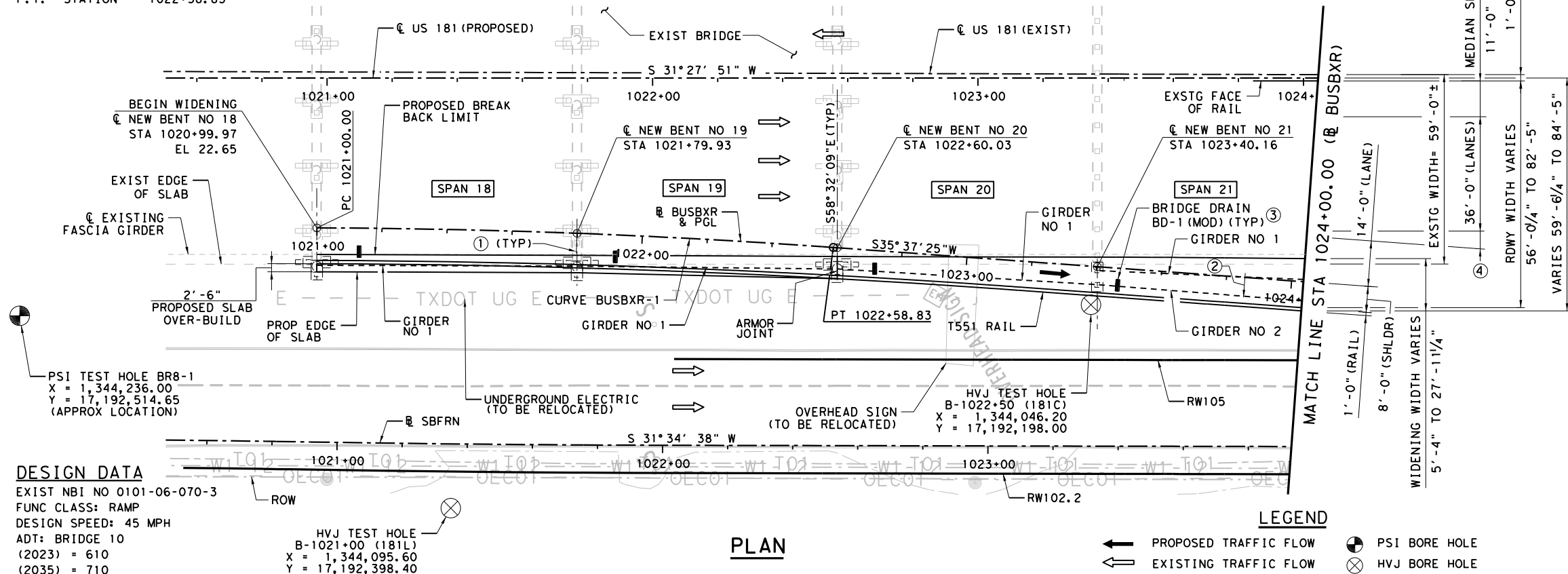


```

CURVE  BUSXR-1
P. I.  STATION      = 1021+79.45
DELTA      = 03° 58' 14.91" (RT)
DEGREE     = 2° 30' 00.00"
TANGENT    = 79.45
LENGTH    = 158.83
RADIUS     = 2291.83
P. C.  STATION      = 1021+00.00
P. T.  STATION      = 1022+58.83

```



NOTES:

1. FOR GENERAL NOTES, SEE "GENERAL NOTES" SHEETS.
2. ROADWAY HORIZONTAL AND VERTICAL GEOMETRY, WIDTH, SUPERELEVATION, TRAFFIC DIRECTION, EXISTING GROUND LINE, PROPOSED GROUND LINE, RIGHT OF WAY AND DRAINAGE DATA PROVIDED BY STANTEC, TOPO DATA PROVIDED BY CIVIL CORP. UTILITY DATA PROVIDED BY PCI.
3. ALL DIMENSIONS ARE EITHER HORIZONTAL OR VERTICAL AND MUST BE CORRECTED FOR GRADE, CROWN AND/OR SUPERELEVATION.
4. ALL SUPERELEVATION TRANSITIONS ARE LINEAR.
5. FOR CONCRETE GIRDER SPANTS, "D" DENOTES BENTS WITH DOWEL BARS AND SLOTTED HOLES AT ENDS OF EXTERIOR GIRDER ONLY.
6. PILE TIP ELEVATIONS SHALL BE VERIFIED IN THE FIELD BY THE GEOTECHNICAL ENGINEER OF RECORD OR AN AUTHORIZED REPRESENTATIVE BASED UPON ACTUAL SOIL CONDITIONS ENCOUNTERED AT EACH PILE LOCATION.
7. CONTRACTOR TO FIELD VERIFY LOCATIONS OF EXISTING STRUCTURES AND UTILITIES PRIOR TO CONSTRUCTION.
8. SEE "TYPICAL SECTION" SHEET FOR TYPICAL SECTION.
9. SEE "BORING LOG DATA" SHEETS FOR BORING LOG INFORMATION.
10. SEE "FOUNDATION LAYOUT" SHEETS FOR DRAINAGE AND UTILITY INFORMATION.
11. SOIL EXPLORATION DATA AND PILE TIP ELEVATION PROVIDED BY PSI.
12. BRIDGE NOT DESIGNED FOR OVERLAY LOAD.
13. SEE "ROADWAY ILLUMINATION" SHEETS FOR UNDERPASS LIGHT FIXTURE DETAILS.
14. FOR HVJ BORING DATA SEE HVJ GEOTECHNICAL DATA REPORT DATED 9/29/2014.
15. SEE SIGNAGE SHEETS FOR SIGN LOCATIONS AND BRIDGE MOUNT DETAILS.

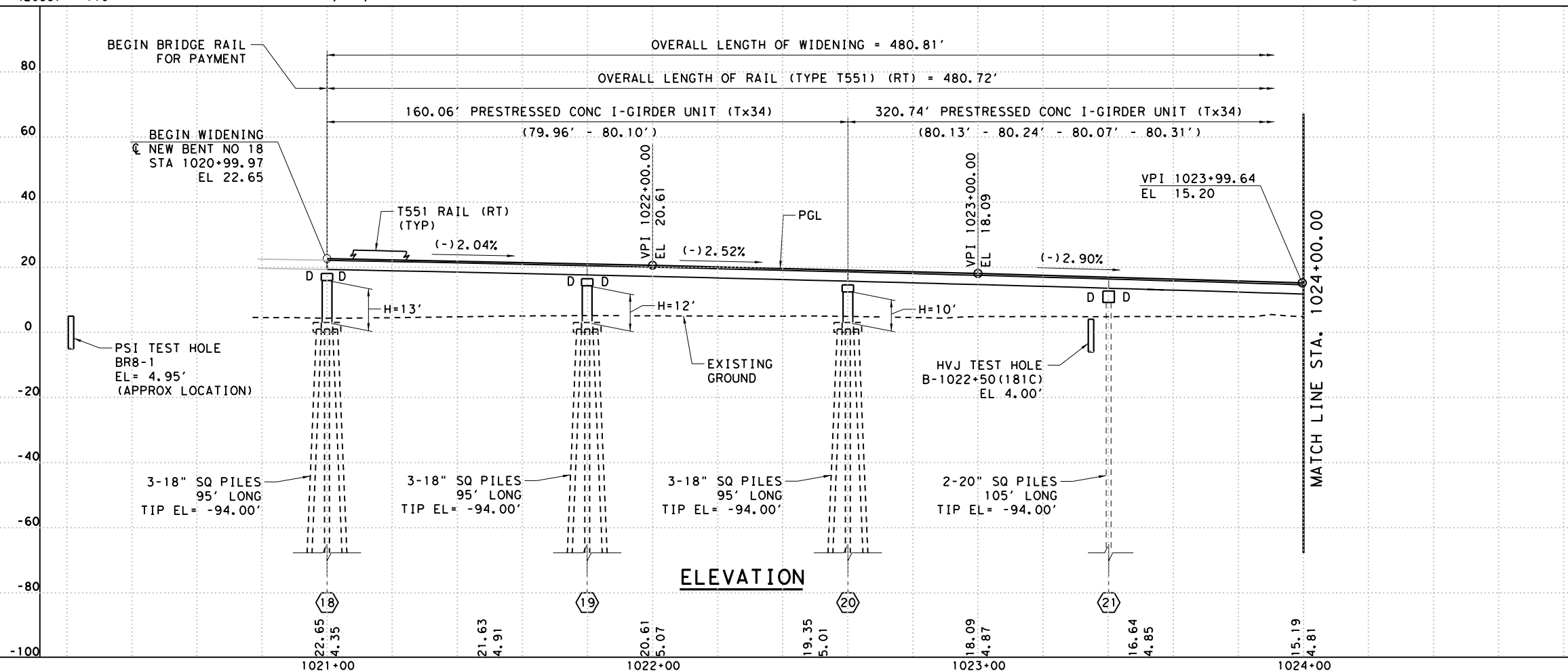
① FOR BENT SKEW ANGLES, SEE "FOUNDATION LAYOUT" SHEETS.

② CROSS SLOPE VARIES. SEE TYPICAL SECTIONS.

③ FOR BRIDGE DRAIN LOCATIONS, SEE "160.06' CONC I-GIRDER UNIT" & "320.74' CONC I-GIRDER UNIT" SHEETS.

④ FOR GORE/SHOULDER AREA LIMITS, SEE "BRIDGE LAYOUT", SHEET 2.

HS-20 LOADING (EXISTING)  
HL-93 LOADING (NEW)

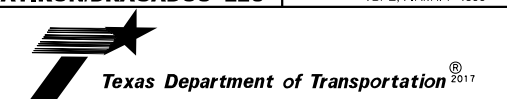
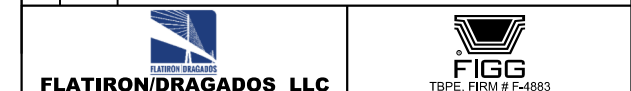


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BY OR UNDER THE SUPERVISION OF:

CESAR FERNANDES 98112 06/30/2017  
TBPE FIRM #F-4883 P.E. NO. DATE

NO.	DATE	REVISION      APPROVED



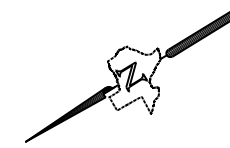
## US 181 HARBOR BRIDGE BRIDGE LAYOUT

US 181 SB OVERPASS WIDENING  
AT BEACH AVENUE  
BRIDGE 10

SCALE: 1" = 40' - 0"			SHEET 1 OF 2	
DESIGN DMS	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GRAPHICS SGF	X	(See Title Sheet)		US 181
CHECK DAK	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK DAK	TEXAS	CRP	NUECES	RB10
CHECK CF	CONTROL	SECTION	JOB	001
	0101	06	095	

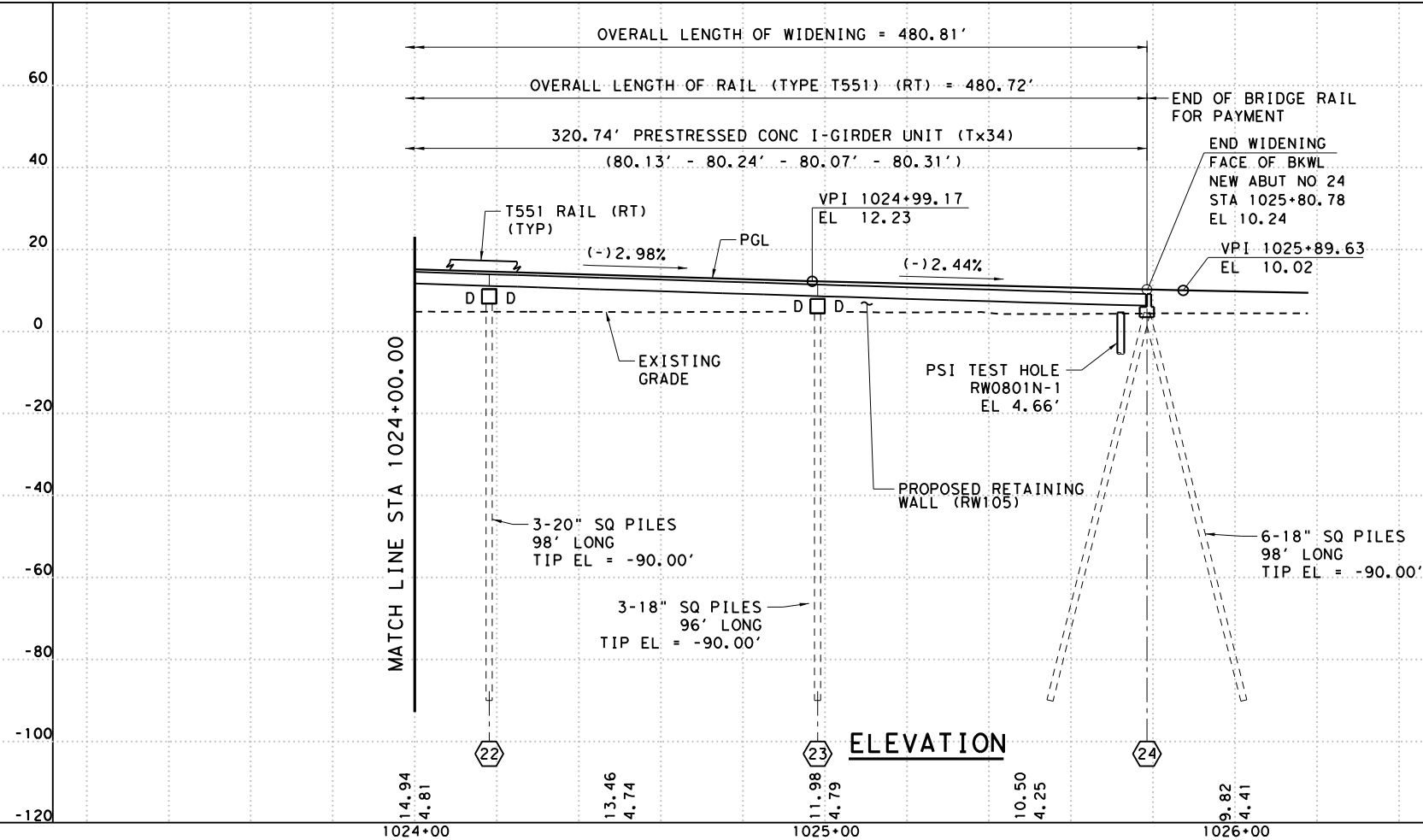
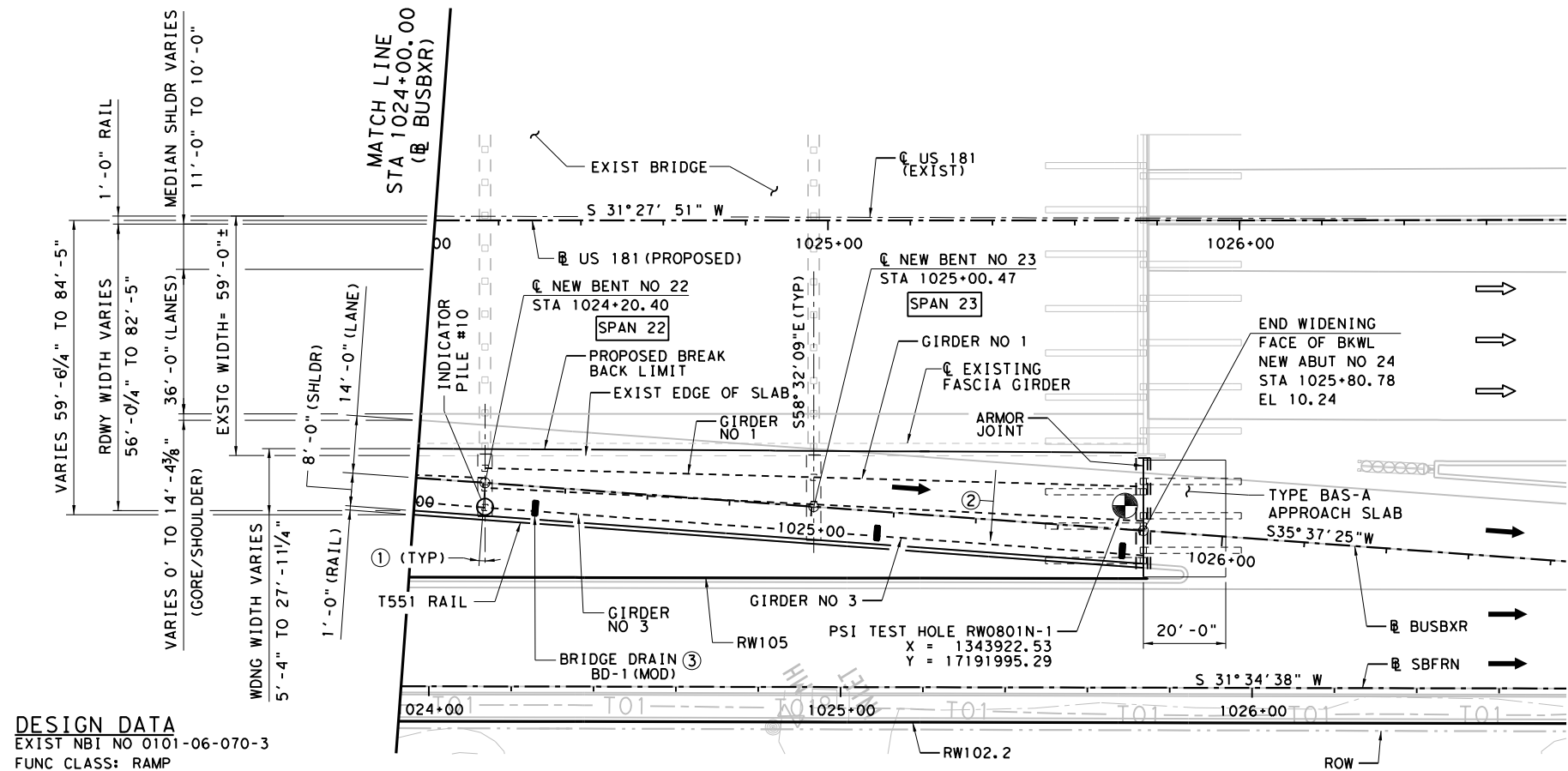
PRELIMINARY NOT FOR CONSTRUCTION, JUNE 2017

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# NOTES:

1. FOR GENERAL NOTES, SEE "GENERAL NOTES" SHEETS.
2. ROADWAY HORIZONTAL AND VERTICAL GEOMETRY, WIDTH, SUPERELEVATION, TRAFFIC DIRECTION, EXISTING GROUND LINE, PROPOSED GROUND LINE, RIGHT OF WAY AND DRAINAGE DATA PROVIDED BY STANTEC, TOPO DATA PROVIDED BY CIVIL CORP. UTILITY DATA PROVIDED BY KCI.
3. ALL DIMENSIONS ARE EITHER HORIZONTAL OR VERTICAL AND MUST BE CORRECTED FOR GRADE, CROWN AND/OR SUPERELEVATION.
4. ALL SUPERELEVATION TRANSITIONS ARE LINEAR.
5. FOR CONCRETE GIRDER SPANS, "D" DENOTES BENTS WITH DOWEL BARS AND SLOTTED HOLES AT ENDS OF EXTERIOR GIRDER ONLY.
6. PILE TIP ELEVATIONS SHOULD BE VERIFIED IN THE FIELD BY THE GEOTECHNICAL ENGINEER OF RECORD OR AN AUTHORIZED REPRESENTATIVE BASED UPON ACTUAL SOIL CONDITIONS ENCOUNTERED AT EACH PILE LOCATION.
7. CONTRACTOR TO FIELD VERIFY LOCATIONS OF EXISTING STRUCTURES AND UTILITIES PRIOR TO CONSTRUCTION.
8. SEE "TYPICAL SECTION" SHEET FOR TYPICAL SECTION.
9. SEE "BORING LOG DATA" SHEETS FOR BORING LOG INFORMATION.
10. SEE "FOUNDATION LAYOUT" SHEETS FOR DRAINAGE AND UTILITY INFORMATION.
11. SOIL EXPLORATION DATA AND PILE TIP ELEVATION PROVIDED BY PSI.
12. BRIDGE NOT DESIGNED FOR OVERLAY LOAD.
13. SEE "ROADWAY ILLUMINATION" SHEETS FOR UNDERPASS LIGHT FIXTURE DETAILS.
14. FOR HVJ BORING DATA SEE HVJ GEOTECHNICAL DATA REPORT DATED 9/29/2014.
15. SEE SIGNAGE SHEETS FOR SIGN LOCATIONS AND BRIDGE MOUNT DETAILS.



PRELIMINARY

80  
60  
40  
20  
0  
-20  
-40  
-60  
-80  
-100  
-120


HS-20 LOADING (EXISTING)  
HL-93 LOADING (NEW)


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TBPE FIRM #F-4883 P.E. NO. DATE


NO.	DATE	REVISION	APPROVED

  
**FLATIRON/DRAGADOS LLC**

  
**FIGG**  
 TBPE FIRM # F-4883



**Texas Department of Transportation** ® 2017

US 181 HARBOR BRIDGE

# BRIDGE LAYOUT

US 181 SB OVERPASS WIDENING  
AT BEACH AVENUE  
BRIDGE 10

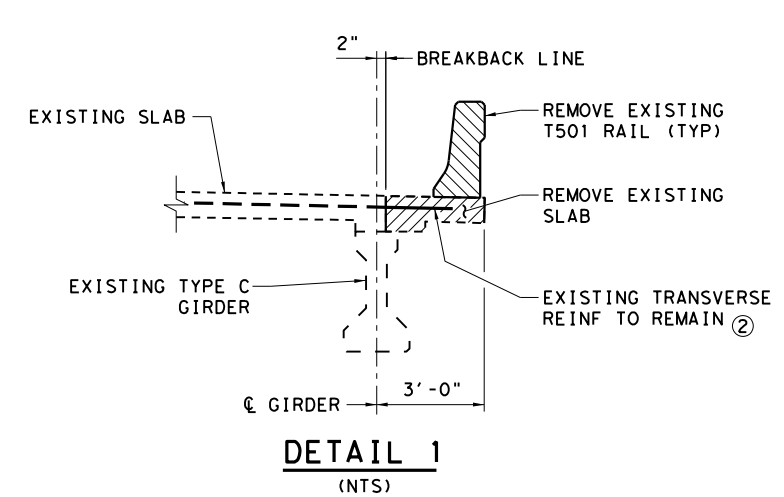
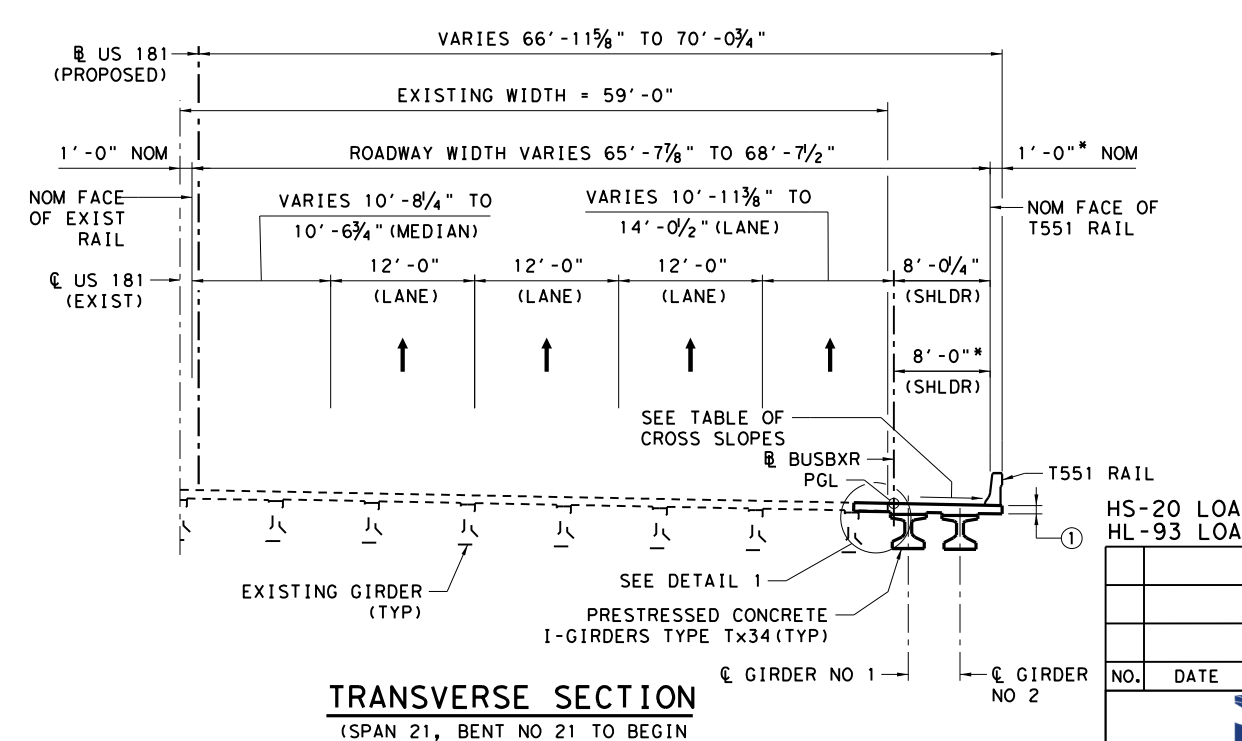
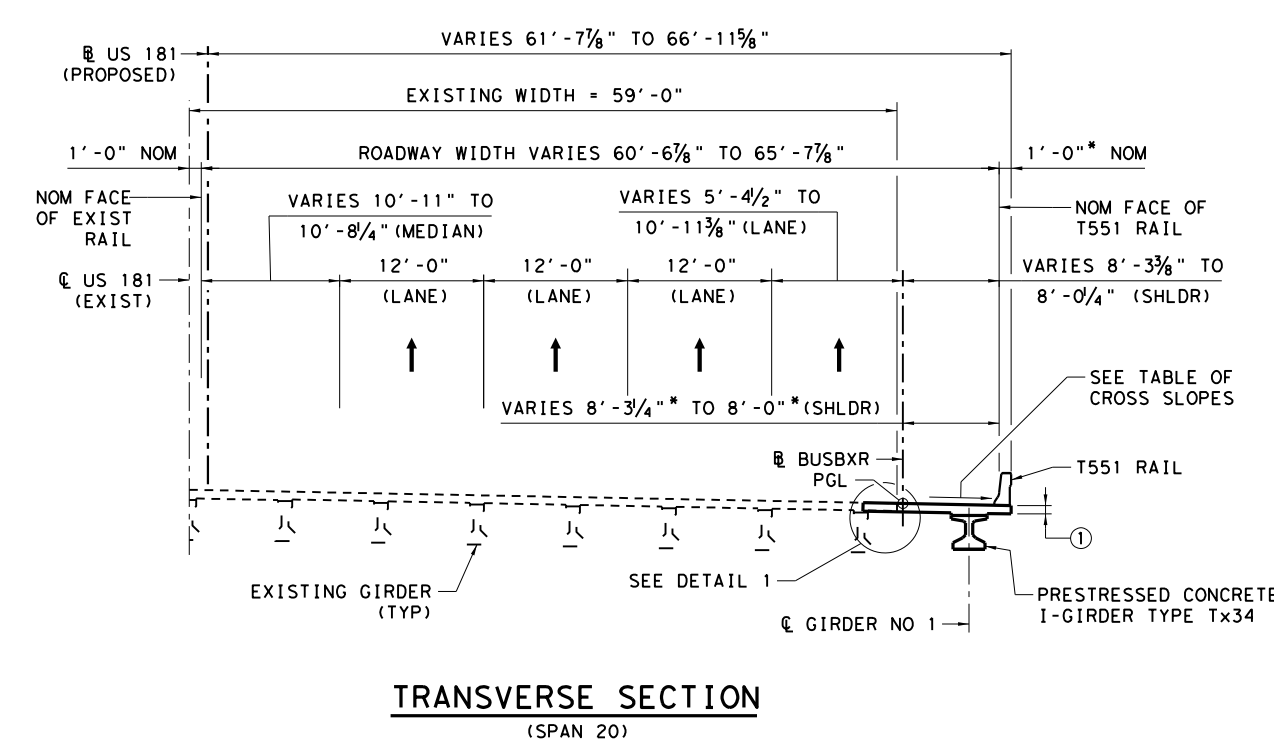
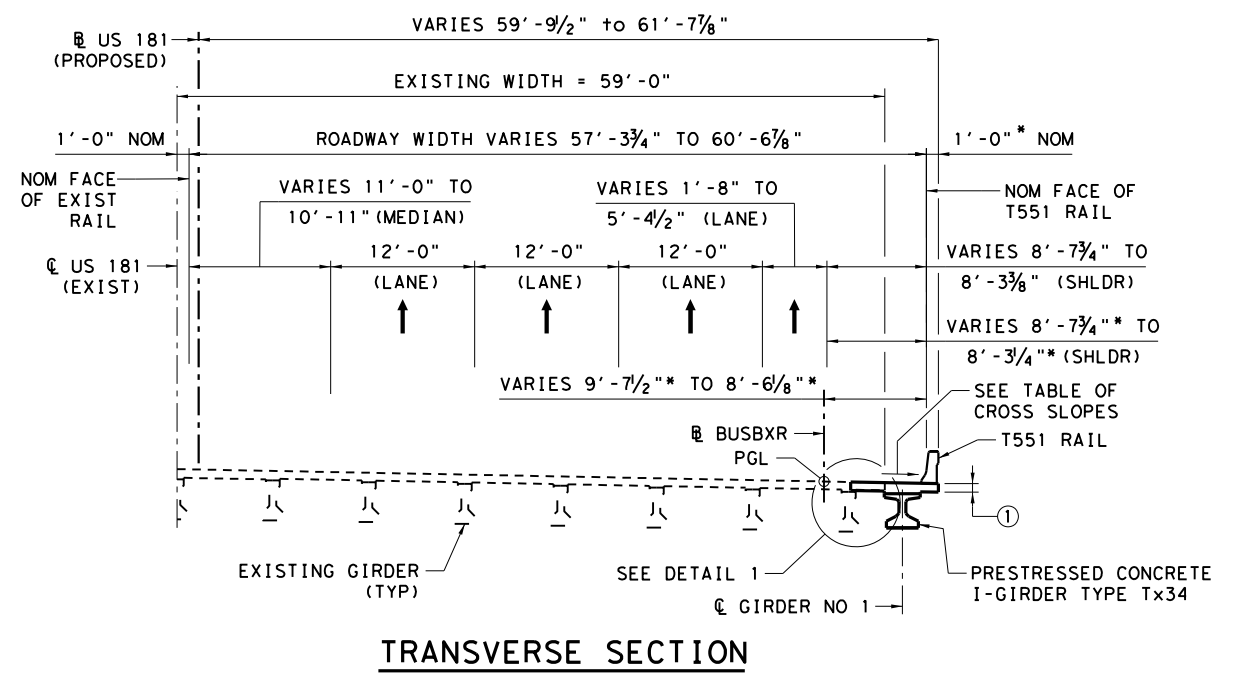
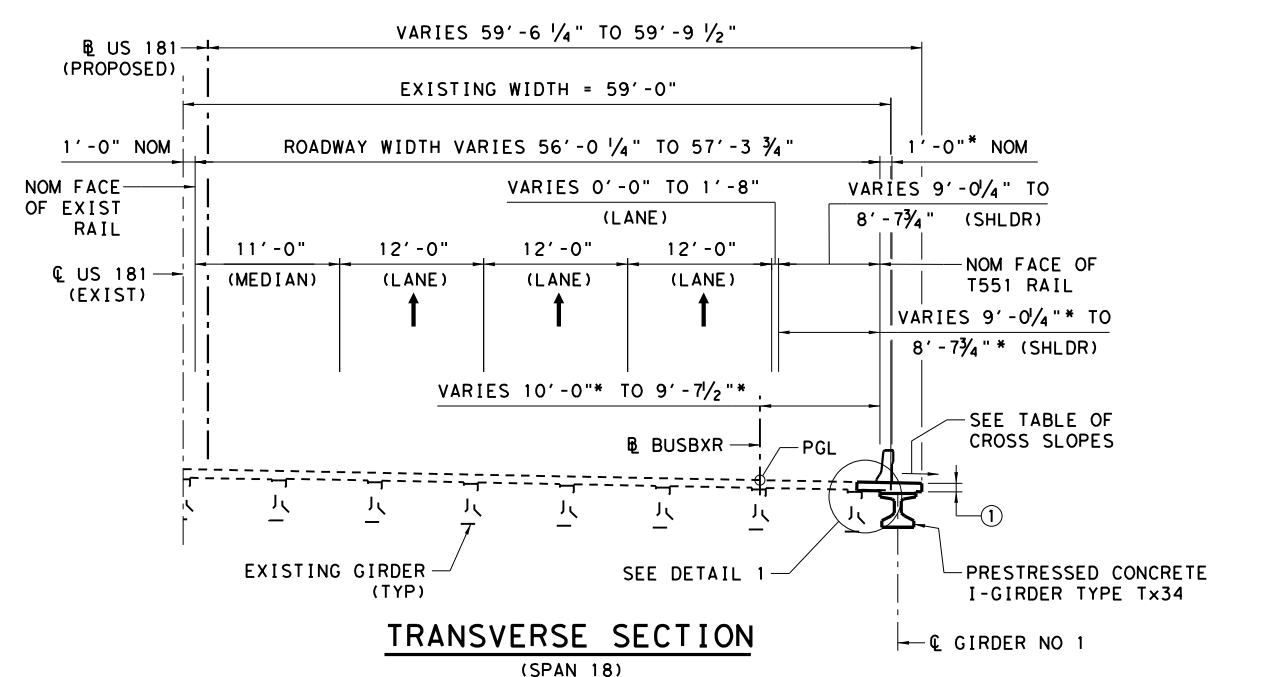
**SCALE: 1" = 40' - 0"**

**SHEET 2 OF 2**

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
<b>DMS</b>			
<b>GRAPHICS</b>	<b>X</b>	<b>(See Title Sheet)</b>	<b>US 181</b>
<b>SGF</b>	STATE	DISTRICT	COUNTY
<b>CHECK DAK</b>	<b>TEXAS</b>	<b>CRP</b>	<b>NUECES</b>
<b>CHECK</b>	CONTROL	SECTION	JOB
<b>CF</b>	0101	06	095

SHEET  
RB10  
002

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USER: drcrowford



- NOTES:
- FOR GENERAL NOTES, SEE "GENERAL NOTES" SHEETS.
  - NEW WIDENED PORTION OF BRIDGE DESIGNED FOR HL-93 LOADING ACCORDING TO AASHTO LRFD SPECIFICATIONS, 7TH EDITION.
  - ALL DIMENSIONS SHOWN ARE MEASURED PERPENDICULAR TO CL US 181 (PROPOSED) EXCEPT AS INDICATED BY "\*" WHICH ARE MEASURED PERPENDICULAR TO CL BUSBX.
- ① FOR SLAB AND OVERHANG THICKNESSES, SEE "160.06' CONCRETE I-GIRDER UNIT" SHEETS AND "320.74' CONCRETE I-GIRDER UNIT" SHEETS.
- ② SEE WIDENING DETAIL ON "160.06' CONCRETE I-GIRDER UNIT" SHEETS AND "320.74' CONCRETE I-GIRDER UNIT" SHEETS.
- LEGEND
- ← PROPOSED TRAFFIC FLOW

TABLE OF CROSS SLOPES	
BASELINE STATION (BUSBX)	CROSS SLOPE*
1020+99.97	1.89%
1021+20.00	1.94%
1021+40.00	1.97%
1021+60.00	1.90%
1021+80.00	1.94%
1022+00.00	1.90%
1022+20.00	1.85%
1022+40.00	1.84%
1022+60.00	1.81%
1022+80.00	1.81%
1023+00.00	1.80%
1023+20.00	1.81%
1023+40.00	1.79%
1023+60.00	1.79%
1023+80.00	1.78%
1024+00.00	1.79%
1024+20.00	1.79%
1024+40.00	1.79%
1024+60.00	1.79%
1024+80.00	1.79%
1025+00.00	1.82%
1025+20.00	1.83%
1025+40.00	1.82%
1025+60.00	1.83%
1025+80.00	2.31%
1026+00.00	1.79%

HS-20 LOADING (EXISTING)  
HL-93 LOADING (NEW)

NO.	DATE	REVISION	APRVD.

US 181 HARBOR BRIDGE

TYPICAL SECTION

US 181 SB OVERPASS WIDENING AT BEACH AVENUE BRIDGE 10

SCALE: 1/16" = 1'-0"

SHEET 1 OF 2

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
DMS	X	(See Title Sheet)	US 181
GRAPHICS	STATE	DISTRICT	COUNTY
SGF	TEXAS	CRP	NUECES
CHECK	CONTROL	SECTION	JOB
DAK	0101	06	095
CHECK	CF		

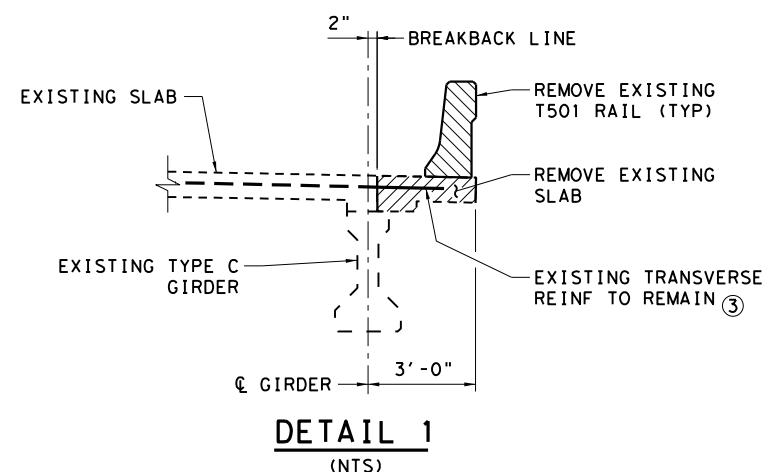
RB10 003

PRELIMINARY NOT FOR CONSTRUCTION, JUNE 2017



- LEGEND

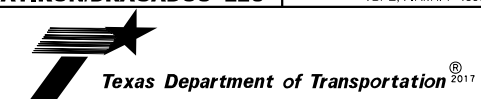
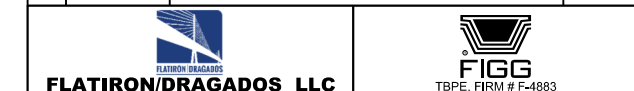
← PROPOSED TRAFFIC FLOW



CESAR FERNANDES 98112 06/30/2017

TBPE FIRM #F-4883	P.E. NO.	DATE
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		(NTS)	
NO.	DATE	REVISION	APRVD.



US 181 HARBOR BRIDGE  
TYPICAL SECTION

US 181 SB OVERPASS WIDENING  
AT BEACH AVENUE  
BRIDGE 10

SCALE:  $\frac{1}{16}'' = 1' - 0''$  SHEET 2 OF 2

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
DMS	X	(See Title Sheet)		US 181
GRAPHICS				
SGF	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK DAK	TEXAS	CRP	NUECES	RB10
CHECK	CONTROL	SECTION	JOB	004
CF	0101	06	095	