DESIGN SCENE

OFFICE OF PROJECT MANAGEMENT & TECHNICAL SUPPORT PROJECT DESIGN SERVICES UNIT

Chapter 1 – 2014 Spec Book Changes

By: Y. Crocker

In the previous Design Scene under SPEC 2573 STORM WATER MANAGEMENT it should have read:

There is an error on sheet 358, PAY ITEMS…item 2573.501 BALE BARRIER should be by the LIN FT not CU YD.

Chapter 2 – Prorata Items (*revised section*)

By: Bob Myers

This section is to be replaced with the following…

There has been some confusion on which items should be prorated in construction plans which involve more than one SP. Proration distributes the cost of items such as mobilization and field office among the various funding groups and/or SP's so that they all share in the cost of these items. It should be noted that ONLY the following items should be prorated:

Mobilization	Lump sum
Field Office	Each
Field Laboratory	Each
Traffic Control	Lump Sum

The pro-rata percentage assigned to each funding split (including bridge costs, if applicable) shown in the plans is determined by dividing the dollar value of work associated with that split by the total dollar value of the contract (including bridge costs), less the pro-rata items. The prorata percentage for each funding split is to be computed to two decimal places and tabulated on the estimated quantities sheet. The designer is to use estimated quantities and estimated prices to compute the prorata percentages. No other items should be taken to two decimal places. Prorata percentages should be shown on the grading plan only, even when bridge costs are included in calculation,

Special circumstances may justify an exception to these procedures. These situations should be reviewed with the Municipal Agreements Unit and the Plan Review Unit, and the determination of how to handle such exception will be made on a case-by-case basis.

Prorata Items Involving Cooperative Construction

A sample computation of prorata items is shown below for reference.

Sample Computation of PRORATA ITEMS for Cooperative Construction Agreements
Total Contract Cost **(including bridge cost)** = $220,500.00

Prorata Items

Mobilization	$10,000.00
Field Office	$ 3,000.00
Field Laboratory	$ 2,500.00
Traffic Control	$ 5,000.00
Total Cost of Prorata Items	**$20,500.00**

Total Contract Cost Minus Total Cost of Prorata Items
$220,500.00 - $20,500.00 = $200,000.00

Cost of each Funding Group & Bridge
(Cost for each group does not include cost for prorata items)

Group 1:	100% State	**$101,000.00**
Group 2:	60% State, 40%	$ 87,200.00
Group 3:	56% State, 44%	$ 1,000.00
Group 4:	100% City	$ 800.00
Bridge:	**100% State**	**$10,000.00**

Prorata Percentage for each Funding Group

Group 1: **($101,000.00+$10,000.00)** = 0.555 (Use 0.55)
$200,000.00

Group 2: $ 87,200.00 = 0.436 (Use 0.44)
$200,000.00

Group 3: $ 1,000.00 = 0.005 (Use 0.01)
$200,000.00

Group 4: $ 800.00 = 0.004 (Use 0.00)
$200,000.00

Chapter 2 – Lighting & Signal Pay Item Changes
By: Y. Crocker

Due to the new 2014 Spec books some of the Lighting (Spec 2545) and Signals (Spec 2565) and their respective removal/salvage pay items have changed.

One of the key changes is that for Spec 2545 Lighting the word BASE is now to be FOUNDATION.

Most of the Spec 2565 Signal item descriptions have been revised. Therefore, please check with the 2014 TRNS*PORT list and do not take the items from previous plans.

Chapter 2 – Maintenance and Restoration of Haul Roads (*revised section*)
By: Y. Crocker with assistance from Paul Johns

Replace this section with the following….

The pay item 2105.501 "Maintenance and Restoration of Haul Roads" Lump Sum should be used on all projects that require raw materials to be hauled to or from the job site. Such as projects that include, but are not limited to, Borrow items, Bituminous materials, Concrete materials.

Stand-alone projects such as crack repairs, landscaping, striping, guardrail would not need the pay item in the SEQ.

Chapter 2 – Cost Share Information in Construction Plans
By: Maryanne Kelly-Sonnek

Cooperative construction cost participation must be identified in the construction plan. Quantities on the estimated quantities sheets must be split into as many columns as there are separate funding groups; the factors that determine funding groups are funding source, project number, and percentage of participation. Specific funding information should be included at the top of each group column in the following manner:
Federal aid participation should be indicated by showing the percentage of federal aid participation for each group. When there is more than one Federal Project Number, each separate federal aid funding source is shown as a separate group and the appropriate Federal Project Number should be indicated.

MnDOT participation should be indicated by showing the percentage of MnDOT participation for each group. When there is more than one State Project Number, each separate state funding source is a separate group and the appropriate State Project Number should be indicated.

Local participation should be indicated by showing the percentage of local participation, and if applicable, the State Aid Project Number. Lump sum agreements should be identified with a note at the top of the column-or noted for the pay items that the lump sum applies to. The notes on the SEQ sheet should state "See Lump Sum Agreement # with local governmental agency".

The funding percentages must total 100% for each column.

When space is limited at the top of the column, footnotes may be used. These should be lettered notes not numbered and need to stand out from the numbered notes.

The tabulation sheets need to support the quantities for each funding group shown on the estimated quantities sheets.

The Federal Project Number, State Project Number, and State Aid Project Number must be shown on the construction plan title sheet.

If federal funds are applied to the local share, the local federal funds must be identified in the STIP, and the local share needs a federal State Aid project number.

For further information regarding cost participation information required in the construction plan, see the "Metro Sample Plan," MnDOT Policy for Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities between MnDOT and Local Units of Government, or contact MnDOT's Design Service Engineer, the Funding Program Coordinator in the MnDOT Office of Transportation System Management, or MnDOT's Municipal Agreements Engineer.

Chapter 3 - Standard Plate 8308A (*section deleted*)

By: Y. Crocker with assistance from Tim Dockter

The following section of the design scene has been deleted as it is now covered under the special provisions….

~~Whenever the standard plate 8308A is used it must include the following note…~~

~~Modified such that note 1 of sheet 2 of 3 should delete…OPEN JOINTS SHALL BE PROVIDED AT LEAST EVERY 200 FEET.~~

Chapter 7 – QUALITY MANAGEMENT

By: Rebecca Embacher

Creation of an additional alignment file is required for jobs using the following special provisions:

- (2016) Quality Management – Paver Mounted Infrared Temperature Equipment for Thermal Profiles

- (2016) Quality Management Special – Intelligent Compaction (IC) Method

This file is needed to calculate percent coverage for use in the basis of measurement/payment within another software platform and for loading the alignment onto the mapping feature of the equipment.

The following are the design requirements that have been added to these provisions:

(1) The Department will provide background, alignment files(s), in the following formats, within three (3) working days of Contract approval:

(a) 2D-DWG (or XML) and

(b) 2D-KMZ

(2) The Department will enclose the following background shapefile features as single, independent polygons (closed 3-sided polylines):

(a) Mainline (Driving and Auxiliary Lanes)

(b) Exceptions on the Mainline

(3) At a minimum, the following text features will be included in the alignment files:

(a) Centerline Station Numbering

(b) Station Limits for Exceptions

(4) The Department is allowed three (3) working days to update files with Department approved changes requested by the Contractor.

Chapter 10 – Aggregate
By: Y. Crocker with assistance from Kaye Tanttari

With the new 2014 Spec Books there comes a new way of paying for the aggregate which many designers have not been aware of.

Spec 2118 Aggregate Surfacing—Aggregate placed as shoulder or adjacent to bituminous/concrete shoulder or mainline bituminous. This includes aggregate placed as surfacing on entrances and road connections.

Spec 2211 Aggregate Base—to be used under mainline bituminous and can be used under bituminous shoulders if placed at same time as mainline aggregate.

Spec 2221 Shoulder Base Aggregate—Aggregate placed under shoulder bituminous/concrete, either as a different class or separate operation than mainline aggregate base.

Chapter 12 – Plastic Pipe Option for Storm Sewer and Side Culverts
By: Y. Crocker

Replace the reference to the technical memorandum from Technical Memorandum No. 07-04-B-01 to the current Technical Memorandum No. 12-01-B-01. The rest of the article remains the same.

Chapter 12 – Pipe Lining
By: Y. Crocker

There has been some confusion regarding pipe lining, hopefully this will clear it up...

Lining pipes must state the size of the pipe being lined….

- 2503.603 LINING SEWER PIPE X" by the LIN FT…grout is incidental unless otherwise noted.
- 2507.501 LINING CULVERT PIPE (X") by the LIN FT, when using this pay item they also need to include either…
  - 2519.607 CLSM LOW DENSITY by the CU YD or
  - 2519.607 CLSM HIGH DENSITY by the CU YD or
  - If using cured in place plastic (CIPP) then pay for it as 2507.603 LINING CULVERT PIPE (X") SPECIAL by the LIN FT

Chapter 14 – Impact Attenuators

By: Y. Crocker with assistance from Kevin Farraher

In order to avoid external conflicts and maintain consistency within MnDOT, we will be changing how we call out temporary and permanent impact attenuators on our traffic control plans.

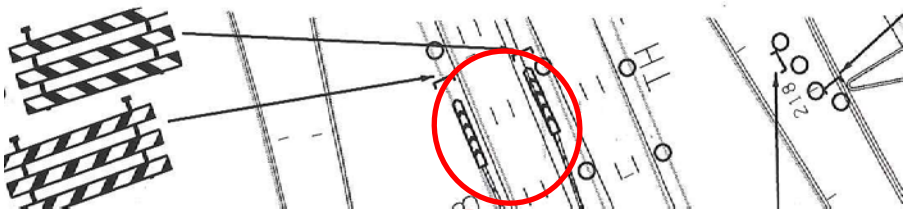
We will be specifying whether they are TL3's or TL2's (test level's) instead of posted speed limits.

All Temporary Impact Attenuators that are to be placed on roads with the speeds of 50 mph or greater will now be TL3 and those that are 45 mph or less shall be TL2.
These will be noted on our Pay Item Tabulation sheets like we have been doing. If the project requires both TL3 and TL2 attenuation, then they should be labeled on the plan sheets for clarification.

Examples: Same test level for all…

	PAY ITEM TABULATION		TC
	PAY ITEM	UNIT	TOTAL
	PORTABLE PRECAST CONCRETE BARRIER DESIGN 8337	LIN FT	400
	PORTABLE PRECAST CONCRETE BARRIER DESIGN 8337-ANCHORED	LIN FT	792
(1)	IMPACT ATTENUATOR	ASSEMBLY	4
	TRAFFIC CONTROL	LUMP SUM	1
(2)	MEDIAN BARRIER DELINEATOR	EACH	40
	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	14
(3)	REMOVABLE PREFORM PAVEMENT MARKING TAPE	LIN FT	5798
	REMOVABLE PREFORMED PLASTIC MASK (BLACK)	LIN FT	3470

(1) TL3 ASSEMBLIES
(2) 20 WHITE, 20 YELLOW- ALL ONE WAY
(3) 3052' 4" SOLID LINE WHITE, 840' 4" BROKEN LINE WHITE, 1906' SOLID LINE YELLOW

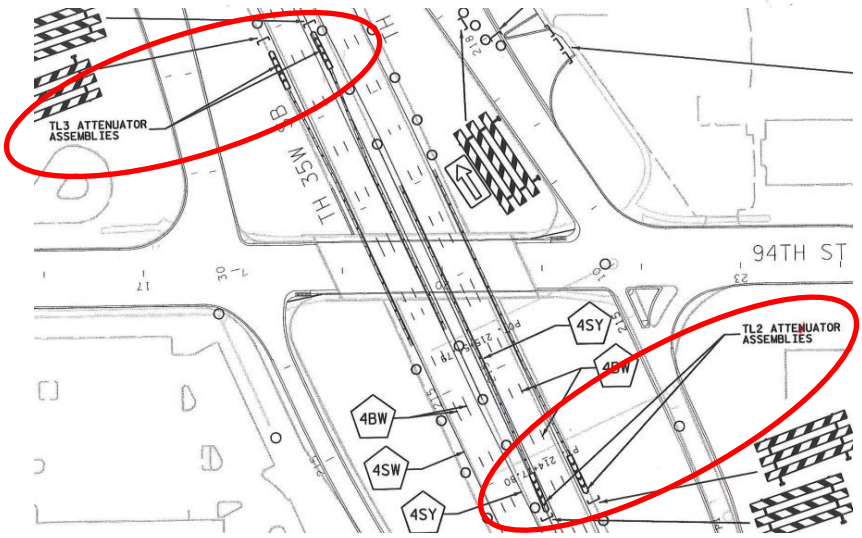


No need to label attenuators

Example: Different test levels…

	PAY ITEM TABULATION		TC
	PAY ITEM	UNIT	TOTAL
	PORTABLE PRECAST CONCRETE BARRIER DESIGN 8337	LIN FT	400
	PORTABLE PRECAST CONCRETE BARRIER DESIGN 8337-ANCHORED	LIN FT	792
(1)	IMPACT ATTENUATOR	ASSEMBLY	4
	TRAFFIC CONTROL	LUMP SUM	1
(2)	MEDIAN BARRIER DELINEATOR	EACH	40
	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	14
(3)	REMOVABLE PREFORM PAVEMENT MARKING TAPE	LIN FT	5798
	REMOVABLE PREFORMED PLASTIC MASK (BLACK)	LIN FT	3470

(1) 2-TL2, 2-TL3 ASSEMBLIES
(2) 20 WHITE,20 YELLOW- ALL ONE WAY
(3) 3052' 4" SOLID LINE WHITE, 840' 4" BROKEN LINE WHITE, 1906' SOLID LINE YELLOW

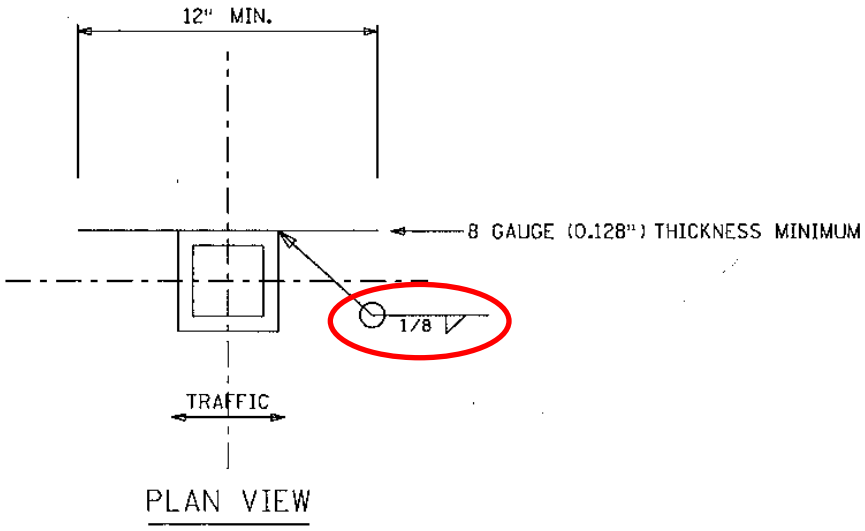


Need to label all attenuators as to what level they are.

Chapter 14 – Cable Line Post

By: Hatem Qamhieh

We have new design detail for High Tension Cable Line Post / Steel Socket Foundation with revised date 5/15/2014. The new detail is a change for the welding from staggered to all around welding on the line post and soil plate. The new projects should use the new detail from now on. It can be found in ProjectWise under OTS-DesignStandards-DesignDetails-htcb_dd.dgn



Make sure that the detail you use shows this weld.

Chapter 18 - Tracking changes to Special Provisions *(revised section)*

By: Jody Stuck

This section is to be replaced with the following to make it coincide with the 2014 Special Provisions……

Because of problems in the field of modifications to the Special Provisions by both contractors and field personnel, we will now start identifying those changes in the proposals.

When preparing and submitting draft special provisions please follow the following process:

Start by downloading the most current SP2014.

(A) If you want to use a C.O. SP2014 write-up of an item but WILL NOT be making any changes within the write-up, then do the following:

Show Section Name and number

Example:

S-X (1910) FUEL ESCALATION CLAUSE
SP2014-50

You may either show all of the words or just show the Section Name and Number. When you leave the SP2014-Number intact, this will indicate to the Special Provisions Unit that you have not changed the section and want the most current write-up.

(B) If you want to use a C.O. SP 2014 write-up, but WILL be making changes within the write-up, then do the following prior to sending us your file:

Show Section Name and SP2014 number, followed by "modified".

Example:

S-X (1910) FUEL ESCALATION CLAUSE
SP2014-50 - modified

Show all the words, including your revisions. Make it as easy as possible for the Special Provisions Unit to recognize your changes. You may choose to show your revisions in italics, a different color, or highlight. Or you may use “Track Changes” (Please add a note to the header indicating your chosen method).

If you DO NOT show the sections as “modified”, the Special Provision Unit will most likely assume you want the current section from the SP2014. So, you may not get what you want.

How these changes will be shown in the final proposal is still being studied.

Chapter 18 – NPDES Permit Application

By: Y. Crocker with assistance from Paul Johns

When filling out the NPDES permit applications be sure to list ALL the SP numbers in the application. There have been some situations in the past where an SP number has been left off the application. When this happens it could result in the contractor having to perform extra paperwork and obtain additional permits to cover the missing SP numbers.

This typically happens when a project becomes tied to another project late in the process. Make sure that when your projects are tied that the permits get updated with the additional SP numbers to avoid complications later in the process.