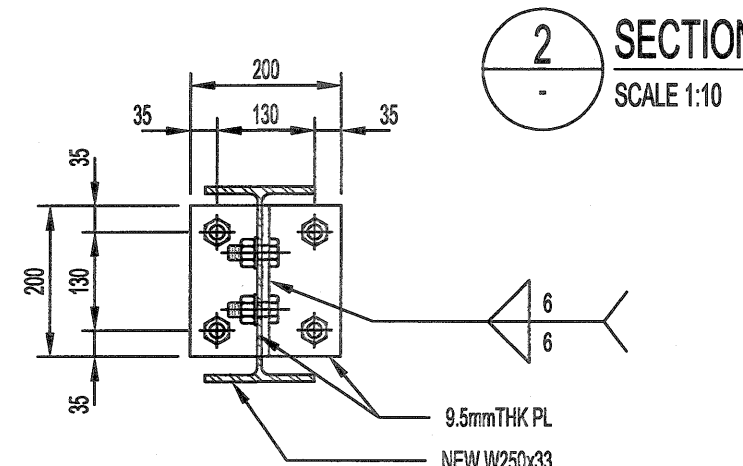
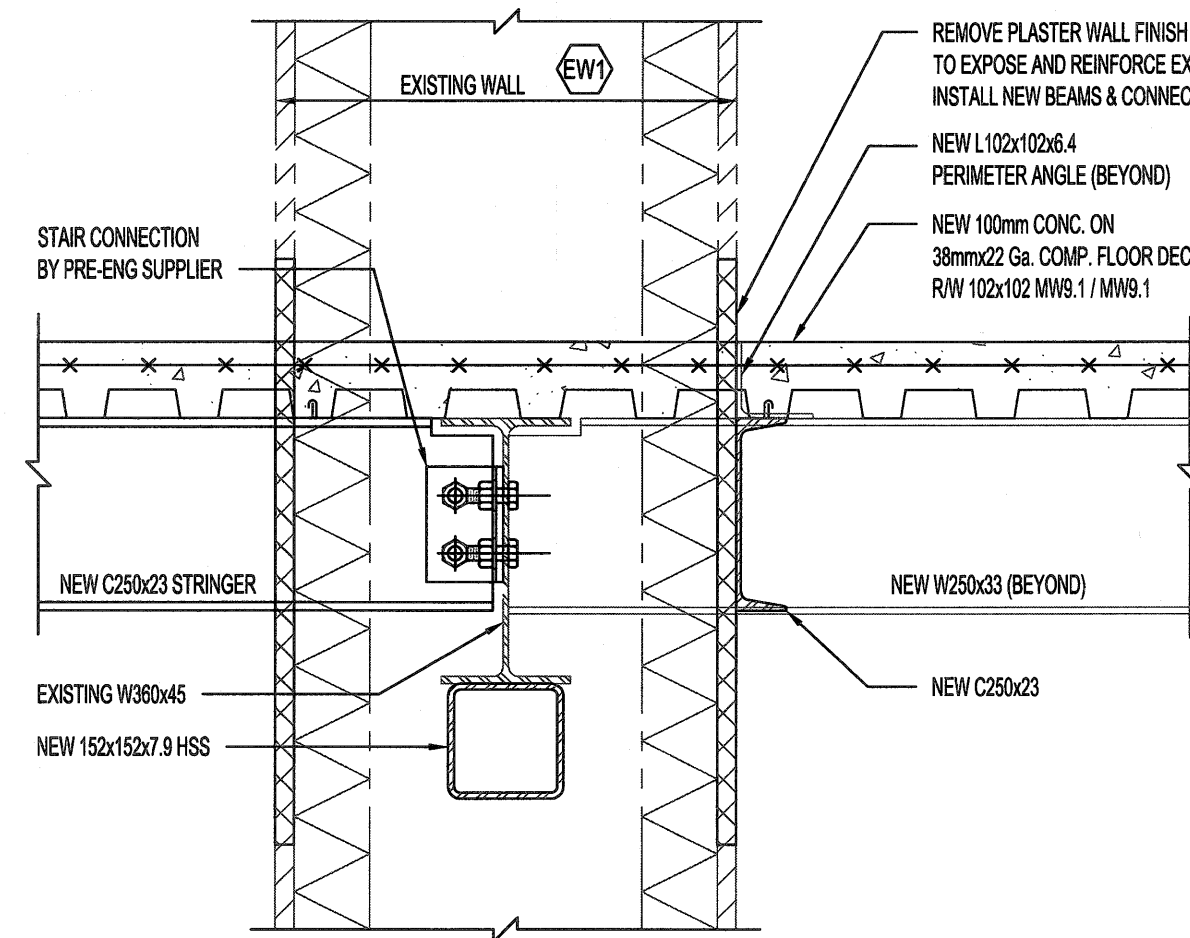


1 SECTION SCALE 1:10

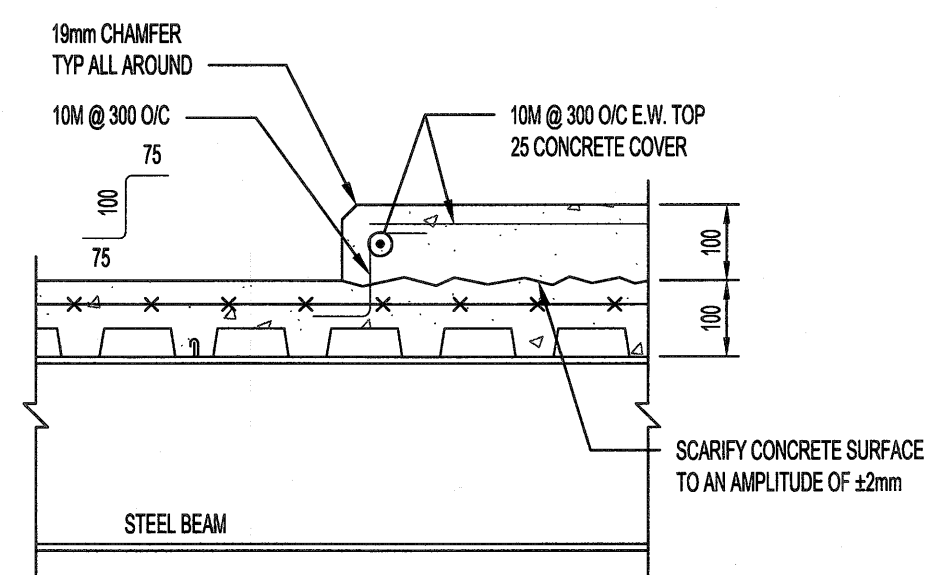


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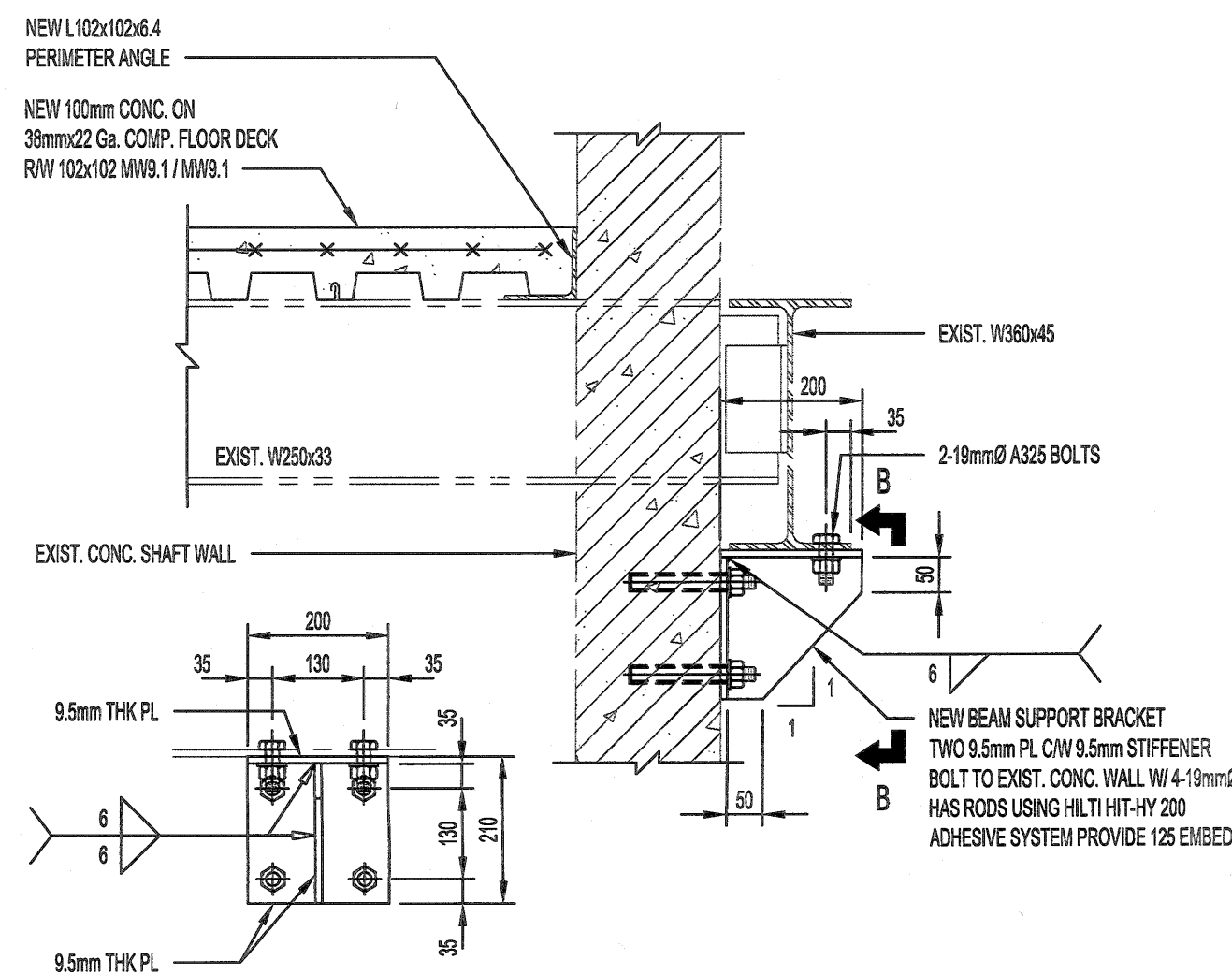
SECTION A-A SCALE 1:10



7 SECTION SCALE 1:10

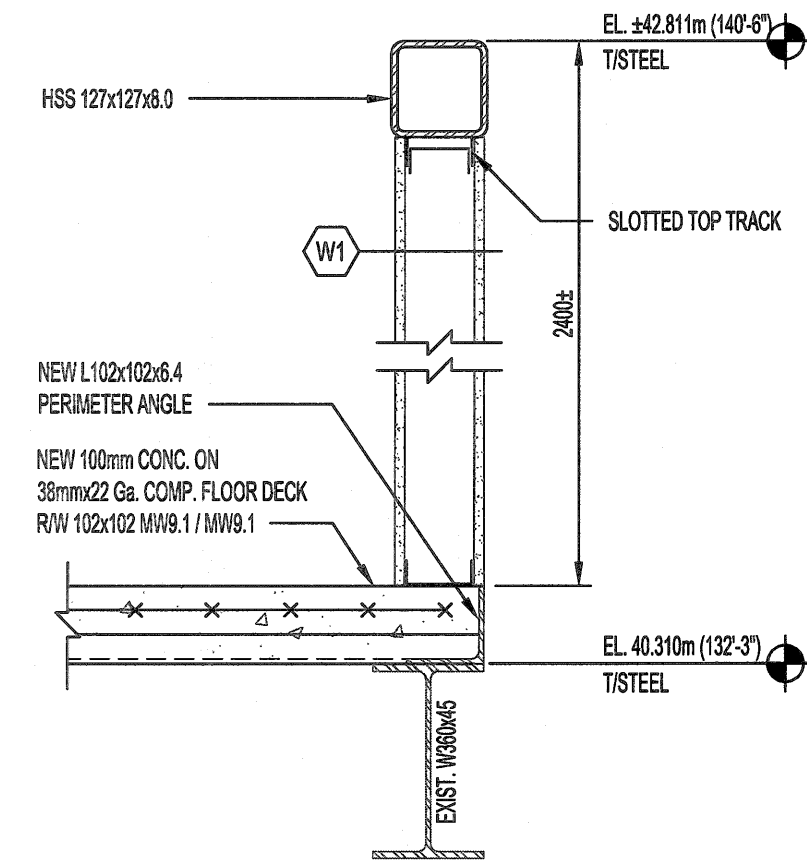


8 SECTION SCALE 1:10

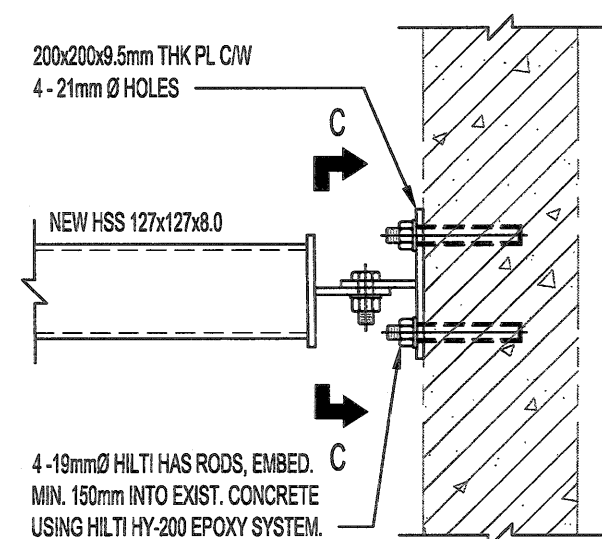


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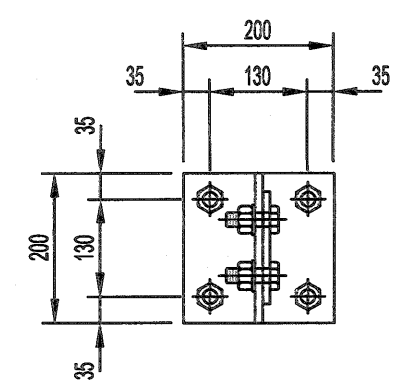
3 SECTION SCALE 1:10



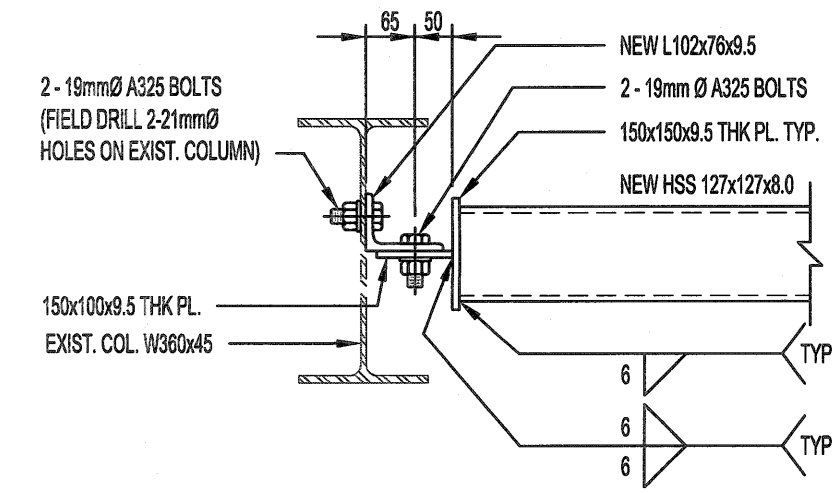
4 SECTION SCALE 1:10



5 SECTION SCALE 1:10



SECTION C-C SCALE 1:10



6 SECTION SCALE 1:10

GENERAL:

- THIS STRUCTURE HAS BEEN DESIGNED AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF PART 4 OF THE MANITOBA BUILDING CODE-2011, NATIONAL BUILDING CODE OF CANADA-2010.
- ALL SPECIFICATIONS AND CODES SPECIFIED SHALL BE THE LATEST REVISION AVAILABLE.
- SITE VERIFY ALL DIMENSIONS, ELEVATIONS, DETAILS, QUANTITIES AND CONDITIONS PRIOR TO START OF ANY DEMOLITION, CONSTRUCTION OR PREFABRICATION OF ANY STRUCTURAL COMPONENT.
- EXISTING STRUCTURAL SUPPORTS WHICH INTERFERE WITH NEW WORK SHALL BE RELOCATED UPON APPROVAL BY THE DESIGN ENGINEER.
- THE CONTRACTOR SHALL ENSURE THAT ALL SERVICES ARE LOCATED AND MARKED.
- ALL BUILDING SYSTEMS COMPONENTS SHALL BE THE PRODUCTS OF A SINGLE MANUFACTURER UNLESS SPECIFIED OTHERWISE.
- SHIP, STORE, HANDLE, ERECT, INSTALL, ETC. ALL BUILDING MATERIALS, COMPONENTS, FIXTURES, EQUIPMENT, ETC. AS PER MANUFACTURERS WRITTEN INSTRUCTIONS.
- ALL DEMOLITION, FABRICATION, CONSTRUCTION, ETC. SHALL BE CARRIED OUT IN ACCORDANCE WITH ALL PERTINENT BUILDING CODES, AND LOCAL BYLAWS AND ORDINANCES.
- 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.
- TIME AND DURATION OF ANY NECESSARY DISRUPTION IN THE USE OF ANY ROOM, SPACE, SERVICE, EQUIPMENT, ETC. SHALL BE COORDINATED WITH, AND APPROVED BY THE CONTRACT ADMINISTRATOR AT THE START OF THE PROJECT. PROVIDE CONTRACT ADMINISTRATOR WITH MINIMUM ONE WEEK NOTICE (OR AS REQUIRED) PRIOR TO EACH ACTUAL OCCURRENCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE CONTRACT ADMINISTRATOR OF ANY PREVIOUSLY UNNOTICED PRE-EXISTING FLAW OR CONDITION THAT MIGHT INCREASE THE SCOPE OF WORK OR COMPROMISE NEW CONSTRUCTION, PRIOR TO THE START OF DEMOLITION AND CONSTRUCTION, OR AS SOON AS IT IS DISCOVERED.

STRUCTURAL AND MISCELLANEOUS STEEL:

- STRUCTURAL AND MISCELLANEOUS STEEL FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH CAN/CSA S16 (2009).
- STRUCTURAL STEEL SHALL MEET THE REQUIREMENTS OF CAN/CSA G40.20/G40.21 (2013).

ROLLED W-SHAPES	CSA G40.21-350W
ROLLED SHAPES & PLATES	CSA G40.21-350W
HSS SECTIONS	CSA G40.21-350W
CLASS C-11	ASTM A53-12
STANDARD PIPE	CSA S136-12
COLD FORMED STEEL	CSA S136-12
BOLTS, NUTS, & WASHERS	ASTM A325-14
WELDING ELECTRODES	CSA W48-14

- WELDING SHALL BE IN ACCORDANCE WITH CSA W59 (2013), BY WELDERS CERTIFIED AND QUALIFIED IN ACCORDANCE WITH CSA W47.1-09 (R2014). ALL WELDS TO BE 6mm UNLESS NOTED OTHERWISE.
- FIELD CONNECTIONS SHALL BE BOLTED 19mm DIAMETER A325 BEARING TYPE UNLESS NOTED OTHERWISE. BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH CSA S16 (2014).

- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA FOR REVIEW PRIOR TO FABRICATION. ALL CONNECTIONS NOT SHOWN ON THE DRAWINGS TO BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER.
- STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE FINISHED AS INDICATED BELOW, UNLESS OTHERWISE NOTED, OR APPROVED EQUAL IN ACCORDANCE WITH B7:
 - INTERIOR STEEL
 - SURFACE PREP. TO SP8 (COMMERCIAL BLAST)
 - ONE PRIME COAT INTERZINC 52 ZINC-RICH EPOXY (2.5 MIL DFT.)
 - ONE FINISH COAT INTERGARD 345 HIGH BUILD EPOXY (6.0 MIL DFT.)

- COLOUR OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE AS FOLLOWS:
 - STRUCTURAL STEEL - BY CONTRACT ADMINISTRATOR

- FIELD TOUCH-UP PAINT TO CONNECTIONS, WELDS, BURNED OR DAMAGED SURFACES, AND UNFINISHED SURFACES AT COMPLETION OF ERECTION AND SHALL MATCH THICKNESS AS SPECIFIED.

- PAINTED SURFACES OF EXISTING STEEL SHALL BE GROUND SMOOTH TO BARE METAL PRIOR TO FIELD WELDING.

- HEAT STRAIGHTENING PROCEDURE SHALL BE APPROVED BY A WELDING ENGINEER AND BE SUBMITTED PRIOR TO REPAIR OF BEAM MEMBERS.

STEEL DECK:

- FABRICATE STEEL DECK IN ACCORDANCE WITH ASTM A653M-13 WITH A Z275 GALVANIZED ZINC COATING.
- THE THICKNESS SPECIFIED REFERS TO THE NOMINAL BASE STEEL THICKNESS EXCLUSIVE OF ANY COATINGS.
- INSTALL IN ACCORDANCE WITH CSA S136 (2012) AND MANUFACTURERS INSTRUCTIONS. FASTEN DECKING TO STRUCTURAL STEEL WITH 19mm DIAMETER FUSION WELDS AT 300mm O/C ALONG ALL SUPPORTS. CLINCH ALL SIDE SEAMS AT 300mm O/C.
- FLOOR DECK TO BE (VICWEST HI-BOND HB 938, 38mm DEEP X 0.76mm (0.0299") THICK OR APPROVED EQUAL IN ACCORDANCE WITH B7.

CONCRETE:

- CONCRETE MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CSA A23.1-09 (R2014). SEE BELOW FOR MIX REQUIREMENTS.
- ADMIXTURES SHALL NOT BE USED UNLESS SPECIFIED HEREIN OR APPROVED BY THE CONTRACT ADMINISTRATOR. CALCIUM CHLORIDE SHALL NOT BE USED.
- MIX WATER SHALL BE POTABLE.
- DESIGN, FABRICATE AND ERECT FORMWORK/SHORING IN ACCORDANCE WITH CAN/CSA S289.3-M92 (R2013). ALLOW SUFFICIENT CONCRETE CURING TIME PRIOR TO REMOVAL.
- CONCRETE FINISHING SHALL MEET THE REQUIREMENTS OF CSA A23.1-09 (R2014).
- FORM RELEASE AGENT SHALL BE BIODEGRADABLE, NON-STAINING AND NON-VOLATILE.
- PROVIDE ADEQUATE COLD/HOT WEATHER PROTECTION AS REQUIRED DURING CURING PERIOD.
- PLACE AND SECURE ALL EMBEDDED ANCHORS, WELD PLATES, SLEEVES, BUCKS, DOWELS, INSERTS, WATERSTOPS, ETC., PRIOR TO PLACING CONCRETE. CO-ORDINATE WITH ALL TRADES FOR EMBEDDING OF ALL OTHER, CONDUIT, SERVICES, BLOCKING, ETC.
- LOCATE AND FABRICATE ALL CONSTRUCTION JOINTS, CONTROL JOINTS AND EXPANSION JOINTS AS DETAILED ON THE DRAWINGS. JOINTS NOT SHOWN SHALL BE APPROVED BY THE CONTRACT ADMINISTRATOR PRIOR TO THE PLACEMENT OF CONCRETE.
- ADHESIVE ANCHORS SHALL BE HILTI HY200 HAS RODS OR APPROVED EQUAL IN ACCORDANCE WITH B7, UNLESS NOTED. INSTALL AS PER MANUFACTURERS INSTRUCTIONS.
- GROUT REINFORCING DOWELS WITH EPOXY GROUT HILTI HIT-HY200, OR APPROVED EQUAL IN ACCORDANCE WITH B7. GROUT BASE PLATES WITH NON-SHRINK GROUT SIKKA M-BED STANDARD, OR APPROVED EQUAL IN ACCORDANCE WITH B7. PLATE AND CURE ALL GROUT WITHIN TEMPERATURE RANGE RECOMMENDED BY MANUFACTURER.
- BONDING AGENTS SHALL BE USED TO ADHERE NEW CONCRETE TO EXISTING CONCRETE OR STEEL. ACCEPTABLE PRODUCT: SIKADUR 32 HI-MOD (EPOXY) OR APPROVED EQUAL IN ACCORDANCE WITH B7.
- THE CONCRETE SUPPLIER SHALL BE CERTIFIED TO MEET THE REQUIREMENTS OF CSA A23.1-09 (R2014).
- THE CONCRETE SUPPLIER SHALL SUBMIT CONCRETE MIX DATA SUBMISSION FORMS FOR EACH TYPE OF CONCRETE SPECIFIED FOR REVIEW PRIOR TO BATCHING ANY CONCRETE.
- CONTRACTOR SHALL PAY FOR COST OF CONCRETE TESTING AS REQUIRED BY CSA A23.1.

CONCRETE MIX DESIGNS:

CONCRETE MIX DESIGN SHALL BE PROPORTIONED TO MEET THE FOLLOWING PERFORMANCE REQUIREMENTS:

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:

- REINFORCING STEEL TO BE NEW DEFORMED BILLET STEEL BARS CONFORMING TO CSA G30.18-09 (R2014). GRADE TO BE 400 MPa.
- REINFORCING STEEL SHALL BE CLEAN, FREE OF RUST, LOOSE SCALE, OIL, GREASE OR ANY OTHER MATERIAL WHICH WOULD REDUCE BOND WITH THE CONCRETE.
- WELDED STEEL WIRE FABRIC SHALL CONFORM TO A1084M/1084M-14. 400 MPa MINIMUM GRADE IN FLAT SHEETS ONLY UNLESS APPROVED OTHERWISE.
- SUBMIT SHOP DRAWINGS WHICH CLEARLY INDICATE BAR SIZES, SPACINGS, LOCATIONS & QUANTITIES OF REINFORCING STEEL, BENDING & CUTTING SCHEDULES, SUPPORTING & SPACING DEVICES, ETC. FOR REVIEW PRIOR TO FABRICATION. DETAIL, FABRICATE AND PLACE REINFORCING IN ACCORDANCE WITH CSA A23.1-09 (R2014), CSA A23.3-14 AND ACI SP-68 (2004) UNLESS NOTED. LAP STEEL 36 BAR DIAMETERS (MINIMUM) UNLESS NOTED.
- TIE, SUPPORT AND SPACE ALL REINFORCING STEEL WITH PROPER APPROVED DEVICES DESIGNED FOR USE IN REINFORCED CONCRETE, TO PREVENT DISPLACEMENT OF REINFORCING AND ENSURE SPECIFIED CONCRETE COVER.
- PROVIDE MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:
 - COMPOSITE SLAB (TOP) 25mm

NOTES:

THESE DRAWINGS SHALL NOT BE SCALED.

THE CONTRACTOR SHALL VISIT THE SITE AND SATISFY ONESELF ALL DIMENSIONS, DATUM, AND DETAILED INFORMATION SHOWN ARE CORRECT.

THE CONTRACTOR IS TO REVIEW AND COORDINATE ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL OPENINGS THROUGH FLOORS, WALLS, AND CEILINGS FOR DUCT, PIPE & ELECTRICAL RISERS AND ALL OPENINGS NOT SHOWN ON DRAWINGS.

ALL OPENINGS THROUGH THE FIRE SEPARATIONS AS A RESULT OF THE WORK OF THIS CONTRACT ARE TO BE FIRE STOPPED AND SEALED WITH UL/C APPROVED FIRE STOPPING TO MAINTAIN THE INTEGRITY OF THE FIRE SEPARATION, AND PROVIDE AND SMOKE-TIGHT BARRIER.

ALL PRODUCTS AND MATERIALS TO BE USED AND INSTALLED SHALL CONFORM WITH MANUFACTURERS SPECIFICATIONS & APPLICABLE CODES.

THE CONTRACTOR SHALL BE RESPONSIBLE TO PATCH AND MAKE GOOD ALL EXISTING CONSTRUCTION AFFECTED BY THE REMOVAL OF ALL ITEMS FORMING THE PART OF THE RENOVATION WORK.

WHERE NEW FLOORING AND BASE IS TO BE INSTALLED IN EXISTING AREAS (REFER TO FLOOR PLAN AND ROOM SCHEDULE) THE EXISTING FLOORING SURFACE AND BASE MUST BE REMOVED, UNLESS OTHERWISE NOTED. ALL FLOOR SURFACES SHALL BE PREPARED IN ACCORDANCE TO MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION OF NEW FLOOR.

WHERE PAINTING OF EXISTING WALLS IS INDICATED ON THE ROOM SCHEDULE, THESE WALLS MUST BE CLEANED OF ANY EXISTING WALL COVERING, PATCHED & PREPARED TO ACCEPT NEW MATERIAL, UNLESS OTHERWISE NOTED.

DUST CONTROL NOTE:

- IN GENERAL ENCLOSE LOCALIZED AREAS SUBJECT TO DUST CREATION WITH SEALED HEAVY WEIGHT POLYETHYLENE BARRIER. COORDINATE WITH BUILDING MAINTENANCE PERSONNEL TO ADJUST OR LIMIT USE OF BUILDING VENTILATION EQUIPMENT TO FURTHER MINIMIZE THE POSSIBLE PROPAGATION OF DUST FROM ONE AREA TO ANOTHER, WHENEVER POSSIBLE DO UNAVOIDABLE DUST CREATING OPERATIONS IN A SMALLER ENCLOSED AREA.

No.	REVISION/DESCRIPTION	BY	DATE
0	ISSUED FOR TENDER	RS	18.08.21

SEAL



DRAWN	JAR	CHECKED	PPG	DESIGNED	PPG	APPROVED
DATE	2018.05.16	USER	APPROVAL			

THE CITY OF WINNIPEG
PLANNING, PROPERTY AND
DEVELOPMENT DEPARTMENT
MUNICIPAL ACCOMMODATIONS DIVISION
3-85 GARRY STREET, R3C 4K4

PROJECT
BOILER ROOM
COMBUSTION AIR UPGRADE
AT PAN AM POOL
25 POSEIDON BAY

SHEET TITLE
STRUCTURAL
MECHANICAL EQUIPMENT SUPPORT
SECTION & NOTES

SCALE	PROJECT No:	SHEET No:
AS SHOWN	18-0107-006	502

ENGINEERS
GEO-SCIENTISTS
MANITOBA
Certificate of Authorization
KGS Group
No. 245

