



# Illinois Department of Transportation

## Memorandum

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To: \*

From: Rich Dotson *RJD*

Subject: **Special Provision Changes**

Date: October 19, 2010

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The following special provisions have been revised for the January 21, 2011 letting. Please revise your special provision books as indicated.

### Recurring Special Provisions

**Updated to 2011 Recurring Checklist.**  
No changes to notes.

The following BDE Special Provisions have been deleted from the BDE Checksheet and have been moved to the 2011 Supplemental Specifications or Recurring Special Provisions. The new location is noted to the right.

|         |  |                           |
|---------|--|---------------------------|
| 606.07  | Concrete Gutter, Type A.....                           | Article 606.07            |
| 1006.11 | Dowel Bars .....                                       | Article 1006.11           |
| 1030.04 | Hot-Mix Asphalt – Plant Test Frequency.....            | Article 1030.05           |
| 1030.05 | Hot-Mix Asphalt – QC/QA Acceptance Criteria .....      | Article 1030.05           |
| 1030.08 | Hot-Mix Asphalt – Transportation.....                  | Article 1030.08           |
| 1077.03 | Mast Arm Assembly and Pole .....                       | Article 1077.03           |
| 701.06  | Notification of Reduced Width.....                     | Article 701.06            |
| 1008.26 | Organic Zinc-Rich Paint System .....                   | Article 1008.05           |
| 701.07  | Partial Exit Ramp Closure for Freeway/Expressway ..... | Section 701               |
| 701.12  | Personal Protective Equipment.....                     | Article 701.12            |
| 780.00  | Polyurea Pavement Marking .....                        | Sections 780, 1095 & 1105 |
| 1020.11 | Portland Cement Concrete Plants.....                   | Article 1020.11           |
| 782.03  | Prismatic Curb Reflectors .....                        | Articles 782.03 & 1097.04 |
| 701.02  | Ramp Closure for Freeway/Expressway .....              | Section 701               |
| 1106.02 | Reflective Sheeting on Channelizing Devices .....      | Article 1106.02           |
| 508.03  | Reinforcement Bars – Storage and Protection .....      | Article 508.03            |
| 1095.01 | Thermoplastic Pavement Marking.....                    | Article 1095.01           |

## Interim Special Provisions

| ISP Number                     | Description   |
|--------------------------------|---|
| Alphabetic ISP Index (Revised) | Remove existing alphabetic index and insert revised index.  |
| Numerical ISP Index (Revised)  | Remove existing numeric index and insert revised index.   |
| 251.00 (Revised)               | <b>“Mulch (BDE)”</b><br>Revised to allow temporary blanket to be reinstalled without additional payment and to change stapling requirements.  |
| 254.00 (New)                   | <b>“Planting Perennial Plants (BDE)”</b><br>Simplifies method of payment.   |
| 280.04 (Revised)               | <b>“Temporary Erosion Control (BDE)”</b><br>Provides some other options and updates to industry standards.  |
| 630.07 (New)                   | <b>“Long-Span Guardrail over Culvert (BDE)”</b><br>Establishes method of payment for a new standard and pay item.   |
| 670.02 (Revised)               | <b>“Engineer’s Field Office Type A (BDE)”</b><br>Revised payment of toll changes.   |
| 670.03 (Revised)               | <b>“Engineer’s Field Office Type B (BDE)”</b><br>Revised payment of toll charges.   |
| 701.10 (New)                   | <b>“Traffic Control Surveillance (BDE)”</b><br>Clarifies when surveillance is required.   |
| 701.14 (New)                   | <b>“Post Mounting of Signs (BDE)”</b><br>Removes bracing from post mounted signs.   |
| 701.19 (New)                   | <b>“Lane Closure, Multilane, Intermittent or Moving Operations, for Speeds ≤ 40 MPH (BDE)”</b><br>Creates pay item for Standard 701427.   |
| 1004.01 (New)                  | <b>“Friction Aggregate (BDE)”</b><br>Created to address the possible shortage of traditional high-friction aggregate.   |
| 1031.00 (Revised)              | <b>“Reclaimed Asphalt Pavement (RAP) (BDE)”</b><br>Waives FRAP Quality Testing if the district has documentation of FRAP Quality.   |
| 1106.02i (Revised)             | <b>“Movable Traffic Barrier (BDE)”</b><br>Several Clarifications.   |
| 1106.02k (Revised)             | <b>“Temporary Water Filled Barrier (BDE)”</b><br>This special was previously named “Longitudinal Temporary Traffic Barrier System” and has been revised for new products and delineation. |

## District Special Provisions

| District Number                     | Description   |
|-------------------------------------|---|
| Alphabetic District Index (Revised) | Remove existing alphabetic index and insert revised index.  |
| Numerical District Index (Revised)  | Remove existing numeric index for Section 500 and 700 and insert revised index.   |
| 550.00 (Delete)                     | <b>“Storm Sewer (PVC), SDR 26”</b><br>Delete this special. It will be replaced by “Storm Sewer (Water Main Requirements)”.  |
| 550.00 (New)                        | <b>“Storm Sewer (Water Main Requirements)”</b><br>This special replaces SDR 26 with more material options and new pay items to correspond with the latest pay item code book. |
| 780.02 (New)                        | <b>“Grooving for Recessed Pavement Marking”</b><br>This special provides basis of payment for the grooving pay items.   |

## General Notes

| GN Number                     | Description  |
|-------------------------------|--|
| Alphabetic GN Index (Revised) | Remove existing alphabetic index and insert revised index.   |
| Numerical GN Index (Revised)  | Remove existing alphabetic index and insert revised index.   |
| 406.05 (New)                  | <b>“Polymerized Bituminous Materials (Prime Coat) Rates”</b><br>This general note should help get closer to the current prime coat rates when estimating quantities and tell field personnel the expected residual rates for various surfaces. |
| 406.10 (Revised)              | <b>“Hot-Mix Asphalt Mixture Requirements”</b><br>Updated to add information on lift thickness.   |
| 666.00 (New)                  | <b>“Right-of-Way Markers”</b><br>This is to remind field personnel to not disturb property pins and tell them where to put the right-of-way markers when a pin is found at the proposed right-of-way marker location.                          |

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### Attachment(s)

cc: \*J. Miller      Team 2      Team 6      Team 10      Galesburg Design (D. Painter)  
K. Emert      Team 3      Team 7      Team 11      Local Roads (M. Augspurger)  
T. Phillips      Team 4      Team 8      Geometrics      Materials (H. Shoup)  
Team 1      Team 5      Team 9      Bridge (T. Inglis)

**Index for  
Supplemental Specifications  
and  
Recurring Special Provisions**

INDEX  
FOR  
SUPPLEMENTAL SPECIFICATIONS  
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2011

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS and frequently used RECURRING SPECIAL PROVISIONS.

ERRATA            Standard Specifications for Road and Bridge Construction (Adopted 1-1-07) (Revised 1-1-11)

SUPPLEMENTAL SPECIFICATIONS

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| 205 Embankment .....  | 2               |
| 251 Mulch .....   | 3               |
| 253 Planting Woody Plants .....                                       | 4               |
| 280 Temporary Erosion Control .....                                   | 6               |
| 406 Hot-Mix Asphalt Binder and Surface Course .....                   | 7               |
| 420 Portland Cement Concrete Pavement .....                           | 11              |
| 443 Reflective Crack Control Treatment .....                          | 12              |
| 501 Removal of Existing Structures .....                              | 15              |
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| 504 Precast Concrete Structures .....                                 | 18              |
| 505 Steel Structures .....  | 19              |
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| 1003 Fine Aggregates .....  | 55              |
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RECURRING SPECIAL PROVISIONS

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

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| 9                    | Construction Layout Stakes Except for Bridges (Eff. 1-1-99) (Rev. 1-1-07) .....  | 172         |
| 10                   | Construction Layout Stakes (Eff. 5-1-93) (Rev. 1-1-07) .....   | 175         |
| 11                   | Use of Geotextile Fabric for Railroad Crossing (Eff. 1-1-95) (Rev. 1-1-07) .....   | 178         |
| 12                   | Subsealing of Concrete Pavements (Eff. 11-1-84) (Rev. 1-1-07) .....  | 180         |
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| 14                   | Pavement and Shoulder Resurfacing (Eff. 2-1-00) (Rev. 1-1-09) .....  | 186         |
| 15                   | PCC Partial Depth Hot-Mix Asphalt Patching (Eff. 1-1-98) (Rev. 1-1-07) .....   | 187         |
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| 24                   | Work Zone Public Information Signs (Eff. 9-1-02) (Rev. 1-1-07) .....   | 204         |
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| 26                   | English Substitution of Metric Bolts (Eff. 7-1-96) .....   | 206         |
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| 28                   | Calcium Chloride Accelerator for Portland Cement Concrete (Eff. 1-1-01) .....  | 208         |
| 29                   | Reserved .....   | 209         |
| 30                   | Quality Control of Concrete Mixtures at the Plant<br>(Eff. 8-1-00) (Rev. 1-1-11) .....                                     | 210         |
| 31                   | Quality Control/Quality Assurance of Concrete Mixtures<br>(Eff. 4-1-92) (Rev. 1-1-11) .....                                | 218         |
| 32                   | Asbestos Bearing Pad Removal (Eff. 11-1-03) .....  | 230         |
| 33                   | Asbestos Hot-Mix Asphalt Surface Removal (Eff. 6-1-89) (Rev. 1-1-09) .....   | 231         |

**Designer Notes**  
**Recurring Special Provisions**

## Designer Notes for January 1, 2011 Recurring Special Provisions

1. Designer Note: This check sheet is required in all contracts that involve Federal funds.
2. Designer Note: This check sheet is required in all Federal contracts.
3. Designer Note: This check sheet is required in all contracts.
4. Designer Note: This check sheet is required in all contracts involving State funds only.
5. Designer Note: This check sheet is required in all contracts involving State funds only.
6. Reserved.
7. Reserved.
8. Designer Note: This check sheet will be required for those contracts that will involve Contractor work on haul road stream crossings, other temporary stream crossings, and in stream work pads. Contracts that would generally involve this type of work would be bridges/structures, new or rebuilt, and contracts involving earth excavation, embankment or borrow excavation. Discuss these types of work operations and any other stream related work with your Project Engineer. Any in-stream crossing or other work will require an individual 404 permit from the Corps of Engineers. Be sure to let the Hydraulics Engineer (Jim Miller) know as soon as possible that a Corps permit will be needed. The permit has a lead-time and is required for the project to proceed to letting.
9. Designer Note: (See #10 below.) Depending on IDOT manpower, this check sheet will be included as a pay item when the Contractor will be required to do all contract staking, except bridges. A large span culvert measuring more than 6 meters (20 feet) along the survey line will require a structure number be assigned to the structure. This will require that the Designer, if he is calling for Contractor staking, use the check sheet entitled Construction Layout Stakes and not the check sheet entitled Construction Layout Stakes Except for Structures. Discuss with the Bureau of Project Implementation (Construction) as to what manpower sources are available.
10. Designer Note: Depending on IDOT manpower needs, this check sheet will be included as a pay item when the Contractor will be required to do all contract staking, including bridges. This check sheet should be used for a large box culvert or a multi pipe that will require a structure number. This would be a structure that will have a span length along survey line of more than 6 meters (20 feet).

Discuss this check sheet with the Bureau of Project Implementation (Construction) as to what manpower sources are available.



11. Designer Note: This special provision specifies the requirements for geotextile fabric for use on railroad crossings.

Include only on projects where the railroad crossing is a contract pay item. Also may be required for temporary crossings.

Railroad crossings are generally (99%) handled by the Railroad through an agreement and not part of our contract. If in doubt as to how to handle, discuss with Project Support.

12. Designer Note: Use this check sheet where existing pavement is being reconstructed and voids are evident under the existing pavement that can be filled by grouting. Discuss with Maintenance Field Engineer responsible for the area.

NOTE: A detail of the slab movement detection device is included in CADD and this drawing must be included in your contract plans.

13. Designer Note: This check sheet will be required on a contract where cold milling is required but where the cold milled area will not be overlaid. Include CADD Standard 440001 in your plans. If your contract is to be cold milled and the area overlaid, you should use one of the two District special provisions on this subject, not this check sheet.

14. Designer Note: This check sheet requires that once a left of bituminous resurfacing is placed on a lane of pavement, any adjoining bituminous shoulder shall be resurfaced with an equal thickness before any other lane is resurfaced for each left of resurfacing. Insert this special on resurfacing projects which meet the following criteria: All four lane interstates and freeways, all four lane expressways, four lane highways with ADT > 25,000 or peak one-way VPH > 1700, two lane highways with ADT > 10,000 or peak one-way VPH > 800.

15. Designer Note: This check sheet should be used on resurfacing projects to address areas which need repair, but do not warrant full depths repair. Joints and cracks, which exhibit environmental distresses such as spalling and "D" cracking or contain maintenance patching, are eligible for using this method of repair. Joints and cracks which exhibit load related distresses such as pumping, alligator cracking, corner breaks, compression failures, subgrade failures or punch outs should not use this method of repair. Discuss use with your Project Engineer.

16. Designer Note: Intended to remove thick bituminous overlay so that the original pavement can be examined and then patched, if necessary. It also further defines specific pay items for work involved.

17. Designer Note: This check sheet was developed by Materials and Physical Research as an alternate to replacing Preformed Joint Sealer and Neoprene Expansion Joints up to 65 mm (2 ½ inches). Include with any projects that have POLYMER CONCRETE as a pay item.

18. Designer Note: This rehabilitation process can be used in a variety of gravity applications such as trenchless rehabilitation of sanitary sewers, storm sewers, and process piping. Insert this special provision if trenchless repair of the items listed above is selected. Prior to selection consult your Project Engineer. Additional information such as size of pipe to be lined, number of laterals, and manhole treatment may be necessary.
19. Designer Note: This check sheet calls for CA 16 for backfill and wrapping the trench. Discuss usage with Implementation.
20. Designer Note: This check sheet was developed by the Central Bureau of Traffic and should be incorporated into all plans containing guardrail, barrier wall or bridge rail. The designer is required to specify the color of all reflectors to be placed and to provide appropriate traffic control standards for the installation of reflectors/markers. It is the District's option to select the type of reflector marker for use on guardrail and barrier walls, and the type of terminal marker for guardrail. This option should be specified by the pay item used. The District prefers use of the top mounted reflector Type C on barrier walls. Include Highway Standards 635006 and 635011 in the plans if this Check Sheet is used.
21. Designer Note: This check sheet was developed to obtain the desired pipe coating on bike racks. Use on all projects with bike racks.
22. Designer Note: This special provision covers the installation of temporary glare screens on temporary concrete barrier. Glare screens may be needed on temporary concrete barriers separating opposing lanes of traffic, especially on horizontal and vertical curves where oncoming headlight glare could be a problem. Discuss usage with your project engineer.
23. Designer Note: This special provision is for use on bridge contracts where staging is required and the District wants the contractor to have an option to post-mounting the temporary bridge and traffic signals. Discuss use with the District Traffic Control Technician.
24. Designer Note: Intended for use on all freeway/expressway contracts with lane closures as shown on Highway Standard 701400. It may also be used at the District's discretion on high visibility projects and/or projects that will require several months to complete.
25. Designer Note: This check sheet should be included for all projects containing roadway lighting. The designer should also include CADD Standard 701301-D4 in the plans.
26. Designer Note: This check sheet was developed to address difficulties with obtaining metric sized bolts. Include in all metric projects, which contain or could contain any type of bolted connection.
27. Designer Note: This check sheet was developed to address difficulties with obtaining metric sized reinforcement bars. Include in all metric projects containing reinforcement bars.

28. Designer Note: This special provision is to be included in pavement and bridge deck patching projects only when specified by District Materials personnel. Not recommended for use on recently constructed pavements or bridge decks.
29. Reserved.
30. Designer Note: Don't use Check Sheet #30 unless requested by Materials.
31. Designer Note: QC/QA for concrete is generally only used on projects with relatively large concrete quantities. Check with Materials prior to use on any project. Note that QC/QA concrete is no longer paid for with a pay item.
32. Designer Note: Include in all contracts where Asbestos Bearing Pad Removal is part of the structure work.
33. Designer Note: Include in all contracts where the existing bridge deck HMA surface is to be removed and the waterproofing membrane contains asbestos and will be removed. The designer must have in the project files a completed "Asbestos Determination Certificate" for every bridge within the project limits. The District Bridge Maintenance Engineer and/or the District Hydraulics Engineer can provide copies of these certificates. If your project has any bridge deck containing asbestos, insert this special provision as well as the General Notes entitled "Asbestos Bridge Wearing Surface Removal".

# **BDE Special Provisions**

## **Alphabetic Index**

ALPHABETIC LIST OF DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

Get a copy of the current check list from the Program Development Secretary, indicate which ISP's are to be included in your set of special provisions, fill in any blanks as indicated on the check list, and include with your set of special provisions to be sent to Springfield where they will be inserted.

| <u>Standard<br/>Spec. No.</u> | <u>PC<br/>No.</u> | <u>Item</u>  |
|-------------------------------|-------------------|--|
| 280.02                        | 28002             | Above Grade Inlet Protection   |
| 888.00                        | 88800             | Accessible Pedestrian Signals (APS)  |
| 1020.02                       | 102002            | Alkali-Silica Reaction for Cast-in-Place Concrete  |
| 1020.03                       | 102003            | Alkali-Silica Reaction for Precast and Precast Prestressed Concrete                            |
| 109.12                        | 10912             | American Recovery and Reinvestment Act Provisions  |
| 701.04                        | 70104             | American Recovery and Reinvestment Act Signing   |
| 107.22                        | 10722             | Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas Inside Illinois State Borders |
| 701.00                        | 70100             | Automated Flagger Assistance Devices   |
| 109.01                        | 10901             | Bituminous Materials Cost Adjustment   |
| 107.38                        | 10738             | Bridge Demolition Debris   |
| 107.19a                       | 10719a            | Building Removal Case I  |
| 107.19b                       | 10719b            | Building Removal Case II   |
| 107.19c                       | 10719c            | Building Removal Case III  |
| 107.19d                       | 10719d            | Building Removal Case IV   |
| 1001.00                       | 100100            | Cement   |
| 106.08                        | 10608             | Certification of Metal Fabricators   |
| 108.05a                       | 10805a            | Completion Date (Via Calendar Days)  |
| 108.05b                       | 10805b            | Completion Date (Via Calendar Days) Plus working Days  |
| 1020.05b                      | 102005b           | Concrete Admixtures  |
| 503.19                        | 50319             | Concrete Joint Sealer  |
| 1020.05c                      | 102005c           | Concrete Mix Designs   |

ALPHABETIC LIST OF DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

| <u>Standard<br/>Spec. No.</u> | <u>PC<br/>No.</u> | <u>Item</u>   |
|-------------------------------|-------------------|---|
| 107.00                        | 10700             | Construction Air Quality – Diesel Vehicle Emissions Control                       |
| 107.01                        | 10701             | Construction Air Quality – Diesel Retrofit  |
| 107.37                        | 10737             | Construction air Quality – Idling Restrictions                                    |
| 353.00                        | 35300             | Determination of Thickness  |
| 202.07                        | 20207             | Digital Terrain Modeling for Earthwork Calculations                               |
| 108.06a                       | 10806a            | Disadvantaged Business Enterprise Participation                                   |
| 670.02                        | 67002             | Engineer's Field Office Type A  |
| 670.03                        | 67003             | Engineer's Field Office Type B  |
| 109.04                        | 10904             | Equipment Rental Rates  |
| 701.13                        | 70113             | Flagger at Side Roads and Entrances   |
| 609.02                        | 60902             | Frames and Grates   |
| 1004.01                       | 100401            | Friction Aggregate  |
| 109.03                        | 10903             | Fuel Cost Adjustment  |
| 643.00                        | 64300             | High Tension Cable Median Barrier   |
| 407.08                        | 40708             | HMA-Hauling on Partially Completed Full-Depth Pavement                            |
| 1030.04c                      | 103004c           | Hot-Mix Asphalt – Anti-Stripping Additive   |
| 406.07                        | 40607             | Hot-Mix Asphalt-Density Testing of Longitudinal Joints                            |
| 701.07a                       | 70107a            | Hot-Mix Asphalt Drop-Offs   |
| 1003.01                       | 100301            | Hot-Mix Asphalt – Fine Aggregate  |
| 702.00c                       | 70200c            | Impact Attenuators  |
| 702.00d                       | 70200d            | Impact Attenuators, Temporary   |
| 302.04                        | 30204             | Improved Subgrade   |
| 701.19                        | 70119             | Lane Closure, Multilane, Intermittent or Moving Operation, for Speeds<br>≤ 40 MPH |
| 108.09                        | 10809             | Liquidated Damages  |

ALPHABETIC LIST OF DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

| <u>Standard<br/>Spec. No.</u> | <u>PC<br/>No.</u> | <u>Item</u>   |
|-------------------------------|-------------------|---|
| 630.07                        | 63007             | Long-Span Guardrail over Culvert  |
| 406.00f                       | 40600f            | Material Transfer Device  |
| 503.02                        | 50302             | Metal Hardware Cast into Concrete   |
| 1008.27                       | 100827            | Moisture Cured Urethane Paint System  |
| 109.11                        | 10911             | Monthly Employment Report   |
| 1106.02i                      | 110602i           | Movable Traffic Barrier   |
| 251.00                        | 25100             | Mulch   |
| 105.03                        | 10503             | National Pollutant Discharge Elimination System / Erosion and Sediment Control Deficiency Deduction |
| 701.01                        | 70101             | Nighttime Work Zone Lighting  |
| 783.03                        | 78303             | Pavement Marking Removal  |
| 701.17                        | 70117             | Pavement Patching   |
| 109.07                        | 10907             | Payments to Subcontractors  |
| 542.03                        | 54203             | Pipe Culverts   |
| 254.00                        | 25400             | Planting Perennial Plants   |
| 420.00                        | 42000             | Portland Cement Concrete Inlay or Overlay   |
| 1090.03                       | 109003            | Post Clips for Extruded Aluminum Signs  |
| 701.14                        | 70114             | Post Mounting of Signs  |
| 540.02                        | 54002             | Precast Concrete Handling Holes   |
| 400.04                        | 40004             | Preventive Maintenance - Bituminous Surface Treatment   |
| 400.01                        | 40001             | Preventive Maintenance – Cape Seal  |
| 400.02                        | 40002             | Preventive Maintenance – Micro-Surfacing  |
| 400.03                        | 40003             | Preventive Maintenance – Slurry Seal  |
| 107.09                        | 10709             | Public Convenience and Safety   |
| 107.11                        | 10711a            | Railroad Protective Liability Insurance   |

ALPHABETIC LIST OF DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

| Standard Spec. No. | PC No.  | Item  |
|--------------------|---------|---|
| 107.11             | 10711b  | Railroad Protective Liability Insurance (5 and 10)          |
| 781.03             | 78103   | Raised Reflective Pavement Markers                          |
| 1031.00            | 103100  | Reclaimed Asphalt Pavement (RAP)                            |
| 420.16             | 42016   | Restoring Bridge Approach Pavements Using High-Density Foam |
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| 108.00             | 10800   | Selection of Labor  |
| 1020.01            | 102001  | Self-Consolidating Concrete for Cast-in-Place Construction  |
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| 109.00             | 10900a  | Steel Cost Adjustment                                       |
| 406.06             | 40606   | Stone Matrix Asphalt  |
| 550.02             | 55002   | Storm Sewers  |
| 671.00             | 67100   | Subcontractor Mobilization Payments                         |
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| 280.04             | 28004   | Temporary Erosion Control                                   |
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| 701.10             | 70110   | Traffic Control Surveillance                                |
| 108.06             | 10806   | Training Special Provision                                  |
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| 108.05             | 10805   | Working Days  |



# **BDE Special Provisions**

## **Numeric Index**

REVISED INDEX

## NUMERIC DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

Get a copy of the current check list from the Program Development Secretary, indicate which ISP's are to be included in your set of special provisions, fill in any blanks as indicated on the check list, and include with your set of special provisions to be sent to Springfield where they will be inserted.

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NUMERIC DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

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NUMERIC DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

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## **BDE Special Provisions**

Designer Note: Insert into all contracts utilizing mulch, erosion blankets, or turf reinforcement mat.

## **MULCH (BDE)**

Effective: November 1, 2010

Revised: January 1, 2011

Revise the first sentence of Article 251.03 of the Standard Specifications to read:

“Within 24 hours of seed placement, mulch by one of the following methods shall be placed on the areas specified.”

Revise Article 251.03(b)(2) of the Standard Specifications to read:

“(2) Procedure 2. This procedure shall consist of stabilizing the straw with an approved mulch blower followed immediately by an overspray application of light-duty hydraulic mulch. The hydraulic mulch shall be according to Article 251.03(c) except that it shall be applied as a slurry of 900 lb (1020 kg) of mulch and 1000 gal (9500 L) of water per acre (hectare) using a hydraulic mulch applicator. The light-duty hydraulic mulch shall be agitated a minimum of five minutes before application and shall be agitated during application. The light-duty hydraulic mulch shall be applied from opposing directions to ensure even coverage.”

Revise Article 251.03(c) of the Standard Specification to read:

“(c) Method 3. This method shall consist of the machine application of a light-duty hydraulic mulch. Seeding shall be conducted as a separate operation and shall not be added to the hydraulic mulch slurry. Hydraulic mulch shall not be applied when the ambient temperature is at or below freezing. To achieve full and even coverage, the hydraulic mulch shall be applied from two opposing directions. Mixing and application rates shall be according to the manufacturer’s recommendations and meet the minimum application rates set in Article 1081.06(a)(2).”

Revise Article 251.03(d) of the Standard Specifications to read:

“(d) Method 3A. This method shall consist of the machine application of a heavy-duty hydraulic mulch. Seeding shall be conducted as a separate operation and shall not be added to the hydraulic mulch slurry. The hydraulic mulch shall not be applied when the ambient temperature is at or below freezing. To achieve full and even coverage, the hydraulic mulch shall be applied from two opposing directions. Mixing and application rates shall be according to the manufacturer’s recommendations and meet the minimum application rates set in Article 1081.06(a)(2). The heavy-duty hydraulic mulch shall be applied using a mechanically agitated hydraulic mulching machine.”

Add the following to Article 251.03 of the Standard Specifications:

“(e) Method 4. This method shall consist of applying compost combined with a performance additive designed to bind/stabilize the compost. The compost/performance additive mixture shall be applied to the surface of the slope using a pneumatic blower at a depth of 2 in. (50 mm).”

Revise Article 251.04 of the Standard Specifications to read:

**“251.04 Erosion Control Blanket.** Erosion control blanket may be placed using either excelsior blanket or knitted straw blanket. Within 24 hours of seed placement, blanket shall be placed on the areas specified. Prior to placing the blanket, the areas to be covered shall be relatively free of rocks or clods over 1 1/2 in. (40 mm) in diameter, and sticks or other foreign material which will prevent the close contact of the blanket with the seed bed. If, as a result of rain, the prepared seed bed becomes crusted or eroded, or if eroded places, ruts, or depressions exist for any reason, the Contractor shall rework the soil until it is smooth and reseed such areas which are reworked.

After the area has been properly shaped, fertilized, and seeded, the blanket shall be laid out flat, evenly, and smoothly, without stretching the material. The excelsior and knitted straw blankets shall be placed so that the netting is on the top and the fibers are in contact with the soil. The heavy duty blankets shall be placed so that the heavy duty extruded plastic mesh is on the bottom.

For placement in ditches, the erosion control blanket shall be applied parallel to the centerline of the ditch so that there are no longitudinal seams within 2 ft (600 mm) of the bottom centerline of the ditch. The blanket shall be toed in on the upslope edge and shingled or overlapped with the flow.

On slopes, the blanket shall be applied either horizontally or vertically to the contour, toed in on the upslope edge, and shingled or overlapped with the flow.

When placed adjacent to the roadway, blankets shall be toed in along the edge of shoulder.

Anchoring the blankets shall be according to the manufacturer's specifications.”

Revise Article 251.06(b) of the Supplemental Specifications to read:

“(b) Measured Quantities. Mulch Methods 1, 2, 3, 3A and 4 will be measured for payment in place in acres (hectares) of surface area mulched. Erosion control blanket, heavy duty erosion control blanket, and turf reinforcement mat will be measured for payment in place in square yards (square meters).”

Revise Article 251.07 of the Supplemental Specifications to read:

**“251.07 Basis of Payment.** This work will be paid for at the contract unit price per acre (hectare) for MULCH, METHOD 1; MULCH, METHOD 2; MULCH, METHOD 3; MULCH, METHOD 3A; MULCH, METHOD 4; and at the contract unit price per square yard (square meter) for EROSION CONTROL BLANKET, HEAVY DUTY EROSION CONTROL BLANKET, or TURF REINFORCEMENT MAT.”

Revise Article 1081.06(a)(2) of the Standard Specifications to read:

“(2) Hydraulic Mulch. The mulch component shall be comprised of a minimum of 70 percent biodegradable material such as wood cellulose, paper fibers, straw or cotton and shall contain no growth or germination inhibiting factors. The remainder of the components shall consist of the manufacturer's choice of tackifiers and/or strengthening fibers needed to meet the performance specifications. Tackifiers shall be non-toxic and LC 50 test results shall be provided along with the manufacturer's certification. Hydraulic mulch shall disperse evenly and rapidly and remain in slurry



when agitated with water. When uniformly applied, the slurry shall form an absorbent cover allowing percolation of water to the underlying surface. Hydraulic mulch shall be packaged in UV and moisture resistant factory labeled packages or bags with the net quantity of the packaged material plainly shown on each package. The biodegradable material shall be relatively free of glossy papers and shall not be water soluble. The hydraulic mulches shall be according to the following.

| Light-Duty Hydraulic Mulch                     |                           |
|--|---------------------------|
| Property <sup>1/</sup>                         | Value                     |
| Functional Longevity <sup>2/</sup>             | 3 months                  |
| Minimum Application Rates                      | 2000 lb/acre (2240 kg/ha) |
| Typical Maximum Slope Gradient (V:H)           | ≤ 1:3                     |
| Maximum Uninterrupted Slope Length             | 50 ft (15 m)              |
| Maximum C Factor                               | 0.15                      |
| Minimum Vegetation Establishment <sup>5/</sup> | 200 %                     |

| Heavy-Duty Hydraulic Mulch                    |                           |
|---|---------------------------|
| Property <sup>1/</sup>                        | Value                     |
| Functional Longevity <sup>2/</sup>            | 12 months                 |
| Minimum Application Rates                     | 3000 lb/acre (3360 kg/ha) |
| Typical Maximum Slope Gradient (V:H)          | ≤ 1:2                     |
| Maximum Uninterrupted Slope Length            | 100 ft (30 m)             |
| Maximum C Factor <sup>3/4/</sup>              | 0.02                      |
| Minimum Vegetation Establishment <sup>5</sup> | 400 %                     |

- 1/ This table sets minimum requirements only. Refer to manufacturer recommendations for application rates, instructions, gradients, maximum continuous slope lengths and other site specific recommendations.
- 2/ Manufacturer's estimated time period, based upon field observations, that a material can be anticipated to provide erosion control as influenced by its composition and site-specific conditions.
- 3/ "C" Factor calculated as ratio of soil loss from HECP protected slope (tested at specified or greater gradient, h:v) to ratio of soil loss from unprotected (control) plot based on large-scale testing.
- 4/ Large-scale test methods shall be according to ASTM D 6459.
- 5/ Minimum vegetation establishment shall be calculated according to ASTM D 7322.

The manufacturer shall furnish a certification with each shipment of hydraulic mulch stating the number of packages or bags furnished and that the material complies with these requirements."

Designer Note: Insert into all contracts where perennial plants are a pay item.

**PLANTING PERENNIAL PLANTS (BDE)**

Effective: January 1, 2011

Revise Section 254 of the Standard Specifications to read:

**“SECTION 254. PLANTING PERENNIAL PLANTS**

**254.01 Description.** This work shall consist of furnishing, transporting, and planting perennial plants.

**254.02 Materials.** Materials shall be according to the following.

| Item                            | Article/Section |
|---------------------------------|-----------------|
| (a) Bulb Type .....             | 1081.02(a)      |
| (b) Ornamental Type .....       | 1081.02(b)      |
| (c) Prairie Type .....          | 1081.02(b)      |
| (d) Wetland Emergent Type ..... | 1081.02(b)      |
| (e) Sedge Meadow Type .....     | 1081.02(b)      |
| (f) Woodland Type .....         | 1081.02(b)      |
| (g) Mulch .....                 | 1081.06(b)      |

**254.03 Planting Time.** Planting times for the various types of perennial plants shall be as follows.

- (a) Bulb Type. Bulb Type plants shall be planted between October 15 and November 15.
- (b) Ornamental Type, Prairie Type, Wetland Emergent Type, and Sedge Meadow Type plants shall be planted between May 1 and June 15 or between August 15 and September 15.
- (c) Woodland Type plants shall be planted between April 1 and May 15.

**254.04 Transporting and Storing Plants.** The Engineer will inspect the plants at the work site at the beginning of each planting day and reject any material that is not properly packaged (including clear labeling by species) or that is not in a firm, moist, or viable condition. Any plants remaining at the end of the day shall be removed from the work site and properly stored by the Contractor. Before planting, sufficient water shall be added to potted plants to insure that the soil around the roots is not dry and crumbly when the plants are removed from the pots.

**254.05 Layout of Planting.** When plants are specified to be planted in prepared soil planting beds, the planting bed shall be approved by the Engineer prior to planting. If no prepared soil planting bed is specified, the plants shall be planted in areas that have existing cover or have been seeded and mulched or sodded. Where perennial plants, except bulb type plants, shall be planted, the planting beds shall be delineated with selective mowing stakes. Selective mowing stakes shall be according to Article 250.08.

**254.06 Planting Procedures.** The spacing of the plants shall be as shown on the plans, or as directed by the Engineer, to uniformly fill the planting beds. Individual plants within the beds shall be planted as follows.

- (a) Bulb Type. Bulb type plants shall be planted to a depth of 6 in. (150 mm) in turf areas or prepared beds.
- (b) Ornamental Type, Prairie Type, Wetland Emergent Type, Sedge Meadow Type, and Woodland Type. When planted in prepared soil planting beds, these plants shall be planted by a hand method approved by the Engineer.

When planted in existing turf, the planting area shall be mowed to a maximum height of 2 in. (50 mm).

In existing cover, or seeded and mulched or sodded planting areas, a 12 in. (300 mm) diameter planting area for individual plants shall be prepared. The existing cover, or seed and mulch shall be cut and removed from the 12 in. (300 mm) diameter planting area and the soil within the planting area loosened to a depth of 6 in. (150 mm). The plants shall be planted within the planting area and immediately watered with at least 1 gal (5 L) of water per plant.

**254.07 Mulching.** Within 24 hours, the plants shall be mulched with 2 in. (50 mm) of a fine grade mulch meeting the approval of the Engineer. Care shall be taken to place the mulch in a way that does not smother the plants. When plants are planted in prepared soil planting beds, the entire bed shall be mulched. Bulb type plants planted in existing turf need not be mulched.

**254.08 Period of Establishment.** Period of Establishment for the various types of perennial plants shall be as follows.

- (a) No period of establishment will be required for bulb type plants.
- (b) Perennial plants must undergo a 30 day period of establishment. Additional waterings shall be performed at least once within every seven days for four weeks following installation. Water shall be applied at the rate of 2 gal/sq yd (9 L/sq m). Should excess moisture prevail, the Engineer may delete any or all of the additional watering cycles. In severe weather, the Engineer may require additional waterings.

Watering of plants in beds shall be applied in such a manner that all plant holes are uniformly saturated without allowing the water to flow beyond the periphery of the bed.

At the end of the period of establishment, the Contractor will be permitted to replace any unacceptable plants and shall thoroughly weed all the beds.

**254.09 Method of Measurement.** This work will be measured for payment in units of 100 perennial plants of the type and size specified. Measurement for payment of this work will not be performed until at the end of the 30 day establishment period for the replacement planting. Only plants that are in place and alive at the time of measurement will be measured for payment, except that if fewer than 25 percent of the plants are acceptable, a quantity equal to 25 percent of the number of units of plants originally planted will be considered measured for payment. Selective mowing stakes will be measured for payment as each in place.

**254.10 Basis of Payment.** This work will be paid for at the contract unit price per unit for PERENNIAL PLANTS, of the type and size specified.

Selective mowing stakes will be paid for at the contract unit price per each for SELECTIVE MOWING STAKES.”

Revise Article 1081.02 of the Standard Specifications to read:

“**1081.02 Perennial Plants.** Perennial plants shall be as follows.

- (a) Bulb Type. Bulb type plants shall include bulbs, tubers, rhizomes, and corms. Bulb type plants shall meet the current standards adopted by the ANLA. The Contractor shall furnish the Engineer a shipping ticket or label documenting that the variety, color, and size of the bulb type plants supplied are as specified in the plans.
- (b) Ornamental Type, Prairie Type, Wetland Emergent Type, Sedge Meadow Type, and Woodland Type. These plants shall meet the current standards adopted by the ANLA. Flats or lots of plants shall be clearly labeled by variety, and the Contractor shall furnish the Engineer a shipping ticket or label documenting that the plants supplied are of the variety specified in the plans.”

Designer Note: Insert into all contracts utilizing temporary erosion control.

**TEMPORARY EROSION CONTROL (BDE)**

Effective: November 1, 2002

Revised: January 1, 2011

Add the following to Article 280.02 of the Standard Specifications to read:

- “(k) Filter Fabric ..... 1080.03
- “(l) Urethane Foam/Geotextile ..... 1081.15(i)”

Revise the third paragraph of Article 280.03 of the Standard Specifications to read:

“Erosion control systems shall be installed prior to beginning any activities which will potentially create erodible conditions. Erosion control systems for areas outside the limits of construction such as storage sites, plant sites, waste sites, haul roads, and Contractor furnished borrow sites shall be installed prior to beginning soil disturbing activities at each area. These offsite systems shall be designed by the Contractor and be subject to the approval of the Engineer.”

Add the following paragraph after the third paragraph of Article 280.03 of the Standard Specifications:

“The temporary erosion and sediment control systems shown on the plans represent the minimum systems anticipated for the project. Conditions created by the Contractor’s operations, or for the Contractor’s convenience, which are not covered by the plans, shall be protected as directed by the Engineer at no additional cost to the Department. Revisions or modifications of the erosion and sediment control systems shall have the Engineer’s written approval.”

Revise Article 280.04(a) of the Standard Specifications to read:

“(a) Temporary Ditch Checks. This system consists of the construction of temporary ditch checks to prevent siltation, erosion, or scour of ditches and drainage ways. Temporary ditch checks shall be constructed with products from the Department’s approved list, rolled excelsior, or with aggregate placed on filter fabric when specified. Filter fabric shall be installed according to the requirements of Section 282. Riprap shall be placed according to Article 281.04. Manufactured ditch checks shall be installed according to the manufacturer’s specifications. Spacing of ditch checks shall be such that the low point in the center of one ditch check is at the same elevation as the base of the ditch check immediately upstream. Temporary ditch checks shall be sufficiently long enough that the top of the device in the middle of the ditch is 6 in. (150 mm) lower than the bottom of the terminating ends of the ditch side slopes.

When rolled excelsior is used, each ditch check shall be installed and maintained such that the device is no less than 10 in. (250 mm) high at the point of overflow. Units installed at a spacing requiring a height greater than 10 in. (250 mm) shall be maintained at the height for the spacing at which they were originally installed.”

Revise the last sentence of the first paragraph Article 280.04(b) of the Standard Specifications to read:

“The barrier shall be constructed with rolled excelsior, silt filter fence, or urethane foam/geotextiles.”

Revise the last sentence of the first paragraph of Article 280.04(g) of the Standard Specifications to read:

“The temporary mulch cover shall be installed according to Article 251.03 except for any reference to seeding.”

Add the following to Article 280.04 of the Standard Specifications:

- (h) Temporary Erosion Control Blanket. This system consists of temporarily installing erosion control blanket or heavy duty erosion control blanket over areas that are to be reworked during a later construction phase. Work shall be according to Article 251.04 except references to seeding and fertilizer shall not apply. When an area is to be reworked more than once, the blanket shall be carefully removed, properly stored, and then reinstalled over the same area.”

Revise Article 280.07(b) of the Standard Specifications to read:

- “(b) Temporary Ditch Checks. This work will be measured for payment along the long axis of the device in place in feet (meters) except for aggregate ditch checks which will be measured for payment in tons (metric tons). Payment will not be made for aggregate in excess of 108 percent of the amount specified by the Engineer.”

Revise Article 280.07(f) of the Standard Specifications to read:

- “(f) Temporary Mulch. This work will be measured for payment according to Article 251.05(b).”

Add the following to Article 280.07 of the Standard Specifications:

- “(g) Temporary Erosion Control Blanket. This work will be measured for payment in place in square yards (square meters) of actual surface covered.

Add the following paragraph after the ninth paragraph of Article 280.07 of the Standard Specifications:

“Temporary or permanent erosion control systems required for areas outside the limits of construction will not be measured for payment.”

Revise Article 280.08(b) of the Standard Specifications to read:

- “(b) Temporary Ditch Checks. This work will be paid for at the contract unit price per foot (meter) for TEMPORARY DITCH CHECKS except for aggregate ditch checks which will be paid for at the contract unit price per ton (metric ton) for AGGREGATE DITCH CHECKS.”

Revise Article 280.08(f) of the Standard Specifications to read:

- “(f) Temporary Mulch. Temporary Mulch will be paid for according to Article 251.06.”

Add the following to Article 280.08 of the Standard Specifications:

- “(g) Temporary Erosion Control Blanket. Temporary Erosion Control Blanket will be paid for at the contract unit price per square yard (square meter) for TEMPORARY EROSION CONTROL BLANKET or TEMPORARY HEAVY DUTY EROSION CONTROL BLANKET.

The work of removing, storing, and reinstalling the blanket over areas to be reworked more than once will not be paid for separately but shall be included in the cost of the temporary erosion control blanket or temporary heavy duty erosion control blanket.”

Delete the tenth (last) paragraph of Article 280.08 of the Standard Specifications.

Revise the second sentence of the first paragraph of Article 1081.15(e) of the Standard Specifications to read:

“The upstream facing of the aggregate ditch check shall be constructed of gradation CA 3. The remainder of the ditch check shall be constructed of gradation RR 3.”

Revise Article 1081.15(f) of the Supplemental Specifications to read:

- “(f) Rolled Excelsior. Rolled excelsior shall consist of an excelsior fiber filling totally encased inside netting and sealed with metal clips or knotted at the ends. The fiber density shall be a minimum of 1.24 lb/cu ft (20 kg/cu m) based on a moisture content of 22 percent at manufacturing. The netting shall be composed of a polyester or polypropylene material which retains 70 percent of its strength after 500 hours of exposure to sunlight. The maximum opening of the net shall be 1 x 1 in. (25 x 25 mm).”

Add the following to Article 1081.15 of the Standard Specifications:

- “(i) Urethane Foam/Geotextile. Urethane foam/geotextile shall be triangular shaped having a minimum height of 10 in. (250 mm) in the center with equal sides and a minimum 20 in. (500 mm) base. The triangular shaped inner material shall be a low density urethane foam. The outer cover shall be a woven geotextile fabric placed around the inner material and allowed to extend beyond both sides of the triangle a minimum of 18 in. (450 mm).

(1) The geotextile shall meet the following properties:

| Property                               | Value           | Test Method |
|--|-----------------|-------------|
| Grab Tensile Strength<br>lb (N) (min.) | 124 (550) min.  | ASTM D 4632 |
| Grab Elongation @ Brake<br>(percent)   | 15 min.         | ASTM D 4632 |
| Burst Strength psi (kPa)               | 280 (1930) min. | ASTM D 3786 |
| AOS (Sieve No.)                        | 30 min.         | ASTM D 4751 |
| UV Resistance (500<br>hours) (percent) | 80 min.         | ASTM D 4355 |

(2) The urethane foam shall meet the following properties:

| Property                         | Value                  | Test Method  |
|----------------------------------|------------------------|--------------|
| Density lb/cu ft (kg/cu m)       | 1.0 ± 0.1 (16.0 ± 1.6) | ASTM D 3574  |
| Tensile Strength psi (kPa)       | 10 (70) min.           | ASTM D 3574  |
| Elongation (percent)             | 125 min.               | ASTM D 3574  |
| Tear Resistance lb/in.<br>(N/mm) | 1.25 (0.22)            | ASTM D 3574" |



63007

630.07

Designer Note: Add this special to any project using Highway Standard 630106. This design will allow guardrail to span small structures that would otherwise require posts to be connected to the structure.

### **LONG-SPAN GUARDRAIL OVER CULVERT (BDE)**

Effective: January 1, 2011

Add the following after the fifth paragraph of Article 630.07 of the Standard Specifications:

“Long-span guardrail over culvert will be measured for payment in feet (meters).”

Add the following after the sixth paragraph of Article 630.08 of the Standard Specifications:

“Steel plate beam guardrail incorporating long-span spacing will be paid for at the contract unit price per foot (meter) for LONG-SPAN GUARDRAIL OVER CULVERT, 12 FT 6 IN (3.8 M) SPAN; LONG-SPAN GUARDRAIL OVER CULVERT, 18 FT 9 IN (5.7 M) SPAN; or LONG-SPAN GUARDRAIL OVER CULVERT, 25 FT (7.6 M) SPAN.”

Designer Note: Insert into larger contracts where a field office may be shared by multiple Resident Engineers or a large staff will be required.

### **ENGINEER'S FIELD OFFICE TYPE A (BDE)**

Effective: April 1, 2007

Revised: January 1, 2011

Revise Article 670.02 of the Standard Specifications to read:

**“670.02 Engineer's Field Office Type A.** Type A field offices shall have a minimum ceiling height of 7 ft (2 m) and a minimum floor space 450 sq ft (42 sq m). The office shall be provided with sufficient heat, natural and artificial light, and air conditioning.

The office shall have an electronic security system that will respond to any breach of exterior doors and windows. Doors and windows shall be equipped with locks. Doors shall also be equipped with dead bolt locks or other secondary locking device.

Windows shall be equipped with exterior screens to allow adequate ventilation. All windows shall be equipped with interior shades, curtains, or blinds. Adequate all-weather parking space shall be available to accommodate a minimum of ten vehicles.

Suitable on-site sanitary facilities meeting Federal, State, and local health department requirements shall be provided, maintained clean and in good working condition, and shall be stocked with lavatory and sanitary supplies at all times.

Sanitary facilities shall include hot and cold potable running water, lavatory and toilet as an integral part of the office where available. Solid waste disposal consisting of two waste baskets and an outside trash container of sufficient size to accommodate a weekly provided pick-up service.

In addition, the following furniture and equipment shall be furnished.

- (a) Four desks with minimum working surface 42 x 30 in. (1.1 m x 750 mm) each and five non-folding chairs with upholstered seats and backs.
- (b) One desk with minimum working surface 48 x 72 in. (1.2 x 1.8 m) with height adjustment of 23 to 30 in. (585 to 750 mm).
- (c) One four-post drafting table with minimum top size of 37 1/2 x 48 in. (950 mm x 1.2 m). The top shall be basswood or equivalent and capable of being tilted through an angle of 50 degrees. An adjustable height drafting stool with upholstered seat and back shall also be provided.
- (d) Two free standing four drawer legal size file cabinet with lock and an underwriters' laboratories insulated file device 350 degrees one hour rating.
- (e) One 6 ft (1.8 m) folding table with six folding chairs.

- (f) One equipment cabinet of minimum inside dimension of 44 in. (1100 mm) high x 24 in. (600 mm) wide x 30 in. (750 mm) deep with lock. The walls shall be of steel with a 3/32 in. (2 mm) minimum thickness with concealed hinges and enclosed lock constructed in such a manner as to prevent entry by force. The cabinet assembly shall be permanently attached to a structural element of the field office in a manner to prevent theft of the entire cabinet.
- (g) One refrigerator with a minimum size of 16 cu ft (0.45 cu m) with a freezer unit.
- (h) One electric desk type tape printing calculator.
- (i) A minimum of two communication paths. The configuration shall include:
  - (1) Internet Connection. An internet service connection using telephone DSL, cable broadband, or CDMA wireless technology. Additionally, an 802.11g/N wireless router shall be provided, which will allow connection by the Engineer and up to four Department staff.
  - (2) Telephone Lines. Three separate telephone lines.
- (j) One plain paper copy machine capable of reproducing prints up to 11 x 17 in. (280 x 432 mm) with an automatic feed tray capable of storing 30 sheets of paper. Letter size and 11 x 17 in. (280 x 432 mm) paper shall be provided.
- (k) One plain paper fax machine with paper.
- (l) Two telephones, with touch tone, where available, and a digital telephone answering machine, for exclusive use by the Engineer.
- (m) One electric water cooler dispenser.
- (n) One first-aid cabinet fully equipped.
- (o) One microwave oven, 1 cu ft (0.03 cu m) minimum capacity.
- (p) One fire-proof safe, 0.5 cu ft (0.01 cu m) minimum capacity.
- (q) One electric paper shredder.
- (r) One post mounted rain gauge, located on the project site for each 5 miles (8 km) of project length."

Revise the first sentence of the first paragraph of Article 670.07 of the Standard Specifications to read:

"The building or buildings fully equipped as specified will be paid for on a monthly basis until the building or buildings are released by the Engineer."

Revise the last sentence of the first paragraph of Article 670.07 of the Standard Specifications to read:

“This price shall include all utility costs and shall reflect the salvage value of the building or buildings, equipment, and furniture which become the property of the Contractor after release by the Engineer, except that the Department will pay that portion of the monthly long distance and monthly local telephone bills that, when combined, exceed \$150.”

Designer Note: Insert into smaller contracts where a large field office is not necessary and the office won't be shared with other Resident Engineers. Internet access is provided in this special.

### **ENGINEER'S FIELD OFFICE TYPE B (BDE)**

Effective: August 1, 2008

Revised: January 1, 2011

Revise Article 670.04 of the Standard Specifications to read:

**670.04 Engineer's Field Office Type B.** Type B field offices shall have a minimum ceiling height of 7 ft (2 m) and a minimum floor space of 380 sq ft (35 sq m). The office shall be provided with sufficient heat, natural and artificial light, and air conditioning. Doors and windows shall be equipped with locks approved by the Engineer.

Adequate all weather parking shall be available to accommodate a minimum of six vehicles.

In addition, the following equipment and furniture meeting the approval of the Engineer shall be furnished.

- (a) Four desks with minimum working surface 42 x 30 in. (1.1 m x 750 mm) each and four non-folding chair with upholstered seat and back.
- (b) One free standing four drawer legal size file cabinet with lock and an underwriters' laboratories insulated file device 350 degrees one hour rating.
- (c) One four-post drafting table with minimum top size of 37 1/2 x 48 in. (950 mm x 1.2 m). The top shall be basswood or equivalent and capable of being tilted through an angle of 50 degrees. An adjustable height drafting stool with upholstered seat and back shall also be provided.
- (d) Two folding chairs.
- (e) One equipment cabinet of minimum inside dimension of 44 in. (1100 mm) high x 24 in. (600 mm) wide x 30 in. (750 mm) deep with lock. The walls shall be of steel with a 3/32 in. (2 mm) minimum thickness with concealed hinges and enclosed lock constructed to prevent entry by force. The cabinet assembly shall be permanently attached to a structural element of the field office to prevent theft of the entire cabinet.
- (f) A minimum of two communication paths. The configuration shall include:
  - (1) Internet Connection. An internet service connection using telephone DSL, cable broadband, or CDMA wireless technology. Additionally, an 802.11g/N wireless router shall be provided, which will allow connection by the Engineer and up to four Department staff.
  - (2) Telephone Lines. Two separate telephone lines.
- (g) One electric desk type printing calculator.

- (h) One first-aid cabinet fully equipped.
- (i) One plain paper copy machine capable of reproducing prints up to 8 1/2 x 11 in. (215 x 280 mm) with an automatic feed tray capable of storing 30 sheets of paper.
- (j) One plain paper fax machine with paper.
- (k) One telephone, with touch tone, where available, and a digital telephone answering machine, for exclusive use by the Engineer.
- (l) A portable toilet meeting Federal, State, and local health department requirements stocked with lavatory and sanitary supplies at all times.
- (m) One electric water cooler dispenser.
- (n) One refrigerator with a minimum size of 16 cu ft (0.45 cu m) with a freezer unit.”

Revise the first sentence of the first paragraph of Article 670.07 of the Standard Specifications to read:

“The building or buildings fully equipped as specified will be paid for on a monthly basis until the building or buildings are released by the Engineer.”

Revise the last sentence of the first paragraph of Article 670.07 of the Standard Specifications to read:

“This price shall include all utility costs and shall reflect the salvage value of the building or buildings, equipment, and furniture which become the property of the Contractor after release by the Engineer, except that the Department will pay that portion of the monthly long distance and monthly local telephone bills that, when combined, exceed \$150.”

70110

701.10

Designer Note: Insert into all contracts.

### **TRAFFIC CONTROL SURVEILLANCE (BDE)**

Effective: January 1, 2011

Revise the first sentence of the first paragraph of Article 701.10 of the Standard Specifications to read:

“When open holes, broken pavement, trenches over 3 in. (75 mm) deep and 4 in. (100 mm) wide or other hazards are present within 8 ft (2.4 m) of the edge of an open lane, the Contractor shall furnish traffic control surveillance during all hours when the Contractor is not engaged in construction operations.”

70114

701.14

Designer Note: Insert into all contracts.

**POST MOUNTING OF SIGNS (BDE)**

Effective: January 1, 2011

Revise the second paragraph of Article 701.14 of the Standard Specifications to read:

“Post mounted signs shall be a breakaway design. The sign shall be within five degrees of vertical. Two posts shall be used for signs greater than 16 sq ft (1.5 sq m) in area or where the height between the sign and the ground exceeds 7 ft (2.1 m).”



70119

701.19

Designer Note: Insert into contracts using Highway Standard 701427.

**LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS ≤ 40 MPH (BDE)**

Effective: January 1, 2011

Revise the first sentence of Article 701.19(c) of the Standard Specifications to read:

“Traffic control and protection required under Standards 701201, 701206, 701306, 701326, 701336, 701406, 701421, 701427, 701501, 701502, 701601, 701602, 701606, 701701 and 701801 will be measured for payment on a lump sum basis.”

Add the following to the first paragraph of Article 701.20(b) of the Standard Specifications:

“TRAFFIC CONTROL AND PROTECTION STANDARD 701427;”

Designer Note: Insert into all Hot-Mix Asphalt contracts.

### FRICITION AGGREGATE (BDE)

Effective: January 1, 2011

Revise Article 1004.01(a)(4) of the Standard Specifications to read:

“(4) Crushed Stone. Crushed stone shall be the angular fragments resulting from crushing undisturbed, consolidated deposits of rock by mechanical means. Crushed stone shall be divided into the following, when specified.

- a. Carbonate Crushed Stone. Carbonate crushed stone shall be either dolomite or limestone. Dolomite shall contain 11.0 percent or more magnesium oxide (MgO). Limestone shall contain less than 11.0 percent magnesium oxide (MgO).
- b. Crystalline Crushed Stone. Crystalline crushed stone shall be either metamorphic or igneous stone, including but is not limited to, quartzite, granite, rhyolite and diabase.”

Revise Article 1004.03(a) of the Standard Specifications to read:

“**1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA).** The aggregate shall be according to Article 1004.01 and the following.

(a) Description. The coarse aggregate for HMA shall be according to the following table.

| Use              | Mixture                               | Aggregates Allowed  |
|------------------|---------------------------------------|---|
| Class A          | Seal or Cover                         | <u>Allowed Alone or in Combination:</u><br>Gravel<br>Crushed Gravel<br>Carbonate Crushed Stone<br>Crystalline Crushed Stone<br>Crushed Sandstone<br>Crushed Slag (ACBF)<br>Crushed Steel Slag<br>Crushed Concrete               |
| HMA<br>All Other | Stabilized<br>Subbase or<br>Shoulders | <u>Allowed Alone or in Combination:</u><br>Gravel<br>Crushed Gravel<br>Carbonate Crushed Stone<br>Crystalline Crushed Stone<br>Crushed Sandstone<br>Crushed Slag (ACBF)<br>Crushed Steel Slag <sup>1/</sup><br>Crushed Concrete |

| Use                          | Mixture   | Aggregates Allowed   |   |
|------------------------------|---|--|---|
| HMA<br>High ESAL<br>Low ESAL | Binder<br>IL-25.0, IL-19.0,<br>or IL-19.0L<br><br>SMA Binder  | <u>Allowed Alone or in Combination:</u><br>Crushed Gravel<br>Carbonate Crushed Stone <sup>2/</sup><br>Crystalline Crushed Stone<br>Crushed Sandstone<br>Crushed Slag (ACBF)<br>Crushed Concrete <sup>3/</sup>  |   |
| HMA<br>High ESAL<br>Low ESAL | C Surface and<br>Leveling Binder<br>IL-12.5,IL-9.5,<br>or IL-9.5L<br><br>SMA<br>Ndesign 50<br>Surface | <u>Allowed Alone or in Combination:</u><br>Crushed Gravel<br>Carbonate Crushed Stone <sup>2/</sup><br>Crystalline Crushed Stone<br>Crushed Sandstone<br>Crushed Slag (ACBF)<br>Crushed Steel Slag <sup>4/</sup><br>Crushed Concrete <sup>3/</sup>  |   |
| HMA<br>High ESAL             | D Surface and<br>Leveling Binder<br>IL-12.5 or<br>IL-9.5<br><br>SMA<br>Ndesign 50<br>Surface          | <u>Allowed Alone or in Combination:</u><br>Crushed Gravel<br>Carbonate Crushed Stone (other than<br>Limestone) <sup>2/</sup><br>Crystalline Crushed Stone<br>Crushed Sandstone<br>Crushed Slag (ACBF) <sup>5/</sup><br>Crushed Steel Slag <sup>4/ 5/</sup><br>Crushed Concrete <sup>3/</sup> |   |
|                              |   | <u>Other Combinations Allowed:</u>   |   |
|                              |   | <i>Up to...</i>  | <i>With...</i>                                    |
|                              |   | 25% Limestone  | Dolomite  |
|                              |   | 50% Limestone  | Any Mixture D<br>aggregate other<br>than Dolomite |
| 75% Limestone                | Crushed Slag<br>(ACBF) <sup>5/</sup> or<br>Crushed<br>Sandstone                                       |  |   |
| HMA<br>High ESAL             | E Surface<br>IL-12.5 or<br>IL-9.5<br><br>SMA<br>Ndesign 80<br>Surface                                 | <u>Allowed Alone or in Combination:</u><br>Crushed Gravel<br>Crystalline Crushed Stone<br>Crushed Sandstone<br>Crushed Slag (ACBF) <sup>5/</sup><br>Crushed Steel Slag <sup>5/</sup><br>Crushed Concrete <sup>3/</sup><br><br>No Limestone.  |   |

| Use  | Mixture  | Aggregates Allowed   |                 |                |  |  |                            |  |  |   |
|--|--|--|-----------------|----------------|--|--|----------------------------|--|--|---|
|  |  | <u>Other Combinations Allowed:</u><br><table border="1"> <tr> <td><i>Up to...</i></td> <td><i>With...</i></td> </tr> <tr> <td>50% Dolomite<sup>2/</sup></td> <td>Any Mixture E aggregate</td> </tr> <tr> <td>75% Dolomite<sup>2/</sup></td> <td>Crushed Sandstone, Crushed Slag (ACBF)<sup>5/</sup>, Crushed Steel Slag<sup>5/</sup>, or Crystalline Crushed Stone</td> </tr> <tr> <td>75% Crushed Gravel or Crushed Concrete<sup>3/</sup></td> <td>Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF)<sup>5/</sup>, or Crushed Steel Slag<sup>5/</sup></td> </tr> </table> | <i>Up to...</i> | <i>With...</i> | 50% Dolomite <sup>2/</sup>   | Any Mixture E aggregate  | 75% Dolomite <sup>2/</sup> | Crushed Sandstone, Crushed Slag (ACBF) <sup>5/</sup> , Crushed Steel Slag <sup>5/</sup> , or Crystalline Crushed Stone | 75% Crushed Gravel or Crushed Concrete <sup>3/</sup> | Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF) <sup>5/</sup> , or Crushed Steel Slag <sup>5/</sup> |
| <i>Up to...</i>  | <i>With...</i>   |  |                 |                |  |  |                            |  |  |   |
| 50% Dolomite <sup>2/</sup>   | Any Mixture E aggregate  |  |                 |                |  |  |                            |  |  |   |
| 75% Dolomite <sup>2/</sup>   | Crushed Sandstone, Crushed Slag (ACBF) <sup>5/</sup> , Crushed Steel Slag <sup>5/</sup> , or Crystalline Crushed Stone |  |                 |                |  |  |                            |  |  |   |
| 75% Crushed Gravel or Crushed Concrete <sup>3/</sup>                           | Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF) <sup>5/</sup> , or Crushed Steel Slag <sup>5/</sup>  |  |                 |                |  |  |                            |  |  |   |
| HMA High ESAL  | F Surface IL-12.5 or IL-9.5<br><br>SMA Ndesign 80 Surface  | <u>Allowed Alone or in Combination:</u><br>Crystalline Crushed Stone<br>Crushed Sandstone<br>Crushed Slag (ACBF) <sup>5/</sup><br>Crushed Steel Slag <sup>5/</sup><br>No Limestone.<br><br><u>Other Combinations Allowed:</u><br><table border="1"> <tr> <td><i>Up to...</i></td> <td><i>With...</i></td> </tr> <tr> <td>50% Crushed Gravel, Crushed Concrete<sup>3/</sup>, or Dolomite<sup>2/</sup></td> <td>Crushed Sandstone, Crushed Slag (ACBF)<sup>5/</sup>, Crushed Steel Slag<sup>5/</sup>, or Crystalline Crushed Stone</td> </tr> </table>                                       | <i>Up to...</i> | <i>With...</i> | 50% Crushed Gravel, Crushed Concrete <sup>3/</sup> , or Dolomite <sup>2/</sup> | Crushed Sandstone, Crushed Slag (ACBF) <sup>5/</sup> , Crushed Steel Slag <sup>5/</sup> , or Crystalline Crushed Stone |                            |  |  |   |
| <i>Up to...</i>  | <i>With...</i>   |  |                 |                |  |  |                            |  |  |   |
| 50% Crushed Gravel, Crushed Concrete <sup>3/</sup> , or Dolomite <sup>2/</sup> | Crushed Sandstone, Crushed Slag (ACBF) <sup>5/</sup> , Crushed Steel Slag <sup>5/</sup> , or Crystalline Crushed Stone |  |                 |                |  |  |                            |  |  |   |

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone shall not be used in SMA Ndesign 80. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as leveling binder.
- 5/ When either slag is used, the blend percentages listed shall be by volume."

103100

1031.00

Designer Note: Insert into all projects with Hot-Mix Asphalt (HMA). It provides the following:

1. Allow a new RAP stockpile referred to as conglomerate 3/8 which requires conglomerate RAP to be processed to minus 3/8 inch.
2. Allow conglomerate 3/8 RAP to be used in additional applications at higher rates as stated in the table below.
3. Allow RAP to be used in Polymer HMA.
4. Require HMA plants to have automated recordation when producing HMA mixes containing RAP.
5. Require HMA plants to utilize Positive Dust Control systems when producing mixes containing conglomerate 3/8 RAP.

### **RECLAIMED ASPHALT PAVEMENT (RAP) (BDE)**

Effective: January 1, 2007

Revised: January 1, 2011

In Article 1030.02(g), delete the last sentence of the first paragraph in (Note 2).

Revise Section 1031 of the Standard Specifications to read:

#### **“SECTION 1031. RECLAIMED ASPHALT PAVEMENT”**

**1031.01 Description.** Reclaimed asphalt pavement (RAP) is reclaimed asphalt pavement resulting from cold milling or crushing of an existing dense graded hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.

**1031.02 Stockpiles.** The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type as listed below (i.e. “Homogeneous Surface”).

Prior to milling, the Contractor shall request the District to provide verification of the quality of the RAP to clarify appropriate stockpile.

- (a) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. All FRAP shall be fractionated prior to testing by screening into a minimum of two size fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass one sieve size larger than the maximum sieve size specified for the mix the RAP will be used in.

- (b) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogenous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.
- (c) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (d) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, Superpave (High or Low ESAL), HMA (High or Low ESAL), or equivalent mixtures. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (e) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP/FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

**1031.03 Testing.** When used in HMA, the RAP/FRAP shall be sampled and tested either during or after stockpiling.

For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

**Evaluation of Test Results.** All of the extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable  $G_{mm}$ . Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

| Parameter         | FRAP/Homogeneous /Conglomerate | Conglomerate "D" Quality |
|-------------------|--------------------------------|--------------------------|
| 1 in. (25 mm)     |                                | ± 5 %                    |
| 1/2 in. (12.5 mm) | ± 8 %                          | ± 15 %                   |
| No. 4 (4.75 mm)   | ± 6 %                          | ± 13 %                   |
| No. 8 (2.36 mm)   | ± 5 %                          |                          |
| No. 16 (1.18 mm)  |                                | ± 15 %                   |
| No. 30 (600 μm)   | ± 5 %                          |                          |
| No. 200 (75 μm)   | ± 2.0 %                        | ± 4.0 %                  |
| Asphalt Binder    | ± 0.4 % <sup>1/</sup>          | ± 0.5 %                  |
| G <sub>mm</sub>   | ± 0.03                         |                          |

1/ The tolerance for FRAP shall be ± 0.3 %.

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt binder content test results fall outside the appropriate tolerances, the RAP/FRAP shall not be used in HMA unless the RAP/FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

#### **1031.04 Quality Designation of Aggregate in RAP/FRAP.**

- (a) The aggregate quality of the RAP for homogenous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.
- (1) RAP from Class I, Superpave (High ESAL)/HMA (High ESAL), or HMA (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
  - (2) RAP from Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
  - (3) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
  - (4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.
- (b) The aggregate quality of FRAP shall be determined as follows.
- (1) If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer. If the quality is not known, the quality shall be determined according to Article 1031.04(b)(2).

(2) Fractionated stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5000 tons (4500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant prequalified by the Department for the specified testing. The consultant shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent will be applied for all HMA applications.”

**1031.05 Use of RAP/FRAP in HMA.** The use of RAP/FRAP shall be a Contractor’s option when constructing HMA in all contracts. The use of RAP/FRAP in HMA shall be as follows.

- (a) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (b) Steel Slag Stockpiles. RAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) surface mixtures only.
- (c) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be FRAP or homogeneous in which the coarse aggregate is Class B quality or better.
- (d) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP/FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP, homogeneous, or conglomerate, in which the coarse aggregate is Class C quality or better.
- (e) Use in Shoulders and Subbase. RAP/FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, homogeneous, conglomerate, or conglomerate DQ.
- (f) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in the table below for a given N Design.

Max RAP Percentage

| HMA Mixtures <sup>1/, 3/</sup> | Maximum % RAP         |                        |         |                  |
|--------------------------------|-----------------------|------------------------|---------|------------------|
|                                | Ndesign               | Binder/Leveling Binder | Surface | Polymer Modified |
| 30                             | 30                    | 30                     | 10      | 10               |
| 50                             | 25                    | 15                     | 10      | 10               |
| 70                             | 15 / 25 <sup>2/</sup> | 10 / 15 <sup>2/</sup>  | 10      | 10               |
| 90                             | 10                    | 10                     | 10      | 10               |
| 105                            | 10                    | 10                     | 10      | 10               |

1/ For HMA shoulder and stabilized subbase (HMA) N-30, the amount of RAP shall not exceed 50% of the mixture.

2/ Value of Max % RAP if homogeneous RAP stockpile of IL-9.5 RAP is utilized.



- 3/ When RAP exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275°F (135 °C) the grades shall be reduced as follows:

Overlays:

When WMA contains between 20 and 30 percent RAP the high temperature shall be reduced by one grade (i.e. 25 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-22). When WMA contains 30 percent or more RAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

Full Depth:

When WMA contains between 20 and 30 percent RAP, the low temperature shall be reduced by one grade (i.e. 25 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG64-28). When the WMA contains 30 percent or more RAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

- (g) When the Contractor chooses the FRAP option, the percentage of FRAP shall not exceed the amounts indicated in the table below for a given N Design.

Max FRAP Percentage

| HMA Mixtures <sup>1/, 2/</sup> | Maximum % FRAP         |         |                  |
|--------------------------------|------------------------|---------|------------------|
| Ndesign                        | Binder/Leveling Binder | Surface | Polymer Modified |
| 30                             | 35                     | 35      | 10               |
| 50                             | 30                     | 25      | 10               |
| 70                             | 25                     | 20      | 10               |
| 90                             | 20                     | 15      | 10               |
| 105                            | 10                     | 10      | 10               |

- 1/ For HMA shoulder and stabilized subbase (HMA) N30, the amount of FRAP shall not exceed 50 percent of the mixture.
- 2/ When FRAP exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275°F (135 °C) the grades shall be reduced as follows:

Overlays:

When WMA contains between 20 and 30 percent FRAP the high temperature shall be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-22). When WMA contains 30 percent or more FRAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

Full Depth:

When WMA contains between 20 and 30 percent FRAP, the low temperature shall be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG64-28). When the WMA contains 30 percent or more FRAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

**1031.06 HMA Mix Designs.** At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP material meeting the above detailed requirements.

RAP/FRAP designs shall be submitted for volumetric verification. If additional RAP/FRAP stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP/FRAP stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP stockpiles may be used in the original mix design at the percent previously verified.

**1031.07 HMA Production.** The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAP/FRAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP/FRAP and either switch to the virgin aggregate design or submit a new RAP/FRAP design.

HMA plants utilizing RAP/FRAP shall be capable of automatically recording and printing the following information.

(a) Dryer Drum Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (4) Accumulated dry weight of RAP/FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- (6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- (7) Residual asphalt binder in the RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.

- (8) Aggregate and RAP/FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP/FRAP are printed in wet condition.)

(b) Batch Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- (4) Mineral filler weight to the nearest pound (kilogram).
- (5) RAP/FRAP weight to the nearest pound (kilogram).
- (6) Virgin asphalt binder weight to the nearest pound (kilogram).
- (7) Residual asphalt binder in the RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

**1031.08 RAP in Aggregate Surface Course and Aggregate Shoulders.** The use of RAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply.
- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

**Designer Note:** Insert into contracts using Highway Standards 701321, 701402, or 701423 at the district's discretion.

Use of this special provision should be limited to cases where temporary concrete barrier is not feasible due to lane closure time restrictions that require the barrier to be deployed or removed on a daily basis. Use of this barrier system should also be limited to work areas where larger barrier deflection from an impact event is acceptable. This BDE special was formerly named "Movable Traffic Barrier System (BDE)."

### **MOVABLE TRAFFIC BARRIER (BDE)**

Effective: January 1, 2010

Revised: January 1, 2011

Description. This work shall consist of furnishing, installing, maintaining, relocating, and removing a movable traffic barrier at locations shown on the plans.

#### Materials.

Add the following to Article 1106.02 of the Standard Specifications:

- "(l) Movable Traffic Barrier. The movable traffic barrier shall meet the requirements of NCHRP Test Level 3 or AASHTO Manual for Assessing Safety Hardware (MASH) and be on the Department's approved list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing, the configuration of the barrier in that test, and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings. The barrier shall be capable of being moved on and off the roadway on a daily basis."

### CONSTRUCTION REQUIREMENTS

Add the following to Article 701.15 of the Standard Specifications:

- "(m) Movable Traffic Barrier. The movable traffic barrier shall be assembled and installed according to the manufacturer's specifications.

The approach end of the movable traffic barrier shall be protected with an impact attenuator which is capable of being moved with the movable barrier system.

When not in use, the device shall be stored longitudinally along the far edge of the shoulder or adjacent to concrete median barrier. The approach end shall be protected with the impact attenuator.

The barrier shall include nighttime delineation consisting of either barrier wall markers or corrugated retroreflective panels. The panels shall consist of one 6 x 36 in. (150 x 900 mm) panel per barrier unit and shall be yellow when on center line or left lane line and white when on edge line."

Method of Measurement.

Add the following to Article 701.19 of the Standard Specifications:

“(g) Movable traffic barrier will be measured for payment in feet (meters) in place, along the centerline of the movable barrier.”

Basis of Payment.

Add the following to Article 701.20 of the Standard Specifications:

“(k) Movable Traffic Barrier will be paid for at the contract unit price per foot (meter) for MOVABLE TRAFFIC BARRIER.

Movement of the barrier will not be paid for separately, but shall be included in the contract unit price per foot (meter) for MOVABLE TRAFFIC BARRIER.”

Designer Note: Use at the district's discretion when using Highway Standards 701321, 701402, or 701423.

Use of this special provision should be limited to cases where temporary concrete barrier is not feasible due to lane closure time restrictions that require the barrier to be deployed or removed within four hours. Use of this barrier system should also be limited to work areas where larger barrier deflection from an impact event is acceptable. This BDE special was formerly named "Longitudinal Temporary Traffic Barrier System (BDE)."

### **TEMPORARY WATER FILLED BARRIER (BDE)**

Effective: January 1, 2010

Revised: January 1, 2011

Description. This work shall consist of furnishing, installing, maintaining, relocating, and removing a temporary water filled barrier at locations shown on the plans.

#### Materials.

Add the following to Article 1106.02 of the Standard Specifications:

- "(k) Temporary Water Filled Barrier. The water filled barrier shall be a lightweight plastic shell designed to accept water ballast. The barrier shall meet the requirements of NCHRP Test Level 3 or AASHTO Manual for Assessing Safety Hardware (MASH) and be on the Department's approved list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined acceptance testing, the configuration of the barrier in that test, and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings."

### CONSTRUCTION REQUIREMENTS

Add the following to Article 701.15 of the Standard Specifications:

- "(l) Temporary Water Filled Barrier. The temporary water filled barrier shall be assembled, installed, and maintained according to the manufacturer's specifications and be capable of withstanding below freezing temperatures. The barrier shall be installed with orange and white alternating units.

When not in use, the device shall be stored longitudinally along the far edge of the shoulder or adjacent to concrete median barrier.

The approach end of the barrier shall be protected with an impact attenuator unless the barrier can serve as it's own crashworthy end treatment, as indicated in the Department's list of approved Temporary Longitudinal Traffic Barrier.

The barrier shall include nighttime delineation consisting of either barrier wall markers or corrugated retroreflective panels. The panels shall consist of one 6 x 36 in. (150 x 900 mm) panel per barrier unit and shall be yellow when on center line or left lane line and white when on edge line."

Method of Measurement.

Add the following to Article 701.19 of the Standard Specifications:

"(f) Temporary water filled barrier will be measured for payment in feet (meters) in place, along the centerline of the barrier.."

Basis of Payment.

Add the following to Article 701.20 of the Standard Specifications:

"(j) This work will be paid for at the contract unit price per foot (meter) for TEMPORARY WATER FILLED BARRIER.

Movement of the barrier will not be paid for separately, but shall be included in the contract unit price per foot (meter) for TEMPORARY WATER FILLED BARRIER."

# **District Special Provisions**

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## District Special Provisions

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District Special Provisions

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## District Special Provisions

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## District Special Provisions

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## **District Special Provisions**

Designer Note: Use in locations where a water main quality pipe is required for storm sewer such as adjacent to water lines.

## **STORM SEWER, (WATER MAIN REQUIREMENTS)**

Effective January 1, 2011

This work consists of constructing storm sewer to meet water main standards, as required by the IEPA or when otherwise specified. The work shall be performed in accordance with applicable parts of Section 550 of the Standard Specifications, applicable sections of the current edition of the IEPA Regulations (Title 35 of the Illinois Administrative Code, Subtitle F, Chapter II, Section 653.119), the applicable sections of the current edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and as herein specified.

This provision shall govern the installation of all storm sewers which do not meet IEPA criteria for separation distance between storm sewers and water mains. Separation criteria for storm sewers placed adjacent to water mains and water service lines are as follows:

- (1) Water mains and water service lines shall be located at least 10 feet (3.05 meters) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, or sewer service connections.
- (2) Water mains and water service lines may be located closer than 10 feet (3.05 meters) to a sewer line when:
  - (a) Local conditions prevent a lateral separation of 10 feet (3.05 meters); and
  - (b) The water main or water service invert is 18 inches (460 mm) above the crown of the sewer; and
  - (c) The water main or water service is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
- (3) A water main or water service shall be separated from a sewer so that its invert is a minimum of 18 inches (460 mm) above the crown of the drain or sewer whenever water mains or services cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main or water services located within 10 feet (3.05 meters) horizontally of any sewer or drain crossed.

When it is impossible to meet (1), (2) or (3) above, the storm sewer shall be constructed of concrete pressure pipe, slip-on or mechanical joints ductile iron pipe, or PVC pipe equivalent to water main standards of construction. Construction shall extend on each side of the crossing until the perpendicular distance from the water main or water service to the sewer or drain line is at least 10 feet (3.05 meters). Storm sewer meeting water main requirements shall be constructed of the following pipe materials:

### Concrete Pressure Pipe

Concrete pressure pipe shall conform to the latest ANSI/AWWA C300, C301, C302, or C303.

Joints shall conform to Article 41-2.07B of the "Standard Specifications for Water and Sewer Main Construction in Illinois."

### Ductile Iron Pipe

Ductile Iron pipe shall conform to ANSI A 21.51 (AWWA C151), class or thickness designed per ANSI A 21.50 (AWWA C150), tar (seal) coated and/or cement lined per ANSI A 21.4 (AWWA C104), with a mechanical or rubber ring (slip seal or push on) joints.

Joints for ductile iron pipe shall be in accordance with the following applicable specifications.

1. Mechanical Joints - AWWA C111 and C600
2. Push-On Joints - AWWA C111 and C600

### Plastic Pipe

Plastic pipe shall be marked with the manufacturer's name (or trademark); ASTM or AWWA specification; Schedule Number, Dimension Ratio (DR) Number or Standard Dimension Ratio (SDR) Number; and Cell Class. The pipe and fittings shall also meet NSF Standard 14, and bear the NSF seal of approval. Fittings shall be compatible with the type of pipe used. The plastic pipe options shall be in accordance with the following:

1. Polyvinyl Chloride (PVC) conforming to ASTM Standard D 1785. Schedule 80 is the minimum required for all pipe sizes, except when the pipe is to be threaded, and then it shall be Schedule 120. It shall be made from PVC compound meeting ASTM D 1784, Class 12454.
2. Polyvinyl Chloride (PVC) conforming to ASTM D 2241. A minimum wall thickness of SDR 26 is required for all pipe sizes (Note: The lower the SDR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.
3. Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM f 441. A minimum of Schedule 80 is required for all pipe sizes. Threaded joints are not allowed. It shall be made from CPVC compound meeting ASTM D 1784, Class 23447.
4. Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM F 442. A minimum wall thickness of SDR 26 is required for all pipe sizes (Note: The lower the SDR number, the higher the wall thickness and pressure rating). It shall be made from CPVC compound meeting ASTM D 1784.
5. Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C900. A minimum of wall thickness of DR 25 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.
6. Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C905. A minimum of wall thickness of DR 26 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

Joining of plastic pipe shall be by push-on joint, solvent welded joint, heat welded joint, flanged joint, or threaded joint, in accordance with the pipe manufacturer's instructions and industry standards. Special precautions shall be taken to insure clean, dry contact surfaces when making solvent or heat welded joints. Adequate setting time shall be allowed for maximum strength.

Elastomeric seals (gaskets) used for push-on joints shall comply with ASTM F477.

Solvent cement shall be specific for the plastic pipe material and shall comply with ASTM D 2564 (PVC) or ASTM F 493 (CPVC) and be approved by NSF.

For water-sewer line crossings only, storm sewer meeting water main requirements may also be constructed of reinforced concrete sewer pipe. The pipe shall conform to ASTM C 76 with a joint and rubber gasket meeting ASTM C 443. The joint shall meet the leakage performance test in ASTM C 443. The pipe manufacturer must demonstrate to Illinois Department of Transportation personnel that the joints pass the leakage performance test prior to installation of the pipe. The pipe class shall meet the requirements of Section 550 of the *Standard Specifications for Road and Bridge Construction*.

This work will be measured and paid for at the contract unit price per foot (meter) for STORM SEWER (WATER MAIN REQUIREMENTS) of the diameter specified.

78002

780.02

Designer Note: Use this special and corresponding pay items when installing grooved in pavement markings. Discuss with your Project Engineer and Ken Fitzpatrick to determine if grooved in markings are necessary. The grooved width shall be 1" wider than the pavement marking specified.

### **GROOVING FOR RECESSED PAVEMENT MARKING**

Effective January 1, 2011

This work shall consist of all materials, equipment, and labor necessary to groove the surface of the pavement to the prior to pavement marking placement. The depth of the groove shall be in accordance with the pavement marking manufacturer's recommendations.

This work will be paid for at the contract unit price for GROOVING FOR RECESSED PAVEMENT MARKING of the dimension specified.

# **District General Notes**

## **Alphabetic Index**



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| 204.00                         | ENVIRONMENTAL REVIEWS  | 204_00          |
| 250.01                         | SEEDING - SIDESLOPE RIPPING                                      | 250_01          |
| 351.00                         | AGGREGATE (DESCRIPTION), TYPE B                                  | 351_00          |
| 351.08                         | AGGREGATE FOR DRIVEWAY REPLACEMENT                               | 351_08          |
| 406.01                         | BRIDGE OVERLAY NOTIFICATION                                      | 406_01          |
| 406.03                         | PAVEMENT STATION NUMBERS & PLACEMENT                             | 406_03          |
| 406.05                         | POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)                    | 406_05          |
| 406.10                         | HOT-MIX ASPHALT MIXTURE REQUIREMENTS                             | 406_10          |
| 406.15a                        | MINIMUM VERTICAL CLEARANCE                                       | 406_15a         |

| <u>Standard Specifications</u> | <u>Item/Description</u>   | <u>Doc. No.</u> |
|--------------------------------|---|-----------------|
| 406.18                         | BUTT JOINT CUTTING TIME RESTRICTION   | 406_18          |
| 406.19                         | PAVING SURFACE COURSE   | 406_19          |
| 420.11                         | FINAL FINISH ON PC CONCRETE PAVEMENT, TYPE B  | 420_11          |
| 440.00                         | ASBESTOS BRIDGE WEARING SURFACE REMOVAL<br>PATCHING                                 | 440_00          |
| 440.02                         | SAW CUT – 18 " (450 MM) SHOULDER REMOVAL - IN-PLACE<br>WHEEL SAW GRINDING PERMITTED | 440_02          |
| 442.00                         | ADDITIONAL HOT-MIX ASPHALT OVERLAY IN LIEU OF<br>PATCHING                           | 442_00          |
| 443.04                         | REFLECTIVE CRACK CONTROL PLACEMENT  | 443_04          |
| 503.00                         | CROSSING EXISTING STRUCTURES WITH EQUIPMENT   | 503_00          |
| 515.00                         | NAME PLATE RELOCATION ON METAL PLATE BRIDGE RAIL                                    | 515_00          |
| 542.00                         | ORDERING LENGTH CONFIRMATION - DRAINAGE ITEMS                                       | 542_00          |
| 602.00                         | EXISTING DRAINAGE PIPES CONNECTED TO NEW<br>STRUCTURES                              | 602_00          |
| 603.00                         | TAPER REMOVAL AT FRAME & GRATES ADJUSTED BY<br>OTHERS                               | 603_00          |
| 606.00                         | MEDIAN AND ISLAND NOSES   | 606_00          |
| 606.04                         | SIGN POST HOLES   | 606_04          |
| 606.14                         | TRANSITION PAYMENT METHOD - NEW/OLD<br>CONSTRUCTION                                 | 606_14          |
| 665.01                         | WOVEN WIRE FENCE REPLACEMENT COMMITMENT   | 665_01          |
| 666.00                         | RIGHT-OF-WAY MARKERS  | 666_00          |
| 667.00                         | SETTING OF SECTION CORNER MONUMENTATION   | 667_00          |
| 670.00A                        | ENGINEERS FIELD OFFICE  | 670_00A         |
| 720.00                         | SIGNING   | 720_00          |
| 780.00                         | NO PASSING ZONE VERIFICATION  | 780_00          |
| 847.00                         | TRAFFIC COUNTER LOOP DETECTOR INSTALLATION  | 847_00          |

DISTRICT GENERAL NOTES

SECTION 400

| <u>Standard Specifications</u> | <u>Item/Description</u>  | <u>Doc. No.</u> |
|--------------------------------|--|-----------------|
| 406.01                         | BRIDGE OVERLAY NOTIFICATION  | 460_01          |
| 406.03                         | PAVEMENT STATION NUMBERS & PLACEMENT   | 406_03          |
| 406.05                         | POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)                                      | 406_05          |
| 406.10                         | HOT-MIX ASPHALT MIXTURE REQUIREMENTS   | 406_10          |
| 406.15A                        | MINIMUM VERTICAL CLEARANCE   | 406_15a         |
| 406.18                         | BUTT JOINT CUTTING TIME RESTRICTION  | 406_18          |
| 406.19                         | PAVING SURFACE COURSE  | 406_19          |
| 420.11                         | FINAL FINISH ON P.C. CONCRETE PAVEMENT, TYPE B                                     | 420_11          |
| 440.00                         | ASBESTOS BRIDGE WEARING SURFACE REMOVAL  | 440_00          |
| 440.02                         | SAW CUT - 450 mm (18") SHOULDER REMOVAL - IN-PLACE<br>WHEEL SAW GRINDING PERMITTED | 440_02          |
| 442.00                         | ADDITIONAL BITUMINOUS OVERLAY IN LIEU OF PATCHING                                  | 442_00          |
| 443.04                         | REFLECTIVE CRACK CONTROL PLACEMENT   | 443_04          |

DISTRICT GENERAL NOTES

SECTION 600

| <u>Standard Specifications</u> | <u>Item/Description</u>                             | <u>Doc. No.</u> |
|--------------------------------|---|-----------------|
| 602.00                         | EXISTING DRAINAGE PIPES CONNECTED TO NEW STRUCTURES | 602_00          |
| 603.00                         | TAPER REMOVAL FRAME & GRATES ADJUSTED BY OTHERS     | 603_00          |
| 606.00                         | MEDIAN AND ISLAND NOSES                             | 606_00          |
| 606.04                         | SIGN POST HOLES                                     | 606_04          |
| 606.14                         | TRANSITION PAYMENT METHOD - NEW/OLD CONSTRUCTION    | 606_14          |
| 665.01                         | WOVEN WIRE FENCE REPLACEMENT COMMITMENT             | 665_01          |
| 666.00                         | RIGHT-OF-WAY MARKERS                                | 666_00          |
| 667.00                         | SETTING OF SECTION CORNER MONUMENTATION             | 667_00          |
| 670.00A                        | ENGINEERS FIELD OFFICE                              | 670_00A         |

## **District General Notes**



## **Section 400**

Effective: January 1, 2011

Designer Note: Use on all HMA contracts.

**POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT) RATES**

| Surface Type             | Estimated Truck Application Rate | Residual Rate |
|--------------------------|----------------------------------|---------------|
| Milled (HMA or PCC)      | 0.08 gal/sy (0.00034 ton/sy)     | 0.04 gal/sy   |
| Existing Pavement        | 0.05 gal/sy (0.00022 ton/sy)     | 0.025 gal/sy  |
| Fog Coat (between lifts) | 0.05 gal/sy (0.00022 ton/sy)     | 0.025 gal/sy  |

Note: Estimated truck application rate is used for estimating quantities.

GN:406.10

Effective: 10-23-06

Revised: 01-01-11

Designer Note: This General Note should be added to all contract plans using QC/QA Hot-Mix Asphalt.

Consult the District Mixtures Control Engineer for guidance in choosing hot-mix asphalt mixture types to use for your specific project. See Materials mixture requirements.

### HOT-MIX ASPHALT MIXTURE REQUIREMENTS

|   |  |
|---|--|
| Mixture Use(s):                             |  |
| RAP % (Max):                                |  |
| AC/PG:                                      |  |
| Design Air Voids:                           |  |
| Mixture Composition:<br>(Gradation Mixture) |  |
| Friction Aggregate                          |  |

Notes: Individual lift thickness of each mix type will be no less than 3 times nominal maximum aggregate size and no more than 6 times nominal maximum aggregate size.

## **Section 600**

Effective: January 1, 2011

Designer Note: Use on all contracts where right-of-way markers are being installed.

### **RIGHT-OF-WAY MARKERS**

When installing right-of-way makers, care shall be taken to not disturb any existing property/right-of-way pins. If a property/right-of-way pin is found at the location of a proposed right-of-way marker, the marker shall be placed one (1) foot in front of the pin.