

Attachment 1
MDP CDA Geometric Design Criteria

DRAFT
5/14/2010

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 Seg 3A: 70 mph Seg 3A (STA 932+00 to southernmost construction limit): 55 mph Seg 3A (SH 121): 55 mph Seg 3B/C: 70 mph	40 mph	Seg 2E: 45 mph Seg 3A: 50 mph Seg 3B/C: 50 mph See Note 19.	Seg 2E: 30 mph Seg 3A: 35 mph Seg 3 B/C: 35 mph	40 mph	25 mph
Stopping Sight Distance See Note 2.	Seg 2E: 570' Seg 3A: 730' See Note 12. Seg 3A (STA 932+00 to southernmost construction limit): 495' Seg 3A (SH 121): 495' Seg 3B/C: 730'	305'	Seg 2E: 360' Seg 3A: 425' See Note 8, 10, 13, 14. Seg 3B/C: 425'	Seg 2E: 200' Seg 3A: 250' 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' Seg 3A: 2050' Seg 3A (STA 932+00 to southernmost construction limit): 1065' Seg 3A (SH 121): 1065' Seg 3B/C: 2050'	675'	Seg 2E: 660' Seg 3A: 835' Seg 3B/C: 835'	Seg 2E: 300' Seg 3A: 465' Seg 3B/C: 465'	510'	180'
Vertical Alignment						
Minimum Grade	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
Maximum Grade	Seg 2E: 3% Seg 3A: 3% Seg 3A (STA 932+00 to southernmost construction limit): 4% Seg 3A (SH 121): 4% Seg 3B/C: 3%	7.00%	4% See Note 3.	7.00%	5.00%	7.00%
Vertical Curve Length Crest (min. K-Value)	Seg 2E: 151 Seg 3A: 247 Seg 3A (STA 932+00 to southernmost construction limit): 114 Seg 3A (SH 121): 114 Seg 3B/C: 247	44	Seg 2E: 61 Seg 3A: 84 Seg 3B/C: 84	Seg 2E: 19 Seg 3A: 29 Seg 3B/C: 29	44	12
Vertical Curve Length Sag (min. K-Value)	Seg 2E: 136 Seg 3A: 181 Seg 3A (STA 932+00 to southernmost construction limit): 115 Seg 3A (SH 121): 115 Seg 3B/C: 181	64	Seg 2E: 79 Seg 3A: 96 Seg 3B/C: 96	Seg 2E: 37 Seg 3A: 49 Seg 3B/C: 49	64	26
Cross-Section						
Lane Width	12'	12' Lanes 24' for U-Turns	14' (single lane) 12' per Lane (multi-lane)	12'	12'	14'
Shoulder Width (min.):						
Inside Shoulder	4' (2 or less lanes) 10' (3 or more lanes)	N/A (curbed)	4' See Note 2.	N/A Curbed	4' (2 or less lanes) 10' (3 or more lanes) See Note 2.	4'
Outside Shoulder	10'	N/A (curbed)	8' See Note 2.	N/A (curbed)	8' / 10' See Note 2. See Note 15.	8'
Curb Offset	N/A	2' Outside 1' Inside	N/A	1'	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%

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'	3' (measured from face of curb) See Note 1.	16'	3' (measured from face of curb) See Note 1.	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'-6"	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"
Over Streets	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"
Over Railroad	23'-0"	23'-0"	23'-0"	23'-0"	23'-0"	23'-0"
Over Electrified Light Rail	26'-6"	26'-6"	26'-6"	26'-6"	26'-6"	26'-6"
Overhead Signs	21'-0"	21'-0"	21'-0"	21'-0"	21'-0"	21'-0"
Pedestrian Crossings	17'-6"	17'-6"				
Other						
Design Vehicle	WB-50	WB-50	WB-50	WB-50	WB-50	WB-50
Driveway Radius	N/A	30' min commercial 15' min residential	N/A	30' min commercial 15' min residential	N/A	N/A

- Notes:**
- The face of new bridge columns shall be located 6 feet or more from the face of curb. This requirement is not applicable to medians on cross streets. A 1.5' minimum offset is permitted for medians on cross streets.
 - 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.
 - Ramps and direct connectors shall have a maximum grade of 4% with the exception of the following listed ramps and direct connectors in Segment 3A which shall have a maximum slope of 5%. However, Developer shall prepare the design using Good Industry Practice using flatter grades where possible:
 - Ramp connecting IH35W SB to IH 30 at south end of project to tie to existing;
 - Ramp connecting IH35W SB to Northside Dr. from STA 8+78.00 to 28+50.00;
 - Ramp connecting IH35W SB to Northside Dr. from STA 28+50.00 to 36+50.00;
 - Ramp connecting Weatherford to IH 35W SB from STA 16+68.00 to 23+90.00;
 - Ramp connecting SH 121 SB to Belknap from STA 32+45.00 to 46+85.00;
 - Ramp connecting SH 183 to IH 35W SB from STA 18+25.00 to 22+00.00;
 - Ramp connecting Weatherford to SH 121 NB from STA 23+06.66 to 35+28.67;
 - Ramp connecting IH 30 EB to IH35W NB at south end of project;
 - DC connecting IH 35W SB to SH 121 NB;
 - Ramp connecting IH 35W ML SB to SPUR 280 SB;
 - Ramp connecting IH 35W ML NB to IH 35W GP NB in Segment 3A; and,
 - Ramp connecting IH 35W GP SB to IH35W ML SB in Segment 3A.
 - Ramp connecting SPUR 280 NB to IH 35W ML NB in Segment 3A.

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.

- 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
 - 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
 - 121SB 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
 - DC 121SB from STA 52+77.00 to 115+85.36 shall have a minimum SSD for 45 mph design speed.
 - 121NB 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
 - DC 121NB from STA 52+77.00 to 101+01.93 shall have a minimum SSD for 45 mph design speed.
 - 35WML 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
 - 35WML from STA 727+66.92 to 743+00.25 shall have a minimum SSD for 60 mph design speed.
 - DC IH35W SB-121 NB from STA 44+59.80 to 59+88.47 shall have a minimum SSD for 40 mph design speed.
 - DC 280-121NB from STA 62+93.47 to 72+70.88 shall have a minimum SSD for 30 mph design speed.
 - The following roadways shall be classified as Collector-Distributor per revised schematics. The outside shoulder width shall be as shown on the schematic and listed below:
 - Roadway connecting Spur 280 to IH35W SB; 8 ft outside shoulder width;
 - Roadway connecting Spur 280 to SH121 NB; outside shoulder width varies (8 ft minimum 10 ft maximum);
 - Roadway connecting SH121 SB to Spur 280; 10 ft outside shoulder width; and,
 - Roadway connecting SH121 SB to IH35W NB; 10 ft outside shoulder width.
 - Ramp connecting IH35NB to Spur 280WB shall be classified as a Loop Ramp per revised schematic.
 - DC 121SB280SB shall have a minimum SSD for 40 mph design speed based on the September 2009 schematic.
 - SPUR 280 is classified as an Urban Arterial with a minimum design speed of 35 mph as shown on the September 2009 schematic.

Segment 3B/C:

- Ramp IH 35W SB-US 287 shall have a Design Speed = 40 mph.

Attachment 2
Request for Information #30



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.: 30B **Date:** May 14, 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: 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 4th 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%.

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 55mph.

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 4th 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 4th 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.

Response Date: May 14, 2010

Delivery Type:

Courier

Overnight

Mail

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

Attachments: _____

Information / Clarification Request:

Request for verification of Geometric Design Criteria for NTE Segment 3A (South End of Project):

Per the Geometric Design Criteria dated 1/5/2010, the maximum grade for Mainlanes (GP and ML) pertaining to “Seg 3A (South End of Project)” is 4%.

Please verify that this criteria applies to the Interim design also; therefore, the proposed interim IH35W Managed & General Purpose Lanes south of East 4th 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%.

Please Verify.

Thank you.

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

Response:

Responder Name: _____ **Response Date:** _____

Delivery Type: Courier Overnight Mail Other

Attachment 3
Request for Information #31



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 **Date:** April 20, 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 Seg 3A interim ramp exceptions

Attachments: NTE Seg 3AI As-Built 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 35mph design speed. The 4 ramps to be considered for exception are: TRTA-GPSI, 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 1500ft 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.

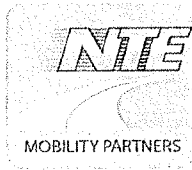
Prior to final approval of this request, TxDOT also requests that NTEMP24 provide the proposed horizontal and vertical design for each of the subject ramps for review. Each ramp design should attempt to achieve the highest attainable design speed.

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. **Response Date:** May 14, 2010

Delivery Type: Courier Overnight Mail Other E-mail

Attachment 4
Request for Information #35



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.:**
 mmacgre@dot.state.tx.us **Fax:**
 agonzalez@cintra.us.com **E-Mail:**

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, 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 35W 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 LENGTH	RADIUS	PI STATION	PI NORTHING	PI EASTING	PC STATION	PT STATION
E35N280-1	26° 14' 50.06" RT	9° 52' 42.90"	135.22'	265.70'	580.00	12+04.74	6,960,919.54	2,331,829.31	10+69.52	13+35.22
E35N280-2	91° 07' 29.40" RT	88° 11' 49.87"	152.97'	238.56'	150.00'	14+88.19	6,961,145.95	2,332,007.63	13+35.22	15+73.78
E35N280-3	98° 06' 15.27" RT	87° 44' 47.34"	138.30'	205.47'	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	81° 49' 51.56"	129.01'	223.87'	180.00'	19+08.26	6,960,780.51	2,332,035.93	17+79.25	20+03.12
E35N280-5	6° 45' 32.24" LT	3° 35' 18.08"	94.29'	188.36'	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.

Response Needed by (date): 05-13-10

Responses:

TxDOT conditionally agrees to the use of the existing horizontal loop ramp curve E35N280-3 which has a radius of 120ft 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. MacGregor, P.E. **Response Date:** May 14, 2010

Delivery Type: **Courier** **Overnight** **Mail** **Other** E-mail

Attachment 5
Request for Information #28



MOBILITY PARTNERS
A TARRANT EXPRESS COMPANY

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:

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.

Please Confirm.

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

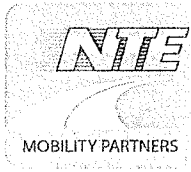
Responses:

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. MacGregor, P.E. **Response Date:** March 16, 2010

Delivery Type: Courier Overnight Mail Other E-mail

Attachment 6
Request for Information #34



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.:**
 mmacgre@dot.state.tx.us **Fax:**
 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 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 LENGTH	RADIUS	PI STATION	PI NORTHING	PI EASTING	PC STATION	PT STATION
CYPRESS-1	121° 30' 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
CYPRESS-2	21° 01' 38.97" RT	11° 27' 32.96"	92.79'	183.50'	500.00'	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:

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. MacGregor, P.E.

Response Date: May 14, 2010

Delivery Type:

Courier

Overnight

Mail

Other E-mail

Attachment 7
Request for Information #26



MOBILITY PARTNERS
TARRANT COUNTY

North Tarrant Express Mobility Partners 2-4, LLC
7700 Chevy Chase Drive
Chase Park One, Suite 500C
Austin, Texas 78752
9001 Airport Freeway
Suite 600
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 35W (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' shoulder in this area. Please verify that the intent is to have a 4' shoulder and verify that a design exception has been processed or will be granted.

Please Verify and Approve.

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

Responses:

The request to retain a 4' 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: Courier Overnight Mail Other E-mail

Attachment 8
Request for Information #29



MOBILITY PARTNERS

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

Request for Information

RFI No.: 29 **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: 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 0014-16-179...*

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

We request to retain a 4' shoulder for this segment in the Interim and MDP/Ultimate design. Please verify that the intent is to have a 4' shoulder and verify the extent to which the design exception has been processed.

Please Verify and Approve.

Thank you.

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

Response:

The request to retain a 4' 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 35W 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. MacGregor, P.E. **Response Date:** March 16, 2010

Delivery Type: Courier Overnight Mail Other E-mail

Attachment 9
Request for Information #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: 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: 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' 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' 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. **Response Date:** December 16, 2009

Delivery Type: Courier Overnight Mail Other E-mail

Attachment 10

TTA Book 3 Geometric Design Criteria

Table 11-2: Geometric Design Criteria

	MAINLANES	FRONTAGE ROADS	RAMPS/DIRECT CONNECTORS	CROSSING STREETS ¹
GENERAL				
Roadway Classification	Urban Freeway or Tollway	Low Speed Urban Street	Urban Freeway or Tollway	Low Speed Urban Street
Design Speed	60 mph	40 mph	50 mph	30-40 mph
Stopping sight distance	570'	305'	425' ⁴	200' (30 mph) 305' (40 mph)
HORIZONTAL ALIGNMENT				
Maximum super-elevation rate	6%	N/A	6%	N/A
Min. Radius of Curvature	1340'	675'	835'	675' (40 mph) 300' (30 mph)
VERTICAL ALIGNMENT				
Minimum grade	0.35 percent	0.35 percent	0.35 percent	0.35 percent
Maximum grade	3.0 percent	7.0 percent	4.0 percent ⁵	7.0 percent (40 mph) 9.0 percent (30 mph)
Vertical curve length Crest (Min. K-Value)	151	44	84	44 (40 mph) 19 (30 mph)
Sag (Min.K-Value)	136	64	96	64 (40 mph) 37 (30 mph)
CROSS-SECTION				
Lane width	12'	12' lanes 24' for U-Turns	14'(single lane) 12' per lane (multi-lane)	12'
Shoulder Width (min.) Inside Shoulder	4' (2 or less lanes) 10' (3 or more lanes)	NA (curbed)	4' ³	NA (curbed)
Outside Shoulder	10'	NA (curbed)	8' ³	NA (curbed)
Curb offset	N/A	1'	N/A	refer to Table 11-3
Cross-slope (typical) Managed Lanes General Purpose Ln	2.5 percent			
- Inside 2 lanes	2.5 percent	2.0 percent	2.0 percent	2.0 percent
- Outside lanes	2.5 percent	2.0 percent	2.0 percent	2.0 percent
- Shoulders	2.5 percent	2.0 percent	2.0 percent	2.0 percent
CLEAR ZONE				
Distance from edge of travel lane unless noted otherwise	30'	3' (measured from face of curb)	16'	refer to notes 1 and 2
Side slopes: - within clear zone - outside clear zone	6:1 3:1 max	6:1 3:1 max	6:1 3:1 max	6:1 3:1 max
VERTICAL CLEARANCE (Minimum)				
Over Roadway	16'-6"	16'-6"	16'-6"	16'-6"
Over Streets	16'-6"	16'-6"	16'-6"	16'-6"
Over Railroad	23'-0"	23'-0"	23'-0"	23'-0"
Over electrified light Rail	26'-6"	26'-6"	26'-6"	26'-6"
Overhead Signs	21'-0"	21'-0"	21'-0"	21'-0"
Pedestrian Crossings	17'-6"	17'-6"		

	MAINLANES	FRONTAGE ROADS	RAMPS/DIRECT CONNECTORS	CROSSING STREETS ¹
Design Vehicles	WB-50	WB-50 WB-67 for U-Turns	WB-50	As noted in Table 11-3
Driveway Radius	N/A	30' min commercial, 15' min. residential	N/A	30' min commercial, 15' min. residential

Notes:

1. See Table 11-3 for crossing street functional classification
2. The face of the new bridge columns shall be located 6 feet or more from the face of curb
3. To mitigate restrictions on the design imposed by sight distance, it is acceptable to position the 8-foot shoulder the inside of the curve and the 4-foot shoulder on the outside of the curve.
4. Ramps and direct connectors shall have a minimum stopping sight distance (SSD) of 425' with the exception of the following listed ramps and direct connectors, for which the minimum SSD is as noted.

Segment 1

- DC ramp connecting IH35W-NB to IH820-WB shall have a minimum SSD of 305'.
- DC ramp connecting IH35W-NB to IH820-EB shall have a minimum SSD of 305'.
- DC ramp connecting IH35W-SB to IH820-WB shall have a minimum SSD of 360'.
- DC ramp connecting IH35W-SB to IH820-EB shall have a minimum SSD of 360'.
- DC ramp connecting IH820-WB to IH35W-NB shall have a minimum SSD of 360'.
- DC ramp connecting IH820-WB to IH35W-SB shall have a minimum SSD of 305'.
- DC ramp connecting IH820-EB to IH35W-NB shall have a minimum SSD of 305'.
- DC ramp connecting IH820-EB to IH35W-SB shall have a minimum SSD of 305'.
- Managed Toll Lane DC ramp connecting IH35W-NB to IH820-EB shall have a minimum SSD of 360'.
- Managed Toll Lane DC ramp connecting IH35W-SB to IH820-EB shall have a minimum SSD of 305'.
- Managed Toll Lane DC ramp connecting IH820-WB to IH35W-NB shall have a minimum SSD of 305'.
- Managed Toll Lane DC ramp connecting IH820-WB to IH35W-SB shall have a minimum SSD of 360'.
- DC ramp connecting SH183-WB to IH820-SB shall have a minimum SSD of 360'.

Segment 2

- DC ramp identified on the RID schematic as WR8248 shall have a minimum SSD of 360'.
- DC ramp identified on the RID schematic as WR248 shall have a minimum SSD of 305'.

5. Ramps and direct connectors shall have a maximum slope of 4% with the exception of the following listed ramps and direct connectors for which shall have a maximum slope of 5%. However, Developer shall prepare the design using Good Industry Practice having flatter slopes where possible.

- Managed Toll Lane DC ramp connecting IH35W-NB to IH35W-EB (RID schematic Sta. 20+50 to Sta. 30+25)
- Managed Toll Lane ramp connecting IH820-EB to Haltom Road (RID schematic Sta. 25+00 to Sta. 38+00)
- Managed Toll Lane ramp connecting IH820-WB to US377 (RID schematic Sta. 18+10 to Sta. 25+00)
- Ramp connecting IH820-EB to Rufe Snow (RID schematic Sta. 18+25 to Sta. 23+50)
- Ramp connecting SH26 to IH820-WB (RID schematic Sta. 25+50 to Sta. 32+80)
- Ramp connecting IH820-WB to Iron Horse Drive (RID schematic Sta. 22+00 to Sta. 29+50)