Summary of Revisions for March 2024 Updates to the Department of Transportation and Infrastructure Specifications Book

This document is intended as a quick reference guide to changes to the Department of Transportation and Infrastructure Specifications Book made in March 2024.

Users of this document are advised:

- This document is not to be used in place of the latest version of the specification posted to https://www.gov.nl.ca/ti/hdc/highway-specification-book/
- It is possible that changes were missed or omitted from this document. Where there is a discrepancy between this document and the latest version of the specification uploaded to the official government webpage, then the specification posted to the specifications webpage shall govern.
- It is the responsibility of all holders of the Department's Specifications Book to obtain and become thoroughly familiar with the most recently published new or revised specification sections. The latest revised specifications published on the Government of Newfoundland and Labrador webpage at the time of tendering shall apply to the applicable project.

2024 – Specification Update Summary:

- SECTION 157 – MOBILIZATION AND DEMOBILIZATION

    - Revised Section 157 modifying the maximum bid amount for Mobilization and Demobilization for Labrador projects with a value greater than $2,000,000 to, “$275,000 + 10.0% of the amount that the Total Estimated Tender exceeds $2,000,000”.

- SECTION 316 – COMPACTION FOR GRANULAR AND OTHER MATERIAL
    - Revised Section 316.06.01 to add the requirement that excavated material be in accordance with Sections 204 and 205.
    - Revised Section 316.06.01 to add the requirement that lifts shall be compacted so as to meet or exceed the requirements for granular or other material in accordance with this specification.
    - Revised Section 316.06.02 to add granular compaction requirement of 100%.
    - Section 316.06.02 changed to 316.06.02.01.
    - Added Section 316.06.02.02 to specify requirements for deficient areas for granular compaction.
    - Added Section 316.06.03 to specify requirements for “Other Material Compaction – Oversize.”
    - Added Section 316.06.03.02 to specify requirements for deficient areas for “Other Material Compaction – Oversize.”
    - Section 316.07.01renamed to, “Granular Submission Requirements” and includes the requirement that QC field results are to be reviewed, signed, and stamped by a Professional Engineer.
    - Added Section 316.07.02, “Other Material Compaction – Oversize”, which requires that the following records must be submitted on behalf of the Contractor to the Owner’s Representative and Materials Engineering Division within 24 hours of completing testing:
        - Area tested and description of material placed
        - Compaction equipment utilized for testing
        - Lift thickness and lift number, including elevations
        - The rolling pattern, including the number of passes, with direction
        - Observations of the compacted surface
        - Additional observations including deficient areas

      Results must be reviewed, signed and stamped by a Professional Engineer, prior to submission.

      Failure to submit documentation, within the required time frame, will result in a $1,000 holdback and a $250 liquidated damage for each delayed test result.

      QC records will be audited by the Owner’s Representative for errors and missing test data. If errors or omissions are found that identify

insufficiently compacted or improperly/untested areas, the Contractor shall make those areas available and re-compact or retest to ensure they comply with the specified compaction requirements.

- Section 316.07.02 changed to Section 316.07.03 and is further divided into two sub-sections; “Granular Material” and “Other Material – Oversize”.
- Section 316.07.03 changed 316.07.04 and is further subdivided into two sub-sections; “Granular Material” and “Other Material – Oversize”.
- Revised Section 316.07.04.01 adding the following:
  - Previously accepted compacted materials left open for more than 7 days or damaged by traffic, rainfall or other means shall be restored and retested prior to placement of any overlying material. Restoration of the compacted materials must be in accordance with Section 301. Any costs for making the materials acceptable again will be at the Contractor’s expense.

- SECTION 330 – HOT MIX ASPHALTIC CONCRETE – GENERAL

  - Revised Section 330, replacing references to PGAC with PGAB.
  - Revised Section 330.04.01 to reference the new MSCR requirements specified in Section 331.
  - Revised Section 330.04.05 to allow for the use of Zycotherm SP2, a organosilane liquid anti-strip agent, at a dosage rate of 0.125%.
  - Revised Section 330.04.02.01 to remove Levelling Course Type II.
  - Revised Section 330.04.02.02 to remove Levelling Course Type II.
  - Revised Table 3 to remove Levelling Course Type II.
  - Replaced Section 330.05 with Paving Operations Placement and Timing Restrictions. Cut off dates for Roadway paving and bridge deck paving are outlined below:

- **TABLE 5**
- **Cut-Off dates for Roadway Paving**

Location	Surface Mix	Base Mix
Labrador	October 14	October 22
Northern Peninsula*	October 22	October 31
All Others	October 31	November 7

- *The Northern Peninsula region is considered all highways north of the Gros Morne National Park Boundary.

- **TABLE 6**
- **Cut-Off Dates for Bridge Deck Paving**

All Locations	Polymer Modified Asphalt	September 30
Labrador and Northern Peninsula	52S-34	October 7
All Others	58S-28	October 22

- Section 330.05 further revised, as follows:

    - No Traffic shall be permitted on the newly placed asphalt concrete until finish rolling is completed and the surface temperature of the finished mat has cooled to 60°C.
    - The Contractor may request to pave when ambient air temperature or surface temperature of the material to be overlaid is below 5°C, however, WMA is required, at no added cost to the Department. This request must be made in writing seven days in advance and must be accompanied by a WMA mix design. Regardless if the job is End Product or Method the Contractor will be responsible and bear all costs associated with the new mix design.
    - WMA shall not be placed when the ambient air temperature or surface temperature of the material to be overlaid is below 0°C. When the ambient air temperature or surface temperature of the material to be overlaid is greater than 0°C and less than 5°C, the Contractor shall detail a method (charts and/or software (example: MnDOT PaveCool)) of determining compaction time(s) based on production temperatures, delivery times and temperature, lift thickness, base material temperature, weather conditions (ambient temperatures and wind chill) and paving location. The Contractor must show daily, to the satisfaction of the Department, based on charts and/or software, that there is sufficient compaction time(s) to achieve the minimum compaction requirements specified by the Department.
    - Using WMA does not provide any exemption to the specified cut-off dates.

- Removed Section 330.07.07.01

- SECTION 332 – HOT MIX ASPHALTIC CONCRETE – METHOD SPECIFICATION
    - Revised Section 332, replacing references to PGAC with PGAB.
    - Revised Section 332.06.04 to remove placement conditions. These requirements are now covered under Section 330.
    - Revised Section 332.10.01 to remove Levelling Course Type II.

- SECTION 333 – HOT MIX ASPHALTIC CONCRETE – END PRODUCT SPECIFICATION
    - Revised Section 333, replacing references to PGAC with PGAB.
    - Revised Table 4 to Remove Levelling Course Type II
    - Revised Section 333.05.05.05 to add the requirement that a set of cores must be taken during the trial.
    - Revised Section 333.06.02 to remove placement conditions. These requirements are now covered under Section 330.

- Revised 333.07.02 to indicate that a $30,000 holdback against project payment shall occur until such time as the final quality control report has been submitted to the Materials Engineer Division.
- Revised Section 333.11 to advise QC Consultant that asphaltic patching testing frequency must be outlined in the QCITP.

- SECTION 337 – WARM MIX ASPHALT
  - Revised Section 337.05.01 to add Zycotherm SP2 to the list of permitted products.
  - Revised Section 337.05.02, as follows:

The WMA shall be produced within the temperature range recommended by the WMA technology supplier or as approved by the Owner's Representative (a minimum 20 ºC temperature decrease is required). The Contractor shall maintain the mixing temperature of the WMA within ± 5ºC of the recommended temperature and shall provide the printed plant production temperatures, as required in section 330.07.04.03, at the end of each days production to the Department Representative and MED for review, or upon request. During daily start up, a temporary increase of 15 ºC above the maximum mixing temperature is allowed for a maximum period of 1 hour. The temperature and time of each batch at discharge shall be recorded.

Failure to produce WMA within the allowable tolerances shall result in the following daily liquidated damages:

- 1st occurrence, $1000.00 liquidated damage
- 2nd occurrence, $2000.00 liquidated damage
- Each occurrence thereafter, $5000.00 each occurrence.

An occurrence shall be defined as when the WMA is produced outside the tolerances as indicated above. If the plant operator fails to make a temperature change within 30 minutes of the first occurrence then this will be treated as a separate occurrence. If there are two (2) or more occurrences within the same day, with no visible attempts to rectify the temperature issue, than production or any subsequent production must cease immediately. Production will only restart once the Contractor can prove that WMA can be produced consistently within the required temperatures.

  - Revised Section 337.05.03, as follows:

    - Revised title of Table A
    - Removed the minimum allowable section (replaced by a note)
    - Added requirement for when paving a bridge deck; the maximum temperature shall be adjusted to match the waterproofing manufacturer's recommendations. For bridge deck paving the temperature requirements of Section 922 shall be followed. Lastly, there shall be an increase to 135

ºC behind the screed should the binder have a traffic designation of “H” or higher.

- SECTION 400 – SPECIFICATIONS FOR DRAINAGE RELATED ITEMS INDEX
  - Index updated to include Section 440 (NEW) and Section 441 (NEW).

- SECTION 411 – SELECT BACKFILL FOR LONG SPAN STRUCTURAL PLATE STRUCTURES

  - Revised Section 411.02 to clarify that all material testing must be carried-out on a project-by-project basis. Material testing results obtained from an alternate project will not be accepted by the Department.
  - Revised Section 411.02 adding the requirement for all letters of conformance to be stamped by a Professional Engineer licensed to practice in Newfoundland and Labrador.
  - Revised Section 411.02 to further define material testing requirements for LSSPS select backfill.
  - Revised Section 411.03 to state that any structural plates that exhibit permanent deformation or strain are to be rejected by the Department and replaced at the Contractor’s expense.

- SECTION 421 – SUPPLY AND INSTALLATION OF PIPE CULVERTS

  - Revised Section 421.04.01 to update the minimum zinc-rich coating thickness to 75 µm, in accordance with the latest version of CSA G401.

- SECTION 423 – SUPPLY AND INSTALLATION OF STRUCTURAL PLATE PIPE

  - Revised Section 423.01 to explicitly identify the Contractor as responsible for quality control for the supply and installation of the Structural Plate Pipe.
  - Added Section 423.02.01 - General Requirements, under Section 423.02 – Submittals.
  - Revised 423.02.01 clarifying and adding submission and review requirements for Structural Plate Pipe shop drawings.
  - Added Section 423.02.02 – Quality Control Plan, under Section 423.02 – Submittals, adding the requirement that the Contractor must submit a quality control plan to ensure that the following items are in accordance with requirements stipulated by the manufacturer, CAN/CSA S6, CSA G401 and the Contract Documents:
    - Bolt Torque Testing (Added Section 423.02.02.01)
    - Shape Monitoring (Added Section 423.02.02.02)
    - Backfill Testing and Compaction (Added Section 423.02.02.03)

        - Manufacturer's Installation and Best Practices Manual (Added Section 423.02.02.04)
        - Handling, Shipping and Storage (Added Section 423.02.02.05)
        - Letter(s) of Compliance (Added Section 423.02.02.06)
        - Material on Site (Added Section 423.02.02.07)
        - Quality Control Reporting (Added Section 423.02.03)
    - Revised Section 423.05 to further define the requirements for handling, shipping and storage of the structural plate material.
    - Revised Section 423.08 to further define material testing requirements for Structural Plate Pipe bedding material.
    - Revised 423.09 to identify the requirements/procedure for any field drilling or cutting of new structural plate material.
    - Revised 423.09 to define the cases whereby structural plate material is to be rejected on the basis of uncoated/damaged coatings.
    - Revised Section 423.10 to further define material testing requirements for Structural Plate Pipe select backfill.
    - Revised Section 423.10 to clarify that all material testing must be carried-out on a project-by-project basis. Material testing results obtained from an alternate project will not be accepted by the Department.
    - Revised Section 423.10.02 to state that any structural plates that exhibit permanent deformation or strain are to be rejected by the Department and replaced at the Contractor's expense.
    - Revised Section 423.13 to clearly identify quality control work as included under the basis for payment for the supply and installation of the Structural Plate Pipe.
    - Revised Section 423.13 to indicate that payment for any LSSPS shall only be made once the structure is installed, backfilled and all letters of conformance have been received and accepted. No interim payments will be considered.

- SECTION 424 – SUPPLY AND INSTALLATION OF STRUCTURAL PLATE ARCH

    - Revised Section 424.01 to explicitly identify the Contractor as responsible for quality control for the supply and installation of the Structural Plate Pipe.
    - Added Section 424.02.01 - General Requirements, under Section 424.02 – Submittals.
    - Revised 424.02.01 clarifying and adding submission and review requirements for Structural Plate Arch shop drawings.
    - Added Section 424.02.02 – Quality Control Plan, under Section 424.02 – Submittals, adding the requirement that the Contractor must submit a quality control plan to ensure that the following items are in accordance

with requirements stipulated by the manufacturer, CAN/CSA S6, CSA G401 and the Contract Documents:

- Bolt Torque Testing (Added Section 424.02.02.01)
- Shape Monitoring (Added Section 424.02.02.02)
- Backfill Testing and Compaction (Added Section 424.02.02.03)
- Manufacturer's Installation and Best Practices Manual (Added Section 424.02.02.04)
- Handling, Shipping and Storage (Added Section 424.02.02.05)
- Letter(s) of Compliance (Added Section 424.02.02.06)
- Material on Site (Added Section 424.02.02.07)
- Quality Control Reporting (Added Section 424.02.03)

- Revised Section 424.05 to further define the requirements for handling, shipping, and storage of the structural plate material.
- Revised 423.08 to identify the requirements/procedure for any field drilling or cutting of new structural plate material.
- Revised 424.08 to define the cases whereby structural plate material is to be rejected on the basis of uncoated/damaged coatings.
- Revised Section 424.09.01 to further define material testing requirements for Structural Plate Pipe select backfill.
- Revised Section 424.09.01 to clarify that all material testing must be carried-out on a project-by-project basis. Material testing results obtained from an alternate project will not be accepted by the Department.
- Revised Section 424.09.02 to state that any structural plates that exhibit permanent deformation or strain are to be rejected by the Department and replaced at the Contractor's expense.
- Revised Section 424.12 to clearly identify quality control work as included under the basis for payment for the supply and installation of the Structural Plate Arch.
- Revised Section 424.13 to indicate that payment for any LSSPS shall only be made once the structure is installed, backfilled and all letters of conformance have been received and accepted. No interim payments will be considered.

- SECTION 426 – DESIGN, SUPPLY, AND INSTALLATION OF LONG SPAN STRUCTURAL PLATE STRUCTURES

  - Revised Section 426.01 to explicitly identify the Contractor as responsible for quality control for the design, supply, and installation of the LSSPS.
  - Revised 426.02 to identify that all submittals must be in accordance with PEGNL's, "Guideline for Authenticating Professional Documents".
  - Revised 426.02 to further define the requirements for designing a water proofing membrane system for underpass structures.

- Added Section 426.03.01 - General Requirements, under Section 426.03 – Submittals.
- Revised 426.03.01 clarifying and adding submission and review requirements for LSSPS shop drawings, calculations, and water testing.
- Revised 426.03.01 to require the Contractor provide a letter of certification from the LSSPS supplier/designer stating that the structure has been constructed and installed in accordance with all specifications.
- Added Section 426.03.02 – Quality Control Plan, under Section 426.03 – Submittals adding the requirement that the Contractor must submit a quality control plan to ensure that the following items are in accordance with requirements stipulated by the manufacturer, designer, CAN/CSA S6, CSA G401, and the Contract Documents:
  - Bolt Torque Testing (Added Section 426.03.02.01)
  - Shape Monitoring (Added Section 426.03.02.02)
  - Backfill Testing and Compaction (Added Section 426.03.02.03)
  - Manufacturer's Installation and Best Practices Manual (Added Section 426.03.02.04)
  - Handling, Shipping and Storage (Added Section 426.03.02.05)
  - Letter(s) of Compliance (Added Section 426.03.02.06)
  - Material on Site (Added Section 426.03.02.07)
  - Quality Control Reporting (Added Section 426.03.03)
- Revised Section 426.06 to further define the requirements for handling, acceptance, shipping and storage of the LSSPS material.
- Revised 426.07.01 to identify the requirements/procedure for any field drilling or cutting of new structural plate material.
- Revised 426.07.01 to define the cases whereby structural plate material is to be rejected on the basis of uncoated/damaged coatings.
- Revised Section 426.07.01 to further define the requirements and procedure in the case where a LSSPS deflects beyond the manufacturer's permitted tolerances.
- Revised Section 426.07.01 to state that any structural plates that exhibit permanent deformation or strain are to be rejected by the Department and replaced at the Contractor's expense.
- Revised Section 426.10 to indicate that payment for any LSSPS shall only be made once the structure is installed, backfilled and all letters of conformance have been received and accepted. No interim payments will be considered.

- SECTION 440 – CLEAN OUT OF EXISTING CULVERTS (NEW)

  - New section added to the DTI Specifications Book which stipulates general requirements, measurement of payment, and basis for payment for the cleanout of existing culverts.

- SECTION 441 – CLEANOUT OF EXISTING STORM SEWERS, CATCH BASINS, MANHOLES AND DITCH INLETS (NEW)

    - New section added to the DTI Specifications Book which stipulates general requirements, measurement of payment, and basis for payment for storm sewer, catch basin, manhole, and ditch inlet cleanout work.

- SECTION 452 – REINFORCED CONCRETE SLOTTED WEIR FISH BAFFLES

    - Revised Section 452.02 correcting sub-heading numbering.
    - Revised Section 452.02.1 modifying the type of anchor bolts required from ASTM A325 to ASTM F3125M.

- SECTION 615 – ARMOUR STONE

    - Revised Section 615.03 correcting typo, "…Clam…" to read as, "…Claim…"

- Section 640 – SUPPLY AND INSTALLATION OF GUIDE RAIL

    - Revised Section 640.03.04 modifying the specification for bolts, nuts, and washers from ASTM A325/A307 to ASTM F3125M.

- Section 643 – SALVAGE AND SALVAGE AND REINSTALLATION OF GUIDE RAIL

    - Revised Section 643.03.02 modifying the specification for bolts, buts and washers from ASTM A325/A307 to ASTM F3125M.

- DIVISION 8 – ENVIRONMENTAL

    - Added Section 806 – Contractor Environmental Mitigation Plan (CEMP)
    - Section 815: added the following clause:

815.09 REMOVAL OF STRUCTURAL STEEL PROTECTIVE COATINGS

Solid waste produced by the removal of steel protective coatings is not permitted to be released into any watercourse or water body or into any ditch or area that leads directly to a watercourse or water body. The specifications in 825.03 are intended to provide guidance to individuals involved in the removal of structural steel protective coatings with respect to the minimum acceptable control measures and the appropriate disposal procedures for the generated solid waste.

    - Section 820: added the following clause:

820.06 REMOVAL OF STRUCTURAL STEEL PROTECTIVE COATINGS

Solid waste produced by the removal of steel protective coatings is not permitted to be released into any watercourse or water body or into any ditch or area that leads directly to a watercourse or water body. The specifications in 825.03 are intended to provide guidance to individuals involved in the removal of structural steel protective coatings with respect to the minimum acceptable control measures and the appropriate disposal procedures for the generated solid waste.

- Section 825: added the following clause:

825.03 REMOVAL OF STRUCTURAL STEEL COATINGS

Prior to the disposal of used sand/grit, representative sampling (one composite sample would be sufficient) shall be collected from the stockpile by a qualified person. Please note, all stockpiles of sand/grit shall be contained and covered during storage on site. The samples shall be forwarded to a certified laboratory for analysis. The results shall be compared to the relevant provincial guidelines for heavy metals (CCME) soil quality guidelines for industrial sites. If the guidelines are exceeded for any parameter(s), then leachate testing using the TCLP protocol shall be undertaken for the parameter.

If the laboratory results exceed the limits outlined in Schedule 2, Cross Border Regulations under CEPA (https://laws-lois.justice.gc.ca/eng/regulations/SOR-2021-25/page-1.html), the material is considered hazardous and shall be transported to a Waste Dangerous Goods/Hazardous Waste (WDG/HW) facility for disposal out of the province. If the results are below these limits the waste is permitted for disposal to an approved landfill within the province. The Department reserves the right to require additional sampling in the future.

A copy of the lab report along with a summary shall be forwarded to joanhann@gov.nl.ca. The department will review and provide a response via email to the proponent.

- DIVISION 9 – STRUCTURES
  - Section 907: modified the following clauses as follows, changes in bold:

907.03.01 General

For concrete pours above **1.5 metres in height** or with spans greater than 3 metres calculations of formwork shall be provided.

907.05 FORMWORK CONSTRUCTION

Form ply shall be used on all exposed faces.

907.08 BRIDGE RAIL END BLOCK RECESSES

When shown on the contract drawings, the Department shall supply **4 800x450x19 plywood panels, complete with Teflon numerals attached for the date and site number,** at the nearest Regional Office.

The Contractor shall install the date and **site number panels on diagonally opposite bridge rail end blocks**, as directed by the Engineer and shown on the Contract Drawings.

- Section 913: added the following clause:

913.05 TESTING

All expansion joints are to be tested, once installation is complete, by the following method in the presence of the Owner's Representative:

The area around the expansion joint shall be enclosed with sandbags, or an approved similar watertight method, to ensure that a minimum of 100mm of water is held over the full width of the joint. Water shall be left for a minimum of 1 hour. Both underneath the joint and the water level shall be monitored to ensure that no water is leaking through the joint. For bride rehabilitations where the joint is constructed in two parts, the test shall overlap the connection area by a minimum of 200mm.

Any joints that are showing any water leakage shall either be repaired or replaced at the Contractor's own cost to the Owner's Representative's satisfaction.

- Section 913: modified the following clauses as follows, changes in bold:

913.07.03 Concrete Rejection and Penalties

ALSP = BLSP * (SS / TS)) * (LJDC / LJ)

913.07.04 Supply and Install Asphalt Plug Expansion Joint

The cost of concrete and reinforcing steel for concrete backers shall be incidental to the works. This includes the costs of any demolition of asphalt, concrete, and steel to install the backers. **Payment for the joints will be reduced as per section 913.07.03 for concrete where the average tested 28 day strength of the concrete in the expansion joint dam is less than the specified strength but otherwise meets the specifications,**

provided the difference between the specified strength and the average tested 28 day strength is no greater than 5 MPa, any concrete less than this will be rejected.

- Section 919: modified the following clauses as follows, changes in bold:

919.05.05.03.01 General

The Contractor shall ensure that all existing expansion joints are free to move vertically prior to jacking. Bolts securing the **bridge rail** posts to the parapet walls, if present, shall be loosened to permit jacking without damaging the **bridge rails.**

919.05.05.03.07 Reinstatement of Structure

All expansion joint and **bridge rail** components removed or loosened to facilitate jacking shall be reinstated.

919.16 REMOVAL AND REPLACEMENT OF **BRIDGE RAIL** AND ANCHOR BLOCKS

The demolition, salvage, supply, and installation of **bridge rails** and measurement for and basis of payment shall be as outlined in Section 915.

- Section 921: modified the following clauses as follows, changes in bold:

921.04 ENVIRONMENTAL PROTECTION, SAFETY PRECAUTIONS AND DAMAGE PREVENTION

All work shall be performed in accordance with the Occupational Health and Safety Act and all amendments, **and Sections 815, 820 and 825 of the Departmental Specification.**

- Section 922: added the following paragraph (in bold) to clause:

922.04.04.02 Paving

Paving shall not be completed outside of the cut off times noted in Section 330 unless agreed in writing with both the Departmental Manager of Materials Engineering and the Chief Bridge Engineer.

- Section 925: modified the following clauses as follows, changes in bold:

925.04.02 Concrete Quality

Cement used shall be a blended Portland, fly ash, silica fume cement, **Type GUb.**

- Section 927: modified the following clauses as follows, changes in bold:

927.02 GENERAL

All calculations are to be designed to the latest version of CSA:S6 “Canadian Highway Bridge Design Code”, **TAC “Geometric Design Guide for Canadian Roads**” and any other relevant standards, guidelines and legislation applicable at the time of construction. **These are considered by the Department to be the minimum standard a designer must achieve. Any variations from these codes, standards, guidelines and legislation shall be specifically accepted by the Department before construction is commenced.**

927.03 CALCULATIONS REQUIRED

Calculations required by the Department shall include but are not limited to:

a) Cover Sheet
b) Index
c) **Design exceptions to S6, TAC design guidelines, and any other relevant standards, guidelines, and legislation applicable at the time of construction**
d) Design Methodology - Any use of “simplified” methods, alternative codes or methods should be made clear here and in the calculations for the relevant design element.
e) Design Assumptions
f) Calculations of Loads - This should include consideration of ALL loads specified under CSA:S6 any additional loads specified by the Department. **Each element shall have its minimum and maximum load, and the corresponding load case clearly noted.**
g) Calculations of Superstructure - This would include but is not limited to design of deck, girders, diaphragms, bearings
h) Calculations of Substructure - This would include but is not limited to design of abutments, piers, wingwalls, foundations (shallow or deep)
i) Design Summary - This should include summaries of all design capacities and capacity/demand ratios with the critical load combination identified for each design element

Spreadsheets can be included to show calculations and summaries of calculations as long as one set of detailed calculations (relevant to this structure) per spreadsheet is submitted to show validity of the spreadsheet. The Department may waive this requirement if they consider the spreadsheet/method used to be sufficiently proven by the industry.

Calculations, that in the Department’s opinion, are not sufficiently detailed for future use by the Department to determine the structure or individual element’s

ultimate and serviceability strength and serviceability shall be rejected and will require resubmittal.

Calculations shall be submitted as a single document unless agreed with the Department otherwise.

- DIVISION 10 – NEWFOUNDLAND EQUIPMENT RENTAL SCHEDULE
    - Rental rates updated to reflect the most recent rate increases implemented by Municipal Infrastructure in 2023.

- DIVISION 11 – STANDARD ROAD CROSS-SECTIONS

    - Revised Form 1100 – “Index” removing Form 1141
    - Revised Forms 1110→1140 – Standardizing notes and dimensions.
    - Removed Form 1141 – “Interchange Ramp (Former Standard)” from the Specifications Book.
    - Revised Form 1170-1 – “Construction of Minor Intersection”, removing reference to the TCH as this typical detail is intended for a lower classification of highway.
    - Revised Form 1171-1 – “Entrance to Commercial Development”, requiring that all commercial accesses be designed in accordance with the latest version of Transportation Association of Canada’s Geometric Design Guide.

- DIVISION 12 – STANDARD DRAWING INDEX

    - Revised Form 1231 – “Typical Structural Plate Round Pipe Bedding and Backfill Details”, modifying select backfill and compacted bedding details.
    - Revised Form 1232 – “Typical Structural Plate Arch Bedding and Backfill Details”, modifying select backfill and compacted bedding details.
    - Revised Form 1281 – “Signal Reflectors on Guide Rail Posts”, adding notes specifying reflector placement, spacing and frequency.
    - Revised Form 1282-1 – “Guide Rail with Additional Posts” revising the minimum post dimension to 150mmx150mm and removing the requirement for offset blocking.