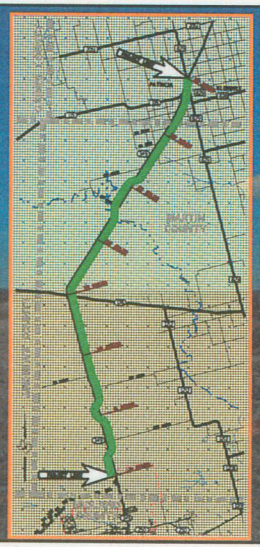
December 11, 2006

SH 349

Martin & Dawson Counties



STAKEHOLDERS' MEETING # 1

Preliminary Design Concept Meeting

SH 349 Proposed Ultimate widening

Purpose of Presentation

- Present an Overview of the Project
- Present the Concept Alternatives for
  - Main lanes
  - SH 349 / SH 176 interchange
  - Proposed Patricia By-Pass

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

Members of the Stakeholders Group

ORGANIZATION	REPRESENTING	TELEPHONE NO.
TxDOT- Odessa District	Lauren Garduño, P.E.	432 - 332 0501
TxDOT- Lubbock District	Randy Hopmann, P.E.	806 - 745 4411
Federal Highway Administration (FHWA)	Zenia Hernandez	512 - 536 5962
Martin County	Judge Corky Blocker	432 - 756 2231
Dawson County	Judge Sam Saleh	806 - 872 7544
Midland Odessa Transportation Alliance (MOTRAN)	James Beauchamp	432 - 563 6240
Ports to Plains Corridor Coalition	Michael Reeves	806 - 775 2338

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

Need for the Project

State (Strategic) Need:

- ❑ Develop mobility corridors for safe and efficient movement of people, vehicles, goods

Regional (West Texas – Permian Basin) Need:

- ❑ Public desire for an improved north-south mobility corridor from the Permian Basin to Lubbock

Project Need:

- ❑ Existing corridor is not in compliance with Texas Trunk System standards
- ❑ Existing corridor does not meet expectations of a federal or state mobility trade corridor

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

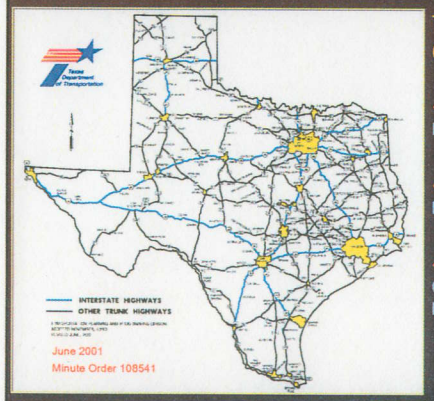
Purpose of the Project

- Develop the SH 349 to Texas Trunk System Standards
- SH349 designated as:
  - Part of Texas Trunk System (Nov.1990)
  - Segment of *La Entrada Al Pacifico (LEAP)* Trade Corridor (Texas Legislature, 1997)
  - The west leg of *Ports to Plains* Trade Corridor (Texas Transportation Commission, 2001)
  - Latest National High Priority Corridor as part of *LEAP* (SAFETEA- LU Federal Transportation Bill, 2006)

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

Texas Trunk System



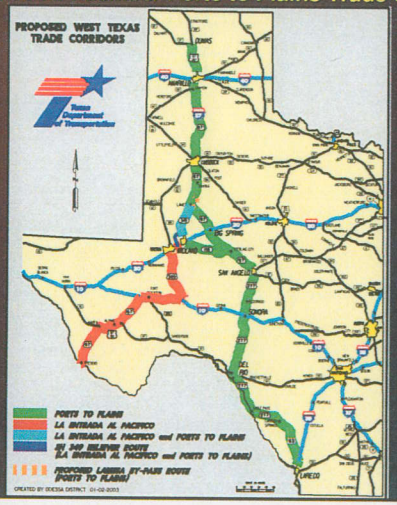
TTC Minute Order 91029 (11-29-1990)

- PLANNED RURAL NETWORK
- 4 LANES OR BETTER-DIVIDED ROADWAY
- INCLUDES & COMPLEMENTS THE INTERSTATE HWY. SYSTEM

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

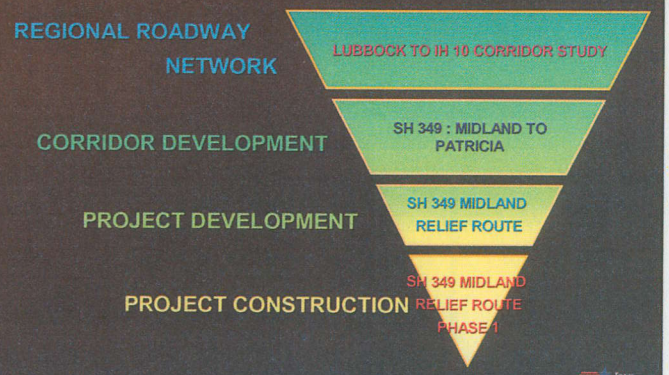
La Entrada Al Pacifico/ Ports to Plains Trade Corridor



Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

PROJECT PROCESS



Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

Lubbock to IH 10 Corridor Study

- **Purpose:** Develop a north-south link connecting IH 10 to IH 27 in Lubbock
- **Need:** Intermodal Surface Transportation Efficiency Act (1991) ISTEA
  - **NAFTA (1993):** Increase in trade traffic expected to/ from Mexico
  - **Travel Efficiency:** No north-south direct route linking IH 10 to IH 27 through Lubbock
  - **Economic:** Potential for Economic diversification and development in West Texas

Texas Department of Transportation Odessa District

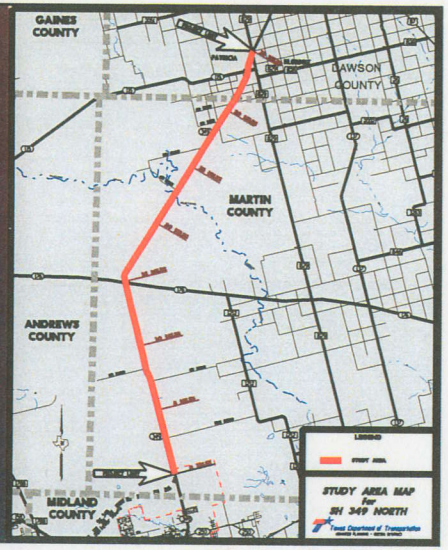
SH 349 Proposed Ultimate widening

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

Project Limits/ Scope

- In Martin and Dawson Counties
- Two miles north of Midland County line, to FM 829, north of Patricia
- Martin County - 31 miles
- Dawson County- 4 miles
- Total length – 35 miles



SH 349 Proposed Ultimate widening

Priority / Commitments

Funding Allocation committed at Federal & State level for SH 349

SAFETEA LU Bill:

Federal Award- $1.6 Million

State Match- 20%: $400,000

Total Allocation: $2.0 Million (80% fed- 20% state)

Local entities to match 10% for Right-of-Way & eligible utilities - 43 TAC §15.55(c)

Texas Department of Transportation Odessa District

NEPA Requirements (National Environmental Policy Act)

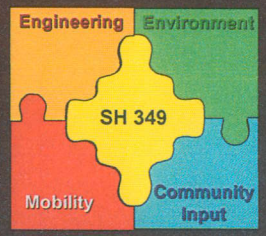
Compliance with the NEPA Process

- Evaluate Multiple Alternatives
- Environmental Related Investigations
- Public Involvement Process
- Impacts/Mitigation
- Approval: FHWA, TxDOT
- Environmental Documentation (FONSI)

Evaluation Factors

Engineering
- Constructability
- ROW
- Utilities
- Cost

Mobility
- Safety/Congestion
- Regional Mobility
- Travel Efficiency



Environment
- Land Use Impacts
- Displacements
- Noise
- Cultural Resources
- Natural resources
- Environmental Justice

Community Input
- Public Meetings
- MAPO Meetings
- Stakeholder Meetings
- Public Hearing
- Press Releases
- Support from local entities

Project Development Process

2 STAGE SCREENING PROCESS

- Develop Alternatives
- Evaluate Alternatives
- Evaluate Environmental Impact
- Recommend a Preferred Alternative
- Reach a consensus on the Preferred Alternative

STAGE 1:

SCREEN FOR FATAL FLAW ON OVERALL PROJECT

STAGE 2:

SCREEN FOR PREFERRED ALIGNMENT & CONCEPT LAYOUTS

- MAIN LANES
- SH 349 / SH176 INTERCHANGE
- PROPOSED PATRICIA BY- PASS

STAGE 1: SCREEN FOR FATAL FLAW ON OVERALL PROJECT

Alternative # 1: NO BUILD

Alternative # 2: WIDEN EXISTING ROADWAY

Alternative # 3: NEW LOCATION ROADWAY

BROADEST IN SCOPE

SH 349 Proposed Ultimate widening

STAGE 1: FATAL FLAW SCREENING
EVALUATION OF ENGINEERING/ MOBILITY FACTORS

ENGINEERING/ MOBILITY FACTORS	ALTERNATIVE # 1 NO BUILD	ALTERNATIVE # 2 WIDEN EXISTING ROADWAY	ALTERNATIVE # 3 PROPOSED NEW LOCATION ROADWAY
MEETS NEEDS & PURPOSE	NO		
MEETS TxDOT STANDARDS FOR TEXAS TRUNK SYSTEM	NO		
Intersection Impacts			
Constructability			
Major Utility conflicts			
Acreage			
COST			
MOBILITY			
Safety/ Congestion			
North/ south Regional Mobility			
Travel Efficiency			
Connectivity at Project Limits			
Connectivity at Intersecting Roads			
OVERALL POTENTIAL ENVIRONMENTAL IMPACT			
OVERALL EVALUATION			

LEGEND: NO IMPACT | NO SIGNIFICANT IMPACT | POTENTIAL SIGNIFICANT IMPACT

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

STAGE 2: SCREEN FOR PREFERRED ALIGNMENT & CONCEPT LAYOUTS

- MAIN LANES PROPOSED WIDENING
- SH 349 / SH 176 INTERCHANGE
- PROPOSED PATRICIA BY- PASS

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

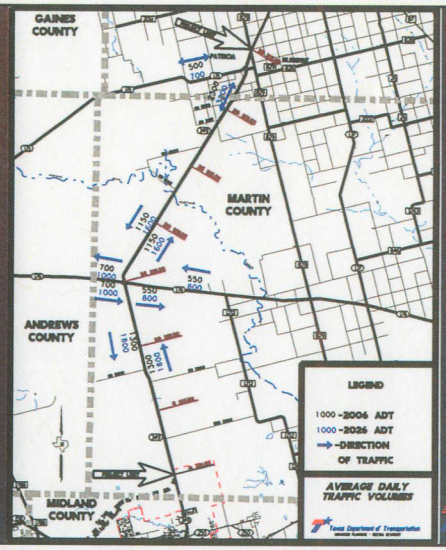
STAGE 2: MAIN LANES PROPOSED WIDENING

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

STAGE 2: MAIN LANES PROPOSED WIDENING

Average Daily Traffic Volumes



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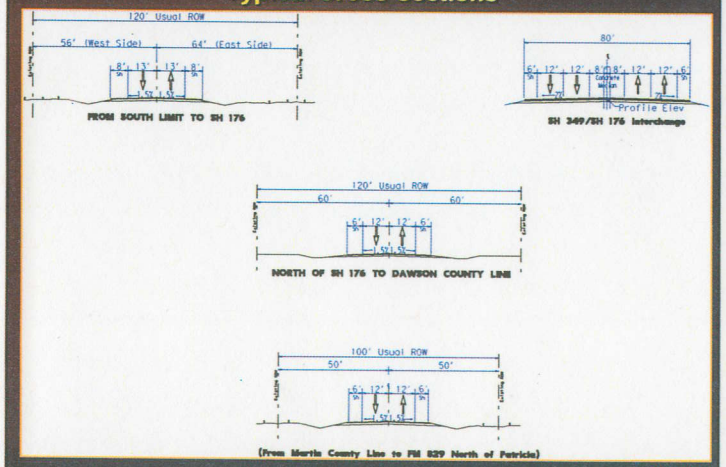
SH 349 Proposed Ultimate widening

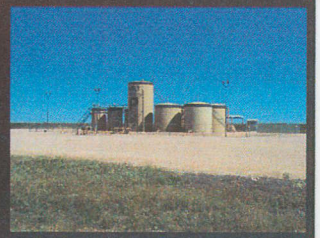
Stage 2- MAIN LANES: Existing Typical Cross Sections



Odessa District

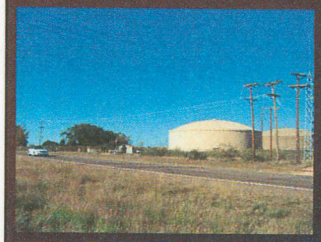
SH 349 Proposed Ultimate widening

Constraint Examples

SH 349 Proposed Ultimate widening

Constraint Examples




SH 349 Proposed Ultimate widening

STAGE 2: MAIN LANES WIDENING CRITERIA

Maximize use existing roadbed – consequential shifts in existing horizontal alignment & roadway crown

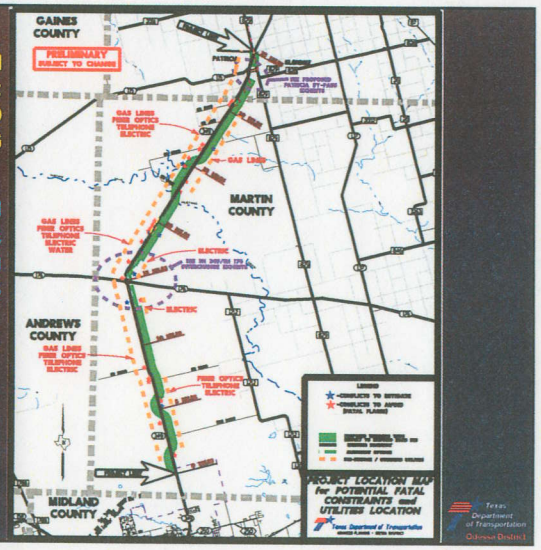
- Avoid "fatal flaw" environmental & utility conflicts abutting existing R.O.W.
- Minimize number of shifts in horizontal alignment
- Avoid displacement of homes and businesses
- Minimize additional R.O.W. taking – no provisions for frontage roads

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

STAGE 2 MAIN LANES: PROPOSED WIDENING

Preferred Alignment & Existing Constraints



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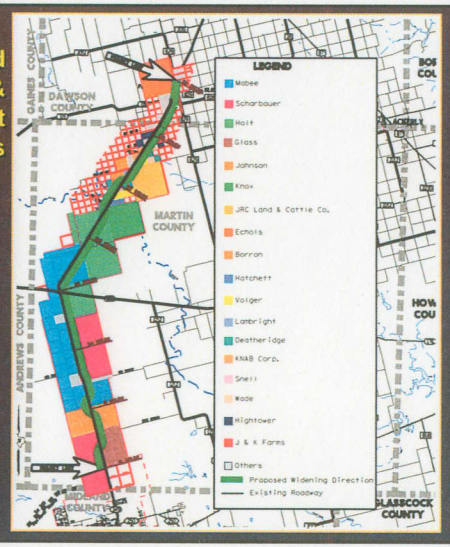
SH 349 Proposed Ultimate widening

Proposed Alignment & Adjacent Landowners



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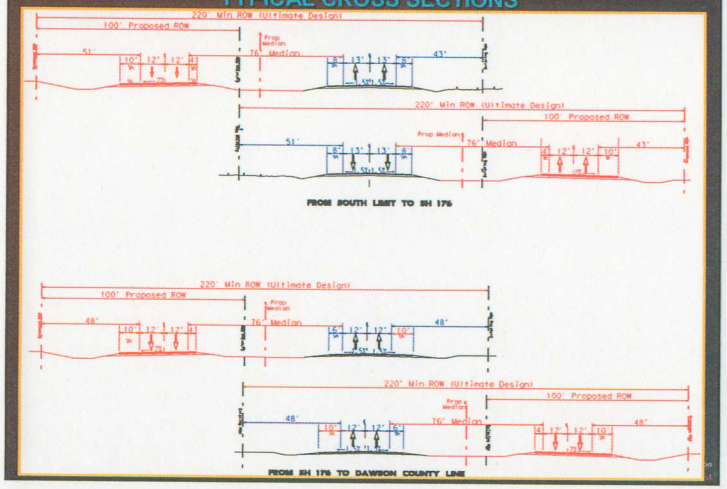
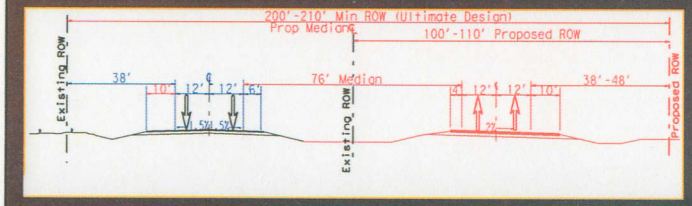
SH 349 Proposed Ultimate widening

STAGE 2- MAIN LANES PROPOSED WIDENING
TYPICAL CROSS SECTIONS



SH 349 Proposed Ultimate widening

STAGE 2- MAIN LANES PROPOSED WIDENING
TYPICAL CROSS SECTION



In Dawson County

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SH 349 Proposed Ultimate widening

STAGE 2: MAIN LANES PROPOSED WIDENING EVALUATION SUMMARY

ENGINEERING / MOBILITY & ENVIRONMENTAL FACTORS	ALTERNATIVE # 1 NO BUILD	ALTERNATIVE # 2 WIDEN EXISTING ROADWAY
ENGINEERING / MOBILITY FACTORS		
ENVIRONMENTAL FACTORS		
OVERALL EVALUATION		

LEGEND: NO IMPACT | NO SIGNIFICANT IMPACT | POTENTIAL SIGNIFICANT IMPACT

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

STAGE 2: SH 349 / SH 176 INTERCHANGE

ALTERNATIVES FOR INTERCHANGE CONCEPTS

ALTERNATIVE # 1- NO BUILD

ALTERNATIVE # 2

- ▶UPGRADE EXISTING INTERCHANGE RAMPS
- ▶RAISE BRIDGE DECK

ALTERNATIVE # 3

- ▶TWO QUADRANT CLOVERLEAF INTERCHANGE
- ▶RAISE BRIDGE DECK

ALTERNATIVE # 4

- ▶PARTIAL DIAMOND INTG
- ▶OPTIONAL LOOP RAMPS
- ▶NEW OVERPASS

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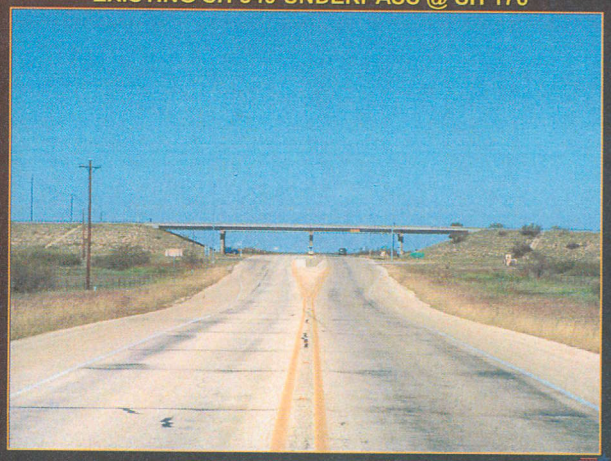
SH 349 Proposed Ultimate widening

EXISTING SH 349 UNDERPASS @ SH 176

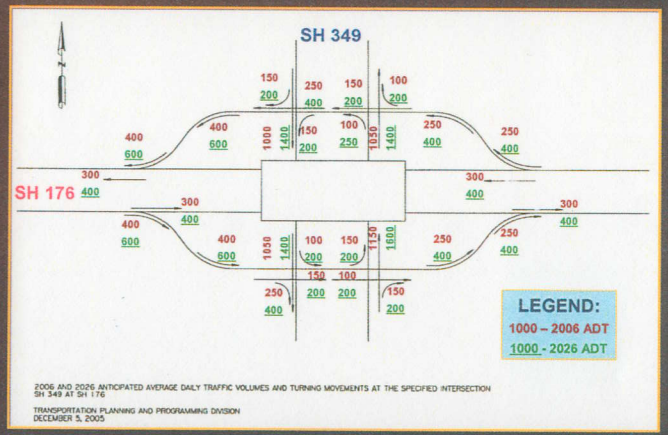


Looking North

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

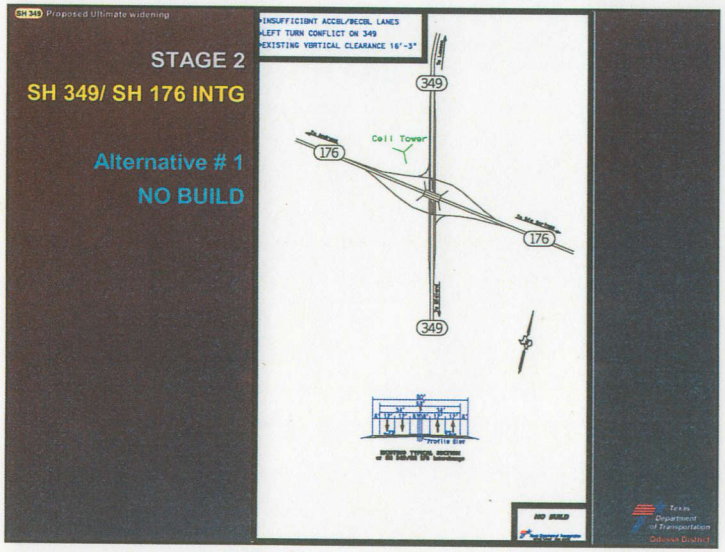
SH 349/ SH 176 INTG. TURNING MOVEMENT TRAFFIC VOLUMES (ADT)

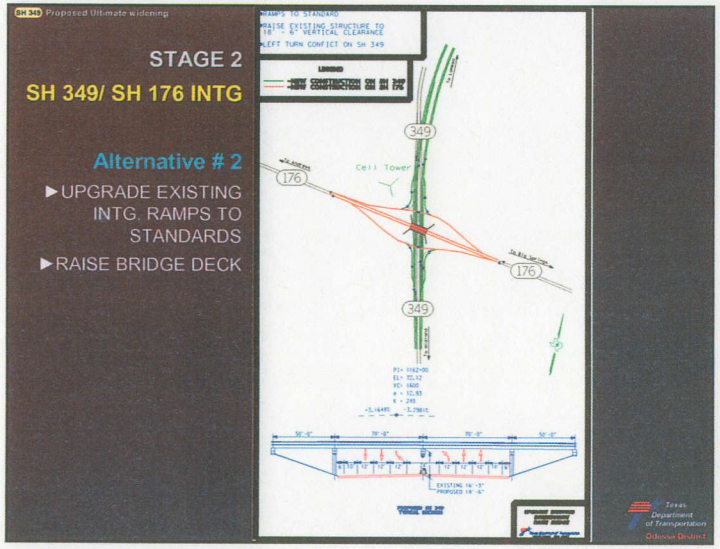


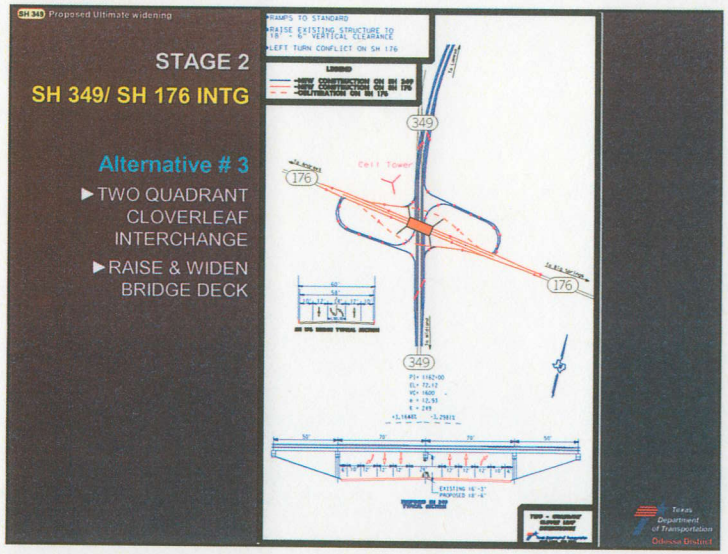
2006 AND 2026 ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES AND TURNING MOVEMENTS AT THE SPECIFIED INTERSECTION SH 349 AT SH 176

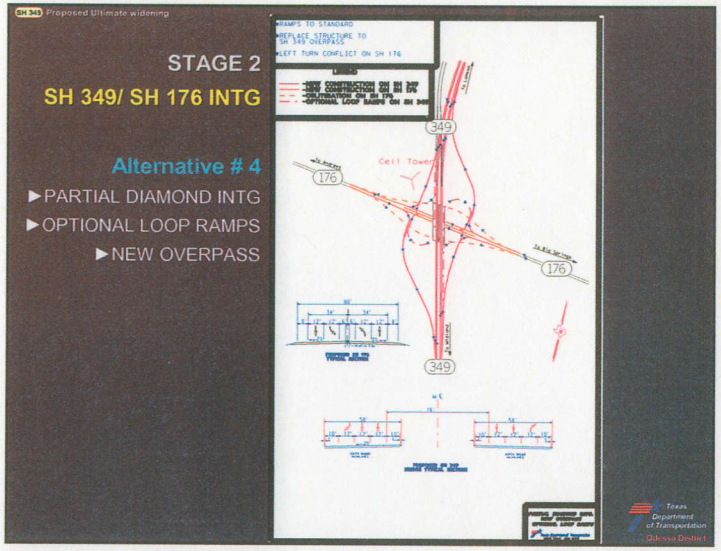
TRANSPORTATION PLANNING AND PROGRAMMING DIVISION
DECEMBER 5, 2005

Texas Department of Transportation Odessa District


SH 349 Proposed Ultimate widening
STAGE 2
SH 349/ SH 176 INTG
Alternative # 1
NO BUILD
INSUFFICIENT ACCEL/DECEL LANES
LEFT TURN CONFLICT ON 349
EXISTING VERTICAL CLEARANCE 16'-3"
349
176
Cell Tower
NO BUILD
Texas Department of Transportation
Odessa District


SH 349 Proposed Ultimate widening
STAGE 2
SH 349/ SH 176 INTG
Alternative # 2
▶UPGRADE EXISTING INTG. RAMPS TO STANDARDS
▶RAISE BRIDGE DECK
RAMPS TO STANDARD
RAISE EXISTING STRUCTURE TO 18' - 6" VERTICAL CLEARANCE
LEFT TURN CONFICT ON SH 349
349
176
Cell Tower
Texas Department of Transportation
Odessa District


SH 349 Proposed Ultimate widening
STAGE 2
SH 349/ SH 176 INTG
Alternative # 3
▶TWO QUADRANT CLOVERLEAF INTERCHANGE
▶RAISE & WIDEN BRIDGE DECK
RAMPS TO STANDARD
RAISE EXISTING STRUCTURE TO 18' - 6" VERTICAL CLEARANCE
LEFT TURN CONFLICT ON SH 176
349
176
Cell Tower
Texas Department of Transportation
Odessa District


SH 349 Proposed Ultimate widening
STAGE 2
SH 349/ SH 176 INTG
Alternative # 4
▶PARTIAL DIAMOND INTG
▶OPTIONAL LOOP RAMPS
▶NEW OVERPASS
RAMPS TO STANDARD
REPLACE STRUCTURE TO SH 349 OVERPASS
LEFT TURN CONFLICT ON SH 176
349
176
Cell Tower
Texas Department of Transportation
Odessa District

SH 349 Proposed Ultimate widening

STAGE 2: SH 349 / SH 176 INTERCHANGE

TURNING MOVEMENT VOLUME CONFLICT INDEX

Conflict Index Summary

Turning Movement Location	ALTERNATIVE # 1 NO BUILD	ALTERNATIVE # 2 ►UPGRADE EXISTING INTG RAMPS ►RAISE BRIDGE DECK	ALTERNATIVE # 3 ►TWO QUADRANT CLOVERLEAF INTERCHANGE ►RAISE & WIDEN BRIDGE DECK	ALTERNATIVE # 4 ►PARTIAL DIAMOND INTG ►NEW OVERPASS ►OPTIONAL LOOP RAMPS	Best Case ►FULL CLOVERLEAF INTG. ►DIRECTIONAL RAMPS
SH 349 North of SH 176	0.44	0.44	0.09	0.09	0.07
SH 349 South of SH 176	0.57	0.57	0.14	0.18	0.07
SH 176 West of SH 349	0.04	0.04	0.27	0.26	0.13
SH 176 East of SH 349	0.03	0.03	0.33	0.24	0.12
Overall Conflict Index	1.07	1.07	0.83	0.77	0.39

Odessa District

SH 349 Proposed Ultimate widening

STAGE 2: SH 349 / SH 176 INTERCHANGE

EVALUATION SUMMARY

ENGINEERING / MOBILITY FACTORS	ALTERNATIVE # 1 NO BUILD	ALTERNATIVE # 2 ►UPGRADE EXISTING INTG. RAMPS ►RAISE BRIDGE DECK	ALTERNATIVE # 3 ►TWO QUADRANT CLOVERLEAF INTERCHANGE ►RAISE & WIDEN BRIDGE DECK	ALTERNATIVE # 4 ►PARTIAL DIAMOND INTERCHANGE ►NEW OVERPASS ►OPTIONAL LOOP RAMPS
ENGINEERING / MOBILITY FACTORS				
ENVIRONMENTAL FACTORS				
OVERALL EVALUATION				

LEGEND: NO IMPACT | NO SIGNIFICANT IMPACT | POTENTIAL SIGNIFICANT IMPACT

Texas Department of Transportation Odessa District

SH 349 Proposed Ultimate widening

STAGE 2: PROPOSED PATRICIA BY-PASS ALTERNATIVES

ALTERNATIVE # 1- NO BUILD

ALTERNATIVE # 2
► 5 lanes within EXISTING ROW

ALTERNATIVE # 3
► NEW LOCATION NEAR- EAST SIDE

ALTERNATIVE # 4
►NEW LOCATION NEAR- WEST SIDE

ALTERNATIVE # 5
►NEW LOCATION FAR- EAST SIDE

ALTERNATIVE # 6
►NEW LOCATION FAR- WEST SIDE

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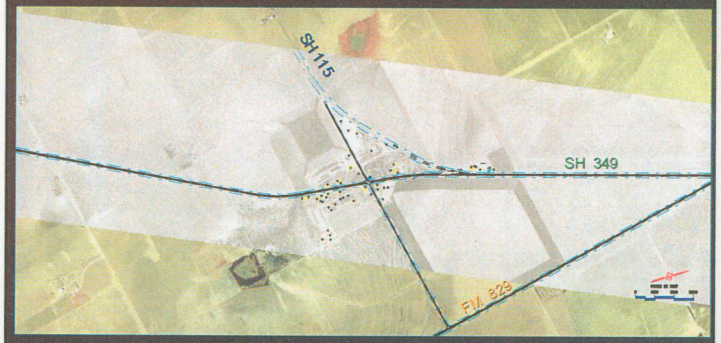
STAGE 2

PATRICIA BY-PASS ALTERNATIVE # 1

NO BUILD



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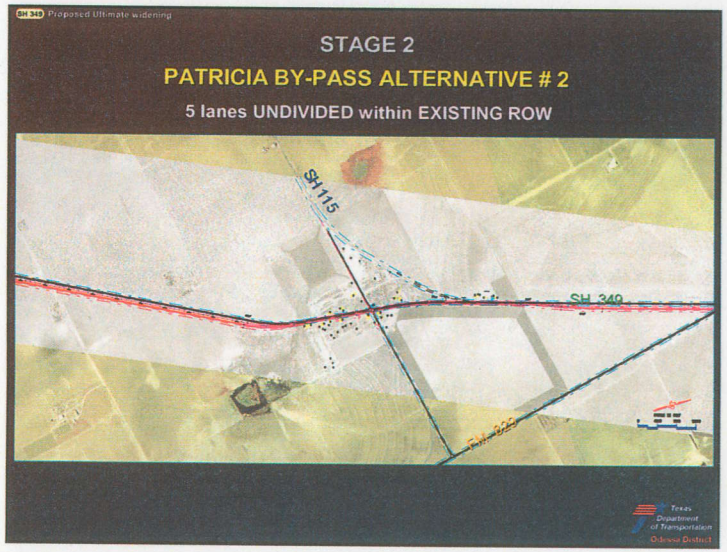
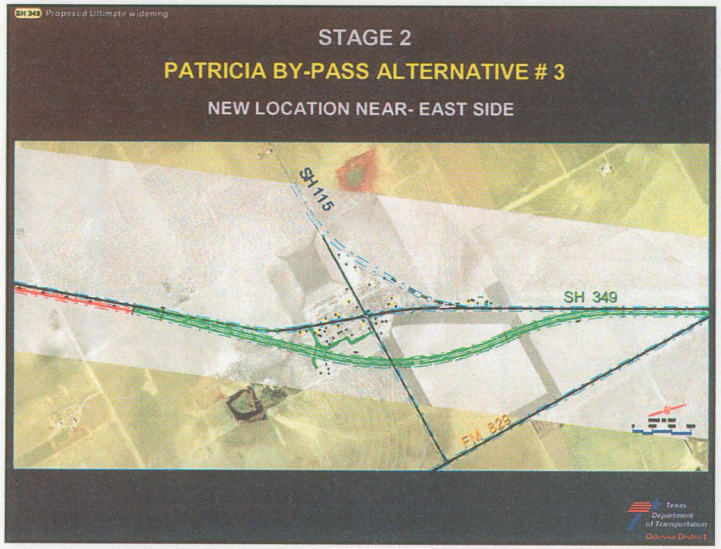
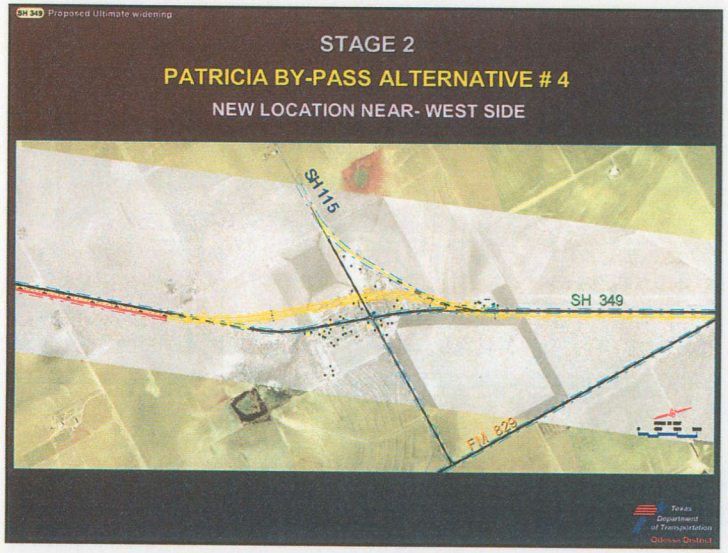
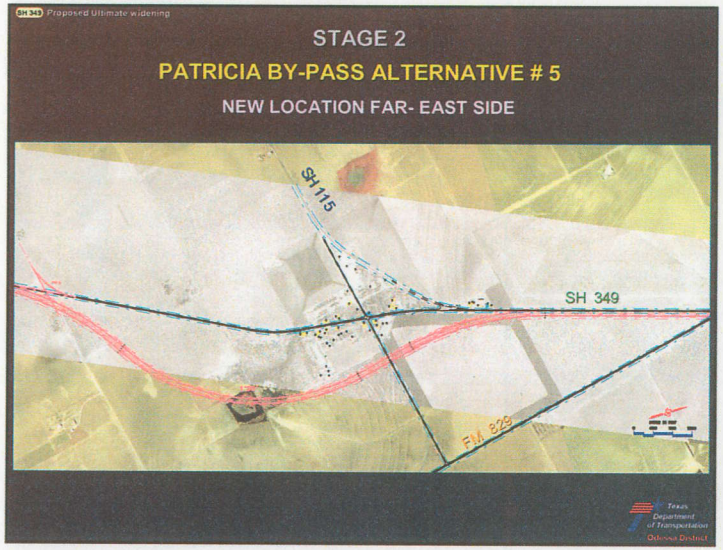

SH 349 Proposed Ultimate widening
STAGE 2
PATRICIA BY-PASS ALTERNATIVE # 2
5 lanes UNDIVIDED within EXISTING ROW
SH 115
SH 349
FM 829
Texas Department of Transportation
Odessa District


SH 349 Proposed Ultimate widening
STAGE 2
PATRICIA BY-PASS ALTERNATIVE # 3
NEW LOCATION NEAR- EAST SIDE
SH 115
SH 349
FM 829
Texas Department of Transportation
Odessa District


SH 349 Proposed Ultimate widening
STAGE 2
PATRICIA BY-PASS ALTERNATIVE # 4
NEW LOCATION NEAR- WEST SIDE
SH 115
SH 349
FM 829
Texas Department of Transportation
Odessa District

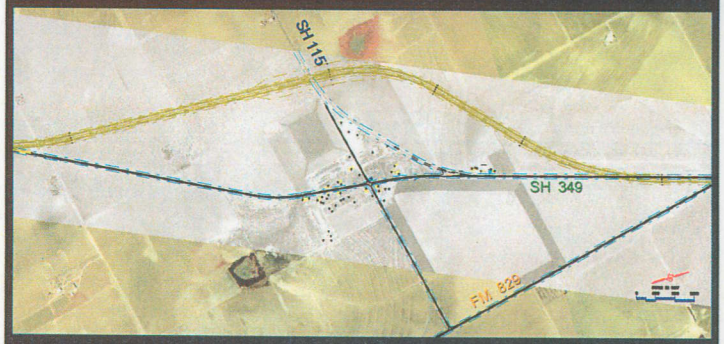

SH 349 Proposed Ultimate widening
STAGE 2
PATRICIA BY-PASS ALTERNATIVE # 5
NEW LOCATION FAR- EAST SIDE
SH 115
SH 349
FM 829
Texas Department of Transportation
Odessa District

SH 349 Proposed Ultimate widening

STAGE 2

PATRICIA BY-PASS ALTERNATIVE # 6

NEW LOCATION FAR- WEST SIDE

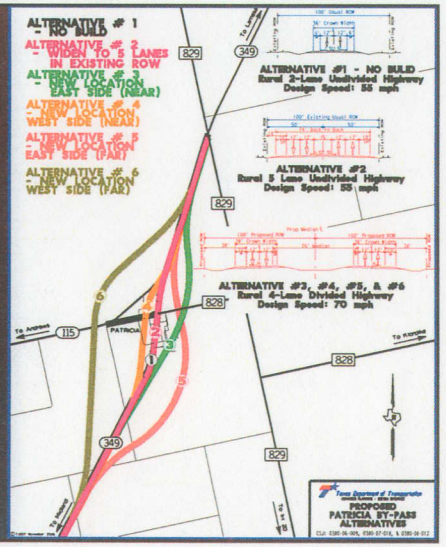


Texas Department of Transportation
Odessa District

SH 349 Proposed Ultimate widening

STAGE 2

SUMMARY OF PATRICIA BY-PASS ALTERNATIVES



SH 349 Proposed Ultimate widening

STAGE 2: PROPOSED PATRICIA BY-PASS ALTERNATIVES

EVALUATION SUMMARY

FACTORS	ALT. #1 NO BUILD	ALT. #2 ►WIDEN TO 5 LANES- UNDIVIDED	ALT. #3 ►NEW LOCATION NEAR- EAST SIDE	ALT. # 4 ►NEW LOCATION NEAR- WEST SIDE	ALT. # 5 ► NEW LOCATION FAR- EAST SIDE	ALT. # 6 ► NEW LOCATION FAR- WEST SIDE
ENGINEERING/ MOBILITY FACTORS						
ENVIRONMENTAL FACTORS						
OVERALL EVALUATION						

LEGEND: NO IMPACT | NO SIGNIFICANT IMPACT | POTENTIAL SIGNIFICANT IMPACT

Texas Department of Transportation
Odessa District

SH 349 Proposed Ultimate widening

SUMMARY OF PREFERRED ALTERNATIVE & COST

	MAIN LANES	SH 349/ SH 176 Interchange	PATRICIA BY-PASS ALTERNATIVES	
Preferred Alternative	Alternative # 2 Widen existing roadway	Alternative # 3 ► TWO QUADRANT CLOVERLEAF INTERCHANGE ► RAISE & WIDEN BRIDGE DECK	Alternative # 2 ►WIDEN TO 5 LANES- UNDIVIDED	Alternative # 3 ►NEW LOCATION NEAR- EAST SIDE
MEDIAN WIDTH	76 ft. RURAL DIVIDED	24 ft. URBAN DIVIDED	URBAN UNDIVIDED	76 FT. RURAL DIVIDED
ADDITONAL R.O.W. WIDTH	100 ft.	See below	none	200 ft.- ML 300 ft. interchange
TOTAL R.O.W. WIDTH	220 ft.		EXISTING 100 ft.	220 ft.- ML 300 ft. interchange
Additional R.O.W Acreage	335 Ac.	34 Ac.	0 Ac.	34 Ac.
TOTAL ADDN'L ROW REQ'D			369 Ac.	403 Ac.
ORDER OF MAGNITUDE CONST'N COST	@ $3.0 M/ ln.mi x 2 ln x 32 mi = $186 M	$ 10 M	@ $ 1.5M/ ln mi x 2 mi = $3 M	@ $1.5M/ ln mi x 4 ln x 2 mi= $ 12 M
ORDER OF MAGNITUDE UTILITY RELOC'N COST	Approximately $ 10 Million +			
ORDER OF MAGNITUDE ROW/ FENCING/ RELOC'N COST	R.O.W. : $ 120,000 FENCING: $ 550,000 RELOCATON: $ 50,000 TOTAL : $720,000			
TOTAL CONST'N + ROW COST			$ 210 M	$ 219 M

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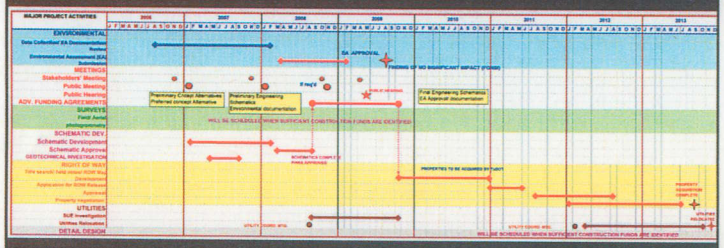
PROJECT SCHEDULE TIMELINE



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Project Schedule
Subject to Change

TxDOT Preliminary Design Concept Meeting	Nov. 27, 2006
Stakeholders' Group Meeting # 1	Dec. 11, 2006
Public Meeting # 1	February 1, 2007
Stakeholders' Group Meeting #2	November, 2007
Public Meeting # 2	January, 2008
Environmental Assessment Doc. Complete	February, 2008
Preliminary Design Schematic Complete	February, 2008
Preliminary Design Schematic Approval	August, 2008
Environmental Approval	February, 2009
Stakeholders' Group Meeting #3	April, 2009
Opportunity for a Public Hearing	May, 2009
Finding of No Significant Impact (FONSI)	August, 2009
Approval to acquire R.O.W.	May, 2011
Initiate utilities relocation	March, 2012
Initiate Detail Design	*WHEN CONSTRUCTION FUNDS IDENTIFIED*

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In Conclusion

- Seek support from Dawson and Martin Counties
- Conduct Public Meeting on February 1, 2007

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END PRESENTATION

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