

Bridge # 17 Miller Road Municipality of Magnetawan

Miller Road
Magnetawan, Ontario

ISSUED FOR TENDER

IFT 2025-05

LIST OF DRAWINGS

C0	LEGEND AND NOTES
C1	REMOVALS
C2	NEW CONSTRUCTION
S1	STRUCTURAL DETAILS
S2	STRUCTURAL DETAILS
S3	STRUCTURAL DETAILS

NOT FOR
CONSTRUCTION

02	2025-08-12	AH	ISSUED FOR TENDER
01	2025-07-31	AH	ISSUED FOR CLIENT REVIEW
No.	YYYY-MM-DD	BY	DESCRIPTION



SHEET #

COVER

GENERAL

- ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE CURRENT MUNICIPALITY OF MAGNETAWAN GUIDELINES, MTO STRUCTURAL MANUAL, AND ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS) AND DRAWINGS (OPSD), UNLESS SPECIFIED OTHERWISE.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, SEWER INVERTS, AND UTILITY LOCATES, IDENTIFYING ANY POTENTIAL CONFLICTS. ANY DISCREPANCIES SHALL BE REPORTED TO THE CONTRACT ADMINISTRATOR IMMEDIATELY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF ALL ENVIRONMENTAL PROTECTION MEASURES IN ACCORDANCE WITH REGULATORY REQUIREMENTS AND PROJECT SPECIFICATIONS.
- ANY TRAFFIC CONTROL, REGULATORY, OR INFORMATIONAL SIGNS REMOVED, DISPLACED, OR DAMAGED DURING CONSTRUCTION SHALL BE REINSTATED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- UTILITY POLES AND OVERHEAD LINES IN THE VICINITY OF THE WORK ZONE SHALL BE BRACED AND PROTECTED AS REQUIRED TO ENSURE STRUCTURAL STABILITY AND WORKER SAFETY.
- THE LOCATIONS OF UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS THROUGH THE APPROPRIATE UTILITY PROVIDERS AND IS RESPONSIBLE FOR PROTECTING ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL REQUIRED TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH THE ONTARIO TRAFFIC MANUAL (OTM) BOOK 7 AND AS DIRECTED BY THE TOWNSHIP.
- THE CONTRACTOR SHALL ENSURE ALL WORK CONFORMS TO APPLICABLE HEALTH AND SAFETY REGULATIONS, INCLUDING THE OCCUPATIONAL HEALTH AND SAFETY ACT (OHS) AND MINISTRY OF LABOUR, IMMIGRATION, TRAINING AND SKILLS DEVELOPMENT (MLTSD) REQUIREMENTS.
- ANY MATERIAL REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL MUNICIPAL AND PROVINCIAL REGULATIONS, INCLUDING ENVIRONMENTAL REQUIREMENTS.
- THE CONTRACTOR SHALL COORDINATE WITH ALL RELEVANT AGENCIES, INCLUDING THE TOWNSHIP, UTILITIES, AND ENVIRONMENTAL AUTHORITIES, TO OBTAIN NECESSARY PERMITS AND APPROVALS BEFORE COMMENCING WORK.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS, INCLUDING ROADWAYS, DITCHES, BOULEVARDS, AND PRIVATE PROPERTY, TO PRE-CONSTRUCTION CONDITIONS OR BETTER, AS SPECIFIED IN THE CONTRACT DOCUMENTS.

TRAFFIC CONTROL

- ALL TRAFFIC CONTROL AND PEDESTRIAN SIGNING SHALL BE IN ACCORDANCE WITH THE ONTARIO TRAFFIC MANUAL (OTM) BOOK 7 AND TOWNSHIP OF AUGUSTA REQUIREMENTS.
- THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND REMOVE TRAFFIC CONTROL DEVICES AS REQUIRED TO ENSURE SAFE PASSAGE FOR VEHICLES, PEDESTRIANS, AND CYCLISTS THROUGHOUT THE DURATION OF THE WORK.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE SIGNAGE, BARRICADES, AND FLAGGING PERSONNEL AS NECESSARY TO DIRECT TRAFFIC SAFELY AROUND THE WORK ZONE.
- ANY TEMPORARY LANE OR ROAD CLOSURES SHALL BE APPROVED BY THE TOWNSHIP OF MAGNETAWAN AND COORDINATED WITH LOCAL AUTHORITIES AND EMERGENCY SERVICES.
- THE CONTRACTOR SHALL ENSURE ALL TRAFFIC CONTROL MEASURES ARE INSPECTED REGULARLY AND ADJUSTED AS NECESSARY TO MAINTAIN SAFETY AND COMPLIANCE.
- THE CONTRACTOR SHALL REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES UPON COMPLETION OF THE WORK AND RESTORE THE SITE TO ITS ORIGINAL CONDITION OR BETTER.

GRADING

- FINISHED SURFACES SHALL BE AT A MINIMUM GRADE OF 2% UNLESS OTHERWISE NOTED.
- SLOPES IN LANDSCAPED AREAS SHALL NOT EXCEED 3:1.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING ELEVATIONS AND GRADES PRIOR TO COMMENCING GRADING OPERATIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE CONTRACT ADMINISTRATOR.
- ALL UTILITIES SHALL BE LOCATED AND VERIFIED PRIOR TO THE START OF CONSTRUCTION.
- ALL GROUND SURFACES SHALL BE GRADED TO PREVENT PONDING, ENSURING POSITIVE DRAINAGE WITHOUT LOW AREAS, EXCEPT WHERE APPROVED SWALES OR CATCHBASIN OUTLETS ARE PROVIDED.
- THE CONTRACTOR SHALL REVIEW PROPOSED GRADES AND IDENTIFY ANY CONFLICTS WITH EXISTING OR PROPOSED STRUCTURES. ANY NECESSARY ADJUSTMENTS SHALL BE COORDINATED WITH THE CONTRACT ADMINISTRATOR.
- SUB-GRADE SHALL BE GRADED AT A MINIMUM OF 3% UNTIL A LOWER DITCH OR AN EXISTING SURFACE WITH POSITIVE DRAINAGE AWAY FROM THE ROADWAY IS ENCOUNTERED.

SITE WORKS

GENERAL STRUCTURAL NOTES

CONSTRUCTION LOADS:
DL: 7 kPa
LL: 11 kPa

- THE FOLLOWING NOTES AND THE TYPICAL DETAILS AS INDICATED ARE APPLICABLE TO ALL STRUCTURAL CONDITIONS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS.
- THE STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACT DOCUMENTS.
- ONLY DIMENSIONS RELEVANT TO STRUCTURAL ELEMENTS ARE SHOWN ON THE DRAWINGS.
- THE DESIGN LIVE LOAD SHOWN UNDER PLANS SHALL NOT BE EXCEEDED DURING CONSTRUCTION. THE CONTRACTOR SHALL MAKE ADEQUATE PROVISIONS FOR CONSTRUCTION LOADS AND FOR ADEQUATE TEMPORARY BRACING TO KEEP THE STRUCTURE (INCLUDING MASONRY WALLS, FLOORS AND ROOF DECKS ETC.) PLUMB AND IN TRUE ALIGNMENT DURING ALL PHASES OF CONSTRUCTION.
- ANY INCONSISTENCIES IN DIMENSIONS AND DETAILS SHOWN STRUCTURAL DRAWINGS ARE TO BE REPORTED TO THE ENGINEER PRIOR TO PROCEEDING WITH WORK. DO NOT SCALE THESE DRAWINGS.
- NO BACKFILL SHALL BE PLACED AGAINST WALLS UNTIL ELEMENTS PROVIDING LATERAL SUPPORT ARE IN PLACE.
- ALL FABRICATION AND ERECTION DRAWINGS (SHOP DRAWINGS) INCLUDING STRUCTURAL STEEL, REINFORCING STEEL, ETC., TO BE SUBMITTED TO THE ENGINEER FOR REVIEW. SUBMIT MINIMUM OF 3 COPIES OF PRINTS PLUS ONE REPRODUCIBLE COPY.
- CARRY OUT ALL WORK IN ACCORDANCE WITH THE MTO STRUCTURAL MANUAL, AND THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.

CONCRETE

- CONCRETE SHALL CONFORM TO CSA A23.1/A23.2 AND SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 30 MPa
- CONCRETE SHALL BE PLACED AND CURED IN ACCORDANCE WITH CSA A23.1. AIR ENTRAINMENT FOR ALL EXTERIOR CONCRETE SHALL BE 6±1%.
- MINIMUM ONE STRENGTH TEST SHALL BE MADE FOR EACH 75m³ OF EACH TYPE OF CONCRETE WITH MINIMUM ONE TEST FOR EACH CONCRETE TYPE ON ANY ONE DAY. EACH STRENGTH TEST SHALL CONSIST OF 4 SPECIMENS, TWO TO BE TESTED AT 7 DAYS AND 2 AT 28 DAYS. MAXIMUM SLUMP TO BE 75mm MAX. FOR SLABS, BEAMS AND WALLS, AND 100mm MAX. FOR COLUMNS AND FOOTINGS.
- CONCRETE CONTRACTOR TO SET ALL LOOSE MEMBERS THAT ARE TO BE EMBEDDED IN THE CONCRETE (e.g. ANCHOR BOLTS, STEEL PLATES, PIPE SLEEVES, ETC.)
- CONTRACTOR TO FORM ALL HOLES, CHASES, ETC., AND TO SET INSERTS, ANCHOR BOLTS AND OTHER EMBEDDED MEMBERS WHICH ARE REQUIRED TO BE HELD IN POSITION TO OBTAIN REQUIRED FINISHES.
- PLUMBING SLOTS, HOLES AROUND PIPES, DUCTS OR OTHER ITEMS WHICH PASS INTO OR THROUGH CONCRETE SLAB OR WALL SHALL BE FILLED AND PATCHED TO THE SAME DEPTH AS THE FLOOR SLAB OR WALL.
- REFER TO MECHANICAL, ELECTRICAL DRAWINGS FOR LOCATIONS OF HOLES, CHASES, PLATES, INSERTS AND PIPE SLEEVES: THE ENGINEER HAS THE FINAL APPROVAL FOR SIZES AND LOCATIONS OF HOLES AND PIPE SLEEVES IN SLABS AND WALLS.
- ALL CONCRETE SURFACES TO BE FINISHED IN ACCORDANCE WITH PROVINCIAL AND MUNICIPAL STANDARDS.
- SUBMIT CONCRETE MIX DESIGN TO THE ENGINEER AND TO THE INSPECTION AND TESTING COMPANY FOR REVIEW AND COMMENT PRIOR TO STARTING CONSTRUCTION.
- PROVIDE STEEL TROWEL FINISH ON FLOOR SLABS AND APPLY APPROVED HARDENING AND SEALING COMPOUNDS AS REQUIRED.

REINFORCING STEEL

- ALL REINFORCING TO BE DEFORMED BARS CONFORMING TO CSA G30.18 GRADE 500 WELDABLE. WELDED WIRE MESH TO CONFORM TO CSA G30.5.
- ALL REINFORCING SHALL BE ACCURATELY PLACED AND SUPPORTED BY CONTINUOUS METAL OR OTHER APPROVED CHAIRS: ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED BY THE CONTRACTOR TO SECURE MAIN BARS AGAINST DISPLACEMENT AS REQUIRED.
- REINFORCING IN FOOTINGS, SLABS, ABUTMENTS, WINGWALLS, AND CONCRETE MEMBERS EXPOSED TO VIEW OR TO THE WEATHER SHALL BE SUPPORTED IN THE DESIGNATED POSITION BY SOLID PRECAST CONCRETE CHAIRS.
- SPLICES AT POINTS OF MAXIMUM TENSILE STRESS SHALL BE AVOIDED WHEREVER POSSIBLE. SUCH SPLICES WHERE USED, SHALL BE APPROVED BY THE ENGINEER AND SHALL BE MINIMUM 40 BAR DIAMETERS.
- CONTINUOUS AND TEMPERATURE REINFORCING BARS SHALL BE LAPPED 30 BAR DIAMETERS OR ENDS WITH STANDARD HOOKS. LAP FOR MESH REINFORCING TO BE 300mm MINIMUM.
- MINIMUM CLEAR DISTANCE BETWEEN PARALLEL BARS SHALL BE GREATER THAN THE FOLLOWING:

- 1.5 TIMES BAR DIAMETER.
- 1.33 TIMES MAXIMUM SIZE OF AGGREGATE.
- 25mm MINIMUM.

- WHERE IN EARTH SUBGRADE, COMPACTED GRANULAR DEPTHS SHALL BE 150 MM OF GRANULAR "A" AND 300 MM OF GRANULAR "B", Type 2. PROVIDE A 2% CROSSFALL ON SUBGRADE.
- ALL DISTURBED AREAS SHALL BE REMEDIATED WITH 100 MM OF TOPSOIL AND SEEDED IN ACCORDANCE WITH OPSS 802 AND OPSS 804.
- ALL EXCAVATED MATERIAL NOT SUITABLE FOR BACKFILL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- THE CONTRACTOR SHALL ENSURE THAT ALL WORKS ARE COMPLETED TO PROVIDE STABLE AND WELL-DRAINED SURFACES, MAINTAINING POSITIVE DRAINAGE AWAY FROM STRUCTURES AND ROADWAYS.
- ALL BACKFILL AND COMPACTION SHALL BE CARRIED OUT IN ACCORDANCE WITH OPSS 501 AND SHALL BE SUBJECT TO TESTING AS REQUIRED BY THE CONTRACT ADMINISTRATOR.
- ANY EXISTING SITE FEATURES, INCLUDING VEGETATION, THAT ARE NOT TO BE DISTURBED SHALL BE PROTECTED DURING CONSTRUCTION. ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS AT THE CONTRACTOR'S EXPENSE.

SEDIMENT AND EROSION CONTROL NOTES

- ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND SHALL BE MONITORED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT. TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN FULLY RE-VEGETATED AND THE SITE HAS BEEN STABILIZED. ONCE STABILIZATION IS COMPLETE, THE TEMPORARY MEASURES SHALL BE REMOVED.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED PRIOR TO AND AFTER EACH RAINFALL EVENT TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR. ANY REQUIRED REPAIRS OR ADJUSTMENTS SHALL BE COMPLETED IMMEDIATELY.
- ANY DISTURBED AREAS NOT SCHEDULED FOR FURTHER CONSTRUCTION WITHIN FORTY-FIVE (45) DAYS SHALL BE PROVIDED WITH A SUITABLE TEMPORARY MULCH AND SEED COVER WITHIN SEVEN (7) DAYS OF COMPLETION.
- REGARDLESS OF SITE-SPECIFIC ITEMS DETAILED ON THE PLANS, THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES TO SUIT THE PROPOSED WORK METHODS, ENSURING THAT SEDIMENT IS CONTROLLED AND PREVENTED FROM RUNNING OFF THE SITE BEFORE ANY DISTURBANCE OCCURS.
- FOLLOWING THE COMPLETION OF CONSTRUCTION, ALL DISTURBED AREAS, INCLUDING PROPOSED GRASSED AND VEGETATED SURFACES, SHALL BE REINSTATED AS SOON AS PRACTICABLE.
- ALL ROADS USED TO ACCESS THE SITE SHALL BE KEPT CLEAN TO THE SATISFACTION OF THE DIRECTOR OF PUBLIC WORKS. ANY DEBRIS OR MUD TRACKED ONTO PUBLIC ROADWAYS SHALL BE REMOVED IMMEDIATELY.
- A SEDIMENT CONTROL PLAN SHALL BE SUBMITTED FOR APPROVAL PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

DEBRIS PLATFORM NOTES

- THE DEBRIS PLATFORM SHALL BE DESIGNED AND INSTALLED TO ENSURE THAT ALL DEBRIS GENERATED DURING CONSTRUCTION IS CAPTURED AND PREVENTED FROM ENTERING THE WATERCOURSE OR SURROUNDING ENVIRONMENT.
- A STAMPED DEBRIS PLATFORM AND INSTALLATION PLAN SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR FOR APPROVAL PRIOR TO THE COMMENCEMENT OF WORK.
- THE PLATFORM SHALL BE INSPECTED DAILY AND MAINTAINED TO ENSURE ITS EFFECTIVENESS THROUGHOUT THE DURATION OF THE WORK. ANY REQUIRED REPAIRS OR ADJUSTMENTS SHALL BE MADE IMMEDIATELY.
- ALL COLLECTED DEBRIS SHALL BE REMOVED FROM THE PLATFORM REGULARLY AND DISPOSED OF IN ACCORDANCE WITH ALL MUNICIPAL AND PROVINCIAL REGULATIONS.
- THE CONTRACTOR SHALL ENSURE THAT THE DESIGN, INSTALLATION, AND OPERATION OF THE PLATFORM COMPLY WITH ALL APPLICABLE SAFETY AND ENVIRONMENTAL REQUIREMENTS.

ADDITIONAL GENERAL STRUCTURAL NOTES:

- DESIGN CODE: CANADIAN HIGHWAY BRIDGE DESIGN CODE CAN/CSA-S6-19 AND MTO STRUCTURAL MAUNAL
- CLASS OF CONCRETE
 - DISTRIBUTION SLAB AND CURBS: 35mPa, CLASS C1
 - FOOTINGS: CLASS F-1
 - PILE CAPS: CLASS F-1
 - REMAINDER: CLASS C1
- CLEAR COVER TO REINFORCING STEEL: REFFER TO TABLE 8.5 CHBDC - 56:19
- REINFORCING STEEL:
 - REINFORCING STEEL SHALL BE SS 316LN OR DUPLEX 2250 WHEN REQUIRED
 - BARS MARKED WITH PREFIX'S DENOTE STAINLESS STEEL BARS, CONFORMING TO ASTM 276 AND ASTM A955M, MINIMUM GRADE 500, TYPE 316 LN OR 2205 DUPLEX
 - UNO. TENSION LAP LENGTHS SHALL BE CLASS "B"
 - BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING MINIMUM BEND DIAMETERS FOR 500W REINFORCING BARS, WHILE STIRRUPS AND TIES SHALL BE IN ACCORDANCE WITH MTO STRUCTURAL STANDARD DRAWING SS12-1, UNO.
 - REINFORCING STEEL WITHOUT PREFIX SHALL BE TO CSA G30. 18 500W AND WELDED TO CSA W186
- (IF POST INSTALLED) DOWELS REQUIRED:
 - UNO. DOWELS SHALL BE ANCHORED TO DRILLED HOLES WITH HILTI HIT-HY200
 - PREPARATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH HILTI SPECIFICATIONS AND GUIDELINES

PRE-CAST CONCRETE NOTES:

- PRESTRESSING STEEL SHALL BE LO-RELAXATION SEVEN WIRE STRANDS, SIZE DESIGNATION 15, GRADE 1860
- MINIMUM BREAKING STRENGTH OF STRAND 261kN
- JACKING FORCE PER STRAND 193kN
- FORCE PER STRAND AFTER ALL LOSSES135kN
- THE ELAPSED TIME INTERVAL BETWEEN JACKING OF STRANDS AND TRANSFER SHALL NOT BE LESS THAN 15 HOURS.
- PRESTRESSING STRANDS SHALL BE SPACED VERTICALLY AT A MINIMUM OF 150mm IN THE VICINITY OF RECTANGULAR HOLES OR INSERTS FOR 20M DOWELS
- CLASS OF CONCRETE FOR PRECAST GIRDER 60MPa
- MIN. CONCRETE STRENGTH AT TRANSFER 40MPa
- REINFORCING STEEL SHALL BE GRADE 500W. STAINLESS STEEL SHALL BE TYPE 316 LN OR DUPLEX 2205 WITH MINIMUM YIELD STRENGTH OF 500MPa
- CLEAR COVER TO REINFORCING STEEL UNLESS SHOWN OTHERWISE:
 - SOFFIT OF BEAM (EXCEPT UNDERCUT) 48+15mm/-5mm
 - UNDERCUT OF BEAM AND ELSEWHERE 30+15mm/-5mm
- ALL TRANSVERSE REINFORCEMENT IN BOTTOM FLANGE, INCLUDING STIRRUPS, LOCATED WITHIN 2000mm FROM THE GIRDER ENDS AT EXPANSION JOINTS SHALL BE STAINLESS STEEL
- FOR BRIDGES ON GRADES EXCEEDING 3%, THE ENDS OF GIRDERS SHALL BE CAST SO THAT THEY ARE VERTICAL WHEN ERECTED
- DRAWINGS TO BE READ IN CONJUNCTION WITH SS107-24
- NO WELDING SHALL BE PERMITTED UNLESS APPROVED BY THE OWNER
- CONCRETE Fc=60MPa
- Fci=45MPa
- PRESTRESSING STRESS PRIOR TO TRANSFER=0.74Fpu

ADDITIONAL GENERAL STRUCTURAL NOTES:

- FOUNDATION DESIGN BASED ON TERRASPEC ENGINEERING REPORT DATED APRIL 06 2025
- MICROPILE CAPACITY ULS & SLS 594kN
- TEST COMPRESSION CAPACITY OF ONE MICROPILE AT EACH ABUTMENT AFTER COMPLETION OF MICROPILE INSTALLATION
- UNDERSIDE OF PILE CAP FILLED WITH CRUSHED ROCK 2" +/- SIZE COMPACTED TO 100% MINIMUMTHICKNESS OF CRUSHED FILL SHALL BE 300mm
- EMBEDMENT OF MICROPILES INTO BEDROCK SHALL BE MINIMUM 1.8m, MICROPILES SHALL BE FILLED WITH GROUT 30MPa MINIMUM

LEGEND

CONTROL / MONUMENTS / PROPERTY / SURVEY

- IRON BAR
- STANDARD IRON BAR
- ROUND IRON BAR
- IRON PIPE MONUMENT
- CUT CROSS
- CONCRETE MONUMENT
- NAIL
- CONTROL POINT
- BENCHMARK

UTILITIES

- UTILITY POLE
- HYDRO / BELL POLE
- BELL POLE
- POLE (OTHER)
- POLE ANCHOR
- PEDESTAL (BELL/CABLE/OTHER)
- HYDRO TRANSFORMER
- STREET LIGHTS
- TRAFFIC LIGHT POLE
- TRAFFIC SIGNAL HAND HOLE
- HYDRO LINE (EXISTING ABOVE)
- HYDRO LINE (NEW ABOVE)
- HYDRO LINE (EXISTING UNDERGROUND)
- HYDRO LINE (NEW UNDERGROUND)
- BURIED ELECTRICAL
- LIGHT STANDARD CABLES
- BELL LINE (ABOVE)
- BELL LINE (EXISTING UNDERGROUND)
- BELL LINE (NEW UNDERGROUND)
- CABLE LINE (ABOVE)
- CABLE LINE (EXISTING UNDERGROUND)
- CABLE LINE (NEW UNDERGROUND)
- UTILITY LINE (OTHER)
- GAS LINE (EXISTING)
- GAS LINE (NEW)
- GAS VALVE
- JOINT UTILITY TRENCH
- MAINTENANCE HOLE (UTILITY/OTHER)
- MAINTENANCE HOLE HYDRO
- MAINTENANCE HOLE COMMUNICATIONS
- GAS METER
- HYDRO METER

GROUND FEATURES / SURFACE OBJECTS / GRADING

- BORE HOLE / PROBE HOLE
- NEW GRADING ELEVATIONS
- EXISTING GRADE ELEVATIONS
- SPOT GRADE ELEVATION
- CIVIL 3D DYNAMIC SURFACE LABELS (NOTE:THESE ARE NOT BLOCKS)
- DIRECTION OF SURFACE DRAINAGE
- SURFACE GRADING (GRADE OR SLOPE%)
- FENCE LINES
- FENCE GATE
- HEDGES / WOOD OUTLINE
- TREES
- STUMP
- ROAD SIGN
- RIP-RAP
- BOLLARD
- EDGE OF ASPHALT / PAVEMENT
- ROAD CENTERLINE
- EDGE OF ASPHALT / PAVEMENT
- CURB GUTTER LINE
- BACK OF CURB
- GRAVEL EDGE
- GRAVEL SHOULDER
- DAYLIGHTING / GRADING LIMIT
- LIMITS OF BANK
- STRAW BALE
- MAILBOX
- SILT FENCE

REMOVALS

- FULL DEPTH ASPHALT REMOVAL (ROADWAY, DRIVEWAY, SIDEWALK)
- CONCRETE REMOVAL (SIDEWALK, ROADWAY, DRIVEWAY)
- NEW ASPHALT (ROADWAY, DRIVEWAY, SIDEWALK)
- NEW CONCRETE (SIDEWALK, ROADWAY, DRIVEWAY)
- NEW GRAVEL (DRIVEWAY, PATHWAY)
- NEW 100mm TOP SOIL AND SEED

REINSTATEMENTS

CSA S6:19

Canadian Highway Bridge Design Code

Table 8.5 (Concluded)

Component	Reinforcing steel		Prestressing steel	Post-tensioning ducts†	
	Cast-in-place	Precast	Precast	Cast-in-place	Precast
exposed to earth					
Caissons with liners	60†			80†	
Buried structures and concrete piles	60†	40†	55†	80†	60†
Front faces of curbs and barriers	70	50	70§		
Other components not listed in table	70	55	75	90	80

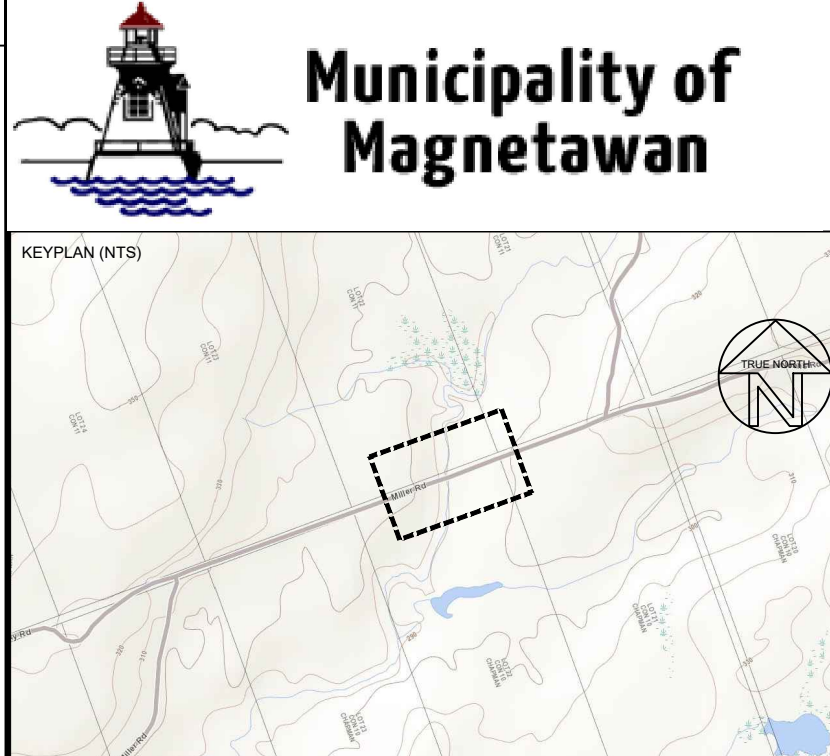
* Reduce by 40 mm for transverse ducts where $d_s \leq 60$ mm or reduce by 50 mm for longitudinal and transverse ducts when not exposed to harsh conditions.

† For all ducts, cover is as specified or 0.5d_s whichever is greater.

‡ Add 10 mm if exposed to harsh conditions (i.e., swamp, marsh, salt water, de-icing spray, or aggressive soils).

§ Add 5 mm if exposed to harsh conditions (i.e., swamp, marsh, salt water, de-icing spray, or aggressive soils).

CLIENT LOGO



DISCLAIMER NOTES

- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ISSUES/PROBLEMS WHICH MAY OCCUR AS A RESULT OF A FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY.
- WHERE THERE ARE ALLEGED ERRORS, OMISSIONS, INCONSISTENCIES OR AMBIGUITIES PRESENT IN THE CONTRACT DOCUMENTS, THE CONTRACTOR MUST SEEK CLARIFICATION FROM JP2g. ANY COSTS OR SCHEDULE DELAYS WHICH RESULT AS A FAILURE TO CONTACT JP2g FOR CLARIFICATION SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
- DO NOT SCALE DRAWINGS. REFER ANY DIMENSIONAL CLARIFICATIONS AND/OR POSSIBLE TRADE INTERFERENCE/CONFLICTS TO JP2g FOR CLARIFICATION PRIOR TO COMMENCEMENT OF THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION WITH SUBTRADES AND SHALL ADDRESS CONSTRUCTION TEAM COORDINATION ITEMS PRIOR TO ISSUING REQUESTS FOR INFORMATION FROM JP2g.
- THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

NOT FOR CONSTRUCTION

02	2025-08-12	AH	ISSUED FOR TENDER
01	2025-07-14	HK	ISSUED FOR 90% REVIEW
No.	YYYY-MM-DD	BY	DESCRIPTION
STAMP		STAMP	

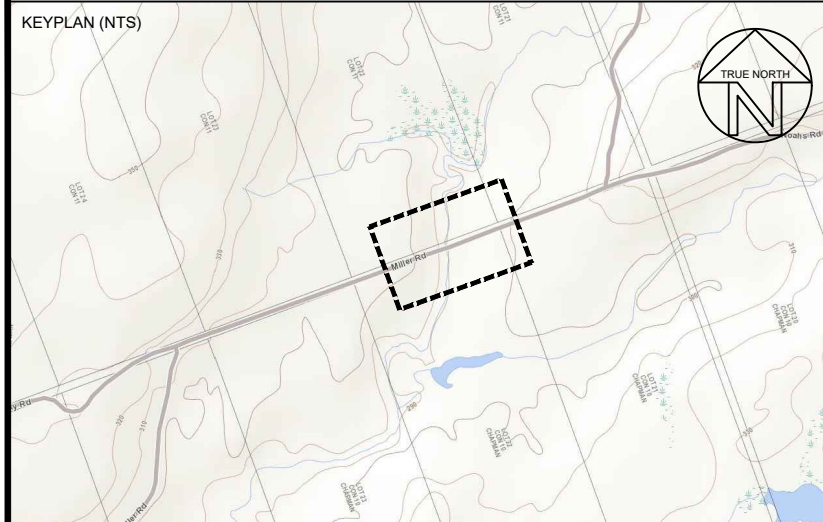
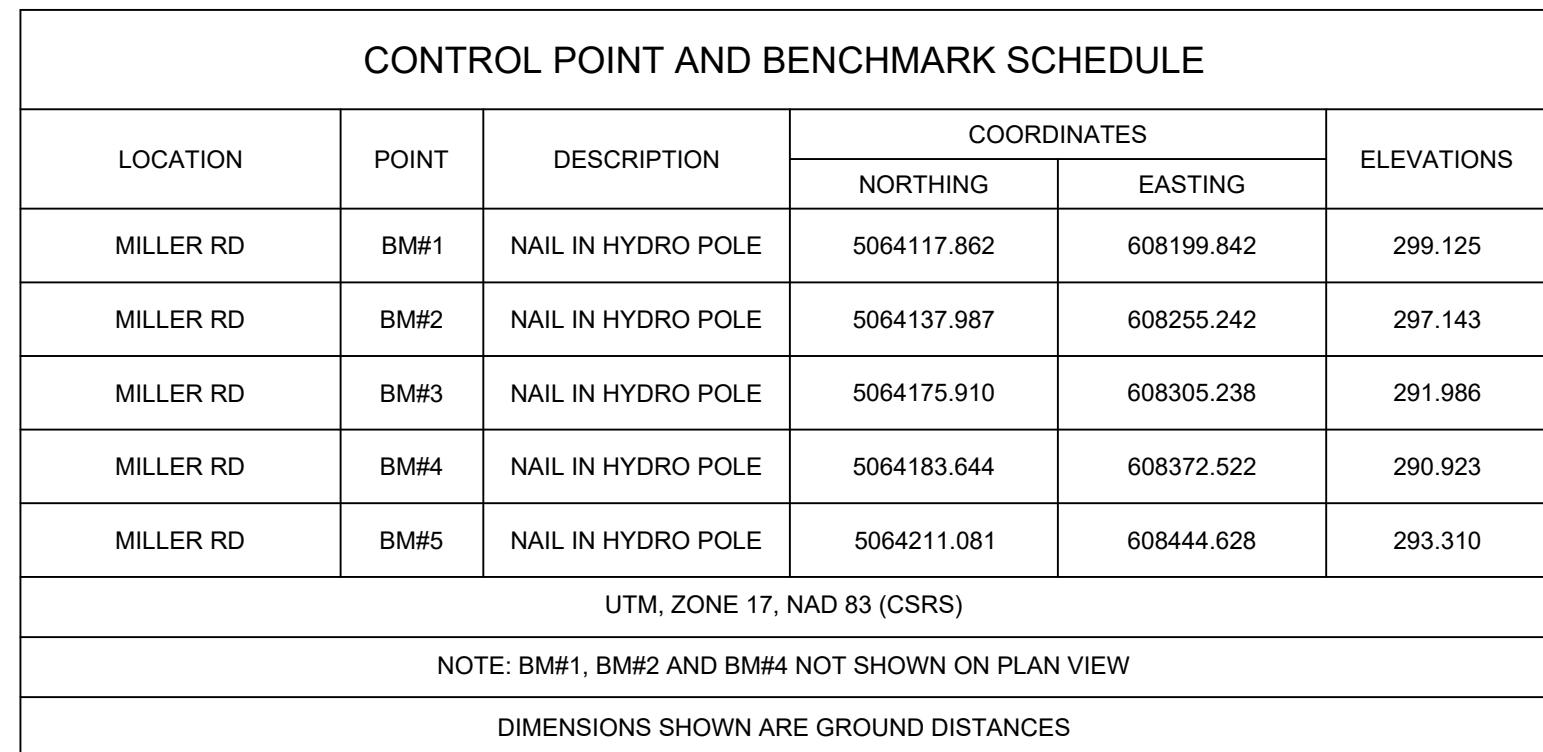
PROJECT
BRIDGE # 17 MILLER ROAD
MUNICIPALITY OF
MAGNETAWAN
MILLER ROAD
MAGNETAWAN, ONTARIO

DRAWING
LEGEND & NOTES

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	REVIEWED: J. MAITLAND
SCALE	APPROVED: G. TORO SUAREZ
	SHEET #

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DISCLAIMER NOTE

- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ISSUES/PROBLEMS WHICH MAY BE CAUSED BY FAILURE TO FOLLOW THE PRELIM. SPECIFICATIONS AND THE DESIGN/INTENT THEY CONVEY.
2. WHERE THERE ARE ALLEGED ERRORS, OMISSIONS, INCONSISTENCIES OR AMBIGUITY PRESENT IN THE CONTRACT DOCUMENTS, THE CONTRACTOR MUST SEEK CLARIFICATION FROM THE ARCHITECT PRIOR TO COMMENCEMENT OF WORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASK FOR CLARIFICATION TO THE ARCHITECT FOR DIRECTION SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DIMENSIONAL CLARIFICATIONS AND/OR POSSIBLE CONFLICTS TO THE ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION WITH SUBTRADE AND SUPPLIERS AND CONSTRUCTION TEAM/COORDINATOR ITEMS PRIOR TO COMMENCEMENT OF WORK FOR INFORMATION FROM JPO2.
5. THE POSITION OF POLE JOINTS, COUNTS, WATERMANS, SEWERS AND OTHER ITEMS AND OVERLAP TEAM/COORDINATOR ITEMS PRIOR TO COMMENCEMENT IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND WHERE SHOWN, THE ACCURACY OF THE INFORMATION IS NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL ITEMS. THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL ITEMS PRIOR TO COMMENCEMENT OF WORK.

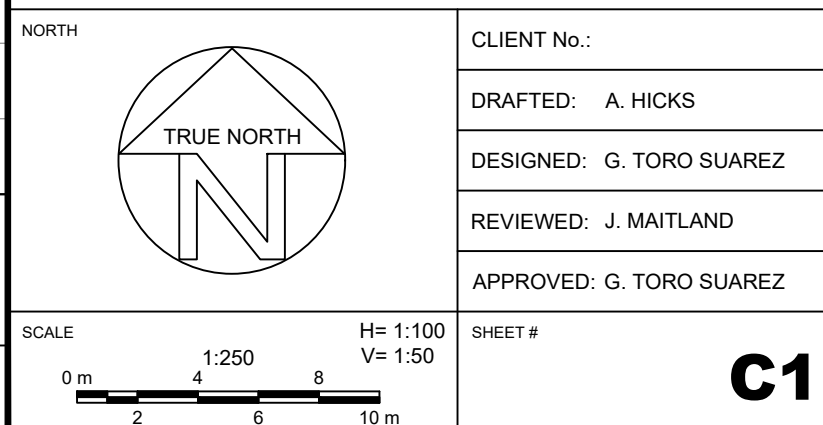
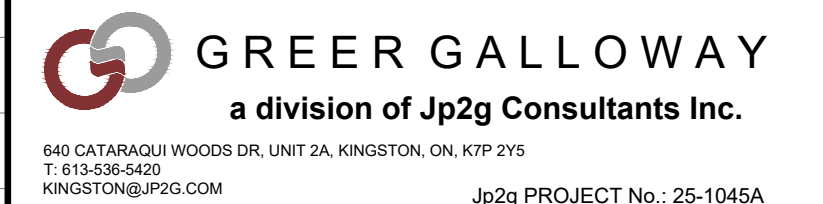
NOT FOR
CONSTRUCTION

PROJECT

**BRIDGE # 17 MILLER ROAD
MUNICIPALITY OF
MAGNETAWAN**

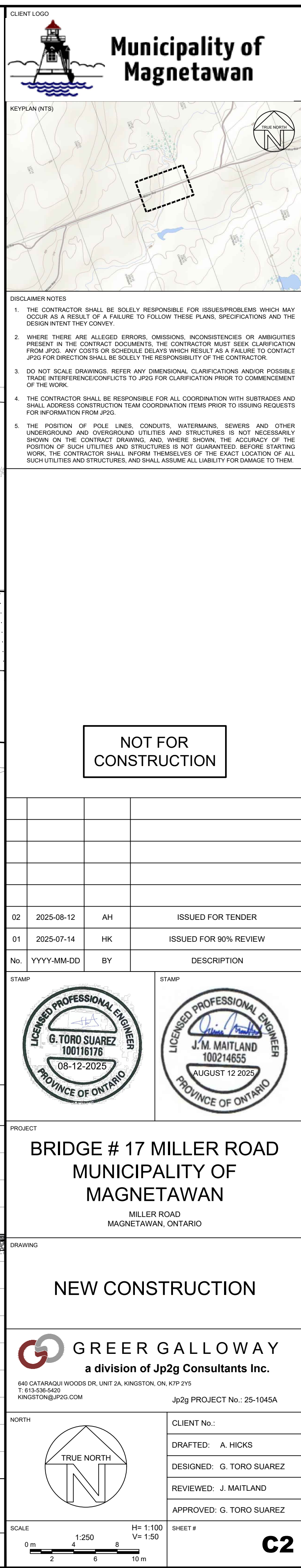
MILLER ROAD
MAGNETAWAN, ONTARIO

REMOVALS

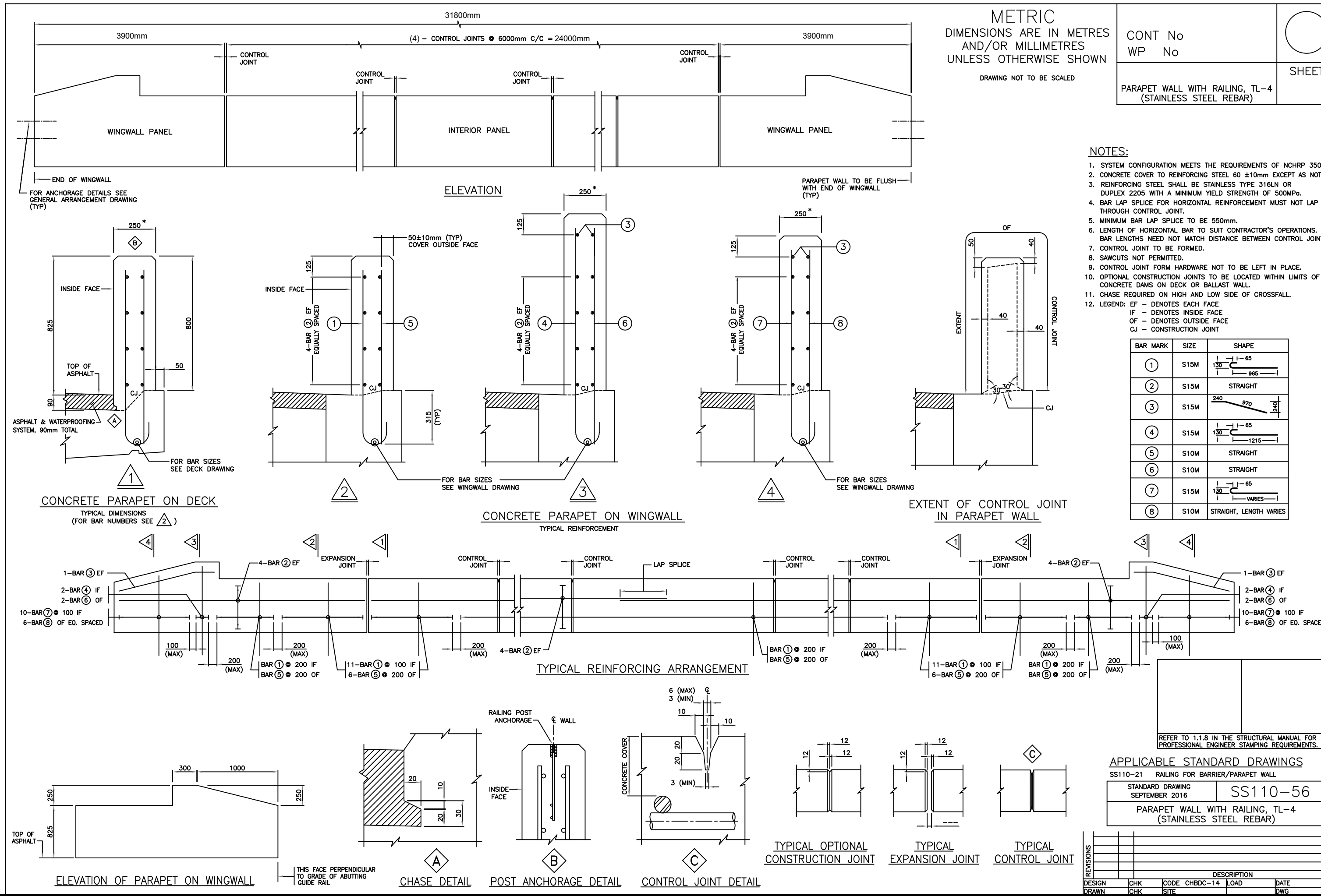
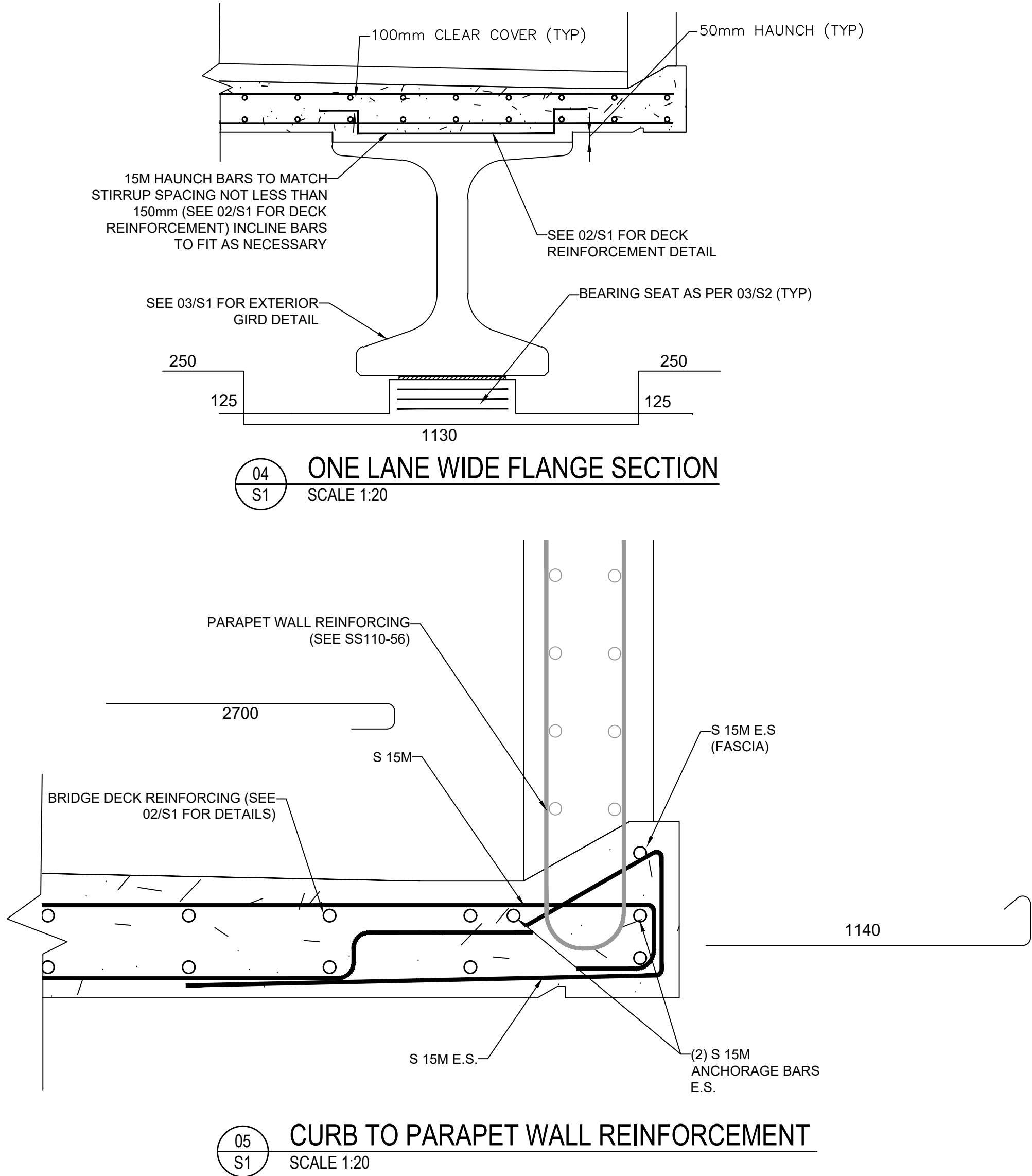
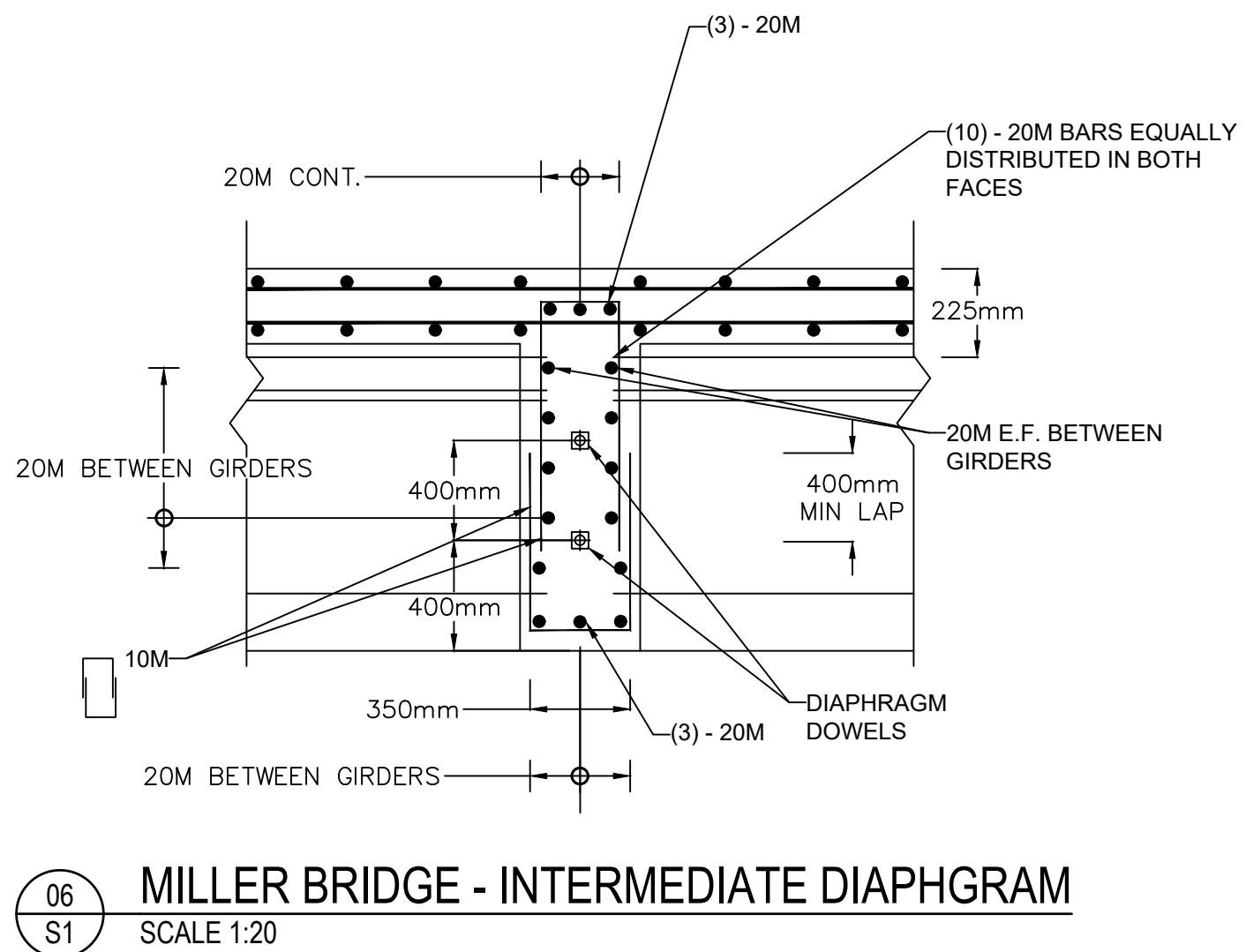
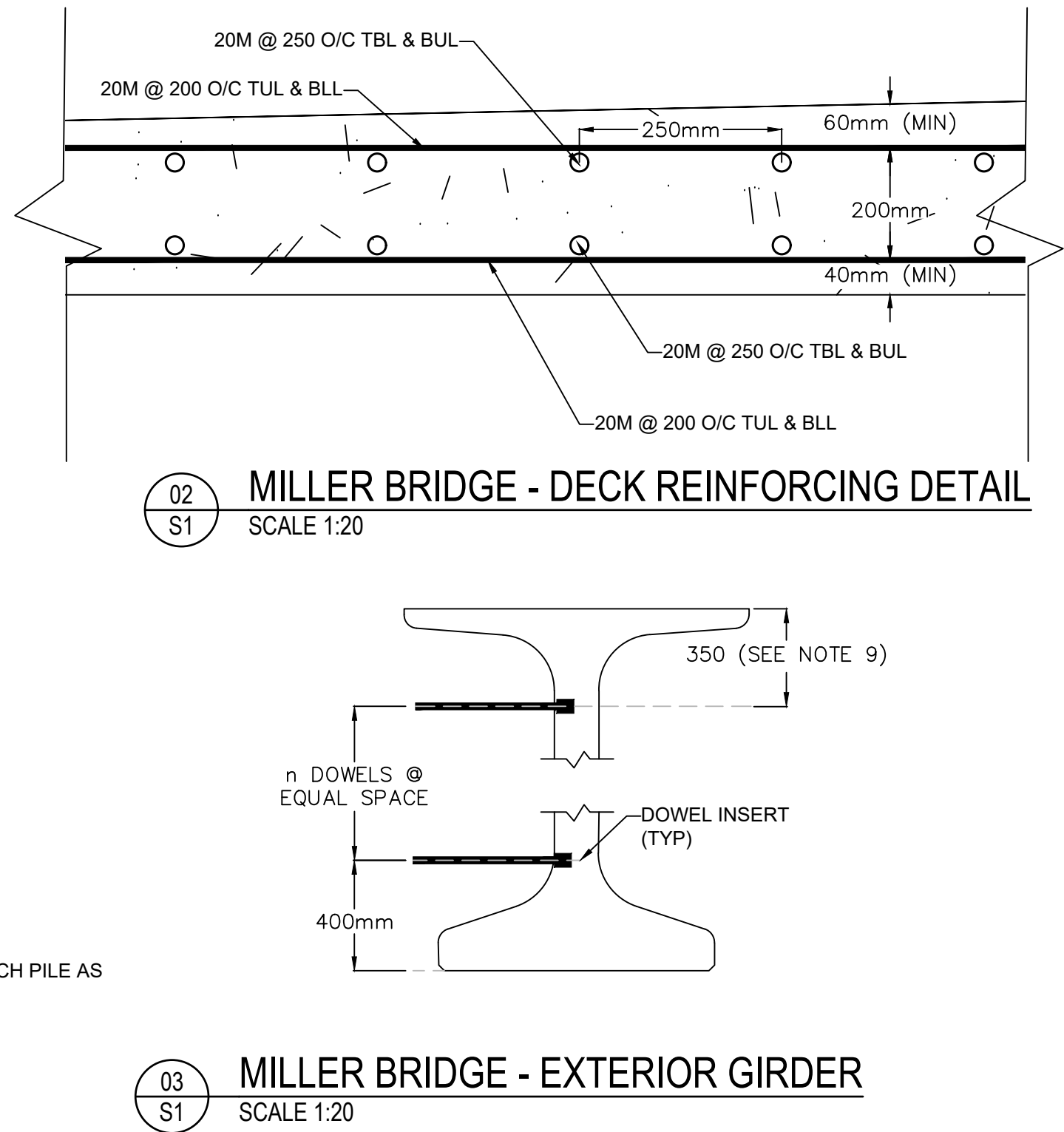
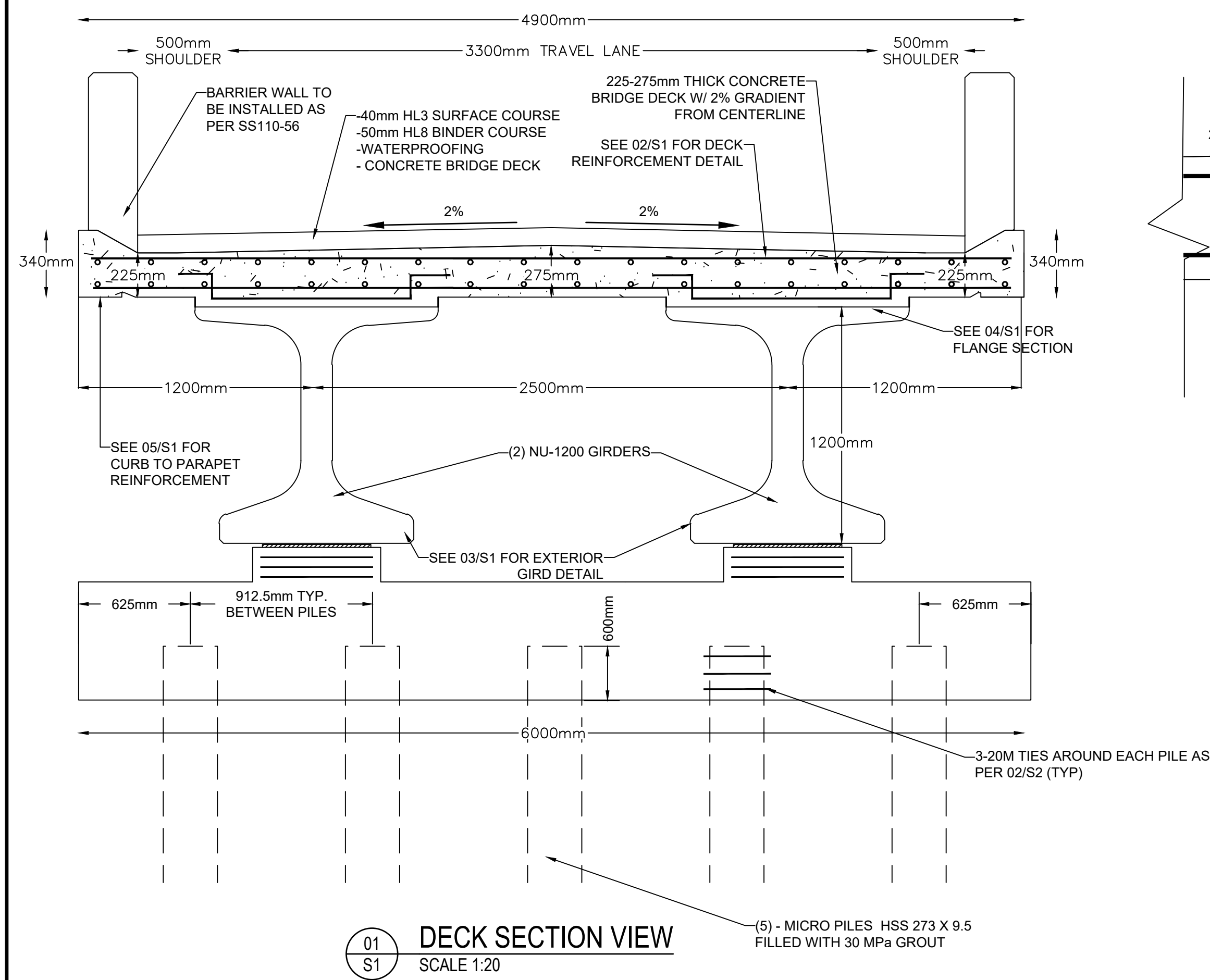


C1

CONTROL POINT AND BENCHMARK SCHEDULE					
LOCATION	POINT	DESCRIPTION	COORDINATES		ELEVATIONS
			NORTHING	EASTING	
MILLER RD	BM#1	NAIL IN HYDRO POLE	5064117.862	608199.842	299.125
MILLER RD	BM#2	NAIL IN HYDRO POLE	5064137.987	608255.242	297.143
MILLER RD	BM#3	NAIL IN HYDRO POLE	5064175.910	608305.238	291.986
MILLER RD	BM#4	NAIL IN HYDRO POLE	5064183.644	608372.522	290.923
MILLER RD	BM#5	NAIL IN HYDRO POLE	5064211.081	608444.628	293.310
UTM, ZONE 17, NAD 83 (CSRS)					
NOTE: BM#1, BM#2 AND BM#4 NOT SHOWN ON PLAN VIEW					
DIMENSIONS SHOWN ARE GROUND DISTANCES					



FILE NAME: J:\1-MAIL TOBID\PROJECTS\SS110-56\BRIDGE #17 MILLER ROAD\BRIDGE.DWG, LAYOUT: 1, STRUCTURAL DETAILS SAVED ON: 2025-08-12



Municipality of Magnetawan

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ISSUES/PROBLEMS WHICH MAY OCCUR AS A RESULT OF A FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY.

2. WHERE THERE ARE ALLEGED ERRORS, OMISSIONS, INCONSISTENCIES OR AMBIGUITIES PRESENT IN THE CONTRACT DOCUMENTS, THE CONTRACTOR MUST SEEK CLARIFICATION FROM JP2G. ANY COSTS OR SCHEDULE DELAYS WHICH RESULT AS A FAILURE TO CONTACT JP2G FOR CLARIFICATION SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

3. DO NOT SCALE DRAWINGS. REFER ANY DIMENSIONAL CLARIFICATIONS AND/OR POSSIBLE TRADE INTERFERENCE/CONFLICTS TO JP2G FOR CLARIFICATION PRIOR TO COMMENCEMENT OF THE WORK.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION WITH SUBTRADES AND SHALL ADDRESS CONSTRUCTION TEAM COORDINATION ITEMS PRIOR TO ISSUING REQUESTS FOR INFORMATION FROM JP2G.

5. THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

NOT FOR CONSTRUCTION

02	2025-08-12	AH	ISSUED FOR TENDER
01	2025-07-14	HK	ISSUED FOR 90% REVIEW
No.	YYYY-MM-DD	BY	DESCRIPTION

G. TORO SUAREZ
100116176
08-12-2025
PROVINCE OF ONTARIO

J.M. MAITLAND
100214655
AUGUST 12 2025
PROVINCE OF ONTARIO

PROJECT: BRIDGE # 17 MILLER ROAD
MUNICIPALITY OF MAGNETAWAN
MILLER ROAD
MAGNETAWAN, ONTARIO

DRAWING: STRUCTURAL DETAILS

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JP2g PROJECT No.: 25-1045A

NORTH	CLIENT No.:
	DRAFTED: A. HICKS
SCALE: AS SHOWN	DESIGNED: G. TORO SUAREZ
	REVIEWED: J. MAITLAND
	APPROVED: G. TORO SUAREZ
	SHEET # S1

