

SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: BR 2022(925)

CONTROL: 0271-17-176

COUNTY: HARRIS

LETTING: 08/03/2022

REFERENCE NO: 0729

**PROPOSAL ADDENDUMS**

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PROPOSAL COVER

BID INSERTS (SH. NO.:

GENERAL NOTES (SH. NO.:

SPEC LIST (SH. NO.:

SPECIAL PROVISIONS:

ADDED:

DELETED:

SPECIAL SPECIFICATIONS:

ADDED:

DELETED:

X OTHER: PLAN SHEETS

DESCRIPTION OF ABOVE CHANGES

(INCLUDING PLANS SHEET CHANGES)

\*\*\*\*\* PLAN SHEETS \*\*\*\*\*

SHEET 001:REPLACED DUE TO REVISED SHEET

SHEET 003:REPLACED DUE TO REVISED SHEET

SHEET 084:REPLACED DUE TO REVISED SHEET

# STATE OF TEXAS DEPARTMENT OF TRANSPORTATION

FED. RD. DIV. NO.	PROJECT NO.	SHEET NO.	
6	BR 2022 (925)	1	
STATE	STATE DIST.	COUNTY	
TEXAS	HOU	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0271	17	176	IH 610

## INDEX OF SHEETS

SEE SHEET 2 FOR INDEX OF SHEETS



07/20/2022

REGISTERED ACCESSIBILITY SPECIALIST (RAS) INSPECTION IS NOT REQUIRED.

## PLANS OF PROPOSED STATE HIGHWAY IMPROVEMENT

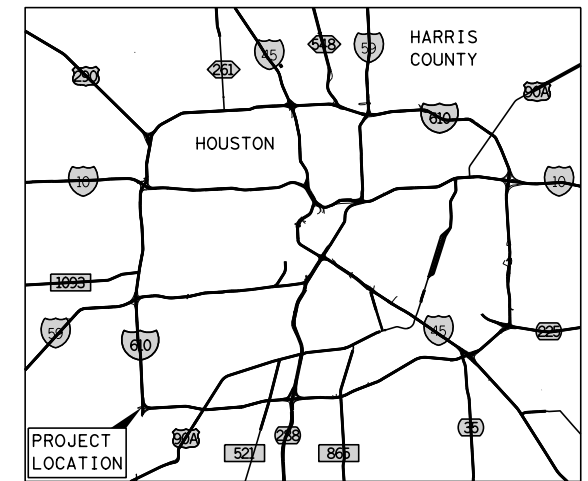
HARRIS COUNTY  
**IH 610 SB FRONTAGE ROAD**  
PROJECT NO. BR 2022 (925)

CSJ: 0271-17-176

NBI: 12-102-0-0271-17-807  
NET LENGTH OF ROADWAY = 243.70 FT = 0.046 MI  
NET LENGTH OF BRIDGE = 170.00 FT = 0.032 MI  
NET LENGTH OF PROJECT = 413.70 FT = 0.078 MI

LIMITS: IH 610 SB FRONTAGE RD AT BRAYS BAYOU

FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR

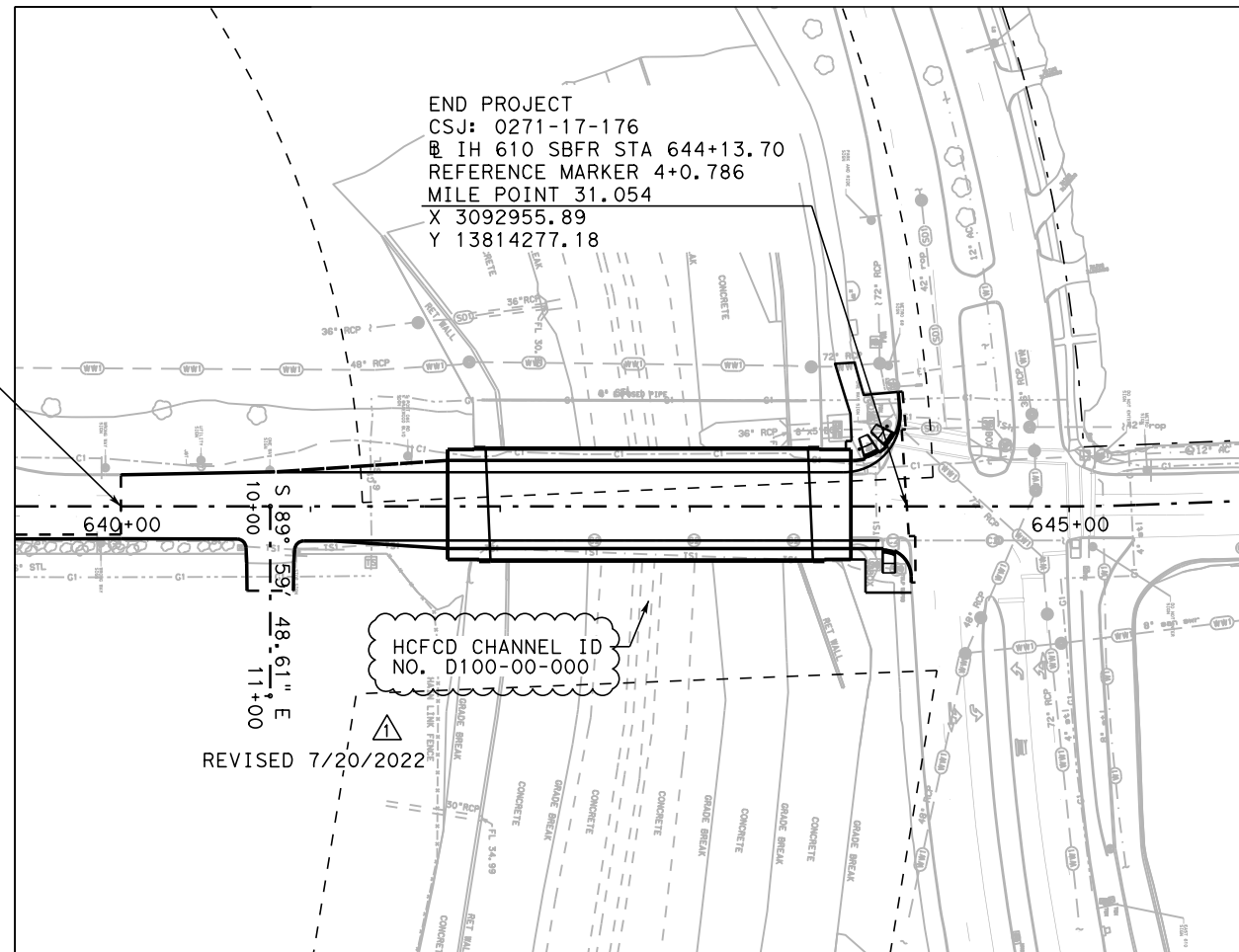


VICINITY MAP  
N. T. S.

DESIGN SPEED  
FRONTAGE ROADS = 30 MPH

ADT: 41,300 (2022) 57,200 (2042)

FOR THE CONSTRUCTION OF: BRIDGE REPLACEMENT



LOCATION MAP  
1" = 600"

BEGIN PROJECT  
CSJ: 0271-17-176  
IH 610 SBFR STA 640+00.00  
REFERENCE MARKER 4+0.708  
MILE POINT 30.976  
X 3092955.86  
Y 13813863.48

END PROJECT  
CSJ: 0271-17-176  
IH 610 SBFR STA 644+13.70  
REFERENCE MARKER 4+0.786  
MILE POINT 31.054  
X 3092955.89  
Y 13814277.18

REVISED 7/20/2022

**\*Construction in Harris County Flood Control District Right-of-Way requires:**  
Site plans must be approved prior to obtaining the required HCFCR Right-of-Way Notification. Be advised that the HCFCR Right-of-Way Notification is separate from the site development permit package  
1.) HCFCR Right-of-Way Notification (permit)  
2.) HCFCR 48-hr Pre-Construction Notice  
Both are required prior to entering or working within Harris County Flood Control District right-of-way. The HCFCR Right-of-Way Notification and 48-hour notice must be provided to HCFCR at [dcid@hcfcd.hctx.net](mailto:dcid@hcfcd.hctx.net).  
To apply for the HCFCR Right-of-Way Notification please go to <http://apps.harriscountytexas.gov/EPermits> and apply for the HCFCR ROW under ROW Notification.  
Failure to provide both items could result in project delays.

REVISED 7/20/2022

### FINAL PLANS

LETTING DATE: \_\_\_\_\_  
DATE CONTRACTOR BEGAN WORK: \_\_\_\_\_  
DATE WORK WAS ACCEPTED: \_\_\_\_\_  
FINAL CONTRACT COST: \$ \_\_\_\_\_  
CONTRACTOR: \_\_\_\_\_

SUBMITTED FOR LETTING **7/21/2022**  
DocuSigned by: **Prasanna Uebhi**  
PROJECT MANAGER

RECOMMENDED FOR LETTING **7/27/2022**  
DocuSigned by: **Larry W. Blackburn**  
For DISTRICT ENGINEER B9928A69E03E42F...

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, NOVEMBER 1, 2014 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT: REQUIRED CONTRACT PROVISIONS FOR ALL FEDERAL-AID CONSTRUCTION CONTRACTS (FORM FHWA 1273, MAY, 2012)

EXCEPTIONS: NO EXCEPTIONS  
EQUATIONS: NO EQUATIONS  
R. R. CROSSINGS: NO R. R. CROSSINGS



818 TOWN AND COUNTRY BLVD  
HOUSTON, TX 77024  
TBPE FIRM NO. F-2966  
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FILE LOCATION  
<http://www.txdot.gov/inside-txdot/district/san-antonio/specinfo.html>

LEVELS DISPLAYED	
1	

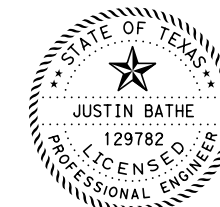
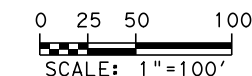
COUNTY\_HARRIS PROJ. NO. BR\_2022(925)  
HWY. NO. IH610 LETTING DATE\_8/2022  
DATE ACCEPTED

LEGEND

- EXIST ROW
- EXIST HCFC D EASEMENT
- XXXX-XXXX-XX-X CURVE NO.
- ↔ EXIST DIRECTION OF TRAFFIC
- ← PROP DIRECTION OF TRAFFIC

NOTES:

1. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR HORIZONTAL CURVE DATA.
2. REFER TO THE SURVEY CONTROL INDEX FOR CONTROL POINTS.



07/20/2022

REVIS 7/20/2022

STANDARD HCFC D NOTES FOR CONSTRUCTION DRAWINGS

1. OBTAIN AND COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL PERMITS AND APPROVALS, WITH ASSISTANCE FROM ENGINEER, IF NECESSARY. OBTAIN PERMIT (CERTIFICATION) FROM HARRIS COUNTY ENGINEER TO ENTER HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY.
2. NOTIFY THE HARRIS COUNTY FLOOD CONTROL DISTRICT'S DEVELOPMENT COORDINATION AND INSPECTION DEPARTMENT IN WRITING AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. SUBMIT THE HCFC D 48 HOUR PRE CONSTRUCTION NOTIFICATION FORM, A COPY OF THE APPROVED CONSTRUCTION DRAWINGS, AND A COPY OF THE CORPS OF ENGINEERS INDIVIDUAL SECTION 404 PERMIT OR COMPLIANCE WITH NATIONWIDE PERMIT, IF APPLICABLE, TO HCFC D, 9900 NORTHWEST FREEWAY, HOUSTON, TEXAS 77092, ATTN: DEVELOPMENT COORDINATION AND INSPECTION DEPT. BY HAND DELIVERY, BY EMAIL DCID@HCFC D.ORG, OR FAX TO 713-684-4129 (FAX NUMBER).
3. ENGINEER SHALL SUBMIT CERTIFICATION LETTER AND RECORD DRAWINGS TO THE HARRIS COUNTY FLOOD CONTROL DISTRICT'S DEVELOPMENT COORDINATION AND INSPECTION SECTION REQUESTING INSPECTION OF ITEMS CONSTRUCTED IN HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY. PRIOR TO REQUESTING INSPECTION, THE DRAINAGE RIGHT-OF-WAY AND/OR EASEMENTS SHALL BE STAKED AND FLAGGED.
4. PROTECT, MAINTAIN, AND RESTORE EXISTING BACKSLOPE DRAINAGE SYSTEMS.
5. BACKSLOPE SWALE AND INTERCEPTOR STRUCTURE ELEVATIONS AND LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. FINAL ELEVATIONS AND LOCATIONS SHALL BE FIELD VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.
6. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL OR DETENTION RIGHT-OF-WAY, EXCEPT THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED. MINIMUM ACCEPTANCE CRITERIA ARE 75% COVERAGE OF LIVE BERMUDA GRASS AND NO EROSION OR RILLS DEEPER THAN 4".
7. EXCAVATE CHANNEL FLOWLINE TO DESIGN ELEVATION AS SHOWN ON PLANS AND DOWNSTREAM, AS NECESSARY, TO ENSURE NO WATER REMAINS IN THE FACILITY (STORM SEWER, LATERAL CHANNEL, OR DRY BOTTOM DETENTION BASIN) DURING NORMAL WATER SURFACE CONDITIONS IN THE CHANNEL, SO THE FACILITY WILL FUNCTION AS INTENDED. FOR WET BOTTOM DETENTION BASINS, ENSURE NO WATER IS ABOVE THE DESIGN LEVEL IN THE WET BOTTOM DURING NORMAL WATER SURFACE CONDITIONS IN THE CHANNEL.
8. MAINTAIN FLOW IN CHANNEL DURING CONSTRUCTION AND RESTORE CHANNEL TO ORIGINAL CONDITION.
9. REMOVE ALL EXCAVATED MATERIAL FROM THE HARRIS COUNTY FLOOD CONTROL DISTRICT OR DRAINAGE RIGHT-OF-WAY. NO FILL IS TO BE PLACED WITHIN A DESIGNATED FLOOD PLAIN AREA WITHOUT FIRST OBTAINING A FILL PERMIT FROM THE APPROPRIATE JURISDICTIONAL AUTHORITY.

NO.	DATE	REVISION	APPROV.

**Jacobs** 818 TOWN AND COUNTRY BLVD  
SUITE 500  
HOUSTON, TX 77024  
FIRM REGISTRATION F-2966



IH 610  
PROJECT LAYOUT

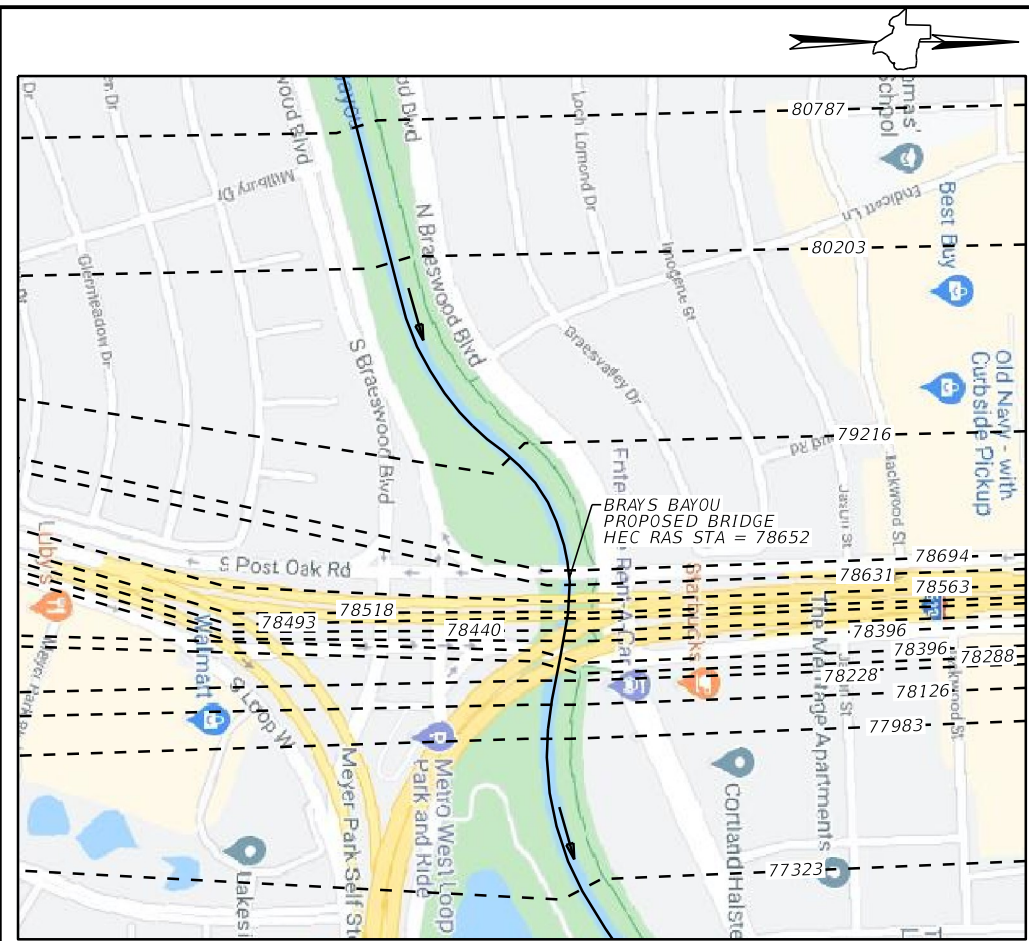
SHEET 1 OF 1

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			3
STATE	DIST.	COUNTY	
TEXAS	HOU	HARRIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0271	17	176	IH 610

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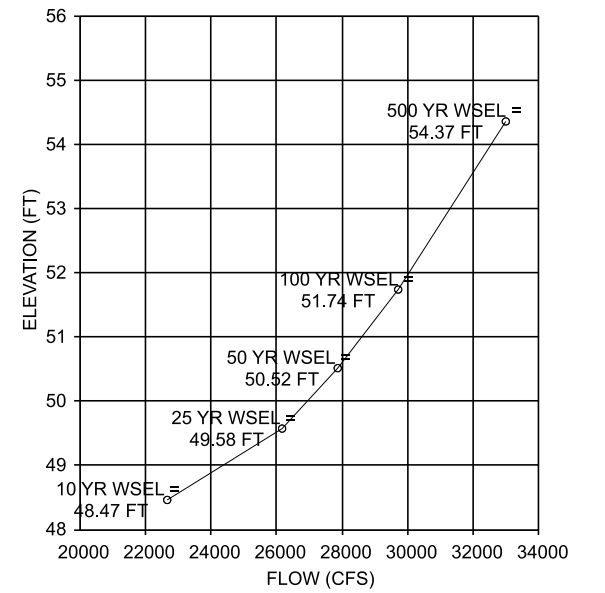
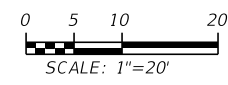
HEC RAS CROSS SECTION LAYOUT (NTS)

RAS CROSS SECTION NO.	FREQ. (YR)	EX WSEL (FT)	PROP WSEL (FT)	DIFF WSEL (PROP-E X) (FT)	EXISTING CONDITIONS				PROPOSED CONDITIONS			
					F.L. ELEV. (FT)	Q (CFS)	CHAN VEL (FT/S)	FLOW AREA (SQ FT)	F.L. ELEV. (FT)	Q (CFS)	CHAN VEL (FT/S)	FLOW AREA (SQ FT)
81408	10 Yr	49.26	49.22	-0.04	25.72	23004	8.40	2853.73	25.72	23004	8.43	2838.17
81408	500 Yr	54.75	54.66	-0.09	25.72	35357	7.81	6239.06	25.72	35357	7.87	6178.63
81251	10 Yr	49.28	49.24	-0.04	25.72	23004	7.85	2931.57	25.72	23004	7.88	2921.74
81251	500 Yr	54.65	54.57	-0.08	25.72	35357	7.81	5995.21	25.72	35357	7.86	5936.92
80787	10 Yr	49.19	49.15	-0.04	25.49	23004	7.79	3048.04	25.49	23004	7.81	3030.85
80787	500 Yr	54.64	54.55	-0.09	25.49	35357	7.56	6383.1	25.49	35357	7.61	6326.08
80203	10 Yr	49.09	49.05	-0.04	25.17	23004	7.64	3011.96	25.17	23004	7.66	3002.04
80203	500 Yr	54.5	54.41	-0.09	25.17	35357	7.70	5709.3	25.17	35357	7.75	5660.79
79216	10 Yr	49.16	49.12	-0.04	24.45	22659	6.23	4477.73	24.45	22659	6.25	4450.49
79216	500 Yr	54.68	54.59	-0.09	24.45	32993	5.83	8315.88	24.45	32993	5.87	8254.99
78694	10 Yr	48.66	48.66	0	24.06	22659	7.61	3050.64	24.06	22659	7.61	3048.76
78694	500 Yr	54.39	54.32	-0.07	24.06	32993	7.00	7211.52	24.06	32993	7.04	7156.48
78652 BR U	10 Yr	48.48	48.47	-0.01	24.06	22659	8.17	2810.77	24.06	22659	8.26	2774.99
78652 BR U	500 Yr	54.46	54.37	-0.09	24.06	32993	6.63	6384.36	24.06	32993	7.12	6166.48
78652 BR D	10 Yr	48.47	48.44	-0.03	24.06	22659	8.17	2832.36	24.06	22659	8.27	2788.68
78652 BR D	500 Yr	54.34	54.19	-0.15	24.06	32993	7.00	5983.29	24.06	32993	7.6	5783.54
78631	10 Yr	48.53	48.53	0	24.06	22659	7.67	3024.21	24.06	22659	7.67	3024.21
78631	500 Yr	54.17	54.17	0	24.06	32993	7.26	6695.26	24.06	32993	7.26	6695.26
78563	10 Yr	48.53	48.53	0	24.06	22659	7.54	3067.57	24.06	22659	7.54	3067.57
78563	500 Yr	54.22	54.22	0	24.06	32993	6.71	6710.89	24.06	32993	6.71	6710.89

- GENERAL NOTES:
- HEC RAS 5.0.7 WAS USED FOR HYDRAULIC ANALYSIS
  - VERTICAL DATUM: NAVD 1988
  - SEE ROADWAY PLAN AND BRIDGE LAYOUT SHEETS FOR MORE DETAILS.
  - FOR EXISTING RESULTS REFER TO HECRAS MODEL FILES BELOW:  
 PLAN: Proposed - All Bridges Multipro le (p23)\*  
 GEOMETRY: Proposed Geometry (g01)\*  
 FLOW: Proposed All bridges Flows (f30)\*
  - FOR PROPOSED RESULTS REFER TO HECRAS MODEL FILES BELOW:  
 PLAN: Proposed 2020 Widening (p01)  
 GEOMETRY: Proposed 2020 Widening (g02)  
 FLOW: Proposed All bridges Flows (f30)
  - SEE PROJECT LAYOUT SHEET FOR STANDARD HCFCD NOTES FOR CONSTRUCTION DRAWINGS

\*THESE FILE NAMES ARE TAKEN AS IS AS-IS FROM THE BASE MODEL RECEIVED FROM HCFCD (Project Brays 08/2020).

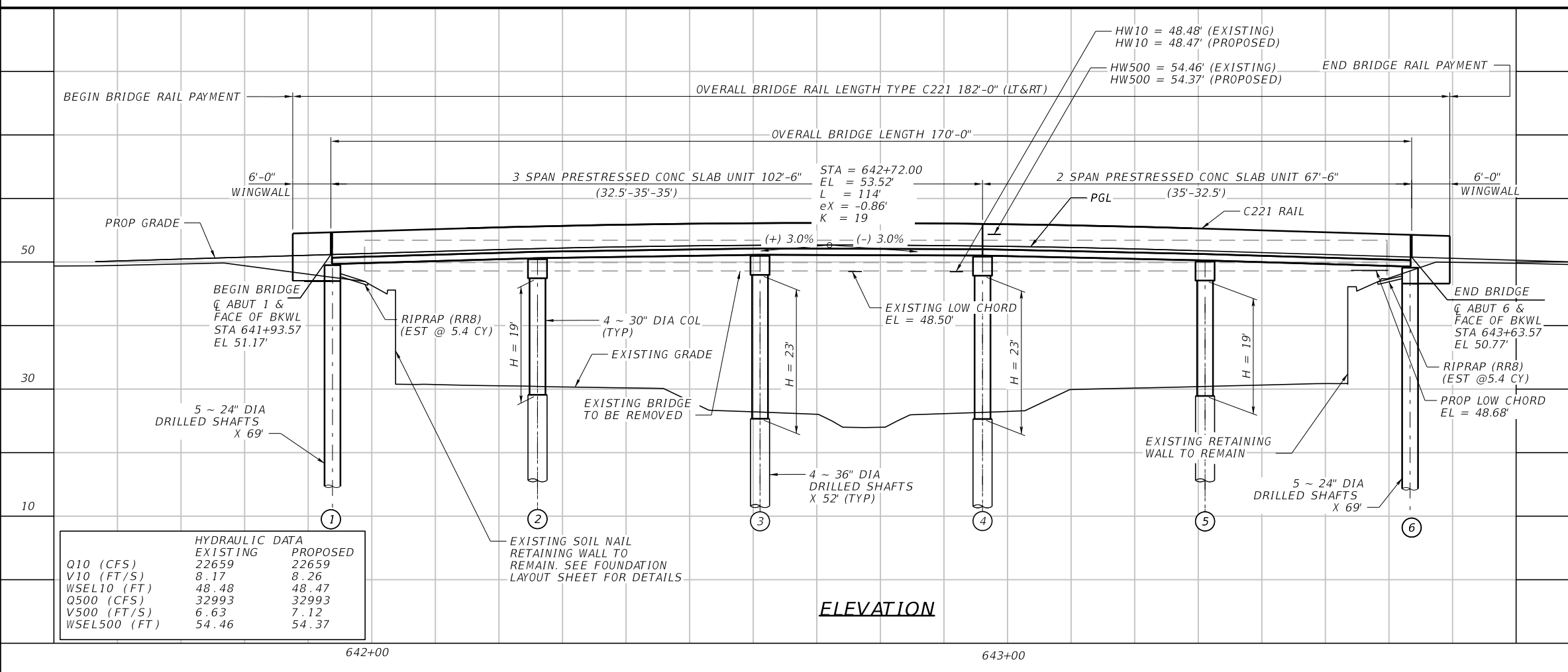
REVISD SHEET 7/20/2022



ELEVATION VS DISCHARGE AT STATION 78652 (PROPOSED)

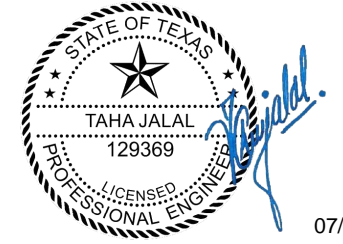
ALL BENTS BEARING S87°30'11.39"W

FUNCT CLASS = URBAN MAJOR COLLECTOR  
 DESIGN SPEED = 30 MPH  
 AADT (2020) = 22,679  
 AADT (2040) = 31,751  
 EXIST NBI = 12-102-0-0271-16-155  
 PROP NBI = 12-102-0-0271-17-807



HYDRAULIC DATA		
	EXISTING	PROPOSED
Q10 (CFS)	22659	22659
V10 (FT/S)	8.17	8.26
WSEL10 (FT)	48.48	48.47
Q500 (CFS)	32993	32993
V500 (FT/S)	6.63	7.12
WSEL500 (FT)	54.46	54.37

ELEVATION



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 SUITE 500  
 HOUSTON, TX 77024  
 FIRM REGISTRATION F-2966

HL93 LOADING SHEET 1 OF 1

Texas Department of Transportation

IH 610  
 HYDRAULIC DATA

BRAYS BAYOU  
 IH610 SBFR

FILE:	DN:	CK:	DW:	EX:
REVISIONS	CONT	SECT	JOB	HIGHWAY
	0271	17	176	IH 610
	DIST	COUNTY	SHEET NO.	
	HOU	HARRIS	84	

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