

N-2015T-0002 CULLEN BOULEVARD



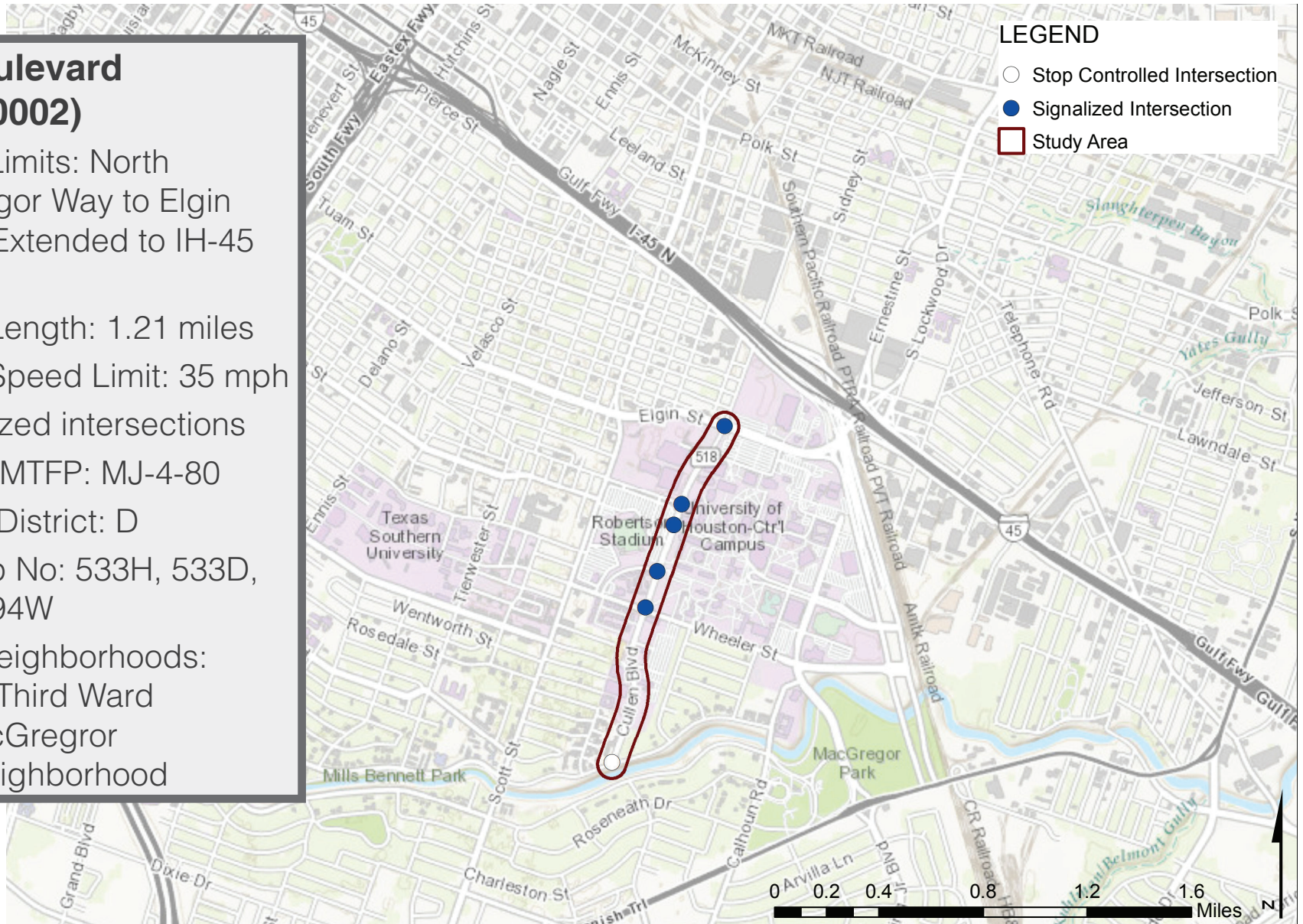
TODAY'S OBJECTIVES

- Summary of Planning 1 Conclusions
- Present three alternatives for Cullen Boulevard between North MacGregor Way and IH-45

PROJECT LOCATION

Cullen Boulevard (N-2015T-0002)

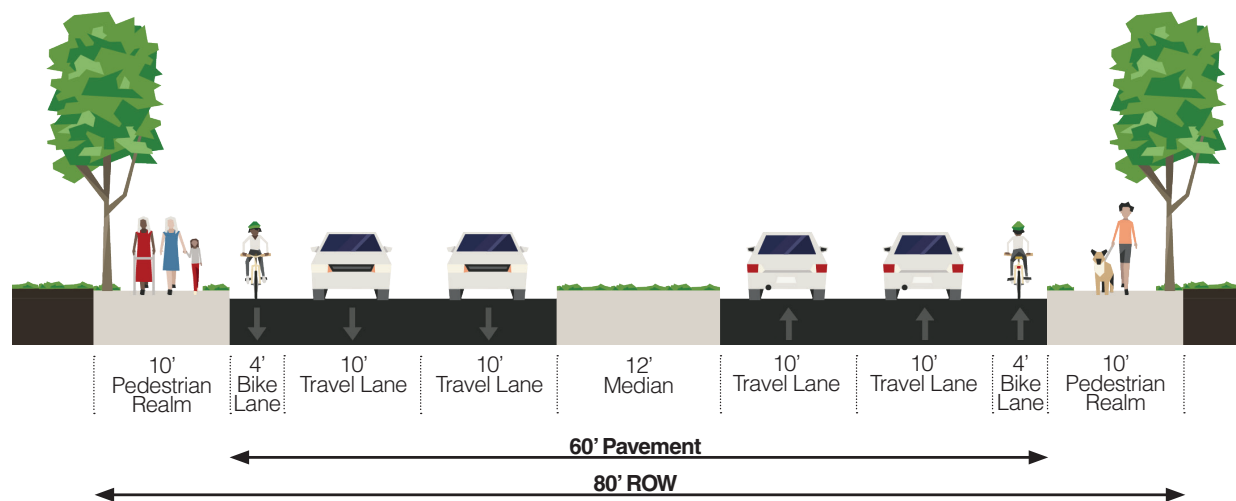
- Project Limits: North MacGregor Way to Elgin Street - Extended to IH-45 after P1
- Project Length: 1.21 miles
- Posted Speed Limit: 35 mph
- 5 signalized intersections
- Existing MTFP: MJ-4-80
- Council District: D
- Key Map No: 533H, 533D, 534A, 494W
- Super Neighborhoods: Greater Third Ward and MacGregor Superneighborhood



TYPICAL CROSS-SECTION

MTFP Classification: MJ-4-80

Bicycle Lane Cross-section | North MacGregor Way to Wheeler Avenue and Elgin Street to IH-45



4 - 10' Travel Lanes

Below *IDM*¹ standard

2 - 4' Bicycle Lanes

Below 5' recommended minimum width for bicycle lane

12' Raised Median

Left-turn lanes at signalized and other key intersections

10' Pedestrian Realm

Sidewalk width varies from 4' to 8' - Some sections extend outside ROW



Transit

METRO Route 30 Cullen/Clinton

UH Outer Loop Shuttle

Overhead Utilities

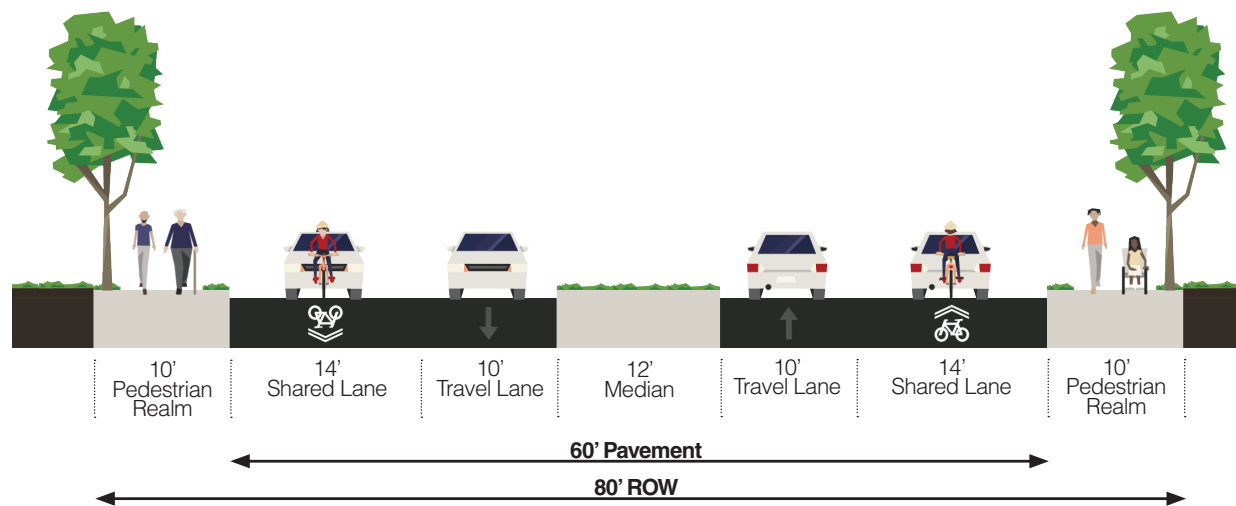
Overhead power lines and cobra-head street lighting - Utility poles located within northbound Cullen Boulevard sidewalk

¹ City of Houston *Infrastructure Design Manual*

TYPICAL CROSS-SECTION

MTFP Classification: MJ-4-80

Shared Lane Cross-section | Wheeler Avenue to Elgin Street



2 - 10' Travel Lanes

Below *IDM*¹ standard

2 - 14' Shared Lanes

Inconsistent markings and signs - previously section included 4' bicycle lane

12' Raised Median

Left-turn lanes at signalized and other key intersections

10' Pedestrian Realm

Sidewalk width varies from 4' to 10' - Some sections extend outside ROW

Transit

METRO Route 42 Holman

Crosstown

METRO Route 68 Brays Bayou

UH Campus Loop Shuttle

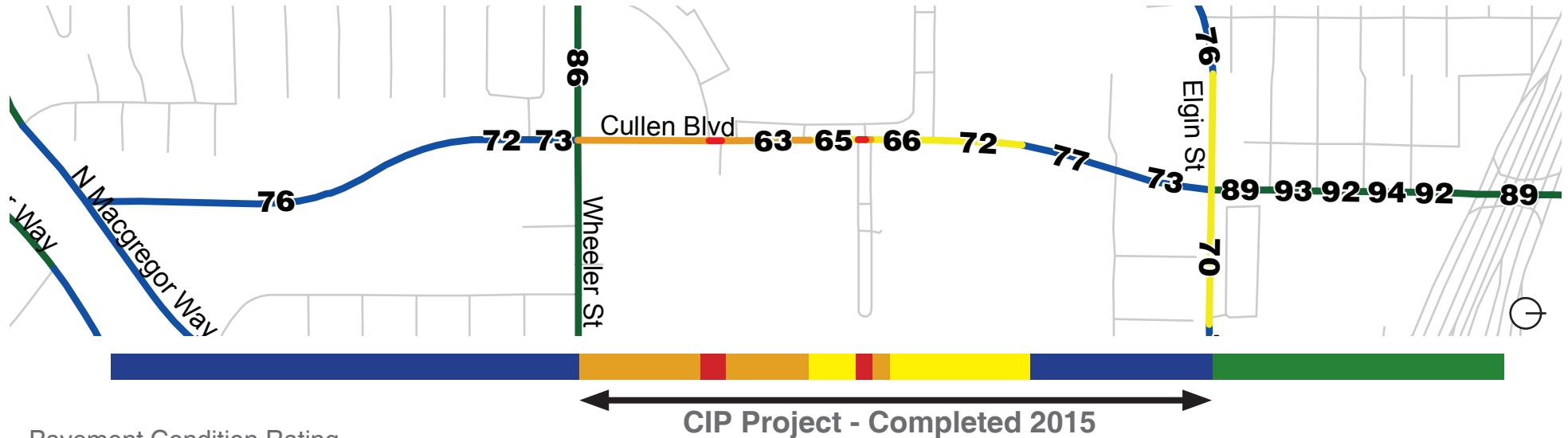
UH Outer Loop Shuttle

Overhead Utilities

Overhead power lines and cobra-head street lighting

¹ City of Houston *Infrastructure Design Manual*

PAVEMENT QUALITY



Pavement Condition Rating

- Low (35-59.0)
- Medium Low (59.1-64.9)
- Medium (65.0-72.0)
- Medium High (72.1-78.6)
- High (78.7-100)

- Between North MacGregor Way and Wheeler Avenue is Medium High, but visual inspection of pavement shows significant number of patches, cracks, potholes and degraded pavement quality
- Between Wheeler Avenue and Elgin Street - New Concrete Panels



CORRIDOR CAPACITY AND LOS

4 Lane Future Alternative

	2014 ¹				2035 ¹				Annual Growth Rate
	ADT	Lanes	V/C Ratio	LOS ¹	ADT	Lanes	V/C Ratio	LOS ²	
N MacGregor Way to Wheeler Avenue	6,972	4	NB=0.26 SB= 0.26	C	11,189	4	NB=0.37 SB= 0.41	C	2.28%
Wheeler Avenue to Holman Street	10,768	4	NB=0.36 SB= 0.37	C	16,208	4	NB=0.51 SB= 0.52	D	1.97%
Holman Street to Elgin Street	14,604	4	NB=0.46 SB= 0.47	C	18,558	4	NB=0.56 SB= 0.61	D	1.15%

2 Lane Future Alternative

	2014 ¹				2035 ¹				Annual Growth Rate
	ADT	Lanes	V/C Ratio	LOS ¹	ADT	Lanes	V/C Ratio	LOS ²	
N MacGregor Way to Wheeler Avenue	6,972	4	NB=0.26 SB= 0.26	C	9,315	2	NB=0.70 SB= 0.68	D	1.39%
Wheeler Avenue to Holman Street	10,768	4	NB=0.36 SB= 0.37	C	13,334	2	NB=0.83 SB= 0.83	D	1.02%
Holman Street to Elgin Street	14,604	4	NB=0.46 SB= 0.47	C	14,484	2	NB=0.93 SB= 0.86	D	-0.04%

¹ Values based on COH Travel Demand Model Outputs

² Based on 2010 *Highway Capacity Manual* Exhibit 16-14 using K = 0.9 and D = 0.55 which are supported by the TMCs

INTERSECTION CAPACITY AND LOS

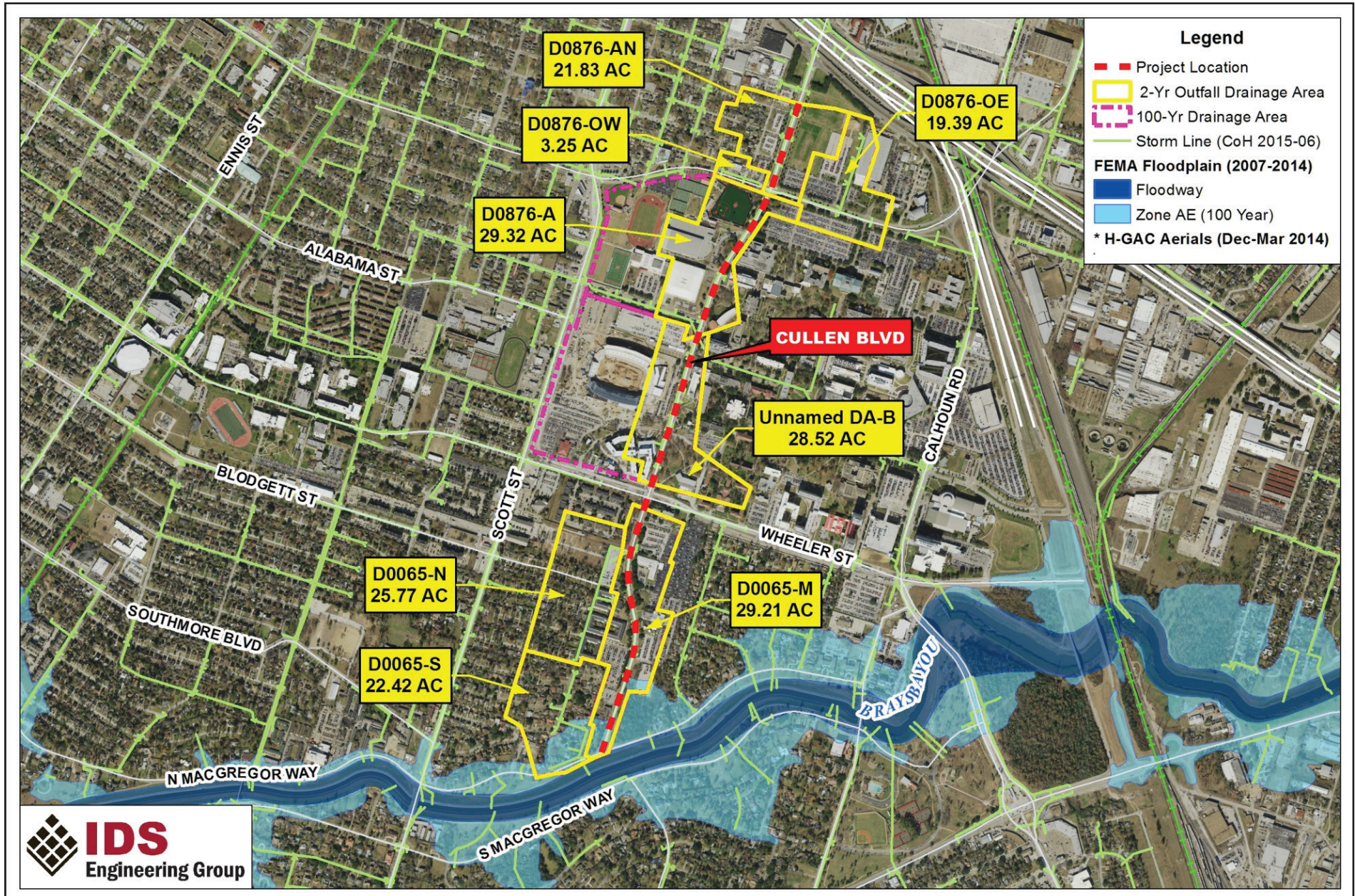
	Wheeler Avenue	Cougar Place Drive	U of H Entrance 14/University Park	Holman Street	Elgin Street
2014 AM Capacity	LOS C Delay(s) - 29.1 V/C - 0.215	LOS B Delay (s) - 10.0 V/C - 0.114	LOS A Delay (s) - 8.8 V/C - 0.126	LOS B Delay (s) - 15.7 V/C - 0.184	LOS D Delay(s) - 37.5 V/C - 0.260
2014 PM Capacity	LOS C Delay (s) - 37.8 V/C - 0.354	LOS B Delay (s) - 19.6 V/C - 0.245	LOS A Delay (s) - 8.0 V/C - 0.143	LOS B Delay (s) - 13.9 V/C - 0.185	LOS D Delay (s) - 31.6 V/C - 0.314

Analysis based on existing timings

Signalized intersections show LOS D with low V/C indicating potential to absorb additional traffic demand.

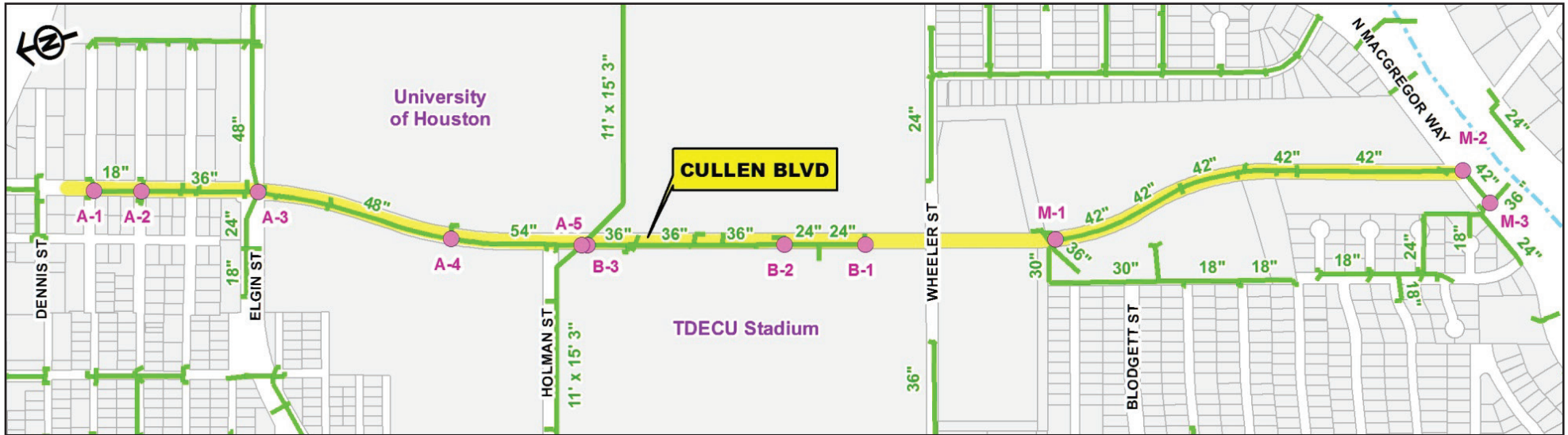
DRAINAGE ANALYSIS

Drainage Area Map



DRAINAGE ANALYSIS

Existing Conditions



STORM SEWER SYSTEMS:

- System A – 18" RCP - 54" RCP
- System B – 24" RCP - 36" RCP
- System M – 42" RCP - 36" RCP

DRAINAGE ANALYSIS

Existing Problems

- Storm sewers on average 60 years old
- Sub-standard Type B inlets
- 5% (~400 ft) of need area in 100-yr floodplain of Brays Bayou

System A

- Outfalls in 11-ft x 15-ft, 3-inch storm sewer
- Inadequate 2-year design capacity

System B

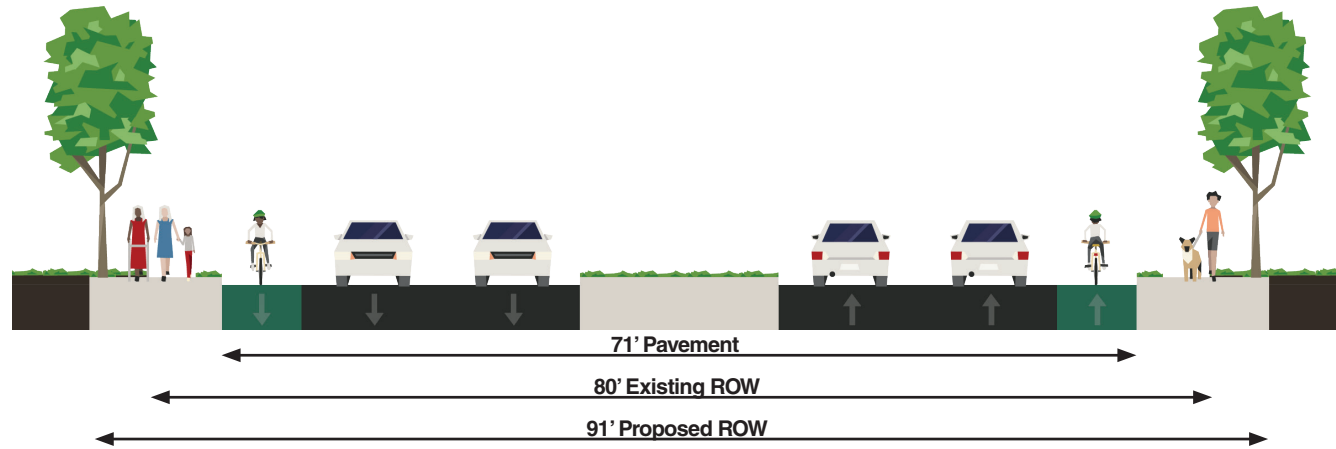
- Outfalls in 11-ft x 15-ft, 3-inch storm sewer
- Adequate 2-year design capacity

System M

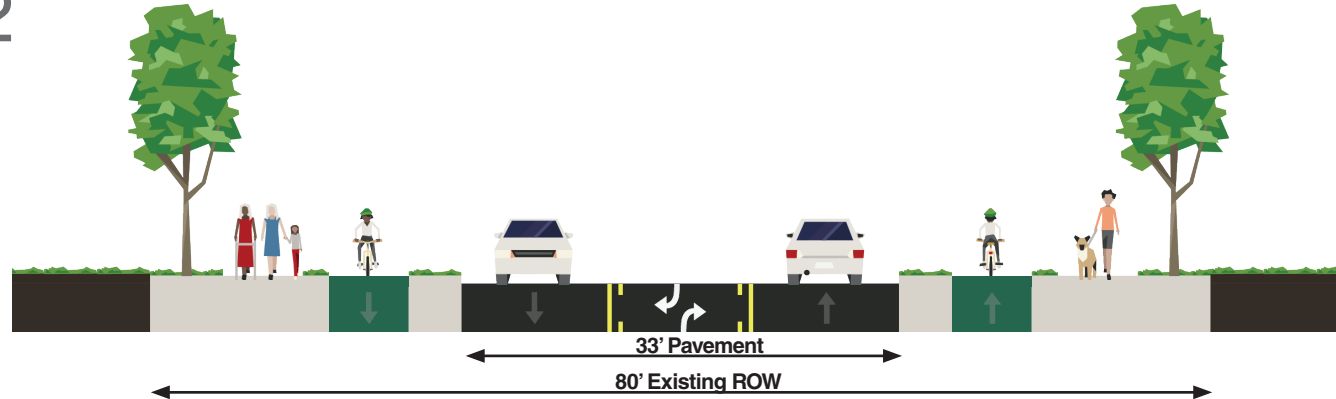
- Outfalls into Brays Bayou
- Adequate 2-year design capacity

PLANNING 1 CONCEPTUAL ALTERNATIVES

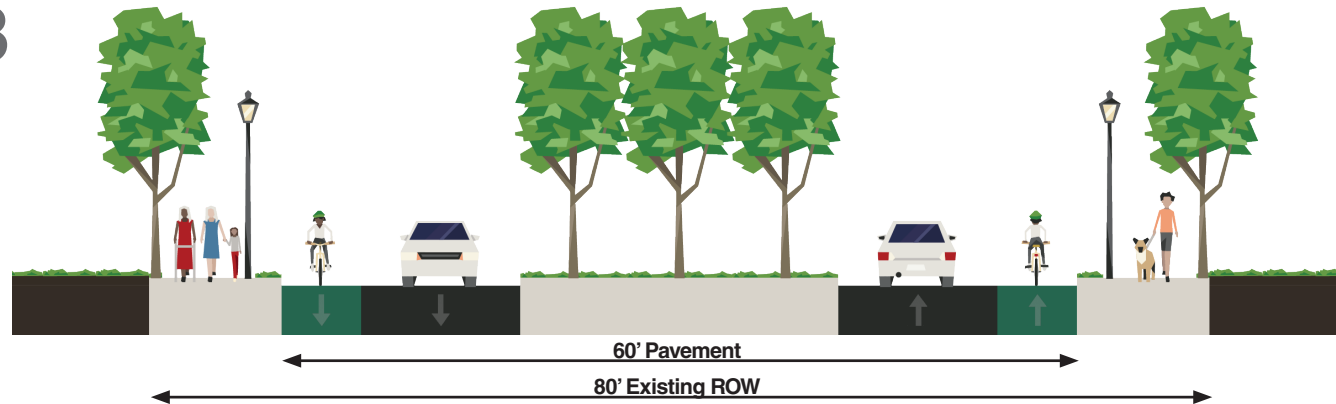
Alternative 1



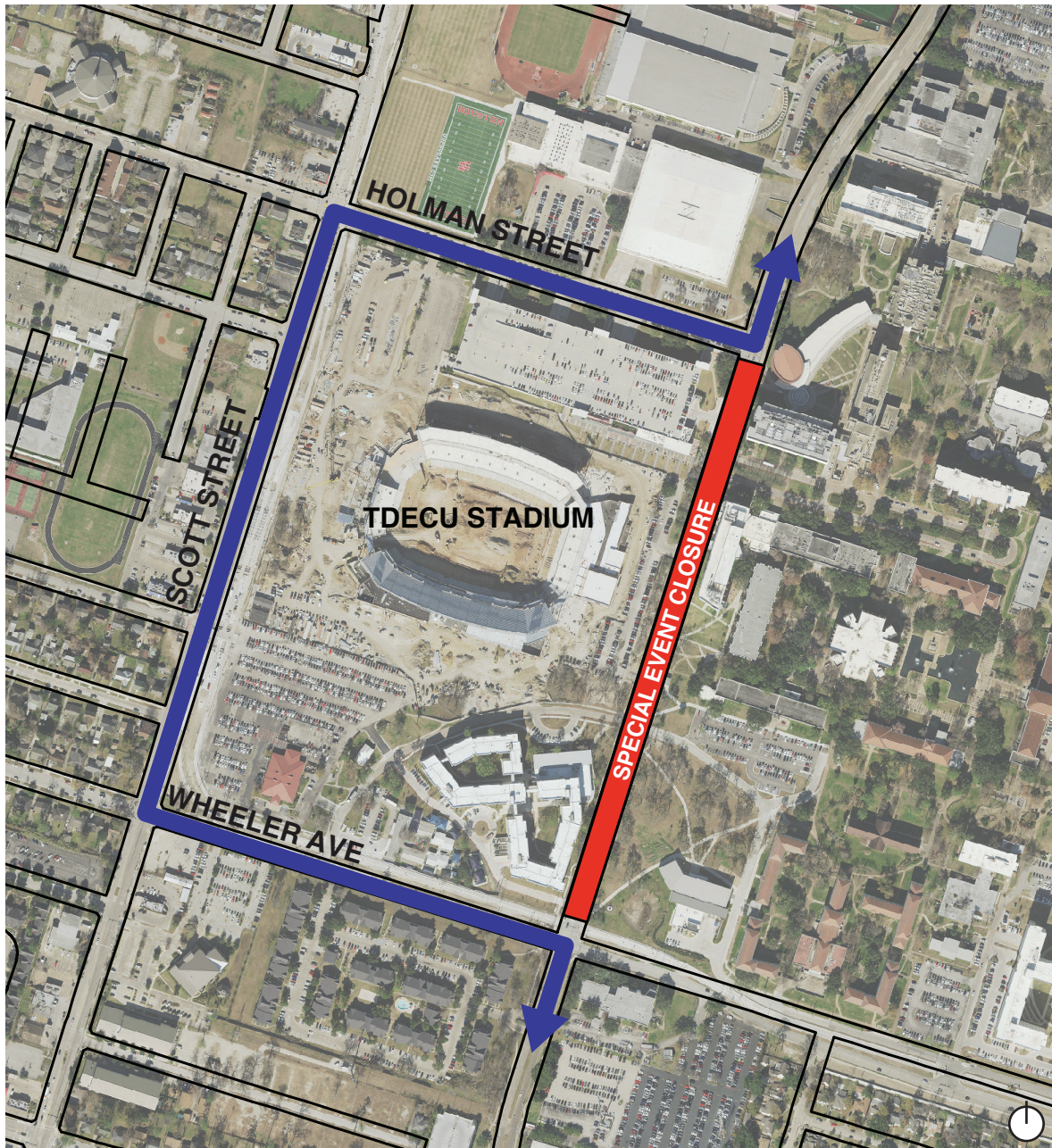
Alternative 2



Alternative 3



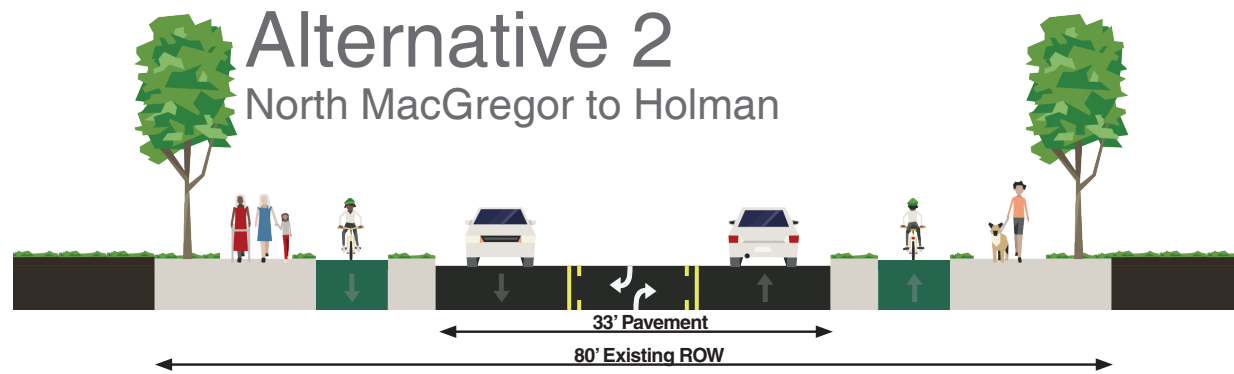
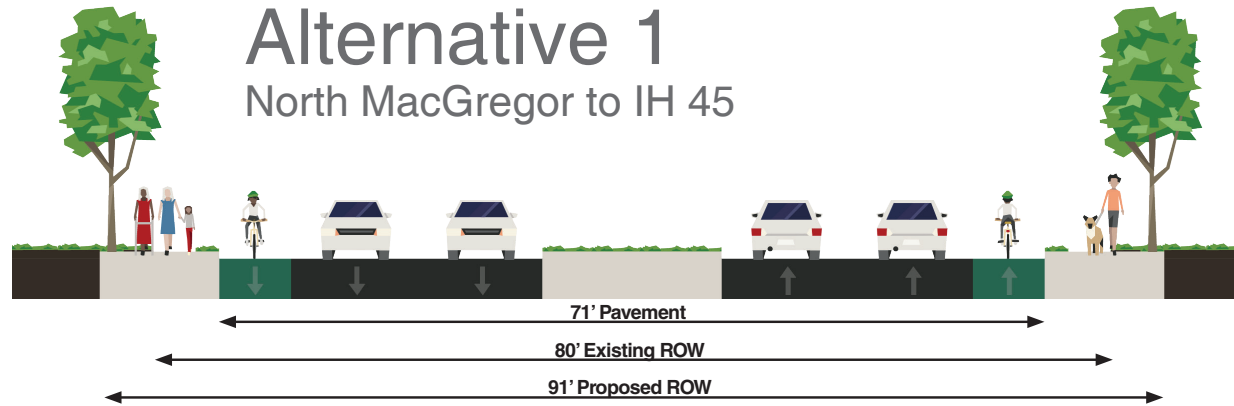
U OF H SPECIAL EVENTS



Cullen Closure

- During all home football games and other key events during the year, U of H closes Cullen Boulevard between Holman Street and Wheeler Avenue
- All Cullen Boulevard through traffic directed to Scott Street
- During closure, the street becomes part of the TDECU Stadium Pavilion
- U of H desires an undivided corridor

PLANNING 2 DESIGN ALTERNATIVES

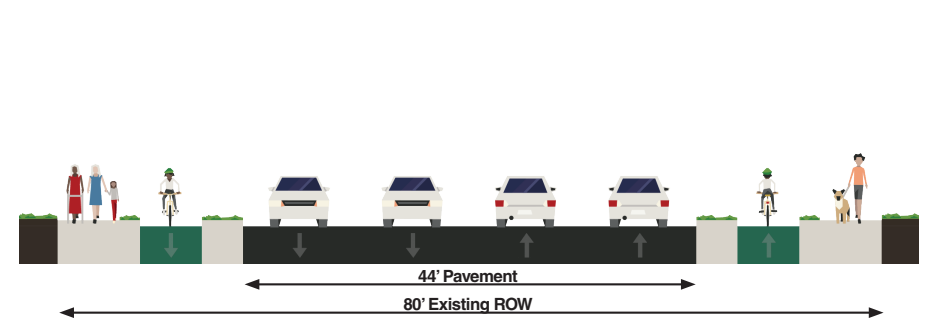
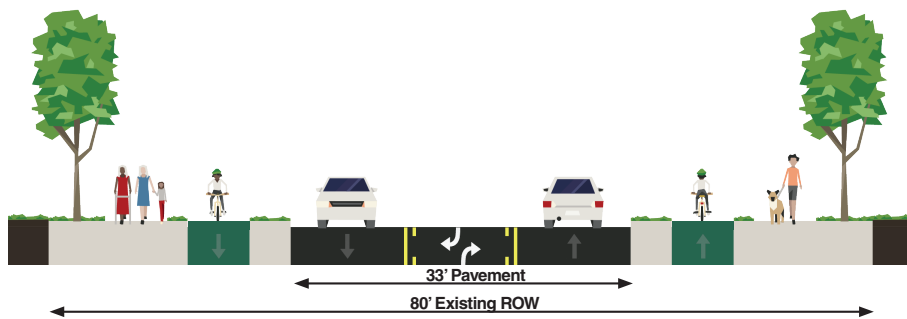


Alternative 2 includes 4 lanes from UH Entrance #16 to IH-45

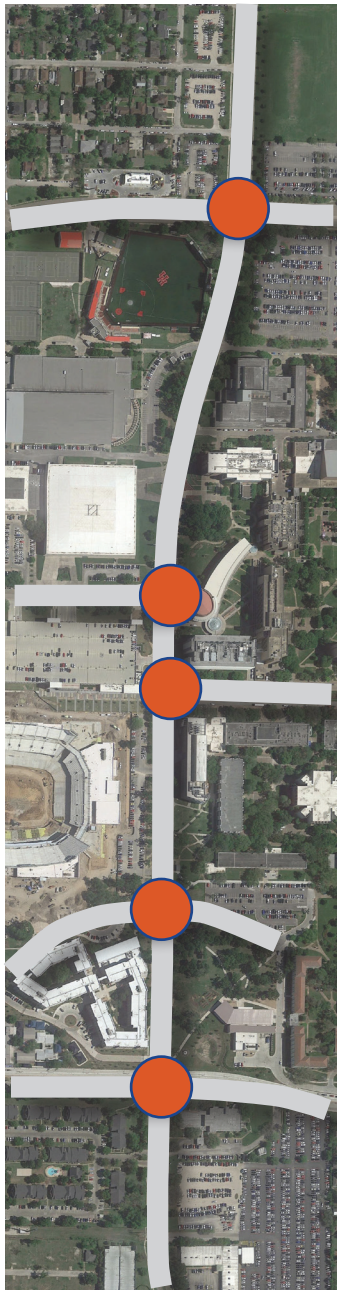
Alternative 2A

Variations for Holman to UH Entrance #16

Alternative 2B



AM PEAK TRAFFIC ANALYSIS



ELGIN

HOLMAN

UNIVERSITY
PARK

COUGAR
PLACE

WHEELER

Existing
2015 Volume

Delay	LOS	V/C
37.5	D	.26

Alternative 1
2035 Volume

Delay	LOS	V/C
37.5	D	.330

Alternative 2A
2035 Volume

Delay	LOS	V/C
37.5	D	.330

Alternative 2B
2035 Volume

Delay	LOS	V/C
37.5	D	.330

Delay	LOS	V/C
15.7	B	.184

Delay	LOS	V/C
11.9	B	.249

Delay	LOS	V/C
14.8	B	.380

Delay	LOS	V/C
13.0	B	.240

Delay	LOS	V/C
8.8	A	.126

Delay	LOS	V/C
9.3	A	.190

Delay	LOS	V/C
9.9	A	.275

Delay	LOS	V/C
9.9	A	.275

Delay	LOS	V/C
10.0	B	.114

Delay	LOS	V/C
12.1	B	.172

Delay	LOS	V/C
10.3	B	.240

Delay	LOS	V/C
10.3	B	.240

Delay	LOS	V/C
29.1	C	.215

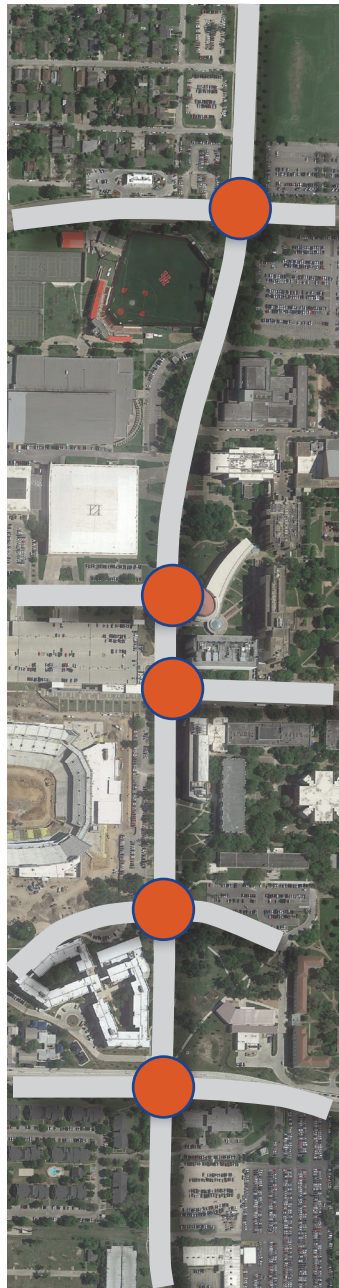
Delay	LOS	V/C
29.1	C	.331

Delay	LOS	V/C
29.6	C	.361

Delay	LOS	V/C
29.6	C	.361

2035 Analysis based on optimized timings

PM PEAK TRAFFIC ANALYSIS



ELGIN

HOLMAN

UNIVERSITY
PARK

COUGAR
PLACE

WHEELER

Existing
2015 Volume

Delay	LOS	V/C
37.8	D	.354

Alternative 1
2035 Volume

Delay	LOS	V/C
38.4	D	.447

Alternative 2A
2035 Volume

Delay	LOS	V/C
38.4	D	.447

Alternative 2B
2035 Volume

Delay	LOS	V/C
38.4	D	.447

Delay	LOS	V/C
13.9	B	.185

Delay	LOS	V/C
21.4	C	.342

Delay	LOS	V/C
22.3	C	.477

Delay	LOS	V/C
20.7	C	.377

Delay	LOS	V/C
8.0	A	.143

Delay	LOS	V/C
8.5	A	.216

Delay	LOS	V/C
9.4	A	.327

Delay	LOS	V/C
9.4	A	.327

Delay	LOS	V/C
19.6	B	.245

Delay	LOS	V/C
16.9	B	.272

Delay	LOS	V/C
15.6	B	.367

Delay	LOS	V/C
15.6	B	.367

Delay	LOS	V/C
31.6	C	.314

Delay	LOS	V/C
31.2	C	.502

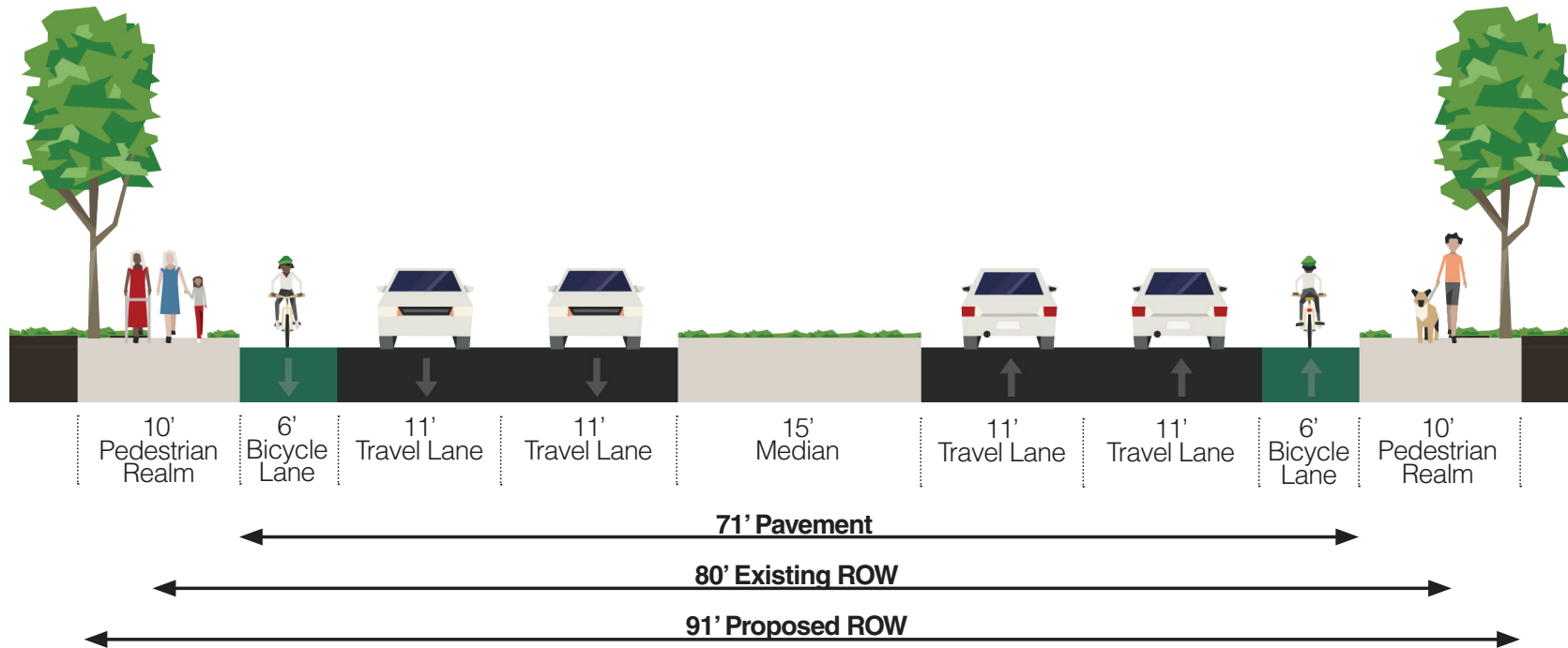
Delay	LOS	V/C
31.2	C	.478

Delay	LOS	V/C
31.2	C	.478

2035 Analysis based on optimized timings

DESIGN ALTERNATIVES

Alternative 1



- Not aligned with the university and residential neighborhood context of the corridor
- Excess capacity for both existing 2015 and projected 2035 conditions
- Requires additional right of way along length of corridor (from current 80' to 91') at an additional cost of ± \$2,369,000

DESIGN ALTERNATIVES

Alternative 2



1. North MacGregor to Holman

2. Holman to UH Entrance #16

3. UH Entrance #16 to Elgin

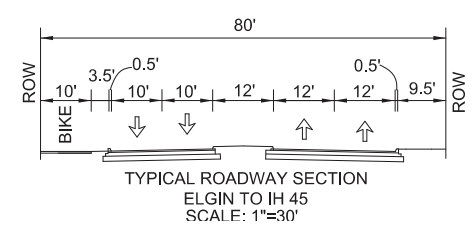
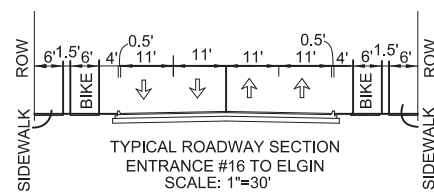
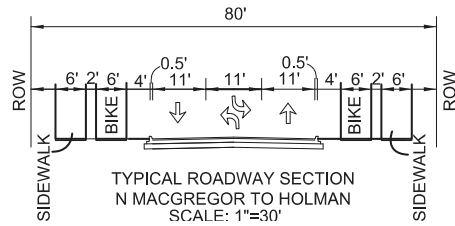
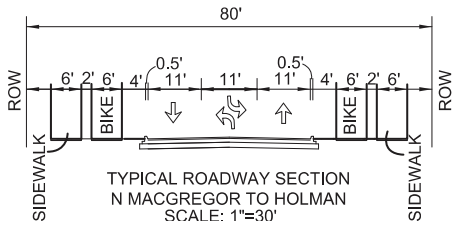
4. Elgin to IH-45

Alternative 2

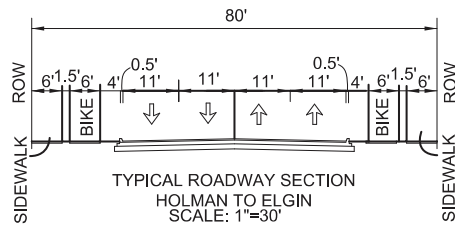
Alternative 2A

Alternative 2

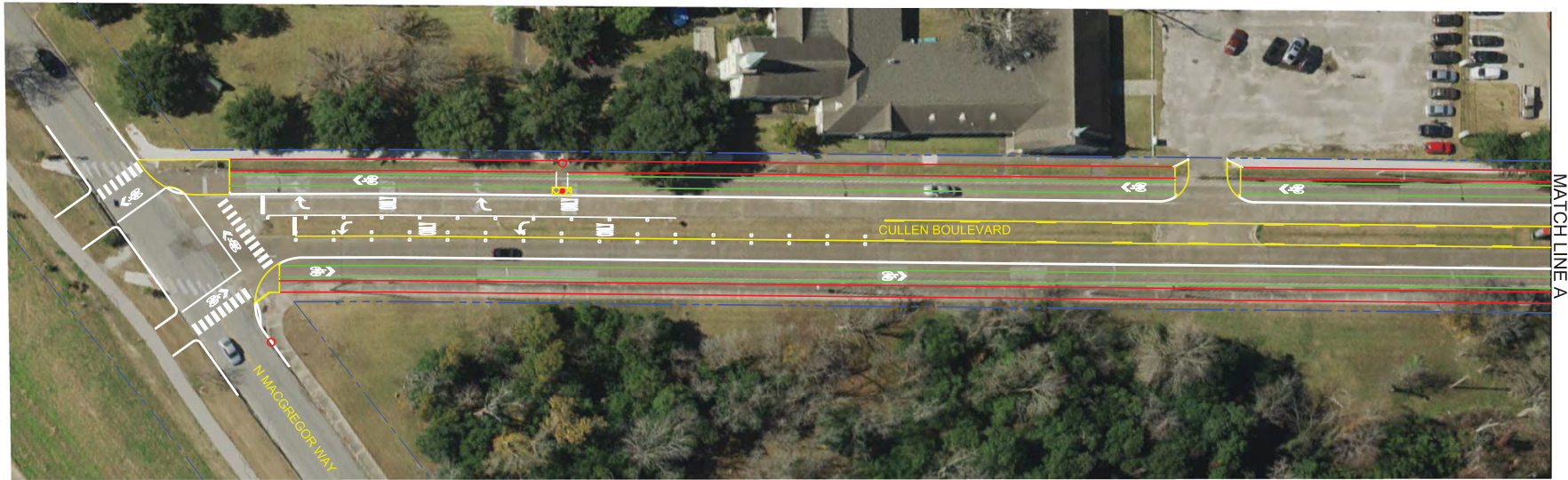
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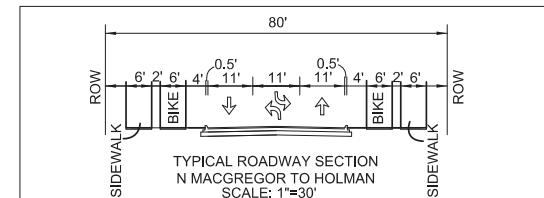
Alternative 2B



ALTERNATIVE 2



MATCH LINE A



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FILE: \$FILE\$



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Cullen Boulevard
North MacGregor Way to IH 45

Schematic
Sheet 1 of 10

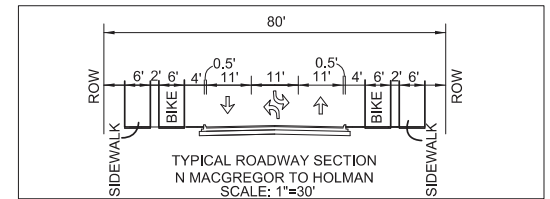
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City of Houston PM
Jing Chen, PE

\$DATE\$

Legend

- Right-of-Way
- Proposed Bike Lane
- Proposed Sidewalk
- Existing Sidewalk
- Concrete Pavement for Bus Stop
- Existing Bus Stop
- Future Bus Shelter
- Future Bus Stop

ALTERNATIVE 2



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 FILE: \$FILE\$



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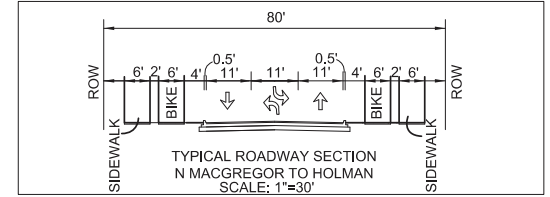
Cullen Boulevard
 North MacGregor Way to IH 45
 Schematic
 Sheet 2 of 10

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Legend	
	Right-of-Way
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ALTERNATIVE 2

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 \$TIME\$



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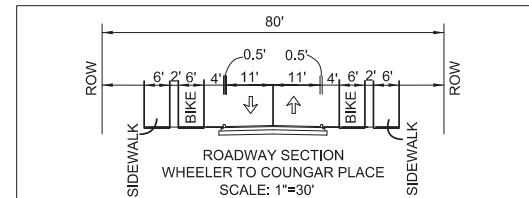
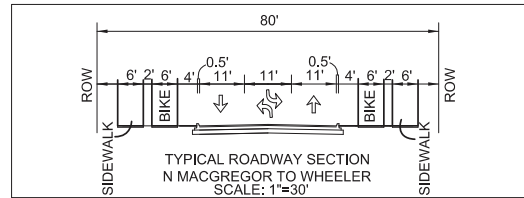
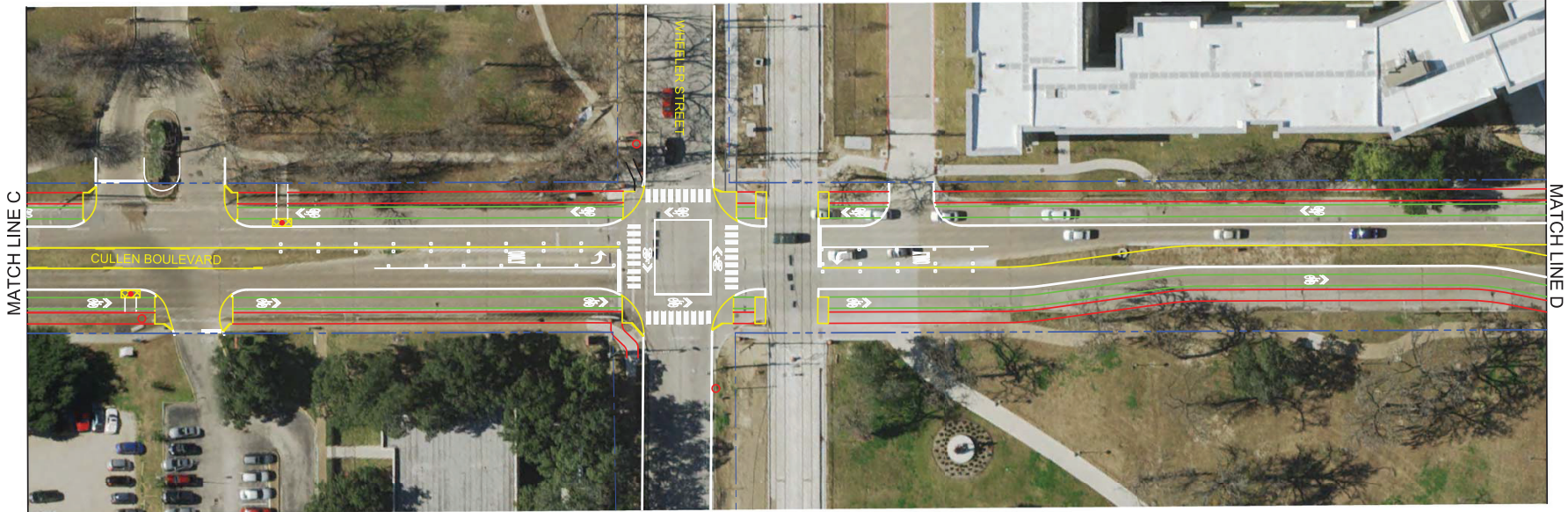
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Cullen Boulevard
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 Schematic
 Sheet 3 of 10

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Legend	
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ALTERNATIVE 2



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Cullen Boulevard
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Sheet 4 of 10

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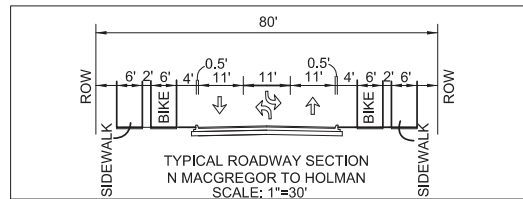
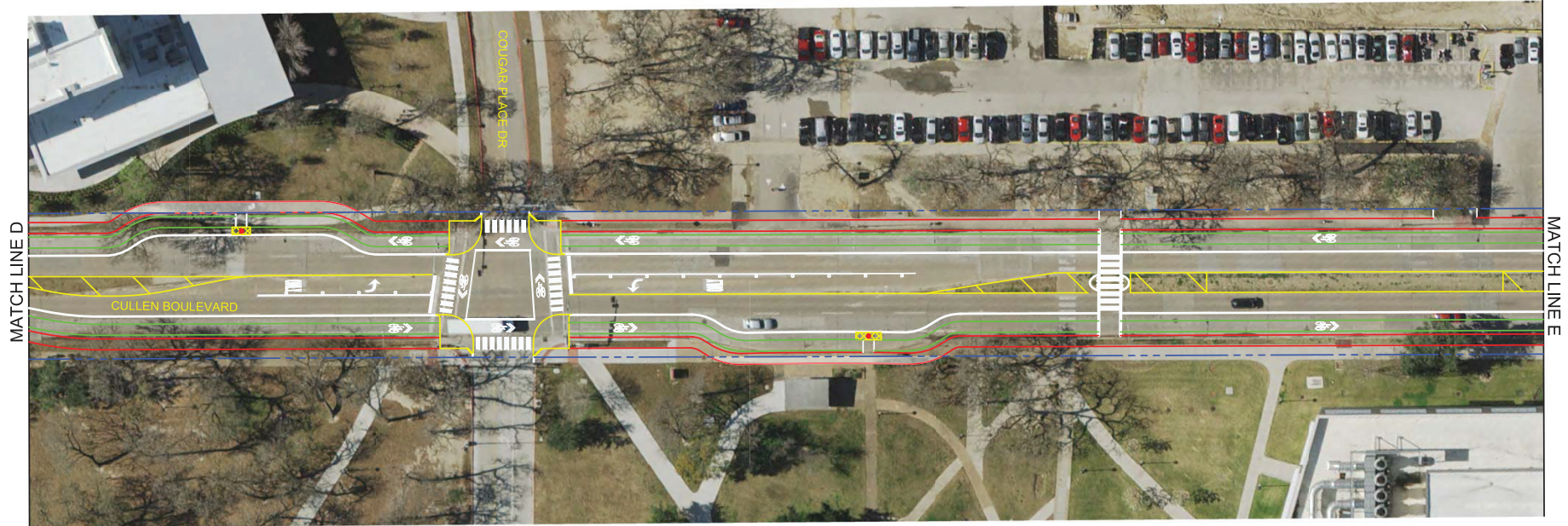
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ALTERNATIVE 2



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DATE: \$DATE\$
FILE: \$FILE\$



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Cullen Boulevard
North MacGregor Way to IH 45

Schematic
Sheet 5 of 10

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Legend

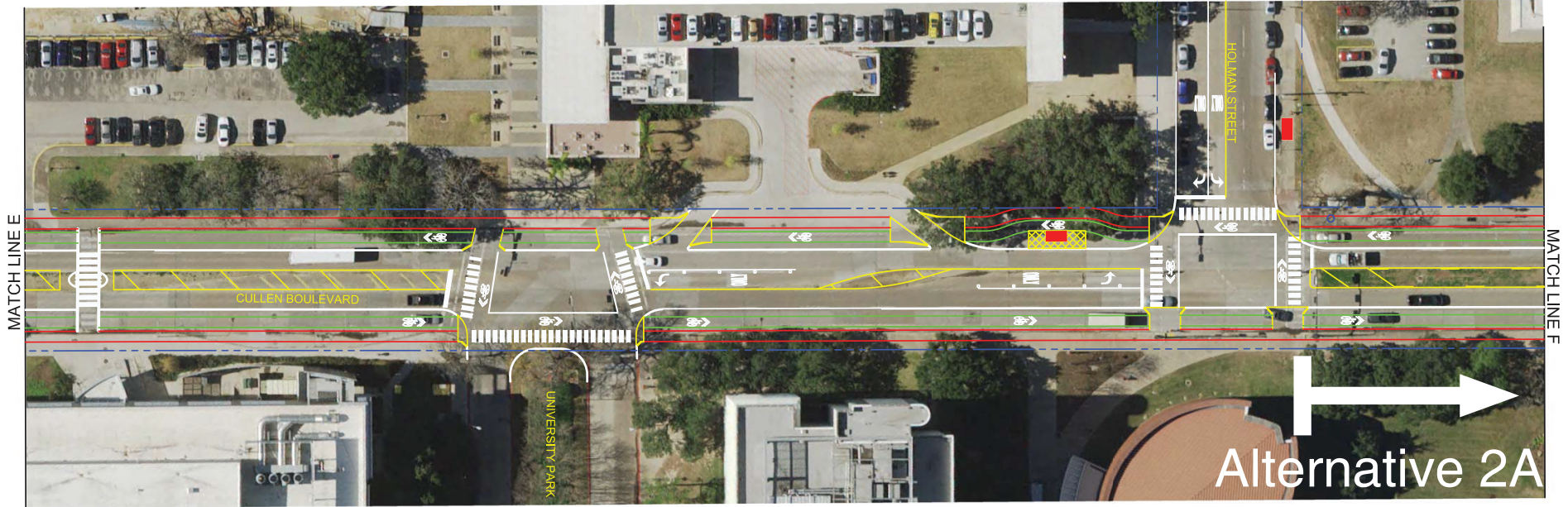
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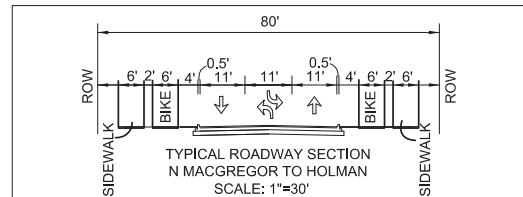
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ALTERNATIVE 2A

Three Lane - Holman to Entrance #16



Alternative 2A



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Cullen Boulevard
North MacGregor Way to IH 45

Schematic
Sheet 6A of 10

WBS No.
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Legend

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TRAFFIC ENGINEERS, INC.

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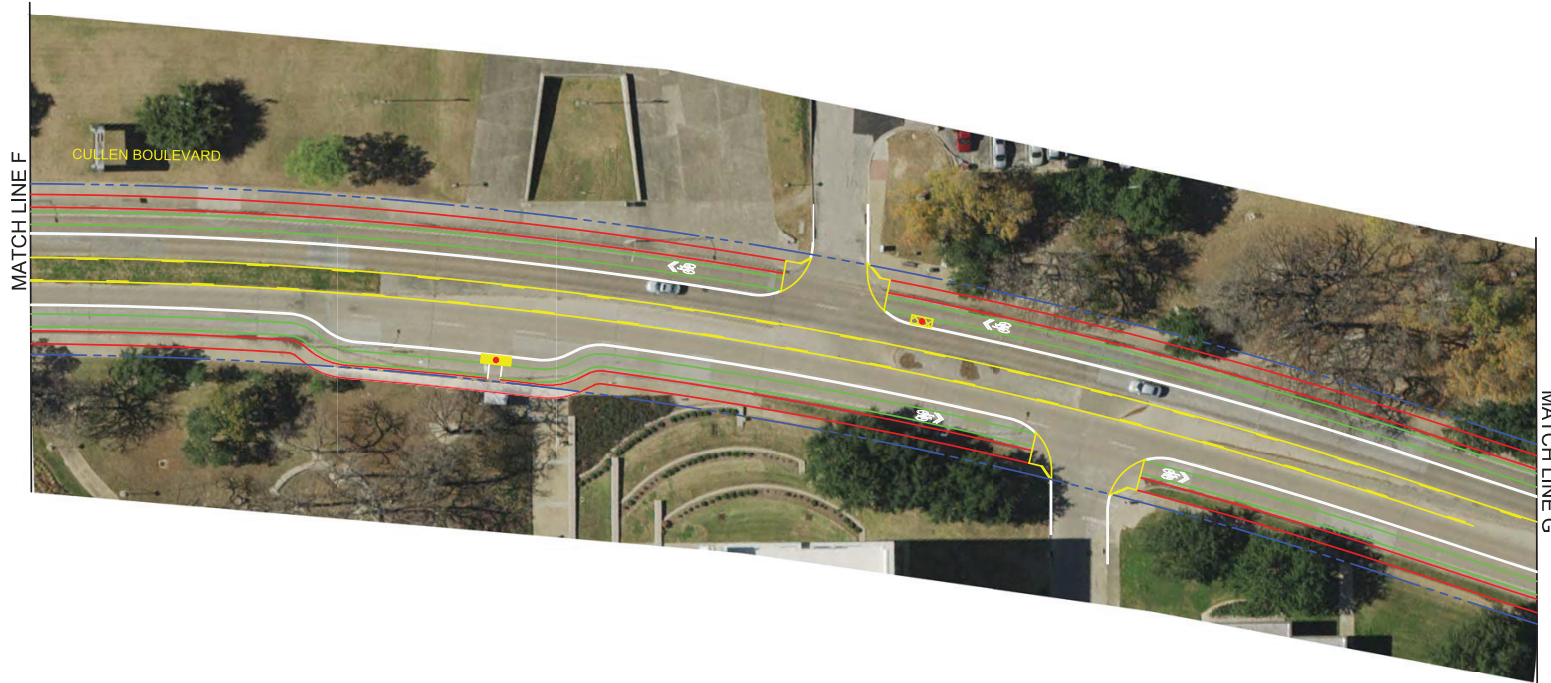
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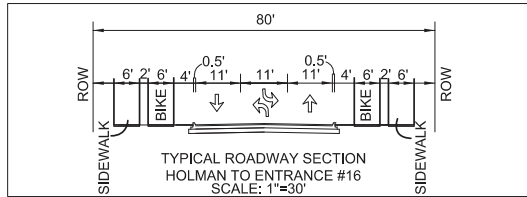
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ALTERNATIVE 2A

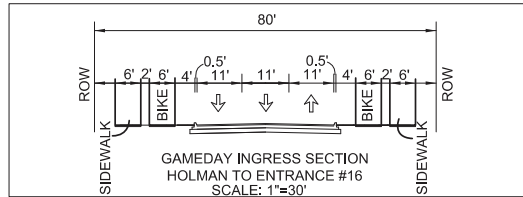
Three Lane - Holman to Entrance #16



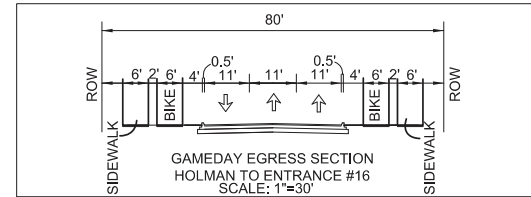
Alternative 2A



Alternative 2A



Alternative 2A



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Cullen Boulevard
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Schematic
Sheet 7A of 10

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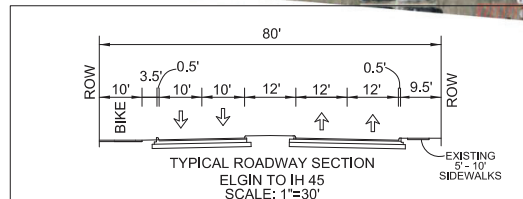
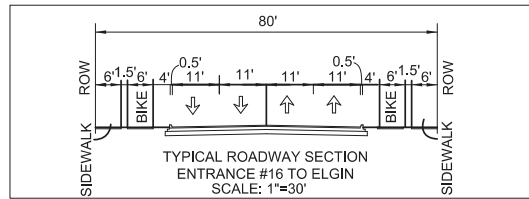
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ALTERNATIVE 2A

Three Lane - Holman to Entrance #16



Alternative 2A



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Fax: 281.809.0807

Cullen Boulevard
North MacGregor Way to IH 45

Schematic
Sheet 8A of 10

WBS No.
N-320100-0008-3

City of Houston PM
Jing Chen, PE

\$DATE\$

Legend

- Right-of-Way
- Proposed Bike Lane
- Proposed Sidewalk
- Existing Sidewalk
- Concrete Pavement for Bus Stop
- Existing Bus Stop
- Future Bus Shelter
- Future Bus Stop

PENTABLE: \$PENTBL\$

PLOTDRIVER: \$PLTRDRVS\$

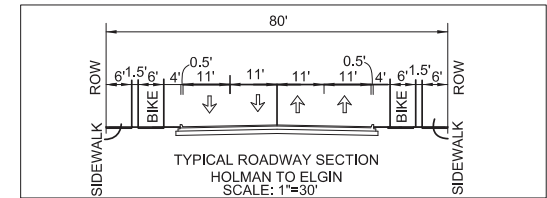
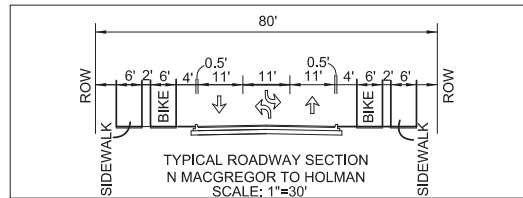
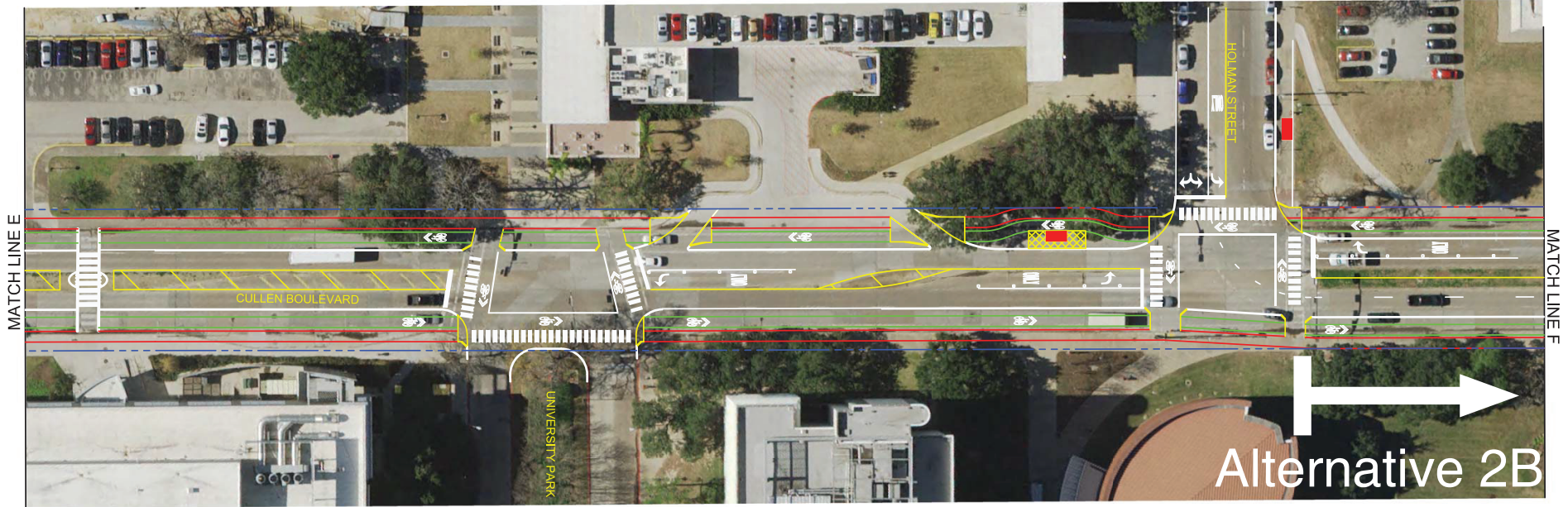
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FILE: \$FILE\$

ALTERNATIVE 2B

Four Lane - Holman to Entrance #16



CITY OF HOUSTON
DEPT. OF PUBLIC WORKS AND ENGINEERING



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Cullen Boulevard
North MacGregor Way to IH 45

Schematic
Sheet 6B of 10

WBS No.
N-320100-0008-3
City of Houston PM
Jing Chen, PE

Legend

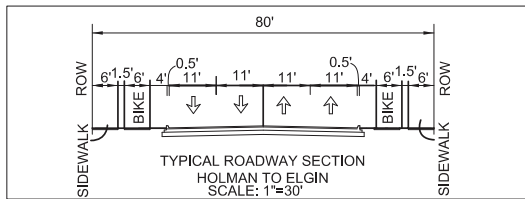
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ALTERNATIVE 2B

Four Lane - Holman to Entrance #16



Alternative 2B



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Cullen Boulevard
North MacGregor Way to IH 45

Schematic
Sheet 7B of 10

WBS No.
N-320100-0008-3

City of Houston PM
Jing Chen, PE

\$DATE\$

Legend

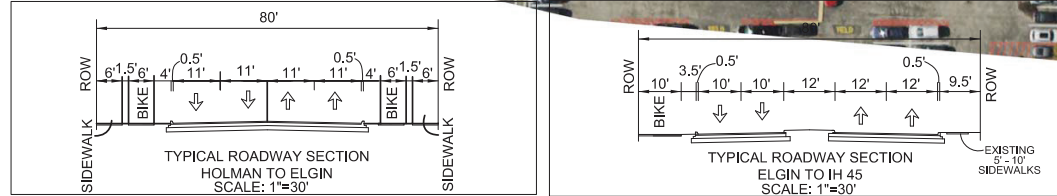
- Right-of-Way
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ALTERNATIVE 2B

Four Lane - Holman to Entrance #16



Alternative 2B



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North MacGregor Way to IH 45

Schematic
Sheet 8B of 10

WBS No.
N-320100-0008-3

City of Houston PM
Jing Chen, PE

\$DATE\$

Legend

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PENTABLE: \$PENTBL\$

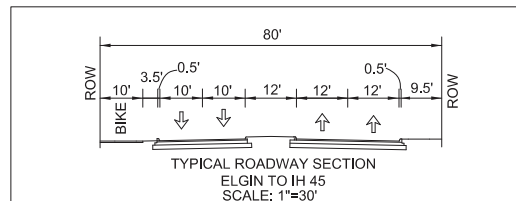
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FILE: \$FILE\$

ALTERNATIVE 2



PENTABLE: \$PENTBL\$

PLOTDRIVER: \$PLTRDRV\$

USER: \$USER\$

\$TIME\$

DATE: \$DATE\$
FILE: \$FILE\$



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Cullen Boulevard
North MacGregor Way to IH 45

Schematic
Sheet 9 of 10

WBS No.
N-320100-0008-3

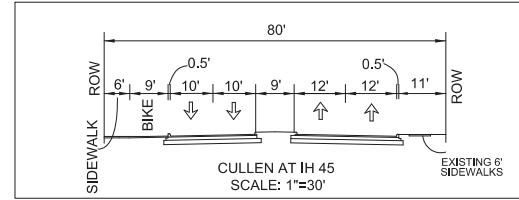
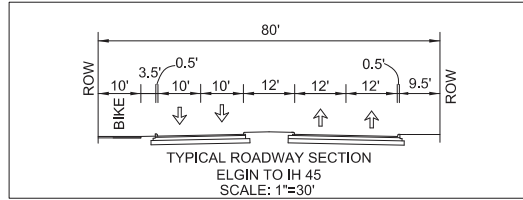
City of Houston PM
Jing Chen, PE

\$DATE\$

Legend

- Right-of-Way
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ALTERNATIVE 2



PENTABLE: \$PENTBL\$

PLOTDRIVER: \$PLTRDRVS\$

USER: \$USER\$

\$TIME\$

DATE: \$DATE\$
FILE: \$FILE\$



CITY OF HOUSTON
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Cullen Boulevard
North MacGregor Way to IH 45

Schematic
Sheet 10 of 10

WBS No.
N-320100-0008-3

City of Houston PM
Jing Chen, PE

\$DATE\$

- Legend
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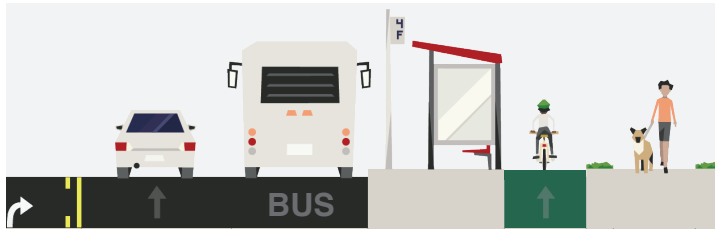
- Concrete Pavement for Bus Stop
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- Future Bus Stop

BUS STOP ALTERNATIVES

Transit Improvements for Cullen

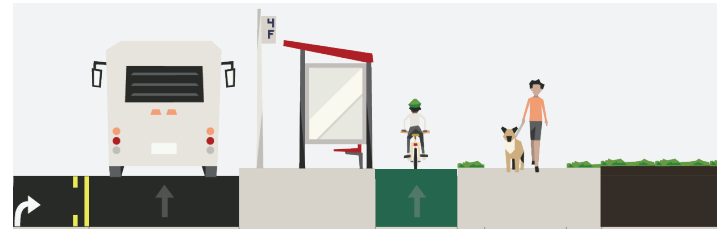
- Future Route 29 Cullen/Hirsch 20 to 30 minute frequency along entire corridor
- Between Holman and Elgin - 3 Routes resulting in very frequent bus service
- Recommend consolidating METRO and UH Shuttle key bus stop locations within University of Houston - Far side stops at Cougar Place and Holman intersections

Bus Pull Out

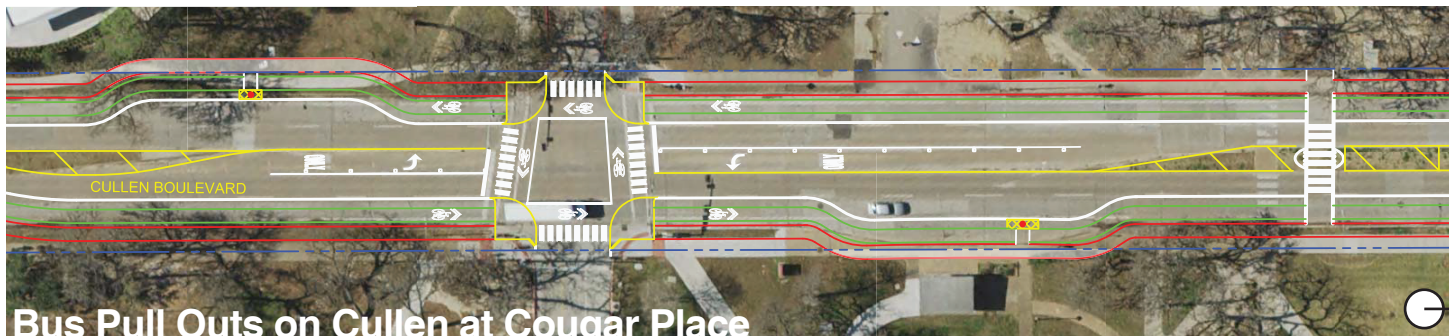


- Requires ROW (approximately 10') and storage for two standard 40 foot buses
- Merging back into traffic can cause delay and reliability issues if vehicle volumes are high

No Bus Pull Out



- Does not require ROW
- Bus does not have to pull back into traffic



Bus Pull Outs on Cullen at Cougar Place

DRAINAGE RECOMMENDATIONS

Proposed Solutions

Storm Drainage Improvements

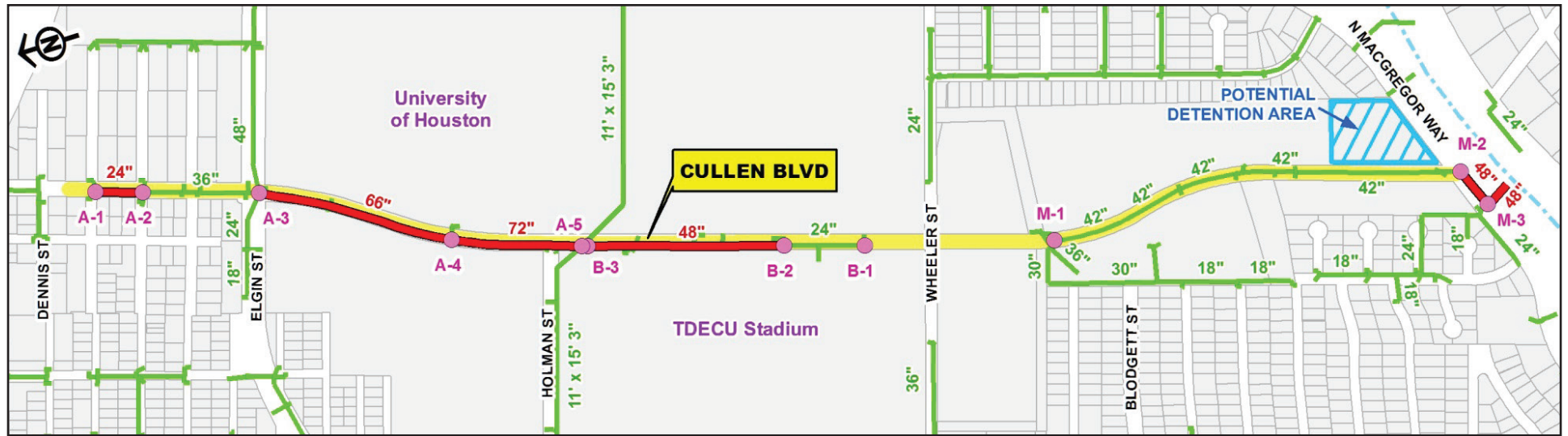
- Replace existing storm sewers
- Conveyance Design Criteria:
- 2-yr < Gutter, 100-yr < 3" above curb
- Detention Volume required due to improved conveyance only

Detention Volume Required

- System A – 0.90 ac-ft
- System B – 0.20 ac-ft
- System M – 0.03 ac-ft

DRAINAGE RECOMMENDATIONS

Drainage Option A – Conveyance + Detention Pond



Storm Sewer Improvements

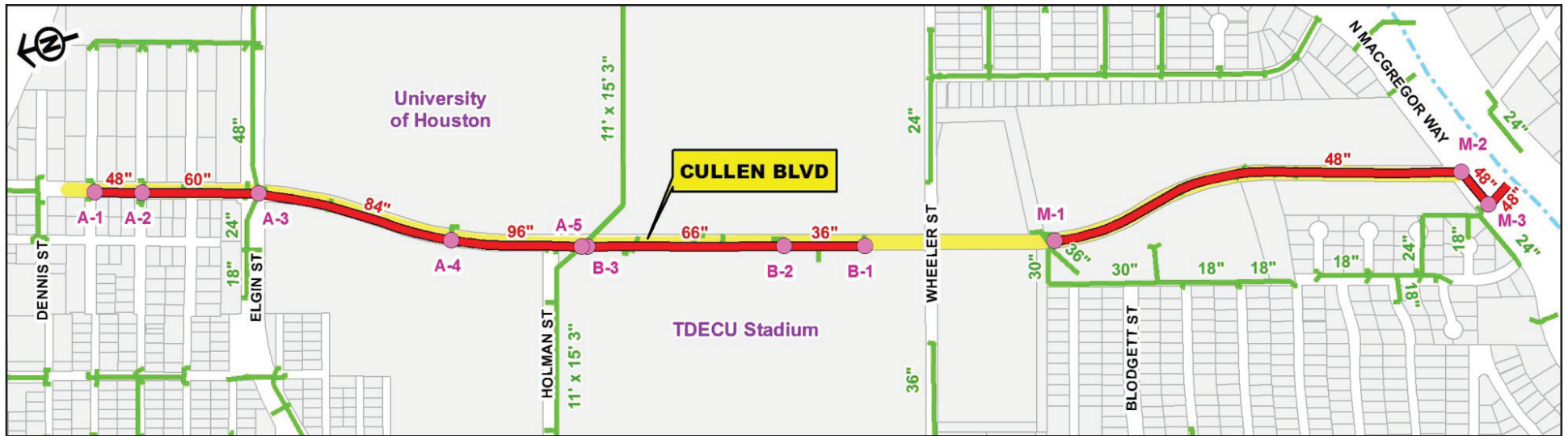
- System A – 0.90 ac-ft
- System B – 0.20 ac-ft
- System M – 0.03 ac-ft

Detention Volume

Total Required – 1.13 ac-ft

DRAINAGE RECOMMENDATIONS

Drainage Option B – Inline Detention



Oversized Storm Sewer

- System A – 48" RCP - 96" RCP
- System B – 36" RCP - 66" RCP
- System M – 48" RCP

Volume Provided

- System A – 0.93 ac-ft
- System B – 0.25 ac-ft
- System M – 0.15 ac-ft

Total – 1.32 ac-ft

DRAINAGE COSTS

Drainage Improvements Cost

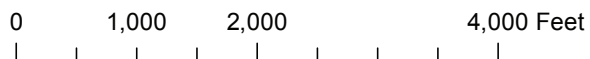
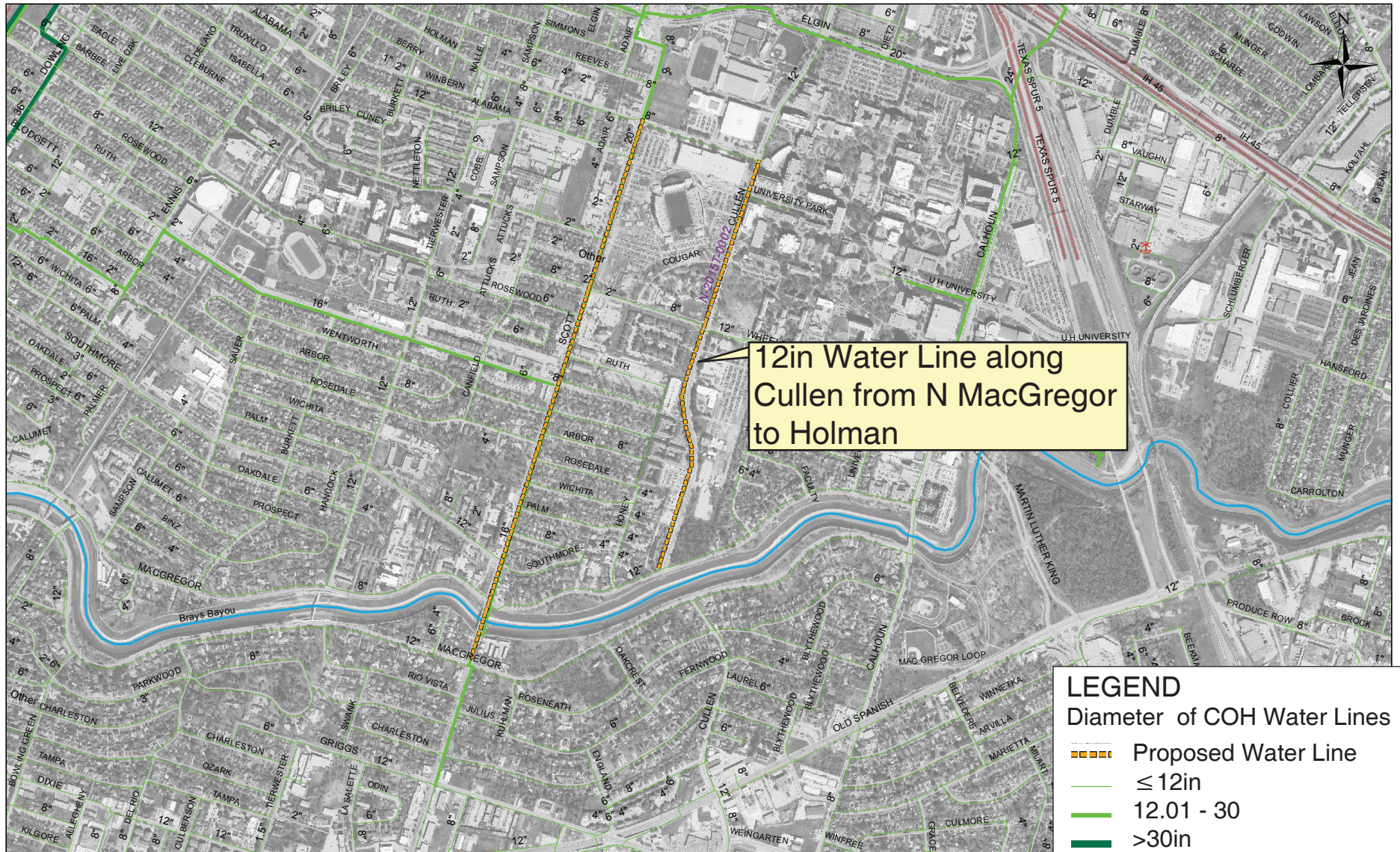
Drainage Option	Cost
Option A: Conveyance + Detention Pond	\$2,260,000
Option B: Inline Detention	\$3,170,000

Floodplain Fill Mitigation

- Required only if there is fill in the 100-year floodplain such as lost volume due to the detention pond
- Floodplain Fill volume not determine

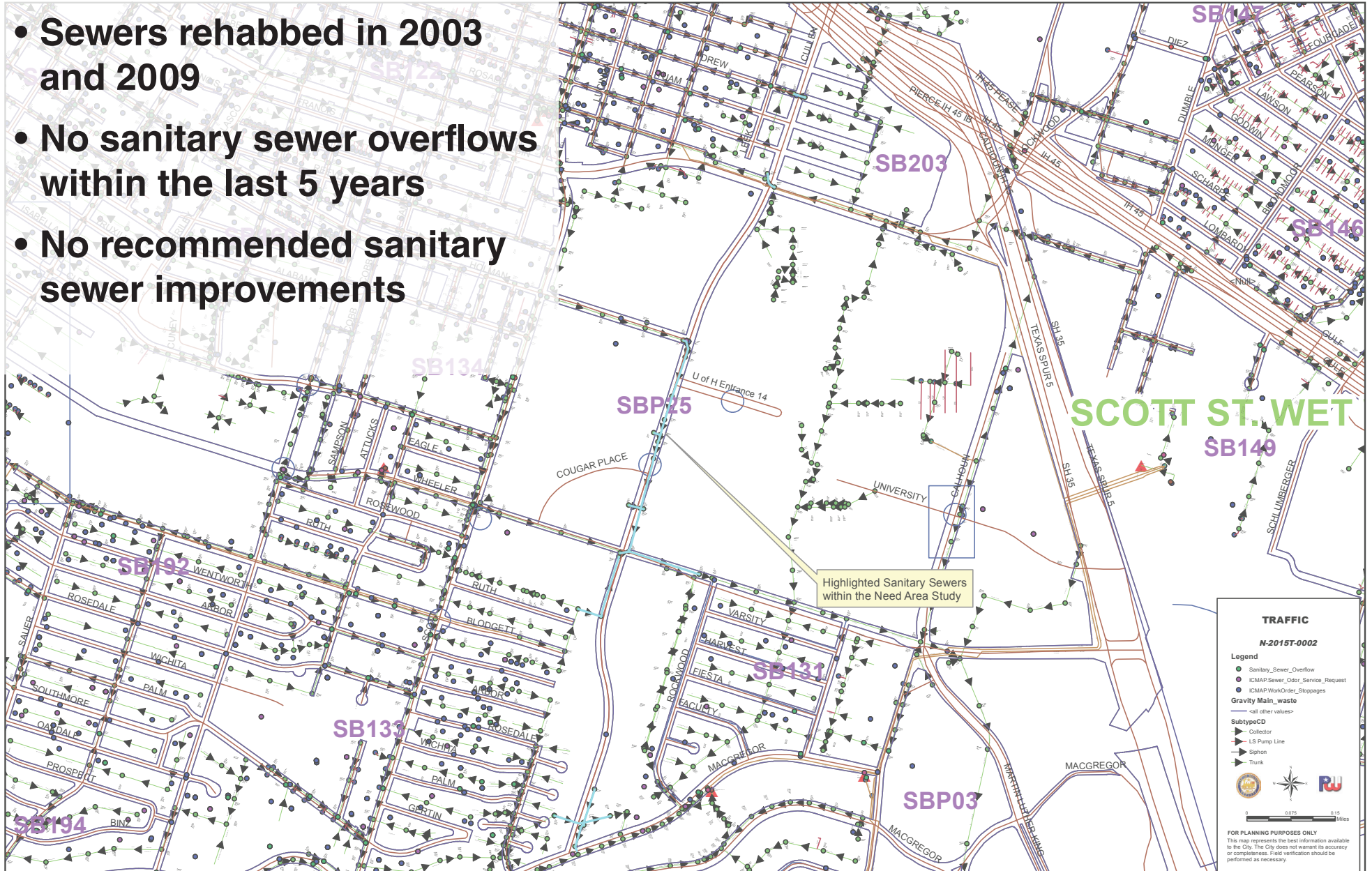
WATER LINE RECOMMENDATIONS

Cullen N-2015T-0002



WASTEWATER RECOMMENDATIONS

- Sewers rehabbed in 2003 and 2009
- No sanitary sewer overflows within the last 5 years
- No recommended sanitary sewer improvements



COST ESTIMATE

Alternative 1 - Four Lane with Median

Cost Item	Cost Drainage Option A	Cost Drainage Option B
Paving Items	\$7,248,088	\$7,248,088
Drainage Items	\$2,260,000	\$3,170,000
Wastewater Items	\$0	\$0
Water Line Items	\$599,227	\$599,227
Total Constructions Cost	\$10,107,315	\$11,017,315
Construction Management (15% of Construction Cost)	\$1,516,098	\$1,652,598
Contingencies (30% of Construction Cost)	\$3,032,195	\$3,305,195
Engineering Fee (17% of Construction Cost + Contingencies)	\$2,233,717	\$2,434,827
Design Management (15% of Design Fee Cost)	\$335,058	\$365,225
Land Acquisition	\$2,369,228	\$2,369,228
Total Project Cost	\$19,593,612	\$21,144,389
Total Project Cost (ReBuild Houston Funds)	\$18,622,862	\$20,173,638

PROJECT PRIORITY SCORE

Alternative 1 - Four Lane with Median

Table 3.3 Major Thoroughfare and Collectors (No Change in Classification)

Infrastructure Category	Weight	Criteria	Benefit	Alternative 1 Drainage Option A	Alternative 1 Drainage Option B
Streets	75%	Pavement conditions (0-60)	Improved Pavement Condition (driving surface)	15.2	15.2
		Traffic Level of Service (0-15)	F to C or better (15 pts) E to C or better (10pts) D to C or better (5pts)	0	0
Drainage Systems	15%	Extreme Event LOS (0-5)	Drainage System conveys within public right-of-way	5	5
		Design Event LOS (0-10)	Drainage System conveys Design Event	10	10
Water	5%	WIRP Rank (0-5)	Reduction in occurrence of breaks, color, odor, low pressure, etc.	3.2	3.2
Wastewater	5%	Sanitary Sewer Overflows or Agreed Order (0-2)	Reduction in stoppages and overflows	0	0
		Point Repairs (0-2)	Reduction in breaks, stoppages and overflows	0	0
		Age of Pipe (0-1)	Reduction in collapses/failures due to older pipe	0	0
Service Area Benefit Factor	Sum of Above			33.4	33.4
Benefited Population	35% of Current Average Daily Traffic + 65% of Future Average Daily Traffic + Current Metro Ridership numbers			23,895	23,895
City Rebuild Houston Funds	Total Candidate Project Costs including Land Acquisition, Design and Construction that are funded by: Ad valorem, drainage charge, 3rd Party (Metro) or Impact Fee contributions			\$18,623	\$20,174
Corridor Centerline Miles	As Measured			1.48	1.48
Candidate Project Priority Score	$\frac{\text{Service Area Benefit Factor} \times \text{Benefited Population} \times \text{Corridor Center Line Miles}}{\text{City ReBuild Houston Funds}}$			63.50	58.62

COST ESTIMATE

Alternative 2A - Three Lane South of Elgin

Cost Item	Cost Drainage Option A	Cost Drainage Option B
Paving Items	\$5,250,396	\$5,250,396
Drainage Items	\$2,260,000	\$3,170,000
Wastewater Items	\$0	\$0
Water Line Items	\$599,227	\$599,227
Total Constructions Cost	\$8,109,623	\$9,019,623
Construction Management (15% of Construction Cost)	\$1,216,444	\$1,352,944
Contingencies (30% of Construction Cost)	\$2,432,888	\$2,705,888
Engineering Fee (17% of Construction Cost + Contingencies)	\$1,792,227	\$1,993,337
Design Management (15% of Design Fee Cost)	\$268,835	\$299,001
Land Acquisition	\$134,865	\$134,865
Total Project Cost	\$13,954,882	\$15,505,658
Total Project Cost (ReBuild Houston Funds)	\$12,984,132	\$14,534,908

PROJECT PRIORITY SCORE

Alternative 2A - Three Lane South of Elgin

Table 3.3 Major Thoroughfare and Collectors (No Change in Classification)

Infrastructure Category	Weight	Criteria	Benefit	Alternative 1 Drainage Option A	Alternative 1 Drainage Option B
Streets	75%	Pavement conditions (0-60)	Improved Pavement Condition (driving surface)	15.2	15.2
		Traffic Level of Service (0-15)	F to C or better (15 pts) E to C or better (10pts) D to C or better (5pts)	0	0
Drainage Systems	15%	Extreme Event LOS (0-5)	Drainage System conveys within public right-of-way	5	5
		Design Event LOS (0-10)	Drainage System conveys Design Event	10	10
Water	5%	WIRP Rank (0-5)	Reduction in occurrence of breaks, color, odor, low pressure, etc.	3.2	3.2
Wastewater	5%	Sanitary Sewer Overflows or Agreed Order (0-2)	Reduction in stoppages and overflows	0	0
		Point Repairs (0-2)	Reduction in breaks, stoppages and overflows	0	0
		Age of Pipe (0-1)	Reduction in collapses/failures due to older pipe	0	0
Service Area Benefit Factor	Sum of Above			33.4	33.4
Benefited Population	35% of Current Average Daily Traffic + 65% of Future Average Daily Traffic + Current Metro Ridership numbers			22,447	22,447
City Rebuild Houston Funds	Total Candidate Project Costs including Land Acquisition, Design and Construction that are funded by: Ad valorem, drainage charge, 3rd Party (Metro) or Impact Fee contributions			\$12,984	\$14,535
Corridor Centerline Miles	As Measured			1.48	1.48
Candidate Project Priority Score	$\frac{\text{Service Area Benefit Factor} \times \text{Benefited Population} \times \text{Corridor Center Line Miles}}{\text{City ReBuild Houston Funds}}$			85.57	76.44

COST ESTIMATE

Alternative 2B - Three Lane and Four Lane Section

Cost Item	Cost Drainage Option A	Cost Drainage Option B
Paving Items	\$5,414,933	\$5,414,933
Drainage Items	\$2,260,000	\$3,170,000
Wastewater Items	\$0	\$0
Water Line Items	\$599,227	\$599,227
Total Constructions Cost	\$8,274,160	\$9,184,160
Construction Management (15% of Construction Cost)	\$1,241,125	\$1,377,625
Contingencies (30% of Construction Cost)	\$2,482,249	\$2,755,249
Engineering Fee (17% of Construction Cost + Contingencies)	\$1,828,590	\$2,029,700
Design Management (15% of Design Fee Cost)	\$274,289	\$304,455
Land Acquisition	\$124,875	\$124,875
Total Project Cost	\$14,225,288	\$15,776,064
Total Project Cost (ReBuild Houston Funds)	\$13,254,537	\$14,805,314

PROJECT PRIORITY SCORE

Alternative 2B - Three Lane and Four Lane Section

Table 3.3 Major Thoroughfare and Collectors (No Change in Classification)

Infrastructure Category	Weight	Criteria	Benefit	Alternative 1 Drainage Option A	Alternative 1 Drainage Option B
Streets	75%	Pavement conditions (0-60)	Improved Pavement Condition (driving surface)	15.2	15.2
		Traffic Level of Service (0-15)	F to C or better (15 pts) E to C or better (10pts) D to C or better (5pts)	0	0
Drainage Systems	15%	Extreme Event LOS (0-5)	Drainage System conveys within public right-of-way	5	5
		Design Event LOS (0-10)	Drainage System conveys Design Event	10	10
Water	5%	WIRP Rank (0-5)	Reduction in occurrence of breaks, color, odor, low pressure, etc.	3.2	3.2
Wastewater	5%	Sanitary Sewer Overflows or Agreed Order (0-2)	Reduction in stoppages and overflows	0	0
		Point Repairs (0-2)	Reduction in breaks, stoppages and overflows	0	0
		Age of Pipe (0-1)	Reduction in collapses/ failures due to older pipe	0	0
Service Area Benefit Factor	Sum of Above			33.4	33.4
Benefited Population	35% of Current Average Daily Traffic + 65% of Future Average Daily Traffic + Current Metro Ridership numbers			22,984	22,984
City Rebuild Houston Funds	Total Candidate Project Costs including Land Acquisition, Design and Construction that are funded by: Ad valorem, drainage charge, 3rd Party (Metro) or Impact Fee contributions			\$13,255	\$14,805
Corridor Centerline Miles	As Measured			1.48	1.48
Candidate Project Priority Score	$\frac{\text{Service Area Benefit Factor} \times \text{Benefited Population} \times \text{Corridor Center Line Miles}}{\text{City ReBuild Houston Funds}}$			85.82	76.84

PROJECT SCORING SUMMARY

Infrastructure Category	Alternative 1 (Four Lane/Median)		Alternative 2A (Three Lane Road)		Alternative 2B (Three/Four Lane Road)	
	Drainage Option A	Drainage Option B	Drainage Option A	Drainage Option B	Drainage Option A	Drainage Option B
Streets	15.2	15.2	15.2	15.2	15.2	15.2
Drainage Systems	15	15	15	15	15	15
Water	3.2	3.2	3.2	3.2	3.2	3.2
Wastewater	0	0	0	0	0	0
Service Area Benefit Factor	33.4	33.4	22.0	22.0	22.0	22.0
Benefited Population	23,895	23,895	22,447	22,447	22,984	22,984
City Rebuild Houston Funds	\$18,623	\$20,174	\$12,984	\$14,535	\$13,255	\$14,805
Corridor Centerline Miles	1.48	1.48	1.48	1.48	1.48	1.48
Candidate Project Priority Score	63.50	58.62	85.57	76.44	85.82	76.84

NEXT STEPS

- Meet with UH Transportation, Parking, and Circulation (TPAC)
- Develop Candidate Project and any Sub-projects
- Detail Cost Estimates for Candidate Project and any Sub-projects
- Continue to coordinate with University of Houston as they develop new University Master Plan