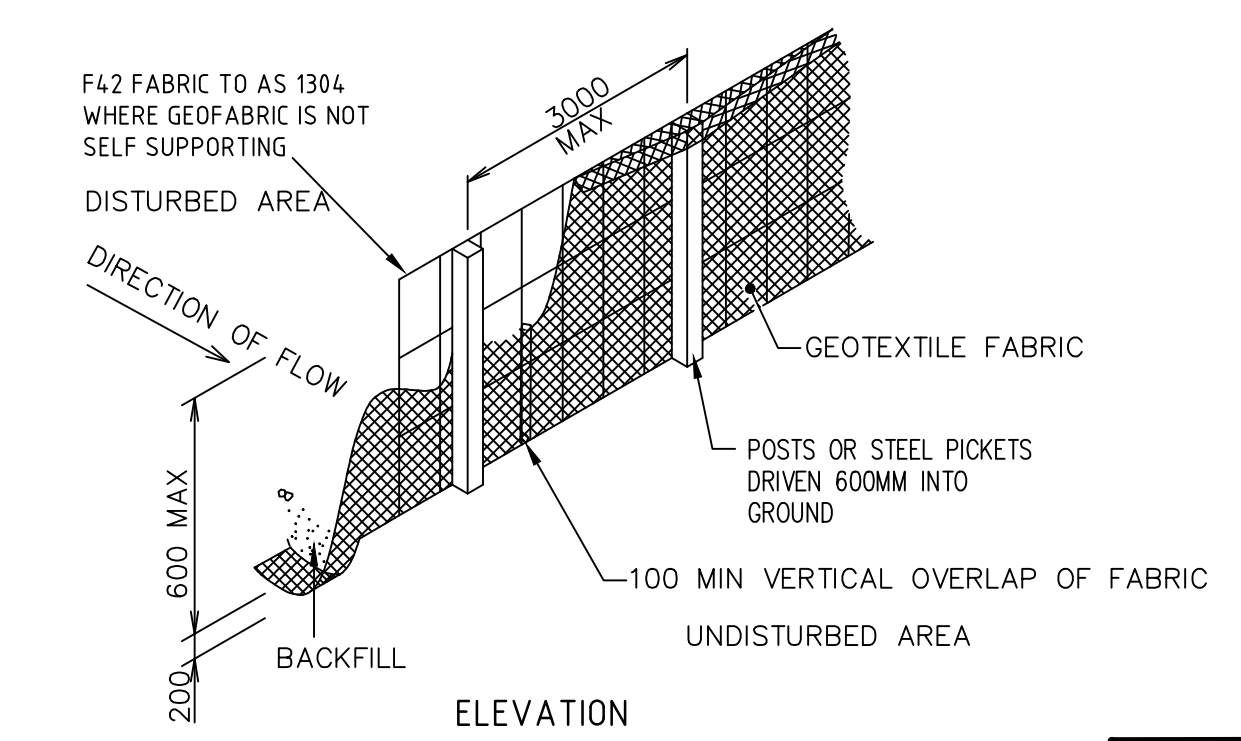
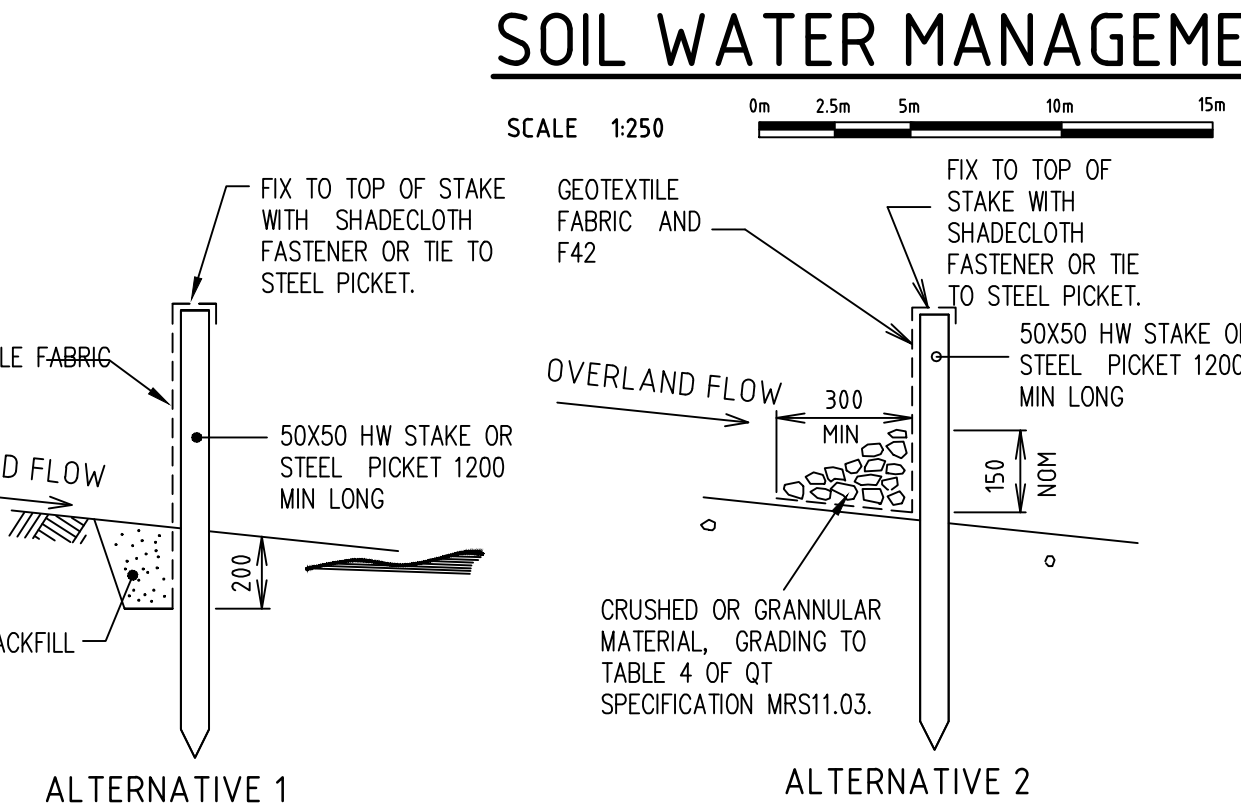


SOIL AND WATER MANAGEMENT LEGEND



TEMPORARY CONSTRUCTION VEHICLE ENTRY/EXIT SEDIMENT TRAP

NOT TO SCALE



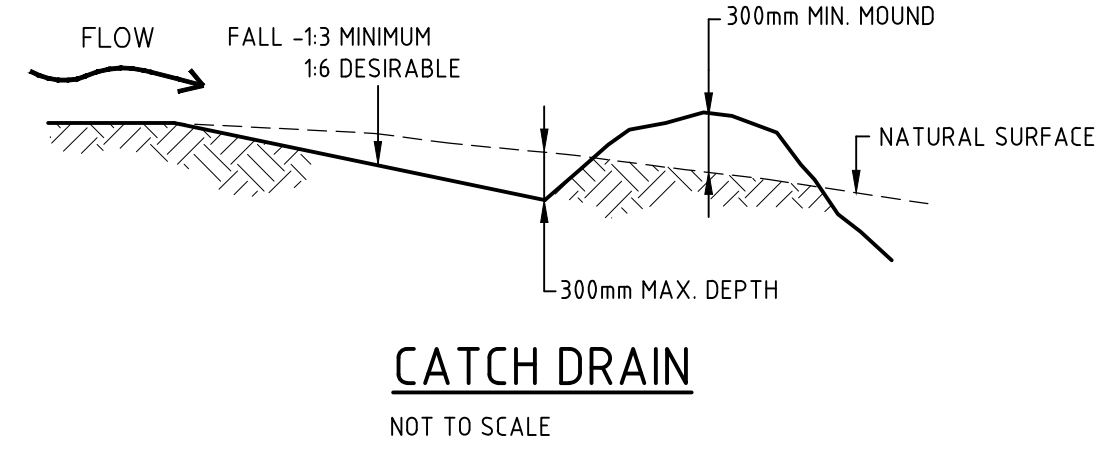
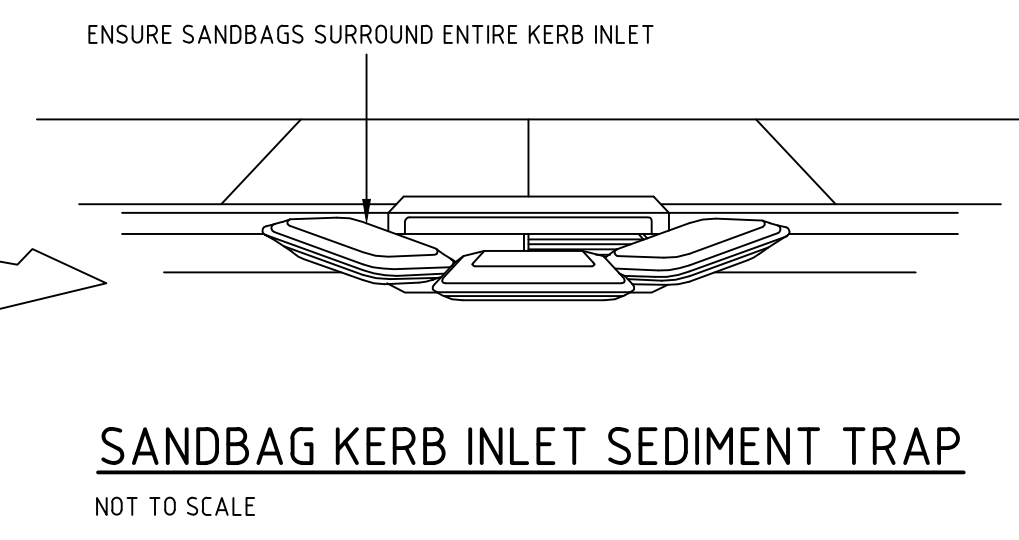
SEDIMENT FENCE

NOT TO SCALE

NOTE: CONTRACTOR TO PROVIDE PROPOSED MANAGEMENT PLAN PROCEDURES. VEHICLE MOVEMENTS ARE TO BE LIMITED TO AREAS APPROVED IN THE ENVIRONMENTAL MANAGEMENT PLAN. INSTALL WIND FENCES AROUND EXPOSED SOIL IN AREAS SUSCEPTIBLE TO DUST GENERATION. WATER EXPOSED SOIL WHEN DUST IS VISIBLE. ENSURE THAT THIS WATER DOES NOT CONTAMINATE SURFACE WATER. WATER FROM SEDIMENT DAMS MAY BE USED FOR DUST SUPPRESSION.

SEDIMENT & EROSION CONTROL PROCEDURE - STAGE 1

- 1. CONSTRUCT TEMPORARY ENTRY/EXIT SEDIMENT TRAP (REFER TO TYPICAL DETAIL, BUILDER TO CONFIRM LOCATION ON-SITE).
- 2. CONSTRUCT SEDIMENT FENCE AND NO DIRTY WATER SHOULD BE ALLOWED TO LEAVE THE SITE - REFER TO TYPICAL DETAIL.
- 3. CONSTRUCT ON GRADE KERB INLET SEDIMENT TRAP TO EXISTING STORMWATER PITS REFER TO TYPICAL DETAIL.
- 4. CONSTRUCT SEDIMENT BASINS.
- 5. ADJUST/EMPTY SEDIMENT BASIN AS REQUIRED TO PREVENT SEDIMENT LADEN WATER FROM LEAVING THE SITE.
- 6. MINIMISE DISTURBED AREA.



SEDIMENT CONTROL CONDITIONS

- 1. SEDIMENT FENCES WILL BE INSTALLED AS SHOWN AND ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER TO CONTAIN COARSER SEDIMENT FRACTIONS (INCLUDING AGGREGATED FINES) AS NEAR AS POSSIBLE TO THEIR SOURCE.
- 2. SEDIMENT REMOVED FROM ANY TRAPPING DEVICE WILL BE RELOCATED WHERE FURTHER POLLUTION TO DOWNSLOPE LANDS & WATERWAYS CANNOT OCCUR.
- 3. STOCKPILES WILL BE PLACED AT THE DISCRETION OF THE SITE MANAGER AND NOT WITHIN 5m OF HAZARD AREAS INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS & DRIVEWAYS.
- 4. WATER WILL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM WITH INLET FILTERS (SEE DETAILS) UNLESS IT IS SEDIMENT FREE.
- 5. TEMPORARY SEDIMENT TRAPS WILL BE RETAINED UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.

SITE INSPECTION & MAINTENANCE CONDITIONS

- THE SITE MANAGER WILL INSPECT THE SITE AT LEAST WEEKLY AND WILL:
  - 1. ENSURE THAT CATCH DRAINS OPERATE PROPERLY & TO EFFECT ANY NECESSARY REPAIRS.
  - 2. REMOVE SPILLED SAND OR OTHER MATERIALS FROM HAZARD AREAS, INCLUDING LANDS CLOSER THAN 5m FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS ESPECIALLY WATERWAYS & PAVED AREAS.
  - 3. REMOVE TRAPPED SEDIMENT WHENEVER LESS THAN DESIGN CAPACITY REMAINS WITHIN THE STRUCTURE
  - 4. ENSURE REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND TO INITIATE UPGRADING OR REPAIR AS APPROPRIATE.
  - 5. CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS.
  - 6. MAINTAIN EROSION & SEDIMENT CONTROL MEASURES IN A FULLY FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE IS REHABILITATED.
  - 7. REMOVE TEMPORARY SOIL CONSERVATION STRUCTURES AS THE LAST ACTIVITY IN THE REHABILITATION PROGRAM.
- AS PART OF THE STATUTORY 'DILIGENCE OF CARE' RESPONSIBILITIES, THE SITE MANAGER WILL KEEP A LOGBOOK MAKING ENTRIES AT LEAST WEEKLY, IMMEDIATELY BEFORE FORECAST RAIN AND AFTER RAINFALL. ENTRIES WILL INCLUDE:
  - 1. THE VOLUME & INTENSITY OF ANY RAINFALL EVENTS
  - 2. THE CONDITION OF ANY SOIL & WATER MANAGEMENT WORKS
  - 3. THE CONDITION OF VEGETATION & ANY NEED TO IRRIGATE
  - 4. THE NEED FOR DUST PREVENTION STRATEGIES
  - 5. ANY REMEDIAL WORKS TO BE UNDERTAKEN
- THE BOOK WILL BE KEPT ONSITE & MADE AVAILABLE TO ANY AUTHORISED PERSON ON REQUEST. IT WILL BE GIVEN TO THE PROJECT MANAGER AT THE CONCLUSION OF WORKS.

PEMULWAY PROJECT REDFERN, NSW



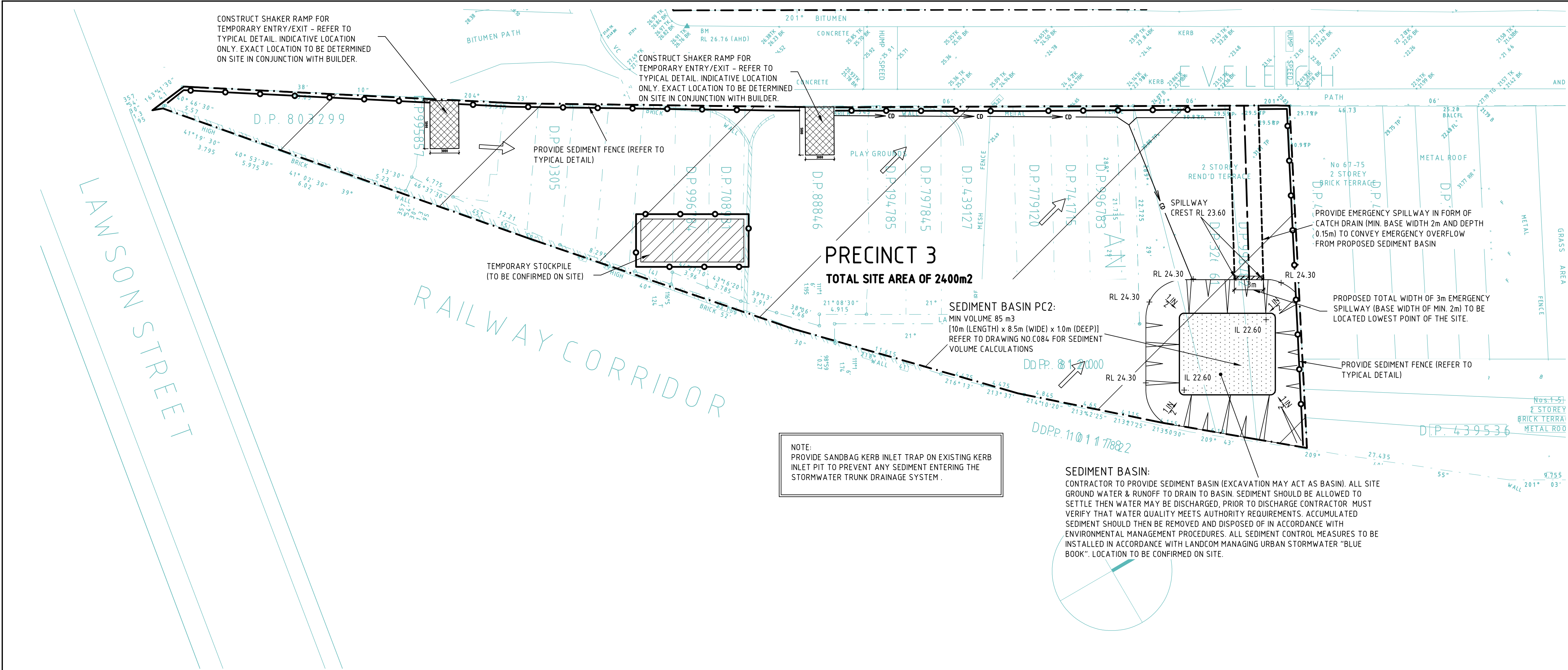
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www.bonaccigroup.com

SOIL WATER MANAGEMENT PLAN LAYOUT FOR PRECINCT 1 AND 2, REDFERN

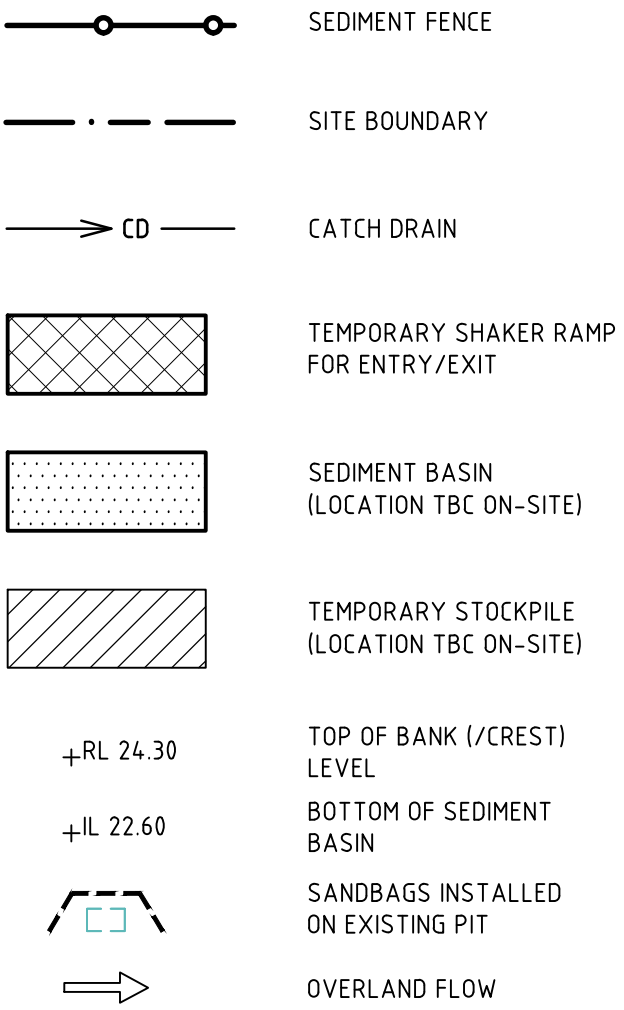
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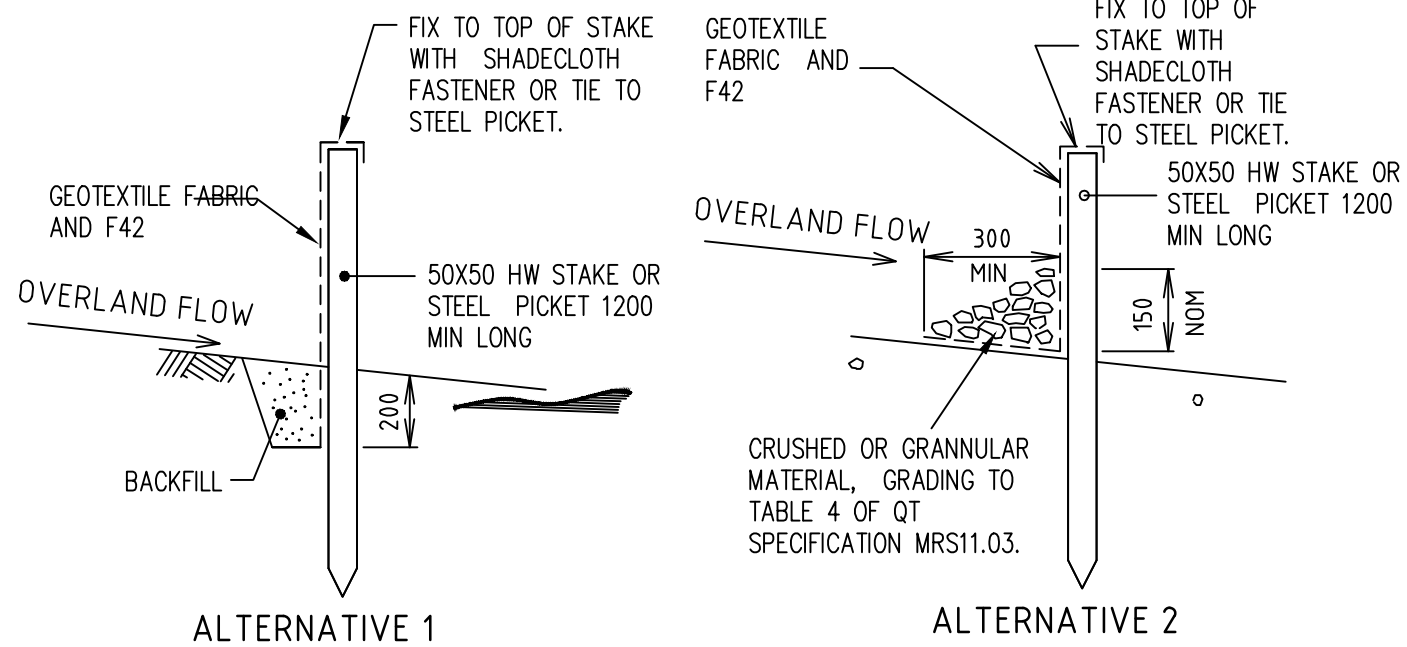
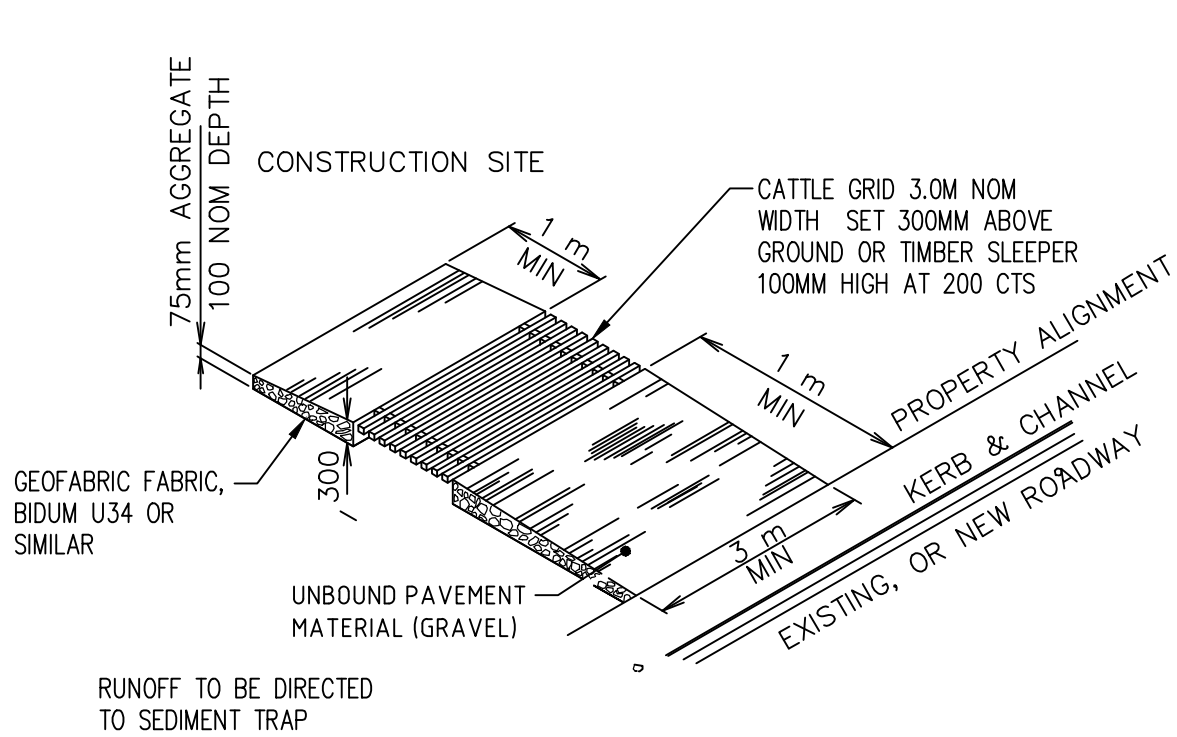


SOIL AND WATER MANAGEMENT LEGEND



SOIL WATER MANAGEMENT PLAN - PRECINCT 3

SCALE 1:250



SITE INSPECTION & MAINTENANCE CONDITIONS

1. THE SITE MANAGER WILL INSPECT THE SITE AT LEAST WEEKLY AND WILL:
2. ENSURE THAT CATCH DRAINS OPERATE PROPERLY & TO EFFECT ANY NECESSARY REPAIRS.
3. REMOVE SPILLED SAND OR OTHER MATERIALS FROM HAZARD AREAS, INCLUDING LANDS CLOSER THAN 5m FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS ESPECIALLY WATERWAYS & PAVED AREAS.
4. REMOVE TRAPPED SEDIMENT WHENEVER LESS THAN DESIGN CAPACITY REMAINS WITHIN THE STRUCTURE
5. ENSURE REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND TO INITIATE UPGRADING OR REPAIR AS APPROPRIATE.
6. CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS.
7. MAINTAIN EROSION & SEDIMENT CONTROL MEASURES IN A FULLY FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE IS REHABILITATED.
8. REMOVE TEMPORARY SOIL CONSERVATION STRUCTURES AS THE LAST ACTIVITY IN THE REHABILITATION PROGRAM.

AS PART OF THE STATUTORY 'DILIGENCE OF CARE' RESPONSIBILITIES, THE SITE MANAGER WILL KEEP A LOGBOOK MAKING ENTRIES AT LEAST WEEKLY, IMMEDIATELY BEFORE FORECAST RAIN AND AFTER RAINFALL. ENTRIES WILL INCLUDE:

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5. ANY REMEDIAL WORKS TO BE UNDERTAKEN

NOTE:

- CONTRACTOR TO PROVIDE PROPOSED MANAGEMENT PLAN PROCEDURES
- VEHICLE MOVEMENTS ARE TO BE LIMITED TO AREAS APPROVED IN THE ENVIRONMENTAL MANAGEMENT PLAN.
- INSTALL WIND FENCES AROUND EXPOSED SOIL IN AREAS SUSCEPTIBLE TO DUST GENERATION
- WATER EXPOSED SOIL WHEN DUST IS VISIBLE. ENSURE THAT THIS WATER DOES NOT CONTAMINATE SURFACE WATER. WATER FROM SEDIMENT DAMS MAY BE USED FOR DUST SUPPRESSION.

SEDIMENT CONTROL CONDITIONS

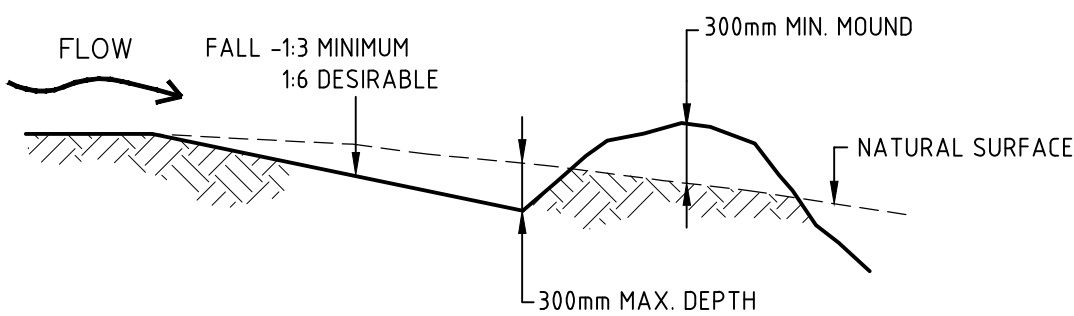
- SEDIMENT CONTROL MEASURES TO BE CHECKED DAILY
- HAUL ROAD LOCATIONS TO BE DETERMINED ON SITE WITH THE APPROVAL OF THE SUPERINTENDENT
- SEALED ROADS ARE TO BE KEPT FREE OF CLAY BITUMEN ROADS ARE TO BE CLEANED/WASHED AS REQUIRED
- NO CLAY/SEDIMENTS ARE TO BE WASHED/DRAINED INTO PITS.
- PREVENT SEDIMENT LEAVE THE BUILDING SITE

SEDIMENT & EROSION CONTROL PROCEDURE - STAGE 1

1. CONSTRUCT TEMPORARY ENTRY/EXIT SEDIMENT TRAP (REFER TO TYPICAL DETAIL, BUILDER TO CONFIRM LOCATION ON SITE).
2. CONSTRUCT SEDIMENT FENCE AND NO DIRTY WATER SHOULD BE ALLOWED TO LEAVE THE SITE - REFER TO TYPICAL DETAIL
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4. CONSTRUCT SEDIMENT BASINS.
5. ADJUST/EMPTY SEDIMENT BASIN AS REQUIRED TO PREVENT SEDIMENT LADEN WATER FROM LEAVING THE SITE.
6. MINIMISE DISTURBED AREA.

TEMPORARY CONSTRUCTION VEHICLE ENTRY/EXIT SEDIMENT TRAP

NOT TO SCALE



CATCH DRAIN

NOT TO SCALE

1. SEDIMENT FENCES WILL BE INSTALLED AS SHOWN AND ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER TO CONTAIN COARSER SEDIMENT FRACTIONS (INCLUDING AGGREGATED FINES) AS NEAR AS POSSIBLE TO THEIR SOURCE.
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PEMULWAY PROJECT REDFERN, NSW



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SOIL WATER MANAGEMENT LAYOUT FOR PRECINCT 3, REDFERN

FOR CONSTRUCTION

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## **Annexure F RailCorp Dilapidation Survey**

**Australian Consulting Engineers Dilapidation Report “RailCorp Assets Job 170037.0  
dated May 2017**





# Australian Consulting Engineers Pty Ltd

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North Strathfield NSW 2137

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Ph: +61 2 9763 1500

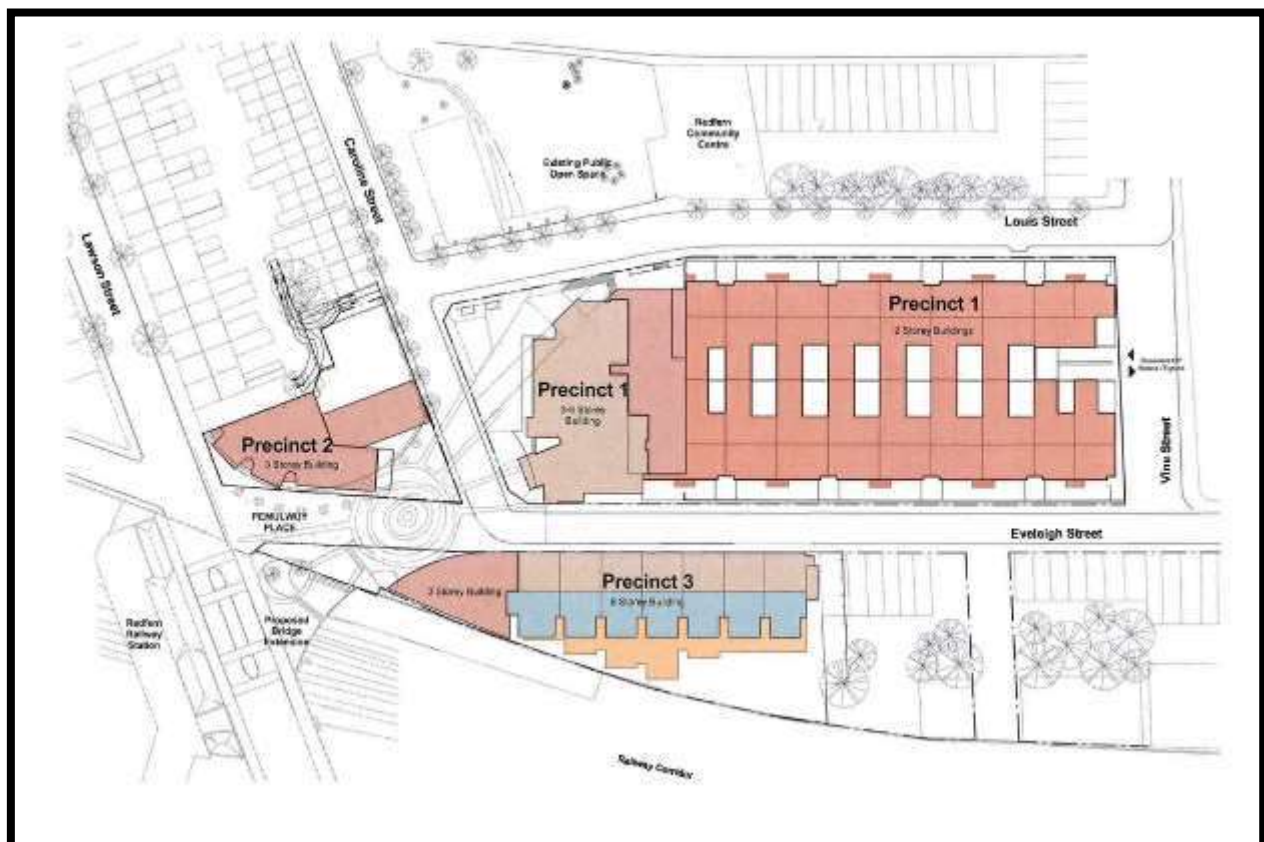
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**Re: Dilapidation Report for Property**  
**No: Pemulwuy Project - Redfern NSW 2016**

**Job: 170037.0**  
**Date: MAY 2017**

**Prepared for: DEICORP CONSTRUCTIONS (NSW) PTY LTD**



Prepared by:

Per:

**Dr. Anthony S. Hasham**

B.E., M.E., M.B.A., Ph.D., M.I.E. AUST., C. P. Eng. N.P.E.R., R.P.E.Q.

Civil/Structural Engineer

Accredited Certifier

Managing Director

## INTRODUCTION

### **Important Information Regarding the Scope and Limitations of the Inspection and this Report**

- I. This report is not an all-encompassing report dealing with the building from every aspect. This report is not a Certificate of Compliance with the requirements of any Act, Regulation, Ordinance or by-law. It is not a structural report. Should you require any advice of a structural nature you should contact a structural engineer.
  
- II. **THIS IS A VISUAL INSPECTION ONLY** limited to those areas and the sections of the property fully accessible to the inspector on the date of inspection. An inspection does not include breaking apart, dismantling, removing or moving objects including but not limited to, foliage, mouldings, roof insulation / insulation, floor or wall coverings, sidings, ceilings, floors, furnishings, appliances or personal possessions. The inspector cannot see inside walls, between floors, inside skill iron roofing, behind stored goods in cupboards, other areas that are concealed or obstructed. The inspector did not dig, gouge, force or perform any other invasive procedures. Visible timbers cannot be destructively probed or hit without the written permission of the property owner.
  
- III. This report does not and cannot make comment upon defects that may have been concealed during the assessment or detection of defects ( including- rising damp and leaks ) which may be subject to the prevailing weather conditions; the presence or absence of timber pests, gas-fittings, common property areas, environmental concerns; the proximity of the property to flight paths, railways, or busy traffic; noise levels; health and safety issues; heritage concerns; security concerns; fire protections; site drainage (apart from surface water drainage); swimming pools and spas (non-structural); detection and identification of illegal building work ; detection and identification of illegal plumbing work; durability of exposed finishes; neighbourhood problems; and document analysis; electrical installations; any matters that are solely regulated by statute; any area(s) or item(s) that could not be inspected by the consultant. Accordingly this report is not a guarantee that defects and/ or damage does not exist in any inaccessible or partly inaccessible areas or sections of the property. (NB: such matters may upon request be covered under the terms of a special purpose property report.)
  
- IV. In the event of any controversy or claim arising out of, or relating to this report, it will be settled by arbitration, in accordance with the rules of the Institute of Arbitrators Australia. Any judgments from such arbitration shall be binding upon both parties.

## **SUMMARY**

The aim of this report is to represent the condition and state of the RailCorp Infrastructure assets of the “Metro Illawarra & South Coast” line, which are adjacent to the subject site, prior to demolition and construction stages at:

**Pemulwuy Project - Redfern NSW 2016.**

This is illustrated through the photographic evidence depicted in Appendix A.

## **DESCRIPTION OF TERMS IN THIS REPORT**

- **Good** - Indicates that there are no defects evident and the items described are in good condition for their age.
- **Reasonable** - Indicates the item may have minor defects that should be noted but not significant enough to need immediate rectification
- **Poor** - Indicates that general maintenance or minor repair may be warranted
- **Defective** - Indicates there is a significant fault that should be rectified.



## **TABLE OF CONTENTS**

<b>FRONT PAGE .....</b>	<b>1</b>
<b>INTRODUCTION .....</b>	<b>2</b>
<b>SUMMARY .....</b>	<b>3</b>
<b>DESCRIPTION OF TERMS IN THIS REPORT .....</b>	<b>4</b>
<b>TABLE OF CONTENTS .....</b>	<b>5</b>
<b>INSPECTED AREAS .....</b>	<b>6</b>
<b>APPENDIX (A) "RAILCORP ASSETS" PHOTOGRAPHIC RECORDS .....</b>	<b>8</b>
<b>SUMMARY .....</b>	<b>167</b>
<b>LETTER OF INTEREST.....</b>	<b>168</b>

## **INSPECTED AREAS**

### **The Area\*(s) inspected were:**

The RailCorp infrastructure assets including the Railway corridor, steel portal haunches, overhead supply system, boundary fence and all other elements that are located adjacent to the subject site.

### **The Area\*(s) NOT Accessible for any Inspection and the Reason(s) why were:**

No inspection was made of concealed frame timbers or any areas concealed by wall linings/sidings, soil, landscaping, rubbish, floor coverings, furniture, pictures, appliances, stored items, insulation, hollow blocks/pots or any other obstructions to visual inspection.

The internal areas of all neighbouring properties

Further than **20m** from the said sight unless otherwise stated.

### **The Area\*(s) in which Visual Inspection was Obstructed and the reason(s) why were:**

Floor coverings and furnishings

Vegetation growth

Stored boxes etc...

\* No comment is made on these concealed areas.



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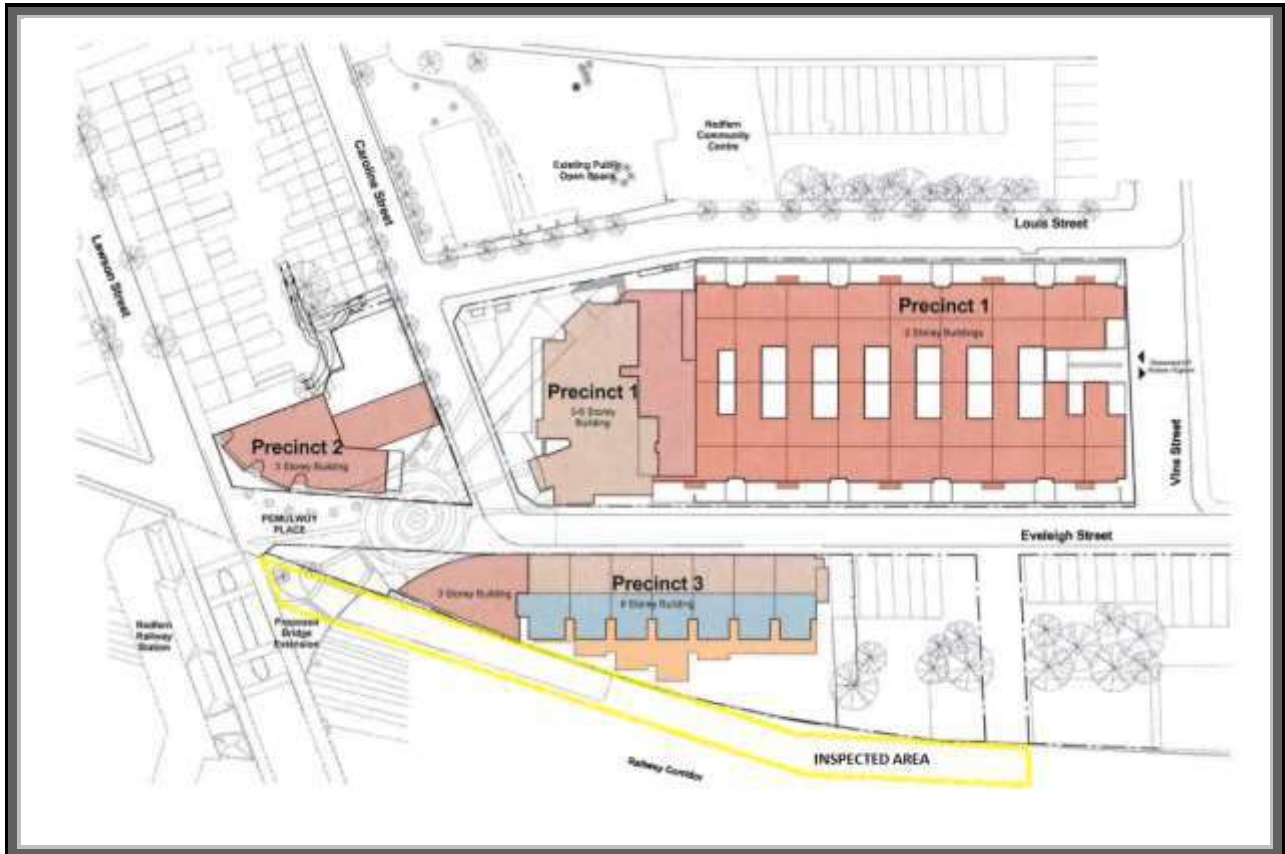
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**Prepared by:**

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Civil/Structural Engineer

Accredited Certifier

Managing Director

**APPENDIX (A)**

**“RAILCORP ASSETS”**

**PHOTOGRAPHIC**

**RECORDS**





Figure 1 – General condition of RailCorp boundary wall and steel portal haunch observed from Lawson Street Overpass Bridge



Figure 2 – General condition of RailCorp boundary wall and steel portal haunch observed from Lawson Street Overpass Bridge





Figure 3 – General condition of RailCorp boundary wall and steel portal haunch observed from Lawson Street Overpass Bridge



Figure 4 – General condition of RailCorp boundary wall and steel portal haunch observed from Lawson Street Overpass Bridge





Figure 5 – General condition of RailCorp boundary wall observed from Lawson Street Overpass Bridge



Figure 6 – General condition of RailCorp boundary wall observed from Lawson Street Overpass Bridge





Figure 7 – General condition of RailCorp boundary wall observed from Lawson Street Overpass Bridge



Figure 8 – General condition of RailCorp boundary wall observed from Lawson Street Overpass Bridge





Figure 9 – General condition of RailCorp boundary wall observed from Lawson Street Overpass Bridge



Figure 10 – General condition of RailCorp boundary wall observed from Lawson Street Overpass Bridge