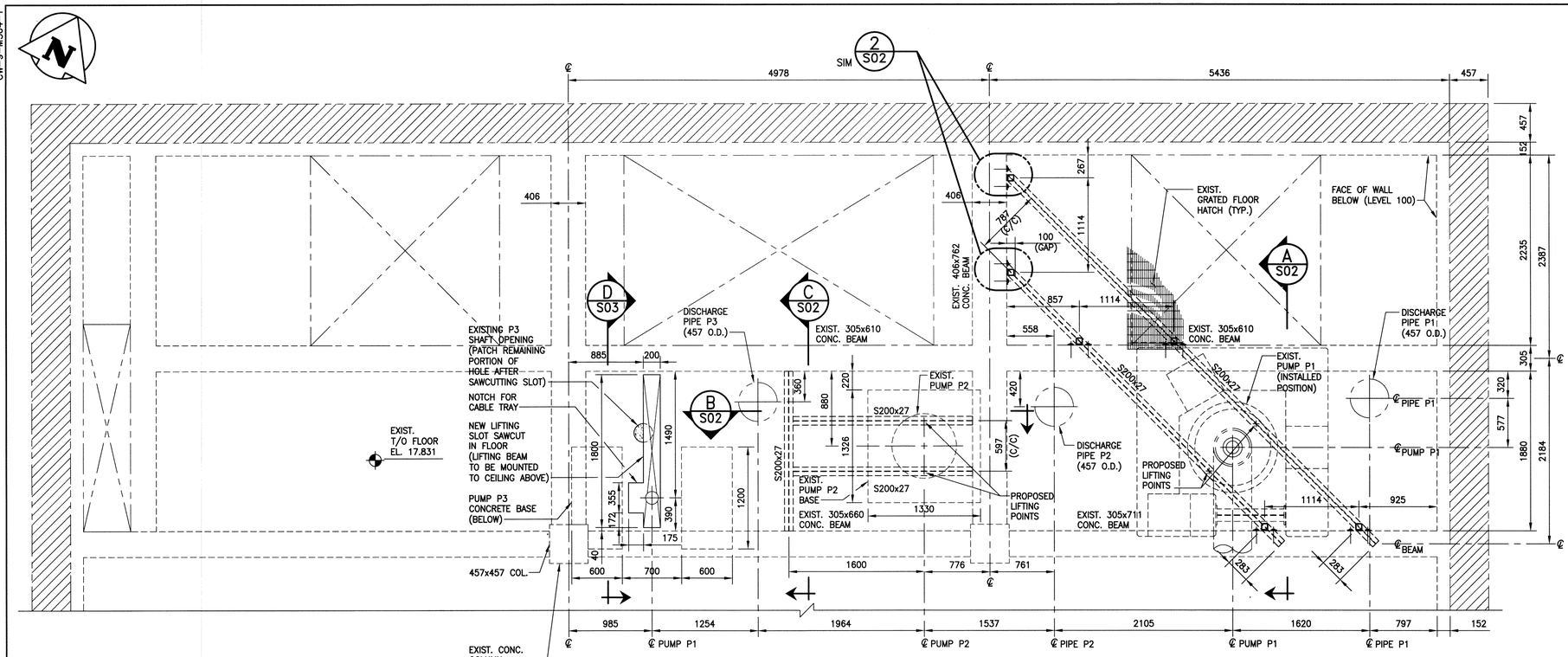
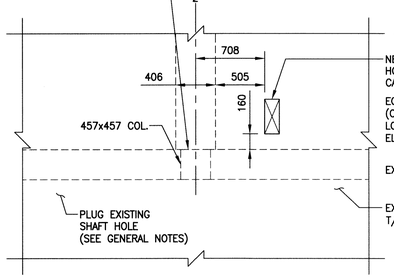


PLAN AT EL. 17.831 (58.5') – LEVEL 200

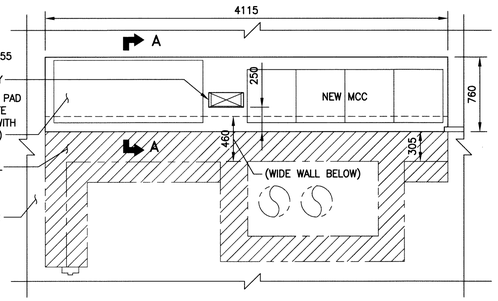
SCALE: 1:30

DIMENSIONS ARE APPROXIMATE ONLY.



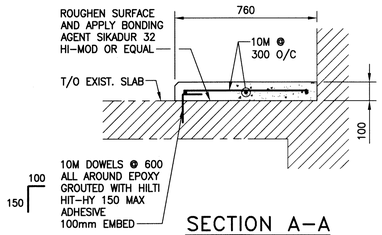
PARTIAL PLAN – LEVEL 300

SCALE: 1:30



PARTIAL PLAN – LEVEL 400

SCALE: 1:30



SECTION A–A

SCALE: 1: 15

600 0 600 1200 1800 2400
SCALE: 1:30 METRIC (A1)
1:60 METRIC (A3)

300 0 300 600 900 1200
SCALE: 1:15 METRIC (A1)
1:30 METRIC (A3)

GENERAL NOTES:

1. SITE VERIFY ALL DIMENSIONS, ELEVATIONS, DETAILS, QUANTITIES AND CONDITIONS PRIOR TO START OF ANY DEMOLITION, CONSTRUCTION OR PREFABRICATION OF ANY [BUILDING] COMPONENT.
2. ALL DEMOLITION, FABRICATION, CONSTRUCTION, ETC. SHALL BE CARRIED OUT IN ACCORDANCE WITH ALL PERTINENT BUILDING CODES, AND LOCAL BYLAWS AND ORDINANCES.
3. EACH TRADE SHALL BE RESPONSIBLE TO PROVIDE ADEQUATE PROTECTION FOR THE EXISTING FACILITY/PROPERTY TO PREVENT PHYSICAL DAMAGE AND LOSS OF VALUE OR USE OF ANY KIND, AS A RESULT OF DEMOLITION, CONSTRUCTION AND RELATED ACTIVITIES.

STRUCTURAL AND MISCELLANEOUS STEEL:

1. STRUCTURAL AND MISCELLANEOUS STEEL FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH CAN/CSA S16 (LATEST).
2. STRUCTURAL STEEL SHALL MEET THE REQUIREMENTS OF CAN/CSA G40.20/G40.21 (LATEST).

ROLLED W-SHAPES	CSA G40.21-350W
ROLLED SHAPES & PLATES	CSA G40.21-300W
BOLTS, NUTS, & WASHERS	ASTM A325
WELDING ELECTRODES	CSA W48.1

3. WELDING SHALL BE IN ACCORDANCE WITH CSA W59 (LATEST), BY WELDERS CERTIFIED AND QUALIFIED IN ACCORDANCE WITH CSA W47.1 (LATEST). ALL WELDS TO BE 1/4" UNLESS NOTED OTHERWISE.
4. FIELD CONNECTIONS SHALL BE BOLTED 3/4" DIAMETER A325 BEARING TYPE UNLESS NOTED OTHERWISE. BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH CSA S16 (LATEST).
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.
6. STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE FINISHED AS INDICATED BELOW, UNLESS OTHERWISE NOTED, OR APPROVED EQUAL.:

   SURFACE PREP. TO SSPC-10
   - ONE PRIME COAT INTERZINC 52 (2.5 MIL)
   - ONE FINISH COAT INTERGARD EF HI-BUILD (6.0 MIL)

7. COLOUR OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE AS FOLLOWS:
   -STRUCTURAL STEEL – LIGHT GREY
   -MONORAIL BEAMS – HI-VISIBILITY YELLOW

ALUMINUM:

1. ALUMINUM SHALL BE IN ACCORDANCE WITH CAN/CSA S517 AND THE ALUMINUM ASSOCIATION "SPECIFICATION FOR ALUMINUM STRUCTURES". ALUMINUM FOR PLATES AND EXTRUDED SHAPES SHALL BE TYPE 6061-T651.
2. ALUMINUM WELDING SHALL BE AN ACCORDANCE WITH CSA W59.2 (LATEST) BY WELDERS CERTIFIED AND QUALIFIED IN ACCORDANCE WITH CSA W47.2 (LATEST). ALL WELDS TO BE 6MM UNLESS OTHERWISE NOTED.
3. PROVIDE NEOPRENE GASKETS WHERE ALUMINUM IN CONTACT WITH CONCRETE.

CONCRETE:

1. CONCRETE MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CSA A23.1 (LATEST). SEE BELOW FOR MIX REQUIREMENTS.
2. MIX WATER SHALL BE POTABLE.
3. DESIGN, FABRICATE AND ERECT FORMWORK/SHORING IN ACCORDANCE WITH CAN/CSA-S269.3 (LATEST). ALLOW SUFFICIENT CONCRETE CURING TIME PRIOR TO REMOVAL.
4. ALL EXPOSED CORNERS TO HAVE 25MM CHAMFER FILLET UNLESS NOTED.
5. BONDING AGENTS SHALL BE USED TO ADHERE NEW CONCRETE TO EXISTING CONCRETE OR STEEL. ACCEPTABLE PRODUCT: [SIKADUR 32 HI-MOD (EPOXY), SIKA LATEX R (ACRYLIC, MIX INTO GROUT)] OR APPROVED EQUAL.

CONCRETE MIX DESIGNS:

INTER. CONC. ALL SLABS, WALLS, BMS & COLUMNS	EXPOSURE CLASS	[N]
	MIN. 28 DAY COMP. STRENGTH	[30] MPA
	CEMENT TYPE	[GU]
	MAX. W/C RATIO	[0.45]
	MAX. AGGREGATE SIZE	[20MM]
	ENTRAINED AIR CONTENT	[N/A]

REINFORCING STEEL:

1. REINFORCING STEEL TO BE NEW DEFORMED BILLET STEEL BARS CONFORMING TO CSA G30.18 (LATEST) GRADE TO BE 400 MPa.
2. REINFORCING STEEL SHALL BE CLEAN, FREE OF RUST, DIRT, LOOSE SCALE, OIL, GREASE OR ANY OTHER MATERIAL WHICH WOULD REDUCED BOND WITH THE CONCRETE.

PATCHING & REMOVALS – GENERAL:

1. PATCH EXISTING FLOOR, WALL, CEILING ASSEMBLIES, ETC. FLUSH WHERE REQUIRED DUE TO DEMOLITION/RENOVATION WORK TO MATCH EXISTING CONSTRUCTION, MATERIALS, TEXTURES AND FINISHES UNLESS NOTED OR PERMITTED OTHERWISE.
2. SIDES OF EXISTING HOLES TO BE PLUGGED SHALL BE COATED WITH BONDING AGENT. BOTTOM OF HOLE SHALL BE FORMED AND HOLE FILLED WITH CONCRETE.
3. BONDING AGENT SHALL BE USED TO ADHERE NEW CONCRETE TO EXISTING CONCRETE. ACCEPTABLE PRODUCT: SIKADUR 32 HI-MOD OR EQUAL.
4. REFER TO MECHANICAL FOR PUMP AND PIPING CONCRETE BASES TO BE DEMOLISHED.

LIFTING PROCEDURE (PUMP P1 & P2):

1. REMOVE VERTICAL SHAFT ABOVE PUMP COUPLING.
2. LOWER LIFTING RING OVER TOP OF PUMP CASING UNTIL SNUG.
3. INSERT HORIZONTAL ANGLES THROUGH OPENINGS IN PUMP CASING AND BOLT IN PLACE TO LIFTING RING.
4. CONNECT HOISTS TO SHACKLES ON LIFTING RING.
5. DETACH PUMP UNIT FROM VOLUTE AND LIFT USING BOTH HOISTS SIMULTANEOUSLY.
6. MOVE PUMP UNIT NORTHWEST OF CONCRETE SUPPORT PEDESTALS USING MANUAL TROLLIES.
7. LOWER PUMP UNIT ONTO WHEELED CART LOCATED ON FLOOR.
8. ROLL CART BELOW FLOOR HATCH AND REMOVE PUMP UNIT FROM STATION USING MOBILE CRANE.

LIFTING PROCEDURE (PUMP P3):

1. REMOVE GRATING FROM FLOOR SLOT AT LEVEL 200.
2. CONNECT HOISTS TO EYEBOLT MOUNTED AT TOP OF PUMP.
3. DETACH PUMP FROM VOLUTE AND LIFT CLEAR.
4. MOVE PUMP UNIT NORTH USING MANUAL TROLLEY.
5. LOWER PUMP ONTO WHEELED SUPPORT FRAME/CART LOCATED ON THE FLOOR.
6. ROLL CART BELOW FLOOR HATCH AND REMOVE PUMP UNIT FROM STATION USING MOBILE CRANE.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

APEGM Certificate of Authorization KGS Group No. 245

NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	11 11 07	CMS

FIELD BOOK #:
POSTED TO LBIS

KGS GROUP CONSULTING ENGINEERS

DESIGNED BY	JMW	CHECKED BY	CMS
DRAWN BY	FBV	APPROVED BY	RED
HOR. SCALE	AS NOTED	RELEASED FOR CONSTRUCTION	
VERTICAL	AS NOTED		
DATE	2011 06 8	DATE	

ENGINEER'S SEAL
PROVINCE OF MANITOBA C.M. SIEPMAN Member 20813 REGISTERED PROFESSIONAL ENGINEER
NOV 7/11

S01

Winnipeg
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

REPLACEMENT OF RAW SEWAGE PUMP P-3
PERIMETER ROAD PUMPING STATION
STRUCTURAL
GENERAL ARRANGEMENT/PLAN

SHEET 1 OF 1
CITY DRAWING NUMBER

CW-9-M564-1
FileName: P:\Projects\2010\10-0107-23\Doc.Control\ToBeIssued\DWG\720-2010_Drawing_S01-R0.dwg – Tab: S01 Plotted By: DDeroche 11/07/2011 [Mon 2:32pm]