# Texas Department of Transportation Book 2 - Technical Provisions 

North Tarrant Express Project Segments 3A and 3B Facility

Attachment 11-1 Approved Design Deviations

September 30, 2012
[THE ELECTRONIC VERSION OF THIS ATTACHMENT WILL CONTAIN THE DGN FILES.]

RFI \#14

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| 14 |  |  | October 15, 2009 |
| :---: | :---: | :---: | :---: |
| Alberto Gonzalez |  | To: | Matthew E. MacGregor |
| NTE Mobility Partners 2-4 |  |  | TxDOT, Dallas District |
| 7700 Chevy Chase Drive |  | Tel.: | 214.320 .4480 |
| Chase Park One, Suite 500C |  | Fax: | 214.320 .4488 |
| Austin, TX 78752 |  | E-Mail: | MMACGRE@dot.state.tx.us |
| Subject: Design Speeds Segment 3A |  |  |  |
| Attachments: None |  |  |  |
| Information / Clarification Request: |  |  |  |
| NTE Mobility Partners 2-4, LLC requests that TxDOT would clarify the design Speed, and Roadway Classification for the different Roadway components of NTE Segment 3A. The North Tarrant Express Segments 2-4 on Section 1.2.1 (a) (3) establishes that the Official Technical Provisions for Concession CDA is the Book 3 "Programmatic Technical Provisions", but such Technical provisions on Book 3 Chapter 11 do not specify the Geometric Design Criteria for the different Roadway components. For Segments 3A. The Developer will like to propose the following Design Speeds and Roadway Classification for TxDOT's Consideration: |  |  |  |
| Roadway | Roadway Classification | Design Speed | (mph) |
| Mainlanes | Urban Freeway or Tollway | 70 |  |
| Direct Connectors | Urban Freeway or Tollway | 50 |  |
| Frontage Roads | Low Speed Urban Street | 40 |  |
| Crossing Streets | Low Speed Urban Street | 30-40 | $\square$ |
| Please note that the above mentioned Design Speeds (Excluding Mainlanes Design Speed), and Roadway Classifications are the same than the NTE Segments $1 \mathrm{~A}, 1 \mathrm{~B}$, and 2 C . |  |  |  |

Response Needed by (date): Oct 19, 2009

## Response:

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
December 2, 2009

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 14: Design Speeds Segment 3A

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $12 / 02 / 09$ | 1 | RFI \#14 Response Form |
|  |  |  |  |
|  |  |  |  |
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|  |  |  |  |
|  |  |  |  |

## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752

## Request for Information

| RFI No.: | 14 |
| :---: | :---: |
| To: | Alberto Gonzalez |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |


| Date: | October 15, 2009 |
| :---: | :---: |
| From: | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: Design Speeds Segment 3A

Attachments: None

## Information / Clarification Request:

NTE Mobility Partners 2-4, LLC requests that TxDOT would clarify the design Speed, and Roadway Classification for the different Roadway components of NTE Segment 3A. The North Tarrant Express Segments 2-4 on Section 1.2.1 (a) (3) establishes that the Official Technical Provisions for Concession CDA is the Book 3 "Programmatic Technical Provisions", but such Technical provisions on Book 3 Chapter 11 do not specify the Geometric Design Criteria for the different Roadway components. For Segments 3A. The Developer will like to propose the following Design Speeds and Roadway Classification for TxDOT's Consideration:

| Roadway | Roadway Classification | Design Speed (mph) |
| :--- | :--- | :---: |
| Mainlanes | Urban Freeway or Tollway | 70 |
| Direct Connectors | Urban Freeway or Tollway | 50 |
| Frontage Roads | Low Speed Urban Street | 40 |
| Crossing Streets | Low Speed Urban Street | $30-40$ |

Please note that the above mentioned Design Speeds (Excluding Mainlanes Design Speed), and Roadway Classifications are the same than the NTE Segments 1A, 1B, and 2C.

Response Needed by (date): Oct 19, 2009

| Response: |
| :--- |
| Roadway facilities, design speeds and classifications shall be in accordance with the attached Draft MDP Geometric Design Criteria. |
| Ultimate design characteristics such as superelevation, horizontal curvature, vertical curvature, etc. shall meet or exceed the values |
| shown in the Draft MDP Design Criteria. |
| Design should maximize design criteria where possible to maximize safety and operation of the facilities. |

Responder Name: Matthew E. MacGregor, P.E. $\quad$ Response Date: December 2, 2009

Delivery Type:
$\square$ Overnight
$\square$ Mail
区 Other
E-mail

DRAFT
8/24/2011

| NORTH TARRANT EXPRESS MDP CDA: Geometric Design Criteria |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mainlanes (GP and ML) | Frontage Roads | Ramps/Direct Connectors | City Street | Collector-Distributor | Loop Ramps (35NB280) |
| General |  |  |  |  |  |  |
| Roadway Classification | Urban Freeway or Tollway | Low Speed Urban Street | Urban Freeway or Tollway | Low Speed Urban Street | Urban Collector | Low Speed Urban Street |
| Design Speed | Seg 2E: 60 mph <br> Seg 3A: 70 mph <br> Seg 3A (South End of Project): 55 mph <br> Seg 3A (SH 121): 55 mph <br> Seg 3A (Spur 280): 55 mph <br> Seg 3B/C: 70 mph | 40 mph | Seg 2E: 45 mph <br> Seg 3A: 50 mph <br> Seg 3B/C: 50 mph See Note 19. | Seg 2E: 30 mph Seg 3A: 35 mph <br> Seg 3 B/C: 35 mph | 40 mph | 25 mph |
| Stopping Sight Distance <br> See Note 2. | Seg 2E: 570' <br> Seg 3A: 730' See Note 12. <br> Seg 3A (South End of Project): 495' <br> Seg 3A (SH 121): 495' <br> Seg 3A (Spur 280): 495' See Note 15. <br> Seg 3B/C: 730' | 305' | Seg 2E: 360' <br> Seg 3A: 425' See Note 8, 10, 13, 14. <br> Seg 3B/C: 425' | Seg 2E: 200 Seg 3A: 250' <br> Seg 3B/C: 250 | 305' | 155' |
| Horizontal Alignment |  |  |  |  |  |  |
| Maximum Super-Elevation Rate | 6\% | N/A | 6\% | N/A | 6\% | 6\% |
| Minimum Radius of Curvature | Seg 2E: 1340' <br> Seg 3A: 2050' <br> Seg 3A (South End of Project): 1065' <br> Seg 3A (SH 121): 1065' <br> Seg 3A (Spur 280): 1065' <br> Seg 3B/C: 2050' | 675' | Seg 2E: 660' <br> Seg 3A: 835' <br> Seg 3B/C: 835' | Seg 2E: 300' Seg 3A: 465' <br> Seg 3B/C: 465 | 510' | 185' |
| Vertical Alignment |  |  |  |  |  |  |
| Minimum Grade | 0.35\% | 0.35\% | 0.35\% | 0.35\% | 0.35\% | 0.35\% |
| Maximum Grade | Seg 2E: 3\% <br> Seg 3A: 3\% <br> Seg 3A (South End of Project): 4\% <br> Seg 3A (SH 121): 4\% <br> Seg 3A (Spur 280): 4\% <br> Seg 3B/C: 3\% | 7.00\% | $4 \%$ <br> See Note 3. | 7.00\% | 5.00\% | 7.00\% |
| Vertical Curve Length Crest (min. K-Value) | Seg 2E: 151 <br> Seg 3A: 247 <br> Seg 3A (South End of Project): 114 <br> Seg 3A (SH 121): 114 <br> Seg 3A (Spur 280): 114 <br> Seg 3B/C: 247 | 44 | Seg 2E: 61 Seg 3A: 84 <br> Seg 3B/C: 84 | Seg 2E: 19 Seg3A: 29 <br> Seg 3B/C: 29 | 44 | 12 |
| Vertical Curve Length Sag (min. K-Value) | Seg 2E:136 <br> Seg 3A: 181 <br> Seg 3A (South End of Project): 115 <br> Seg 3A (SH 121): 115 <br> Seg 3A (Spur 280): 115 <br> Seg 3B/C: 181 | 64 | Seg 2E: 79 <br> Seg 3A: 96 <br> Seg 3B/C: 96 | Seg 2E: 37 <br> Seg 3A: 49 <br> Seg 3B/C: 49 | 64 | 26 |
| Cross-Section |  |  |  |  |  |  |
| Lane Width | 12' | 12' Lanes <br> 24' for U-Turns | $\begin{aligned} & \text { 14' (single lane) } \\ & 12 \text { ' per Lane (multi-lane) } \end{aligned}$ | 12' | 12' | $14^{\prime}$ |
| Shoulder Width (min.): |  |  |  |  |  |  |
| Inside Shoulder | $\begin{aligned} & \hline 4^{\prime} \text { (2 or less lanes) } \\ & 10^{\prime} \text { (3 or more lanes) } \end{aligned}$ | N/A (curbed) | 4' See Note 2. | N/A (curbed) | 4' (2 or less lanes) 10' (3 or more lanes) | 4' |
| Outside Shoulder | $10^{\prime}$ | N/A (curbed) | 8' See Note 2. | N/A (curbed) | 10' | $8^{\prime}$ |
| Curb Offset | N/A | 2' Outside 1' Inside | N/A | $2 '$ | $2 '$ | N/A |
| Cross-Slope (typical) |  |  |  |  |  |  |
| Managed Lanes: | 2.50\% |  |  |  |  |  |
| General Purpose Lanes: | 2.50\% | 2.00\% | 2.00\% | 2.00\% | 2.00\% | 2.00\% |

## DRAFT

8/24/2011


RFI \#15

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| 15 |  | Date: | October 15, 2009 |
| :---: | :---: | :---: | :---: |
| Alberto Gonzalez |  | To: | Matthew E. MacGregor |
| NTE Mobility Partners 2-4 |  |  | TxDOT, Dallas District |
| 7700 Chevy Chase Drive |  | Tel.: | 214.320 .4480 |
| Chase Park One, Suite 500C |  | Fax: | 214.320.4488 |
| Austin, TX 78752 |  | E-Mail: | MMACGRE@dot.state.tx.us |
| Subject: Design Speeds Segment 3B |  |  |  |
| Attachments: None |  |  |  |
| Information / Clarification Request: |  |  |  |
| NTE Mobility Partners 2-4, LLC requests that TxDOT would clarify the design Speed, and Roadway Classification for the different Roadway components of NTE Segment 3B. The North Tarrant Express Segments 2-4 on Section 1.2 .1 (a) (3) establishes that the Official Technical Provisions for Concession CDA is the Book 3 "Programmatic Technical Provisions", but such Technical provisions on Book 3 Chapter 11 do not specify the Geometric Design Criteria for the different Roadway components. For Segments 3B. The Developer will like to propose the following Design Speeds and Roadway Classification for TxDOT's Consideration: |  |  |  |
| Roadway | Roadway Classification | Design Speed | (mph) |
| Mainlanes | Urban Freeway or Tollway | 70 |  |
| Direct Connectors | Urban Freeway or Tollway | 50 |  |
| Frontage Roads | Low Speed Urban Street | 40 |  |
| Crossing Streets | Low Speed Urban Street | 30-40 | $\bigcirc$ |
| Please note that the above mentioned Design Speeds (Excluding Mainlanes Design Speed), and Roadway Classifications are the same than the NTE Segments 1A, 1B, and 2 C . |  |  |  |

Response Needed by (date): Oct 19, 2009

## Response:

$\qquad$ Response Date:

Overnight
$\square$ Mail
凹 Other

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

## Date:

December 2, 2009

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: RFI\# 15: Design Speeds Segment 3B

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $12 / 02 / 09$ | 1 | RFI \#15 Response Form |
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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacG | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.:From: | 15 |
| :---: | :---: |
|  | Alberto Gonzalez |
| From: | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |

Date: October 15, 2009

Subject: Design Speeds Segment 3B

Attachments: None

## Information / Clarification Request:

NTE Mobility Partners 2-4, LLC requests that TxDOT would clarify the design Speed, and Roadway Classification for the different Roadway components of NTE Segment 3B. The North Tarrant Express Segments 2-4 on Section 1.2 .1 (a) (3) establishes that the Official Technical Provisions for Concession CDA is the Book 3 "Programmatic Technical Provisions", but such Technical provisions on Book 3 Chapter 11 do not specify the Geometric Design Criteria for the different Roadway components. For Segments 3B. The Developer will like to propose the following Design Speeds and Roadway Classification for TxDOT's Consideration:

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| Crossing Streets | Low Speed Urban Street | $30-40$ |

Please note that the above mentioned Design Speeds (Excluding Mainlanes Design Speed), and Roadway Classifications are the same than the NTE Segments 1A, 1B, and 2C.

Response Needed by (date): Oct 19, 2009

## Response:

Roadway facilities, design speeds and classifications shall be in accordance with the attached Draft MDP Geometric Design Criteria.
Ultimate design characteristics such as superelevation, horizontal curvature, vertical curvature, etc. shall meet or exceed the values shown in the Draft MDP Design Criteria.

Design should maximize design criteria where possible to maximize safety and operation of the facilities.
Responder Name: Matthew E. MacGregor, P.E. Response Date: December 2, 2009

Delivery Type:
$\square$ Overnight
$\square$ Mail
区 Other
E-mail

DRAFT
8/24/2011

| NORTH TARRANT EXPRESS MDP CDA: Geometric Design Criteria |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mainlanes (GP and ML) | Frontage Roads | Ramps/Direct Connectors | City Street | Collector-Distributor | Loop Ramps (35NB280) |
| General |  |  |  |  |  |  |
| Roadway Classification | Urban Freeway or Tollway | Low Speed Urban Street | Urban Freeway or Tollway | Low Speed Urban Street | Urban Collector | Low Speed Urban Street |
| Design Speed | Seg 2E: 60 mph <br> Seg 3A: 70 mph <br> Seg 3A (South End of Project): 55 mph <br> Seg 3A (SH 121): 55 mph <br> Seg 3A (Spur 280): 55 mph <br> Seg 3B/C: 70 mph | 40 mph | Seg 2E: 45 mph <br> Seg 3A: 50 mph <br> Seg 3B/C: 50 mph See Note 19. | Seg 2E: 30 mph Seg 3A: 35 mph <br> Seg 3 B/C: 35 mph | 40 mph | 25 mph |
| Stopping Sight Distance <br> See Note 2. | Seg 2E: 570' <br> Seg 3A: 730' See Note 12. <br> Seg 3A (South End of Project): 495' <br> Seg 3A (SH 121): 495' <br> Seg 3A (Spur 280): 495' See Note 15. <br> Seg 3B/C: 730' | 305' | Seg 2E: 360' <br> Seg 3A: 425' See Note 8, 10, 13, 14. <br> Seg 3B/C: 425' | Seg 2E: 200 Seg 3A: 250' <br> Seg 3B/C: 250 | 305' | 155' |
| Horizontal Alignment |  |  |  |  |  |  |
| Maximum Super-Elevation Rate | 6\% | N/A | 6\% | N/A | 6\% | 6\% |
| Minimum Radius of Curvature | Seg 2E: 1340' <br> Seg 3A: 2050' <br> Seg 3A (South End of Project): 1065' <br> Seg 3A (SH 121): 1065' <br> Seg 3A (Spur 280): 1065' <br> Seg 3B/C: 2050' | 675' | Seg 2E: 660' <br> Seg 3A: 835' <br> Seg 3B/C: 835' | Seg 2E: 300' Seg 3A: 465' <br> Seg 3B/C: 465 | 510' | 185' |
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| Minimum Grade | 0.35\% | 0.35\% | 0.35\% | 0.35\% | 0.35\% | 0.35\% |
| Maximum Grade | Seg 2E: 3\% <br> Seg 3A: 3\% <br> Seg 3A (South End of Project): 4\% <br> Seg 3A (SH 121): 4\% <br> Seg 3A (Spur 280): 4\% <br> Seg 3B/C: 3\% | 7.00\% | $4 \%$ <br> See Note 3. | 7.00\% | 5.00\% | 7.00\% |
| Vertical Curve Length Crest (min. K-Value) | Seg 2E: 151 <br> Seg 3A: 247 <br> Seg 3A (South End of Project): 114 <br> Seg 3A (SH 121): 114 <br> Seg 3A (Spur 280): 114 <br> Seg 3B/C: 247 | 44 | Seg 2E: 61 Seg 3A: 84 <br> Seg 3B/C: 84 | Seg 2E: 19 Seg3A: 29 <br> Seg 3B/C: 29 | 44 | 12 |
| Vertical Curve Length Sag (min. K-Value) | Seg 2E:136 <br> Seg 3A: 181 <br> Seg 3A (South End of Project): 115 <br> Seg 3A (SH 121): 115 <br> Seg 3A (Spur 280): 115 <br> Seg 3B/C: 181 | 64 | Seg 2E: 79 <br> Seg 3A: 96 <br> Seg 3B/C: 96 | Seg 2E: 37 <br> Seg 3A: 49 <br> Seg 3B/C: 49 | 64 | 26 |
| Cross-Section |  |  |  |  |  |  |
| Lane Width | 12' | 12' Lanes <br> 24' for U-Turns | $\begin{aligned} & \text { 14' (single lane) } \\ & 12 \text { ' per Lane (multi-lane) } \end{aligned}$ | 12' | 12' | $14^{\prime}$ |
| Shoulder Width (min.): |  |  |  |  |  |  |
| Inside Shoulder | $\begin{aligned} & \hline 4^{\prime} \text { (2 or less lanes) } \\ & 10^{\prime} \text { (3 or more lanes) } \end{aligned}$ | N/A (curbed) | 4' See Note 2. | N/A (curbed) | 4' (2 or less lanes) 10' (3 or more lanes) | 4' |
| Outside Shoulder | $10^{\prime}$ | N/A (curbed) | 8' See Note 2. | N/A (curbed) | 10' | $8^{\prime}$ |
| Curb Offset | N/A | 2' Outside 1' Inside | N/A | $2 '$ | $2 '$ | N/A |
| Cross-Slope (typical) |  |  |  |  |  |  |
| Managed Lanes: | 2.50\% |  |  |  |  |  |
| General Purpose Lanes: | 2.50\% | 2.00\% | 2.00\% | 2.00\% | 2.00\% | 2.00\% |

## DRAFT

8/24/2011


RFI \#16

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information



## Response Needed by (date): Oct 19, 2009

| Response: |
| :--- |
|  |
|  |
|  |
|  |

$\qquad$ Response Date:
$\square$ Overnight
$\square$ Mail
凹 Other

## REQUEST FOR CLARIFICATIONS IN HORIZONTAL GEOMETRY

| Segment | Alignment name | Type | Description | From | To | Request |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2E | WR 500 | Connector | Connection between 2 FR | 85+26.00 | 8542+26.00 | Request from TxDOT that this Connector be considered a Frontage Road, and as such be classified as a Low Speed Urban Street with 40 mph Design Speed. This DC connects frontage road to frontage road. |
| 3A | STEADMAN | Connector | STEADMAN | 15+03.20 | 17+30.21 | Request from TxDOT to confirm that this alignment is a Low Speed Urban St |
| 3A | WEA-BEL | SH121 FRN Ramp | FR Connection SH121 NB\&SB | 10+00 | 31+24.17 | Request that this Ramp be considered a Frontage Road, and as such be classified as a Low Speed Urban Street with 40 mph Design Speed. This Ramp connects frontage road to frontage road. |
| 3A | 121SB | GPL | SH121 SB GPL | 52+77.00 | 115+85.36 | Request from TxDOT to confirm that the alignment is a connector between the Referenced Stations (Design Speed of 50 mph ) |
| 3A | 121SB | GPL | SH121 NB GPL | 52+77.00 | 101+01.93 | Request from TxDOT to confirm that the alignment is a connector between the Referenced Stations (Design Speed of 50 mph ) |
| 3A | 35WML | ML | ML | 883+62.35 | 908+25.36 | Request from TxDOT to confirm that the alignment is a connector between the Referenced Stations (Design Speed of 50 mph ) |

```
<* 5 Describe Chain STEADMN
```

Chain STEADMN contains:
CUR STEADMN-1 CUR STEADMN-2 801802

Beginning chain STEADMN description

## Curve Data

*---_-----_*
Curve STEADMN-1

| P.I. Station | 10+44.76 | N | 6,960,561. 5023 | E | 2,332,131.7952 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Delta = | $1^{\circ} 47{ }^{\prime} 25.22 "$ | (LT) |  |  |  |
| Degree | $2^{\circ} 00{ }^{\prime} 00.00 "$ |  |  |  |  |
| Tangent | 44.7621 |  |  |  |  |
| Length | 89.5170 |  |  |  |  |
| Radius | 2,864.7889 |  |  |  |  |
| External | 0.3497 |  |  |  |  |
| Long Chord = | 89.5133 |  |  |  |  |
| Mid. ord. = | 0.3496 |  |  |  |  |
| P.C. Station | 10+00.00 | N | 6,960,595.2152 | E | 2,332,161.2415 |
| P.T. Station | 10+89.52 | N | 6,960,526.8858 | E | 2,332,103.4165 |
| c.c. |  | N | 6,958,710.6447 | E | 2,334,318.8812 |

Back $=S 41^{\circ} 08^{\prime} 07.04^{\prime \prime} \mathrm{W}$
Ahead $=S 39^{\circ} 20^{\prime} 41.82^{\prime \prime} \mathrm{W}$
Chord Bear $=S 40^{\circ} 14^{\prime} 24.43^{\prime \prime} \mathrm{W}$

Course from PT STEADMN-1 to PC STEADMN-2 S $39^{\circ} 20^{\prime} 41.82^{\prime \prime}$ W Dist 358.9827

## Curve Data

*-----------*
Page 1


Course from PT STEADMN-2 to $801 \mathrm{~S} 3^{\circ} 22^{\prime} 43.26^{\prime \prime}$ W Dist 215.4522

Point 801 N $\quad 6,959,689.1597 \mathrm{E} \quad 2,331,728.1770$ Sta 20+40.59

Course from 801 to 802 s $1^{\circ} 01^{\prime} 39.21^{\prime \prime}$ W Dist 200.0446

Point $802 N$ 6,959,489.1473 E 2,331,724.5895 Sta 22+40.63

Ending chain STEADMN description

Chain STEADMN contains:
CUR STEADMN-1 CUR STEADMN-2 801802

Beginning chain STEADMN description

Curve Data
*-----------*
Curve STEADMN-1


Course from PT STEADMN-1 to PC STEADMN-2 S $39^{\circ} 20^{\prime} 41.82^{\prime \prime}$ W Dist 358.9827

## Curve Data

*-----------*
Page 1

| P.I. Station |  |  | 16+43.26 | N | 6,960,098.6554 | E | 2,331,752.3526 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delta | $=$ |  | 57' 58.55" | (LT) |  |  |  |
| Degree | = | $9^{\circ}$ | 32' $57.47{ }^{\prime \prime}$ |  |  |  |  |
| Tangent | = |  | 194.7566 |  |  |  |  |
| Length | = |  | 376.6378 |  |  |  |  |
| Radius | $=$ |  | 600.0000 |  |  |  |  |
| External | $=$ |  | 30.8170 |  |  |  |  |
| Long chord | = |  | 370.4844 |  |  |  |  |
| Mid. Ord. | = |  | 29.3115 |  |  |  |  |
| P.C. Statio |  |  | 14+48.50 | N | 6,960,249.2690 | E | 2,331,875.8259 |
| P.T. Station |  |  | 18+25.14 | N | 6,959,904.2373 | E | 2,331,740.8746 |
| c.c. |  |  |  | N | 6,959,868.8763 | E | 2,332,339.8317 |
| Back | $=\mathrm{S}$ | $39^{\circ} 20$ | ' 41.82" W |  |  |  |  |
| Ahead | $=\mathrm{S}$ | $3^{\circ} 22$ | ' 43.26" W |  |  |  |  |
| Chord Bear | $=\mathrm{S}$ | $21^{\circ} 21$ | ' 42.54" W |  |  |  |  |

Course from PT STEADMN-2 to 801 S $3^{\circ} 22^{\prime} 43.26^{\prime \prime}$ W Dist 215.4522

Point 801 N 6,959,689.1597 E 2,331,728.1770 Sta $20+40.59$

Course from 801 to 802 S $1^{\circ} 01^{\prime} 39.21$ " W Dist 200.0446

Point $802 N \quad 6,959,489.1473 \mathrm{E} \quad 2,331,724.5895$ Sta $22+40.63$

Ending chain STEADMN description


```
WEA-BEL.out
```

<* 1 Describe Chain WETHBELK

Chain WETHBELK contains:
CUR WEATHBELK-1 CUR WEATHBELK-2 CUR WEATHBELK-3 CUR WEATHBELK-4
Beginning chain WETHBELK description
Feature: WEA-BEL

## Curve Data

*----------*
Curve weathbelk-1

| P.I. Station |  |  |  | 10+56.36 | N | 6,965,482.0382 | E | 2,334,305.5512 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| De1ta | $=$ |  | $6^{\circ} 2$ | 27' 05.54" | (LT) |  |  |  |
| Degree = | $=$ |  | $5^{\circ} 4$ | 43' 46.48" |  |  |  |  |
| Tangent | = |  |  | 56.3599 |  |  |  |  |
| Length | = |  |  | 112.6006 |  |  |  |  |
| Radius | = |  |  | 1,000.0000 |  |  |  |  |
| Externa 1 | = |  |  | 1.5870 |  |  |  |  |
| Long Chord |  |  |  | 112.5411 |  |  |  |  |
| mid. ord. = |  |  |  | 1.5844 |  |  |  |  |
| P.C. Station |  |  |  | 10+00.00 | N | 6,965,512.0921 | E | 2,334,353.2293 |
| P.T. Station |  |  |  | $11+12.60$ | N | 6,965,446.8174 | E | 2,334,261.5520 |
| C.C. |  |  |  |  | N | 6,964,666.1343 | E | 2,334,886.4792 |
| Back = | $=\mathrm{S}$ | $57^{\circ}$ | 46' | ' 28.91" W |  |  |  |  |
| Ahead = | $=\mathrm{S}$ | $51^{\circ}$ | 19' | ' 23.37" W |  |  |  |  |
| Chord Bear = | = S | $54^{\circ}$ | 32' | ' 56.14" W |  |  |  |  |

[^0]Curve WEATHBELK-2


Course from PT WEATHBELK-2 to PC WEATHBELK-3 S 59² $29^{\prime} 04.33^{\prime \prime}$ W Dist 1,059.2177

## Curve Data

*---------- **
Curve WEATHBELK-3

| P.I. Station | 24+47.98 | N | 6,964,760.2713 | E | 2,333,116.6927 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| De7ta = | 29 ${ }^{\circ} 22^{\prime} 59.81^{\prime \prime}$ | (LT) |  |  |  |
| Degree = | $11^{\circ} 14^{\prime} 04.08^{\prime \prime}$ |  |  |  |  |
| Tangent = | 133.7165 |  |  |  |  |
| Length | 261.5458 |  |  |  |  |
| Radius | 510.0000 |  |  |  |  |
| External = | 17.2382 |  |  |  |  |
| Long Chord = | 258.6891 |  |  |  |  |
| Mid. Ord. = | 16.6746 |  |  |  |  |
| P.C. Station | $23+14.26$ | N | 6,964,828.1686 | E | 2,333,231.8884 |
| P.T. Station | 25+75.81 | N | $6,964,644.5878$ $\text { ge } 2$ | E | 2,333,049.6299 |

WEA-BEL. out
C.C.
$N \quad 6,964,388.8076 E$
$2,333,490.8515$
Back $\quad=\mathrm{S} 59^{\circ} 29^{\prime} 04.33^{\prime \prime} \mathrm{W}$
Ahead $\quad=S 30^{\circ} 06^{\prime} 04.52^{\prime \prime} \mathrm{W}$
Chord Bear $=S 44^{\circ} 47^{\prime} 34.43^{\prime \prime} W$

Course from PT WEATHBELK-3 to PC WEATHBELK-4 S 300 06' 04.52" W Dist 246.3613

## Curve Data

*---------**
Curve WEATHBELK-4


[^1]

```
<*
3 Describe Chain 121SB
```

Chain 121sB contains:
90 CUR 121SB-1 CUR 121SB-2 CUR 121SB-3 CUR 121SB-4 CUR 121SB-5 CUR 121SB-6 91
Beginning chain 121SB description
Feature: 121-CL
Point 90 N 6,965,859.2463 E 2,337,828.2715 Sta $15+04.91$

Course from 90 to PC $121 \mathrm{sB}-1 \mathrm{~s} 60^{\circ} 23^{\prime} 40.69^{\prime \prime}$ W Dist 562.5889

Curve Data
*----------*

| P.I. Station |  |  |  | 27+83.63 | N | 6,965,227.5287 | E | 2,336,716.4898 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delta | = |  | - 14 | $4^{\prime} 58.68{ }^{\prime \prime}$ | (RT) |  |  |  |
| Degree | = |  | 30 | 0' 03.18" |  |  |  |  |
| Tangent | $=$ |  |  | 716.1314 |  |  |  |  |
| Length | $=$ |  |  | ,415.8078 |  |  |  |  |
| Radius | = |  |  | , 817.4690 |  |  |  |  |
| External | $=$ |  |  | 66.5899 |  |  |  |  |
| Long Chord | $=$ |  |  | ,407.7075 |  |  |  |  |
| Mid. ord. |  |  |  | 65.4483 |  |  |  |  |
| P.C. Station |  |  |  | 20+67.50 | N | 6,965,581.3143 | E | 2,337,339.1293 |
| P.T. Station |  |  |  | 34+83.31 | $N$ | 6,965,123.4615 | E | 2,336,007.9602 |
| c.c. |  |  |  |  | N | 6,968,900.4077 | E | 2,335,453.2108 |
| Back | $=\mathrm{S}$ | $60^{\circ}$ | 23 ' | 40.69" W |  |  |  |  |
| Ahead | $=5$ | $81^{\circ}$ | 38' | 39.36" W |  |  |  |  |
| Chord Bear | $=\mathrm{S}$ | $71^{\circ}$ | 01' | 10.03" W |  |  |  |  |

## Curve Data

Curve 121SB-2

| P.I. Station | $59+17.14 \mathrm{~N}$ | $6,964,769.7797$ | E | $2,333,599.9598$ |
| :--- | ---: | :--- | ---: | :--- |

De7ta $=\quad 3^{\circ} 58^{\prime} 59.71^{\prime \prime}$ (RT)

Degree $=\quad 0^{\circ} 44^{\prime} 51.54^{\prime \prime}$
Tangent $=\quad 266.4919$
Length $=\quad 532.7691$

Radius $=7,663.4400$
External $=\quad 4.6322$
Long Chord
532.6618

Mid. Ord. =
4.6294
P.C. Station $\quad 56+50.65 \mathrm{~N} \quad 6,964,808.5059 \mathrm{E} \quad 2,333,863.6228$

| P.T. Station | $61+83.42$ | N | $6,964,749.4623$ | E | $2,333,334.2435$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| C.C. | N | $6,972,390.5978$ | E | $2,332,749.9820$ |  |

Back $=S 81^{\circ} 38^{\prime} 39.36^{\prime \prime} \mathrm{W}$
Ahead $\quad=\mathrm{S} 85^{\circ} 37^{\prime} 39.07^{\prime \prime} \mathrm{W}$
Chord Bear $=\mathrm{S} 83^{\circ} 38^{\prime} 09.22^{\prime \prime} \mathrm{W}$

Course from PT $121 \mathrm{SB}-2$ to $\mathrm{PC} 121 \mathrm{SB}-3 \mathrm{~S} 85^{\circ} 37^{\prime} 39.07^{\prime \prime} \mathrm{W}$ Dist 579.7449

## Curve Data

$\qquad$
Curve 121SB-3



Course from PT 121SB-3 to PC 121SB-4 S $0^{\circ} 41^{\prime} 05.63^{\prime \prime}$ E Dist 272.8349

## Curve Data

*----------*

| Curve 121sB-4 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P.I. Station |  |  | $87+79.83$ | N | 6,963,128.8411 | E | 2,331,946.8915 |
| De7ta | = |  | 43' 52.96" |  |  |  |  |
| Degree | = |  | 56' 34.19" |  |  |  |  |
| Tangent | = |  | 410.6323 |  |  |  |  |
| Length | = |  | 820.0181 |  |  |  |  |
| Radius | = |  | 6,077.0000 |  |  |  |  |
| External = | $=$ |  | 13.8577 |  |  |  |  |
| Long Chord |  |  | 819.3961 |  |  |  |  |
| mid. ord. |  |  | 13.8262 |  |  |  |  |
| P.C. Station |  |  | $83+69.20$ | N | 6,963,539.4441 | E | 2,331,941.9830 |
| P.T. Station |  |  | $91+89.21$ | $N$ | 6,962,721.3103 | E | 2,331,896.5174 |
| c.c. |  |  |  | N | 6,963,466.8032 | E | 2,325,865.4172 |
| Back | $=\mathrm{s}$ | $0^{\circ} 4$ | $1^{\prime} 05.63^{\prime \prime} \mathrm{E}$ |  |  |  |  |
| Ahead = | $=\mathrm{S}$ | $7^{\circ} 0$ | 2' 47.33" W |  |  |  |  |
| Chord Bear = |  | $3^{\circ} 1$ | ' ${ }^{\text {' 50.85" W }}$ |  |  |  |  |

121sb.out
Course from PT 121SB-4 to PC 121SB-5 S $7^{\circ} 02^{\prime} 47.33^{\prime \prime}$ W Dist 920.9826


121SB. out


Course from PT 121SB-6 to $91 \mathrm{~s} 6^{\circ} 08^{\prime} 40.40^{\prime \prime}$ W Dist 346.1134

Point 91 N 6,960,349.2916 E 2,331,564.6439 Sta 115+85.36

Ending chain 121SB description


Chain 121NB contains:
100 CUR 121 NB-1 CUR 121 NB- 2 CUR 121NB-3 CUR 121NB-4 101

Beginning chain 121NB description
Point 100 N $6,965,836.4233 \mathrm{E} \quad 2,337,841.2395$ Sta $14+91.10$

Course from 100 to PC $121 \mathrm{NB}-1 \mathrm{~s} 60^{\circ} 23^{\prime} 40.70^{\prime \prime}$ W Dist 622.6007

Curve Data
*----------*

| P.I. Station |  |  | 28+34.76 | $N$ | 6,965,172.6259 | E | 2,336,672.9993 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delta | = |  | 14' $58.66{ }^{\prime \prime}$ | (RT) |  |  |  |
| Degree | = |  | 29' 26.28 " |  |  |  |  |
| Tangent | = |  | 721.0556 |  |  |  |  |
| Length | = |  | 1,425.5431 |  |  |  |  |
| Radius | = |  | 3,843.7190 |  |  |  |  |
| External | = |  | 67.0478 |  |  |  |  |
| Long Chord |  |  | 1,417.3870 |  |  |  |  |
| mid. ord. |  |  | 65.8983 |  |  |  |  |
| P.C. Station |  |  | 21+13.70 | N | 6,965,528.8441 | E | 2,337,299.9202 |
| P.T. Station |  |  | 35+39.24 | N | 6,965,067.8431 | E | 2,335,959.5978 |
| C.c. |  |  |  | $N$ | 6,968,870.7606 | E | 2,335,401.0337 |
| Back | = S | $60^{\circ} 2$ | 23' 40.70" W |  |  |  |  |
| Ahead = | $=\mathrm{S}$ | $81^{\circ} 3$ | 38' 39.36" W |  |  |  |  |
| Chord Bear $=$ | = S | $71^{\circ} 0$ | 1' 10.03" W |  |  |  |  |

Course from PT $121 \mathrm{NB}-1$ to PC $121 \mathrm{NB}-2 \mathrm{~S}^{121 \mathrm{NB} .01^{\circ}} 38^{\prime} 39.36^{\prime \prime}$ W Dist $3,056.2882$

course from PT 121NB-2 to PC 121NB-3 $50^{\circ} 04^{\prime} 19.25^{\prime \prime}$ W Dist 281.0657

Curve Data
*----------*
Curve $121 \mathrm{NB}-3$

| P.I. St |  |  | 83+02.99 | N | 6,963,286.4925 | E | 2,332,208.6489 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| De7ta | = | $4^{\circ}$ | 07' 41.18" | (RT) |  |  |  |
| Degree | = | $0^{\circ}$ | 57' 17.75" |  |  |  |  |
| Tangent | = |  | 216.2407 |  |  |  |  |
| Length | = |  | 432.2943 |  |  |  |  |
| Radius | = |  | 6,000.0000 |  |  |  |  |


| External | $=$ |  | 3.8954 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Long Chord | = |  | 432.2008 |  |  |  |  |
| Mid. ord. | = |  | 3.8929 |  |  |  |  |
| P.C. Station |  |  | 80+86.75 | $N$ | 6,963,502.7330 | E | 2,332,208.9207 |
| P.T. Station |  |  | $85+19.04$ | $N$ | 6,963,070.8325 | E | 2,332,192.8114 |
| c.c. |  |  |  | $N$ | 6,963,510.2743 | E | 2,326,208.9254 |
| Back |  | $0^{\circ} 04^{\prime}$ | 19.25" W |  |  |  |  |
| Ahead | $=\mathrm{s}$ | $4^{\circ} 12^{\prime}$ | 00.43" W |  |  |  |  |
| Chord Bear | $=\mathrm{s}$ | $2^{\circ} 08^{\prime}$ | 09.84" W |  |  |  |  |

Course from PT 121NB-3 to PC 121NB-4 S $4^{\circ} 12^{\prime} 00.44^{\prime \prime}$ W Dist 127.7660

## Curve Data

$\square$
Curve 121NB-4

| P.I. Station |  |  | 91+01.85 | N | 6,962,489.5861 | E | 2,332,150.1261 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| De7ta = |  |  | 30' 39.72" | (RT) |  |  |  |
| Degree = | $=$ |  | 42' 58.31" |  |  |  |  |
| Tangent | = |  | 455.0457 |  |  |  |  |
| Length | = |  | 909.1118 |  |  |  |  |
| Radius | = |  | 8,000.0000 |  |  |  |  |
| External | = |  | 12.9312 |  |  |  |  |
| Long Chord $=$ |  |  | 908.6227 |  |  |  |  |
| Mid. ord. = |  |  | 12.9103 |  |  |  |  |
| P.C. Station |  |  | $86+46.81$ | N | 6,962,943.4096 | E | 2,332,183.4538 |
| P.T. Station |  |  | $95+55.92$ | N | 6,962,042.4688 | E | 2,332,065.5523 |
| c.c. |  |  |  | N | 6,963,529.3319 | E | 2,324,204.9392 |
| Back = | $=\mathrm{s}$ | ${ }^{\circ} 12^{\prime}$ | ' 00.43" W |  |  |  |  |
| Ahead = | $=5$ | $0^{\circ} 42^{\prime}$ | ' 40.15" W |  |  |  |  |

Course from PT $121 \mathrm{NB}-4$ to $101 \mathrm{~s} 10^{\circ} 42^{\prime \prime} 40.15^{\prime \prime} \mathrm{NB}$ out W Dist 546.0090

Point 101 N 6,961,505.9731 E 2,331,964.0722 Sta 101+01.93

Ending chain 121 NB description

<* 2 Describe Chain 35WML

Chain 35 WML contains:
CUR 35WML-1 CUR 35WML-2 CUR 35WML-3 CUR $35 W M L-4$ CUR $35 W M L-5$ CUR $35 W M L-631$

Beginning chain 35 WML description
Feature: 35WML

## Curve Data

*---------- *
Curve 35WML-1


Course from PT $35 \mathrm{WML}-1$ to PC $35 \mathrm{WML}-2 \mathrm{~S} 0^{\circ} 45^{\prime} 58.46^{\prime \prime} \mathrm{E}$ Dist $4,731.7669$

## 35WML.out

Curve 35WML-2

| P.I. Statio |  |  |  | 630+21.04 | N | 6,990,168.3012 | E | 2,333,438.2443 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delta | = |  | - 54 | 54' 14.96" | (RT) |  |  |  |
| Degree | = |  | $0^{\circ} 15$ | 15' 00.00" |  |  |  |  |
| Tangent | = |  |  | 180.8349 |  |  |  |  |
| Length | = |  |  | 361.6622 |  |  |  |  |
| Radius | = |  |  | 2,918.3118 |  |  |  |  |
| Externa 1 | = |  |  | 0.7134 |  |  |  |  |
| Long Chord | $=$ |  |  | 361.6584 |  |  |  |  |
| Mid. Ord. | = |  |  | 0.7134 |  |  |  |  |
| P.C. Station |  |  |  | $628+40.21$ | N | 6,990,349.1199 | E | 2,333,435.8260 |
| P.T. Statio |  |  |  | 632+01.87 | N | 6,989,987.4669 | E | 2,333,437.8090 |
| C.C. |  |  |  |  | N | 6,990,042.6338 | E | 2,310,519.5636 |
| Back | $=\mathrm{S}$ |  | 45' | ' 58.46 " E |  |  |  |  |
| Ahead | $=\mathrm{S}$ |  | 08' | ' 16.50" W |  |  |  |  |
| Chord Bear | $=\mathrm{S}$ |  | 18' | ' 50.98" E |  |  |  |  |

Course from PT 35WML-2 to PC 35WML-3 S $0^{\circ}$ 08' 16.50" W Dist 5,437.0130

```
Curve Data
*----------*
```

Curve $35 \mathrm{WML}-3$

| P.I. Station | 695+50.27 | N | 6,983,639.0831 E | 2,333,422.5277 |
| :---: | :---: | :---: | :---: | :---: |
| Delta | $9^{\circ} 05^{\prime} 41.09^{\prime \prime}$ | (RT) |  |  |
| Degree | $0^{\circ} 30^{\prime} 00.00 "$ |  |  |  |
| Tangent | 911.3892 |  |  |  |
| Length | 1,818.9495 |  |  |  |
| Radius | 11,459.1559 |  |  |  |
| External | 36.1859 |  |  |  |
| Long Chord | 1,817.0405 |  |  |  |
| Mid. Ord. = | 36.0720 |  |  |  |
|  |  |  | ge 2 |  |

35WML.out

| P.C. Station | $686+38.89$ | N | $6,984,550.4696$ | E | $2,333,424.7215$ |
| :--- | ---: | :--- | ---: | :--- | :--- |
| P.T. Station | $704+57.83$ | N | $6,982,739.5010$ | E | $2,333,276.3008$ |
| C.C. |  |  | N | $6,984,578.0531$ | E |
| Back $=\mathrm{S}$ | $0^{\circ} 08^{\prime} 16.50^{\prime \prime} \mathrm{W}$ | $2,321,965.5988$ |  |  |  |

Course from PT 35WML-3 to PC $35 \mathrm{WML}-4 \mathrm{~S} 9^{\circ} 13^{\prime} 57.59^{\prime \prime} \mathrm{W}$ Dist $2,309.0842$

## Curve Data

*-----------*
Curve $35 \mathrm{WML}-4$

| P.I. Station |  |  | 735+44.05 | N | 6,979,693.2690 | E | 2,332,781.1365 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delta | = | $22^{\circ}$ | 59' 59.93" | (RT) |  |  |  |
| Degree | = |  | 30' 00.00" |  |  |  |  |
| Tangent | $=$ |  | 777.1299 |  |  |  |  |
| Length | = |  | 1,533.3321 |  |  |  |  |
| Radius | = |  | 3,819.7186 |  |  |  |  |
| External | = |  | 78.2528 |  |  |  |  |
| Long Chord |  |  | 1,523.0576 |  |  |  |  |
| mid. Ord. |  |  | 76.6819 |  |  |  |  |
| P.C. Station |  |  | 727+66.92 | N | 6,980,460.3311 | E | 2,332,905.8223 |
| P.T. Station |  |  | 743+00.25 | N | 6,979,035.9031 | E | 2,332,366.6478 |
| c.c. |  |  |  | N | 6,981,073.1818 | E | 2,329,135.5883 |
| Back | $=\mathrm{S}$ | $9^{\circ} 13^{\prime}$ | ' 57.59" W |  |  |  |  |
| Ahead = | $=\mathrm{s}$ | $32^{\circ} 13^{\prime}$ | ' 57.52" W |  |  |  |  |
| Chord Bear $=$ | $=5$ | $20^{\circ} 43^{\prime}$ | ' $57.56{ }^{\prime \prime} \mathrm{W}$ |  |  |  |  |

Course from PT $35 \mathrm{WML}-4$ to PC $35 \mathrm{WML}-5 \mathrm{~s} 32^{\circ} 13^{\prime} 57.52^{\prime \prime} \mathrm{W}$ Dist $1,500.6041$

Curve Data

Curve 35WML-5

| P.I. Station | 779+06.69 | N | 6,975,985.2521 | E | 2,330,443.1220 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| De7ta = | $40^{\circ} 21^{\prime} 38.16^{\prime \prime}$ | (LT) |  |  |  |
| Degree = | $1^{\circ} 00{ }^{\prime} 00.00^{\prime \prime}$ |  |  |  |  |
| Tangent | 2,105.8378 |  |  |  |  |
| Length | 4,036.0600 |  |  |  |  |
| Radius | 5,729.5780 |  |  |  |  |
| Externa 1 | 374.7333 |  |  |  |  |
| Long Chord = | 3,953.1280 |  |  |  |  |
| Mid. ord. = | 351.7291 |  |  |  |  |
| P.C. Station | 758+00.85 | N | 6,977,766.5580 | E | 2,331,566.2881 |
| P.T. Station | $798+36.91$ | N | 6,973,900.5679 | E | 2,330,740.8543 |
| C.C. |  | N | 6,974,710.6399 | E | 2,336,412.8774 |

Back $=S 32^{\circ} 13^{\prime} 57.52^{\prime \prime} \mathrm{W}$
Ahead $=S 8^{\circ} 07^{\prime} 40.63^{\prime \prime} \mathrm{E}$
Chord Bear $=\mathrm{S} 12^{\circ} 03^{\prime} 08.45^{\prime \prime} \mathrm{W}$

Course from PT 35WML-5 to PC $35 \mathrm{WML}-6 \mathrm{~S} 8^{\circ} 07^{\prime} 40.63^{\prime \prime} \mathrm{E}$ Dist 8,525.4334

Curve Data
*----------*
Curve $35 \mathrm{WML}-6$

| P.I. Station |  | 897+60.62 N | 6,964,076.5478 | E | 2,332,143.9098 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| De7ta | $67^{\circ}$ | 43' 58.45" (RT) |  |  |  |
| Degree | $2{ }^{\circ}$ | 45' 00.00" |  |  |  |
| Tangent |  | 1,398.2723 |  |  |  |
| Length |  | 2,463.0147 |  |  |  |
| Radius |  | 2,083.4829 |  |  |  |
| External |  | 425.7135 |  |  |  |
| Long Chord |  | 2,322.0793 |  |  |  |
| Mid. ord. |  | 353.4864 |  |  |  |

35WML.out

| P.C. | Station |  |  |  | $883+62.35$ |  | 6,965,460.7742 | E | 2,331,946. 2161 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P.т. | Station |  |  |  | $908+25.36$ |  | 6,963,369.0790 | E | 2,330,937.8197 |
| c.c. |  |  |  |  |  |  | 6,965,166.2025 | E | 2,329,883.6623 |
| Back |  | = S |  |  | 40.63" E |  |  |  |  |
| Ahead | = | = |  | 36 ' | 17.82" W |  |  |  |  |
| Chord | Bear $=$ | $=$ |  |  | 18.59" W |  |  |  |  |

Course from PT $35 \mathrm{WML}-6$ to $31 \mathrm{~s} 59^{\circ} 36^{\prime} 17.82^{\prime \prime} \mathrm{W}$ Dist $1,771.6013$

Point 31

$$
\text { N } 6,962,472.7209 \text { E } 2,329,409.7119 \text { Sta } 925+96.96
$$

Ending chain 35wML description


| SEGMENT 2 SH121/SH183 FROM IH 820 to SH 161 SCHEMATIC |  |  |
| :--- | :---: | :--- |
| FACILITY | DESIGN SPEED(MPH) | FUNCTICNALCLASSIFICATION |
| GENERAL PURPOSE LANES, MANAGED LANES | 60 | URBAN FREEWAY |
| RAMPS, DIRECT CONNECTORS | 45 | MID-RANGE URBAN |
| FRONTAGE ROADS, FM 3029 PRECINCT LINE ROAD, BROWN <br> TRAIL, BEDFORD RD, CENTRAL DR, FM 157 (INDUSTRIAL <br> BLVD), SH 10 (W. EULESS BLVD), AMON CARTER BLVD | 40 | URBAN ARTERIAL OR URBAN COLLECTOR |
| HURSTVIEW DR., NORWOOD DR, FOREST RIDGE DR, <br> MURPHY DR, WEST PARK WAY, ECTOR DR, EULESS MAIN ST, <br> AMERICAN BLVD, BEAR CREEK BLVD | 30 | URBAN COLLECTOR |
| SIDE STREETS | 30 | LOCAL |


| SEGMENT 3A FROM MEACHAM BLVD TO SPUR 280 |  |  |
| :--- | :---: | :--- |
| FACILITY | DESIGN SPEED(MPH) | FUNCTIONALCLASSIFICATION |
| IH 35W GENERAL PURPOSE LANES | $55^{*}$ | URBAN FREEWAY |
| SH 121 MAINLANES | 55 | URBAN FREEWAY |
| MANAGED LANES | 70 | URBAN FREEWAY |
| DIRECT CONNECTORS | 50 | URBAN PRINCIPAL ARTERIAL |
| RAMPS / MANAGED LANE RAMPS | 50 | URBAN PRINCIPAL ARTERIAL |
| COLLECTOR / DISTRIBUTORS | 50 | URBAN PRINCIPAL ARTERIAL |
| FRONTAGE ROADS | 40 | URBAN LOCAL STREET |
| CITY STREETS | 35 | URBAN LOCAL STREET |
| LOOP RAMP (CLOVERLEAF) | 25 | LOCAL |
| *70MPH AT ALL LOCATIONS EXCEPT WHERE IT TIES TO EXSITING AT THE SOUTH END OF THE PROJECT |  |  |


| SEGMENT 3B FROM IH 820 TO US 287 |  |  |
| :--- | :---: | :--- |
| FACILITY | DESIGN SPEED(MPH) | FUNCTIONALCLASSIFICATION |
| IH 35W GENERAL PURPOSE LANES | 70 | URBAN FREEWAY |
| US 287 \& SH 170 MAINLANES | 70 | URBAN FREEWAY |
| MANAGED LANES | 70 | URBAN FREEWAY |
| DIRECT CONNECTORS | 50 | URBAN PRINCIPALARTERIAL |
| RAMPS / MANAGED LANE RAMPS | 50 | URBAN PRINCIPALARTERIAL |
| COLLECTOR / DISTRIBUTORS | 50 | URBAN PRINCIPALARTERIAL |
| FRONTAGE ROADS | 40 | URBAN LOCAL STREET |
| CITY STREETS | 35 | URBAN LOCAL STREET |

Various files submitted with RFI \#16:

## STEADMAN.out (Geopak output file)

WEA-BEL.out (Geopak output file) 121SB.out (Geopak output file) 121NB.out (Geopak output file)

35WML.out (Geopak output file)
Z_design_exceptions.dgn

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
December 2, 2009

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 16: Horizontal Alignment Clarifications for Segments 2E and 3A

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $12 / 02 / 09$ | 1 | RFI \#16 Response Form |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 16 |
| :--- | :--- |
| To: |  |
|  | Alberto Gonzalez |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |

Date: October 15, 2009

Subject: Request for Horizontal Alignment Clarifications of segments 2E and 3A
Attachments: TABLE FOR REQUEST FOR CLARIFICATIONS 16.pdf

Information / Clarification Request:
NTE Mobility Partners 2-4, LLC has attached the file TABLE FOR REQUEST FOR CLARIFICATIONS 14.pdf. The Developer requests from TxDOT to respond to the different request for clarification that are listed on the attached file with respect to Horizontal Alignments for Segments 2E and 3A.

Response Needed by (date): Oct 19, 2009

## Response:

1. Segment 2E: WR 500 from STA $500+00.00$ to $526+86.58$ shall be considered a Frontage Road and classified as a Low Speed Urban Street as shown on revised schematics dated 7/7/2009.
2. Segment 3A: STEADMAN from STA $10+00.00$ to $19+30.00$ shall be considered a Frontage Road and classified as a Low Speed Urban Street as shown on revised schematics dated 8/5/2009.
3. Segment 3A: WEA-BEL from STA $10+00.00$ to $31+24.17$ shall be considered a Frontage Road and classified as a Low Speed Urban Street as shown on revised schematics dated 8/5/2009.
4. Segment 3A: 121 SB from STA $52+77.00$ to $115+85.36$ shall be considered a Direct Connector and classified as an Urban Freeway as shown on revised schematics dated 8/5/2009.
5. Segment 3A: 121 NB from STA $52+77.00$ to $101+01.93$ shall be considered a Direct Connector and classified as an Urban Freeway as shown on revised schematics dated 8/5/2009.
6. Segment 3A: 35 WML from STA $883+62.35$ to $908+25.36$ shall be considered a Direct Connector and classified as an Urban Freeway as shown on revised schematics dated 8/5/2009.

| Responder Name: | Matthew E. M | r, P.E. |  | Response Date: |  | December 2, 2009 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mai | 区 | Other | E-mail |

RFI \#20

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 1920 (TxDOT correction) | Date: | November 2, 2009 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Kate Flanagan |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | kflanagan@cintra.us.com |
| Subject: NTE 2-3 = Electronic Toll Equipment Power Requirements |  |  |  |
| Attachments: |  |  |  |
| Information / Clarification Request: |  |  |  |
| Please provide the electrical power requirements for the various components of the ETC equipment for NTE 2-3. |  |  |  |

Response Needed by (date): 11-7-09

## Response:

Responder Name: $\qquad$ Response Date:
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
$\square$ Other

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
November 30, 2009

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 20: NTE 2-3 - Electronic Toll Equipment Power Requirements

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $11 / 30 / 09$ | 1 | RFI \#20 Response Form |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacG | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 20 | Date: | November 2, 2009 |
| :---: | :---: | :---: | :---: |
| To: | Alberto Gonzalez | From: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE 2-3 = Electronic Toll Equipment Power Requirements

Attachments: $\qquad$
Information / Clarification Request:
Please provide the electrical power requirements for the various components of the ETC equipment for NTE 2-3.

Response Needed by (date): Nov 7, 2009

## Response:

There are no specific power requirements for the ETC equipment for NTE 2-4.
Please prepare the ETCS design in accordance with the requirements specified in Section 21 of TxDOT's CDA Book 3 for Concession Projects as amended by the provisions noted in Book 2.

When design requirements for the ETCS are not specified, the designer should use Good Industry Practice and reference all applicable codes and TxDOT standards.
Responder Name: Matthew E. MacGregor, P.E. Response Date: November 30, 2009
$\square$ Overnight
$\square$ Mail
区 Other E-mail

RFI \#21

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 21 | Date: | 12/07/09 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: |  |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: |  |

Subject: Traffic Control Plan Design Criteria for Sections 2E, 3A, and 3B

## Attachments:

$\qquad$

```
Information / Clarification Request:
Design for the Temporary Traffic Control Plan during construction are based on the following parameters:
- Typical Min. Design Speed: 55 mph on Interstate and State Highways; Absolute Min. 40 mph at major alignment transitions or areas where higher speeds cannot be attained due to geometric and safety constraints; 25 mph on Frontage Roads and Cross Streets.
- Number of lanes on Frontage Roads may be reduce to 1 lane, as needed, for phasing traffic during construction.
- Number of lanes on cross streets may be reduced by one lane in each direction, as needed, for phasing traffic during construction.
- Lane widths: Minimum 11' with exceptions of \(10^{\prime}\) lanes in limited circumstances in short distances during construction.
- Shoulders: \(1^{\prime}\) min. offset from edge of travel way to edge of pavement or barrier.
```


## $\square$ Please Verify.

$\square$ Please Approve and Confirm.

Response Needed by (date): Friday, January 1, 2010

## Response:

| Responder Name: |  |  |  | Response Date: |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | $\square$ | Other |

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date: $\qquad$

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 21: Traffic Control Plan Design Criteria for Sections 2E, 3A, and 3B

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $12 / 16 / 09$ | 1 | RFI \#21 Response Form |
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|  |  |  |  |

These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacG | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

# Request for Information 

| RFI No.: | 21 |
| :--- | :--- |
| To: | Alberto Gonzalez |
|  | NTE Mobility Partners 2-4 |


| Date:From: | 12/07/09 |
| :---: | :---: |
|  | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: Traffic Control Plan Design Criteria for Sections 2E, 3A, and 3B

## Attachments:

## Information / Clarification Request:

## Design for the Temporary Traffic Control Plan during construction are based on the following parameters:

- Typical Min. Design Speed: 55 mph on Interstate and State Highways; Absolute Min. 40 mph at major alignment transitions or areas where higher speeds cannot be attained due to geometric and safety constraints; 25 mph on Frontage Roads and Cross Streets.
- Number of lanes on Frontage Roads may be reduce to 1 lane, as needed, for phasing traffic during construction.
- Number of lanes on cross streets may be reduced by one lane in each direction, as needed, for phasing traffic during construction.
- Lane widths: Minimum 11' with exceptions of 10' lanes in limited circumstances in short distances during construction.
- Shoulders: $1^{\prime}$ min. offset from edge of travel way to edge of pavement or barrier.


## Response Needed by (date): Friday, January 1, 2010

## Response:

The Design Requirements for Temporary Control Plans for the MDP shall be in accordance with CDA Books 2 and 3, Section 18.3, Traffic Control, Design Requirements, the TXMUTCD and the TxDOT traffic control plan standards.

The Design Speed on Interstate and State Highways shall be 55 mph in accordance with CDA Book 2, Section 18.3.1.1.1. The absolute minimum design speed shall be 45 mph as approved by TxDOT.

The number of lanes on frontage roads during construction shall be in accordance with CDA Book 2 Section 18.3.1.1.2, Table 18-1a.
TxDOT approval is required for a reduction in the number of frontage road lanes.

The number of lanes on cross streets shall be in accordance with CDA Book 2 Section 18.3.1.1.1 and 18.3.1.1.2 or as approved by TxDOT.

Lane widths during construction shall be a minimum of $11^{\prime}$ in accordance with CDA Book 2 Section 18.3.1.1.1. For minor cross streets only, TxDOT may, at its sole discretion, approve the use of 10' lanes in limited circumstances as stated in Section 18.3.1.1.1.

A 1' minimum offset from edge of travel way to edge of pavement or barrier is permitted in accordance with Section 18.3.1.1.1.
Responder Name: Matthew E. MacGregor, P.E. $\quad$ Response Date: December 16, 2009

RFI \#23

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | z2 23 (TxDOT Correction) | Date: | December 7, 2009 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Kate Flanagan |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  |  |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | kflanagan@cintra.us.com |
| Subject: | NTE Seg 3A Pedestrain bridge |  |  |
| Attachments: |  |  |  |
| Information / Clarification Request: |  |  |  |
| There is an existing pedestrian bridge over IH35W (Sta 941+15) between Spur 280 and Luella. It appears this structure is in conflict with proposed IH35W SB and the SB 35 to 30 DC . What is to be proposed for this structure: removed and relocated, removed only? The schematic shows only the existing structure via the topo and no information could be found in the environmental documents. |  |  |  |

Response Needed by (date): $\quad 12-14-09$

## Response:

Responder Name: $\qquad$ Response Date:
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
$\square$ Other

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date: December 16, 2009

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: RFI\# 23: NTE Segment 3A Pedestrian bridge

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $12 / 16 / 09$ | 1 | RFI \#23 Response Form |
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|  |  |  |  |

## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacG | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 23 | Date: | December 7, 2009 |
| :---: | :---: | :---: | :---: |
| To: | Alberto Gonzalez | From: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |
| Subject: | NTE Seg 3A Pedestrian bridge |  |  |

## Attachments:

$\qquad$

## Information / Clarification Request:

There is an existing pedestrian bridge over IH35W (Sta 941+15) between Spur 280 and Luella. It appears this structure is in conflict with proposed IH35W SB and the SB 35 to 30 DC. What is to be proposed for this structure: removed and relocated, removed only? The schematic shows only the existing structure via the topo and no information could be found in the environmental documents.

## Response Needed by (date): 12-14-09

## Response:

NTEMP2-4 shall design all Elements of the Ultimate Facility to accommodate the existing and proposed pedestrian facilities identified in the TxDOT RID schematics including the existing pedestrian bridge crossing the Facility between Spur 280 and Luella St. at approx IH 35W STA 941+15..

If the pedestrian facility cannot be accommodated by the Ultimate Facility then it shall be replaced or relocated at the direction of TxDOT in accordance with the design requirements contained in the CDA Books 2 and 3, Section 20.2.2 and Good Industry Practice.

Responder Name: Matthew E. MacGregor, P.E.
Response Date: December 16, 2009

Delivery Type:
$\square$ Courier
Overnight
$\square$ Mail
区 Other E-mail

RFI \#24 \& \#24B

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information



Response Needed by (date): 12-23-09

## Response:

Responder Name: $\qquad$ Response Date:
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
$\square$ Other

NTE Seg 3A
Additional exceptions for vertical geometry 12-11-2009

| Number | Alignment | Description | From Sta | To Sta | Deviation Request | Response |
| ---: | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 35S-121N | DC 35 S TO 121N | $25+19$ | $58+66.33$ | Max Grade $=5 \%$ |  |
| 2 | MLS-280 | SB ML DC to 280 | $937+00$ | $949+05$ | Max Grade $=5 \%$ |  |
| 3 | Spur 280 | Spur 280 | $29+34.72$ | $30+30$ | Max Grade $=5 \%$ |  |
| 4 | Spur 280 | Spur 280 | $34+36$ | $38+15$ | Max Grade $=7 \%$ |  |
| 5 | Spur 280 | Spur 280 | $38+15$ | $39+00$ | Max Grade $=5 \%$ |  |
| 6 | MLN-GP | ML Wishbone entrance | $19+80$ | $27+45$ | Max Grade $=5 \%$ |  |
| 7 | GP-MLS | ML Wishbone exit | $18+10$ | $26+01$ | Max Grade $=5 \%$ |  |

Various files submitted with RFI \#24:

## Seg3A_Profile.dgn

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
January 6, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 24: NTE Segment 3A Request for Additional Design Deviations

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :--- |
| 1 | $1 / 5 / 10$ | 1 | RFI \#24 Response Form |
| 1 | $1 / 5 / 10$ | 2 | Revcrised Draft Geometric Design Criteria Table |
|  |  |  |  |
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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
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| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacG | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752

## Request for Information

RFI No.: 24

To:
Matt MacGregor
4777 E. Highway 80
Mesquite, TX 75150-6443
mmacgre@dot.state.tx.us

Date: December 31, 2009

| From: | Alberto Gonzales |
| ---: | :--- |
| Tel.: |  |
| Fax: |  |
| E-Mail: |  |
|  |  |

Subject:
NTE Seg 3A request for additional design exceptions

Attachments: NTE MDP Draft Geometric Design Criteria Table 010510.pdf

## Information / Clarification Request:

Please see the attached list of additional exceptions for Segment 3A. Exceptions requested are summarized below.

1. $35 \mathrm{~S}-121 \mathrm{~N}$ - top level DC, a $5 \%$ max grade is needed due to the additional interchange level added by the managed lane extension
2. MLS-280 - SB managed lane DC to Spur 280, $5 \%$ maximum grade is need due to elevation of the managed lanes and geometric constraints along Spur 280. Need to tie profile to existing while reducing impacts to pedestrian bridge over Spur 280.
3. Spur 280 - existing grade is over $4 \%$
4. MLN-GP \& GP-MLS - wishbone ramps to the managed lanes, $5 \%$ maximum grade is needed to accommodate tolling zone located on bridge and vertical clearance requirement.

## Response Needed by (date): 12-23-09

## Responses:

1. The 5\% max grade is acceptable. See the revised Draft Geometric Criteria Table.
2. Further clarification is requested for using a $5 \%$ grade. The profile should include structure depths for the DC and roadways crossing this profile as well as the existing and proposed pedestrian bridge to verify clearances. The request should explain how the impacts to the pedestrian bridge are reduced using a $5 \%$ max grade and what geometric constraints along Spur 280/US 287 preclude using a $4 \%$ grade.
3. See revised Draft Geometric Design Criteria Table. SPUR 280 is classified as an Urban Arterial with a design speed of 35 mph and maximum grade of $7.00 \%$. Based upon this classification a design deviation is not required.
4. Further clarification and justification are requested with respect to the tolling zone requirements and the need for using a $5 \%$ grade. The exhibits should be revised to show the tolling zone vertical clearance requirement, walls and bridge limits, structure depths, etc. as pertains to both plan and profile views.

Responder Name: Matthew E. MacGregor, P.E. Response Date: January 6, 2010

Delivery Type:
$\square \quad$ Courier
$\square$ Overnight
$\square$ Mail
区 Other
E-mail

## DRAFT

1/5/2010

| NORTH TARRANT EXPRESS MDP CDA Geometric Design Criteria |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mainlanes (GP and ML) | Frontage Roads | Ramps/Direct Connectors | City Street | Collector-Distributor | Loop Ramps (35NB280) |
| General |  |  |  |  |  |  |
| Roadway Classification | Urban Freeway or Tollway | Low Speed Urban Street | Urban Freeway or Tollway | Low Speed Urban Street | Urban Collector | Low Speed Urban Street |
| Design Speed | Seg 2E: 60 mph <br> Seg 3A: 70 mph <br> Seg 3A (South End of Project): 55 mph Seg 3A (SH 121): 55 mph <br> Seg 3B/C: 70 mph | 40 mph | Seg 2E: 45 mph <br> Seg 3A: 50 mph <br> Seg 3B/C: 50 mph See Note 19. | Seg 2E: 30 mph Seg 3A: 35 mph | 40 mph | 25 mph |
| Stopping Sight Distance <br> See Note 2. | Seg 2E: 570' <br> Seg 3A: 730' See Note 12. <br> Seg 3A (South End of Project): 495' <br> Seg 3A (SH 121): 495' <br> Seg 3B/C: 730' | 305 | Seg 2E: 360' <br> Seg 3A: 425' See Note 8, 10, 13, 14. <br> Seg 3B/C: 425' | Seg 2E: 200 Seg 3A: 250' <br> Seg 3B/C: 250' | 305' | 155' |
| Horizontal Alignment |  |  |  |  |  |  |
| Maximum Super-Elevation Rate | 6\% | N/A | 6\% | N/A | 6\% | 6\% |
| Minimum Radius of Curvature | Seg 2E: 1340' <br> Seg 3A: 2050' <br> Seg 3A (South End of Project): 1065' <br> Seg 3A (SH 121): 1065' <br> Seg 3B/C: 2050' | 675' | Seg 2E: 660' <br> Seg 3A: 835' <br> Seg 3B/C: 835' | Seg 2E: 300' Seg 3A: 465' | 510' | 180' |
| Vertical Alignment |  |  |  |  |  |  |
| Minimum Grade | 0.35\% | 0.35\% | 0.35\% | 0.35\% | 0.35\% | 0.35\% |
| Maximum Grade | Seg 2E: 3\% <br> Seg 3A: 3\% <br> Seg 3A (South End of Project): 4\% <br> Seg 3A (SH 121): 4\% <br> Seg 3B/C: 3\% | 7.00\% | $4 \%$ <br> See Note 3. | 7.00\% | 5.00\% | 7.00\% |
| Vertical Curve Length Crest (min. K-Value) | Seg 2E: 151 <br> Seg 3A: 247 <br> Seg 3A (South End of Project): 114 <br> Seg 3A (SH 121): 114 <br> Seg 3B/C: 247 | 44 | Seg 2E: 61 <br> Seg 3A: 84 <br> Seg 3B/C: 84 | Seg 2E: 19 Seg3A: 29 <br> Seg 3B/C: 29 | 44 | 12 |
| Vertical Curve Length Sag (min. K-Value) | Seg 2E:136 <br> Seg 3A: 181 <br> Seg 3A (South End of Project): 115 <br> Seg 3A (SH 121): 115 <br> Seg 3B/C: 181 | 64 | Seg 2E: 79 <br> Seg 3A: 96 <br> Seg 3B/C: 96 | Seg 2E: 37 Seg 3A: 49 <br> Seg 3B/C: 49 | 64 | 26 |
| Cross-Section |  |  |  |  |  |  |
| Lane Width | 12' | $\begin{aligned} & 12 \text { ' Lanes } \\ & 24 \text { ' for U-Turns } \end{aligned}$ | $\begin{aligned} & 14 \text { ' (single lane) } \\ & 12 \text { ' per Lane (multi-lane) } \end{aligned}$ | 12' | 12' | 14' |
| Shoulder Width (min.): |  |  |  |  |  |  |
| Inside Shoulder | $\begin{aligned} & 4^{\prime} \text { (2 or less lanes) } \\ & 10^{\prime} \text { (3 or more lanes) } \end{aligned}$ | N/A (curbed) | 4'See Note 2. | N/A Curbed | $\begin{aligned} & \hline 4^{\prime} \text { (2 or less lanes) } \\ & \left.10^{\prime} \text { (3 or more lanes }\right) \end{aligned}$ | 4' |
| Outside Shoulder | 10' | N/A (curbed) | 8' See Note 2. | N/A (curbed) | $8^{\prime} / 10^{\prime}$ <br> See Note 15. | 8' |
| Curb Offset | N/A | 2' Outside 1' Inside | N/A | $2 '$ | $2 '$ | N/A |
| Cross-Slope (typical) |  |  |  |  |  |  |
| Managed Lanes (ML): | 2.50\% |  |  |  |  |  |
| General Purpose Lanes (GP): | 2.50\% | 2.00\% | 2.00\% | 2.00\% | 2.00\% | 2.00\% |

DRAFT
1/5/2010

| NORTH TARRANT EXPRESS MDP CDA Geometric Design Criteria |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mainlanes (GP and ML) | Frontage Roads | Ramps/Direct Connectors | City Street | Collector-Distributor | Loop Ramps (35NB280) |
| Clear Zone |  |  |  |  |  |  |
| Distance from Edge of Travel Lane Unless Noted Otherwise | $30^{\prime}$ | 3' (measured from face of curb) See Note 1. | 16' | $\begin{aligned} & 3^{3} \text { (measured from face of } \\ & \text { curb) See Note } 1 . \end{aligned}$ | 16' | 16' |
| Side Slopes: |  |  |  |  |  |  |
| - Within Clear Zone | 6:1 max | 6:1 max | 6:1 max | 6:1 max | 6:1 max | 6:1 max |
| - Outside Clear Zone | 3:1 max | 3:1 max | 3:1 max | 3:1 max | 3:1 max | 3:1 max |
| Vertical Clearance (Minimum) |  |  |  |  |  |  |
| Over Roadway | $16^{\prime}-6{ }^{\prime \prime}$ | $16^{\prime}-6{ }^{\prime \prime}$ | $16^{\prime}-6^{\prime \prime}$ | 16'-6" | $16^{\prime}-6{ }^{\prime \prime}$ | $16^{\prime}-6^{\prime \prime}$ |
| Over Streets | $16^{\prime}-6^{\prime \prime}$ | $16^{\prime}-6^{\prime \prime}$ | $16^{\prime}-6^{\prime \prime}$ | $16^{\prime}-6^{\prime \prime}$ | $16^{\prime}-6{ }^{\prime \prime}$ | $16^{\prime}-6^{\prime \prime}$ |
| Over Railroad | $23^{\prime}-0^{\prime \prime}$ | 23'-0" | $23^{\prime}-0^{\prime \prime}$ | $23^{\prime}-0^{\prime \prime}$ | 23'-0" | 23'-0" |
| Over Electrified Light Rail | 26'-6" | $26^{\prime}-6^{\prime \prime}$ | 26'-6" | $26^{\prime}-6{ }^{\prime \prime}$ | $26^{\prime}-6{ }^{\prime \prime}$ | 26'-6" |
| Overhead Signs | $21^{\prime}-0^{\prime \prime}$ | 21'-0" | $21^{\prime}-0^{\prime \prime}$ | 21'-0" | 21'-0" | $21^{\prime}-0^{\prime \prime}$ |
| Pedestrian Crossings | $17^{\prime}-6{ }^{\prime \prime}$ | $17^{\prime}-6{ }^{\prime \prime}$ |  |  |  |  |
| Other |  |  |  |  |  |  |
| Design Vehicle | WB-50 | WB-50 | WB-50 | WB-50 | WB-50 | WB-50 |
| Driveway Radius | N/A | $\begin{aligned} & 30^{\prime} \text { min commercial } \\ & 15^{\prime} \text { min residential } \\ & \hline \end{aligned}$ | N/A | $\begin{aligned} & 30^{\prime} \mathrm{min} \text { commercial } \\ & 15^{\prime} \mathrm{min} \text { residential } \\ & \hline \end{aligned}$ | N/A | N/A |
| Notes: <br> 1. The face of the new bridge columns shall be located 6 feet or more from the face of curb <br> 2. To mitigate restrictions on the design imposed by sight distance, it is acceptable to position the 8 -foot shoulder on the inside of the curve and the 4 -foot shoulder on the outside of the curve. <br> 3. Ramps and direct connectors shall have a maximum grade of $4 \%$ with the exception of the following listed ramps and direct connectors in Segment 3 A which shall have a maximum slope of $5 \%$. However, Developer shall prepare the design using Good Industry Practice using flatter grades where possible: <br> a. Ramp connecting IH35W SB to IH 30 at south end of project to tie to existing; <br> b. Ramp connecting IH35W SB to Northside Dr. from STA 8+78.00 to 28+50.00; <br> c. Ramp connecting IH35W SB to Northside Dr. from STA $28+50.00$ to $36+50.00$; <br> d. Ramp connecting Weatherford to IH 35 W SB from STA $16+68.00$ to $23+90.00$; <br> e. Ramp connecting SH 121 SB to Belknap from STA $32+45.00$ to $46+85.00$; <br> f. Ramp connecting SH 183 to IH 35W SB from STA $18+25.00$ to $22+00.00$; <br> g. Ramp connecting Weatherford to SH 121 NB from STA $23+06.66$ to $35+28.67$; <br> h. Ramp connecting IH 30 EB to IH35W NB at south end of project; <br> i. DC connecting IH 35 W SB to SH 121 NB ; <br> j. Ramp connecting IH 35 W ML SB to SPUR 280 SB ; <br> k. Ramp connecting IH 35W ML NB to IH 35W GP NB; and, <br> 1. Ramp connecting IH 35W GP SB to IH35W ML SB. |  |  |  |  |  |  |
| Segment 2E: |  |  |  |  |  |  |
| 4. WR 500 from STA $500+00.00$ to $526+86.58$ shall be considered a Frontage Road and classified as a Low Speed Urban Street as shown on revised schematics. |  |  |  |  |  |  |
| Segment 3A: <br> 5. STEADMAN from STA $10+00$ <br> 6. WEA-BEL from STA $10+00.00$ <br> 7. 121 SB from STA $52+77.00$ to <br> 8. DC 121 SB from STA $52+77.00$ <br> 9. 121 NB from STA $52+77.00$ to <br> 10. DC 121 NB from STA $52+77.00$ <br> 11. 35 WML from STA $883+62.35$ <br> 12. 35WML from STA 727+66.92 <br> 13. DC IH35W SB-121 NB from S <br> 14. DC $280-121 \mathrm{NB}$ from STA $62+$ <br> 15. The following roadways shall be <br> a. Roadway connecting Spur <br> b. Roadway connecting Spur <br> c. Roadway connecting SH12 <br> d. Roadway connecting SH12 <br> 16. Ramp connecting IH35NB to $S$ <br> 17. DC 121SB280SB shall have a <br> 18. SPUR 280 is classified as an U <br> Segment 3B/C: | hall be conside $1 l$ be considered be considered a all have a minin be considered a hall have a mini all be considered 11 have a minim $59+88.47$ shall 8 shall have a lector-Distribut ; 8 ft outside s ; outside shoul ; 10 ft outside $\mathrm{NB} ; 10 \mathrm{ft}$ outsid be classified as 40 mph design a minimum de | Road and classified as a Low oad and classified as a Low ctor and classified as an Urb 45 mph design speed. ctor and classified as an Urb 45 mph design speed. nector and classified as an U 0 mph design speed. um SSD for 40 mph design for 30 mph design speed. schematics. The outside sho <br> es ( 8 ft minimum 10 ft maxi ; and, <br> dth. <br> per revised schematic. <br> on the September 2009 sche <br> 35 mph as shown on the Sep | Urban Street as shown on re Urban Street as shown on revis way as shown on revised sche <br> way as shown on revised sche <br> reeway as shown on revised sc <br> width shall be as shown on the | schematics dated 8/5/2009 chematics dated $8 / 5 / 2009$ s dated 8/5/2009 <br> ss dated $8 / 5 / 2009$ <br> atics dated 8/5/2009 <br> natic and listed below: |  |  |
| 19. Ramp IH 35W SB-US 287 shal |  |  |  |  |  |  |



From schamatil
35 WS schdepuof.pdS







North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information



As part of the CDA negotiations, and in order to close pending issues with RFI's, TxDOT has requested to provide additional information as follows:

1 Item \#2 - In the Seg3A_Profile.dgn file submitted on May 31, 2011, the MLS-280 profile does not show the existing and proposed pedestrian bridges to verify clearances. In the Seg3AI_Profile.dgn file submitted on May 31, 2011, the MLS-280 profile does not show the structure depths of the DC or the existing and proposed pedestrian bridges to verify clearances.

NTEMP has attached Exhibit 1 (printout of vertical alignment of the SB IH35ML to EB Spur 280 DC available on segment3A_profile.dgn). Exhibit 1 includes minimum vertical to be met by the developer. As discussed and accepted on Friday $5^{\text {th }}$, 2011, Developer has made available calculated minimum clearances in the Data Room, which is accessible to TxDOT (developer to update again once revised Mandatory Scope schematics are available with the Chesapeake inspired alternative incorporated).

2 Also, NTEMP needs to explain how the impacts to the pedestrian bridge are reduced using a 5\% max grade and what geometric constraints along Spur 280/US 287 preclude using a $4 \%$ grade.

Developer is including with this RFI Exhibit 1 that depicts the vertical alignment of the SB IH35ML to EB Spur 280 DC. In exhibit 1 , the developer has drawn a 4\% vertical grade East of station 933+00 (If RFI 24 wouldn't be conditionally approved). The pedestrian overpass crosses at approx station $947+00$; the developer has included in the same profile the two alternatives for the pedestrian bridge. The lowest pedestrian bridge depicts the vertical alignment designed to clear over the $4.73 \%$ grade. The second design alternative depicts the pedestrian bridge required in order to comply with Book 2 table 11-1 minimum clearances over the $4 \%$ vertical grade (Pedestrian bridge vertical alignment raised 10.5 ft over the approved RFI 24 pedestrian bridge design). Raising the pedestrian bridge 10.5 ft would require that the bridge be extended by about 280 ft (access ramps constrained by ADA requirements); therefore approval of Approval of RFI 24 signifies a reduction in the pedestrian bridge structural area of $20 \%$.

Additional Impacts by TxDOT of not approving RFI 24 (not approving a 5\% max grade) on this connector include:

- Second alternative pedestrian bridge would be very impractical (hence seldom used) due to the fact that it would cross close to 50 ft over existing spur 280 (equivalent to standing on a $5^{\text {th }}$ floor of a building).
- Tie in to Spur 280 would occur 250 ft to the east of Alternative one.
- IH35W SB ML to Spur 280 EB bridge would have to be extended 200 ft towards the East (Approval of RFI 24 reduces structural area of bridge 232 by $5 \%$ ).

3 Item \#4 - The dgn profile files submitted May 31, 2011 should be revised to show the tolling zone vertical clearance requirement, walls and bridge limits, structure depths, etc. as pertains to both plan and profile views.

NTEMP has attached exhibit Exhibit 2 to this RFI (printout of segment3A_profile.dgn), which includes minimum vertical clearances to be met by developer at ramp GP-MLS (including Declaration area overhang over IH35W GPL). Developer is also including Exhibit 3 with the applicable Mandatory scope schematics at ramps MLN-GP and GP-MLS; this horizontal layout has the requested information including layout of retaining walls, beg and end of bridges, etc. As discussed and accepted on Friday $5^{\text {th }}, 2011$, Developer has made available calculated minimum clearances in the Data Room, which is accessible to TxDOT (developer to update again once revised Mandatory Scope schematics are available with the Chesapeake inspired alternative incorporated). As seen in Exhibit 2 , the need for a $5 \%$ grade in both of the above reference ramps, is required in order for the developer to be able to end the vertical alignment at GPL gore areas as depicted in the TxDOT Schematics for environmental approval (gores would have to be moved in average 245 ft North). The gore movement towards the North will require that bridges 208 and 210 to increase in order to accommodate the realignment of ramps MLN-GP and GP-MLS (by approving RFI 24, the construction cost of the Bridges 208 and 210 will be reduced). A 4 percent grade can not be applied in the VPI downstation from where the developer has depicted them in exhibit 2, as this will reduce the vertical clearance in the ramps (ramps need to be supported by a combination of straddle bents, and single columns that require large structural depths).

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 24B. Approval needs not to contain any additional or pending restrictions.
[Recipient's Name]
October 14, 2008
Page 3

Responder Name: Matthew E. MacGregor, P.E.
Response Date:
Delivery Type: $\quad \square$ Courier $\quad \square$ Overnight $\quad \square$ Mail $\quad \boxtimes$ Other E-mail

ANAGED LANES

\&

ENTRANCE RAMP FROM NB IH 35W
MANAGED LANES TO NB IH 35W
GENERAL PURPOSE LANES (MLN-GP)





Various files submitted with RFI \#24B:

## Seg3A_Profile.dgn

## Transmittal Letter

## Date:

August 10, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject: RFI \#24B \& Reissue of RFI \#24: NTE Seg 3A request for additional design exceptions

We Are Sending You:

| Copies | Date | No. | Description |
| :---: | :---: | :---: | :--- |
| 1 | $8 / 10 / 11$ | 2 | RFI \#24B Response Form |
| 1 | $8 / 10 / 11$ | 2 | Reissue of RFI \#24 Response Form |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |


| These Are Transmitted As Checked Below: |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1600 with any questions.

Copy To:
Signed: Matthew MacGregor [electronic]
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
区 Other Electronic

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752

## Request for Information

RFI No.: 24

To:
Matt MacGregor
4777 E. Highway 80
Mesquite, TX 75150-6443
mmacgre@dot.state.tx.us

Date:
December 31, 2009

| From: | Alberto Gonzales |
| ---: | :--- |
| Tel.: |  |
| FTE Mobility Partners 2-4 - Austin, TX |  |
| E-Mail: |  |
|  |  |

## Subject:

NTE Seg 3A request for additional design exceptions

Attachments: NTE MDP Draft Geometric Design Criteria Table 010510.pdf

## Information / Clarification Request:

Please see the attached list of additional exceptions for Segment 3A. Exceptions requested are summarized below.

1. $35 \mathrm{~S}-121 \mathrm{~N}$ - top level DC, a $5 \%$ max grade is needed due to the additional interchange level added by the managed lane extension
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3. Spur 280 - existing grade is over $4 \%$
4. MLN-GP \& GP-MLS - wishbone ramps to the managed lanes, $5 \%$ maximum grade is needed to accommodate tolling zone located on bridge and vertical clearance requirement.

Response Needed by (date): 12-23-09

## Responses:

1. The 5\% max grade is acceptable. See the revised Draft Geometric Criteria Table.
2. Further clarification is requested for using a $5 \%$ grade. The profile should include structure depths for the DC and roadways crossing this profile as well as the existing and proposed pedestrian bridge to verify clearances. The request should explain how the impacts to the pedestrian bridge are reduced using a 5\% max grade and what geometric constraints along Spur 280/US 287 preclude using a $4 \%$ grade.
3. See revised Draft Geometric Design Criteria Table. SPUR 280 is classified as an Urban Arterial with a design speed of 35 mph and maximum grade of $7.00 \%$. Based upon this classification a design deviation is not required.
4. Further clarification and justification are requested with respect to the tolling zone requirements and the need for using a $5 \%$ grade. The exhibits should be revised to show the tolling zone vertical clearance requirement, walls and bridge limits, structure depths, etc. as pertains to both plan and profile views.
[Response reissue August 10, 2011: TxDOT has reviewed Developer's submittal of RFI \#24B and hereby approves RFI \#24 without conditions.]

Responder Name: Matthew E. MacGregor, P.E.
Response Date:
Reissued August 10, 2011

Delivery Type:
$\square$ Overnight
$\square$ Mail
区 Other
E-mail

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information



As part of the CDA negotiations, and in order to close pending issues with RFI's, TxDOT has requested to provide additional information as follows:

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2 Also, NTEMP needs to explain how the impacts to the pedestrian bridge are reduced using a 5\% max grade and what geometric constraints along Spur 280/US 287 preclude using a 4\% grade.

Developer is including with this RFI Exhibit 1 that depicts the vertical alignment of the SB IH35ML to EB Spur 280 DC. In exhibit 1 , the developer has drawn a 4\% vertical grade East of station 933+00 (If RFI 24 wouldn't be conditionally approved). The pedestrian overpass crosses at approx station $947+00$; the developer has included in the same profile the two alternatives for the pedestrian bridge. The lowest pedestrian bridge depicts the vertical alignment designed to clear over the 4.73\% grade. The second design alternative depicts the pedestrian bridge required in order to comply with Book 2 table 11-1 minimum clearances over the $4 \%$ vertical grade (Pedestrian bridge vertical alignment raised 10.5 ft over the approved RFI 24 pedestrian bridge design). Raising the pedestrian bridge 10.5 ft would require that the bridge be extended by about 280 ft (access ramps constrained by ADA requirements); therefore approval of Approval of RFI 24 signifies a reduction in the pedestrian bridge structural area of $20 \%$.

Additional Impacts by TxDOT of not approving RFI 24 (not approving a 5\% max grade) on this connector include:

- Second alternative pedestrian bridge would be very impractical (hence seldom used) due to the fact that it would cross close to 50 ft over existing spur 280 (equivalent to standing on a $5^{\text {th }}$ floor of a building).
- Tie in to Spur 280 would occur 250 ft to the east of Alternative one.
- IH35W SB ML to Spur 280 EB bridge would have to be extended 200 ft towards the East (Approval of RFI 24 reduces structural area of bridge 232 by 5\%).

3 Item \#4 - The dgn profile files submitted May 31, 2011 should be revised to show the tolling zone vertical clearance requirement, walls and bridge limits, structure depths, etc. as pertains to both plan and profile views.

NTEMP has attached exhibit Exhibit 2 to this RFI (printout of segment3A_profile.dgn), which includes minimum vertical clearances to be met by developer at ramp GP-MLS (including Declaration area overhang over IH35W GPL). Developer is also including Exhibit 3 with the applicable Mandatory scope schematics at ramps MLN-GP and GP-MLS; this horizontal layout has the requested information including layout of retaining walls, beg and end of bridges, etc. As discussed and accepted on Friday $5^{\text {th }}$, 2011, Developer has made available calculated minimum clearances in the Data Room, which is accessible to TxDOT (developer to update again once revised Mandatory Scope schematics are available with the Chesapeake inspired alternative incorporated). As seen in Exhibit 2 , the need for a $5 \%$ grade in both of the above reference ramps, is required in order for the developer to be able to end the vertical alignment at GPL gore areas as depicted in the TxDOT Schematics for environmental approval (gores would have to be moved in average 245 ft North). The gore movement towards the North will require that bridges 208 and 210 to increase in order to accommodate the realignment of ramps MLN-GP and GP-MLS (by approving RFI 24, the construction cost of the Bridges 208 and 210 will be reduced). A 4 percent grade can not be applied in the VPI downstation from where the developer has depicted them in exhibit 2, as this will reduce the vertical clearance in the ramps (ramps need to be supported by a combination of straddle bents, and single columns that require large structural depths).

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 24B. Approval needs not to contain any additional or pending restrictions.

TxDOT partially approved RFI \#24 on January 6, 2010, but asked for further clarification as described above. TxDOT received this RFI \#24B on August 9, 2011. TxDOT confirms that the Developer has provided adequate information to allow TxDOT to grant final approval for this RFI.

RFI \#24 and 24B are approved without conditions.

| Responder Name: | Matthew E. Ma | or, P.E. |  | Response Date: |  | August 10, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mai | 区 | Other | E-mail |

RFI \#25

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 2425 (TxDOT correction) | Date: | December 14, 2009 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Kate Flanagan |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 |  |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | kflanagan@cintra.us.com |
| Subject: NTE Seg 3A Pedestrain bridge |  |  |  |
| Attachments: NTE MDP Geometric Design Criteria Response 121409.pdf |  |  |  |
| Information / Clarification Request: |  |  |  |
| Please see the attached markups to the draft geometric design criteria table. Below is a summary of requested modifications: <br> 1. Based on note 15 , Spur 280 SSD should be listed as $360^{\prime}$ for 45 mph . <br> 2. Minimum curve radius for the loop ramp is $180^{\prime}$ for 25 mph <br> 3. Current schematic designs for roadways now classified as collector-distributors have $8^{\prime}$ minimum outside shoulders. <br> 4. Spur 280 has a max grade listed as $4 \%$. A design exception has been requested for maximum grade, See RFI 23. The current design has a max grade $>6 \%$. We do not think is possible to flatten this below $4 \%$, the existing grade is greater than $4 \%$. |  |  |  |

Response Needed by (date): $\quad 12-23-09$

## Response:

Responder Name: $\qquad$ Response Date:
Delivery Type:
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$\square$ Other

DRAFT
12／3／2009


$$
45 \mathrm{MP}+550=360
$$


 Mus in For as MPH
 Shanloer wiotll
（4）Curvent Desion ths maxawaie $76 \%$ ， $74 \%$ MATCHing

| NORTH TARHANT EXPRESS MDP CDA: Geometric Design Criteria |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Alainiane (ap mox ML) | Fronters foindy | Fampedirect connaction | Gry simen | Collsetom-1/berlibutor | Loop Rimpe (35NE200) |
| Claar Zone |  |  |  |  |  |  |
| Oistance from Edge of Trave Lane Unless Noted Otherwise | $30^{\circ}$ | 3' (messured from face of curb) See Note 1. | 16* | 3' (measured from face of curb) See Note 1. | 16' | $16^{\prime}$ |
| Sido Slopas: |  |  |  |  |  |  |
| Within Cilaer Zone | 6.1 max | 6:1 max | 6:1 max | 6:1 max | 5:1 max | 6:1 max |
| -Outside Clear Zone | 3:1 max | 3:1 max | 3:1 max | 9:1 1 max | 9:1 max | 3:1 max |
| Vertical Clearance (Minimum) |  |  |  |  |  |  |
| Over Roadmay | 16.6" | $16^{\prime}-6^{\circ}$ | 16:\% ${ }^{6}$ | $16^{\circ} \cdot 6^{+}$ | $16^{\prime} \cdot 6^{*}$ | 15.6 ${ }^{\circ}$ |
| Over Siraets | $16^{\prime} \cdot 6^{\circ}$ | $16^{\prime} \cdot 6^{\circ}$ | $16^{\circ} \cdot 6^{\circ}$ | 16'.5' | $16^{\prime} \cdot 6^{*}$ | 16.6 |
| Oyer Prailrand | 23-0* | $23^{\prime} \cdot 0^{\prime \prime}$ | $23^{3} \cdot 0^{*}$ | 23'0* | 23:0* | $23^{\text {a }}$-0" |
| Over Electrified Light Aail | 26.6* | ${ }^{26 \cdot 6} 6^{\circ}$ | ${ }^{66 \cdot} 5^{\prime \prime}$ | $26^{\prime} \cdot 6^{\prime}$ | 28:6* | $26^{\circ} \cdot 6^{*}$ |
| Overhead Signs | $21^{\circ} 0^{*}$ | $21 \cdot 6$ | $21.0{ }^{\circ}$ | $21^{1} \cdot 0^{*}$ | $2^{10} 00^{*}$ | $21^{\prime} \cdot 0^{\prime}$ |
| Pedsastrian Croosings | $17^{\prime} \cdot 6^{\prime}$ | $17.6{ }^{\circ}$ |  |  |  |  |
| Oher |  |  |  |  |  |  |
| Design Vehicle | WB-50 | WQ.50 | WQ-50 | We-50 | W8-50 | We-50 |
| Driveway Radius | N/A | $30^{\prime}$ min commorclal t5' min residenilal | N/A | $30^{\prime}$ min commercial 15' min residential | NA | N/A |
| 1. The face of the new britge columnx sifull be ilixuled 6 feet or mure from the face of curt <br> 2. To miligute restrictions on the design impased by sight distance, it is acceptable to pasition the 8 -fixh stumilder an the inside of the carve and the 4 -fioht shrulder on the oulside wr the turse. <br>  Ifoweter, Developer shall prepare the design using Gouxl Jndusily Practice using Ilutler gradles where possible: <br> 9. Kump connecting [IDSW SB to [li 30 al south end of project to tie to existing: <br> b. Ramp counecting LH35W SH to Nortside Dr. I'rom STA 8+78.00 it 28+50,00; <br> г. Rxmp conneeling [II3SW SB to Northaide Dr. Iforn STA 28+50 U0 to 36+50.00; <br> ut. Ramp cirmecting Weatherfoid to JH 35w SB from STA $16+68.00$ to $23+$ y 0.00 : <br> e. Ramp connccing SH 121 SH to Belknap frum STA 32+45,00 w 46i+85,00; <br> f. Ramp cunniecting SH 183 to 1 H 35 W SB tion STA $18+25.00$ to $22+00.00$; <br> g. Ramp connecting Weathertord to SH 121 NB limol $\$ \mathrm{TA} 23+06.06$ in $3.5+28.67$; ancl, <br> h. Kamp cennecting IH 30 EB แs II $35 W$ ND al spouti etud of project. |  |  |  |  |  |  |
| Sermert 2t: <br>  |  |  |  |  |  |  |
| Sermen 3A: |  |  |  |  |  |  |
| 5. STEADMAN IGONSTA <br> 6. WEA-BEL from STA 10 <br> ${ }_{7}$ 12\|SB Imom STA $52+77$. <br> 8. DC I2ISB from STA $52+$ <br> 9. 12 INB from STA $52+77$ <br> 10. DC. 121 NB Frome STA 52 <br> 11. 35 WM WL from SIAA $883+$ <br> 12.35 WML Jimm STA $727+$ <br> 13. DC. II 35 WY SB-I2I NB <br> 14. DC $288-121 \mathrm{NB}$ from ST <br> 15. SPUR 280 shull have a m <br> 16. The following rondways s <br> a. Ronalway commetuing <br> h. Ruudway curnecling <br> c. Roadway connecting <br> U, Rupulway cturrecling <br> 17. Ramip connecting LH35N <br> 18. SPUR 280 mm SH 121 NH | +30.00 slall be 4.17 shall he co 6 shall be cons 85.36 shall hive 3 shall be cuns +01.93 shall hav 5.36 shull becr 0.2.5 xhall have 59.80 to $59+88$ $72+70.88$ shail fo 45 mphyesig od as Collecion135W SB; HI21 NB: Spur 280; amul, [H35W NB: WB shall be clas TA $62+93.47$ to | rontage Road and clasinifal truge Rohed und Llas sijied an Connector and classified as SD fir 45 mph design spead Cannectort and classifified is SD for 45 mph design speed rect Conrrectur arred Llasisified $D$ for 60 mph dezign speed minimum SSD lar 40 mph en SSD $\operatorname{lom} 30$ inph design s <br> reviseal schemulitx: <br> R Ramp per revised schernu llave a ininimum SSD for 3 |  <br> 5 Peed Lrban Street as xturws ban treeway as shown on revis <br> rbal Freeway as shomen oil revis <br> Lirban Fieeway as shown on a <br> sperd. | n revised xctematics لated rvised schematics dated $8 / 5$ chematics daterl 8/5/2009 <br> chematics dated 8/5/2009 <br> d schematics dated $\mathrm{i} 5 / 5 / 2005$ | $2009$ |  |
| Scement 3b/C: |  |  |  |  |  |  |
| 19. Ramp [H 35W SB-US 287 stall have a Design Speed $=40 \mathrm{mph}$. |  |  |  |  |  |  |

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
January 6, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 25: NTE Segment 3A Geometric Design Criteria

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $1 / 5 / 10$ | 1 | RFI \#25 Response Form |
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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


## Request for Information

| RFI No.: | 25 | Date: | December 31, 2009 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Kate Flanagan |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | kflanagan@cintra.us.com |
| Subject: | NTE Seg 3A Geometric Design Criteria |  |  |

## Attachments:

## Information / Clarification Request:

Please see the attached markups to the draft geometric design criteria table. Below is a summary of requested modifications:

1. Based on note 15 , Spur 280 SSD should be listed as $360^{\prime}$ for 45 mph .
2. Minimum curve radius for the loop ramp is $180^{\prime}$ for 25 mph
3. Current schematic designs for roadways now classified as collector-distributors have 8 ' minimum outside shoulders.
4. Spur 280 has a max grade listed as $4 \%$. A design exception has been requested for maximum grade, See RFI 23. The current design has a max grade $>6 \%$. We do not think is possible to flatten this below $4 \%$, the existing grade is greater than $4 \%$.

Response Needed by (date): 12-23-09

## Responses:

1. SPUR 280 is classified as an Urban Arterial with a design speed of 35 mph and minimum SSD of 250 as shown on the Sept 2009 Segment 3A schematics. See the revised Draft Geometric Design Criteria Table, Note 18, attached to the response to RFI\#24. The Draft Geometric Design Criteria Table lists minimum values. The design shall maximize design criteria where possible to maximize safety and operation of the facilities in accordance with Good industry Practice.
2. The Draft Geometric Design Criteria Table has been updated to reflect a minimum curvature of $180^{\prime}$ for the Loop Ramp as specified in the TxDOT RDM. The Sept 2009 schematic has a radius of $185^{\prime}$ for this Loop Ramp. NTEMP2-4 shall provide the maximum radius possible in accordance with Good Industry Practice.
3. NTEMP2-4 shall provide the shoulder widths for collector distributor roadways as shown on the Sept 2009 schematics and as specified in the Draft Geometric Design Criteria Table and Draft Geometric Design Criteria Table, Note 15.
4. SPUR 280 is classified as an Urban Arterial with a maximum grade of $7.00 \%$. See revised Draft Geometric Design Criteria Table, Note 18. Based upon this classification a design deviation is not required.

Responder Name: Matthew E. MacGregor, P.E. Response Date: January 6, 2010

Delivery Type:
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$\square$ Overnight
$\square \quad$ Mail
区 Other
E-mail

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
Reissued August 24, 2011

To:


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.macgregor@txdot.gov |
|  |  |

Subject: RFI\# 25: NTE Segment 3A Geometric Design Criteria

We Are Sending You:

| Copies | Date | No. | Description |
| :---: | :---: | :---: | :---: |
| 1 | $8 / 24 / 2011$ | 1 | Reissue of RFI \#25 Response Form |
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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1600 with any questions.


## Request for Information

| RFI No.: | 25 |
| :--- | :--- |
| To: | $\frac{\text { Matt MacGregor }}{}$4777 E. Highway 80 <br>  <br>  |


| Date: | December 31, 2009 |
| :---: | :---: |
| From: | Kate Flanagan |
|  | NTE Mobility Partners 2-4 - Austin, TX |
| Tel.: |  |
| Fax: |  |
| E-Mail: | kflanagan@cintra.us.com |

Subject:
NTE Seg 3A Geometric Design Criteria

## Attachments:

## Information / Clarification Request:

Please see the attached markups to the draft geometric design criteria table. Below is a summary of requested modifications:

1. Based on note 15 , Spur 280 SSD should be listed as $360^{\prime}$ for 45 mph .
2. Minimum curve radius for the loop ramp is $180^{\prime}$ for 25 mph
3. Current schematic designs for roadways now classified as collector-distributors have 8' minimum outside shoulders.
4. Spur 280 has a max grade listed as $4 \%$. A design exception has been requested for maximum grade, See RFI 23. The current design has a max grade $>6 \%$. We do not think is possible to flatten this below $4 \%$, the existing grade is greater than $4 \%$.

Response Needed by (date): 12-23-09

## Responses:

1. SPUR 280 is classified as an Urban Arterial with a design speed of 35 mph and minimum SSD of 250 ' as shown on the Sept 2009 Segment 3A schematics. See the revised Draft Geometric Design Criteria Table, Note 18, attached to the response to RFI\#24. The Draft Geometric Design Criteria Table lists minimum values. The design shall maximize design criteria where possible to maximize safety and operation of the facilities in accordance with Good industry Practice.
2. The Draft Geometric Design Criteria Table has been updated to reflect a minimum curvature of 180 ' for the Loop Ramp as specified in the TxDOT RDM. The Sept 2009 schematic has a radius of $185^{\prime}$ for this Loop Ramp. NTEMP2-4 shall provide the maximum radius possible in accordance with Good Industry Practice.
3. NTEMP2-4 shall provide the shoulder widths for collector distributor roadways as shown on the Sept 2009 schematics and as specified in the Draft Geometric Design Criteria Table and Draft Geometric Design Criteria Table, Note 15.
4. SPUR 280 is classified as an Urban Arterial with a maximum grade of $7.00 \%$. See revised Draft Geometric Design Criteria Table, Note 18. Based upon this classification a design deviation is not required.
[TxDOT Reissue: The loop ramp discussed in item \#2 above is further addressed with RFI \#35 \& 35B, which approve a minimum radius of $120^{\prime}$ to match the existing configuration.]
Responder Name: Matthew E. MacGregor, P.E. Response Date: Reissued August 24, 2011
$\square$ OvernightMail
© Other E-mail

RFI \#26

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 25 | Date: | February 8, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Kate Flanagan |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | kflanagan@cintra.us.com |

Subject: Use of 4' inside shoulder on six-lane Managed Lanes per TxDOT schematics.

Attachments: None

## Information / Clarification Request:

Request for verification of inside 4' shoulder width on Managed Lanes:
Per the NTE Segment 3B TxDOT schematics, the proposed Managed Lanes show a 4 foot inside shoulder for a 6 lane freeway (i.e. 3 managed lanes in each direction).

For reference, please see TxDOT schematic roll 7 of 26, Dated July 28, 2009, prepared by Civil Associates, Inc. and entitled: IH $35 W$ (URBAN FREEWAY) NORTH (FROM IH 820 TO SOUTH OF SH 114) TARRANT COUNTY CSJ 0014-16-252 AND 0081-12-041 On this schematic, please see IH 35 W typical sections from STA $1538+00$ to $1581+00$.

We request to retain a $4^{\prime}$ shoulder in this area. Please verify that the intent is to have a $4^{\prime}$ shoulder and verify that a design exception has been processed or will be granted.
$\square$ Please Verify and Approve.
Thank you.

## Response:

$\qquad$ Response Date:

## Delivery Type:

$\square$ Courier
$\square$ Overnight
$\square$ Mail
$\square$ Other

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
March 5, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 26: Use of $4^{\prime}$ inside shoulder on six-lane Managed Lanes per TxDOT schematics.

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $3 / 5 / 10$ | 1 | RFI \#26 Response Form |
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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 26 | Date: | February 8, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Alberto Gonzalez | From: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |

Subject: Use of 4' inside shoulder on six-lane Managed Lanes per TxDOT schematics.

## Attachments:

## Information / Clarification Request:

## Request for verification of inside 4' shoulder width on Managed Lanes:

Per the NTE Segment 3B TxDOT schematics, the proposed Managed Lanes show a 4 foot inside shoulder for a 6 lane freeway (i.e. 3 managed lanes in each direction).

For reference, please see TxDOT schematic roll 7 of 26, Dated July 28, 2009, prepared by Civil Associates, Inc. and entitled: IH $35 W$ (URBAN FREEWAY) NORTH (FROM IH 820 TO SOUTH OF SH 114) TARRANT COUNTY CSJ 0014-16-252 AND 0081-12-041 On this schematic, please see IH 35W typical sections from STA 1538+00 to 1581+00.

We request to retain a $4^{\prime}$ shoulder in this area. Please verify that the intent is to have a $4^{\prime}$ shoulder and verify that a design exception has been processed or will be granted.

## $\square$ Please Verify and Approve.

Response Needed by (date): Friday, February 20, 2010

## Responses:

The request to retain a $4^{\prime}$ inside shoulder on the proposed NB and SB Managed Lanes in Segment 3B between the IH 820 and Basswood Blvd connections is approved.

The proposed IH 35W typical sections from STA 1538+00 to STA $1581+00$ as shown on TxDOT schematic Roll 7 of 26 will be updated to show two ML and one AUX lane in each direction.

No design exception will be required for this section of roadway given the proposed lane classification.
Responder Name: Matthew E. MacGregor, P.E. Response Date: March 5, 2010

Delivery Type:
$\square$ Overnight
$\square \quad$ Mail
区 Other
E-mail


STA. $4096+00.00$ TO $4120+12.83$



RFI \#27

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 27 | Date: | March 5, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Kate Flanagan |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | kflanagan@cintra.us.com |
| Subject: | NTE SEGMENT 3A: DESIGN | RINITY RIV | R WEST FORK LEVEES |

Attachments: (1) FIRM - 190 of 495 Tarrant County.PDF

## Information / Clarification Request:

Request for clarification of Design Criteria for design and construction at Trinity River West Fork Levees:

Per the NTE Segment 3A TxDOT schematics, the proposed IH-35 Managed Lanes and General Purpose Lanes cross over the West Fork Trinity River at an existing levee. For reference, please see attachment 1 - FIRM - 190 of 495 Tarrant County.PDF for existing flood map for this area.

Please provide information on the TxDOT/USCOE coordination on this project.

What are design criteria for clearances, placing bridge columns and drill shafts, diaphragm walls, etc.? What are the design policies, guidelines and requirements for working on and near USACE levees based on TxDOT/USCOE coordination?

Thank you.

Response Needed by (date): FRIDAY, MARCH 19, 2010

## Response:

$\qquad$ Response Date:

Delivery Type:
$\square$ Overnight
$\square \quad$ Mail
$\square$ Other


## Transmittal Letter

Date: June 2, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 27: NTE SEGMENT 3A: DESIGN CRITERIA FOR WORKING AT TRINITY RIVER WEST FORK LEVEES

We Are Sending You:

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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

 guidelines and requirements for working on and near USACE levees based on TxDOT/USCOE coordination?

Thank you.

Response Needed by (date): FRIDAY, MARCH 19, 2010

## Responses:

Please find attached the following three items in response to your request for clarification regarding design and construction at the Trinity River West Fork Levee:

1. TRWD Criteria for Construction within and along the limits of Existing Federal Flood Protection Projects.
2. USACE Criteria for Construction within the limits of Existing Federal Flood Protection Projects, dated October 31, 2003.
3. TxDOT Meeting Notes from a meeting held with the Tarrant Regional Water District (TRWD) on May 27, 2010.

| Responder Name: | Matthew E. M | r, P.E. |  |  |  | June | , 2010 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 | Other | E-mail |

# TARRANT REGIONAL WATER DISTRICT <br> P.O. Box 4508 <br> Fort Worth, TX 76164 

CRITERIA FOR CONSTRUCTION WITHIN AND ALONG THE LIMITS OF EXISTING FEDERAL FLOOD PROJECTION PROJECTS

1. Pamphlet Purpose. This pamphlet provides guidance to individuals, developers, architect-engineering firms, and local governmental agencies for the construction of new facilities or the modification of existing facilities within the limits of Tarrant Regional Water District's (TRWD) flood protection project. The guidance contained in this pamphlet applies to the activities described herein in most cases and serves as a supplement to the U.S. Army Corps of Engineers, Fort Worth District (CESWF) Pamphlet SWFP 1150-2-1. This pamphlet is in no way a substitution or replacement of the SWFP 1150-2-1 and should only be used for guidance on the floodway in addition to the abovementioned pamphlet. However, TRWD reserves the right to reconsider this guidance at any time due to unknown or unforeseen circumstances, technological advances, additional information, etc.
2. Applicability. This pamphlet applies to any TRWD land owned or controlled by fee ownership or easement on the Fort Worth Floodway.
3. Project Purpose. A federal flood control project is designed to safely carry floodwater within the project and through a developed area. As such, any proposed developments within the project must keep the safe passage of floodwater as the first priority. The roles of the CESWF and TRWD are to maintain the integrity of the project while preventing negative impacts to the passage of the project design flood.

## 4. General Criteria for Construction within and along the Fort Worth Floodway.

## A. Submittals

(1) Five paper copies and one electronic set of $10 \%$ plans, including an aerial map, are to be submitted to TRWD. A concept plan is not sufficient for initial review. The aerial map shall show the right-of-way boundaries of TRWD with specific levee toe and channel slope limits in the portion of the project being crossed, if applicable.
(2) Within the initial submittal the construction starting date, completion date, and detailed project construction schedule, including sequence of construction prior to initiation of work shall be included.
(3) TRWD will make every attempt to return initial comments within 45 days of submittal.

## B. Security

(1) Site must remain secure with all gates closed and locked at all times.
(2) Cable fencing that is removed for construction purposes must be secured at the end of each work day with suitable fence to prevent motorized traffic
from entering the floodway. Specifications for replacement of security fence will be provided upon request.
(3) Only vehicles and equipment required for construction are allowed in the construction area in accordance to and as stated in Texas Water Code Chapter 49.217.
(a) All vehicles within construction area should be authorized by TRWD.
(b) Construction employee vehicles shall not be allowed on the floodway at any time during construction.
(c) Employee parking shall be provided off site.
(4) All maintenance roads shall remain unblocked to allow passage in the event of an emergency.
C. Construction involving the Trinity Trail System
(1) No closure of the Trinity Trail is allowed.
(2))Rerouting the Trinity Trail
(a) If interference to the trail is required for construction, the trail must be re-routed using compacted $3 / 8^{\prime \prime}$ minus flex base or asphalt.
(b) A trail detour plan, including signage must be submitted with packet.
(c) Signs notifying trail users of upcoming project/detour must be placed at least 1 week, but no earlier than 3 weeks before construction begins.
(d) Posted signs must be of professional quality and not hand made.
(3)Repairing/Replacing the Concrete Trail after construction
(a)Replace using a minimum 6" thick 3000 psi concrete with 1' perimeter beams reinforced with \#4 rebar tied $100 \%$ on 1' centers both ways.
(b)Rebar shall be installed on plastic chairs.
(c)Surface of trail shall be finished with a uniform medium-broom finish.
(d) Trail must be 8 ' minimum width and no smaller than the existing trail.
(4) Repairing/Replacing the Asphalt Trail after construction
(a)Type B asphalt is required
(b)\#1 flex base compacted 6 " thick shall be use for the base
(c) Finish grade shall have a smooth uniform surface and free of any surface defects or vertical deflection.
(b)Trail must be 11 ' minimum width and no smaller than the existing trail.
(d)Concrete may be required to replace asphalt at the discretion of the District

## D. Establishing Grass Post-Construction

(1) All grass shall be re-established to existing or better condition.
(2) A seed injected compost blanket minimum 2" depth shall be used on any slopes greater than 6:1.
(3) Seed Compositions
(a) From September 1 through March 15 Common Bermuda and Wheat shall be used.
(b) From March 16 through August 31 Japanese Millet and Common Bermuda shall be used.
(4) The "natural areas" on the floodway shall be re-established using a specific wildflower seed mixture, approved by the District.
E. Any vaults installed within the Floodway shall be flush with the ground with no greater than a 16:1 earthen slope away from the vault.
F. Erosion protection on the Floodway
(1) Cabled Articulating Revetment Systems are to be used for erosion control
(2) Riprap, gabions or concrete paving are not allowed and may not be substituted for the revetment systems
(3) Revetment systems must be a natural earth tone color.
5. Crossing Over Existing Levees at Grade.
A. Notwithstanding pamphlet SWFP 1150-2-1, District does not allow construction method as provided for in Paragraph 5 of SWFP 1150-2-1..
6. Crossing Over The Fort Worth Floodway.
A. Aerial bridge structures transporting utility lines over the Fort Worth Floodway will not be allowed.
7. Crossing Under Levees with Open Excavation.
A. This method is not allowed on the Fort Worth Floodway.
8. Crossing Under Levees with Boring or Jacking Sleeves.
A. Please refer to pamphlet SWFP 1150-2-1.

## 9. Horizontal Directional Drilling Under Levees and Channels.

A. Please refer to pamphlet SWFP 1150-2-1.

## 10. Bridges Crossing Levees.

A. All storm water runoff from bridge decks must be piped into a collection device and then to the river to prevent erosion within the floodway.
B. Cabled Articulating Revetment Systems are to be installed within the shadow line of the bridge where vegetation cannot be established.

## 11. Buried Lines Parallel to Levees and Channels.

A. Please refer to pamphlet SWFP 1150-2-1.
12. River and Channel Crossing Criteria.
A. Please refer to pamphlet SWFP 1150-2-1.

## 13. Roadway or Railroad Crossings.

A. Please refer to pamphlet SWFP 1150-2-1.

## 14. Discharge Structures.

A. All new, relocated, or renovated storm drain systems are required to have a Storm Water Collection Device (SWCD) capable of containing trash, sediment and oils in accordance with the integrated Storm Water Management (iSWM) program as promulgated by North Central Texas Council of Governments (NCTCOG).
B. The bottom elevation of the SWCD shall be installed at a depth no greater than 20 feet from existing grade.
C. Access to the SWCD shall accommodate an industrial size Vacuum Truck.
D. The agency, developer, entity or corporation responsible for the SWCD shall submit a maintenance report to TRWD on July $1^{\text {st }}$ of each year following the year of installation of the SWCD. Maintenance report shall include dates and volumes of oils, sediments and floatables removed from the SWCD. The SWCD shall be maintained and removals performed by the responsible party in accordance with the manufacture's guidelines.
E . All discharge points shall be installed below conservation elevation of the river (normal water surface elevation).

## 15. Pump Discharge Pipelines Over Levees.

A. Notwithstanding pamphlet SWFP 1150-2-1, District does not allow construction method as provided for in Paragraph 5 of SWFP 1150-2-1.
16. Electrical and Telephone Criteria for Overhead Wire Crossings.
A. When possible, free standing poles should be used that do not require guy lines.
B. If used, all guy wires shall be marked with a yellow or orange PVC cover.
C. Poles and guy wires shall not be installed within 21 feet of any other above ground obstruction to allow for maintenance vehicle passage

## 17. Low Dams or Diversion of Flows.

A. Please refer to pamphlet SWFP 1150-2-1.
18. Process for Abandoning Existing Pipelines.
A. Please refer to pamphlet SWFP 1150-2-1.

## 19. Construction of Recreation Facilities.

A. Please refer to pamphlet SWFP 1150-2-1.

## 20. Planting of Trees along the Floodway.

A. Removed trees must be replaced on a 1:1 caliper inch basis. Replaced trees shall be 3" to 5" caliper. The sum total of replacement tree diameter shall equal the removed tree diameter.
B. Replacement trees must be irrigated for 2 years with subsurface drip irrigation.
C. Trees shall be warranted for 2 years.

## 21. Oil and Gas Exploration Activities.

A. Temporary raw water supply pumps and lines may be placed in the Floodway at the District's discretion.
(1) The Federal Floodway will not be use as a storage yard for pumping equipment.
(2) Pump Equipment shall not be placed along the Floodway any earlier than one week prior to the drilling or fracing operation of the well.
B. Temporary Water Lines.
(1) Contractor is required to mow a $10^{\prime}$ strip on both sides of the temporary water line on a 2 -week interval basis.
(2) Where temporary water lines cross maintenance roads that are not a part of the trail system, a suitable crossing shall be constructed that provides a HS20 loading. Crossings are subject to frequent traffic by large tracked and rubber tire equipment.
(3) All water transfer pipelines must be free from leaks, including pipe joint couplings.
(4) Lines 3 " or smaller.
(a) Lines may be bored beneath the existing trail with a minimum depth of 2' below existing grade or attached to an overhead structure as described in $5 . b$ below.
(b) Each end of the buried line shall be constructed in valve boxes and positioned 5' on either side of the trail as connection points.
(5) Lines greater than 3 ".
(a) Lines must be constructed overhead allowing a 9' clearance and spanning the width of existing trail.
(b) Overhead structure must be stable, free from leaks, adequately anchored, free standing and painted a bright safety color.
(c) Signs notifying trail users of overhead crossing must be placed at least 1 week, but no earlier than 3 weeks before crossing is installed.
(d) Posted signs must be of professional quality and not handmade.
(6) Specific means and methods regarding temporary water lines are to be submitted for approval.
C. Water Pumps.
(1) All water pumps must be placed in a containment structure capable of containing one and a half times the total amount of fluid within the pump in the event of a pump malfunction.
(2) TRWD's Temporary Raw Water Sales Agreement must be attached to the pump.
(3) All water pumps placed below the top of the river channel must be removed each evening or at the end of each workday, unless supervision is provided 24 hours a day.
(4) A containment boom must be placed in the river at a 50' radius from the extraction point.
(5) Containment boom shall be 18" from top of boom to bottom of skirt.
D. Removal of Pump Equipment
(1) All pump equipment must be disassembled and removed from the property immediately upon completion of the drilling or fracing operation.

## District will process and review all Project Submittals on a case by case basis and reserves the right to approve or deny any such submittal at its sole discretion.

DEPARTMENT OF THE ARMY<br>U.S Army Corps of Engineers, Fort Worth District<br>P.O. Box 17300<br>Fort Worth, Texas 76102-0300

SWFP 1150-2-1

Pamphlet
No. 1150-2-1
31 October 2003

## Local Cooperation <br> CRITERIA FOR CONSTRUCTION WITHIN THE LIMITS <br> OF EXISTING FEDERAL FLOOD PROTECTION PROJECTS

1. Pamphlet Purpose. This pamphlet provides guidance to individuals, developers, architect-engineering firms, local project sponsors, and local governmental agencies for the construction of new facilities or the modification of existing facilities within the limits of an existing Federal flood protection project constructed by the U.S. Army Corps of Engineers, Fort Worth District (CESWF) and for which local project sponsors and/or local governmental agencies have the responsibilities for operation and maintenance. The CESWF, in accordance with Title 33 CFR, Section 208.10, retains the right of review and approval on all proposed improvements and/or modifications that are passed over, under, or through the walls, levees, improved channels, or floodways of such projects. The guidance contained in this pamphlet applies to the activities described herein in most cases; however CESWF reserves the right to reconsider this guidance at any time due to unknown or unforeseen circumstances, technological advances, additional information, etc.
2. Applicability. This pamphlet applies to all Federal flood protection projects constructed by CESWF, and for which a letter of assurance agreeing to the operation and maintenance of the flood protection project has been furnished CESWF by the project's local sponsor.
3. Project Purpose. A Federal flood control project is designed to safely carry floodwater within the project and through a deveIoped area. As such, any proposed developments within the project must keep the safe passage of floodwater as the first priority. The roles of the CESWF and the project local sponsor are to maintain the integrity of the project while preventing negative impacts to the passage of the project design flood. The CESWF will not allow the safety of the project to be compromised or the required design carrying capacity of the project reduced.

## 4. General Criteria for Construction Within a Floodway.

a. As early as possible during the planning process, discuss preliminary proposals with the CESWF and the local sponsor to avoid major revisions or project delay. The local sponsor may make any requirements of this Pamphlet more stringent than those contained herein. Concept proposals may be submitted for review. Submit the proposed construction starting date and the detailed project construction schedule, including sequence of construction prior to initiation of work.
b. Construction may not start until final written contract drawings and plans have been reviewed and approved in writing by both the CESWF and the local sponsor.
c. Furnish five (5) sets of plans and specifications for the proposed work to the CESWF, Operations Division, ATTN: CESWF-OD-M, via the local sponsor sufficiently in advance of proposed construction to allow adequate time for review and approval. A vicinity map shall be included in the plans showing the right-of-way boundaries of the flood protection project with specific levee toe and channel slope limits in the portion of the project being crossed, if applicable.
d. If boring, jacking, or tunneling operations are planned; detailed designs, calculations, and construction procedures must be provided for review. See subsequent paragraphs for additional details and required procedures.
e. Practice approved construction methods and best management practices to minimize erosion at the construction site. All work shall be performed in such a manner as to be as environmentally friendly as possible. This includes making every effort to reduce the turbidity of the water at the site, such as by limiting the amount of time construction equipment is in the water. A storm water pollution prevention plan (SWPPP) must be included in the final project submittal.
f. When construction work is in progress in a project located downstream of a Federal dam, a request from the contractor for changes in regulated releases will be considered on individual cases only. Normally, regulated releases from upstream lakes for evacuation of floodwaters, water supply, recreation, or other purposes considered to be in the best interest of the public will have first consideration. A flood event could occur at any time during construction activities and could affect these activities.
g. Construction equipment, spoil material, supplies, forms, buildings for inspectors, labs, or equipment and supply storage buildings, etc., shall not be placed or stored in the floodway during construction activities. Any item that may be transported by flood flows shall not be stored within the project. Locations of construction trailers and stockpile areas shall be included on project plans and approved by the CESWF and the local sponsor.
h. In addition to other requirements set forth in this Pamphlet, permits may be required under Section 10 and Section 404 for the desired work. These permits require a minimum of 90 days to process. It is recommended that contact with the CESWF Regulatory Branch be initiated in the early planning stages to prevent delays.
i. Repair or replace any maintenance and operation roads disturbed during construction to a condition equal to or better than their condition before construction. All roads must be inspected by the local sponsor prior to completion of the project.
j. Compact all fill and backfill in 6 -inch lifts as specified in job specifications approved by the CESWF. Compaction shall be to at least 95 percent of modified density as specified in ASTM D-1557. All backfill shall consist of impervious materials. Reestablish vegetation to its original condition or better. Remove all excess material from the limits of the floodway.
k. Provide scour protection consisting of articulating revetment system protection capable of being revegetated at the outfall of stilling basins designed according to the issuing jet velocity. If approved by the local sponsor, riprap, gabions, or concrete paving may be substituted for the revetments.

1. The crown or crest of the levee referred to in this pamphlet is the original or design levee crest elevation. This may or may not be the same as the current levee crest elevation. All modifications shall be based on the higher of the two elevations.
m. Upon request, the CESWF Hydrology and Hydraulics Section may provide applicable hydraulic models to be used for design.
n. Any permanent disturbance of existing recreation facilities must be mitigated.
o. Sump areas adjacent to federal projects are considered an integral part of the federal project and any modifications to them will be reviewed and approved in accordance with this Pamphlet.

## 5. Crossing Over Existing Levees At Grade.

a. The local sponsor may decide to not allow any proposed crossing over existing levees at grade.
b. No excavation or notching will be performed into or on the levee, or within the levee template.
c. Strip topsoil from the levee and place the line up and over the levee template slopes at grade. This will require rather abrupt line grade changes at the levee crest. Cover the new line by placing new fill uniformly on the slopes and top of the levee to slope away from the line and parallel to the longitudinal axis of the levee. Provide a minimum of 2 feet of cover over the new line. The slope of the fill shall be 1 vertical on 20 horizontal or flatter. Replace the topsoil, reestablish grass on all disturbed areas, and restore any roadways.
d. All valves located within 15 feet of either side of the projected toe of the levee shall be provided in a concrete box enclosure with a manhole type cover. Valve boxes located within the floodway shall be underground and flush with the surface. If the valve box is placed in the levee crest, the bottom of the excavation shall be not lower than one foot above the design water surface elevation. Fill shall be uniformly placed to slope away from the top of the valve box. If possible all valves shall be placed on the landside of levees a minimum of 15 feet from the projected levee toe.
e. Provide water-tight sealed manhole covers for all manholes within the floodway having tops below design water surface elevation. Fasten manhole covers to the manhole structures.

## 6. Crossing Under Levees with Open Excavation.

a. Provide a temporary ring levee (cofferdam) on the riverside of the existing levee at the location of the subject crossing to the same top elevation as the existing levee. This ring levee shall have a minimum crest width of 10 feet and sides slopes of 1 vertical on 3 horizontal or flatter. Construct the levee of impervious materials according to the provisions specified in Paragraph 4 j .
b. When the temporary ring levee is complete, excavate through the existing levee using one vertical on three horizontal cut slopes. The toe of the levee and ring levee shall be a minimum of 20 feet (measured horizontally) from the top edge of the excavation.
c. Generally, sources for borrow materials shall not be located within the limits of the floodway right-of-ways. In addition, depending on the type of soil and whether or not pervious materials or unstable materials exist in the foundation of the existing levee, it may be desirable to limit the depth of excavation or specify a minimum distance from the land-side toe of the levee. All excavated slopes shall be properly designed and the drawings sealed by a registered professional engineer.
d. After the line has been placed, the open excavation will be compacted in accordance with Paragraph 4 j . When backfill operations are completed, the entire foundation area to be occupied by the replaced levee fill shall be scarified, plowed, and/or harrowed to a depth of 6 inches, and then compacted by at least 16 complete passes of the tamping roller or 95 percent modified density, whichever is more rigorous.
e. Accomplish levee replacement by placing fill in 6-inch lifts and compacting by not less than eight complete passes of a tamping roller or at least 95 percent modified density. After compaction, the moisture content shall be within the limits of 3 percentage points above optimum to 2 percentage points below optimum moisture content.
f. Determine the in-place moisture content and density of the levee fill on a frequency of about one sample for each 2500 cubic yards of backfill placed in the levee.
g. When the breached levee has been reconstructed to its original grade, remove the temporary ring levee and dress and turf the surface areas of the plugged section.
h. Provide water-tight sealed manhole covers for all manholes within the flood protection project having tops below design water surface elevation. Fasten manhole covers to the manhole structures.
i. For pipelines, install a positive cut-off structure to prevent water from the riverside flowing through the pipeline to the landside. If located on the riverside of a levee, extend the cut-off structure to the levee crown elevation by bridge. This structure must be accessible no matter what flood condition may exist. The closure device must be operational by manpower, if necessary.
j. Provide gravity storm drains discharging into the floodway with automatic flap gate(s) at the discharge end of the line and energy dissipaters, as required. The owner or local sponsor, as per written agreement, shall be responsible for inspection and maintenance to ensure proper operation of the flap gates.
k. Use monolithic conduits or conduits with water-tight joints under the levee and levee template.
7. Crossing Under Levees with Boring or Jacking of Sleeves. The sequence of work shall be as follows:
a. Excavate the boring and jacking pit (must be on the land side outside the projected toe of the levee template slope).
b. Bore and jack the sleeve to a point beyond the projected riverside toe of the levee template slope.
c. If the difference in the diameters of the bore and sleeve exceeds 3 inches, the annular space shall be pressure grouted with bentonite slurry.
d. Place the product line in the sleeve.
e. Pressure grout the product line in sleeve with bentonite slurry.
f. Excavate the pit on the riverside and construct a manhole with gate valve placed on inside face of manhole away from channel. Tie line from sleeve under levee into manhole with gate valve.
g. Tie line from sleeve under levee into a manhole on landside.
h. During work on items a through h , a plug will be required to be placed and braced at the open end of the sleeve and pipe located in the jacking pit at the close of work each day. This plug must remain in place until the gate valve is installed and connections made to ensure protection from flooding from the river.

## 8. Horizontal Directional Drilling Under Levees and Channels.

a. Detailed contractual drawings, plans, procedures, and engineering calculations shall be provided to CESWF for review. These must include all the requirements of Paragraph 4 above and the following additional items:
(1) Inside diameter of the final bore hole and outside diameter of the product casing.
(2) Detailed description of construction and horizontal boring methods to be utilized.
(3) If the difference in the diameters of the final bore and product casing exceeds 3 inches, provide the method of pressure grouting the annular space between the outside of the product casing and the inside of the bore to prevent seepage under the levee template during maximum river stages.
(4) A profile of the proposed line showing alignment (including location of the river and levees).
(5) Location of entry and exit points, location, elevations and proposed clearances for all utility crossings and structures
(6) Right-of-way lines, property, and other utility right-of-way or easement lines
(7) Depth under the base of the levee, depth of the line under the river channel, and location of both ends of the string. If the proposed depth of the string directly below the base of the levee is less than 30 feet, then detailed engineering calculations sealed by a registered professional engineer shall be provided for review. These calculations must show a minimum 1.5 factor of safety against hydro-fracturing to be acceptable.
b. Develop and provide a quality control plan for the project that includes the maximum allowable drilling pressure, gage calibration method, and responsibility for assuring that the pressure is not exceeded.
c. The minimum clearance distance from the top of the pipe encasement to the original design river bottom elevation shall be 7 feet. Should the existing channel bottom elevation be lower than original design grade, the new line shall be the discussed depth below the existing bottom elevation.
d. Develop and provide a quality control plan for the project that includes the maximum allowable drilling pressure, gage calibration method, and specific responsibility for assuring that the pressure is not exceeded. During the drilling process, the pressure in the borehole must be monitored to ensure that the operational drilling pressures remain within the safe limits to prevent soil fracturing. The name of the party responsible for monitoring the work must be specified.

## 9. Bridges Crossing Levees.

a. The bottom of low steel of the bridge shall be above the design crest elevation of the levee. No notching into the levee will be allowed.
b. All bents should be located to minimize the number of bents located within the template of the levee. Driving of piles within the template of the levee will not be allowed. Bents at these locations should only be designed as drilled piers.
c. Bridges will not be located where their construction will block maintenance access roads presently located within the floodway.
d. All storm water runoff from bridge decks must be piped to grade to prevent erosion within the floodway.
e. Re-vegetated mat type slope protection must be provided from the top of the levee to the floodway bottom under the shadowline of the bridge.
f. The bridge must be designed to minimize the number of pier bents. If the new bridge is within 500 feet of an existing bridge the new pier bents must be in alignment with the adjacent bridge.

## 10. Buried Lines Parallel to Levees and Channels.

a. Buried lines parallel with a levee (either on the river side or land side) will not be allowed where the buried lines final location will be within the extended template of the levee. For example, a line buried 5 feet deep must be at least 15 feet away from the toe of a levee with a 1 vertical on 3 horizontal slope.
b. Sumps, ditches, swales, or other project features crossed by the buried line shall be restored to their pre construction condition.
c. Buried lines parallel with the channel bank must be at least 25 feet from the projected river channel slope template.
d. When a buried line crosses a discharge channel, place the line on piers with the piers aligned so as to provide minimal obstruction to flow in the discharge channel and designed so as to catch minimal debris. The preferred alternative would be to place the line under the discharge channel and encase it with concrete. Extend the encasement a minimum of 5 feet beyond the top of the channel side slopes.

## 11. River and Channel Crossing Criteria.

a. Crossings Under Rivers and Channels by Open Excavation:
(1) Bury the line a minimum of 7 feet below the original design river bottom elevation. Should the existing channel bottom elevation be lower than original design grade, the new line shall be the discussed depth below the existing bottom elevation.
(2) Sufficiently anchor or encase the line to prevent floatation.
(3) Backfill the excavation with material similar to that excavated. If soil is excavated, backfill with compacted impervious fill material and if rock is excavated, backfill with concrete.
(4) No cofferdam fill type crossings shall be allowed in water greater than six (6) feet in depth, and will then only be allowed if geotechnical and structural designs prove that sheet piling would not be a viable method.
b. Crossings Over Rivers and Channels.
(1) Provide a minimum freeboard between the low point of the crossing and the design water surface elevation of three feet or to the top of any levee, whichever is higher.
(2) The obstruction caused by the supporting bridge and its piers shall not significantly reduce the carrying capacity of the floodway. No longitudinal cross bracing will be used.
(3) Submit final plans and hydraulic computations to indicate that the proposed project would not reduce the floodway capacity.
(4) Projects crossing navigable waterways (Trinity River downstream from Riverside Drive in Fort Worth, Texas) shall require a United States Coast Guard permit. Clearances and requirements shall be as directed by the Coast Guard.

## 12. Roadway or Railroad Crossings.

a. The low steel of a bridge shall have an elevation not lower than the crown of the levee or top of bank or 3 feet above the design water surface, whichever is higher. Contact CESWF for the current design water surface at the location of the proposed roadway crossing. Additional clearances shall be required for fixed spans over navigable waterways.
b. Submit final plans and hydraulic computations to indicate the proposed roadway or bridge would not reduce flows or project capacity. Projects will not be approved that reduce the carrying capacity of the project.
c. Any roadway over a navigable waterway will require a permit from the United States Coast Guard.
d. See Paragraph 9 for special requirements for crossing levees.
e. Hold temporary roadway fill to a minimum to prevent increasing the water surface elevation should a flood occur during the construction period. Construct all temporary ramps from levees going in a downstream direction. This will prevent flows from being directed into the face of the levees.

## 13. Headwall, Chutes, Gate Valves, Flap (Automatic) Gates, etc.

a. Install headwall, gate valve structures, flap (automatic) gates, and other types of outfall structures in such a manner to prevent obstruction of flow or creation of scouring conditions within the project. All headwalls must transition with the slope and flow discharge points must be at an elevation equal to the bottom of the slope or at the normal water surface. Chutes will not be allowed unless they are the only viable alternative.
b. All structures shall be installed in such a manner so as to not create maintenance problems.

## 14. Pump Discharge Pipelines Over Levees.

a. The invert of the discharge shall be at the toe of the protective works (levee) and shall be free-vented at the highest point. For very large lines deviation from this criteria may be considered, but under no condition shall excavation be permitted into the levee. See Paragraph 5 for requirements for crossing over a levee on grade.
b. Flap (automatic) gates are not required at the outfall of the discharge lines.

## 15. Electrical and Telephone Criteria for Overhead Wire Crossings.

a. The local sponsor may require directional boring under the levee as opposed to an overhead crossing.
b. No structure (poles or otherwise) shall be located closer than 15 feet from the toe of any levee.
c. No structure (poles or otherwise) shall be located closer than 15 feet from the top of any channel slope.
d. Provide a minimum vertical clearance of 28 feet between the crown of the levee and the low wire at the low point of the wire at the levee crossing computed under the most adverse conditions (temperature, wind, load, etc.).
e. Provide a minimum vertical clearance of 28 feet between the natural ground and the low wire at the low point of the sag in the area of the project channel, or three feet above the project design water surface level, whichever is higher. (Check Electrical Code for minimum clearance of high voltage lines.)
f. Locate guy wires and anchors in such a manner that they do not interfere with the operation and/or maintenance of the channel, levees, or related structures. No anchors may be placed on the levee.

## 16. Low Dams or Diversion of Flows.

a. Submit plans, hydraulic and structural computations, and specifications for low dams or other obstructions for review and comments prior to the construction of any type dam structure in a project area. These plans will be reviewed to determine if adverse hydraulic or structural effects would occur within the project as a result of the proposed construction. Prior to an extensive engineering study for any type of water barrier in a project, the CESWF and the local sponsor will review the concept plan, proposed location, and purpose.
b. Diversion of flows into or out of a project area shall be reviewed as to possible adverse hydraulic or structural effects.

## 17. Process for Abandoning Existing Pipelines.

a. Requests to abandon existing buried pipelines within a project shall be submitted in writing to CESWF and the local sponsor. No buried line within a floodway may be abandoned without the review and approval of CESWF and the local sponsor.
b. As a minimum, the portion of the abandoned pipeline under a levee shall be completely filled with concrete or grout to prevent seepage through the abandoned line during flood conditions.
c. Abandoned buried pipelines that are located on floodway property, but are not located under a levee shall be plugged at each end with concrete or grout.
d. Any structures associated with abandoned buried pipelines, for example, manholes, shall be removed and the resulting hole filled and compacted in accordance with the provisions in paragraph 4 j .
e. Above-ground abandoned pipelines shall be removed from floodway right-of-way, including any associated structures.
18. Construction of Recreation Facilities. Submit plans to the CESWF for review and approval on any proposed recreation type facilities to be constructed in an existing or approved Federal project area. Each plan shall include hydraulic computations and will be reviewed for individual and cumulative effects to determine if the proposed construction would produce adverse effects on an existing or approved project area. If adverse effects on the carrying capacity of the project are determined, the project will be disapproved. The local sponsor may construct minor recreation improvements as needed so long as final asbuilt plans are provided to CESWF.

## 19. Planting of Trees Within a Floodway.

a. The purpose of a Federal flood protection project is to carry floodwater through an urban area. Anything in the floodway that restricts flow or can catch floating debris will reduce the carrying capacity below its design limits and will not be allowed. The local sponsor is directed to remove all trees on the
levees or adjacent to the channel and also as many other trees and obstructions within the floodway as reasonably possible.
b. Planting of trees on the levees will not be allowed nor approved.
c. Planting of additional trees within existing flood protection projects or adjacent to channels is not encouraged and will be evaluated only on a case-by-case basis. Only trees with deep-type root systems and high canopies may be planted in selected areas of existing flood protection projects. The plantings shall be a minimum of 50 feet away from the toe of the levee or the top of the channel bank. Trees may be placed no closer than at an average spacing of 100 feet, center-to-center. Prune trees to permit mowing immediately adjacent with tractor type mowers. No bush or vine type plants will be permitted. Minimum application of ground cover plants for slope protection will be allowed, subject to approval by the local sponsor.
d. Submit a coordinated planting plan with hydraulic computations for review and approval. This plan must also show all existing trees within 1000 feet of the proposed new trees.

CESWF-EC-DG

CAROL J. SHEAD
Publications Control Officer

## DISTRIBUTION:

Trinity River Crossings
TxDOT and Tarrant Regional Water District (TRWD) Meeting - May 27, 2010

## Attendees:

- Matthew MacGregor, TxDOT; Curtis Hanan, TxDOT; et al


## General:

- TRWD and USACE Criteria for Construction within and along the limits of Existing Federal Flood Protection Projects were provided by TRWD at the meeting. USACE Guidelines dated October 31, 2003.


## Topics:

1. IH 35W Crossing:

- The property adjacent to IH 35W is noted as a secondary valley storage site for TRWD. They do not anticipate needing this site. TRWD valley storage is further south between the trees and SH 121 where an existing park is located.
- The park area will be lowered to accommodate a 2 year event with all the facilities replaced. The park will have to answer to the possibilities if needing any property adjacent to IH 35W. TxDOT should proceed as is with existing property as the future property conditions.
- The attached Guidelines on crossing the Trinity will have to apply SPF + 4' for freeboard.
- The 15 ' box above the SPF could be an issue.
- Penetrations of the levee and $50^{\prime}+$ could be an issue.
- CDC Permit process is to be followed.
- FW to confirm water elevation +4'.

2. Drainage Coordination as TRE crosses IH 35W:

- TRWD will keep the current old Levee in place and hug the TRE and use the existing drainage configuration.
- TRWD would like TxDOT to connect to the existing FR north of this location to minimize future work. TRWD will provide Curtis and John information to do this.
- We should share this with NTEMP24 at our next FTF after Curtis and John have configured what they see can fit. This should be a good thing unless we have to tuck the FR under the GP lanes.
- Does this section also have a CDC permit process to be followed?
- FW to confirm water elevation +4'.

3. SH 121 Crossing:

- The Belknap and the FR crossings are the ones that could be an issue related to height, SPF + 4' for freeboard.
- The 15' box above the SPF could be an issue.
- Penetrations of the levee and 50' + could be an issue. Likely same approach as 7th street in FW and the Trinity in Dallas with diaphragm walls / 36" drill shafts.
- CDC Permit process is to be followed.
- FW to confirm water elevation +4'.

4. General Comments

- Current Hydrographs for water elevations are available - It should not be too much higher than before.
- Need to reach an agreement on what can fit and be approved when it is not reasonable to have a 15' box.
- Confirm that the Set the agreed upon bridge beam underside for all crossings.
- Follow the CDC permit process - This is NTEMP24's responsibility to start sooner than later I guess. Can you start before NEPA clearance?
- Incorporate what we now know into the Schematic and EA's.


RFI \#28 \& \#28B

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 28 | Date: | March 10, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Kate Flanagan |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | kflanagan@cintra.us.com |

Subject: NTE SEGMENT 3A: INTERIM CLOVERLEAF RAMP (IH35NB TO SPUR 280 WB) TO RETAIN CLASSIFICATION AS LOOP RAMP.

## Attachments:

## Information / Clarification Request:

Request for verification on NTE Segment 3A Interim Ramp connecting IH35NB to Spur 280WB: Classification to remain the same as MDP/Ultimate Design.

The NTE Segment 3A Interim design of Ramp 35NB280 requires the vertical profile to be raised in order to tie into Spur 280 WB. The new vertical profile has a maximum grade of $7 \%$.

Per the Geometric Design Criteria dated 1/5/2010, under the Notes section, it states:
Segment 3A:
16. Ramp connecting IH35NB to Spur 280WB shall be classified as a Loop Ramp per revised schematic.

The maximum grade for a Loop Ramp (35NB280) is 7\%. Please confirm this criteria may be used in the Interim design and a grade of $7 \%$ for Ramp 35NB280 is acceptable.
$\square$ Please Confirm.

Thank you.

Response Needed by (date): FRIDAY, MARCH 26, 2010

## Response:

$\qquad$ Response Date:

Delivery Type:
$\square$
Courier
$\square$ Overnight
$\square$ Mail
$\square$ Other

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
March 16, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 28: NTE SEGMENT 3A: INTERIM CLOVERLEAF RAMP (IH35NB TO SPUR 280 WB) TO RETAIN CLASSIFICATION AS LOOP

We Are Sending You:

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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacGr | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 28 | Date: | March 10, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Alberto Gonzalez | From: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE SEGMENT 3A: INTERIM CLOVERLEAF RAMP (IH35NB TO SPUR 280 WB) TO RETAIN CLASSIFICATION AS LOOP RAMP.

Attachments: $\qquad$


#### Abstract

Information / Clarification Request: Request for verification on NTE Segment 3A Interim Ramp connecting IH35NB to Spur 280WB: Classification to remain the same as MDP/Ultimate Design.


The NTE Segment 3A Interim design of Ramp 35 NB280 requires the vertical profile to be raised in order to tie into Spur 280 WB. The new vertical profile has a maximum grade of $7 \%$.

Per the Geometric Design Criteria dated 1/5/2010, under the Notes section, it states:

## Segment 3A:

16. Ramp connecting IH35NB to Spur 280WB shall be classified as a Loop Ramp per revised schematic.

The maximum grade for a Loop Ramp (35NB280) is 7\%. Please confirm this criteria may be used in the Interim design and a grade of $7 \%$ for Ramp 35NB280 is acceptable.
$\square$ Please Confirm.

Response Needed by (date): FRIDAY, MARCH 26, 2010

## Responses:

The use of a grade of 7\% for Ramp 35NB280 for the Interim design per the MDP Draft Geometric Design Criteria Table is approved.

| Responder Name: | Matthew E. M | , P.E. |  | Res |  | Marc | 16, 2010 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square \quad$ Courier | $\square$ Overnight | $\square$ | Mail | 区 | Other | E-mail |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 28B | Date: | Aug 1. 2011 |
| :---: | :---: | :---: | :---: |
| To: | Lucas Lahitou | From: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE SEGMENT 3A: INTERIM CLOVERLEAF RAMP (IH35NB TO SPUR 280 WB) TO RETAIN CLASSIFICATION AS LOOP RAMP.

Attachments: Exhibit 1 (Profile Interim GPL ramp IH35W to Spur 280 WB ), segment3AI_profile.dgn

## Information / Clarification Request:

As part of the CDA negotiations, TxDOT requested that the developer confirmed the following:
1 For the developer to confirm if the latest mandatory scope reflects the approved RFI
Developer confirms that the vertical alignment design of the Interim ramp from IH35WNB to Spur 280 WB reflects the approved RFI. Developer is also including with this RFI the printout of the proposed vertical alignment E35N280 (Exhibit 1) that is located within the file segment3Al_profile.dgn (always provided with the Mandatory scope schematics).

2 Geopak name of ramp approved under RFI
The updated geopak alignment name for this ramp is E35N280. Developer requests from TxDOT to reissue RFI 28 with the most up to date alignment name.

Response Needed by (date):
August 3, 2011

## Responses:

| Responder Name: | Matthew E. M | r, P.E. |  | Response Date: |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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EXIT RAMP 35W NB TO SPUR 280 WB (E35N280)
520

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NOĞAP

## Transmittal Letter

## Date:

 August 10, 2011To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| $:$ | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |

Subject:
RFI \#28B \& Reissue of RFI \#28: NTE SEGMENT 3A: INTERIM CLOVERLEAF RAMP (IH35NB TO SPUR 280 WB) TO RETAIN CLASSIFICATION AS LOOP RAMP.

We Are Sending You:

| Copies | Date | No. | Description |
| :---: | :---: | :---: | :--- |
| 1 | $8 / 10 / 11$ | 2 | RFI \#28B Response Form |
| 1 | $8 / 10 / 11$ | 2 | Reissue of RFI \#28 Response Form |
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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1600 with any questions.

Copy To:
Signed: Matthew MacGregor [electronic]
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
区 Other Electronic

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 28 | Date: | March 10, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Alberto Gonzalez | From: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE SEGMENT 3A: INTERIM CLOVERLEAF RAMP (IH35NB TO SPUR 280 WB) TO RETAIN CLASSIFICATION AS LOOP RAMP.

Attachments: $\qquad$


#### Abstract

Information / Clarification Request: Request for verification on NTE Segment 3A Interim Ramp connecting IH35NB to Spur 280WB: Classification to remain the same as MDP/Ultimate Design.


The NTE Segment 3A Interim design of Ramp 35 NB280 requires the vertical profile to be raised in order to tie into Spur 280 WB. The new vertical profile has a maximum grade of $7 \%$.

Per the Geometric Design Criteria dated 1/5/2010, under the Notes section, it states:

## Segment 3A:

16. Ramp connecting IH35NB to Spur 280WB shall be classified as a Loop Ramp per revised schematic.

The maximum grade for a Loop Ramp (35NB280) is 7\%. Please confirm this criteria may be used in the Interim design and a grade of $7 \%$ for Ramp 35NB280 is acceptable.
$\square$ Please Confirm.

Response Needed by (date): FRIDAY, MARCH 26, 2010

## Responses:

The use of a grade of $7 \%$ for Ramp 35NB280 for the Interim design per the MDP Draft Geometric Design Criteria Table is approved.
[Response reissued August 10, 2011: TxDOT has reviewed Developer's submittal of RFI \#28B and hereby approves RFI \#28 without conditions.]

| Responder Name: | Matthew E. M | , P.E. |  | Res |  | Reis | Augus |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square \quad$ Courier | $\square$ Overnight | $\square$ | Mail | 区 | Other | E-mail |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 28B |
| :---: | :---: |
| To: | Lucas Lahitou |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |


| Date: | Aug 1. 2011 |
| :---: | :---: |
| From: | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE SEGMENT 3A: INTERIM CLOVERLEAF RAMP (IH35NB TO SPUR 280 WB) TO RETAIN CLASSIFICATION AS LOOP RAMP.

Attachments: Exhibit 1 (Profile Interim GPL ramp IH35W to Spur 280 WB), segment3AI_profile.dgn


#### Abstract

Information / Clarification Request: As part of the CDA negotiations, TxDOT requested that the developer confirmed the following:

1 For the developer to confirm if the latest mandatory scope reflects the approved RFI

Developer confirms that the vertical alignment design of the Interim ramp from IH35WNB to Spur 280 WB reflects the approved RFI. Developer is also including with this RFI the printout of the proposed vertical alignment E35N280 (Exhibit 1) that is located within the file segment3AI_profile.dgn (always provided with the Mandatory scope schematics).

2 Geopak name of ramp approved under RFI

The updated geopak alignment name for this ramp is E35N280. Developer requests from TxDOT to reissue RFI 28 with the most up to date alignment name.


## Response Needed by (date):

August 3, 2011

## Responses:

TxDOT conditionally approved RFI \#28 on March 16, 2010. TxDOT received this RFI \#28B on August 4, 2011. TxDOT confirms the corrected ramp name "E35N280" and confirms that the Developer has provided adequate information to allow TxDOT to grant final approval for this RFI.

RFI \#28 and 28B are approved without conditions.

TxDOT notes that this RFI was written by the Developer's DB contractor and believes the statement regarding the delivery of the Mandatory Scope schematics to be intended for the Developer. TxDOT requested from the Developer dgn files in addition to the pdfs of the Mandatory Scope schematics numerous times before receiving the entire design packages with all current dgn files in March 2011.

| Responder Name: | Matthew E. M | , P.E. |  | Response Date: |  | August 10, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square \quad$ Courier | $\square$ Overnight | $\square$ | Mail | 区 | Other | E-mail |

RFI \#29

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 29 | Date: | March 10, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Kate Flanagan |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | kflanagan@cintra.us.com |

Subject: USE OF 4' INSIDE SHOULDER ON SIX-LANE MANAGED LANES PER TxDOT SCHEMATICS.

## Attachments:

$\qquad$

## Information / Clarification Request:

Request for verification of inside 4' shoulder width on Managed Lanes:
Per the NTE Segment 3A TxDOT schematics, the proposed Managed Lanes show a 4 foot inside shoulder for a 6 lane freeway (i.e. 3 managed lanes in each direction).

For reference, please see TxDOT schematic roll 1 of 16, stamped: PRELIMINARY 100\% SUBMITTAL AUGUST 5, 2009, prepared by Civil Associates, Inc. and entitled: IH 35W (URBAN FREEWAY) SOUTH (FROM MEACHAM BLVD TO SPUR 280) TARRANT COUNTY CSJ 0014-16179...

On this schematic, please see IH 35W typical sections from STA 707+20 to $722+98$.

We request to retain a $4^{\prime}$ shoulder for this segment in the Interim and MDP/Ultimate design. Please verify that the intent is to have a $4^{\prime}$ shoulder and verify the extent to which the design exception has been processed.
$\square$ Please Verify and Approve.
Thank you.

Response Needed by (date):
FRIDAY, MARCH 26, 2010

## Response:

$\qquad$ Response Date:
$\square \quad$ CourierOvernight
$\square$ Mail
$\square$ Other

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
March 16, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 29: USE OF 4' INSIDE SHOULDER ON SIX-LANE MANAGED LANES PER TxDOT SCHEMATICS.RAMP.

We Are Sending You:

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| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacGr | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

## RFI No.:

29

| Date: | March 10, 2010 |
| :---: | :---: |
| From: | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: USE OF 4' INSIDE SHOULDER ON SIX-LANE MANAGED LANES PER TxDOT SCHEMATICS.

## Attachments:

## Information / Clarification Request:

Request for verification of inside 4' shoulder width on Managed Lanes:

Per the NTE Segment 3A TxDOT schematics, the proposed Managed Lanes show a 4 foot inside shoulder for a 6 lane freeway (i.e. 3 managed lanes in each direction).

For reference, please see TxDOT schematic roll 1 of 16, stamped: PRELIMINARY 100\% SUBMITTAL AUGUST 5, 2009, prepared by Civil Associates, Inc. and entitled: IH 35W (URBAN FREEWAY) SOUTH (FROM MEACHAM BLVD TO SPUR 280) TARRANT COUNTY CSJ 0014-16179...

On this schematic, please see IH 35W typical sections from STA $707+20$ to $722+98$.

We request to retain a $4^{\prime}$ shoulder for this segment in the Interim and MDP/Ultimate design. Please verify that the intent is to have a $4^{\prime}$ shoulder and verify the extent to which the design exception has been processed.
$\square$ Please Verify and Approve.

Thank you.

## Response Needed by (date):

FRIDAY, MARCH 26, 2010

## Response:

The request to retain a $4^{\prime}$ inside shoulder on the proposed NB and SB Managed Lanes in Segment 3A between the pair of wishbone connections for the Interim and Ultimate design is approved.

The proposed IH 35W typical sections from STA $707+20$ to STA $722+98$ as shown on TxDOT Schematic Roll 5 of 16 will be updated to show two ML and one AUX lane in each direction as shown on the proposed IH 35 W typical sections from STA $745+00$ to STA 772+00 on TxDOT Schematic Roll 6 of 16.

No design exception will be required for this section of roadway given the proposed lane classification.

| Responder Name: | Matthew E. M | r, P.E. |  |  |  | Marc | 16, 2010 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 | Other | E-mail |

RFI \#30B \& \#30C

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

 allowed to be designed for 55 MPH , and have a maximum grade of four percent.

## Response Needed by (date):

FRIDAY, April 30, 2010

## Response:

$\qquad$ Response Date:
$\square$ Overnight
$\square \quad$ Mail
$\square$ Other






NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
May 14, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 30B: NTE SEGMENT 3A: MAXIMUM GRADES SEGMENT 3A INTERIM (SOUTH END OF PROJECT)

We Are Sending You:

| Copies | Date | No. | Description |
| :---: | :---: | :---: | :---: |
| 1 | $5 / 14 / 10$ | 3 | RFI \#30B Response Form and Exhibit |
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## These Are Transmitted As Checked Below:

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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacGr | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

# Request for Information 

## RFI No.:

30B
Date: April 28, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: NTE SEGMENT 3A: MAXIMUM GRADES SEGMENT 3A INTERIM (SOUTH END OF PROJECT)

Attachments: Exhibit showing Alternative Design Concept for Interim northbound IH 35W Main Lane PGL

## Information / Clarification Request:

Request for verification of Geometric Design Criteria for NTE Segment 3A (South End of Project):
As part of the project optimization process, NTE Mobility Partners 2-4 have developed an alternative design NTE segment 3A on IH 35W south of SH 121. The main purpose of this alternative is to utilize as much as possible the existing infrastructure on the interchange, and move the Existing general purpose lanes (when necessary) in order to open up an area for the construction of the Managed Lanes extension south of SH 121. Attached to this RFI is a plan and profile of Managed Lanes and General Purpose lanes of the Alternative South of SH 121 as requested previously by TxDOT in order to approve the RFI. Construction on IH 35 South Bound General Purpose Lanes South of SH 121 is Interim, and is not in the Ultimate location (horizontally and vertically) as depicted on TxDOT Schematics for this segment. As seen on the plans, the profile of both bounds of the Interim General Purpose Lanes south of station $898+55$ is parallel to the existing vertical profile, but the existing profile has grades that exceed the required 3 percent maximum grade. NTE DP 2-4 has submitted RFI 32 that requests clarifying a station range where the ultimate GPL is allowed to be designed for 55 mph beyond station $932+00$, but this RFI will still not cover the interim construction of GPL that exceed three percent beyond station $905+70$. The developer respectfully requests that both bounds of the Interim General Purpose lanes south of station $898+55$ be allowed to be designed for 55 MPH , and have a maximum grade of four percent.

Please verify that this criteria applies to the Interim design also; therefore, the proposed interim IH35W Managed \& General Purpose Lanes south of East $4^{\text {th }}$ Street will have a maximum grade of $4 \%$. This request is being submitted based on the interim profile matching the existing profile which currently exceeds $3 \%$.
$\square$ Please Verify.
Thank you.

Response Needed by (date): FRIDAY, April 30, 2010

## Response:

TxDOT conditionally approves NTEMP's request to use a maximum PGL grade of $4 \%$ for the interim IH 35W General Purpose Lanes south of STA $898+55$.

Final approval is dependent upon review and approval of the complete interim design proposal package and providing verification that the following vertical curves have been revised to meet a design speed of 55 mph .

## Northbound IH 35W

The vertical curve located at VPI Sta. 924+63, a curve length of 600', and a K value of 86 does not meet the criteria for a 55 MPH design for a crest vertical curve. The $K$ value for a 55 MPH design for a crest curve is 114.

The vertical curve located at VPI Sta. 932+17, a curve length of 730', and a $K$ value of 96 does not meet the criteria for a 55 MPH design for a sag vertical curve. The K value for a 55 MPH design for a sag curve is 115 .

Southbound IH 35W
The vertical curve located at VPI Sta. 923+45, a curve length of 680', and a K value of 88 does not meet the criteria for a 55 MPH design for a crest vertical curve. The K value for a 55 MPH design for a crest curve is 114 .

The vertical curve located at VPI Sta. 910+52, a curve length of 420', and a K value of 97 does not meet the criteria for a 55 MPH design for a sag vertical curve. The K value for a 55 MPH design for a sag curve is 115.

The vertical curve located at VPI Sta. 931+84, a curve length of 780', and a K value of 108 does not meet the criteria for a 55 MPH design for a sag vertical curve. The K value for a 55 MPH design for a sag curve is 115.

Prior to final approval of this request, TXDOT also requests that NTEMP24 provide documentation discussing why the permanent bridge structures over $4^{\text {th }}$ Street and the RR cannot be constructed as part of the interim configuration. This documentation should include a review of the attached exhibit which proposes an alternate interim profile for the northbound main lanes in order to construct the permanent structures over $4^{\text {th }}$ St and the RR. Please identify what factors preclude further development of this interim alternate design for the northbound IH 35W main lanes.
Responder Name: Matthew E. MacGregor, P.E. $\quad$ Response Date: May 14, 2010

Delivery Type: $\quad \square$ Courier $\quad \square$ Overnight $\quad \square$ Mail $\quad$| Other |
| :--- |
| E-mail |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 30 C |
| :---: | :---: |
| To: | Lucas Lahitou |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |


| Date:From: | Aug 1. 2011 |
| :---: | :---: |
|  | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE SEGMENT 3A: MAXIMUM GRADES SEGMENT 3A INTERIM (SOUTH END OF PROJECT)

Exhibit 1 (printout of interim NB and SB GPL vertical alignment south of station $898+55$ and $908+02$ respectively), segment3AI_profile.dgn

## Information / Clarification Request:

As part of the CDA negotiations, and in order to close pending issues with RFI's, TxDOT has requested to provide the following information:

1 For the developer to confirm if the latest mandatory scope reflects the approved RFI

Developer confirms that the vertical alignment design of the Interim NB and SB GPL (south of station $898+55$ and $908+02$ respectively) reflects the approved RFI. Please refer to exhibit 1 (printout of the file segment3AI_profile.dgn always provided with the Mandatory scope schematics).

2 Interim design proposal package and providing verification that the NB and SB Interim GPL vertical curves have been revised to meet a design speed of 55 mph as requested on RFI 30B (South of SH 121 Interchange).

Please refer to exhibit 1 (printout of the file segment3AI_profile.dgn always provided with the Mandatory scope schematics). All vertical curves meet or exceed K value of 114 (crest) and 115 (Sag) for 55 MPH design speed.

3 Provide an explanation of why the developer would not build the NB and SB permanent bridges over fourth street bridge and the railroad (contained within RFI 30 response from TxDOT).

Developer provided response to this request through the Proposal Due Diligence Process. Explanation and alternatives are discussed in Issue number 1 and 2. TxDOT did communicate to the developer that the alternative of the NB and SB GPL crossing over $4^{\text {th }}$ street and the railroad with bridges compatible with the ultimate configuration, is no longer desired by the state.

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 30 without any restrictions.

Response Needed by (date): Aug 3, 2011
$\square$

Responder Name: Matthew E. MacGregor, P.E.
Response Date:CourierOvernightMail
区 Other E-mail







Various files submitted with RFI \#30C:

## Seg3AI_Profile.dgn

## Transmittal Letter

## Date:

August 10, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject: RFI \#30C \& Reissue of RFI \#30B: NTE SEGMENT 3A: MAXIMUM GRADES SEGMENT 3A INTERIM (SOUTH END OF PROJECT)

We Are Sending You:

| Copies | Date | No. | Description |
| :---: | :---: | :---: | :--- |
| 1 | $08 / 10 / 11$ | 2 | RFI \#30C Response Form |
| 1 | $08 / 10 / 11$ | 2 | Reissue of RFI \#30B Response Form |
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| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1600 with any questions.

Copy To:
Signed: Matthew MacGregor [electronic]
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
区 Other Electronic

# Request for Information 

## RFI No.:

30B
Date: April 28, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: NTE SEGMENT 3A: MAXIMUM GRADES SEGMENT 3A INTERIM (SOUTH END OF PROJECT)

Attachments: Exhibit showing Alternative Design Concept for Interim northbound IH 35W Main Lane PGL

## Information / Clarification Request:

Request for verification of Geometric Design Criteria for NTE Segment 3A (South End of Project):
As part of the project optimization process, NTE Mobility Partners 2-4 have developed an alternative design NTE segment 3A on IH 35W south of SH 121. The main purpose of this alternative is to utilize as much as possible the existing infrastructure on the interchange, and move the Existing general purpose lanes (when necessary) in order to open up an area for the construction of the Managed Lanes extension south of SH 121. Attached to this RFI is a plan and profile of Managed Lanes and General Purpose lanes of the Alternative South of SH 121 as requested previously by TxDOT in order to approve the RFI. Construction on IH 35 South Bound General Purpose Lanes South of SH 121 is Interim, and is not in the Ultimate location (horizontally and vertically) as depicted on TxDOT Schematics for this segment. As seen on the plans, the profile of both bounds of the Interim General Purpose Lanes south of station $898+55$ is parallel to the existing vertical profile, but the existing profile has grades that exceed the required 3 percent maximum grade. NTE DP 2-4 has submitted RFI 32 that requests clarifying a station range where the ultimate GPL is allowed to be designed for 55 mph beyond station $932+00$, but this RFI will still not cover the interim construction of GPL that exceed three percent beyond station $905+70$. The developer respectfully requests that both bounds of the Interim General Purpose lanes south of station $898+55$ be allowed to be designed for 55 MPH , and have a maximum grade of four percent.

Please verify that this criteria applies to the Interim design also; therefore, the proposed interim IH35W Managed \& General Purpose Lanes south of East $4^{\text {th }}$ Street will have a maximum grade of $4 \%$. This request is being submitted based on the interim profile matching the existing profile which currently exceeds $3 \%$.
$\square$ Please Verify.
Thank you.

## Response:

TxDOT conditionally approves NTEMP's request to use a maximum PGL grade of $4 \%$ for the interim IH 35W General Purpose Lanes south of STA $898+55$.

Final approval is dependent upon review and approval of the complete interim design proposal package and providing verification that the following vertical curves have been revised to meet a design speed of 55 mph .

## Northbound IH 35W

The vertical curve located at VPI Sta. 924+63, a curve length of 600', and a $K$ value of 86 does not meet the criteria for a 55 MPH design for a crest vertical curve. The $K$ value for a 55 MPH design for a crest curve is 114 .

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Southbound IH 35W
The vertical curve located at VPI Sta. 923+45, a curve length of 680', and a K value of 88 does not meet the criteria for a 55 MPH design for a crest vertical curve. The K value for a 55 MPH design for a crest curve is 114 .

The vertical curve located at VPI Sta. 910+52, a curve length of 420', and a K value of 97 does not meet the criteria for a 55 MPH design for a sag vertical curve. The K value for a 55 MPH design for a sag curve is 115.

The vertical curve located at VPI Sta. 931+84, a curve length of 780', and a K value of 108 does not meet the criteria for a 55 MPH design for a sag vertical curve. The K value for a 55 MPH design for a sag curve is 115.

Prior to final approval of this request, TxDOT also requests that NTEMP24 provide documentation discussing why the permanent bridge structures over $4^{\text {th }}$ Street and the RR cannot be constructed as part of the interim configuration. This documentation should include a review of the attached exhibit which proposes an alternate interim profile for the northbound main lanes in order to construct the permanent structures over $4^{\text {th }}$ St and the RR. Please identify what factors preclude further development of this interim alternate design for the northbound IH 35W main lanes.
[Response reissued August 10, 2011: TxDOT has reviewed Developer's submittal of RFI \#30C and hereby approves RFI \#30B for general purpose lanes south of STA $898+55$ only, without conditions.]

| Responder Name: | Matthew E. M | r, P.E. |  | Response Date: |  | Reissued August 10, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mai | 区 | Other | E-mail |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 30 C |
| :---: | :---: |
| To: | Lucas Lahitou |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |


| Date:From: | Aug 1. 2011 |
| :---: | :---: |
|  | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE SEGMENT 3A: MAXIMUM GRADES SEGMENT 3A INTERIM (SOUTH END OF PROJECT)

Exhibit 1 (printout of interim NB and SB GPL vertical alignment south of station $898+55$ and $908+02$ respectively), segment3AI_profile.dgn

## Information / Clarification Request:

As part of the CDA negotiations, and in order to close pending issues with RFI's, TxDOT has requested to provide the following information:

1 For the developer to confirm if the latest mandatory scope reflects the approved RFI

Developer confirms that the vertical alignment design of the Interim NB and SB GPL (south of station $898+55$ and $908+02$ respectively) reflects the approved RFI. Please refer to exhibit 1 (printout of the file segment3AI_profile.dgn always provided with the Mandatory scope schematics).

2 Interim design proposal package and providing verification that the NB and SB Interim GPL vertical curves have been revised to meet a design speed of 55 mph as requested on RFI 30B (South of SH 121 Interchange).

Please refer to exhibit 1 (printout of the file segment3AI_profile.dgn always provided with the Mandatory scope schematics). All vertical curves meet or exceed K value of 114 (crest) and 115 (Sag) for 55 MPH design speed.

3 Provide an explanation of why the developer would not build the NB and SB permanent bridges over fourth street bridge and the railroad (contained within RFI 30 response from TxDOT).

Developer provided response to this request through the Proposal Due Diligence Process. Explanation and alternatives are discussed in Issue number 1 and 2. TxDOT did communicate to the developer that the alternative of the NB and SB GPL crossing over $4^{\text {th }}$ street and the railroad with bridges compatible with the ultimate configuration, is no longer desired by the state.

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 30 without any restrictions.

Response Needed by (date): Aug 3, 2011

## Response:

TxDOT conditionally approved RFI \#30B on May 14, 2010. TxDOT received this RFI \#30C on August 4, 2011. In addition to the information provided above and the information provided in a meeting with the Developer on July 29, 2011, TxDOT reviewed the Seg3AI_Profile.dgn file submitted on May 31, 2011 as part of the FIP package. TxDOT confirms that the Developer has provided adequate information to grant final approval for this RFI.

RFI \#30B and 30C are approved for the general purpose lanes south of STA $898+55$ only, without conditions.

TxDOT notes that this RFI was written by the Developer's DB contractor and believes the statement regarding the delivery of the Mandatory Scope schematics to be intended for the Developer. TxDOT requested from the Developer dgn files in addition to the pdfs of the Mandatory Scope schematics numerous times before receiving the entire design packages with all current dgn files in March 2011.

Responder Name: Matthew E. MacGregor, P.E.
Response Date: August 10, 2011
Delivery Type: $\quad \square$ Courier $\quad \square$ Overnight $\quad \square$ Mail $\quad \boxtimes$ Other E-mail

## RFI \#31 and \#31B

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 31 |
| :--- | :--- |
| To: |  |
|  | Matt MacGregor |
|  | 4777 E. Highway 80 |
|  | Mesquite, TX 75150-6443 |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Date:
April 20, 2010

| From: | Alberto Gonzalez |
| ---: | :--- |
| Tel.: |  |
| FTE Mobility Partners 2-4 - Austin, TX |  |
| E-Mail: |  |
|  |  |

Subject:
NTE Seg 3A interim ramp exceptions

Attachments: NTE Seg 3AI As-Builts of 4 existing ramps.pdf, Plans for Interim Construction on the same area


#### Abstract

Information / Clarification Request: This is to request an exception for design speed on 4 interim ramps located along IH35W between the Trinity River and the SH121/IH 35 W interchange. The interim configuration shows existing mainlanes and frontage roads that are widened to accommodate the managed lane extension. New ramp designs are provided for the entrance and exits in approximate locations of the existing ramps. A review of the existing ramp as-builts indicate a design speed range of $25-50 \mathrm{mph}$ based on horizontal and vertical curves (See attached). The current designs have accommodated a 35 mph design speed. The 4 ramps to be considered for exception are: TRTAGPSI, GPSI-121, TRTA-GPNI, BELK-GPNI. The above listed ramps also do not comply with the minimum distance between ramps as required by the TxDOT Roadway Design Manual Figure 3-51, as it provides less than 1500 ft of weaving distance in the auxiliary lane. NTE Mobility Partners 2-4 respectfully requests both a deviation on the design speed of the above ramps, and a deviation with respect to the minimum distance between Successive entrance and exit ramps. This request applies only to the four ramps built for the Segment 3A interim configuration. This exception request is exclusive to the interim configuration. It has no impact on the ultimate design.


Response Needed by (date): 4-23-10

## Response:

Responder Name: $\qquad$ Response Date:
Delivery Type:Courier
Overnight
$\square \quad$ Mail
$\square$ Other











NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
May 14, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 31: NTE Seg 3A interim ramp exceptions

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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


# Request for Information 

RFI No.: 31
Date:
April 20, 2010

| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

## Subject:

NTE Seg 3A interim ramp exceptions

Attachments: NTE Seg 3AI As-Builts of 4 existing ramps.pdf, Plans for Interim Construction on the same area

## Information / Clarification Request:

This is to request an exception for design speed on 4 interim ramps located along IH35W between the Trinity River and the SH121/IH 35W interchange. The interim configuration shows existing mainlanes and frontage roads that are widened to accommodate the managed lane extension. New ramp designs are provided for the entrance and exits in approximate locations of the existing ramps. A review of the existing ramp as-builts indicate a design speed range of 25-50 mph based on horizontal and vertical curves (See attached). The current designs have accommodated a 35 mph design speed. The 4 ramps to be considered for exception are: TRTAGPSI, GPSI-121, TRTA-GPNI, BELK-GPNI. The above listed ramps also do not comply with the minimum distance between ramps as required by the TxDOT Roadway Design Manual Figure 3-51, as it provides less than 1500 ft of weaving distance in the auxiliary lane. NTE Mobility Partners $2-4$ respectfully requests both a deviation on the design speed of the above ramps, and a deviation with respect to the minimum distance between Successive entrance and exit ramps.
This request applies only to the four ramps built for the Segment 3A interim configuration. This exception request is exclusive to the interim configuration. It has no impact on the ultimate design.

## Response Needed by (date): 4-23-10

## Response:

TxDOT conditionally approves the interim design and locations of the four ramps (TRTA-GPSI, GPSI-121, GPNI-TRTA and BELK-GPNI ).
Final approval is dependent upon review and approval of the complete interim design proposal package.

Prior to final approval of this request, TxDOT also requests that NTEMP24 provide the proposed horizontal and vertical design for each of the subject ramps for review. Each ramp design should attempt to achieve the highest attainable design speed.

The AUX lane weaving distance between ramps TRTA-GPSI, GPSI-121 should also be maximized during final design of the interim configuration by refining ramp locations and optimizing ramp designs. For example, there may be an opportunity to increase the AUX lanes weaving distance by relocating the Ramp TRTA-GPSI gore further to the north (closer to the U-turn).

Responder Name: Matthew E. MacGregor, P.E. $\quad$ Response Date: May 14, 2010

Overnight
$\square \quad$ Mail
区 Other
E-mail

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

RFI No.: 31B

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

Date:
Aug 1. 2011

| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: NTE Seg 3A interim ramp exceptions

Exhibit 1 (printout of interim NB and SB GPL vertical alignment for ramps south of Trinity River), Exhibit 2 (printout of Attachments: interim NB and SB GPL layout for ramps south of Trinity River), segment3AI_profile.dgn, Seg3AI_Align.dgn, Seg3AI_Pave.dgn

## Information / Clarification Request:

As part of the CDA negotiations, and in order to close pending issues with RFI's, TxDOT has requested to provide the following information:

1 For the developer to provide (or specify) the location and level in the dgn files for the latest horizontal proposed horizontal and vertical design for the subject ramps of RFI 31

Developer has provided the dgn's for plan and profile of the subject ramps with each updated submission of the Mandatory Scope schematics. The vertical alignment of the four ramps is within the file segment3AI_profile.dgn; developer has included a printout of the specified electronic file containing the four Interim ramps in exhibit 1. The horizontal alignment and pavement files are within the dgn files called Seg3AI_Align.dgn and Seg3AI_Pave.dgn respectively; developer has included a printout of the Mandatory Scope Schematics at the four Interim ramps in exhibit 2. Further information could be found by Txdot in the GPK file provided by the developer with each Mandatory Scope Submittal; the name of the gpk file is job03a.gpk

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 31 without any restrictions. Further optimization of these ramps will take place during the Detail Design Process.

Response Needed by (date): Aug 3, 2011
$\square$

Responder Name: Matthew E. MacGregor, P.E.
Response Date:CourierOvernightMail
区 Other E-mail







Microstation files submitted with RFI \#31B:

## Seg3AI_Align.dgn

## Seg3AI_Pave.dgn

## Seg3AI_Profile.dgn

## Transmittal Letter

## Date:

August 10, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject: RFI \#31B \& Reissue of RFI \#31: NTE Seg 3A interim ramp exceptions

We Are Sending You:

| Copies | Date | No. | Description |
| :---: | :---: | :---: | :--- |
| 1 | $08 / 10 / 11$ | 2 | RFI \#31B Response Form |
| 1 | $08 / 10 / 11$ | 2 | Reissue of RFI \#31 Response Form |
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| These Are Transmitted As Checked Below: |  |  |  |  |  |
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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1600 with any questions.

Copy To:
Signed: Matthew MacGregor [electronic]
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
区 Other Electronic

# Request for Information 

RFI No.:
31

To:
Alberto Gonzalez
NTE Mobility Partners 2-4
7700 Chevy Chase Drive
Chase Park One, Suite 500C
Austin, TX 78752

Date:
April 20, 2010

| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

## Subject:

NTE Seg 3A interim ramp exceptions

Attachments: NTE Seg 3AI As-Builts of 4 existing ramps.pdf, Plans for Interim Construction on the same area

## Information / Clarification Request:

This is to request an exception for design speed on 4 interim ramps located along IH35W between the Trinity River and the SH121/IH 35W interchange. The interim configuration shows existing mainlanes and frontage roads that are widened to accommodate the managed lane extension. New ramp designs are provided for the entrance and exits in approximate locations of the existing ramps. A review of the existing ramp as-builts indicate a design speed range of 25-50 mph based on horizontal and vertical curves (See attached). The current designs have accommodated a 35 mph design speed. The 4 ramps to be considered for exception are: TRTAGPSI, GPSI-121, TRTA-GPNI, BELK-GPNI. The above listed ramps also do not comply with the minimum distance between ramps as required by the TxDOT Roadway Design Manual Figure 3-51, as it provides less than 1500 ft of weaving distance in the auxiliary lane. NTE Mobility Partners 2-4 respectfully requests both a deviation on the design speed of the above ramps, and a deviation with respect to the minimum distance between Successive entrance and exit ramps.
This request applies only to the four ramps built for the Segment 3A interim configuration. This exception request is exclusive to the interim configuration. It has no impact on the ultimate design.

Response Needed by (date): 4-23-10

## Response:

TxDOT conditionally approves the interim design and locations of the four ramps (TRTA-GPSI, GPSI-121, GPNI-TRTA and BELK-GPNI ).
Final approval is dependent upon review and approval of the complete interim design proposal package.

Prior to final approval of this request, TxDOT also requests that NTEMP24 provide the proposed horizontal and vertical design for each of the subject ramps for review. Each ramp design should attempt to achieve the highest attainable design speed.

The AUX lane weaving distance between ramps TRTA-GPSI, GPSI-121 should also be maximized during final design of the interim configuration by refining ramp locations and optimizing ramp designs. For example, there may be an opportunity to increase the AUX lanes weaving distance by relocating the Ramp TRTA-GPSI gore further to the north (closer to the U-turn).
[Response reissued August 10, 2011: TxDOT has reviewed Developer's submittal of RFI \#31B and hereby approves RFI \#31 without conditions. TxDOT requests that the Developer maximize the auxiliary lane weaving distance between ramps TRTA-GPSL and GPSI-121 during final design.]

Responder Name: Matthew E. MacGregor, P.E. Response Date: Reissued August 10, 2011
$\square$ Overnight
$\square$ Mail
区 Other
E-mail

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

RFI No.: 31B

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

Date:
Aug 1. 2011

| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: NTE Seg 3A interim ramp exceptions

Exhibit 1 (printout of interim NB and SB GPL vertical alignment for ramps south of Trinity River), Exhibit 2 (printout of Attachments: interim NB and SB GPL layout for ramps south of Trinity River), segment3AI_profile.dgn, Seg3AI_Align.dgn, Seg3AI_Pave.dgn

## Information / Clarification Request:

As part of the CDA negotiations, and in order to close pending issues with RFI's, TxDOT has requested to provide the following information:

1 For the developer to provide (or specify) the location and level in the dgn files for the latest horizontal proposed horizontal and vertical design for the subject ramps of RFI 31

Developer has provided the dgn's for plan and profile of the subject ramps with each updated submission of the Mandatory Scope schematics. The vertical alignment of the four ramps is within the file segment3AI_profile.dgn; developer has included a printout of the specified electronic file containing the four Interim ramps in exhibit 1. The horizontal alignment and pavement files are within the dgn files called Seg3AI_Align.dgn and Seg3AI_Pave.dgn respectively; developer has included a printout of the Mandatory Scope Schematics at the four Interim ramps in exhibit 2. Further information could be found by Txdot in the GPK file provided by the developer with each Mandatory Scope Submittal; the name of the gpk file is job03a.gpk

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 31 without any restrictions. Further optimization of these ramps will take place during the Detail Design Process.

Response Needed by (date): Aug 3, 2011

## Response:

TxDOT conditionally approved RFI \#31 on May 14, 2010. TxDOT received this RFI \#31B on August 4, 2011. In addition to the information provided above and the information provided in a meeting with the Developer on July 29, 2011, TxDOT reviewed the Seg3AI_Profile.dgn file submitted on May 31, 2011 as part of the FIP package. TxDOT confirms that the Developer has provided adequate information to grant final approval for this RFI.

RFI \#31 and 31B are approved without conditions. TxDOT requests that the Developer maximize the auxiliary lane weaving distance between ramps TRTA-GPSL and GPSI-121 during final design.

TxDOT notes that this RFI was written by the Developer's DB contractor and believes the statement regarding the delivery of the Mandatory Scope schematics to be intended for the Developer. TxDOT requested from the Developer dgn files in addition to the pdfs of the Mandatory Scope schematics numerous times before receiving the entire design packages with all current dgn files in March 2011.

Responder Name: Matthew E. MacGregor, P.E.
Response Date: August 10, 2011

Delivery Type:Courier
OvernightMail
区
Other
E-mail

RFI \#33, \#33B \& \#33C

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 33 | Date: | April 26, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Alberto Gonzalez |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 |  |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | agonzalez@cintra.us.com |
| Subject: | NTE Seg 3A request for additional design exception and NTE Seg 2-4 Geometric Design Criteria |  |  |
| Attachments: DC (280-MLNI).pdf (Plan \& Profile of 280-MLNI DC) |  |  |  |
| Information / Clarification Request: |  |  |  |
| NTEDPP 2-4 requests an additional design deviation for Segment 3A. The deviation requested is summarized below. <br> 1. 280 - MLNI DC from Spur 280 to IH 35 W ML NB, $5 \%$ maximum grade is need due to the elevation of the managed lanes and geometric constraints along Spur 280, and the need to clear the Ultimate General Purpose Lanes on IH-35W. <br> Consequently, NTEDPP 2-4 requests modification of the North Tarrant Express MDP CDA Geometric Design Criteria for segments 2-4 for the following Item: <br> 2. Add note 3 M to read: "Ramp connecting SPUR 280 NB to IH 35 W ML NB on Segment 3 A " |  |  |  |

Response Needed by (date): $\quad 05-30-10$
Responses: $\quad 1$

## DIRECT CONNECTOR (280-MLNI)





NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
May 14, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 33: NTE Seg 3A request for additional design exception and NTE Seg 2-4 Geometric Design Criteria

We Are Sending You:

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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


## Request for Information

RFI No.:

## 33

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

Date: April 26, 2010

| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE Seg 3A request for additional design exception and NTE Seg 2-4 Geometric Design Criteria

Attachments: DC (280-MLNI).pdf (Plan \& Profile of 280-MLNI DC)

## Information / Clarification Request:

NTEDPP 2-4 requests an additional design deviation for Segment 3A. The deviation requested is summarized below.

1. 280 - MLNI DC from Spur 280 to IH 35W ML NB, $5 \%$ maximum grade is need due to the elevation of the managed lanes and geometric constraints along Spur 280, and the need to clear the Ultimate General Purpose Lanes on IH-35W.

Consequently, NTEDPP 2-4 requests modification of the North Tarrant Express MDP CDA Geometric Design Criteria for segments 2-4 for the following Item:
2. Add note 3 M to read: "Ramp connecting SPUR 280 NB to IH 35 W ML NB on Segment $3 A^{\prime}$ "

## Response Needed by (date): 05-30-10

## Responses:

TxDOT conditionally agrees to the use of the $5 \%$ maximum grade for the interim direct connector ramp 280-MLNI.

Final approval is dependent upon review and approval of the complete interim design proposal package.

Prior to final approval of this request, TxDOT requests that NTEMP24 provide an updated profile indicating all crossing roadways, estimated structure depths, and calculated minimum vertical clearances. TxDOT also requests that NTEMP24 review the location of the northbound US 287 exit gore and document the reasons for not relocating the gore further to the east to reduce not only the interim $5 \%$ grade, since this appears to be the ultimate gore location, but also the ultimate grade which also exceeds $4 \%$.

The Draft MDP Geometric Design Criteria Table will not be updated to reflect interim design criteria since the table is intended as a reference document for the ultimate design of the facility.
Responder Name: Matthew E. MacGregor, P.E. $\quad$ Response Date: May 14, 2010

Overnight
$\square$ Mail
区 Other
E-mail

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas $78752 \quad$ North Richland Hills, TX 76180

## Request for Information



As part of the CDA negotiations, and in order to close pending issues with RFI's, TXDOT has requested to provide additional information related to the Interim WB Spur 280 to IH35W ML NB. Please note that the developer disputes that this RFI is still not approved by TxDOT, as it is listed as a design deviation in Book 2 Note 3M. Deviation 3M has been in the Geometric Design Criteria for segment 3A and $3 B$ since May 142010 (more than a year ago) with the response of RFI 32 and 33 (done the same date).

Notwithstanding the above, developer will provide the additional information requested by TxDOT in the latest RFI log:
1 For the developer to provide (or specify) the location and level in the dgn files for the latest horizontal proposed horizontal and vertical design for the subject ramp of RFI 33.

Developer has always provided the dgn's for plan and profile of the subject ramp with each updated submission of the Mandatory Scope schematics. The vertical alignment of the interim and ultimate ramp is within the file segment3AI_profile.dgn, and segment3A_profile.dgn respectively. Developer has included a printout of the specified electronic files containing the ramp vertical alignment in exhibit 1 (includes minimum vertical clearances that need to be met by the developer). The horizontal alignment and pavement files are within the dgn files called Seg3AI_Align.dgn and Seg3AI_Pave.dgn respectively. Developer has included a printout of the Mandatory Scope and Ultimate Master Development Plan schematics as exhibit 2. Further information could be found in the GPK file provided by the developer with each Mandatory Scope Submittal; the name of the gpk file is job03a.gpk

2 NTEMP needs to document the reasons for not relocating the NB US 287 exit gore to reduce the interim and ultimate grades as described in TxDOT response.

Please note that as seen in exhibit 2, the developer as part of the multiple submissions of the Mandatory scope schematics has realigned the existing Spur 280 WB to IH35W NB (Dec 2010 submission vs. May 2010). The new alignment of the Spur 280 to IH35W NB GPL has been moved further south. After close evaluation of WB Spur 280 to IH35W ML NB vertical alignment, the main driver for the 5 percent grade is that the ramp needs to fit underneath the future Spur 280 EB to SH 121 NB with $16.5^{\prime}$ clearance (not being built during mandatory scope, see exhibit 1 sheet 1 , and exhibit 3). The developer as part of the exercise of providing a facility with no subsidy, is building as much as possible the ultimate connector ( $5 \%$ grade starts after station $917+90$ ) up to station $927+75$, and then needs to transition to the existing spur 280 by realigning the existing spur 280 WB to IH35 NB ramp (see FIP and Book 2 Capacity Improvement tables already finalized and approved by TxDOT and Developer). Again, due to the fact that the table 11-1 note 3M allows for 5 percent grade within this alignment, and since the developer is following the same vertical alignment up to station 927+75, the interim WB Spur 280 to IH35W NB ML does not need additional design deviations beyond the already granted to the Ultimate Configuration alignment. In the event that TxDOT desires to build an interim or ultimate WB Spur 280 to IH35W NB ML with 4 percent grade, TxDOT's construction of the capacity improvement will be more expensive due to the fact that the Spur 280 EB to SH 121 connector will have to be at a higher elevation (in order to clear the ML ramp from Spur 280).

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 33 for both the Interim Mandatory and Capacity Improvement WB Spur 280 to IH35W NB ML vertical alignment (make it compatible with book 2 table 11-1). Approval needs not to contain any additional or pending restrictions.

Aug 3, 2011
$\square$

Responder Name: Matthew E. MacGregor, P.E. Response Date:
Delivery Type: $\quad \square$ Courier $\quad \square$ Overnight $\quad \square$ Mail $\quad \boxtimes$ Other E-mail






## PRELIMINARY

## AECOM

## Inc. - 3580

 IIS Document is Releaseo vine rit Authon
north tarrant express - segment 3a SPUR 280/US 287 PLAN


(3) - number of traffic lanes
$\Rightarrow$ traffic direction

-     - managed lane toll gantry
$-\quad$ ramp toll gantry
1 170M355 ALIGNMENT NAME
$\longrightarrow$ Bridge identifier

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| AECOM• <br> COM Technical Services Inc. - 3580 |  |  |  |  |  |
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| north tarrant express - segment 3a SPUR 280/US 287 PLAN |  |  |  |  |  |
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Various files submitted with RFI \#33B:

## Seg3A_Profile.dgn

## Seg3AI_Profile.dgn

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.:From: | 33 C | Date: | Aug 8.2011 |
| :---: | :---: | :---: | :---: |
|  | Lucas Lahitou | To: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |
| Subject: | DC ramp 280-MLN |  |  |

Attachments: None

## Information / Clarification Request:

As part of the CDA negotiations, and in order to close pending issues with RFI's, TxDOT has requested to provide additional information related to the Interim WB Spur 280 to IH35W ML NB. In particular RFI LOG provided on August $4^{\text {th }}, 2011$ requests NTEMP to provide calculated vertical clearances.

As dicussed and accepted on Friday $5^{\text {th }}, 2011$, Developer has made available calculated vertical minimum clearances in the Data Room, which is accessible to TxDOT (developer to update once revised Mandatory Scope schematics are available with the Chesapeake inspired alternative incorporated).

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 33C for both the Interim Mandatory and Capacity Improvement WB Spur 280 to IH35W NB ML vertical alignment (make it compatible with book 2 table 11-1). Approval needs not to contain any additional or pending restrictions.

Response Needed by (date):
Aug 11, 2011

## Response:

Responder Name: Matthew E. MacGregor, P.E.

Response Date:
$\square$ Overnight
$\square$ Mail
区 Other E-mail

## Transmittal Letter

## Date:

 August 16, 2011To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject: RFI \#33B, RFI \#33C \& Reissue of RFI \#33: DC ramp 280-MLN

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| 1 | $08 / 16 / 11$ | 2 | RFI \#33C Response Form |
| 1 | $08 / 16 / 11$ | 3 | Reissue of RFI \#33 Response Form |
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| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1600 with any questions.

Copy To:
Signed: Matthew MacGregor [electronic]
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
区 Other Electronic

## Request for Information

RFI No.:
33

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

Date: April 26, 2010

| From: | Matthew E. MacGregor |
| ---: | :--- |
| TxDOT, Dallas District |  |
| Fax: | 214.319 .6571 |
| E-Mail: | 214.319 .6580 |
|  |  |

Subject:
NTE Seg 3A request for additional design exception and NTE Seg 2-4 Geometric Design Criteria

Attachments: DC (280-MLNI).pdf (Plan \& Profile of 280-MLNI DC)

## Information / Clarification Request:

NTEDPP 2-4 requests an additional design deviation for Segment 3A. The deviation requested is summarized below.

1. 280 - MLNI DC from Spur 280 to IH 35 W ML NB, $5 \%$ maximum grade is need due to the elevation of the managed lanes and geometric constraints along Spur 280, and the need to clear the Ultimate General Purpose Lanes on IH-35W.

Consequently, NTEDPP 2-4 requests modification of the North Tarrant Express MDP CDA Geometric Design Criteria for segments 2-4 for the following Item:
2. Add note 3M to read: "Ramp connecting SPUR 280 NB to IH 35W ML NB on Segment 3A"

## Response Needed by (date): 05-30-10

## Responses:

TxDOT conditionally agrees to the use of the $5 \%$ maximum grade for the interim direct connector ramp 280-MLNI.

Final approval is dependent upon review and approval of the complete interim design proposal package.
Prior to final approval of this request, TxDOT requests that NTEMP24 provide an updated profile indicating all crossing roadways, estimated structure depths, and calculated minimum vertical clearances. TxDOT also requests that NTEMP24 review the location of the northbound US 287 exit gore and document the reasons for not relocating the gore further to the east to reduce not only the interim $5 \%$ grade, since this appears to be the ultimate gore location, but also the ultimate grade which also exceeds $4 \%$.

The Draft MDP Geometric Design Criteria Table will not be updated to reflect interim design criteria since the table is intended as a reference document for the ultimate design of the facility.
[Response reissue August 16, 2011: TxDOT has reviewed Developer's submittal of RFI \#33B \& 33C and hereby approves RFI \#33 without conditions.]

Responder Name: Matthew E. MacGregor, P.E. Response Date: Reissue August 16, 2011

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas $78752 \quad$ North Richland Hills, TX 76180

## Request for Information



As part of the CDA negotiations, and in order to close pending issues with RFI's, TXDOT has requested to provide additional information related to the Interim WB Spur 280 to IH35W ML NB. Please note that the developer disputes that this RFI is still not approved by TxDOT, as it is listed as a design deviation in Book 2 Note 3M. Deviation 3M has been in the Geometric Design Criteria for segment 3A and $3 B$ since May 142010 (more than a year ago) with the response of RFI 32 and 33 (done the same date).

Notwithstanding the above, developer will provide the additional information requested by TxDOT in the latest RFI log:
1 For the developer to provide (or specify) the location and level in the dgn files for the latest horizontal proposed horizontal and vertical design for the subject ramp of RFI 33.

Developer has always provided the dgn's for plan and profile of the subject ramp with each updated submission of the Mandatory Scope schematics. The vertical alignment of the interim and ultimate ramp is within the file segment3AI_profile.dgn, and segment3A_profile.dgn respectively. Developer has included a printout of the specified electronic files containing the ramp vertical alignment in exhibit 1 (includes minimum vertical clearances that need to be met by the developer). The horizontal alignment and pavement files are within the dgn files called Seg3AI_Align.dgn and Seg3AI_Pave.dgn respectively. Developer has included a printout of the Mandatory Scope and Ultimate Master Development Plan schematics as exhibit 2. Further information could be found in the GPK file provided by the developer with each Mandatory Scope Submittal; the name of the gpk file is job03a.gpk

2 NTEMP needs to document the reasons for not relocating the NB US 287 exit gore to reduce the interim and ultimate grades as described in TxDOT response.

Please note that as seen in exhibit 2, the developer as part of the multiple submissions of the Mandatory scope schematics has realigned the existing Spur 280 WB to IH35W NB (Dec 2010 submission vs. May 2010). The new alignment of the Spur 280 to IH35W NB GPL has been moved further south. After close evaluation of WB Spur 280 to IH35W ML NB vertical alignment, the main driver for the 5 percent grade is that the ramp needs to fit underneath the future Spur 280 EB to SH 121 NB with $16.5^{\prime}$ clearance (not being built during mandatory scope, see exhibit 1 sheet 1 , and exhibit 3). The developer as part of the exercise of providing a facility with no subsidy, is building as much as possible the ultimate connector ( $5 \%$ grade starts after station $917+90$ ) up to station $927+75$, and then needs to transition to the existing spur 280 by realigning the existing spur 280 WB to IH35 NB ramp (see FIP and Book 2 Capacity Improvement tables already finalized and approved by TxDOT and Developer). Again, due to the fact that the table 11-1 note 3M allows for 5 percent grade within this alignment, and since the developer is following the same vertical alignment up to station 927+75, the interim WB Spur 280 to IH35W NB ML does not need additional design deviations beyond the already granted to the Ultimate Configuration alignment. In the event that TxDOT desires to build an interim or ultimate WB Spur 280 to IH35W NB ML with 4 percent grade, TxDOT's construction of the capacity improvement will be more expensive due to the fact that the Spur 280 EB to SH 121 connector will have to be at a higher elevation (in order to clear the ML ramp from Spur 280).

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 33 for both the Interim Mandatory and Capacity Improvement WB Spur 280 to IH35W NB ML vertical alignment (make it compatible with book 2 table 11-1). Approval needs not to contain any additional or pending restrictions.

Aug 3, 2011

TxDOT conditionally approved RFI \#33 on May 14, 2010. TxDOT received this RFI \#33B on August 4, 2011 and RFI \#33C on August 10, 2011. In addition to the information provided above and the information provided in a meeting with the Developer on July 29, 2011, TxDOT reviewed the Seg3AI_Profile.dgn file submitted on May 31, 2011 as part of the FIP package. TxDOT confirms that the Developer has provided adequate information to grant final approval for this RFI.

RFI \#33 and 33B are approved without conditions.
TxDOT notes that this RFI was written by the Developer's DB contractor and believes the statement regarding the delivery of the Mandatory Scope schematics to be intended for the Developer. TxDOT requested from the Developer dgn files in addition to the pdfs of the Mandatory Scope schematics numerous times before receiving the entire design packages with all current dgn files in March 2011.
Responder Name: Matthew E. MacGregor, P.E. Response Date: August 16, 2011
Delivery Type: $\quad \square$ Courier $\quad \square$ Overnight $\quad \square$ Mail $\quad \boxtimes$ Other E-mail

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 33 C | Date: | Aug 8. 2011 |
| :---: | :---: | :---: | :---: |
| From: | Lucas Lahitou | To: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319 .6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |
| Subject: | DC ramp 280-MLN |  |  |

Attachments: None

## Information / Clarification Request:

As part of the CDA negotiations, and in order to close pending issues with RFI's, TxDOT has requested to provide additional information related to the Interim WB Spur 280 to IH35W ML NB. In particular RFI LOG provided on August $4^{\text {th }}, 2011$ requests NTEMP to provide calculated vertical clearances.

As dicussed and accepted on Friday $5^{\text {th }}, 2011$, Developer has made available calculated vertical minimum clearances in the Data Room, which is accessible to TxDOT (developer to update once revised Mandatory Scope schematics are available with the Chesapeake inspired alternative incorporated).

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 33C for both the Interim Mandatory and Capacity Improvement WB Spur 280 to IH35W NB ML vertical alignment (make it compatible with book 2 table 11-1). Approval needs not to contain any additional or pending restrictions.

Response Needed by (date):
Aug 11, 2011

## Response:

TxDOT conditionally approved RFI \#33 on May 14, 2010. TxDOT received RFI \#33B on August 4, 2011 and this RFI \#33C on August 10, 2011. TxDOT is aware that adequate calculated vertical clearances have been provided and will be updated once revised Mandatory Scope schematics are developed.

RFI \#33, 33B and 33C are approved without conditions.

| Responder Name: | Matthew E. M | r, P.E. |  | Response Date: |  | August 16, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mai | 区 | Other | E-mail |

RFI \#34 \& \#34B

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 34 |
| :--- | :--- |
| To: | Matt MacGregor  <br>  4777 E. Highway 80 <br>  Mesquite, TX 75150-6443 <br>   <br>   <br>   <br>   <br>   |

Date: May 11, 2010

Subject:
NTE Seg 3A Cypress Street

| From: | Alberto Gonzalez |
| ---: | :--- |
|  | NTE Mobility Partners 2-4 - Austin, TX |
| $:$ |  |
| Fax: |  |
| E-Mail: | agonzalez@cintra.us.com |

Plan view at Cypress Street

## Information / Clarification Request:

NTEMP 2-4 requests an additional design deviation for Segment 3A. The deviation is for Cypress Street alignment. As part of the project optimization, NTEMP 2-4 has connected the SB Managed Lanes to Spur 280 in order to take advantage of the existing connection of Spur 280 to IH 30. To achieve the above stated goal, the Spur 280 NB was moved towards the East to make room for the Direct Connector coming from IH 35W Manage Lane South Bound, requiring that the Cypress Street overpass to be re-constructed and at the same time be raised to meet minimum clearance (current bridge only has 14ft 11in clearance with respect to the NB spur 280). Below is the table describing Cypress Street Alignment:

| CURVE DATA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NUM | DELTA |  |  |  | DEGREE |  |  | Tangent | CuRVE <br> LENGTH | RADIUS | PI STATICN | PI NORTHING | PI EASTING | PC STATION | PT STATION |
| CYPRESS-1 | 121* | $30^{\prime}$ | 06.76" | RT | 76* | 23. | 39.74" | 133.93' | 159.05' | $75.00{ }^{+}$ | $11+33.93$ | 6,959, 202.68 | 2,333,801.30 | $10+00.00$ | $11+59.05$ |
| CYPRE5s-2 | 21* | $01{ }^{\circ}$ | 38.97" | RT | $1{ }^{\circ}$ | $27^{\prime}$ | 32.96" | 92. $79^{\circ}$ | $183.50^{\circ}$ | $500.00^{\circ}$ | 15+28.02 | 6,958, 833.03 | 2,333,460.33 | $14+35.22$ | 16+18.72 |

The construction limits within Cypress will creep slightly within the existing curve Cypress-1 in order to raise the Overpass. Cypress being a cross street will have to meet the geometric requirements under the column of City Street within the document North Tarrant Express MDP CDA Geometric Design criteria for a design speed of 35 MPH. Existing Curve Cypress-1 has a radius of 75 ft between stations $10+00$ to $11+59.05$; this existing radius only complies with a design speed of 15 MPH based on Low Speed Urban Street table 2-5 of the TxDOT Roadway Design Manual. NTMP 2-4 respectfully requests to TxDOT that a note be added to the document North Tarrant Express MDP CDA Geometric Design Criteria that grants a deviation on the design speed for the curve between stations $10+00$ to $11+59.05$ for 15 MPH.

## Response Needed by (date):

05-13-10

## Responses:

[Recipient's Name]
October 14, 2008
Page 2

Responder Name: Matthew E. MacGregor, P.E. Response Date:

Delivery Type: $\quad \square$ Courier $\quad \square$ Overnight $\quad \square$ Mail $\quad$| Other |
| :--- |




## AECOM•

AECOM Technical Services Inc.- 3580


north tarrant express - segment 3a SPUR 280/US 287 PLAN



NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
May 14, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 34: NTE Seg 3A Cypress Street

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $5 / 14 / 10$ | 3 | RFI \#34 Response Form and Exhibit |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | ® | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 34 | Date: | May 11, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Alberto Gonzalez |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | agonzalez@cintra.us.com |
| Subject: | NTE Seg 3A Cypress Street |  |  |

Attachments: Alternate Intersection Design Concept for Cypress Street Intersection

## Information / Clarification Request:

NTEMP 2-4 requests an additional design deviation for Segment 3A. The deviation is for Cypress Street alignment. As part of the project optimization, NTEMP 2-4 has connected the SB Managed Lanes to Spur 280 in order to take advantage of the existing connection of Spur 280 to IH 30. To achieve the above stated goal, the Spur 280 NB was moved towards the East to make room for the Direct Connector coming from IH 35W Manage Lane South Bound, requiring that the Cypress Street overpass to be re-constructed and at the same time be raised to meet minimum clearance (current bridge only has 14 ft 11 in clearance with respect to the NB spur 280). Below is the table describing Cypress Street Alignment:

| CURVE DATA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NUM | DELTA |  |  |  | DEGREE |  |  | TANGENT | CURVE <br> LENGTH | RADIUS | PI STATION | PI NORTHING | PI EASTING | PC STATION | PT STATION |
| CYPRESS-1 | $121^{\circ}$ | $30^{\circ}$ | 06.76" | RT | $76^{\circ}$ | 23 | 39.74" | 133.93 | $159.05^{*}$ | 75.00* | $11+33.93$ | 6,959, 202.68 | 2,333,801. 30 | $10+00.00$ | 11+59.05 |
| CYPRESS-2 | $21^{\circ}$ | $01{ }^{1}$ | 38.97" | RT | $11^{\circ}$ | $27^{\circ}$ | 32.96" | $92.79^{\circ}$ | $183.50^{\prime}$ | $500.00^{\circ}$ | $15+28.02$ | $6,958,833.03$ | 2,333, 460.33 | $14+35.22$ | $16+18.72$ |

The construction limits within Cypress will creep slightly within the existing curve Cypress-1 in order to raise the Overpass. Cypress being a cross street will have to meet the geometric requirements under the column of City Street within the document North Tarrant Express MDP CDA Geometric Design criteria for a design speed of 35 MPH . Existing Curve Cypress-1 has a radius of 75 ft between stations $10+00$ to $11+59.05$; this existing radius only complies with a design speed of 15 MPH based on Low Speed Urban Street table 2-5 of the TxDOT Roadway Design Manual. NTMP 2-4 respectfully requests to TxDOT that a note be added to the document North Tarrant Express MDP CDA Geometric Design Criteria that grants a deviation on the design speed for the curve between stations $10+00$ to $11+59.05$ for 15 MPH.

## Responses:

TxDOT conditionally agrees to the use of the horizontal radius of 75 ft between stations $10+00$ to $11+59.05$ for the proposed design configuration of the Cypress Street intersection.

Final approval is dependent upon review and approval of the complete interim design proposal package.
Prior to final approval of this request, TxDOT also requests that NTEMP24 consider alternate cost effective design improvements for the Cypress Creek intersection since this will be the permanent configuration of the intersection. See the attached alternate design concept. Consideration should also be given to straightening the Cypress Creek alignment north of the bridge to create a "T-intersection".

The Draft MDP Geometric Design Criteria Table will not be updated to reflect interim design criteria since the table is intended as a reference document for the ultimate design of the facility.

| Responder Name: | Matthew E. M | r, P.E. |  | Response Date: |  | May 14, 2010 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 | Other | E-mail |

# Google maps ataues 




## Cypress Street Roundabout

## Cost Estimate

| Estimated <br> Item |  |  |  | Unit | Quantity | Unit Price | Amount |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mobilization (5\%) |  |  |  |  |  |  |  |
| Remove Asphalt |  |  |  |  |  |  |  |
| Asphalt (6") |  |  |  |  |  |  |  |
| LS |  |  |  |  |  |  |  |

TOTAL
\$95,768.27


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752 North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 34B | Date: | Aug 3, 2011 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Lucas Lahitou |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: |  |
| Subject: | NTE Seg 3A Cypress Street |  |  |

$$
\begin{array}{ll}
\text { Attachments: } & \text { Exhibit } 1 \text { (existing and Developers proposed conditions at Cypress Street), Exhibit } 2 \text { (TxDOT roundabout recommendation } \\
& \text { for same location), Exhibit } 3 \text { (printout of relevant FHWA Guide to Roundabouts) }
\end{array}
$$

Information / Clarification Request:

As part of the CDA negotiations, TxDOT requested that the developer confirmed the following:
1 Justification of why a other design alternatives are not feasible:
Justification needs shall first consider the following facts:

- As seen on Exhibit 1, the developer is matching the exact same existing conditions at the Interchange of Spur 280 frontage road and Cypress Street. Developer is also matching the existing signalization that grants free movement (right of way) to the NB Cypress Street to WB Spur 280 frontage road, and viceversa. Currently the traffic coming from WB Spur 280 to SB Cypress and NB Frontage road is required to stop and yield respectively.
- Below is a table describing the Existing and Proposed Cypress Street alignment as conditionally approved by RFI 35. Please note that existing Curve Cypress -1 has a radius of 75 ft between stations $10+00$ to $11+59.05$; this existing radius only complies with a design speed of 15 MPH based on Low Speed Urban Street table 2-5 of the TxDOT Roadway Design Manual.


The design alternatives considered by the developer included:

## Roundabout discarded due to the following:

- Roundabout alternative suggested by HDR (included with this RFI as Exhibit 2) classifies as a compact roundabouts with inscribed diameter of about 108 ft as described by AASHTO Geometric Design of Highways and Streets and FHWA publication (Roundabouts, An Informational Guide, Exhibit 3) under single lane roundabouts (no further reduction in the diameter is allowed). As seen on exhibit 2, the roundabout the Proposed Edge of Pavement has moved further North than the existing Edge of Pavement; this displacement (in the most likely event) will require extra ROW from the adjacent park (caused by new Grading back to Existing ground). As stated numerous times by TxDOT, developer is not allowed to aquire property from the Harmon Field Park.
- Currently TxDOT Roadway Design Manual does not specify any Roundabout design criteria. The above mentioned FHWA publication (included as Exhibit 3), lists in table 6-14 the Design Speeds attained by the different movements for Roundabouts of different Diameters. As Marked in the Exhibit, HDR's Roundabout will only attain a 13 MPH Design Speed for the NB Cypress Street to WB Spur 280 frontage road (R4 movement); again, the alternative approved by TxDOT within RFI 34 meets a design speed of 15MPH (2MPH higher than Roundabout option). In order to attain the same design speed as the conditionally approved RFI 35, the roundabout Inscribed circle diameter needs to be increased to 130 ft , and therefore even more ROW will be required than HDR's alternative described above (higher construction cost than alternative conditionally approved by TxDOT on RFI 34).


## Full stop for all movements discarded due to the following:

- The other option that the developer considered consisted of a full stop for all the movements at the intersection of Cypress Street, and WB Frontage road. This alternative will cost the same as the alternative already conditionally approved by RFI 34 , but the NB Cypress street to WB Spur 280 frontage road (and viceversa) will not flow freely as it currently does (as depicted in exhibit 1).

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 34 without any restrictions.

## Response Needed by (date):

8/14/2011

## Responses:

TxDOT conditionally agrees to the use of the horizontal radius of 75 ft between stations $10+00$ to $11+59.05$ for the proposed design configuration of the Cypress Street intersection.

Final approval is dependent upon review and approval of the complete interim design proposal package.

Prior to final approval of this request, TxDOT also requests that NTEMP24 consider alternate cost effective design improvements for the Cypress Creek intersection since this will be the permanent configuration of the intersection. See the attached alternate design concept. Consideration should also be given to straightening the Cypress Creek alignment north of the bridge to create a "T-intersection".

The Draft MDP Geometric Design Criteria Table will not be updated to reflect interim design criteria since the table is intended as a reference document for the ultimate design of the facility.

| Responder Name: | Matthew E. M | r, P.E. |  | Response Date: |  | May 14, 2010 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mai | 区 | Other | E-mail |



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phone at google.com/gmm


## PRELIMINARY

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north tarrant express - segment 3a SPUR 280/US 287 PLAN



Finally, the radius of the fastest possible right-turn path, $R_{3}$, is evaluated. Like $R_{1}$, the right-turn radius should have a design speed at or below the maximum design speed of the roundabout and no more than $20 \mathrm{~km} / \mathrm{h}(12 \mathrm{mph})$ above the conflicting $R_{i}$ design speed.

| Inscribed Circle <br> Diameter $(\mathbf{m})$ | Approximate $R_{4}$ Value <br> Radius <br> $(\mathbf{m})$ | Speed <br> $(\mathbf{k m} / \mathbf{h})$ | Maximum $R_{\mathbf{1}}$ Value <br> Radius <br> $\mathbf{( m )}$ | Speed <br> $(\mathbf{k m} / \mathbf{h})$ |
| :--- | :--- | :--- | :--- | :--- |
| Single-Lane Roundabout | 11 | 21 | 54 | 41 |
| 30 | 13 | 23 | 61 | 43 |
| 35 | 16 | 25 | 69 | 45 |
| 40 | 19 | 26 | 73 | 46 |
| 45 |  |  |  |  |
| Double-Lane Roundabout | 15 | 24 | 65 | 44 |
| 45 | 17 | 25 | 69 | 45 |
| 50 | 20 | 27 | 78 | 47 |
| 55 | 23 | 28 | 83 | 48 |
| 60 | 25 | 29 | 88 | 49 |
| 65 | 28 | 30 | 93 | 50 |
| 70 |  |  |  |  |


| Inscribed Circle Diameter (m) | Approximate $R_{4}$ Value |  | Maximum $R_{1}$ Value |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Radius <br> (ft) | Speed (mph) | Radius <br> (ft) | Speed (mph) |
| Single-Lane Roundabout |  |  |  |  |
| 100 | 35 | 13 | 165 | 25 |
| 115 | 45 | 14 | 185 | 26 |
| 130 | 55 | 15 | 205 | 27 |
| 150 | 65 | 15 | 225 | 28 |
| Double-Lane Roundabout |  |  |  |  |
| 150 | 50 | 15 | 205 | 27 |
| 165 | 60 | 16 | 225 | 28 |
| 180 | 65 | 16 | 225 | 28 |
| 200 | 75 | 17 | 250 | 29 |
| 215 | 85 | 18 | 275 | 30 |
| 230 | 90 | 18 | 275 | 30 |

Exhibit 6-13. Approximated $R_{+}$ values and corresponding $R_{t}$ values (metric units).

Exhibit 6-14. Approximated $R_{d}$ values and corresponding $R_{1}$ values (U.S. customary units).

### 6.2.1.5 Speed consistency

In addition to achieving an appropriate design speed for the fastest movements, another important objective is to achieve consistent speeds for all movements. Along with overall reductions in speed, speed consistency can help to minimize the crash rate and severity between conflicting streams of vehicles. It also simplifies the task of merging into the conficting traffic stream, minimizing critical gaps, thus optimizing entry capacity. This principle has two implications:

1. The relative speeds between consecutive geometric elements should be minimized; and
2. The relative speeds between conflicting traffic streams should be minimized.

As shown in Exhibit 6-12, five critical path radii must be checked for each approach. $R_{P}$, the entry path radius, is the minimum radius on the fastest through path prior to the yield line. $R_{2}$, the circulating path radius, is the minimum radius on the fastest through path around the central island. $R_{3}$, the exit path radius, is the minimum radius on the fastest through path into the exit. $R_{4}$, the left-turn path radius, is the minimum radius on the path of the conficting left-turn movement. $R_{5}$, the right-turn path radius, is the minimum radius on the fastest path of a right-turning vehicle. It is important to note that these vehicular path radii are not the same as the curb radi. First the basic curb geometry is laid out, and then the vehicle paths are drawn in accordance with the procedures described in Section 6.2.1.3.


Exhibit 6-12. Vehicle path radii.

## Transmittal Letter

## Date:

August 10, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject: RFI \#34B \& Reissue of RFI \#34: NTE Seg 3A Cypress Street

We Are Sending You:

| Copies | Date | No. | Description |
| :---: | :---: | :---: | :--- |
| 1 | $08 / 10 / 11$ | 2 | RFI \#34B Response Form |
| 1 | $08 / 10 / 11$ | 2 | Reissue of RFI \#34 Response Form |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |


| These Are Transmitted As Checked Below: |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1600 with any questions.

Copy To:
Signed: Matthew MacGregor [electronic]
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
区 Other Electronic

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 34 | Date: | May 11, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Alberto Gonzalez |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | agonzalez@cintra.us.com |
| Subject: | NTE Seg 3A Cypress Street |  |  |

Attachments: Alternate Intersection Design Concept for Cypress Street Intersection

## Information / Clarification Request:

NTEMP 2-4 requests an additional design deviation for Segment 3A. The deviation is for Cypress Street alignment. As part of the project optimization, NTEMP 2-4 has connected the SB Managed Lanes to Spur 280 in order to take advantage of the existing connection of Spur 280 to IH 30. To achieve the above stated goal, the Spur 280 NB was moved towards the East to make room for the Direct Connector coming from IH 35W Manage Lane South Bound, requiring that the Cypress Street overpass to be re-constructed and at the same time be raised to meet minimum clearance (current bridge only has 14 ft 11 in clearance with respect to the NB spur 280). Below is the table describing Cypress Street Alignment:

| CURVE DATA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NUM | DELTA |  |  |  | DEGREE |  |  | TANGENT | CURVE <br> LENGTH | RADIUS | PI STATION | PI NORTHING | PI EASTING | PC STATION | PT STATION |
| CYPRESS-1 | 121* | $30^{\circ}$ | 06.76" | RT | $76^{\circ}$ | 23. | 39.74" | 133.93' | 159.05* | $75.00{ }^{*}$ | $11+33.93$ | 6,959, 202.68 | 2,333,801.30 | $10+00.00$ | 11+59.05 |
| CYPRESS-2 | $21^{\prime}$ | $01{ }^{1}$ | 38.97" | RT | $11^{\circ}$ | $27^{\circ}$ | 32.96" | $92.79^{\circ}$ | $183.50^{\prime}$ | $500.00^{\prime}$ | $15+28.02$ | $6,958,833.03$ | 2, 333,460.33 | $14+35.22$ | $16+18.72$ |

The construction limits within Cypress will creep slightly within the existing curve Cypress-1 in order to raise the Overpass. Cypress being a cross street will have to meet the geometric requirements under the column of City Street within the document North Tarrant Express MDP CDA Geometric Design criteria for a design speed of 35 MPH . Existing Curve Cypress-1 has a radius of 75 ft between stations $10+00$ to $11+59.05$; this existing radius only complies with a design speed of 15 MPH based on Low Speed Urban Street table 2-5 of the TxDOT Roadway Design Manual. NTMP 2-4 respectfully requests to TxDOT that a note be added to the document North Tarrant Express MDP CDA Geometric Design Criteria that grants a deviation on the design speed for the curve between stations $10+00$ to $11+59.05$ for 15 MPH.

## Responses:

TxDOT conditionally agrees to the use of the horizontal radius of 75 ft between stations $10+00$ to $11+59.05$ for the proposed design configuration of the Cypress Street intersection.

Final approval is dependent upon review and approval of the complete interim design proposal package.
Prior to final approval of this request, TxDOT also requests that NTEMP24 consider alternate cost effective design improvements for the Cypress Creek intersection since this will be the permanent configuration of the intersection. See the attached alternate design concept. Consideration should also be given to straightening the Cypress Creek alignment north of the bridge to create a "T-intersection".

The Draft MDP Geometric Design Criteria Table will not be updated to reflect interim design criteria since the table is intended as a reference document for the ultimate design of the facility.
[Response reissue August 10, 2011: TxDOT has reviewed Developer's submittal of RFI \#34B and hereby approves RFI \#34 for the use of the horizontal radius of 75 ft between stations $10+00$ and $11+59.05$ for the proposed configuration of the Cypress Street intersection, without conditions. TxDOT requests that the Developer consider alternatives during final design that would lead to a safer configuration.]

| Responder Name: | Matthew E. M | , P.E. |  | Response Date: |  | Reissued August 10, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square \quad$ Courier | $\square$ Overnight | $\square$ | Mail | 区 | Other | E-mail |



North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752 North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 34B | Date: | Aug 3, 2011 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Lucas Lahitou |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: |  |
| Subject: | NTE Seg 3A Cypress Street |  |  |

$$
\begin{array}{ll}
\text { Attachments: } & \text { Exhibit } 1 \text { (existing and Developers proposed conditions at Cypress Street), Exhibit } 2 \text { (TxDOT roundabout recommendation } \\
& \text { for same location), Exhibit } 3 \text { (printout of relevant FHWA Guide to Roundabouts) }
\end{array}
$$

Information / Clarification Request:

As part of the CDA negotiations, TxDOT requested that the developer confirmed the following:
1 Justification of why a other design alternatives are not feasible:
Justification needs shall first consider the following facts:

- As seen on Exhibit 1, the developer is matching the exact same existing conditions at the Interchange of Spur 280 frontage road and Cypress Street. Developer is also matching the existing signalization that grants free movement (right of way) to the NB Cypress Street to WB Spur 280 frontage road, and viceversa. Currently the traffic coming from WB Spur 280 to SB Cypress and NB Frontage road is required to stop and yield respectively.
- Below is a table describing the Existing and Proposed Cypress Street alignment as conditionally approved by RFI 35. Please note that existing Curve Cypress-1 has a radius of 75 ft between stations $10+00$ to $11+59.05$; this existing radius only complies with a design speed of 15 MPH based on Low Speed Urban Street table 2-5 of the TxDOT Roadway Design Manual.


The design alternatives considered by the developer included:

## Roundabout discarded due to the following:

- Roundabout alternative suggested by HDR (included with this RFI as Exhibit 2) classifies as a compact roundabouts with inscribed diameter of about 108 ft as described by AASHTO Geometric Design of Highways and Streets and FHWA publication (Roundabouts, An Informational Guide, Exhibit 3) under single lane roundabouts (no further reduction in the diameter is allowed). As seen on exhibit 2, the roundabout the Proposed Edge of Pavement has moved further North than the existing Edge of Pavement; this displacement (in the most likely event) will require extra ROW from the adjacent park (caused by new Grading back to Existing ground). As stated numerous times by TxDOT, developer is not allowed to aquire property from the Harmon Field Park.
- Currently TxDOT Roadway Design Manual does not specify any Roundabout design criteria. The above mentioned FHWA publication (included as Exhibit 3), lists in table 6-14 the Design Speeds attained by the different movements for Roundabouts of different Diameters. As Marked in the Exhibit, HDR's Roundabout will only attain a 13 MPH Design Speed for the NB Cypress Street to WB Spur 280 frontage road (R4 movement); again, the alternative approved by TxDOT within RFI 34 meets a design speed of 15MPH (2MPH higher than Roundabout option). In order to attain the same design speed as the conditionally approved RFI 35, the roundabout Inscribed circle diameter needs to be increased to 130 ft , and therefore even more ROW will be required than HDR's alternative described above (higher construction cost than alternative conditionally approved by TxDOT on RFI 34).


## Full stop for all movements discarded due to the following:

- The other option that the developer considered consisted of a full stop for all the movements at the intersection of Cypress Street, and WB Frontage road. This alternative will cost the same as the alternative already conditionally approved by RFI 34 , but the NB Cypress street to WB Spur 280 frontage road (and viceversa) will not flow freely as it currently does (as depicted in exhibit 1).

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 34 without any restrictions.

## Response Needed by (date):

8/14/2011

## Responses:

[Recipient's Name]
August 10, 2011
Page 3

TxDOT conditionally approved RFI \#34 on May 14, 2010. TxDOT received this RFI \#34B on August 4, 2011. In addition to the information provided above and the information provided in a meeting with the Developer on July 29, 2011, TxDOT reviewed the Seg3AI_Profile.dgn file submitted on May 31, 2011 as part of the FIP package. TxDOT confirms that the Developer has provided adequate information to grant final approval for this RFI.

RFI \#34 and 34B are approved without conditions. TxDOT requests that the Developer consider alternatives during final design that would lead to a safer configuration.

| Responder Name: | Matthew E. M | r, P.E. |  | Response Date: |  | August 10, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square \quad$ Courier | $\square$ Overnight | $\square$ | Mai | 区 | Other | E-mail |

## RFI \#35 \& \#35B

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

RFI No.: 35

Date: May 11, 2010

To:

| Matt MacGregor |
| :--- |
| 4777 E. Highway 80 |
| Mesquite, TX 75150-6443 |
|  |
| mmacgre@dot.state.tx.us |

Subject:
NTE Segment 3A Existing NB IH35W Exit to Spur 280 NB

Attachments:
Plan view at Spur 280 an IH 35W

## Information / Clarification Request:

NTEMP 2-4 requests an additional design deviation for Segment 3A for the existing NB IH 35W Exit to Spur 280 NB. As part of the project optimization process, an in order to reduce a potential subsidy from TxDOT for the construction of the project, NTE Mobility Partners 2-4 have developed an alternative design NTE segment 3 A on IH 35 W south of SH 121. The main purpose of this alternative is to utilize as much as possible the existing infrastructure on the interchange of SH 121 with IH35W, and on the interchange of IH 35 W with Spur 280 . Attached to this RFI is a plan and profile of Managed Lanes and General Purpose lanes of the Alternative at the interchange of IH35W and Spur 280; as seen on the plans NTEMP 2-4 is using the existing NB IH35W loop ramp Exit to Spur 280 NB. Below is the table describing the existing loop ramp E35N280:

| CURVE DATA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NUM | DELTA |  |  |  | DEGREE |  |  | TANGENT | CURVE <br> LENGTH | RADIUS | PI STATION | PI NORTHING | PI EASTING | PC STATION | PT STATION |
| E35N280-1 | 26* | $14^{\prime}$ | 50.06" | RT | 9* | $52^{\prime \prime}$ | 42.90" | $135.22^{\prime}$ | 265.70' | 580.00 | 12+04.74 | 6,960,919.54 | 2,331,829, 31 | 10+69.52 | $13+35.22$ |
| E351080-2 | $91^{*}$ | $07^{\circ}$ | $29.40^{\prime \prime}$ | RT | $38{ }^{\circ}$ | $11^{\text {. }}$ | 49.87" | $152.97^{\circ}$ | $238.56{ }^{\circ}$ | $150.00^{\prime}$ | $14+88.19$ | 6,961, 145.95 | 2,332,007.63 | 13+35.22 | $15+73.78$ |
| E35H280-3 | $98^{\circ}$ | 06. | 15.27" | RT | $47^{*}$ | 44* | 47.34" | $138.30^{\circ}$ | 205.47 ${ }^{\prime}$ | 120,00 | $17+12.08$ | 6,960,961.26 | 2,332,232.87 | $15+73.78$ | $17+79.25$ |
| E35N280-4 | 71* | 15' | 35.94" | RT | 310 | 49' | 51.56" | 129.01' | $223.87^{\circ}$ | $180.00{ }^{\prime}$ | 19+08.26 | 6,960, 780. 51 | $2,332,035.93$ | 17+79.25 | 20+03.12 |
| E35N280-5 | $6{ }^{4}$ | 45' | 32.24" | LT | 3* | 35' | 18.08" | 94.29* | 188, $36^{\circ}$ | 1,596.71 | 20+97.41 | 6,960, 887.80 | 2,331,840,09 | 20+03.12 | 21+91.48 |

As seen on the table above, the existing loop ramp curve E35N280-4 has a radius of 120 ft , that do not comply with the Ultimate alignment geometric requirements listed in the document North Tarrant Express MDP CDA Geometric Design under Loop Ramp (design speed requirement of 25 MPH ). The stated alignment currently only complies with a design speed of 20 MPH based on Low Speed Urban Street table 2-5 of the TxDOT Roadway Design Manual. NTMP 2-4 respectfully requests to TxDOT to add a note on the document North Tarrant Express MDP CDA Geometric Design Criteria Allowing the developer to comply with a design speed of 20, and to classify this existing loop ramp as a Low Speed Urban Street.

## Responses:

| Responder Name: | Matthew E. M | r, P.E. |  | Response Date: |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 | Other | E-mail |



NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
May 14, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI\# 35: NTE Segment 3A Existing NB IH35W Exit to Spur 280 NB

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $5 / 14 / 10$ | 2 | RFI \#35 Response Form |
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|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 35 | Date: | May 11, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Alberto Gonzalez |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4 - Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | agonzalez@cintra.us.com |
| Subject: | NTE Segment 3A Existing NB IH35W Exit to |  |  |

Attachments:
Plan view at Spur 280 an IH 35W

## Information / Clarification Request:

NTEMP 2-4 requests an additional design deviation for Segment 3A for the existing NB IH 35W Exit to Spur 280 NB. As part of the project optimization process, an in order to reduce a potential subsidy from TxDOT for the construction of the project, NTE Mobility Partners 2-4 have developed an alternative design NTE segment 3A on IH 35W south of SH 121. The main purpose of this alternative is to utilize as much as possible the existing infrastructure on the interchange of SH 121 with IH35W, and on the interchange of IH 35 W with Spur 280 . Attached to this RFI is a plan and profile of Managed Lanes and General Purpose lanes of the Alternative at the interchange of IH35W and Spur 280; as seen on the plans NTEMP 2-4 is using the existing NB IH35W loop ramp Exit to Spur 280 NB. Below is the table describing the existing loop ramp E35N280:

| CURVE DATA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N \M | DELTA |  |  |  | DEGREE |  |  | TANGENT | CURVE <br> LENGTH | RADIUS | PI STATION | PI NORTHING | PI EASTING | PC STATION | PT STATION |
| E35N280-1 | $26^{\circ}$ | 14* | 50.06 ${ }^{11}$ | RT | $9^{*}$ | 52* | 42.90" | 135.22' | 265.70 ${ }^{\circ}$ | 580,00 | 12+04. 74 | 6,960,919,54 | 2,331,829,31 | $10+69.52$ | $13+35.22$ |
| E351080-2 | $91^{\circ}$ | 07' | 29.40" | RT | $38^{\circ}$ | 11* | 49.87" | $152.97^{\prime}$ | $238.56{ }^{\circ}$ | $150.00^{\prime}$ | $14+88.19$ | 6,961,145.95 | 2,332,007.63 | $13+35.22$ | $15+73.78$ |
| E35 $2880-3$ | $98^{\circ}$ | 06* | 15.27" | RT | $47^{\circ}$ | $44^{\prime}$ | 47.34" | 138.30' | 205.47 ${ }^{\prime}$ | $120.00{ }^{\circ}$ | $17+12.08$ | 6,960,961, 26 | 2,332, 232.87 | 15+73.78 | 17+79.25 |
| E35M280-4 | 71* | 15' | 35.94' | RT | $31 *$ | 49' | 51.56" | $129.01^{\prime}$ | 223.87 ${ }^{\prime}$ | $180.00{ }^{\prime}$ | 19+08. 26 | 6,960, 780. 51 | 2,332,035.93 | 17*79.25 | 20+03.12 |
| E35 $\mathrm{NZ} 280-5$ | 6* | $45^{\circ}$ | $32.24{ }^{\prime \prime}$ | LT | 3* | 35' | 18.08" | 94. $29{ }^{\circ}$ | $188.36^{\prime}$ | 1.596.71' | $20+97.41$ | 6,960, 887.80 | 2,331,840.09 | $20+03.12$ | 21+91.48 |

As seen on the table above, the existing loop ramp curve E35N280-4 has a radius of 120 ft , that do not comply with the Ultimate alignment geometric requirements listed in the document North Tarrant Express MDP CDA Geometric Design under Loop Ramp (design speed requirement of 25 MPH ). The stated alignment currently only complies with a design speed of 20 MPH based on Low Speed Urban Street table 2-5 of the TxDOT Roadway Design Manual. NTMP 2-4 respectfully requests to TxDOT to add a note on the document North Tarrant Express MDP CDA Geometric Design Criteria Allowing the developer to comply with a design speed of 20, and to classify this existing loop ramp as a Low Speed Urban Street.

## Responses:

TxDOT conditionally agrees to the use of the existing horizontal loop ramp curve E35N280-3 which has a radius of 120 ft and a design speed of 20 mph .

Final approval is dependent upon review and approval of the complete interim design proposal package.
The Draft MDP Geometric Design Criteria Table will not be updated to reflect interim design criteria since the table is intended as a reference document for the ultimate design of the facility.

| Responder Name: | Matthew E. M | r, P.E. |  | Response Date: |  | May 14, 2010 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square \quad$ Courier | $\square$ Overnight | $\square$ | Mail | 区 | Other | E-mail |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 35B | Date: | Aug 1. 2011 |
| :---: | :---: | :---: | :---: |
| To: | Lucas Lahitou | From: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE Segment 3A Existing NB IH35W Exit to Spur 280 NB

## Attachments:

Exhibit 1 (printout of geopak file job03a.gpk describing the alignment E35N280), Exhibit 2 (printout of interim E35N280 vertical alignment), segment3AI_profile.dgn, Seg3AI_Align.dgn

## Information / Clarification Request:

As part of the CDA negotiations, and in order to close pending issues with RFI's, TxDOT has requested to provide the following information:

1 For the developer to confirm if the latest mandatory scope reflects the approved RFI

Developer confirms that the vertical alignment design of the Interim E35N280 loop ramp reflects the approved RFI. Please refer to exhibit 1 (printout of geopak file job03a.gpk describing the alignment E35N280 including the 120 ft radius curve). The GPK file has been included with the Mandatory scope Schematic drawings. Developer is also including exhibit 2 (printout of interim E35N280 vertical alignment) obtained from the dgn file segment3AI_profile.dgn. Alignments are laid out in file Seg3AI_Align.dgn, which was included with the Mandatory Scope Schematics.

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 35 without any restrictions.

Response Needed by (date): Aug 3, 2011

## Response:

$\square$

Responder Name: Matthew E. MacGregor, P.E. Response Date:


# Exhibit 1 Geopak output describing horizontal alignment E35N280 

```
<* 1 DESCRIBE CHAIN E35N280
```

Chain E35N280 contains:
ER280 CUR E35N280-1 CUR E35N280-2 CUR E35N280-3 CUR E35N280-4 CUR E35N280-5

Beginning chain E35N280 description

Point ER280 N 6,960,719.2582 E 2,331,786.8163 Sta 10+00.00

Course from ER280 to PC E35N280-1 N 110 58' 41.61" E Dist 69.5201

Curve Data
*----------*

Curve E35N280-1
P.I. Station $\quad 12+04.74 \mathrm{~N} \quad 6,960,919.5427 \mathrm{E} \quad 2,331,829.3086$

Delta $=26^{\circ} 14^{\prime} 50.06^{\prime \prime}(R T)$
Degree = $9^{\circ} 52$ ' $42.90^{\prime \prime}$
Tangent $=135.2223$
Length $=265.6984$
Radius $=580.0000$
External $=15.5544$


Curve Data
$\qquad$

Curve E35N280-2
P.I. Station $\quad 14+88.19 \mathrm{~N} \quad 6,961,145.9446 \mathrm{E} \quad 2,332,007.6323$

Delta $=91^{\circ} 07^{\prime} 29.40^{\prime \prime}(R T)$
Degree $=38^{\circ} 11^{\prime} 49.87^{\prime \prime}$
Tangent = 152.9741
Length $=238.5643$
Radius $=150.0000$
External $=64.2454$
Long Chord $=\quad 214.2041$
Mid. Ord. $=44.9802$
P.C. Station $\quad 13+35.22 \mathrm{~N} \quad 6,961,025.7709 \mathrm{E} \quad 2,331,912.9784$
P.T. Station $\quad 15+73.78 \mathrm{~N} \quad$ 6,961,048.9498 E 2,332,125.9247
$\begin{array}{lll}\text { C.C. } \quad \mathrm{N} & 6,960,932.9572 \mathrm{E} & 2,332,030.8157\end{array}$
Back $=\mathrm{N} 38^{\circ} 13^{\prime} 31.67^{\prime \prime} \mathrm{E}$
Ahead $=S 50^{\circ} 38^{\prime} 58.93^{\prime \prime} \mathrm{E}$
Chord Bear $=N 83^{\circ} 47^{\prime} 16.37^{\prime \prime} \mathrm{E}$

Curve Data


Curve E35N280-3

| P.I. Station | 17+12.08 N | 6,960,961.2605 E | 2,332,232.8684 |
| :---: | :---: | :---: | :---: |
| Delta = | $98^{\circ} 06^{\prime} 15.27{ }^{\prime \prime}$ (RT) |  |  |
| Degree = | 47º $44^{\prime} 47.34^{\prime \prime}$ |  |  |
| Tangent = | 138.2981 |  |  |
| Length = | 205.4690 |  |  |
| Radius $=$ | 120.0000 | As allowed per RFI 35 |  |
| External = | 63.1021 |  |  |
| Long Chord = | 181.2735 |  |  |
| Mid. Ord. = | 41.3553 |  |  |
| P.C. Station | $15+73.78 \mathrm{~N}$ | 6,961,048.9498 E | 2,332,125.9247 |
| P.T. Station | 17+79.25 N | 6,960,867.7468 E | 2,332,130.9785 |
| C.C. | N 6,960,95 | ,956.1557 E 2,332, | 049.8375 |
| Back = S 50³ $38^{\prime} 58.93{ }^{\prime \prime} \mathrm{E}$ |  |  |  |

Ahead $=S 47^{\circ} 27^{\prime} 16.34^{\prime \prime} \mathrm{W}$

Chord Bear $=$ S $1^{\circ} 35^{\prime} 51.29 " E$

Curve Data
*----------*

## Curve E35N280-4

| P.I. Station | 19+08.26 N | 6,960,780.5135 E | 2,332,035.9316 |
| :---: | :---: | :---: | :---: |
| Delta $=71^{\circ} 15^{\prime} 35.94{ }^{\prime \prime}(\mathrm{RT})$ |  |  |  |
| Degree $=31^{\circ} 49$ '51.56" |  |  |  |
| Tangent $=129.0099$ |  |  |  |
| Length $=223.8698$ |  |  |  |
| Radius = 180.0000 |  |  |  |
| External $=41.4578$ |  |  |  |
| Long Chord = 209.7175 |  |  |  |
| Mid. Ord. $=33.6967$ |  |  |  |
| P.C. Station | $17+79.25 \mathrm{~N}$ | 6,960,867.7468 E | 2,332,130.9785 |
| P.T. Station | 20+03.12 N | 6,960,842.4958 E | 2,331,922.7867 |
| C.C. | N 6,961, | 000.3602 E 2,332,009.2670 |  |
| Back = S $47^{\circ} 27^{\prime} 16.34{ }^{\prime \prime} \mathrm{W}$ |  |  |  |
| Ahead = N 61 ${ }^{\circ} 17{ }^{\prime} 07.72^{\prime \prime} \mathrm{W}$ |  |  |  |
| Chord Bear = | = S $83{ }^{\circ} 05^{\prime} 04.31^{\prime \prime} \mathrm{W}$ |  |  |

Curve Data
*----------*

Curve E35N280-5
P.I. Station $\quad 20+97.41 \mathrm{~N} \quad 6,960,887.7962 \mathrm{E} \quad 2,331,840.0936$

Delta $=6^{\circ} 45^{\prime} 32.24^{\prime \prime}(\mathrm{LT})$
Degree $=3^{\circ} 35^{\prime} 18.08^{\prime \prime}$
Tangent $=94.2883$
Length $=188.3579$
Radius $=1,596.7137$


Ending chain E35N280 description


550

540

530
EXIT RAMP 35W NB TO SPUR 280 WB (E35N280)
520

510


NOG்AP

Various files submitted with RFI \#35B:

## Seg3AI_Align.dgn

## Seg3AI_Profile.dgn

## Transmittal Letter

## Date:

August 10, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject: RFI \#35B \& Reissue of RFI \#35: NTE Segment 3A Existing NB IH35W Exit to Spur 280 NB

We Are Sending You:

| Copies | Date | No. | Description |
| :---: | :---: | :---: | :--- |
| 1 | $08 / 10 / 11$ | 2 | RFI \#35B Response Form |
| 1 | $08 / 10 / 11$ | 2 | Reissue of RFI \#35 Response Form |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |


| These Are Transmitted As Checked Below: |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1600 with any questions.

Copy To:
Signed: Matthew MacGregor [electronic]
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
区 Other Electronic

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 35 | Date: | May 11, 2010 |
| :---: | :---: | :---: | :---: |
| To: | Matt MacGregor | From: | Alberto Gonzalez |
|  | 4777 E. Highway 80 |  | NTE Mobility Partners 2-4-Austin, TX |
|  | Mesquite, TX 75150-6443 | Tel.: |  |
|  |  | Fax: |  |
|  | mmacgre@dot.state.tx.us | E-Mail: | agonzalez@cintra.us.com |
| Subject: | NTE Segment 3A Existing NB IH35W Exit to |  |  |

Attachments:
Plan view at Spur 280 an IH 35W

## Information / Clarification Request:

NTEMP 2-4 requests an additional design deviation for Segment 3A for the existing NB IH 35W Exit to Spur 280 NB. As part of the project optimization process, an in order to reduce a potential subsidy from TxDOT for the construction of the project, NTE Mobility Partners 2-4 have developed an alternative design NTE segment 3A on IH 35W south of SH 121. The main purpose of this alternative is to utilize as much as possible the existing infrastructure on the interchange of SH 121 with IH35W, and on the interchange of IH 35 W with Spur 280 . Attached to this RFI is a plan and profile of Managed Lanes and General Purpose lanes of the Alternative at the interchange of IH35W and Spur 280; as seen on the plans NTEMP 2-4 is using the existing NB IH35W loop ramp Exit to Spur 280 NB. Below is the table describing the existing loop ramp E35N280:

| CURVE DATA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N \M | DELTA |  |  |  | DEGREE |  |  | TANGENT | CURVE <br> LENGTH | RADIUS | PI STATION | PI NORTHING | PI EASTING | PC STATION | PT STATION |
| E35N280-1 | $26^{\circ}$ | 14* | 50.06 ${ }^{11}$ | RT | $9^{*}$ | 52* | 42,901 | 135.22' | 265.70 ${ }^{\circ}$ | 580,00 | 12+04. 74 | 6,960,919,54 | 2,331,829,31 | $10+69.52$ | $13+35.22$ |
| E351080-2 | $91^{\circ}$ | 07' | 29.40" | RT | $38^{\circ}$ | 11* | 49.87" | 152.97 ${ }^{\prime}$ | $238.56{ }^{\circ}$ | $150.00^{\prime}$ | $14+88.19$ | 6,961,145.95 | 2,332,007.63 | $13+35.22$ | $15+73.78$ |
| E35 $2880-3$ | $98^{\circ}$ | 06* | 15.27" | RT | $47^{\circ}$ | $44^{\prime}$ | 47.34" | 138.30' | 205, 47 ${ }^{\prime}$ | $120.00{ }^{\circ}$ | $17+12.08$ | 6,960,961, 26 | 2,332, 232.87 | 15+73.78 | 17+79.25 |
| E35M280-4 | 71* | 15' | 35.94" | RT | $31 *$ | 49' | 51.56" | $129.01^{\prime}$ | 223.87 ${ }^{\prime}$ | $180.00{ }^{\prime}$ | 19+08. 26 | 6,960, 780. 51 | 2,332,035.93 | 17+79.25 | 20+03.12 |
| E35 $\mathrm{NZ} 280-5$ | 6* | $45^{\circ}$ | $32.24{ }^{\prime \prime}$ | LT | 3* | 35' | 18.08" | 94. $29{ }^{\prime}$ | $188.36^{\prime}$ | 1.596.71' | $20+97.41$ | 6,960, 887.80 | 2,331,840.09 | $20+03.12$ | 21+91.48 |

As seen on the table above, the existing loop ramp curve E35N280-4 has a radius of 120 ft , that do not comply with the Ultimate alignment geometric requirements listed in the document North Tarrant Express MDP CDA Geometric Design under Loop Ramp (design speed requirement of 25 MPH ). The stated alignment currently only complies with a design speed of 20 MPH based on Low Speed Urban Street table 2-5 of the TxDOT Roadway Design Manual. NTMP 2-4 respectfully requests to TxDOT to add a note on the document North Tarrant Express MDP CDA Geometric Design Criteria Allowing the developer to comply with a design speed of 20, and to classify this existing loop ramp as a Low Speed Urban Street.

## Responses:

TxDOT conditionally agrees to the use of the existing horizontal loop ramp curve E35N280-3 which has a radius of 120 ft and a design speed of 20 mph .

Final approval is dependent upon review and approval of the complete interim design proposal package.
The Draft MDP Geometric Design Criteria Table will not be updated to reflect interim design criteria since the table is intended as a reference document for the ultimate design of the facility.
[Response reissued August 10, 2011: TxDOT has reviewed Developer's submittal of RFI \#35B and hereby approves RFI \#35 to the use of the existing horizontal loop ramp curve E35N280-3 which has a radius of 120 ft and a design speed of 20 mph , without conditions.]

| Responder Name: | Matthew E. M | r, P.E. |  | Response Date: |  | Reissued August 10, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 | Other | E-mail |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 35B | Date: | Aug 1. 2011 |
| :---: | :---: | :---: | :---: |
| To: | Lucas Lahitou | From: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE Segment 3A Existing NB IH35W Exit to Spur 280 NB

## Attachments:

Exhibit 1 (printout of geopak file job03a.gpk describing the alignment E35N280), Exhibit 2 (printout of interim E35N280 vertical alignment), segment3AI_profile.dgn, Seg3AI_Align.dgn

## Information / Clarification Request:

As part of the CDA negotiations, and in order to close pending issues with RFI's, TxDOT has requested to provide the following information:

1 For the developer to confirm if the latest mandatory scope reflects the approved RFI
Developer confirms that the vertical alignment design of the Interim E35N280 loop ramp reflects the approved RFI. Please refer to exhibit 1 (printout of geopak file job03a.gpk describing the alignment E35N280 including the 120 ft radius curve). The GPK file has been included with the Mandatory scope Schematic drawings. Developer is also including exhibit 2 (printout of interim E35N280 vertical alignment) obtained from the dgn file segment3AI_profile.dgn. Alignments are laid out in file Seg3AI_Align.dgn, which was included with the Mandatory Scope Schematics.

Based on the above information, and in order to finalize the CDA documents, the developer requests that TxDOT provide the official approval of RFI 35 without any restrictions.

Response Needed by (date): Aug 3, 2011

## Response:

TxDOT conditionally approved RFI \#35 on May 14, 2010. TxDOT received this RFI \#35B on August 4, 2011. In addition to the information provided above and the information provided in a meeting with the Developer on July 29, 2011, TxDOT reviewed the Seg3AI_Align.dgn file submitted on May 31, 2011 as part of the FIP package. TxDOT confirms that the Developer has provided adequate information to grant final approval for this RFI.

RFI \#35 and 35B are approved for the use of the existing horizontal loop ramp curve E35N280-3 which has a radius of 120ft and a design speed of 20 mph .

TXDOT notes that this RFI was written by the Developer's DB contractor and believes the statement regarding the delivery of the Mandatory Scope schematics to be intended for the Developer. TxDOT requested from the Developer dgn files in addition to the pdfs of the Mandatory Scope schematics numerous times before receiving the entire design packages with all current dgn files in March 2011.

| Responder Name: | Matthew E. Ma | r, P.E. |  | Response Date: |  | August 10, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mai | 区 | Other | E-mail |

RFI \#44 \& \#44B

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 44 (TxDOT correction) | Date: | August 25, 2010 |
| :---: | :---: | :---: | :---: |
| From: | Alberto Gonzalez | To: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: 214.319.6571 |  |
|  | Chase Park One, Suite 500C | Fax: E-Mail: | 214.319.6580 |
|  | Austin, TX 78752 |  | MMACGRE@dot.state.tx.us |
| Subject: NTE 3A - SH 121 / Spur 280 Direct Connector minimum radius exception |  |  |  |
| Attachment 1.pdf (plan view of Direct Connector 121S-280 - TxDOT Schematic) <br> Attachments: Attachment 2.pdf (plan view of Direct Connector 121S-280 - NTEMP 2-4) <br> Attachment 3.pdf (SSD Calculations 2 pages) |  |  |  |
| Information / Clarification Request: |  |  |  |
| NTEMP 2-4 requests a design deviation for Segment 3A. The deviation is for the direct connector from US 121 to Spur 280 (NTEMP 2-4 alignment 121S-280, TxDOT alignment 121SB280SB). Per TxDOT Schematics (attached), the DC shows a radius of $510^{\prime}$ at the tie-in to Spur 280. This allows the construction for SH 121 S - Spur 280 to avoid existing bridge structure. |  |  |  |
| NTEMP 2-4 requests a design exception for DC 121S-280 to allow: <br> 1. A minimum radius of $510^{\prime}$ corresponding to a minimum design speed of 40 mph . <br> 2. A minimum SSD for 35 mph design speed based on SSD calculations (attached). Please note the Geometric Design Criteria dated 5/14/2010 already states "DC 121SB280SB shall have a minimum SSD for 40 mph design speed based on the September 2009 schematic"; this will be revised to state "DC 121SB280SB shall have a minimum SSD for 35 mph design speed based on the Preliminary $100 \%$ Submittal September 15, 2009 schematic". |  |  |  |
| Please Confirm. |  |  |  |


| Response Needed by (date): | September 3, 2010 |
| :--- | :--- |
| Response: |  |
|  |  |
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## Responder Name:

$\qquad$ Response Date:

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© Other E-mail


vognte NTE 3A MDP
$\qquad$ calculation no. NaneNONE reviewer F.Gaytán date $-8 / 25 / 10$
scale $\qquad$ Move SHEETV. 1

T×DOT RDM 2-28 SSD formula:

$$
M=R\left[1-\cos \left(\frac{28.655}{R}\right)\right]
$$

- $M \Rightarrow$ Middle ordinate :

$$
\begin{aligned}
& M=10^{\prime}(S H L D)+\frac{1}{2}\left(12^{\prime} \angle A N E\right) \\
& M=16^{\prime}
\end{aligned}
$$

- Given $R=510^{\prime}$,
- Solve for $S=\frac{R}{28.65} \times \cos ^{-1}\left[\frac{(R-M)}{R}\right]$

$$
\begin{aligned}
& =\frac{510}{28.65} \times \cos ^{-1}\left[\frac{510-16}{510}\right] \\
S & =256.15^{7}
\end{aligned}
$$

- Based on RDM page 2-29, Figure 2-5 $\omega / M=16^{\prime}, R \equiv 510^{\prime}, S=256.2$

$$
\therefore V=35 \mathrm{mph}
$$

$2 / 2$



STOPPING SIGHT DISTANCE ON HORIZONTAL CURVES (US CUSTOMARY)

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
September 9, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI \#44: NTE 3A - SH 121 / Spur 280 Direct Connector minimum radius exception.

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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 44 |
| :--- | :--- |
| To: |  |
|  | Alberto Gonzalez |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |

Date: August 25, 2010

| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: NTE 3A - SH 121 / Spur 280 Direct Connector minimum radius exception.

Attachment 1.pdf (plan view of Direct Connector 121S-280 - TxDOT Schematic)
Attachments: Attachment 2.pdf (plan view of Direct Connector 121S-280 - NTEMP 2-4)
Attachment 3.pdf (SSD Calculations 2 pages)

## Information / Clarification Request:

NTEMP 2-4 requests a design deviation for Segment 3A. The deviation is for the direct connector from US 121 to Spur 280 (NTEMP 2-4 alignment 121S-280, TxDOT alignment 121SB280SB). Per TxDOT Schematics (attached), the DC shows a radius of 510 ' at the tie-in to Spur 280. This allows the construction for SH 121S - Spur 280 to avoid existing bridge structure.

NTEMP 2-4 requests a design exception for DC 121S-280 to allow:

1. A minimum radius of 510 'corresponding to a minimum design speed of 40 mph .
2. A minimum SSD for 35 mph design speed based on SSD calculations (attached). Please note the Geometric Design Criteria dated 5/14/2010 already states "DC 121SB280SB shall have a minimum SSD for 40 mph design speed based on the September 2009 schematic"; this will be revised to state "DC 121SB280SB shall have a minimum SSD for 35 mph design speed based on the Preliminary 100\% Submittal September 15, 2009 schematic".

Please Confirm.

Response Needed by (date): September 3, 2010

## Response:

A design deviation for design speed for the southbound SH 121 to Spur 280 connector ramp is not required. The ramp has been reclassified as a collector distributor with a design speed of 40 mph and minimum radius of curvature of 510' according to the MDP Draft Geometric Criteria Table dated May 14, 2010.

The request for a design deviation of 35 mph for SSD is granted based on the geometry provided in the TxDOT schematic dated September 15, 2009 which proposes to end construction at 121 S - 280 STA $85+20.04$ in order to not reconstruct the RR bridge.
Responder Name: Matthew E. MacGregor, P.E. Response Date: September 9, 2010

## Request for Information

## RFI No.:

44B
Date: August 3, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE 3A - SH 121 / Spur 280 Direct Connector minimum radius exception.

## Attachments: <br> Exhibit 1 (Printout of TxDOT’s Schematics for environmental approval depicting the SH121 to Spur 280 connector), Exhibit 2 (Printout of Developer's latest Master Development Plan depicting the SH121 to Spur 280 connector)

## Information / Clarification Request:

As part of the CDA negotiations, TxDOT requested that the developer confirmed the following:
1 For the developer to confirm if the existing Spur 280 RR bridge west of IH 35 W will not need to be reconstructed.
Please refer to FIP and Book 2 Capacity Improvement agreed by both TxDOT and the developer; in such table, the final design and construction of the entire SH 121 WB to Spur 280 DC lies entirely within TxDOT. Nevertheless, the Developer will like to point out the following:

- In TxDOT's schematics for environmental approval for the NTE Segment 3A (dated January 31 2011), the ramp in question does not require that the existing Spur 280 bridge over the railroad bridge be replaced (see Exhibit 1)
- In Developer's schematics for the Master Development Plan for the NTE Segment 3A (presented to TxDOT March 18 2011), the ramp in question does not require that the existing Spur 280 bridge over the railroad bridge be replaced (see Exhibit 2)

Based on the above mentioned two independently developed Ultimate schematics, and in order to finalize the CDA documents, the developer requests that TXDOT remove from the RFI log that NTEMP needs to provide additional information prior to executing facility agreement.

Response Needed by (date): Not Required
Response:

## Responder Name:

$\qquad$ Response Date:



## Transmittal Letter

## Date:

 August 10, 2011To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
|  | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject: RFI \#44B \& Reissue of RFI \#44: NTE 3A - SH 121 / Spur 280 Direct Connector minimum radius exception.

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| 1 | $08 / 10 / 11$ | 2 | Reissue of RFI \#44 Response Form |
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| These Are Transmitted As Checked Below: |  |  |  |  |  |
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| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1600 with any questions.

Copy To:
Signed: Matthew MacGregor [electronic]
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
区 Other Electronic

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 44 |
| :--- | :--- |
| To: | Alberto Gonzalez  <br>  NTE Mobility Partners 2-4 <br>  Chase Park One, Suite 500C |

Date: August 25, 2010

Subject: NTE 3A - SH 121 / Spur 280 Direct Connector minimum radius exception.

Attachment 1.pdf (plan view of Direct Connector 121S-280 - TxDOT Schematic)
Attachments: Attachment 2.pdf (plan view of Direct Connector 121S-280 - NTEMP 2-4)
Attachment 3.pdf (SSD Calculations 2 pages)

## Information / Clarification Request:

NTEMP 2-4 requests a design deviation for Segment 3A. The deviation is for the direct connector from US 121 to Spur 280 (NTEMP 2-4 alignment 121S-280, TxDOT alignment 121SB280SB). Per TxDOT Schematics (attached), the DC shows a radius of $510^{\prime}$ at the tie-in to Spur 280. This allows the construction for SH 121S - Spur 280 to avoid existing bridge structure.

NTEMP 2-4 requests a design exception for DC 121S-280 to allow:

1. A minimum radius of 510 'corresponding to a minimum design speed of 40 mph .
2. A minimum SSD for 35 mph design speed based on SSD calculations (attached). Please note the Geometric Design Criteria dated 5/14/2010 already states "DC 121SB280SB shall have a minimum SSD for 40 mph design speed based on the September 2009 schematic"; this will be revised to state "DC 121SB280SB shall have a minimum SSD for 35 mph design speed based on the Preliminary 100\% Submittal September 15, 2009 schematic".

Please Confirm.

Response Needed by (date):
September 3, 2010

## Response:

A design deviation for design speed for the southbound SH 121 to Spur 280 connector ramp is not required. The ramp has been reclassified as a collector distributor with a design speed of 40 mph and minimum radius of curvature of 510' according to the MDP Draft Geometric Criteria Table dated May 14, 2010.

The request for a design deviation of 35 mph for SSD is granted based on the geometry provided in the TxDOT schematic dated September 15, 2009 which proposes to end construction at 121 S-280 STA $85+20.04$ in order to not reconstruct the RR bridge.
[Response reissued August 10, 2011: TxDOT has reviewed Developer's submittal of RFI \#44B and confirms the approval stated above.]
Responder Name: Matthew E. MacGregor, P.E. $\quad$ Response Date: Reissued August 10, 2011.

# Request for Information 

RFI No.:
44B

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

Date: August 3, 2011

| From: | Matthew E. MacGregor |
| :---: | :---: |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE 3A - SH 121 / Spur 280 Direct Connector minimum radius exception.

## Attachments: <br> Exhibit 1 (Printout of TxDOT’s Schematics for environmental approval depicting the SH121 to Spur 280 connector), Exhibit 2 (Printout of Developer's latest Master Development Plan depicting the SH121 to Spur 280 connector)

## Information / Clarification Request:

As part of the CDA negotiations, TxDOT requested that the developer confirmed the following:
1 For the developer to confirm if the existing Spur 280 RR bridge west of IH 35 W will not need to be reconstructed.
Please refer to FIP and Book 2 Capacity Improvement agreed by both TxDOT and the developer; in such table, the final design and construction of the entire SH 121 WB to Spur 280 DC lies entirely within TxDOT. Nevertheless, the Developer will like to point out the following:

- In TxDOT's schematics for environmental approval for the NTE Segment 3A (dated January 31 2011), the ramp in question does not require that the existing Spur 280 bridge over the railroad bridge be replaced (see Exhibit 1)
- In Developer's schematics for the Master Development Plan for the NTE Segment 3A (presented to TxDOT March 18 2011), the ramp in question does not require that the existing Spur 280 bridge over the railroad bridge be replaced (see Exhibit 2)

Based on the above mentioned two independently developed Ultimate schematics, and in order to finalize the CDA documents, the developer requests that TxDOT remove from the RFI log that NTEMP needs to provide additional information prior to executing facility agreement.

## Response Needed by (date): Not Required

## Response:

TxDOT received this RFI \#44B on August 4, 2011 and confirms the approval granted for RFI \#44.

RFI \#45

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 45 | Date: | September 3, 2010 |
| :---: | :---: | :---: | :---: |
| From: | Alberto Gonzalez | To: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE 3A - Existing ROW to edge of pavement distance (Border) at Steadman Road.

Attachments: Attachment 1.pdf (Plan view of project spanning over Big Fossil Creek)

## Information / Clarification Request:

NTEMP 2-4 requests a design clarification of the Recommended Design Frequency for the frontage roads over Big Fossil Creek.

NTEMP 2-4 requests a design clarification based on:

1. According the TxDOT Hydraulic Design Manual (Section 3 Design Frequency, page 5-10) for Minor Arterial and Collectors (Including Frontage Roads) the recommended frequency is a 25 year desirable design frequency and a 100 year check frequency for a "small bridge".

Clarification is requested by TxDOT to verify that the frontage road bridges over Big Fossil Creek are to be considered "small bridges" and therefore as such are to be designed for a 25 year design storm. Please note that TxDOT hydraulic Design Manuel does not define or clarify the meaning of "small bridge".

Please Confirm.

## Response Needed by (date): September 10, 2010

Response:

## Responder Name:

$\qquad$ Response Date:

## Delivery Type:

Courier
Overnight
$\square$ Mail
区 Other E-mail


RFI Attachment \#1 Frontagie road DESIGN STORM REETURN PERIOD.
AEcom

$$
9-3-2010
$$

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
September 9, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI \#45: NTE 3B - Big Fossil Creek Design Frequency for Frontage Road Bridges

We Are Sending You:

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| 1 | $9 / 9 / 10$ | 1 | RFI \#45 Response Form |
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## These Are Transmitted As Checked Below:

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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752 North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 45 |
| :--- | :--- |
| To: | Alberto Gonzalez  <br>  NTE Mobility Partners 2-4 <br>  Chase Park One, Suite 500C |


| Date: | September 3, 2010 |
| :---: | :---: |
| From: | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE 3B - Big Fossil Creek Design Frequency for Frontage Road Bridges

Attachments: Attachment 1.pdf (Plan view of project spanning over Big Fossil Creek)

## Information / Clarification Request:

NTEMP 2-4 requests a design clarification of the Recommended Design Frequency for the frontage roads over Big Fossil Creek.

NTEMP 2-4 requests a design clarification based on:

1. According the TxDOT Hydraulic Design Manual (Section 3 Design Frequency, page 5-10) for Minor Arterial and Collectors (Including Frontage Roads) the recommended frequency is a 25 year desirable design frequency and a 100 year check frequency for a "small bridge".

Clarification is requested by TxDOT to verify that the frontage road bridges over Big Fossil Creek are to be considered "small bridges" and therefore as such are to be designed for a 25 year design storm. Please note that TxDOT hydraulic Design Manuel does not define or clarify the meaning of "small bridge".

Please Confirm.

Response Needed by (date):
September 10, 2010

## Response:

The use of a 25 year design storm frequency for the frontage road bridges over Big Fossil Creek is appropriate as recommended in the TxDOT Hydraulics Manual.

| Responder Name: | Matthew E. M | , P.E. |  | Response Date: |  | September 9, 2010 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square \quad$ Courier | $\square$ Overnight | $\square$ | Mail | 区 | Other | E-mail |

RFI \#46

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 46 |
| :--- | :--- |
| From: |  |
|  | Alberto Gonzalez |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |

\begin{tabular}{|c|c|}
\hline \multirow[t]{2}{*}{Date:

To:} \& September 3, 2010 <br>
\hline \& Matthew E. MacGregor <br>
\hline \& TxDOT, Dallas District <br>
\hline Tel.: \& 214.319.6571 <br>
\hline Fax: \& 214.319.6580 <br>
\hline E-Mail: \& MMACGRE@dot.state.tx.us <br>
\hline
\end{tabular}

Subject: NTE 3A - Existing ROW to edge of pavement distance (Border) at Steadman Road.

## Attachments: Attachment 1.pdf (Plan view Steadman near IH35W station 937+00)

## Information / Clarification Request:

NTEMP 2-4 requests a design deviation for Segment 3A. The deviation is for the border area which is normally 15 feet minimum and 20 feet desirable per the TxDOT Roadway design manual Table 3-1 for Urban Streets.

NTEMP 2-4 requests a design exception to allow:

1. A distance of 9 feet from the ROW line to the proposed pavement edge for Steadman Road.
2. Avoiding of a ROW take on a historic property.

The above stated design deficiency requiring deviation, has emerged after TxDOT's communicated to the developer the desire not take additional ROW that would have been required on the East side of Steadman. The additional ROW will be required if the design deviation is not granted, in order to comply with the minimum geometric requirements for a frontage road as defined by the MDP Geometric Design Criteria, and the TxDOT Roadway Design Manual.

Please Confirm.
Response Needed by (date): September 10, 2010

## Response:

## Responder Name:

$\qquad$ Response Date:

Overnight
$\square$ Mail
区 Other E-mail

r.202d

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
September 9, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI \#46: NTE 3A - Existing ROW to edge of pavement distance (Border) at Steadman Road.

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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 46 |
| :--- | :--- |
| From: |  |
|  | Alberto Gonzalez |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |

Date: September 3, 2010

| To: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: NTE 3A - Existing ROW to edge of pavement distance (Border) at Steadman Road.

Attachments: Attachment 1.pdf (Plan view Steadman near IH35W station 937+00)

## Information / Clarification Request:

NTEMP 2-4 requests a design deviation for Segment 3A. The deviation is for the border area which is normally 15 feet minimum and 20 feet desirable per the TxDOT Roadway design manual Table 3-1 for Urban Streets.

NTEMP 2-4 requests a design exception to allow:

1. A distance of 9 feet from the ROW line to the proposed pavement edge for Steadman Road.
2. Avoiding of a ROW take on a historic property.

The above stated design deficiency requiring deviation, has emerged after TxDOT's communicated to the developer the desire not take additional ROW that would have been required on the East side of Steadman. The additional ROW will be required if the design deviation is not granted, in order to comply with the minimum geometric requirements for a frontage road as defined by the MDP Geometric Design Criteria, and the TxDOT Roadway Design Manual.

Please Confirm.

Response Needed by (date): September 10, 2010

## Response:

The design deviation for border width for the northbound frontage road at Steadman Street in front of Parcels 148 and 149 is granted in order to not require additional ROW from the Butler Place Housing Project.
Responder Name: Matthew E. MacGregor, P.E. Response Date: September 9, 2010

RFI \#47, \#47B \& \#47C

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 47 |
| :--- | :--- |
| From: |  |
|  | Lucas Lahitou |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |

Date: November 12, 2010

| To: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: NTE Segment 3A - Interim Entrance/Exit Ramps from/to SH183 and Northside Drive.

## Attachments: Attachment 1.pdf (Plan view STA 780+00 to STA 852+00) <br> Attachment 2.pdf (Figure 3-37; Section 6-Freeways; TxDOT Roadway Design Manual)

## Information / Clarification Request:

As part of the project optimization, TxDOT requested to defer construction of NBFR and SBFR between SH183 and Northside Dr (between approximate Stations $790+00$ and $830+00$ ) as well as defer Ultimate NSD-35N, 35N-183, 35S-NSD and 183-35S ramps and replacing them for interim ramps as shown in Attachment 1 Preliminary Layout.

The new construction will provide the same number of GPLs as existing now and the same entrance/exit ramp movements as the Ultimate configuration. Both NB and SB designed ramps comply with the 2000' minimum Geometric Requirements for an entrance ramp followed by exit ramp distance as shown on Attachment 2 as defined by TxDOT Roadway Design Manual.

The above stated design clarification is part of the Scope deferments and adjustments to achieve a Zero Public Subsidy.

Please confirm that no additional auxiliary lanes are part of this scope, irrespective of the level of service achieved between the consecutive entrance/exit ramp pairs in this section of GPLs, including both NB and SB.

Response Needed by (date): November 19, 2010

## Response:

## Responder Name:

$\qquad$ Response Date:

Mail
区 Other E-mail



of these requirements, see the Highway Capacity Manual. Figure 3-37 shows minimum distances between ramps for various ramp configurations.


Figure 3-37. Arrangements For Successive Ramps. Click here to see a PDF of the image.

## Cross Section and Cross Slopes

Superelevation rates, as related to curvature and design speed of the ramp or direct connector, are given in Table 3-21. While connecting roadways represent highly variable conditions, as high a superelevation rate as practicable should be used, preferably in the upper half or third of the indicated range, particularly in descending grades. Superelevation rates above $8 \%$ are shown in Table 3-21 only to indicate the limits of the range. Superelevation rates above $8 \%$ are not recommended and a larger radius is preferable.

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
December 6, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI \#47: NTE Segment 3A - Interim Entrance/Exit Ramps from/to SH183 and Northside Drive.

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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacG | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

## Request for Information

RFI No.:
47

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

Date: November 12, 2010

| From: | Matthew E. MacGregor |
| :---: | :---: |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject:
NTE Segment 3A - Interim Entrance/Exit Ramps from/to SH183 and Northside Drive.

## Attachments: Attachment 1.pdf (Plan view STA 780+00 to STA 852+00) <br> Attachment 2.pdf (Figure 3-37; Section 6-Freeways; TxDOT Roadway Design Manual)

## Information / Clarification Request:

As part of the project optimization, TxDOT requested to defer construction of NBFR and SBFR between SH183 and Northside Dr (between approximate Stations $790+00$ and $830+00$ ) as well as defer Ultimate NSD-35N, $35 \mathrm{~N}-183,35 \mathrm{~S}-\mathrm{NSD}$ and $183-35 \mathrm{~S}$ ramps and replacing them for interim ramps as shown in Attachment 1 Preliminary Layout.

The new construction will provide the same number of GPLs as existing now and the same entrance/exit ramp movements as the Ultimate configuration. Both NB and SB designed ramps comply with the 2000' minimum Geometric Requirements for an entrance ramp followed by exit ramp distance as shown on Attachment 2 as defined by TxDOT Roadway Design Manual.

The above stated design clarification is part of the Scope deferments and adjustments to achieve a Zero Public Subsidy.
Please confirm that no additional auxiliary lanes are part of this scope, irrespective of the level of service achieved between the consecutive entrance/exit ramp pairs in this section of GPLs, including both NB and SB.

## Response Needed by (date): November 19, 2010

## Response:

TxDOT acknowledges that the proposed design of the interim ramps between SH 183 and Northside Drive meets the minimum spacing requirements shown in RDM, Figure 3-37, and meets the requirements of Book 2 which calls for Good Industry Practice irrespective of LOS.

TxDOT also understands that the existing configuration does not include frontage roads or auxiliary lanes between SH 183 and Northside Dr. and that the Developer is proposing the current interim configuration without auxiliary lanes as part of the scope deferments proposed by NTEMP and submitted for TxDOT review to achieve a zero public subsidy (2.1.1 and 2.1.2).

However, pending resolution of the gas well site issue which may require further modifications to the proposed design and pending receipt of the updated $3 A / B B$ drawings, TxDOT requests that the Developer verify the operational characteristics of the proposed configuration since the proposed spacing between ramps has been significantly reduced compared to the existing ramp spacing.

TXDOT reserves the right to include auxiliary lanes between the ramps to improve performance and operations and recognizes that this will exceed the guidelines of the technical requirements and good industry practice and so would be an additional cost to TxDOT.

Responder Name: Matthew E. MacGregor, P.E. $\quad$ Response Date: December 6, 2010

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区 Other
E-mail

## Request for Information

| RFI No.: | 47B |
| :---: | :---: |
| From: | Lucas Lahitou |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |


| Date: | March 152011 |
| :---: | :---: |
| To: | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject:
NTE Segment 3A - Interim Entrance/Exit Ramps from/to SH183 and Northside Drive.

Attachments: Exhibit 1 (LOS analysis of NTE 3A between SH 183 and Northside Drive)

## Information / Clarification Request:

As part of the project optimization, TxDOT requested to defer construction of NBFR and SBFR between SH183 and Northside Dr (between approximate Stations $790+00$ and $830+00$ ) as well as defer Ultimate NSD-35N, $35 \mathrm{~N}-183,35 \mathrm{~S}-\mathrm{NSD}$ and $183-35 \mathrm{~S}$ ramps and replacing them for interim ramps without auxiliary lanes in between them. AS part of RFI 47 response, TxDOT also requested to the developer to verify the operational characteristics of the Mandatory scope configuration of the GPL's between SH 183 and Northside Drive.

NTEMP has used year 2025 projected time of day traffic, both existing and test cases show severe congestions during AM and PM peak periods on general purpose lanes between US 183 and Northside. As seen on Exhibit 1, the traffic condition will be slightly worsened due to the shortened distance between ramps especially on northbound traffic, but the difference is not very significant. This might be caused by the fact that there are no frontage roads in place for both existing and test configuration, hence both cases will have limited capability of handling heavy traffic.

With respect to the SB GPL movement, please note that the mandatory scope configuration adds a GPL lane at the point where the entrance ramp from SH 183 (Approx IH35W CL station 804+50) that does not get dropped at the GPL exit to Northside drive (Approx IH35W CL station $825+50$ ). This additional lane also acts as an auxiliary lane. An additional auxiliary lane will worsen the traffic conditions due to the fact that a vehicle already in the GPL north of IH35W centerline station $804+50$ will have to make two weaving movements to exit to SH 183 (first move will be to the new third lane at $804+50$, and then to the aux lane that will end at the SB exit to Northside Drive).

The above traffic evaluation NTEMP has proven that the existing operational characteristics will not be significantly worsened, with the mandatory scope configuration on the proposed IH35W GPL's between SH 183 and Northside Drive; moreover an auxiliary lane is not required either due to Geometric requirements (distance between exits $>2000 \mathrm{ft}$ NB and SB). TxDOT's response to RFI 47 mentioned that TxDOT reserves the right to include auxiliary lanes between the above mentioned ramps in the NTE segment 3A (which NTEMP will conform), but the developer requests that the RFI 47B response mentions unequivocally that the addition of those lanes will be an additional cost to TxDOT.

## Response Needed by (date): 3/22/2011

$\square$

$\qquad$ Response Date:
Delivery Type: $\quad \square$ Courier $\quad \square$ Overnight $\quad \square$ Mail $\quad$ 区 Other $\quad \underline{\text { E-mail }}$

LOS analysis for NTE 3AB weaving section between SH 183 and Northside Dr (year 2025)

| Configuration | Direction |  | TS_1 | TS_2 | TS_3 | TS_4 | TS_5 | TS_6 | TS_7 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{gathered} \text { 10pm to } \\ 6 \mathrm{am} \end{gathered}$ | $\begin{aligned} & \hline 8 \mathrm{pm}- \\ & 10 \mathrm{pm} \end{aligned}$ | 6-7am | 7-9am | $\begin{gathered} 9 \mathrm{am}-4 \mathrm{pm}, \\ 7-8 \mathrm{pm} \end{gathered}$ | 4-6pm | 6-7pm | Notes |
| Test Case | North bound | weaving section | B | E | F | F | F | F | F | treated as weaving section |
|  | South Bound | weaving section | B | D | F | F | E | F | F |  |
| Existing Case |  | merge junction | B | D | E | E | E | E | E | treated as separate junctions since the distance between ramps exceeds 2500 ft |
|  | North bound | diverge junction | B | D | D | E | E | E | E |  |
|  | South Bound | merge junction | B | C | D | E | D | E | D |  |
|  |  | diverge junction | B | D | E | E | E | F | E |  |

Test Case:
Existing Case:
Not frontage roads on both sides between SH 183 and Northside Dr as shown figure below Existing configuration


NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
March 24, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

Subject: RFI \#47B: NTE Segment 3A - Interim Entrance/Exit Ramps from/to SH183 and Northside Drive.

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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacG | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

## Request for Information

RFI No.: 47B

| To: | Lucas Lahitou |
| :--- | :--- |
|  | NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |  |
| Chase Park One, Suite 500C |  |

Date: March 152011

| From: | Matthew E. MacGregor |
| ---: | :--- |
| TxDOT, Dallas District |  |
|  | 214.319 .6571 |
| Fax: | 214.319 .6580 |
|  |  |

Subject:
NTE Segment 3A - Interim Entrance/Exit Ramps from/to SH183 and Northside Drive.

Attachments: Exhibit 1 (LOS analysis of NTE 3A between SH 183 and Northside Drive)

## Information / Clarification Request:

As part of the project optimization, TxDOT requested to defer construction of NBFR and SBFR between SH183 and Northside Dr (between approximate Stations $790+00$ and $830+00$ ) as well as defer Ultimate NSD-35N, $35 \mathrm{~N}-183,35 \mathrm{~S}-\mathrm{NSD}$ and $183-35 \mathrm{~S}$ ramps and replacing them for interim ramps without auxiliary lanes in between them. AS part of RFI 47 response, TxDOT also requested to the developer to verify the operational characteristics of the Mandatory scope configuration of the GPL's between SH 183 and Northside Drive.

NTEMP has used year 2025 projected time of day traffic, both existing and test cases show severe congestions during AM and PM peak periods on general purpose lanes between US 183 and Northside. As seen on Exhibit 1, the traffic condition will be slightly worsened due to the shortened distance between ramps especially on northbound traffic, but the difference is not very significant. This might be caused by the fact that there are no frontage roads in place for both existing and test configuration, hence both cases will have limited capability of handling heavy traffic.

With respect to the SB GPL movement, please note that the mandatory scope configuration adds a GPL lane at the point where the entrance ramp from SH 183 (Approx IH35W CL station 804+50) that does not get dropped at the GPL exit to Northside drive (Approx IH35W CL station $825+50$ ). This additional lane also acts as an auxiliary lane. An additional auxiliary lane will worsen the traffic conditions due to the fact that a vehicle already in the GPL north of IH35W centerline station $804+50$ will have to make two weaving movements to exit to SH 183 (first move will be to the new third lane at $804+50$, and then to the aux lane that will end at the SB exit to Northside Drive).

The above traffic evaluation NTEMP has proven that the existing operational characteristics will not be significantly worsened, with the mandatory scope configuration on the proposed IH35W GPL's between SH 183 and Northside Drive; moreover an auxiliary lane is not required either due to Geometric requirements (distance between exits $>2000 \mathrm{ft}$ NB and SB). TxDOT's response to RFI 47 mentioned that TxDOT reserves the right to include auxiliary lanes between the above mentioned ramps in the NTE segment 3A (which NTEMP will conform), but the developer requests that the RFI 47B response mentions unequivocally that the addition of those lanes will be an additional cost to TxDOT.

## Response Needed by (date): 3/22/2011

TXDOT has reviewed the traffic analysis provided in Exhibit 1 and would appreciate additional information and clarification.

1. The concern raised in TxDOT's response to RFI \#47 was that the spacing between the proposed entrance and exit ramps between SH 183 and Northside Drive as shown in the December 2, 2010 Mandatory Scope schematic had been significantly reduced compared to the spacing of the existing ramps. The figure in Exhibit 1 shows that a different configuration with different (increased) ramp spacing was modeled to analyze the weaving section between SH 183 and Northside Dr. Please confirm which is the correct configuration for the Mandatory Scope to be used in the LOS analysis.
2. The LOS analysis for the northbound weaving section for the ramp configuration shown in Exhibit 1 results in a decrease in LOS from $D$ to $E$ ( $8 \mathrm{pm}-10 \mathrm{pm}$ ) and from E to $F$ for all other time periods except 10 pm to 6 am which is the same LOS B. Please provide the weave analysis detailed output data (HCS or other software showing at a minimum weaving segment speed, density and LOS) for further review.
3. Please also provide detailed weave analysis output data for the weaving section between the northbound general purpose lane entrance ramp from Northside Drive and the northbound exit ramp to the managed lanes. The new weave section also needs to be analyzed as it might severely impact traffic and safety.

TxDOT takes no exception to the proposed SB IH 35W lane configuration. TxDOT understands that the addition of the third southbound lane at the entrance ramp from SH 183 is consistent with the existing configuration and that an additional southbound auxiliary lane is not required.

Pending resolution of the Chesapeake gas well site issue which might require further modifications to the interim design and eliminate the problematic northbound weaving sections, TxDOT appreciates the Developer's cooperation in working towards optimizing the design of the Mandatory Scope for this segment of the 3A Facility Segment between Northside Drive and SH 183.
Responder Name: Matthew E. MacGregor, P.E._ Response Date: March 24, 2011
Delivery Type: $\quad \square$ Courier $\quad \square$ Overnight $\quad \square$ Mail $\quad \boxtimes$ Other E-mail

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.:From: | 47C | Date: | March 302011 |
| :---: | :---: | :---: | :---: |
|  | Lucas Lahitou | To: | Matthew E. MacGregor |
| From: | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE Segment 3A - Interim Entrance/Exit Ramps from/to SH183 and Northside Drive.

Attachments: Exhibit 1 (LOS analysis of NTE 3A between SH 183 and Northside Drive), Exhibit 2 (Traffic Model)

## Information / Clarification Request:

Attached to this RFI are the responses to the request for further information 47B by TxDOT (RFI 47C Exhibit 1). The developer also is including the excel tables with the calculations used for traffic modeling (RFI 47C Exhibit 2).

With the submission of this RFI 47 form and supporting information, Developer deems this matter "complete" and considers it has provided TxDOT all information necessary to review and determine the appropriateness of the build-out of the NB GPL auxiliary lane and/or NB Frontage road. Unless TxDOT determines that additional information is necessary, we request TxDOT to please include within their response to this RFI whether the auxiliary lane and/or NB frontage road are desired by TxDOT and should be included within the proposed mandatory scope. Please note that, consistent with TxDOT's request to provide a zero public subsidy project, developer's proposal assumes the deferral of construction of NBFR and SBFR between SH183 and Northside Dr (between approximate Stations $790+00$ and $830+00$ ) as well as the deferral of Ultimate NSD-35N, $35 \mathrm{~N}-183,35 \mathrm{~S}$-NSD and $183-35 \mathrm{~S}$ ramps and replaced them for interim ramps without auxiliary lanes in between them. Hence, if Developer is required to build these additional improvements, there will be an additional cost to be incurred bv TxDOT.

Response Needed by (date): 4/6/2011

## Response:

## Responder Name:

$\qquad$ Response Date:Courier
$\square$ Mail
区 Other
E-mail

North Tarrant Express Mobility Partners 2－4，LLC<br>7700 Chevy Chase Drive 9001 Airport Freeway<br>Chase Park One，Suite 500C Suite 600<br>Austin，Texas 78752

## RFI 47C Exhibit 1

TxDOT has reviewed the traffic analysis provided in Exhibit 1 and would appreciate additional information and clarification．

1．The concern raised in TxDOT＇s response to RFI \＃47 was that the spacing between the proposed entrance and exit ramps between SH 183 and Northside Drive as shown in the December 2， 2010 Mandatory Scope schematic had been significantly reduced compared to the spacing of the existing ramps．The figure in Exhibit 1 shows that a different configuration with different（increased）ramp spacing was modeled to analyze the weaving section between SH 183 and Northside Dr．Please confirm which is the correct configuration for the Mandatory Scope to be used in the LOS analysis．

The weaving distances used for the test case were updated based on the schematic dated 12／02／10，more specifically，
$\checkmark \quad$ NB（between entrance ramp from Northside Dr and exit ramp toward NTE 3A managed lanes）-1700 ft
$\checkmark \quad$ NB（between entrance ramp from Northside Dr and exit ramp toward SH 183）－ 2500 ft
$\checkmark \quad$ SB（between entrance ramp from SH 183 and exit ramp toward Northside Dr）－ 1500 ft

2．The LOS analysis for the northbound weaving section for the ramp configuration shown in Exhibit 1 results in a decrease in LOS from $D$ to $E$（ $8 \mathrm{pm}-10 \mathrm{pm}$ ）and from $E$ to $F$ for all other time periods except 10 pm to 6 am which is the same LOS B．Please provide the weave analysis detailed output data（HCS or other software showing at a minimum weaving segment speed，density and LOS）for further review．

Weaving segment speed，density and LOS have been added as shown in Exhibit 2 to RFI 47C．The detailed LOS calculation spreadsheet is also attached for review，which contains more information on other outputs and assumptions used．The excel file was developed based on the Highway Capacity Manual 2000 （HCM）and the below is a brief summary of the methodologies used，
$\checkmark$ For test case，as shown in Exhibit 2 to RFI 47C，since the maximum distances between ramps equals or are less than 2500 ft ， which warrants the usage of weaving analysis documented in Chapter 24 of HCM 2000 to estimate LOS．

1）Input：geometric data，traffic volumes per movement，free flow speed of freeway segment
2）Volume adjustment：peak－hour factor，heavy vehicles，driver population
3）Compute flow rates
4）Establish weaving segment configuration type
5）Compute unconstrained weaving and non－weaving speed
6）Check for constrained－flow operation
－If constrained，compute constrained weaving and non－weaving speeds
－Otherwise，use the unconstrained parameter
7）Compute average space mean speed within weaving segment
8）Compute density within the weaving segment
9）Determine LOS
$\checkmark \quad$ For no build case，as shown in Exhibit 2 to RFI 47C，since the maximum distances between ramps exceeds 2500 ft ，LOS analysis were conducted separately for each entrance ramp（or merge junction）and exit ramp（or diverge junction）using the approaches documented in Chapter 25 of HCM 2000.

1）Input：geometric data，traffic volumes per movement，free flow speed of freeway segment
2）Volume adjustment：peak－hour factor，heavy vehicles，driver population
3）Predicting flow entering／exiting lane 1 and lane 2 （V12）
4）Determine Capacity Vr12
5）Determine LOS

3．Please also provide detailed weave analysis output data for the weaving section between the northbound general purpose lane entrance ramp from Northside Drive and the northbound exit ramp to the managed lanes．The new weave section also needs to be analyzed as it might severely impact traffic and safety．

The new analysis has been added as shown in Exhibit 2 to RFI 47C．It is notable that certain assumptions have to be made on traffic volumes entering managed lanes since no additional forecast was made for this particular managed lane ramp．
$\checkmark \quad$ For traffic volume from Northside entrance ramp to managed lane，it is assumed that $10 \%$ traffic will try to cross general purpose lanes and enter into managed lane，although it is debatable that the actual movement will be quite difficult especially when there are high traffic volume present on general purpose lanes．
$\checkmark \quad$ For traffic volume from NTE 3A general purpose lane to managed lane, it is assumed that 5-10\% traffic will diverge into managed lanes based on different time periods.

Please note that the model limitation check for this segment has failed on volume ratio, which is the ratio of the weaving traffic volume versus total traffic volume. This is mainly due to the fact that all general purpose lane traffic will be considered as weaving traffic and interferes with traffic movement from Northside entrance ramp to managed lane ramp. The model limitation failure indicates that the actual traffic condition could be worse than expected as the HCM methodology will have its limitation to analyze this type of condition.

Various files submitted with RFI 47C:

## RFI 47C Exhibit 2.xls (Traffic Model)

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
May 26, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

Subject: RFI \#47C: NTE Segment 3A - Interim Entrance/Exit Ramps from/to SH183 and Northside Drive.

We Are Sending You:

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| 1 | $05 / 26 / 11$ | 1 | RFI \#47C Due Diligence Review Comments |
| 1 | $05 / 26 / 11$ | - | RFI \#47C Exhibit 2 Comments |
| 1 | $05 / 26 / 11$ | 4 | Merge/Diverge Analysis Output |
|  |  |  |  |
|  |  |  |  |

## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacG | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

## Request for Information

RFI No.: 47C

To: Lucas Lahitou

| NTE Mobility Partners 2-4 |
| :--- |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

Date: March 302011

| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject:
NTE Segment 3A - Interim Entrance/Exit Ramps from/to SH183 and Northside Drive.

Attachments: LOS Analysis between Northside Drive and SH 183-Due Diligence Review Comments

## Information / Clarification Request:

Attached to this RFI are the responses to the request for further information 47B by TxDOT (RFI 47C Exhibit 1). The developer also is including the excel tables with the calculations used for traffic modeling (RFI 47C Exhibit 2).

With the submission of this RFI 47 form and supporting information, Developer deems this matter "complete" and considers it has provided TxDOT all information necessary to review and determine the appropriateness of the build-out of the NB GPL auxiliary lane and/or NB Frontage road. Unless TXDOT determines that additional information is necessary, we request TXDOT to please include within their response to this RFI whether the auxiliary lane and/or NB frontage road are desired by TxDOT and should be included within the proposed mandatory scope. Please note that, consistent with TxDOT's request to provide a zero public subsidy project, developer's proposal assumes the deferral of construction of NBFR and SBFR between SH183 and Northside Dr (between approximate Stations $790+00$ and $830+00$ ) as well as the deferral of Ultimate NSD-35N, 35N-183, 35S-NSD and 183-35S ramps and replaced them for interim ramps without auxiliary lanes in between them. Hence, if Developer is required to build these additional improvements, there will be an additional cost to be incurred by TxDOT.

## Response Needed by (date): 4/6/2011

## Response:

TxDOT has reviewed the additional data provided by the Developer with respect to the LOS analysis between SH 183 and Northside Drive and does not require any additional supporting information at this time. However, TxDOT reserves the right to request, as needed, additional clarification and supporting documentation after approval of the FIP with respect to, but not limited to, the attached list of comments relating to the due diligence review of the additional data.

Currently, due to fiscal constraints, TxDOT is not requesting that the Developer include either an auxiliary Lane and /or northbound frontage road to the currently proposed Mandatory Scope in order to be consistent with the current request to provide a zero public subsidy project. However, the current Mandatory Scope configuration shall not preclude the future construction of the northbound frontage road between Northside Drive and SH 183 and shall be compatible with the ultimate configuration per Book 2 of the Agreement. In addition, TxDOT also reserves the right to include the northbound frontage road in the Project at any time pending outcome of the on-going $\$ 89.5 \mathrm{M}$ scope changes negotiations and/or changes in the current funding situation with the understanding that this could result in an additional cost to TxDOT.

Responder Name: Matthew E. MacGregor, P.E. $\quad$ Response Date: May 26, 2011

Delivery Type:
$\square \quad$ Courier
$\square$ Overnight
$\square$ Mail
区 Other
E-mail

RFI \#48 \& \#48B

## Request for Information

## RFI No.: 48

| From: | Lucas Lahitou |
| ---: | :--- |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |

Date: November 12, 2010

| To: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: NTE IH820/IH35W Interchange - Ramp RM4-820E

Attachment 1.1.pdf (Plan view STA 635+00 to STA 660+00)
Attachments: Attachment 1.2.pdf (DC820E35S profile)
Attachment 2.pdf (Table 3-20 TxDOT Roadway Design Manual)

## Information / Clarification Request:

As part of the project optimization, NTEMP 2-4 requests two design exceptions for DC820E35S Direct Connector on IH820/IH35W Interchange in order to defer IH820 EBGPL reconstruction west of approximately Station $641+50$ and maintain existing pavement and bridge over Mark IV Parkway and Little Fossil Creek without any modification. Please see Attachment 1 for preliminary layout.

In order to be able to achieve the stated above and comply with a $16.5^{\prime}$ minimum clearance over RM4-820E Ramp, a design speed exception of 45 mph is needed on DC820E35S between the equivalent Stations $638+00$ and $650+00$ on "IH820 EBGPL" as well as a vertical grade exception of 5\% also on DC820E35S. Stationing refers to EBGPL because of modifications on DC820E35S alignment.

A Design Speed of 45 mph is within the requirements of Table 3-20 in the Roadway Design Manual shown in Attachment 2 and which states that all ramp and connections should be designed to enable vehicles to leave and enter the traveled way of the freeway at no less than 50 percent ( 75 percent in this case) of the freeway's design speed ( 60 mph ).

NTE Mobility Partners 2-4 respectfully requests both a deviation on the design speed of the above Direct Connector, and a deviation with respect to the maximum vertical grade.

The above stated design clarification is part of the Scope deferments and adjustments to achieve a Zero Public Subsidy. If above deviation is not granted, the contractor will have to consider an alternative design that will require an increase in the construction cost.

Response Needed by (date): November 19, 2010

## Response:

$\qquad$ Response Date:
® Other E-mail


$$
\begin{aligned}
& \text { DC820E35S } \\
& D S=45 \mathrm{MPH}
\end{aligned}
$$



## Design Speed

There should be a definite relationship between the design speed on a ramp or direct connection and the design speed on the intersecting highway or frontage road. All ramps and connections should be designed to enable vehicles to leave and enter the traveled way of the freeway at no less than 50 percent ( 70 percent usual, 85 percent desirable) of the freeway's design speed. Table 3-20 shows guide values for ramp/connection design speed. The design speed for a ramp should not be less than the design speed on the intersecting frontage roads. AASHTO's A Policy on Geometric Design of Highways and Streets provides additional guidance on the application of the ranges of ramp design speed shown in Table 3-20:

Table 3-20: Guide Values for Ramp/Connection Design Speed as Related to Highway Design Speed*

| (US Customary) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Highway Design Speed (mph) | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
| Ramp** Design Speed (mph): | - |  |  |  |  |  |  |  |  |  |  |
| Upper Range (85\%) | 25 | 30 | 35 | 40 | 45 | 48 | 50 | 55 | 60 | 65 | 70 |
| Mid Range (70\%) | 20 | 25 | 30 | 33 | 35 | 40 | 45 | 45 | 50 | 55 | 60 |
| Lower Range (50\%) | 15 | 18 | 20 | 23 | 25 | 28 | 30 | 30 | 35 | 40 | 45 |
| (Metric) |  |  |  |  |  |  |  |  |  |  |  |
| Highway Design Speed (km/h) | 50 | 60 |  | 0 | 80 | 90 | 100 | 11 |  | 120 | 130 |
| Ramp** Design Speed (km/h): | - |  |  |  |  |  |  |  |  |  |  |
| Upper Range (85\%) | 40 | 50 |  | 60 | 70 | 80 | 90 | 10 |  | 110 | 120 |
| Mid Range (70\%) | 30 | 40 |  | 0 | 60 | 60 | 70 | 80 |  | 90 | 100 |
| Lower Range (50\%) | 20 | 30 | 4 | 0 | 40 | 50 | 50 | 60 |  | 70 | 80 |
| * For corresponding minimum radius, see Table 2-6. <br> **Loops: Upper and middle range values of design speed generally do not apply. The design speed on a loop should be no less than 25 mph [ $40 \mathrm{~km} / \mathrm{h}$ ] ( 185 ft [ 55 m ] minimum radius) based on an $\mathrm{e}_{\text {max }}$ of $6 \%$. Particular attention should be given to controlling superelevation on loops due to the tight turning radii and speed limitations. |  |  |  |  |  |  |  |  |  |  |  |

## Horizontal Geometrics

Lane and shoulder widths for ramps and direct connections are shown in Table 3-18.
Figure 3-36 provides design criteria for entrance and exit ramp acceleration, deceleration, and taper lengths; adjustment factors for grade effects are shown in Table 3-14: Speed Change Lane Adjustment Factors as a Function of a Grade

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
December 10, 2010

To:

| Alberto Gonzalez |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI \#48: NTE IH820/IH35W Interchange - Ramp RM4-820E

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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 48 | Date: | November 12, 2010 |
| :---: | :---: | :---: | :---: |
| From: | Lucas Lahitou | To: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319 .6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |
| Subject: | NTE IH820/IH35W Inter |  |  |

Attachment 1.1.pdf (Plan view STA 635+00 to STA 660+00)
Attachments: Attachment 1.2.pdf (DC820E35S profile)
Attachment 2.pdf (Table 3-20 TxDOT Roadway Design Manual)

## Information / Clarification Request:

As part of the project optimization, NTEMP 2-4 requests two design exceptions for DC820E35S Direct Connector on IH820/IH35W Interchange in order to defer IH820 EBGPL reconstruction west of approximately Station 641+50 and maintain existing pavement and bridge over Mark IV Parkway and Little Fossil Creek without any modification. Please see Attachment 1 for preliminary layout.

In order to be able to achieve the stated above and comply with a $16.5^{\prime}$ minimum clearance over RM4-820E Ramp, a design speed exception of 45 mph is needed on DC820E35S between the equivalent Stations 638+00 and 650+00 on "IH820 EBGPL" as well as a vertical grade exception of $5 \%$ also on DC820E35S. Stationing refers to EBGPL because of modifications on DC820E35S alignment.

A Design Speed of 45 mph is within the requirements of Table 3-20 in the Roadway Design Manual shown in Attachment 2 and which states that all ramp and connections should be designed to enable vehicles to leave and enter the traveled way of the freeway at no less than 50 percent ( 75 percent in this case) of the freeway's design speed ( 60 mph ).

NTE Mobility Partners 2-4 respectfully requests both a deviation on the design speed of the above Direct Connector, and a deviation with respect to the maximum vertical grade.

The above stated design clarification is part of the Scope deferments and adjustments to achieve a Zero Public Subsidy. If above deviation is not granted, the contractor will have to consider an alternative design that will require an increase in the construction cost.

## Response:

Pending receipt of the updated $3 \mathrm{~A} / 3 \mathrm{~B}$ drawings, TxDOT requests the following clarifications in connection with the request for the two design deviations for design speed and vertical curvature for DC820E35S.

First, TxDOT would like to acknowledge that the proposed solution which includes deferring the work at Mark IV and designing an interim ramp from the existing 820 E bridge over Mark IV to tie to DC820E35S is part of the scope deferments to achieve a zero public subsidy and that any change to the proposed solution may result in an additional cost to TxDOT.

However, TxDOT respectfully requests the Developer contemplate utilizing the existing Mark IV to 820E ramp which may eliminate the need for the two design deviations. If the existing Mark IV to 820 E is utilized then Ramp RM4-820E can be deferred (since the existing ramp currently provides access to $820 \mathrm{E}, 35 \mathrm{~N}$ and 35 S ). If RM4-820 can be deferred then the proposed DC820E35S grade can possibly be lowered and the $k$-value increased to meet a design speed of 50 mph since DC820E35S does not have to be designed to provide a $16.5^{\prime}$ clearance over RM4-820. Maintaining the existing Mark IV to 820E ramp is an important consideration since closure of the ramp would prevent Mark IV traffic from accessing 35 N and 35 S directly.

The inclusion of such future considerations could result in an interim cost savings (by not constructing RM4-820E). However, the end result of that decision can be considered a design refinement and not preclude the approval of the MDP and ISOW. TxDOT will process the requested change as a design deviation. We may request additional details from NTEMP for that effort as part of the FIP/FA process.
Responder Name: Matthew E. MacGregor, P.E. Response Date: December 10, 2010
Delivery Type:
Courier
Overnight
Mail
区 Other E-mail

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 48B |
| :--- | :--- |
| From: |  |
|  | Lucas Lahitou |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |

Date: January 20, 2011

| To: | Matthew E. MacGregor |
| :---: | :---: |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject:
NTE IH820/IH35W Interchange - DC’s 820EB to IH35NB and SB, and IH35NB and SB to IH820WB

## Attachment 1 IH35/IH820 Mandatory Scope Plans

## Attachments:


#### Abstract

Information / Clarification Request: As part of the response to RFI 48, TxDOT communicated to the developer the preference of leaving the existing access to and from Mark IV Parkway via the existing Jug handle ramps (Ultimate ramps from Mark IV to IH820 EB and IH820WB to Mark IV are now included in the capacity improvement stage on chapter 1 Book 2). The developer has accommodated such request, and is including in attachment 1 the plans depicting such configuration.

In order to accommodate the existing jug handle ramps, the GPL Direct Connector bridge s 14 and 17 (from IH820 EB to IH35NB and SB, and the GPL Direct Connector from IH35WNB and SB to IH820 WB) will require a temporary or "throw away" segment that will not be compatible with the Ultimate configuration and the minimum requirements to clear the future ultimate ramps. For this reason, the developer requests from TxDOT to grant a design deviation on the vertical alignment of this ramps in order to reduce the amount of temporary structure not compatible with the ultimate TxDOT schematics for Environmental Approval.

The design deviation requested will be for a 5 percent max vertical alignment grade (current maximum allowable vertical grade is 4 percent). The developer will utilize this design deviation in order to meet the proposed ultimate profile as early as possible, thus reducing the amount of bridge spans $t$ that will have to be demolished in order to complete the full intersection.


Response Needed by (date): January 26, 2011

## Response:

$\qquad$ Response Date:Overnight
$\square$ Mail
区 Other E-mail

## NORTH TARRANT EXPRESS - OPTIMIZED IH820 / IH35W INTERCHANGE PROPOSAL SCHEMATIC PLAN SET

DECEMBER 2, 2010


INDEX OF SHEETS
 DESCRIPTION 1 cover sheet









NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
April 11, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI \#48B: NTE IH820/IH35W Interchange - DC's 820EB to IH35NB and SB, and IH35NB and SB to IH820WB

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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacG | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 48B | Date: | January 20, 2011 |
| :---: | :---: | :---: | :---: |
| To: | Lucas Lahitou | From: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |

Subject:
NTE IH820/IH35W Interchange - DC's 820EB to IH35NB and SB, and IH35NB and SB to IH820WB

## Attachments: Attachment 1 IH35/IH820 Mandatory Scope Plans

## Information / Clarification Request:

As part of the response to RFI 48, TxDOT communicated to the developer the preference of leaving the existing access to and from Mark IV Parkway via the existing Jug handle ramps (Ultimate ramps from Mark IV to IH820 EB and IH820WB to Mark IV are now included in the capacity improvement stage on chapter 1 Book 2). The developer has accommodated such request, and is including in attachment 1 the plans depicting such configuration.

In order to accommodate the existing jug handle ramps, the GPL Direct Connector bridge s 14 and 17 (from IH820 EB to IH35NB and SB, and the GPL Direct Connector from IH35WNB and SB to IH820 WB) will require a temporary or "throw away" segment that will not be compatible with the Ultimate configuration and the minimum requirements to clear the future ultimate ramps. For this reason, the developer requests from TxDOT to grant a design deviation on the vertical alignment of this ramps in order to reduce the amount of temporary structure not compatible with the ultimate TxDOT schematics for Environmental Approval.

The design deviation requested will be for a 5 percent max vertical alignment grade (current maximum allowable vertical grade is 4 percent). The developer will utilize this design deviation in order to meet the proposed ultimate profile as early as possible, thus reducing the amount of bridge spans $t$ that will have to be demolished in order to complete the full intersection.

## Response:

A maximum 5\% downgrade for DC35N820WY for the temporary connection from the back of gore with DC35S820W at STA $22+95.09$ to tie to the IH 820WB GPL as shown in the Dec 2, 2010 Mandatory Scope schematic is approved.

Regarding compatibility of the DC35N820WY and DC35N820WU vertical alignments, TxDOT would like to verify that the interim design of the vertical alignment for the connector ramp is compatible with the vertical alignment contemplated for the NEPA schematic. The current vertical alignment grades as shown on the Dec 2, 2010 Mandatory Scope schematic are $+3.44 \%$ and $-3.80 \%$. The grades shown on the Oct 29, 2010 Segment 1A schematic provided by the Developer are $+2.41 \%$ and $-3.97 \%$.

The current approach grade as shown in the Dec 2, 2010 Mandatory Scope schematic for DC820E35SY is 3.5\% which does not exceed the maximum vertical alignment grade of $4 \%$. Therefore, if the Developer wishes to contemplate a redesign of the DC820E35SY vertical alignment shown in the current Mandatory Scope, TxDOT requests that the Developer please provide an exhibit showing the redesign proposal for TxDOT review.

Regarding compatibility of the DC820E35SY and DC820E35SU vertical alignments, TxDOT would again like the Developer to verify that the vertical alignment grades for the DC820E35SY east of the gore with DC820E35N contemplated for the Mandatory Scope are compatible with the ultimate connector ramp grades shown on Oct 29, 2010 Segment 1A schematic.

| Responder Name: | Matthew E. MacGregor, P.E. |  |  |  |  | Response Date: |  | April 11, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ | Courier | $\square$ | Overnight | $\square$ | Mail | 区 | Other | E-mail |

RFI \#49

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.:From: | 49 | Date: | December 7, 2010 |
| :---: | :---: | :---: | :---: |
|  | Lucas Lahitou |  | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | MMACGRE@dot.state.tx.us |

Subject:
NTE Segments 3A, 3B , and IH820/IH35W Interchange Book 2 Chapter 20

## Attachments:

## Information / Clarification Request:

The NTE segments 3A, 3B, and IH820/IH35W Interchange CDA Book 2 chapter 20 requires the developer to accommodate within the facility a Metropolitan Transportation Plan regional Veloweb trail system. During the proposal coordination meetings held with TxDOT, the developer has requested plans, specs, requirements and general information of such veloweb, but TxDOT representatives do not have any details of such facility. It has hard to believe that TxDOT requires the developer to comply with something that TxDOT themselves don't have any details nor specific technical requirements required to accommodate such facility. NTEMP 2-4 respectfully request that TxDOT either provide all the necessary data in order do accommodate the Fort Worth Veloweb trail system, or remove it from the requirements of book 2 chapter 20.2.2

Book 2 Chapter 20.2.1 is also requiring the developer to accommodate a bicycle facility at the North side of the Cottonbelt fort worth connector. Please submit plans of plan bicycle crossing, and any additional technical requirements beyond what is specified in chapter 11 that the developer needs to meet.

Response Needed by (date): December 10, 2010

## Response:

$\qquad$ Response Date:Overnight
$\square$ Mail
区 Other E-mail

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

## Date:

December 10, 2010

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI \#49: NTE Segments 3A, 3B, and IH820/IH35W Interchange Book 2 Chapter 20

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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


## Request for Information

## RFI No.:

49
Date: December 7, 2010

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject:
NTE Segments 3A, 3B , and IH820/IH35W Interchange Book 2 Chapter 20

TRWD Criteria (provided May 2010).pdf
Mobility2030_Exh15-15_1_10_30_07.pdf

## Information / Clarification Request:

The NTE segments 3A, 3B, and IH820/IH35W Interchange CDA Book 2 chapter 20 requires the developer to accommodate within the facility a Metropolitan Transportation Plan regional Veloweb trail system. During the proposal coordination meetings held with TxDOT, the developer has requested plans, specs, requirements and general information of such veloweb, but TxDOT representatives do not have any details of such facility. It has hard to believe that TxDOT requires the developer to comply with something that TxDOT themselves don't have any details nor specific technical requirements required to accommodate such facility. NTEMP 2-4 respectfully request that TxDOT either provide all the necessary data in order do accommodate the Fort Worth Veloweb trail system, or remove it from the requirements of book 2 chapter 20.2.2

Book 2 Chapter 20.2.1 is also requiring the developer to accommodate a bicycle facility at the North side of the Cottonbelt fort worth connector. Please submit plans of plan bicycle crossing, and any additional technical requirements beyond what is specified in chapter 11 that the developer needs to meet.

Response Needed by (date):
December 10, 2010

## Response:

Please find attached the requested Tarrant Regional Water District (TRWD) guidelines for accommodating the MTP regional Veloweb trail system within the $3 A / 3 B$ Facility.

The major portion of the Veloweb in Segment 3A runs along the Trinity River and the trail is covered under the TRWD guidelines.
Also below is the weblink to the NCTCOG's website specifically dealing with the Regional Veloweb:
http://www.nctcog.org/trans/sustdev/bikeped/veloweb.asp
Attached is the NCTCOG's Bicycle and Pedestrian Facilities plan included in Mobility 2030. There does not appear to be any updates for Mobility 2030-2009 Amendment.

We are accommodating pedestrians/bicyclist as previously discussed along IH 35W based on FHWA guidance provided on previous schematic reviews in the area.

Responder Name: Matthew E. MacGregor, P.E. Response Date: December 10, 2010

Overnight
$\square$ Mail
区 Other
E-mail

## 1 obfity The Metropolitan <br> Transportation Plan

Bicycle and Pedestrian Facilities

## Legend

## Recommended Veloweb Routes

$\Longrightarrow$ Completed: 112 miles
Funded: 34 miles
$\longrightarrow$ Needed: 289 miles

## Candidate Veloweb Routes

_ Completed: 7 miles
Needed: 202 miles
__ FreewaysCounty BoundariesMetropolitan Planning Area Boundary Major Lakes

New facility locations indicate transportation needs and do not represent specific alignments.

All existing railroad rights-of-way should be monitored for potential future transportation corridors

All Veloweb routes should be targeted for right-of-way preservation.


October 30, 2007

# TARRANT REGIONAL WATER DISTRICT <br> P.O. Box 4508 <br> Fort Worth, TX 76164 

CRITERIA FOR CONSTRUCTION WITHIN AND ALONG THE LIMITS OF EXISTING FEDERAL FLOOD PROJECTION PROJECTS

1. Pamphlet Purpose. This pamphlet provides guidance to individuals, developers, architect-engineering firms, and local governmental agencies for the construction of new facilities or the modification of existing facilities within the limits of Tarrant Regional Water District's (TRWD) flood protection project. The guidance contained in this pamphlet applies to the activities described herein in most cases and serves as a supplement to the U.S. Army Corps of Engineers, Fort Worth District (CESWF) Pamphlet SWFP 1150-2-1. This pamphlet is in no way a substitution or replacement of the SWFP 1150-2-1 and should only be used for guidance on the floodway in addition to the abovementioned pamphlet. However, TRWD reserves the right to reconsider this guidance at any time due to unknown or unforeseen circumstances, technological advances, additional information, etc.
2. Applicability. This pamphlet applies to any TRWD land owned or controlled by fee ownership or easement on the Fort Worth Floodway.
3. Project Purpose. A federal flood control project is designed to safely carry floodwater within the project and through a developed area. As such, any proposed developments within the project must keep the safe passage of floodwater as the first priority. The roles of the CESWF and TRWD are to maintain the integrity of the project while preventing negative impacts to the passage of the project design flood.

## 4. General Criteria for Construction within and along the Fort Worth Floodway.

## A. Submittals

(1) Five paper copies and one electronic set of $10 \%$ plans, including an aerial map, are to be submitted to TRWD. A concept plan is not sufficient for initial review. The aerial map shall show the right-of-way boundaries of TRWD with specific levee toe and channel slope limits in the portion of the project being crossed, if applicable.
(2) Within the initial submittal the construction starting date, completion date, and detailed project construction schedule, including sequence of construction prior to initiation of work shall be included.
(3) TRWD will make every attempt to return initial comments within 45 days of submittal.

## B. Security

(1) Site must remain secure with all gates closed and locked at all times.
(2) Cable fencing that is removed for construction purposes must be secured at the end of each work day with suitable fence to prevent motorized traffic
from entering the floodway. Specifications for replacement of security fence will be provided upon request.
(3) Only vehicles and equipment required for construction are allowed in the construction area in accordance to and as stated in Texas Water Code Chapter 49.217.
(a) All vehicles within construction area should be authorized by TRWD.
(b) Construction employee vehicles shall not be allowed on the floodway at any time during construction.
(c) Employee parking shall be provided off site.
(4) All maintenance roads shall remain unblocked to allow passage in the event of an emergency.
C. Construction involving the Trinity Trail System
(1) No closure of the Trinity Trail is allowed.
(2))Rerouting the Trinity Trail
(a) If interference to the trail is required for construction, the trail must be re-routed using compacted $3 / 8^{\prime \prime}$ minus flex base or asphalt.
(b) A trail detour plan, including signage must be submitted with packet.
(c) Signs notifying trail users of upcoming project/detour must be placed at least 1 week, but no earlier than 3 weeks before construction begins.
(d) Posted signs must be of professional quality and not hand made.
(3)Repairing/Replacing the Concrete Trail after construction
(a)Replace using a minimum 6" thick 3000 psi concrete with 1' perimeter beams reinforced with \#4 rebar tied $100 \%$ on 1' centers both ways.
(b)Rebar shall be installed on plastic chairs.
(c)Surface of trail shall be finished with a uniform medium-broom finish.
(d) Trail must be 8 ' minimum width and no smaller than the existing trail.
(4) Repairing/Replacing the Asphalt Trail after construction
(a)Type B asphalt is required
(b)\#1 flex base compacted 6 " thick shall be use for the base
(c) Finish grade shall have a smooth uniform surface and free of any surface defects or vertical deflection.
(b)Trail must be 11 ' minimum width and no smaller than the existing trail.
(d)Concrete may be required to replace asphalt at the discretion of the District

## D. Establishing Grass Post-Construction

(1) All grass shall be re-established to existing or better condition.
(2) A seed injected compost blanket minimum 2" depth shall be used on any slopes greater than 6:1.
(3) Seed Compositions
(a) From September 1 through March 15 Common Bermuda and Wheat shall be used.
(b) From March 16 through August 31 Japanese Millet and Common Bermuda shall be used.
(4) The "natural areas" on the floodway shall be re-established using a specific wildflower seed mixture, approved by the District.
E. Any vaults installed within the Floodway shall be flush with the ground with no greater than a 16:1 earthen slope away from the vault.
F. Erosion protection on the Floodway
(1) Cabled Articulating Revetment Systems are to be used for erosion control
(2) Riprap, gabions or concrete paving are not allowed and may not be substituted for the revetment systems
(3) Revetment systems must be a natural earth tone color.
5. Crossing Over Existing Levees at Grade.
A. Notwithstanding pamphlet SWFP 1150-2-1, District does not allow construction method as provided for in Paragraph 5 of SWFP 1150-2-1..
6. Crossing Over The Fort Worth Floodway.
A. Aerial bridge structures transporting utility lines over the Fort Worth Floodway will not be allowed.
7. Crossing Under Levees with Open Excavation.
A. This method is not allowed on the Fort Worth Floodway.
8. Crossing Under Levees with Boring or Jacking Sleeves.
A. Please refer to pamphlet SWFP 1150-2-1.

## 9. Horizontal Directional Drilling Under Levees and Channels.

A. Please refer to pamphlet SWFP 1150-2-1.

## 10. Bridges Crossing Levees.

A. All storm water runoff from bridge decks must be piped into a collection device and then to the river to prevent erosion within the floodway.
B. Cabled Articulating Revetment Systems are to be installed within the shadow line of the bridge where vegetation cannot be established.

## 11. Buried Lines Parallel to Levees and Channels.

A. Please refer to pamphlet SWFP 1150-2-1.
12. River and Channel Crossing Criteria.
A. Please refer to pamphlet SWFP 1150-2-1.

## 13. Roadway or Railroad Crossings.

A. Please refer to pamphlet SWFP 1150-2-1.

## 14. Discharge Structures.

A. All new, relocated, or renovated storm drain systems are required to have a Storm Water Collection Device (SWCD) capable of containing trash, sediment and oils in accordance with the integrated Storm Water Management (iSWM) program as promulgated by North Central Texas Council of Governments (NCTCOG).
B. The bottom elevation of the SWCD shall be installed at a depth no greater than 20 feet from existing grade.
C. Access to the SWCD shall accommodate an industrial size Vacuum Truck.
D. The agency, developer, entity or corporation responsible for the SWCD shall submit a maintenance report to TRWD on July $1^{\text {st }}$ of each year following the year of installation of the SWCD. Maintenance report shall include dates and volumes of oils, sediments and floatables removed from the SWCD. The SWCD shall be maintained and removals performed by the responsible party in accordance with the manufacture's guidelines.
E . All discharge points shall be installed below conservation elevation of the river (normal water surface elevation).

## 15. Pump Discharge Pipelines Over Levees.

A. Notwithstanding pamphlet SWFP 1150-2-1, District does not allow construction method as provided for in Paragraph 5 of SWFP 1150-2-1.
16. Electrical and Telephone Criteria for Overhead Wire Crossings.
A. When possible, free standing poles should be used that do not require guy lines.
B. If used, all guy wires shall be marked with a yellow or orange PVC cover.
C. Poles and guy wires shall not be installed within 21 feet of any other above ground obstruction to allow for maintenance vehicle passage

## 17. Low Dams or Diversion of Flows.

A. Please refer to pamphlet SWFP 1150-2-1.
18. Process for Abandoning Existing Pipelines.
A. Please refer to pamphlet SWFP 1150-2-1.

## 19. Construction of Recreation Facilities.

A. Please refer to pamphlet SWFP 1150-2-1.

## 20. Planting of Trees along the Floodway.

A. Removed trees must be replaced on a 1:1 caliper inch basis. Replaced trees shall be 3" to 5" caliper. The sum total of replacement tree diameter shall equal the removed tree diameter.
B. Replacement trees must be irrigated for 2 years with subsurface drip irrigation.
C. Trees shall be warranted for 2 years.

## 21. Oil and Gas Exploration Activities.

A. Temporary raw water supply pumps and lines may be placed in the Floodway at the District's discretion.
(1) The Federal Floodway will not be use as a storage yard for pumping equipment.
(2) Pump Equipment shall not be placed along the Floodway any earlier than one week prior to the drilling or fracing operation of the well.
B. Temporary Water Lines.
(1) Contractor is required to mow a $10^{\prime}$ strip on both sides of the temporary water line on a 2 -week interval basis.
(2) Where temporary water lines cross maintenance roads that are not a part of the trail system, a suitable crossing shall be constructed that provides a HS20 loading. Crossings are subject to frequent traffic by large tracked and rubber tire equipment.
(3) All water transfer pipelines must be free from leaks, including pipe joint couplings.
(4) Lines 3 " or smaller.
(a) Lines may be bored beneath the existing trail with a minimum depth of 2' below existing grade or attached to an overhead structure as described in $5 . b$ below.
(b) Each end of the buried line shall be constructed in valve boxes and positioned 5' on either side of the trail as connection points.
(5) Lines greater than 3 ".
(a) Lines must be constructed overhead allowing a 9' clearance and spanning the width of existing trail.
(b) Overhead structure must be stable, free from leaks, adequately anchored, free standing and painted a bright safety color.
(c) Signs notifying trail users of overhead crossing must be placed at least 1 week, but no earlier than 3 weeks before crossing is installed.
(d) Posted signs must be of professional quality and not handmade.
(6) Specific means and methods regarding temporary water lines are to be submitted for approval.
C. Water Pumps.
(1) All water pumps must be placed in a containment structure capable of containing one and a half times the total amount of fluid within the pump in the event of a pump malfunction.
(2) TRWD's Temporary Raw Water Sales Agreement must be attached to the pump.
(3) All water pumps placed below the top of the river channel must be removed each evening or at the end of each workday, unless supervision is provided 24 hours a day.
(4) A containment boom must be placed in the river at a 50' radius from the extraction point.
(5) Containment boom shall be 18" from top of boom to bottom of skirt.
D. Removal of Pump Equipment
(1) All pump equipment must be disassembled and removed from the property immediately upon completion of the drilling or fracing operation.

## District will process and review all Project Submittals on a case by case basis and reserves the right to approve or deny any such submittal at its sole discretion.

RFI \#50, \#50B \& \#50C

## Request for Information

RFI No.: 50

From: Lucas Lahitou

| NTE Mobility Partners 2-4 |
| :--- |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

Date: February 18, 2011

| To: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: NTE Segments 3A Manage Lane Profile

## Attachments: <br> Exhibit 1 (NTE Segment 3A Schematic Plan sheet south of IH35W sta 844+00), Exhibit 2 (NTE MDP CDA Geometric Design Criteria dated $1 / 5 / 2010$ ), Exhibit 3 (segested redlines to Geometric Design Criteria table)


#### Abstract

Information / Clarification Request: During the NTE Master Development Plan process, TxDOT communicated the desire that the extension of the managed lane south of SH 121 be tied with the SBIH35W IH 35W General Purpose Lanes as far north as possible. This request was due to the fact that there is no room for adding any more lanes south of station $959+40$ (see exhibit 1), and there is a need to transition 7 lanes (IH35W CL sta 938+00) to four lanes (IH35W CL sta 950+00). TxDOT wanted to have the longest possible tangent and merging section for dropping the GPL lane added with the Manage Lane Entrance (currently designed out with a total 1800 ft tangent and merge area). The developer has been accommodated in the plans, and it has been evaluated and approved by TxDOT after multiple technical comment and revisions to NTE segment 3A Master Development Plan schematics. The developer requests that the NTE segment 3A and 3B Geometric Design requirement Table 11-2A of Book 2 be modified to state that 55 MPH design speed will be applicable to the Manage lane starting at station 913+55.00.

Please note that previously the geometric requirement table indicated that 55MPH design speed was allowed in the "South End of Project" (see Exhibit 2 Draft NTE MDP CDA Geometric Design Criteria dated January $5^{\text {th }} 2010$ ). The latest Geometric Design Criteria Table 11-2A of Book 2 under Mainlanes column allows for a 55 MPH design speed south of sta $932+00$. This station was added to this table due to RFI 3; NTEMP requested that this station be clarified in the geometric requirement table based on NB and SB IH35W General Purpose Lanes ( $3 \%>$ Vertical Grade>4\% required, and Sag K values lower than required for 70 MPH). The developer did not request within RFI 32 to include station 913+55 where 55 MPH design criteria shall commence for the Managed Lanes. Again, TxDOT has in numerous times provided design comments and requested revisions, and this profile grade has not come out as a design deficiency due to the desire of providing the longest tangent and merge area for finalizing the Manage Lanes (CAI is currently updating the NEPA schematics with the same vertical alignment submitted by NTEMP).

If this RFI is not approved, NTEMP would need to move the SB Manage Lane entrance to the IH35W GPL further south in order to have a vertical alignment that complies with 70 MPH (max grade $=3 \%$, and sag k value of 181), therefore reducing significantly the tangent and merging area for finalizing the Manage Lanes within the constraints stated in the first paragraph.


## Response Needed by (date): February 24, 2011

## Response:

[Recipient's Name]
October 15, 2008
Page 2

Responder Name:

Delivery Type: $\quad \square$ Courier $\quad \square$ Overnight $\quad \square$ Mail $\quad$ Other E-mail

## Transmittal Letter

Date:
March 1, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI \#50: NTE Segments 3A Manage Lane Profile

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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.


## Request for Information

RFI No.: 50

To: Lucas Lahitou
NTE Mobility Partners 2-4
7700 Chevy Chase Drive
Chase Park One, Suite 500C
Austin, TX 78752

Date: February 18, 2011

| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject:
NTE Segments 3A Manage Lane Profile

Attachments: Exhibit 1 - Alternative Redesign for SB IH 35W Managed Lane Vertical Alignment

## Information / Clarification Request:

During the NTE Master Development Plan process, TxDOT communicated the desire that the extension of the managed lane south of SH 121 be tied with the SB IH35W IH 35W General Purpose Lanes as far north as possible. This request was due to the fact that there is no room for adding any more lanes south of station $959+40$ (see exhibit 1), and there is a need to transition 7 lanes (IH35W CL sta 938+00) to four lanes (IH35W CL sta 950+00). TxDOT wanted to have the longest possible tangent and merging section for dropping the GPL lane added with the Manage Lane Entrance (currently designed out with a total 1800 ft tangent and merge area). The developer has been accommodated in the plans, and it has been evaluated and approved by TxDOT after multiple technical comment and revisions to NTE segment 3A Master Development Plan schematics. The developer requests that the NTE segment 3A and 3B Geometric Design requirement Table 11-2A of Book 2 be modified to state that 55 MPH design speed will be applicable to the Manage lane starting at station 913+55.00.

Please note that previously the geometric requirement table indicated that 55MPH design speed was allowed in the "South End of Project" (see Exhibit 2 Draft NTE MDP CDA Geometric Design Criteria dated January $5^{\text {th }} 2010$ ). The latest Geometric Design Criteria Table 11-2A of Book 2 under Mainlanes column allows for a 55 MPH design speed south of sta $932+00$. This station was added to this table due to RFI 3; NTEMP requested that this station be clarified in the geometric requirement table based on NB and SB IH35W General Purpose Lanes ( $3 \%>$ Vertical Grade>4\% required, and Sag K values lower than required for 70 MPH ). The developer did not request within RFI 32 to include station 913+55 where 55 MPH design criteria shall commence for the Managed Lanes. Again, TxDOT has in numerous times provided design comments and requested revisions, and this profile grade has not come out as a design deficiency due to the desire of providing the longest tangent and merge area for finalizing the Manage Lanes (CAI is currently updating the NEPA schematics with the same vertical alignment submitted by NTEMP).

If this RFI is not approved, NTEMP would need to move the SB Manage Lane entrance to the IH35W GPL further south in order to have a vertical alignment that complies with 70 MPH (max grade $=3 \%$, and sag $k$ value of 181), therefore reducing significantly the tangent and merging area for finalizing the Manage Lanes within the constraints stated in the first paragraph.


#### Abstract

Response: The vertical alignment of the SB Managed Lanes should comply with a design speed of 70 mph . TxDOT does not approve the use of a design speed of 55 mph for the Managed Lanes south of STA $913+55$. However, TxDOT does approve the use of a maximum $4 \%$ grade for the Managed Lanes south of STA 913+55 (design speed of 70 mph for rolling terrain per the TxDOT RDM, Table 2-9). Note that in RFI \#30 TxDOT previously approved the use of a maximum 4\% grade for the interim IH 35W General Purpose Lanes south of STA 932+00 and a design speed of 55 mph only in order to transition to the existing facility at the south end of the Project.

TxDOT understands that the current SB Managed Lane vertical alignment (35WMLS30) south of STA 913+55 does not meet the maximum grade requirement of $3 \%$ for 70 mph as specified in Book 2 (currently $3.48 \%$ ). TxDOT also understands that the SB Managed Lane vertical alignment where it ties to the SB General Purpose Lanes is incompatible with the horizontal geometry contemplated for the ultimate configuration just south of the RR bridge. The current 35WMLS30 vertical alignment is apparently compatible with the interim SB General Purpose Lane horizontal and vertical alignments.

The SB Managed Lane vertical alignment south of STA 913+55 appears higher than required to tie to the ultimate SB General Purpose Lanes just south of the RR. TxDOT would like to suggest an alternative solution for NTEMP's consideration. The solution consists of lowering the Managed Lane vertical alignment and the interim SB General Purpose Lane vertical alignment between STA 913+55 and Spur 280 as shown in Exhibit 1. The alternative includes lowering the vertical alignment of the 35WMLS30 by approximately 7 ' at the south end of the RR bridge using a maximum grade of $4 \%$ and a design speed of 70 mph while maintaining the required clearance over the RR (calculated clearance of $33^{\prime}$ ). The interim SB General Purpose Lanes would also be lowered to accommodate the ultimate horizontal and vertical geometry. Minor adjustments south of STA $913+55$ would be required to the NB Managed Lanes vertical alignment, the SB Managed Lane exit ramp to US 287 and interim exit ramp to Spur 280.

NTEMP may also consider lowering the interim NB General Purpose Lane vertical alignment to ultimate grade to eliminate the need for interim retaining wall which would increase the cost savings resulting from lowering the SB Managed Lane bridges and interim General Purpose Lane bridges. Since the NB General Purpose Lanes would be lower than currently contemplated, the NB IH 35 W to Spur 280 loop ramp would require modification including relocating the exit ramp gore further south. Adjustments would also need to be made to the NB IH 35W GPL entrance ramps from Spur 280 and US 287. An additional item for review and consideration will be the impact to the construction phasing. Temporary shoring would be required for the phased construction of the SB GPL in Phase 2 and the NB GPL in Phases 3 and 4.

TxDOT appreciates that NTEMP has designed 35WMLS30 to be compatible with the interim design in order to utilize as much of the existing facility as possible by using existing grade between the RR and Spur 280 to facilitate the construction phasing. However, because the current design is incompatible with the ultimate configuration TxDOT would appreciate your consideration of this alternative design solution and the opportunity to discuss this further.


Responder Name: Matthew E. MacGregor, P.E. Response Date: March 1, 2011

Delivery Type: $\quad \square$ Courier $\quad \square$ Overnight $\quad \square$ Mail $\quad$|  | Other E-mail |
| :--- | :--- | :--- | :--- | :--- | :--- |



North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 50 B |
| :--- | :--- |
| To: | Lucas Lahitou <br>  <br>  <br>  <br>  |


| Date: | Aug 1. 2011 |
| :---: | :---: |
| From: | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE segment 3A Manage Lane Profile South of Station 913+55

Attachments: Exhibit 1 (Printout of NB and SB Manage Lane profile south of station $913+55$ ), segment3A_profile.dgn


#### Abstract

Information / Clarification Request: As part of the CDA negotiations, TxDOT requested that the developer confirmed the following: 1 For the developer to confirm that the Managed Lanes vertical curves South of station 913+55 comply with the 70 MPH design speed. Developer confirms that the vertical alignment design of the NB and SB Managed reflects the use of the allowed 4\% Maximum grade south of station $913+55$, and that it complies with a 70 MPH design speed (see Exhibit 1 printout of the NB and SB Manage lane profile). Please note that profiles referenced within this RFI are available in the dgn file Segment3A_Profile.dgn previously submitted to TxDOT with the Mandatory Scope Schematics (file attached).

Developer considers that TxDOT already has all the information requested based on the above, and TxDOT's finalized Due Diligence process (TxDOT has communicated that they do not desire to lower the vertical alignment profiles as requested by TxDOT within the RFI response). The developer requests that TxDOT provide the official approval of RFI 50 without any restrictions or further considerations.


## Response Needed by (date): August 4, 2011

## Responses:

Responder Name: Matthew E. MacGregor, P.E. Response Date:

## Delivery Type:

Courier
Overnight
$\square$ Mail
区 Other E-mail


EXIT RAMP FROM MANAGED LANE SOUTHBOUND TO GENERAL PURPOSE LANE (MLS-35S) STA 910+00


Various files submitted with RFI \#50B:

## Seg3A_Profile.dgn

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI | 50C |
| :---: | :---: |
| From: | Lucas Lahitou |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |

Date: Aug 8. 2011

Subjec NTE segment 3A Manage Lane Profile South of Station 913+55

Attachme None

## Information / Clarification Request:

As part of the CDA negotiations, TxDOT requested that the developer confirmed the following:
1 In Seg3A_Profile.dgn file submitted May 31, 2011, and RFI \#50B submitted by NTEMP (received by TxDOT on Aug. 4, 2011), the 35WML proposed profile shows $K$ values that comply with the 70 mph design speed south of STA $913+55$, but the southernmost sag curve achieved the 70 mph design speed by lengthening the profile beyond the limits shown in the plan view and in the FIP. NTEMP and TxDOT need to discuss how best to resolve issue.

At meeting held August $5^{\text {th }}$ Developer proposed for Book 2 Table 1-3 to be modified as follows:
Table 1-3: Segment 3A Facility Segment

| Location | NB |  |  | SB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Segment 3A | GP | ML | FR | GP | ML | FR |
| $\begin{aligned} & \text { 3A - North } \\ & \text { limit (IH-35W) } \end{aligned}$ | $672+50$ | $672+50$ | $20+87$ <br> (see note <br> 2.) | $672+50$ | $672+50$ | 22+54 (see note 2) |
| $\begin{aligned} & \text { 3A- South } \\ & \text { limit }(\mathrm{IH}-35 \mathrm{~W}) \end{aligned}$ | $929+00$ | $\begin{aligned} & 935+22 \\ & 91] \end{aligned}$ | $\begin{aligned} & 919+19 \\ & \text { (see } \end{aligned}$ | $929+00$ | 929+00 | $\begin{aligned} & 884+21 \\ & (\text { see notes } 1 \text { and } 2 \text { ) } \end{aligned}$ |
|  |  |  | notes 1 <br> and 2) |  |  |  |

$$
\begin{aligned}
& \text { Comment [SdI3]: Updatad based on latest } \\
& \text { NTEMP Interim horizontal and vertical aligument. }
\end{aligned}
$$

Based on the above, Developer requests that TxDOT provide the official approval of RFI 50 without any restrictions or further considerations.

Response Needed by (date):
August 11, 2011

## Responses:

## Transmittal Letter

## Date:

August 16, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject: RFI \#50B, 50C \& Reissue of RFI \#50: NTE segment 3A Manage Lane Profile South of Station 913+55

We Are Sending You:

| Copies | Date | No. | Description |
| :---: | :---: | :---: | :--- |
| 1 | $08 / 16 / 11$ | 1 | RFI \#50B Response Form |
| 1 | $08 / 16 / 11$ | 2 | RFI \#50C Response Form |
| 1 | $08 / 16 / 11$ | 3 | Reissue of RFI \#50 Response Form |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |


| These Are Transmitted As Checked Below: |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1600 with any questions.

Copy To:
Signed: Matthew MacGregor [electronic]
Delivery Type:
$\square$ Courier
$\square$ Overnight
$\square$ Mail
区 Other Electronic

## Request for Information

RFI No.: 50

To: Lucas Lahitou
NTE Mobility Partners 2-4
7700 Chevy Chase Drive
Chase Park One, Suite 500C
Austin, TX 78752

Date: February 18, 2011

| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject:
NTE Segments 3A Manage Lane Profile

Attachments: Exhibit 1 - Alternative Redesign for SB IH 35W Managed Lane Vertical Alignment

## Information / Clarification Request:

During the NTE Master Development Plan process, TxDOT communicated the desire that the extension of the managed lane south of SH 121 be tied with the SB IH35W IH 35W General Purpose Lanes as far north as possible. This request was due to the fact that there is no room for adding any more lanes south of station $959+40$ (see exhibit 1), and there is a need to transition 7 lanes (IH35W CL sta 938+00) to four lanes (IH35W CL sta 950+00). TxDOT wanted to have the longest possible tangent and merging section for dropping the GPL lane added with the Manage Lane Entrance (currently designed out with a total 1800 ft tangent and merge area). The developer has been accommodated in the plans, and it has been evaluated and approved by TxDOT after multiple technical comment and revisions to NTE segment 3A Master Development Plan schematics. The developer requests that the NTE segment 3A and 3B Geometric Design requirement Table 11-2A of Book 2 be modified to state that 55 MPH design speed will be applicable to the Manage lane starting at station 913+55.00.

Please note that previously the geometric requirement table indicated that 55MPH design speed was allowed in the "South End of Project" (see Exhibit 2 Draft NTE MDP CDA Geometric Design Criteria dated January $5^{\text {th }} 2010$ ). The latest Geometric Design Criteria Table 11-2A of Book 2 under Mainlanes column allows for a 55 MPH design speed south of sta $932+00$. This station was added to this table due to RFI 3; NTEMP requested that this station be clarified in the geometric requirement table based on NB and SB IH35W General Purpose Lanes ( $3 \%>$ Vertical Grade>4\% required, and Sag K values lower than required for 70 MPH ). The developer did not request within RFI 32 to include station 913+55 where 55 MPH design criteria shall commence for the Managed Lanes. Again, TxDOT has in numerous times provided design comments and requested revisions, and this profile grade has not come out as a design deficiency due to the desire of providing the longest tangent and merge area for finalizing the Manage Lanes (CAI is currently updating the NEPA schematics with the same vertical alignment submitted by NTEMP).

If this RFI is not approved, NTEMP would need to move the SB Manage Lane entrance to the IH35W GPL further south in order to have a vertical alignment that complies with 70 MPH (max grade $=3 \%$, and sag $k$ value of 181), therefore reducing significantly the tangent and merging area for finalizing the Manage Lanes within the constraints stated in the first paragraph.

## Response:

The vertical alignment of the SB Managed Lanes should comply with a design speed of 70 mph . TXDOT does not approve the use of a design speed of 55 mph for the Managed Lanes south of STA $913+55$. However, TxDOT does approve the use of a maximum $4 \%$ grade for the Managed Lanes south of STA $913+55$ (design speed of 70 mph for rolling terrain per the TxDOT RDM, Table 2-9). Note that in RFI \#30 TxDOT previously approved the use of a maximum 4\% grade for the interim IH 35W General Purpose Lanes south of STA 932+00 and a design speed of 55 mph only in order to transition to the existing facility at the south end of the Project.

TxDOT understands that the current SB Managed Lane vertical alignment (35WMLS30) south of STA $913+55$ does not meet the maximum grade requirement of $3 \%$ for 70 mph as specified in Book 2 (currently $3.48 \%$ ). TxDOT also understands that the SB Managed Lane vertical alignment where it ties to the SB General Purpose Lanes is incompatible with the horizontal geometry contemplated for the ultimate configuration just south of the RR bridge. The current 35WMLS30 vertical alignment is apparently compatible with the interim SB General Purpose Lane horizontal and vertical alignments.

The SB Managed Lane vertical alignment south of STA $913+55$ appears higher than required to tie to the ultimate SB General Purpose Lanes just south of the RR. TxDOT would like to suggest an alternative solution for NTEMP's consideration. The solution consists of lowering the Managed Lane vertical alignment and the interim SB General Purpose Lane vertical alignment between STA $913+55$ and Spur 280 as shown in Exhibit 1. The alternative includes lowering the vertical alignment of the 35WMLS30 by approximately 7 ' at the south end of the RR bridge using a maximum grade of $4 \%$ and a design speed of 70 mph while maintaining the required clearance over the RR (calculated clearance of $33^{\prime}$ ). The interim SB General Purpose Lanes would also be lowered to accommodate the ultimate horizontal and vertical geometry. Minor adjustments south of STA $913+55$ would be required to the NB Managed Lanes vertical alignment, the SB Managed Lane exit ramp to US 287 and interim exit ramp to Spur 280.

NTEMP may also consider lowering the interim NB General Purpose Lane vertical alignment to ultimate grade to eliminate the need for interim retaining wall which would increase the cost savings resulting from lowering the SB Managed Lane bridges and interim General Purpose Lane bridges. Since the NB General Purpose Lanes would be lower than currently contemplated, the NB IH 35W to Spur 280 loop ramp would require modification including relocating the exit ramp gore further south. Adjustments would also need to be made to the NB IH 35W GPL entrance ramps from Spur 280 and US 287. An additional item for review and consideration will be the impact to the construction phasing. Temporary shoring would be required for the phased construction of the SB GPL in Phase 2 and the NB GPL in Phases 3 and 4.

TXDOT appreciates that NTEMP has designed 35WMLS30 to be compatible with the interim design in order to utilize as much of the existing facility as possible by using existing grade between the RR and Spur 280 to facilitate the construction phasing. However, because the current design is incompatible with the ultimate configuration TxDOT would appreciate your consideration of this alternative design solution and the opportunity to discuss this further.
[Response reissued August 16, 2011: TxDOT has reviewed Developer's submittal of RFI \#50B \& 50C and, if the Developer changes the southern construction limit of the northbound managed lanes from STA $935+22$ to STA $935+91$ to fit vertical curves that meet 70 mph design speed (as described in RFI \#50C), approves use of a maximum grade of $4 \%$ without conditions.]

Responder Name: Matthew E. MacGregor, P.E. Response Date: Reissued August 16, 2011


# Request for Information 

| RFI No.: | 50B |
| :---: | :---: |
| To: | Lucas Lahitou |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |


| Date:From: | Aug 1. 2011 |
| :---: | :---: |
|  | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE segment 3A Manage Lane Profile South of Station 913+55
Attachments: Exhibit 1 (Printout of NB and SB Manage Lane profile south of station $913+55$ ), segment3A_profile.dgn


#### Abstract

Information / Clarification Request: As part of the CDA negotiations, TxDOT requested that the developer confirmed the following:

1 For the developer to confirm that the Managed Lanes vertical curves South of station $913+55$ comply with the 70 MPH design speed. Developer confirms that the vertical alignment design of the NB and SB Managed reflects the use of the allowed 4\% Maximum grade south of station $913+55$, and that it complies with a 70 MPH design speed (see Exhibit 1 printout of the NB and SB Manage lane profile). Please note that profiles referenced within this RFI are available in the dgn file Segment3A_Profile.dgn previously submitted to TxDOT with the Mandatory Scope Schematics (file attached).

Developer considers that TxDOT already has all the information requested based on the above, and TxDOT's finalized Due Diligence process (TxDOT has communicated that they do not desire to lower the vertical alignment profiles as requested by TxDOT within the RFI response). The developer requests that TxDOT provide the official approval of RFI 50 without any restrictions or further considerations.


## Response Needed by (date): August 4, 2011

## Responses:

TxDOT conditionally approved use of a maximum 4\% grade for the managed lanes south of STA 913+55 in RFI \#50 on March 1, 2011. TxDOT received this RFI \#50B on August 4, 2011 and RFI \#50C on August 10, 2011. In addition to the information provided above, TxDOT reviewed the Seg3A_Profile.dgn file submitted on May 31, 2011 as part of the FIP package. TxDOT confirms that the Developer has provided adequate information to grant final approval for this RFI.

RFI \#50, 50B and 50C are approved for the use of a maximum 4\% grade for the managed lanes south of STA $913+55$ if the Developer changes the southern construction limit of the northbound managed lanes from STA 935+22 to STA 935+91 to fit vertical curves that meet 70 mph design speed (as addressed in RFI \#50C). No further conditions needed for final approval.

TxDOT notes that this RFI was written by the Developer's DB contractor and believes the statement regarding the delivery of the Mandatory Scope schematics to be intended for the Developer. TxDOT requested from the Developer dgn files in addition to the pdfs of the Mandatory Scope schematics numerous times before receiving the entire design packages with all current dgn files in March 2011.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C
Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI |  |
| :--- | :--- |
| From: $:$ | 50 C |
|  |  |
|  | Lucas Lahitou <br> NTE Mobility Partners 2-4 |

Date: Aug 8. 2011

| To: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | TxDOT, Dallas District |
| Fax: | 214.319 .6571 |
|  | 214.319 .6580 |
|  | MMACGRE@dot.state.tx.us |
|  |  |

Subjec NTE segment 3A Manage Lane Profile South of Station 913+55

Attachme None

## Information / Clarification Request:

As part of the CDA negotiations, TxDOT requested that the developer confirmed the following:
1 In Seg3A_Profile.dgn file submitted May 31, 2011, and RFI \#50B submitted by NTEMP (received by TxDOT on Aug. 4, 2011), the $35 W M L$ proposed profile shows $K$ values that comply with the 70 mph design speed south of STA $913+55$, but the southernmost sag curve achieved the 70 mph design speed by lengthening the profile beyond the limits shown in the plan view and in the FIP. NTEMP and TxDOT need to discuss how best to resolve issue.

At meeting held August $5^{\text {th }}$ Developer proposed for Book 2 Table 1-3 to be modified as follows:
Table 1-3: Segment 3A Facility Segment


Based on the above, Developer requests that TxDOT provide the official approval of RFI 50 without any restrictions or further considerations.

## Response Needed by (date):

August 11, 2011

## Responses:

TxDOT conditionally approved use of a maximum 4\% grade for the managed lanes south of STA 913+55 in RFI \#50 on March 1, 2011. TxDOT received RFI \#50B on August 4, 2011 and this RFI \#50C on August 10, 2011.

With this change in Book 2 Table 1-3, TxDOT approves RFI \#50, 50B and 50C without conditions.Mail
区 Other
E-mail

## RFI \#51 \& \#51B

# Request for Information 

From: |  | Lucas Lahitou |
| ---: | :--- |
|  | NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |  |
| Chase Park One, Suite 500C |  |

| To: | Matthew E. MacGregor |
| :---: | :---: |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |

Subject:
NTE IH35W/IH820 Interchange Loop Ramp from IH820EB to IH35W NB during construction

## Attachments: <br> Exhibit 1 (Traffic Control Plan NTE Optimized Interchange), Exhibit 2 (IH820EB to IH35W NB loop ramp detail layout ), Exhibit 3 (IH35W/IH820 Proposal plan sheet 2 of 8)


#### Abstract

Information / Clarification Request: NTEMP has developed a preliminary Traffic control plan for the IH35W/IH820 Mandatory scope (see Exhibit 1). Loop ramps have been found to be the only possible form of providing the existing connections between IH35W to and from IH820 in a cost effective manner. The developer's main objective of the traffic control plan is to provide the existing connections to and from IH35W through temporary loop ramps, in order to construct as fast as possible the permanent Direct connectors that will start to be used during phase 4. NTEMP requests from TxDOT a design deviation on the IH820EB to IH35W NB loop ramp.

As seen on Exhibit 3, the current left hand ramps connecting both highways would cross the future facility in fill areas; therefore they eventually will have to be closed in order to be able to construct the IH35W Managed Lanes and GPL's. The developer will not be able to build the proposed elevated connectors in one phase in order to replace the existing ramps, due to the fact that the proposed connectors have segments that are in conflict with the existing Mainlanes (Connectors cannot be built until the GPL's are shifted away from the conflict area, requiring the developer to build them in multiple phases; see exhibit 3 for locations). The proposed temporary full cloverleaf interchange is the only solution that will be compatible with the location of the columns for the proposed 12 permanent proposed connectors, the proposed GPL's and ML, and be able to be used in multiple construction phases. During the process of developing the loop ramps, the developer has found that the IH820EB to IH35W NB loop ramp will not be compliant with TxDOT's Roadway Design Manual Table 3-20 that states that loop ramps design speed should be no less than 25 MPH, (see Exhibit 2 for a plan view of Area in reference). As seen on Exhibit 2, the proposed loop ramp design is constrained by the NB to EB frontage road (currently being built under the NTE segment 1A contract, and in place during construction of Optimized Interchange), the temporary IH35W NB to IH820EB ramp (design already as close as possible to the proposed frontage road), the proposed columns of bridge 20 (Drill shafts already in place), and the location of the IH820 EB lanes during phases 1 through 4 (existing GPL's).

Due to the constraints explained above that limit the loop ramp to a radius of 115 ft , NTEMP request that TxDOT would grant a design deviation on the temporary IH820EB to IH35W NB loop ramp that complies with a design speed of 20 MPH , and that ramp be classified as a Low Speed Urban Street. Please note that a loop ramp with a design radius compliant with TxDOT RDM table 3-20 will go beyond the ROW limit outlined in Exhibit 2, therefore closing the frontage road and/or temporary ramp from IH35W NB to IH820 EB will not help the loop ramp conform to the Geometric Design Guidelines. Classification by TxDOT as a Low Speed Urban Street is based on the precedent that in segment 3A the loop ramp from IH35W NB to Spur 280 WB is classified as such in Book 2.


## Response Needed by (date): March 21, 2011

## Response:

$\square$
$\qquad$

Delivery Type: $\quad \square$ Courier $\quad \square$ Overnight $\quad \square$ Mail $\quad$ Other E-mail






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NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date:
March 24, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI \#51: NTE IH35W/IH820 Interchange Loop Ramp from IH820EB to IH35W NB during construction

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $03 / 24 / 11$ | 2 | RFI \#51 Response Form |
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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Andrew Keetley at 512.685 .2911 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacGr | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 区 Other | Electronic |

# Request for Information 

## RFI No.:

51
Date: March 14, 2011

To: Lucas Lahitou
NTE Mobility Partners 2-4
7700 Chevy Chase Drive
Chase Park One, Suite 500C
Austin, TX 78752

| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject:
NTE IH35W/IH820 Interchange Loop Ramp from IH820EB to IH35W NB during construction

## Attachments: <br> Exhibit 1 (Traffic Control Plan NTE Optimized Interchange), Exhibit 2 (IH820EB to IH35W NB loop ramp detail layout ), Exhibit 3 (IH35W/IH820 Proposal plan sheet 2 of 8)

## Information / Clarification Request:

NTEMP has developed a preliminary Traffic control plan for the IH35W/IH820 Mandatory scope (see Exhibit 1). Loop ramps have been found to be the only possible form of providing the existing connections between IH35W to and from IH820 in a cost effective manner. The developer's main objective of the traffic control plan is to provide the existing connections to and from IH35W through temporary loop ramps, in order to construct as fast as possible the permanent Direct connectors that will start to be used during phase 4. NTEMP requests from TxDOT a design deviation on the IH820EB to IH35W NB loop ramp.

As seen on Exhibit 3, the current left hand ramps connecting both highways would cross the future facility in fill areas; therefore they eventually will have to be closed in order to be able to construct the IH35W Managed Lanes and GPL's. The developer will not be able to build the proposed elevated connectors in one phase in order to replace the existing ramps, due to the fact that the proposed connectors have segments that are in conflict with the existing Mainlanes (Connectors cannot be built until the GPL's are shifted away from the conflict area, requiring the developer to build them in multiple phases; see exhibit 3 for locations). The proposed temporary full cloverleaf interchange is the only solution that will be compatible with the location of the columns for the proposed 12 permanent proposed connectors, the proposed GPL's and ML, and be able to be used in multiple construction phases. During the process of developing the loop ramps, the developer has found that the IH820EB to IH35W NB loop ramp will not be compliant with TxDOT's Roadway Design Manual Table 3-20 that states that loop ramps design speed should be no less than 25 MPH, (see Exhibit 2 for a plan view of Area in reference). As seen on Exhibit 2, the proposed loop ramp design is constrained by the NB to EB frontage road (currently being built under the NTE segment 1A contract, and in place during construction of Optimized Interchange), the temporary IH35W NB to IH820EB ramp (design already as close as possible to the proposed frontage road), the proposed columns of bridge 20 (Drill shafts already in place), and the location of the IH820 EB lanes during phases 1 through 4 (existing GPL's).

Due to the constraints explained above that limit the loop ramp to a radius of 115 ft , NTEMP request that TxDOT would grant a design deviation on the temporary IH820EB to IH35W NB loop ramp that complies with a design speed of 20 MPH, and that ramp be classified as a Low Speed Urban Street. Please note that a loop ramp with a design radius compliant with TxDOT RDM table 3-20 will go beyond the ROW limit outlined in Exhibit 2, therefore closing the frontage road and/or temporary ramp from IH35W NB to IH820 EB will not help the loop ramp conform to the Geometric Design Guidelines. Classification by TxDOT as a Low Speed Urban Street is based on the precedent that in segment 3A the loop ramp from IH35W NB to Spur 280 WB is classified as such in Book 2.

TxDOT approves the design of the full cloverleaf concept at the IH 820/IH 35 W Interchange provided that the design meets or exceeds all the requirements specified in Section 18 of Book 2.

However, TXDOT respectfully requests further clarification with respect to the following items prior to making a final determination regarding the requested design deviation for a design speed of 20 mph for the IH 820 EB to IH 35 W NB temporary loop ramp and classification of the ramp as a low speed urban street.

1. Provide verification that the proposed cloverleaf conceptual configuration is compatible with the Segment 1 Interchange traffic control plan recently submitted for TxDOT review.
2. Provide a typical section showing the proposed lane configuration for both IH 820 and IH 35 W with the addition of the loop ramps. Only two lanes are currently shown.
3. Please identify the locations of the lane drops on IH 820 and IH 35 W to achieve lane balance through the interchange.
4. A minimum design speed of 20 mph for the IH820 EB to IH 35 W NB loop ramp would require an IH 820 EB and IH 35 W NB main lane design speed of 40 mph to accommodate the loop ramp per the RDM Section 6 which states that the design speed of ramps exiting a freeway should be no less than $50 \%$ of the freeway's design speed. The minimum design speed for main lanes in Book 2 is 55 mph . Please verify that a minimum design speed of 55 mph will be maintained on IH 35 W and IH 820 per Book 2, Section 18.3.1.1.1
5. Please provide figures showing the proposed horizontal and vertical alignments for the IH820 EB to IH35W NB temporary loop ramp to verify that that the maximum grade will not exceed $7 \%$ and a minimum radius of 115 ft will be maintained. Note that RDM Table 2-5 allows a minimum design radius of 90 ft and no superelevation for a design speed of 20 mph should TxDOT allow the ramp to be classified as a low speed urban street.
Responder Name: Matthew E. MacGregor, P.E. $\quad$ Response Date: March 24, 2011

Delivery Type:
$\square$ Courier
Overnight
$\square$ Mail
区 Other E-mail

## Request for Information

RFI No.:
51B

From:
Lucas Lahitou
NTE Mobility Partners 2-4
7700 Chevy Chase Drive
Chase Park One, Suite 500C
Austin, TX 78752

Date: April 21, 2011

To: Matthew E. MacGregor

| Tel.: | TxDOT, Dallas District |
| ---: | :--- |
| Fax: | 214.319 .6571 |
| E-Mail: | 214.319 .6580 |
|  |  |

Subject:
NTE IH35W/IH820 Interchange Loop Ramp from IH820EB to IH35W NB during construction

Attachments: Exhibit 2-1 (existing Facility), Exhibit 2-2 and 2-4 (Proposed TCP and typical sections), Exhibit 5 (loop ramp P\&P)

## Information / Clarification Request:

Please find below NTEMP responses to TxDOT's questions within RFI 51 response:

1. Provide verification that the proposed cloverleaf conceptual configuration is compatible with the Segment 1 Interchange traffic control plan recently submitted for TxDOT review.

AS per current TCP design, it is assumed that NTE segment 1A will be already built at the time construction of NTE segment 3A and Interchange will start.
2. Provide a typical section showing the proposed lane configuration for both IH 820 and IH 35 W with the addition of the loop ramps. Only two lanes are currently shown.
3. Please identify the locations of the lane drops on IH 820 and IH 35 W to achieve lane balance through the interchange.

NTEMP is providing Exhibits 2.1 through 2.4 with this document that contains the information requested by TxDOT. Please note that the exhibits clearly depict that the developer will not be closing any existing GPL Lane or any IH35W connection to and from IH820 (existing facility is depicted in Exhibit 2-1).
4. A minimum design speed of 20 mph for the IH820 EB to IH35W NB loop ramp would require an IH 820 EB and IH 35W NB main lane design speed of 40 mph to accommodate the loop ramp per the RDM Section 6 which states that the design speed of ramps exiting a freeway should be no less than $50 \%$ of the freeway's design speed. The minimum design speed for main lanes in Book 2 is 55 mph . Please verify that a minimum design speed of 55 mph will be maintained on IH 35 W and IH 820 per Book 2 , Section 18.3.1.1.1

NTEMP confirms that the design speed in the general purpose lanes used to develop the traffic control plan is 55 MPH as per book 2 requirements in chapter 18.3.1.1.1. The developer is not able to fit a loop ramp for a design speed of 25 MPH as required by RDM table 3-20.
5. Please provide figures showing the proposed horizontal and vertical alignments for the IH820 EB to IH35W NB temporary loop ramp to verify that that the maximum grade will not exceed $7 \%$ and a minimum radius of 115 ft will be maintained. Note that RDM Table $2-5$ allows a minimum design radius of 90 ft and no superelevation for a design speed of 20 mph should TxDOT allow the ramp to be classified as a low speed urban street.

NTEMP is providing Exhibit 5 with this document. Please note that developer has been able to accommodate a vertical alignment that does not exceed $7 \%$ max. grade, and used a horizontal radius of 115 ft .

NTEMP again requests that TxDOT would grant the design deviation requested in the original RFI 51 on the temporary IH820 EB to IH35W NB loop ramp to comply with a design speed of 20 MPH , and that the ramp be classified as a Low Speed Urban Street. Classification by TxDOT as a Low Speed Urban Street is based on the precedent that in segment 3A, the loop ramp from IH35W to Spur 280 WB is classified as such in book 2.
[Recipient's Name]
October 15, 2008
Page 2

Response Needed by (date):

## Response:

$\qquad$ Response Date:Overnight
$\square$ Mail
© Other E-mail

NTE MDP
TxDOT Dallas District
4777 E Highway 80
Mesquite,
Texas 75150-6643

## Transmittal Letter

Date: July 1, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |
|  |  |

Subject: RFI \#51: NTE IH35W/IH820 Interchange Loop Ramp from IH820EB to IH35W NB during construction

We Are Sending You:

| Copies | Date | No. |  |
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| 1 | $07 / 01 / 11$ | 2 | RFI \#51B Response Form |
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## These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either me at 214.319 .6571 with any questions.


## Request for Information

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | TxDOT, Dallas District |
| Fax: | 214.319 .6571 |
| E-Mail: | 214.319 .6580 |
|  |  |

Subject:
NTE IH35W/IH820 Interchange Loop Ramp from IH820EB to IH35W NB during construction

Attachments: Exhibit 2-1 (existing Facility), Exhibit 2-2 and 2-4 (Proposed TCP and typical sections), Exhibit 5 (loop ramp P\&P)

## Information / Clarification Request:

Please find below NTEMP responses to TxDOT's questions within RFI 51 response:

1. Provide verification that the proposed cloverleaf conceptual configuration is compatible with the Segment 1 Interchange traffic control plan recently submitted for TxDOT review.

AS per current TCP design, it is assumed that NTE segment 1A will be already built at the time construction of NTE segment 3A and Interchange will start.
2. Provide a typical section showing the proposed lane configuration for both IH 820 and IH 35 W with the addition of the loop ramps. Only two lanes are currently shown.
3. Please identify the locations of the lane drops on IH 820 and IH 35 W to achieve lane balance through the interchange.

NTEMP is providing Exhibits 2.1 through 2.4 with this document that contains the information requested by TxDOT. Please note that the exhibits clearly depict that the developer will not be closing any existing GPL Lane or any IH35W connection to and from IH820 (existing facility is depicted in Exhibit 2-1).
4. A minimum design speed of 20 mph for the IH820 EB to IH35W NB loop ramp would require an IH 820 EB and IH 35W NB main lane design speed of 40 mph to accommodate the loop ramp per the RDM Section 6 which states that the design speed of ramps exiting a freeway should be no less than $50 \%$ of the freeway's design speed. The minimum design speed for main lanes in Book 2 is 55 mph. Please verify that a minimum design speed of 55 mph will be maintained on IH 35 W and IH 820 per Book 2 , Section 18.3.1.1.1

NTEMP confirms that the design speed in the general purpose lanes used to develop the traffic control plan is 55 MPH as per book 2 requirements in chapter 18.3.1.1.1. The developer is not able to fit a loop ramp for a design speed of 25 MPH as required by RDM table 3-20.
5. Please provide figures showing the proposed horizontal and vertical alignments for the IH820 EB to IH35W NB temporary loop ramp to verify that that the maximum grade will not exceed $7 \%$ and a minimum radius of 115 ft will be maintained. Note that RDM Table 2-5 allows a minimum design radius of 90 ft and no superelevation for a design speed of 20 mph should TxDOT allow the ramp to be classified as a low speed urban street.

NTEMP is providing Exhibit 5 with this document. Please note that developer has been able to accommodate a vertical alignment that does not exceed $7 \%$ max. grade, and used a horizontal radius of 115 ft .

NTEMP again requests that TxDOT would grant the design deviation requested in the original RFI 51 on the temporary IH820 EB to IH35W NB loop ramp to comply with a design speed of 20 MPH , and that the ramp be classified as a Low Speed Urban Street. Classification by TxDOT as a Low Speed Urban Street is based on the precedent that in segment 3A, the loop ramp from IH35W to Spur 280 WB is classified as such in book 2.

## Response:

The design speed of 20 mph for the IH820 EB to IH35W NB loop is acceptable, as long as it's only used during the construction of the 3A DCs, and not a permanent traffic solution.

Use of the four loop ramps seem to be an acceptable device for traffic flow during construction; this is probably the best option to keep a somewhat consistent traffic flow through this area, and to keep traffic moving to the downtown area.

Work to minimize the use of these loop ramps in operation during the construction of the 3 A section.Overnight
Mail

区 Other E-mail

## RFI \#52 \& \#52B

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 52 |
| :--- | :--- |
| From: | Lucas Lahitou |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |


| Date: $\quad \begin{aligned} & \text { D } \\ & \text { To: }\end{aligned}$ | July 7, 2011 |
| :---: | :---: |
|  | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE 3A - Existing ROW to edge of pavement distance (Border) at Northside Crossroad Ramp (NS-GSP1).

Attachments: Attachment 1.pdf (Plan view Northside Ramp (NS-GSP1)

## Information / Clarification Request:

NTEMP 2-4 requests a design deviation for Segment 3A. The deviation is for the border area which is normally 15 feet minimum and 20 feet desirable per the TxDOT Roadway design manual Table 3-1 for Urban Streets.

NTEMP 2-4 requests a design exception to allow:

1. A distance of 10 feet from the Existing ROW line to the proposed pavement edge for Northside Crossroad Ramp (NS-GPS1).
2. Avoiding of a ROW take on a Private Parcel neighboring with Ramp.

The above stated design deficiency requiring deviation, has emerged after TxDOT's communicated to the developer the desire to develop a design alternative for Northside Crossroad Ramp (NS-GSP1) in order to avoid conflict with a Private parcel. The additional ROW will be required if the design deviation is not granted, in order to comply with the minimum geometric requirements for a frontage road as defined by the MDP Geometric Design Criteria, and the TxDOT Roadway Design Manual.

Please Confirm.

## Response Needed by (date):

## Response:

## Responder Name:

$\qquad$ Response Date:

## Delivery Type:

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Overnight
$\square$ Mail
区 Other E-mail


## Transmittal Letter

Date: July 26, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject: RFI \#52: NTE 3A - Existing ROW to edge of pavement distance (Border) at Northside Crossroad Ramp (NS-GSP1).

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| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1668 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacGr | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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# Request for Information 

RFI No.:
52

| Date: | July 7, 2011 |
| :---: | :---: |
| To: | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | Matt.MacGregor@TxDOT.gov |

From:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

To: Matthew E. MacGregor
TxDOT, Dallas District
Tel.: 214.319.6571
Fax: 214.319.6580
E-Mail: Matt.MacGregor@TxDOT.gov

Subject: NTE 3A - Existing ROW to edge of pavement distance (Border) at Northside Crossroad Ramp (NS-GSP1).
Attachments: Attachment 1.pdf (Plan view Northside Ramp (NS-GSP1)

## Information / Clarification Request:

NTEMP 2-4 requests a design deviation for Segment 3A. The deviation is for the border area which is normally 15 feet minimum and 20 feet desirable per the TxDOT Roadway design manual Table 3-1 for Urban Streets.

NTEMP 2-4 requests a design exception to allow:

1. A distance of 10 feet from the Existing ROW line to the proposed pavement edge for Northside Crossroad Ramp (NS-GPS1).
2. Avoiding of a ROW take on a Private Parcel neighboring with Ramp.

The above stated design deficiency requiring deviation, has emerged after TxDOT's communicated to the developer the desire to develop a design alternative for Northside Crossroad Ramp (NS-GSP1) in order to avoid conflict with a Private parcel . The additional ROW will be required if the design deviation is not granted, in order to comply with the minimum geometric requirements for a frontage road as defined by the MDP Geometric Design Criteria, and the TxDOT Roadway Design Manual.

Please Confirm.

## Response Needed by (date):

## Response:

TxDOT conditionally approves, in order for the Developer to proceed with the redesign to avoid a private parcel, a minimum border width of 10 feet from IH 35W STA $841+50$ to $845+90$ (as shown in Attachment 1) directly adjacent to Stavron parcel \#852 (property owner \#93 - west) for southbound GP entrance ramp NS-GPS1 to avoid ROW acquisition of this parcel. This request requires TxDOT approval but does not require an FHWA design exception.

As the Developer is aware, TxDOT is currently pursuing two parallel tracks in this area -1 ) continuing to pursue the acquisition of parcel \#852, and 2) continuing the study of the redesign (at this parcel and the effects of the redesign at the Chesapeake gas well area) to avoid this parcel.

Final approval prior to the execution of the Facility Agreement is dependent on TxDOT's decision on the preferred alternative. TxDOT anticipates receiving the redesign (including applicable CADD files) and calculation of additional ROW required at the Chesapeake parcel from the Developer prior to finalizing the decision of the preferred alternative.


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 52B | Date: | 8/3/2011 |
| :---: | :---: | :---: | :---: |
| From: | Lucas Lahitou | To: | Matthew E. MacGregor |
|  | NTE Mobility Partners 2-4 |  | TxDOT, Dallas District |
|  | 7700 Chevy Chase Drive | Tel.: | 214.319.6571 |
|  | Chase Park One, Suite 500C | Fax: | 214.319.6580 |
|  | Austin, TX 78752 | E-Mail: | Matt.MacGregor@TxDOT.gov |

Subject: NTE 3A - Existing ROW to edge of pavement distance (Border) at Northside Crossroad Ramp (NS-GSP1).

## Attachments:

Information / Clarification Request:
AS response to RFI 52, TxDOT requested from developer the dgn files that are applicable to Mandatory Scope Alternative in
order to evade the Stavron parcels. Developer is including with this RFI the applicable dgn files for the final approval of RFI
52.

## Response Needed by (date):

| Response: |
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Various files submitted with RFI \#52B:

## ACAD-Mercado Pad to CHK 2010-11-24.dwg (Autocad File)

Pave 3ai 75ft from well to ROW.dgn
Seg3A_Topo.dgn
Seg3ai_Align 75ft from well to ROW.dgn Seg3ai_Row 75ft from well.dgn

## Transmittal Letter

## Date:

 August 10, 2011To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject:

> RFI \#52B \& Reissue of RFI \#52: NTE 3A - Existing ROW to edge of pavement distance (Border) at Northside Crossroad Ramp (NS-GSP1).

We Are Sending You:

| Copies | Date | No. | Description |
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| 1 | $08 / 10 / 11$ | 2 | RFI \#52B Response Form |
| 1 | $08 / 10 / 11$ | 2 | Reissue of RFI \#52 Response Form |
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| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1600 with any questions.

Copy To:
Signed: Matthew MacGregor [electronic]
Delivery Type
$\square$ Courier
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$\square$ Mail
区 Other Electronic

# Request for Information 

RFI No.:
52

| Date: | July 7, 2011 |
| :---: | :---: |
| To: | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | Matt.MacGregor@TxDOT.gov |

From:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

To: Matthew E. MacGregor
TxDOT, Dallas District
Tel.: 214.319.6571
Fax: 214.319.6580
E-Mail: Matt.MacGregor@TxDOT.gov

Subject: NTE 3A - Existing ROW to edge of pavement distance (Border) at Northside Crossroad Ramp (NS-GSP1).

## Attachments: Attachment 1.pdf (Plan view Northside Ramp (NS-GSP1)

## Information / Clarification Request:

NTEMP 2-4 requests a design deviation for Segment 3A. The deviation is for the border area which is normally 15 feet minimum and 20 feet desirable per the TxDOT Roadway design manual Table 3-1 for Urban Streets.

NTEMP 2-4 requests a design exception to allow:

1. A distance of 10 feet from the Existing ROW line to the proposed pavement edge for Northside Crossroad Ramp (NS-GPS1).
2. Avoiding of a ROW take on a Private Parcel neighboring with Ramp.

The above stated design deficiency requiring deviation, has emerged after TxDOT's communicated to the developer the desire to develop a design alternative for Northside Crossroad Ramp (NS-GSP1) in order to avoid conflict with a Private parcel . The additional ROW will be required if the design deviation is not granted, in order to comply with the minimum geometric requirements for a frontage road as defined by the MDP Geometric Design Criteria, and the TxDOT Roadway Design Manual.

Please Confirm.

## Response Needed by (date):

## Response:

TxDOT conditionally approves, in order for the Developer to proceed with the redesign to avoid a private parcel, a minimum border width of 10 feet from IH 35W STA $841+50$ to $845+90$ (as shown in Attachment 1) directly adjacent to Stavron parcel \#852 (property owner \#93 - west) for southbound GP entrance ramp NS-GPS1 to avoid ROW acquisition of this parcel. This request requires TxDOT approval but does not require an FHWA design exception.

As the Developer is aware, TxDOT is currently pursuing two parallel tracks in this area -1 ) continuing to pursue the acquisition of parcel \#852, and 2) continuing the study of the redesign (at this parcel and the effects of the redesign at the Chesapeake gas well area) to avoid this parcel.

Final approval prior to the execution of the Facility Agreement is dependent on TxDOT's decision on the preferred alternative. TxDOT anticipates receiving the redesign (including applicable CADD files) and calculation of additional ROW required at the Chesapeake parcel from the Developer prior to finalizing the decision of the preferred alternative.
[Response reissued August 10, 2011: TxDOT has received RFI \#52B which included dgn files for the redesign around the Stavron parcel. TxDOT, however, has decided to move forward with the acquisition of the Stavron parcel, so this redesign will not be necessary.]


North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 52B |
| :--- | :--- |
| From: | Lucas Lahitou |
|  | NTE Mobility Partners 2-4 |
|  | 7700 Chevy Chase Drive |
|  | Chase Park One, Suite 500C |
|  |  |


| Date: | 8/3/2011 |
| :---: | :---: |
| To: | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | Matt.MacGregor@TxDOT.gov |

Subject: NTE 3A - Existing ROW to edge of pavement distance (Border) at Northside Crossroad Ramp (NS-GSP1).

## Attachments:

| Information / Clarification Request: |
| :--- |
| AS response to RFI 52, TxDOT requested from developer the dgn files that are applicable to Mandatory Scope Alternative in |
| order to evade the Stavron parcels. Developer is including with this RFI the applicable dgn files for the final approval of RFI |
| 52. |

## Response Needed by (date):

## Response:

TxDOT appreciates the Developer's submittal of dgn files for this redesign.
TxDOT stated in RFI \#52 that final approval prior to the execution of the Facility Agreement is dependent on TxDOT's decision on the preferred alternative. TxDOT has decided to move forward with the acquisition of the Stavron parcel, so this redesign will not be necessary. However, TxDOT has the right to reconsider this redesign option at a later point prior to execution of the Facility Agreement.

RFI \#52 is not necessary if TxDOT moves forward with the acquisition of the Stavron parcel.


RFI \#53

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

| RFI No.: | 53 |
| :--- | :--- |
| From: |  |
|  | Lucas Lahitou |
|  | NTE Mobility Partners 2-4 |
|  | Chase Park One, Suite 500C |
|  | Austin, TX 78752 |


| Date: $\quad \begin{aligned} \\ \text { To: }\end{aligned}$ | July 22, 2011 |
| :---: | :---: |
|  | Matthew E. MacGregor |
|  | TxDOT, Dallas District |
| Tel.: | 214.319.6571 |
| Fax: | 214.319.6580 |
| E-Mail: | MMACGRE@dot.state.tx.us |

Subject: NTE 3A - Existing ROW to edge of pavement distance (Border) at approx. Sta. $815+00$ to $819+00$.

## Attachments: GAs Well+RFI.pdf (Plan view)

## Information / Clarification Request:

NTEMP 2-4 requests a design deviation for Segment 3A. The deviation is for the border area which is normally 15 feet minimum and 20 feet desirable per the TxDOT Roadway design manual Table 3-1 for Urban Streets.

NTEMP 2-4 requests a design exception to allow:

1. A distance of 10 feet from the proposed ROW line to the proposed pavement edge for Southbound frontage road is provided from approx. Sta. $815+00$ to $819+00$.
2. Avoiding of a ROW take on a Private Parcel neighboring with Ramp.

The above stated design deficiency requiring deviation, has emerged after TxDOT's communicated to the developer the desire to develop a geometrical design alternative in order to avoid conflict with a Private parcel. The additional ROW will be required if the design deviation is not granted, in order to comply with the minimum geometric requirements for a frontage road as defined by the MDP Geometric Design Criteria, and the TxDOT Roadway Design Manual.

Please Confirm.

## Response Needed by (date):

## Response:

## Responder Name:

$\qquad$ Response Date:

## Delivery Type:

Courier
Overnight
$\square$ Mail
区 Other E-mail


## Transmittal Letter

Date: July 26, 2011

To:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |


| From: | Matthew E. MacGregor |
| ---: | :--- |
|  | TxDOT, Dallas District |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject: RFI \#53: NTE 3A - Existing ROW to edge of pavement distance (Border) at approx. Sta. 815+00 to 819+00

We Are Sending You:

| Copies | Date | No. |  |
| :---: | :---: | :---: | :---: |
| 1 | $07 / 26 / 11$ | 2 | RFI \#53 Response Form |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

These Are Transmitted As Checked Below:

| $\boxtimes$ | As Requested | $\square$ | For Your Use | $\square$ | For Review And Comment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\square$ | For Approval | $\square$ | Returned After Loan To Us | $\square$ | Approved as Noted |
| $\square$ | Returned for Modifications | $\square$ |  |  |  |

## Remarks:

Please contact either myself at 214.319 .6571 or Kim Daily at 512.904 .1668 with any questions.

| Copy To: |  |  |  | Signed: | Matthew MacGr | gor [electronic] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delivery Type: | $\square$ Courier | $\square$ Overnight | $\square$ | Mail | 囚 Other | Electronic |

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive 9001 Airport Freeway
Chase Park One, Suite 500C Suite 600
Austin, Texas 78752
North Richland Hills, TX 76180

## Request for Information

RFI No.:
53

From:

| Lucas Lahitou |
| :--- |
| NTE Mobility Partners 2-4 |
| 7700 Chevy Chase Drive |
| Chase Park One, Suite 500C |
| Austin, TX 78752 |

Date: July 22, 2011

| To: | Matthew E. MacGregor |
| ---: | :--- |
| Tel.: | 214.319 .6571 |
| Fax: | 214.319 .6580 |
| E-Mail: | Matt.MacGregor@txdot.gov |
|  |  |

Subject: NTE 3A - Existing ROW to edge of pavement distance (Border) at approx. Sta. 815+00 to 819+00.

## Attachments: GAs Well+RFI.pdf (Plan view)

## Information / Clarification Request:

NTEMP 2-4 requests a design deviation for Segment 3A. The deviation is for the border area which is normally 15 feet minimum and 20 feet desirable per the TxDOT Roadway design manual Table 3-1 for Urban Streets.

NTEMP 2-4 requests a design exception to allow:

1. A distance of 10 feet from the proposed ROW line to the proposed pavement edge for Southbound frontage road is provided from approx. Sta. $815+00$ to $819+00$.
2. Avoiding of a ROW take on a Private Parcel neighboring with Ramp.

The above stated design deficiency requiring deviation, has emerged after TxDOT's communicated to the developer the desire to develop a geometrical design alternative in order to avoid conflict with a Private parcel. The additional ROW will be required if the design deviation is not granted, in order to comply with the minimum geometric requirements for a frontage road as defined by the MDP Geometric Design Criteria, and the TxDOT Roadway Design Manual.

Please Confirm.

## Response Needed by (date):

## Response:

TxDOT conditionally approves, in order for the Developer to proceed with the redesign to avoid the Stavron parcel \#852, a minimum border width of 10 feet from approximate IH 35W STA 815+00 to 819+00 (as shown in the Gas Well+RFI.pdf attachment) directly adjacent to Chesapeake parcel \#848 (property owner \#88) to accommodate the southbound managed lanes to general purpose lanes exit ramp shift approximately 2000' north from location shown in the December, 2010 Mandatory Scope Schematics. This request requires TxDOT approval but does not require an FHWA design exception.

As the Developer is aware, TxDOT is currently pursuing two parallel tracks in this area -1 ) continuing to pursue the acquisition of parcel \#852, and 2) continuing the study of the redesign (at this parcel and at the Chesapeake gas well area) to avoid this parcel.

Final approval of this RFI prior to the execution of the Facility Agreement is dependent on TxDOT's decision on the preferred alternative.

Responder Name: Matthew E. MacGregor, P.E. Response Date: July 26, 2011

Overnight
$\square \quad$ Mail
区 Other E-mail

# Texas Department of Transportation Book 2 - Technical Provisions 

North Tarrant Express Project Segments 3A and 3B Facility

Attachment 11-2<br>Approved Design Exceptions

September 30, 2012

| TO: | Dieter Billek, P.E. |
| :--- | :--- |
|  | Strategic Project Division |

DATE: August 10, 2012
from: Maria G. Burke, P.E. A Mia Gol, $R E$.
SUBJECT: Revised Schematic, IAJR and Design Exceptions
County: Tarrant
Control: 0014-16-179, etc.
Highway: IH 35W - South Segment
Limits: From IH 820 to IH 30

Attached is a copy of the Federal Highway Administration letter dated August 9, 2012, providing comments and discussion on the revised schematic, design exceptions and the Interstate Access Justification Report (IAJR) for the subject project.

We forwarded you the Traffic Operations Division's review comment on July 9, 2012 and our responses to district response were submitted to you on May 2, 2012. We suggest that you provide responses addressing all comments using a comment / response form. If you have any questions, please feel free to contact me at 512.416 .2703 or Ray Thomasian at 512.416.2718.
cc: Curtis Hanan, P.E. - FTW
John Tillinghast, P E. - FTW
Loyl Bussell, P.E. - FTW
Anita Wilson - FHWA
MAM file copy
File Copy

Texas Division
August 9, 2012
$300 \mathrm{E} 8^{\text {th }}$ Street
Austin, Texas 78705
Phone: 512-536-5950
Fax: 512-536-5990
unw.fhwa.dot.gov/bxdiv
In Reply Refer To:
HA-TX

Revised Schematics, Interstate Access Justification Report and Design Exceptions
Interstate Highway (IH) 35W: From IH 820 to IH 30
Tarrant County
CSJ: 0014-16-179 \& 0014-16-931
Ms. Maria G. Burke, P.E.
Director, Field Coordination Section A
TxDOT - Design Division
125 E. $11^{\text {th }}$ Street
Austin, Texas 78701
Dear Ms. Burke:
Reference is made to your letters dated April 11, 2012 and June 28, 2012, transmitting the schematic, design exceptions (DEs) and Interstate Access Justification Report (IAJR) for the subject project. The DE \#1 is required at five ramp/direct connector locations to the managed lanes where the standard width for a ramp or connector would be constructed but would accommodate two lanes to separate high occupancy vehicles (HOVs) from the rest and allow them to "declare" themselves as such and receive a fifty percent discount of the toll amount during established hours of the day. In addition the project is proposed to be developed in phases and at the locations of existing loop ramps, the ramps would require some reconstruction for the first phase of the project but will still maintain existing geometric conditions that are not in accordance with the TxDOT Roadway Design Manual (RDM) for minimum radius and design speed.

In the same line as the IH35W North discussions occurred in an attempt to address concerns regarding adequate signage, markings, and information in advance of the declaration zones. The TxDOT Fort Worth District later indicated that the region may go to another method of declaration that would not require the declaration zones currently proposed in the schematics. The commitment to move forward with alternate declaration is not solidified therefore we conditionally concur with the DE \#1 and schematics pending FHWA acceptance of operational analysis and a complete signing (including small advance signing which are not in the schematics and would be developed as part of the requirements set forth in the agreement with the developer) and striping plan that effectively deals with concerns identified with the declaration area concept. It is understood that the design exception will no longer be needed if

Ms. Maria G Burke, P.E.
August 9, 2012
Page 2
new technology enables other methods besides physical lane declaration for toll or HOV use, such as a toll tag registration system. An approach that does not require a design exception alternative would be preferred if it becomes available.

An Environmental Assessment (EA) for this project is currently being conducted and is anticipated to be completed in August 2012. Final approval of the DEs, the IAJR and the schematic are contingent upon completion of the environmental process and a Finding of No Significant Impact (FONSI) is determined for the build alternative.

Should you have any questions, please contact Anita Wilson at 512-536-5951.

Sincerely,


Salvador Deocampo
District Engineer

DEWITT C. GREER STATE HIGHWAY ELDG. - 125 E. 11TH STREET * AUSTIN, TEXAS 78701-2485 - (512) 463-8585
July 6, 2011

Tarrant and Denton Counties
Control: 0014-16-252, 0014-16-255
0081-12-041 \& 0081-13-904
Highway: IH 35W
Limits: From: IH 820 to SH 114
Ms. Janice Brown
Texas Division Administrator
Federal Highway Administration
Austin, Texas 78701
Dear Ms. Brown:
Aftached for your raview are one (1) copy of the proposed design schematic and two (2) copies of the Interstate Access Justification Report along with a request for design exception for reduced shoulder widths along the high occupancy vehicle declaration lanes for the above captioned project.

The proposed project will reconstruct the existing four lane freeway to six/eight general purpose lanes and four/six tolled managed lanes. In addition, the construction of the interchanges with SH 170 and US 81/US 287 are also included as part of this project. Please note that Design and Traffic Operations Divisions are currently reviewing the design schematic and we will forward you our review comments shortly.

Also for your information, enclosed is a copy of the Form 1002, page 3 of 5 . If you need additional information, please contact me at (512) 416-2703 or Ray Thomasian, at (512) 416-2718.

Sincerely,

Maria G. Burke, P.E.
Director of Field Coordinatien Section A
Altachments

## cc: FTW-Loyl Busseil, P.E. <br> TTA- Dieter Billak, P.E. <br> MAM Read File <br> File Copy



## MEMORANDUM

TO:
Dieter Billek, P.E.
DATE: June 24, 2011
Texas Turnpike Authority Division
FROM: Curtis W. Henan, P.E.
Originating Office
Fort Worth District
PD
SUBJECT: Preliminary Geometric Layout IH 35W: From IH 820 to SH 114
CSJ: 0014-16-252, 0014-16-255
0081-12-041 \& 0081-13-904
Tarrant and Denton Counties

Attached for your review and further handling are three copies of the preliminary geometric layout and Interstate Access Justification report for the above referenced project. The proposed project will reconstruct the existing four lane freeway to six/eight general purpose lanes and four/six tolled managed lanes. Interchanges with SH 170 and US 81/US 287 are also proposed to be reconstructed.

The original Page 3 of 5 of the corresponding Form 1002 that describes the proposed basic design criteria is also enclosed. Included is a design exception for reduced shoulder widths along high occupancy vehicle declaration lanes.

If you have questions, please contact Mr. John Tillinghast, P.E. at (817) 370-6594 or me at (817) 370-6535.


District Advanced Transportation Planning Director
Attachments

Form 1002 (Rev. 4/11)
Page 3 of 5

## PROPOSED BASIC DESIGN DATA

Highway: IH 35W
County: Tarrant

Control: See Attached Sheet $\qquad$
Limits: From 1 H 820 to Eagle Parkway

Work Program Title(s):

Work Type (Layman's Description):
Eagle Pkwy to US 81/US 287 Reconstruct from 4 lanes to 6 General Purpose lanes and 4 Managed Toll lanes
US 81/US 287 to HH 820 Reconstruct from 4 lanes to 8 General Purpose lanes and 4/6 Managed Toll lanes
Proposed Design Standards (Structures):

| Proposed Design Standards (Roadway): Roadway Design Manual (May 2010), Chpt 2, Chpt 3, Section 6 |  |
| :--- | :--- |
| Proposed Design Standards (Traffic): 2006 Texas MUTCD Revision 1 |  |
| Design Speed (Applicable): See Attch mph | Terrain: Level |
| Traffic: Existing See Attached Sheet | Projected: See Attached Sheet |
| Highway functional Class (Urban): Freeway | (Rural): |



1. Shidrs for 6 Managed Lane Ramp Declaration Areas
2. $\qquad$
3. $\qquad$
4. 
5. $\qquad$
Design Exception Recommended for Approval (District):
Date: $\qquad$
Waiver Recommended for Approval (District):
Date: $\qquad$
Signed:
Title: $\qquad$

## EXCEPTION COMMITTEE

(To be filled out in Austin)

|  | Bridge Design |
| :--- | :--- |
| $\ldots$ | Roadway Design |
| $\ldots$ | Bicycle Lanes |
|  | Traffic |


|  | Bridge Design |
| :--- | :--- |
| $\ldots$ | Roadway Design |
| $\ldots$ | Bicycle Lanes |
|  | Traffic |

Recommended Action:
Approval $\quad \square$ Non-Approval
Reasons:

Recommended Action:
$\square$ Approval
$\square$ Non-Approval
Reasons:


Date:
Signed: (Title)

## IH 35W

From IH 820 to Eagle Parkway
CSJ's:0014-16-252, \& 255
0081-12-041 \& 0081-13-904

## Design Speeds:

IH 35W General Purpose and Managed Lanes: 70 MPH
US 81/US 287 General Purpose Lanes: 70 MPH
Direct Connectors:
Ramps/Managed Lane Ramps: 50 MPH *

Frontage Roads: 50 MPH

Collector/Distributors: 40 MPH 50 MPH
City Streets:
30 MPH

* 50 MPH except where noted on schematic


## Traffic:

Existing: 174,900 ADT (2010) SH 121 to US 81/US 287
115,100 ADT (2010) US 81/US 287 to Westport Parkway 92,300 ADT (2010) Westport Parkway to SH 114

Projected:269,800 ADT (2030) SH 121 to US 81/US 287
178,800 ADT (2010) US 81/US 287 to Westport Parkway 141,000 ADT (2030) Westport Parkway to SH 114

Project: $\quad$ HH 35W North Segment<br>County: Tarrant<br>Control/Limits: $\quad 0014-16-252$ IH 820 to US 81/US 287<br>0014-16-255 IH 820 to US 81/ US 287<br>0081-12-041 US 81/US 287 to Tarrant/Denton County Line<br>0081-13-904 Tarrant/Denton County Line to Eagle Parkway

## Introduction

The purpose of this Request for Design Exception No. 1 is to provide the flexibility to design, construct, finance, operate and maintain a Project that leverages minimal State resources while bringing congestion relief and roadway improvements estimated in excess of $\$ 440$ million to Tarrant County.

The Request for Design Exception is needed for five entrance ramps to the HH 35 W Managed HOV Lane system and one Managed Lane direct connector ramp where the shoulder widths, at the Declaration Areas only, do not meet the standard recommended guidelines for shoulder widths as specified in the contract documents.

Physical as well as financial constraints sometimes preclude the ability to provide a consistent design in accordance with Good Engineering Practice. Shoulder widths are often squeezed to less than desirable to accommodate bridge and sign columns just as elements of a project's design are often optimized to provide a consistent overall design in relation to adjacent structures and roadways. For example, TxDOT recently submitted a Request for Design Exception for the $\mathrm{IH}-635$ Project for FHWA approval because the minimum values on the ramps could not be attained. The request which was submitted for similar reasons to those described above has been subsequently approved by FHWA.

In addition, the following likely changes will eliminate the need for Declaration Areas: (1) air quality goals are attained, (2) change in regional policy/law, (3) technological advances that allow the toll gantry system to distinguish HOV users from SOV users reliably in the same lane, (4) declaration is achieved through a registration program or (5) transponder technology advances to where declaration occurs at the device level. Because one or more conditions listed above are likely occurrence(s) and will negate the need for the Declaration Areas, the design exception is sought for the interim condition only with a view to reducing the size of the "bubble" at the Declaration Area.

## Project Description

TxDOT Fort Worth District proposes to improve a 10.5 -mile section of IH 35W in Tarrant and Denton Counties, Texas. The proposed project extends from Eagle Parkway in southern Denton County to IH 820 in north-central Tarrant County, as shown in Figure 1.

IH 35W from SH 114 to IH 820 is a four-lane divided freeway with controlled access entrances and exits with discontinuous frontage roads.

IH-35W within the project limits is currently not a tolled facility.

Figure 1: Project Location Map


The proposed improvements include the reconstruction and widening of the existing freeway:

- From IH 820 to Basswood Boulevard, the proposed project would consist of reconstructing and widening the roadway to a 14 -lane facility consisting of four General Purpose Lanes in each direction and a barrier-separated six-lane concurrent Managed Lane facility (three lanes in each direction). The Managed Lane facility would be centered between the General Purpose Lanes.
- From Basswood Boulevard to US 81/287, the proposed project would consist of reconstructing and widening the roadway to a 12 -lane facility consisting of four General Purpose Lanes in each direction and a barrier-separated four-lane concurrent Managed Lane facility (two lanes in each direction). The Managed Lane facility would be centered between the General Purpose Lanes. Direct connector ramps between US 81/US 287 and the IH 35W Managed Lanes would be constructed.
- From US 81/287 to Eagle Parkway, the proposed project would consist of reconstructing and widening the roadway to a 10-lane facility consisting of three General Purpose Lanes in each direction and a barrier-separated four-lane concurrent Managed Lane facility (two lanes in each direction). The Managed Lane facility would be centered between the General Purpose Lanes. Direct connector ramps between IH 35W and SH 170 would also be constructed.


## Managed HOV Lane Policy and Project Application

The proposed Managed Lanes will be managed using a pricing methodology in accordance with the policies developed by the North Central Texas Council of Governments (NCTCOG) and included by the Federal Highway Administration under the Express Lane Demonstration Program (Section 1604(b) Safe Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

The NCTCOG's Managed Lane policy includes the following key provisions (The full policy is located in the NCTCOG's Mobility 2030: 2009 Amendment- page 279 at http://www.nctcog.org/trans/mtp/2030/17.Roadway.pdf):

- Transit vehicles will not be charged a toll.
- Single Occupancy Vehicles (SOV) will pay the full rate.
- HOVs of two or more occupants will receive a 50 percent discount during the peak period. This discount will phase out after the air quality attainment maintenance period.
- Regional Transportation Council sponsored public vanpools are permitted to add peak-period toll as eligible expenses.

Current NCTCOG's policy Managed Lane Policy specifies that HOV (Managed Lane) users will receive a $50 \%$ discount during the peak period, the electronic toll collection system needs to distinguish between SOV and HOV users through the use of Declaration Areas. A Declaration Area will be provided at each of the following entrance ramps and direct connectors into the $\mathrm{IH}-35 \mathrm{~W}$ Managed Lanes:
A. Southbound (SB) ramp from Frontage Road just south of Basswood Blva.
B. SB direct connector ramp from Eastbound (EB) US 287
C. SB interim ramp from General Purpose Lanes just south of North Tarrant Pkwy
D. SB ramp from Frontage Road just south of Heritage Trace Pkwy
E. SB ramp from General Purpose Lanes just south of Keller Hicks Road
F. SB ramp from General Purpose Lanes just south of Alliance Blvd.

Declaration Area "C" would be on an interim ramp constructed to begin the SB Managed Lanes for the portion of the North Segment Facility extending from US 81/ US 287 to IH 820. This ramp would then be removed when the Managed Lanes are extended north to Eagle Parkway.

Table 1 lists the proposed Declaration Areas and Exhibit 1 shows the general locations.

## Table 1: Proposed Declaration Areas

| No. | Location | Road | Direction | Station | Inside Shlaf <br> (ti) | Outside Shldr (ft) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | FR On-Ramp | IH35W | SB | 1510+00 | 4 | 4 |
| B | US 287 Connector | IH35W | SB | $1452+00$ | 4 | 4 |
| C | Transition Ramp | IH35W | SB | $1410+00$ | 4 | 4 |
| D | FR On-Ramp | IH 35W | SB | $1360+00$ | 1 | 1 |
| E | GPL On-Ramp | IH35W | SB | 1258+00 | 1 | 1 |
| F | GPL On-Ramp | IH35W | SB | $1068+00$ | 1 | 1 |

Functionally, the ramps and connectors requiring design exceptions will operate as single lane ramps except that the users will be required to shift horizontally to a transitional section to register the vehicle as a HOV vehicle for a pricing discount during peak periods. The ramps are transitioned at 50 to 1 from both sides in order to transition from a single $14-\mathrm{ft}$ wide lane to $2-12$-ft wide lanes, which include a $200-\mathrm{ft}$ long Declaration Area. Within the transition section, the HOV and SOV users will shift to the right and left, respectively, which will allow them to self-declare occupancy. Within the Declaration Area, the electronic toll collection equipment will record self-declared HOV users and SOV users in order to identify all HOV user transactions. Typical sections for the ramps and direct connectors at the Declaration Areas are provided in Exhibit 2. After the Declaration Area, the 2-12ft lanes transition back to a single 14-ft lane before drivers enters the Managed HOV Lanes. Plan view and typical sections for the ramps and connectors requiring design exceptions are provided in Exhibits 3.1 through 3.6.

The Managed HOV Lanes are included in the proposed Dallas-Fort Worth Metropolitan Transportation Mobility 2030 plan as a measure to reach air quality attainment status. NCTCOG policy allows the discount for HOV users to phase out after the air quality attainment maintenance period. In the future, the following likely changes will eliminate the need for these Declaration Areas (1) air quality goals are attained, (2) change in regional policy/law, (3) technological advances that allow the toll gantry system to distinguish HOV users from SOV users reliably in the same lane, (4) declaration is achieved through a registration program or (5) transponder technology advances to where declaration occurs at the device level. The likely occurrence of one or more of the conditions listed above will negate the need for the Declaration Areas.

## 1. What are the minimum design values that can not be obtained?

The minimum inside shoulder width of 4 feet and the outside shoulder widths of 6 feet and 8 feet required for ramps and direct connectors, respectively, cannot be obtained within the Declaration Areas for the following entrance ramps and direct connectors into the Managed HOV Lanes:
A. SB ramp from FR just south of Basswood Blvd (Exhibit 3.1).
B. SB direct connector ramp from EB US 287 (Exhibit 3.2)
C. SB interim ramp from GPL just south of North Tarrant Pkwy (Exhibit 3.3)
D. SB ramp from FR just south of Heritage Trace Pkwy (Exhibit 3.4)
E. SB ramp from GPL just south of Keller Hicks Road (Exhibit 3.5)
F. SB ramp from GPL just south of Alliance Blvd. (Exhibit 3.6)
2. Why the minimum design values can not be attained?

The minimum values on the ramps cannot be attained because of construction cost and right-of-way limitations along IH 35 W . Priority was given to attaining design values on the General Purpose Lanes, the Managed HOV Lanes, free ramps, and frontage roads because these are considered permanent features of the facility.

Providing the minimum values for the Declaration Areas at the entrance and direct connector ramps would require widening retained fill sections and bridges resulting in wider roadway sections at the Declaration Areas than for the remainder of the ramp lengths. The wider sections would also result in realignments of the adjacent roadways thereby creating areas of potential sideswipe accidents as inattentive drivers may not shift and remain on a linear path as the lane lines are transitioned to accommodate the minimum shoulders. The realignments could result in the need for additional right-of-way.

## 3. What are the values that can be attained by the proposed design?

The inside and outside shoulder widths that can be attained at the proposed Declaration Areas are shown in Table 1.

## 4. Summary and analysis of the accident history at this location.

The proposed Managed Lanes and Managed Lane ramps are new construction. Accident data relative to this exception for IH 35 W was taken from the data obtained on the General Purpose Lanes for the years 2006, 2007 and 2008. The crash rates were provided by Control-Section/Milepoint in North Segment in two sections Section 1 - from IH 820 to US 287/US 81, and Section 2 from US 287/ US 81 to Eagle Parkway.

To analyze the safety impacts of construction along the IH 35 W corridor, crash data between 2006 and 2008 along IH 35W corridor within the project limits were collected and reviewed for crash patterns. A total of 542 crashes were reported in these sections of IH 35 W . Table 2 provides a summary of the crashes by facility and severity.

Table 2: Crash Type and Severity Summary

| IH 35W Facility | Year | Crash Severity |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Fatality | Injury | Non- <br> Injury | No <br> Information |  |
| IH 820 to US 287 | 2006 |  | 30 | 44 |  |  |
| (Section 1) | 2007 |  | 39 | 59 | 1 |  |
|  | 2008 | 1 | 35 | 80 |  |  |
| US 287 to Eagle Pkwy | 2006 |  | 36 | 43 | 3 |  |
| (Section 2) | 2007 | 3 | 43 | 48 | 2 |  |
|  | 2008 |  | 28 | 47 |  |  |
| Total |  | 4 | 211 | 321 | 6 |  |

* Injury includes incapacitating crashes, non-incapacitating crashes, and possible injury cases

The crash rate on the General Purpose Lanes was compared with statewide average data for urban interstate facilities to obtain a safety ratio for the past three years. The results are summarized in Table 3.

Table 3: Crash Rate Analysis Summary

| IH 35W General Purpose Lanes | 2006 |  | 2007 |  | 2008 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Section | 1 | 2 | 1 | 2 | 1 | 2 |
| Actual Crashes | 74 | 82 | 99 | 96 | 116 | 75 |
| Actual Crash Rate (per 100 million vehicle miles) | 64.17 | 61.96 | 85.85 | 72.54 | 100.59 | 56.67 |
| Statewide <br> Average Crash Rate <br> (per 100 million vehicle miles) | 107.23 |  | 111.32 |  | 101.32 |  |
| Safety Ratio | 0.6 | 0.6 | 0.8 | 0.7 | 1.0 | 0.6 |

The review of the crash data indicates that a number of crashes are caused by sideswipes and rear-end collisions. Based on the mile point information for Sections 1 and 2, the crashes highlight the need for the project due to increasing number of crashes caused by the increased congestion along HH 35 W . Construction of the new interchanges and widening of the mainlanes cross-section will distribute traffic
more evenly, reducing congestion on the mainlanes and potentially reducing these types of crashes.

The Texas Transportation Institute (TTI) field tested the proposed declaration area designs on IH 30, which will have similar operational characteristics to the IH 35W declaration areas. These field tests were conducted on October 17, 2007 in College Station, TX and were based on a higher speed mainlane declaration design. Based on observations by several Research and Operational personnel during testing the Declaration Areas functioned properly. Appendix A contains the summary of results of the field tests.

The operation of the declaration areas may be compared to the Dallas North Tollway (DNT) entrance and exit ramps at Royal Lane and Northwest Highway. From 2005 to 2006, the number of accidents is as follows:

- 5 at the SB DNT exit ramp at Royal Lane
- Zero at the NB DNT entrance ramp at Royal Lane
- 2 at the NB DNT entrance ramp at Northwest Highway
- 2 the SB DNT exit ramp at Northwest Highway

These ramps have 50 to 1 transitions to 10 -ft wide lanes with a 6 " curb on both sides and $11^{\prime \prime}$ of clearance to the toll booths, but the accident history does not show a pattern or problem. They require drivers to make quick choices between the cash lane and the toll tag lane, which are narrower than the cross section that these design exceptions provide. Occupancy declaration will require less complicated decisions; so, it is highly unlikely that the implementation of the requested design exceptions will negatively impact the causes of accidents.
5. Brief description of alternatives considered and the reasons for eliminating each alternative.

Several redesign alternatives were considered. In general, the ramps and connectors could be widened to meet the minimum design values but the redesign options were eliminated from consideration due to the additional construction cost and potential right-of-way costs to the project. The redesign options that were considered in order to provide the required minimum shoulder requirement are described below:
A. Declaration Area " $A$ " is located on both a retained fill section and structure through the Declaration Area. The proposed redesign solution would be to widen the Declaration Area and redesign the alignment 2 ' to the east.
B. Declaration Area " $B$ " is located on both a retained fill section and structure through the Declaration Area. The connector currently has 4 -foot inside and 4 -foot outside shoulders. The proposed redesign solution would include widening the connector ramp 4' to the west to provide $4^{\prime}$ inside and $8^{\prime}$ outside shoulders. Since the area required for the retained fill section between the SB ML and ultimate configuration of the SB GPL at the Declaration Area does not permit the required widening, the SB GPL alignment would need to be realigned to the west resulting in the redesign of the SB GPL and the exit ramp to Basswood Blvd. The direct connector ramp may
also need to be realigned to provide a more cost effective bent arrangement as a result of the redesign.
C. Declaration Area " C " is located on an interim at-grade ramp. The proposed alignment would need to be redesigned 2' to the west through the Declaration Area towards the SB GPL.
D. Declaration Area " D " is located on a retained fill section through the Declaration Area. The proposed design solution would include widening the Declaration Area and redesigning the ramp and frontage road alignment $10^{\prime}$ to the west. This redesign would require 4400 square feet of additional right-of-way.
E. Declaration Area " $E$ " is on a retained fill section through the Declaration Area. The proposed design solution would be to widen the Declaration Area and redesign the ramp and frontage road alignment $10^{\prime}$ to the west. This redesign would require approximately 4150 square feet of additional night-of-way.
F. Declaration Area " $F$ " is at-grade and would require widening the pavement and redesigning the ramp alignment 12' to the west through the Declaration Area towards the SB GPL.

The redesign alternatives were eliminated from consideration because the Enforcement Zone and Declaration Areas are an interim condition only and only operational during the peak periods. When the HOV discount is phased out after the air quality attainment maintenance period, the currently proposed pavement for the Enforcement Zone and Declaration Areas will be striped off to provide the required shoulder areas. The minimum shoulder width is already included within these areas. The additional unused pavement associated with the redesign solutions will create maintenance issues with trash and windblown debris collecting in these areas.
6. What is the percentage and total dollar difference between the proposed cost and the cost of construction necessary to obtain minimum values?

The current estimate of construction costs for IH 35 W is $\$ 440$ Million. The costs associated with widening each of the ramps listed in Question 5 to provide the minimum required inside and outside shoulder widths are:

| No. | Location | Additional <br> Construction Cost | Percent Increase <br> in Cost |
| :---: | :--- | :---: | :---: |
| A | FR On-Ramp | $\$ 18,000$ | $<1 \%$ |
| B | US 287 Connector | $\$ 178,000$ | $<1 \%$ |
| C | Transition Ramp | $\$ 21,000$ | $<1 \%$ |
| D | FR On-Ramp | $\$ 89,000$ | $<1 \%$ |
| E | GPL On-Ramp | $\$ 87,000$ | $<1 \%$ |
| F | GPL On-Ramp | $\$ 95,000$ | $<1 \%$ |

Estimate of Additional Costs:
\$488,000

## 7. Does this design conform to adjacent roadway sections?

The adjacent roadway sections of IH 820 and SH 183 (Segments 1 and 2) being developed as part of the North Tarrant Express Comprehensive Development Agreement will have shoulders that meet minimum design requirements. Smooth and uniform shoulder width transitions will be used to ensure that drivers have time to recognize the change in shoulder widths.

These width transitions keep the design exception areas in conformity with adjacent sections as drivers will not be caught off guard by sudden changes in the shoulder widths. Moreover, since passing would not be allowed within the Declaration Area, the ramps would continue to function as a single lane ramp.
8. What would be the project delay and consequences as a result of meeting the minimum values?

Project delay would be both at the design level and during construction due to the additional right-of-way that would be required to implement the minimum value at all locations. Obtaining minimum values on the IH 35 W ramps would require the purchase of additional right-of-way and maintenance costs, which could cause project delay of possible one year. Delaying the project will adversely impact expected mobility improvements, congestion relief in the area and final costs of the project.
9. Short narrative of why you feel this design exception should be approved.

The Enforcement Zone and Declaration Areas are an interim condition only and only operational during the peak periods. When the HOV discount is phased out after the air quality attainment maintenance period, the pavement for the Enforcement Zone and Declaration Area will become functionally shoulders and the minimum shoulder width is already included within these areas. Areas of additional unused pavement will create maintenance issues with trash and windblown debris collecting in these areas.

This design exception should be approved because the reduced shoulder widths are limited to the Declaration Areas. Regulatory traffic signs, "Do Not Pass" are anticipated to be located in advance of the Declaration Areas. Only one vehicle at a time will be entering the Declaration Area and the ramps and connectors will operate as one lane ramps. Within this area and the transition sections, the total pavement width is greater than the desirable pavement width for a one lane ramp, which will allow sufficient width for vehicles to pass in the event of an accident in the Declaration Area. A consistent design approach was applied for all of these ramps to develop consistent driver expectations. The configuration is the least disruptive to adjacent property owners and avoids maintenance impacts of the additional pavement.

Finally, the need for the design exception is only for the interim condition and will not be required when the region incorporates emerging technologies that will remove the need for the Declaration Areas (potentially before facility opening) or the HOV requirement and/or air quality goals are attained.




ENFDRCEMENT VEHICLE
S HOV LANE
SECTION ARA
DECLARATION N.T.S.






## APPENDIX A

## TTI Field Test Results

## Design and Operation of the I-30 Tom Landry Managed Lane Value Pricing Project in Dallas, Texas

Christopher Poe, Ph.D, P.E., Assistant Agency Director, Texas Transportation Institute (cpoe@tamu.edu)
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| Research sponsored by: <br> US Department of Transportation <br> US Ceporetmert Texas Department of Transportation Cr macopration Rodmean heghway | Research conducted by: <br> - Texas <br> Transportation |
| :---: | :---: |
| TOLL GANIRY DESTCN FIELD TEST <br> Description of Field Test <br> - Full scale mock-up of the toll gantry design with temporary pavement markings and pylons <br> - Conducted at the TTI Riverside Facility in College Station, TX <br> - Project team and staff from participating agencies able to drive the through the design at highway speed <br> - Unabie to simulate vertical curvature or overhead signing <br> Question to be Answered by Field Test <br> - How does the lane shift at the gantry work? <br> - Does the design encourage/discourage passing? <br> - What is the comfort at high speed? <br> - What is the comfort with a vehicle platoon? <br> - How is visibility behind a large vehicle? <br> - Do the pylons assist the design? <br> - Do we agree with HOV being in the right lane? <br> Field Test Findings <br> - Lane shift design was comfortable at highway speeds <br> - Design may discourage passing maneuvers <br> - Pyions effective traffic control <br> - Visibility of the gantry when following a platoon of vehicles was a concern <br> - Design Revisions = adjust gore taper and include more emphasis on the overhead sign design |  |
|  | Signing Information <br> 1) Managed lane is ahead <br> 2) Distance to the managed lane entrance <br> 3) Marnaged lane is open or closed <br> 4) Managed lane entrance is a left exit <br> 5) Distance to Managed Lane destinations/exits <br> 6) Location of the actual managed lane entrance <br> 7) Means of payment |
|  | Participating Agencies <br> - Texas Department of Transportation (TxDOT) <br> - Dallas Area Rapid Transit (DART) <br> - North Texas Tollway Authority (NTTA) <br> - North Central Texas Council of Governments (NCTCOG) <br> - Texas Transportation Institute (TT) <br> Key Project Team Members |
|  | - Stephen Endres, P.E., Project Manager, TxDOT <br> - Mathew NiacGregor. P.E.. CDA/Tollway Director. TxDOT <br> - Koorosh Olyai. P.E., Assistant Vice President, DART <br> - Dan Lamers, P.E., North Central Texas Council of Governments <br> - Christopher Poe, P.E., Assistant Agency Director, TTI <br> - Stephen Ranft, Assistant Research Specialist, TTI <br> - Hm Langston. P.E. Bridgefarmer Associates |



Description of Field Test

- Full scale mock-up of the proposed lane configuration, geometry, pavement markings and pylons
- Project team and staff from participating agencies able to test drive the mock-up ramp at highway speeds and with back round traffic.
- Test conducted at TTI Riverside Facility in College Station, TX.

Questions to be answered by Field Test

- How does the Lane shift at the gantry works
- Does the design encourage/discourage passing?
- What is the comfort at high speeds?
- What is the comfort with a vehicle platoon?
- How is the visibility behind a large vehicle?
- Do the Pylons assist the design?
- Do we agree with HOV being in the right lane?


## Field Test Findings

- Lane shift design was comfortable at highway speeds
- Design may discourage passing maneuvers
- Pylons effective traffic control
- Visibility of the gantry when following a platoon of vehicles was a concern

Other recommendations of this review are:

- Design Revisions; adjust gore taper
- Overhead sign design

What was not tested?

- Gantry Design
- Vertical and horizontal curvature
- Signing

Simulations

- Model assumptions and development
- Aerial view
- Driver's view
- Enforcement view
- Link to view simulation

Example of similar design in operation and Accident history

- DNT Entrance/exit ramps at Royal Lane and Northwest Highway in Dallas


## Field Test

## Tolling Gantry



# Texas Department of Transportation Book 2 - Technical Provisions 

North Tarrant Express Project Segments 3A and 3B Facility

Attachment 11-3<br>Segment 3A Driveways

## September 30, 2012





[^0]:    Curve Data
    *-----------*

[^1]:    Ending chain WETHBELK description

