Appendix K Location Hydraulic Study Form

LOCATION HYDRAULIC STUDY FORM

Dist. 04 Co. SON Rte. 101 K.P. 45.0
EA 0A1000 Bridge No. 20-182
Floodplain Description:
POOL CREEK

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Highway 101 at this location is elevated above the flood plain

2. ADT: Current 75,000 Projected 144,000

3. Hydraulic Data: Base Flood Q_{100}= 1677 m^3 / s
WSE_{100}= 111.1 The flood of record, if greater than Q_{100}:
Q= N/A m^3 / s WSE= N/A
Overtopping flood Q= 0 m^3 / s WSE= _____
Are NFIP maps and studies available? YES ✓ NO_____

4. Is the highway location alternative within a regulatory floodway ?
YES_____ NO ✓

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A. Residences? NO ✓ YES_____
B. Other Bldgs? NO ✓ YES_____
C. Crops? NO ✓ YES_____
D. Natural and beneficial

FLOODPLAIN VALUES? NO_____ YES_____

6. Type of Traffic:

A. Emergency supply or evacuation route? NO_____ YES ✓
B. Emergency vehicle access? NO_____ YES ✓
C. Practicable detour available? NO_____ YES Information not available
D. School bus or mail route? NO_____ YES ✓

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A. Roadway $_____ Information not available
B Property $_____ Information not available
Total $_____ Information not available

9. Assessment of Level of Risk Low_____
Moderate____
High_____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer _____ Date 9/20/07
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible
Floodplain development? NO_____YES_____

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer Chris Okpalawgo Date 9/24/07
(Item numbers 1,2,6,8)

LOCATION HYDRAULIC STUDY FORM

Dist. 04 Co. SON Rte. 101 K.P. 47.4
EA 0A1000 Bridge No. 20-181
Floodplain Description:
PRUITT CREEK

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Highway 101 at this location is elevated above the flood plain

2. ADT: Current 75,000 Projected 144,000

3. Hydraulic Data: Base Flood Q_{100}= 1240 m^3 / s
WSE_{100}= 117.1 The flood of record, if greater than Q_{100}:
Q= N/A m^3 / s WSE= N/A
Overtopping flood Q= 0 m^3 / s WSE= _____
Are NFIP maps and studies available? YES ✓ NO _____

4. Is the highway location alternative within a regulatory floodway ?
YES _____ NO ✓

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A. Residences? NO ✓ YES _____
B. Other Bldgs? NO ✓ YES _____
C. Crops? NO ✓ YES _____
D. Natural and beneficial
FLOODPLAIN VALUES? NO ✓ YES _____

6. Type of Traffic:

A. Emergency supply or evacuation route? NO _____ YES ✓
B. Emergency vehicle access? NO _____ YES ✓
C. Practicable detour available? NO _____ YES Information not available
D. School bus or mail route? NO _____ YES ✓

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A. Roadway $_____

B Property $_____

Total $_____

9. Assessment of Level of Risk Low_____✓

Moderate____

High_____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer_____Date 9/20/07

(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible

Floodplain development? NO_____YES_____

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer Chris Olspalango Date 9/24/07

(Item numbers 1,2,6,8)

LOCATION HYDRAULIC STUDY FORM

Dist. 04 Co. SON Rte. 101 K.P. 34.8
EA 0A100D Bridge No. 20-180
Floodplain Description:
MARK WEST CREEK

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Highway 101 at this location is elevated above the floodplain

2. ADT: Current 76,000 Projected 141,000

3. Hydraulic Data: Base Flood Q_{100}= 12,430 m^3 / s
WSE_{100}= 142.5 The flood of record, if greater than Q_{100}:
Q= N/A m^3 / s WSE= N/A
Overtopping flood Q= 0 m^3 / s WSE= _____
Are NFIP maps and studies available? YES ✓ NO_____

4. Is the highway location alternative within a regulatory floodway ?
YES_____ NO ✓

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.

Potential Q_{100} backwater damages:

A. Residences? NO ✓ YES_____
B. Other Bldgs? NO ✓ YES_____
C. Crops? NO ✓ YES_____
D. Natural and beneficial
FLOODPLAIN VALUES? NO ✓ YES_____

6. Type of Traffic:

A. Emergency supply or evacuation route? NO_____ YES ✓
B. Emergency vehicle access? NO_____ YES ✓
C. Practicable detour available? NO_____ YES Information not available
D. School bus or mail route? NO_____ YES ✓

7. Estimated duration of traffic interruption for 100-year event hours: 0

8. Estimated value of Q_{100} flood damages (if any) – moderate risk level.

A. Roadway $_____ Information not available
B Property $_____ Information not available
Total $_____ Information not available

9. Assessment of Level of Risk Low ✓
Moderate____
High_____

For High Risk projects, during design phase, additional Design Study Risk Analysis May be necessary to determine design alternative.

Signature – Dist. Hydraulic Engineer [signature] Date 9/20/07
(Item numbers 3,4,5,7,9)

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible
Floodplain development? NO_____YES_____

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – Dist. Project Engineer Chris Okpalanso Date 9/24/07
(Item numbers 1,2,6,8)