

## NCINC Meeting Notes on Design of I-35

### **Attendees:**

- Charles Davidson, E.I.T., I-35 Project Manager, **TxDOT**
- Robert Carrillo, I-35 **Consultant w/Carter-Burgess**
- Joseph Carrizales, P.E., **TxDOT**
- Jeffrey Skillman, NCINC, **Wilshire Wood/Delwood I NA**
- Dohn Larson, NCINC, **Hancock NA**
- Bo McCarver, NCIN, **Blackland NA**
- Shekhar Govind, P.E., **NCINC Technical /Engineer Consultant**
- Ken Ronsonette, NCINC, **Delwood II NA**

### **Meeting Date:**

- **November 2, 2001 at TxDOT office Building #2 from 9:00 am to 11:30 am**

### **• Project Purpose:**

- **Q-** Are there structural defects that necessitate rebuilding?
- **A-** Robert Carrillo, TxDOT, said their BRINSAP (bridge inspection program) shows no structural defects. The defects are in out-dated designs and inadequate capacity.
  
- **Q-** TxDOT has previously indicated that the current lane volume is beyond its capacity. Hypothetically, how many lanes would it take to carry the projected traffic load?
- **A-** Charles Davidson, E.I.T.; I-35 Project Manager indicated that modeling suggests that, to meet projected capacity, they would need to build 9 lanes in both directions. The modeling includes having light rail in place, SH130 with truck traffic diverted; and both Loop 1 and 183 built out.
  
- **Q-** What effects will SH130 have on these projections.
- **A-** TxDOT indicated that SH130 will relieve some of the direct traffic associated with trucks but it will only help redirect a small portion of traffic.
  
- **Q-** Have origin destination studies been done.
- **A-** TxDOT indicated that no origin destination studies were done. They explained that they feel the path of least resistance will be taken by the drivers therefore no study was done.
  
- **Q-** Does the proposed design take into account how the traffic actually operates regarding exiting the highway? Has a driving behavior model been used?

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- A- The design is based on models, which look at a combination of factors that include time, distance, and driving behavior. The model is called Trans CAT and TxDOT is using level 3 to 4 to do the modeling for the I-35 project. With a 3 to 4 level the level of services will vary and this allows TxDOT to isolate and see traffic patterns. The model is using 2025 traffic projections. If they utilize a 4 to 5 level all traffic stops and they cannot isolate and see traffic patterns.
  - Q-Has the Airport Blvd intersection been fully optimized and evaluated?
  - A- Robert Carrillo with Carter- Burgess indicated that the intersection of Airport Blvd has not been fully optimized and that flow patterns have not been evaluated onto Airport going East or West.
- **Design Issues, Limitations, Constraints:**
    - Q- If the design for keeping I-35 depressed through Airport Blvd was redrawn with the center gap shifted to the West side, what are the implications to the Hancock neighborhood? Have any designs been drawn to respond to the request from the March 17 charette?
    - A- Robert Carrillo with Carter-Burgess indicated that the initial first request was made at the June 11<sup>th</sup> meeting and from an engineering perspective it complicates the angles of Airport Blvd. due to the curvature. He also indicated that they had contacted the railroad via an e-mail and based on his recollection CAPMETRO stated that they could neither move nor shut down the tracks. Robert indicated that the RR was a fatal flaw so no further consideration was given to shifting the design. Robert indicated that he thought Surendi Mowa (?) at CAPMETRO was the person who stated it was not possible.
    - Q- The proposed design has the main lanes depressed beneath 38<sup>1/2</sup> street and then elevated over the railroad. Can you tell us the grade for the elevated portion?
    - A – Robert Carrillo, Cater-Burgess indicated the grade was 4.8%.
    - Q- What are the fatal flaws not allowing I-35 to be depressed through Airport Blvd?
    - A- Joseph Carrizales with TxDOT Austin District indicated that there were three (3) issues that they felt could not be solved:
      - FATAL FLAWS.
        - A- Railroad
        - B- Constructability
        - C- Drainage

The following open discussion took place on the three fatal flaw and is captured below:

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### **(a) Railroad:**

- Clearance requirements will require the main lanes to be at least 16.5 feet below the railroad bridge – this is lower than the main lanes south of that point and will require substantial drainage considerations to avoid flooding the lowest points during heavy rains.
- CAPMETRO leases the lines to move goods. They are bound to meet their contractual agreements. A freight scale that is located southeast of the I-35 railroad crossing.
- When TxDOT contacted CapMetro, they had indicated that they would need the RR to be shut down for at least 18 to 24 months. They (TxDOT) would not support the use of a shoe-fly due to constructability issues (i.e., the alignment of the existing support columns make it impossible to alter the alignment of the rail line).

### **(b) Constructability:**

- Currently TxDOT is assessing this as one of the three fatal flaws. However, this issue has not been fully evaluated by TxDOT and their consultant since they felt they could not solve the problems associated with the railroad.
- Discussion on constructability did go over how they cannot work or build under the existing elevated lanes between Airport Blvd and 41<sup>st</sup> St without removing all or a portion of the existing structure. TxDOT confirmed that they anticipate building the north bound frontage road farther to the east first. Then constructing the new-elevated HOV lanes between the two existing elevated structures. During this second step, two center lanes of the existing lower level (one in each direction) would be shut down and each of the upper levels would be striped for three lanes of traffic.
- Questions were asked regarding the details of construction in the area of the current elevated structures in the area between Airport Blvd and 41<sup>st</sup> St. NCINC representatives pointed out that these structures are very closely built and that in order to build the necessary supports for the new HOV bridge in this area would require the removal of at least one lane from each of the existing center structures. (See attached illustration) It was very clear that TxDOT has not reviewed this and this may present a major issue on being able to construct the existing design as proposed by the consultant.

### **(c) Drainage:**

- No current evaluation was done by TxDOT regarding the impacts to adjacent creeks for either the current proposed design or a design with I-35 depressed through Airport Blvd. Joseph Carrizales, P.E. with TxDOT indicated that he would authorize both the evaluation of constructability and drainage if we (NCINC) could obtain a commitment from CAMPO to close or reroute the railroad during the necessary period of construction.

**ACTION ITEM:** The representatives of (NCINC) discussed after the meeting what steps would need to be taken to address the TxDOT position that the railroad is the fatal flaw as stated by Joseph Carrizales, P.E. In summarizing Mr. Carrizales discussion “

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...TxDOT opinion is that they will not initiate further discussion concerning the railroad due to the fact that the consultants contract is expiring and has reached the contract limits.”

### **Design Issues, Limitations, Constraints:**

- **Q-** The proposed design of I-35 Airport Blvd. Interchange is nearly identical to the existing configuration except for the absence of a direct exit to Airport Blvd. from north bound I-35. How does the new design, which requires exiting at 38-½ help traffic merge onto Airport Blvd in a safe manner?
- **A-** Robert Carrillo with Carter-Burgess indicated that they have not fully optimized the intersection and that Airport Blvd traffic flows have not been considered.
- **Q-** Could you combine the northbound I-35 exits with Airport Blvd. and 51<sup>st</sup> Street by locating the exit to the north of Airport Blvd with a turn around for traffic to return to Airport Blvd?
- **A-** Robert Carrillo with Carter-Burgess indicated that this is not conventional TxDOT engineering to locate an exit ramp after the intersection with the destination road and that they believe driver expectancy would be a concern. They also indicated that this would require advance signing to inform the driver of the loop around to get to Airport Blvd.
- **Q-** At our previous meetings with TxDOT, the Blackland Neighborhood has said it prefers that MLK be the major carrier of east-west traffic and that traffic on Manor Road be minimized so as to accommodate the growing entertainment district near Hoovers. The present draft of the Upper Boggy Creek plan called for Manor Road to be an “alternative transportation corridor” accommodating bicycle and public transportation. Your new design shows a northbound exit ramp onto Manor Road and has other features that establish it as a major east-west roadway. Why have you altered the design in this way?
- **A-** Robert Carrillo, TxDOT, The design accommodates CAMPO plans that call for optimizing east-west traffic flow.

### **Safety and Environmental Impacts:**

- **Q-** Why are the cantilevered access roads only used up to the 38-½ street intersection in the present design?
- **A-** Robert Carrillo with Carter-Burgess indicated that going past 38-½ street complicates the design.
- **Q-** Why was a vehicular crossing at Hancock Center added to the design after the July 14<sup>th</sup> charrette? How does this improve the safety of cyclist and pedestrians over the current condition?

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- **A-** Joseph Carrizales, TxDOT indicated that this was added based on the NA request and that they did not hear anything from Hancock Center requesting this connection. It was pointed out to Joseph and Charles Davidson that the NA where wanting a safe crossing for pedestrian access into Hancock and not so much vehicular access. They indicated that they could incorporate wider sidewalks for pedestrian and cyclists traffic. They also clarified that without a vehicular intersection, traffic along the feeder road would not be stopped to handle pedestrian and cyclist traffic – instead, a flashing yellow light would be employed.
  
- **Q-**When the expanded freeway is completed, what is your estimate of the number of days per year Austin will be out of compliance with EPA clean air standards?  
**A-**Robert Carrillo, TxDOT said it could not be estimated because the weather cannot be predicted.

### **TECHNICAL DESIGN QUESTIONS:**

- **Q** - Traffic modeling, volumes, engineering and design specifications were left with Charles Davidson, I-35 Project Manager and the NCINC representatives requested that this information be collected and provided to us by the middle of December.

### **MEETING NOTES:**

- Meeting notes taken by Ken Ronsonette, NCINC, Delwood II NA on November 2, 2001 based on conversations held by attendees represented. Notes were submitted to NCINC representatives who attended November 2, 2001 meeting for final review and comment. Our goal is to provide these meeting notes to the NCINC neighborhoods so that they have a better understanding of the I-35 project so that more informed decision can be made on these issues as they regard impacts to your area and/or surrounding neighbors. NCINC appreciated you taking the time to read this information. Please send any comment to your NCINC representative. Thank You.

## Details from the discussion of Constructability

Initially, we positioned our discussion about the topic of constructability as one of the TxDOT team educating us so that we could communicate more clearly with our constituents about why the option of depressing I-35 between 38½ St and 51<sup>st</sup> St would require an additional 100' of ROW. Shortly after we began this discussion, however, it appeared we were actually treading on unexplored ground regarding the constructability of TxDOT's proposed design.

### ***What we thought we already understood***

Since the March 17<sup>th</sup> charrette, TxDOT has been telling us that depressing I-35 through Airport Blvd will involve moving the ROW line farther to the east. At the charrette, the team showed a map that illustrated their expectation just such a plan. This map did, in fact, take an additional "swath" of land that included at least five (5) properties on Bradwood Rd and the chapel at St. George's Episcopal Church. The map also showed a substantial "gap" between the northbound frontage road and the northbound main lanes.

To most of the participants, it appeared that this "gap" was the reason for the ROW dipping so deeply into the eastside neighborhoods. The TxDOT team explained that this "gap" was a necessary by-product of the construction process. The construction project will consist of several phases – each phase will include one or more tasks to either build new traffic lanes/bridges or demolish existing traffic lanes/bridges.

During construction, a combination of existing lanes/bridges and new lanes/bridges will be required to maintain a minimum of three lanes of traffic in each direction. The "gap" is the result of the last section of existing lanes that will remain in operation during construction and only be shut down after all other work is completed.

Three of the charrette participants (Dohn Larson, Jeffrey Skillman, and Ken Ronsonette) asked the Carter-Burgess engineer (Robert Carrillo) to consider the possibility of moving that 'gap' from the east side to the west side of the project. This would, presumably, shift the need for additional ROW onto the less controversial parking lots of Hancock Center.

*Note: This request was not answered until the meeting with TxDOT on November 2<sup>nd</sup>.*

At both the Commercial & Industry Users meeting held on October 9<sup>th</sup> at the LBJ Auditorium and the Cherrywood NA review meeting held on October 11<sup>th</sup> at the Asbury Methodist Church, the design team responded to questions about the depressing of I-35 through Airport Blvd as having three key issues:

1. The railroad cannot be shut down or rerouted for the necessary period of construction (i.e., for excavation under the railroad and construction of a new rail bridge);
2. Such a design would require an additional 100' of ROW on the east side which will take the chapel at St. George's Church; and
3. Such a design will require a two-mile drainage tunnel to drain the site

Questions about the details associated with these claims went unanswered at the October 11<sup>th</sup> meeting.

## ***What we confirmed on November 2<sup>nd</sup>***

The existing elevated structure between 41<sup>st</sup> St and Fairwood Rd is what poses the greatest challenge of constructability. At some point during construction, various portions of the structure will need to be taken down and replaced with a new roadway (either an elevated bridge or an excavated channel, depending on which design is being implemented). Ultimately, the entire existing structure will need to be replaced.

For the purpose of our discussions, we focused on the proposed design since that is the only design that had been closely scrutinized by TxDOT.

The proposed design calls for staging the removal and replacement steps to such that each stage will result in the replacement of the portion that is removed with a comparable new structure onto which traffic can be moved during the next stage.

The initial stages, as confirmed by Robert Carrillo, would be:

1. Build the new northbound frontage road on the east side
2. Move traffic from the two center-most lanes of the existing structure toward the outside edges of the structure (re-striping each of the existing upper decks to carry three lanes of traffic). Remove the center-most section of the existing structure to make room for the columns to support the new elevated HOV lanes. Build the new elevated HOV lanes down the center of the current structure.
3. Move three lanes of traffic from one of the existing elevated structures (most likely the west side structure) onto the new elevated HOV lanes. Remove the abandoned elevated structure. Build the new main lanes for the indicated side (e.g., 5-6 southbound lanes on the west side)
4. Construction would progress in similar stages throughout the project.

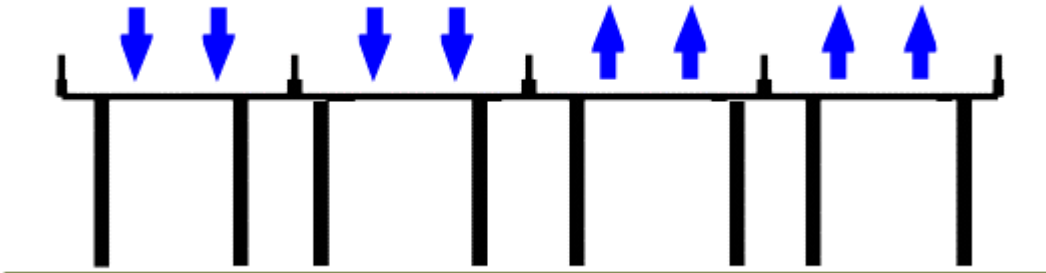
## ***What didn't make sense to us***

We could understand the sequence of construction stages and the fact that a single section of roadway might remain in use right up to the final opening of the new road. But what wasn't clear (in fact it was rather confusing) was why the proposed design could be built without creating the same "gap" and, therefore, requiring the same 100' of additional ROW.

So, during the November 2nd meeting with the TxDOT team, we drew some pictures to explain our confusion. The following illustrations are roughly the same as those that we used in the meeting, except that these represent two separate cross sections (one where both the upper and lower levels are at the same level and the other where the split is more obvious).

Typical Cross-Section of Elevation at Ardenwood

Current Structure Before Modification



Typical Cross-Section of Elevation at Ardenwood

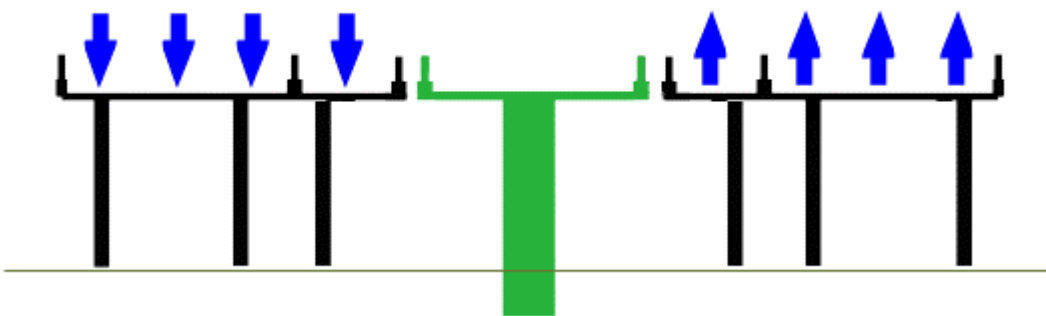
Phase I - Remove Center section to clear way for new HOV Lanes



*In the illustration above, we questioned how can they remove enough of the center-most roadway to allow for the construction of the new HOV structure and still leave a usable portion of roadway for one lane of traffic (note how precariously the remaining lane is perched on that one remaining column).*

Typical Cross-Section of Elevation at Ardenwood

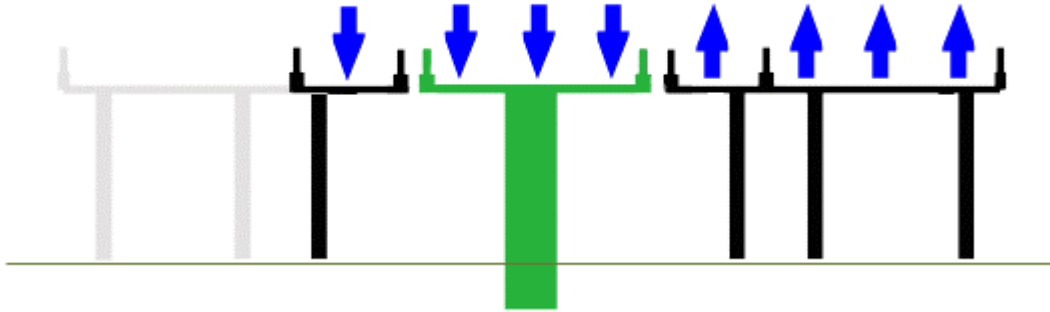
Phase II - Build Bridge for HOV Lanes



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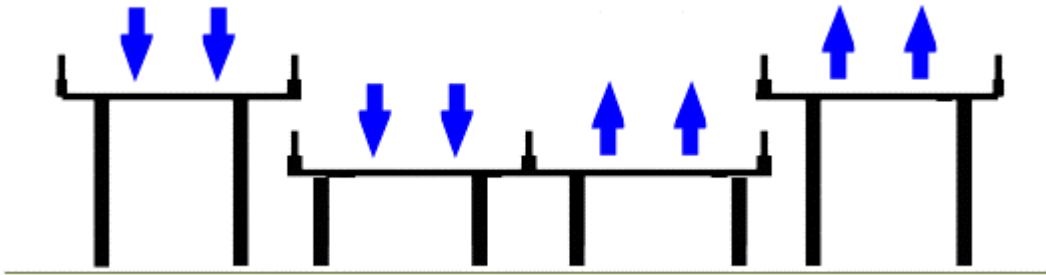
Typical Cross-Section of Elevation at Ardenwood

Phase III - Remove one outside section to clear way for new Main Lanes



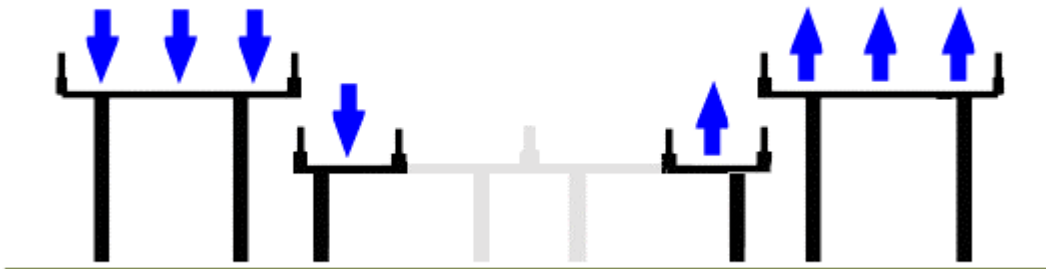
Typical Cross-Section of Elevation at 41st Street

Current Structure Before Modification



Typical Cross-Section of Elevation at 41st Street

Phase I - Remove Center section to clear way for new HOV Lanes

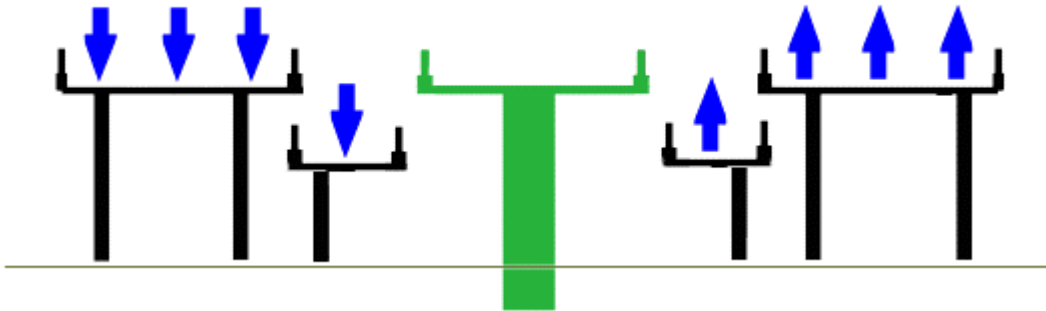


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Typical Cross-Section of Elevation at 41st Street

Phase II - Build Bridge for HOV Lanes



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Typical Cross-Section of Elevation at 41st Street

Phase III - Remove one outside section to clear way for new Main Lanes

