DESIGN UPDATE TRAINING

DRAINAGE STANDARDS & UPDATES

PRESENTED BY:

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WHAT'S NEW IN 2014?

• HYDROPLANING GUIDANCE
• DRAINAGE MANUAL 2014 UPDATES
  • JULY 2013: INDEX 205 → APPENDIX E
  • 2014: LRFD PIPE COVER
• CULVERT SERVICE LIFE ESTIMATOR
HYDROPLANING GUIDANCE

- HYDROPLANING ANALYSIS PROCEDURE
  - LOOKS AT LESSER EVENTS
  - INCLUDES DRIVER REACTION TO RAINFALL
    - SIMULATOR AND FLORIDA FREEWAYS
- HP COMPUTER PROGRAM
HYDROPLANING GUIDANCE

• BULLETIN RELEASE IN MID-FEBRUARY
  ✓ NEW PPM LANGUAGE
  ✓ NEW PPM TYPICAL SECTIONS

• WEBINAR

• EXPO

• HELP AVAILABLE ON CURRENT PROJECTS
DRAINAGE MANUAL 2014 UPDATES

• SECTION 1.5   DRAINAGE REPORT CONTENTS
• SECTION 3.7.3  JUDGMENT ON SHOULDER GUTTER
• SECTION 3.10  CLARIFICATION ON MH ACCESS
• SECTION 3.10.3 PRESSURE JOINTS > 5 PSI
APPENDIX E: LRFD IMPLEMENTATION

• MINIMUM PIPE COVER CONTROL POINT

• MINIMUM COVER INCREASED TO PREVENT PIPE PLACEMENT WITHIN ROADWAY BASE

• CHANGES TO MINIMUM AND MAXIMUM COVER FOR PIPES

LRFD WEBINAR WILL TAKE PLACE SOON
PIPE COVER FOR FLEXIBLE PIPE

- MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT
- MEASURED FROM TOP OF PIPE TO TOP OF RIGID PAVEMENT
PIPE COVER FOR RIGID PIPE

• MEASURED FROM TOP OF PIPE TO TOP OF FLEXIBLE PAVEMENT
• MEASURED FROM TOP OF PIPE TO BOTTOM OF RIGID PAVEMENT
MAXIMUM AND MINIMUM PIPE COVERS
SIGNIFICANT CHANGES

• MINIMUM COVER MAY ACTUALLY BE REDUCED DUE TO NEW CONTROL POINT

• MAXIMUM COVER OF RCP REDUCED

• MAXIMUM COVER OF PVC INCREASED

• MAXIMUM COVER OF POLYETHYLENE PIPE (HDPE) REDUCED SLIGHTLY

• POLYPROPYLENE PIPE (PP) WAS ADDED TO APPENDIX E

• METAL PIPES COVER REQUIREMENTS COMPARABLE TO STANDARD INDEX 205
CULVERT SERVICE LIFE ESTIMATOR

• CHECKS SERVICE LIFE OF OPTIONAL PIPES

• UPDATED TO MATCH NEW LRFD DATA
Thank you...Questions?