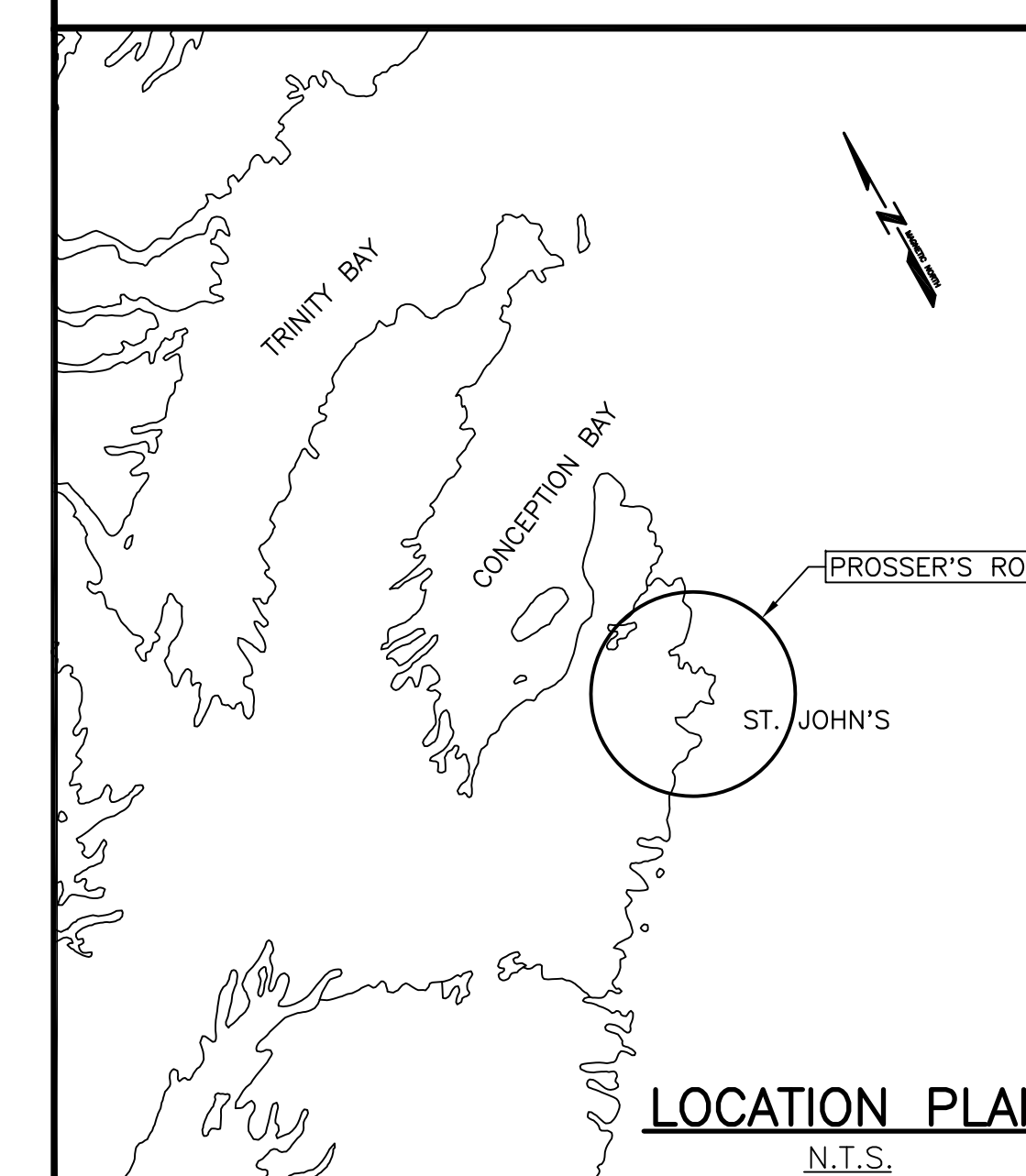
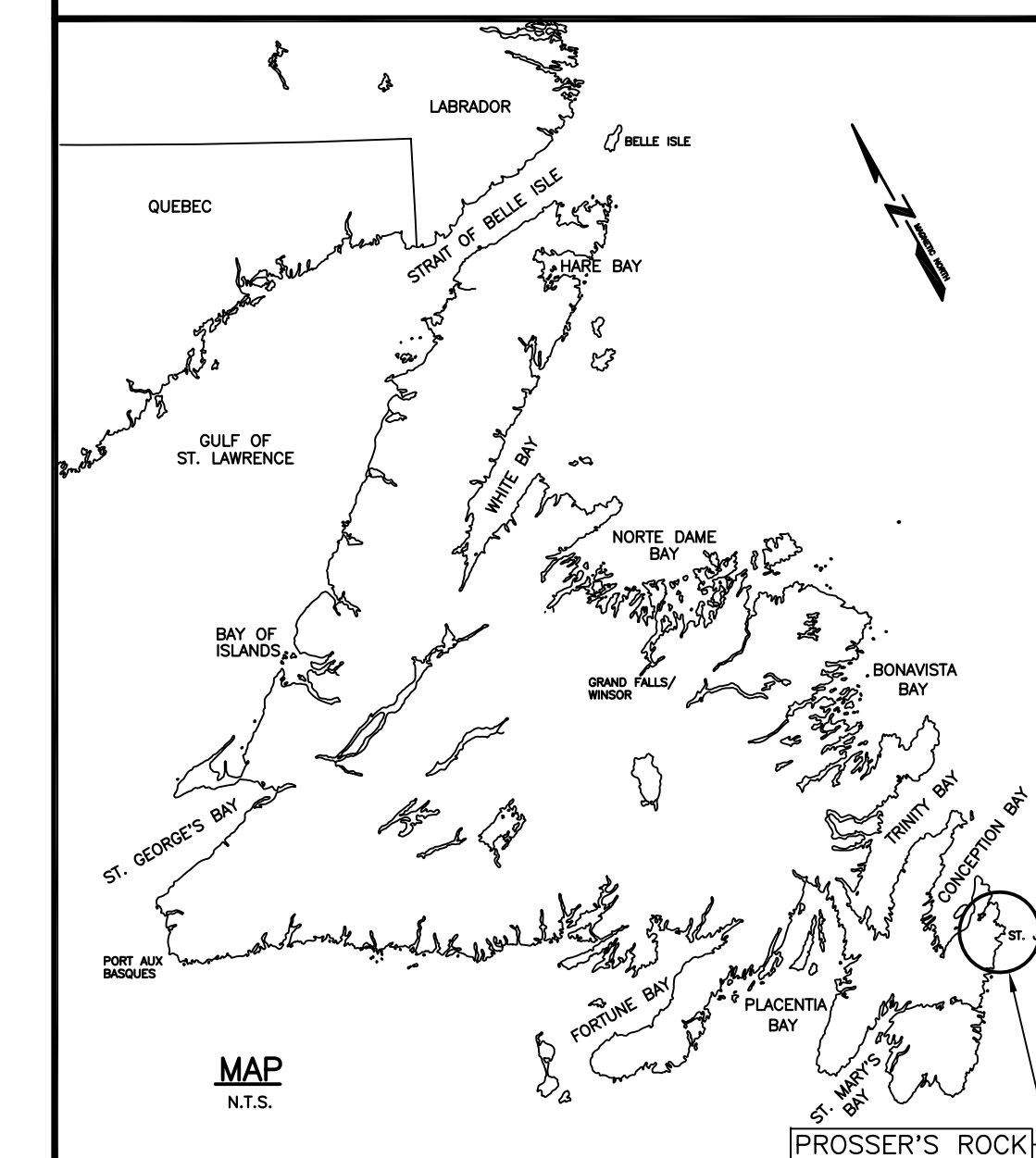


FISHERIES AND OCEANS
CANADA

PROSSER'S ROCK ELECTRICAL UPGRADES ST. JOHN'S NEWFOUNDLAND AND LABRADOR

PROJECT No. 721767
ISSUED FOR TENDER

SMALL CRAFT HARBOURS

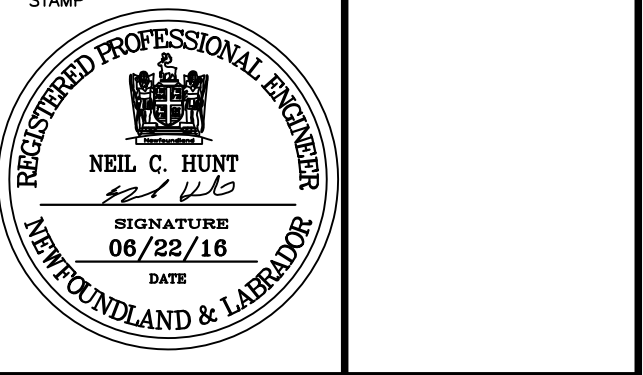


LIST OF DRAWINGS:

C1 OF 2	GENERAL PLAN
C2 OF 2	MISCELLANEOUS CIVIL DETAILS
E1 OF 6	EXISTING SITE PLAN
E2 OF 6	NEW SITE PLAN
E3 OF 6	ELECTRICAL DETAILS
E4 OF 6	PANEL SCHEDULES
E5 OF 6	ELECTRICAL DETAILS
E6 OF 6	ELECTRICAL DETAILS

NOTES:
 1. ALL ELEVATIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

PROVINCE OF NEWFOUNDLAND
PERMIT HOLDER
 This Permit Allows
APN Engineering Inc.
 To practice Professional Engineering in Newfoundland and Labrador. Permit No. as issued by APBNL F0282 which is valid for the year 2016.



NOTES

SURVEY PARTY CHIEF: RICHARD HEALEY
SURVEY VESSEL: ALUMINUM BOAT
SURVEY DATES: JAN 17, 2003 AND JUNE 13, 2006
SOUNDER TYPE: SINGLE TRANSDUCER
SOUNDER SETTING: MIN/SET/REL OF SOUND 1500 m/s
DEPTH GATE USED: N/A
FREQ. OF TRANS.: 200 MHz
POSITIONING SYSTEM USED: TRIMBLE 5700 GPS
LAND SURVEY POSITION BY: TRIMBLE 5700 GPS
DATA DATE/POSITION USED: (NO SHARING FILE)
TOTAL REDUCTION SCHEME:
OFFICE PROCESSOR: EDDIE BEARNS
DATE OF PROCESSING: AUGUST, 2006
MODE OF PLOTTING: LEAST OF MINIMUM DEPTHS
MATCH CELL WITH X LENGTH:
REDUCTION OF MATCH CELLS:

LEGEND

- | | | | |
|--|------------------|--|------------------------|
| | WATER BLOCK | | CONCRETE DECK |
| | ARMOUR STONE | | PAVEMENT |
| | CHAIN LINK FENCE | | MOORING LIMIT OF WHARF |
| | EDGE OF ASPHALT | | CROWN LAND MONUMENT |
| | BASE OF CLIFF | | BUILDING DWI SERVICES |

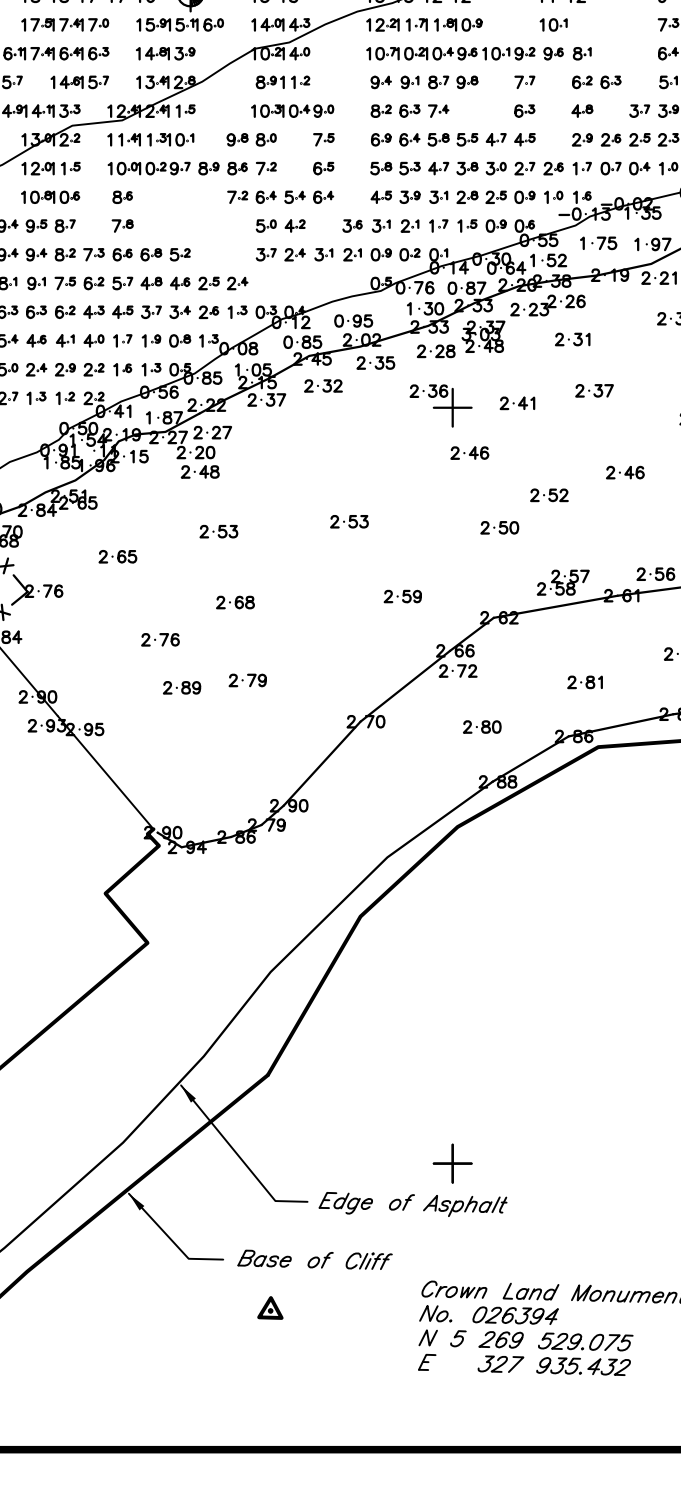
CONTROL POINTS:

PL NAME	EASTING	NORTHING	CO ELEV	DESCRIPTION
026207	377058.447	520814.500	2.944	PROVINCIAL BRASS PLASQUE SET IN CONCRETE
026207	377022.144	5208774.276	2.994	BOLT IN CONCRETE DECK
PWC-1-91	377264.551	5209416.762	2.999	BOLT IN CONCRETE DECK
PWC-1-91	377264.551	5209392.485	2.999	BOLT IN CONCRETE DECK
BM 879900	377264.551	5209342.284	3.063	BRASS PLASQUE SET IN CONCRETE PILLAR

ALL SOUNDINGS & ELEVATIONS IN METRES.
 ALL SOUNDINGS & ELEVATIONS REFERRED TO CHS BM 879900 ELEV. 3.063 M (BRASS PLASQUE SET IN CONCRETE PILLAR OF OLD ELECTRICAL BUILDING) LOCATED AT BERTH 31 STATIONS.
 SOUNDINGS TAKEN USING NAUGHTON AND PROGENIES BY TRIMBLE DIFFERENTIAL GPS POSITIONING SYSTEM ON JAN. 17, 2003 AND JUNE 13, 2006.
 COORDINATES FOR HORIZONTAL CONTROL ARE GIVEN ON THE L.I.T. MAPPING BY THE NORTH AMERICAN DATUM OF 1983.
 SOUNDINGS WERE REDUCED BY DIFFERENTIAL GPS POSITIONING SYSTEM CHARTS BEFORE BEING CORRECTED FOR TIDE & BAR CHECK CORRECTION.
 SPEED OF SOUND WAS OBTAINED USING A DOBSON PNO DOPPLERMETER.
 SOUNDINGS WERE REDUCED USING HYDRAC MAX VER02.12.
 ALL FIELD NOTES ARE IN STATIONS BOOK #7007.

WATERS OF ST. JOHN'S HARBOUR

219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------

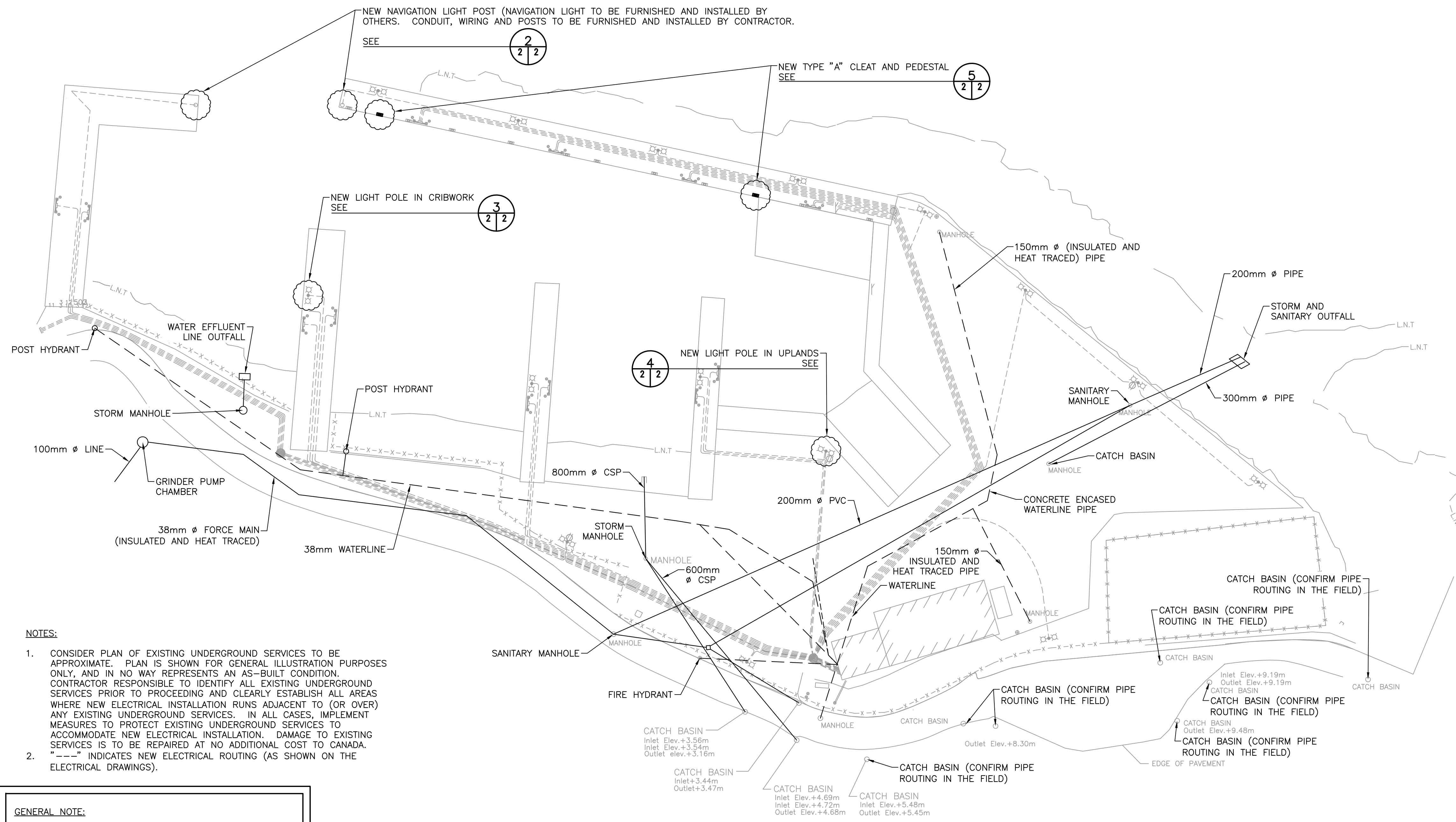


NEWFOUNDLAND LIGHT & POWER CO. LTD.

C	ISSUED FOR TENDER	06/22/16
B	ISSUED FOR 99% REVIEW	04/05/16
A	ISSUED FOR 33% REVIEW	03/30/16

PROSSERS ROCK
ELECTRICAL UPGRADES
ST. JOHN'S, NL
GENERAL PLAN

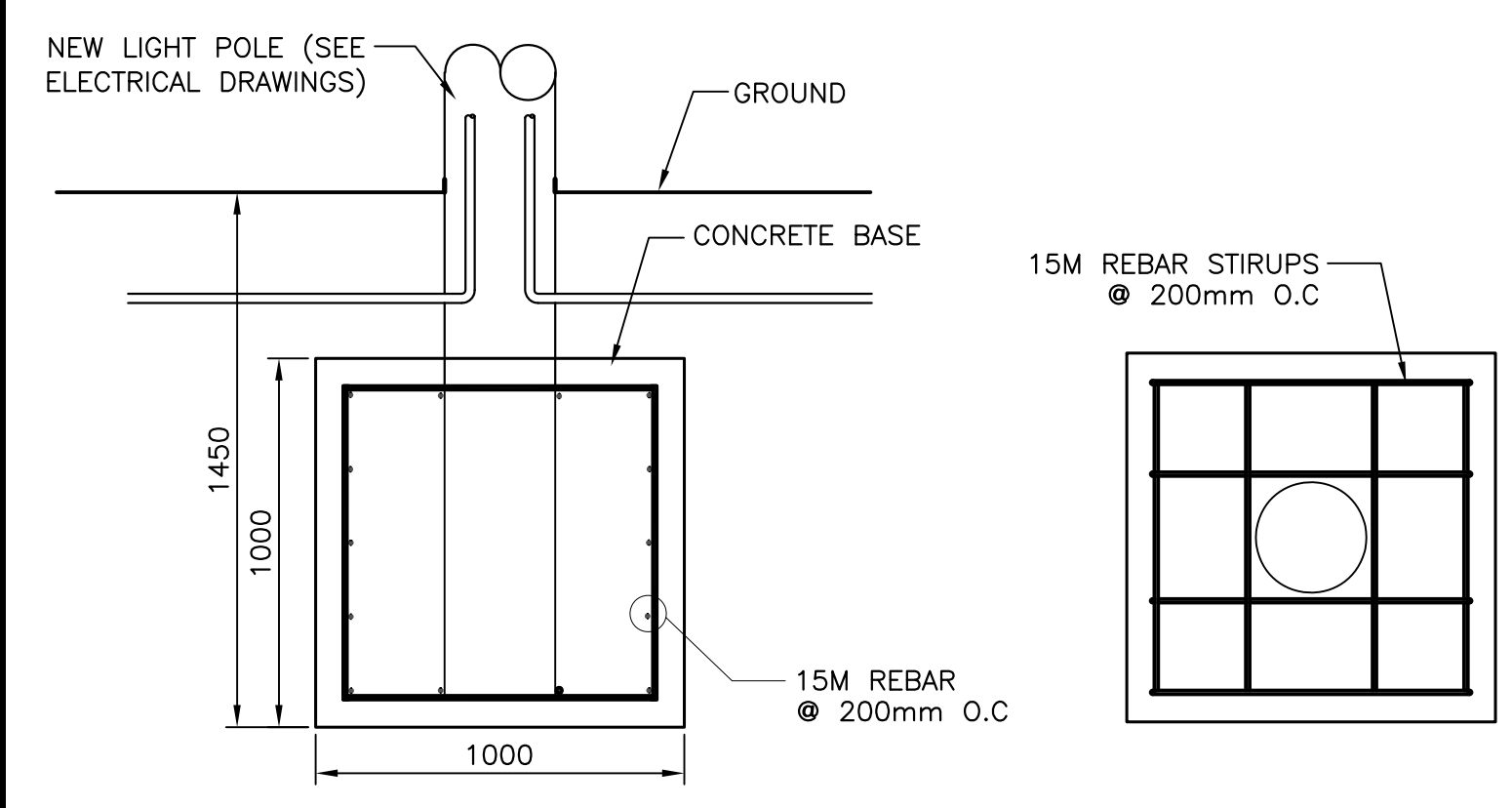
designed N.H. concu
 date JUNE 22, 2016
 drawn P.H. dessine
 date JUNE 22, 2016
 approved
 Tender Submission
 DFO Project Manager
 project number **721767** no. du projet
 drawing no. **C1** no. du dessin



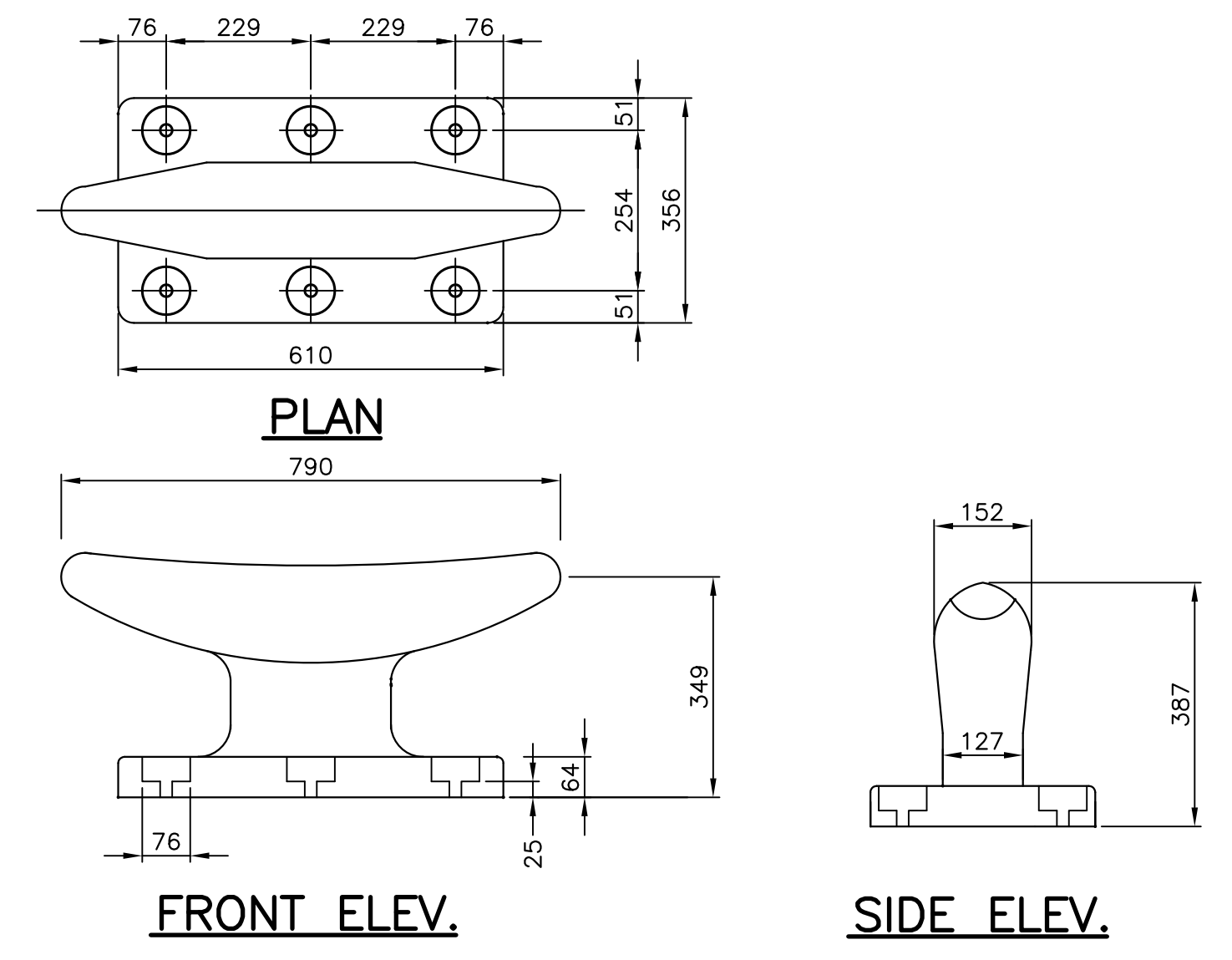
PLAN OF EXISTING UNDERGROUND SERVICES (1/2)
SCALE : N.T.S.

- NOTES:**
- CONSIDER PLAN OF EXISTING UNDERGROUND SERVICES TO BE APPROXIMATE. PLAN IS SHOWN FOR GENERAL ILLUSTRATION PURPOSES ONLY, AND IN NO WAY REPRESENTS AN AS-BUILT CONDITION. CONTRACTOR RESPONSIBLE TO IDENTIFY ALL EXISTING UNDERGROUND SERVICES PRIOR TO PROCEEDING AND CLEARLY ESTABLISH ALL AREAS WHERE NEW ELECTRICAL INSTALLATION RUNS ADJACENT TO (OR OVER) ANY EXISTING UNDERGROUND SERVICES. IN ALL CASES, IMPLEMENT MEASURES TO PROTECT EXISTING UNDERGROUND SERVICES TO ACCOMMODATE NEW ELECTRICAL INSTALLATION. DAMAGE TO EXISTING SERVICES IS TO BE REPAIRED AT NO ADDITIONAL COST TO CANADA.
 - "---" INDICATES NEW ELECTRICAL ROUTING (AS SHOWN ON THE ELECTRICAL DRAWINGS).

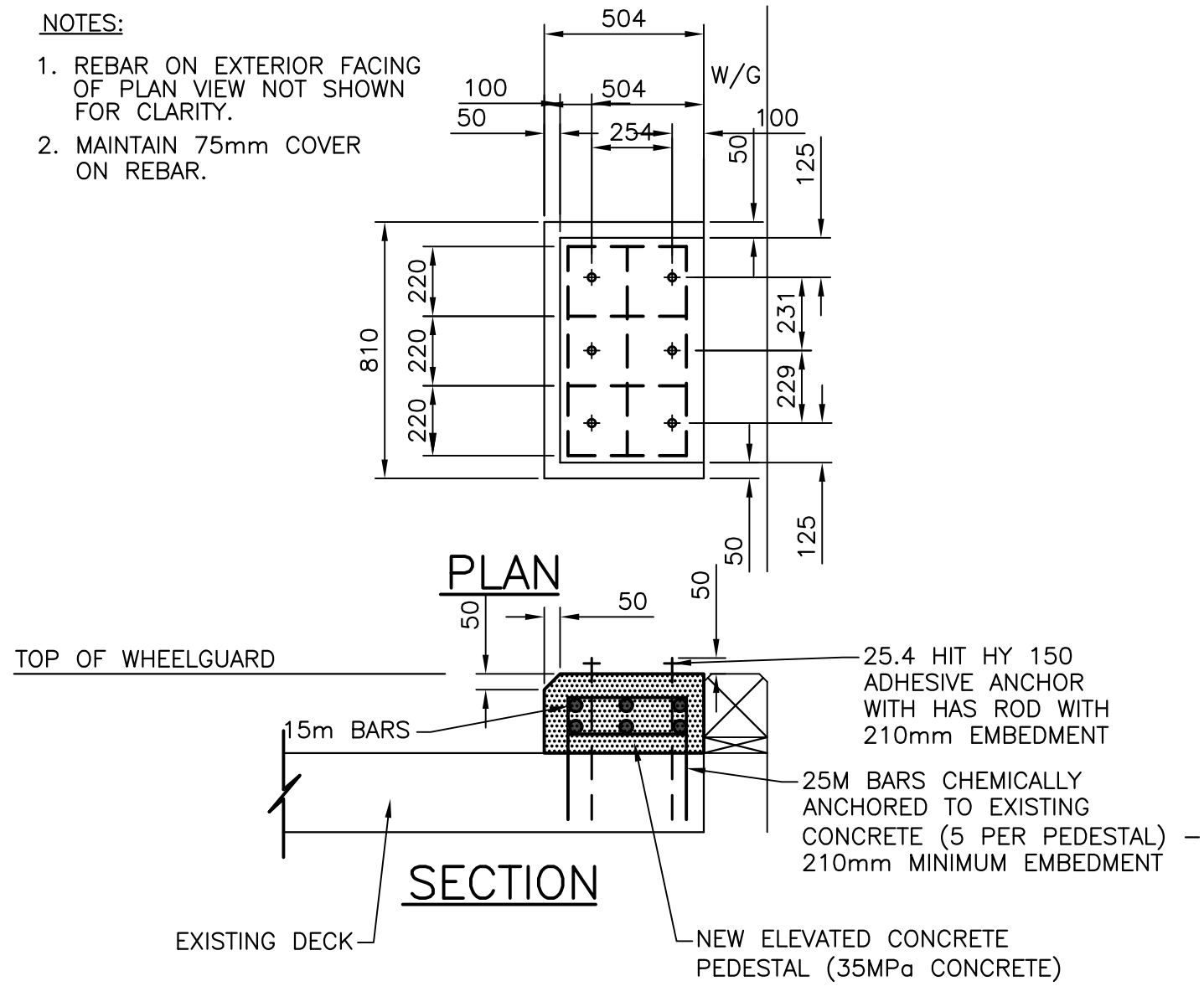
- GENERAL NOTE:**
- SEE ELECTRICAL DRAWINGS FOR THE FOLLOWING:
 - A. ELECTRICAL PEDESTAL BOLTING TO DECK.
 - B. GALVANIZED STEEL PIPE CAP FASTENED TO DECK.
 - C. CONCRETE CUTOUT FOR NEW CONDUIT IN DECK.
 - D. CONCRETE MANHOLE PULL BOX.
 - E. LIGHTPOLE.
 - F. CONDUIT TRANSITION FROM DECK TO UPLANDS.
 - G. TRENCHING DETAIL IN ASPHALT.
 - H. BOLLARD PROTECTORS.
 - I. CONDUIT TRANSITION INTO BUILDING.



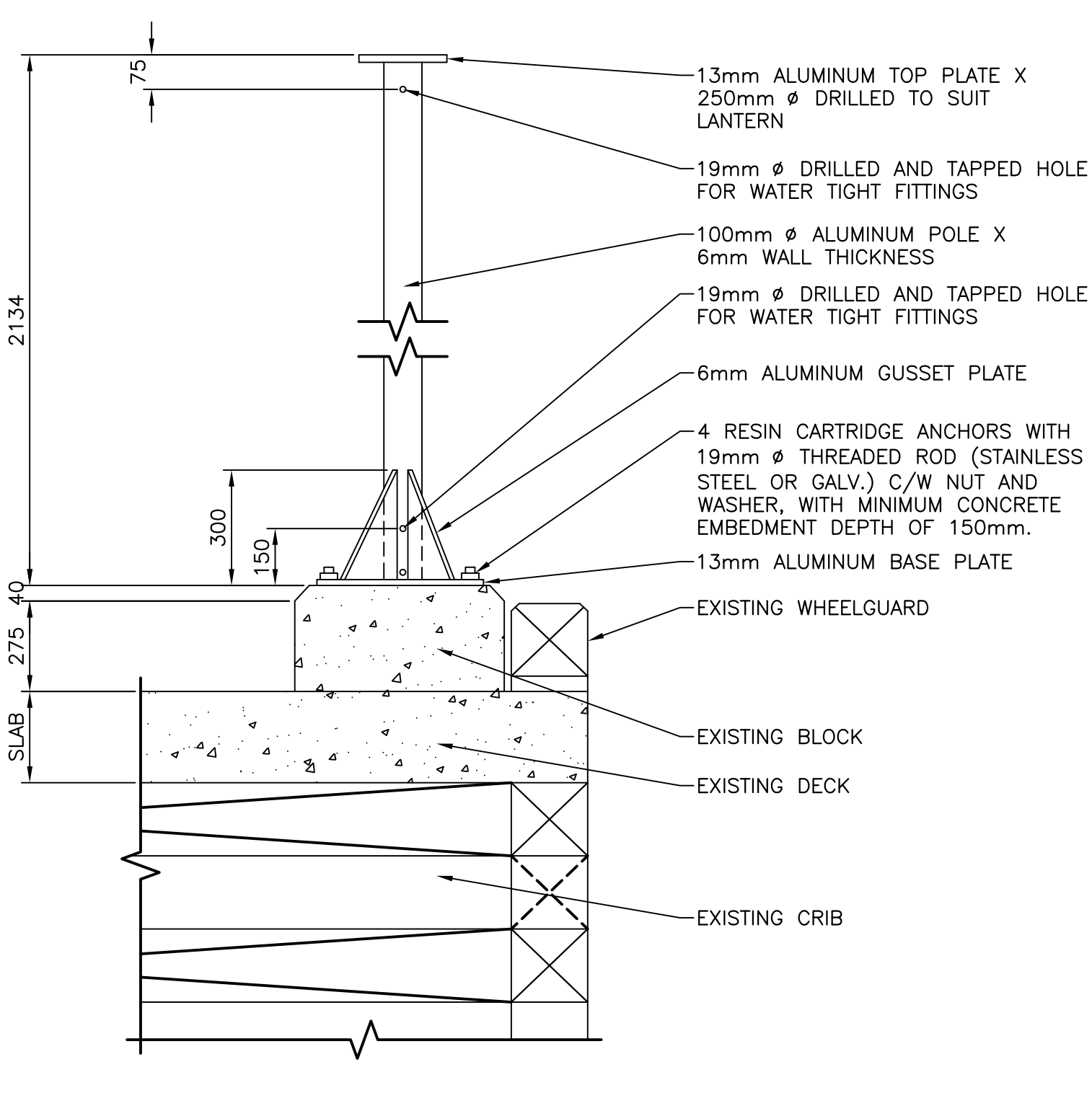
NEW POLE IN UPLANDS (4/2)
SCALE : 1:20



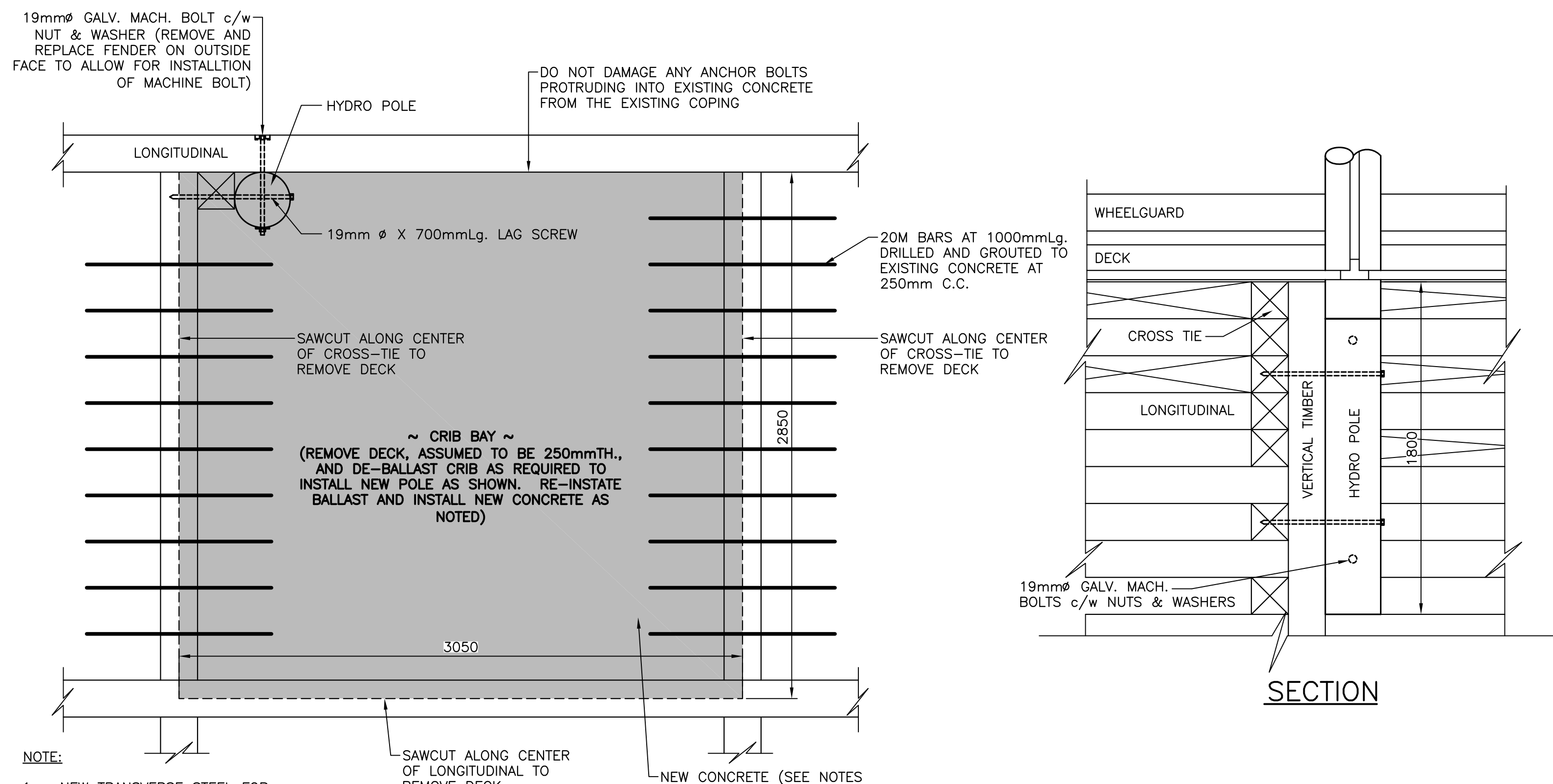
NEW TYPE "A" CLEAT (5/2)
SCALE : 1:10



NEW TYPE "A" CLEAT ATTACHMENT (5/2)
SCALE : 1:20



NEW NAVIGATION LIGHT POST DETAIL (2/2)
SCALE : 1:75



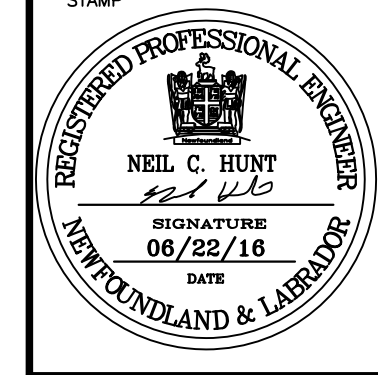
NEW POLE IN EXISTING CRIBWORK (3/2)
SCALE : 1:20

SMALL CRAFT HARBOURS



- NOTES:**
- ALL ELEVATIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

PROVINCE OF NEWFOUNDLAND
PERMIT HOLDER
This Permit Allows
AFN ENGINEERING INC.
To practice Professional Engineering in Newfoundland and Labrador. Permit No. as issued by APBNGI, F0282, which is valid for the year 2016.



C	ISSUED FOR TENDER	06/22/16
B	ISSUED FOR 99% REVIEW	04/05/16
A	ISSUED FOR 33% REVIEW	03/30/16
revisions		date

project
PROSSER'S ROCK ELECTRICAL UPGRADES
ST. JOHN'S, NL

MISCELLANEOUS CIVIL DETAIL

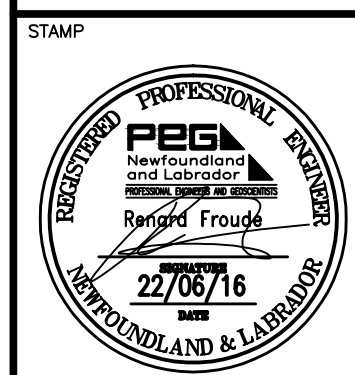
designed	N.H.	concu
date	JUNE 22, 2016	
drawn	P.H.	dessine
date	JUNE 22, 2016	
approved		approve
Tender		Submission
DFO Project Manager		
project number	721767	no. du projet
drawing no.	C2	no. du dessin

SMALL CRAFT HARBOURS



NOTES

1. ALL DIMENSIONS IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
2. ALL ELEVATIONS IN METERS UNLESS SPECIFIED OTHERWISE.
3. DO NOT SCALE FROM DRAWINGS, USE DIMENSIONS AS SHOWN.
4. THE CONTRACTOR SHALL DETERMINE WHAT SAFETY MEASURES NEED TO BE TAKEN DURING DEMOLITION/ CONSTRUCTION ACTIVITIES.
5. ENSURE ALL ITEMS WHICH ARE DESIGNATED FOR REMOVAL ARE FULLY EXTRACTED IN THEIR ENTIRETY.
6. RELIABLE AS-BUILT INFORMATION IS LIMITED. EXISTING WHARF PLANS AND SECTIONS SHOWN FOR INFORMATION ONLY. CONTRACTOR TO BASE COSTS FOR DEMOLITION AND ASSOCIATED RISKS ACCORDINGLY.
7. PRIOR TO DEMOLITION OF STRUCTURES, DEACTIVATE POWER TO THE AFFECTED FIXTURES AND DURING DEMOLITION TERMINATE CABLING IN ACCORDANCE WITH ELECTRICAL DRAWINGS.
8. ALL WORK TO BE COMPLETED AS PER CANADIAN ELECTRICAL CODE C22.1-15.
9. ALL EXISTING PEDESTALS TO BE REMOVED ALONG WITH EXISTING WIRING AND CONDUITS IN DECKING.
10. ALL EXISTING LIGHT POLES TO REMAIN. CONTRACTOR TO RUN NEW CONDUITS AND WIRING FROM ELECTRICAL ROOM TO EXISTING LIGHT POLES AS PER NEW SITE PLAN. CONTRACTOR TO RE-USE EXISTING CONDUITS LOCATED IN EXISTING LIGHT POLE BASES TO PULL WIRE INTO EXISTING LIGHT POLE. NOTE THAT ALL EXISTING CONDUITS ARE ENCASED IN CONCRETE BELOW GRADE.



PROVINCE OF NEWFOUNDLAND AND LABRADOR

PEG PERMIT HOLDER

THIS PERMIT ALLOWS

MADERRA ENGINEERING

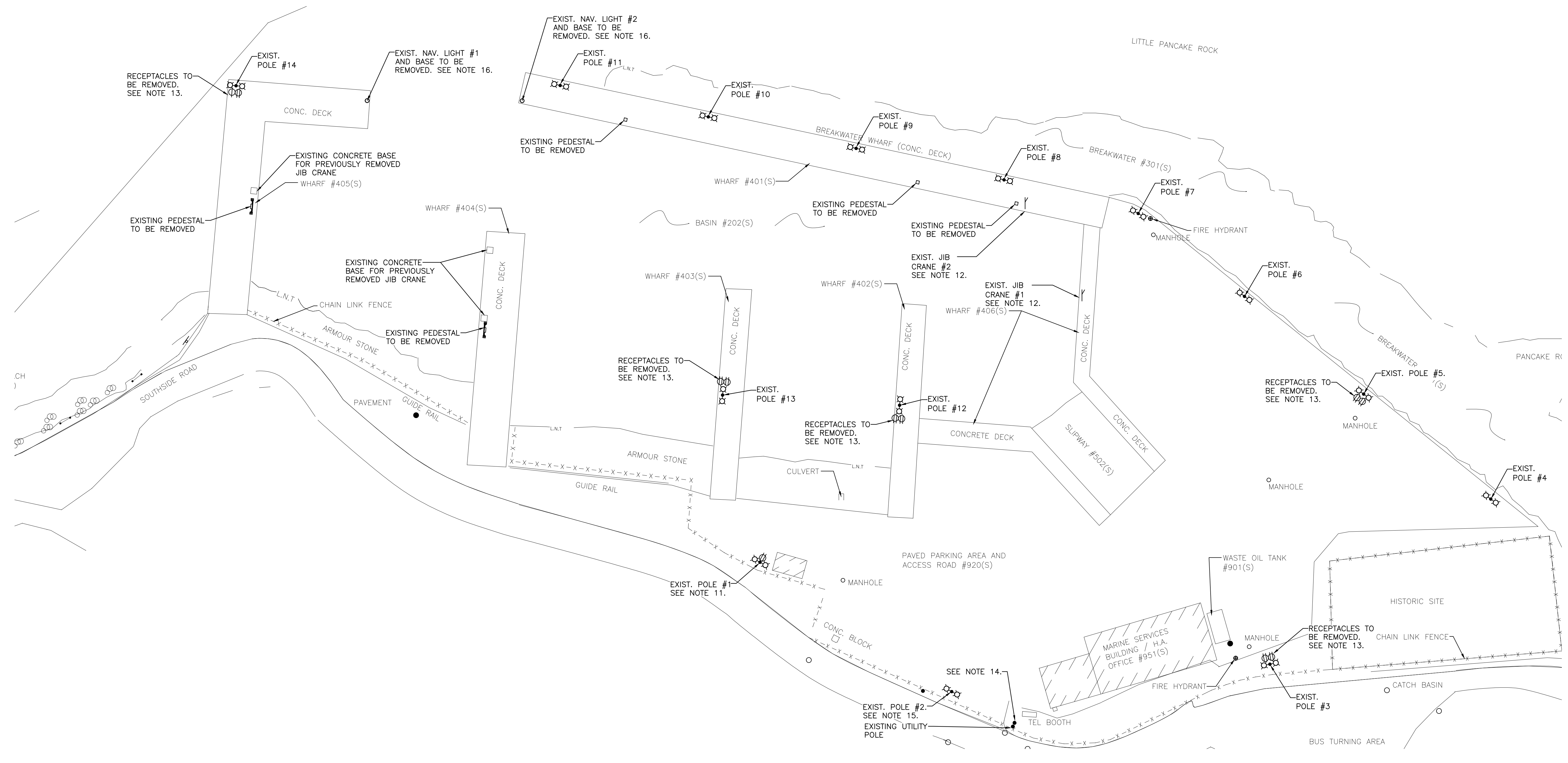
To practice Professional Engineering in Newfoundland and Labrador

Permit No. as issued by PEG **Y0253** which is valid for the year **2016**

0	ISSUED FOR TENDER	22/06/16
C	ISSUED FOR 99% REVIEW	31/03/16
B	ISSUED FOR 66% REVIEW	14/01/16
A	ISSUED FOR 33% REVIEW	10/11/15
revisions		date
project		project

PROSSER'S ROCK ELECTRICAL UPGRADES ST. JOHN'S,NL

drawing	dessin
EXISTING SITE PLAN	
designed S.P.M	conçu
date OCT 2015	
drawn S.P.M	dessiné
date OCT 2015	
approved R.F	approuvé
date OCT 2015	
Tender	Submission
DFD Project Manager	
project number	no. du projet
721767	
drawing no.	no. du dessin
E1	



1 EXISTING SITE PLAN
E1
SCALE 1 : 400

NOTES (CONT'D)

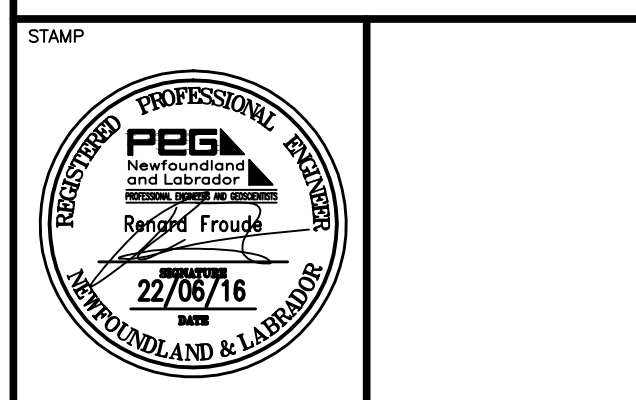
11. RECEPTACLES IN EXISTING LIGHT POLE #1 TO BE RE-WIRED AND INSTALL NEW RECEPTACLES AND COVERS IN EXISTING RECEPTACLE LOCATIONS. PROVIDE ALL NEW WIRING.
12. EXISTING JIB CRANES #1 AND #2 TO BE REMOVED AND REINSTALLED WITH NEW WIRING AND CONDUITS. ANY NEW EQUIPMENT REQUIRED FOR OPERATION OF JIB CRANES TO BE PROVIDED BY DFO.
13. DISCONNECT, MAKE SAFE AND REMOVE EXISTING RECEPTACLES FROM EXISTING LIGHT POLE BASE. INSTALL NEW BLANK WEATHERPROOF COVER PLATES OVER EXISTING BOXES.
14. EXISTING OWNER'S POLE TO REMAIN. REMOVE EXISTING UTILITY SERVICE AND CAP CONDUIT AT BASE OF POLE.
15. ALL LIGHTS ON EXISTING POLES TO BE REPLACED WITH NEW.
16. EXISTING NAVIGATION LIGHTS AND BASES TO BE REMOVED AND BE REPLACED WITH NEW. SEE CIVIL DRAWINGS FOR NEW BASE DETAIL.

SMALL CRAFT HARBOURS



NOTES

- ALL DIMENSIONS IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
- ALL ELEVATIONS IN METERS UNLESS SPECIFIED OTHERWISE.
- DO NOT SCALE FROM DRAWINGS. USE DIMENSIONS AS SHOWN.
- THE CONTRACTOR SHALL DETERMINE WHAT SAFETY MEASURES NEED TO BE TAKEN DURING DEMOLITION/ CONSTRUCTION ACTIVITIES.
- ENSURE ALL ITEMS WHICH ARE DESIGNATED FOR REMOVAL ARE FULLY EXTRACTED IN THEIR ENTIRETY.
- RELIABLE AS-BUILT INFORMATION IS LIMITED. EXISTING WHARF PLANS AND SECTIONS SHOWN FOR INFORMATION ONLY. CONTRACTOR TO BASE COSTS FOR DEMOLITION AND ASSOCIATED RISKS ACCORDINGLY.
- PRIOR TO DEMOLITION OF STRUCTURES, DEACTIVATE POWER TO THE AFFECTED FIXTURES AND DURING DEMOLITION TERMINATE CABLING IN ACCORDANCE WITH ELECTRICAL DRAWINGS.
- ALL WORK TO BE COMPLETED AS PER CANADIAN ELECTRICAL CODE C22.1-15.
- CONTRACTOR TO RE-USE EXISTING CONDUITS BETWEEN LIGHT POLES #4, #5, AND #6. PULL NEW WIRES INTO CONDUITS AS PER PANEL SCHEDULE.
- DISCONNECT, MAKE SAFE AND REMOVE EXISTING LIGHT FIXTURES ON EXISTING POLES AND REPLACE WITH NEW. LIGHT FIXTURE TO BE HUBBELL KILLARK KFL SERIES LED FLOODLIGHT C/W 105 WATT LED LAMP AND BUILT-IN 120V PHOTOCELL. PROVIDE KFS-6 SLIPFITTER ACCESSORY FOR MOUNTING FIXTURE TO EXISTING POLE.



PROVINCE OF NEWFOUNDLAND AND LABRADOR
PEG PERMIT HOLDER
 THIS PERMIT ALLOWS
MADERRA ENGINEERING
 To practice Professional Engineering in Newfoundland and Labrador
 Permit No. as issued by PEG Y0253
 which is valid for the year 2016

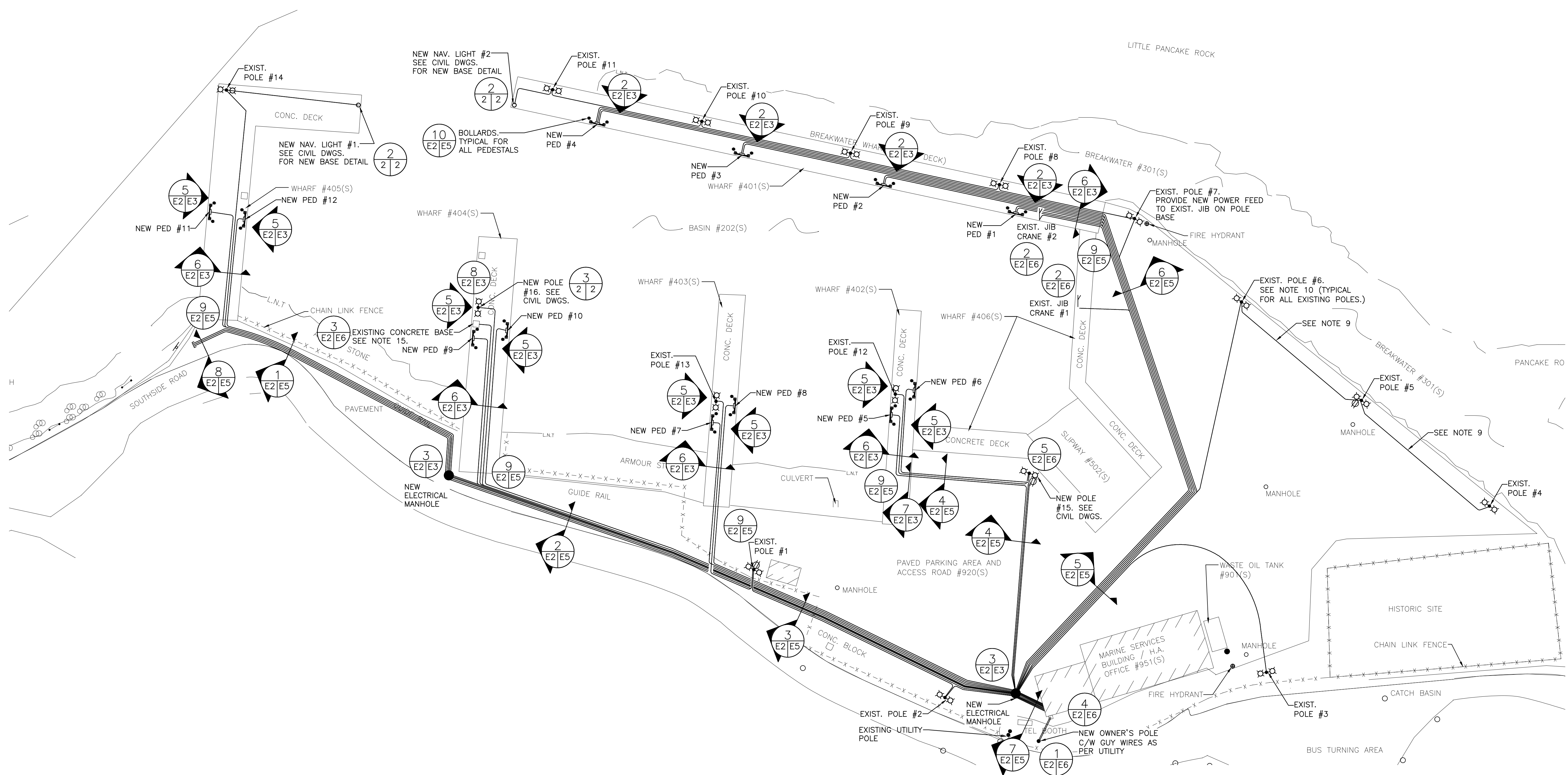
O	ISSUED FOR TENDER	22/06/16
C	ISSUED FOR 99% REVIEW	31/03/16
B	ISSUED FOR 66% REVIEW	14/01/16
A	ISSUED FOR 33% REVIEW	10/11/15

revisions	date
project	project

PROSSER'S ROCK ELECTRICAL UPGRADES ST. JOHN'S, NL

NEW SITE PLAN

designed	S.P.M	concu
date	OCT 2015	
drawn	S.P.M	dessine
date	OCT 2015	
approved	R.F	approuve
date	OCT 2015	
Tender		Submission
DFD Project Manager		
project number	721767	no. du projet
drawing no.	E2	no. du dessin



1 NEW SITE PLAN
 SCALE 1 : 400

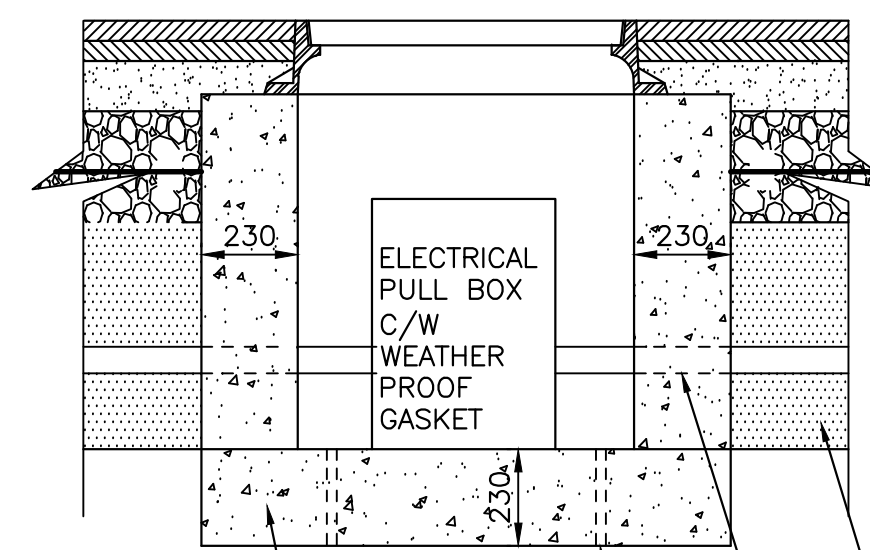
NOTES (CONT'D)

- CONTRACTOR TO COMPLETE ALL WORK TO MAIN ELECTRICAL SERVICE SO THAT THE MAXIMUM DURATION OF LOSS OF POWER TO THE SITE IS ONE WEEK. CONTRACTOR TO PROVIDE ADVANCE NOTICE OF LOSS OF POWER TO SITE MINIMUM OF TWO WEEKS PRIOR TO SHUTDOWN. AN ASSESSMENT OF \$2,000.00 PER DAY WILL BE ADDED FOR EACH DAY THE SHUTDOWN EXCEEDS THE MAXIMUM SET DURATION. COORDINATE WITH UTILITIES.
- ALL WORK TO BE COMPLETED ON EACH WHARF IS TO BE COORDINATED WITH ALL TRADES IN PHASES SO THAT ONLY ONE WHARF IS TO BE TAKEN OUT OF SERVICE AT A TIME.
- ALL EXISTING LIGHT POLES TO REMAIN AS PER EXISTING SITE PLAN. CONTRACTOR TO RUN NEW CONDUITS AND WIRING FROM ELECTRICAL ROOM TO EXISTING LIGHT POLES. CONTRACTOR TO RE-USE EXISTING CONDUITS LOCATED IN EXISTING LIGHT POLE BASES TO PULL WIRE INTO EXISTING LIGHT POLE. NOTE THAT ALL EXISTING CONDUITS ARE ENCASED IN CONCRETE BELOW GRADE.
- EXISTING JIB CRANES #1 AND #2 TO BE REMOVED AND REINSTALLED WITH NEW WIRING AND CONDUITS. ANY NEW EQUIPMENT REQUIRED FOR OPERATION OF JIB CRANES TO BE PROVIDED BY DFO.
- RUN 1-53mm CONDUIT TO EXISTING CONCRETE BASE C/W POLY FISH CORD FOR FUTURE. CAP CONDUIT AND COVER WITH GALVANIZED STEEL PIPE AND FASTEN TO DECK (SEE DETAIL).
- ALL PARKING LOT LIGHTING IS APPROXIMATELY 40 FEET HIGH.
- PRIOR TO TRENCHING, CONTRACTOR TO COORDINATE WITH CIVIL DRAWINGS AND LOCATE ALL EXISTING UNDERGROUND UTILITIES. ALL LOCATIONS INDICATED ARE A REFERENCE AND MAY NOT CAPTURE EVERYTHING. ANY DAMAGE TO UNDERGROUND UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR AND WILL HAVE TO BE REPLACED.



NOTES

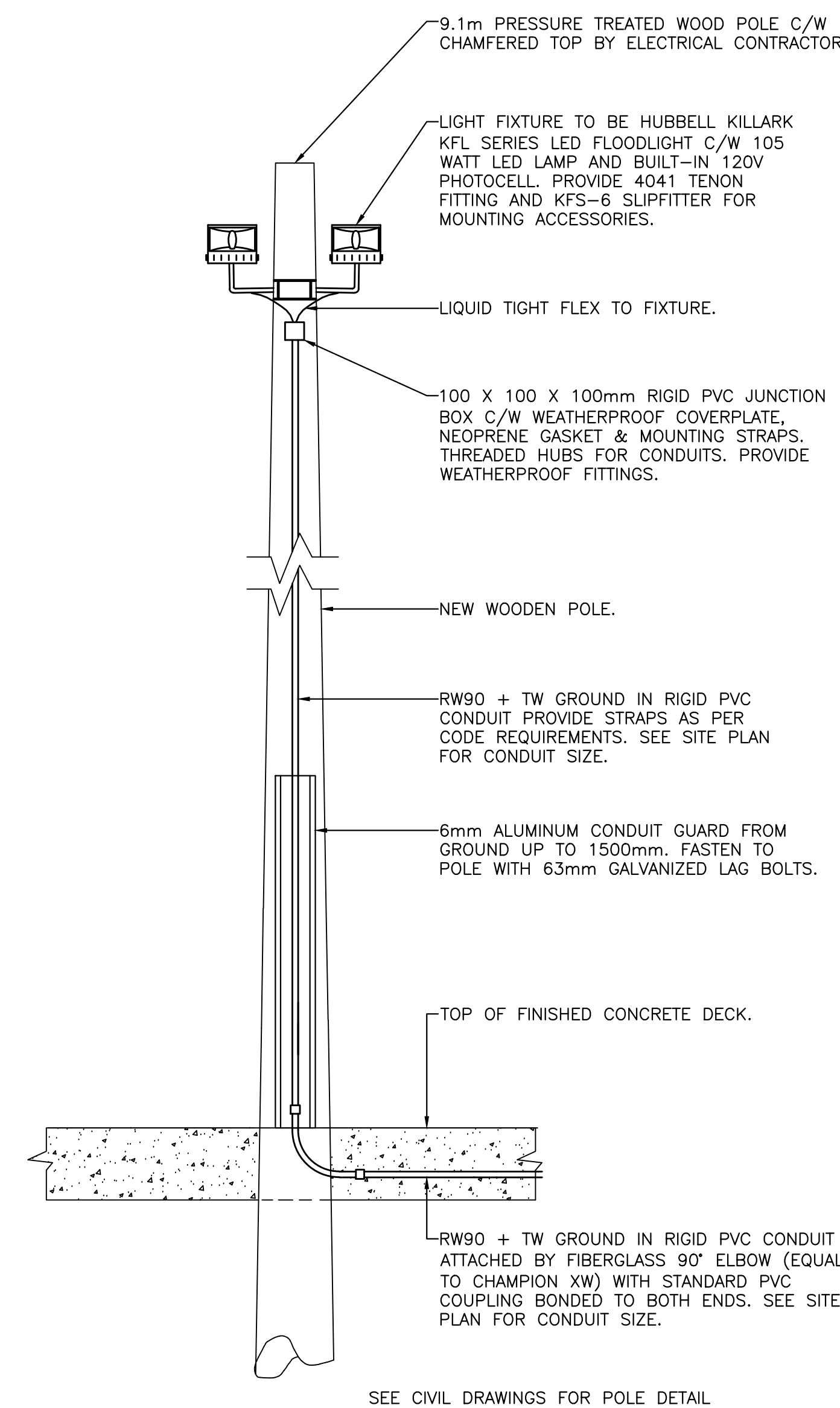
1. ALL DIMENSIONS IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
2. ALL ELEVATIONS IN METERS UNLESS SPECIFIED OTHERWISE.



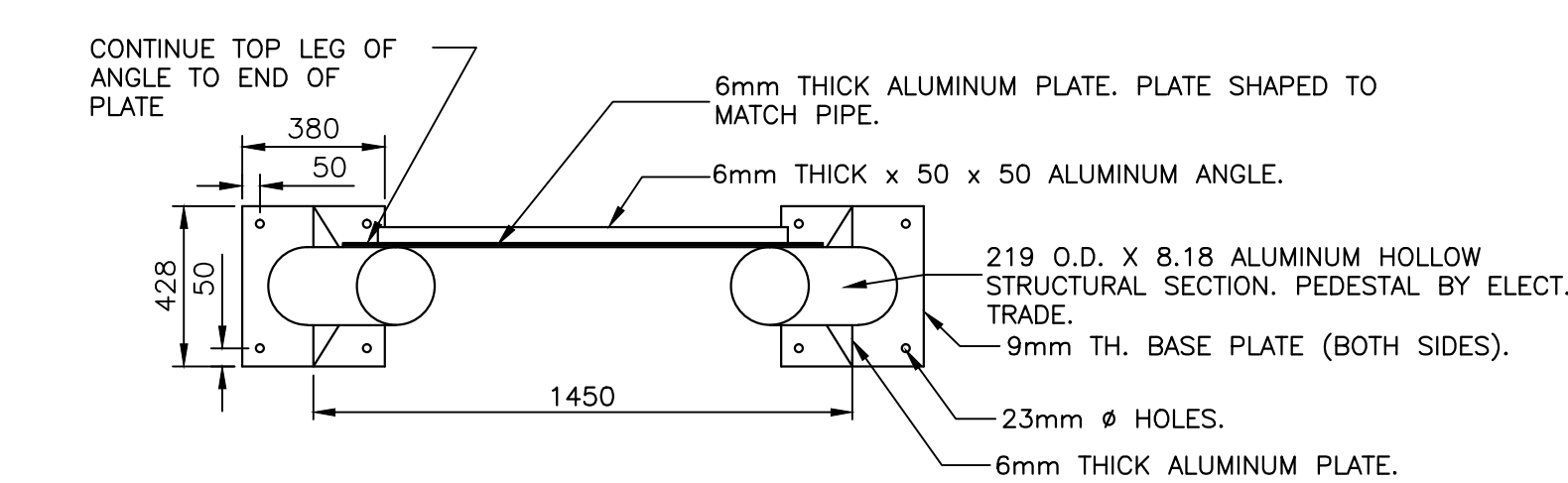
CONCRETE ENCASEMENT
 PROVIDE MINIMUM 4 - 19mm Ø DRAIN LINES
 PIPE SLEEVES AS REQUIRED TO ACCOMMODATE CONDUITS
 PROVIDE 150mm SAND BEDDING COVERAGE ALL AROUND CONDUIT

NOTE:
 1. CONTRACTOR TO SIZE PULL BOX TO ACCOMMODATE 33-53mm RIGID PVC CONDUITS ENTERING AND LEAVING FIRST MANHOLE CLOSEST TO MAIN ELECTRICAL ROOM. EXACT LAYOUTS AND REQUIREMENTS TO BE DETERMINED ON SITE.

3 TYPICAL MANHOLE PULLBOX
 E2/E3 N.T.S.



8 LIGHT POLE #16 DETAIL
 E2/E3 N.T.S.



1 TYPICAL ELECTRICAL PEDESTAL CONSTRUCTION
 E3 N.T.S.

LAMACOID NAMEPLATE (MECHANICALLY ATTACHED) TO READ AS FOLLOWS:
 DANGER WHEN OPERATING EQUIPMENT, APPROVED RECEPTACLES, CORDS, PLUGS AND OVERCURRENT DEVICES MUST BE USED AS PER RECEPTACLE SIZE.

20A, 125V GFCI MODULE INSTALLED IN A FIBERGLASS WEATHERPROOF BOX WITH TWO 3/4" I.P.S. MOLDED IN KNOCKOUTS C/W PVC WEATHERPROOF CAST ALUMINUM LIFT COVER PLATE.

20A, 125V MARINE GRADE TWISTLOCK RECEPTACLE C/W YELLOW FIBERGLASS TYPE FD BOX C/W WEATHERPROOF COVER C/W MATCHING YELLOW PLUG & YELLOW RUBBER BOOT.

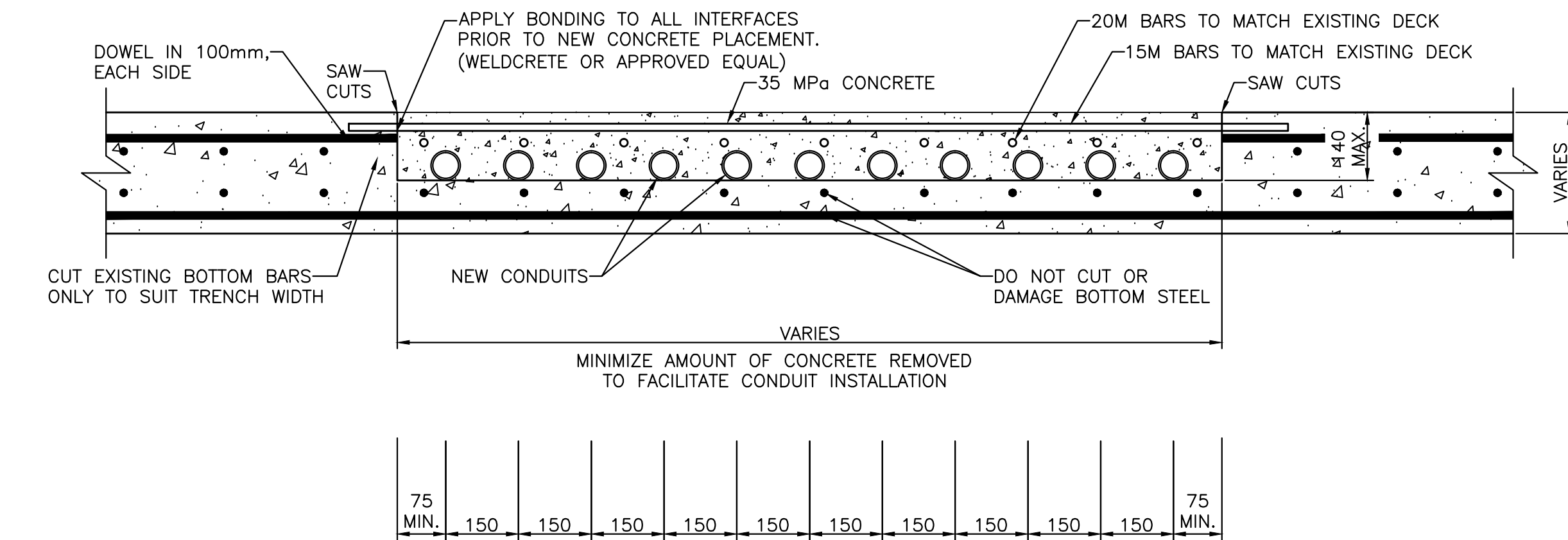
20A, 125V GFCI MODULE INSTALLED IN A FIBERGLASS WEATHERPROOF BOX WITH TWO 3/4" I.P.S. MOLDED IN KNOCKOUTS C/W PVC WEATHERPROOF CAST ALUMINUM LIFT COVER PLATE.

1-53mm RIGID PVC CONDUIT ATTACHED BY FIBERGLASS 90° ELBOW (EQUAL TO CHAMPION XW) WITH STANDARD PVC COUPLING BONDED TO BOTH ENDS. RUN IN CONCRETE WHARF DECK FROM NEW PANEL TO PEDESTALS. FOR ALL PEDESTALS RUN RW90 CONDUCTORS AND TW BOND. ONE BOND WIRE IS FOR ALL RECEPTACLES.

PEDESTAL NOTES:

1. THIS CONFIGURATION IS FOR NEW PEDESTALS: #5, #6, #7, #8, #9, #10, #11, & #12.
2. REINFORCING OMITTED FOR CLARITY.
3. MOUNT RECEPTACLES IN FIBERGLASS FD TYPE OUTLET BOX, COVER, GASKET & MOUNTING LUGS, HUBS, WEATHER PROOF FITTINGS, CAST "CROUSE HINDS" OR EQUAL, C/W 20mm
4. PROVIDE ALUMINUM ANGLE MOUNTING BRACKETS WELDED TO THE BACK PLATE, FOR ALL RECEPTACLES.
5. DRILL 9mm DRAINAGE HOLE IN BACK CORNERS OF JUNCTION BOX TO ALLOW FOR DRAINAGE OF WATER.

5 NEW ELECTRICAL PEDESTAL CONFIGURATION - FINGER PIER WHARF (TYPICAL)
 E2/E3 N.T.S.



6 CONCRETE DECKING CUTOUT FOR CONDUITS (TYPICAL)
 E2/E3 N.T.S.

2 NEW ELECTRICAL PEDESTAL CONFIGURATION - BREAKWATER WHARF
 E2/E3 N.T.S.

300 x 300 x 150mm PVC JUNCTION BOX RATED NEMA 4X C/W WEATHERPROOF COVERPLATE, NEOPRENE GASKET, MOUNTING STRAPS & WEATHERPROOF FITTINGS. "SCHEPTEK" OR APPROVED EQUAL, SIZE BOND WIRES TO SECTION 10 OF C.E.C. C22.1-15. ALL CABLE CONNECTORS TO BE MARINE GRADE C/W "O" RINGS. BOX TO BE C/W DIN RAIL MOUNTED TERMINAL BLOCKS EQUAL TO "PHOENIX" CONTACT UK16 SERIES. DO NOT SPLICE CONDUCTORS.

30A, 125V MARINE GRADE TWISTLOCK RECEPTACLE C/W YELLOW FIBERGLASS TYPE FD BOX C/W WEATHERPROOF COVER C/W MATCHING YELLOW PLUG & YELLOW RUBBER BOOT.

15A, 125V MARINE GRADE STRAIGHT BLADE DUPLEX RECEPTACLE C/W YELLOW FIBERGLASS TYPE FD BOX C/W WEATHERPROOF COVER C/W MATCHING YELLOW PLUG & YELLOW RUBBER BOOT.

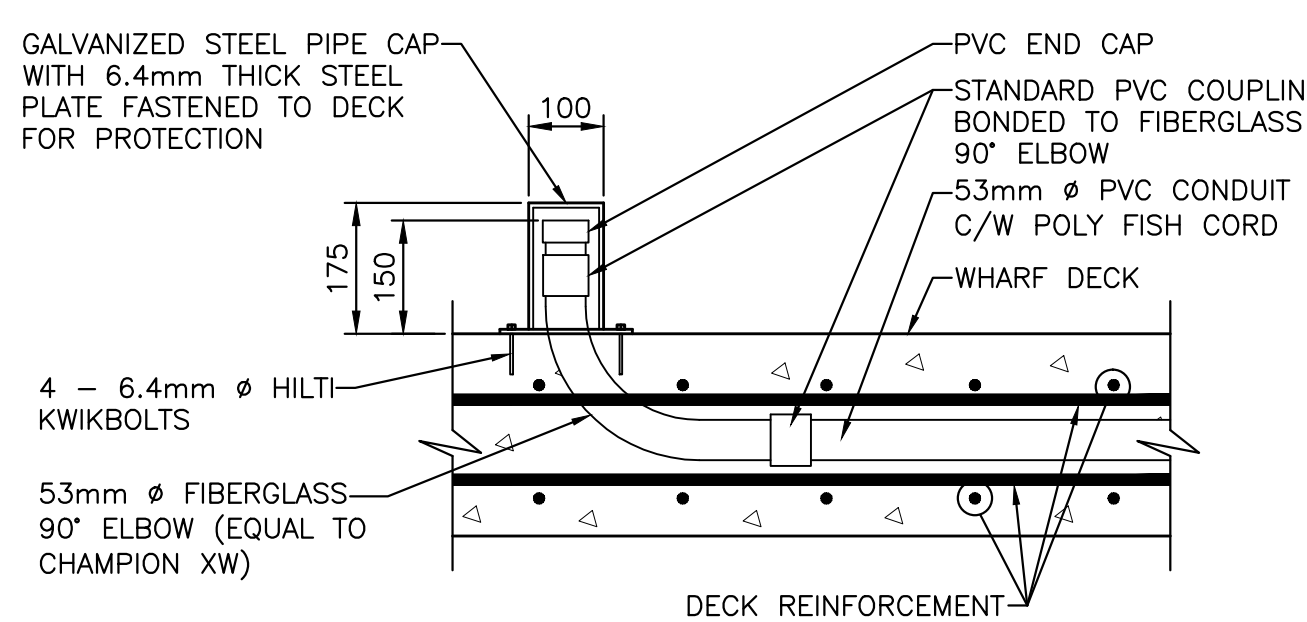
15A, 125V GFCI MODULE INSTALLED IN A FIBERGLASS WEATHERPROOF BOX WITH TWO 3/4" I.P.S. MOLDED IN KNOCKOUTS C/W PVC WEATHERPROOF CAST ALUMINUM LIFT COVER PLATE.

15A, 125V GFCI MODULE INSTALLED IN A FIBERGLASS WEATHERPROOF BOX WITH TWO 3/4" I.P.S. MOLDED IN KNOCKOUTS C/W PVC WEATHERPROOF CAST ALUMINUM LIFT COVER PLATE.

PEDESTAL NOTES:

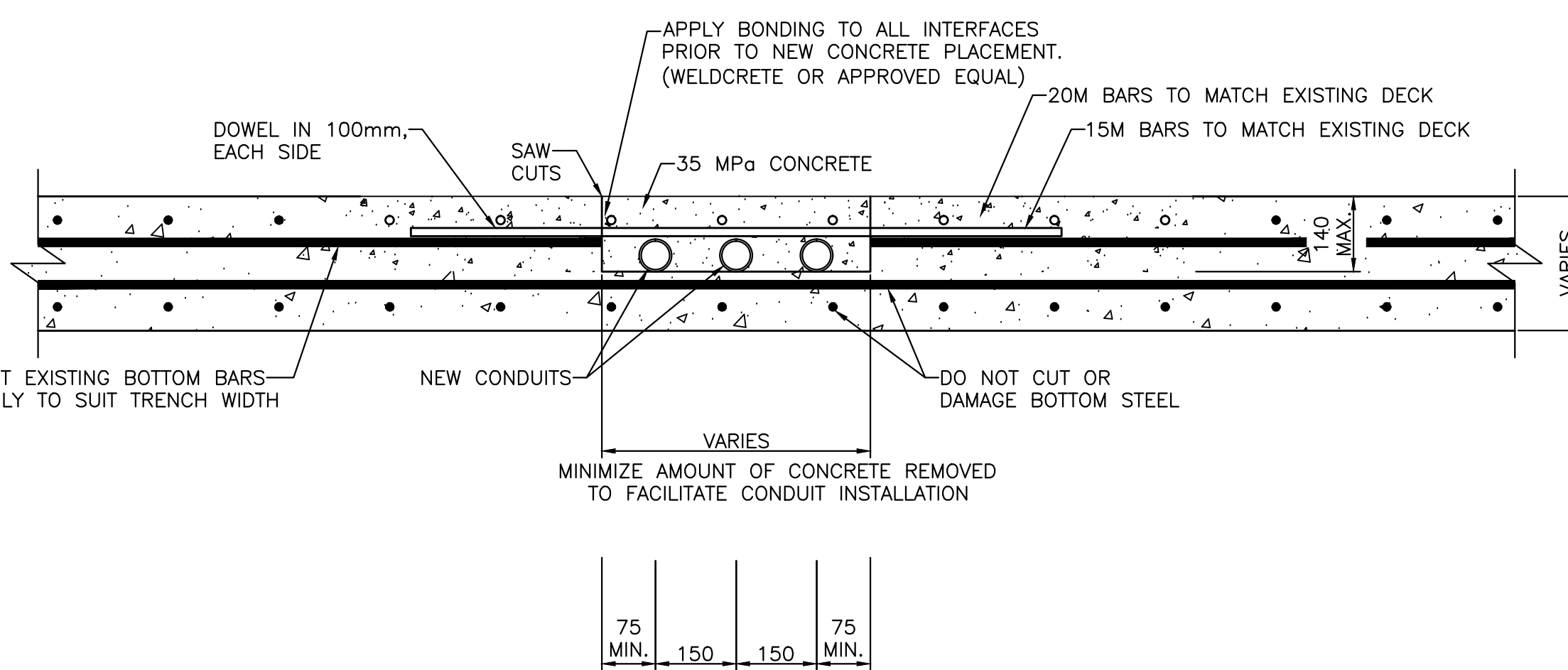
1. THIS CONFIGURATION IS FOR NEW PEDESTALS: #1, #2, #3, & #4.
2. 50A 208 3Ø RECEPTACLE FOR PEDESTALS #2 AND #4 PEDESTALS ONLY.
3. REINFORCING OMITTED FOR CLARITY.
4. MOUNT RECEPTACLES IN FIBERGLASS FD TYPE OUTLET BOX, COVER, GASKET & MOUNTING LUGS, HUBS, WEATHER PROOF FITTINGS, CAST "CROUSE HINDS" OR EQUAL, C/W 20mm
5. PROVIDE ALUMINUM ANGLE MOUNTING BRACKETS WELDED TO THE BACK PLATE, FOR ALL RECEPTACLES.
6. DRILL 9mm DRAINAGE HOLE IN BACK CORNERS OF JUNCTION BOX TO ALLOW FOR DRAINAGE OF WATER.

4 PEDESTAL STUB-UP CONDUIT CAP DETAIL
 E3 UNTIL EQUIPMENT INSTALLED.
 N.T.S.



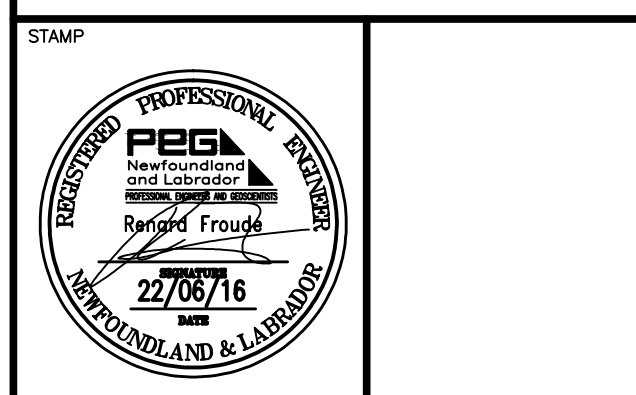
NOTE:
 THIS DETAIL IS FOR ALL PEDESTALS, UNTIL EACH PIECE OF EQUIPMENT IS INSTALLED ON SITE TO PREVENT DAMAGE TO CONDUITS AND TO PREVENT ANY WATER OR DIRT TO ENTER THE CONDUIT. THE EXACT LOCATION OF THE ELBOW IN RELATION TO ELECTRICAL FIXTURE IS TO BE DETERMINED IN THE FIELD.

4 PEDESTAL STUB-UP CONDUIT CAP DETAIL
 E3 UNTIL EQUIPMENT INSTALLED.
 N.T.S.

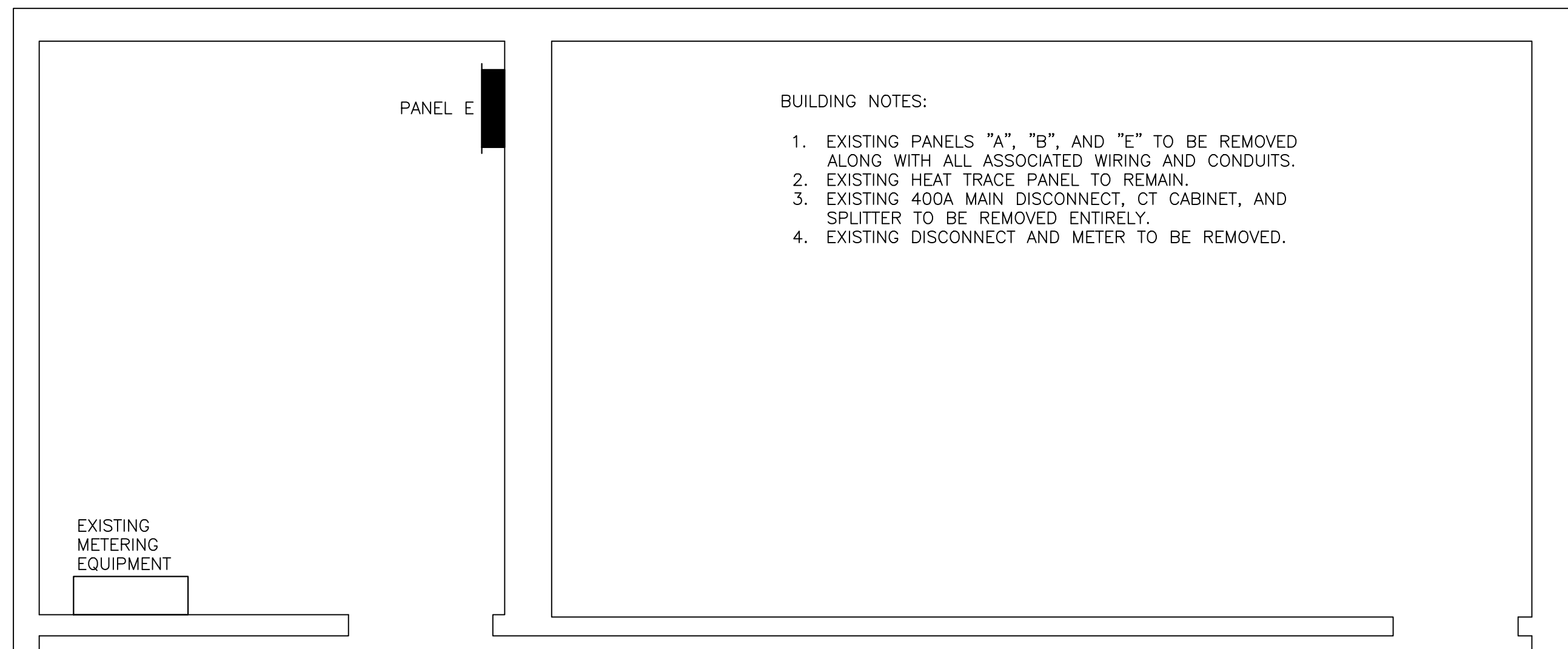


7 CONCRETE CUTOUT PERPENDICULAR TO WHARF (TYPICAL)
 E2/E3 N.T.S.

revisions	date
0	ISSUED FOR TENDER 22/06/16
C	ISSUED FOR 99% REVIEW 31/03/16
B	ISSUED FOR 66% REVIEW 14/01/16
A	ISSUED FOR 33% REVIEW 10/11/15

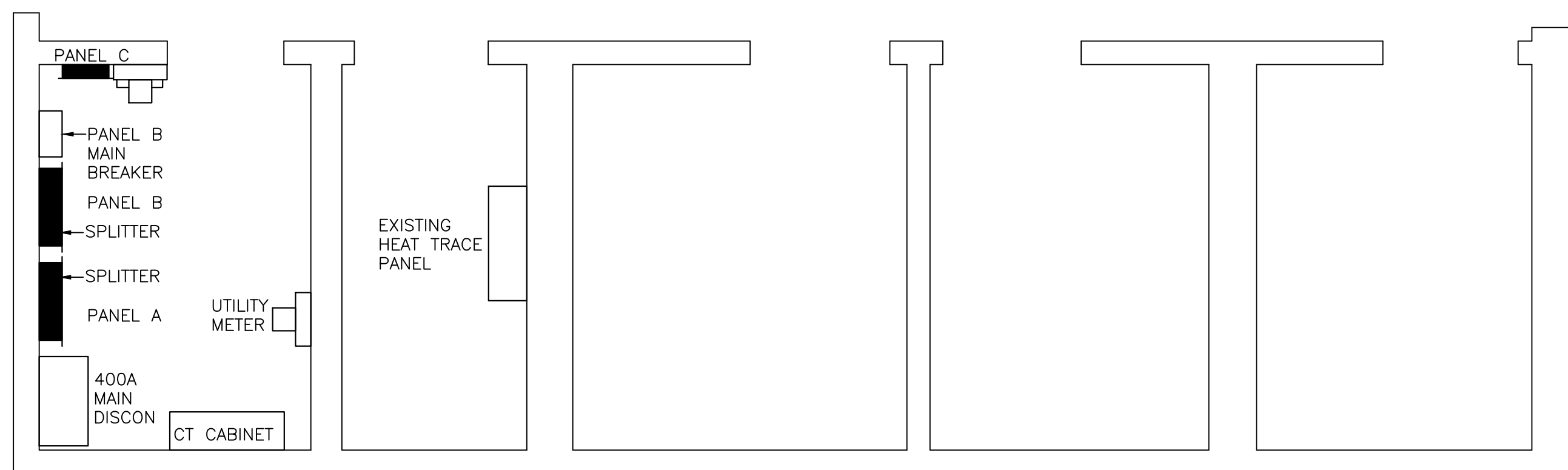


PROVINCE OF NEWFOUNDLAND AND LABRADOR
 PEG PERMIT HOLDER
 THIS PERMIT ALLOWS
 MADERRA ENGINEERING
 To practice Professional Engineering in Newfoundland and Labrador. Permit No. as issued by PEG Y0253 which is valid for the year 2016.

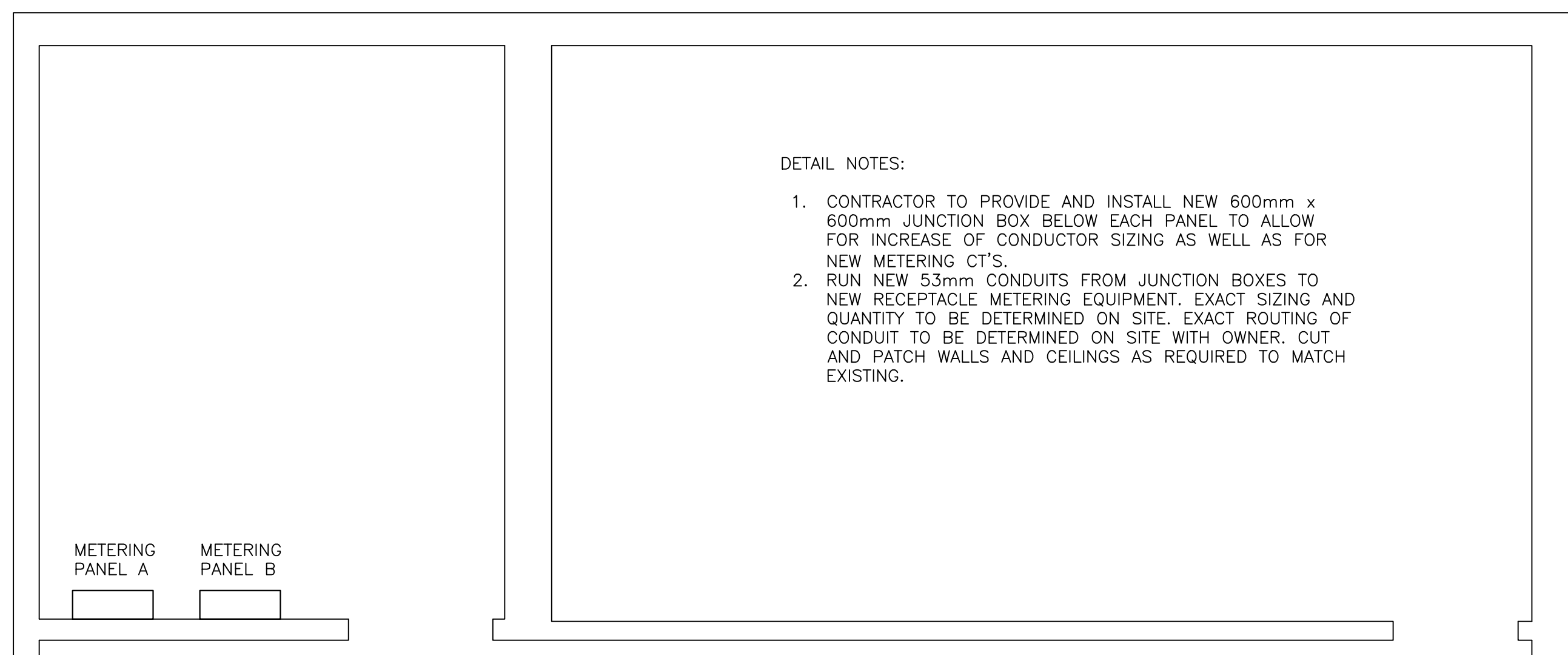


BUILDING NOTES:

1. EXISTING PANELS "A", "B", AND "E" TO BE REMOVED ALONG WITH ALL ASSOCIATED WIRING AND CONDUITS.
2. EXISTING HEAT TRACE PANEL TO REMAIN.
3. EXISTING 400A MAIN DISCONNECT, CT CABINET, AND SPLITTER TO BE REMOVED ENTIRELY.
4. EXISTING DISCONNECT AND METER TO BE REMOVED.

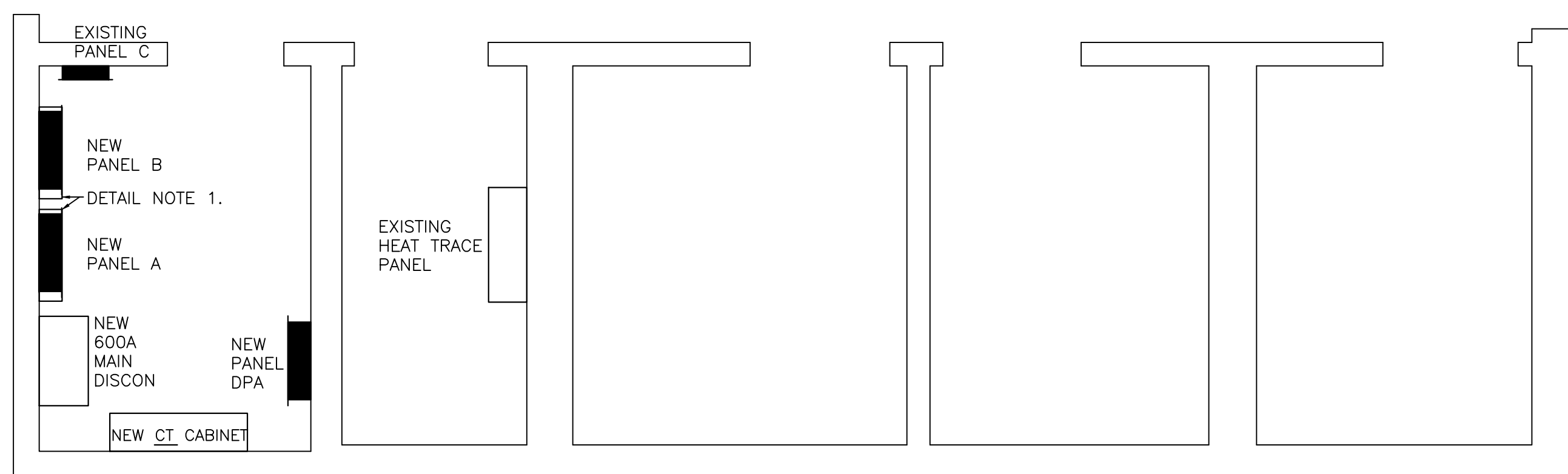


1
E4 EXISTING ELECTRICAL LAYOUT
N.T.S



DETAIL NOTES:

1. CONTRACTOR TO PROVIDE AND INSTALL NEW 600mm x 600mm JUNCTION BOX BELOW EACH PANEL TO ALLOW FOR INCREASE OF CONDUCTOR SIZING AS WELL AS FOR NEW METERING CT'S.
2. RUN NEW 53mm CONDUITS FROM JUNCTION BOXES TO NEW RECEPTACLE METERING EQUIPMENT. EXACT SIZING AND QUANTITY TO BE DETERMINED ON SITE. EXACT ROUTING OF CONDUIT TO BE DETERMINED ON SITE WITH OWNER. CUT AND PATCH WALLS AND CEILINGS AS REQUIRED TO MATCH EXISTING.



2
E4 NEW ELECTRICAL LAYOUT
N.T.S

LOCATION
PANEL A
PANEL SCHEDULE

TYPE 60 CIRCUIT SURFACE CABINET - TOP ENTRY
RATING 120/208V, 3PH., 4W., 225 AMP
STANDARD OF ACCEPTANCE EATON POW-R-LINE 1a
MINIMUM INTERRUPTING CAPACITY 10000 R.M.S. SYMM AMPERES
NOTES * - BREAKER TO BE C/W LOCK-ON DEVICE

CIRCUIT DESCRIPTION	LOAD WATTS	WIRE SIZE	BRKR SIZE	CIRCUIT NO.	BRKR SIZE	WIRE SIZE	LOAD WATTS	CIRCUIT DESCRIPTION
PEDESTAL #1 REC #1	1440	4	15	1	2	15	4	1440 PEDESTAL #2 REC #6
PEDESTAL #1 REC #2	2880	1	30	3	4	30	1	2880 PEDESTAL #2 REC #7
PEDESTAL #1 REC #3	2880	1	30	5	6	30	1	2880 PEDESTAL #2 REC #8
PEDESTAL #1 REC #4	2880	1	30	7	8	30	1	2880 PEDESTAL #2 REC #9
PEDESTAL #1 REC #5	4992	1	30	9	10	30	1	4992 PEDESTAL #2 REC #10
PEDESTAL #3 REC #11	1440	3	15	13	14	15	2	1440 PEDESTAL #4 REC #16
PEDESTAL #3 REC #12	2880	1/0	30	15	16	30	2/0	2880 PEDESTAL #4 REC #17
PEDESTAL #3 REC #13	2880	1/0	30	17	18	30	2/0	2880 PEDESTAL #4 REC #18
PEDESTAL #3 REC #14	2880	1/0	30	19	20	30	2/0	2880 PEDESTAL #4 REC #19
PEDESTAL #3 REC #15	4992	1/0	30	21	22	30	2/0	4992 PEDESTAL #4 REC #20
JIB CRANE #1	4000	4	30	25	26	30	4	4000 JIB CRANE #2
JIB CRANE #1 REC	1440	4	15	31	32	15	4	1440 JIB CRANE #2 REC
LIGHTS POLE #3	300	10	15	33	34	15	8	300 LIGHTS POLE #5
LIGHTS POLE #4	300	6	15	35	36	15	8	300 LIGHTS POLE #7
LIGHTS POLE #6	300	10	15	37	38	15	6	300 LIGHTS POLE #9
LIGHTS POLE #8	300	6	15	39	40	15	6	300 LIGHTS POLE #11
LIGHTS POLE #10	300	6	15	41	42	15		SPARE
LIGHT POLE #7 POWER TO EXISTING JUNCTION BOX	1440	6	15	43	44	50		
NAVIGATIONAL LIGHT #2	200	6	15	45	46		1	14 KW PEDESTAL #2 REC #53
PEDESTAL #4 REC #54	14 KW	1	50	47	48	3		
				49	50			
				51	52			
				53	54			
				55	56			
				57	58			
				59	60			

1. PROVIDE TYPE WRITTEN DIRECTORY.

PANELBOARDS TO BE C/W GROUNDED NEUTRAL, GROUND AND NEUTRAL BLOCKS, BOLT-ON TYPE BREAKERS WITH AN I.C. RATING AS INDICATED, RMS SYMMETRICAL AT PANEL VOLTAGE. PROVIDE LAMICOID NAMEPLATE STATING PANEL DESIGNATION, VOLTAGE, PHASE AND AMPERAGE, TYPE WRITTEN DIRECTORY, AND LOCKING DOOR. ALL PANELS TO BE KEYPED ALIKE. INSTALLATION, INCLUDING CONDUITS, TO BE RATED FOR SURFACE MOUNTED APPLICATIONS. WALL MOUNT ON 19mm THICK PLYWOOD BACKBOARD. PAINT PLYWOOD LIGHT GRAY.

LOCATION
PANEL DPA
PANEL SCHEDULE

TYPE 30 CIRCUIT SURFACE CABINET - TOP ENTRY
RATING 120/208V, 3PH., 4W., 600 AMP
STANDARD OF ACCEPTANCE EATON POW-R-LINE 3
MINIMUM INTERRUPTING CAPACITY 10000 R.M.S. SYMM AMPERES
NOTES * - BREAKER TO BE C/W LOCK-ON DEVICE

CIRCUIT DESCRIPTION	LOAD WATTS	WIRE SIZE	BRKR SIZE	CIRCUIT NO.	BRKR SIZE	WIRE SIZE	LOAD WATTS	CIRCUIT DESCRIPTION
NEW PANEL A	50 KW	4/0	225	1	2	100	3	20 KW EXISTING PANEL C
NEW PANEL B	48 KW	4/0	225	7	8	100	EXIST TO REUSE	10KW EXISTING PANEL D (LOCATED IN MAIN GARAGE)
				9	10			
				11	12			
				13	14			
				15	16			
				17	18			
				19	20			
				21	22			
				23	24			
				25	26			
				27	28			
				29	30			

1. PROVIDE TYPE WRITTEN DIRECTORY.

LOCATION
PANEL B
PANEL SCHEDULE

TYPE 60 CIRCUIT SURFACE CABINET - TOP ENTRY
RATING 120/208V, 3PH., 4W., 225 AMP
STANDARD OF ACCEPTANCE EATON POW-R-LINE 1a
MINIMUM INTERRUPTING CAPACITY 10000 R.M.S. SYMM AMPERES
NOTES * - BREAKER TO BE C/W LOCK-ON DEVICE

CIRCUIT DESCRIPTION	LOAD WATTS	WIRE SIZE	BRKR SIZE	CIRCUIT NO.	BRKR SIZE	WIRE SIZE	LOAD WATTS	CIRCUIT DESCRIPTION
PEDESTAL #5 REC #21	1440	6	15	1	2	15	6	1440 PEDESTAL #6 REC #25
PEDESTAL #5 REC #22	1920	6	20	3	4	20	4	1920 PEDESTAL #6 REC #26
PEDESTAL #5 REC #23	1920	6	20	5	6	20	4	1920 PEDESTAL #6 REC #27
PEDESTAL #5 REC #24	2880	4	30	7	8	30	3	2880 PEDESTAL #6 REC #28
PEDESTAL #7 REC #29	1440	6	15	9	10	15	4	1440 PEDESTAL #8 REC #33
PEDESTAL #7 REC #30	1920	4	20	11	12	20	4	1920 PEDESTAL #8 REC #34
PEDESTAL #7 REC #31	1920	4	20	13	14	20	4	1920 PEDESTAL #8 REC #35
PEDESTAL #7 REC #32	2880	3	30	15	16	30	2	2880 PEDESTAL #8 REC #36
PEDESTAL #9 REC #37	1440	4	15	17	18	15	4	1440 PEDESTAL #10 REC #41
PEDESTAL #9 REC #38	1920	3	20	19	20	20	3	1920 PEDESTAL #10 REC #42
PEDESTAL #9 REC #39	1920	3	20	21	22	20	3	1920 PEDESTAL #10 REC #43
PEDESTAL #9 REC #40	2880	1	30	23	24	30	1	2880 PEDESTAL #10 REC #44
PEDESTAL #11 REC #45	1440	2	15	25	26	15	2	1440 PEDESTAL #12 REC #49
PEDESTAL #11 REC #46	1920	1	20	27	28	20	1	1920 PEDESTAL #12 REC #50
PEDESTAL #11 REC #47	1920	1	20	29	30	20	1	1920 PEDESTAL #12 REC #51
PEDESTAL #11 REC #48	2880	2/0	30	31	32	30	2/0	2880 PEDESTAL #12 REC #52
LIGHTS POLE #1	300	12	15	33	34	15	12	300 LIGHTS POLE #2
LIGHTS POLE #12	300	10	15	35	36	15	8	300 LIGHTS POLE #13
LIGHTS POLE #14	300	6	15	37	38	15	12	300 LIGHTS POLE #15
LIGHT POLE #1 REC	1440	6	15	39	40	15	8	300 LIGHTS POLE #16
NAVIGATIONAL LIGHT #1	200	6	15	41	42	15	6	1440 LIGHT POLE #15 REC
				43	44	15		
				45	46	2	12	2000 HEAT TRACE PANEL
				47	48			
				49	50			
				51	52			
				53	54			
				55	56			
				57	58			
				59	60			

1. PROVIDE TYPE WRITTEN DIRECTORY.

PANELBOARDS TO BE C/W GROUNDED NEUTRAL, GROUND AND NEUTRAL BLOCKS, BOLT-ON TYPE BREAKERS WITH AN I.C. RATING AS INDICATED, RMS SYMMETRICAL AT PANEL VOLTAGE. PROVIDE LAMICOID NAMEPLATE STATING PANEL DESIGNATION, VOLTAGE, PHASE AND AMPERAGE, TYPE WRITTEN DIRECTORY, AND LOCKING DOOR. ALL PANELS TO BE KEYPED ALIKE. INSTALLATION, INCLUDING CONDUITS, TO BE RATED FOR SURFACE MOUNTED APPLICATIONS. WALL MOUNT ON 19mm THICK PLYWOOD BACKBOARD. PAINT PLYWOOD LIGHT GRAY.

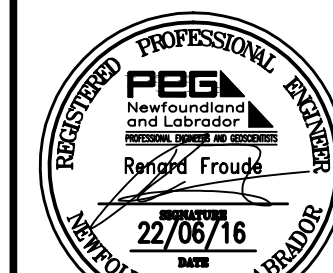
SMALL CRAFT HARBOURS



NOTES

1. ALL DIMENSIONS IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
2. ALL ELEVATIONS IN METERS UNLESS SPECIFIED OTHERWISE.

STAMP



PROVINCE OF NEWFOUNDLAND AND LABRADOR
PEG PERMIT HOLDER
THIS PERMIT ALLOWS
PROFESSIONAL ENGINEERING SERVICES
MADERRA ENGINEERING
To practice Professional Engineering in Newfoundland and Labrador Permit No. as issued by PEG Y0253 which is valid for the year 2016

O	ISSUED FOR TENDER	22/06/16
C	ISSUED FOR 99% REVIEW	31/03/16
B	ISSUED FOR 66% REVIEW	14/01/16
A	ISSUED FOR 33% REVIEW	10/11/15

revisions	date
project	project

PROSSER'S ROCK ELECTRICAL UPGRADES ST. JOHN'S, NL

PANEL SCHEDULES

designed	S.P.M	concu
date	OCT 2015	
drawn	S.P.M	dessine
date	OCT 2015	
approved	R.F	approuve
date	OCT 2015	

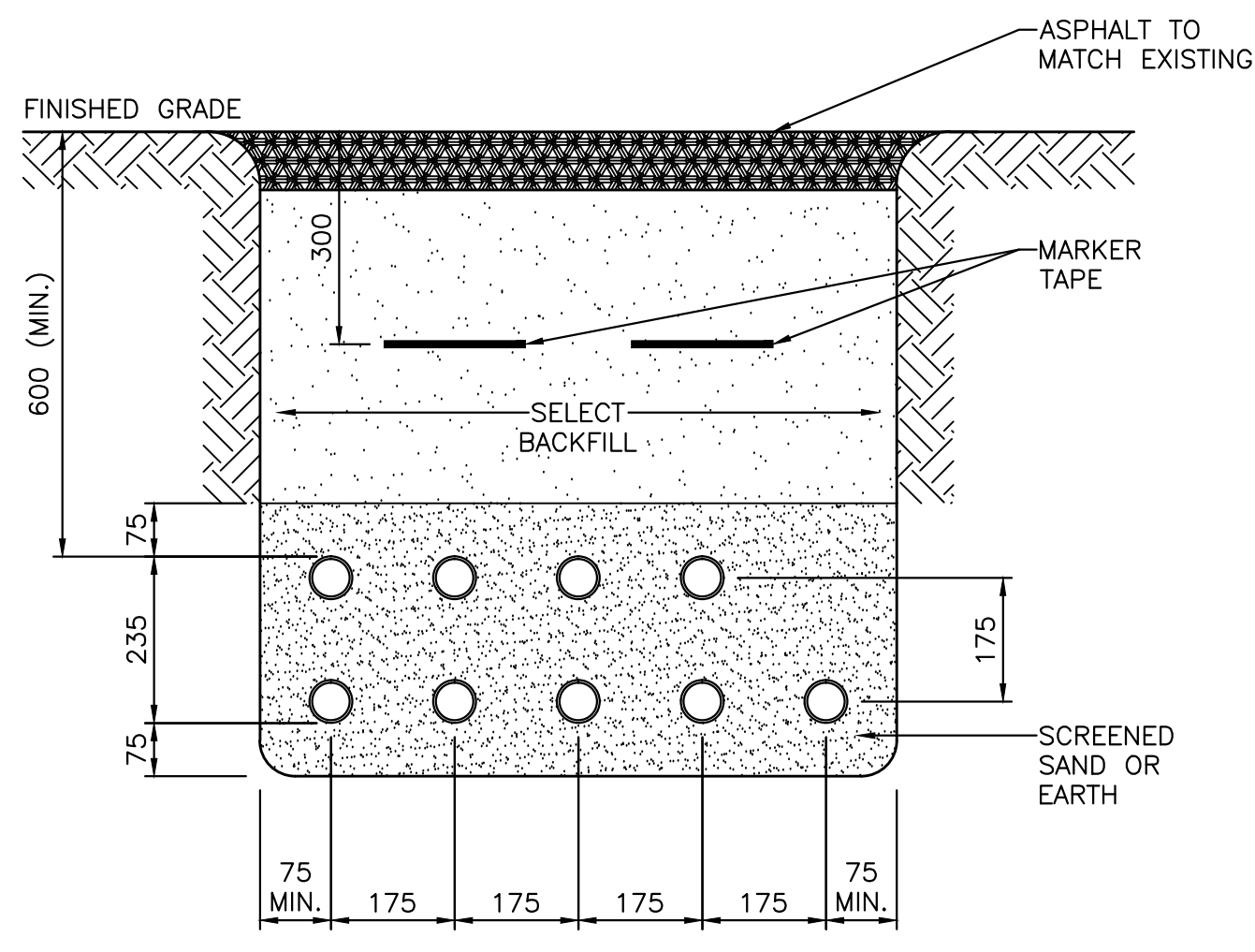
Tender Submission

DFD Project Manager no. du projet

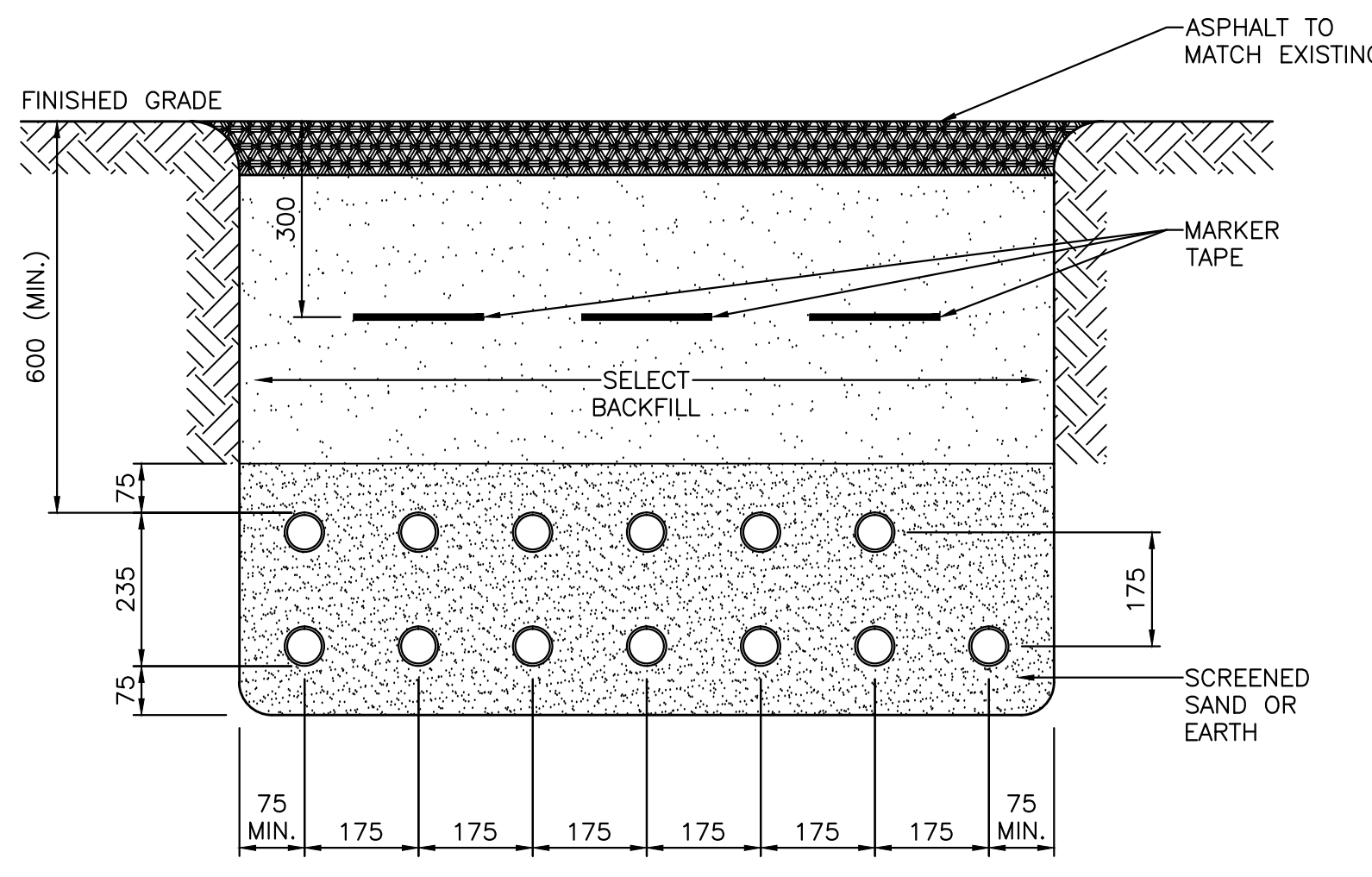
721767

drawing no. no. du dessin

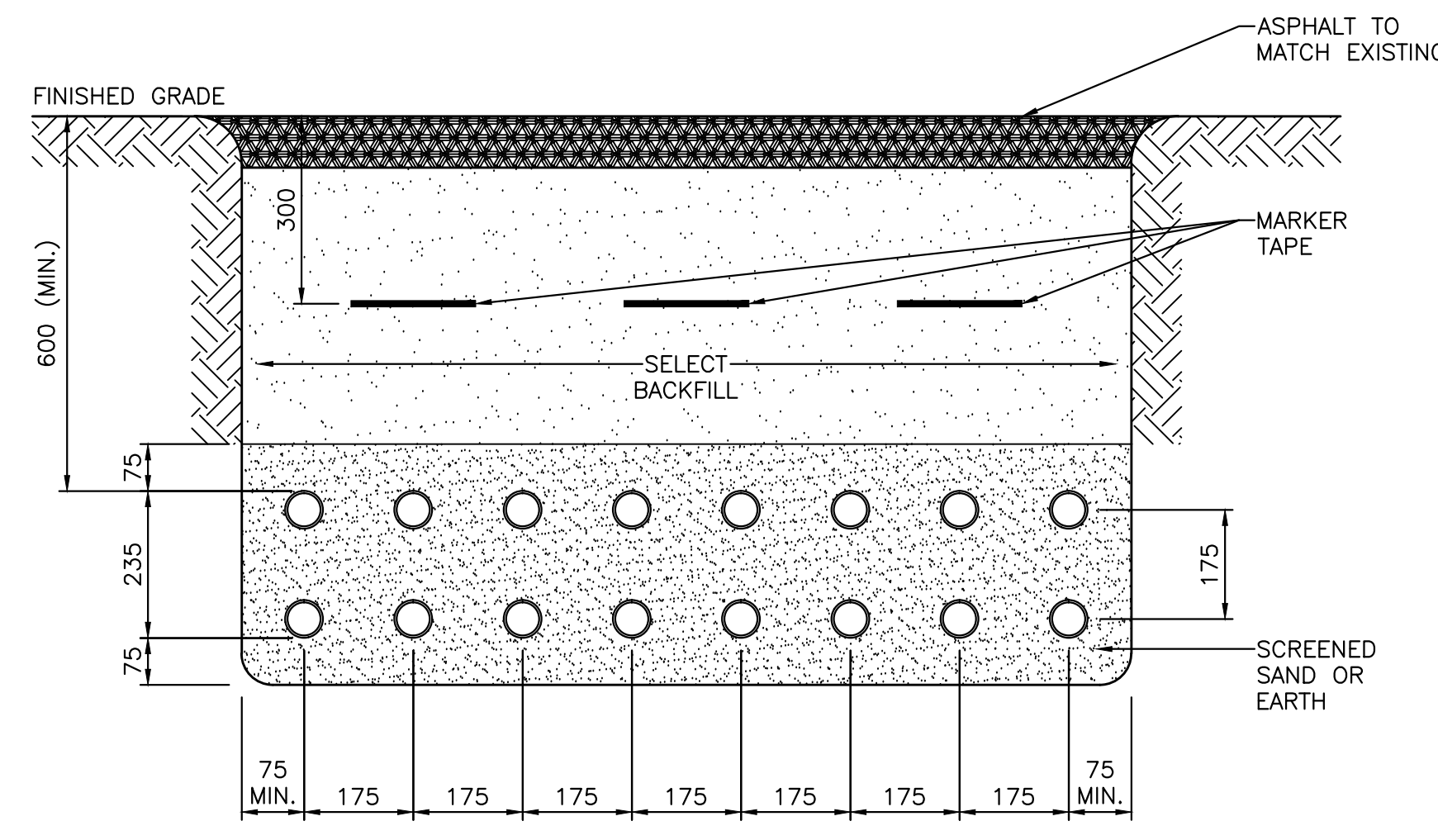
E4



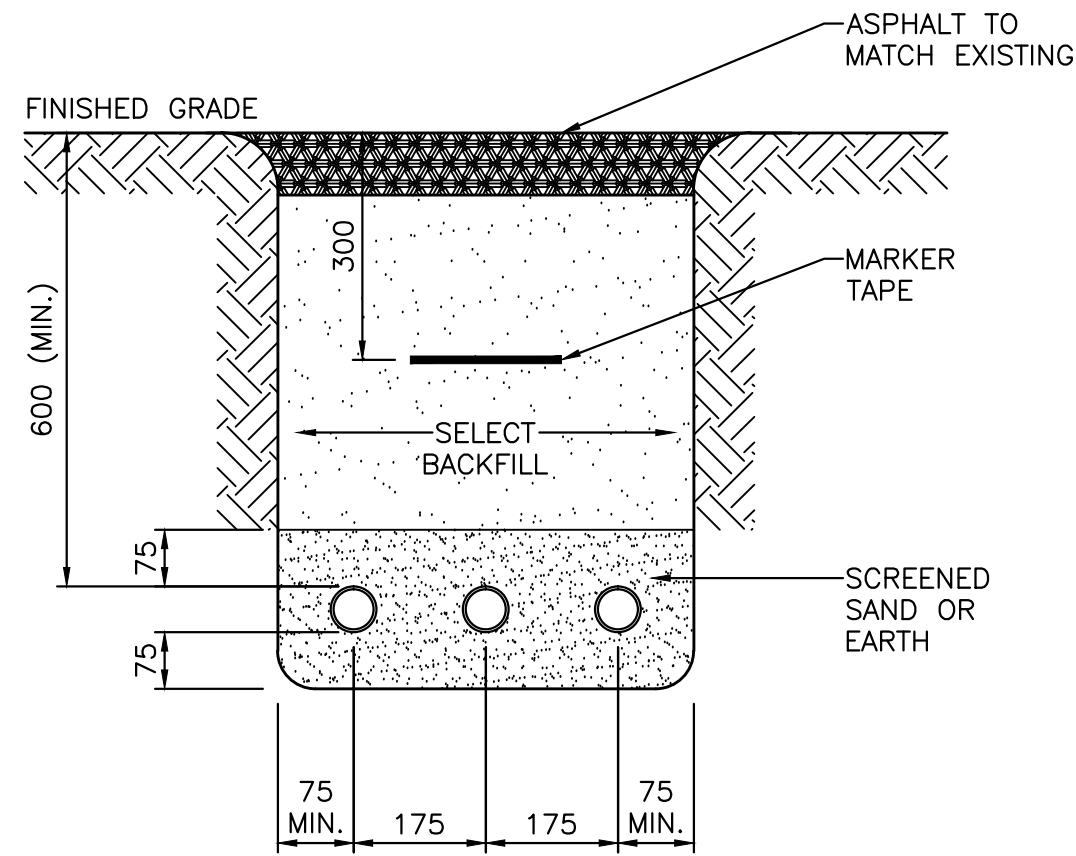
1 TRENCH DETAIL 1
E2/E5 N.T.S.



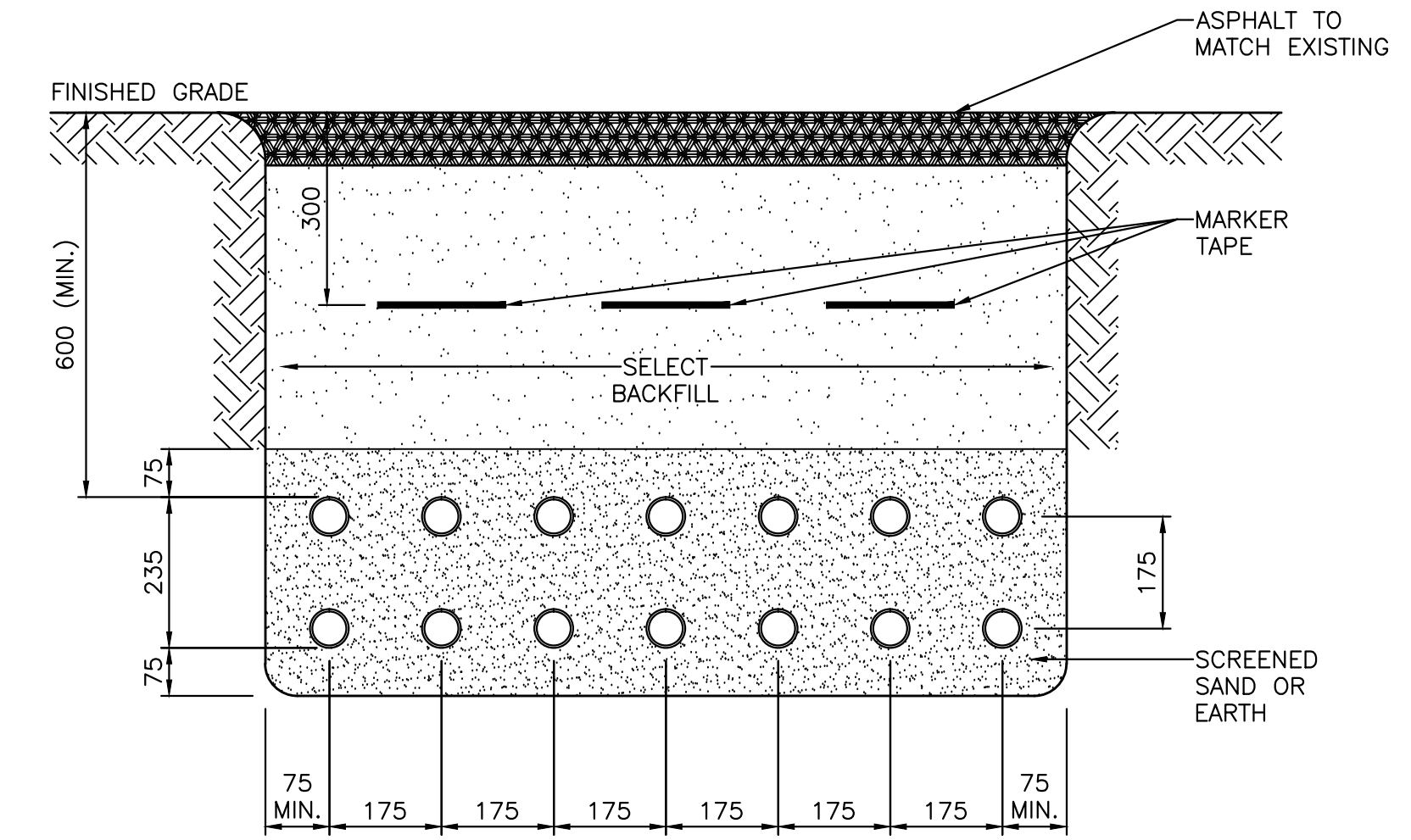
2 TRENCH DETAIL 2
E2/E5 N.T.S.



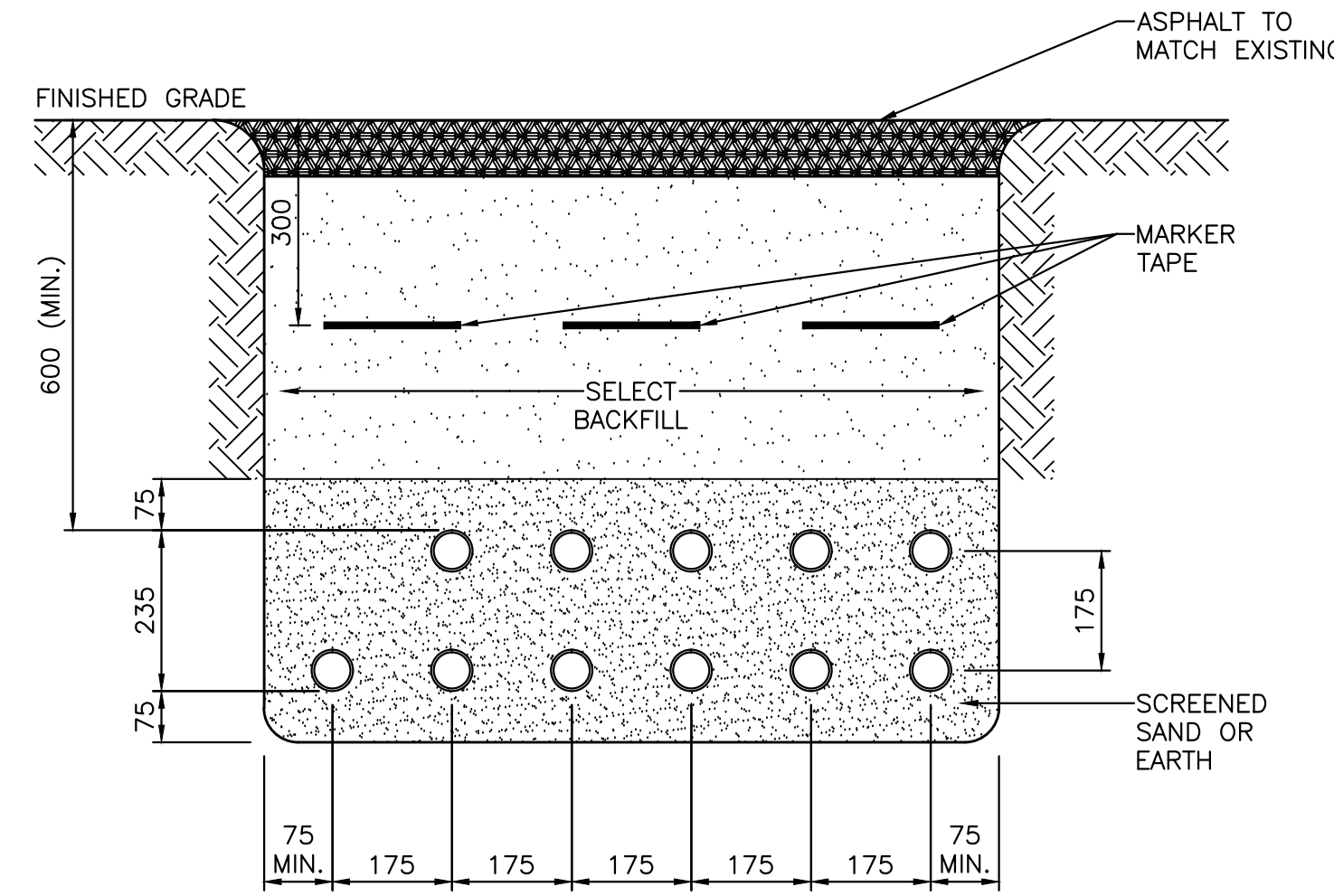
3 TRENCH DETAIL 3
E2/E5 N.T.S.



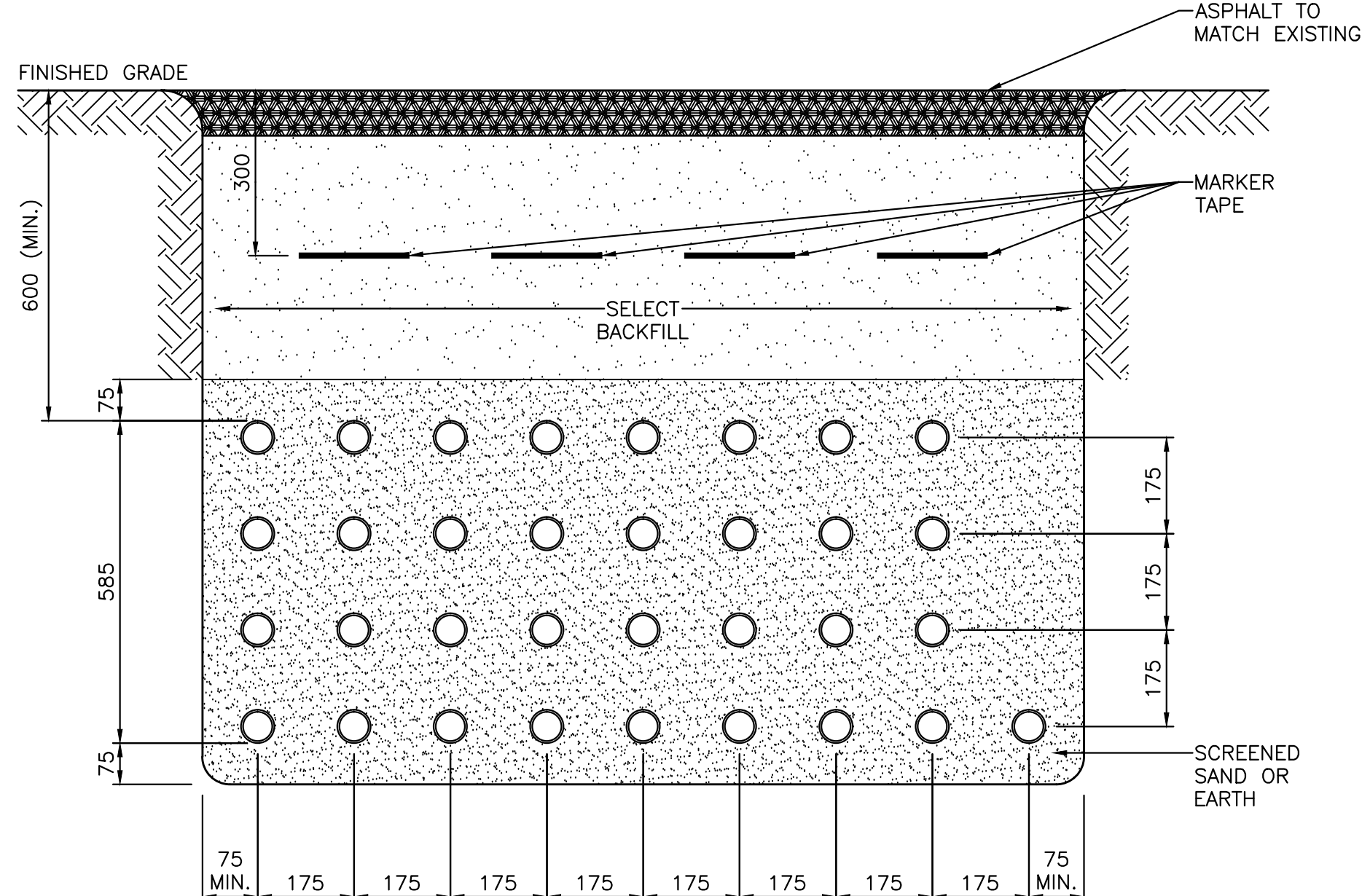
4 TRENCH DETAIL 4
E2/E5 N.T.S.



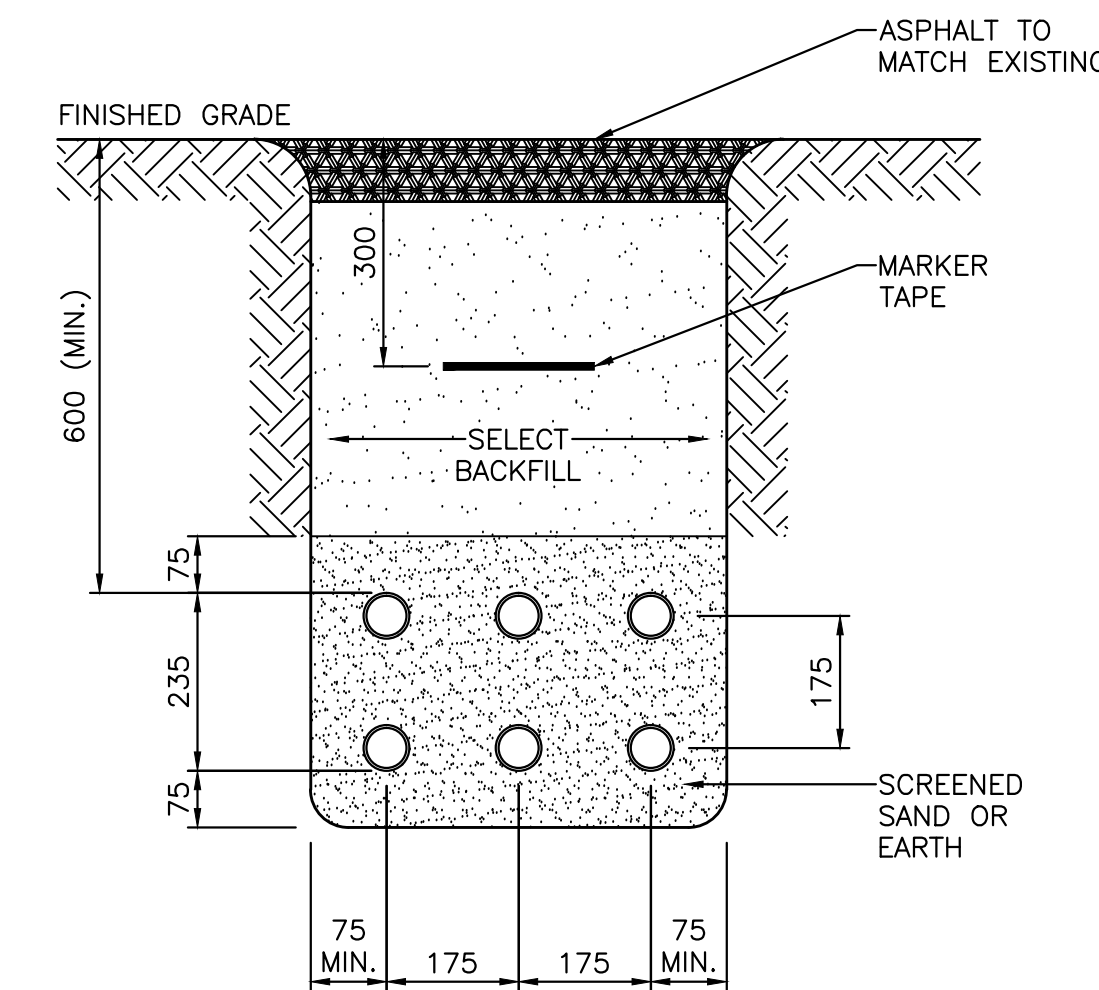
5 TRENCH DETAIL 5
E2/E5 N.T.S.



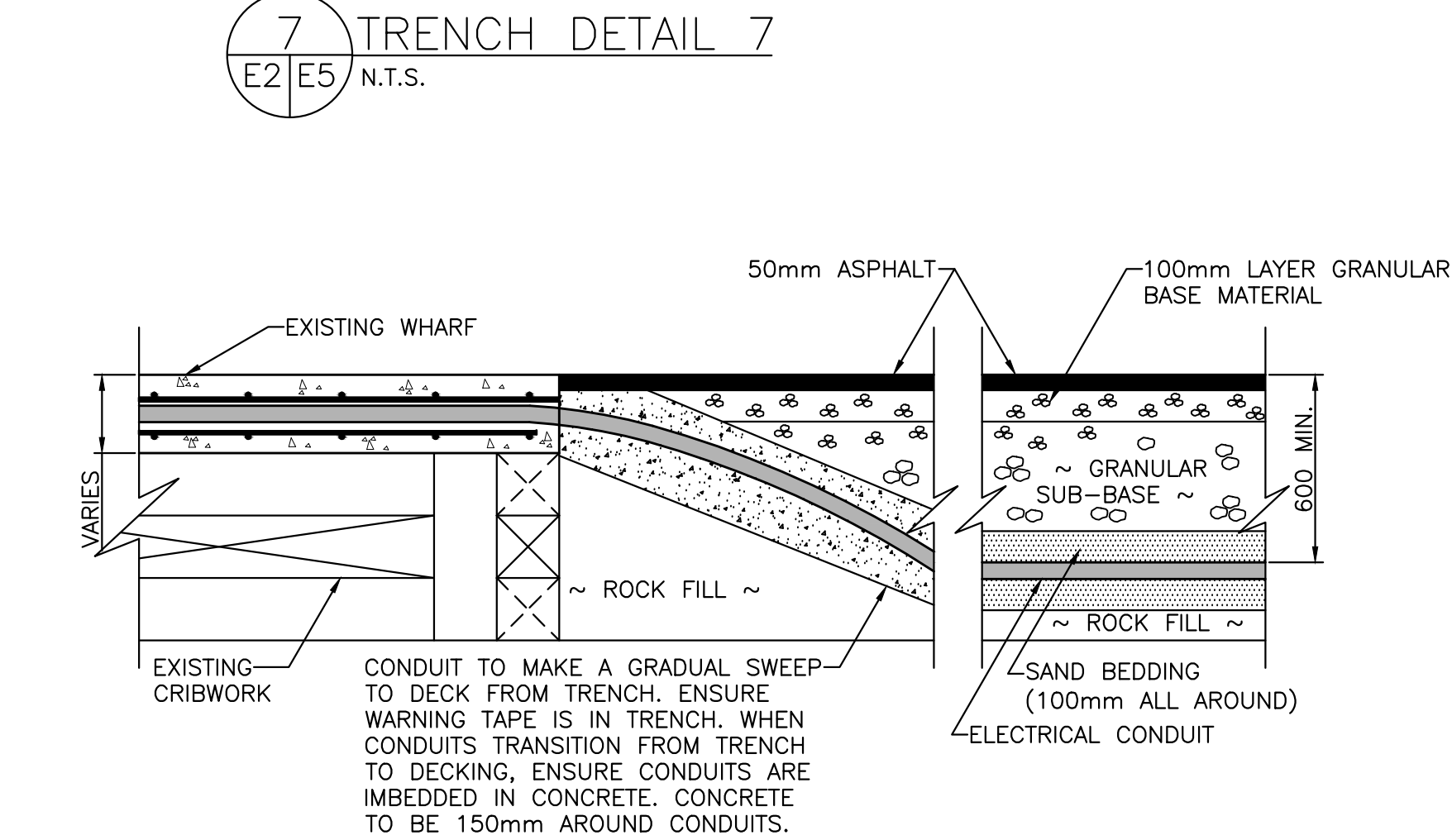
6 TRENCH DETAIL 6
E2/E5 N.T.S.



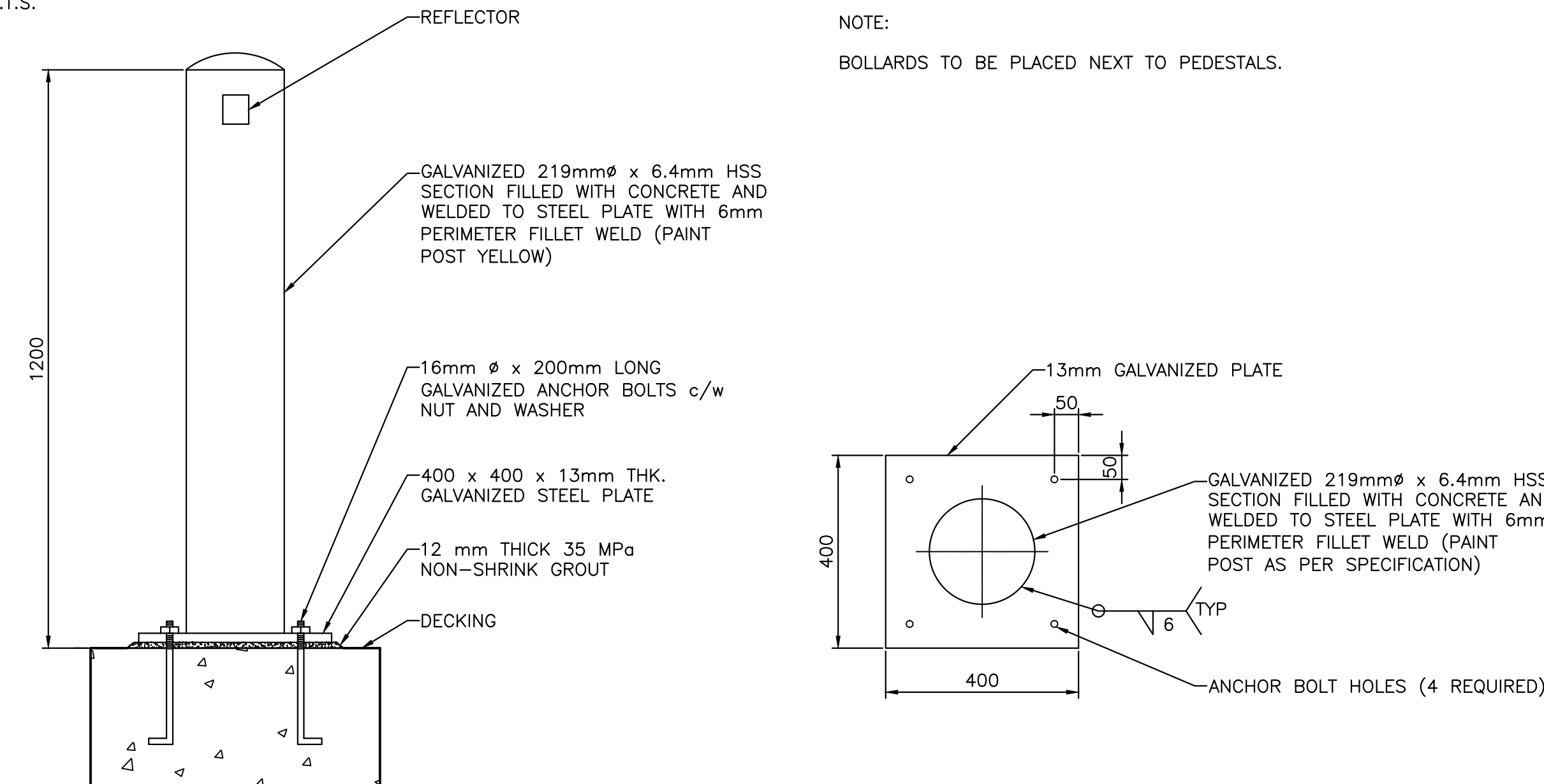
7 TRENCH DETAIL 7
E2/E5 N.T.S.



8 TRENCH DETAIL 8
E2/E5 N.T.S.



9 CONDUIT TRANSITION (TYPICAL)
E2/E5 N.T.S.



10 TYPICAL BOLLARD
E2/E5 N.T.S.

NOTE:
BOLLARDS TO BE PLACED NEXT TO PEDESTALS.

CONDUIT SCHEDULE		
EQUIPMENT	CONDUIT	CONDUIT SIZE AND WIRING
NEW PEDESTAL #1	(A)	4 #1 RW90 FOR 3 30A 120V + 2 #1 RW90 SPARES + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #1	(B)	3 #1 RW90 FOR 1 30A 120/208V + 2 #4 RW90 FOR 1 15A 120V + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #2	(C)	4 #1 RW90 FOR 3 30A 120V + 3 #1 RW90 FOR 1 30A 120/208V + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #2	(D)	3 #1 RW90 FOR 1 50A 208V + 2 #4 RW90 FOR 1 15A 120V + 2 #1 RW90 SPARES + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #3	(E)	4 #1/0 RW90 FOR 3 30A 120V + 2 #1/0 RW90 SPARES + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #3	(F)	3 #1/0 RW90 FOR 1 30A 120/208V + 2 #3 RW90 FOR 1 15A 120V + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #4	(G)	4 #2/0 RW90 FOR 3 30A 120V + 2 #2 RW90 FOR 1 15A 120V + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #4	(H)	3 #2/0 RW90 FOR 1 30A 120/208V + 2 #2/0 RW90 SPARES + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #4	(J)	3 #1/0 RW90 FOR 1 50A 208V + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #5	(K)	2 #4 RW90 FOR 1 30A 120V + 3 #6 RW90 FOR 2 20A 120V + 2 #6 RW90 FOR 1 15A 120V + 2 #4 RW90 SPARES + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #6	(L)	2 #3 RW90 FOR 1 30A 120V + 3 #4 RW90 FOR 2 20A 120V + 2 #6 RW90 FOR 1 15A 120V + 2 #3 RW90 SPARES + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #7	(M)	2 #3 RW90 FOR 1 30A 120V + 3 #4 RW90 FOR 2 20A 120V + 2 #6 RW90 FOR 1 15A 120V + 2 #3 RW90 SPARES + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #8	(N)	2 #2 RW90 FOR 1 30A 120V + 3 #4 RW90 FOR 2 20A 120V + #4 RW90 FOR 1 15A 120V + 2 #2 RW90 SPARES + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #9	(P)	2 #1 RW90 FOR 1 30A 120V + 3 #3 RW90 FOR 2 20A 120V + 2 #4 RW90 FOR 1 15A 120V + 2 #1 RW90 SPARES + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #10	(Q)	2 #1 RW90 FOR 1 30A 120V + 3 #3 RW90 FOR 2 20A 120V + 2 #4 RW90 FOR 1 15A 120V + 2 #1 RW90 SPARES + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #11	(R)	2 #2/0 RW90 FOR 1 30A 120V + 3 #1 RW90 FOR 2 20A 120V + 2 #2 RW90 FOR 1 15A 120V + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
NEW PEDESTAL #12	(S)	2 #2/0 RW90 FOR 1 30A 120V + 3 #1 RW90 FOR 2 20A 120V + 2 #2 RW90 FOR 1 15A 120V + 1 #6 TW BOND IN 53mm RIGID PVC CONDUIT
EXIST. JIB CRANE #1	(T)	3 #4 RW90 FOR JIB CRANE + 2 #4 RW90 FOR JIB CRANE RECEPTACLE + 2 #8 TW BOND + CONTROL WIRING (AS REQUIRED) IN 53mm RIGID PVC CONDUIT
EXIST. JIB CRANE #2	(U)	3 #4 RW90 FOR JIB CRANE + 2 #4 RW90 FOR JIB CRANE RECEPTACLE + 2 #8 TW BOND + CONTROL WIRING (AS REQUIRED) IN 53mm RIGID PVC CONDUIT
EXIST. POLE #3	(V)	2 #10 RW90 + 1 #12 TW BOND IN 53mm RIGID PVC CONDUIT
EXIST. POLE #4, #5, #6	(W)	2 #6 RW90 + 1 #8 TW BOND FOR POLE #4, 2 #8 RW90 + 1 #10 TW BOND FOR POLE #5, 2 #10 RW90 + 1 #12 TW BOND FOR POLE #6, IN 53mm RIGID PVC CONDUIT
EXIST. POLE #7, #8, #9, #10, #11, NAV. LIGHT #2	(X)	2 #8 RW90 + 1 #10 TW BOND FOR POLE #7, 2 #8 RW90 + 1 #8 TW BOND FOR EACH OF POLES #8, #9, #10, #11, 2 #8 RW90 + 1 #10 TW BOND FOR NAVIGATIONAL LIGHT #2, IN 53mm RIGID PVC CONDUIT, 2 #6 RW90 + 1 #8 TW BOND TO POLE #7 JUNCTION BOX
EXIST. POLE #12, NEW POLE #15, 15A, 120V RECEPT. POLE #15	(Y)	2 #10 RW90 + 1 #12 TW BOND FOR POLE #12, 2 #12 RW90 + 1 #12 TW BOND FOR POLE #15, 2 #6 RW90 + 1 #8 TW BOND FOR 15A REC POLE #15 IN 53mm RIGID PVC CONDUIT
EXIST. POLE #1, #2, #13, 15A, 120V RECEPT. POLE #1	(Z)	2 #12 RW90 + 1 #12 TW BOND FOR POLE #1, 2 #12 RW90 + 1 #8 TW BOND FOR POLE #2, 2 #8 RW90 + 1 #10 TW BOND FOR POLE #13, 2 #6 RW90 + 1 #8 TW BOND FOR 15A REC POLE #1, IN 53mm RIGID PVC CONDUIT
NEW POLE #16	(AA)	2 #8 RW90 + 1 #10 TW BOND IN 53mm RIGID PVC CONDUIT
EXIST. POLE #14, NAV. LIGHT #1	(BB)	2 #6 RW90 + 1 #8 TW BOND FOR POLE #14, 2 #8 RW90 + 1 #10 TW BOND FOR NAVIGATIONAL LIGHT #1, IN 53mm RIGID PVC CONDUIT
EXISTING CONCRETE BASE, WHARF #404 (FUTURE)	(CC)	POLY FISH CORD IN 53mm RIGID PVC CONDUIT
(FUTURE WHARF)	(DD)	POLY FISH CORD IN 53mm RIGID PVC CONDUIT
(FUTURE WHARF)	(EE)	POLY FISH CORD IN 53mm RIGID PVC CONDUIT
(FUTURE WHARF)	(FF)	POLY FISH CORD IN 53mm RIGID PVC CONDUIT
(FUTURE WHARF)	(GG)	POLY FISH CORD IN 53mm RIGID PVC CONDUIT
(FUTURE WHARF)	(HH)	POLY FISH CORD IN 53mm RIGID PVC CONDUIT
(FUTURE WHARF)	(JJ)	POLY FISH CORD IN 53mm RIGID PVC CONDUIT

SMALL CRAFT HARBOURS

NOTES

- ALL DIMENSIONS IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
- ALL ELEVATIONS IN METERS UNLESS SPECIFIED OTHERWISE.

PROVINCE OF NEWFOUNDLAND AND LABRADOR

PEG PERMIT HOLDER
THIS PERMIT ALLOWS
SPECIAL TRADE SERVICES

MADERRA ENGINEERING

To practice Professional Engineering in Newfoundland and Labrador, Permit No. as issued by PEG Y0253 which is valid for the year 2016.

O	ISSUED FOR TENDER	22/06/16
B	ISSUED FOR 99% REVIEW	31/03/16
A	ISSUED FOR 66% REVIEW	14/01/16

revisions	description	date

PROSSER'S ROCK ELECTRICAL UPGRADES ST. JOHN'S, NL

ELECTRICAL DETAILS

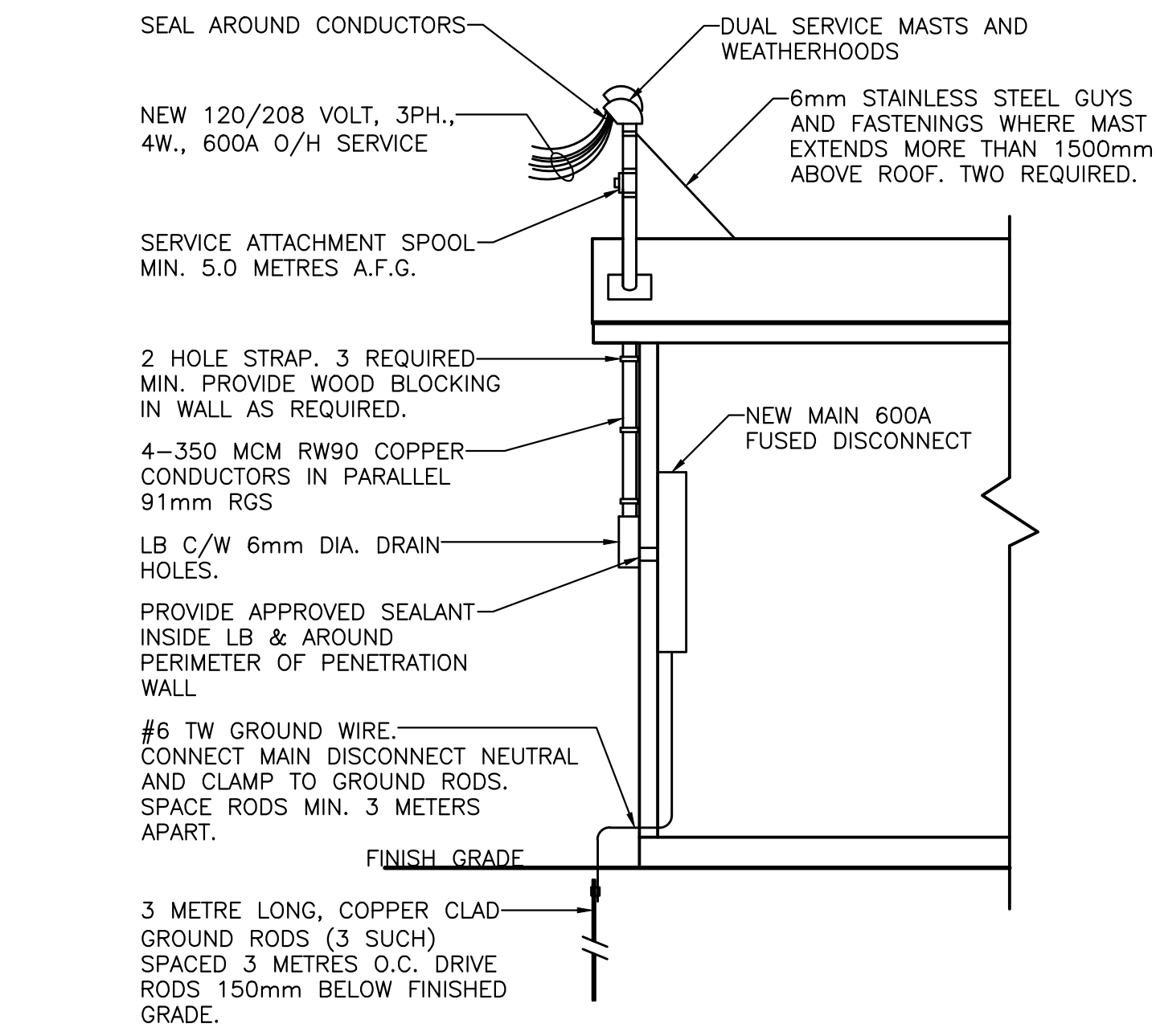
designed S.P.M. concu
date OCT 2015
drawn S.P.M. dessine
date OCT 2015
approved R.F. approve
Tender Submission
DFD Project Manager
project number 721767
drawing no. E5

SMALL CRAFT HARBOURS

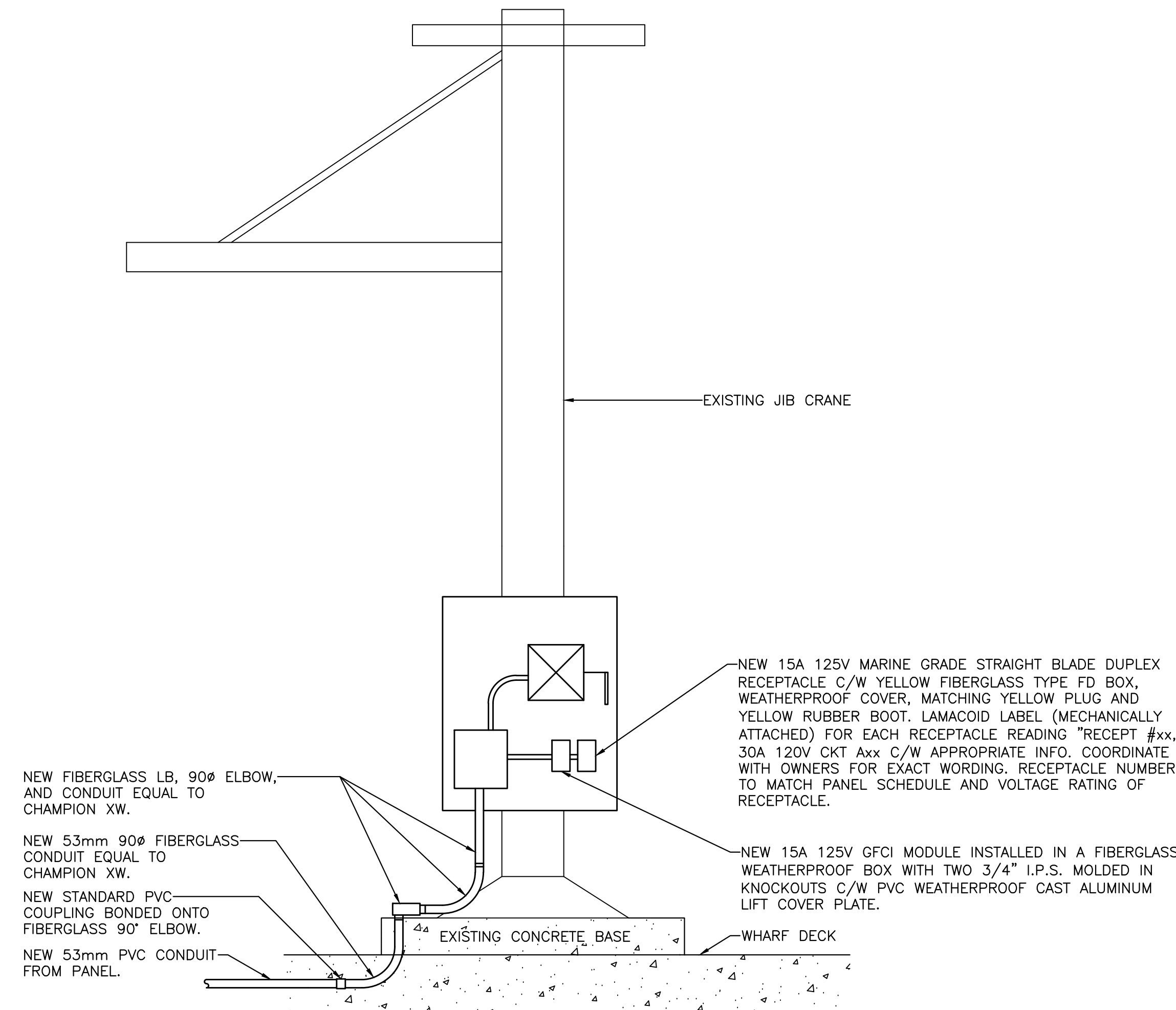


NOTES

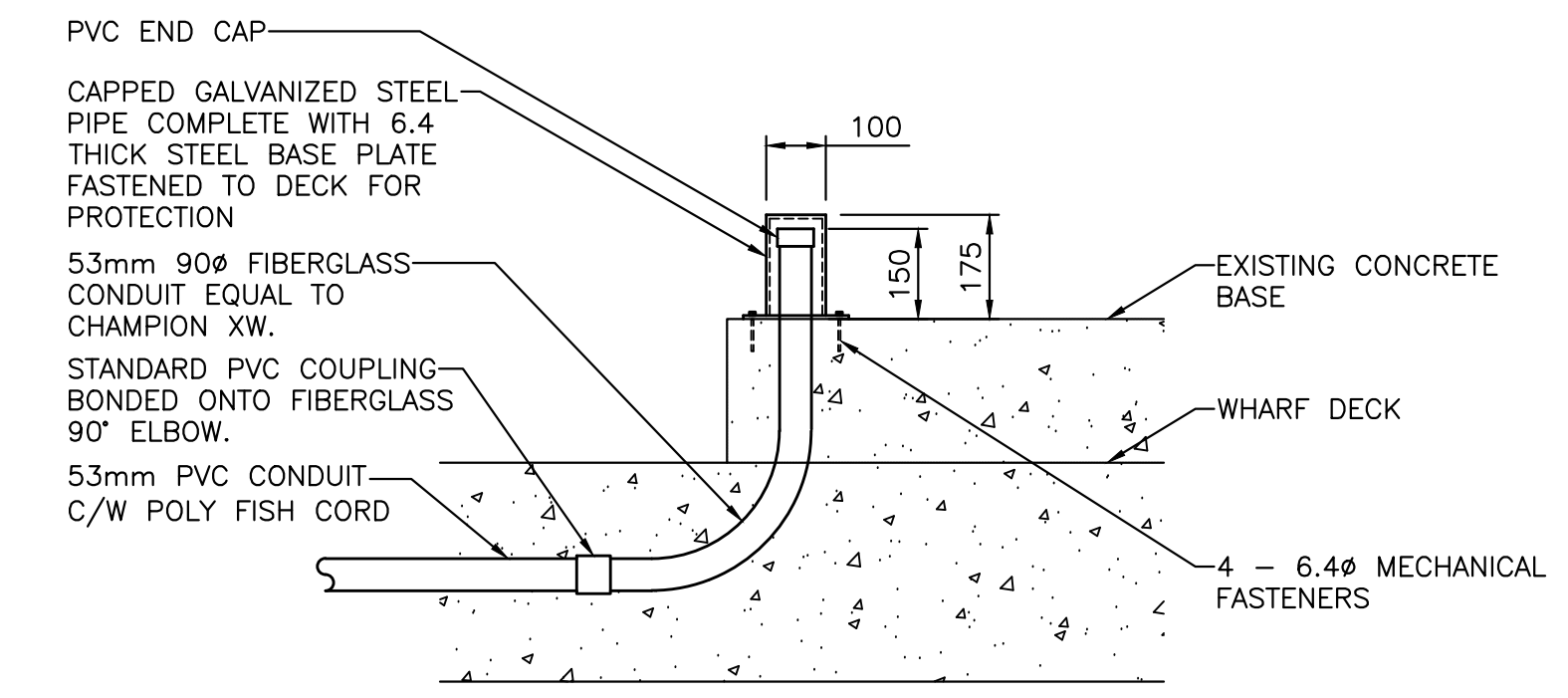
1. ALL DIMENSIONS IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
2. ALL ELEVATIONS IN METERS UNLESS SPECIFIED OTHERWISE.



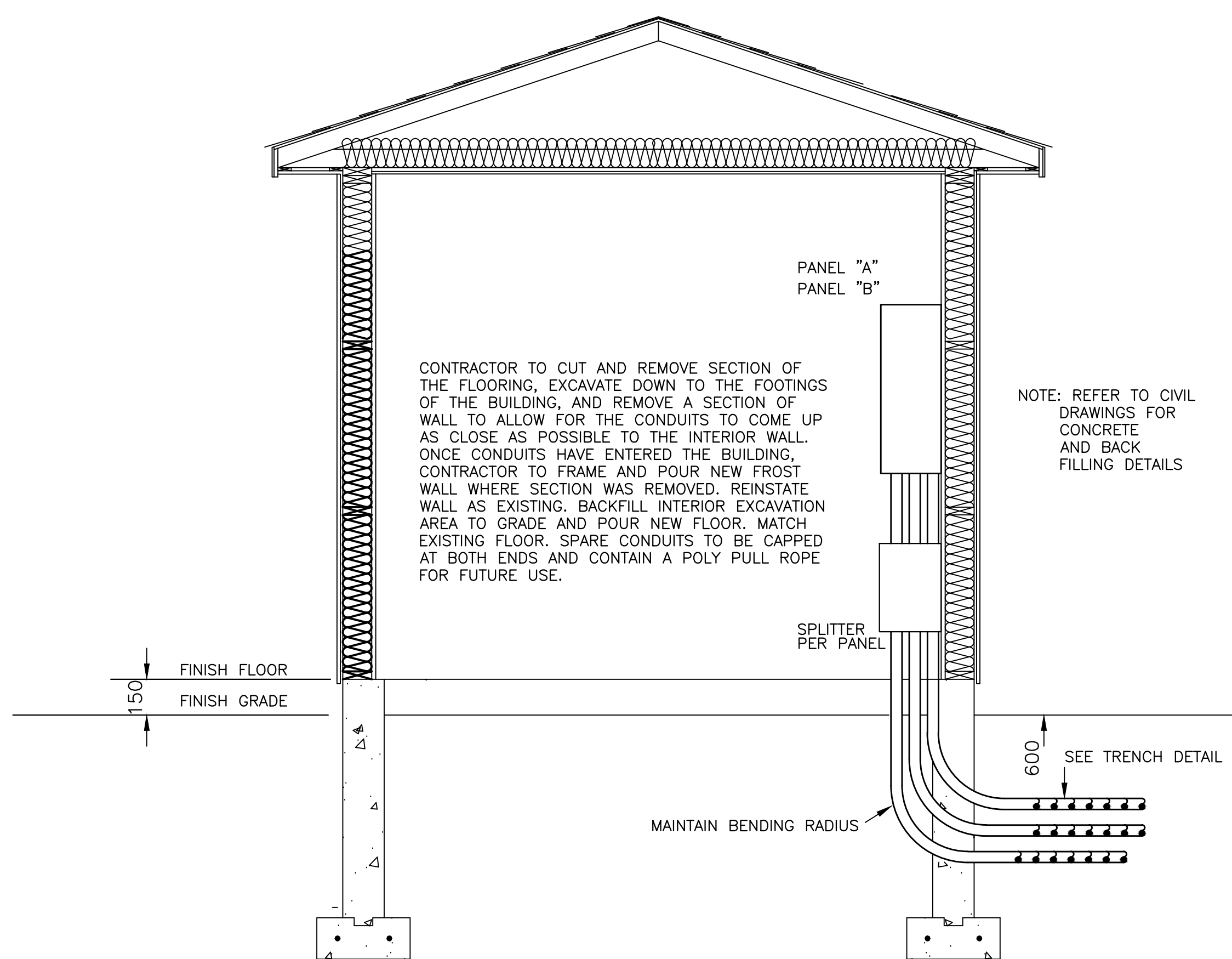
1 SERVICE AND GROUNDING DETAIL
E2/E6 N.T.S.



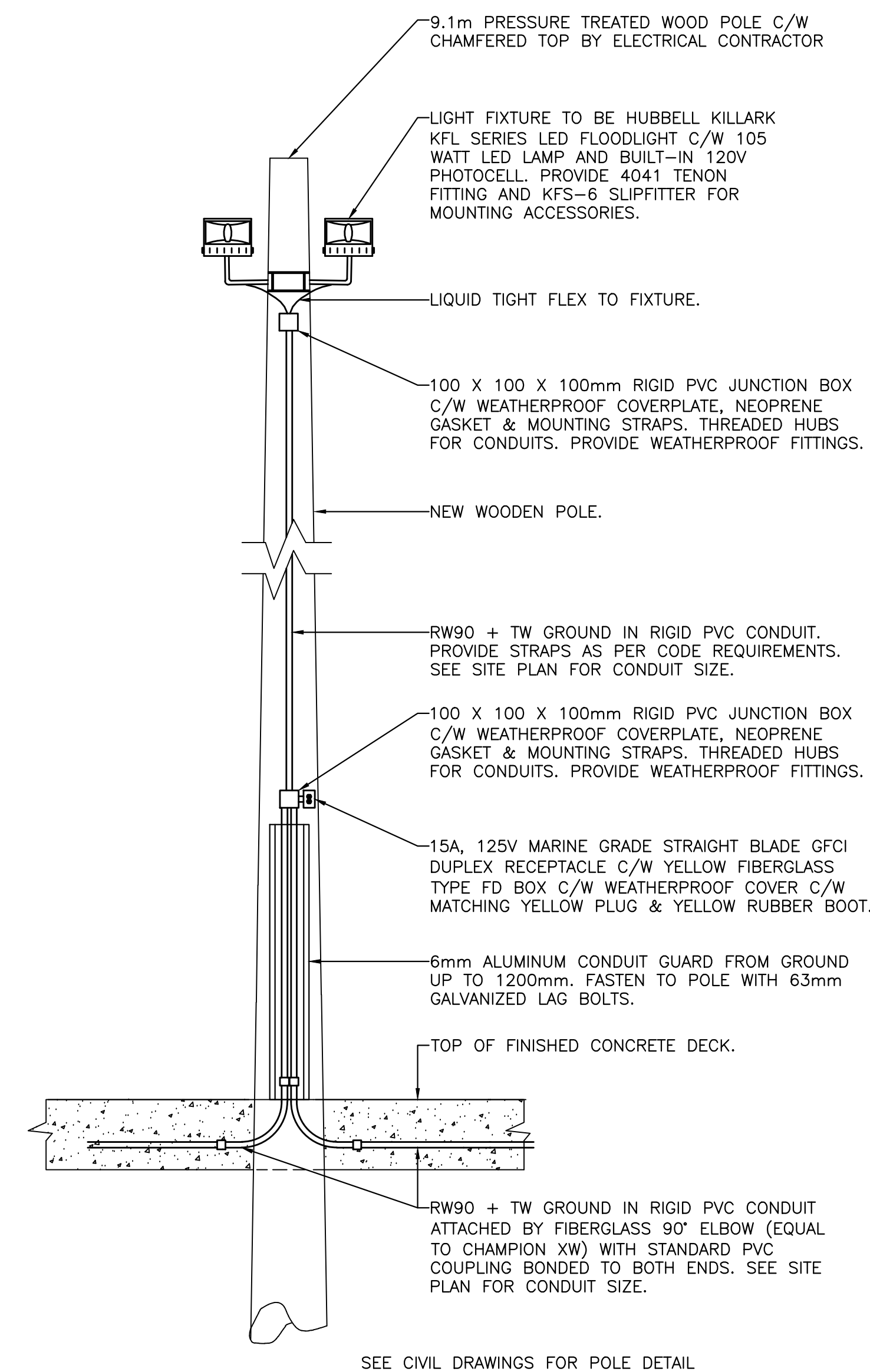
2 TYPICAL ELECTRICAL INSTALLATION DETAIL FOR EXISTING JIB CRANES
E2/E6 N.T.S.



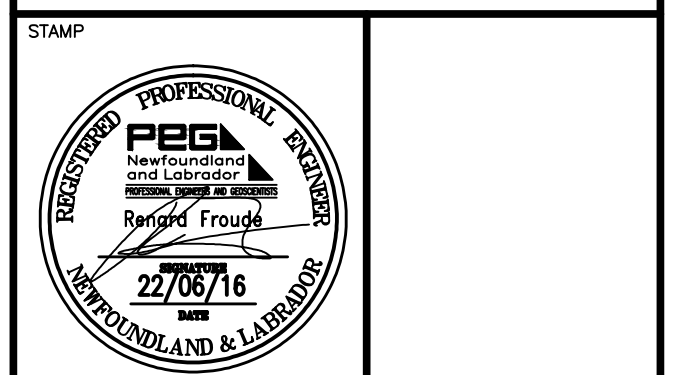
3 EMPTY STUB-UP CONDUIT CAP DETAIL IN EXISTING CONCRETE BASE FOR FUTURE EQUIPMENT
E2/E6 N.T.S.



4 CONDUITS ENTERING EXISTING BUILDING
E2/E6 N.T.S.



5 LIGHT POLE #15 DETAIL
E2/E6 N.T.S.



PROVINCE OF NEWFOUNDLAND AND LABRADOR
PEG PERMIT HOLDER
THIS PERMIT ALLOWS
PROFESSIONAL ENGINEERING SERVICES
MADERRA ENGINEERING
To practice Professional Engineering in Newfoundland and Labrador, Permit No. as issued by PEG Y0253 which is valid for the year 2016.

0	ISSUED FOR TENDER	22/06/16
B	ISSUED FOR 99% REVIEW	31/03/16
A	ISSUED FOR 66% REVIEW	14/01/16
revisions		date
project		project

PROSSER'S ROCK
ELECTRICAL
UPGRADES
ST. JOHN'S, NL

ELECTRICAL
DETAILS

designed	S.P.M	concu
date	OCT 2015	
drawn	S.P.M	dessine
date	OCT 2015	
approved	R.F	approuve
date	OCT 2015	
Tender		Submission

DFD Project Manager		no. du projet
project number	721767	
drawing no.	E6	no. du dessin