

2013 Structures and Geotechnical Webinar

Mike Robinson

Chris Kreider

Kevin Bowen

Eddie Bunn

Aaron Earwood

Michelle Long

Agenda

- Submittals
- Division Let Projects
- Specification Changes
- Bridge Barrier Rail
- Temporary Bridge Inspection
- Pile Restrikes and Redrives
- Coordination of Utility Relocations and Permits
- 2013 Structure Inspector Training
- Supplemental Agreements

Submittals

- Routing

SUBMITTAL OF WORKING DRAWINGS

(2-10-12)

1.0 GENERAL

Submit working drawings in accordance with Article 105-2 of the *Standard Specifications* and this provision. For this provision, “submittals” refers to only those listed in this provision. The list of submittals contained herein does not represent a list of required submittals for the project. Submittals are only necessary for those items as required by the contract. Make submittals that are not specifically noted in this provision directly to the Resident Engineer. Either the Structure Design Unit or the Geotechnical Engineering Unit or both units will jointly review submittals.

If a submittal contains variations from plan details or specifications or significantly affects project cost, field construction or operations, discuss the submittal with and submit all copies to the Resident Engineer. State the reason for the proposed variation in the submittal. To minimize review time, make sure all submittals are complete when initially submitted. Provide a contact name and information with each submittal. Direct any questions regarding submittal requirements to the Resident Engineer, Structure Design Unit contacts or the Geotechnical Engineering Unit contacts noted below.

In order to facilitate in-plant inspection by NCDOT and approval of working drawings, provide the name, address and telephone number of the facility where fabrication will actually be done if different than shown on the title block of the submitted working drawings. This includes, but is not limited to, precast concrete items, prestressed concrete items and fabricated steel or aluminum items.

Submittals

- Routing
- Checking on Review Status

Structures Design & Management

Home > Resources > Structures

AGC and ACEC Minutes

Committee members and meeting minutes

[Read More](#)

Culvert Standards

English and Metric design standard files in PDF and DGN

[Read More](#)

Drawing Submittal Status and Design Notes

Review current status of drawing requests and design notes for drawings

[Read More](#)

Manuals and Form Letters

Design Manuals, Structure Form Letters

[Read More](#)

Project Special Provisions

[Read More](#)

Spring Field Review

Bridge photos around the state

[Read More](#)

Standard Drawings and Policy Memos

Standard specification drawing files in DGN and PDF formats.

[Read More](#)

Structure Training Seminars & Papers

Training, seminars, workshops and presentation papers

[Read More](#)

Structures Manuals





[Read More](#)

Structures Resources





Contractor Submittal, Subregional Guidelines, Differential Deflection, TVA Coordination

[Read More](#)

Featured Downloads

- [Temporary Bridge Inspection Report](#)
2012-10-09 15:22:35 
- [Temporary Bridge Inspection Report Notes.pdf](#)
2012-10-10 09:33:29 
- [Design Manual \(December 2012\)](#)
2012-12-19 14:56:20 
- [12 Month Letting](#)
2013-02-13 11:04:50 

Standard Design Plans

- [Standard Design Plans-CSU End Bents \(Oct 2012\)](#) 
- [Standard Design Plans-CSU Bents \(Oct 2012\)](#) 
- [Standard Design Plans-CSU Superstructure and Misc \(Oct 2012\)](#) 
- [Standard Design Plans-Box Beams \(Oct 2012\)](#) 

Contact Form

For questions & feedback about this area of Connect NCDOT, contact Structures Management Unit.

Employee Directory

Staff contacts for Structures Management Unit.

Was this page helpful?





Drawing Submittal Status and Design Notes

Review current status of drawing requests and design notes for drawings

Home > Resources > Structures > Drawing Submittal Status and Design Notes

Design Standard Notes

<input type="checkbox"/>	Name	Memo Date
	Memo Type : English (8)	
	Memo Type : Metric (6)	

SMU Working Drawing Submittal Status: 1/6/13 thru 2/25/13

This online version of the submittal listing is updated semi-weekly, on Monday and Thursday mornings, usually by 10 AM.

If your submittal does not appear on this listing, check with this Office. For many construction projects, the contact information is shown in the Structure Section of the Contract, as a Project Special Provision entitled "Submittal of Working Drawings".

Paul D. Lambert, PE 919-707-6407
James A. Gaither, PE 919-707-6409
James L. Bolden Jr., PE 919-707-6408

NCDOT Structures Management Unit, Working Drawing Review & Approval Section

Drawings Submittal Status

<input type="checkbox"/>	Contract #	Status	Submittals	County	RE Date Rec'd	SDU Date Rec'd	Letter Sent Date
	C202616	Accepted	77-inch MBT prestressed girder casting drawings - 28 members - girder handling stresses	Hertford / Gates	1/7/2013	1/8/2013	1/18/2013
	C202602	Accepted	sole plates and anchor rod assemblies for prestressed girder bridges 1, 3, 4, 5 & 10 - 226 and 452 respectively - Revision of Jan 3	Iredell		1/8/2013	1/25/2013
	C202823	Accepted as Noted	bridge sidewalk expansion joint cover plates - six assemblies	Pasquotank	1/7/2013	1/8/2013	1/31/2013
	C202436	under review	standard two-line elliptical aluminum rail system - rails on both sides	Durham	1/7/2013	1/8/2013	
	C202436	Accepted - See Letter	fabricated metal stay-in-place deck forms for single-span steel bridge	Durham	1/7/2013	1/8/2013	1/30/2013
	C202602	Handled by Dean Hardister	materials approval request: segmental gravity retaining wall system - three proposed alternatives	Iredell	1/8/2013	1/8/2013	
	C202521	Accepted as Noted	deck overhang falsework for dual two-span, MBTprestress girder bridges	Mecklenburg		1/9/2013	1/17/2013
	C202521	Accepted as Noted	deck overhang falsework on prestressed girder bridge	Mecklenburg		1/9/2013	1/17/2013
	C203008	under review	proposed repair to reinforcing steel at deck finger joints	New Hanover	1/9/2013	1/9/2013	
	C202331	Accepted as Noted	alternate girder erection plan: 225'-ft single-span plate girders - Revision of Jan 7	Lee		1/9/2013	1/22/2013
	C203008	Acceptable	LMC operations equipment list	New Hanover	1/9/2013	1/9/2013	1/31/2013
	C202231	under review	prestressed girder erection over railway	Moore		1/9/2013	
	C202951	Accepted	laminated elastomeric bearing pads - 24 pads	Davidson	1/9/2013	1/9/2013	1/16/2013
	C202993	Accepted - See letter	span jacking for substructure repair; materials submittal: shotcrete & repair mortar	Forsyth		1/10/2013	1/30/2013
	C202780	not reviewed	span jacking plan for resetting elastomeric pads due to girder translation and end rotation	Scotland	1/10/2013	1/10/2013	1/24/2013
	C202334	Response by Tom Koch	proposals to correct beveled sole plates - 28 locations	Beaufort	1/9/2013	1/10/2013	1/17/2013
	C202836	Accepted as Noted	deck joint checkered steel plate and angle repair	New Hanover		1/10/2013	2/21/2013
	D000123	Accepted as Noted	box beam strand stressing calculations and detensioning sequence - 10 members	Caswell	1/4/2013	1/10/2013	1/17/2013
	C202724	Accepted as Noted	bridge sidewalk expansion joint cover plates - four assemblies - Revision of Dec 28	Cumberland	1/10/2013	1/10/2013	1/29/2013
	C202522	Accepted as Noted	four butterfly and three cantilever type overhead sign support assemblies and footings	Cabarrus		1/10/2013	2/1/2013

Division Projects

- Notification requirements
- Notice of New Structure Forms



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PATRICK L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

MEMORANDUM TO: Divisions Engineers

FROM: G. R. Perfetti, P.E.
State Structures Management Engineer

DATE: March 6, 2013

SUBJECT: STRUCTURE INVENTORY OF DIVISION LET, DIVISION
CONSTRUCTED AND MUNICIPAL PROJECTS

In an effort to promptly inventory new or replacement structures and have them inspected prior to being put into service, the following procedures are being extended to Division Let projects, Municipal projects and structures constructed by Division forces.

Award of Contract

For Division Let projects, provide a copy of the "Notification of Award" letter to the Structures Management Unit's (SMU's) Structure Inventory & Appraisal (SI&A) Officer, Eddie Smith, and the Working Drawing Review Project Engineer, Paul Lambert. This will serve as a notice to SI&A that an inventory record will need to be updated and assist the Working Drawing group in handling any upcoming contractor submittals.

Notice for Completion of Structure

When the anticipated date for completion of structure (e.g., bridges, culverts, pipes or sign structures) and opening to traffic is known, the "Notice for Completion of Structure Work" form (see attachment) should be submitted to SMU's SI&A Officer, and Bridge Inspection Superintendent, Tim Earp. This assists in allowing inspection crews the opportunity, when applicable, to schedule and perform the initial inspection of the structure before opening to traffic and the inventory recording to be completed.

Transmittal of As-Built Plans at Final Acceptance

When the Division Engineer sends the "Final Acceptance Letter" to the Contractor, provide a copy of the letter and a set of as-built plans to SMU's SI&A Officer. This information will be scanned into BridgeDocs for the purpose of maintaining proper documentation of structures currently in service.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
STRUCTURES MANAGEMENT UNIT
1581 MAIL SERVICE CENTER
RALEIGH NC 27699-1581

TELEPHONE: 919-707-5400
FAX: 919-250-4082
WEBSITE: WWW.NCDOT.ORG

LOCATION:
CENTURY CENTER COMPLEX
BUILDING A
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610

Notice for Completion of Structure Work

Instructions

- For bridges, culverts, pipes or sign structures complete form as soon as an estimated completion date of the structure is known. If the anticipated date of opening to traffic is unknown, leave blank and send a revised form when the date is known.
- Provide as much information as possible to identify the structure location.
- For Preservation, Rehabilitation or Repair work, provide a detailed description.
(e.g. painted girders, LMC deck, etc.)

Submit to: Structure Inventory and Appraisal Officer / SMU
 Bridge Inspection Superintendent / SMU

Copies to: Division Engineer, State Construction Engineer

Reported by: _____ Date: _____

Division: _____ County: _____

Bridge #: _____ TIP Project #: _____
 (Culvert # or Pipe #)

Location: Structure on _____ over _____
 between _____ and _____

Additional information regarding location: _____

Check below where applicable:

- Bridge, Culvert or Pipe (circle one)
- Overhead Sign Structure
- Cantilever Sign Structure
- Other -- Explain (Preservation, Rehabilitation or Repair) _____

Anticipated Date of Structure Completion: _____

Anticipated Date of Opening to Traffic: _____

Specification Changes

- Domestic Steel
- Placing Loads on Bridge Decks

DOMESTIC STEEL:

(4-16-13)

106

SP1 G120

Revise the *2012 Standard Specifications* as follows:

Page 1-49, Subarticle 106-1(B) Domestic Steel, lines 2-7, replace the first paragraph with the following:

All steel and iron products that are permanently incorporated into this project shall be produced in the United States except minimal amounts of foreign steel and iron products may be used provided the combined material cost of the items involved does not exceed 0.1% of the total amount bid for the entire project or \$2,500, whichever is greater. If invoices showing the cost of the material are not provided, the amount of the bid item involving the foreign material will be used for calculations. This minimal amount of foreign produced steel and iron products permitted for use is not applicable to high strength fasteners. Domestically produced high strength fasteners are required.

PLACING LOAD ON STRUCTURE MEMBERS

(11-27-12)

The 2012 Standard Specifications shall be revised as follows:

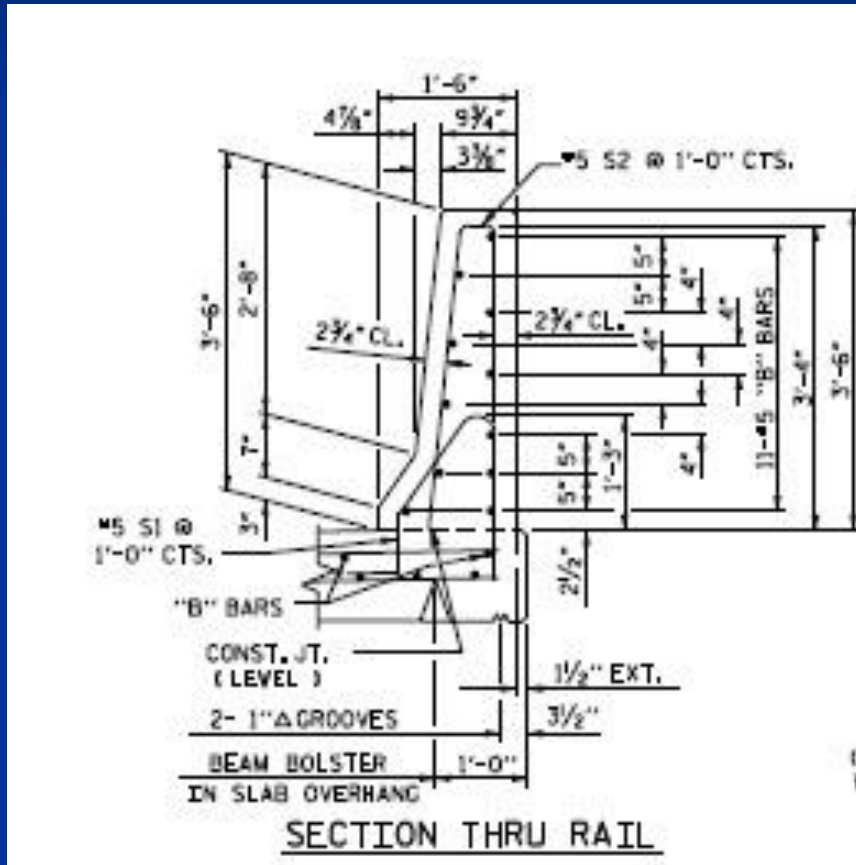
In **Section 420-20 – Placing Load on Structure Members** replace the first sentence of the fifth paragraph with the following:

Do not place vehicles or construction equipment on a bridge deck until the deck concrete develops the minimum specified 28 day compressive strength and attains an age of at least 7 curing days.

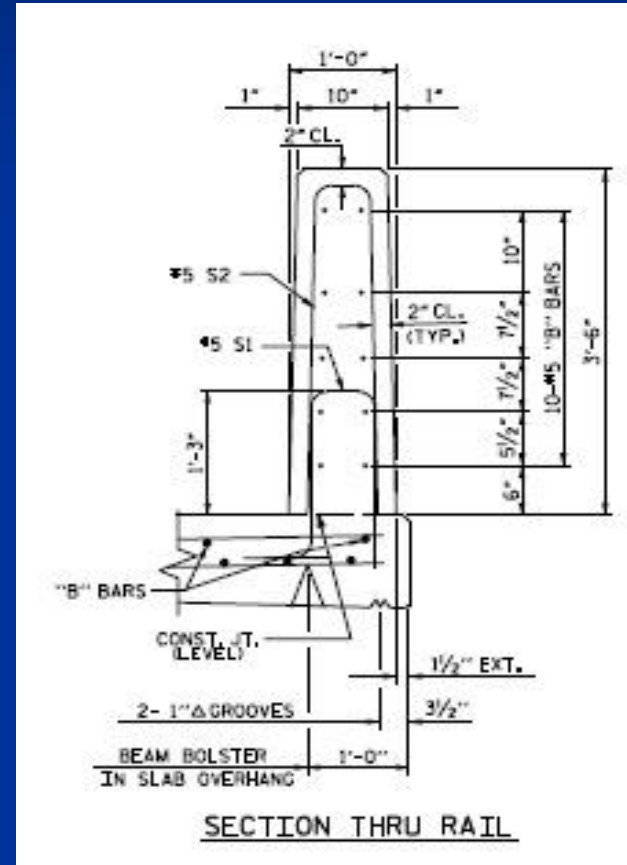
Bridge Barrier Rail

- New Types of 42" High Rail

42" F-shape Concrete Barrier Rail



42" Vertical Concrete Barrier Rail



Bridge Barrier Rail

- New Types of 42" High Rail
- Slip-forming Difficulties

Temporary Bridge Inspection

- Material Inspection
- Panel Bridge Inspection Requirements

**CONSTRUCTION, MAINTENANCE AND REMOVAL
OF TEMPORARY STRUCTURE AT STATION**

(9-27-12)

Construct, maintain and afterwards remove a temporary structure in accordance with the applicable parts of the Standard Specifications and this Special Provision (structure only; the approaches are not a part of this pay item). Provide a temporary structure with a minimum overall length of _____ feet. Center the length of the structure about Station _____ -Detour- with the alignment, grade, and skew as indicated on the Roadway plans. If the skew is not 90°, then lengthening of the structure to accommodate a 90° skew is permitted. Provide a temporary structure with a minimum clear roadway width of _____ feet and an underclearance elevation no less than elevation _____. Temporary structures over railroads shall maintain a minimum horizontal clearance of 25' from center of track to any temporary bent.

Include material specifications for all new and used materials, including commercial grades and species of timber and lumber, in the detail drawings of the structure. In addition, show the location and a detailed sketch of the used materials indicating condition of the material, the location and geometry of existing but unused holes, attachments left over from previous use and any other irregularities in the material.

New and used material for temporary structures constructed by the Contractor, including systems intended for multiple usages, shall be inspected and approved prior to assembly.

Temporary Bridge Inspection

- Material Inspection
- Panel Bridge Inspection Requirements

Before the temporary structure is loaded, the contractor shall inspect the structure and submit a written statement certifying that the erected structure complies with the approved detailed drawings. Temporary structures utilizing modular panels shall be inspected and certified by a manufacturer's representative. Any condition that does not comply with the accepted drawings, or any other condition deemed unsatisfactory by the Engineer, is cause for rejection.

Once vehicular traffic is allowed on a structure utilizing modular panels, routine inspection by the manufacturer will be required. The first inspection of the structure will be one month after opening the structure to vehicular traffic. Subsequent inspections shall be performed every six months. However, when ADTT exceeds 2000 inspection of the temporary structure shall occur every three months. An inspection report provided by the Department must be completed by the manufacturer and submitted to the Engineer within 3 days of each inspection. Any items documented in the report indicating safety or stability issues with the structure must be reported immediately. All safety and stability repairs will be performed promptly by the Contractor and approved by the Engineer.

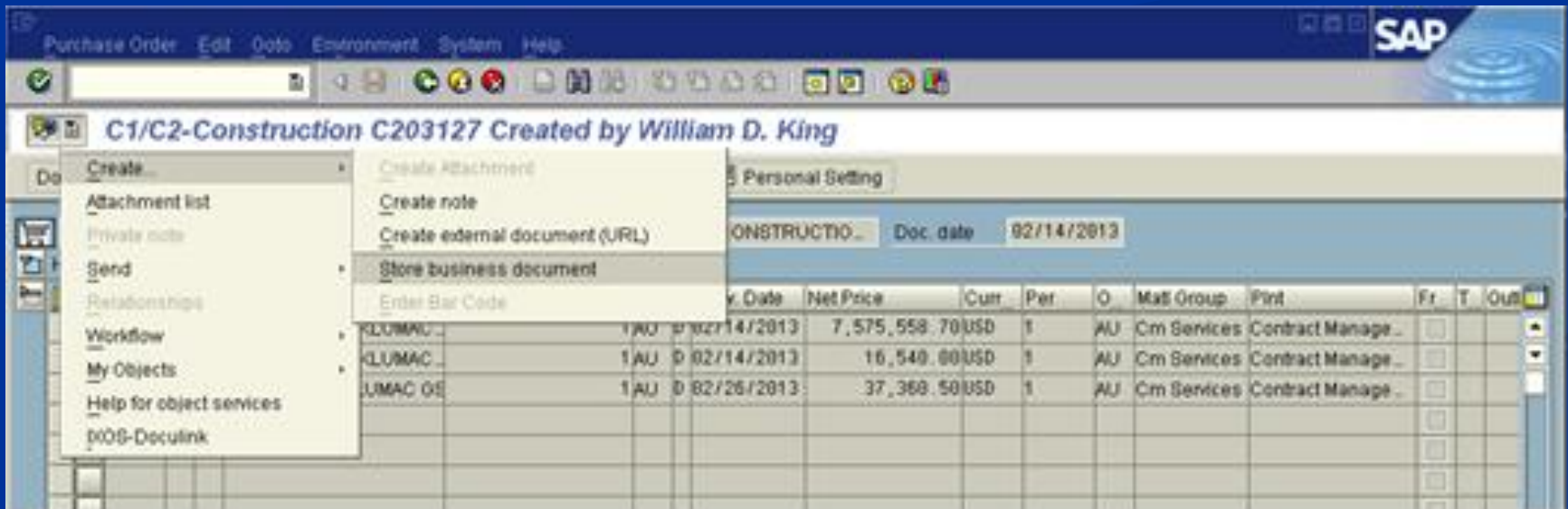
Scanning Supplemental Agreements

Supplemental Agreements

- Scan Fully Executed Supplemental Agreements into SAP, in Addition to Entering the Supplemental Agreement Information into HiCAMS.

Supplemental Agreements

- Process to Add a Scanned Document to a Contract in SAP:
 - Use **ME23N** to navigate to the Contract to which a document needs to be attached.
 - From the Services for Object menu, select **Create > Store Business Document**.

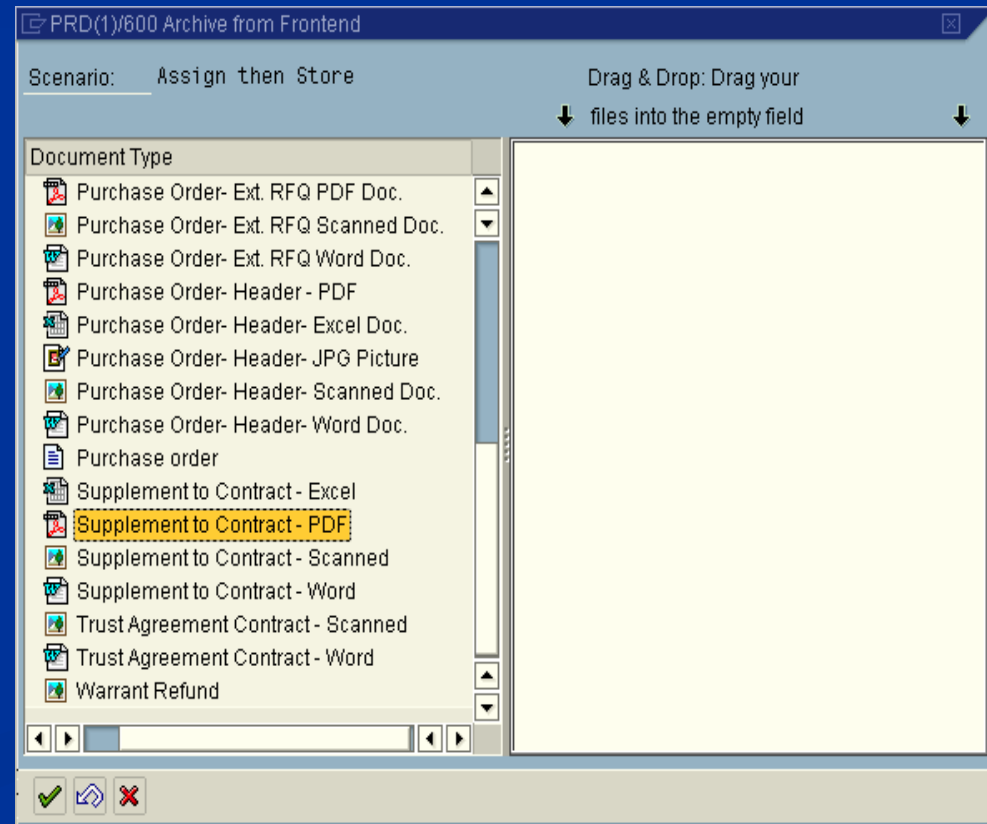


The screenshot displays the SAP ME23N interface for a contract. The title bar reads "C1/C2-Construction C203127 Created by William D. King". The "Create" menu is open, showing options: "Create Attachment", "Create note", "Create external document (URL)", "Store business document" (highlighted), and "Enter Bar Code". The "Attachment list" is visible on the left. The main table shows contract items with columns: "y. Date", "Net Price", "Curr", "Per", "O", "Matl Group", "Plant", "Fr", "T", and "Out".

y. Date	Net Price	Curr	Per	O	Matl Group	Plant	Fr	T	Out
02/14/2013	7,575,558.70	USD	1	AU	Cm Services	Contract Manage...			
02/14/2013	16,549.80	USD	1	AU	Cm Services	Contract Manage...			
02/26/2013	37,368.50	USD	1	AU	Cm Services	Contract Manage...			

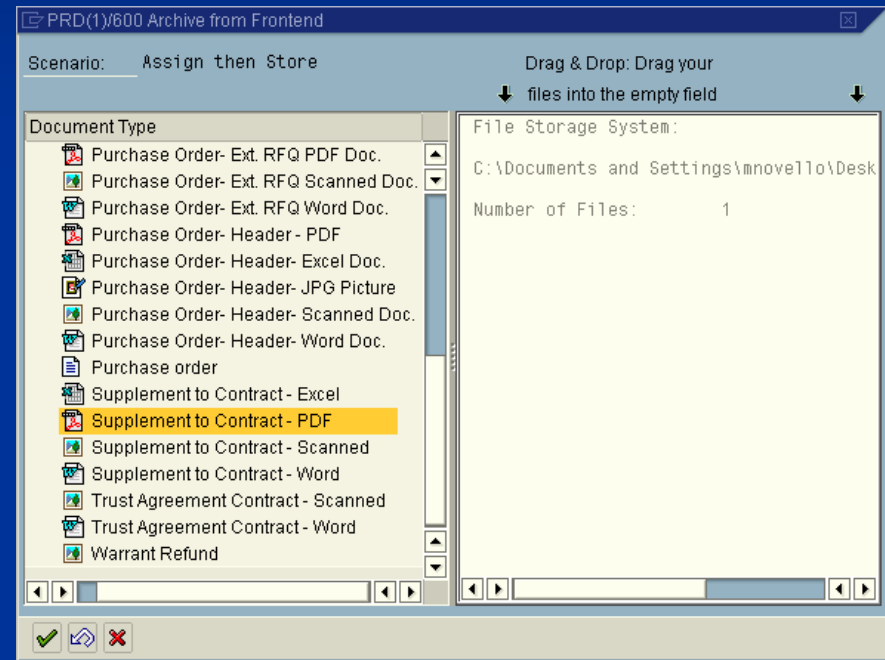
Supplemental Agreements

- In the **Archive from Frontend** dialog box, select the type of document to be attached. A Supplemental Agreement will generally be a PDF or Scanned Document.
- Select the file.



Supplemental Agreements

- The empty field will display the name of the location from which the file was selected and the number of files added.
- Click the Continue checkmark to attach the document to the contract.



Supplemental Agreements

- To confirm that the document has been assigned to the contract, go to the **Services for Object** menu and choose **Attachment List**. To view any attachment, double click on the row for the document.

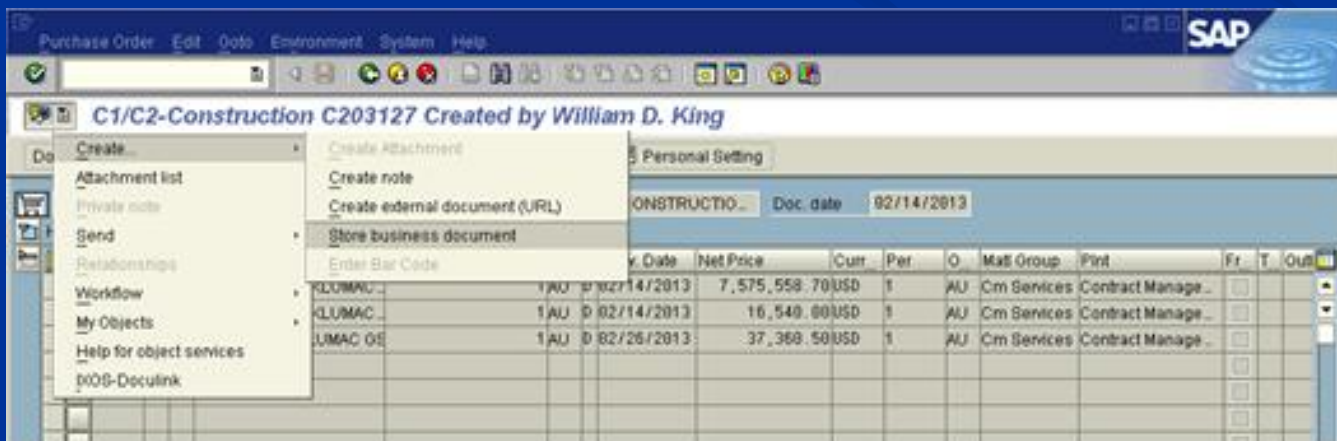
Icon	Title	Creator Name	Created On
	Supplement to Contract - PDF		03/04/2013
	Contract Backup Documentation - Sc...		02/15/2013
	Purchase order		02/14/2013

Supplemental Agreements

- Scan Fully Executed Supplemental Agreements into SAP, in Addition to Entering the Supplemental Agreement Information into HiCAMS.

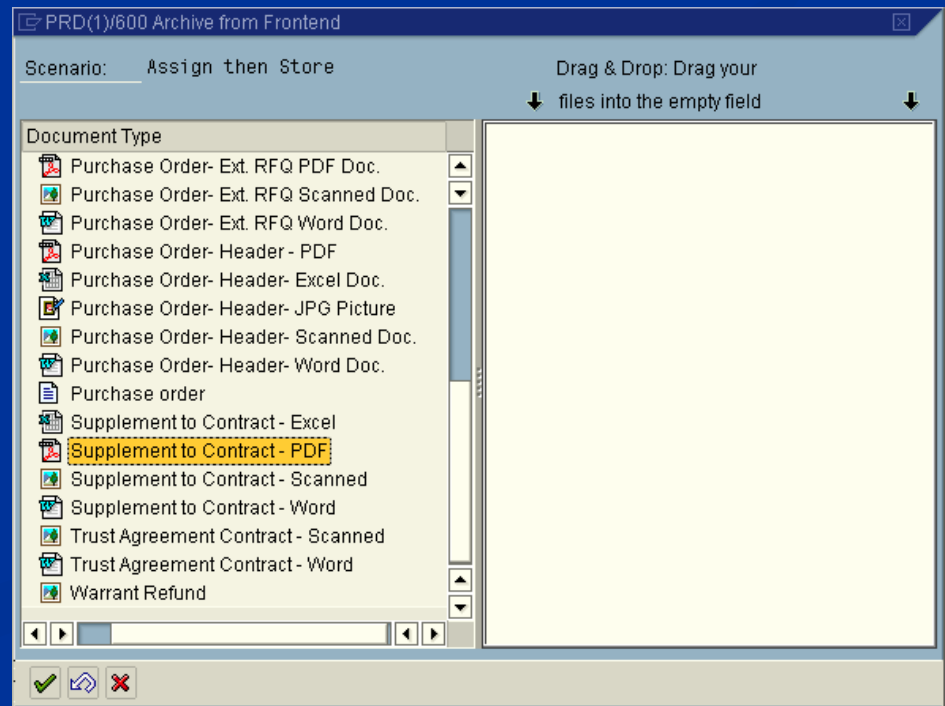
Supplemental Agreements

- Process to Add a Scanned Document to a Contract in SAP:
 - Use **ME23N** to navigate to the Contract to which a document needs to be attached.
 - From the Services for Object menu, select **Create > Store Business Document**.



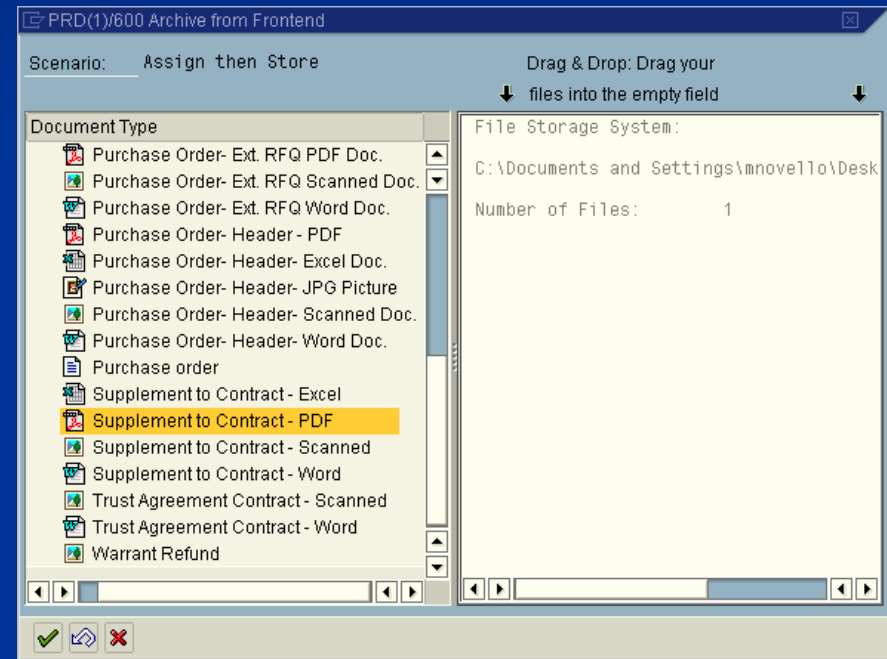
Supplemental Agreements

- In the **Archive from Frontend** dialog box, select the type of document to be attached. A Supplemental Agreement will generally be a PDF or Scanned Document.
- Select the file.



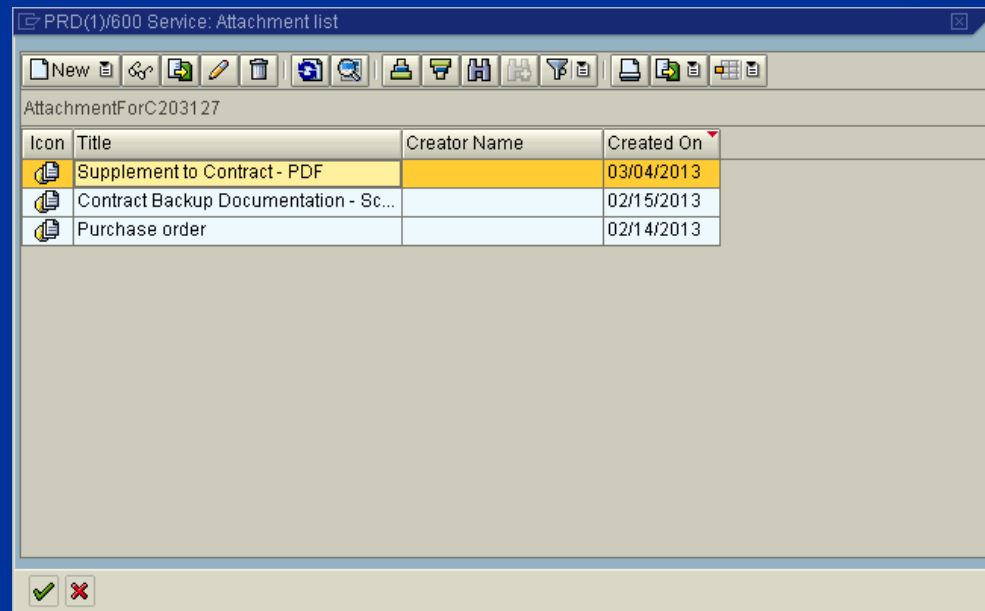
Supplemental Agreements

- The empty field will display the name of the location from which the file was selected and the number of files added.
- Click the Continue checkmark to attach the document to the contract.






Supplemental Agreements

- To confirm that the document has been assigned to the contract, go to the **Services for Object** menu and choose **Attachment List**. To view any attachment, double click on the row for the document.



The screenshot shows a software window titled "PRD(1)/600 Service: Attachment list". The window contains a table with the following data:

Icon	Title	Creator Name	Created On
	Supplement to Contract - PDF		03/04/2013
	Contract Backup Documentation - Sc...		02/15/2013
	Purchase order		02/14/2013