INDEX OF SHEETS
SEE SHEETS 2 THRU 8 FOR INDEX OF SHEETS

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED
STATE HIGHWAY IMPROVEMENT

ROADWAY LENGTH = 21473.19 FT 4.067 MILES
BRIDGE LENGTH = 926.48 FT 0.175 MILES
TOTAL LENGTH OF PROJECT = 4.242 MILES

FERDERAL AID PROJECT
PROJECT NO:
BEXAR COUNTY
SL 1604

LIMITS: FROM 2.0 MILES WEST OF US 281 TO REDLAND RD

FOR WORK CONSISTING OF EXPAND 4 TO 10 LANE EXPRESSWAY-INCLUDING 2 HOV-SPECIAL USE LANES; FROM 4 TO 4 FR RDS

CCSJ 2452-02-130
SL 1604
DESIGN SPEED
MAINLANES = 60 mph
FRONTAGE ROADS = 45 mph
RAMP = 35 mph
DIRECT CONNECTORS = 45 mph
CROSS STREETS = 45/30 mph
AREA OF DISTURBED SOIL = 66 AC.
ADT:
168,750 = (2025)
235,300 = (2045)
FUNCTIONAL CLASS = URBAN FREEWAY

DIST	PROJECT NO.		SHEET NO.
15			1
STATE	DIST	COUNTY	
TEXAS	SAT	BEXAR	
CONT	SECT	JOB	HIGHWAY
2452	02	130, ETC	SL 1604,ETC

REGISTERED ACCESSIBILITY SPECIALIST (RAS) INSPECTION REQUIRED
TDLR NO.
ACCESSIBILITY STANDARDS = PROWAG
FINAL PLANS

LETTING DATE: _____
DATE CONTRACTOR BEGAN WORK: _____
DATE WORK WAS ACCEPTED: _____
DATE WORK WAS COMPLETED: _____
FINAL CONTRACT COST: $ _____
CONTRACTOR: _____

FINAL PLANS STATEMENT:

THE CONSTRUCTION WORK WAS PERFORMED IN ACCORDANCE WITH THE PLANS:

_____ P.E. _____
AREA ENGINEER DATE

TEXAS DEPARTMENT OF TRANSPORTATION

LJA Engineering, Inc.
FRN - F-1386

BEGIN PROJECT
MI MRK: 11.777
REF MRK: 527.79
℄ ML1604 STA 4400+00.00
BEGIN CSJ 2452-02-130
BEGIN RCSJ 2452-03-133

℄ ML1604 STA 4479+85.85
END CSJ 2452-02-130
END RCSJ 2452-03-133
BEGIN CSJ 2452-03-113
BEGIN RCSJ 2452-03-129

N.T.S.

EXCEPTIONS: N/A
EQUATION: STA 4412+82.55 = STA 4412+82.88 LP 1604
RR X-ING'S: N/A

END PROJECT
MI MRK: 30.780
REF MRK: 532.15
℄ ML1604 STA 4624+00.00
END CSJ 2452-03-113
END RCSJ 2452-03-129

ATTACHMENT NO. 01-22 TO SPECIAL AGREEMENT FOR CONSTRUCTION, MAINTENANCE, AND OPERATIONS OF HIGHWAY LIGHTING SYSTEMS WITHIN A MUNICIPALITY, DATED JUNE 24, 2014. THE CITY-STATE CONSTRUCTION, MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE AS HERETOFORE AGREED TO, ACCEPTED, AND SPECIFIED IN THE AGREEMENT TO WHICH THESE PLANS ARE MADE A PART.

CONCURRENCE

CITY OF SAN ANTONIO

RECOMMENDED FOR LETTING:

PLAN REVIEW

RECOMMENDED FOR LETTING:

TRANSPORTATION ENGINEER

RECOMMENDED FOR LETTING:

DIRECTOR OF TRANSPORTATION, PLANNING AND DEVELOPMENT

APPROVED FOR LETTING:

DISTRICT ENGINEER

COUNTY BEXAR PROJ. NO. _____
HWY. NO. LP1604 LETTING DATE _____
DATE ACCEPTED _____

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, JULY 5 2022)

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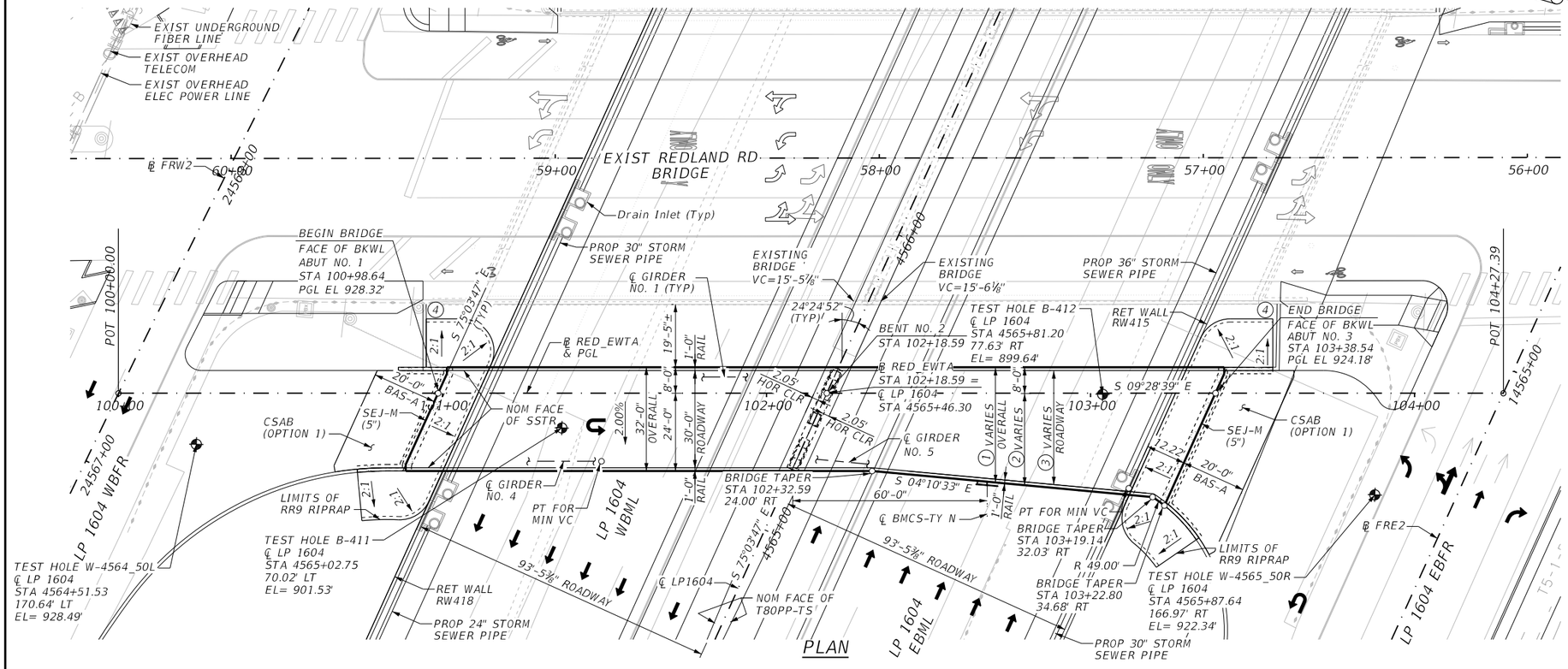


GENERAL NOTES:

DESIGNED ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 9TH EDITION (2020) AND TXDOT BRIDGE DESIGN MANUAL (NOV 2021).

GIRDER END CONDITIONS:
D: DENOTES DOWEL AT EXTERIOR GIRDERS
BLANK: DENOTES NO DOWEL

THE "H" VALUES SHOWN ARE ESTIMATED COLUMN HEIGHTS. CONTRACTOR IS RESPONSIBLE FOR CALCULATING ACTUAL COLUMN HEIGHTS BASED ON FIELD CONDITIONS.

✥ – DENOTES SOIL BORING LOCATIONS, SEE BORING LOG SHEETS.

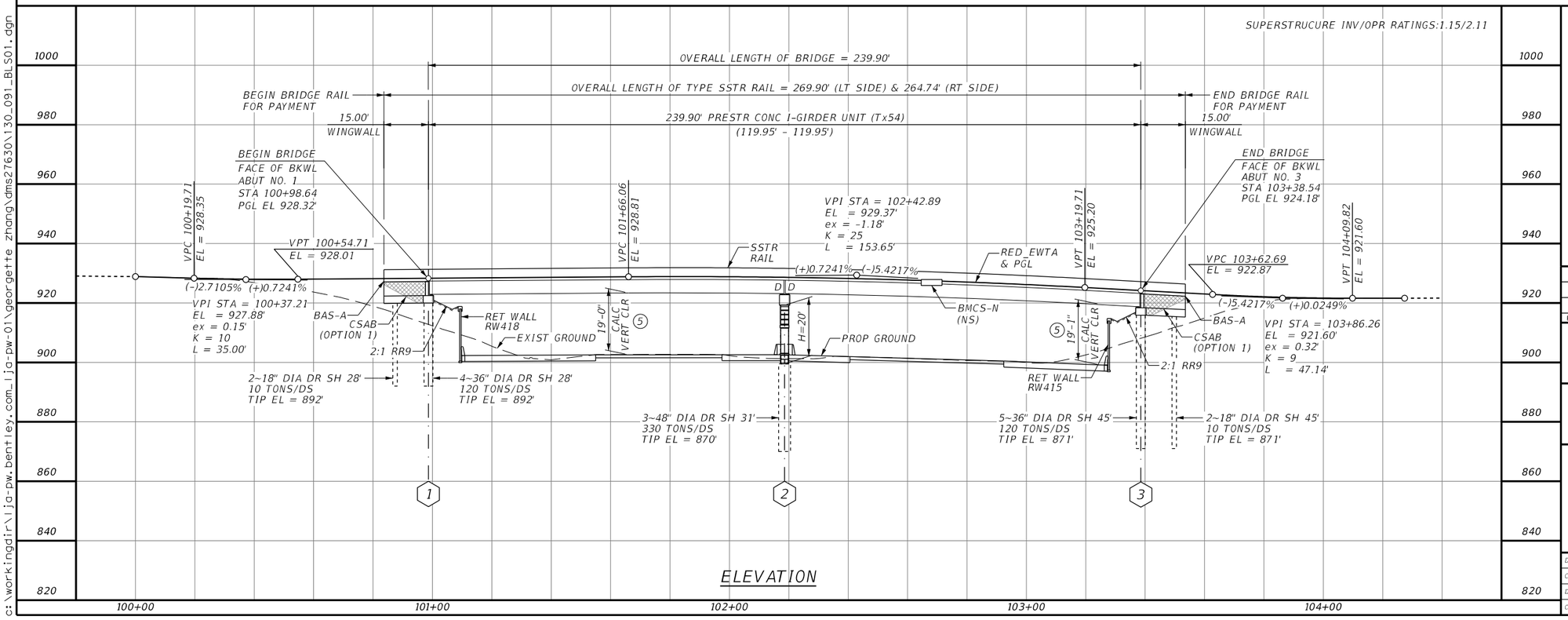
SEE AESTHETIC DETAILS SHEETS FOR SAN ANTONIO DISTRICT "HILL COUNTRY REGION" AESTHETIC TREATMENT DETAILS.

SEE BRIDGE TYPICAL SECTIONS SHEET FOR BRIDGE TYPICAL SECTIONS.

1. VARIES 42'-8½" TO 32'-0"
2. VARIES 34'-8¼ " TO 24'-0"
3. VARIES 40'-9" TO 30'-0"
4. CONTRACTOR TO REMOVE AND REPLACE EXISTING RIPRAP AS NEEDED. MATCH ROADWAY RIPRAP AS NEEDED.
5. EXISTING BRIDGE WBML VC=15'-5⅞", EBML VC=15'-6⅛". SEE PLAN VIEW FOR LOCATIONS.

PROPOSED NBI NUMBER: 15-015-0-2452-03-315
FUNCTIONAL CLASSIFICATION: URBAN MINOR ARTERIAL
DESIGN SPEED: 10 MPH
ADT (2025): 5,250 VPD
ADT (2045): 5,900 VPD

HL93 LOADING



STATE OF TEXAS
DAVID N. PRETORIUS
130358
PROFESSIONAL ENGINEER
2.17.2023

0' 10' 20' 40'
SCALE: 1"=40'

REV. NO.	DATE	DESCRIPTION	BY

LJA Engineering, Inc.
FRN - F-1386

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LP 1604

BRIDGE LAYOUT

LP 1604 UNDERPASS AT REDLAND RD EAST TO WEST TURNAROUND

DESIGNED:	HC	FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
CHECKED:	TB	6	TEXAS				LP1604
DRAWN:	CJ	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CHECKED:	TS	SAT	BEXAR	2452	02	130, ETC	1992

8:27:52 AM 2/16/2023
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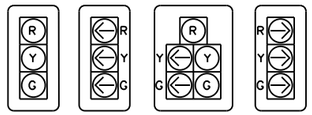
PROPOSED TRAFFIC SIGNAL HEADS

12" SIGNAL FACES
12" LED SIGNAL SECTIONS W/ REFLECTIVE BACKPLATES

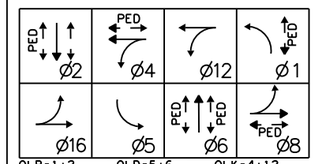
12" PEDESTRIAN HEADS
12" LED SIGNAL FACE



1 QTY: 5 | 2 QTY: 1 | 4 QTY: 1 | 5 QTY: 3

W1 THRU W8 QTY: 8

PROPOSED PHASE DIAGRAM



OLB=1+2
OLC=5
OLD=5+6
OLE=4+12
OLK=4+12
OLN=8+16
CONFLICT FLASH: RED ALL PHASES

CAUTION:
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT UNDERGROUND UTILITIES INCLUDING GAS ARE KNOWN TO EXIST IN THE VICINITY OF THIS WORK. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO BEGINNING WORK AND SHALL EXERCISE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT INCLUDING POLE FOUNDATIONS AND CONDUITS

CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	CONDUIT RUN (TRENCH)
	CONDUIT RUN (BORE)
	TRAFFIC CONTROLLER CABINET
	GROUND BOX
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	STREET NAME SIGN
	CCTV CAMERA
	RADAR PRESENCE DETECTION (RPDD)
	RADAR ZONE
	RADAR ADVANCE DETECTION (RADD)
	LUMINAIRE
	PED SIGNAL & PUSH BUTTON
05	CONDUIT IDENTIFIER
C	POLE IDENTIFIER

N

0 20 40 60
SCALE 1" = 40'

PROPOSED TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
ONLY	R3-8MS (36" x 30")	S1
LEFT TURN YIELD ON GREEN	R10-12 (30" x 36")	S2
ONLY ONLY	R3-8LS (36" x 30")	S3
NO TURN ON RED EXCEPT FROM RIGHT LANE	R10-11C (30" x 42")	S4
⇦ Stone Oak Pkwy / Voigt Dr ⇨	D3-1G (108" x 24")	S5
⇦ Voigt Dr / Stone Oak Pkwy ⇨	D3-1G (108" x 24")	S6
Loop 1604	D3-1G (84" x 18")	S7
	R10-3EL/R (15" x 9")	PB

NOTES:
1. ALL DIMENSIONS ARE IN FEET UNLESS SPECIFIED OTHERWISE.
2. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO COMMENCING EXCAVATION. ALL UTILITY LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
3. ALL TRAFFIC SIGNAL EQUIPMENT DEEMED SALVAGEABLE BY THE TXDOT INSPECTOR SHALL BE DELIVERED TO TXDOT SAN ANTONIO DISTRICT SIGNAL SHOP AT 4615 NW LOOP 410, SAN ANTONIO, TX 78229. CONTACT JORGE RAMOS AT 210-731-5143.
4. ALL UTILITY VALVE AND/OR METER ADJUSTMENTS SHALL BE SUBSIDIARY TO VARIOUS PERTINENT PROJECT BID ITEMS. THERE SHALL BE NO ADDITIONAL PAYMENT FOR UTILITY VALVE AND/OR METER ADJUSTMENTS UNLESS SPECIFIED OTHERWISE IN THIS PLAN SET.
5. ALL ITEMS NOT SPECIFICALLY CALLED OUT IN THESE PLANS TO BE REMOVED, SHALL REMAIN.

DESIGN

STATE OF TEXAS — JUSTIN W. CLARK — 118715 — LICENSED PROFESSIONAL ENGINEER

2/17/2023
JUSTIN W. CLARK, P.E. — DATE

REVIEW & APPROVAL

STATE OF TEXAS — GILMER D. GASTON — 80472 — LICENSED PROFESSIONAL ENGINEER

2/17/2023
GILMER D. GASTON, P.E. — DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation ©2023

LP 1604

PROPOSED SIGNAL LAYOUT STONE OAK PKWY AT LP 1604 WBFR

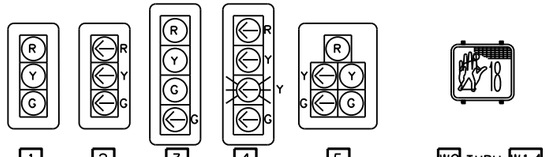
FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2108

10:23:47 AM 2/17/2023
v:\bentley\dms\ja production\tpuente\dms0341\130_TRAF03_PR_STNE OAK.dgn

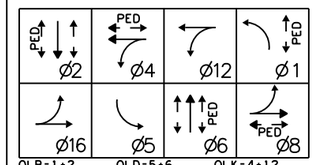
PROPOSED TRAFFIC SIGNAL HEADS

12" SIGNAL FACES
12" LED SIGNAL SECTIONS W/ REFLECTIVE BACKPLATES

12" PEDESTRIAN HEADS
12" LED SIGNAL FACE



PROPOSED PHASE DIAGRAM



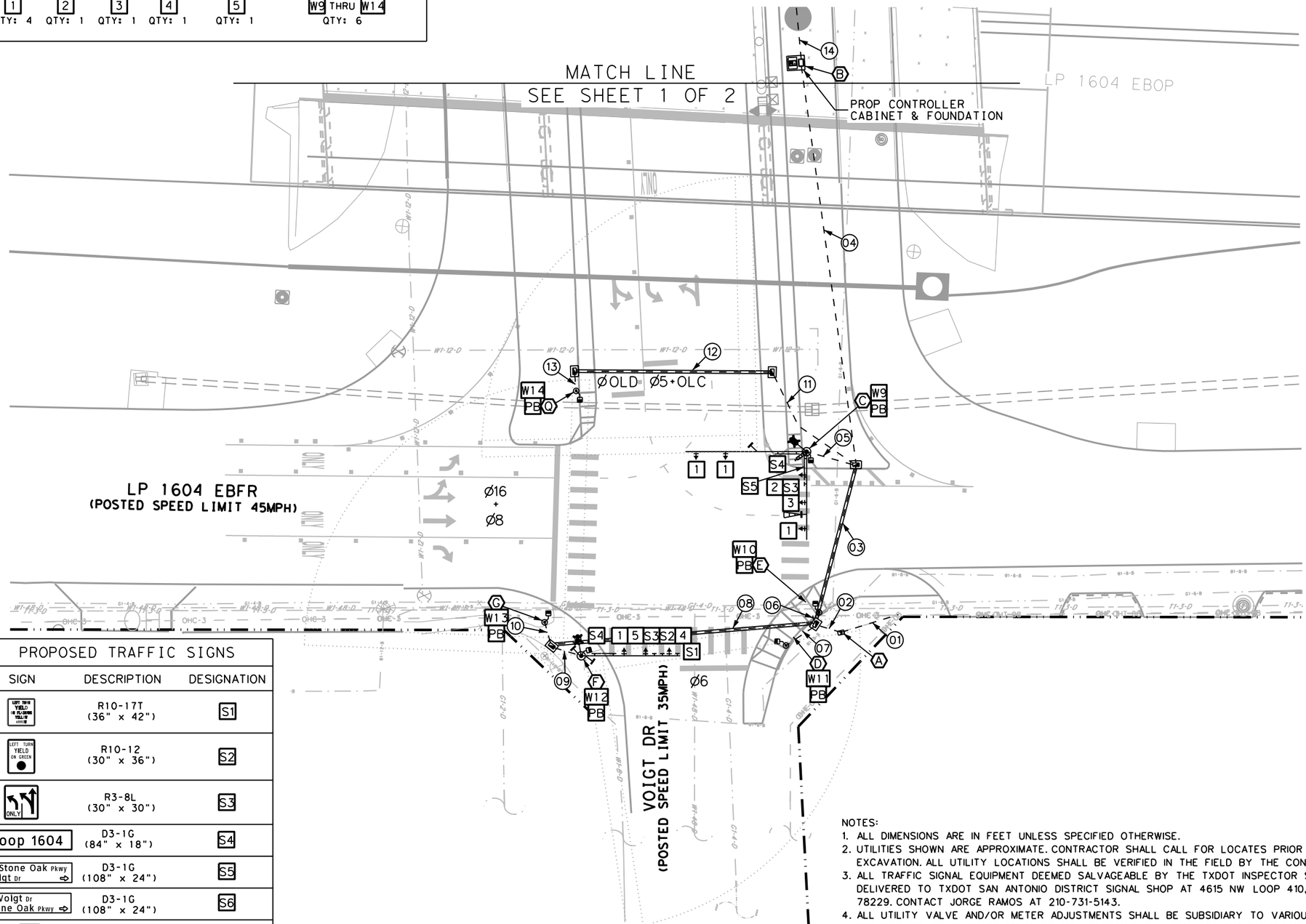
OLB=1+2
OLC=5
OLD=5+6
OLE=4+12
OLK=4+12
OLN=8+16
CONFLICT FLASH: RED ALL PHASES

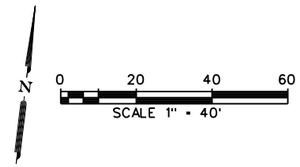
CAUTION:
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT UNDERGROUND UTILITIES INCLUDING GAS ARE KNOWN TO EXIST IN THE VICINITY OF THIS WORK. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO BEGINNING WORK AND SHALL EXERCISE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT INCLUDING POLE FOUNDATIONS AND CONDUITS

CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	CONDUIT RUN (TRENCH)
	CONDUIT RUN (BORE)
	TRAFFIC CONTROLLER CABINET
	GROUND BOX
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	STREET NAME SIGN
	CCTV CAMERA
	RADAR PRESENCE DETECTION (RPDD)
	RADAR ZONE
	RADAR ADVANCE DETECTION (RADD)
	LUMINAIRE
	PED SIGNAL & PUSH BUTTON
05	CONDUIT IDENTIFIER
C	POLE IDENTIFIER





PROPOSED TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
LEFT TURN YIELD ON FLASHING YELLOW ARROW	R10-17T (36" x 42")	S1
LEFT TURN YIELD ON GREEN	R10-12 (30" x 36")	S2
ONLY	R3-8L (30" x 30")	S3
Loop 1604	D3-1G (84" x 18")	S4
⇦ Stone Oak Pkwy / Voigt Dr ⇨	D3-1G (108" x 24")	S5
⇦ Voigt Dr / Stone Oak Pkwy ⇨	D3-1G (108" x 24")	S6
	R10-3EL/R (15" x 9")	PB

NOTES:
1. ALL DIMENSIONS ARE IN FEET UNLESS SPECIFIED OTHERWISE.
2. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO COMMENCING EXCAVATION. ALL UTILITY LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
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5. ALL ITEMS NOT SPECIFICALLY CALLED OUT IN THESE PLANS TO BE REMOVED, SHALL REMAIN.

DESIGN

STATE OF TEXAS — JUSTIN W. CLARK — 118715 — LICENSED PROFESSIONAL ENGINEER

2/17/2023
JUSTIN W. CLARK, P.E. — DATE

REVIEW & APPROVAL

STATE OF TEXAS — GILMER D. GASTON — 80472 — LICENSED PROFESSIONAL ENGINEER

2/17/2023
GILMER D. GASTON, P.E. — DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation ©2023

LP 1604

PROPOSED SIGNAL LAYOUT STONE OAK PKWY AT LP 1604 EBFR

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2109

10:23:51 AM 2/17/2023
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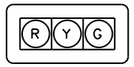
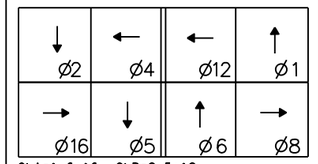
EXISTING TRAFFIC SIGNAL HEADS

12" SIGNAL FACES	12" PEDESTRIAN HEADS
12" LED SIGNAL SECTIONS W/ BACKPLATES	12" LED SIGNAL FACE
	
1 QTY: 12	W9 THRU W16 QTY: 8

NOTE: SIGNAL HEADS ON INSIDE APPROACHES HAVE GREEN INDICATIONS LOUVERED

PHASE DIAGRAM



OLA=1+6+16 OLB=2+5+12
OLK=1+4+12 OLN=5+8+16
CONFLICT FLASH:RED ALL PHASES

EXISTING TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
LOOP 1604	D3-1G	S1
US 281	D3-1G	S2
	R3-8L (36" x 36")	S3
	R10-4BL/R (12" x 9")	PB

NOTES:
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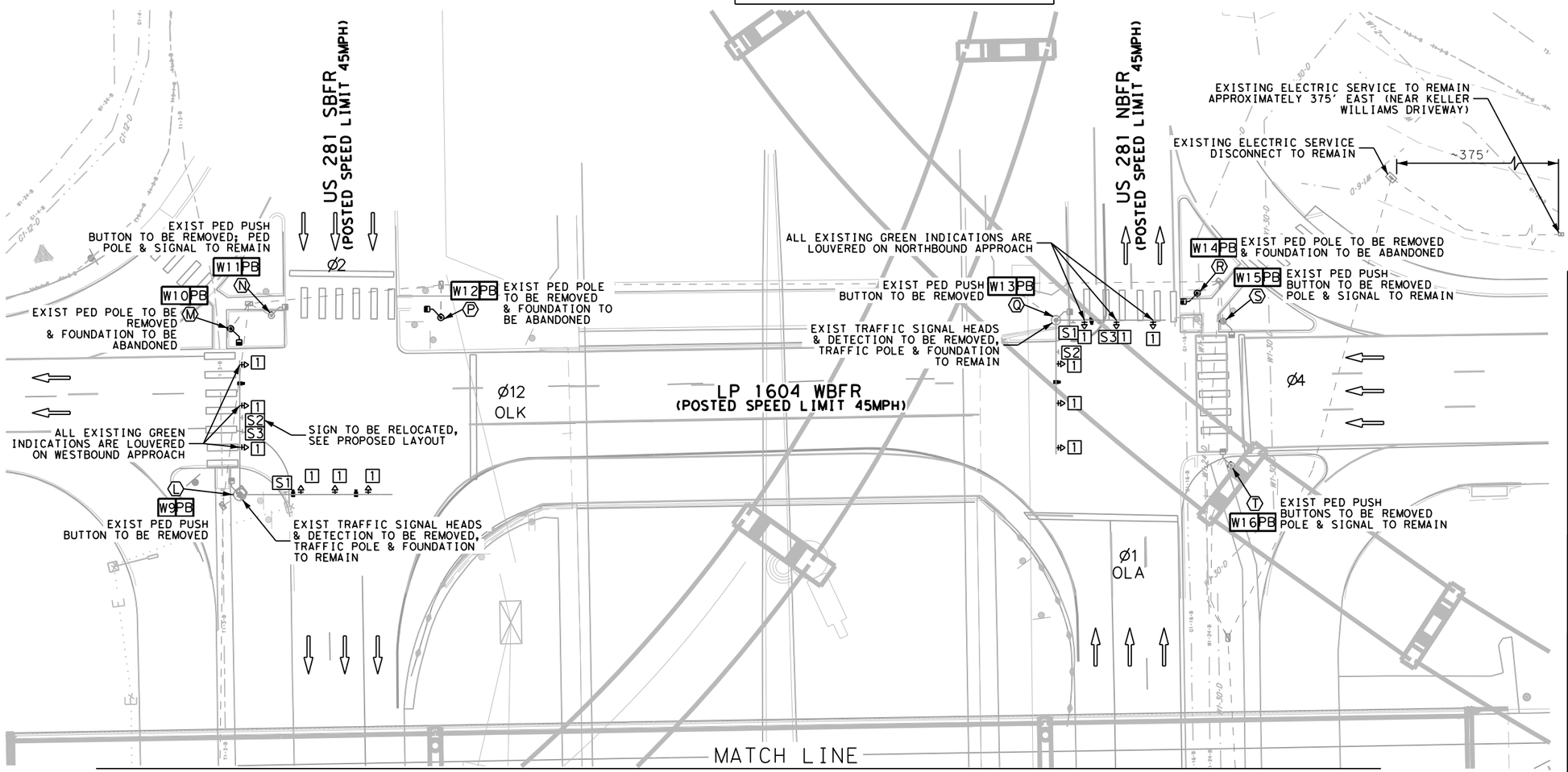
LEGEND

SYMBOL	DESCRIPTION
— · · —	RIGHT-OF-WAY
⟸	TRAFFIC FLOW
- - -	CABLE/CONDUIT RUN
	ELECTRIC SERVICE
	TRAFFIC CONTROLLER CABINET
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	VIVDS DETECTION
	PED SIGNAL & PUSH BUTTON
—W—	WATER LINE
—SS—	SEWER LINE
—FOL—	COMM LINE
—OHE—	OVERHEAD ELECTRIC LINE
—G—	GAS LINE



N

0 20 40 60
SCALE 1" = 40'

CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

CAUTION:
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DESIGN
STATE OF TEXAS — JUSTIN W. CLARK — 118715 — LICENSED PROFESSIONAL ENGINEER
JUSTIN W. CLARK, P.E. 2/17/2023 DATE

REVIEW & APPROVAL
STATE OF TEXAS — GILMER D. GASTON — 80472 — LICENSED PROFESSIONAL ENGINEER
GILMER D. GASTON, P.E. 2/17/2023 DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN - F-1386

Texas Department of Transportation
©2023

LP 1604

EXISTING SIGNAL LAYOUT US 281 AT LP 1604 WBFR

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2114

10:24:19 AM 2/17/2023
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EXISTING TRAFFIC SIGNAL HEADS

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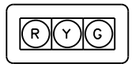
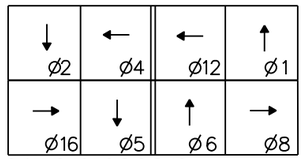
12" LED SIGNAL SECTIONS W/ BACKPLATES	12" LED SIGNAL FACE
	
1 QTY: 12	W1 THRU W8 QTY: 8

NOTE: SIGNAL HEADS ON INSIDE APPROACHES HAVE GREEN INDICATIONS LOUVERED

PHASE DIAGRAM



OLA=1·6·16 OLB=2·5·12
OLK=1·4·12 OLN=5·8·16
CONFLICT FLASH: RED ALL PHASES

EXISTING TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
LOOP 1604	D3-1G	S1
US 281	D3-1G	S2
	R3-8L (30" x 36")	S3
	R10-4BL/R (12" x 9")	PB

NOTES:
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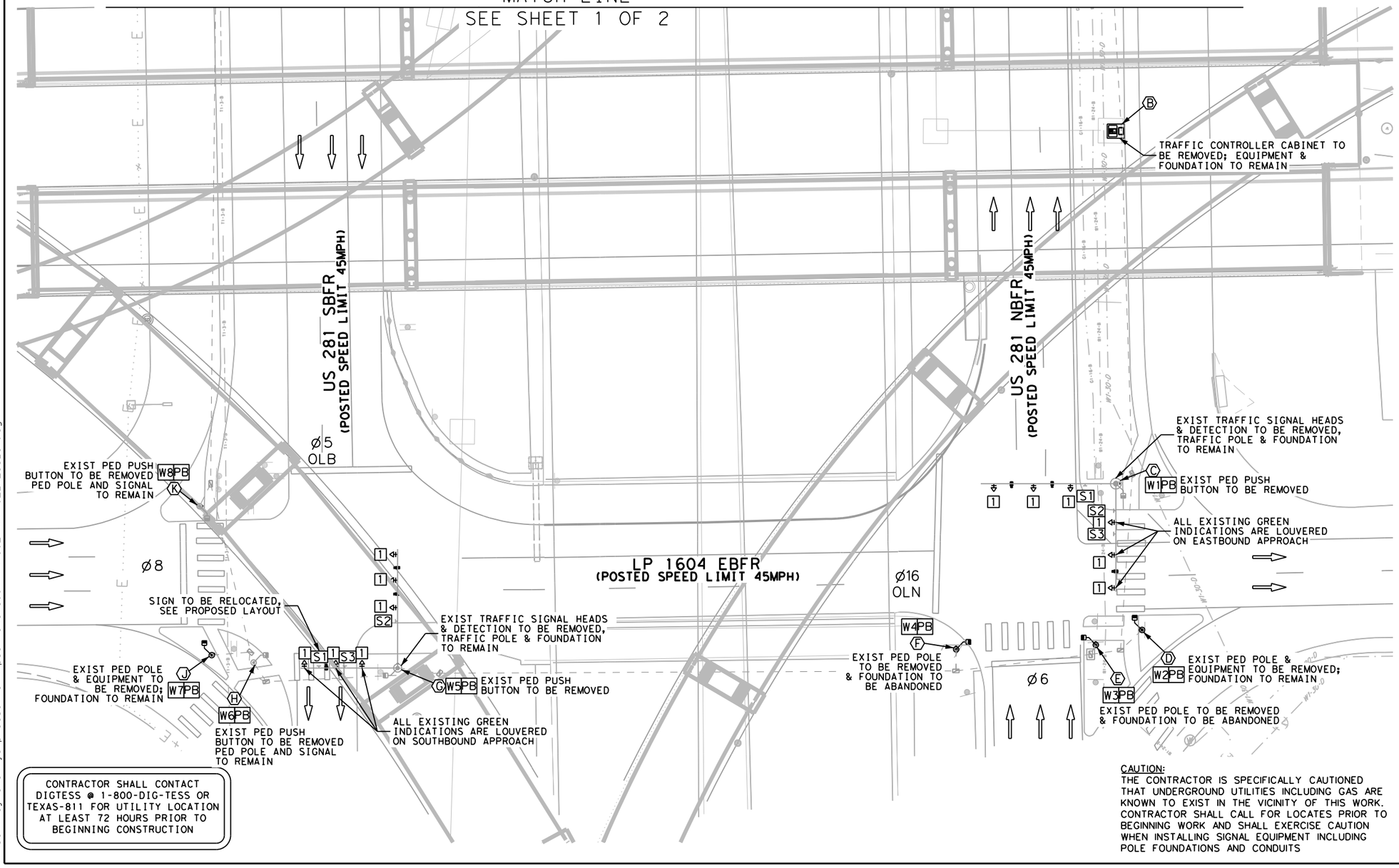
5. ALL ITEMS NOT SPECIFICALLY CALLED OUT IN THESE PLANS TO BE REMOVED, SHALL REMAIN.
6. ALL EXISTING FOUNDATIONS CALLED OUT TO BE REMOVED; SHALL BE OBLITERATED A MIN. OF 2' BELOW GRADE.

LEGEND

SYMBOL	DESCRIPTION
— · · —	RIGHT-OF-WAY
⟸	TRAFFIC FLOW
– – –	CABLE/CONDUIT RUN
	ELECTRIC SERVICE
	TRAFFIC CONTROLLER CABINET
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	VIVDS DETECTION
	PED SIGNAL & PUSH BUTTON
—W—	WATER LINE
—SS—	SEWER LINE
—FOL—	COMM LINE
—OHE—	OVERHEAD ELECTRIC LINE
—G—	GAS LINE



CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

CAUTION:
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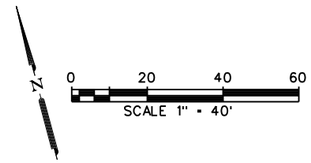


DESIGN

STATE OF TEXAS
JUSTIN W. CLARK
118715
LICENSED PROFESSIONAL ENGINEER

JUSTIN W. CLARK, P.E. — 2/17/2023 DATE

REVIEW & APPROVAL

STATE OF TEXAS
GILMER D. GASTON
80472
LICENSED PROFESSIONAL ENGINEER

GILMER D. GASTON, P.E. — 2/17/2023 DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN - F-1386

Texas Department of Transportation ©2023

LP 1604

EXISTING SIGNAL LAYOUT US 281 AT LP 1604 EBFR

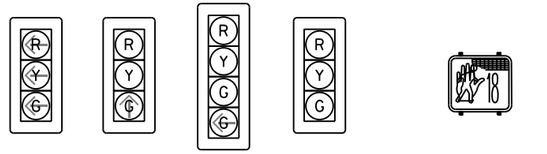
FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2115

10:24:23 AM 2/17/2023
v:\bentley\dms\lja production\tpuente\dms03441\130_TRAF10_EX_US281.dgn

PROPOSED TRAFFIC SIGNAL HEADS

12" SIGNAL FACES
12" LED SIGNAL SECTIONS
W/ REFLECTIVE BACKPLATES

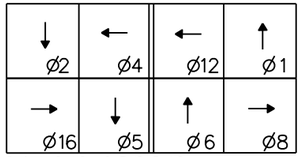
12" PEDESTRIAN HEADS
12" LED
SIGNAL FACE



1 QTY: 2 | 2 QTY: 4 | 3 QTY: 2 | 4 QTY: 4

W5 THRU W7 QTY: 3

PHASE DIAGRAM



OLA=1+6+16 OLB=2+5+12
OLK=1+4+12 OLN=5+8+16
CONFLICT FLASH: RED ALL PHASES

EXISTING TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
LOOP 1604	D3-1G	S1
US 281	D3-1G	S2
ONLY	R3-8L (36" x 36")	S3

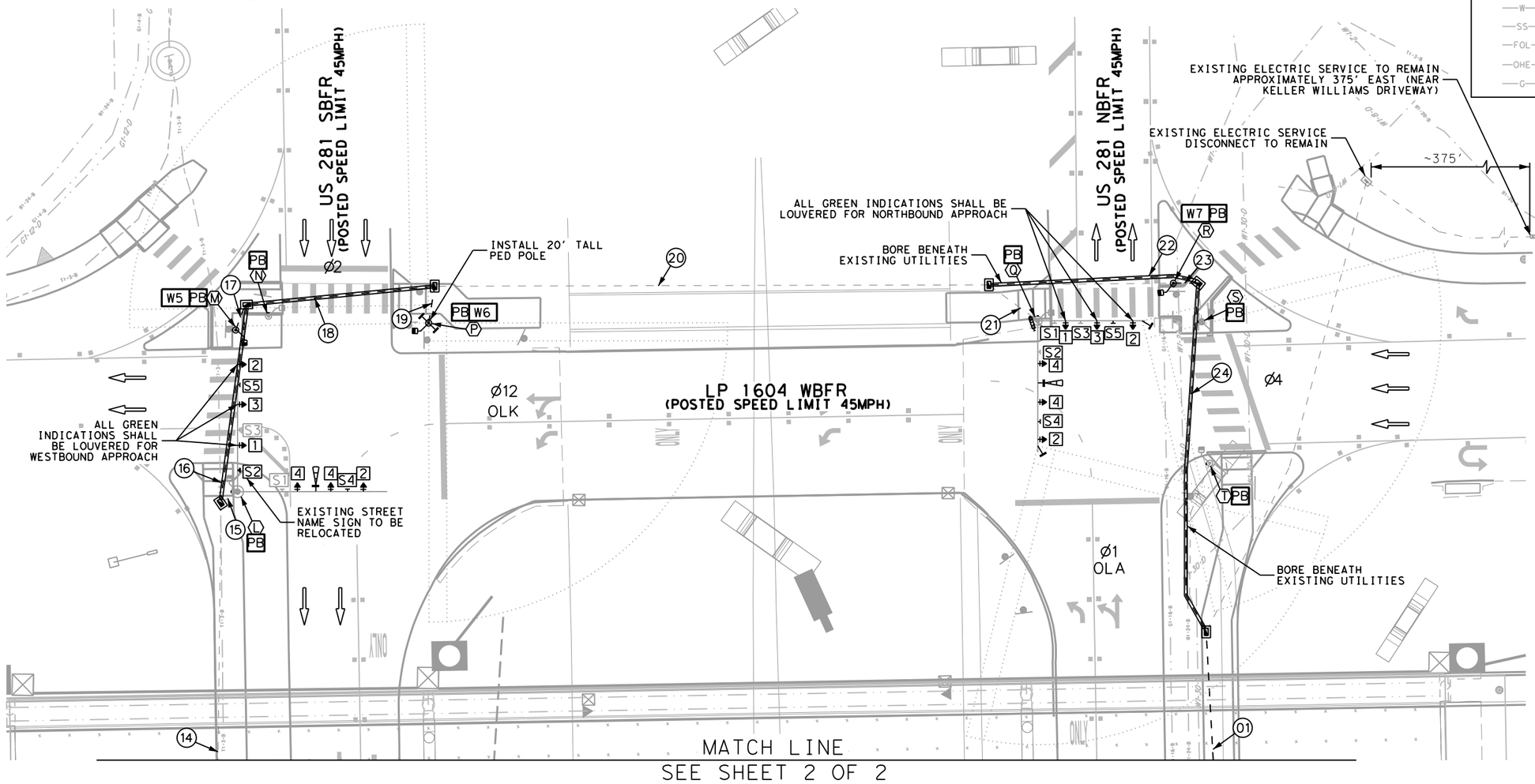
PROPOSED TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
	R10-3EL/R (12" x 9")	PB
ONE WAY	R6-1R (54" x 18")	S4
ONE WAY	R6-1L (54" x 18")	S5

LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	CABLE/CONDUIT RUN
	ELECTRIC SERVICE
	TRAFFIC CONTROLLER CABINET
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	CCTV CAMERA
	RADAR ADVANCED DETECTION DEVICE (RADD)
	RADAR PRESENCE DETECTION DEVICE (RPDD)
	PED SIGNAL & PUSH BUTTON
—W—	WATER LINE
—SS—	SEWER LINE
—FOL—	COMM LINE
—OHE—	OVERHEAD ELECTRIC LINE
—G—	GAS LINE

NOTE: SIGNAL HEADS ON INSIDE APPROACHES HAVE GREEN INDICATIONS LOUVERED



0 20 40 60
SCALE 1" = 40'

NOTES:
1. ALL DIMENSIONS ARE IN FEET UNLESS SPECIFIED OTHERWISE.
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DESIGN
STATE OF TEXAS
JUSTIN W. CLARK
118715
LICENSED PROFESSIONAL ENGINEER
JUSTIN W. CLARK, P.E. 2/17/2023 DATE

REVIEW & APPROVAL
STATE OF TEXAS
GILMER D. GASTON
80472
LICENSED PROFESSIONAL ENGINEER
GILMER D. GASTON, P.E. 2/17/2023 DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation ©2023

LP 1604

PROPOSED SIGNAL LAYOUT US 281 AT LP 1604 WBFR

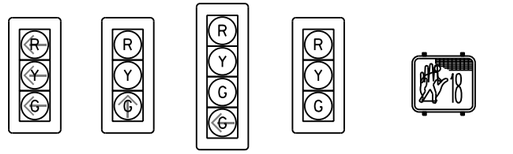
FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2116

10:24:30 AM 2/17/2023
v:\bentley\dms\lja production\tpuente\dms03441\130_TRAF11_PR_US281.dgn

PROPOSED TRAFFIC SIGNAL HEADS

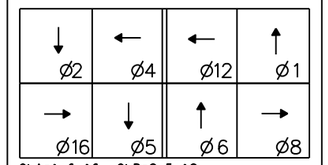
12" SIGNAL FACES
12" LED SIGNAL SECTIONS
W/ REFLECTIVE BACKPLATES

12" PEDESTRIAN HEADS
12" LED
SIGNAL FACE



NOTE: SIGNAL HEADS ON INSIDE APPROACHES HAVE GREEN INDICATIONS LOUVERED

PHASE DIAGRAM



OLA=1•6•16 OLB=2•5•12
OLK=1•4•12 OLN=5•8•16
CONFLICT FLASH:RED ALL PHASES

PROPOSED TRAFFIC SIGNS

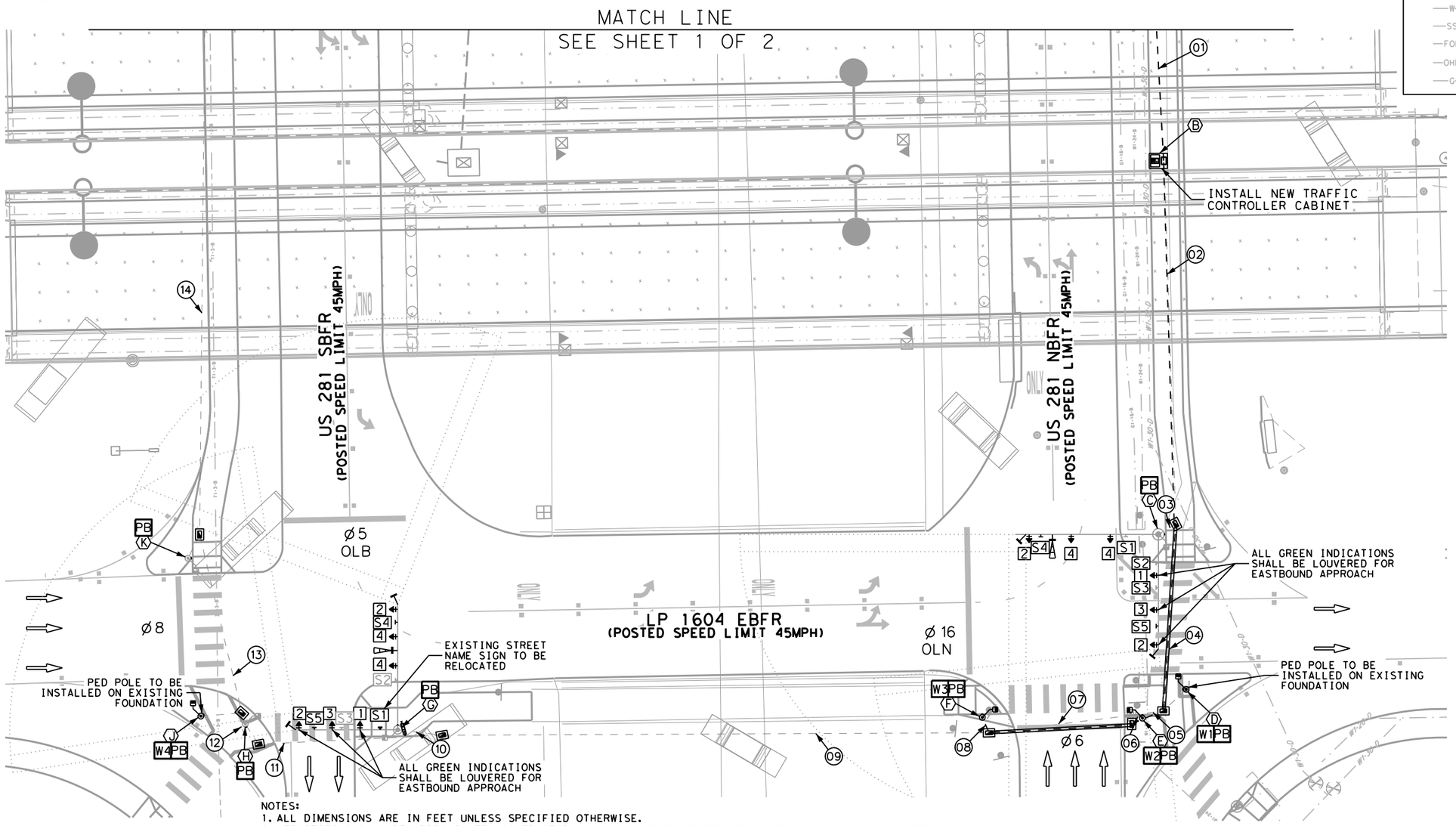
SIGN	DESCRIPTION	DESIGNATION
	R10-3EL/R (15" x 9")	PB
ONE WAY	R6-1R (54" x 18")	S4
ONE WAY	R6-1L (54" x 18")	S5

EXISTING TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
LOOP 1604	D3-1G	S1
US 281	D3-1G	S2
ONLY	R3-8L (36" x 36")	S3

LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	CABLE/CONDUIT RUN
	ELECTRIC SERVICE
	TRAFFIC CONTROLLER CABINET
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	CCTV CAMERA
	RADAR ADVANCED DETECTION DEVICE (RADD)
	RADAR PRESENCE DETECTION DEVICE (RPDD)
	PED SIGNAL & PUSH BUTTON
—W—	WATER LINE
—SS—	SEWER LINE
—FOL—	COMM LINE
—OHE—	OVERHEAD ELECTRIC LINE
—G—	GAS LINE



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DESIGN

STATE OF TEXAS
JUSTIN W. CLARK
118715
LICENSED PROFESSIONAL ENGINEER

JUSTIN W. CLARK, P.E. — 2/17/2023 DATE

REVIEW & APPROVAL

STATE OF TEXAS
GILMER D. GASTON
80472
LICENSED PROFESSIONAL ENGINEER

GILMER D. GASTON, P.E. — 2/17/2023 DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN - F-1386

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LP 1604

PROPOSED SIGNAL LAYOUT US 281 AT LP 1604 EBFR

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2117

10:24:35 AM 2/17/2023
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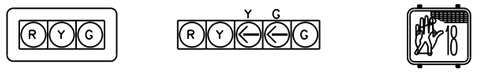
EXISTING TRAFFIC SIGNAL HEADS

12" SIGNAL FACES
12" LED SIGNAL SECTIONS WITH BACKPLATES

12" PEDESTRIAN HEADS
12" LED SIGNAL FACE

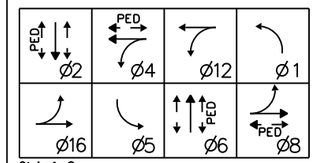


1 QTY: 5

2 QTY: 1

W1 THRU W6 QTY: 6

EXISTING PHASE DIAGRAM



OLA=1+2
OLB=5+6
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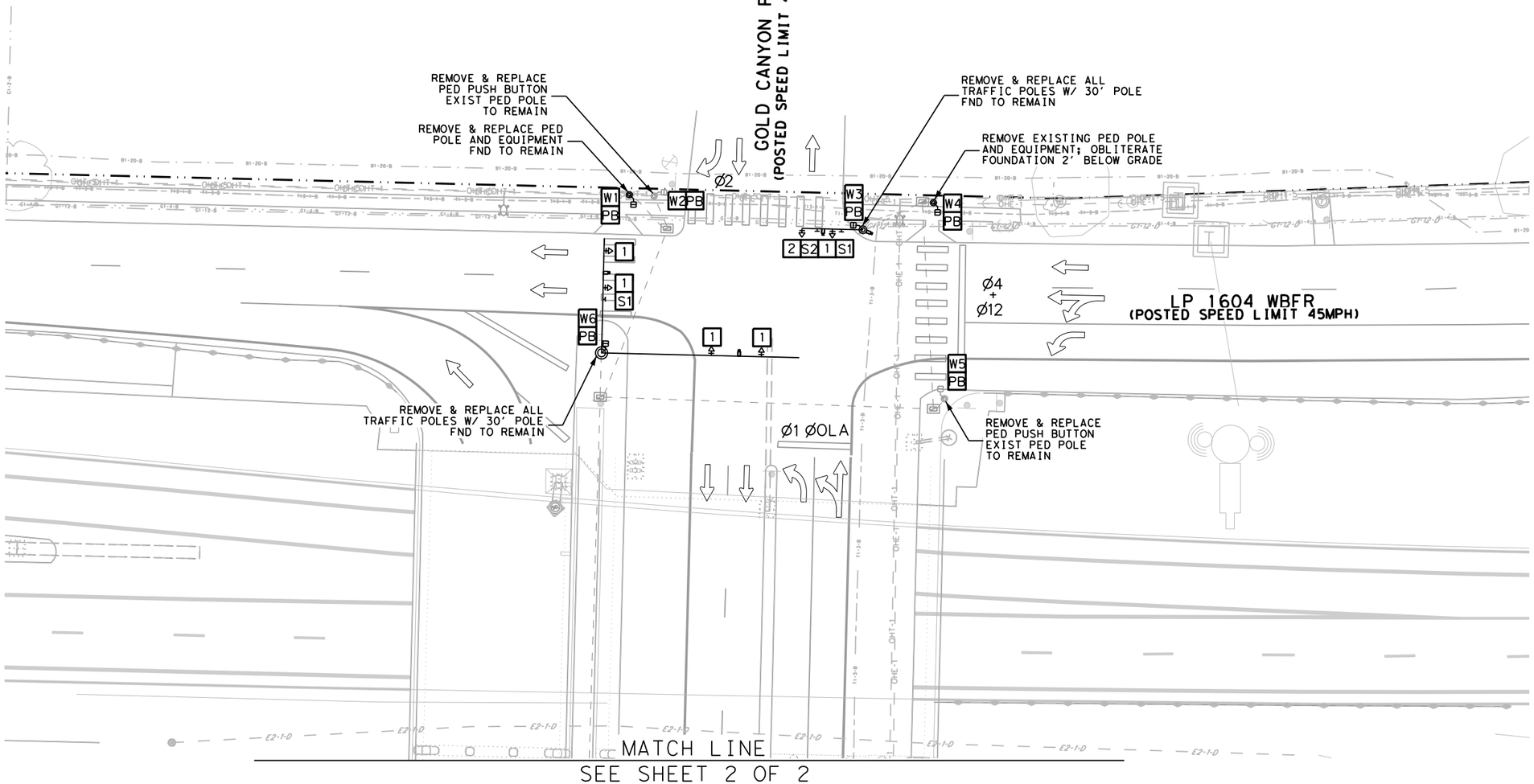
EXISTING TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
	R3-8L (30" x 30")	S1
	R10-12 (30" x 36")	S2
	R10-4BL/R (9" x 12")	PB

LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	CABLE/CONDUIT RUN
	ELEC SERVICE
	TRAFFIC CONTROLLER CABINET
	GROUND BOX
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	STREET NAME SIGN
	VIVDS CAMERA
	RADAR DETECTION
	LUMINAIRE
	PED SIGNAL & PUSH BUTTON
—W—	WATER LINE
—SS—	SEWER LINE
—FOL—	COMM LINE
—OHE—	OVERHEAD ELECTRIC LINE
—G—	GAS LINE



MATCH LINE
SEE SHEET 2 OF 2

N

0 20 40 60
SCALE 1" = 40'

NOTES:
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DESIGN

STATE OF TEXAS
JUSTIN W. CLARK
118715
LICENSED PROFESSIONAL ENGINEER

JUSTIN W. CLARK, P.E. — 2/17/2023 DATE

REVIEW & APPROVAL

STATE OF TEXAS
GILMER D. GASTON
80472
LICENSED PROFESSIONAL ENGINEER

GILMER D. GASTON, P.E. — 2/17/2023 DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN-F-1386

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LP 1604

EXISTING SIGNAL LAYOUT GOLD CANYON RD AT LP 1604 WBFR

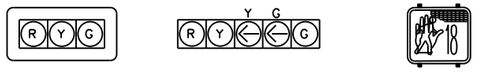
FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2122

10:25:07 AM 2/17/2023
v:\bentley\dms\lja production\tpuente\dms03441\130_TRAF17_EX_GOLD CNYN.dgn

EXISTING TRAFFIC SIGNAL HEADS

12" SIGNAL FACES
12" LED SIGNAL SECTIONS WITH BACKPLATES

12" PEDESTRIAN HEADS
12" LED SIGNAL FACE

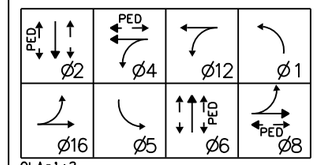


1 QTY: 5

2 QTY: 1

W1 THRU W6 QTY: 6

EXISTING PHASE DIAGRAM



OLA=1+2
OLB=5+6
CONFLICT FLASH: RED ALL PHASES

EXISTING TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
	R3-8MS (30" x 30")	S1
	R10-12 (30" x 36")	S2
	R10-4BL/R (9" x 12")	PB

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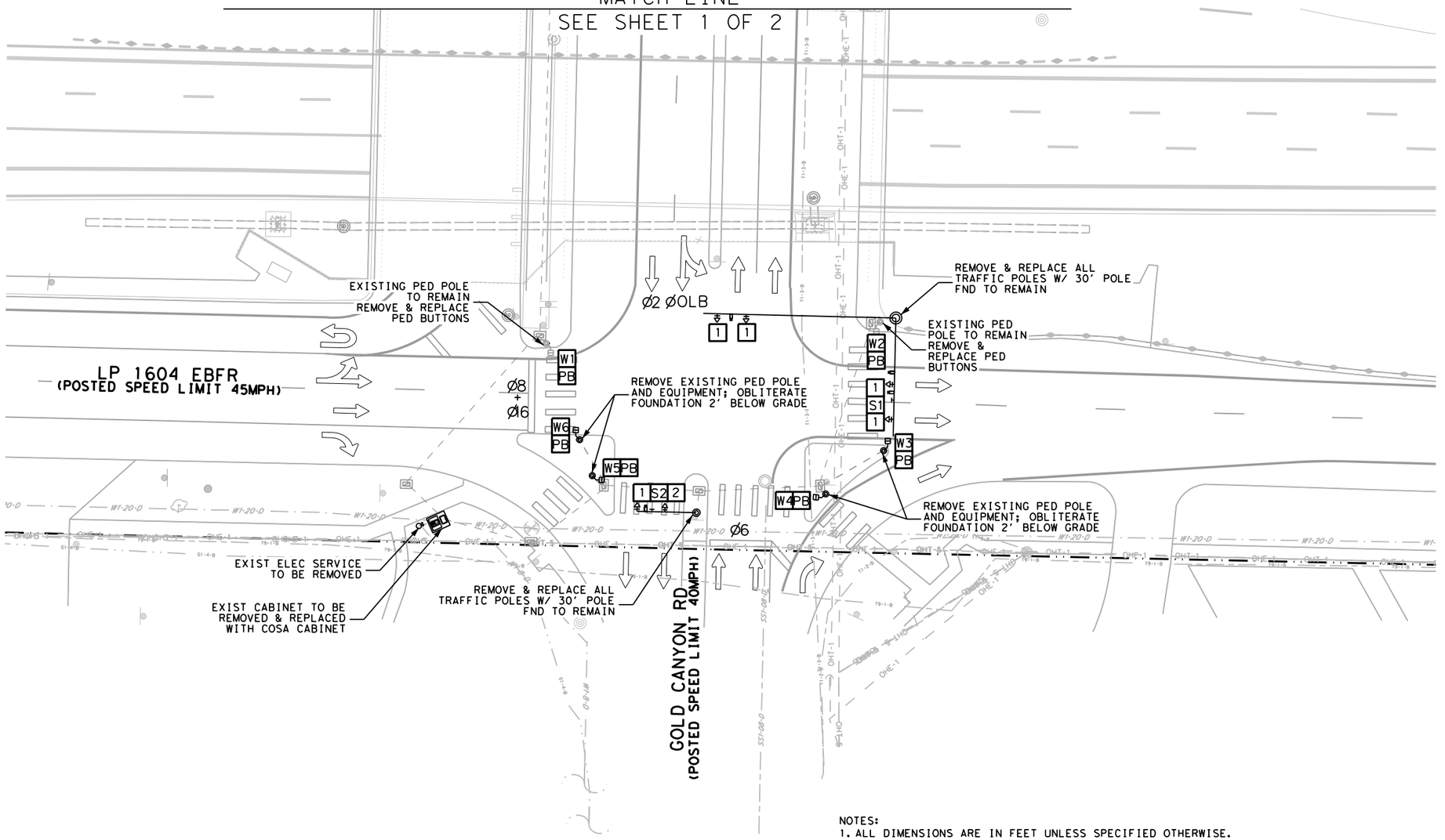
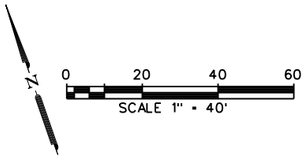
LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	CABLE/CONDUIT RUN
	ELEC SERVICE
	TRAFFIC CONTROLLER CABINET
	GROUND BOX
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	STREET NAME SIGN
	VIVDS CAMERA
	RADAR DETECTION
	LUMINAIRE
	PED SIGNAL & PUSH BUTTON
—W—	WATER LINE
—SS—	SEWER LINE
—FOL—	COMM LINE
—OHE—	OVERHEAD ELECTRIC LINE
—G—	GAS LINE

MATCH LINE
SEE SHEET 1 OF 2





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DESIGN

STATE OF TEXAS — JUSTIN W. CLARK — 118715 — LICENSED PROFESSIONAL ENGINEER

JUSTIN W. CLARK, P.E. — 2/17/2023 DATE

REVIEW & APPROVAL

STATE OF TEXAS — GILMER D. GASTON — 80472 — LICENSED PROFESSIONAL ENGINEER

GILMER D. GASTON, P.E. — 2/17/2023 DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN - F-1386

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LP 1604

EXISTING SIGNAL LAYOUT GOLD CANYON RD AT LP 1604 EBFR

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2123

10:25:11 AM 2/17/2023
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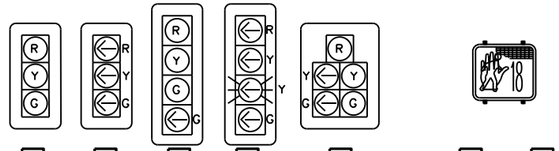
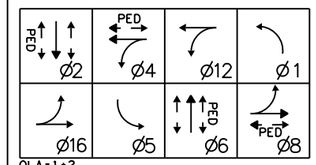
PROPOSED TRAFFIC SIGNAL HEADS

12" SIGNAL FACES
12" LED SIGNAL SECTIONS
W/ REFLECTIVE BACKPLATES

12" PEDESTRIAN HEADS
12" LED
SIGNAL FACE



PROPOSED PHASE DIAGRAM



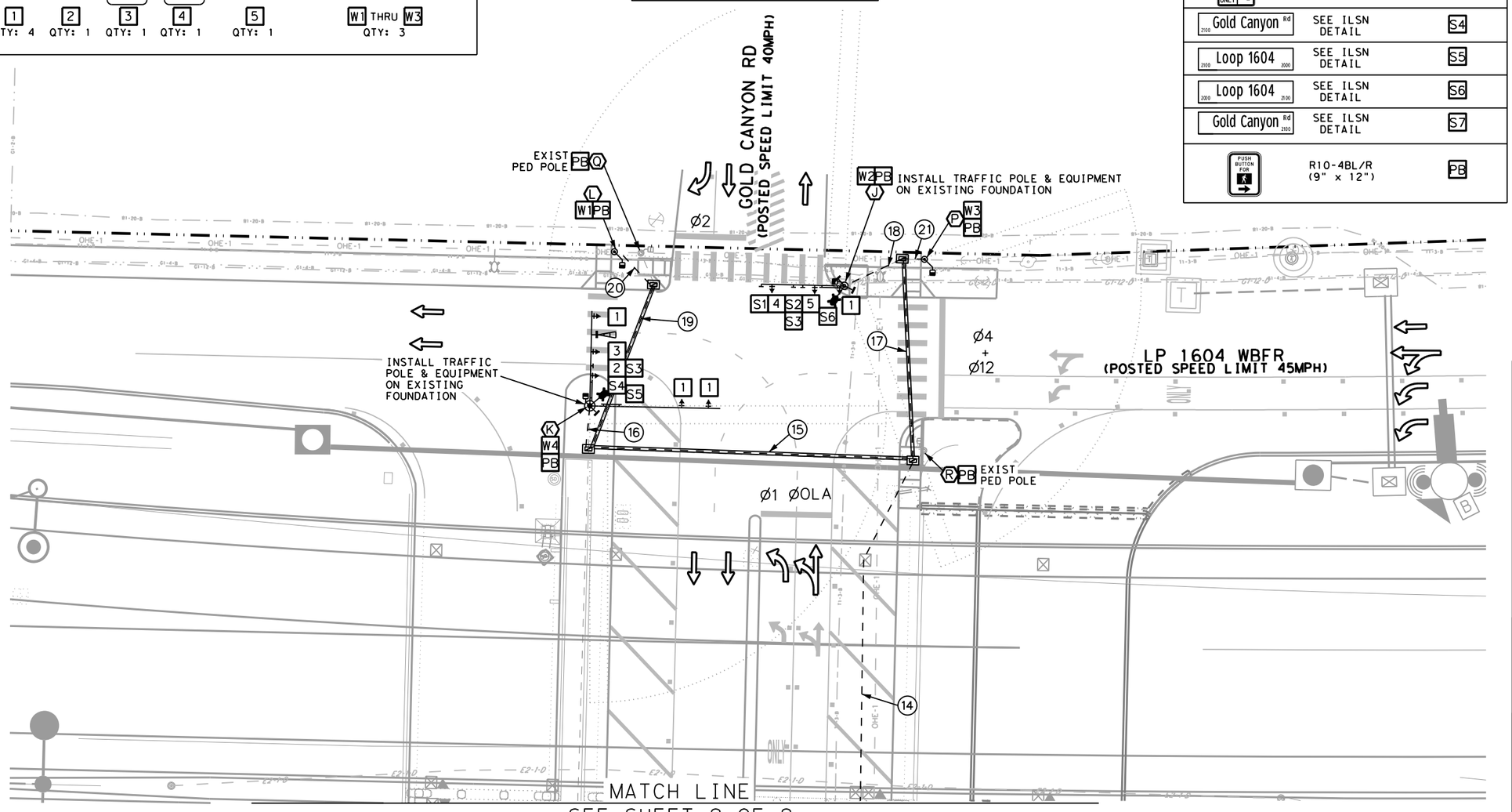
OLA=1+2
OLB=5+6
CONFLICT FLASH: RED ALL PHASES

PROPOSED TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
LEFT TURN YIELD ON FLASHING YELLOW ARROW	R10-17T (30" x 30")	S1
LEFT TURN YIELD ON GREEN	R10-12 (30" x 36")	S2
ONLY	R3-8L (30" x 30")	S3
Gold Canyon Rd 2100	SEE ILSN DETAIL	S4
Loop 1604 2100 2000	SEE ILSN DETAIL	S5
Loop 1604 2000 2100	SEE ILSN DETAIL	S6
Gold Canyon Rd 2100	SEE ILSN DETAIL	S7
PUSH BUTTON FOR	R10-4BL/R (9" x 12")	PB

LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	EXIST CONDUIT RUN
	PROP CONDUIT RUN (TRENCH)
	PROP CONDUIT RUN (BORE)
	COSA CONTROLLER CABINET
	GROUND BOX
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	STREET NAME SIGN
	RADAR PRESENCE DETECTION (RPDD)
	RADAR ZONE
	RADAR ADVANCE DETECTION (RADD)
	LUMINAIRE
	PED SIGNAL & PUSH BUTTON
05	CONDUIT IDENTIFIER
C	POLE IDENTIFIER
	CCTV CAMERA



N

0 20 40 60
SCALE 1" = 40'

DESIGN

STATE OF TEXAS
JUSTIN W. CLARK
118715
LICENSED PROFESSIONAL ENGINEER

JUSTIN W. CLARK, P.E. — 2/17/2023 DATE

REVIEW & APPROVAL

STATE OF TEXAS
GILMER D. GASTON
80472
LICENSED PROFESSIONAL ENGINEER

GILMER D. GASTON, P.E. — 2/17/2023 DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN - F-1386

Texas Department of Transportation
©2023

LP 1604

PROPOSED SIGNAL LAYOUT GOLD CANYON RD AT LP 1604 WBFR

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2124

CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

CAUTION:
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT UNDERGROUND UTILITIES INCLUDING GAS ARE KNOWN TO EXIST IN THE VICINITY OF THIS WORK. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO BEGINNING WORK AND SHALL EXERCISE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT INCLUDING POLE FOUNDATIONS AND CONDUITS

NOTES:
1. ALL DIMENSIONS ARE IN FEET UNLESS SPECIFIED OTHERWISE.
2. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO COMMENCING EXCAVATION. ALL UTILITY LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
3. ALL TRAFFIC SIGNAL EQUIPMENT DEEMED SALVAGEABLE BY THE TXDOT INSPECTOR SHALL BE DELIVERED TO TXDOT SAN ANTONIO DISTRICT SIGNAL SHOP AT 4615 NW LOOP 410, SAN ANTONIO, TX 78229. CONTACT JORGE RAMOS AT 210-731-5143.
4. ALL UTILITY VALVE AND/OR METER ADJUSTMENTS SHALL BE SUBSIDIARY TO VARIOUS PERTINENT PROJECT BID ITEMS. THERE SHALL BE NO ADDITIONAL PAYMENT FOR UTILITY VALVE AND/OR METER ADJUSTMENTS UNLESS SPECIFIED OTHERWISE IN THIS PLAN SET.
5. ALL ITEMS NOT SPECIFICALLY CALLED OUT IN THESE PLANS TO BE REMOVED, SHALL REMAIN.

10:25:17 AM 2/17/2023
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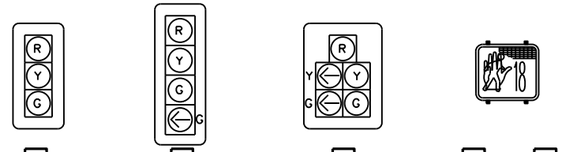
PROPOSED TRAFFIC SIGNAL HEADS

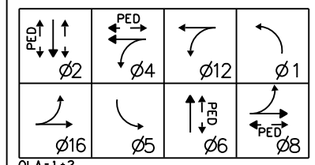
12" SIGNAL FACES
12" LED SIGNAL SECTIONS
W/ REFLECTIVE BACKPLATES

12" PEDESTRIAN HEADS
12" LED
SIGNAL FACE



1 QTY: 4 | 3 QTY: 1 | 5 QTY: 1 | W4 THRU W7 QTY: 4

PROPOSED PHASE DIAGRAM



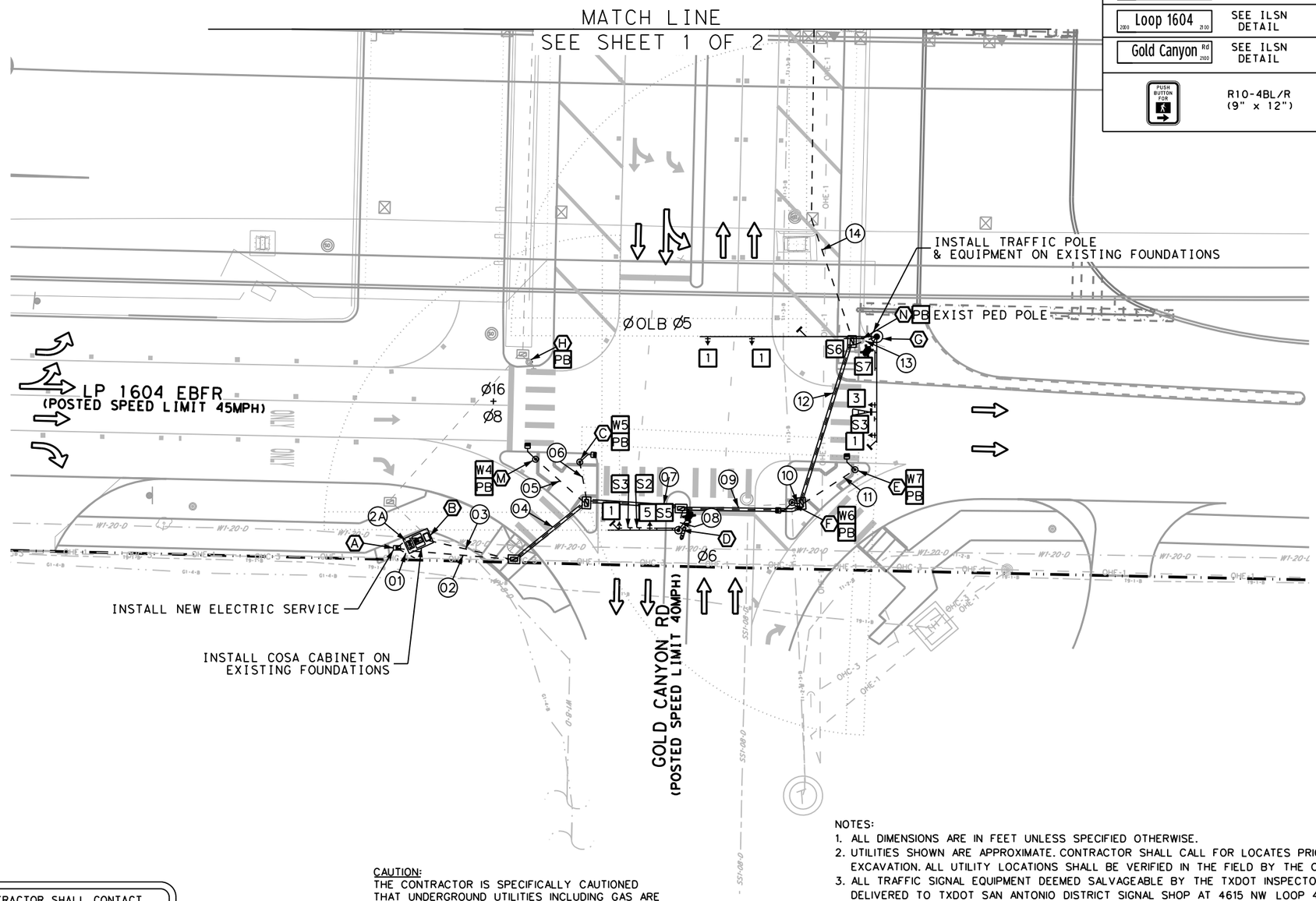
OLA=1+2
OLB=5+6
CONFLICT FLASH: RED ALL PHASES

PROPOSED TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
LEFT TURN YIELD ON FLASHING YELLOW ARROW	R10-17T (30" x 30")	S1
LEFT TURN YIELD ON GREEN	R10-12 (30" x 36")	S2
ONLY	R3-8MS (36" x 30")	S3
Gold Canyon Rd 2100	SEE ILSN DETAIL	S4
Loop 1604 2100 2000	SEE ILSN DETAIL	S5
Loop 1604 2000 2100	SEE ILSN DETAIL	S6
Gold Canyon Rd 2100	SEE ILSN DETAIL	S7
PUSH BUTTON FOR	R10-4BL/R (9" x 12")	PB

LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	EXIST CONDUIT RUN
	PROP CONDUIT RUN (TRENCH)
	PROP CONDUIT RUN (BORE)
	COSA CONTROLLER CABINET
	GROUND BOX
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	STREET NAME SIGN
	RADAR PRESENCE DETECTION (RPDD)
	RADAR ZONE
	RADAR ADVANCE DETECTION (RADD)
	LUMINAIRE
	PED SIGNAL & PUSH BUTTON
05	CONDUIT IDENTIFIER
C	POLE IDENTIFIER
	CCTV CAMERA



N 0 20 40 60
SCALE 1" = 40'

DESIGN
STATE OF TEXAS
JUSTIN W. CLARK
118715
LICENSED PROFESSIONAL ENGINEER
JUSTIN W. CLARK, P.E. 2/17/2023 DATE

REVIEW & APPROVAL
STATE OF TEXAS
GILMER D. GASTON
80472
LICENSED PROFESSIONAL ENGINEER
GILMER D. GASTON, P.E. 2/17/2023 DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN - F-1386

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LP 1604

PROPOSED SIGNAL LAYOUT GOLD CANYON RD AT LP 1604 EBFR

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2125

CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

CAUTION:
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT UNDERGROUND UTILITIES INCLUDING GAS ARE KNOWN TO EXIST IN THE VICINITY OF THIS WORK. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO BEGINNING WORK AND SHALL EXERCISE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT INCLUDING POLE FOUNDATIONS AND CONDUITS

NOTES:
1. ALL DIMENSIONS ARE IN FEET UNLESS SPECIFIED OTHERWISE.
2. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO COMMENCING EXCAVATION. ALL UTILITY LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
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4. ALL UTILITY VALVE AND/OR METER ADJUSTMENTS SHALL BE SUBSIDIARY TO VARIOUS PERTINENT PROJECT BID ITEMS. THERE SHALL BE NO ADDITIONAL PAYMENT FOR UTILITY VALVE AND/OR METER ADJUSTMENTS UNLESS SPECIFIED OTHERWISE IN THIS PLAN SET.
5. ALL ITEMS NOT SPECIFICALLY CALLED OUT IN THESE PLANS TO BE REMOVED, SHALL REMAIN.

10:25:20 AM 2/17/2023
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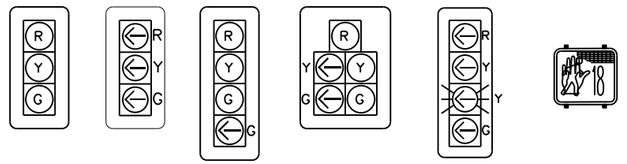
EXISTING TRAFFIC SIGNAL HEADS

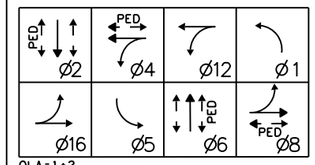
12" SIGNAL FACES
12" LED SIGNAL SECTIONS W/ BACKPLATES

12" PEDESTRIAN HEADS
12" LED SIGNAL FACE



1	2	3	4	5	W1 THRU W6
QTY: 5	QTY: 1	QTY: 1	QTY: 1	QTY: 1	QTY: 6

EXISTING PHASE DIAGRAM



OLA=1•2
OLB=5•6
CONFLICT FLASH: RED ALL PHASES

EXISTING TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
	R3-6L (30" x 36")	S1
	R10-12 (30" x 36")	S2
	R10-17T (30" x 30")	S3
	R10-3EL/R (9" x 15")	PB

NOTES:
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6. ALL EXISTING FOUNDATIONS CALLED OUT TO BE REMOVED, SHALL BE OBLITERATED 2' BELOW.

LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	CABLE/CONDUIT RUN
	ELEC SERVICE
	COSA CONTROLLER CABINET
	GROUND BOX
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	STREET NAME SIGN
	ADVANCE RADAR DETECTION
	RADAR DETECTION
	OPTICOM EVP
	LUMINAIRE
	PED SIGNAL & PUSH BUTTON
—W—	WATER LINE
—SS—	SEWER LINE
—FOL—	COMM LINE
—OHE—	OVERHEAD ELECTRIC LINE
—G—	GAS LINE

0 20 40 60
SCALE 1" = 40'

N

CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

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DESIGN

STATE OF TEXAS — JUSTIN W. CLARK — 118715 — LICENSED PROFESSIONAL ENGINEER

JUSTIN W. CLARK, P.E. — 2/17/2023 DATE

REVIEW & APPROVAL

STATE OF TEXAS — GILMER D. GASTON — 80472 — LICENSED PROFESSIONAL ENGINEER

GILMER D. GASTON, P.E. — 2/17/2023 DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN - F-1386

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LP 1604

EXISTING SIGNAL LAYOUT REDLAND RD AT LP 1604 WBFR

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2130

10:25:48 AM 2/17/2023
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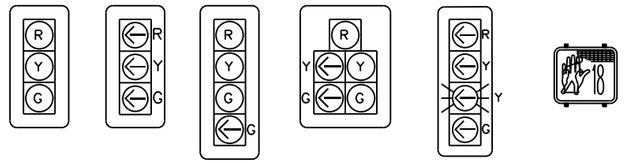
EXISTING TRAFFIC SIGNAL HEADS

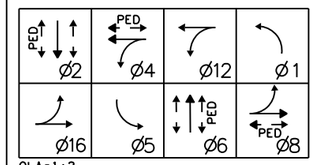
12" SIGNAL FACES
12" LED SIGNAL SECTIONS W/ BACKPLATES

12" PEDESTRIAN HEADS
12" LED SIGNAL FACE



1	2	3	4	5	W1 THRU W6
QTY: 5	QTY: 1	QTY: 1	QTY: 1	QTY: 1	QTY: 6

EXISTING PHASE DIAGRAM



OLA=1+2
OLB=5+6
CONFLICT FLASH: RED ALL PHASES

EXISTING TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
	R3-6L (30" x 36")	S1
LEFT TURN YIELD ON GREEN	R10-12 (30" x 36")	S2
LEFT TURN YIELD ON FLASHING YELLOW ARROW	R10-17T (30" x 30")	S3
ONLY	R3-5R (30" x 36")	S4
	R10-3EL/R (9" x 15")	PB

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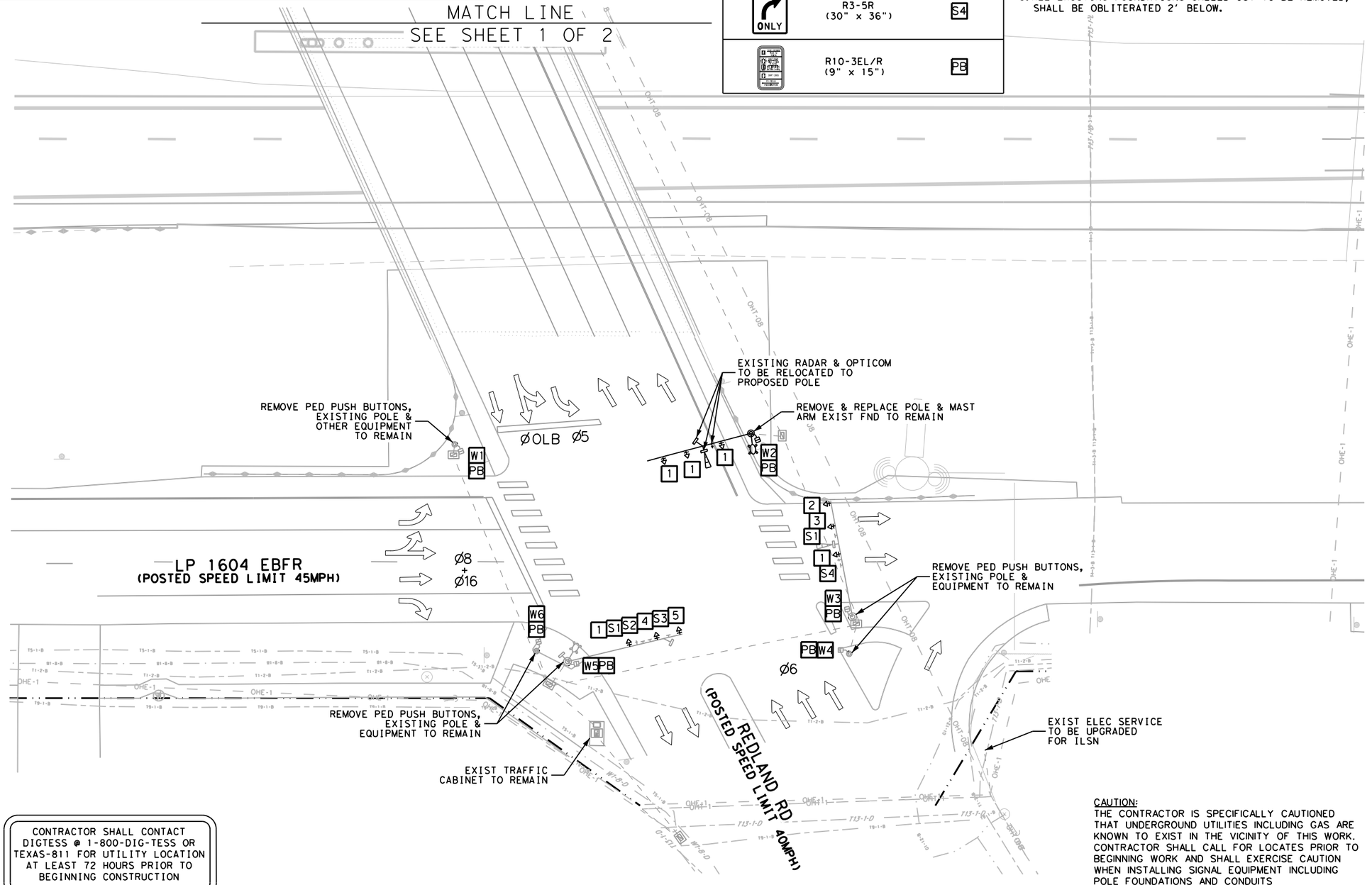
LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	CABLE/CONDUIT RUN
	ELEC SERVICE
	COSA CONTROLLER CABINET
	GROUND BOX
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	STREET NAME SIGN
	ADVANCED RADAR DETECTION
	RADAR DETECTION
	OPTICOM EVP
	LUMINAIRE
	PED SIGNAL & PUSH BUTTON
—W—	WATER LINE
—SS—	SEWER LINE
—FOL—	COMM LINE
—OHE—	OVERHEAD ELECTRIC LINE
—G—	GAS LINE



CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

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N

0 20 40 60
SCALE 1" = 40'

DESIGN

STATE OF TEXAS
JUSTIN W. CLARK
118715
LICENSED PROFESSIONAL ENGINEER

JUSTIN W. CLARK, P.E. — 2/17/2023 DATE

REVIEW & APPROVAL

STATE OF TEXAS
GILMER D. GASTON
80472
LICENSED PROFESSIONAL ENGINEER

GILMER D. GASTON, P.E. — 2/17/2023 DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN - F-1386

Texas Department of Transportation
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LP 1604

EXISTING SIGNAL LAYOUT REDLAND RD AT LP 1604 EBFR

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2131

10:25:52 AM 2/17/2023
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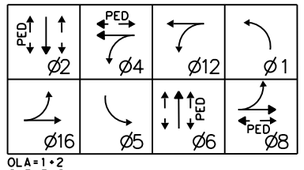
PROPOSED PHASE DIAGRAM



OLA=1+2
OLB=5+6
CONFLICT FLASH:RED ALL PHASES

PROPOSED TRAFFIC SIGNAL HEADS

12" PEDESTRIAN HEADS
12" LED
SIGNAL FACE

W1
QTY: 1

NOTES:
1. ALL DIMENSIONS ARE IN FEET UNLESS SPECIFIED OTHERWISE.
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PROPOSED TRAFFIC SIGNS

SIGN	DESCRIPTION	DESIGNATION
Redland Rd (17000 / 18000)	SEE ILSN DETAIL	S1
Loop 1604 (2900 / 2800)	SEE ILSN DETAIL	S2
Loop 1604 (2800 / 2900)	SEE ILSN DETAIL	S3
Redland Rd (18000 / 17000)	SEE ILSN DETAIL	S4
PUSH BUTTON FOR	R10-4BL/R (9" x 12")	PB

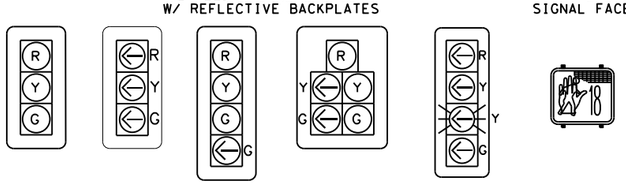
LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	CONDUIT RUN(TRENCH)
	CONDUIT RUN(BORE)
	ILSN SIGN
	LUMINAIRE
	COSA CONTROLLER CABINET
	GROUND BOX
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	RADAR PRESENCE DETECTION(RPDD)
	RADAR ADVANCE DETECTION(RADD)
	OPTICOM EVP
	PED SIGNAL & PUSH BUTTON
05	CONDUIT IDENTIFIER
C	POLE IDENTIFIER
	CCTV

PROPOSED TRAFFIC SIGNAL HEADS

12" SIGNAL FACES
12" LED SIGNAL SECTIONS
W/ REFLECTIVE BACKPLATES

12" PEDESTRIAN HEADS
12" LED
SIGNAL FACE



1	2	3	4	5	W1
QTY: 5	QTY: 1	QTY: 1	QTY: 1	QTY: 1	QTY: 1

CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

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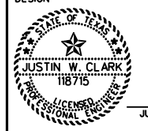
DESIGN



JUSTIN W. CLARK, P.E. — 2/17/2023 DATE

REVIEW & APPROVAL

GILMER D. GASTON, P.E. — 2/17/2023 DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation ©2023

LP 1604

PROPOSED SIGNAL LAYOUT REDLAND RD AT LP 1604 WBFR

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2132

10:26:00 AM 2/17/2023
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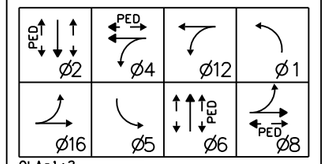
PROPOSED TRAFFIC SIGNS

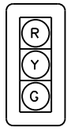
SIGN	DESCRIPTION	DESIGNATION
Redland Rd (17000 / 18000)	SEE ILSN DETAIL	S1
Loop 1604 (2900 / 2800)	SEE ILSN DETAIL	S2
Loop 1604 (2800 / 2900)	SEE ILSN DETAIL	S3
Redland Rd (18000 / 17000)	SEE ILSN DETAIL	S4
PUSH BUTTON FOR (A) →	R10-4BL/R (9" x 12")	PB

PROPOSED PHASE DIAGRAM



OLA=1+2
OLB=5+6
CONFLICT FLASH: RED ALL PHASES

PROPOSED TRAFFIC SIGNAL HEADS

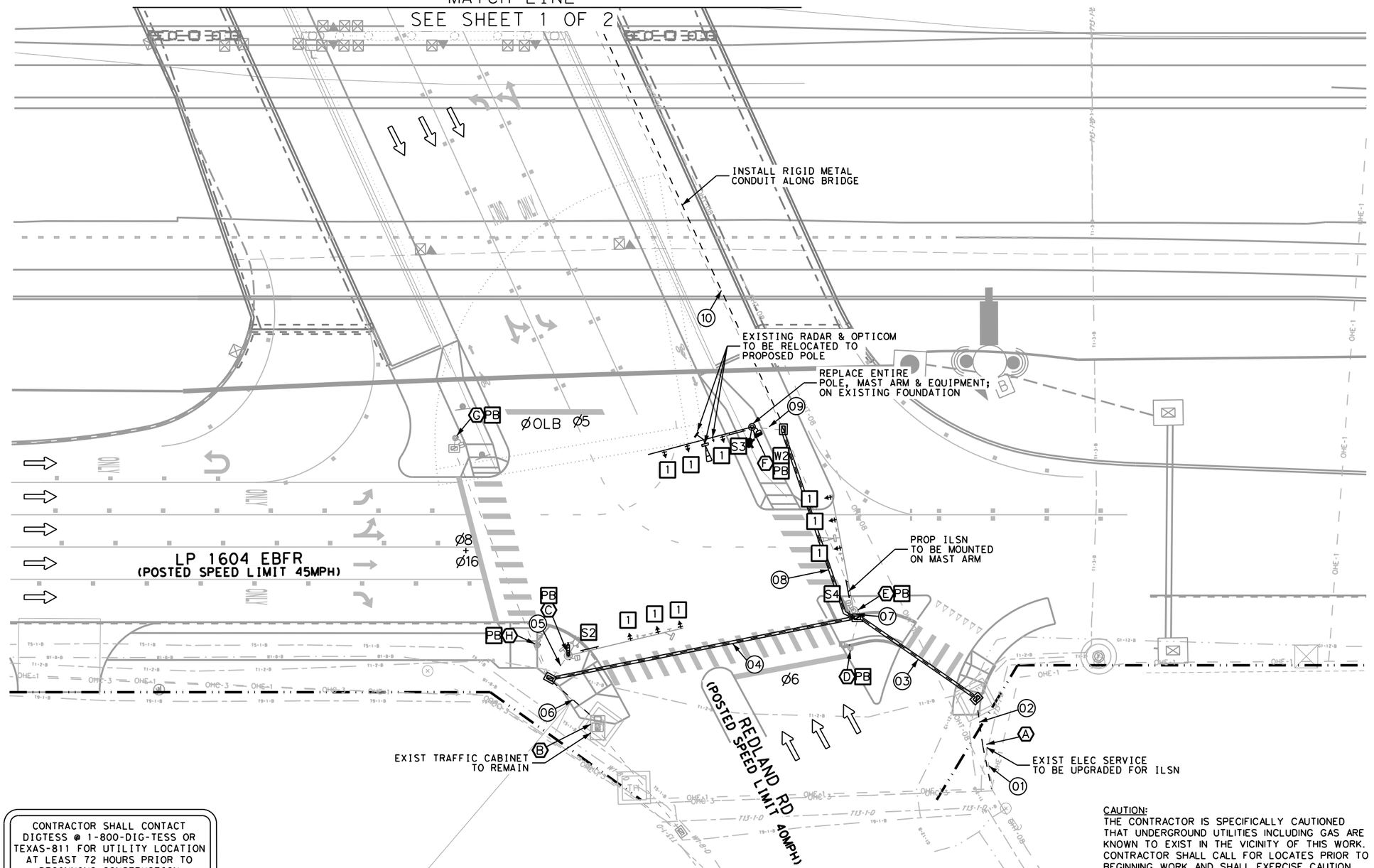
12" SIGNAL FACES	12" PEDESTRIAN HEADS
12" LED SIGNAL SECTIONS W/ REFLECTIVE BACKPLATES	12" LED SIGNAL FACE
	
1 QTY: 9	W2 QTY: 1

NOTES:
1. ALL DIMENSIONS ARE IN FEET UNLESS SPECIFIED OTHERWISE.
2. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO COMMENCING EXCAVATION. ALL UTILITY LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
3. ALL TRAFFIC SIGNAL EQUIPMENT DEEMED SALVAGEABLE BY THE TXDOT INSPECTOR SHALL BE DELIVERED TO TXDOT SAN ANTONIO DISTRICT SIGNAL SHOP AT 4615 NW LOOP 410, SAN ANTONIO, TX 78229. CONTACT JORGE RAMOS AT 210-731-5143.
4. ALL UTILITY VALVE AND/OR METER ADJUSTMENTS SHALL BE SUBSIDIARY TO VARIOUS PERTINENT PROJECT BID ITEMS. THERE SHALL BE NO ADDITIONAL PAYMENT FOR UTILITY VALVE AND/OR METER ADJUSTMENTS UNLESS SPECIFIED OTHERWISE IN THIS PLAN SET.
5. ALL ITEMS NOT SPECIFICALLY CALLED OUT IN THESE PLANS TO BE REMOVED, SHALL REMAIN.

LEGEND

SYMBOL	DESCRIPTION
	RIGHT-OF-WAY
	TRAFFIC FLOW
	CONDUIT RUN (TRENCH)
	CONDUIT RUN (BORE)
	ILSN SIGN
	COSA CONTROLLER CABINET
	GROUND BOX
	TRAFFIC POLE & FND
	TRAFFIC SIGNAL HEAD
	MAST ARM SIGN
	RADAR PRESENCE DETECTION (RPDD)
	RADAR ADVANCE DETECTION (RADD)
	OPTICOM EVP
	LUMINAIRE
	PED SIGNAL & PUSH BUTTON
05	CONDUIT IDENTIFIER
C	POLE IDENTIFIER
	CCTV

MATCH LINE
SEE SHEET 1 OF 2



N
0 20 40 60
SCALE 1" = 40'

CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

CAUTION:
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT UNDERGROUND UTILITIES INCLUDING GAS ARE KNOWN TO EXIST IN THE VICINITY OF THIS WORK. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO BEGINNING WORK AND SHALL EXERCISE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT INCLUDING POLE FOUNDATIONS AND CONDUITS

DESIGN

STATE OF TEXAS — JUSTIN W. CLARK — 118715 — LICENSED PROFESSIONAL ENGINEER

2/17/2023
JUSTIN W. CLARK, P.E. DATE

REVIEW & APPROVAL

STATE OF TEXAS — GILMER D. GASTON — 80472 — LICENSED PROFESSIONAL ENGINEER

2/17/2023
GILMER D. GASTON, P.E. DATE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

LJA Engineering, Inc.
FRN - F-1386

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LP 1604

PROPOSED SIGNAL LAYOUT REDLAND RD AT LP 1604 EBFR

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2133

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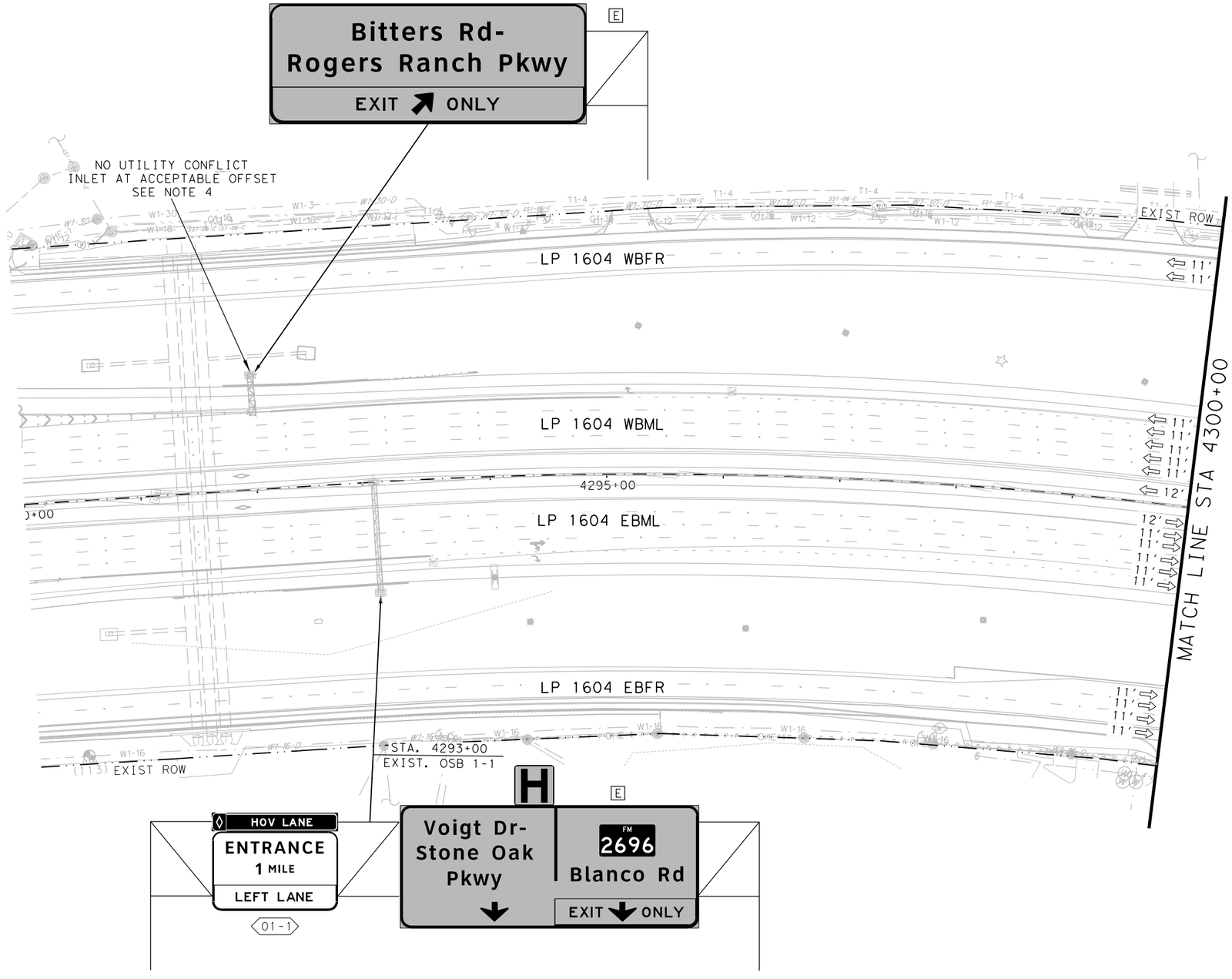

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LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

1. REFER TO LARGE SIGN DETAIL AND OVERHEAD SIGN ELEVATION SHEETS FOR ADDITIONAL INFORMATION.
2. STAKE LOCATION OF THE OVERHEAD SIGN STRUCTURES TO BE APPROVED BY THE ENGINEER.
3. CONTRACTOR SHALL INSTALL RIP RAP APRONS AT FOUNDATION LOCATIONS NOT ALREADY IN RIP RAP OR PAVEMENT AREAS. SEE "RIP RAP APRON DETAILS" FOR MORE INFORMATION.
4. UTILITIES SHOWN APPROXIMATE. CONTRACTOR TO FIELD VERIFY EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION.

STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
LARGE SIGN LAYOUT

BEGIN TO STA 4300+00

SHEET 1 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2446

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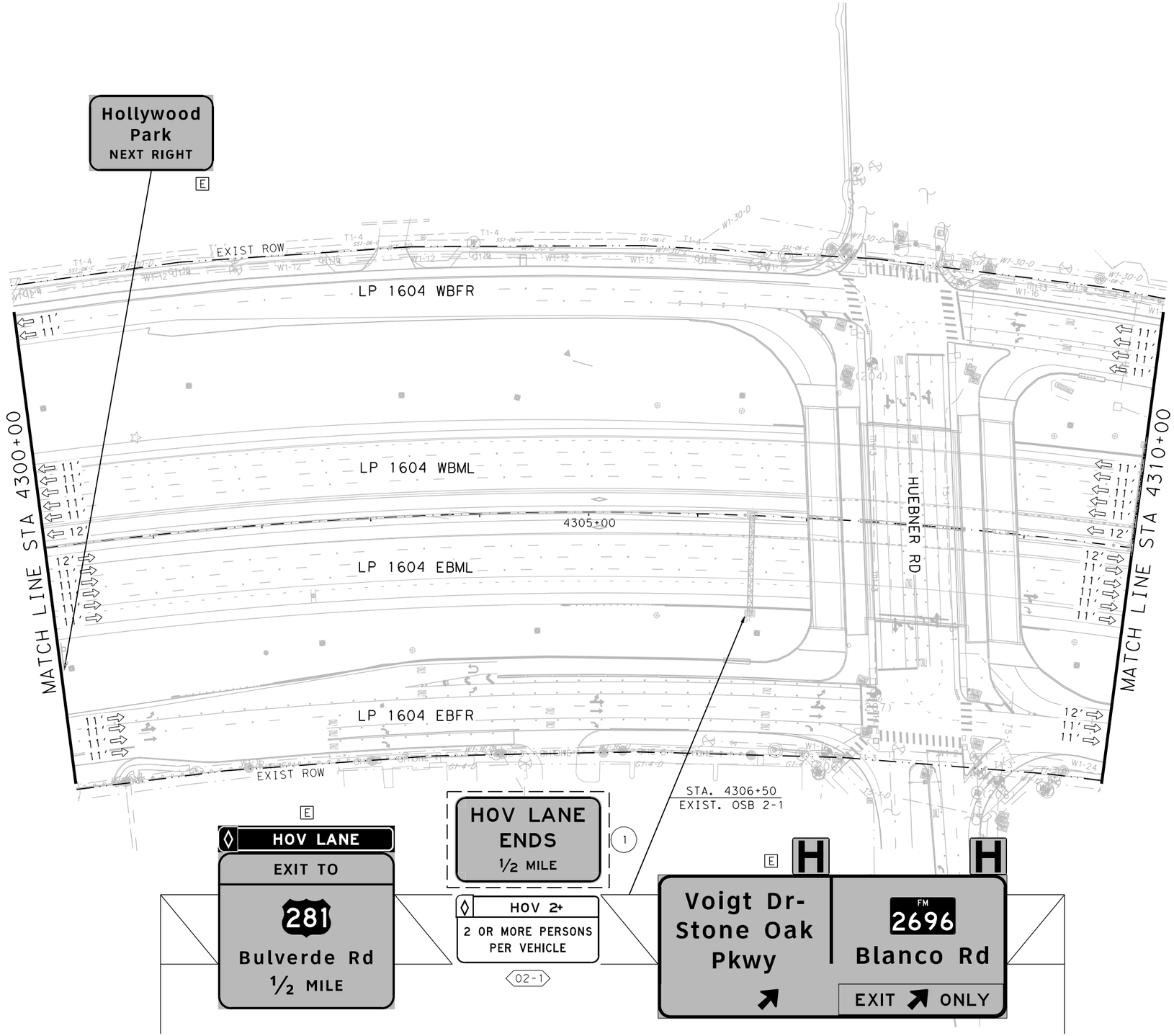

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LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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FRN-F-1386

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LP 1604
LARGE SIGN LAYOUT

STA 4300+00 TO STA 4310+00

SHEET 2 OF 36

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2447

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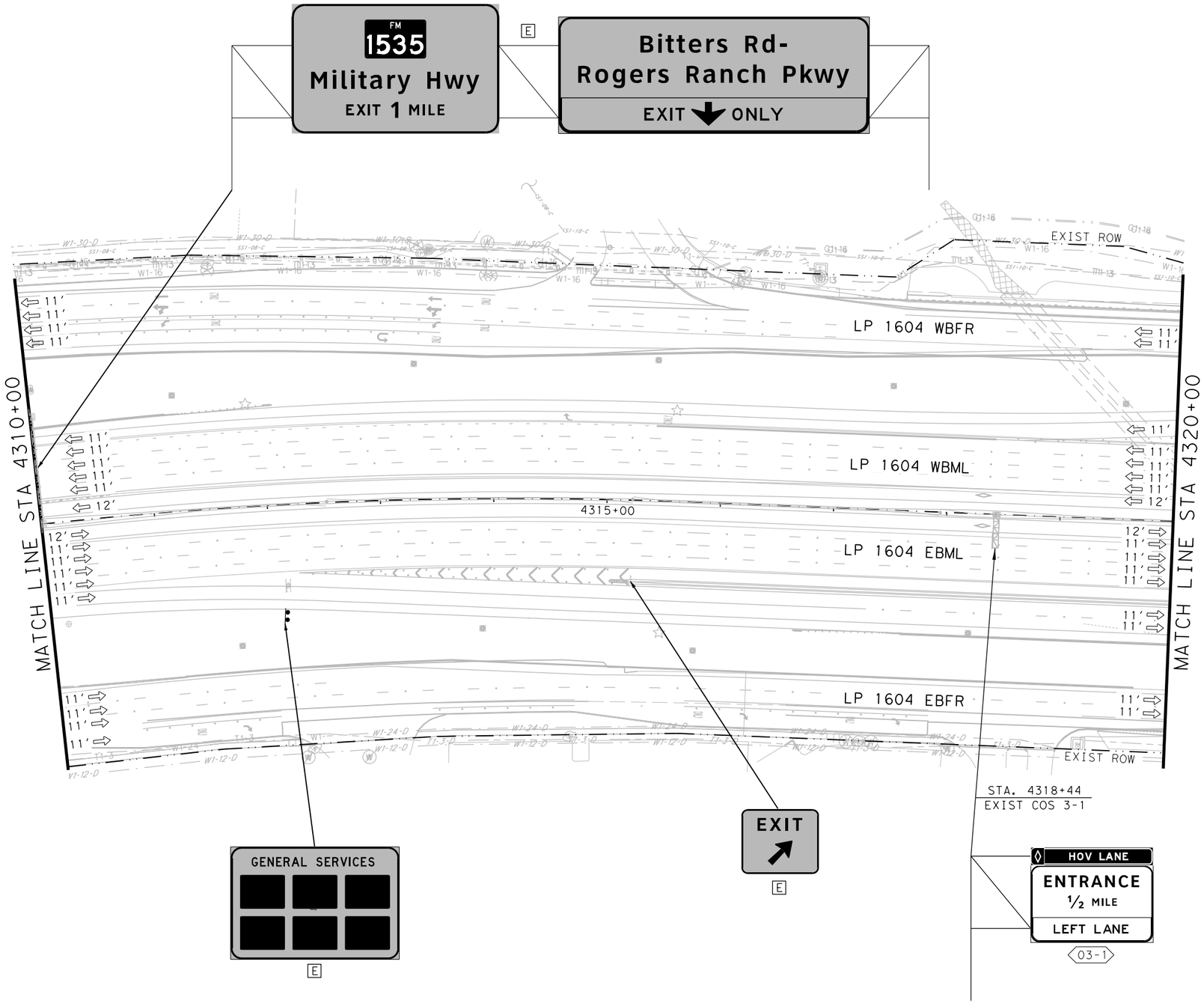

LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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FRN - F-1386

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LP 1604
LARGE SIGN LAYOUT

STA 4310+00 TO STA 4320+00

SHEET 3 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2448

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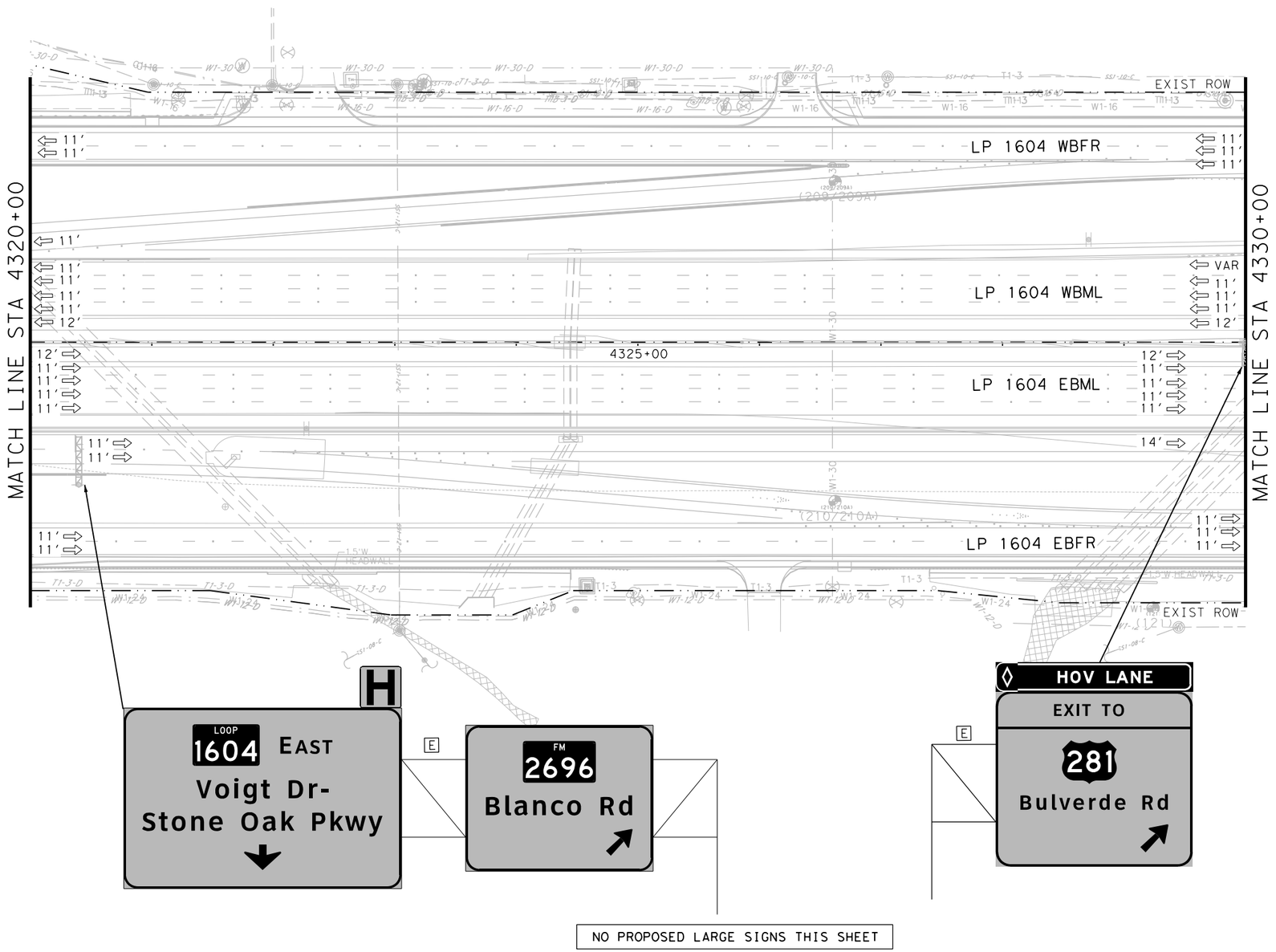

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LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
LARGE SIGN LAYOUT

STA 4320+00 TO STA 4330+00

SHEET 4 OF 36

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2449

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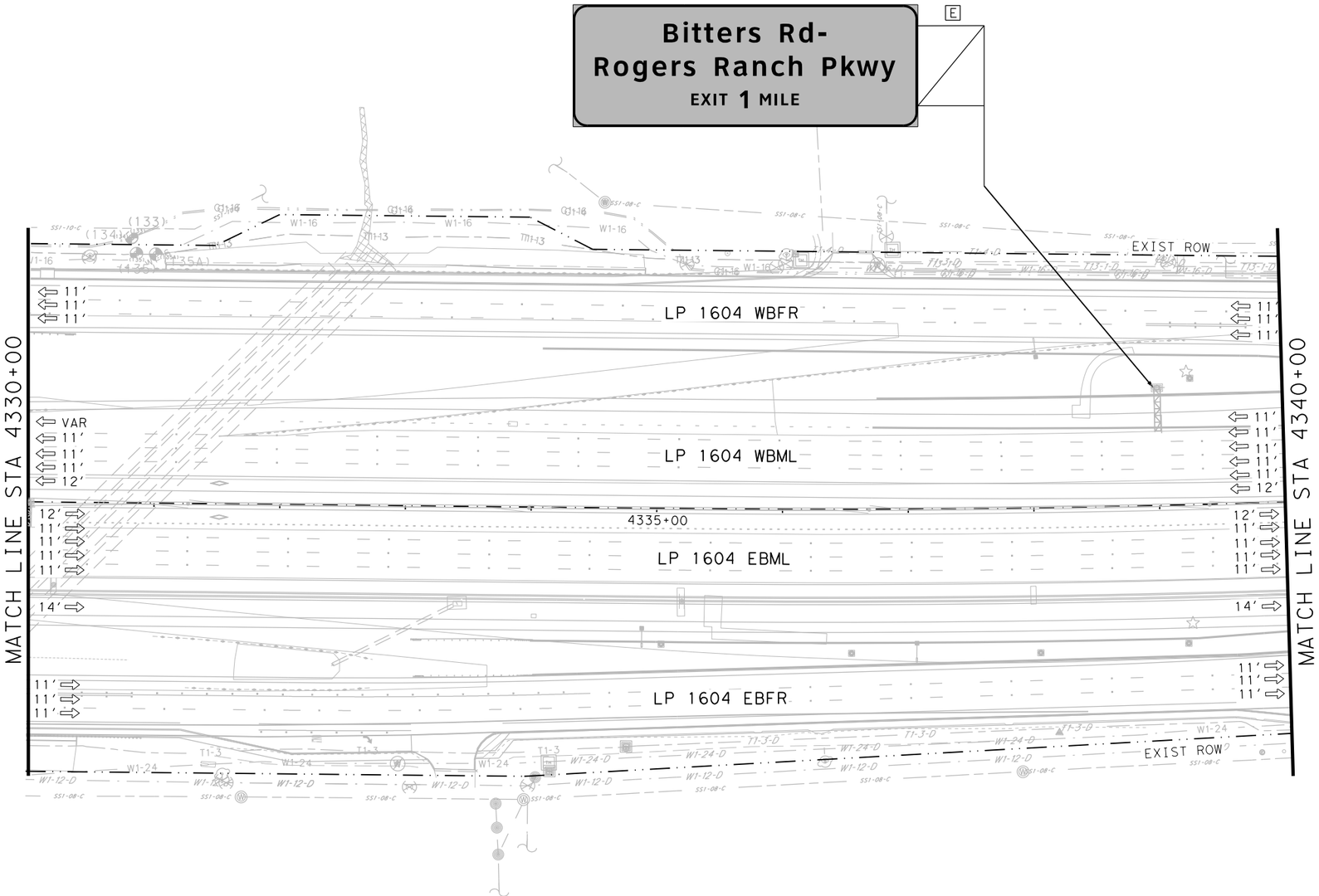

NO PROPOSED LARGE SIGNS THIS SHEET

N

LEGEND

- X-X — SIGN NUMBER - PROPOSED LARGE SIGN
- E — EXISTING SIGN TO REMAIN
- X — EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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FRN-F-1386

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LP 1604
LARGE SIGN LAYOUT

STA 4330+00 TO STA 4340+00

SHEET 5 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2450

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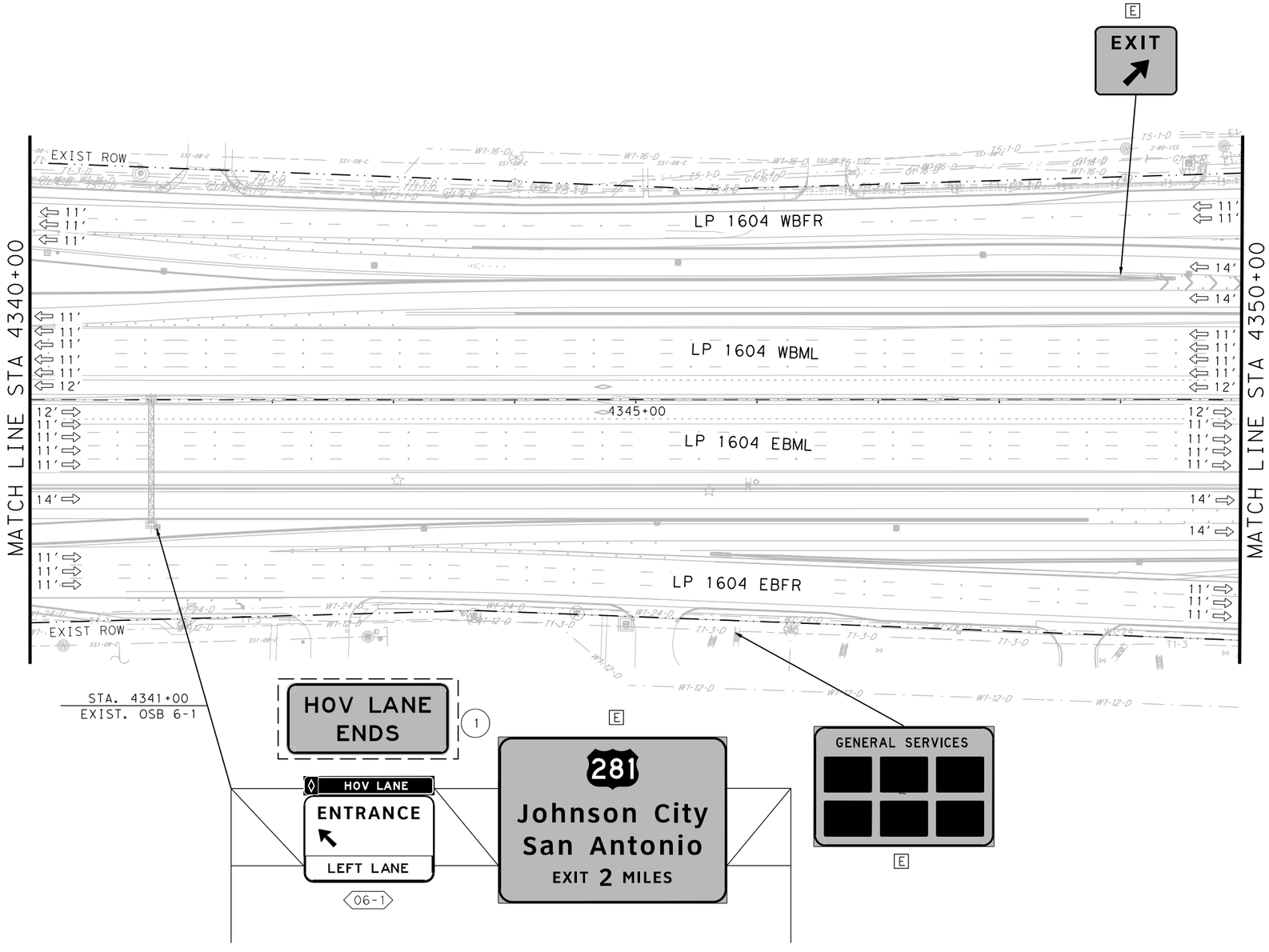

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LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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LP 1604
LARGE SIGN LAYOUT

STA 4340+00 TO STA 4350+00

SHEET 6 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2451

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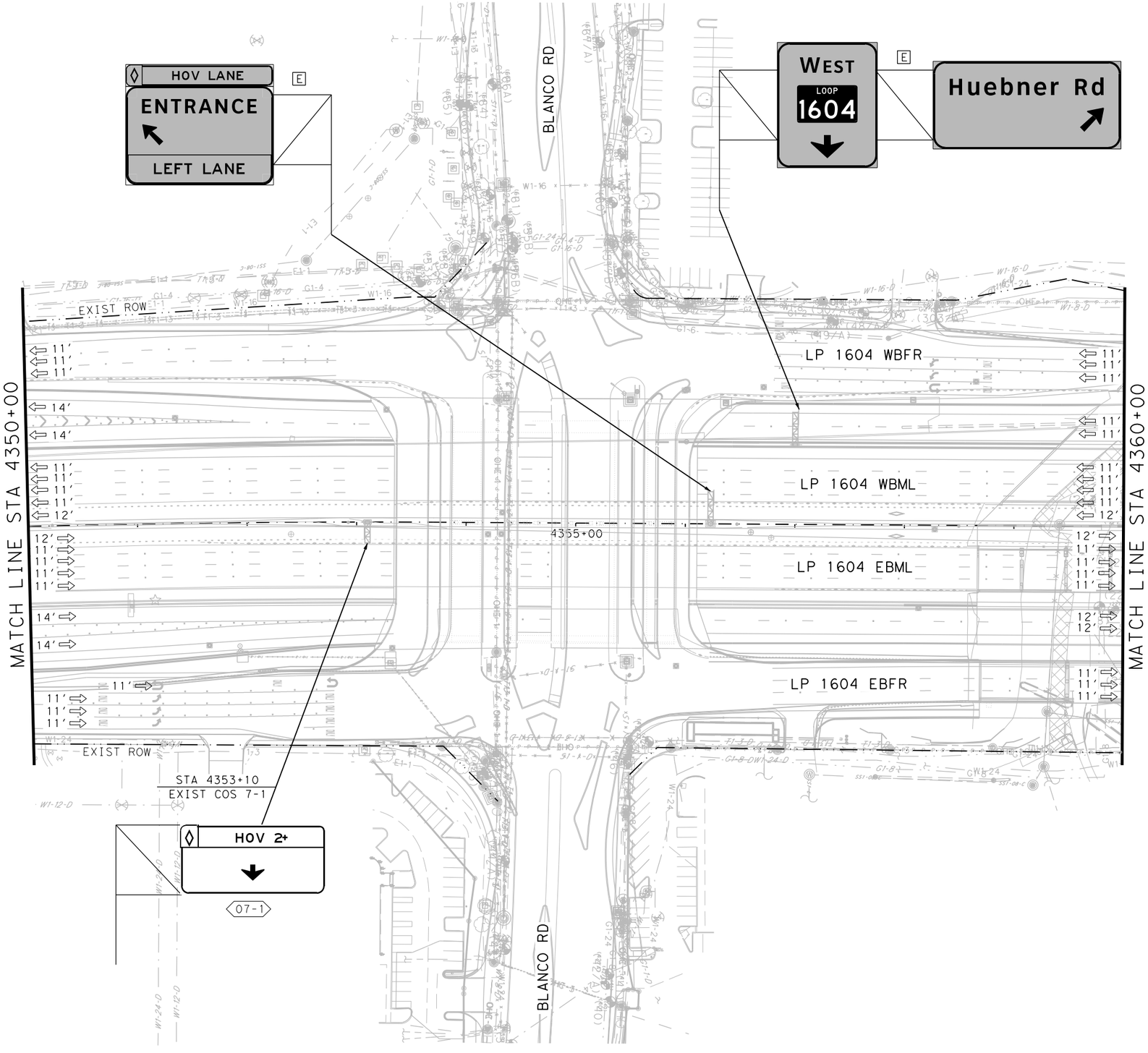

LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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FRN-F-1386

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LP 1604
LARGE SIGN LAYOUT

STA 4350+00 TO STA 4360+00

SHEET 7 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2452

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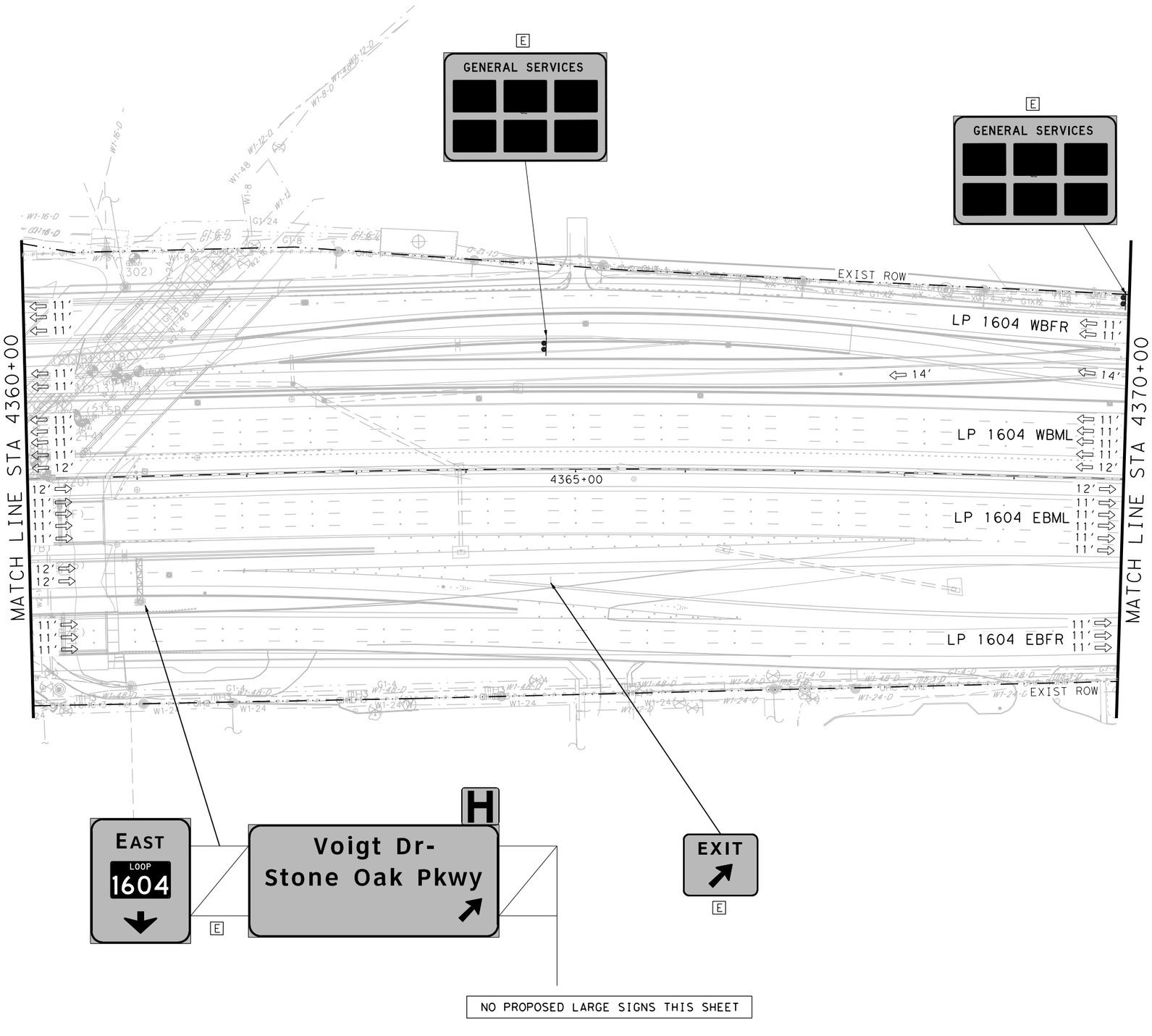

LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- [E] EXISTING SIGN TO REMAIN
- (X) EXISTING SIGN TO BE REMOVED
- ▭ CONCRETE COLUMN SIGN FOUNDATION
- ⇦ TRAFFIC FLOW ARROW (EXISTING)
- ← TRAFFIC FLOW ARROW (PROPOSED)

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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FRN - F-1386

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LP 1604
LARGE SIGN LAYOUT

STA 4360+00 TO STA 4370+00

SHEET 8 OF 36

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2453

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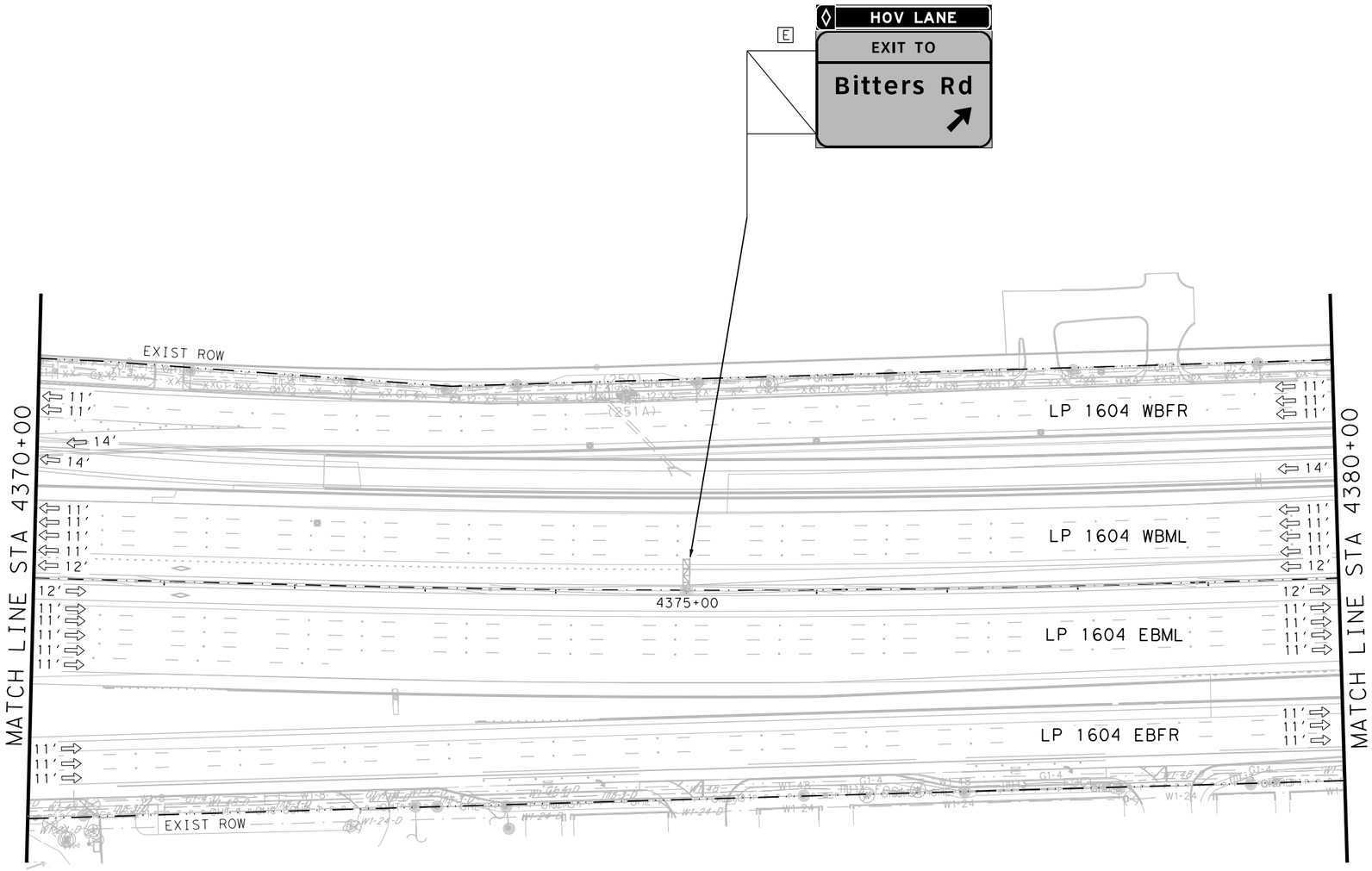

NO PROPOSED LARGE SIGNS THIS SHEET

LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- [E] EXISTING SIGN TO REMAIN
- (X) EXISTING SIGN TO BE REMOVED
- ▭ CONCRETE COLUMN SIGN FOUNDATION
- ⇦ TRAFFIC FLOW ARROW (EXISTING)
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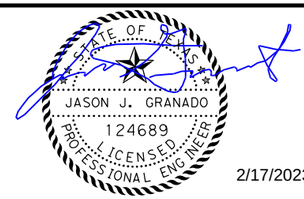

2/17/2023

0′ 25′ 50′ 100′

SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
LARGE SIGN LAYOUT

STA 4370+00 TO STA 4380+00

SHEET 9 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2454

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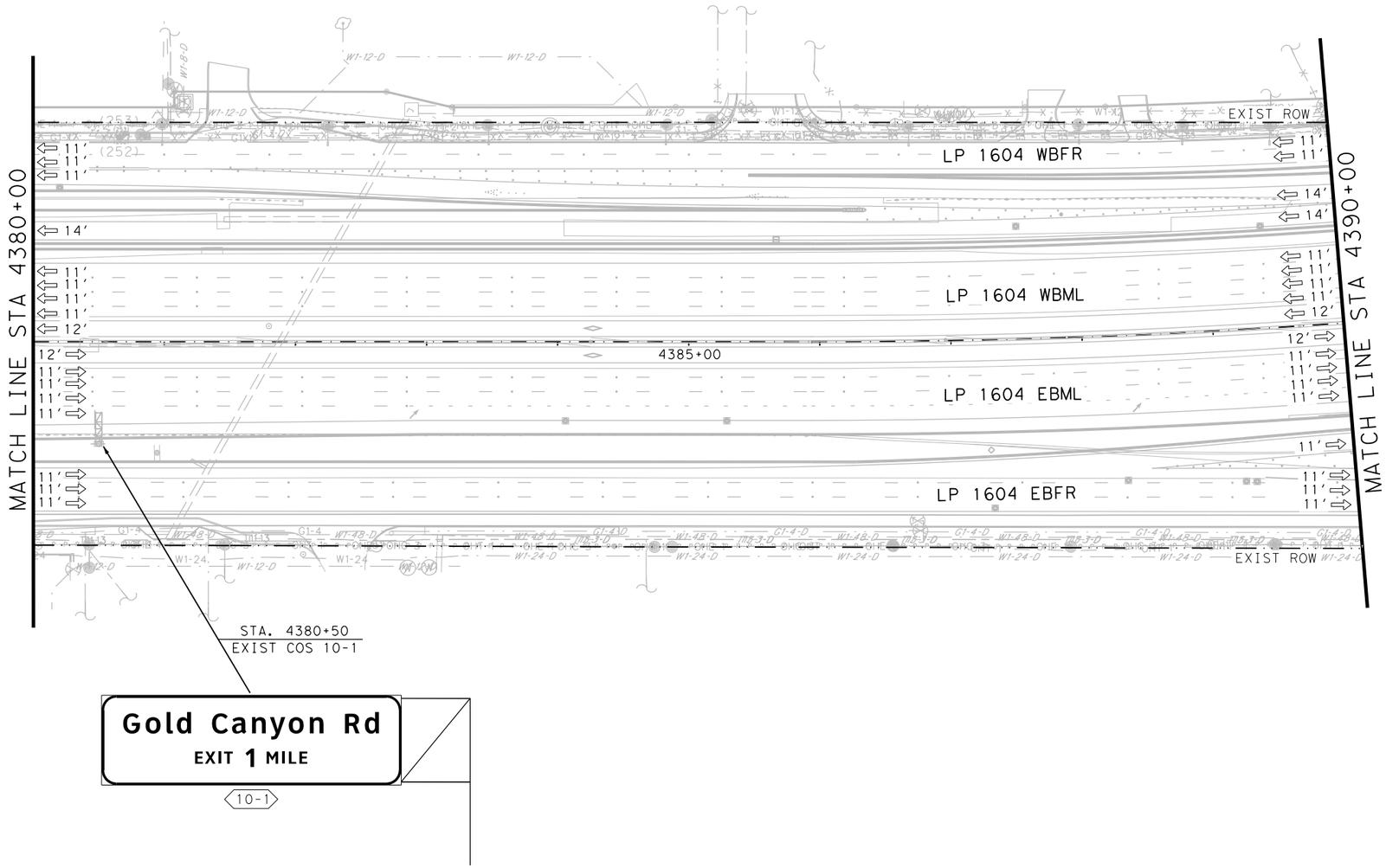

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LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

1. REFER TO LARGE SIGN DETAIL AND OVERHEAD SIGN ELEVATION SHEETS FOR ADDITIONAL INFORMATION.
2. STAKE LOCATION OF THE OVERHEAD SIGN STRUCTURES TO BE APPROVED BY THE ENGINEER.
3. CONTRACTOR SHALL INSTALL RIP RAP APRONS AT FOUNDATION LOCATIONS NOT ALREADY IN RIP RAP OR PAVEMENT AREAS. SEE "RIP RAP APRON DETAILS" FOR MORE INFORMATION.
4. UTILITIES SHOWN APPROXIMATE. CONTRACTOR TO FIELD VERIFY EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION.

STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
LARGE SIGN LAYOUT

STA 4380+00 TO STA 4390+00

SHEET 10 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2455

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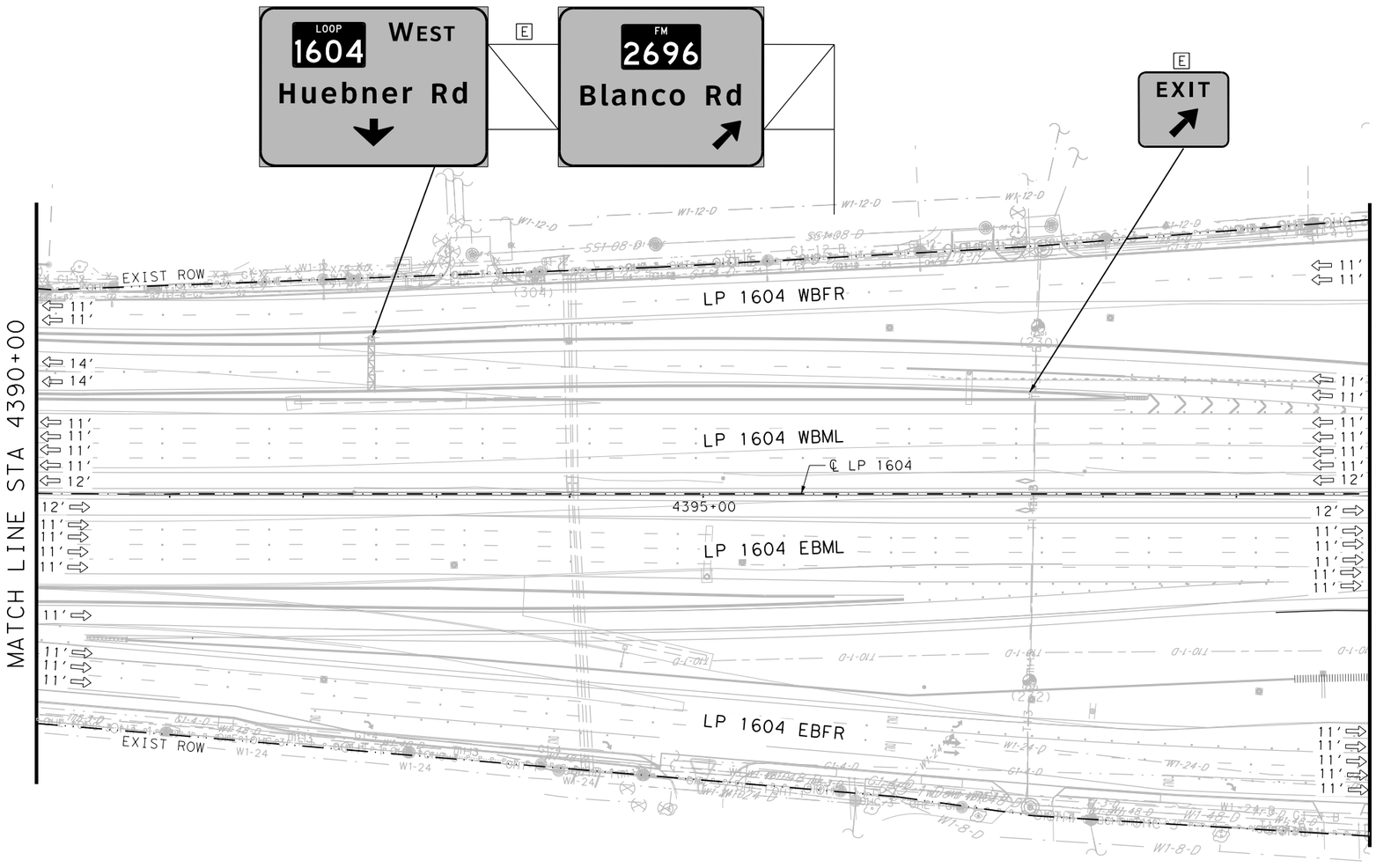

NO PROPOSED LARGE SIGNS THIS SHEET

LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- [E] EXISTING SIGN TO REMAIN
- (X) EXISTING SIGN TO BE REMOVED
- ▭ CONCRETE COLUMN SIGN FOUNDATION
- ⇦ TRAFFIC FLOW ARROW (EXISTING)
- ← TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
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FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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LP 1604
LARGE SIGN LAYOUT

STA 4390+00 TO STA 4400+00

SHEET 11 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2456

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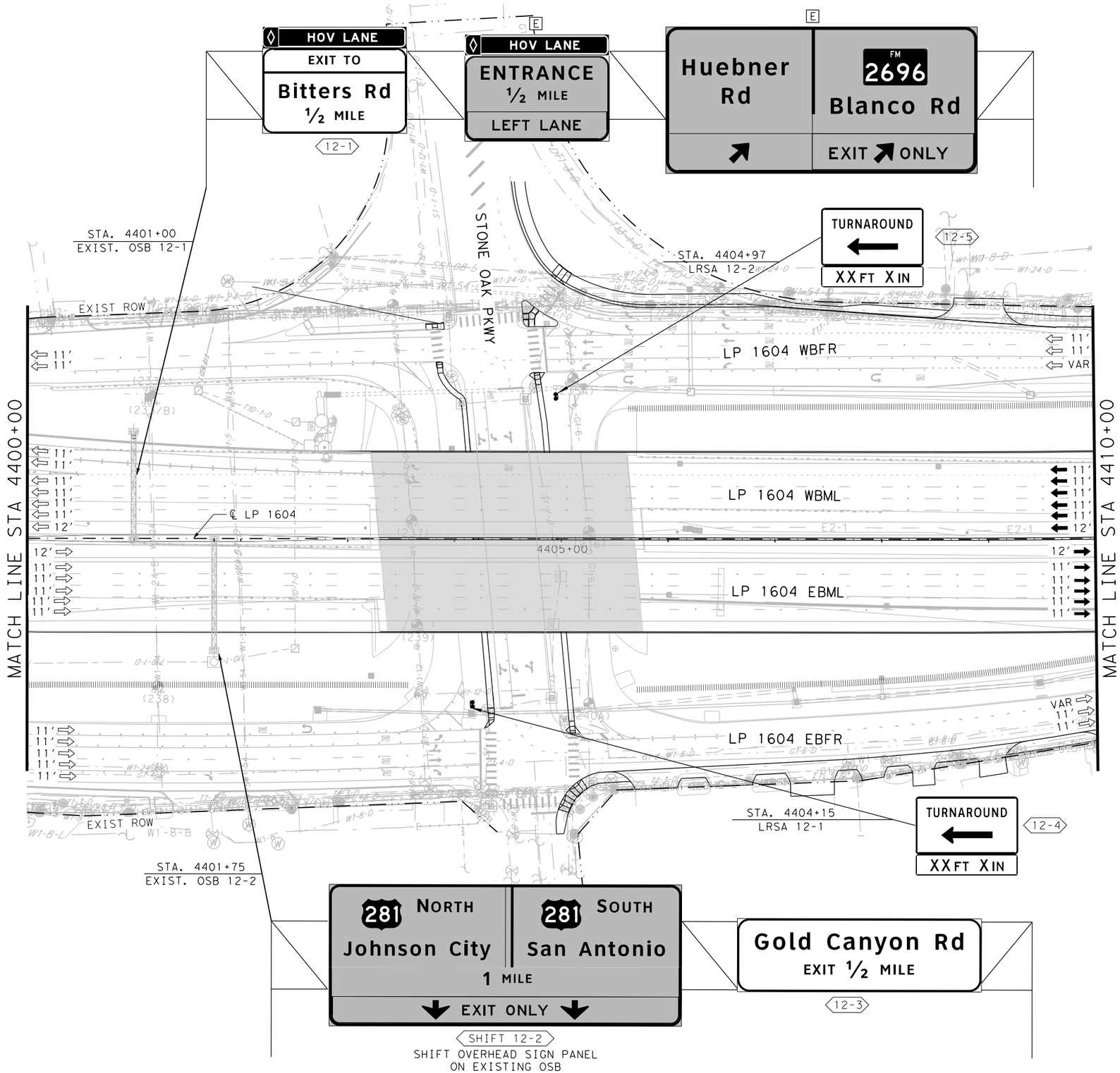

LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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LP 1604
LARGE SIGN LAYOUT

STA 4400+00 TO STA 4410+00

SHEET 12 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2457

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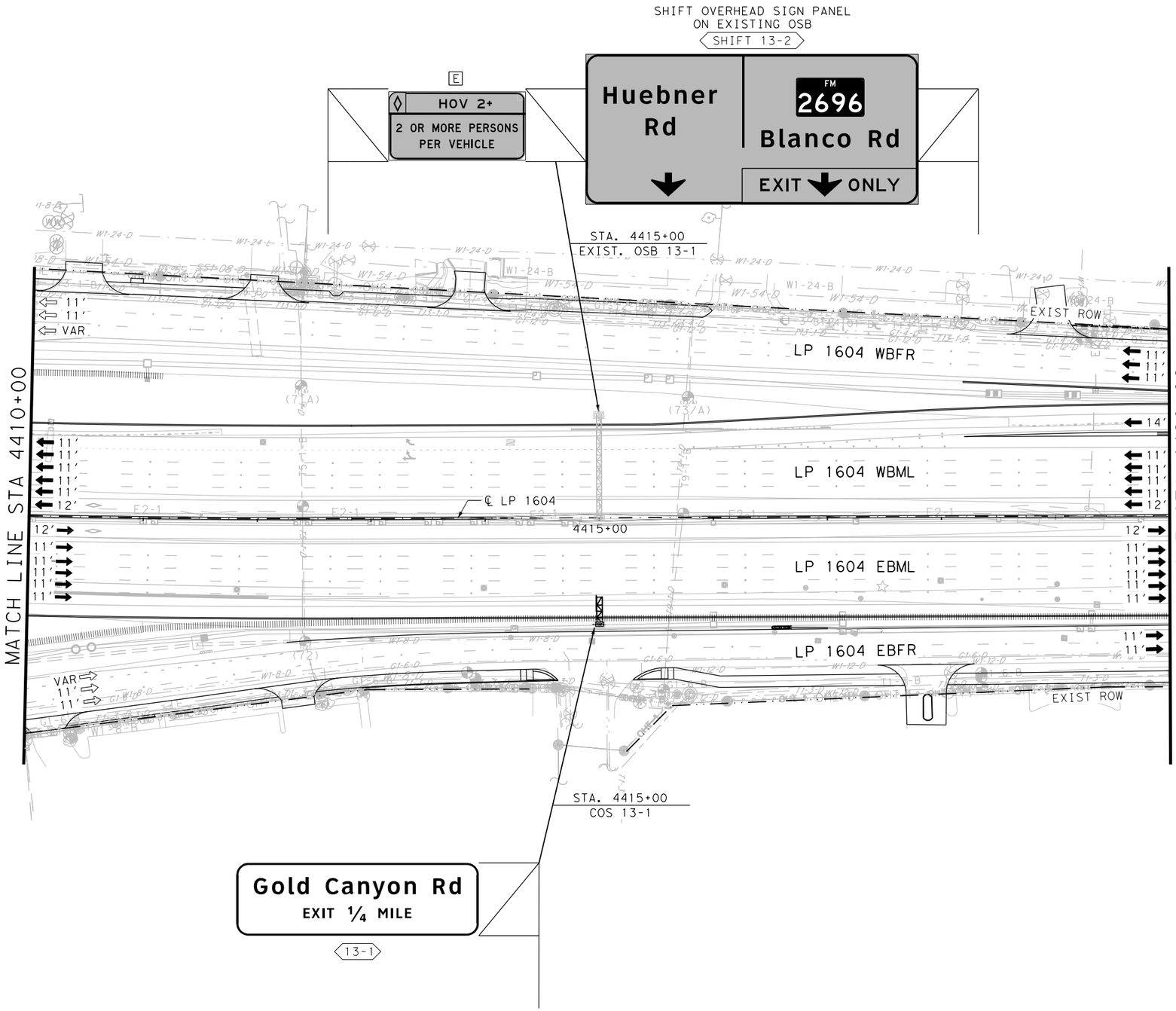

LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
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LP 1604
LARGE SIGN LAYOUT

STA 4410+00 TO STA 4420+00

SHEET 13 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2458

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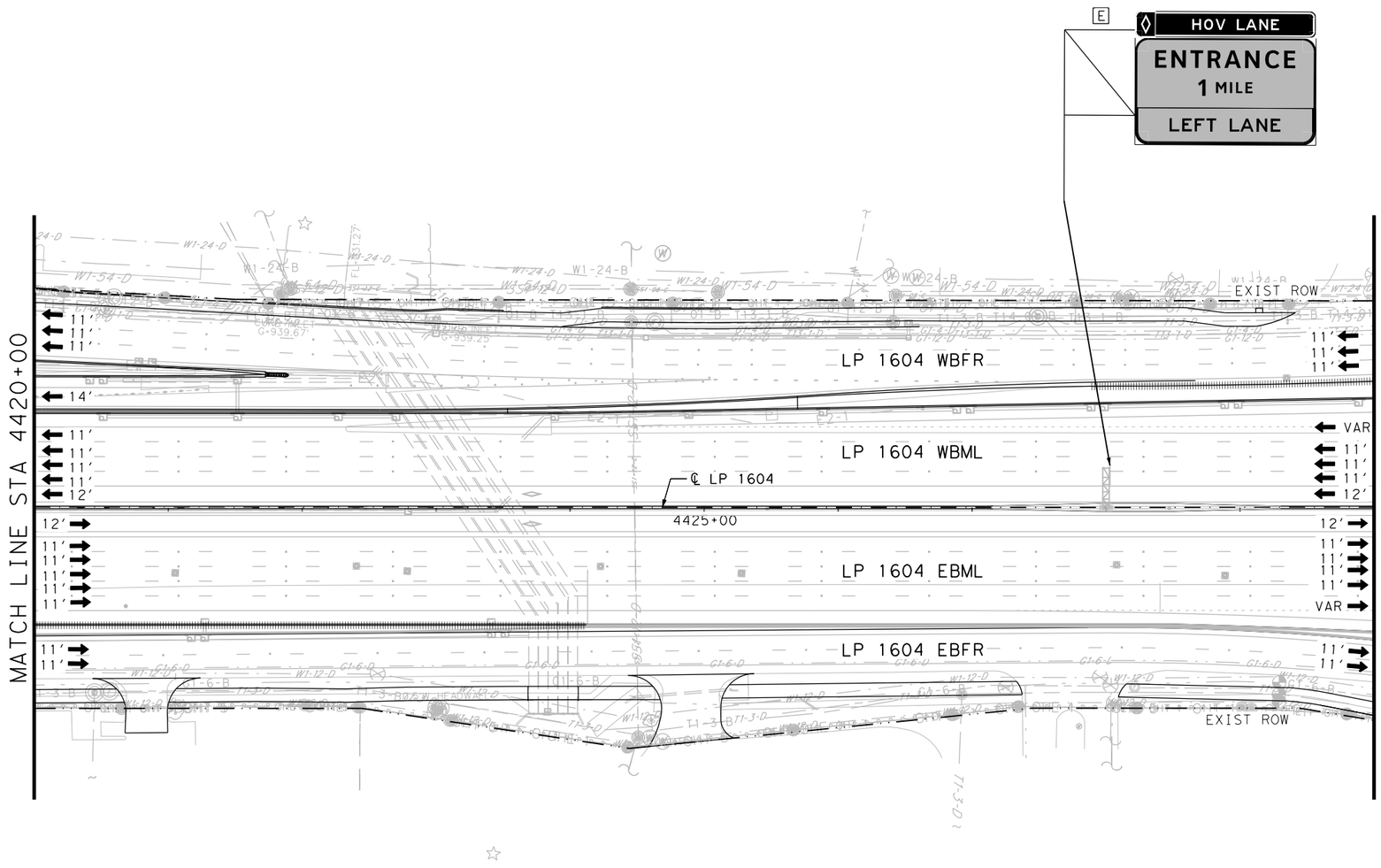

NO PROPOSED LARGE SIGNS THIS SHEET

LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- [E] EXISTING SIGN TO REMAIN
- (X) EXISTING SIGN TO BE REMOVED
- ▭ CONCRETE COLUMN SIGN FOUNDATION
- ⇦ TRAFFIC FLOW ARROW (EXISTING)
- ← TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
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LP 1604
LARGE SIGN LAYOUT

STA 4420+00 TO STA 4430+00

SHEET 14 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2459

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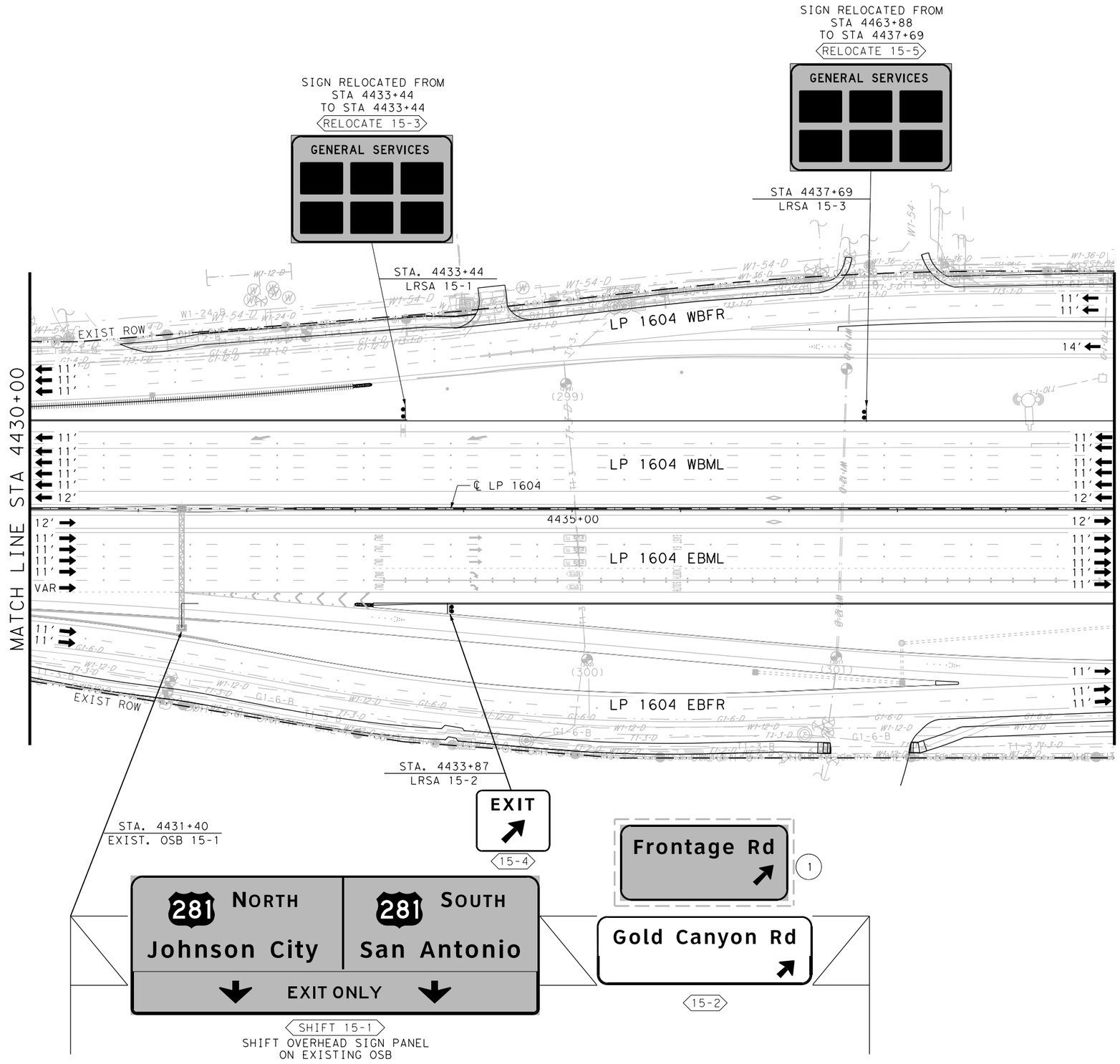

LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

1. REFER TO LARGE SIGN DETAIL AND OVERHEAD SIGN ELEVATION SHEETS FOR ADDITIONAL INFORMATION.
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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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LP 1604
LARGE SIGN LAYOUT

STA 4430+00 TO STA 4440+00

SHEET 15 OF 36

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2460

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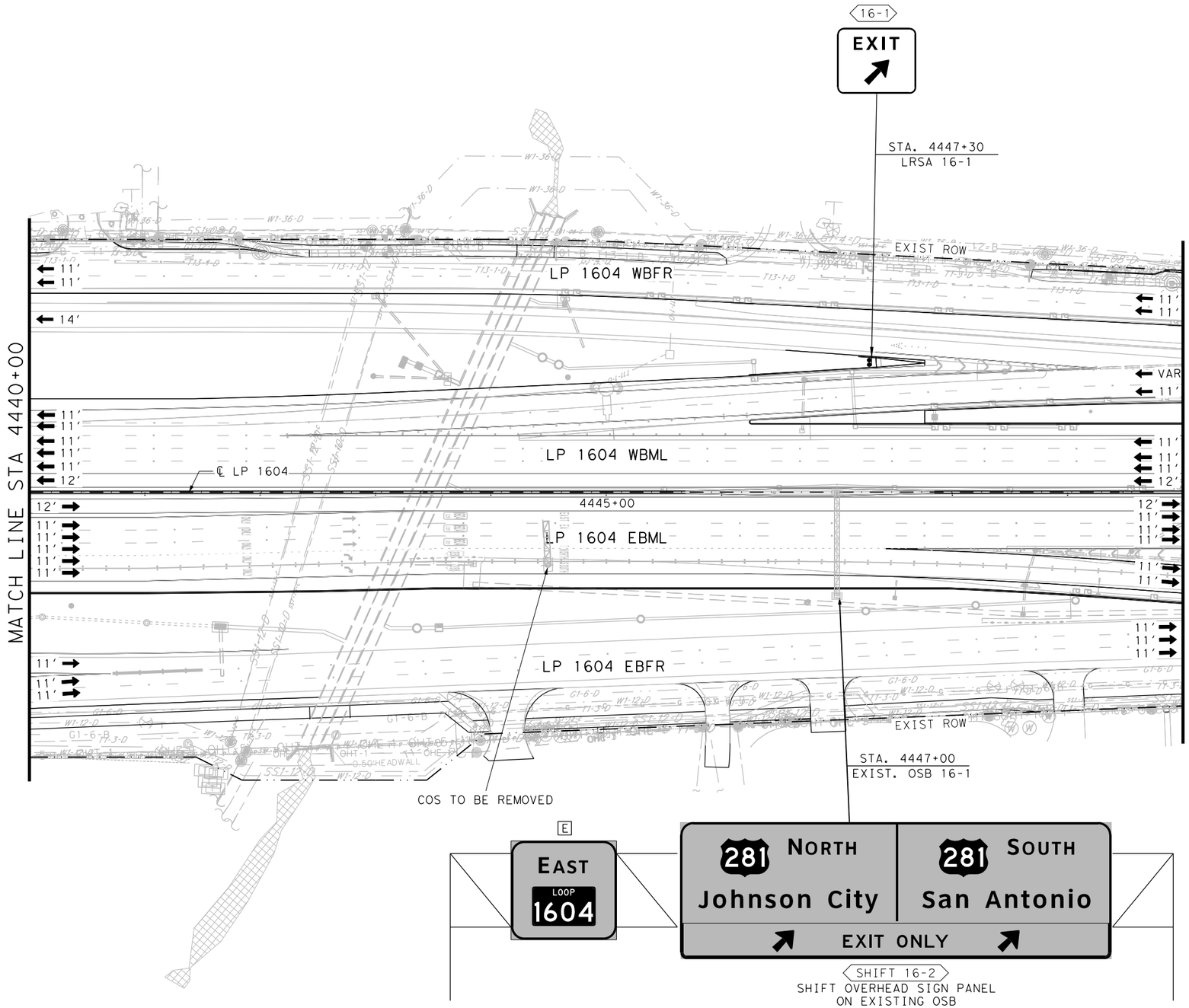

N

LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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FRN - F-1386

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LP 1604
LARGE SIGN LAYOUT

STA 4440+00 TO STA 4450+00

SHEET 16 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2461

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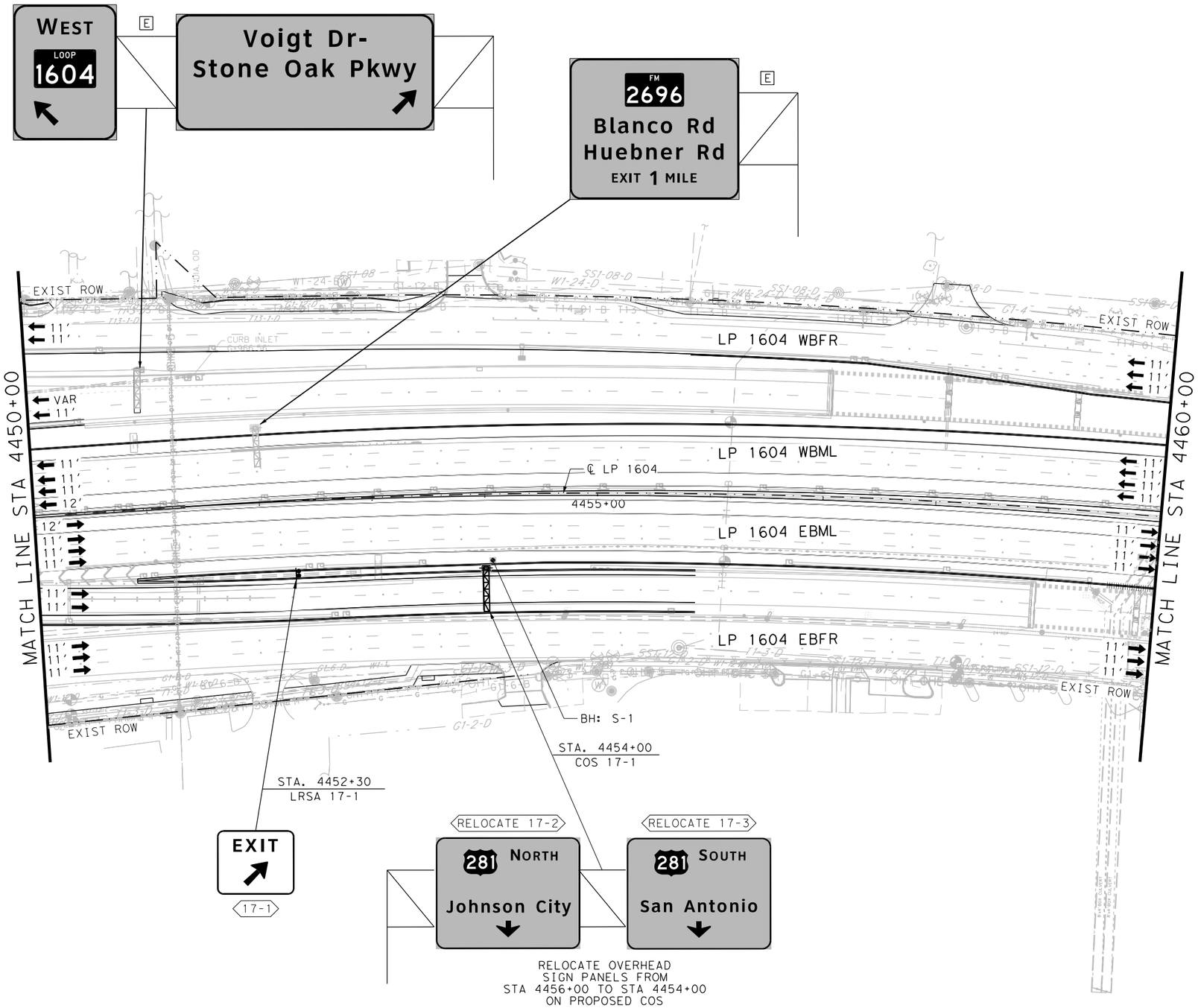

N

LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- [E] EXISTING SIGN TO REMAIN
- (X) EXISTING SIGN TO BE REMOVED
- ▭ CONCRETE COLUMN SIGN FOUNDATION
- ⇦ TRAFFIC FLOW ARROW (EXISTING)
- ← TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
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LP 1604
LARGE SIGN LAYOUT

STA 4450+00 TO STA 4460+00

SHEET 17 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2462

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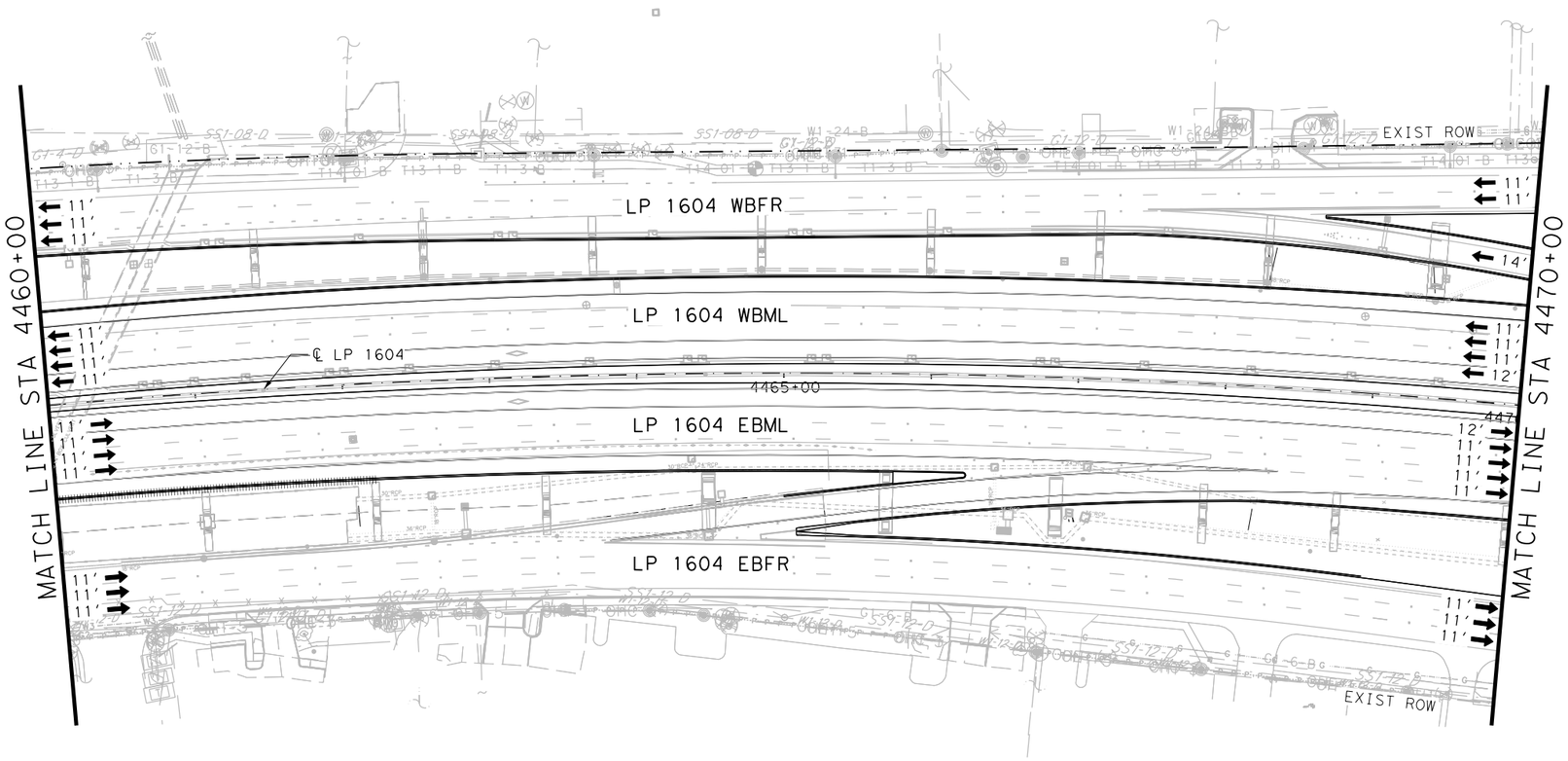

NO PROPOSED LARGE SIGNS THIS SHEET

LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- [E] EXISTING SIGN TO REMAIN
- (X) EXISTING SIGN TO BE REMOVED
- ▭ CONCRETE COLUMN SIGN FOUNDATION
- ⇦ TRAFFIC FLOW ARROW (EXISTING)
- ← TRAFFIC FLOW ARROW (PROPOSED)

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LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
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REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
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STA 4460+00 TO STA 4470+00

SHEET 18 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2463

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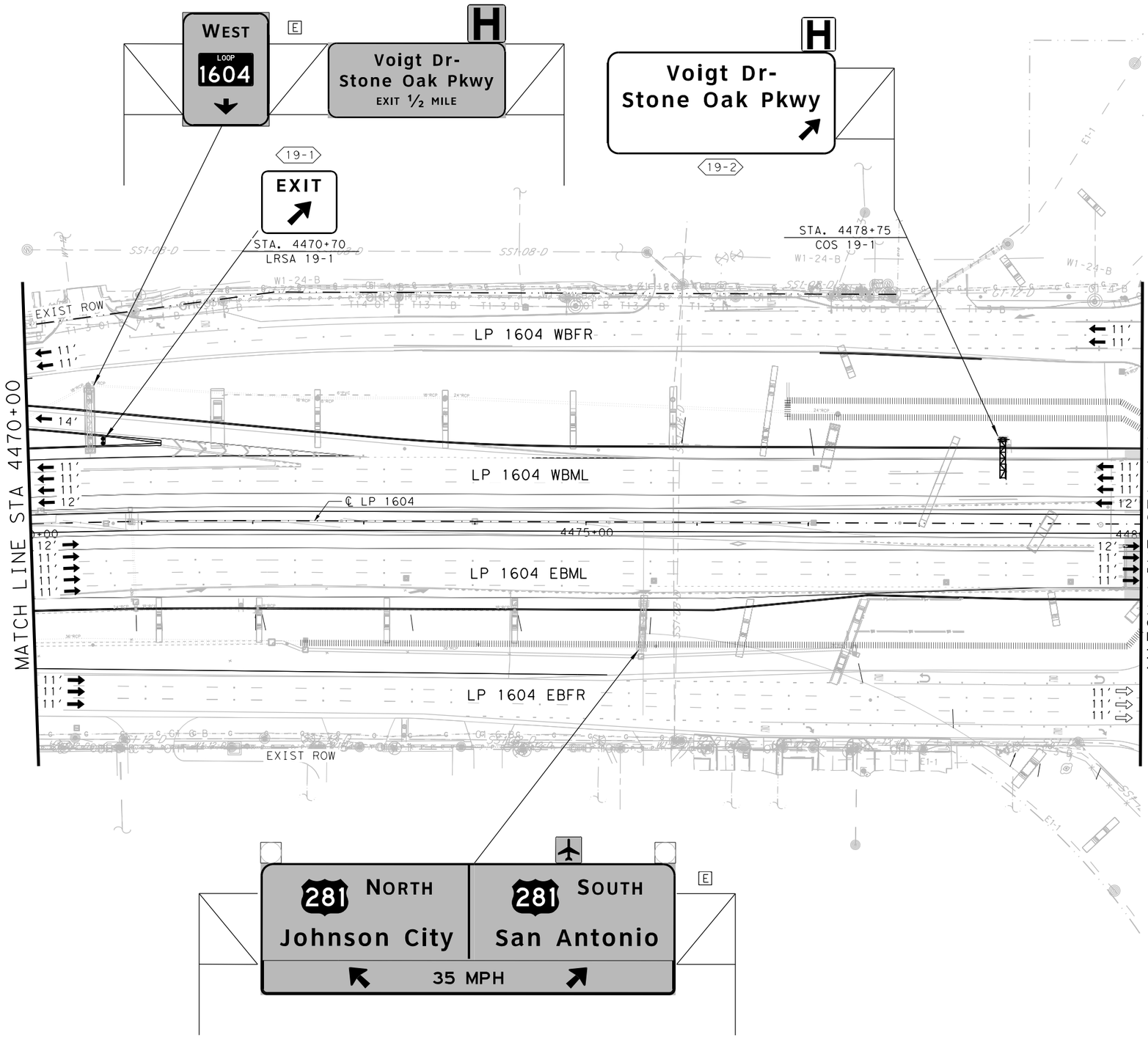

LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

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2/17/2023

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REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
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FRISCO, TEXAS 75034 (214) 440-3600
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LP 1604
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STA 4470+00 TO STA 4480+00

SHEET 19 OF 36

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2464

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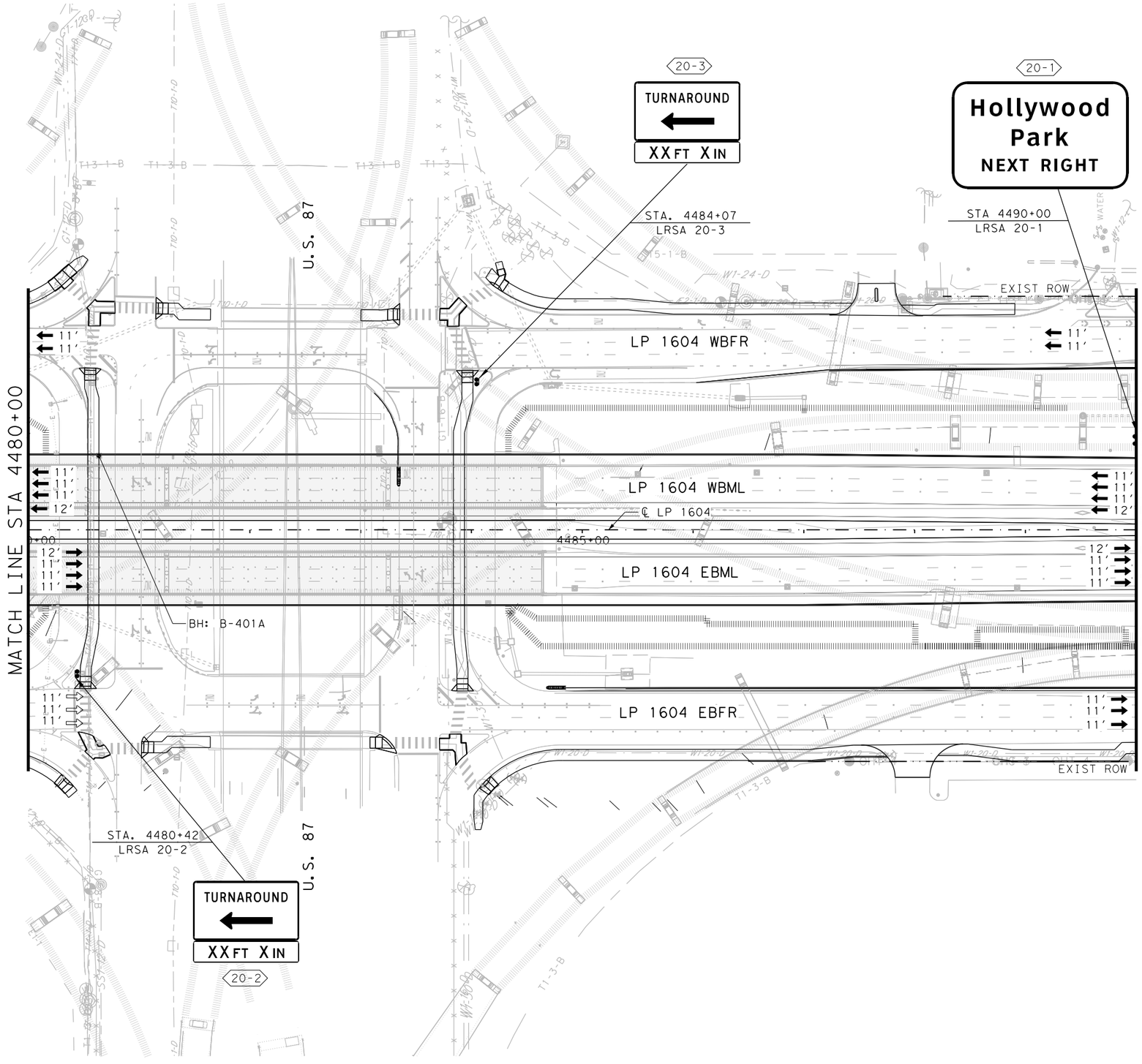

LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
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STATE OF TEXAS
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2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
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STA 4480+00 TO STA 4490+00

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2465

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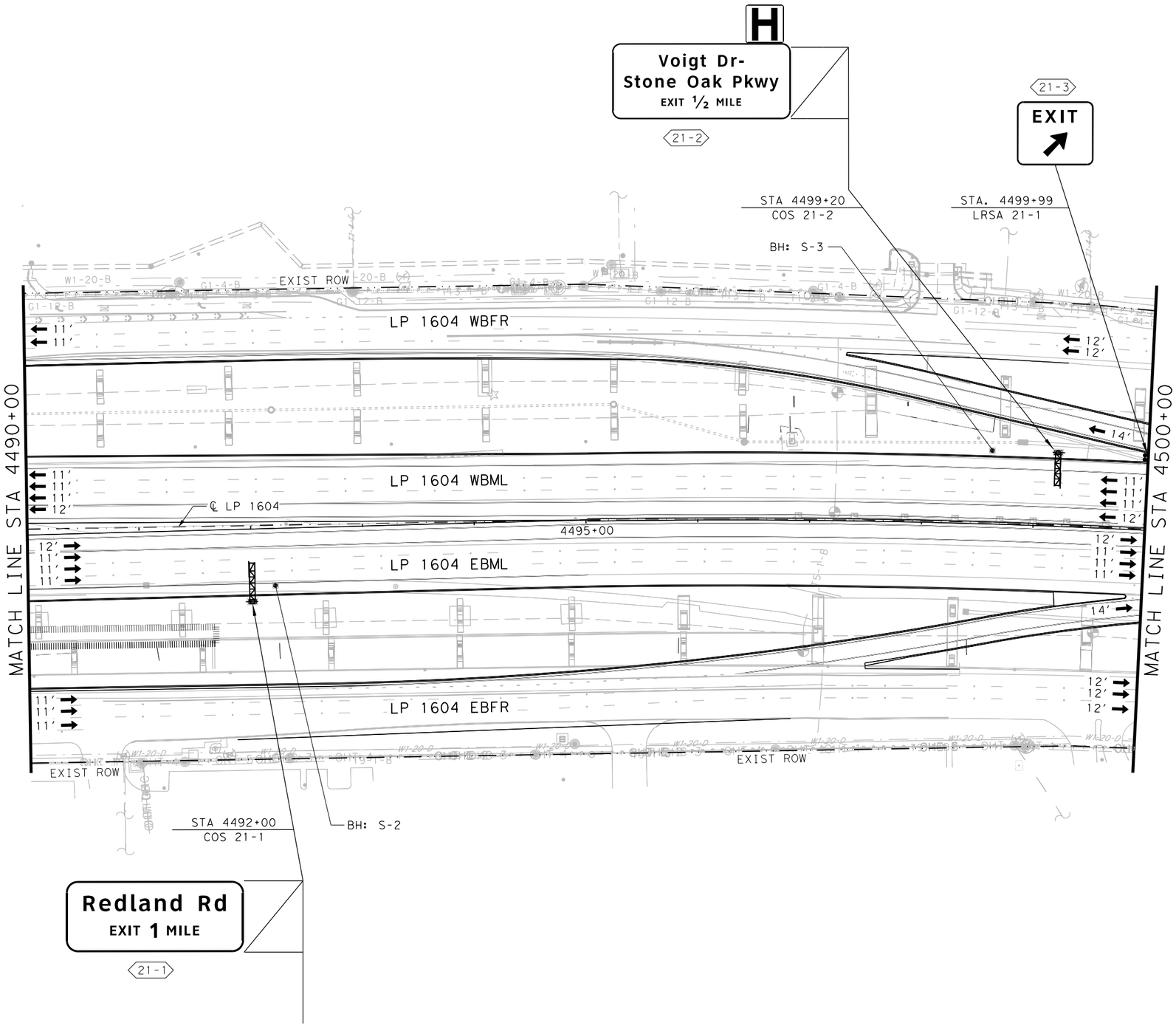

LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

1. REFER TO LARGE SIGN DETAIL AND OVERHEAD SIGN ELEVATION SHEETS FOR ADDITIONAL INFORMATION.
2. STAKE LOCATION OF THE OVERHEAD SIGN STRUCTURES TO BE APPROVED BY THE ENGINEER.
3. CONTRACTOR SHALL INSTALL RIP RAP APRONS AT FOUNDATION LOCATIONS NOT ALREADY IN RIP RAP OR PAVEMENT AREAS. SEE "RIP RAP APRON DETAILS" FOR MORE INFORMATION.
4. UTILITIES SHOWN APPROXIMATE. CONTRACTOR TO FIELD VERIFY EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION.

STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
LARGE SIGN LAYOUT

STA 4490+00 TO STA 4500+00

SHEET 21 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2466

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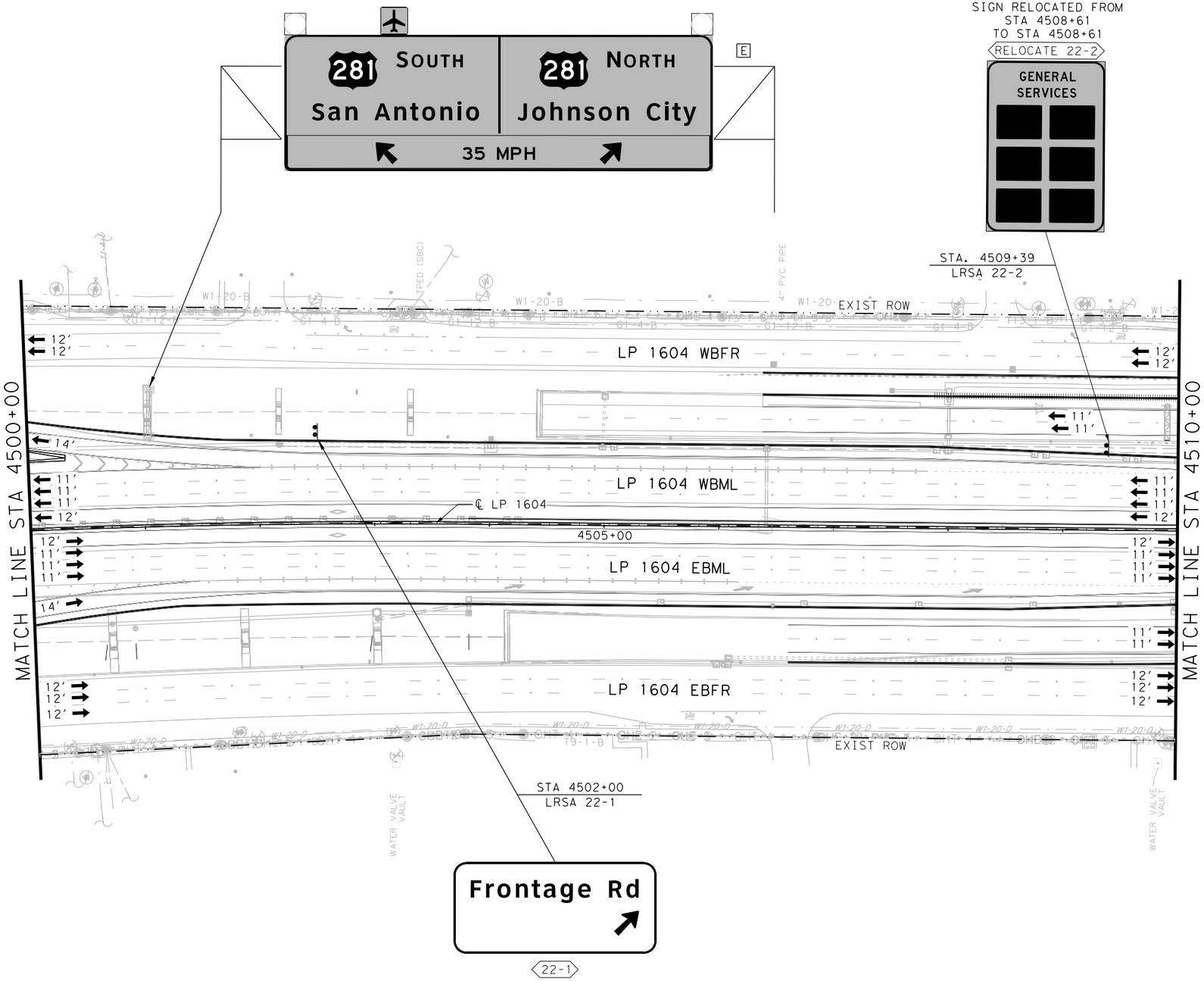

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LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- [E] EXISTING SIGN TO REMAIN
- (X) EXISTING SIGN TO BE REMOVED
- ▭ CONCRETE COLUMN SIGN FOUNDATION
- ⇦ TRAFFIC FLOW ARROW (EXISTING)
- ← TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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LP 1604
LARGE SIGN LAYOUT

STA 4500+00 TO STA 4510+00

SHEET 22 OF 36

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2467

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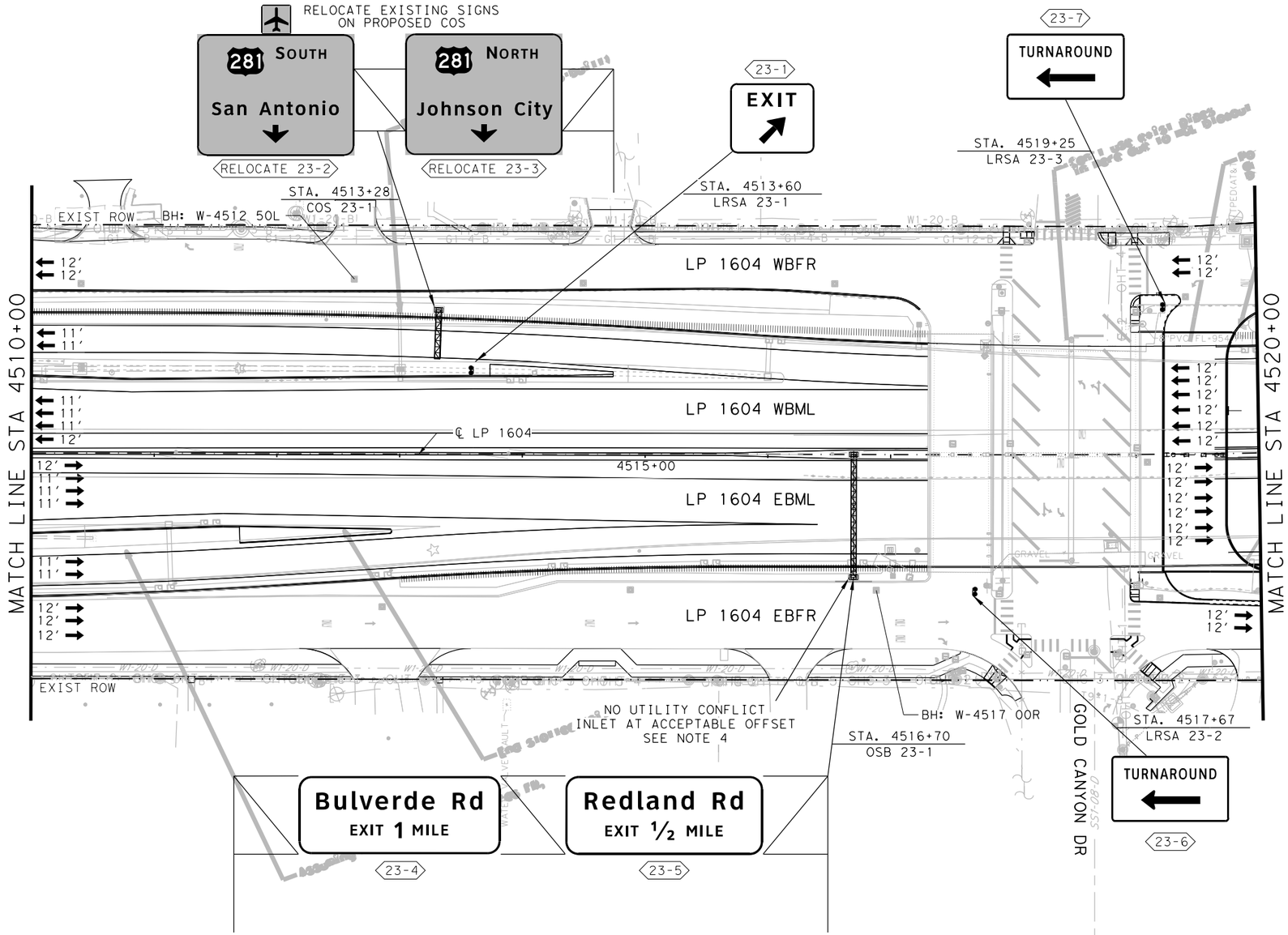

LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- (X) EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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LP 1604
LARGE SIGN LAYOUT

STA 4510+00 TO STA 4520+00

SHEET 23 OF 36

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2468

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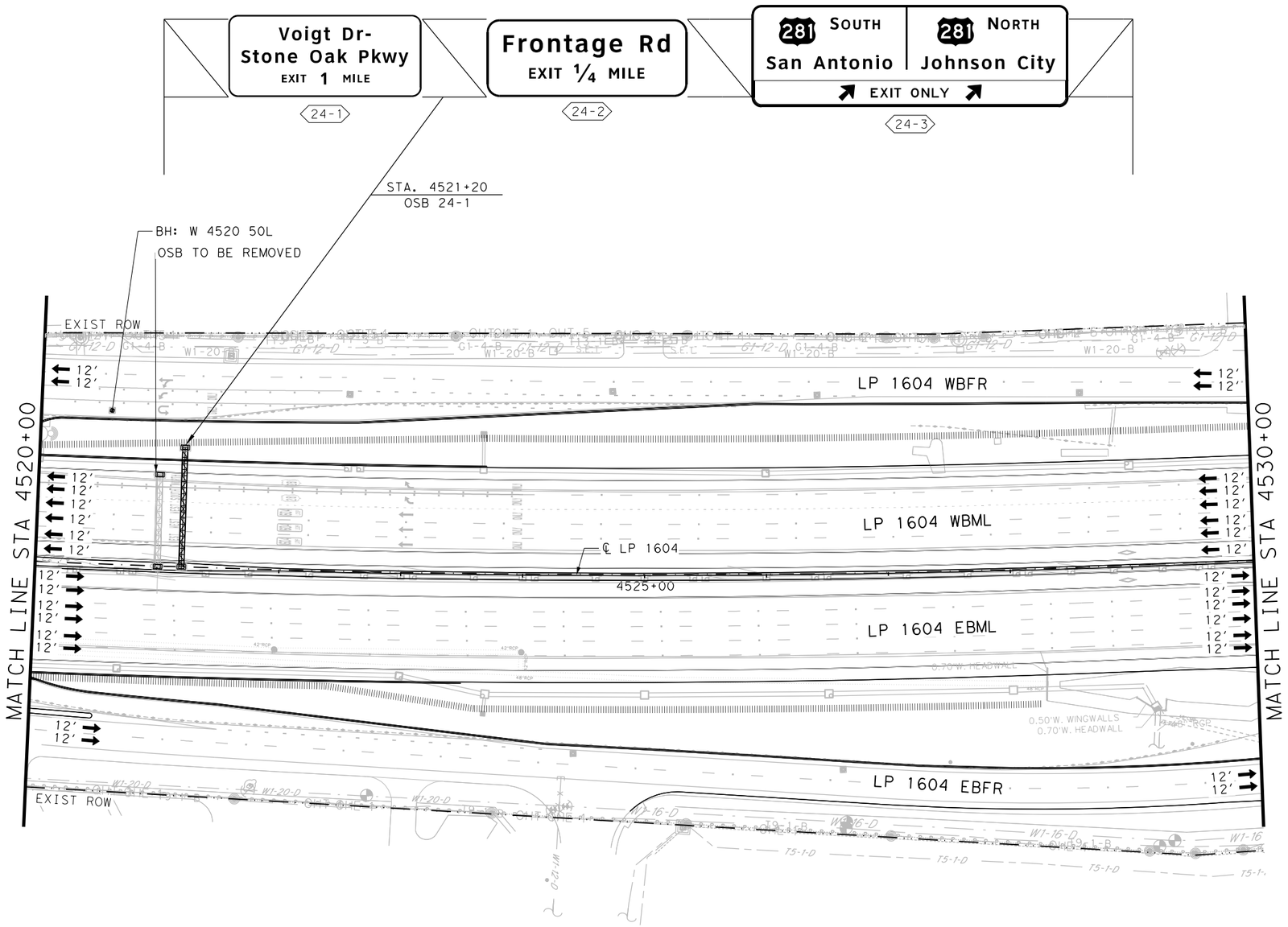

LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- Ⓔ EXISTING SIGN TO REMAIN
- Ⓧ EXISTING SIGN TO BE REMOVED
- ▭ CONCRETE COLUMN SIGN FOUNDATION
- ⇦ TRAFFIC FLOW ARROW (EXISTING)
- ← TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

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SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

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LP 1604
LARGE SIGN LAYOUT

STA 4520+00 TO STA 4530+00

SHEET 24 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2469

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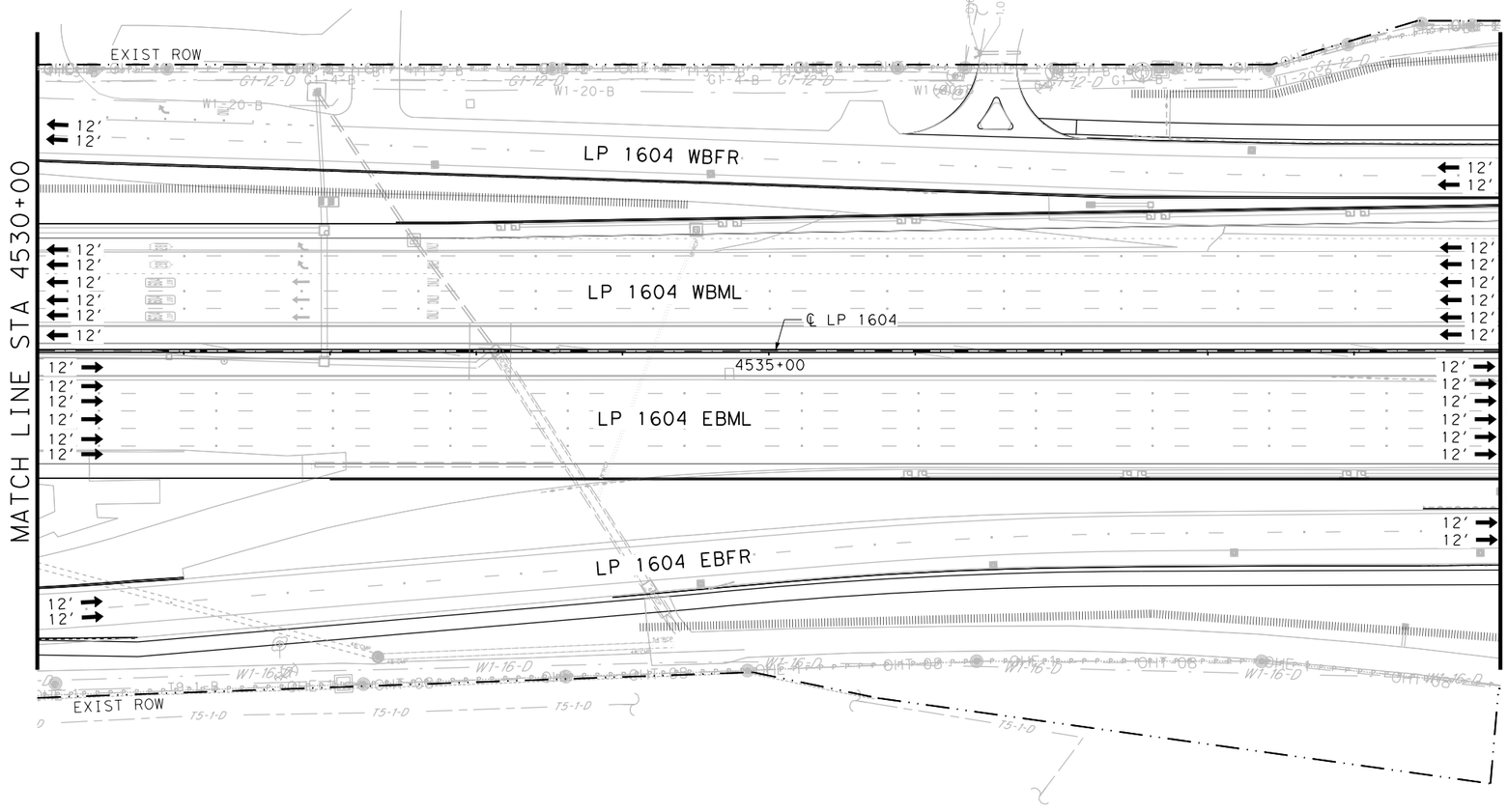

NO PROPOSED LARGE SIGNS THIS SHEET

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LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
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LP 1604
LARGE SIGN LAYOUT

STA 4530+00 TO STA 4540+00

SHEET 25 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2470

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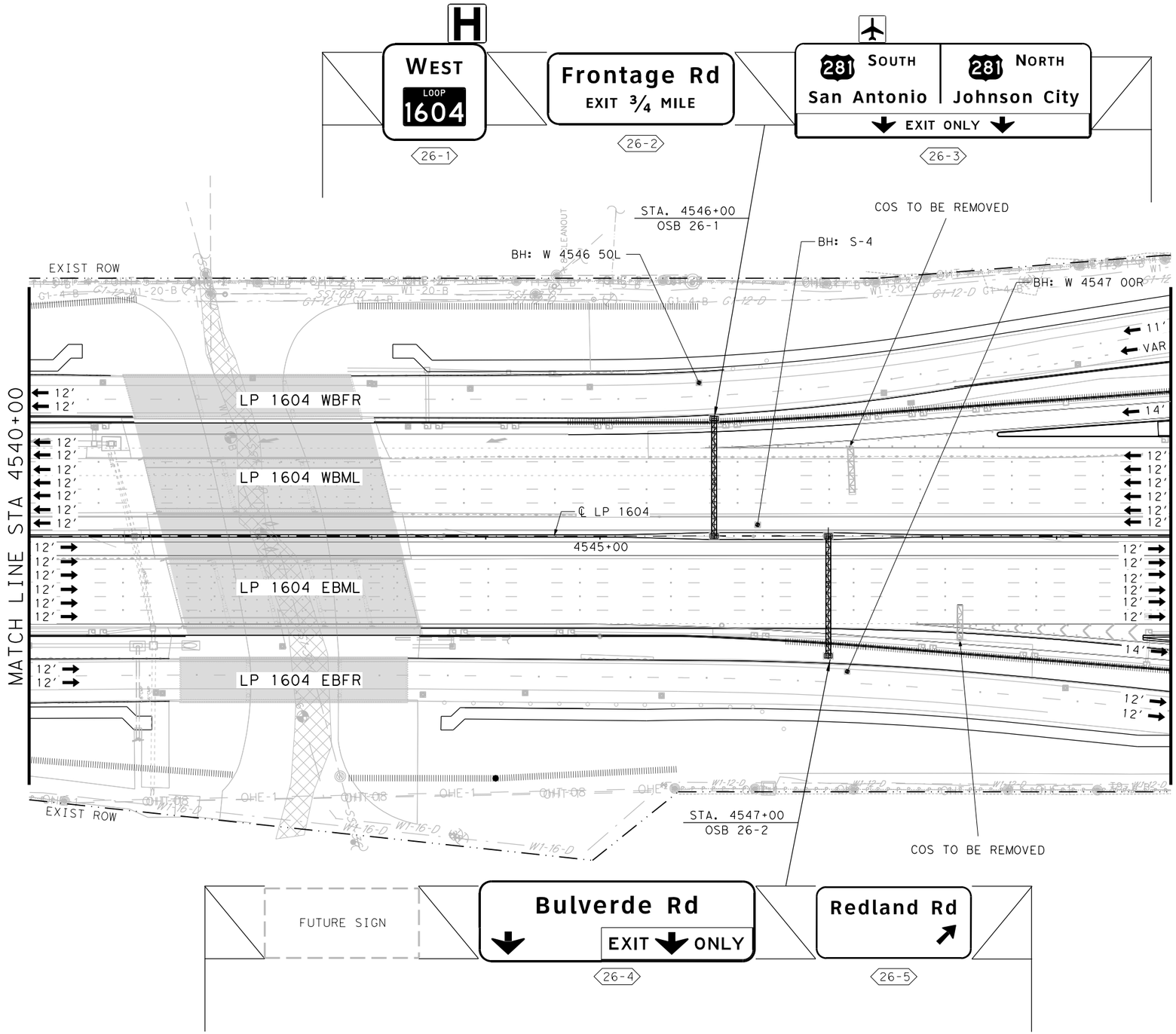

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LEGEND

- X-X — SIGN NUMBER - PROPOSED LARGE SIGN
- E — EXISTING SIGN TO REMAIN
- X — EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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LP 1604
LARGE SIGN LAYOUT

STA 4540+00 TO STA 4550+00

SHEET 26 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2471

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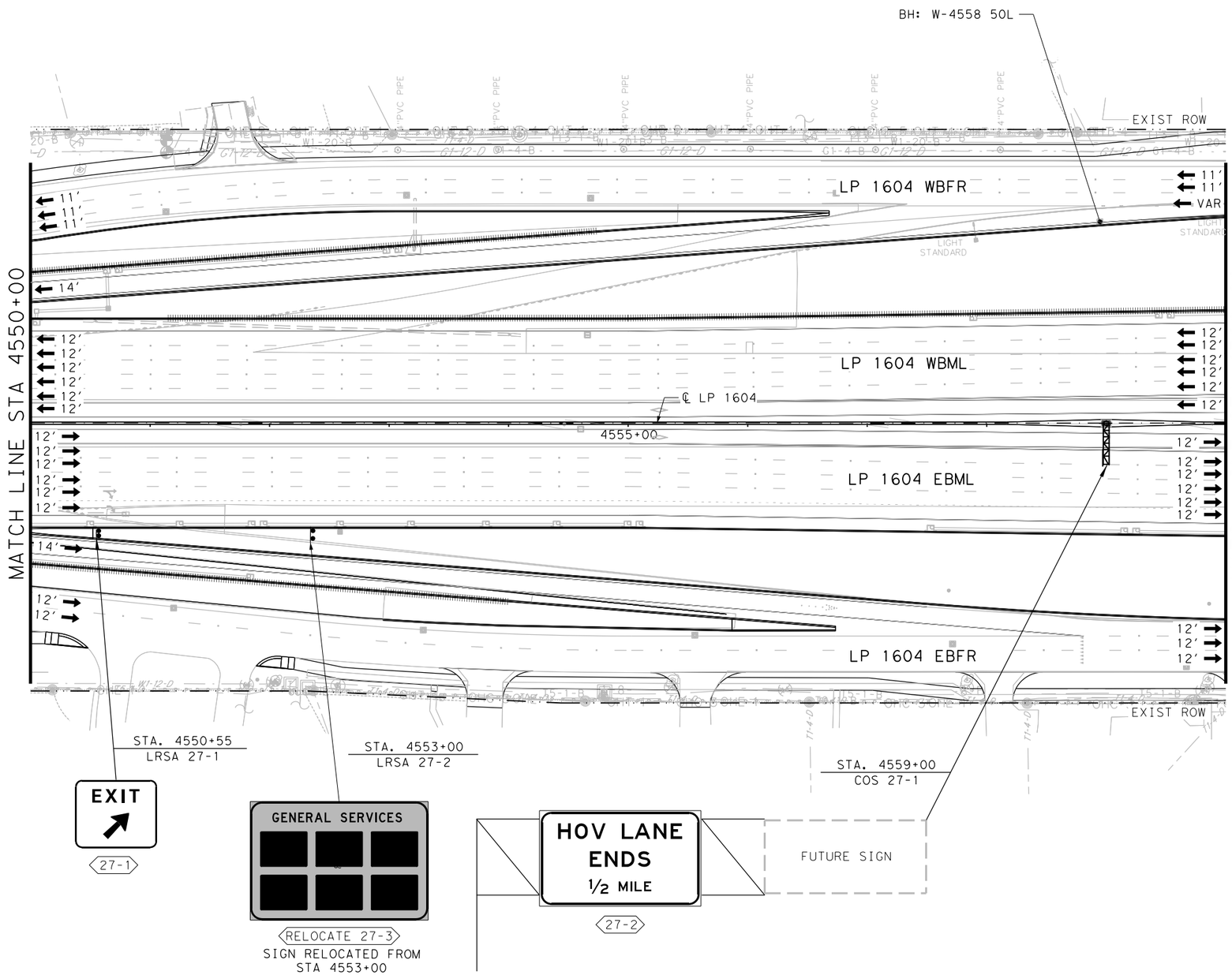

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LEGEND

- X-X — SIGN NUMBER - PROPOSED LARGE SIGN
- E — EXISTING SIGN TO REMAIN
- X — EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

1. REFER TO LARGE SIGN DETAIL AND OVERHEAD SIGN ELEVATION SHEETS FOR ADDITIONAL INFORMATION.
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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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LP 1604
LARGE SIGN LAYOUT

STA 4550+00 TO STA 4560+00

SHEET 27 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2472

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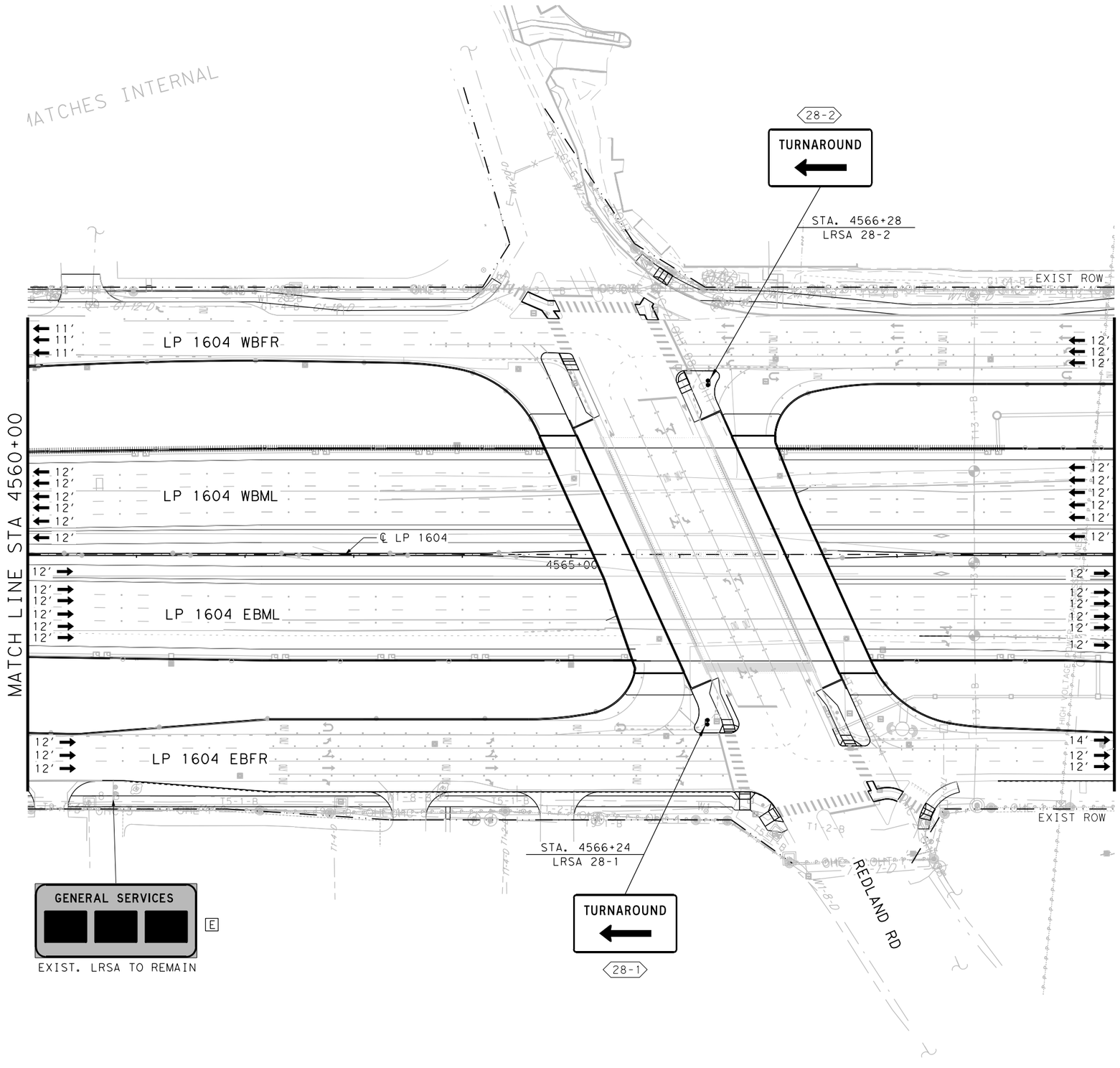

LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
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LP 1604
LARGE SIGN LAYOUT

STA 4560+00 TO STA 4570+00

SHEET 28 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2473

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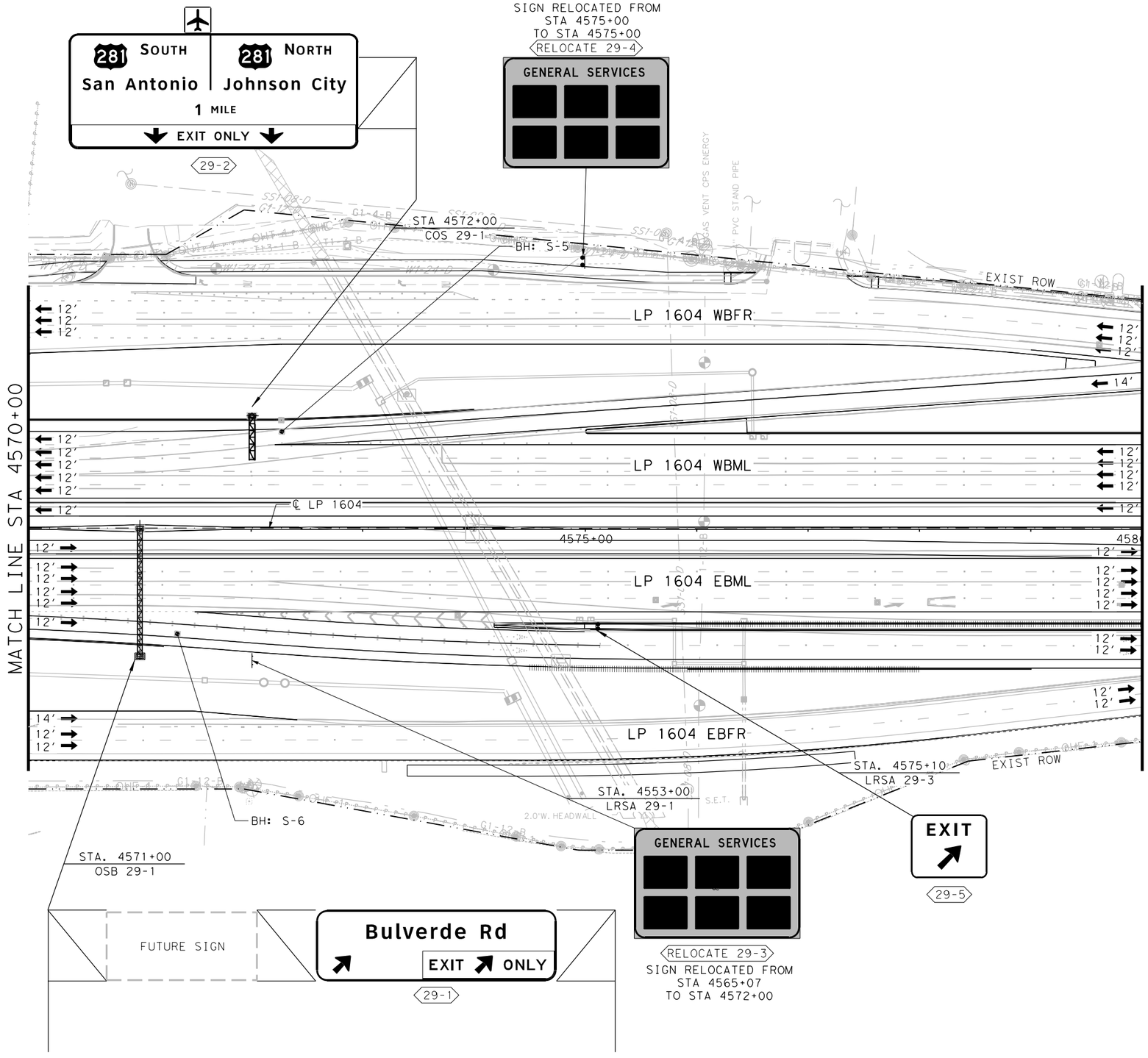

N

LEGEND

- ⟨X-X⟩ SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
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STA 4570+00 TO STA 4580+00

SHEET 29 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2474

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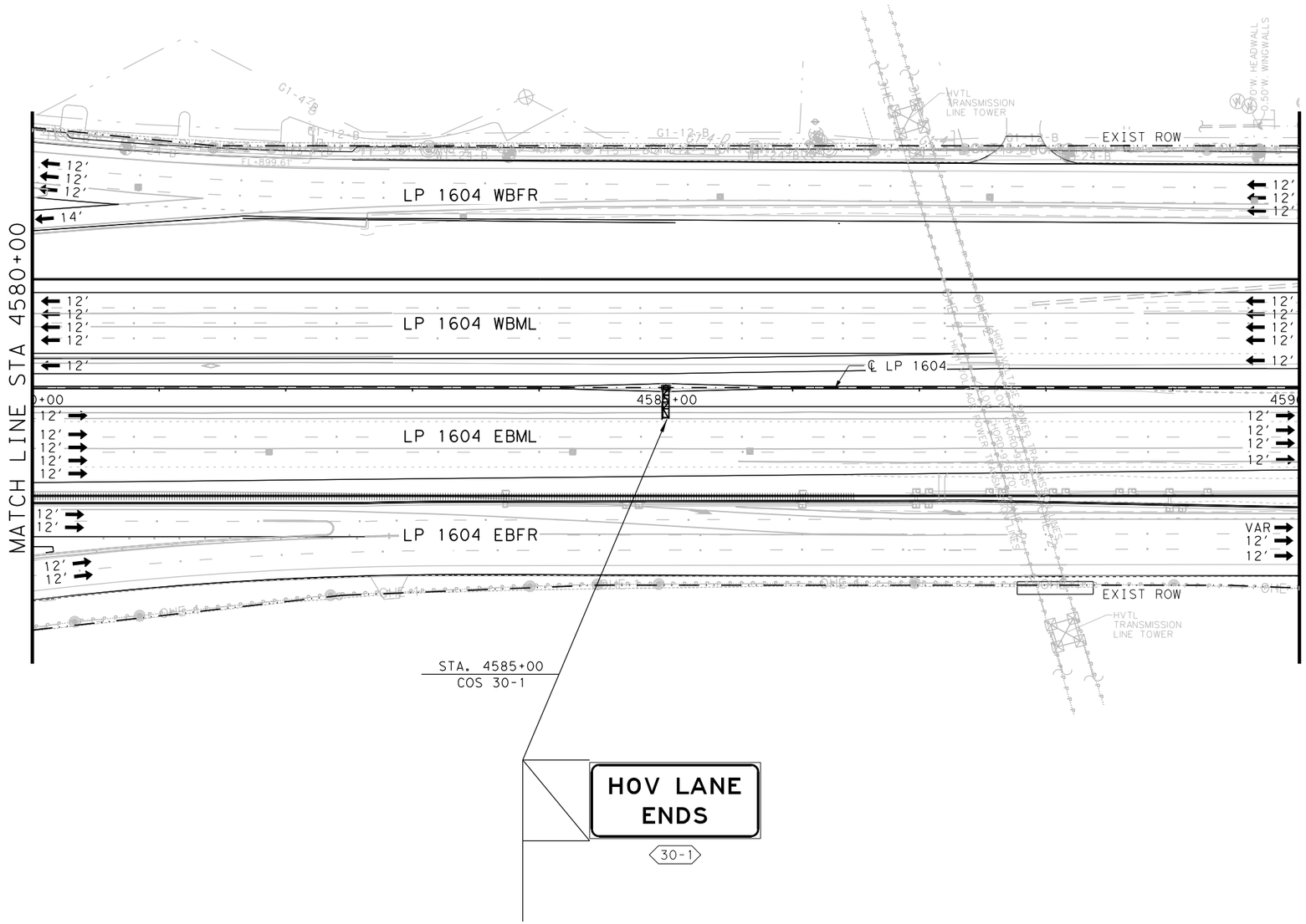

LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

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PROFESSIONAL ENGINEER
2/17/2023

0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
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TEXAS REGISTERED ENGINEERING FIRM F-9073

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LARGE SIGN LAYOUT

STA 4580+00 TO STA 4590+00

SHEET 30 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130,ETC	2475

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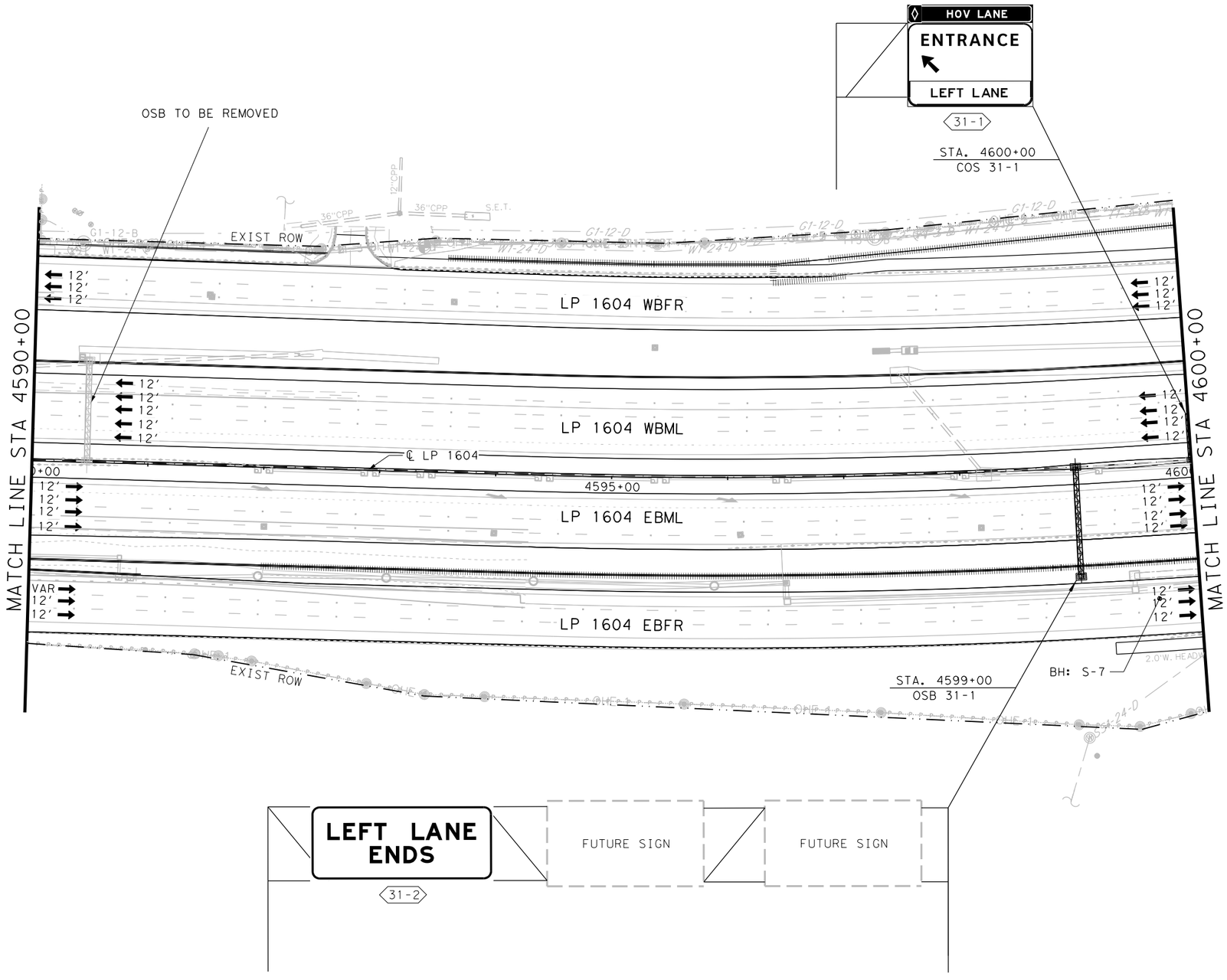

LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

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STATE OF TEXAS
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124689
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
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STA 4590+00 TO STA 4600+00

SHEET 31 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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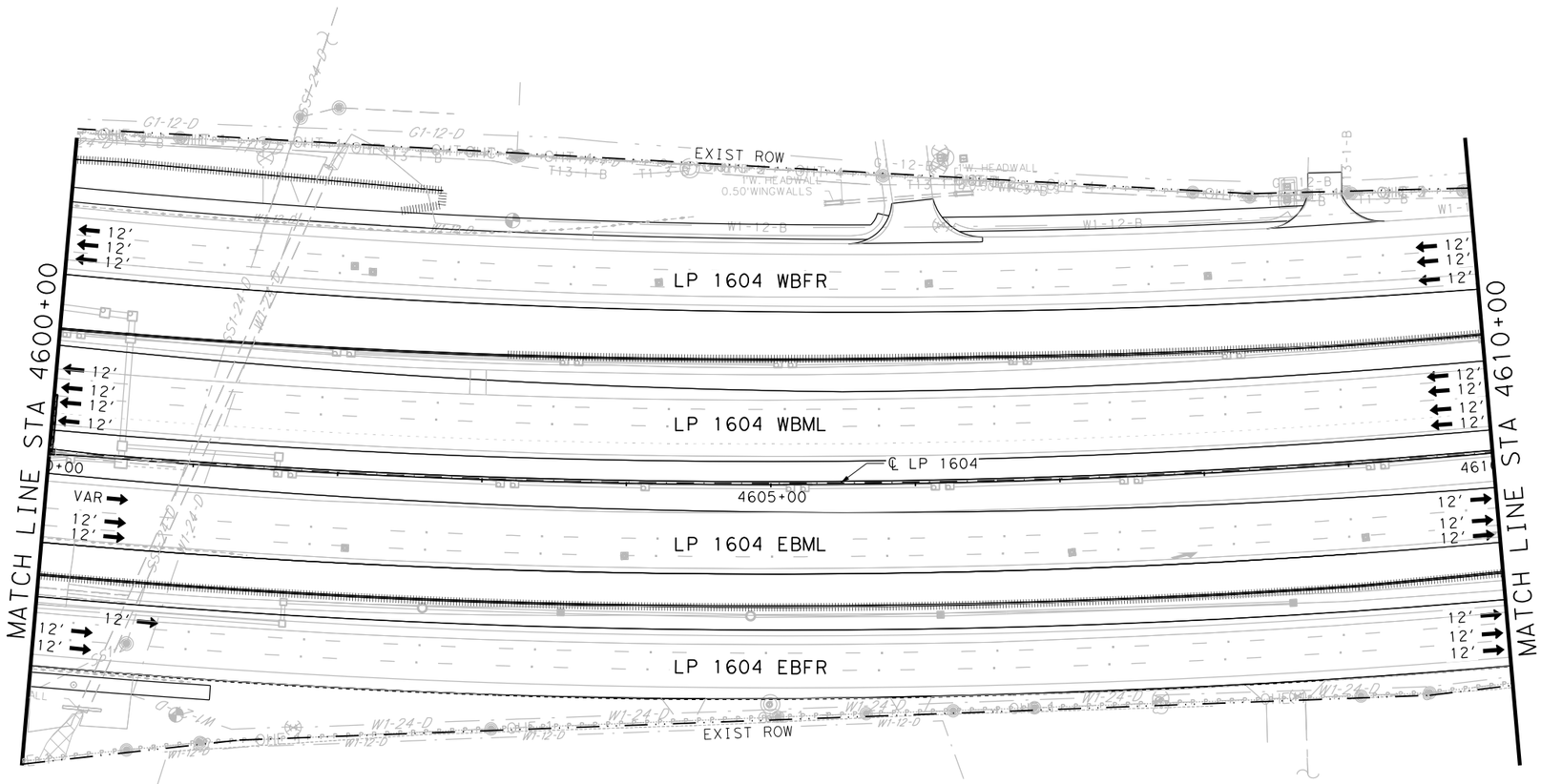

NO PROPOSED LARGE SIGNS THIS SHEET

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LEGEND

- X-X SIGN NUMBER - PROPOSED LARGE SIGN
- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
- CONCRETE COLUMN SIGN FOUNDATION
- TRAFFIC FLOW ARROW (EXISTING)
- TRAFFIC FLOW ARROW (PROPOSED)

NOTES:

1. REFER TO LARGE SIGN DETAIL AND OVERHEAD SIGN ELEVATION SHEETS FOR ADDITIONAL INFORMATION.
2. STAKE LOCATION OF THE OVERHEAD SIGN STRUCTURES TO BE APPROVED BY THE ENGINEER.
3. CONTRACTOR SHALL INSTALL RIP RAP APRONS AT FOUNDATION LOCATIONS NOT ALREADY IN RIP RAP OR PAVEMENT AREAS. SEE "RIP RAP APRON DETAILS" FOR MORE INFORMATION.
4. UTILITIES SHOWN APPROXIMATE. CONTRACTOR TO FIELD VERIFY EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION.

STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
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STA 4600+00 TO STA 4610+00

SHEET 32 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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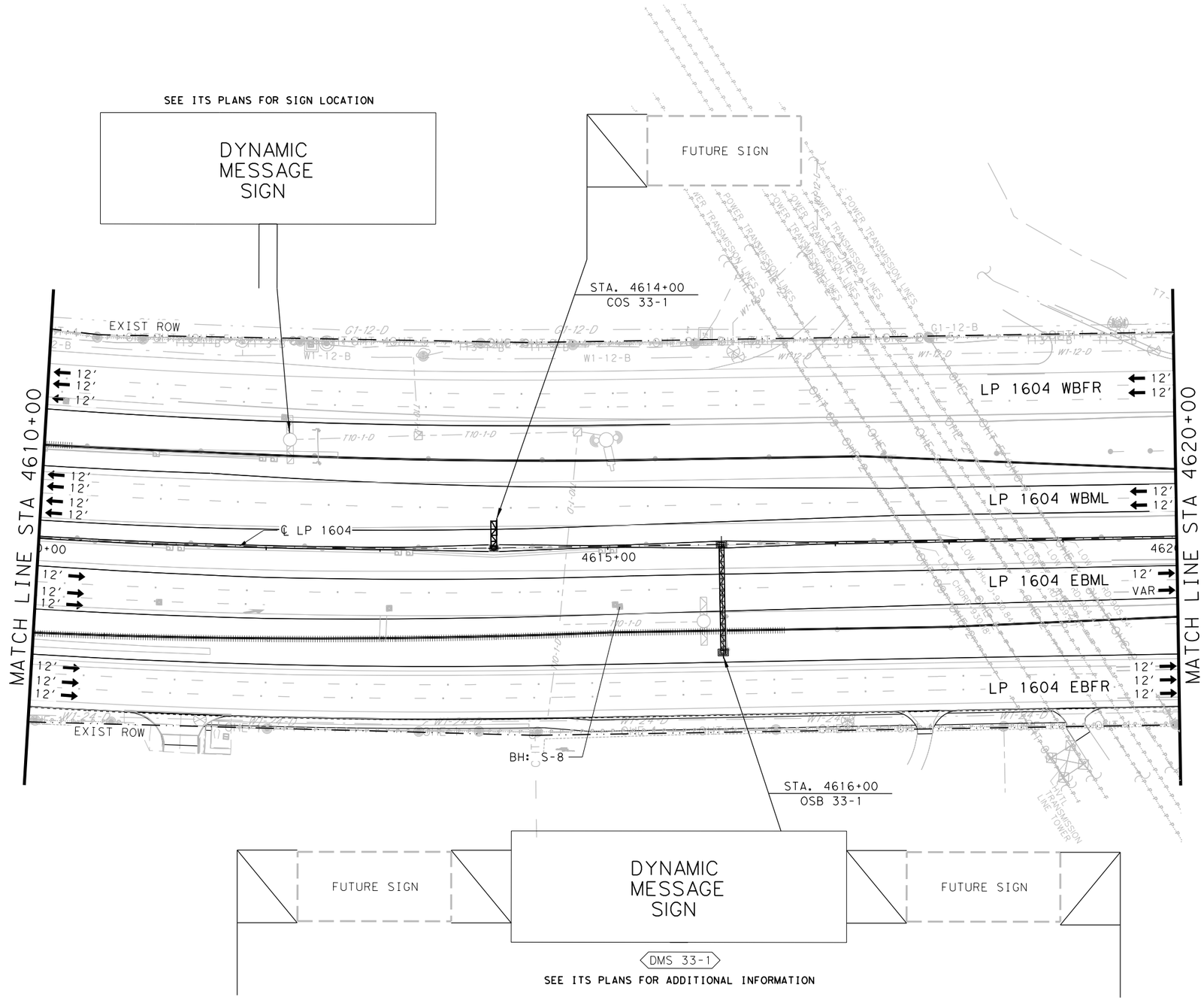

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- X EXISTING SIGN TO BE REMOVED
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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED PROFESSIONAL ENGINEER
2/17/2023

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SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
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STA 4610+00 TO STA 4620+00

SHEET 33 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2478

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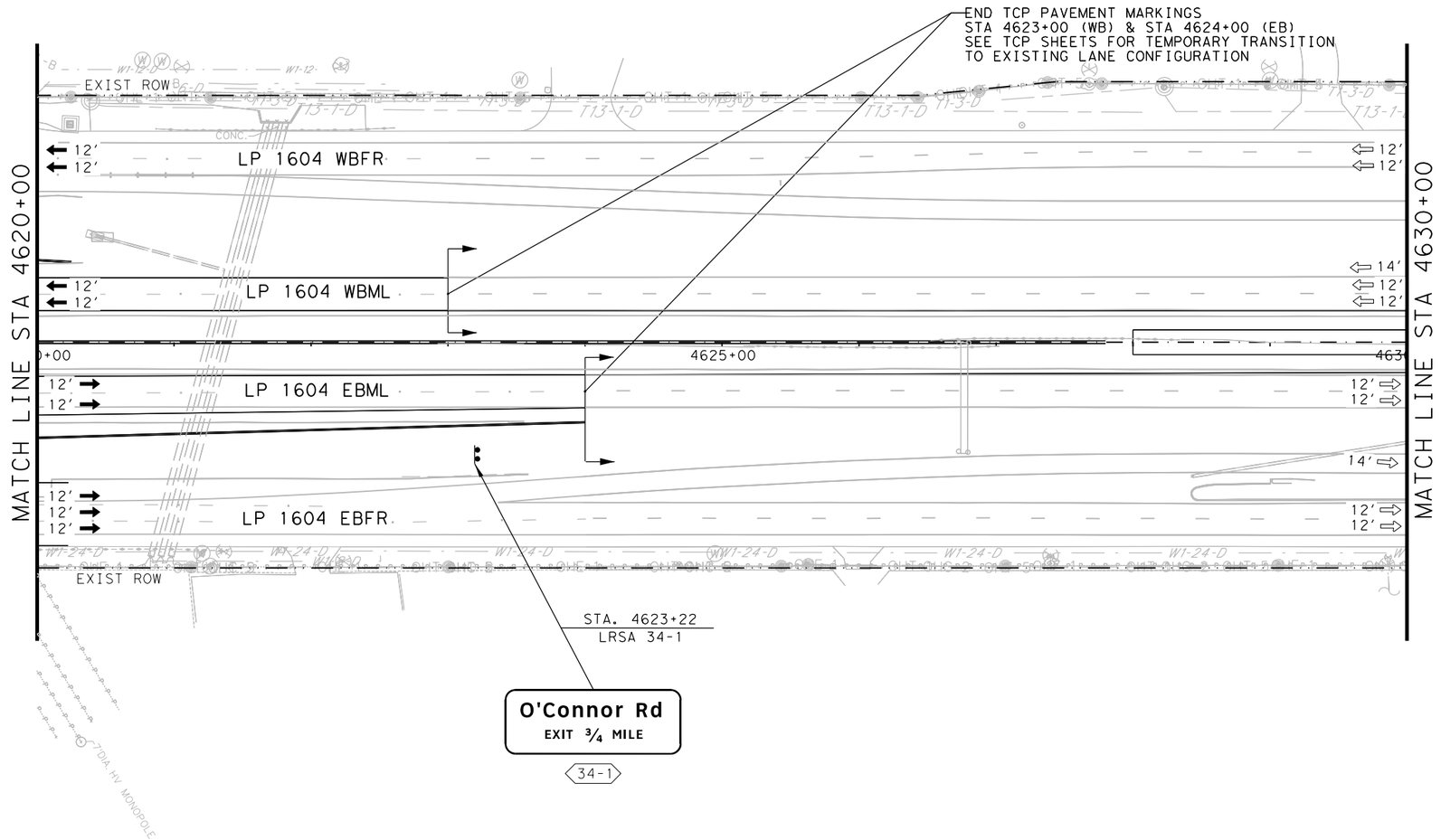

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LEGEND

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- E EXISTING SIGN TO REMAIN
- X EXISTING SIGN TO BE REMOVED
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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

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LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
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SHEET 34 OF 36

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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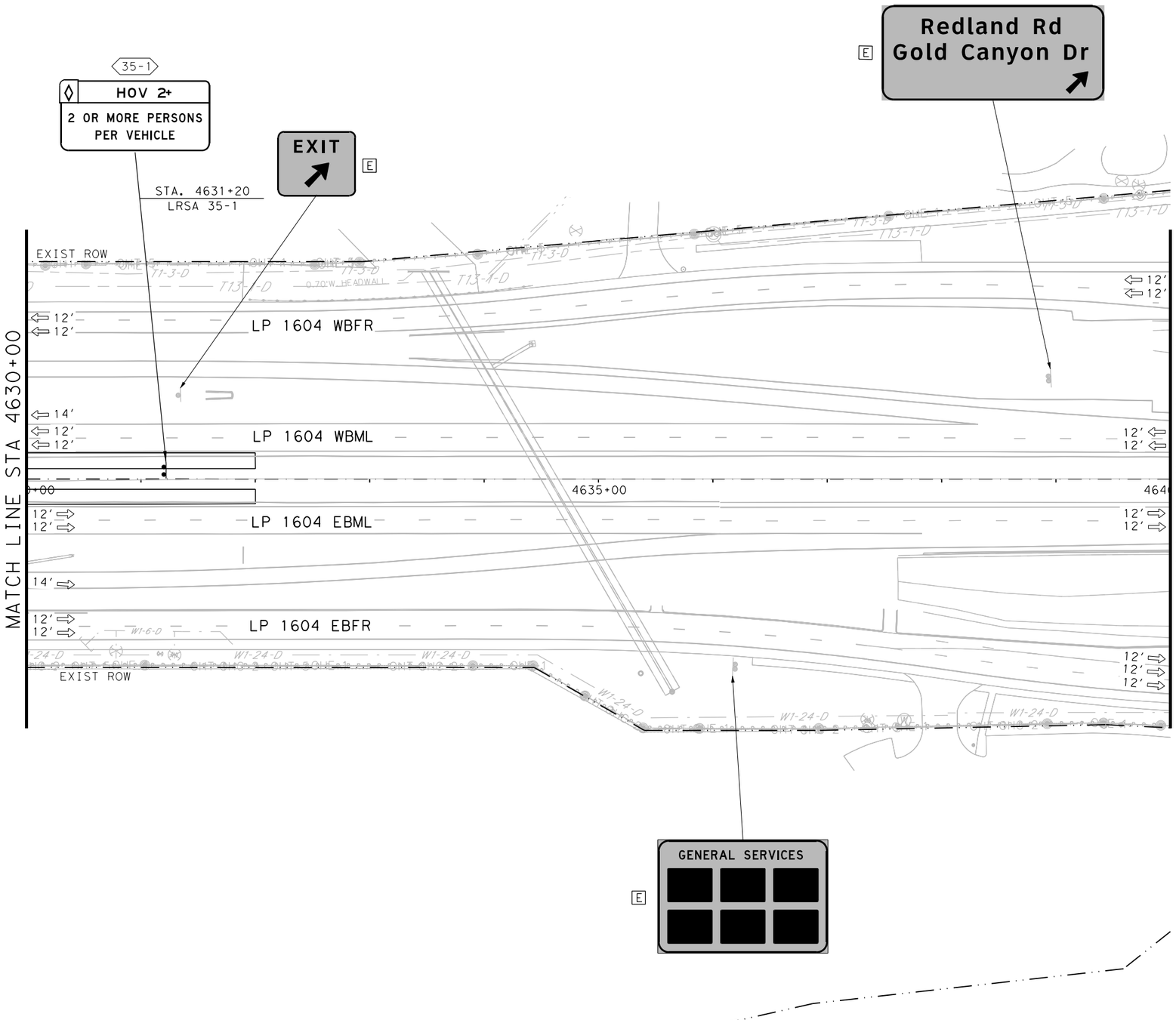

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- X EXISTING SIGN TO BE REMOVED
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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED PROFESSIONAL ENGINEER
2/17/2023

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REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
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LARGE SIGN LAYOUT

STA 4630+00 TO STA 4640+00

SHEET 35 OF 36

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2480

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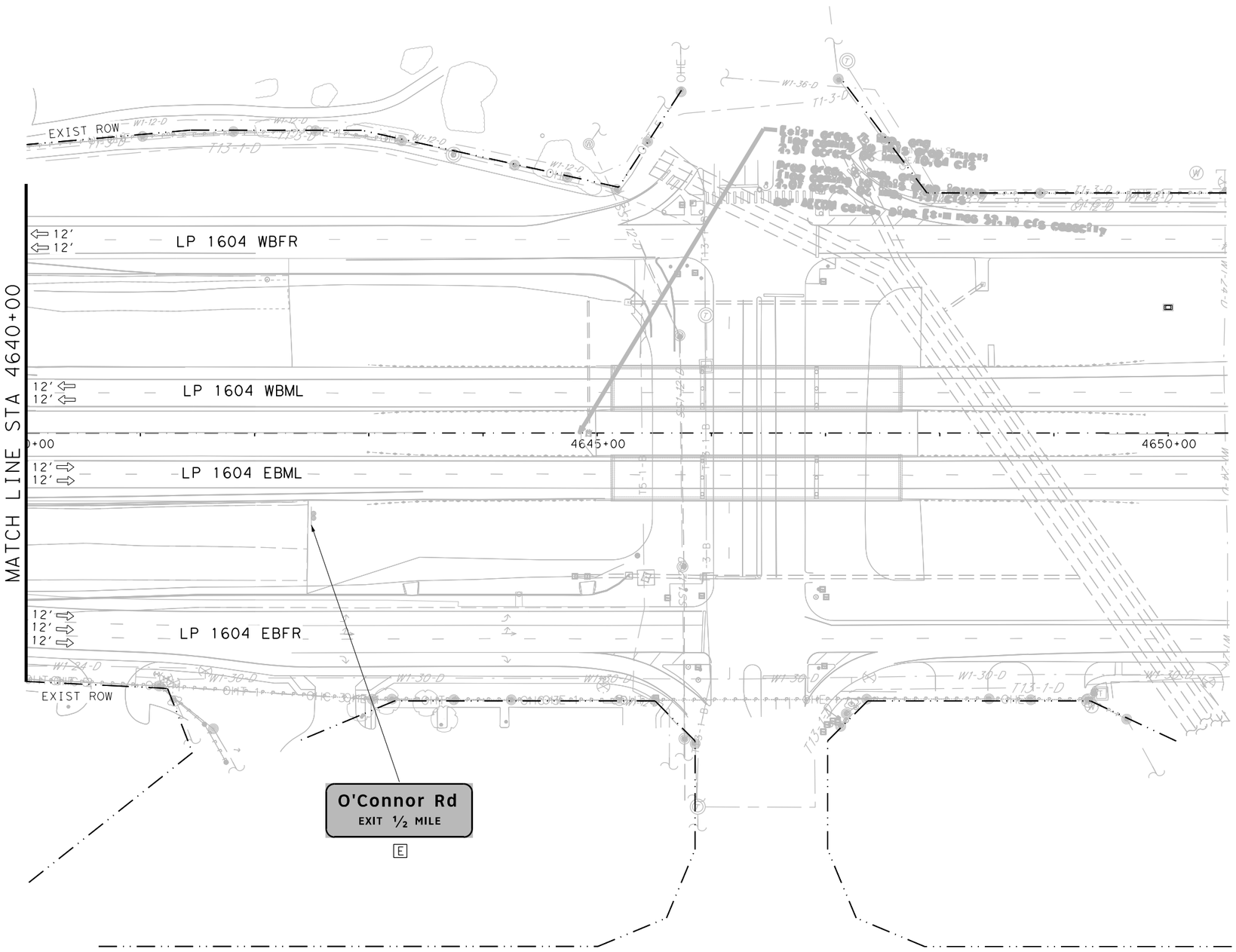

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STATE OF TEXAS
JASON J. GRANADO
124689
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

LAMB-STAR ENGINEERING, L.L.C.
3801 PARKWOOD BOULEVARD, SUITE 550
FRISCO, TEXAS 75034 (214) 440-3600
TEXAS REGISTERED ENGINEERING FIRM F-9073

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LP 1604
LARGE SIGN LAYOUT

STA 4640+00 TO END

SHEET 36 OF 36

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TX				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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STORMWATER POLLUTION PREVENTION PLAN (SWP3):

This SWP3 has been developed in accordance with the TPDES Construction General Permit TXR150000 (CGP). The Texas Department of Transportation (TxDOT) ensures that project specifications include adequate best management practices (BMPs) for this project.

For all projects with any soil disturbing activities, TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office. If no field office is available, then this SWP3 shall be kept in the appropriate TxDOT Area Office.

This SWP3 is consistent with requirements specified in applicable stormwater plans and the projects environmental permits, issues, and commitments (EPICs). A copy of the CGP is included in Attachment 2.12 of the SWP3 binder.

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):
CSJ 2452-02-130, ETC

1.2 PROJECT LIMITS:
From: 2.0 MILES WEST OF US 281

To: REDLAND RD.

1.3 PROJECT COORDINATES:
BEGIN: (Lat) 29.6087 (N) ,(Long) 98.4941 (W)

END: (Lat) 29.6004 (N) ,(Long) 98.4229 (W)

1.4 TOTAL PROJECT AREA (Acres): 199 AC

1.5 TOTAL AREA TO BE DISTURBED (Acres): 66 AC

1.6 NATURE OF CONSTRUCTION ACTIVITY:
WORK CONSISTING OF EXPAND 4 TO 10 LANE EXPRESSWAY - INCLUDING 2 HOV-SPECIAL USE LANES; FROM 4 TO 4 FR RDS

1.7 MAJOR SOIL TYPES:

Soil Type	Description
Crawford Stony 0 to 5% Slopes	35% Sand, 33% Silt, 32% Clay Well drained, high rate of runoff, and slight erosion potential.
Bexar Soils, 0 to 5% Slopes	22% Sand, 28% Silt, 50% Clay Well drained, high rate of runoff, and slight erosion potential.

1.8 PROJECT SPECIFIC LOCATIONS (PSLs):
PSLs must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. PSLs may be identified during preconstruction meetings or during the construction process. Please choose from the options below:

☐ PSLs determined during preconstruction meeting
☒ PSLs determined during construction
☐ No PSLs planned for construction

Type	Sheet #s

All off-ROW PSLs required by the Contractor are the Contractor's responsibility. The Contractor shall secure all permits required by local, state, federal laws for off-ROW PSLs. The contractor shall provide diagrams, areas of disturbance, acreage, and BMPs for all off-ROW PSLs within one mile of the project.

1.9 CONSTRUCTION ACTIVITIES:
(Use the following list as a starting point when developing the Construction Activity Schedule and Ceasing Record in Attachment 2.5.)

☒ Mobilization
☒ Install sediment and erosion controls
☒ Blade existing topsoil into windrows, prep ROW, clear and grub
☒ Remove existing pavement
☒ Grading operations, excavation, and embankment
☒ Excavate and prepare subgrade for proposed pavement widening
☒ Remove existing culverts, safety end treatments (SETs)
☒ Remove existing metal beam guard fence (MBGF), bridge rail
☒ Install proposed pavement per plans
☒ Install culverts, culvert extensions, SETs
☒ Install mow strip, MBGF, bridge rail
☒ Place flex base
☒ Rework slopes, grade ditches
☒ Blade windrowed material back across slopes
☒ Revegetation of unpaved areas
☒ Achieve site stabilization and remove sediment and erosion control measures
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.10 POTENTIAL POLLUTANTS AND SOURCES:

☒ Sediment laden stormwater from stormwater conveyance over disturbed area
☒ Fuels, oils, and lubricants from construction vehicles, equipment, and storage
☒ Solvents, paints, adhesives, etc. from various construction activities
☒ Transported soils from offsite vehicle tracking
☒ Construction debris and waste from various construction activities
☒ Contaminated water from excavation or dewatering pump-out water
☒ Sanitary waste from onsite restroom facilities
☒ Trash from various construction activities/receptacles
☒ Long-term stockpiles of material and waste
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.11 RECEIVING WATERS:
Receiving waters must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. Include Segment # for receiving waters.

Tributaries	Classified Waterbody
Mudd Creek, Upper Salado Creek	* Salado Creek (1910); (Impaired fish community in water, Impaired macrobenthic community in water)

* Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

☒ Development of plans and specifications
☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
☒ Post Construction Site Notice
☒ Submit NOI/CSN to local MS4
☒ Perform SWP3 inspections
☒ Maintain SWP3 records and update to reflect daily operations
☒ Complete and submit Notice of Termination to TCEQ
☒ Maintain SWP3 records for 3 years
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

☒ Day To Day Operational Control
☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
☒ Post Construction Site Notice
☒ Submit NOI/CSN to local MS4
☒ Maintain schedule of major construction activities
☒ Install, maintain and modify BMPs
☒ Complete and submit Notice of Termination to TCEQ
☒ Maintain SWP3 records for 3 years
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.14 LOCAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) OPERATOR COORDINATION:

MS4 Entity
No MS4s receive stormwater discharge from the site.

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HUMBERTO CONTRERAS
99213
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2/17/2023

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

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Sheet 1 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			2645
STATE	STATE DIST.	COUNTY	
TEXAS	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
2452	02	130, ETC	LP1604

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

2.0 BEST MANAGEMENT PRACTICES (BMPs) AND CONTROLS, INSPECTION, AND MAINTENANCE

The Contractor shall be the responsible party for implementing the BMPs described herein and for complying with the SWP3 for control of erosion and sedimentation during day-to-day operations. The Contractor shall implement changes to this SWP3 approved by TxDOT within the times specified in this SWP3 or the CGP.

2.1 EROSION CONTROL AND SOIL STABILIZATION BMPs:

T / P

- ☐ ☐ Protection of Existing Vegetation
- ☐ ☐ Vegetated Buffer Zones
- ☒ ☐ Soil Retention Blankets
- ☐ ☐ Geotextiles
- ☐ ☐ Mulching/ Hydromulching
- ☐ ☐ Soil Surface Treatments
- ☒ ☒ Temporary Seeding
- ☐ ☒ Permanent Planting, Sodding or Seeding
- ☒ ☐ Biodegradable Erosion Control Logs
- ☒ ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Vertical Tracking
- ☐ ☐ Interceptor Swale
- ☐ ☒ Riprap
- ☐ ☐ Diversion Dike
- ☐ ☐ Temporary Pipe Slope Drain
- ☐ ☐ Embankment for Erosion Control
- ☐ ☐ Paved Flumes
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____

2.2 SEDIMENT CONTROL BMPs:

T / P

- ☒ ☐ Biodegradable Erosion Control Logs
- ☐ ☐ Dewatering Controls
- ☒ ☐ Inlet Protection
- ☒ ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Sandbag Berms
- ☒ ☐ Sediment Control Fence
- ☒ ☐ Stabilized Construction Exit
- ☐ ☐ Floating Turbidity Barrier
- ☐ ☐ Vegetated Buffer Zones
- ☐ ☐ Vegetated Filter Strips
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

Sediment control BMPs requiring design capacity calculations (See SWP3 Attachment 1.3.):

T / P

- ☐ ☐ Sediment Trap
  - ☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
  - ☐ 3,600 cubic feet of storage per acre drained
- ☐ ☐ Sedimentation Basin
  - ☐ Not required (<10 acres disturbed)
  - ☐ Required (>10 acres) and implemented.
    - ☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
    - ☐ 3,600 cubic feet of storage per acre drained
  - ☒ Required (>10 acres), but not feasible due to:
    - ☒ Available area/Site geometry
    - ☐ Site slope/Drainage patterns
    - ☐ Site soils/Geotechnical factors
    - ☐ Public safety
    - ☐ Other: _____

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Type	Stationing	
	From	To

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.4 OFFSITE VEHICLE TRACKING CONTROLS:

- ☒ Excess dirt/mud on road removed daily
- ☒ Haul roads dampened for dust control
- ☒ Loaded haul trucks to be covered with tarpaulin
- ☒ Stabilized construction exit
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

2.5 POLLUTION PREVENTION MEASURES:

- ☒ Chemical Management
- ☒ Concrete and Materials Waste Management
- ☒ Debris and Trash Management
- ☒ Dust Control
- ☒ Sanitary Facilities
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

2.6 VEGETATED BUFFER ZONES:

Natural vegetated buffers shall be maintained as feasible to protect adjacent surface waters. If vegetated natural buffer zones are not feasible due to site geometry, the appropriate additional sediment control measures have been incorporated into this SWP3.

Type	Stationing	
	From	To
Vegetated buffer zones are not planned.		

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:

- ☒ Fire hydrant flushings
- ☒ Irrigation drainage
- ☒ Pavement washwater (where spills or leaks have not occurred, and detergents are not used)
- ☒ Potable water sources
- ☒ Springs
- ☒ Uncontaminated groundwater
- ☒ Water used to wash vehicles or control dust
- ☒ Other allowable non-stormwater discharges as allowed by TPDES GP TXR150000.

2.8 INSPECTIONS:

All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3 .

2.9 MAINTENANCE:

Control measures shall be properly installed according to specifications. If it is determined that a BMP or control measure is not operating effectively, maintenance must be accomplished as soon as possible and before the next anticipated rain event, but in no case later than 7 calendar days after being able to access the site. Maintenance shall be performed by the Contractor as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.

2/17/2023

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

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Sheet 2 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			2646
STATE	STATE DIST.	COUNTY	
TEXAS	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
2452	02	130, ETC	LP1604

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3/6/2023 $TIME$
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I. STORMWATER POLLUTION PREVENTION-CLEAN WATER ACT SECTION 402

Texas Pollutant Discharge Elimination System (TPDES) TXR 150000: Stormwater Discharge Permit or Construction General Permit (CGP) required for projects with 1 or more acres distrubed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 506.

☐ No Action Required ☒ Required Action

Action No.

1. Prevent stormwater pollution by controlling erosion and sedimentation in accordance with TPDES Permit TXR 150000.
2. Comply with the Storm Water Pollution Prevention Plan (SW3P) and revise when necessary to control pollution or required by the Engineer.
3. Post Construction Site Notice (CSN) with SW3P information on or near the site, accessible to the public and Texas Commission on Environmental Quality (TCEQ), Environmental Protection Agency (EPA) or other inspectors.
4. When Contractor project specific locations (PSL's) increase disturbed soil area to 5 acres or more, Contractor shall submit Notice of Intent (NOI) to TCEQ and the Engineer.

5. NOI required: Yes ☒ No ☐

Note: If amount of soil disturbance changes, permit requirements may change.

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404

US Army Corps of Engineers (USACE) Permit required for filling, dredging, excavating or other work in any potential USACE jurisdictional water, such as, rivers, creeks, streams, or wetlands.

The Contractor shall adhere to all of the terms and conditions associated with the following permit(s):

☐ No Permit Required
☒ Nationwide Permit (NWP) 14 - Pre-construction Notice (PCN) not Required
☐ Nationwide Permit 14 - PCN Required
☐ Individual 404 Permit Required
☐ Other Nationwide Permit Required: NWP• _____

Required Actions: List waters of the US permit applies to, location in project and check Best Management Practices (BMPs) planned to control erosion, sedimentation and post-project total suspended solids (TSS).

1. BE (Lorence Creek) (Crossing 21)
2. BH (Mud Creek) (Crossing 22)
3. BI (UT to Elm Creek) (Crossing 23)
4. BJ (Elm Creek) (Crossing 24)

401 Best Management Practices: (Not applicable if no USACE permit)

Erosion	Sedimentation	Post-Construction TSS
☒ Temporary Vegetation	☒ Silt Fence	☐ Vegetative Filter Strips
☒ Blankets/Matting	☒ Rock Berm	☐ Retention/Irrigation Systems
☐ Mulch	☐ Triangular Filter Dike	☐ Extended Detention Basin
☒ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
☐ Interceptor Swale	☐ Straw Bale Dike	☐ Wet Basin
☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Mulch Filter Berm and Socks
☒ Mulch Filter Berm and Socks	☒ Mulch Filter Berm and Socks	☐ Compost Filter Berm and Socks
☒ Compost Filter Berm and Socks	☒ Compost Filter Berm and Socks	☒ Vegetation Lined Ditches
	☐ Stone Outlet Sediment Traps	☐ Sand Filter Systems
	☐ Sediment Basins	☐ Sedimentation Chambers
		☐ Grassy Swales

III. CULTURAL RESOURCES

Refer to TxDOT Standard Specifications in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact the Engineer immediately.

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

4.

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical. Contractor must adhere to Construction Specification Requirements Specs 162,164, 192, 193, 506, 730, 751, 752 in order to comply with requirements for invasive species, beneficial landscaping, and tree/brush removal commitments.

☐ No Action Required ☒ Required Action

Action No.

1. Numerous restrictions apply to tree removal activities. See Migratory Bird requirements and Areas of Environmental Concern Table on EPIC Page 3.

2.

3.

4.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS.

☐ No Action Required ☒ Required Action

Comply with all EPICs located in Section 8 of the EA and all conditions listed in the BO issued for this project.

Action No.

1. MIGRATORY BIRD NESTS: Schedule construction activities as needed to meet the following requirements:

   A. Do not remove or destroy any active migratory bird nests (nests containing eggs and/or flightless birds) at any time of year. If there are any active nests, they shall not be removed until the nests become inactive.

   B. On/in structures, if there are any active nests, they shall not be removed until all nests become inactive. After inactive nests are removed and/or before nest activity begins, deterrent materials may be applied to the structures to prevent future nest building.

2. See Item 5 in General Notes.

3. TPWD Amphibian BMPs
- Amphibians present may include Cascade Caverns Salamander, Comal Blind Salamander, Strecker's Chorus Frog, Texas Salamander, Woodhouse's Toad.
- Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered.
- When work is in water or will permanently impact a water feature and potential habitat exists for the target species complete the following:
- Minimize impacts to wetland, temporary and permanent open water features,including depressions, and riverine habitats.
- Maintain hydrologic regime and connections between wetlands and other aquatic features.
- Use barrier fencing to direct animal movements away from construction activities and areas of potential wildlife-vehicle collisions in construction areas directly adjacent, or that may directly impact, potential habitat for the target species.
- Use erosion control blankets or mats that contain no netting, or only contain loosely woven natural fiber netting is preferred. Plastic netting should be avoided to the extent practicable.

TPWD Amphibian BMPs (Continued)
- Project specific locations (PSLs) proposed within state-owned ROW should be located in uplands away from aquatic features.
- When work is directly adjacent to the water, minimize impacts to shoreline basking sites (e.g., downed trees, sand bars, exposed bedrock) and overwinter sites (e.g., brush and debris piles, crayfish burrows) where feasible.
- Avoid or minimize disturbing or removing downed trees, rotting stumps, and leaf litter, which may be refugia for terrestrial amphibians, where feasible.

4. TPWD Terrestrial Reptile BMPs
- Reptiles present may include Texas Garter Snake and Tamaulipan Spot-tailed Earless Lizard
- Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered.
- Inform contractors that if reptiles are found on the project site allow species to safely leave the project area.
- For open trenches and excavated pits, install escape ramps at an angle of less than 45 degrees (1:1) in areas left uncovered. Visually inspect excavation areas for trapped wildlife prior to backfilling.
- Avoid or minimize disturbing or removing downed trees, rotting stumps, and leaf litter where feasible.
- Due to increased activity (mating) of reptiles during the spring, construction activities like clearing or grading should attempt to be scheduled outside of the spring (April-May) season. Also, timing conducting ground-disturbing activities before October, when reptiles become less active and may be using burrows in the project area, is also encouraged.

5. TPWD Bird BMPs
- Prior to construction, perform daytime surveys for nests, including under bridges and in culverts, to determine they are not active before removal. Nests that are active should not be disturbed.
- Do not disturb, destroy, or remove active nests, including ground-nesting birds, during the nesting season. Nesting season is recognized at the TxDOT San Antonio District as: From February 15th to October 1st.
- Avoid the removal of unoccupied, inactive nests, as practicable.
- Prevent the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair.
- Do not collect, capture, relocate, or transport birds, eggs, young, or active nests without a permit.

6. TPWD Bat BMPs
- Bats present may include: Big Brown Bat, Cave Myotis, Eastern Red Bat, Hoary Bat, Mexican Free-Tailed Bat, Tricolored Bat.
- Active bat colonies were identified at a large atypical arch culvert (anticipated to remain) and a retaining wall cap within an on-ramp of Loop 1604 (may require removal) near UPRR bridges, FM 2252 and Lookout Road. TPWD recommends that any work at either location be performed outside of the young rearing period between May to October to avoid impacts to bats, particularly when young bats are non-volant.

- If bats are present or recent signs of occupation (i.e., piles of guano, distinct musky odor, or staining and rub marks at potential entry points) are observed, take appropriate measures to ensure that bats are not harmed, such as implementing non-lethal exclusion activities or timing or phasing of construction. Exclusion devices can be installed by a qualified individual between September 1 and March 31. Exclusion devices should be used for a minimum of seven days when minimum nighttime temperatures are above 50° F and minimum daytime temperatures are above 70° F. Prior to exclusion, ensure that alternate roosting habitat is available in the immediate area. If no suitable roosting habitat is available, installation of alternate roosts is recommended to replace the loss of an occupied roost.

- In all instances, avoid harm or death to bats. Bats should only be handled as a last resort and after communication with TPWD.

STATE OF TEXAS
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99213
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3/6/2023

Texas Department of Transportation
San Antonio District Standard

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS

EPIC

FILE: epic 2015-10-09 SAI.dgn	DN: TxDOT	CK: TxDOT	DW: BW	CK: GAG
© TxDOT OCTOBER 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	2452	02	130, ETC	LP1604
	DIST	COUNTY		SHEET NO.
	SAT	BEXAR		2647

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7. TPWD BMPs for Plains Spotted Skunk, Western Hog-nosed Snake, Western Spotted Skunk
-Contractor is advised of potential occurrence in the project area, and to avoid harming the species if encountered, and to avoid unnecessary impacts to dens.

If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediated area, and contact the Engineer immediately.

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):

Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropiate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets (MSDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act.

Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the District Spill Coordinator immediately. The Contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the Engineer if any of the follwing are detected:
- Dead or distressed vegetation (not identified as normal)
- Trash piles, drums, canister, barrels, etc.
- Undesirable smells or odors
- Evidence of leaching or seepage of substances

Hazardous Materials or Contamination Issues Specific to this Project:

☐ No Action Required ☒ Required Action

Action No.

1. CONTRACTOR WASTE AND MATERIALS MANAGEMENT PLAN (CWMP)

-The project area includes the Edwards Aquifer Recharge Zone, and the construction directly overlies the water table of the regional drinking water supply aquifer. The groundwater can carry pollutants over 1 mile per day to water wells. Numerous water wells are located near the project. The aquifer is vulnerable to spills of chemicals and sanitary waste.
-Contractor will prepare and implement a CWMP to prevent, avoid, minimize, and clean up any spills associated with materials, waste and equipment that the Contractor brings onto the project area or generates within the project area with an emphasis on chemicals and sanitary wastes.
-CWMP will address measures to prevent spills of chemicals associated with construction materials, waste and equipment and to prevent damage to all sanitary sewer facilities including sanitary sewer lines, manholes, lift stations and power supply, force mains, valves, and related appurtenances. Maintain labelling and protection all sanitary waste facilities in the ROW. CWMP will list chemicals which will be brought onto State ROW by Contractor with relevant health and safety data and protection measures for each. CWMP will include measures to respond to spills.
-CWMP will identify on-site personnel responsible for daily implementation and enforcement, including contact information.
-Contractor to provide CWMP training to all on-site personnel once every 365 days and invite TxDOT personnel (five business days notice) to each training event. Contractor is to maintain copies of training records on-site and provide records upon request.
-TxDOT will not permit storage of any quantity of hazardous materials, such as a one- quart container of oil, in state ROW in the Edwards Aquifer Contributing, Recharge and Transition Zones during construction. TxDOT's expectation of the contractor is that no containers of non-potable liquids other than non-potable clean water, would be left outside the confines of a vehicle unattended.
-The contractor must immediately report spills including sanitary sewer discharge to TxDOT and to the following:
EPA National Response Center (800) 424-8802
State Emergency Response Commission (800) 832-8224
TCEQ Regional Office (210) 490-3096
Edwards Aquifer Authority (210) 222-2204
San Antonio Water System (210) 704-7297

Does the project involve the demolition of a span bridge?
☒ Yes ☐ No (No further action required)

If "Yes", a pre- demolition notification must be submitted to the Texas Department of State Health Services. The contractor shall contact TxDOT's Project Engineer 25 calendar days prior to the demolition of the bridges(s) on the project to assist with the notification.

VII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

☐ No Action Required ☒ Required Action

Action No.

1. NOTE TO CONTRACTOR

Please be advised that the project is located within a known area of Karstic Limestone and the Karst features may be impacted throughout construction for the entire project limits.

2. TRAINING REQUIREMENTS

1) Karst Training
-TxDOT will provide karst training to the Contractor following the preconstruction meeting and will provide additional training events at locations provided by Contractor and approved by TxDOT. Request training 5 business days in advance.
-Contractor is to ensure all on-site personnel involved with soil disturbance (excavation, grading, trenching, drilling, etc) including subcontractors attend karst training once every 365 days.
-No soil disturbance may occur in the presence of personnel lacking documentation of karst training requirements.
-Contractor is to maintain copies of training records on-site and provide records upon request.

2) Contractor Waste and Materials Management (CWMP) Training
-Contractor will provide CWMP training to all on-site personnel once every 365 days and invite TxDOT personnel (five business days) to each training event.
-Contractor is to ensure all personnel including subcontractors attend CWMP training once per calendar year.
-Contractor is to maintain copies of training records on-site and provide records upon request.

3. KARST FEATURE STOP WORK REQUIREMENTS

-If karst features (i.e., caves, solution cavities, voids, holes, openings in rock, etc) are discovered, immediately stop work within 50 feet of the opening except as necessary to protect the feature. Notify TxDOT within 12 hours.
-Cover opening with wood or plastic to protect feature from ambient air temperature and humidity. Add insulation if temperatures exceed 100°F.
-Add sandbags or berms to prevent runoff from entering the opening. Place fence or barricades around feature for public safety.
-Do not drive equipment when scientists are inside feature.
-TxDOT will provide scientists to evaluate the feature and will provide direction to the contractor regarding the disposition of feature and notice when work may resume. The duration of the stop work requirement is indefinite depending upon findings and resource agency coordination.
-Features may require management under the Endangered Species Act and Edwards Aquifer Rules under the jurisdiction of the USFWS and TCEQ, respectively.
-TxDOT must notify TCEQ within 24 hours after a professional geologist determines a feature is classified as "sensitive" and TxDOT must obtain TCEQ approval of a feature disposition plan.
-Features determined potential habitat under USFWS requirements may require frequent visits (presence-absence surveys) to inspect for listed species. Features which are too small or unsafe to enter may require baiting every 2-3 days for approximately 2-3 weeks. Features which can be safely entered may require entry every 2-3 days for approximately 4-5 weeks. Results of surveys may affect feature disposition plans.

4. PROJECT SPECIFIC LOCATIONS (PSLs)

On-ROW PSLs
-The Contractor may not locate any PSLs such as offices and storage yards on TxDOT ROW within 300 feet of any known listed species location or potential Golden Cheeked Warbler (GCW) habitat. See Environmental Features sheets.
-TxDOT is required to submit information regarding on-ROW PSLs to TCEQ's Edwards Aquifer Program for review and approval before installation. TCEQ sensitive features and floodplain should be avoided to facilitate TCEQ approval. TCEQ sensitive features are shown on the Environmental Features sheets in the construction plans.
-Locations of listed species and TCEQ sensitive features are subject to change with time. New karst features may be discovered.

Off-ROW PSLs
-The Contractor is responsible for compliance on PSLs located outside the ROW.
-The Contractor is required to provide information to TxDOT on Contractor PSLs located outside the TxDOT ROW.
-TxDOT is required to submit information regarding off-ROW PSLs to TCEQ5's Edwards Aquifer Program for approval before installation.
-USFWS requires TxDOT to provide information to contractor to facilitate contractor compliance with the Endangered Species Act (ESA).
-Potential Golden-cheeked Warbler (GCW) habitat within 300 feet of the project area is shown on the Environmental Features layouts in the construction plans. Potential GCW habitat may be located beyond the areas shown in layouts.

Off-ROW PSLs (Continued)
-Potential karst invertebrate habitat is located in the project area and surrounding portions of Bexar County. Karst Zone 1 includes areas that are known to contain listed species. Karst Zone 2 includes areas that probably contain listed species.
-Information on compliance with issues such as Karst Invertebrate Endangered Species and the Edwards Aquifer is available on USFWS and TCEQ websites.
https://www.fws.gov/southwest/es/AustinTexas/ESA_Sp_KarstInverts.html#Karst_zones

5. TPWD Water Quality BMPs
-Minimize the use of equipment in streams and riparian areas during construction. When possible, equipment access should be from banks, bridge decks, or barges.
-When temporary stream crossings are unavoidable, remove stream crossings once they are no longer needed and stabilize banks and soils around the crossing.

6. See EPIC sheet 3 of 3 for table summarizing areas of environmental concern.

7. Asbestos-Containing Material and Lead-Containing Paint Inspection Reports are available for each bridge to be modified by the project. Concentration of lead were identified in the paint on the bridges shown in the Areas of Environmental Concern Table.
The contractor is responsible to identify locations on the bridges that will require torch cutting, grinding, sawing, etc. Once the locations are identified, the contractor shall notify the project engineer.
TxDOT will be responsible for contracting a specialty contractor to spot abate these locations by stripping the paint in accordance with TxDOT 2014 Standard Specification 6.10 and TxDOT Bridge Division Special Provision SP 006-30 and SP 006-31 prior to dismantling the bridge.
The contract shall only torch cut, grind, or saw steel elements at locations where the lead containing paint has been stripped back to expose uncoated steel.
The contractor will be responsible for recycling the portions of the bridge that contain lead containing paint in accordance with all applicable state and federal guidelines including item 6.10 - Removal & Disposal of Painted Steel (2014 Standard Specifications).
Contractor shall develop a containment plan for lead paint waste to be submitted to TxDOT for review and approval. This applies to any activity that may generate lead paint waste such as surface preparation, washing, pressure washing, etc.

8. Special Requirements For Features Found In Joint-Bid Sanitary Sewer Excavations. TxDOT is responsible for notifying TCEQ and SAWS if any sensitive features are encountered in joint-bid sanitary sewer excavations.
TxDOT is also responsible for endangered species habitat assessments and species surveys, as needed. In the event that endangered or presumed endangered species are found, TxDOT and SAWS shall work cooperatively to develop a plan that is compliant with the project's Endangered Species Act requirements and TCEQ requirements.
SAWS is responsible for preparing and obtaining TCEQ approval of sensitive feature closure plans for features found in joint bid sanitary sewer excavations. TxDOT will implement the TCEQ approved closure plan.

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EPIC

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REVISIONS		2452	02	130, ETC		LP1604	
		DIST		COUNTY			SHEET NO.
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AREAS OF ENVIRONMENTAL CONCERN

Feature Name and description	Location	Access	Instructions
Potential Golden-cheeked Warbler (GCW) Habitat	Patches throughout project area. See Environmental Features Sheet 1 of 2.	Limited	Access permitted to remove trees from GCW habitat impact areas shown on Environmental Features sheets. Trees may be removed after August 31 and before March 1.
Trees within 300 feet of potential GCW Habitat	Trees subject to criteria throughout project area.	Limited	Distance between trees and GCW habitat to be measured by contractor. Trees within 300 feet of habitat areas may be removed after August 31 and before March 1.
Edwards Aquifer Recharge Zone, Contributing Zone and Transition Zone	Patches throughout project area. See Environmental Features Sheets.	Limited	Comply with the TCEQ-approved Water Pollution Abatement Plan (WPAP) and conditions in the TCEQ authorization letter. Maintain copies of WPAP and letter on-site. Ground disturbing activities may not commence until the TCEQ has approved the WPAP. Comply with SAWS TCEQ-approved SCS Plan and conditions in the TCEQ authorization letter. Maintain copies of SCS Plan and letter on-site. TxDOT will not permit storage of any quantity of hazardous materials, such as a one- quart container of oil, in state ROW in the CZ, RZ, or TZ during construction. TxDOT*s expectation of the contractor is that no containers of non-potable liquids other than non-potable clean water, would be left outside the confines of a vehicle unattended.
LOOP-012 TCEQ Sensitive Features	Upstream Easement - Lorence Creek Tributary WPAP Site Plan Sheet 3 OF 23		Feature is upstream of soil disturbance.
LOOP-205 TCEQ Sensitive Features	Downstream Easement - Lorence Creek Tributary WPAP Site Plan Sheet 3 OF 23		Maintain temporary erosion control in ROW upstream of feature. Feature to be protected and preserved.
LOOP-009 TCEQ Sensitive Features	Between WBML and WBFR West of Gold Canyon Dr. WPAP Site Plan Sheet 12 OF 23		Protect feature until it is removed.
S-7-C NORTH TCEQ Sensitive Features Engineered drain to an underground cave designed by ARMA. The only surface expression of the feature is a grate inlet with a 3 in. diameter PVC pipe inlet below the grate. Refer to karst closure feature closure sheet 982 for an illustration of the feature relative to the previously closed cave.	Between WBML and existing exit ramp located just West of Gold Canyon Dr. WPAP Site Plan Sheet 12 OF 23	Limited	Contractor is to protect and preserve this drain inlet feature.
1604-F101 TCEQ Sensitive Features	In ROW Along EBFR West of Gold Canyon Dr. WPAP Site Plan Sheet 12 OF 23		Feature was previously sealed with TCEQ approval. Excavation may reopen it; and if so, it would be resealed. Refer to karst closure detail sheet.
Ordinary high-water marks (OHWM). Stream boundaries where US Army Corps of Engineers may have jurisdiction	Various locations in ROW and easements See Environmental Features sheets	Limited	Access permitted if NWP 14 terms and conditions satisfied without requiring preconstruction notification. Minimize placement of dredge and fill including drill shaft cuttings in OHWM.
TxDOT channel and drainage easements	Various	None	Numerous issues in easements. Consult with TxDOT Environmental Specialist for any easement access. TxDOT must survey for Seymeria texana in easements to confirm presence or absence prior to disturbance.
US 281 Underpass Widening at LP 1604 WBML	15-015-0-0253-04-105	Unrestricted	(430 ppm lead paint)
US 281 Underpass Widening at LP 1604 EBML	15-015-0-0253-04-251	Unrestricted	(1030 ppm lead paint)

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REVISIONS	2452	02	130, ETC		LP1604		
	DIST	COUNTY				SHEET NO.	
	SAT	BEXAR				2649	

PROJECT BEGIN
(Sta. 4400+00.00)

Tuscany Stone

LOOP 012

LOOP 205

Stone Oak Parkway

4400+00 4405+00 4410+00 4415+00 4420+00 4425+00 4430+00 4435+00 4440+00 4445+00 4450+00 4455+00 4460+00 4465+00 4470+00

MATCHLINE 5

281-121

1604

4475+00 4485+00 4490+00 4495+00 PC 4495+01.00 4500+00 PT 4503+81.37 4505+00 4510+00 4515+00 PC 4517+18.23 4520+00 4525+00 PT 4529+15.67 4530+00 4535+00 4540+00 4545+00

LOOP-009

S-7-C North

1604-F101

MATCHLINE 5

MATCHLINE 6

281

Karst Feature: 281-121
(Turnaround Cave*)

281-121

0 20 40
Feet

* Approximate Boundary

Surveyed Feature Sensitivity

- Potential Habitat and Not Sensitive (USFWS)
- Potential Habitat and Sensitive Feature (TCEQ)
- Sensitive Feature - Not Considered Potential Habitat - Above 40 (TCEQ)
- Lead Based Paint Containing Bridge (TxDOT)
- Golden-cheeked Warbler Habitat
- Approved GCW Impact Area
- Ordinary High Water Mark (OHWM)
- Existing Right-of-way
- Easement
- Action Area
- Existing Sanitary Sewer
- Proposed Sanitary Sewer
- Asbestos Containing Materials Bridge
- Edwards Aquifer Recharge Zone (RZ)

NOTE:

Feature 281-121 is a cave encountered by drilled shaft on CSJ: 0253-04-146. The cave was filled with flowable fill per TCEQ approved mitigation plan.

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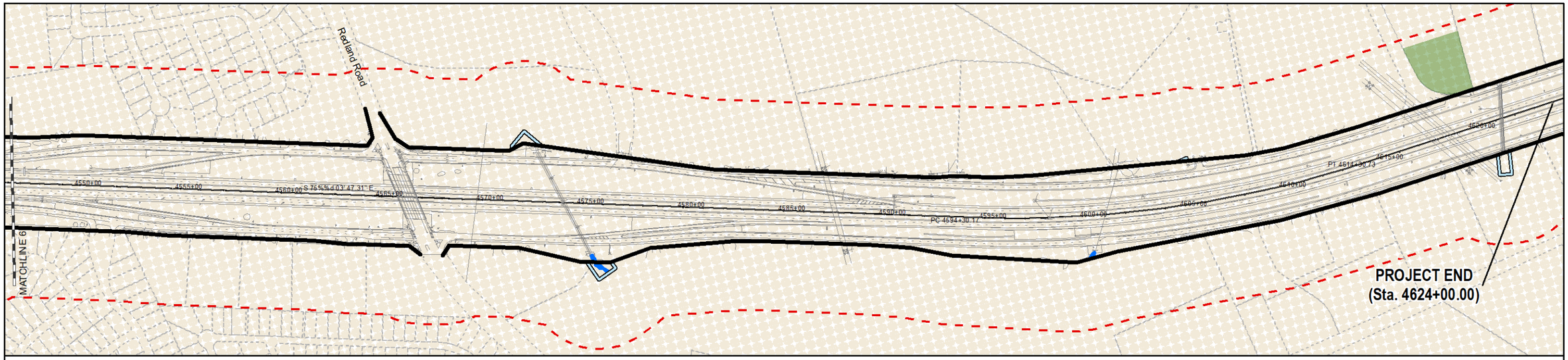
LP 1604
Environmental Features

0 250 500
Feet

Scale 1" = 500'

CSJ: 2451-02-083

SEGMENT 4
SHEET 1 OF 2



Surveyed Feature Sensitivity

- Potential Habitat and Not Sensitive (USFWS)
- Potential Habitat and Sensitive Feature (TCEQ)
- Sensitive Feature - Not Considered Potential Habitat - Above 40 (TCEQ)
- Lead Based Paint Containing Bridge (TxDOT)
- Golden-cheeked Warbler Habitat
- Approved GCW Impact Area
- Ordinary High Water Mark (OHWM)
- Existing Right-of-way
- Easement
- Action Area
- Existing Sanitary Sewer
- Proposed Sanitary Sewer
- Asbestos Containing Materials Bridge
- Edwards Acquifer Recharge Zone (RZ)

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LP 1604
Environmental Features

0 250 500
Feet
Scale 1" = 500'

CSJ: 2451-02-083

SEGMENT 4
SHEET 2 OF 2

Texas Commission on Environmental Quality
Water Pollution Abatement Plan
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

The following/listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director (ED), nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code (TAC), Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following/listed "construction notes" restricts the powers of the ED, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, TAC, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the ED's approval, whether or not in contradiction of any "construction notes," is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, TAC § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following/listed "construction notes" in no way represent an approved exception by the ED to any part of Title 30 TAC, Chapters 213 and 217, or any other TCEQ applicable regulation

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.

2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.

3. If any sensitive feature(s) (caves, solution cavity, sink hole, etc.) is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. Construction activities may not be resumed until the TCEQ has reviewed and approved the appropriate protective measures in order to protect any sensitive feature and the Edwards Aquifer from potentially adverse impacts to water quality.

4. No temporary or permanent hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.

5. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the approved plans and manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.

6. Any sediment that escapes the construction site must be collected and properly disposed of before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.

7. Sediment must be removed from the sediment traps or sedimentation basins not later than when it occupies 50% of the basin's design capacity.

8. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite.

9. All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.

10. If portions of the site will have a temporary or permanent cease in construction activity lasting longer than 14 days, soil stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.

11. The following records shall be maintained and made available to the TCEQ upon request:
    - the dates when major grading activities occur;
    - the dates when construction activities temporarily or permanently cease on a portion of the site; and
    - the dates when stabilization measures are initiated.

12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:

    A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;

    B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;

    C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office 12100 Park 35 Circle, Building A Austin, Texas 78753-1808 Phone (512) 339-2929 Fax (512) 339-3795	San Antonio Regional Office 14250 Judson Road San Antonio, Texas 78233-4480 Phone (210) 490-3096 Fax (210) 545-4329

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

STATE OF TEXAS
ZACHARY B. RYAN
106276
LICENSED
PROFESSIONAL ENGINEER

2/9/2023

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LP 1604
TCEQ
GENERAL NOTES

SHEET 1 OF 1

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	0072	08	130	2652

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LEGEND

- OUTFALL AREA
- BMP DRAINAGE AREA
- VEGETATIVE FILTER STRIP (VFS) AREA
- VEGETATIVE FILTER STRIP
- EXISTING VFS
- FLOW DIRECTION
- XX-XX BMP AREA ID
- SENSITIVE FEATURE
- DITCH FLOWLINE
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NOTES:

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WPAP
SITE PLAN
BEGIN TO 4405+00

SHEET 1 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2653

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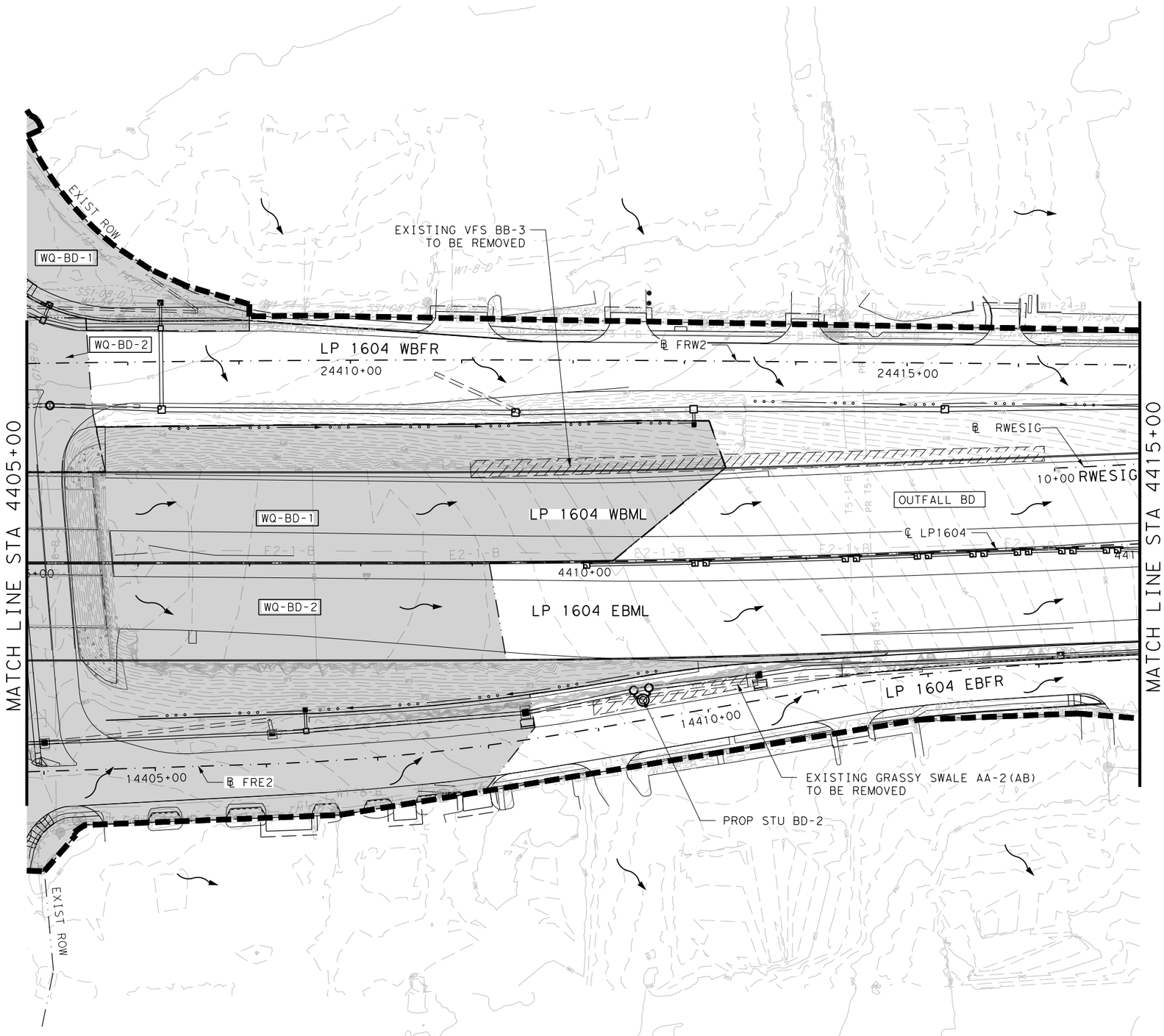

LEGEND

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SITE PLAN
4405+00 TO 4415+00

SHEET 2 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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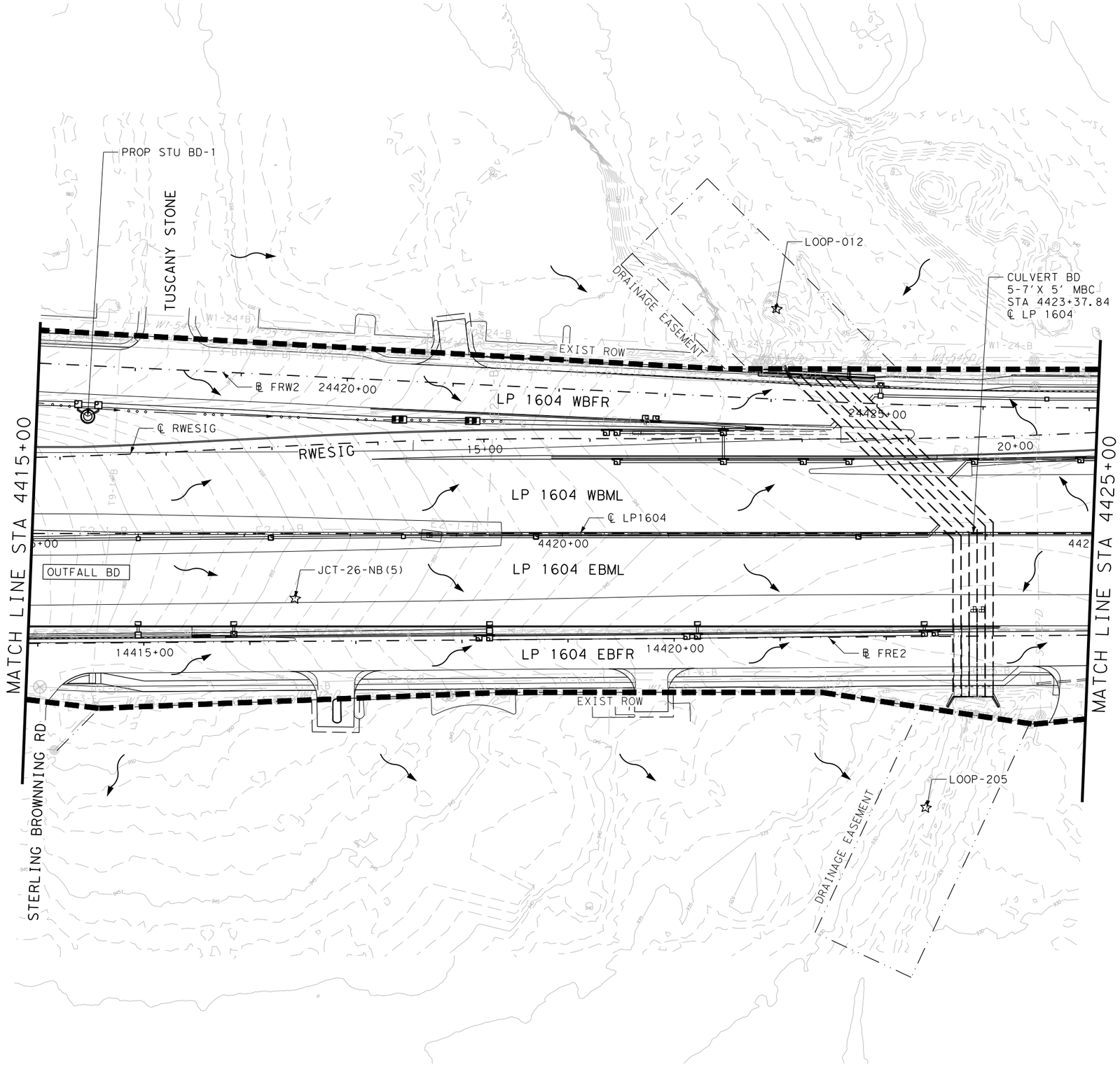

LEGEND

- OUTFALL AREA
- BMP DRAINAGE AREA
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4415+00 TO 4425+00

SHEET 3 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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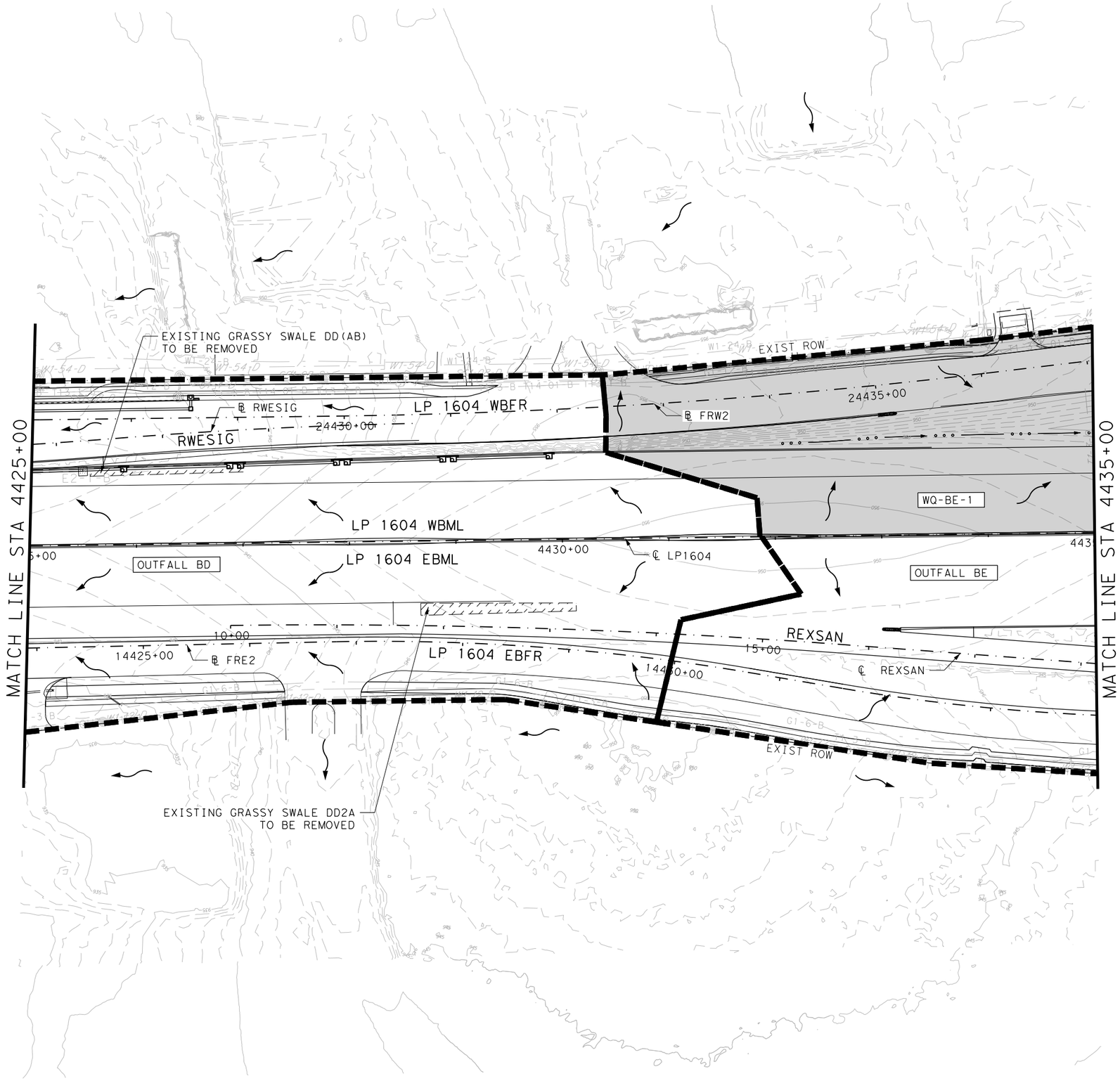

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LEGEND

- OUTFALL AREA
- BMP DRAINAGE AREA
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SHEET 4 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2656

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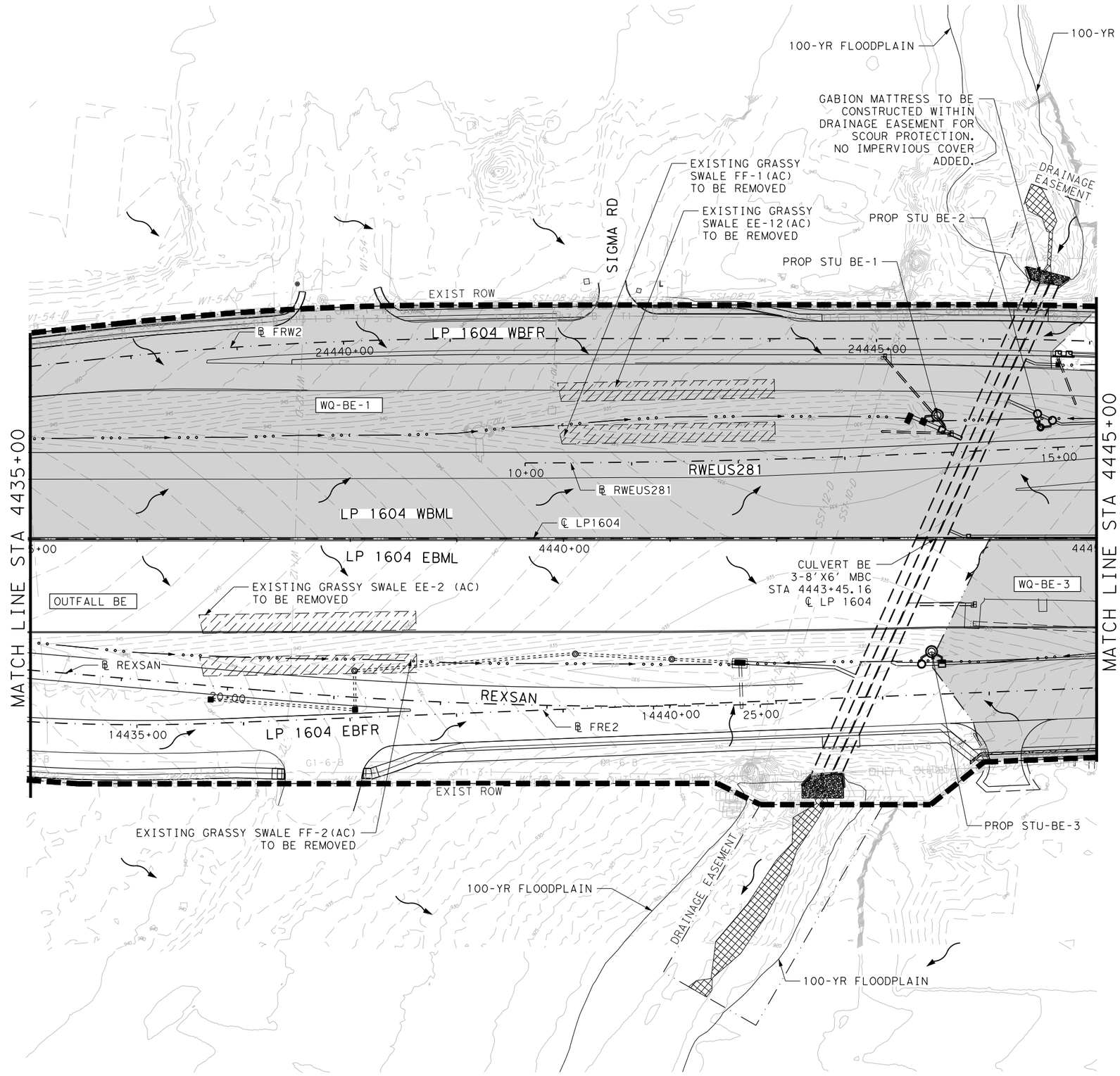

LEGEND

- OUTFALL AREA
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SHEET 5 OF 23

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
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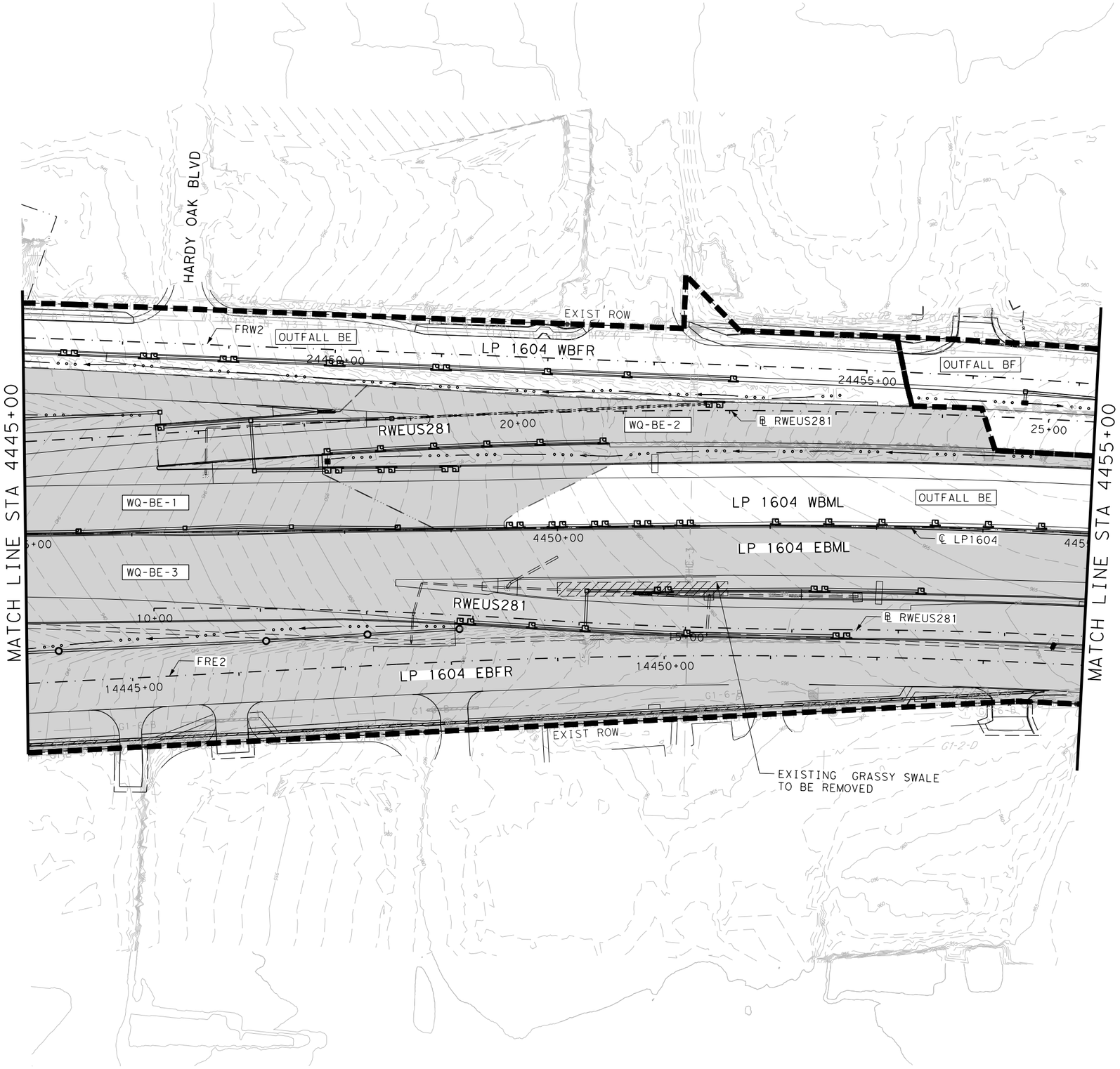

LEGEND

- OUTFALL AREA
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4445+00 TO 4455+00

SHEET 6 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2658

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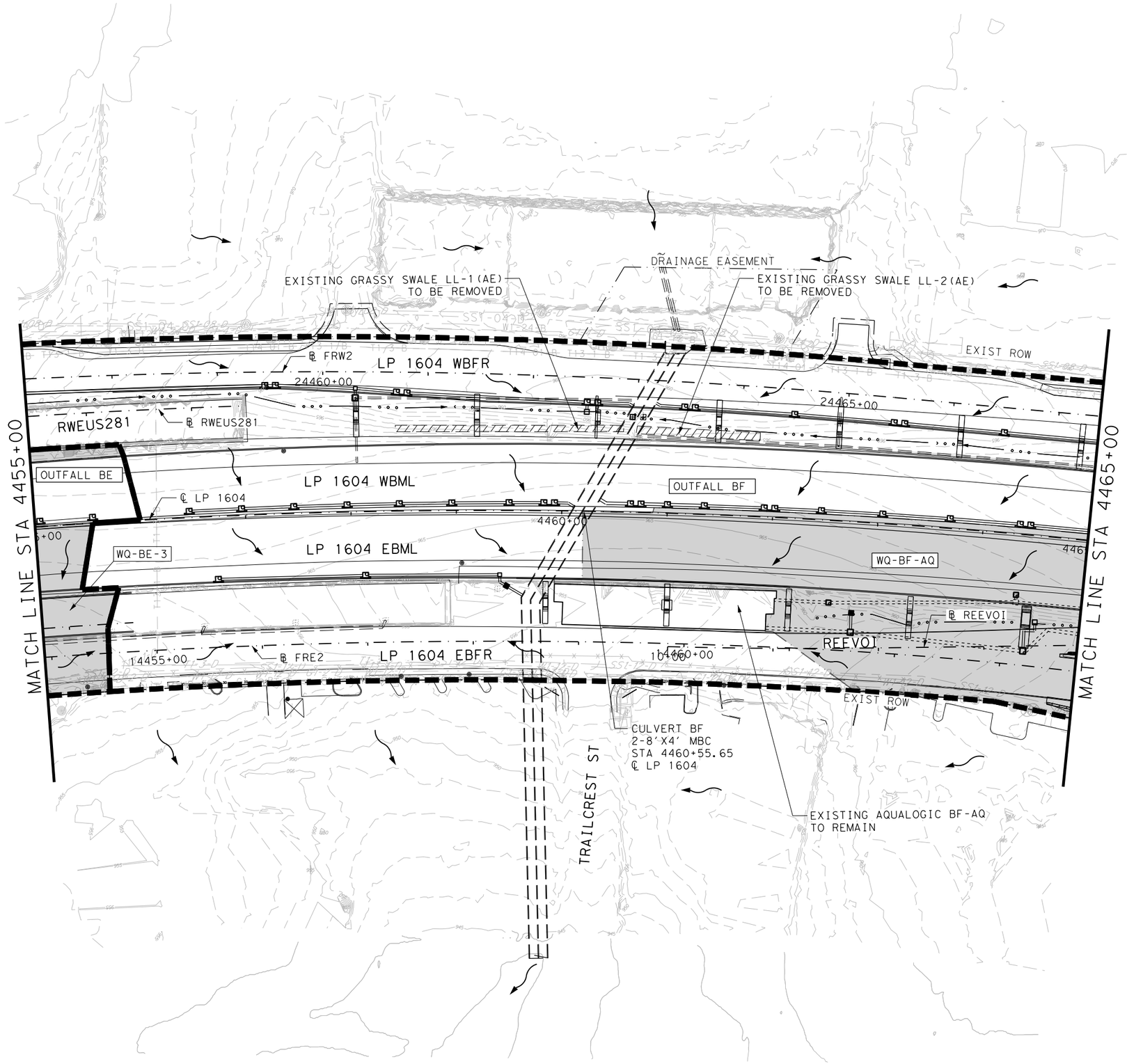

LEGEND

- OUTFALL AREA
- BMP DRAINAGE AREA
- VEGETATIVE FILTER STRIP (VFS) AREA
- VEGETATIVE FILTER STRIP
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4455+00 TO 4465+00

SHEET 7 OF 23

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2659

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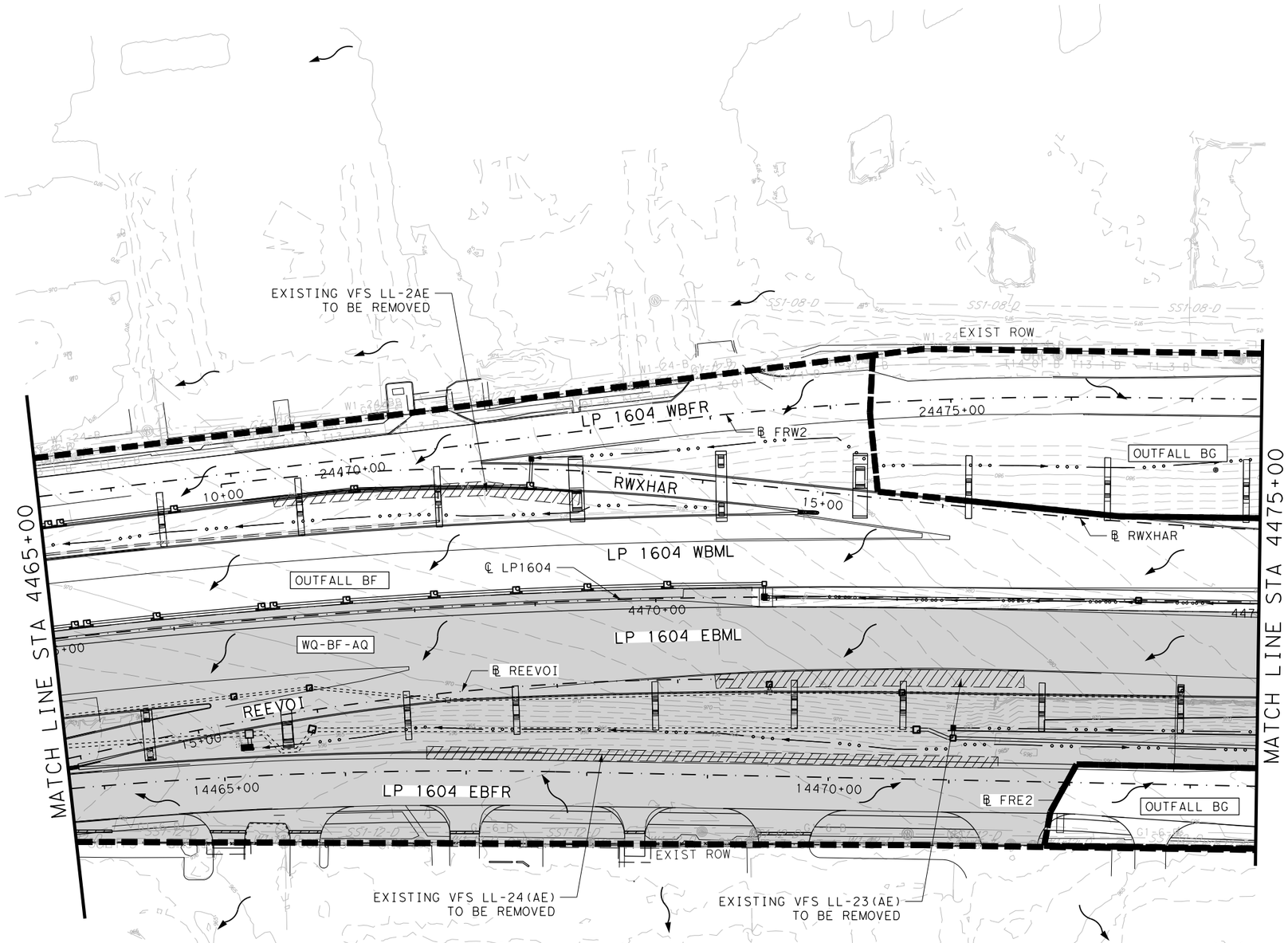

LEGEND

- OUTFALL AREA
- BMP DRAINAGE AREA
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4465+00 TO 4475+00

SHEET 8 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2660

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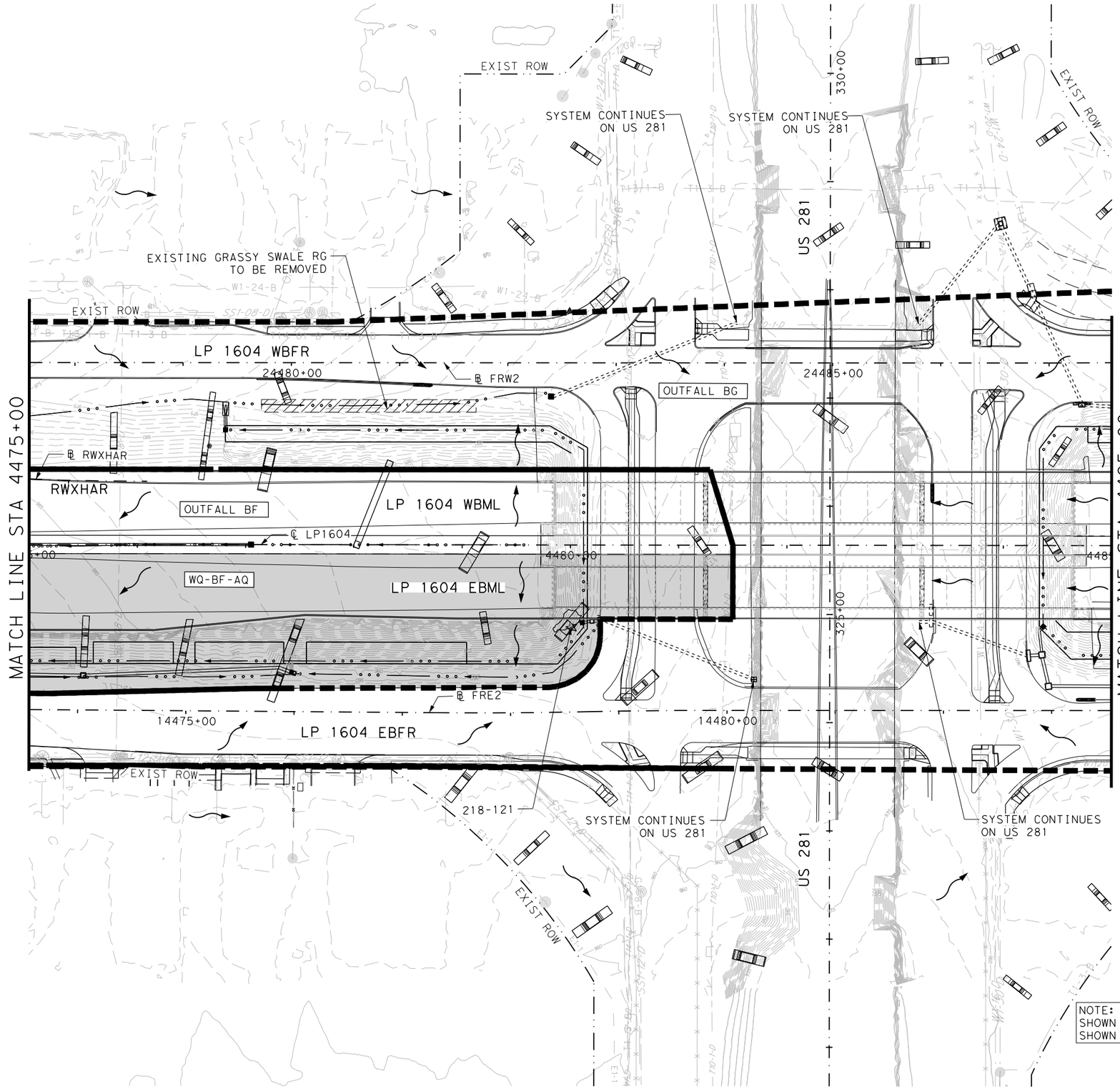

NOTE: DIRECT CONNECTOR COLUMNS SHOWN BUT DECK AND RAIL ARE NOT SHOWN FOR CLARITY.

LEGEND

- OUTFALL AREA
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4475+00 TO 4485+00

SHEET 9 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2661

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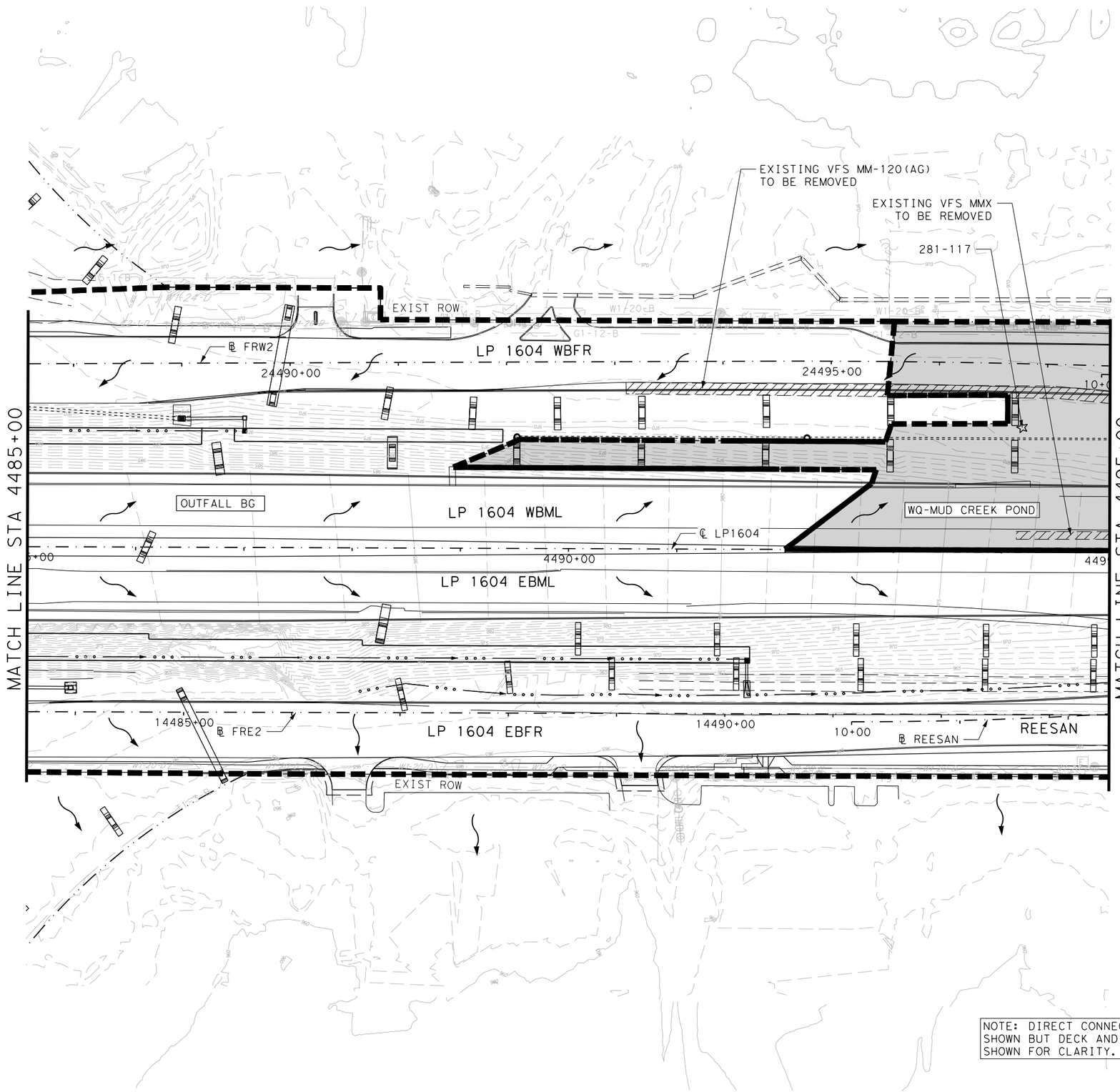

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SITE PLAN
4485+00 TO 4495+00

SHEET 10 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2662

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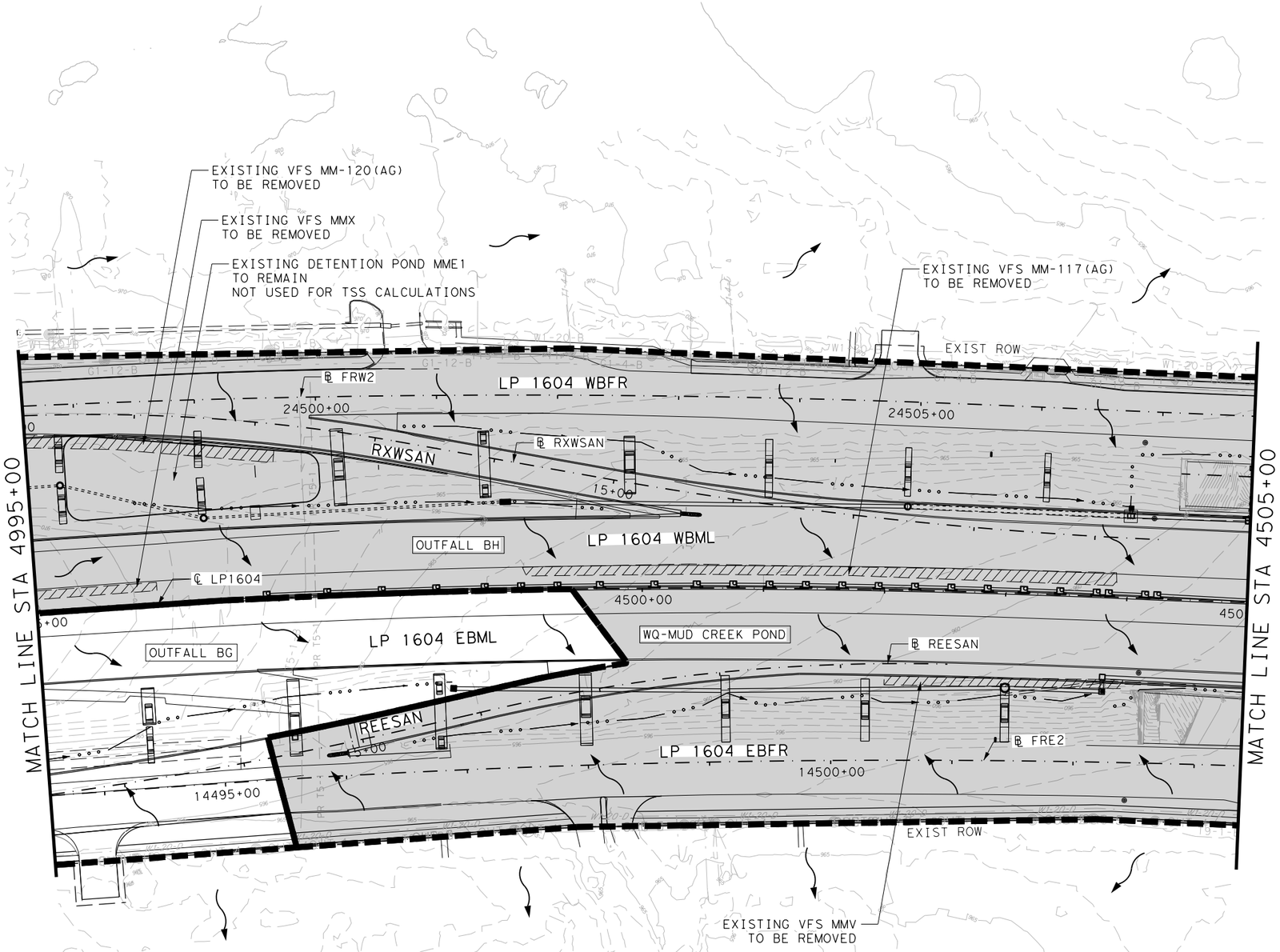

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LEGEND

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SHEET 11 OF 23

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2663

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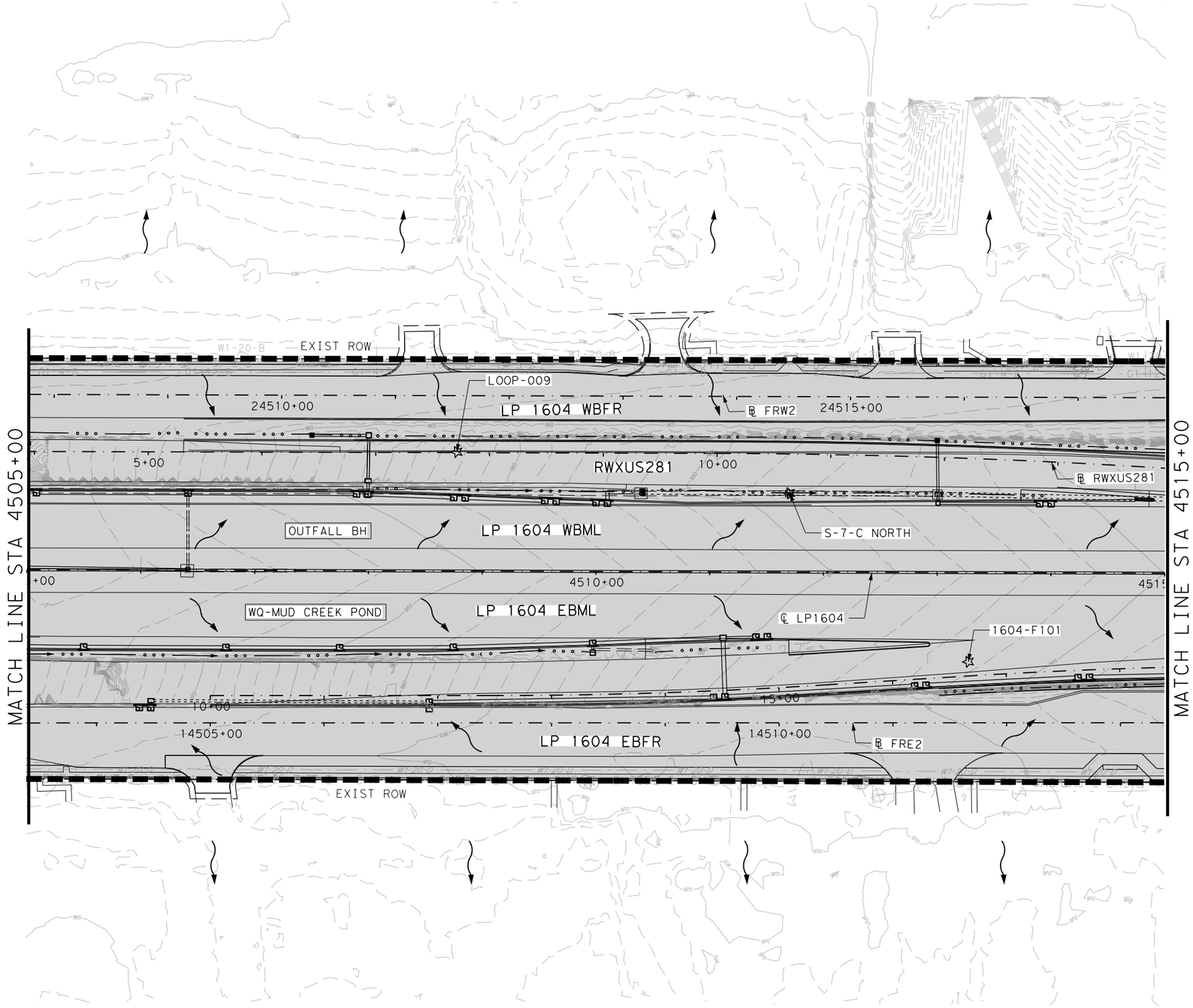

LEGEND

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0′ 25′ 50′ 100′
SCALE: 1"=100′

REV. NO.	DATE	DESCRIPTION	BY

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
WPAP
SITE PLAN
4505+00 TO 4515+00

SHEET 12 OF 23

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2664

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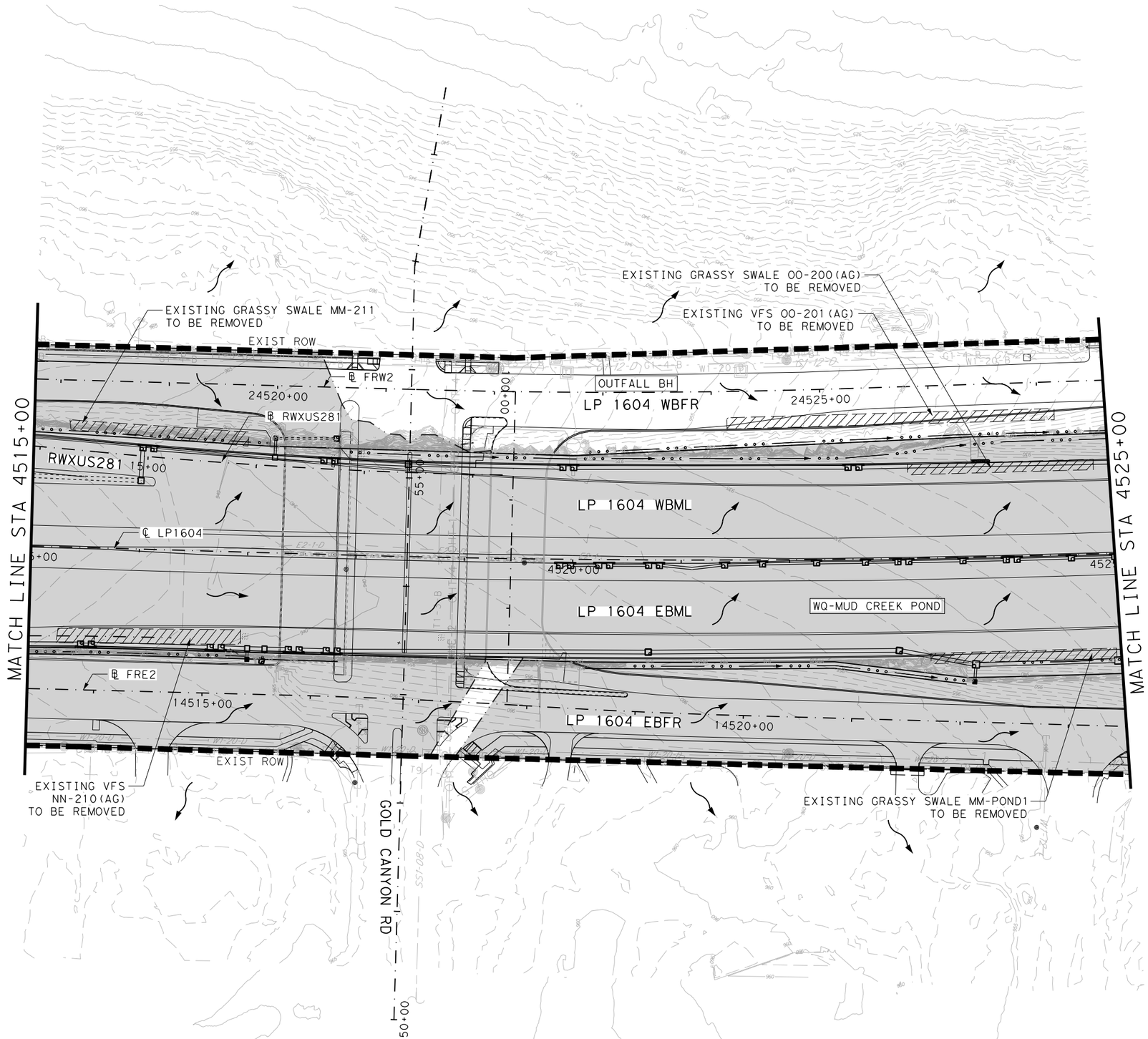

LEGEND

- OUTFALL AREA
- BMP DRAINAGE AREA
- VEGETATIVE FILTER STRIP (VFS) AREA
- VEGETATIVE FILTER STRIP
- EXISTING VFS
- FLOW DIRECTION
- XX-XX BMP AREA ID
- SENSITIVE FEATURE
- DITCH FLOWLINE
- SURFACE WATERS

NOTES:

1. FOR DRAINAGE PATTERNS AND APPROXIMATE SLOPES, SEE DRAINAGE AREA MAPS.
2. FOR AREAS OF SOIL DISTURBANCE AND LOCATIONS OF STABILIZATION SEE SW3P LOCATED UNDER THE CONSTRUCTION PLANS (ATTACHMENT G).
3. ANY INCIDENTAL WORK OUTSIDE OF WPAP PROJECT AREA IS LIMITED TO MODIFICATIONS OF ROADWAY SIGNAGE.

STATE OF TEXAS
ZACHARY B. RYAN
106276
LICENSED
PROFESSIONAL ENGINEER

2/9/2023

95% SUBMITTAL

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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LP 1604
WPAP
SITE PLAN
4515+00 TO 4525+00

SHEET 13 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2665

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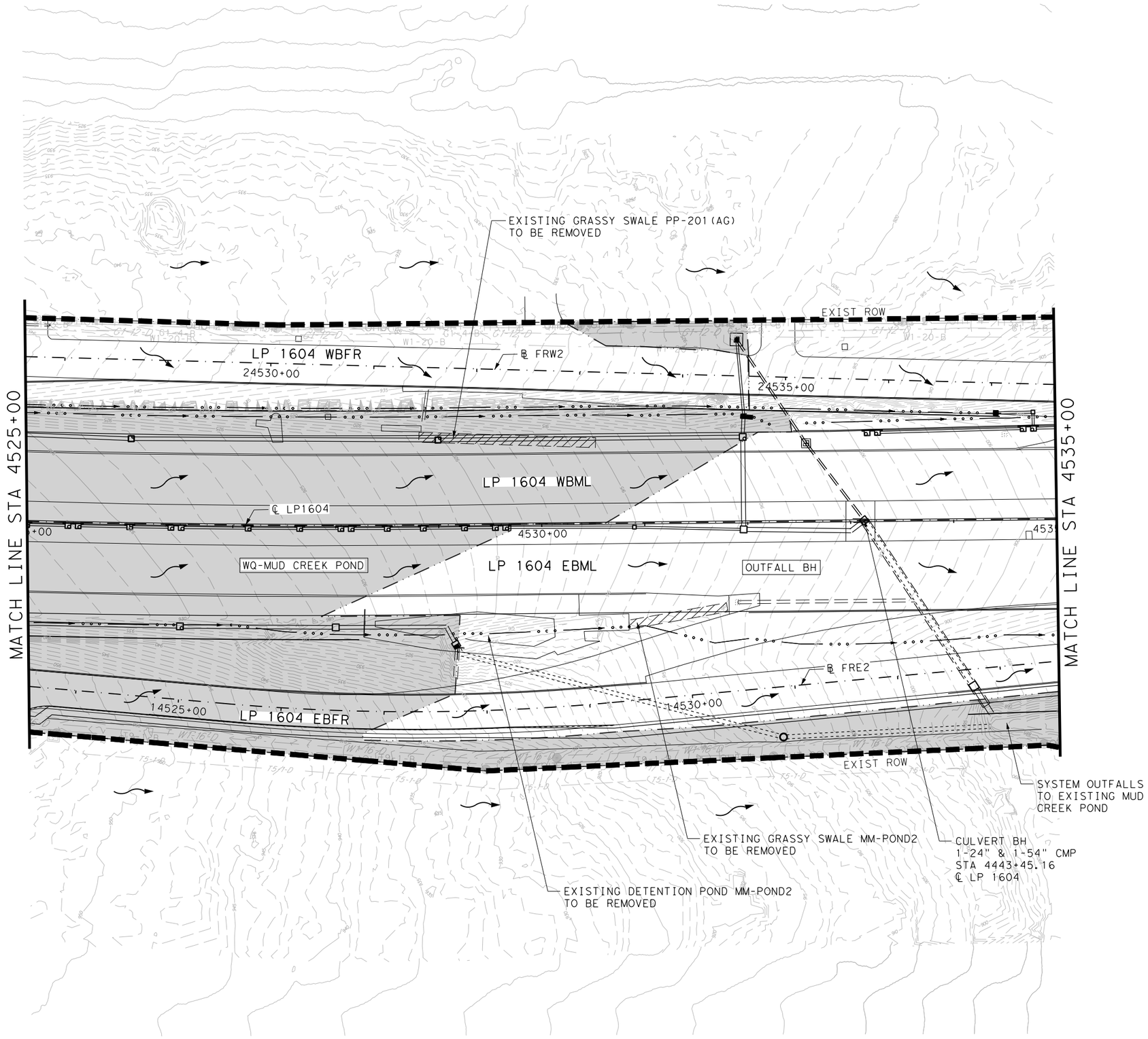

LEGEND

- OUTFALL AREA
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LP 1604
WPAP
SITE PLAN
4525+00 TO 4535+00

SHEET 14 OF 23

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2666

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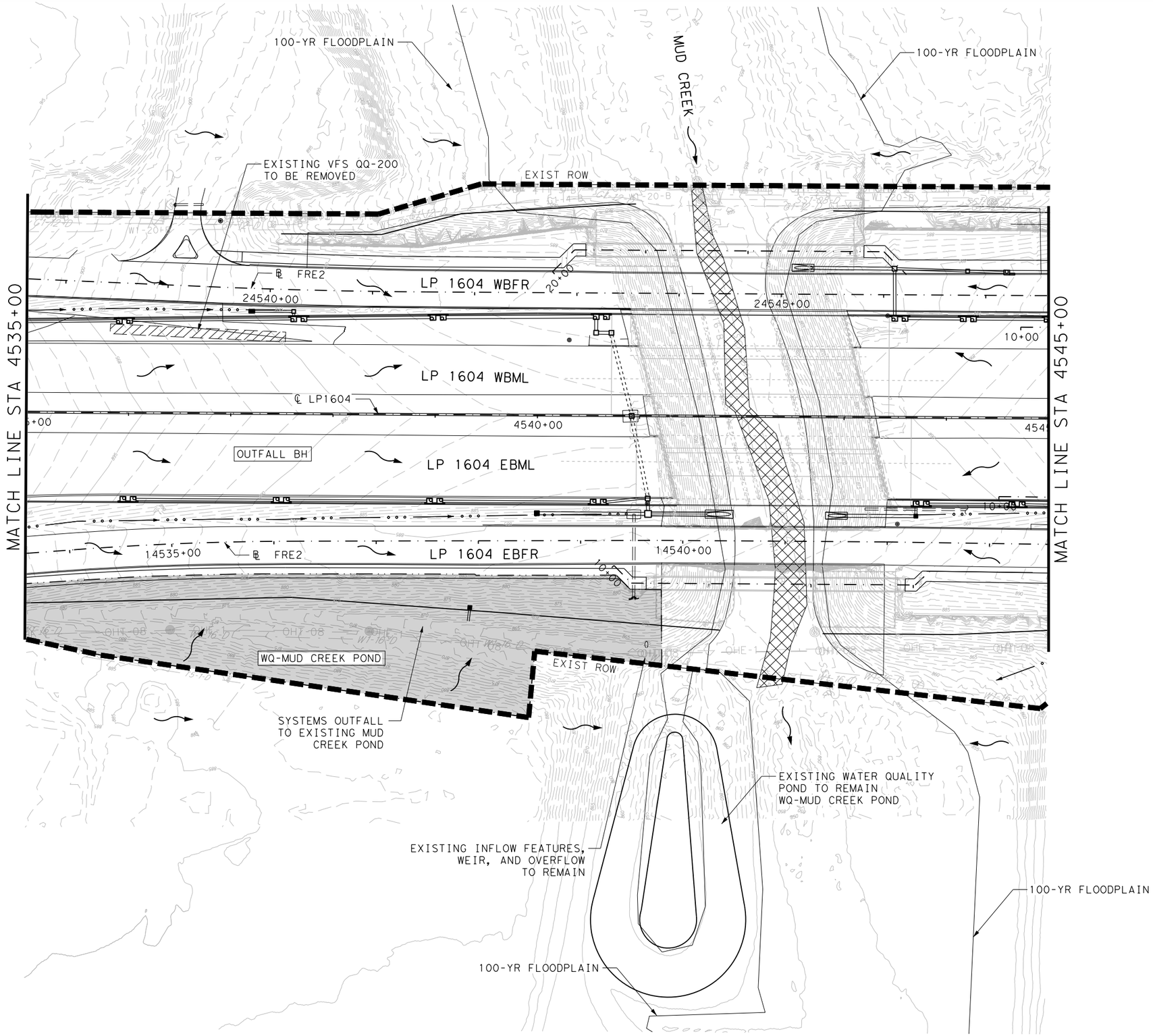

LEGEND

- OUTFALL AREA
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4535+00 TO 4545+00

SHEET 15 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2667

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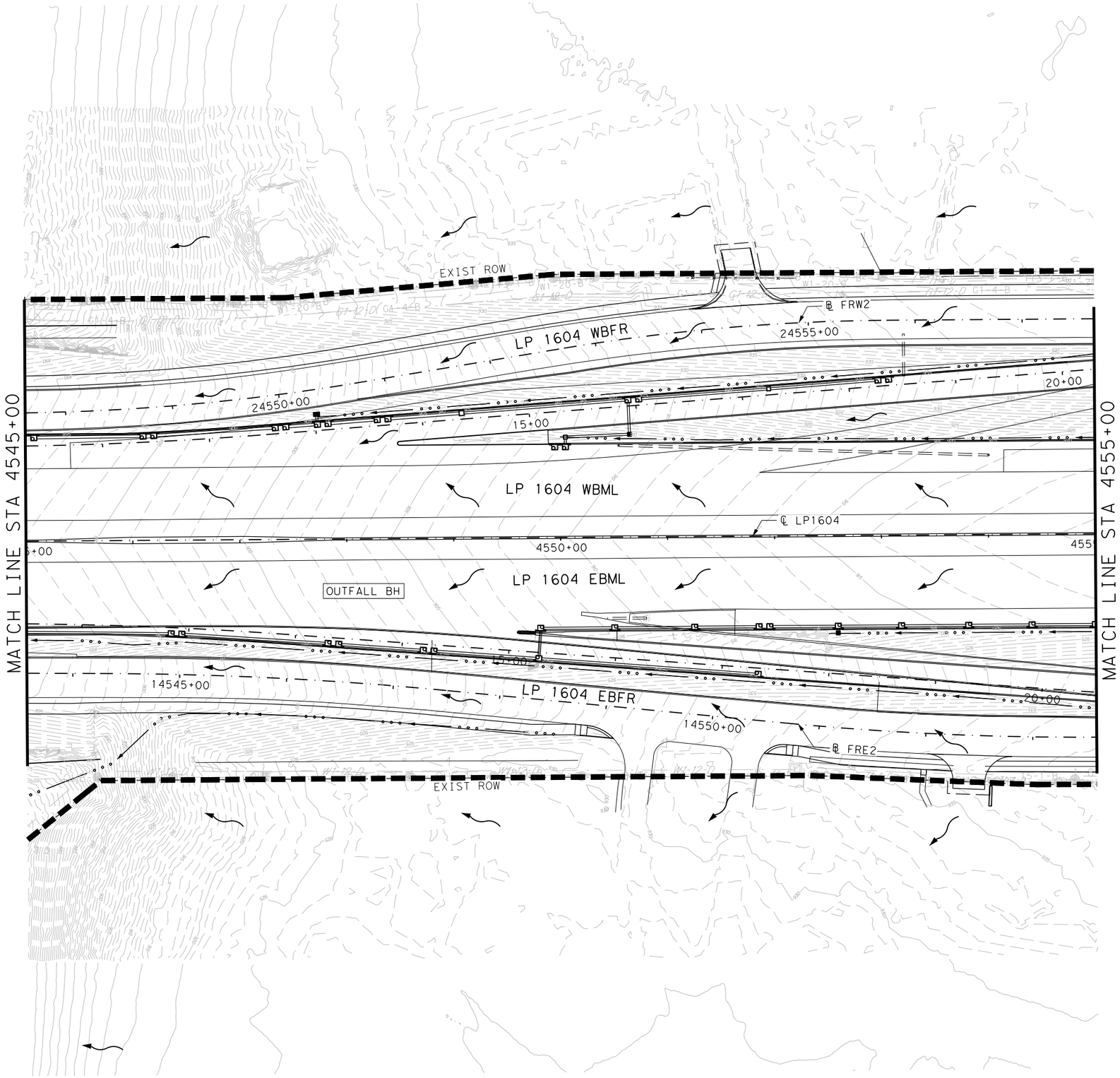

LEGEND

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- BMP DRAINAGE AREA
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4545+00 TO 4555+00

SHEET 16 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2668

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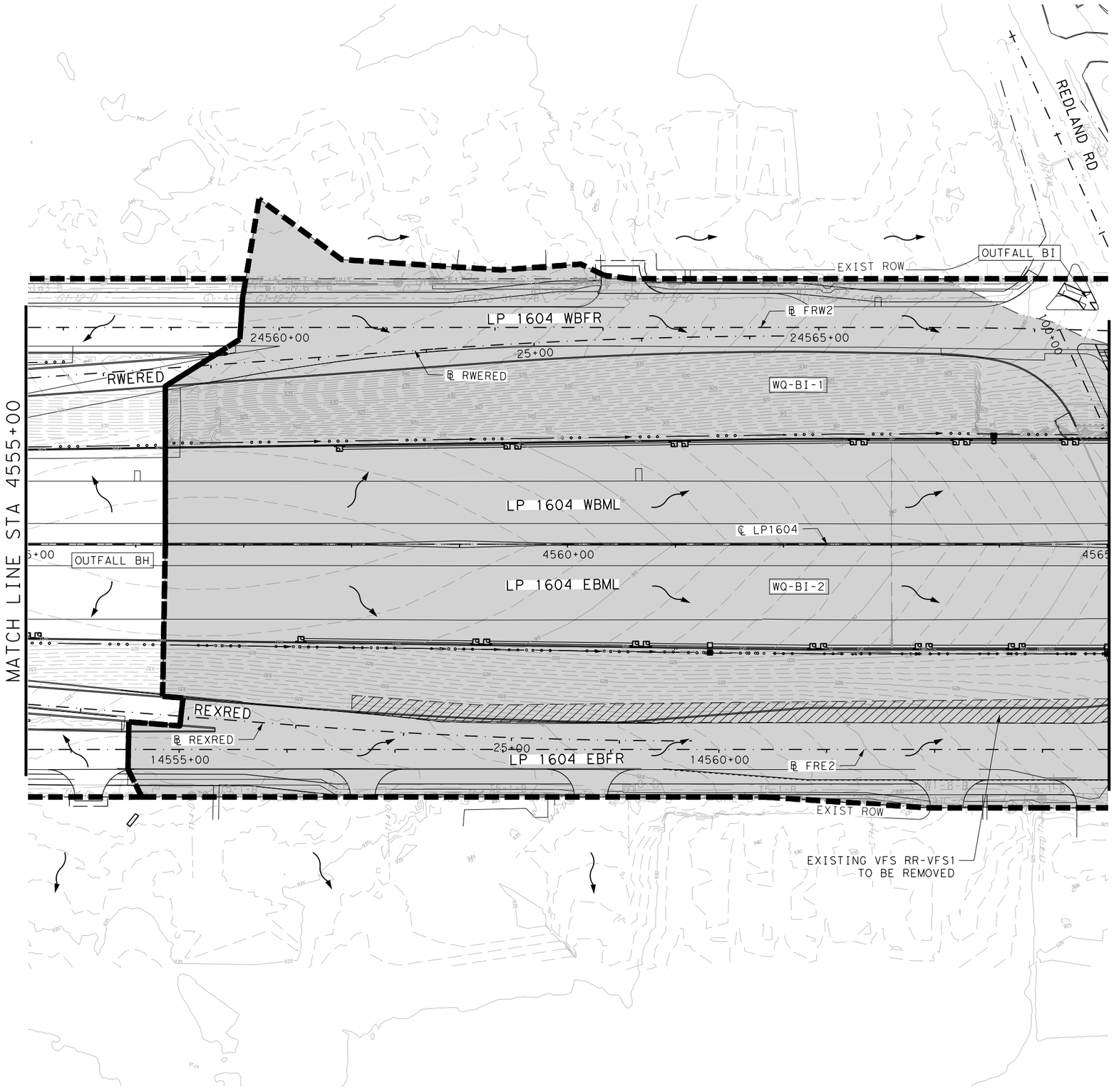

LEGEND

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4555+00 TO 4565+00

SHEET 17 OF 23

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2669

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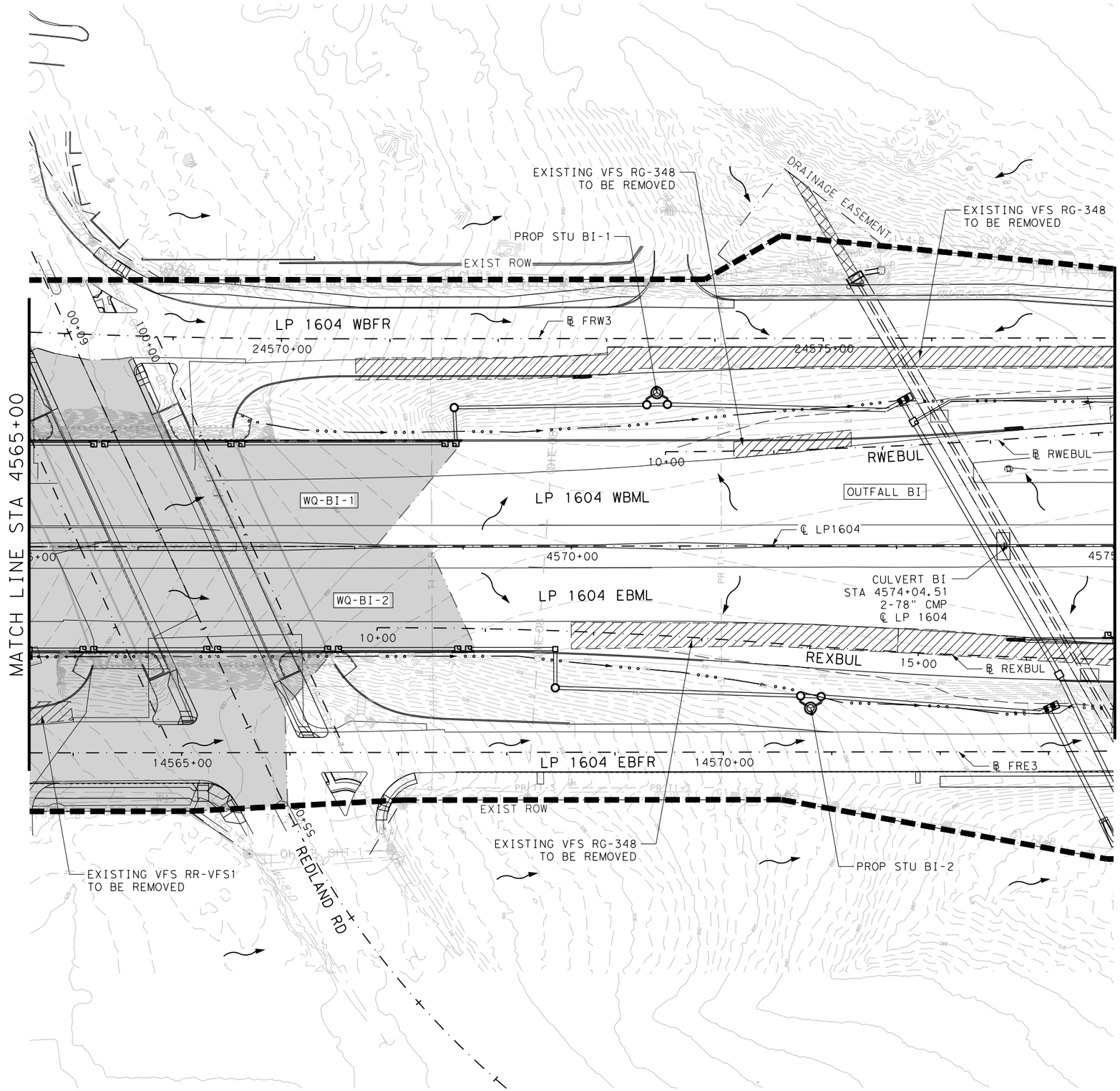

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WPAP
SITE PLAN
4565+00 TO 4575+00

SHEET 18 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2670

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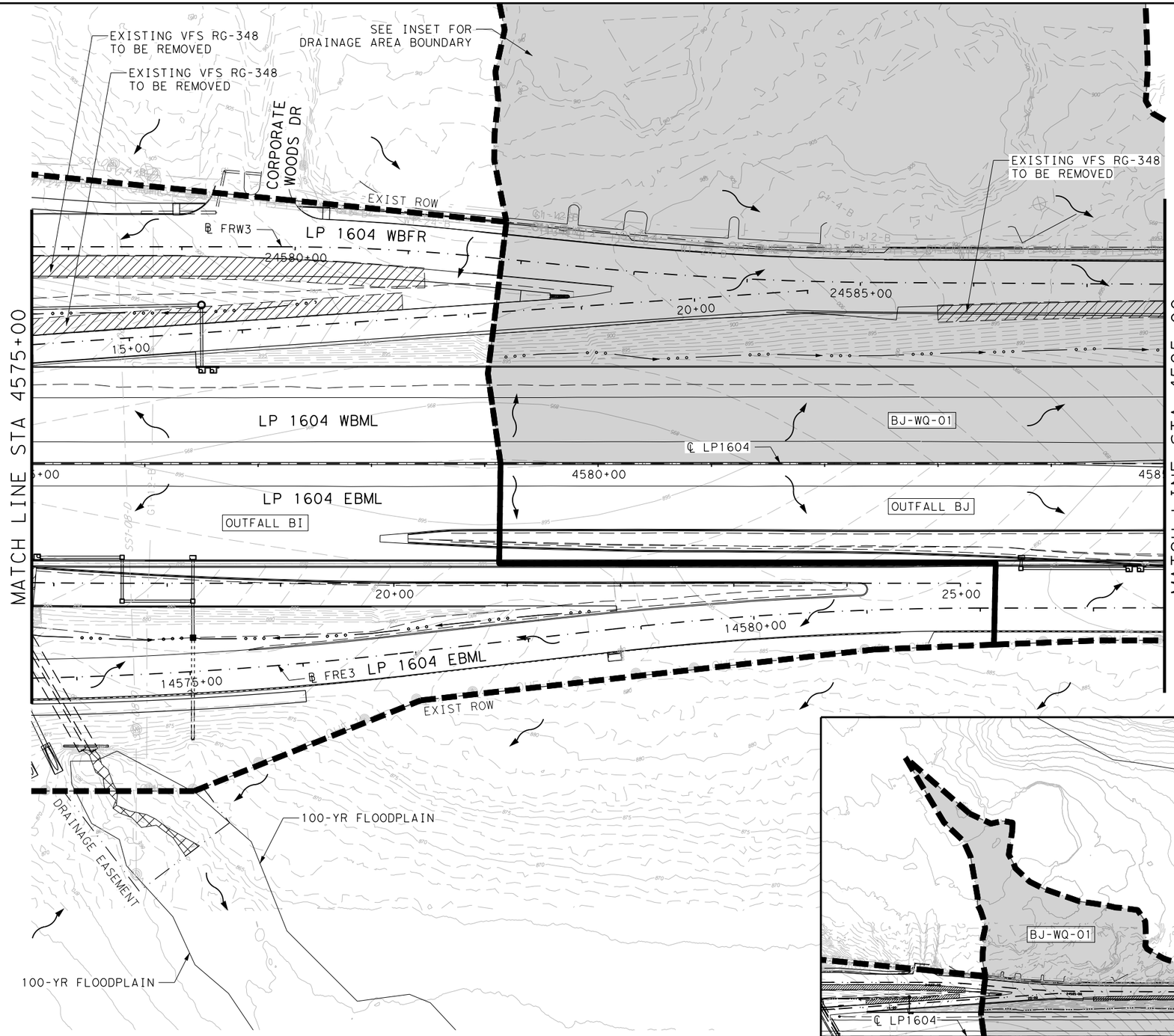

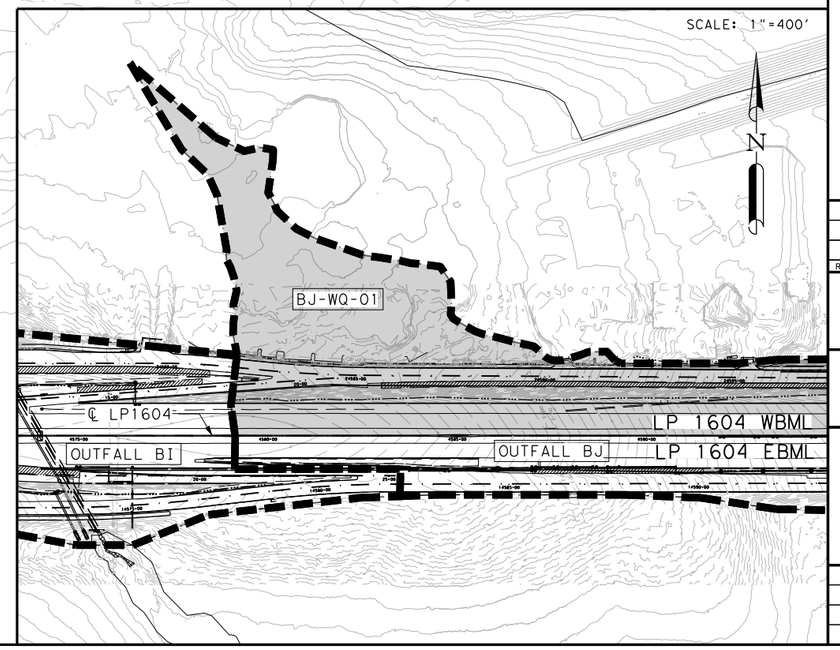

LEGEND

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LP 1604
WPAP
SITE PLAN
4575+00 TO 4585+00

SHEET 19 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2671

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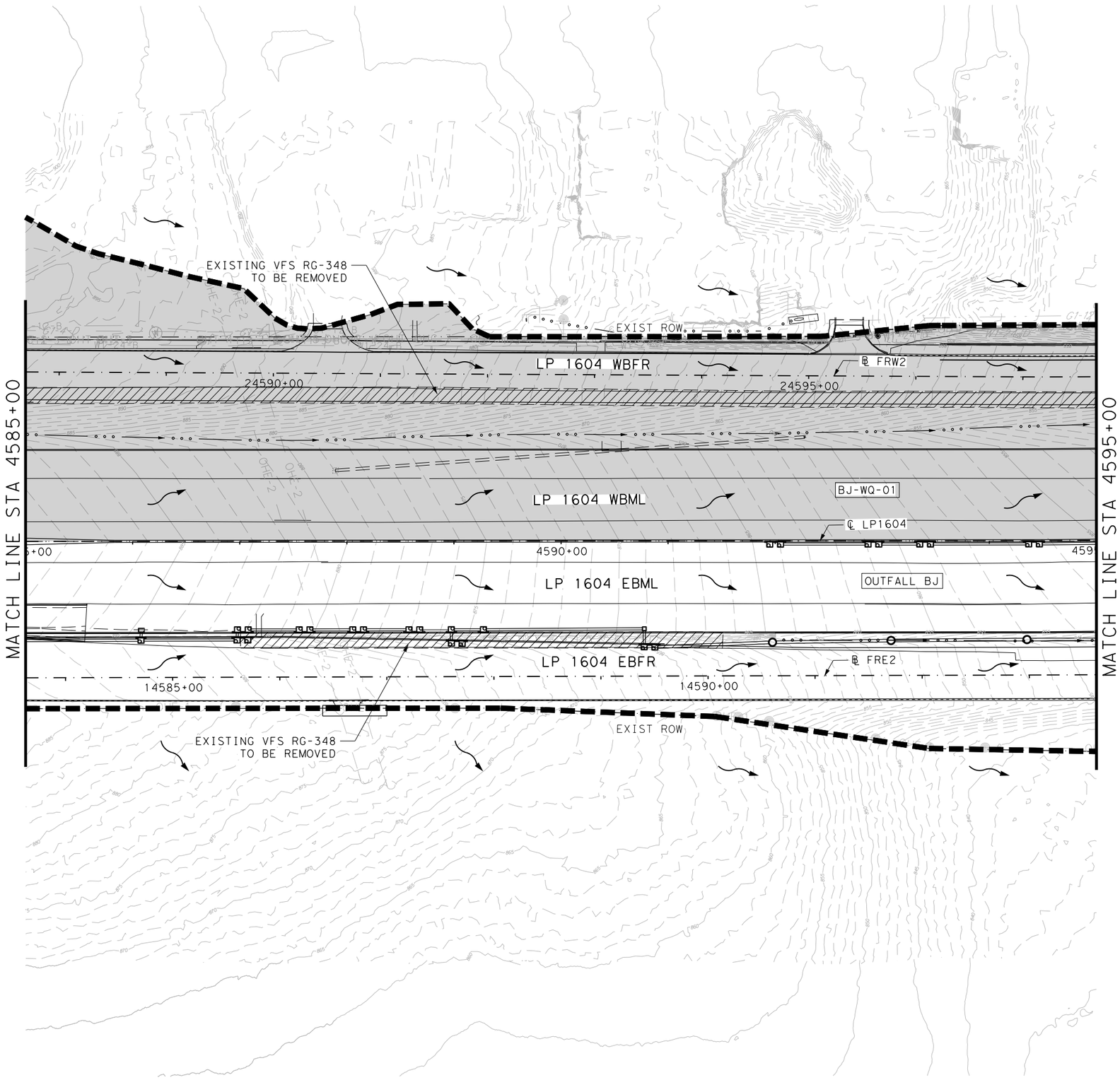

LEGEND

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LP 1604
WPAP
SITE PLAN
4585+00 TO 4595+00

SHEET 20 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2672

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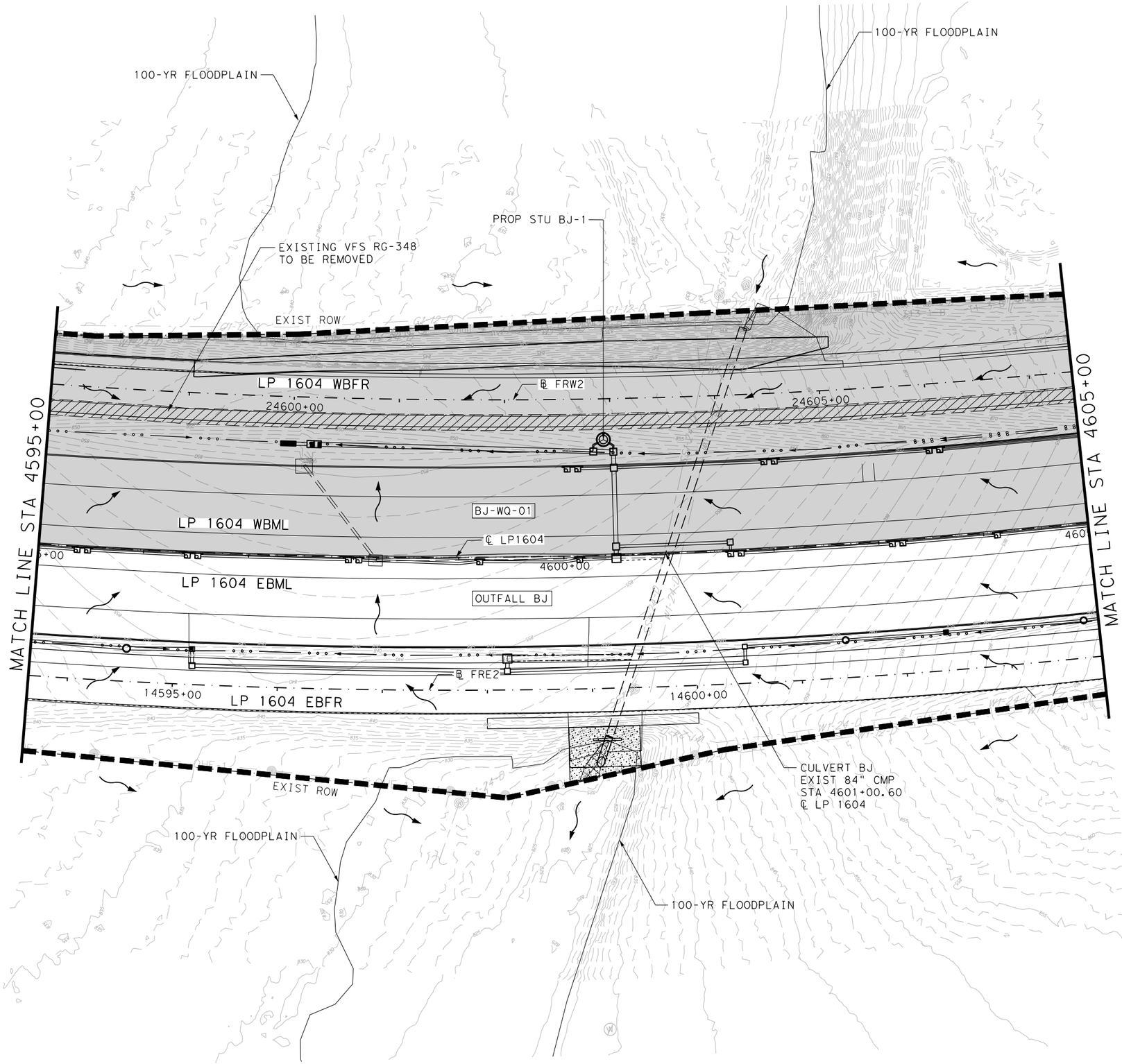

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LP 1604
WPAP
SITE PLAN
4595+00 TO 4605+00

SHEET 21 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2673

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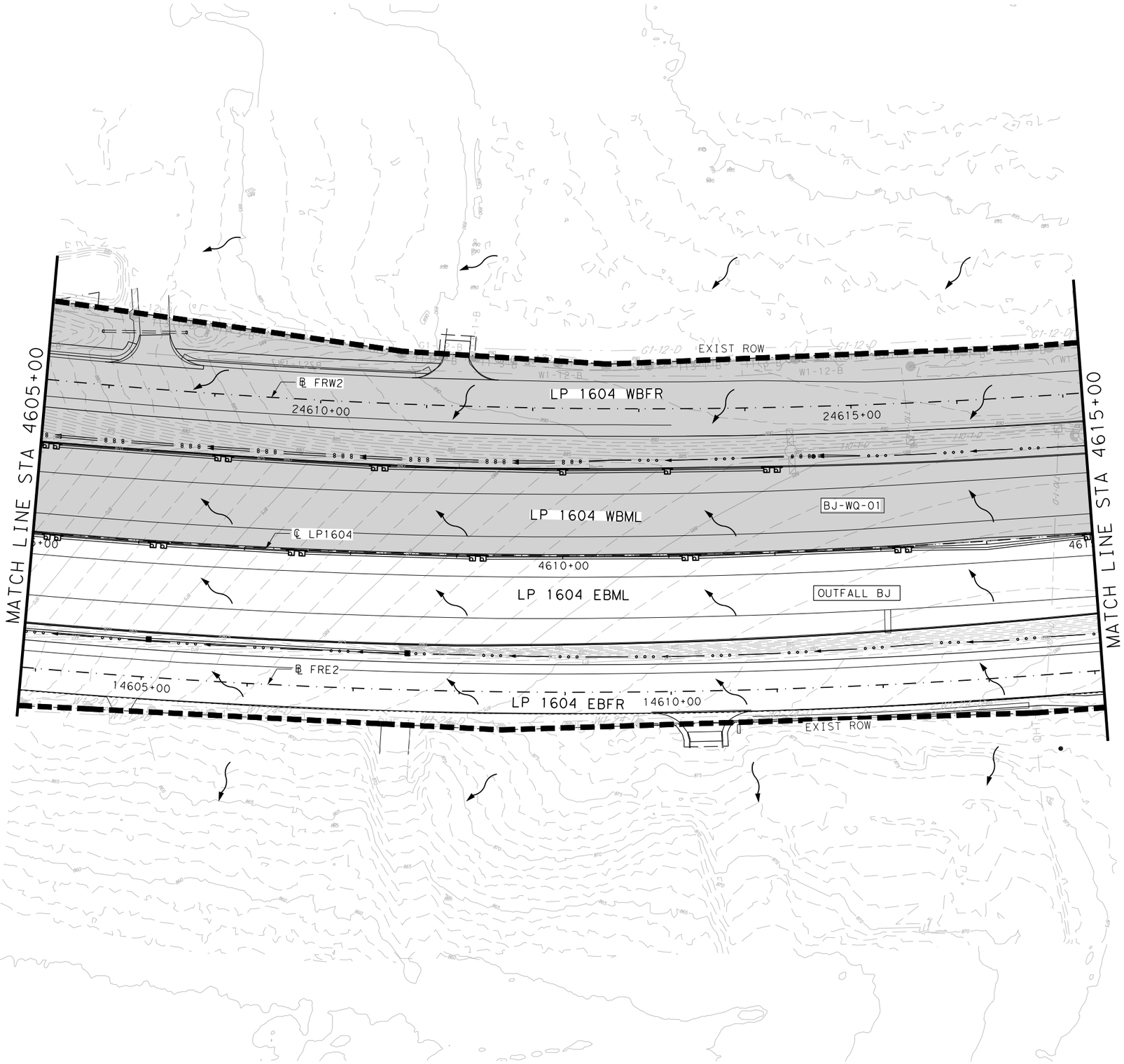

LEGEND

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WPAP
SITE PLAN
4605+00 TO 4615+00

SHEET 22 OF 23

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2674

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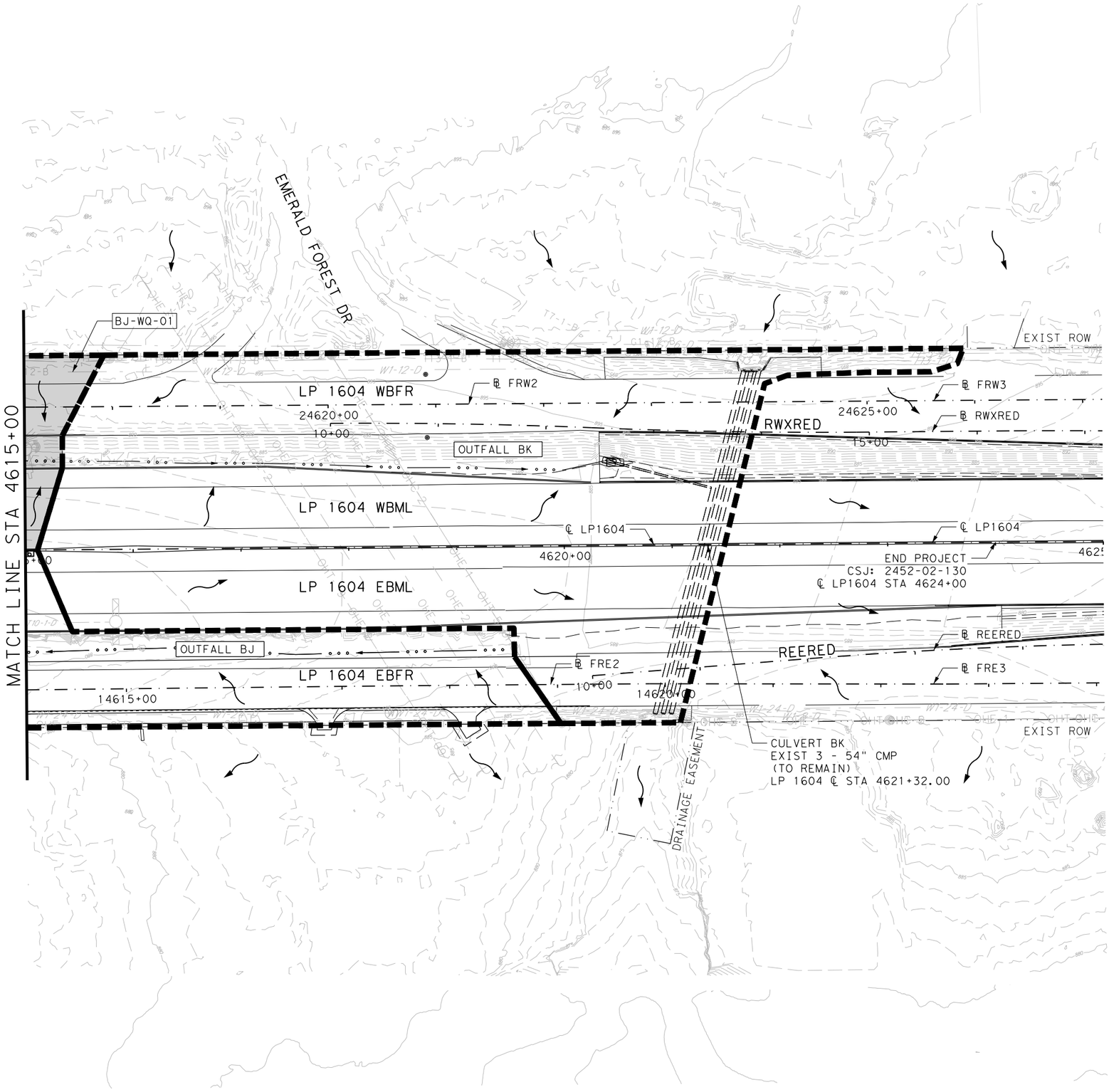

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WPAP
SITE PLAN
4615+00 TO END

SHEET 23 OF 23

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS	SEE TITLE SHEET			LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2675

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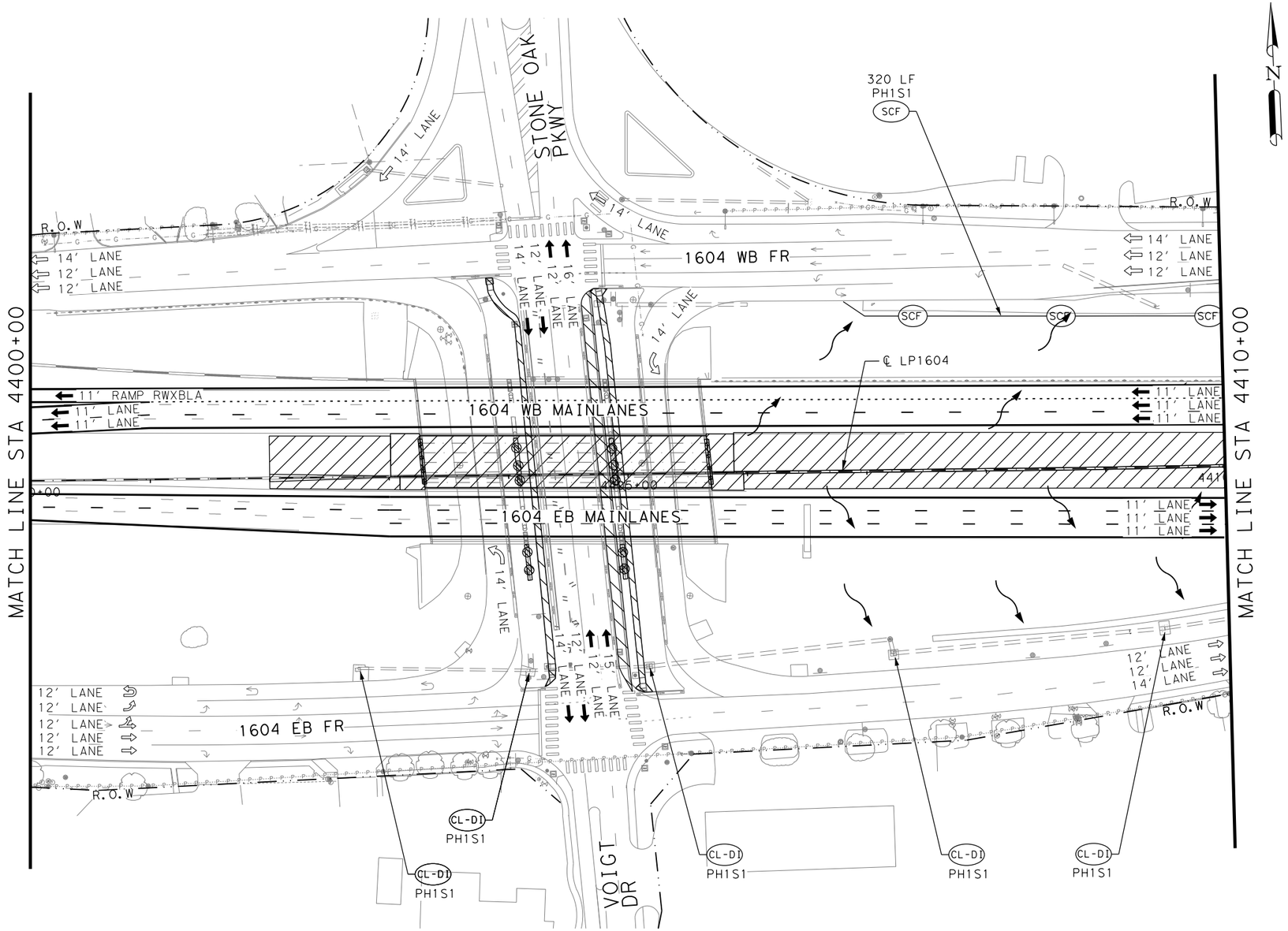

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	2
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	320
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	320
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	100
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	100

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4400+00 TO STA 4410+00

SHEET 1 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2676

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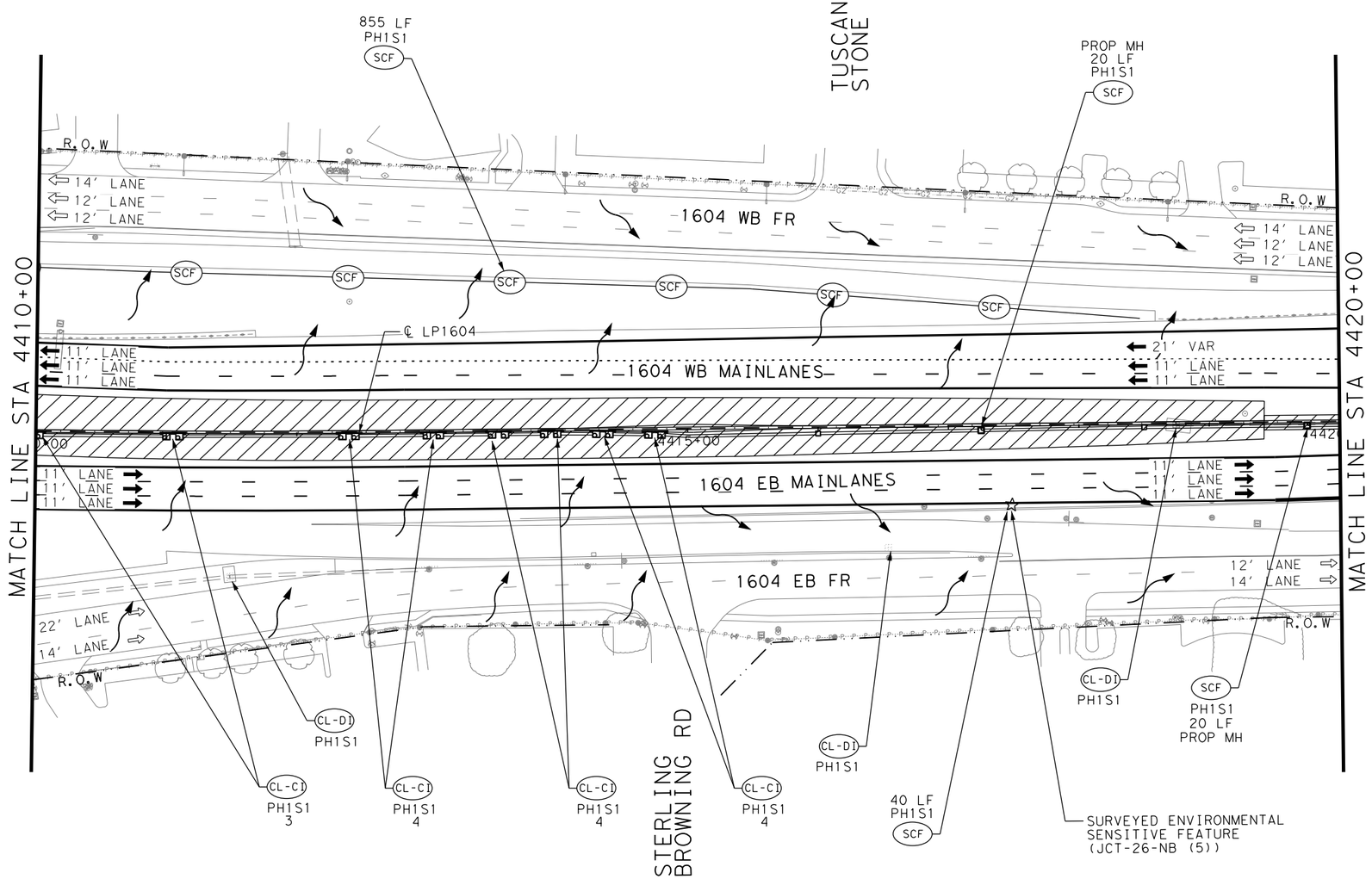

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	2
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	935
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	935
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	330
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	330

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
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REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4410+00 TO STA 4420+00

SHEET 2 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2677

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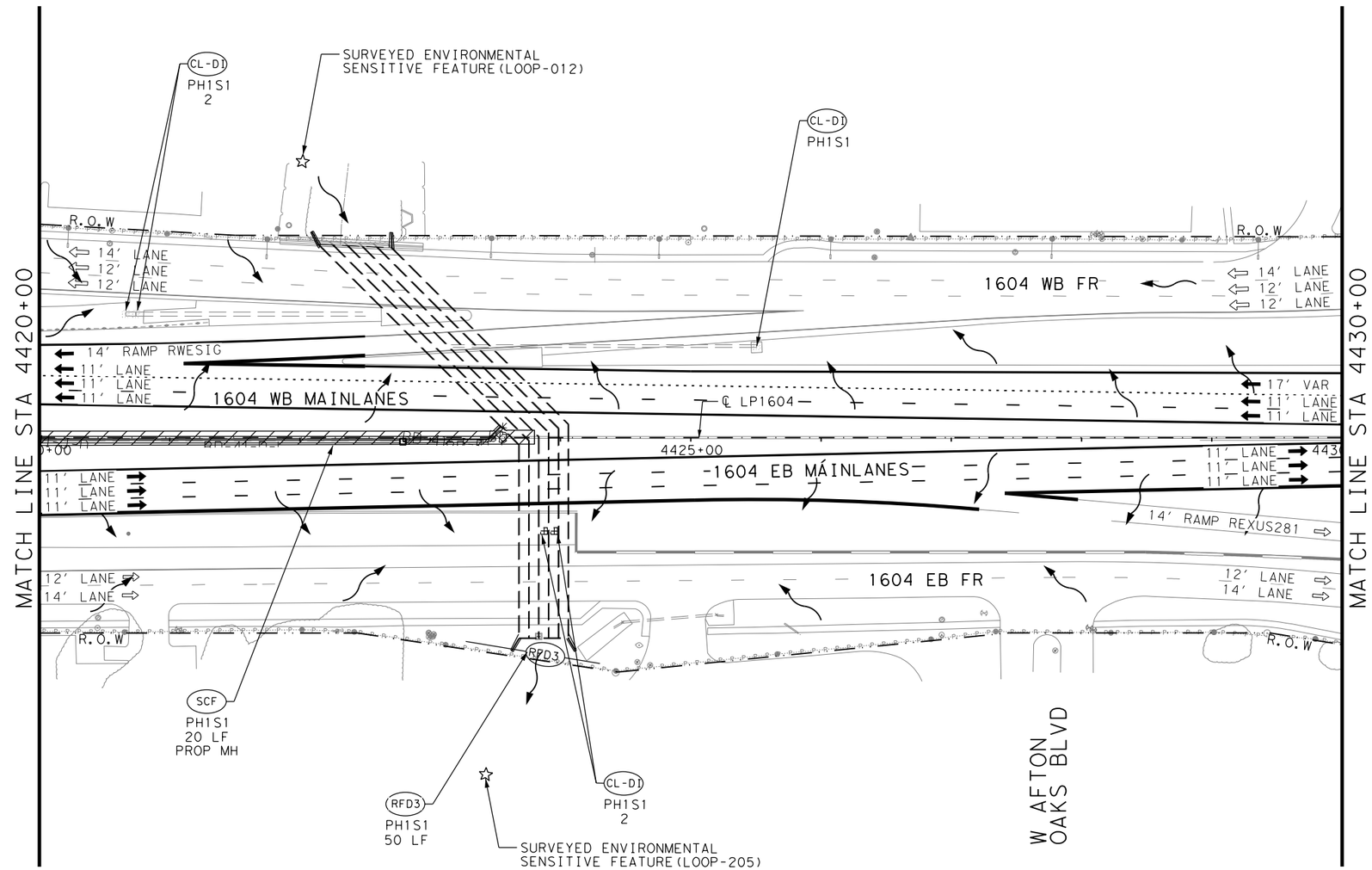

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	50
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	50
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	20
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	20
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	100
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	100

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NOTES:

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3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
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STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10263

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4420+00 TO STA 4430+00

SHEET 3 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2678

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

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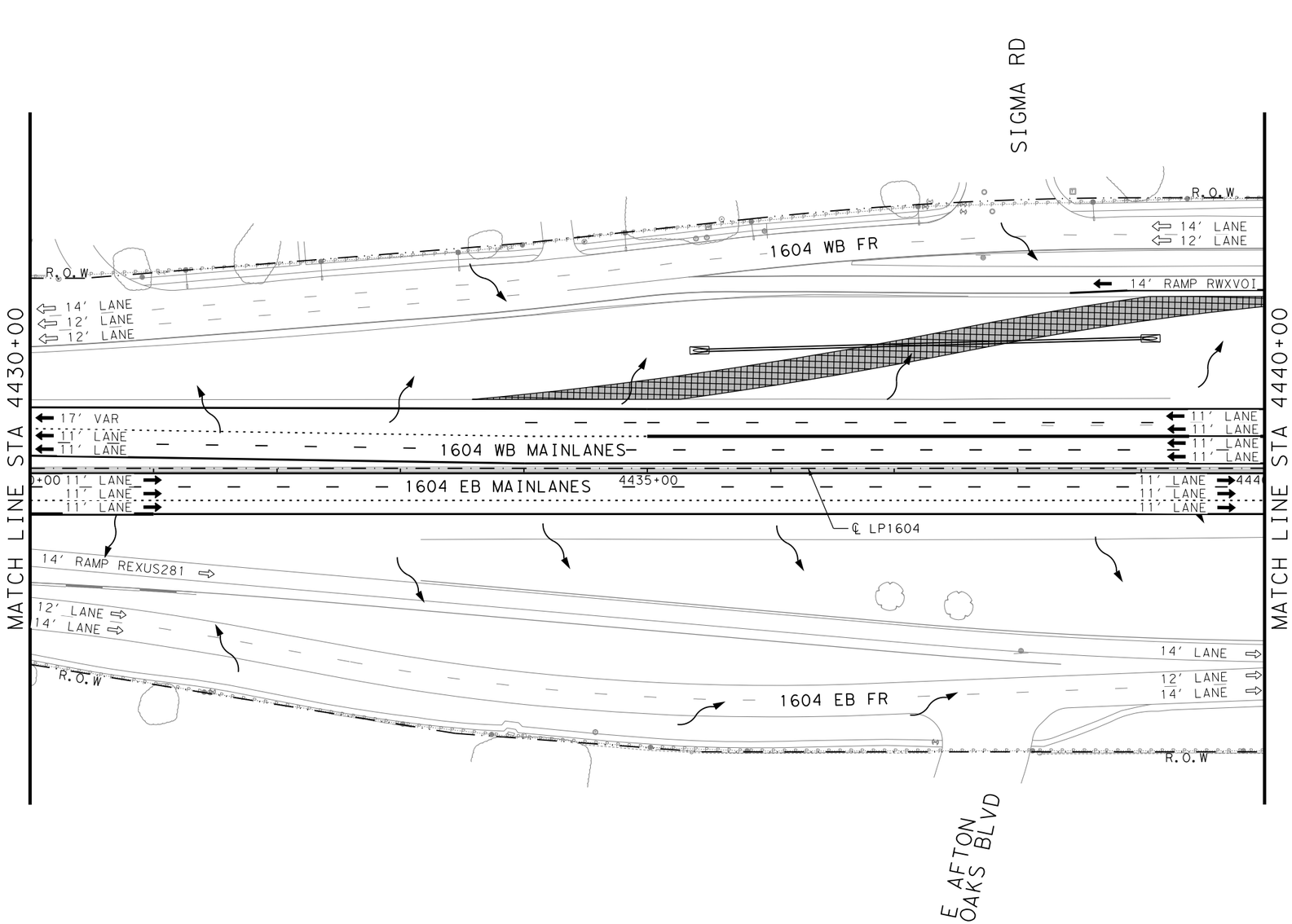

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON, TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4430+00 TO STA 4440+00

SHEET 4 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2679

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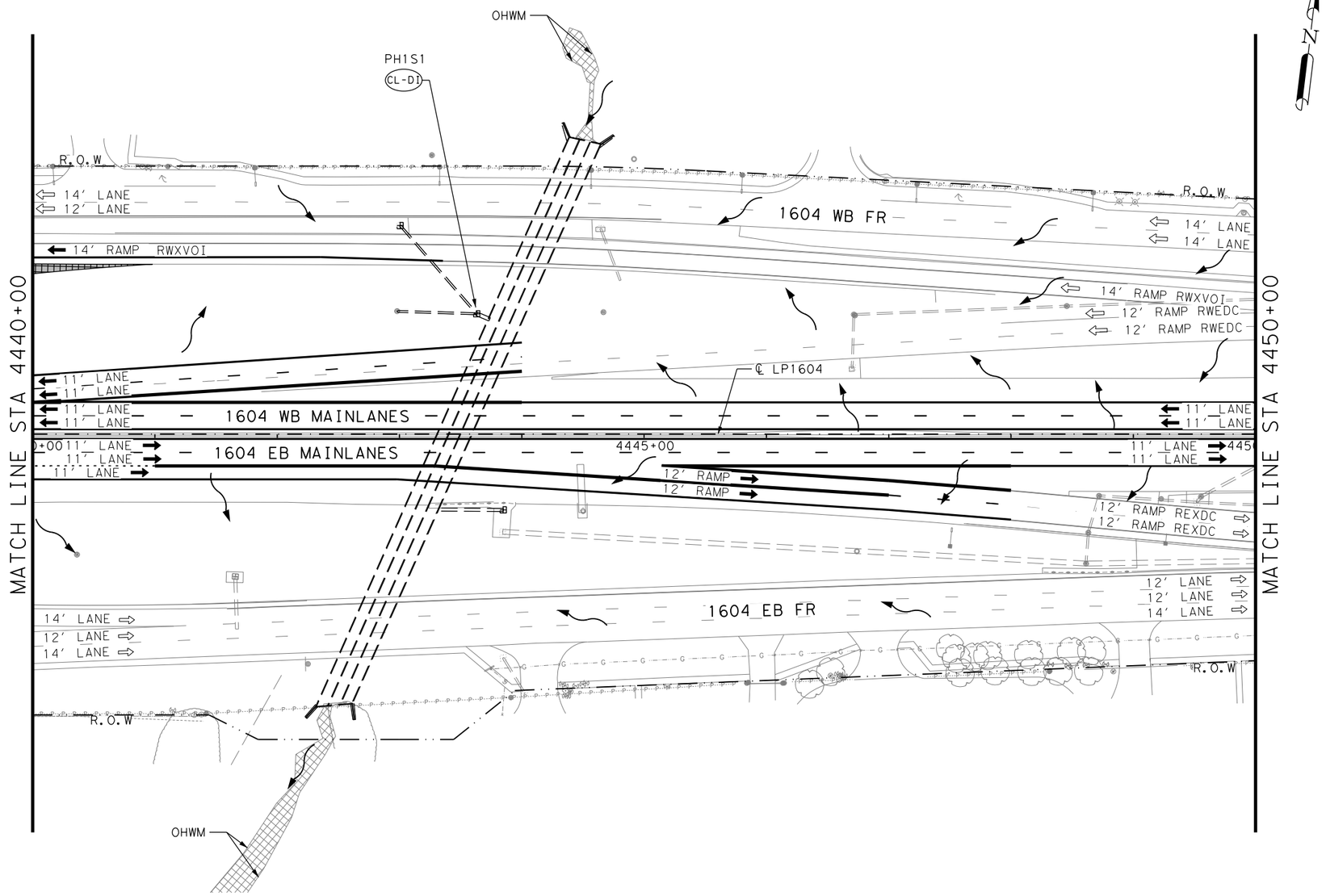

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	20
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	20

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- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-D1 — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-D1 — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-C1 — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-C1 — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-G1 — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-G1 — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
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LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4440+00 TO STA 4450+00

SHEET 5 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2680

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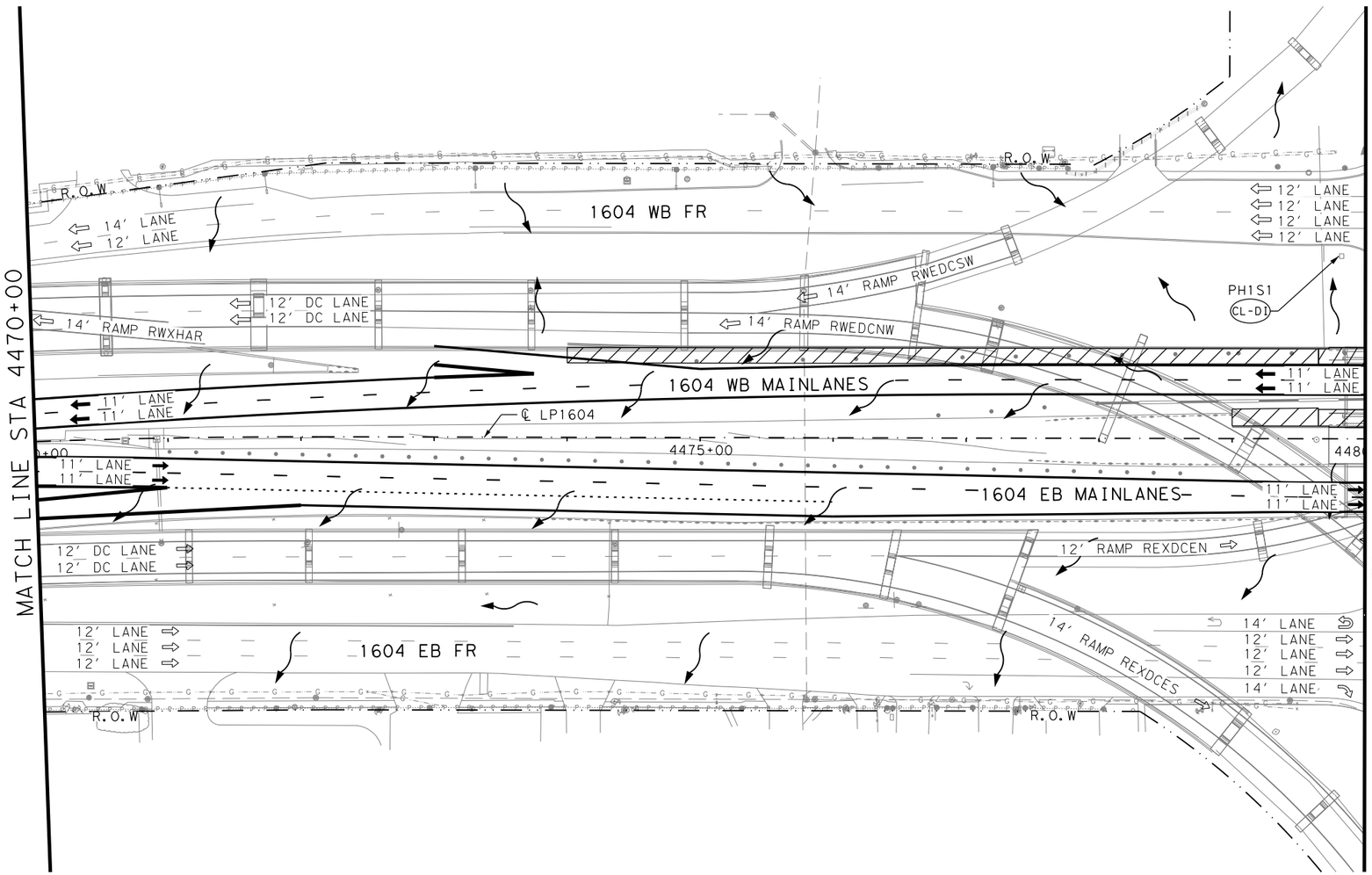

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
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169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
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506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
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506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
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- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4470+00 TO STA 4480+00

SHEET 6 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2681

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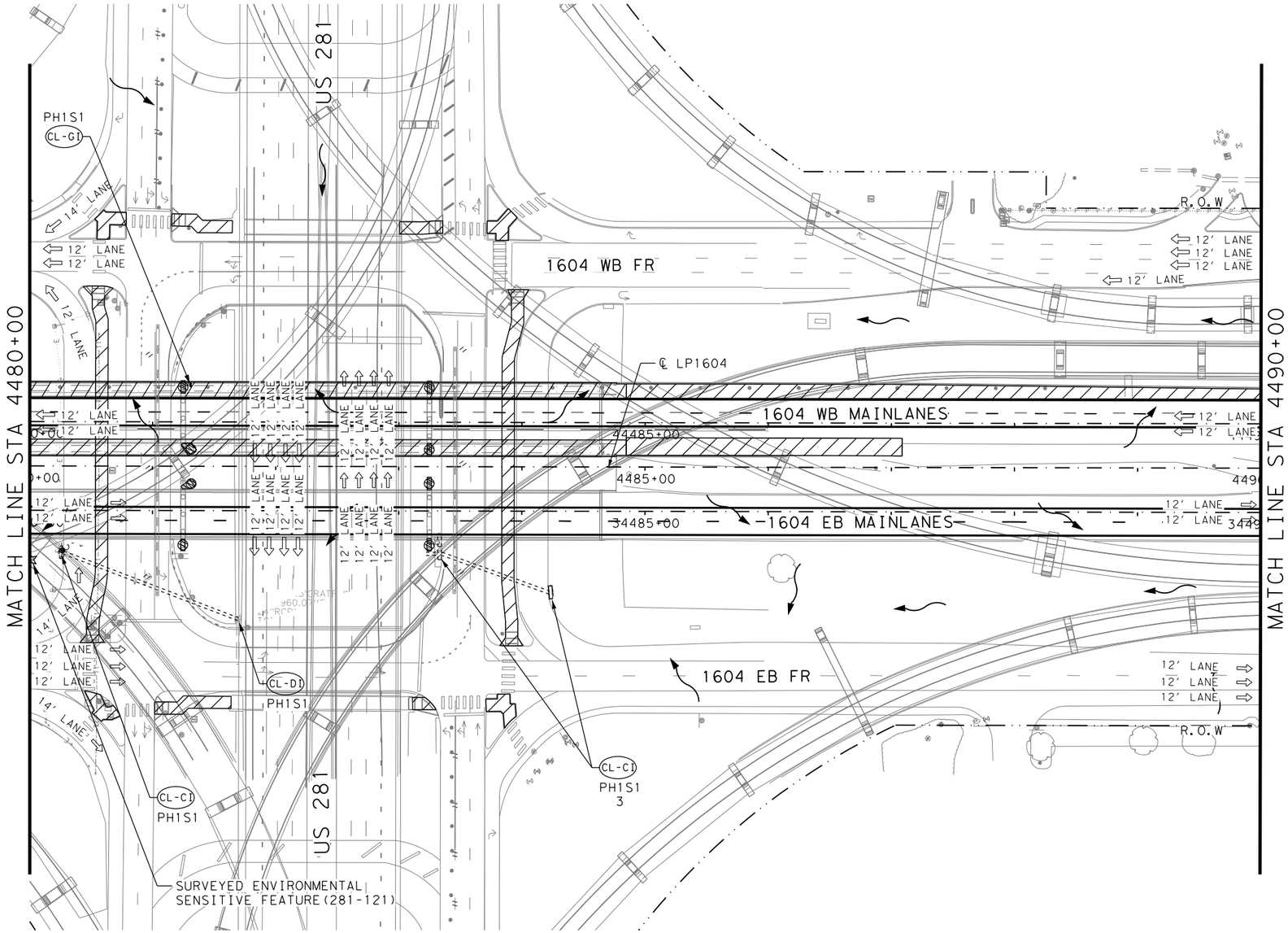

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	94
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	94

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
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- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
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LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation
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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4480+00 TO STA 4490+00

SHEET 7 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2682

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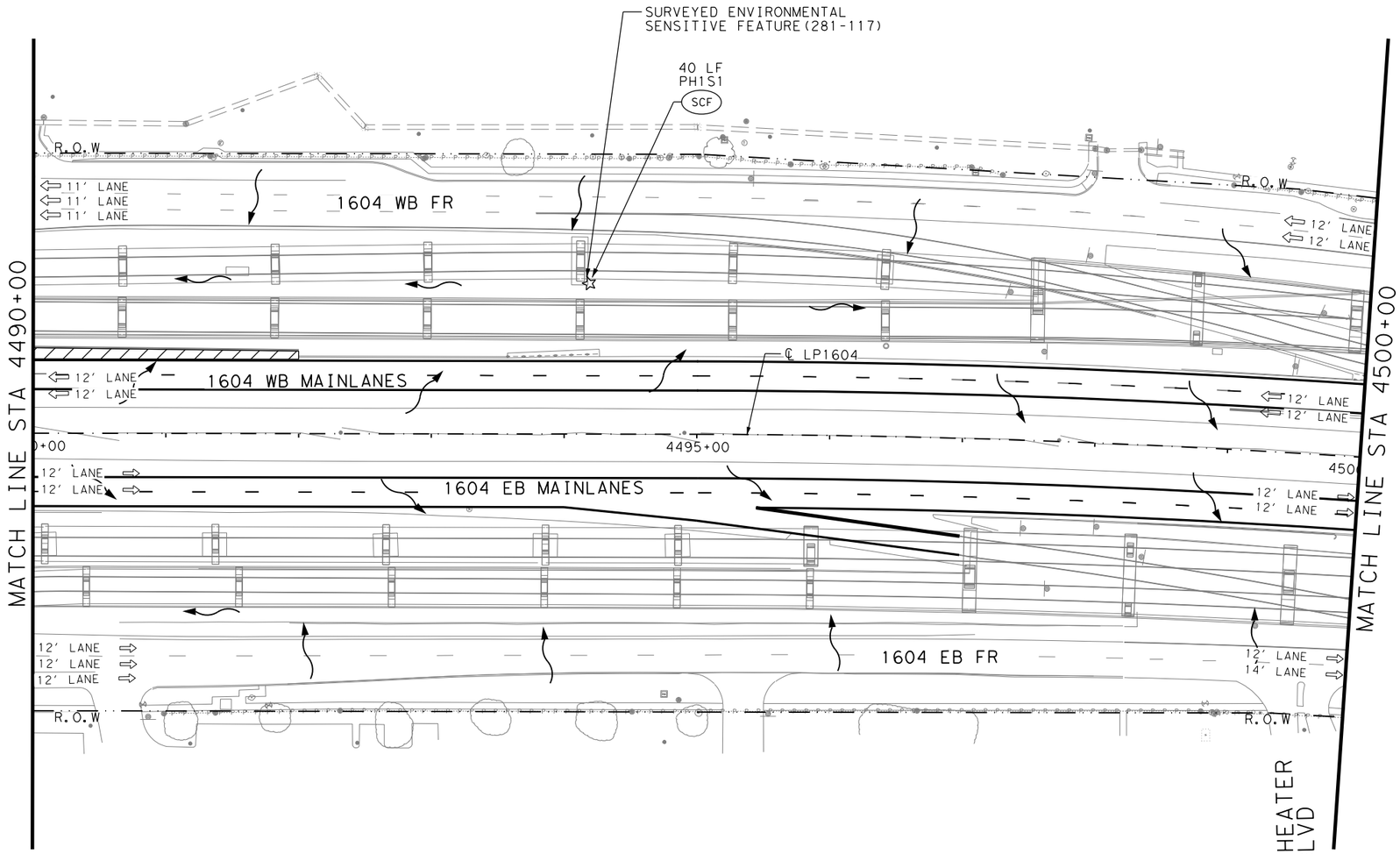

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	111
506	CONSTRUCTION EXITS (REMOVE)	SY	111
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	40
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	40
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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NOTES:

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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10263

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4490+00 TO STA 4500+00

SHEET 8 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2683

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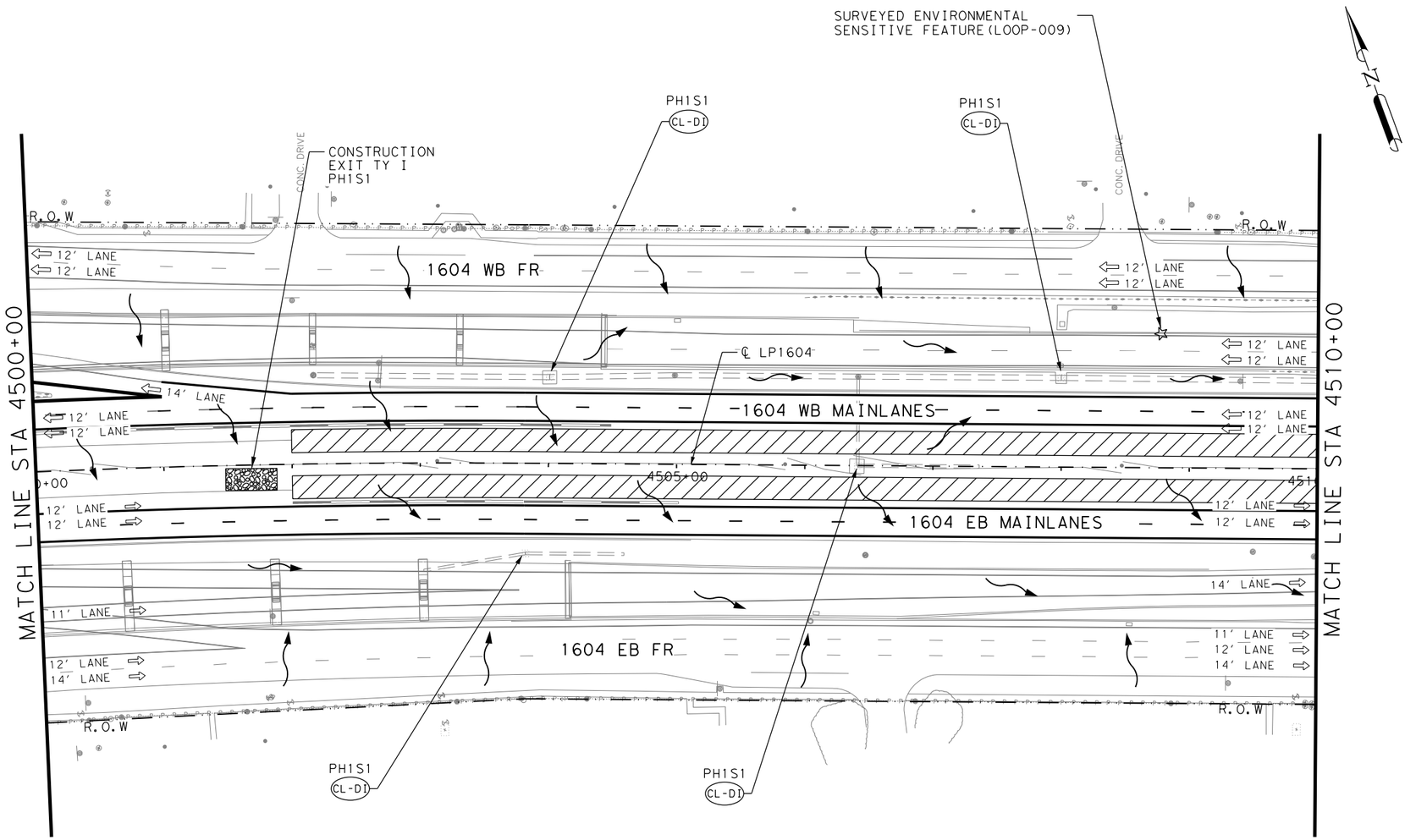

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	111
506	CONSTRUCTION EXITS (REMOVE)	SY	111
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	80

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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2925 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4500+00 TO STA 4510+00

SHEET 9 OF 22

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2684

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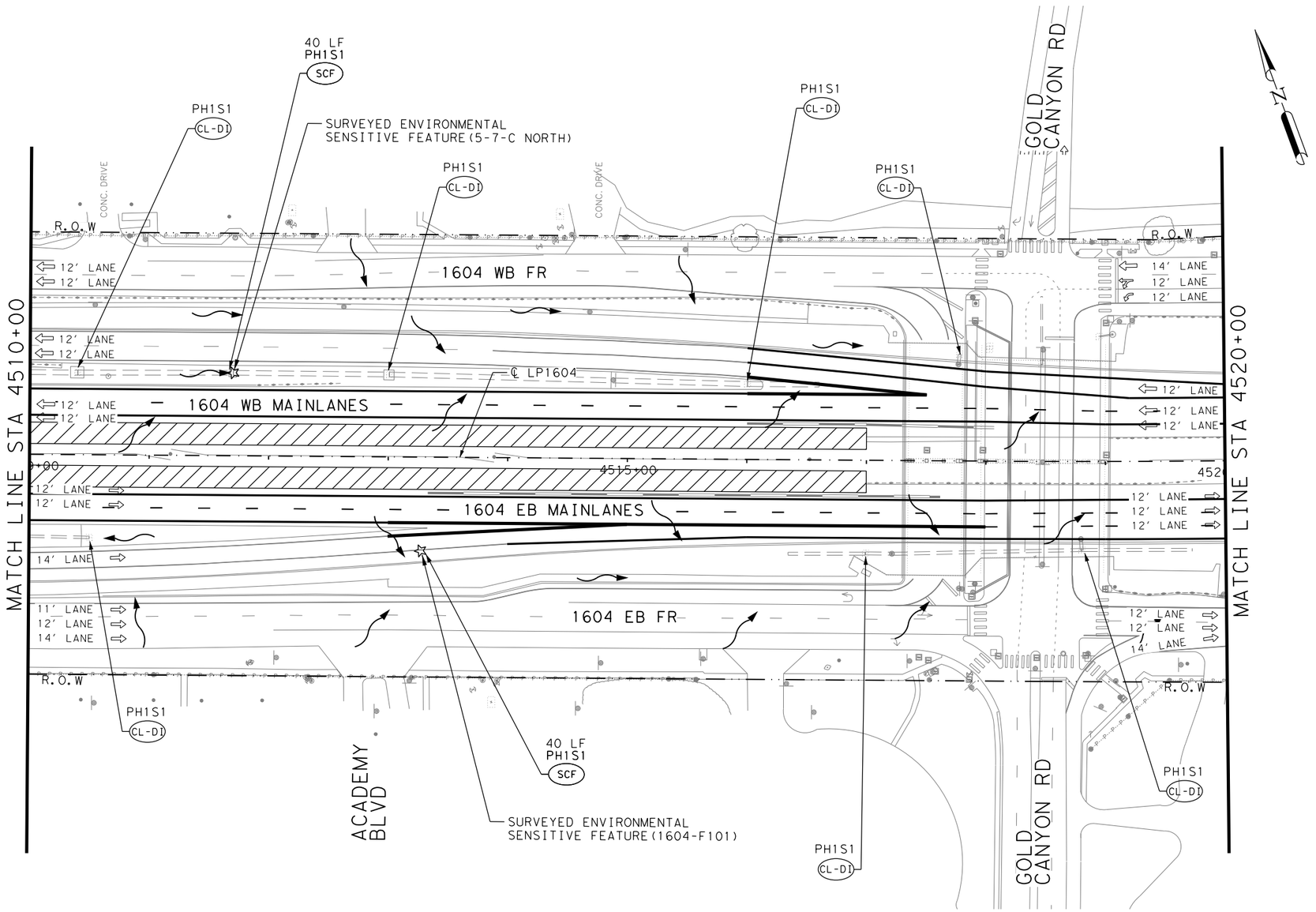

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	80
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	80
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	140
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	140

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- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
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2/17/2023

0' 25' 50' 100'
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REV. NO.	DATE	DESCRIPTION	BY

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Texas Department of Transportation
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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4510+00 TO STA 4520+00

SHEET 10 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2685

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QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	111
506	CONSTRUCTION EXITS (REMOVE)	SY	111
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	2
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	226
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	226
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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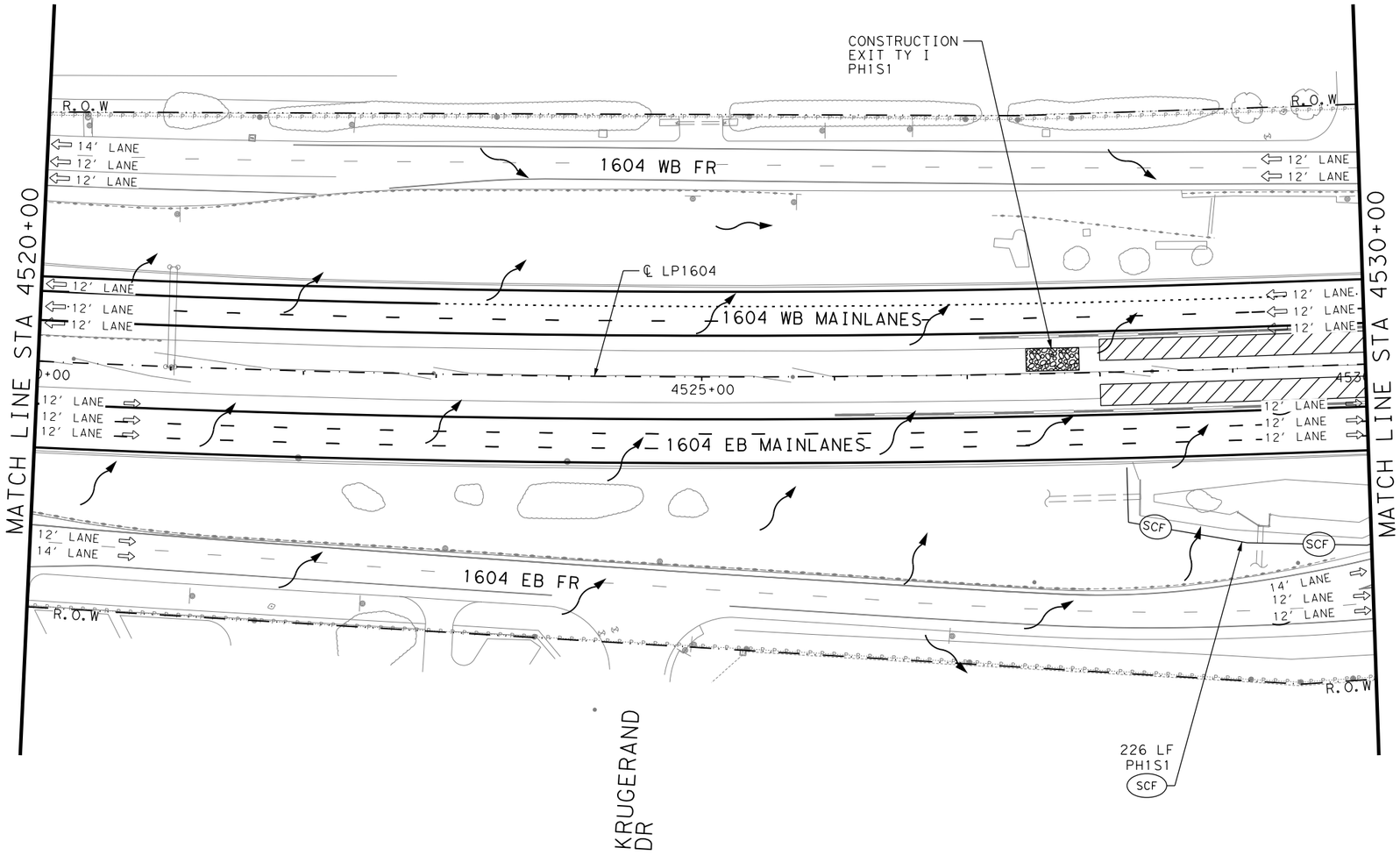

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE		TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation ©2023

LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4520+00 TO STA 4530+00

SHEET 11 OF 22

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2686

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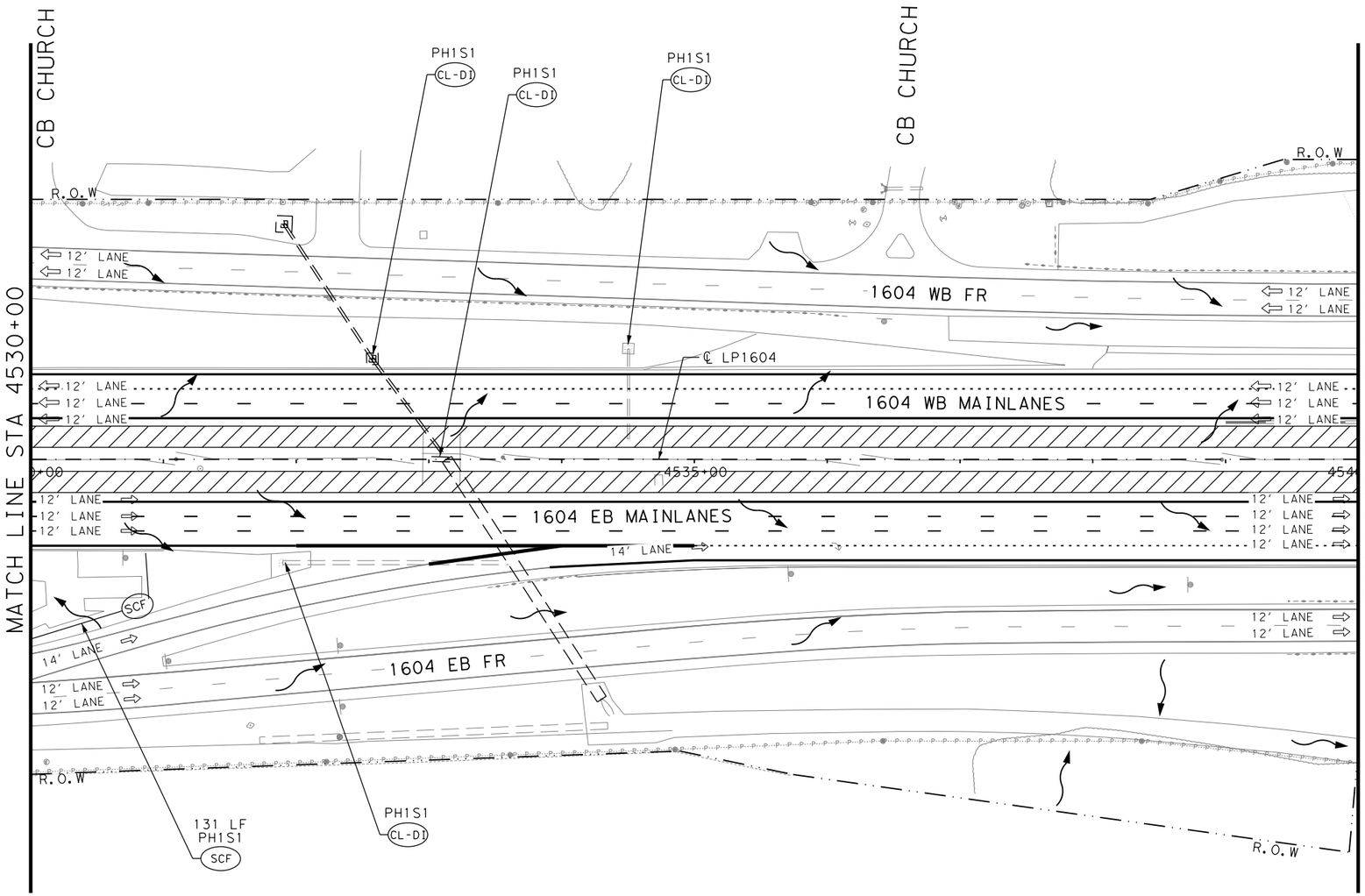

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	131
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	131
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	80

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
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- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
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REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
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LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation ©2023

LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4530+00 TO STA 4540+00

SHEET 12 OF 22

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2687

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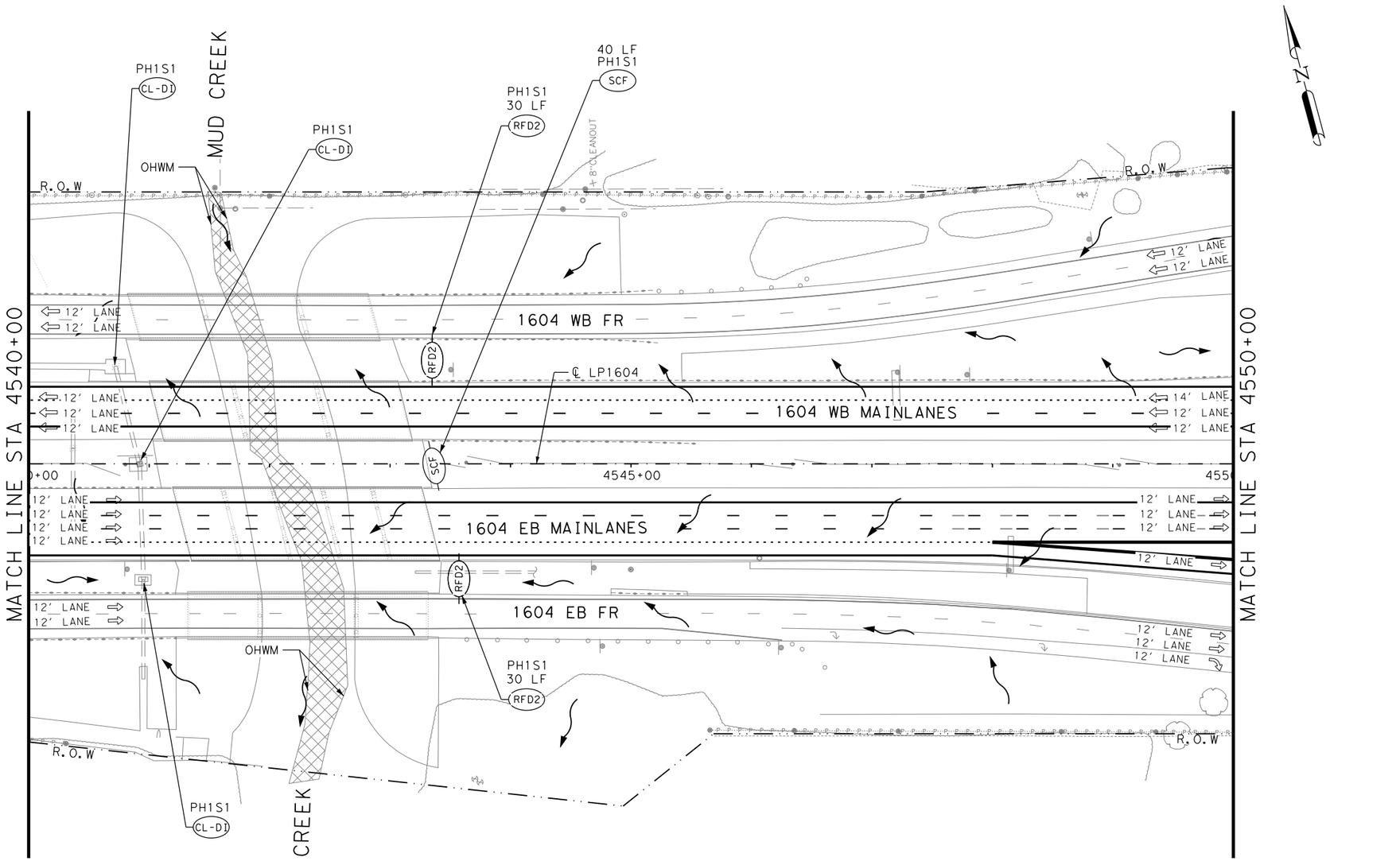

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	60
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	60
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	4
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	40
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	40
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	60
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	60

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LEGEND:

- (SCF) TEMPORARY SEDIMENT CONTROL FENCE
- (SCF) TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- (RFD2) ROCK FILTER DAM
- (RFD2) ROCK FILTER DAM PREV PHASE
- (CL-DI) EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
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- (CL-CI) EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- (CL-CI) EROSION CONTROL LOG AT CURB INLET PREV PHASE
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- (ECL) EROSION CONTROL LOG
- (ECL) EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
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FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4540+00 TO STA 4550+00

SHEET 13 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2688

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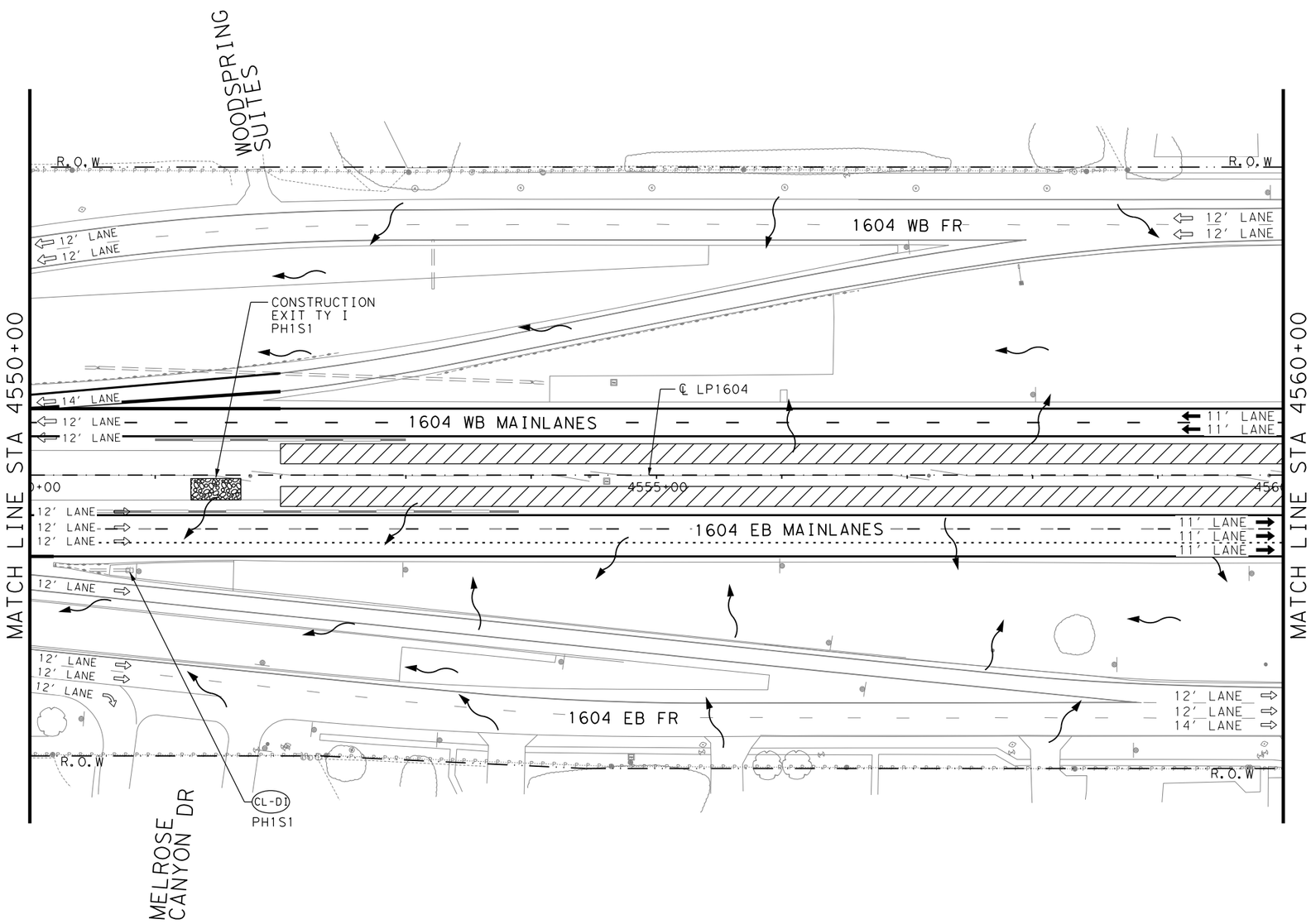

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	111
506	CONSTRUCTION EXITS (REMOVE)	SY	111
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	20
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	20

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- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
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- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4550+00 TO STA 4560+00

SHEET 14 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2689

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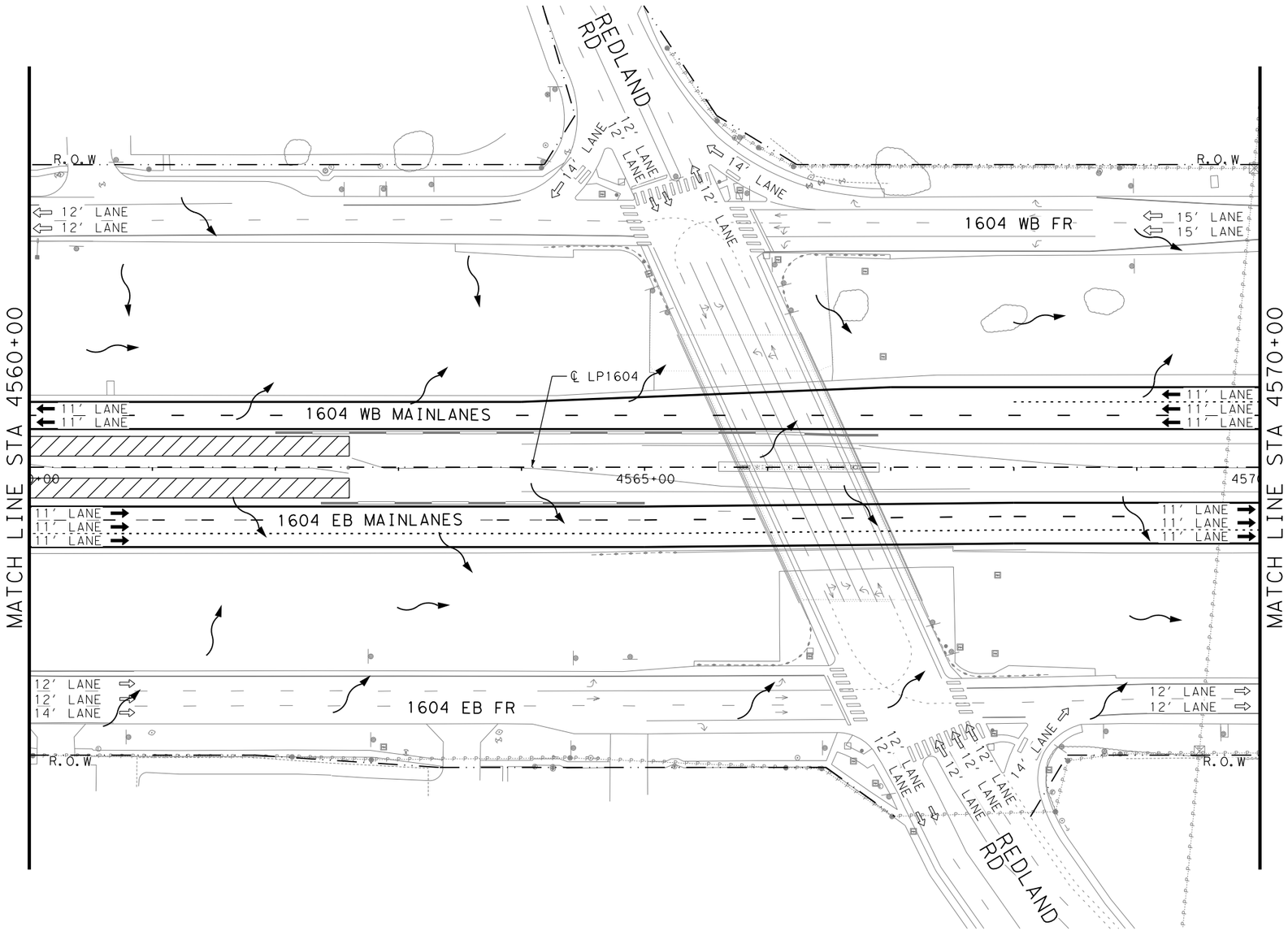

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QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- PERM PAVEMENT THIS PHASE
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- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4560+00 TO STA 4570+00

SHEET 15 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2690

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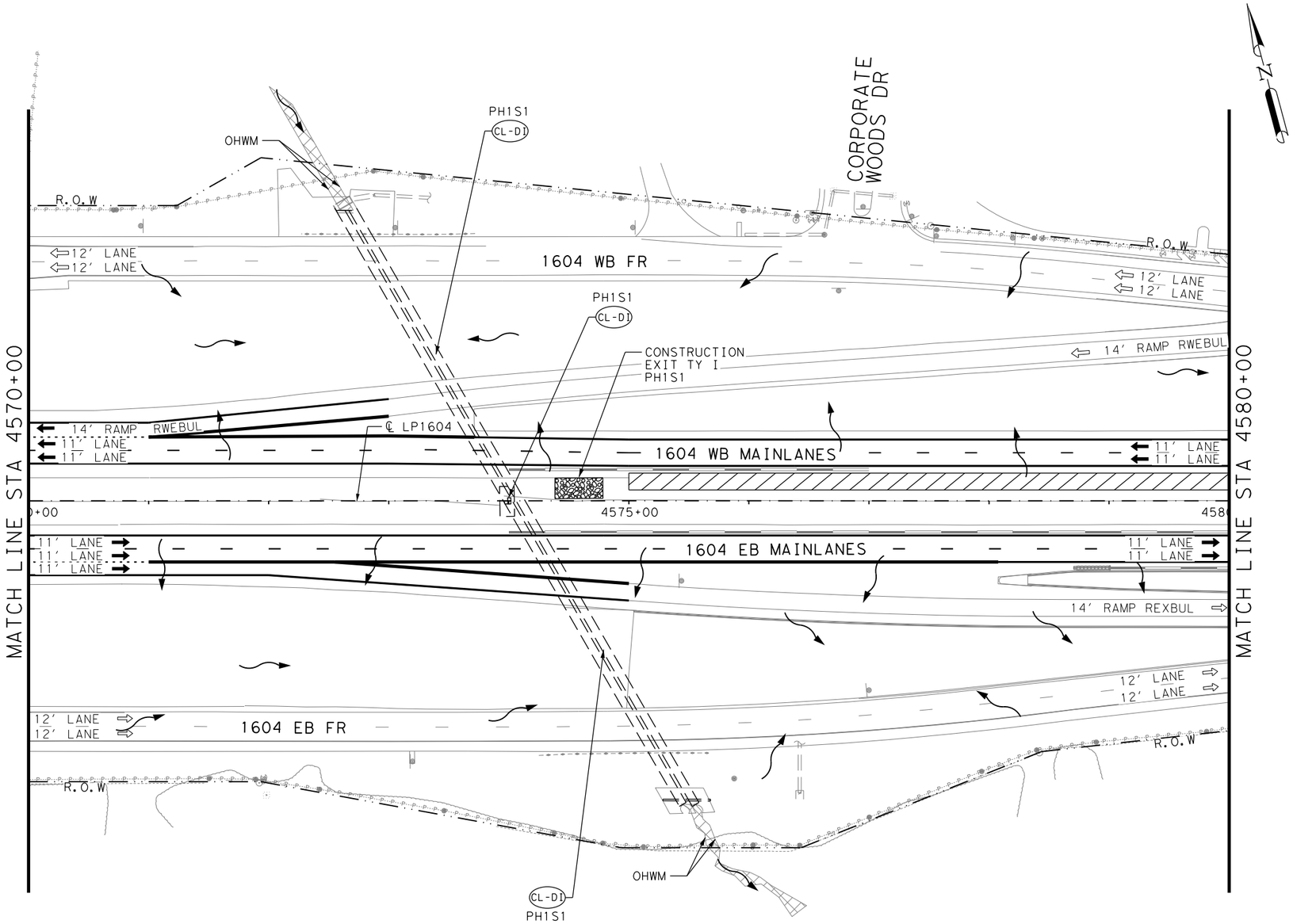

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
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*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	111
506	CONSTRUCTION EXITS (REMOVE)	SY	111
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	60
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	60

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- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

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CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation ©2023

LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4570+00 TO STA 4580+00

SHEET 16 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2691

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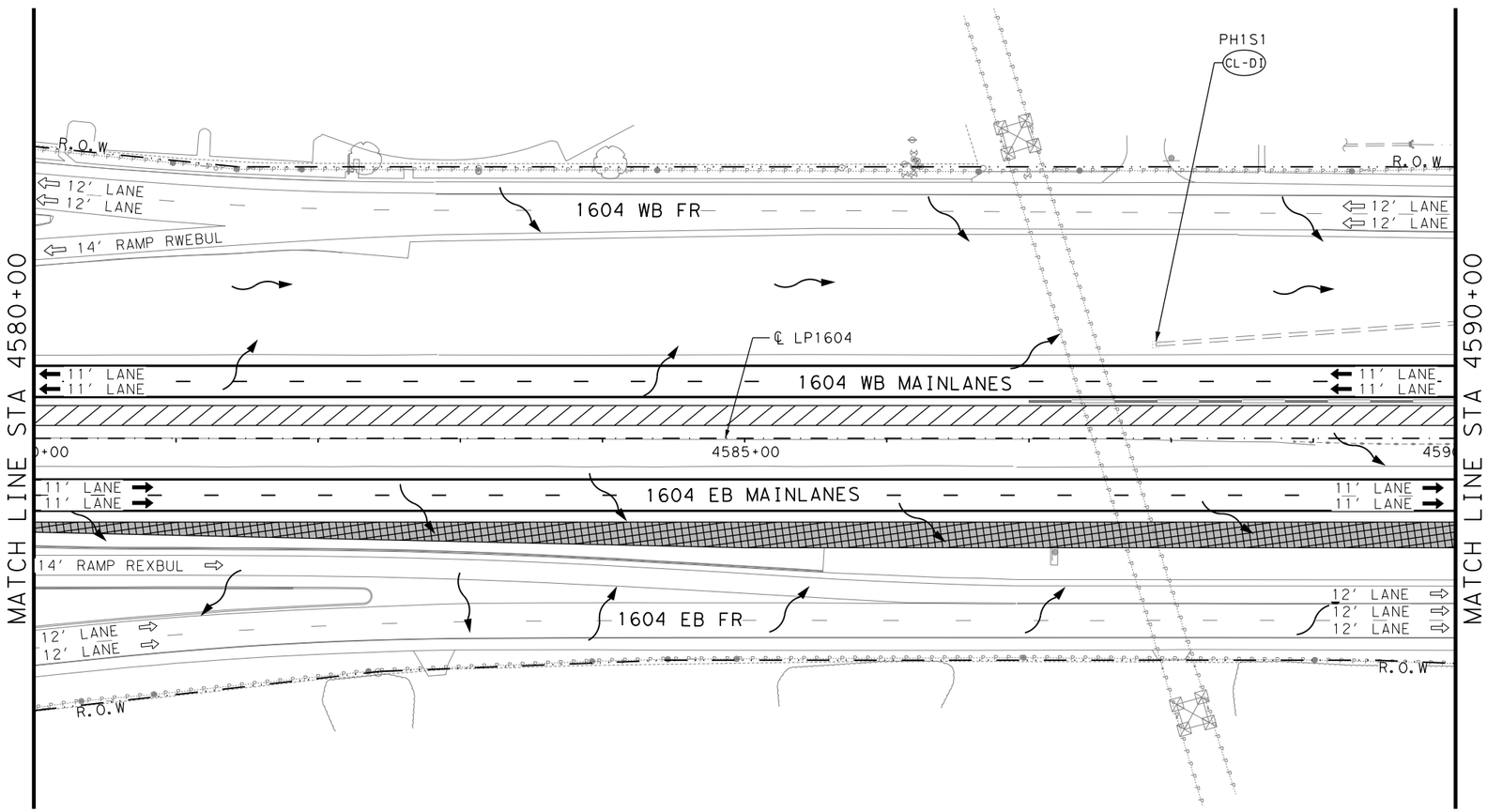

N

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	20
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	20

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS * SURVEYORS
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LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4580+00 TO STA 4590+00

SHEET 17 OF 22

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2692

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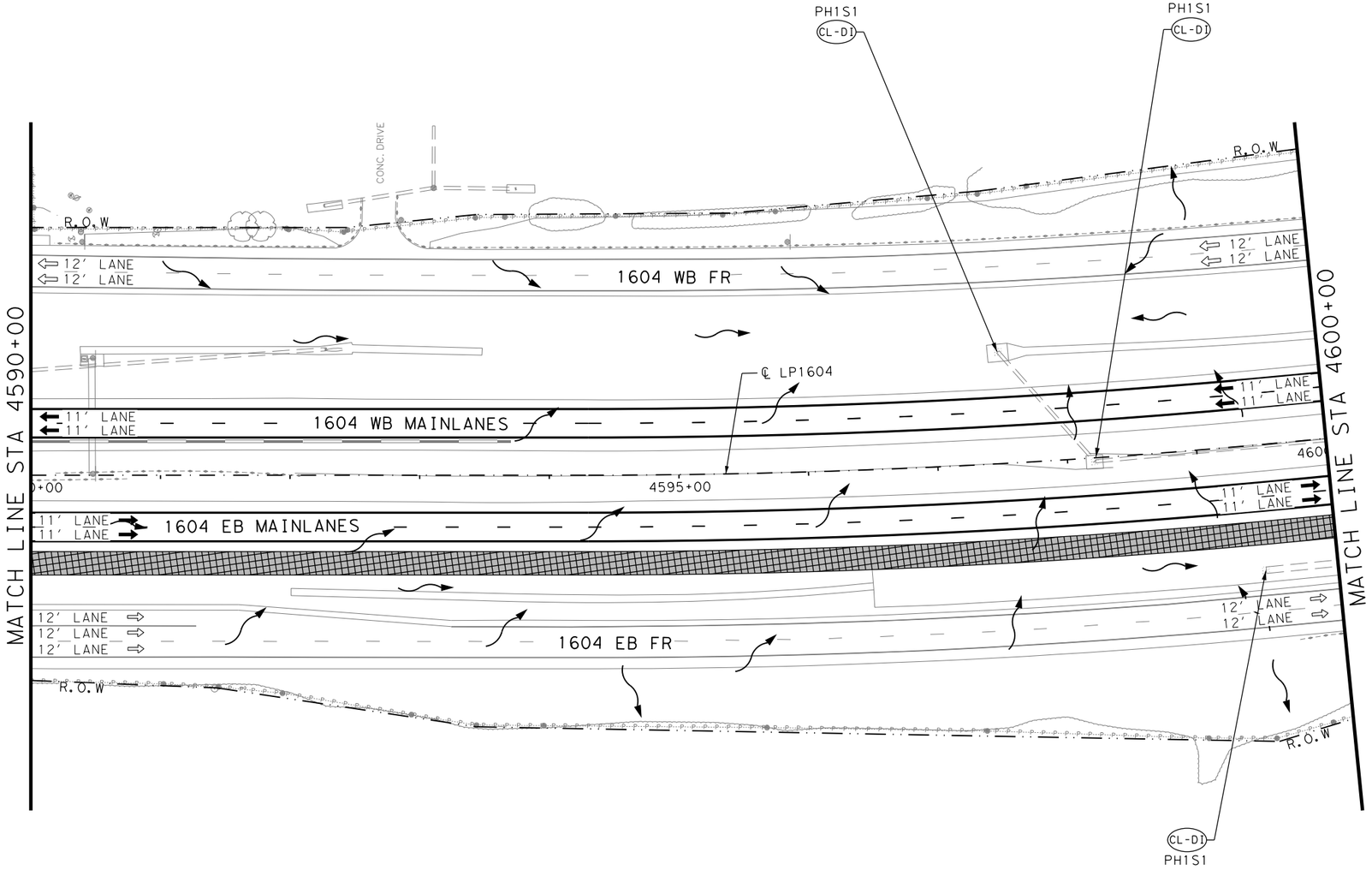

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	60
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	60

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LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
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LICENSED
PROFESSIONAL ENGINEER

2/17/2023

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4590+00 TO STA 4600+00

SHEET 18 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2693

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QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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NOTES:

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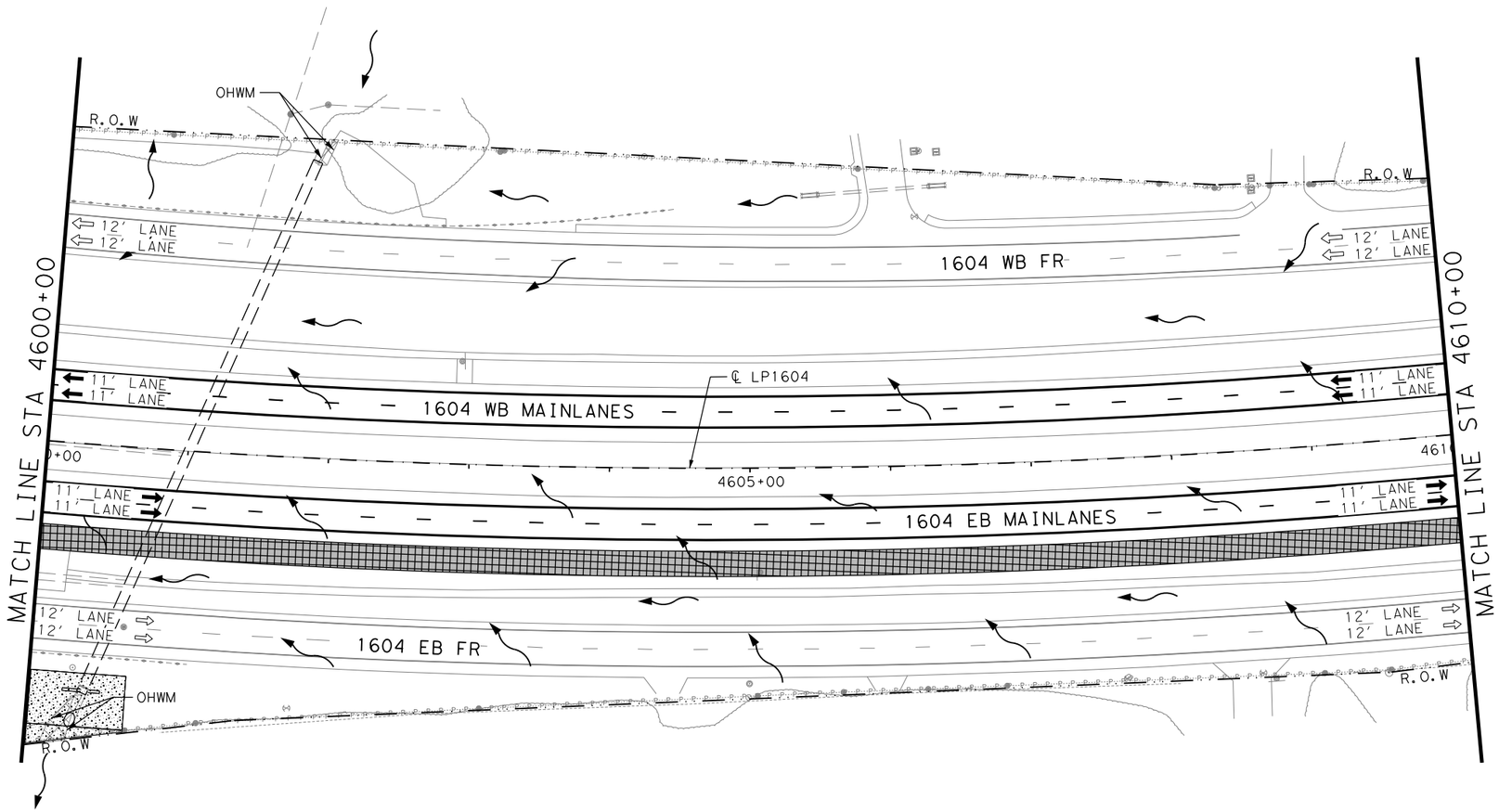

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

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FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4600+00 TO STA 4610+00

SHEET 19 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2694

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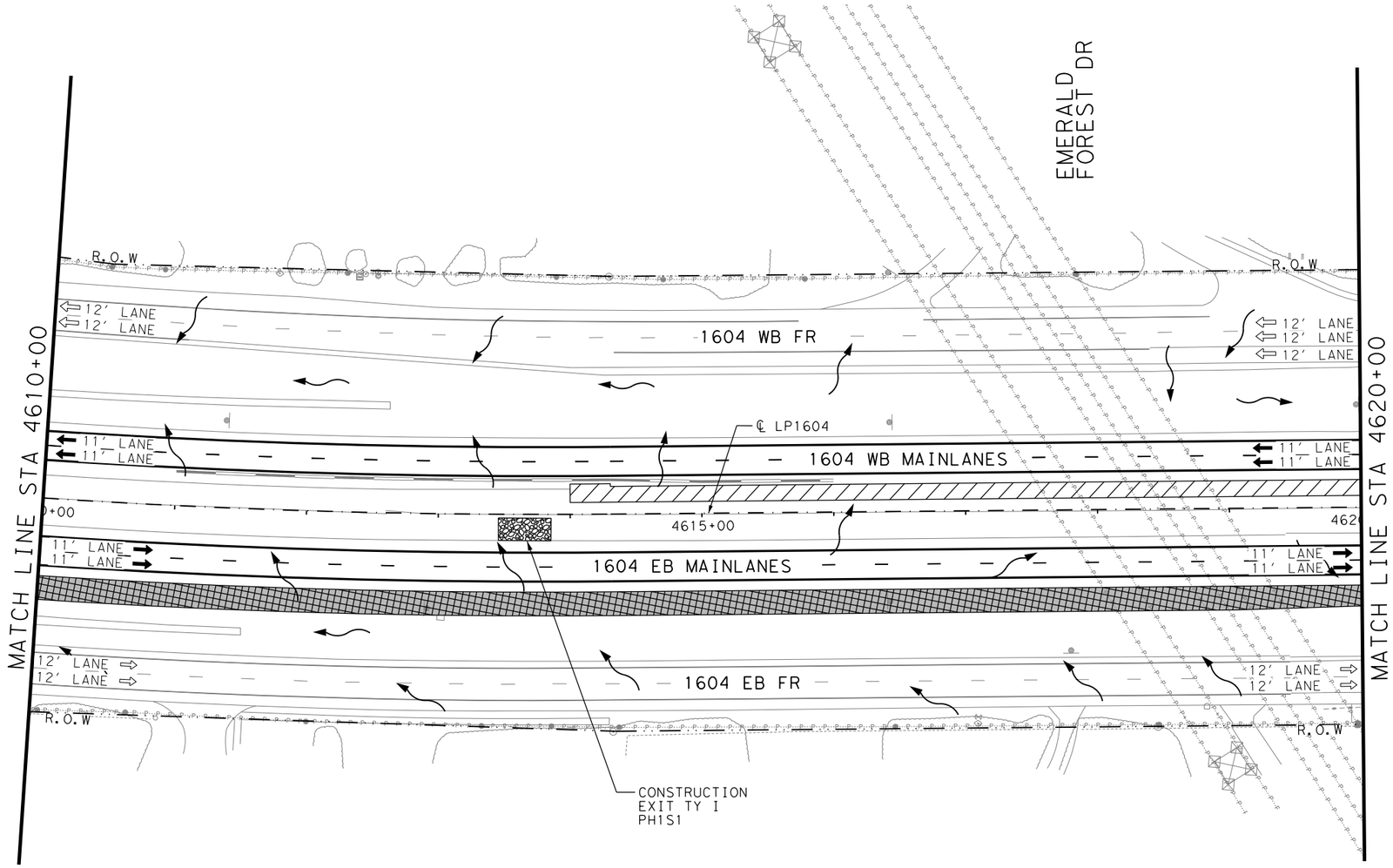

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	111
506	CONSTRUCTION EXITS (REMOVE)	SY	111
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
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FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4610+00 TO STA 4620+00

SHEET 20 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2695

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QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	20
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	20

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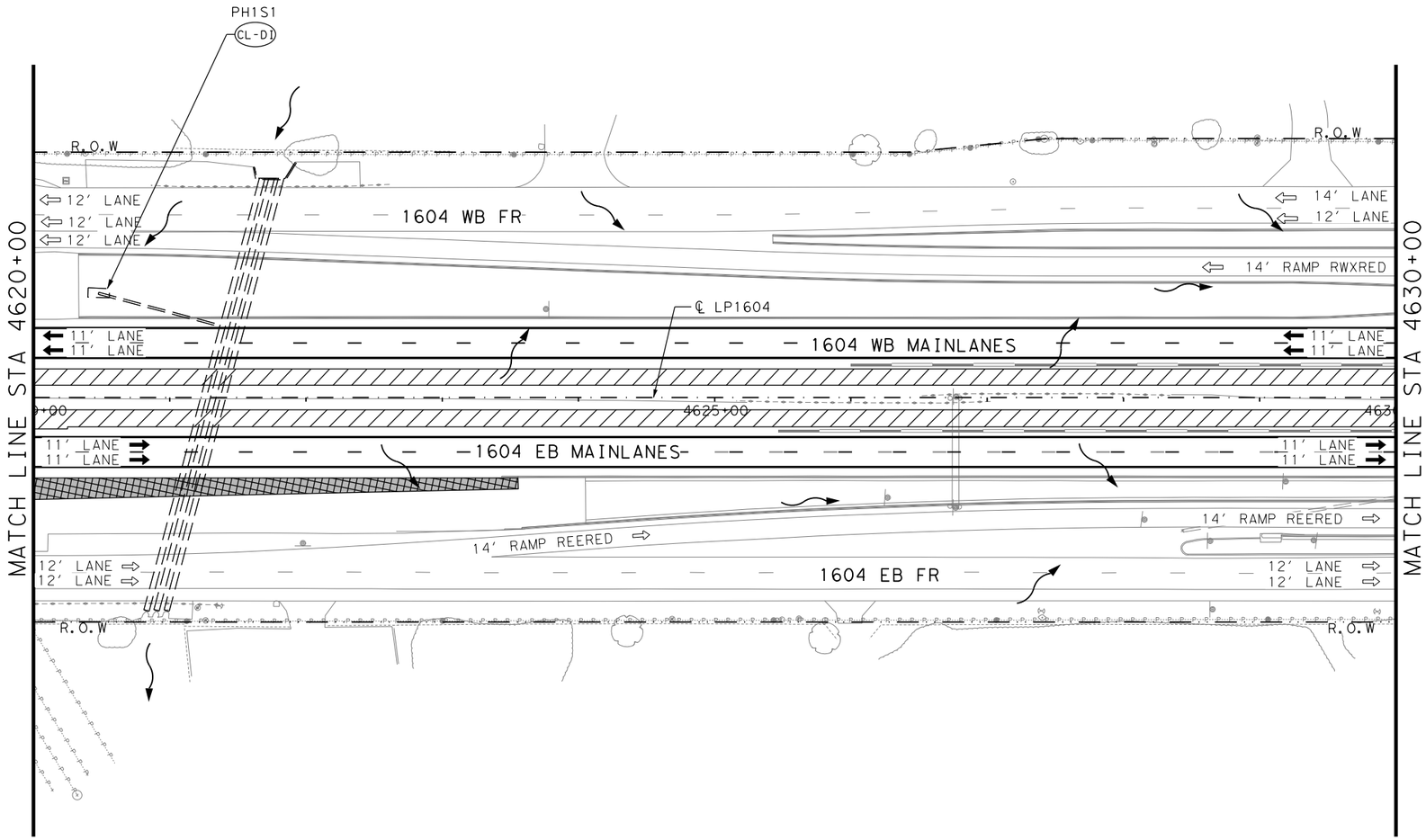

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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
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- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
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- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
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PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

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FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4620+00 TO STA 4630+00

SHEET 21 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2696

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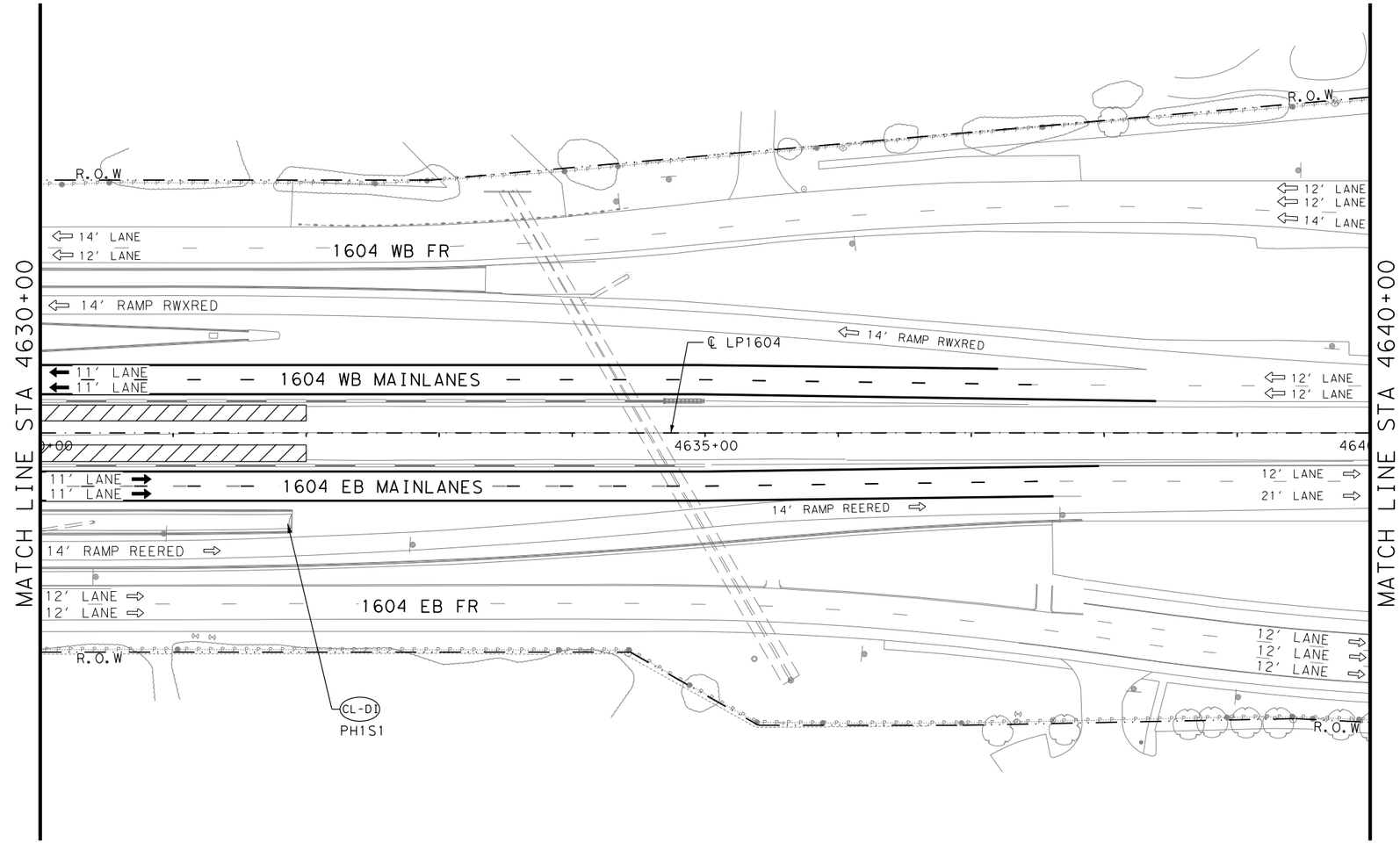

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

QUANTITY SUMMARY CSJ 0072-08-130, ETC

ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	20
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	20

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 1
STA 4630+00 TO STA 4640+00

SHEET 22 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2697

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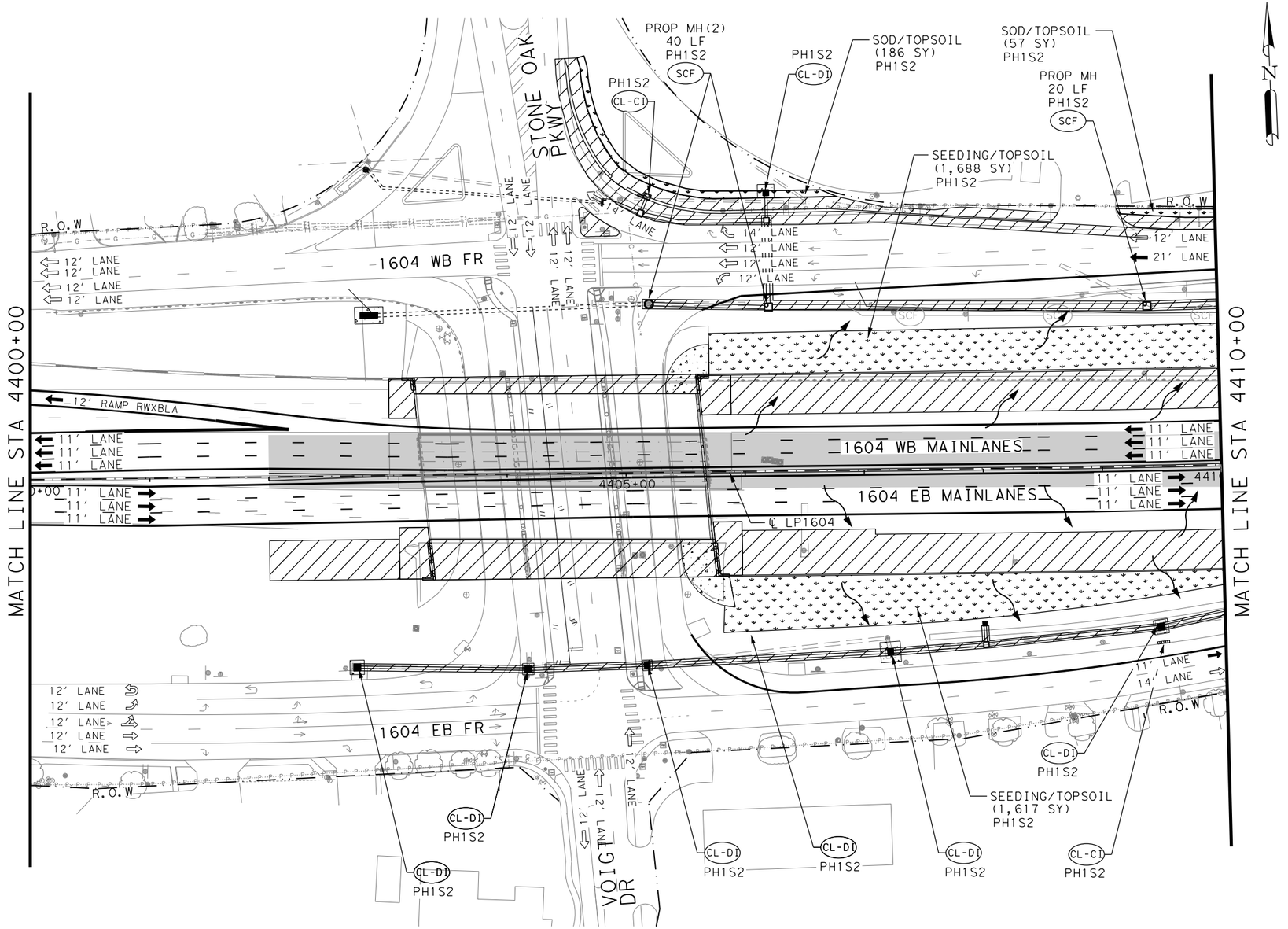

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	3548
162	BLOCK SODDING	SY	243
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	3305
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	3305
168	VEGETATIVE WATERING	MG	55.3
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	3548
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	60
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	60
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	176
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	176

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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
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PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4400+00 TO STA 4410+00

SHEET 1 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2698

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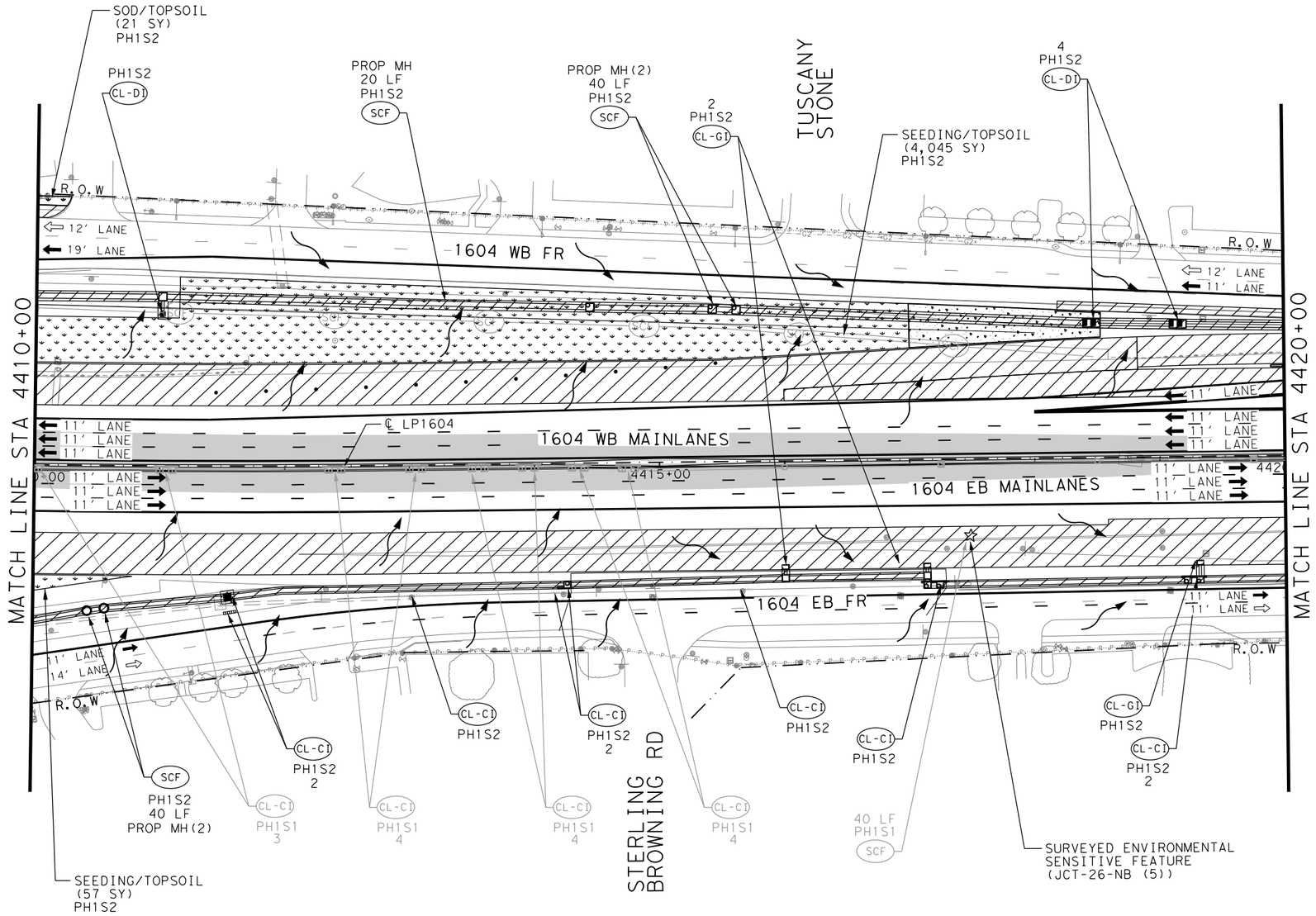

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	4123
162	BLOCK SODDING	SY	21
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	4102
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	4102
168	VEGETATIVE WATERING	MG	64.3
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	4123
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	40
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	40
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	304
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	304

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LEGEND:

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- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
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- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS ★ SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4410+00 TO STA 4420+00

SHEET 2 OF 23

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2699

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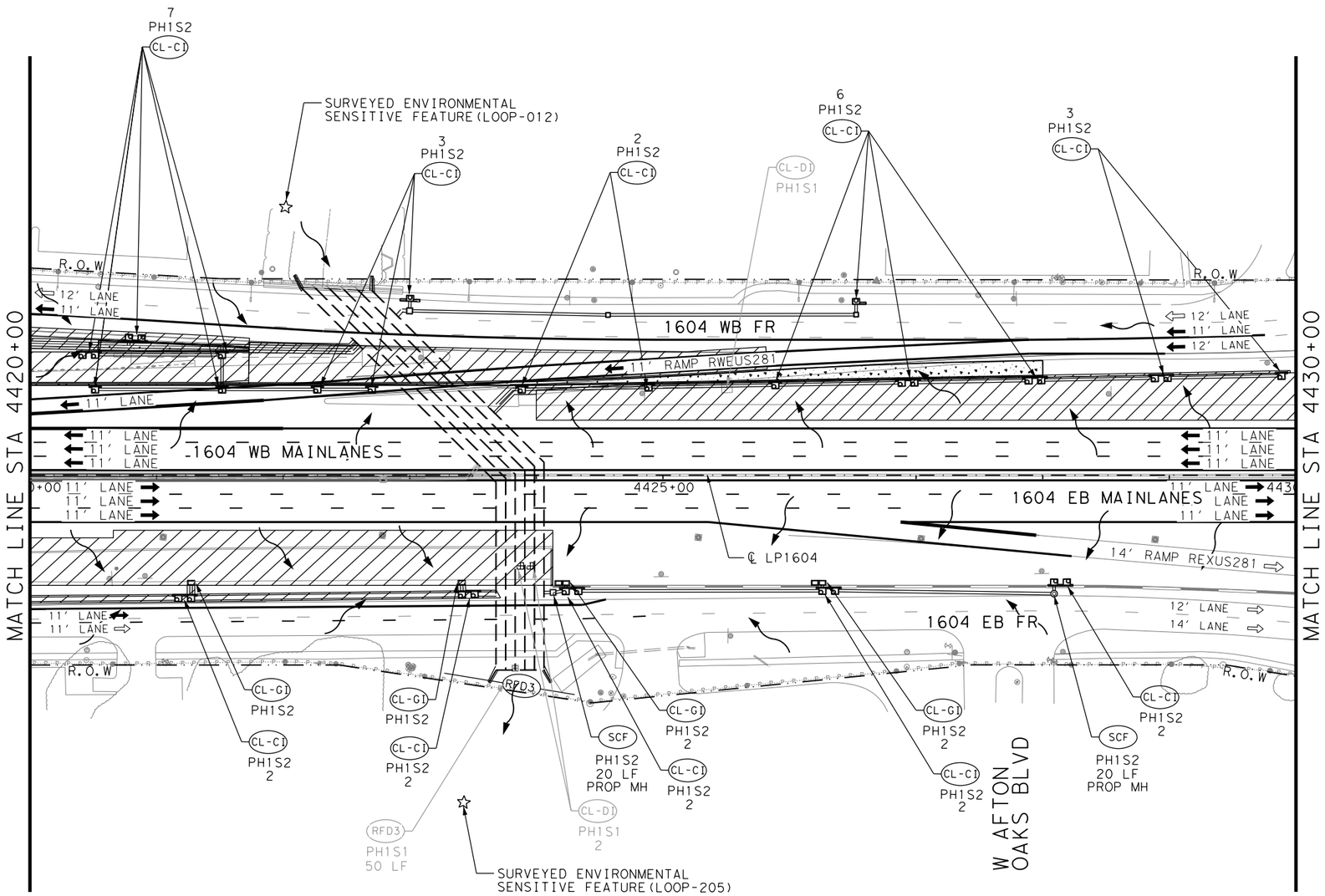

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	20
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	20
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	678
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	678

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NOTES:

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- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
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- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
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- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10263

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4420+00 TO STA 4430+00

SHEET 3 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2700

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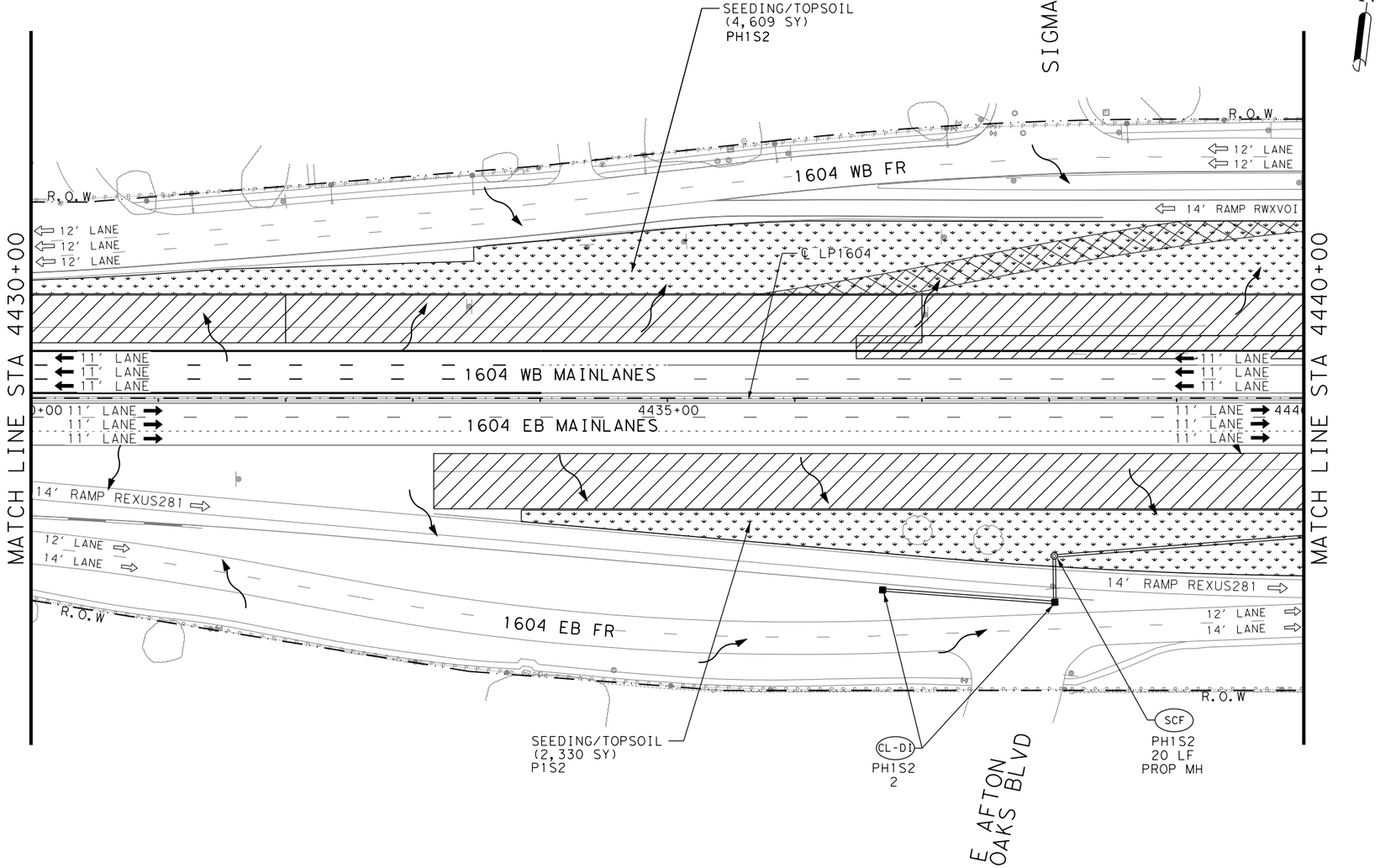

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	6939
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	6939
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	6939
168	VEGETATIVE WATERING	MG	108.2
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	6939
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	20
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	20
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	40

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- RFD2 — ROCK FILTER DAM PREV PHASE
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- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
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2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

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FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4430+00 TO STA 4440+00

SHEET 4 OF 23

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2701

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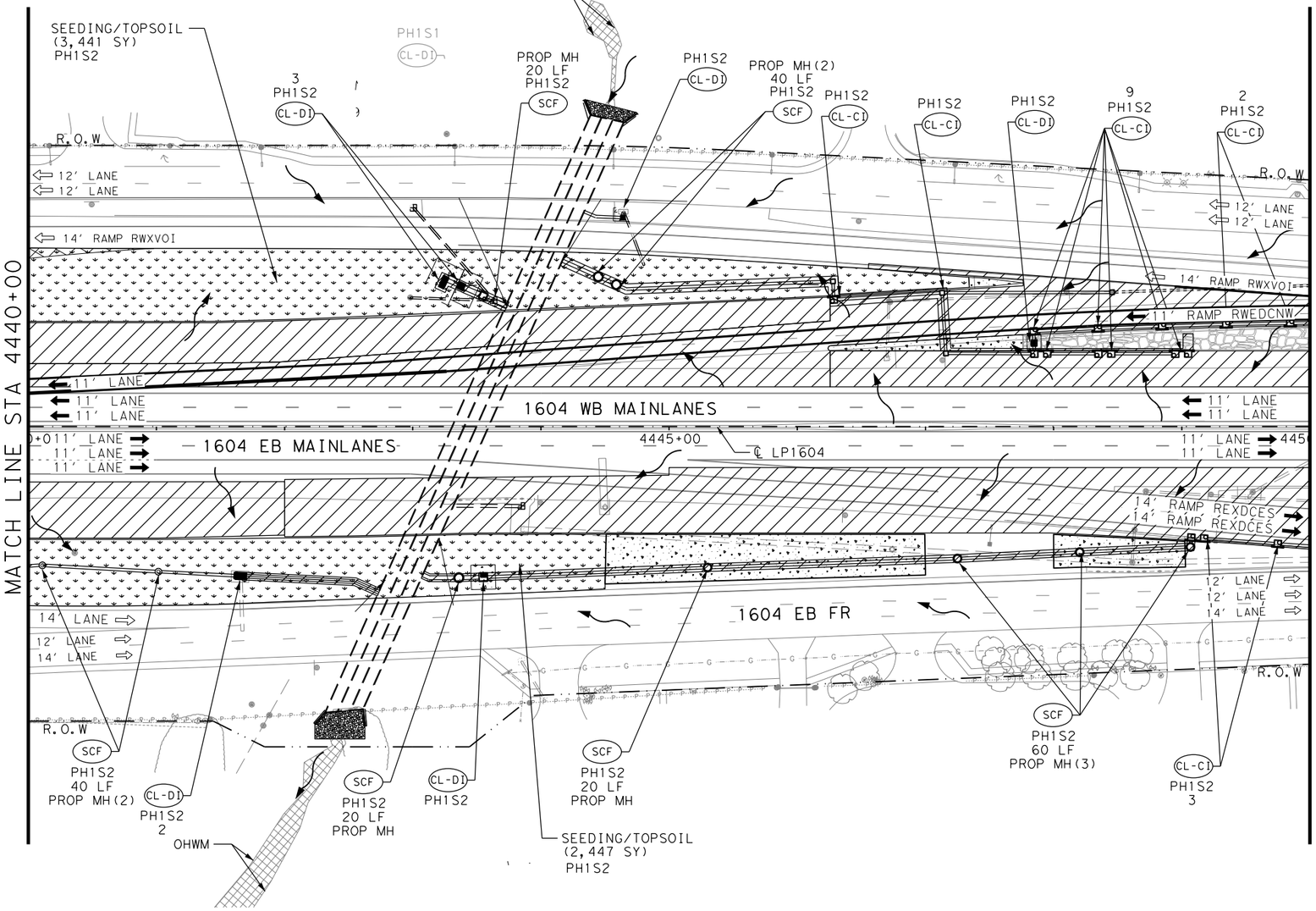

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	5888
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	5888
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	5888
168	VEGETATIVE WATERING	MG	91.9
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	5888
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	200
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	200
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	448
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	448

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4440+00 TO STA 4450+00

SHEET 5 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2702

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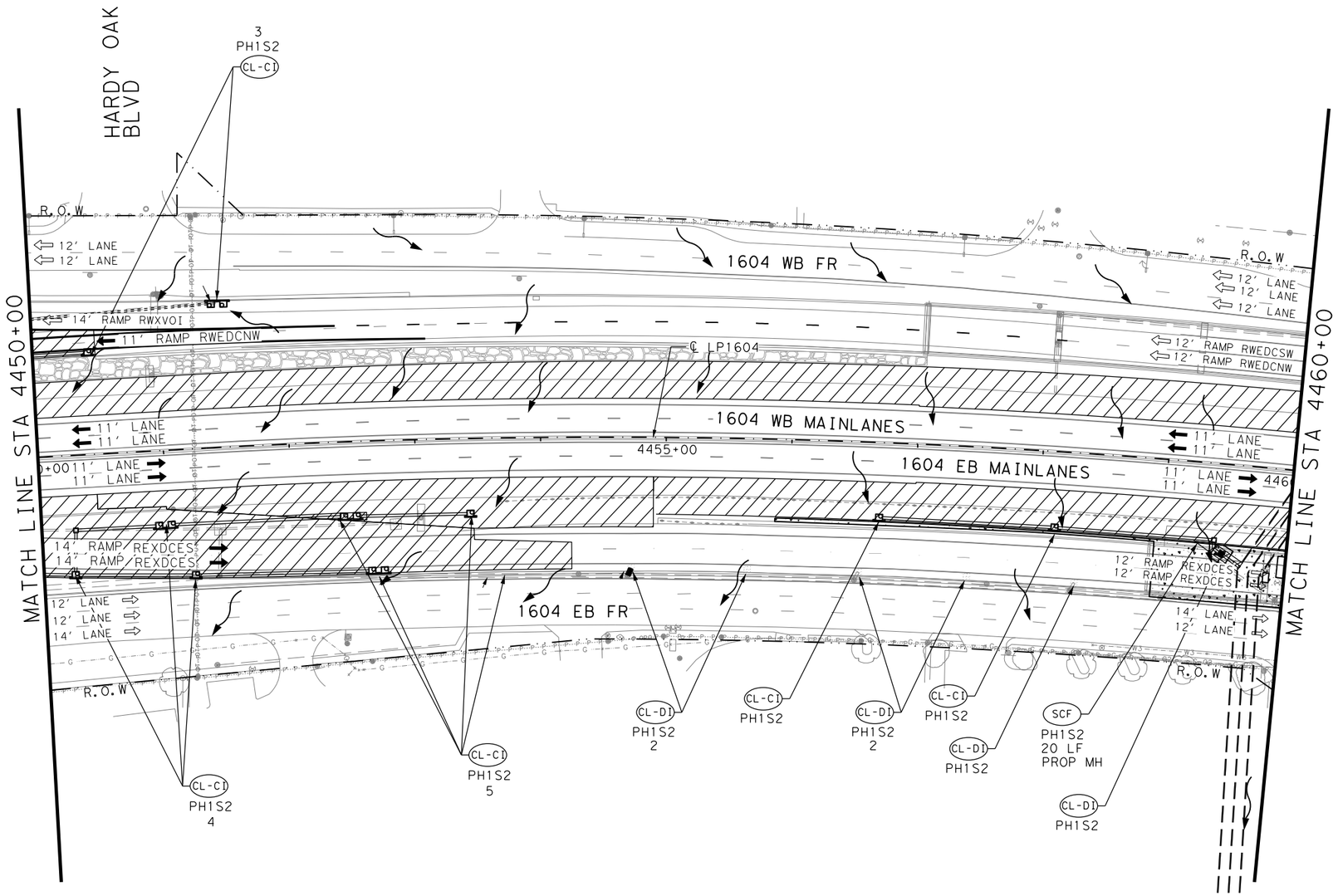

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED		PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE		TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED		PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE		TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG		CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE		CONSTRUCTON EXIT TY I PREV PHASE		TRAFFIC FLOW

QUANTITY SUMMARY CSJ 0072-08-130, ETC

ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	20
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	20
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	372
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	372

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
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STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4450+00 TO STA 4460+00

SHEET 6 OF 23

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2703

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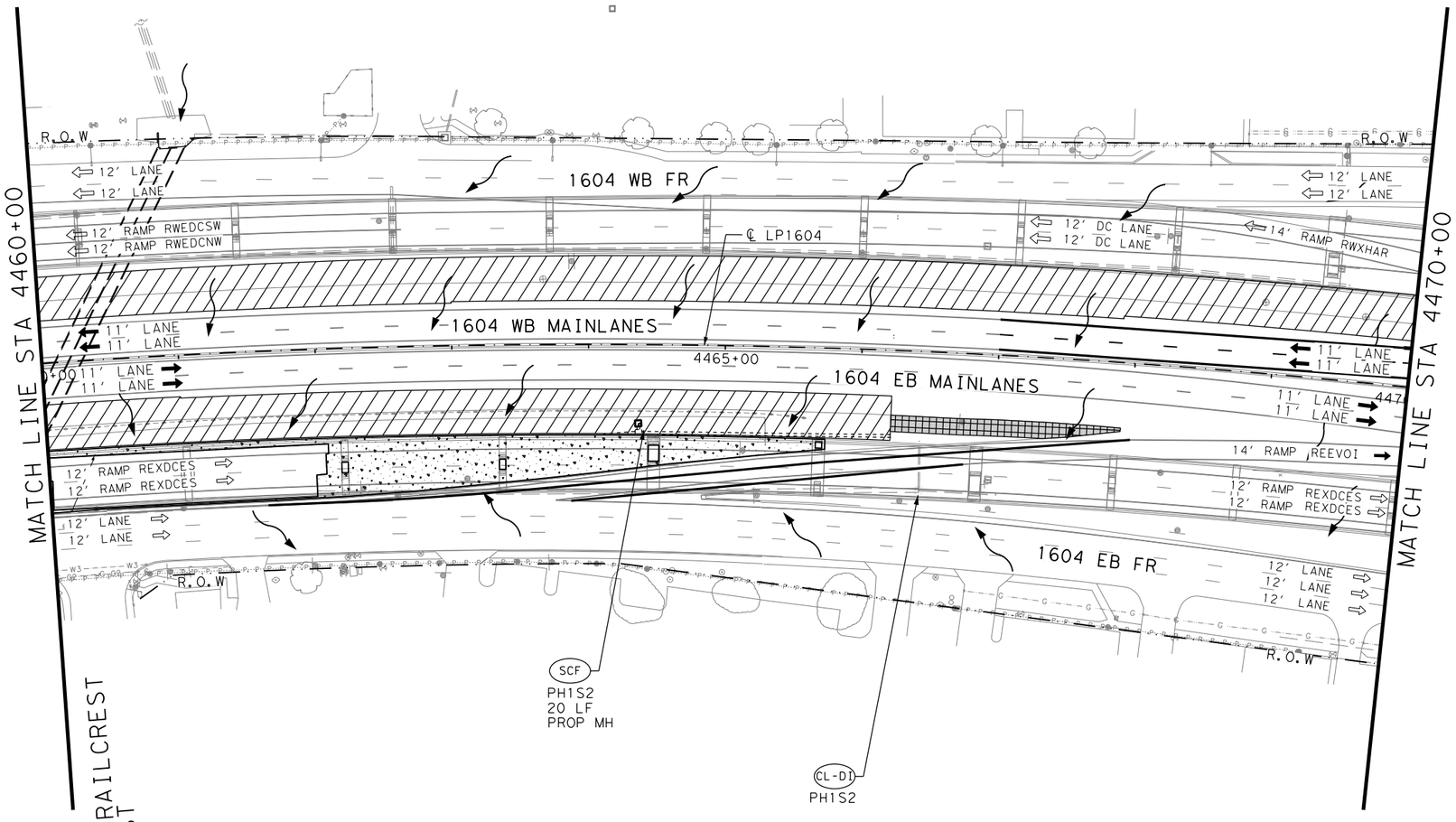

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	20
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	20
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	20
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	20

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LEGEND:

- (SCF) TEMPORARY SEDIMENT CONTROL FENCE
- (SCF) TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- (RFD2) ROCK FILTER DAM
- (RFD2) ROCK FILTER DAM PREV PHASE
- (CL-DI) EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- (CL-DI) EROSION CONTROL LOG AT DROP INLET PREV PHASE
- (CL-CI) EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- (CL-CI) EROSION CONTROL LOG AT CURB INLET PREV PHASE
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- (ECL) EROSION CONTROL LOG
- (ECL) EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4460+00 TO STA 4470+00

SHEET 7 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2704

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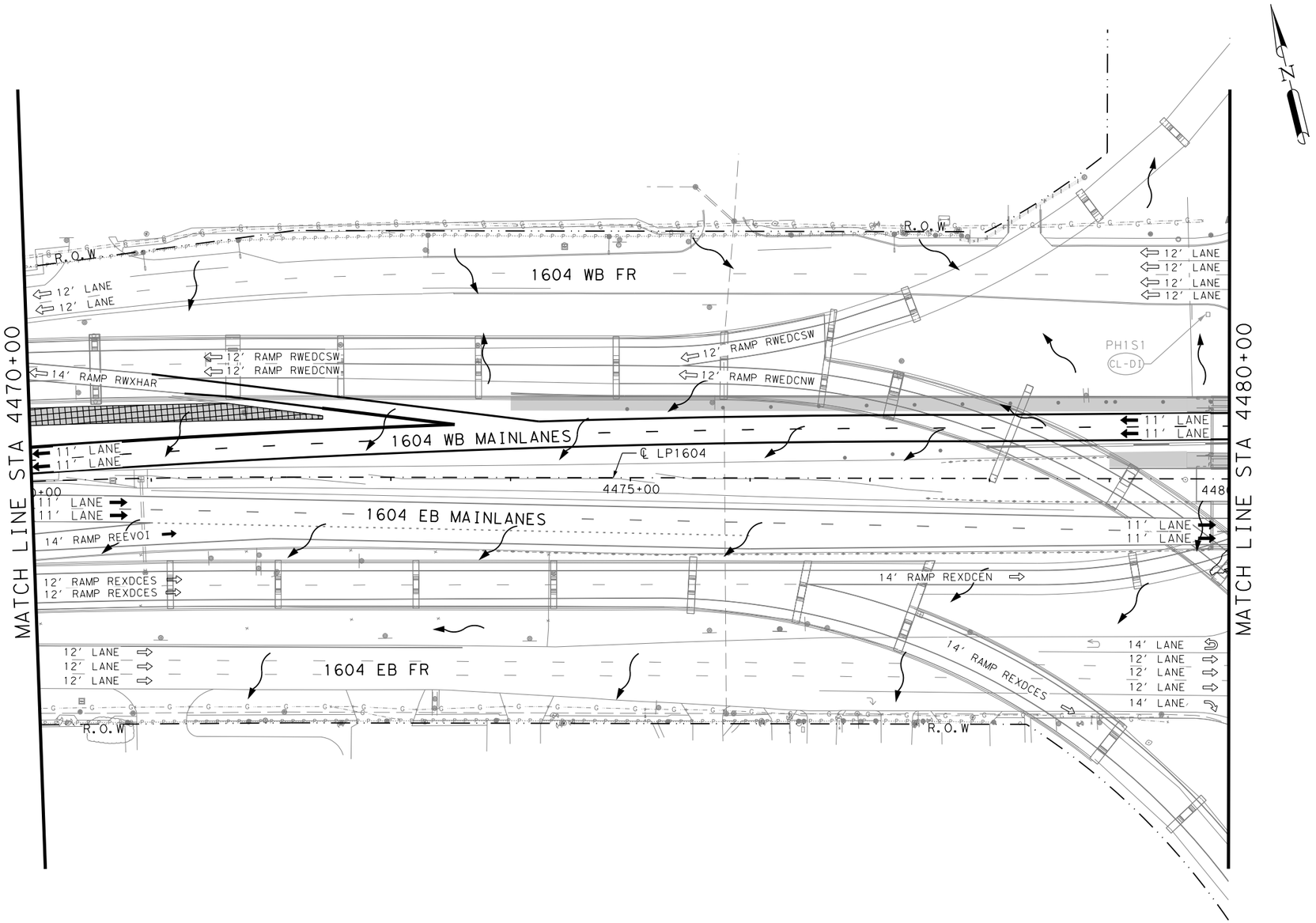

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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NOTES:

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STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4470+00 TO STA 4480+00

SHEET 8 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2705

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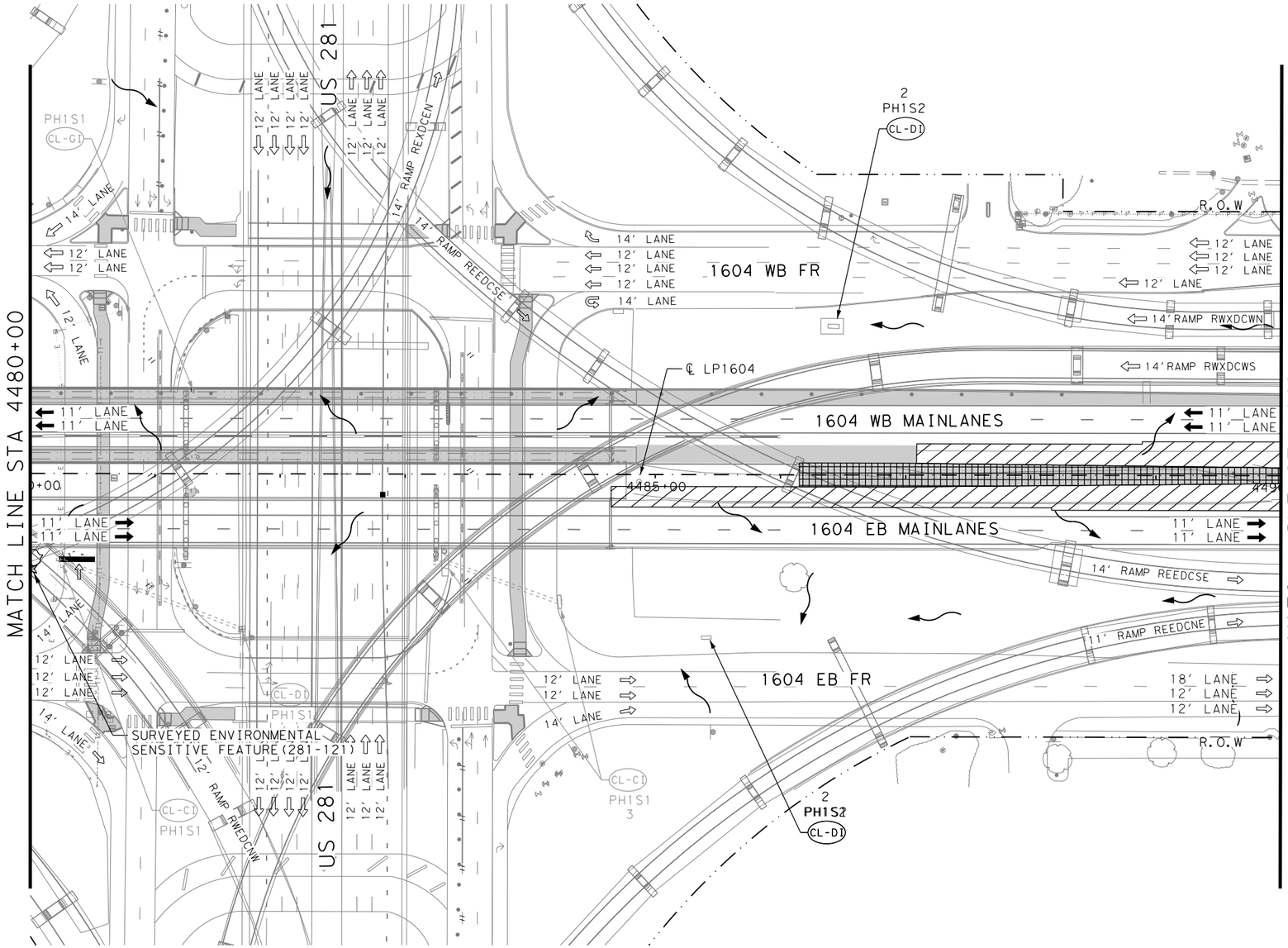

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	80

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
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LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4480+00 TO STA 4490+00

SHEET 9 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2706

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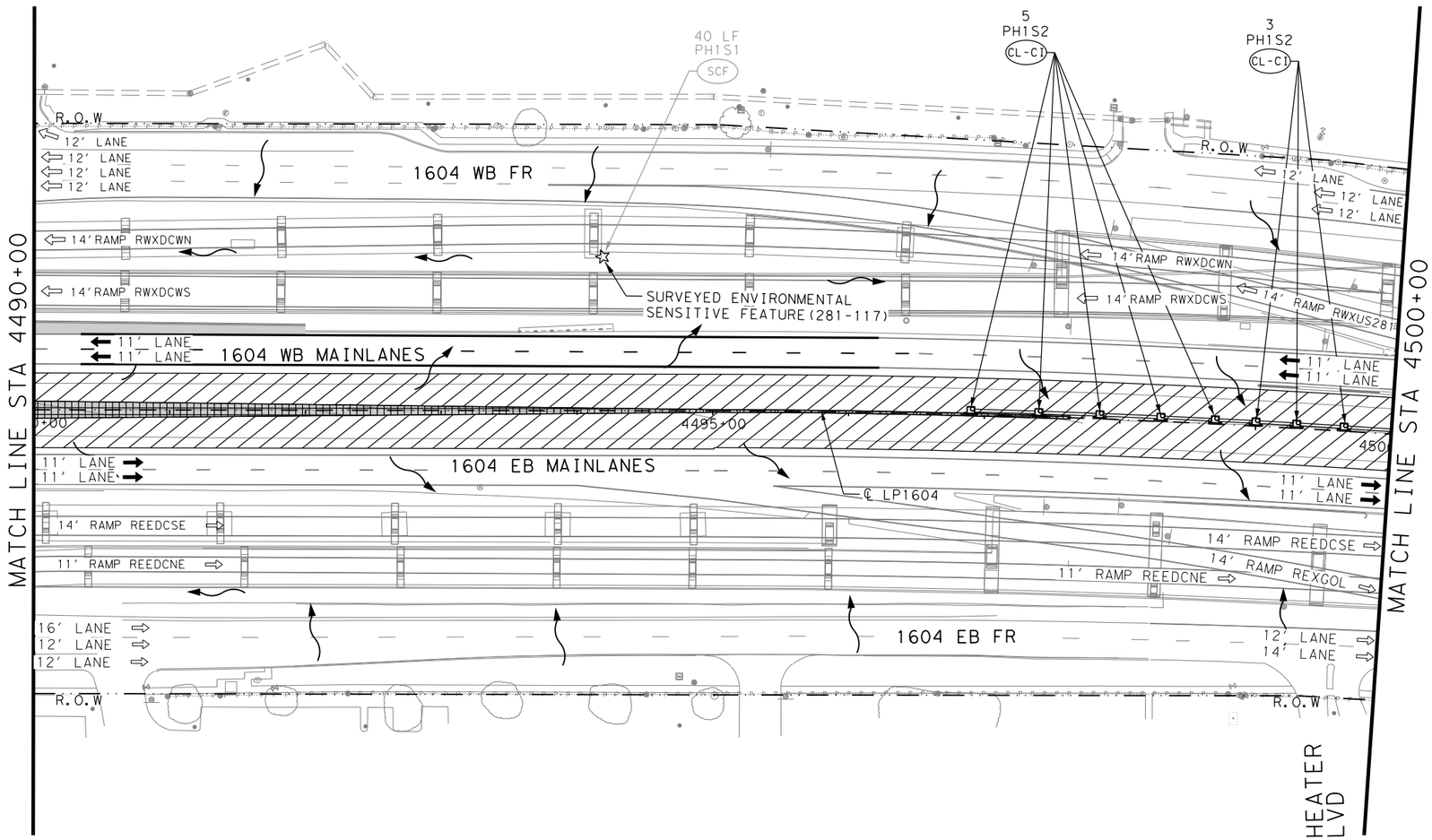

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	144
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	144

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10263

LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation
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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4490+00 TO STA 4500+00

SHEET 10 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2707

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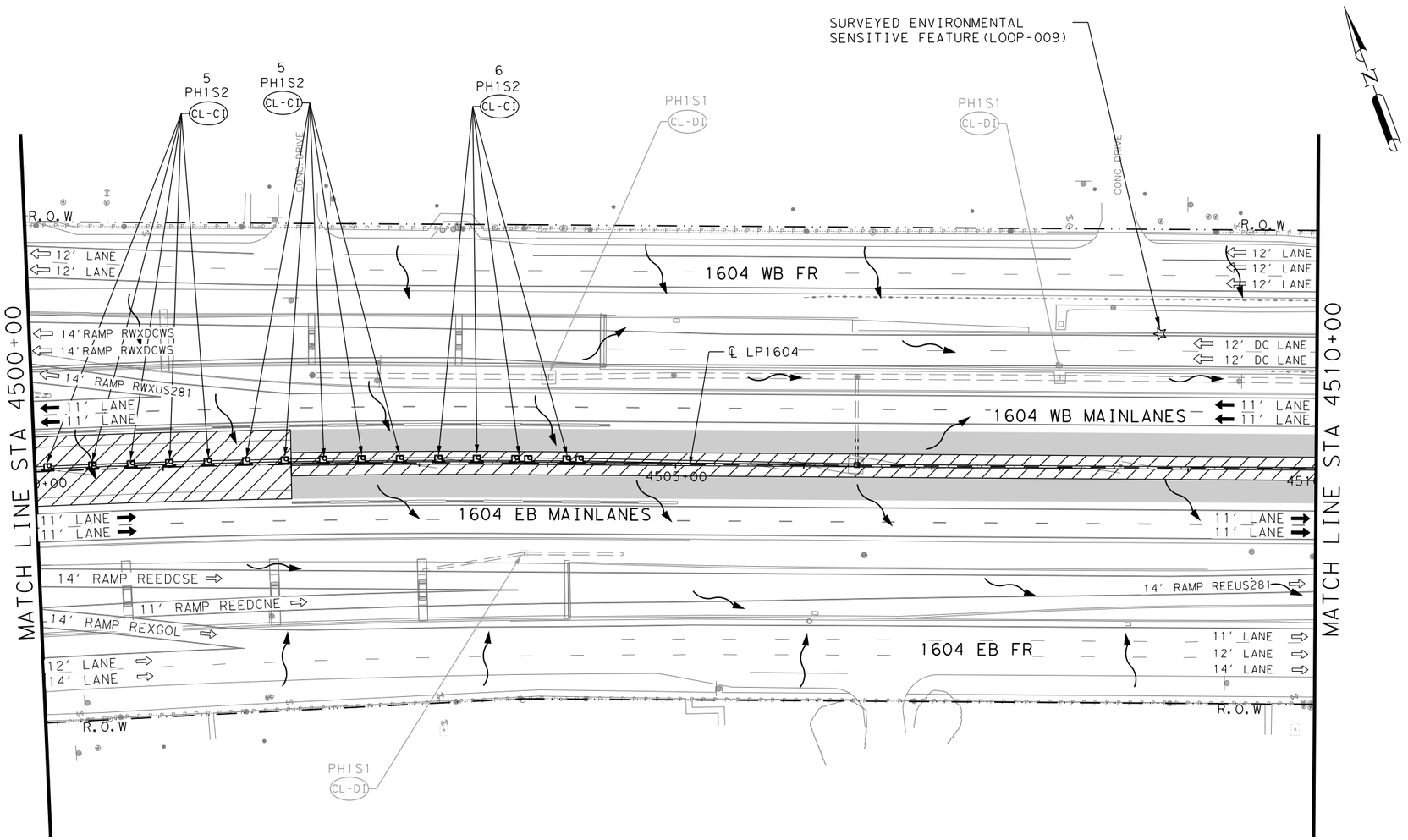

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	288
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	288

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
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- ECL — EROSION CONTROL LOG
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- PERM PAVEMENT THIS PHASE
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- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4500+00 TO STA 4510+00

SHEET 11 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2708

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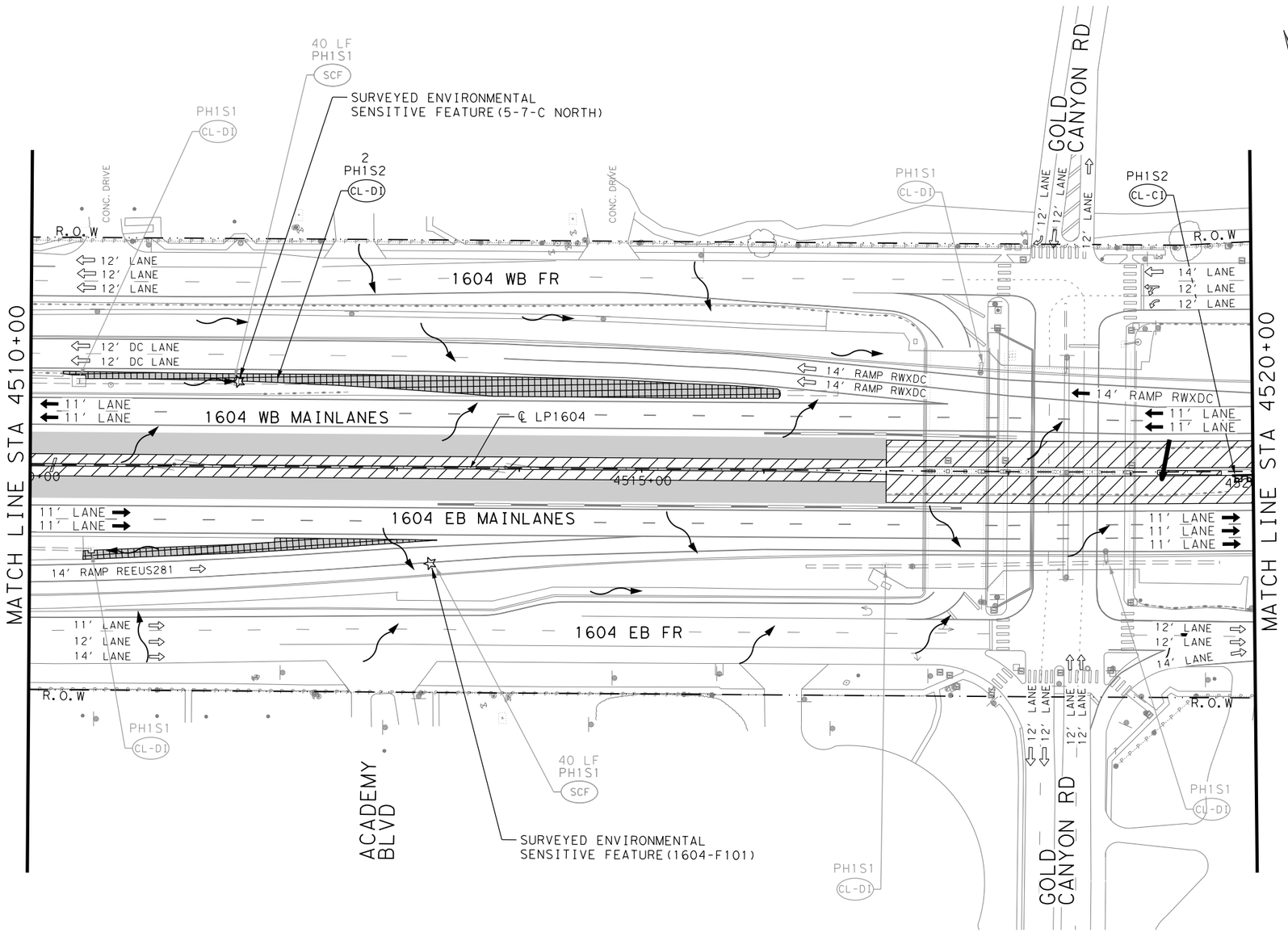

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	58
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	58

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- (RFD2) ROCK FILTER DAM
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- (CL-CI) EROSION CONTROL LOG AT CURB INLET PREV PHASE
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- (ECL) EROSION CONTROL LOG
- (ECL) EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
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- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10263

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4510+00 TO STA 4520+00

SHEET 12 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2709

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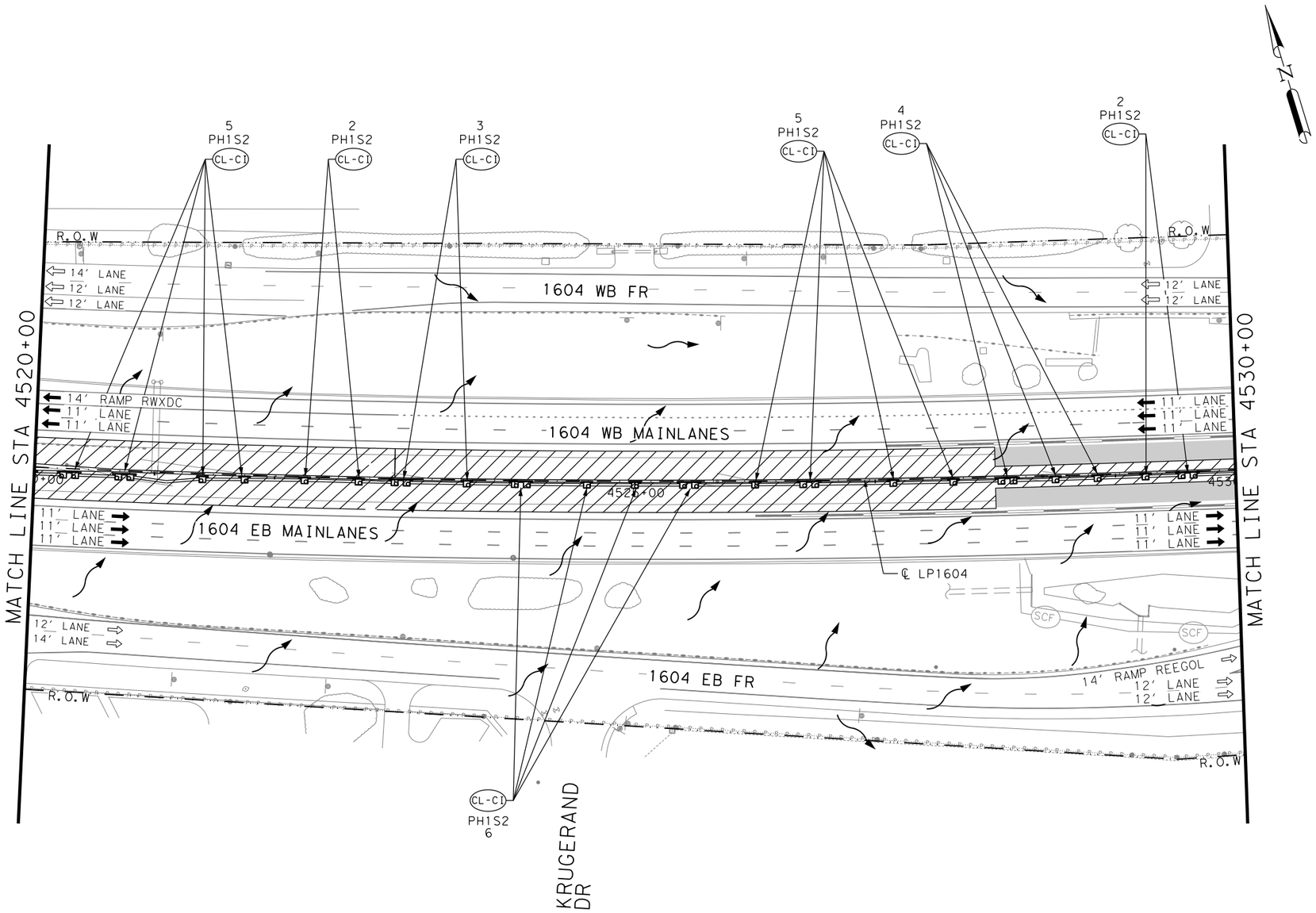

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	486
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	486

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NOTES:

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- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4520+00 TO STA 4530+00

SHEET 13 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2710

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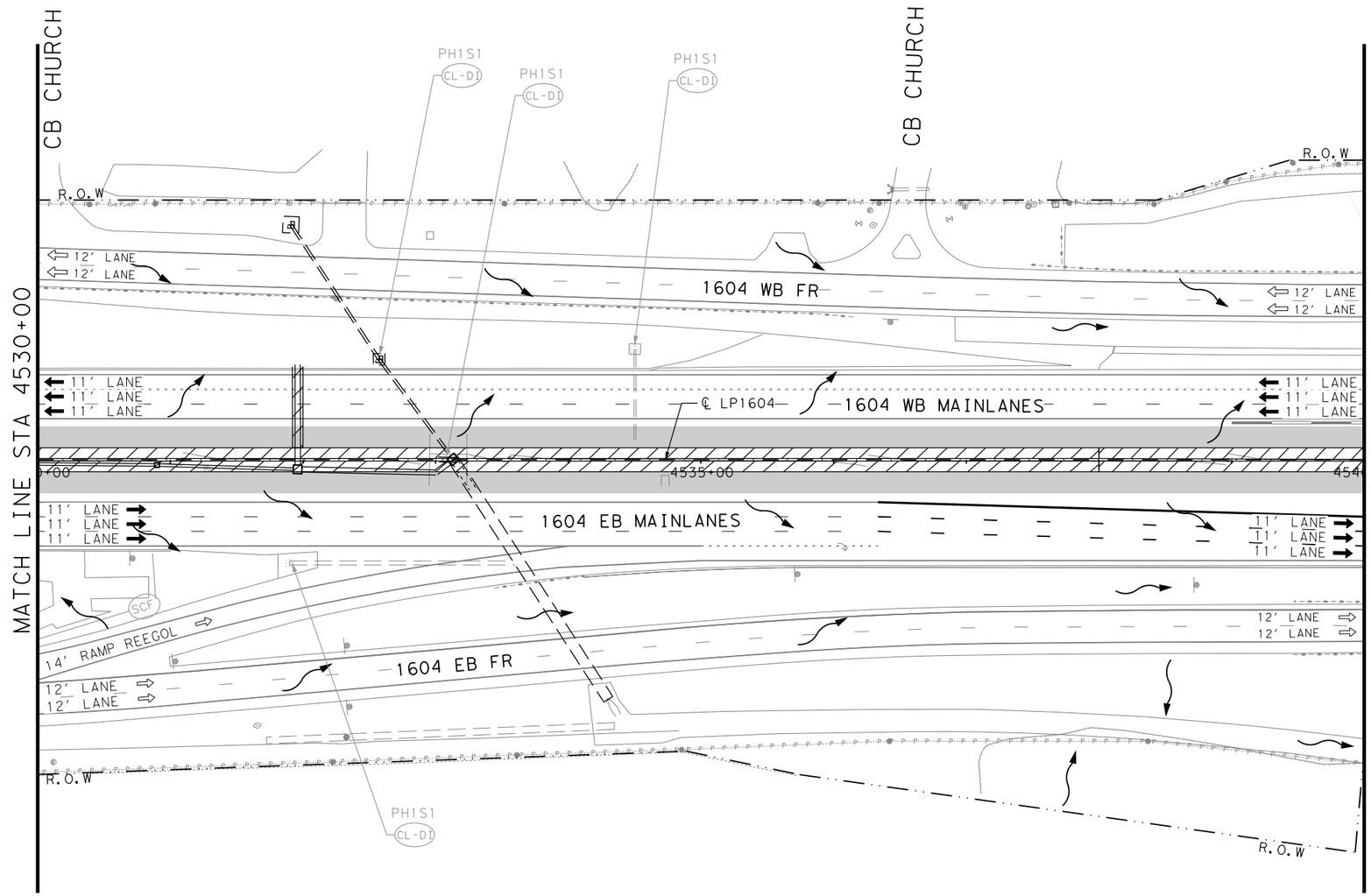

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
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LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4530+00 TO STA 4540+00

SHEET 14 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2711

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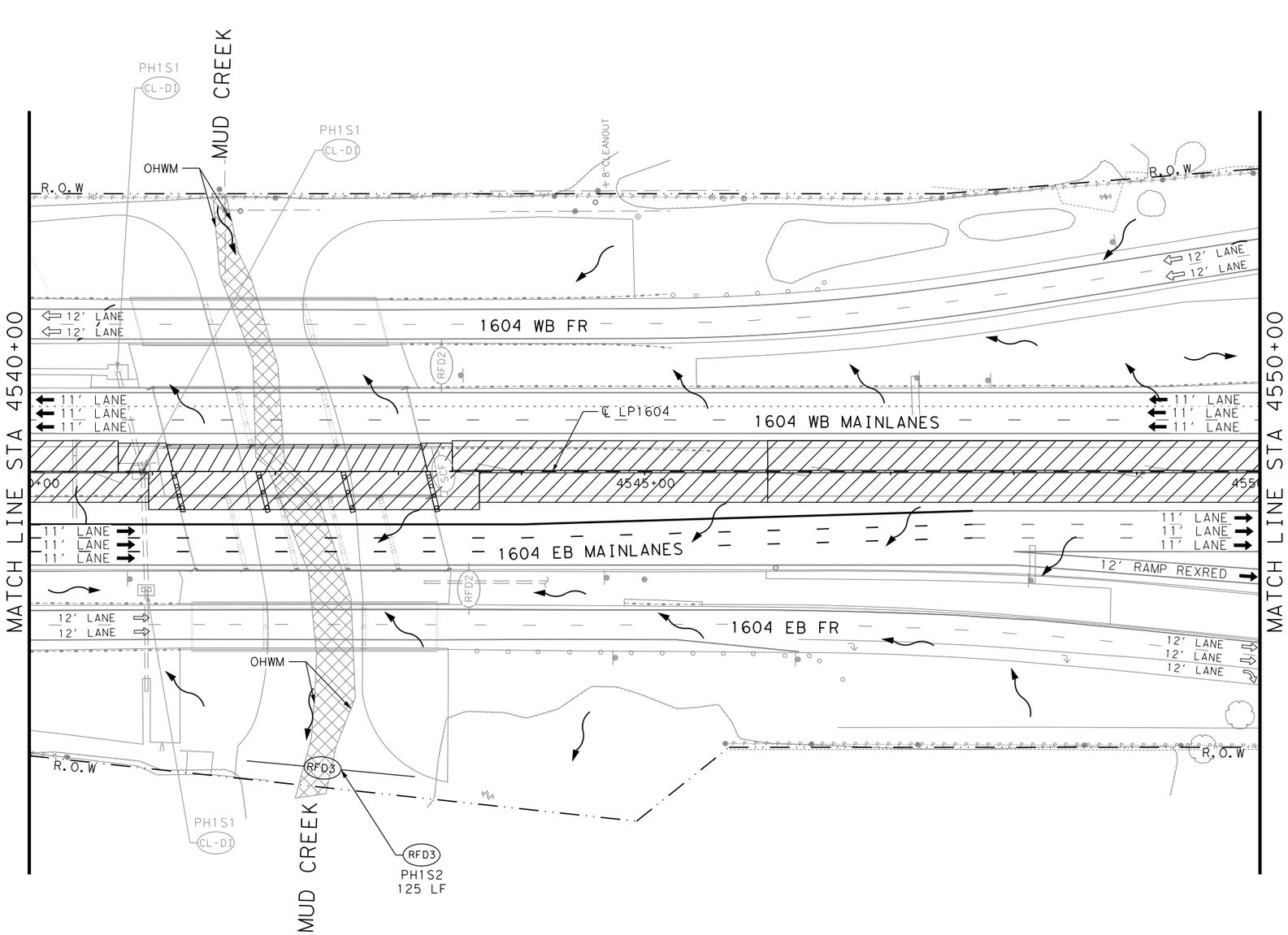

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	125
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	125
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
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- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
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- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FRN 10283

LJA Engineering, Inc.
FRN - F-1386

Texas Department of Transportation
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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4540+00 TO STA 4550+00

SHEET 15 OF 23

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2712

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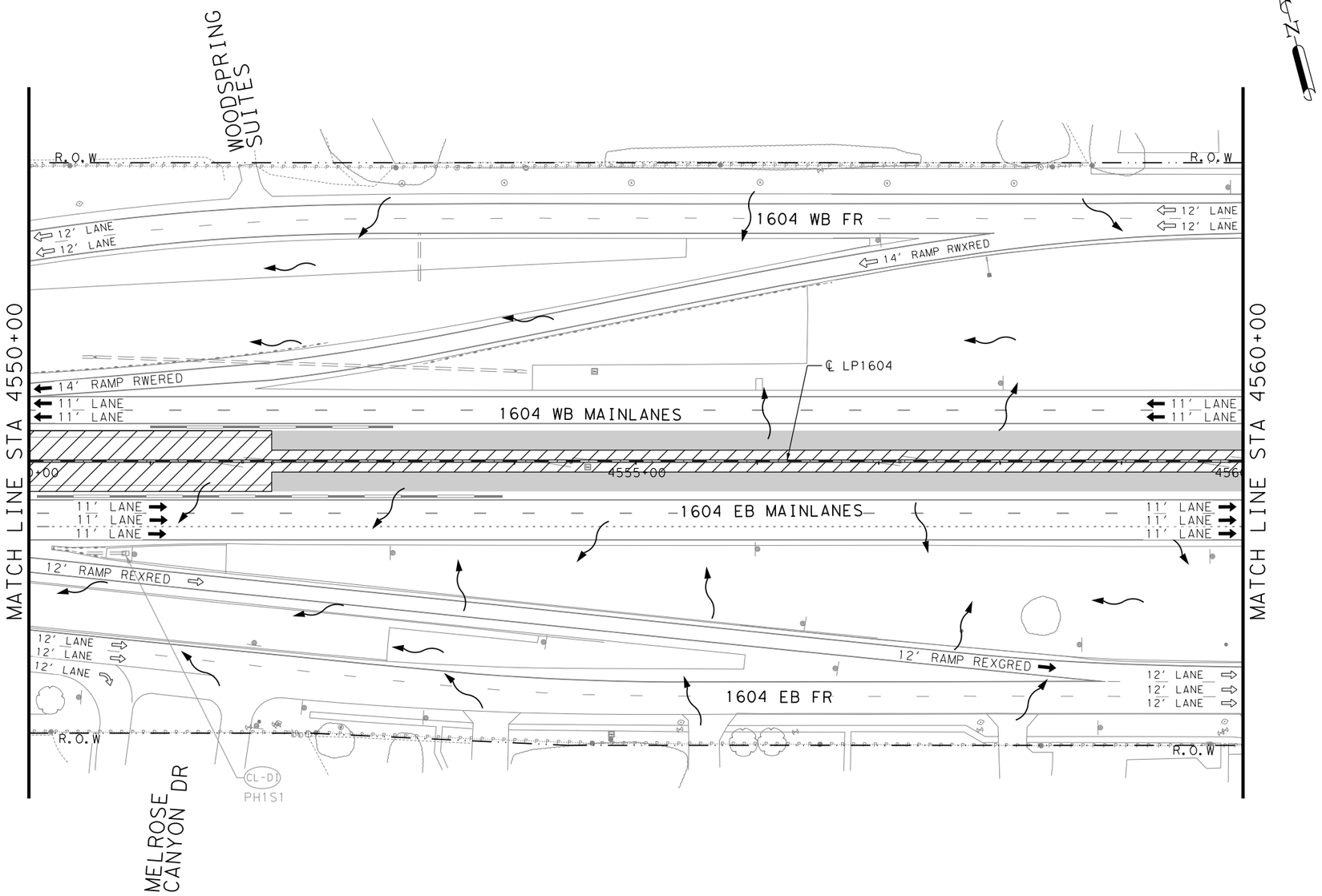

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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- CONSTRUCTON EXIT TY I PREV PHASE
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- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
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LICENSED
PROFESSIONAL ENGINEER

2/17/2023

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REV. NO.	DATE	DESCRIPTION	BY

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ENGINEERS • SURVEYORS
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TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4550+00 TO STA 4560+00

SHEET 16 OF 23

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2713

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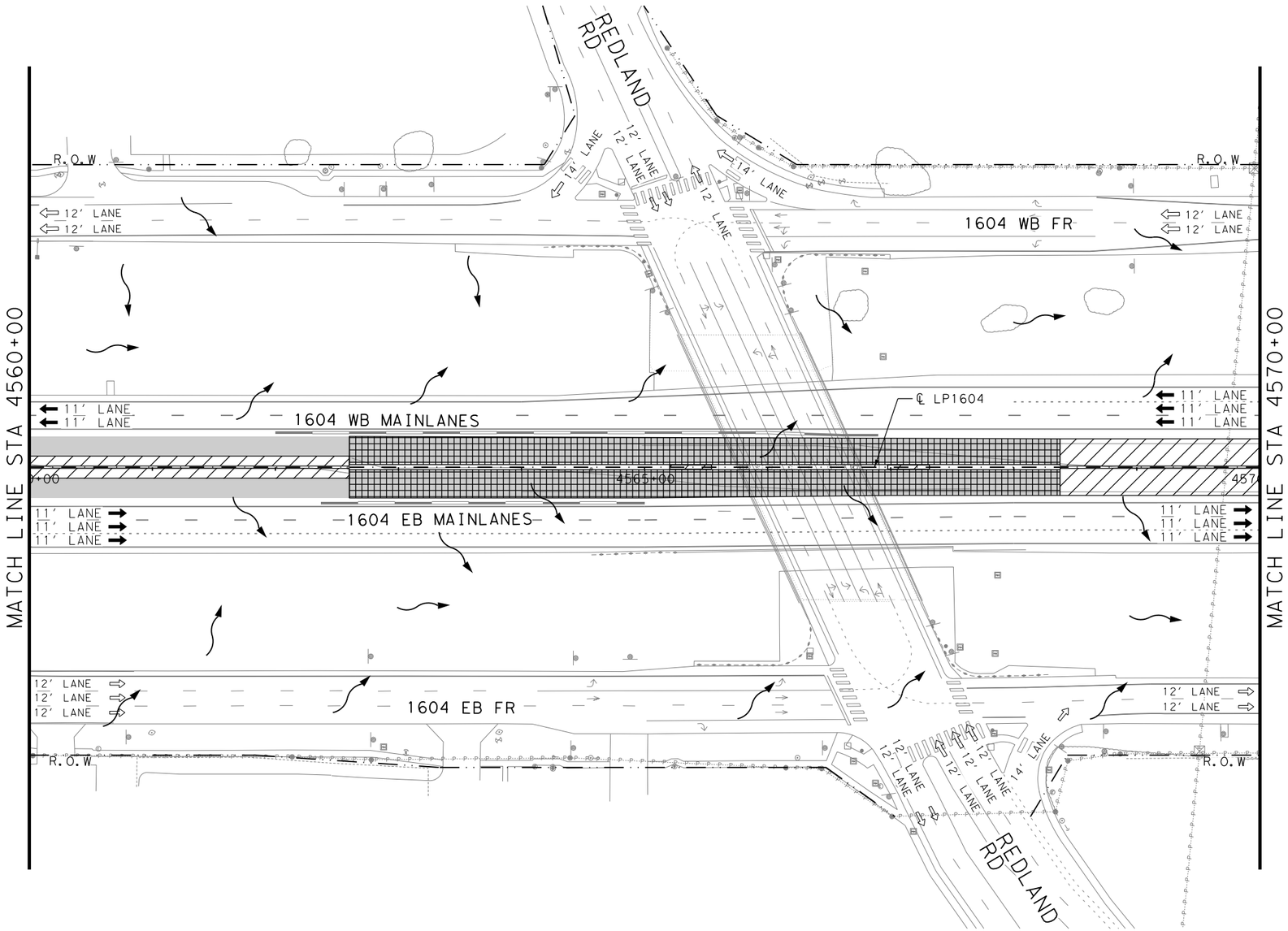

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- CONSTRUCTON EXIT TY I (111 SY EA)
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- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FRN 10283

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4560+00 TO STA 4570+00

SHEET 17 OF 23

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2714

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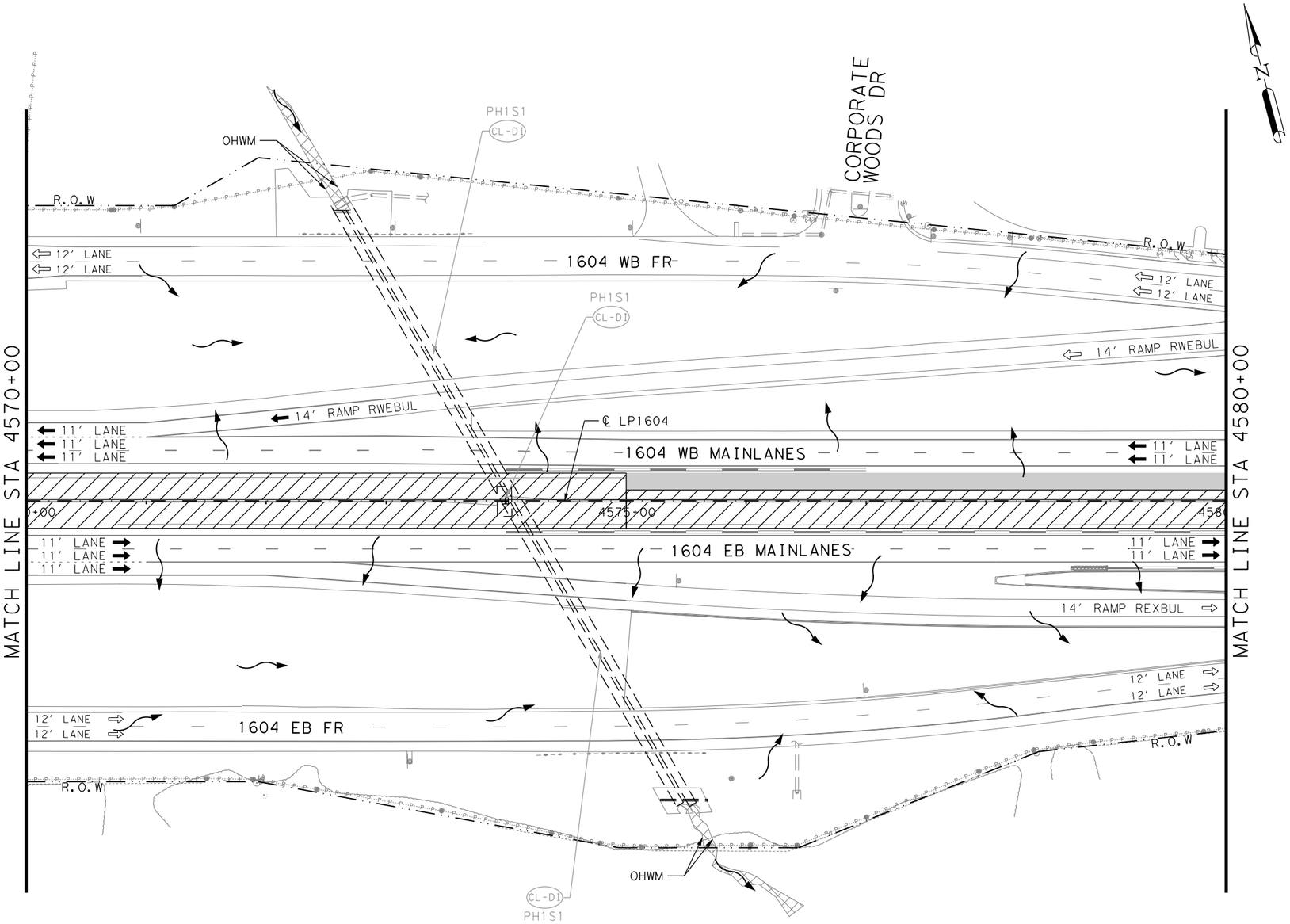

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
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506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4570+00 TO STA 4580+00

SHEET 18 OF 23

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2715

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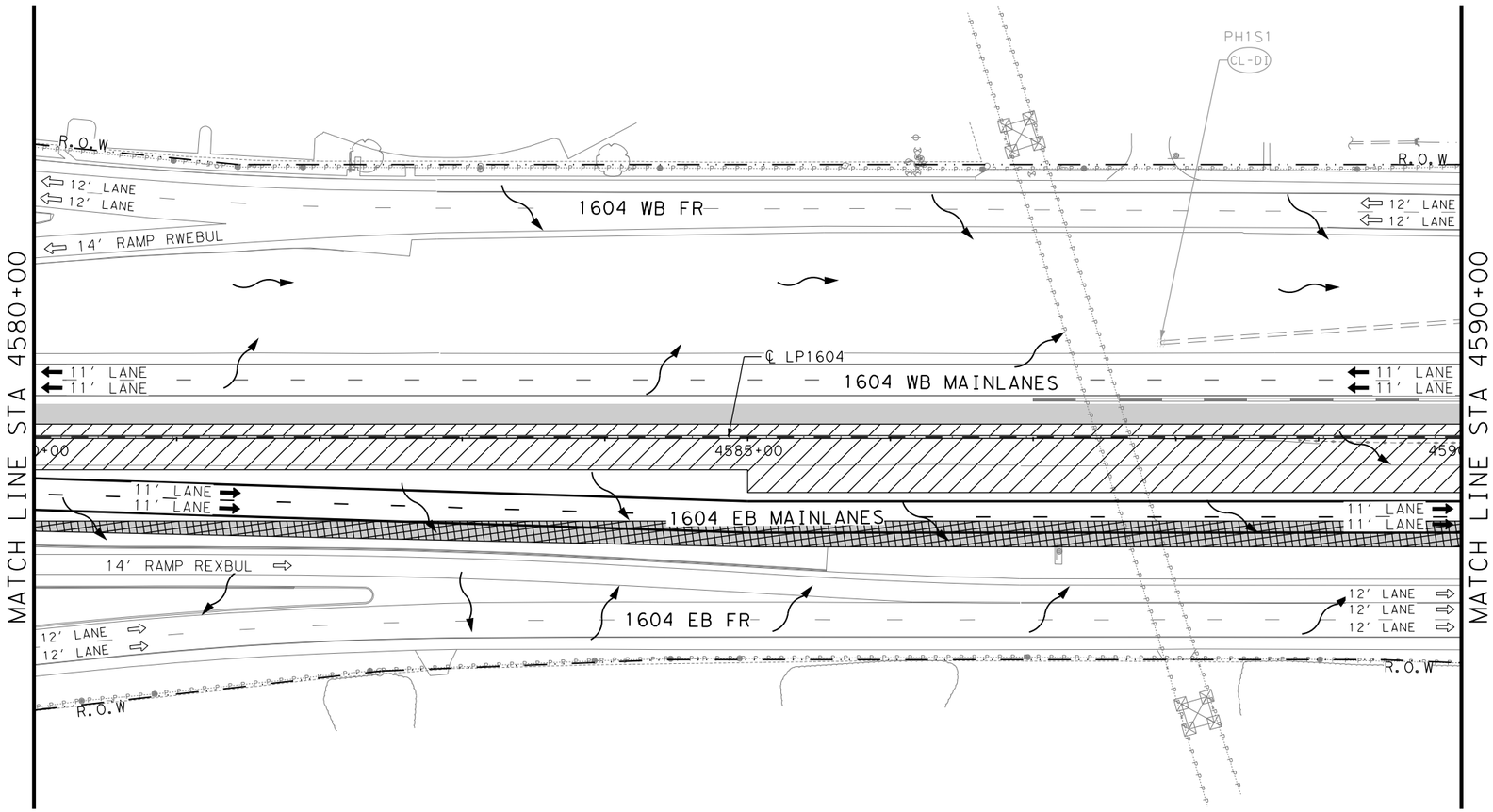

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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2/17/2023

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FRN-F-1386

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LP 1604

EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4580+00 TO STA 4590+00

SHEET 19 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2716

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

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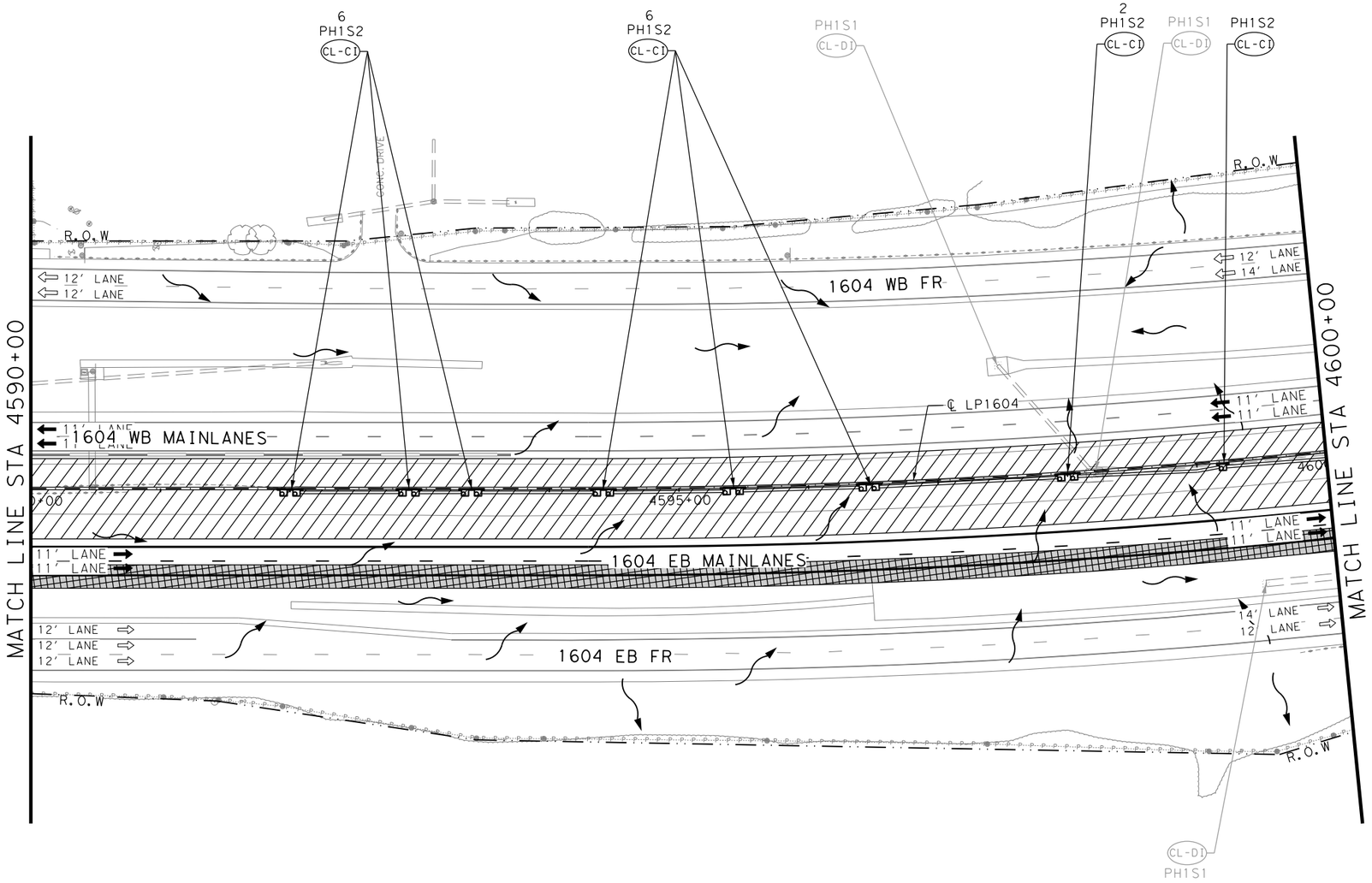

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
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162	BLOCK SODDING	SY	0
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*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
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506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	270
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	270

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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
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- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4590+00 TO STA 4600+00

SHEET 20 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2717

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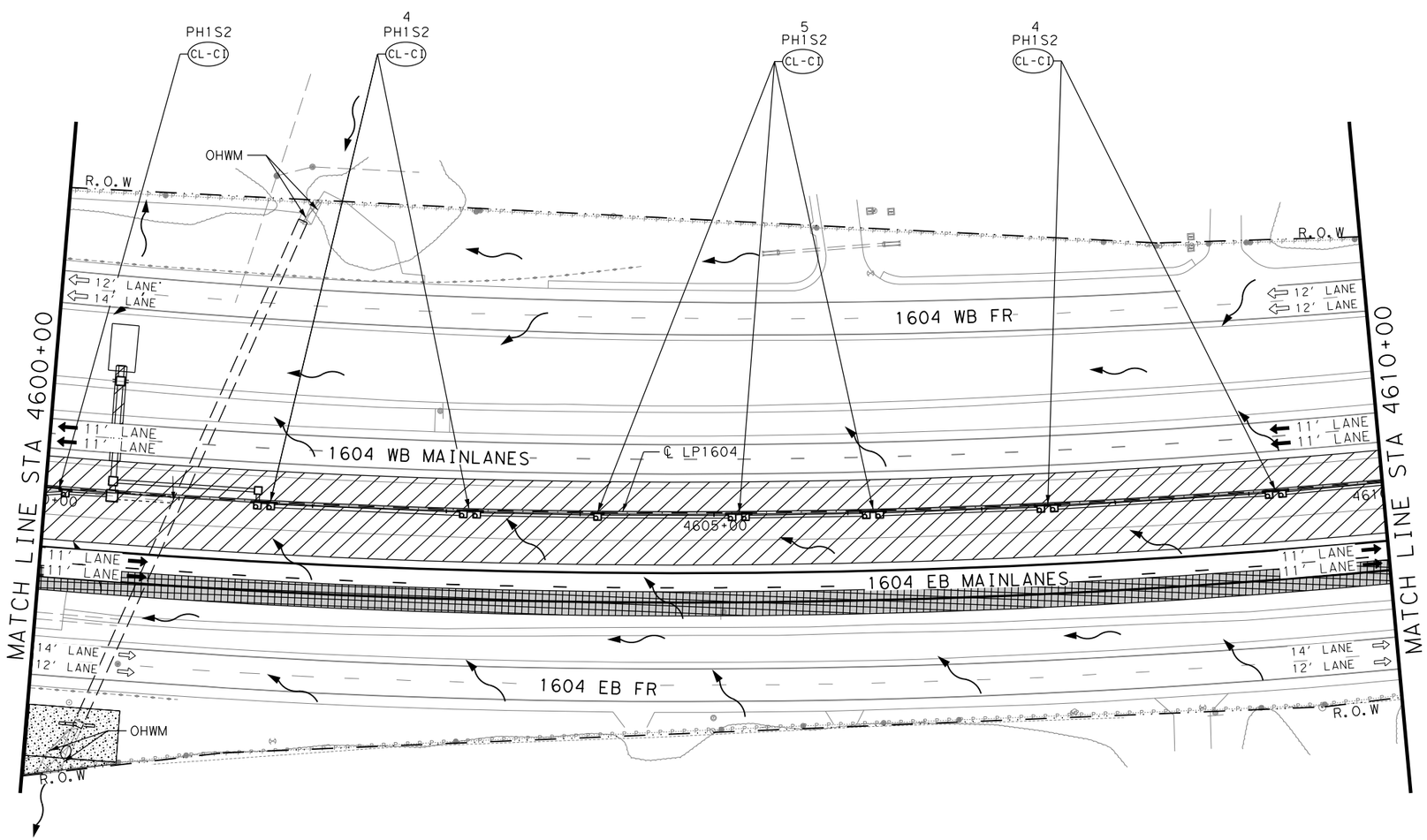

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QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	252
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	252

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
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- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
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LICENSED
PROFESSIONAL ENGINEER

2/17/2023

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LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4600+00 TO STA 4610+00

SHEET 21 OF 23

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2718

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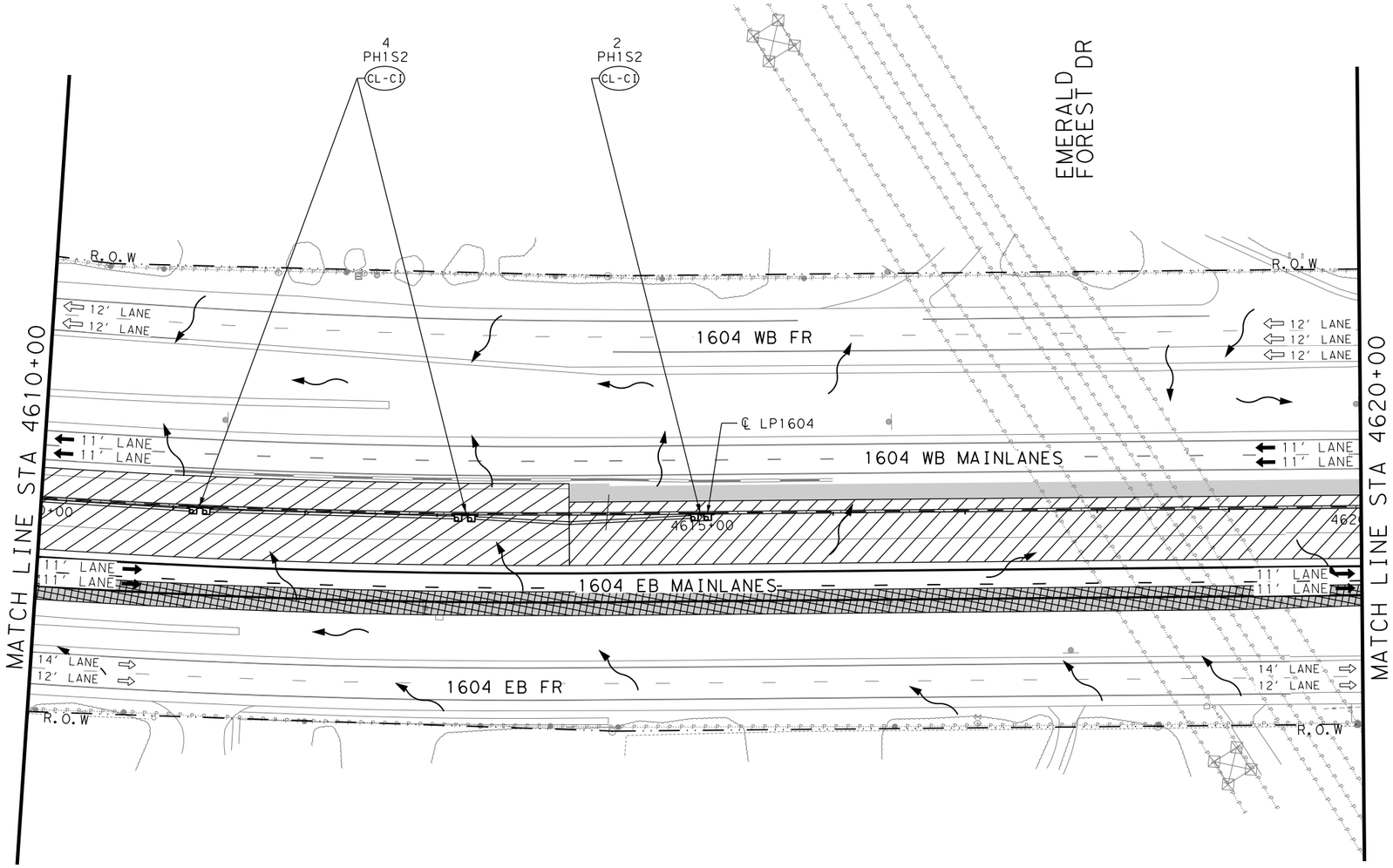

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	108
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	108

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- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4610+00 TO STA 4620+00

SHEET 22 OF 23

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2719

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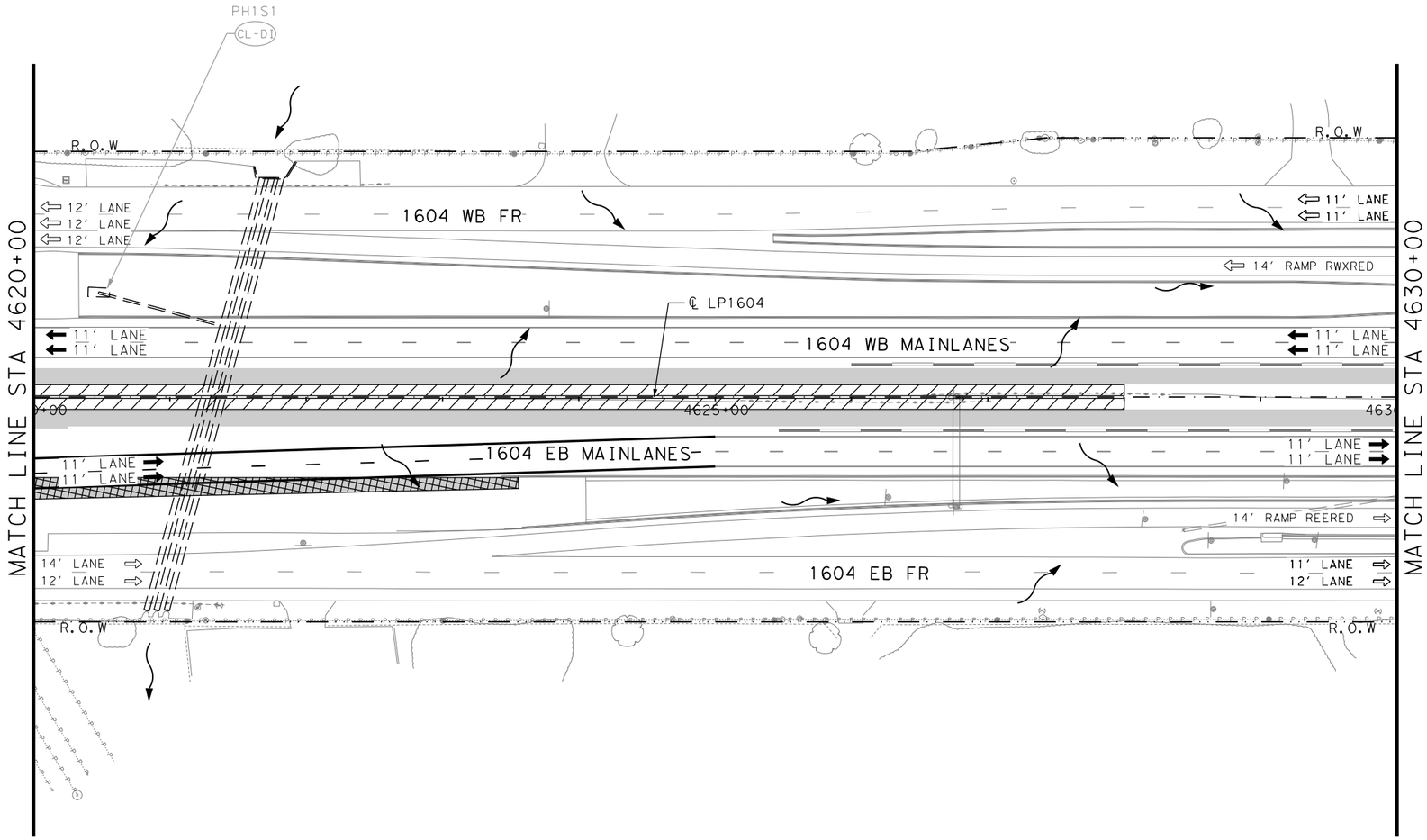

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 1 STEP 2
STA 4620+00 TO STA 4630+00

SHEET 23 OF 23

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2720

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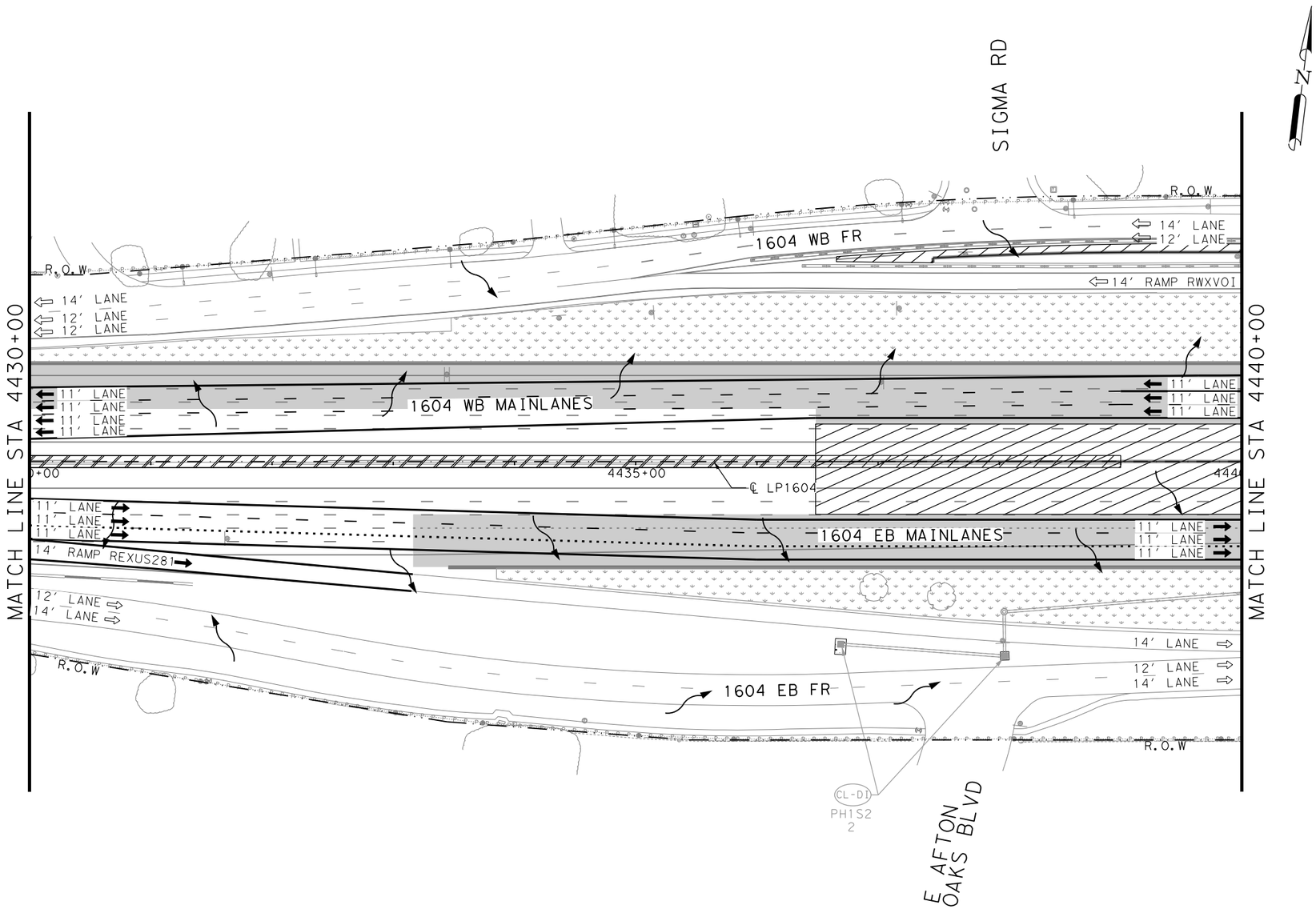

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

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LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4430+00 TO STA 4440+00

SHEET 1 OF 20

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2721

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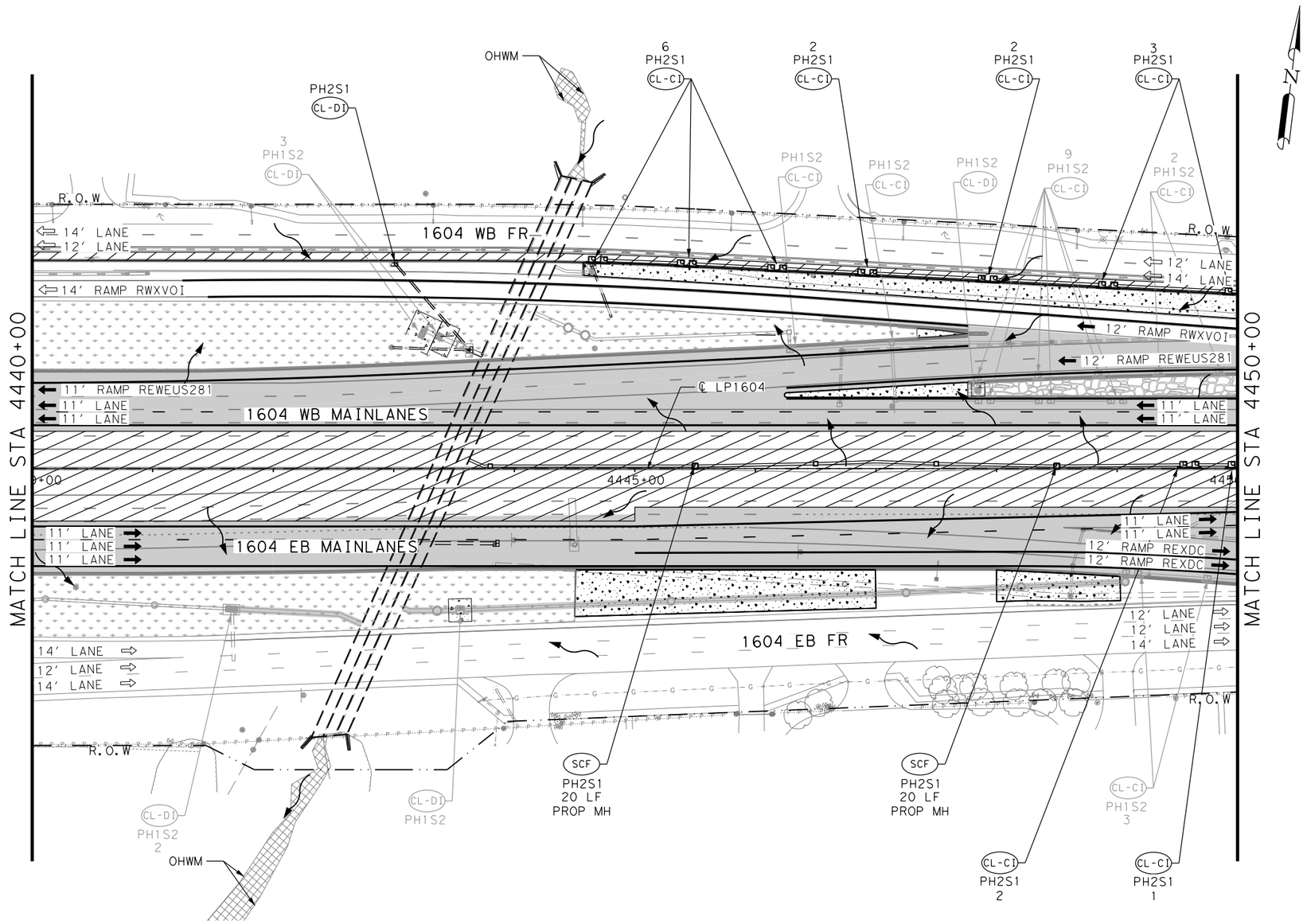

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
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168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
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506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	40
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	40
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LJA Engineering, Inc.
FRN-F-1386

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LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4440+00 TO STA 4450+00

SHEET 2 OF 20

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2722

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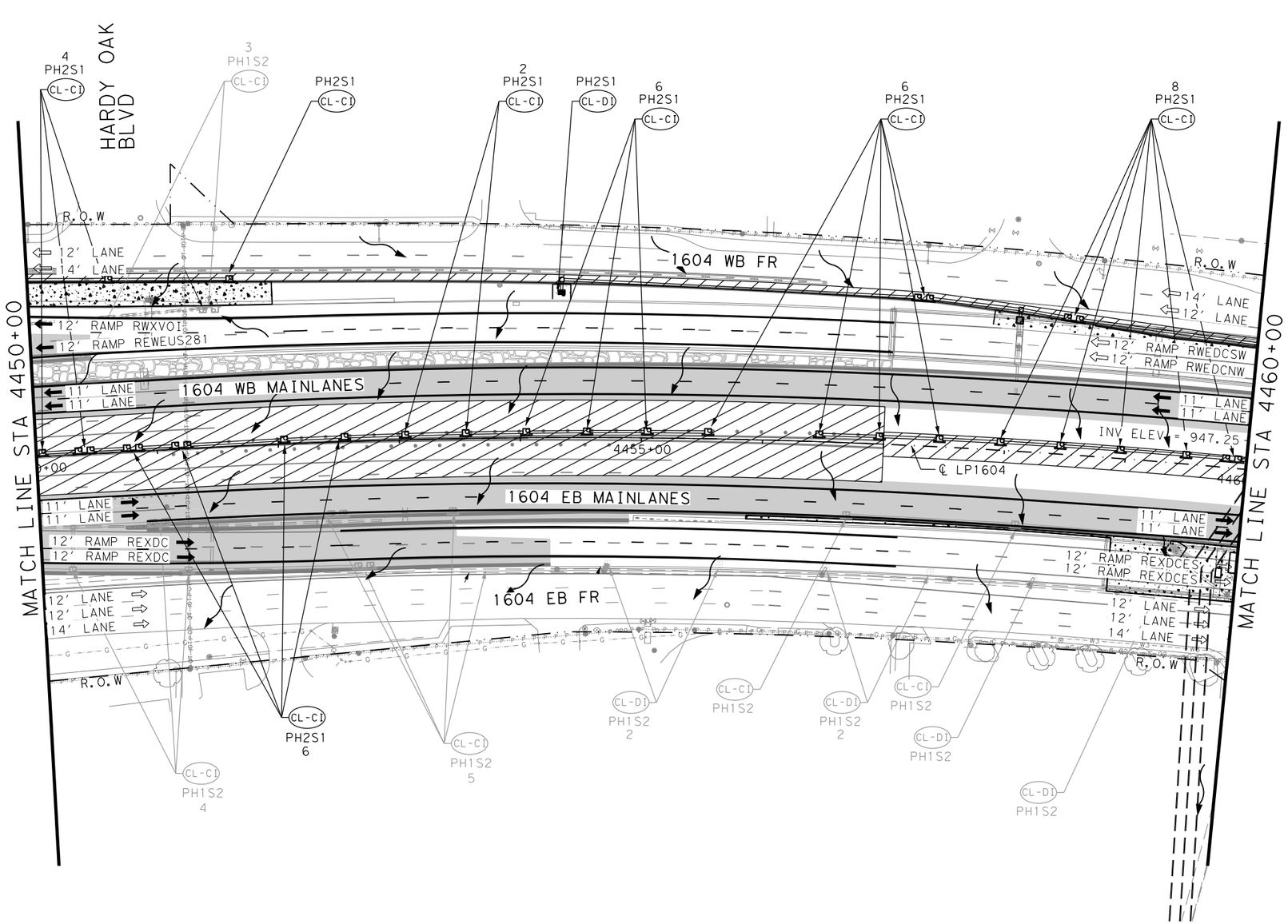

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED	PERM PAVEMENT THIS PHASE	SOD/SEED THIS PHASE
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE	TEMP PAVEMENT THIS PHASE	SOD/SEED PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED	PERM PAVEMENT PREV PHASE	PROP CONC RIPRAP AREA
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE	TEMP PAVEMENT PREV PHASE	REMOVE TEMP PAVEMENT
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG	CONSTRUCTON EXIT TY I (111 SY EA)	PH1 PHASE TREATMENT WAS INSTALLED
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE	CONSTRUCTON EXIT TY I PREV PHASE	TRAFFIC FLOW

QUANTITY SUMMARY CSJ 0072-08-130, ETC

ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	614
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	614

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN - F-1386

Texas Department of Transportation
©2023

LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4450+00 TO STA 4460+00

SHEET 3 OF 20

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2723

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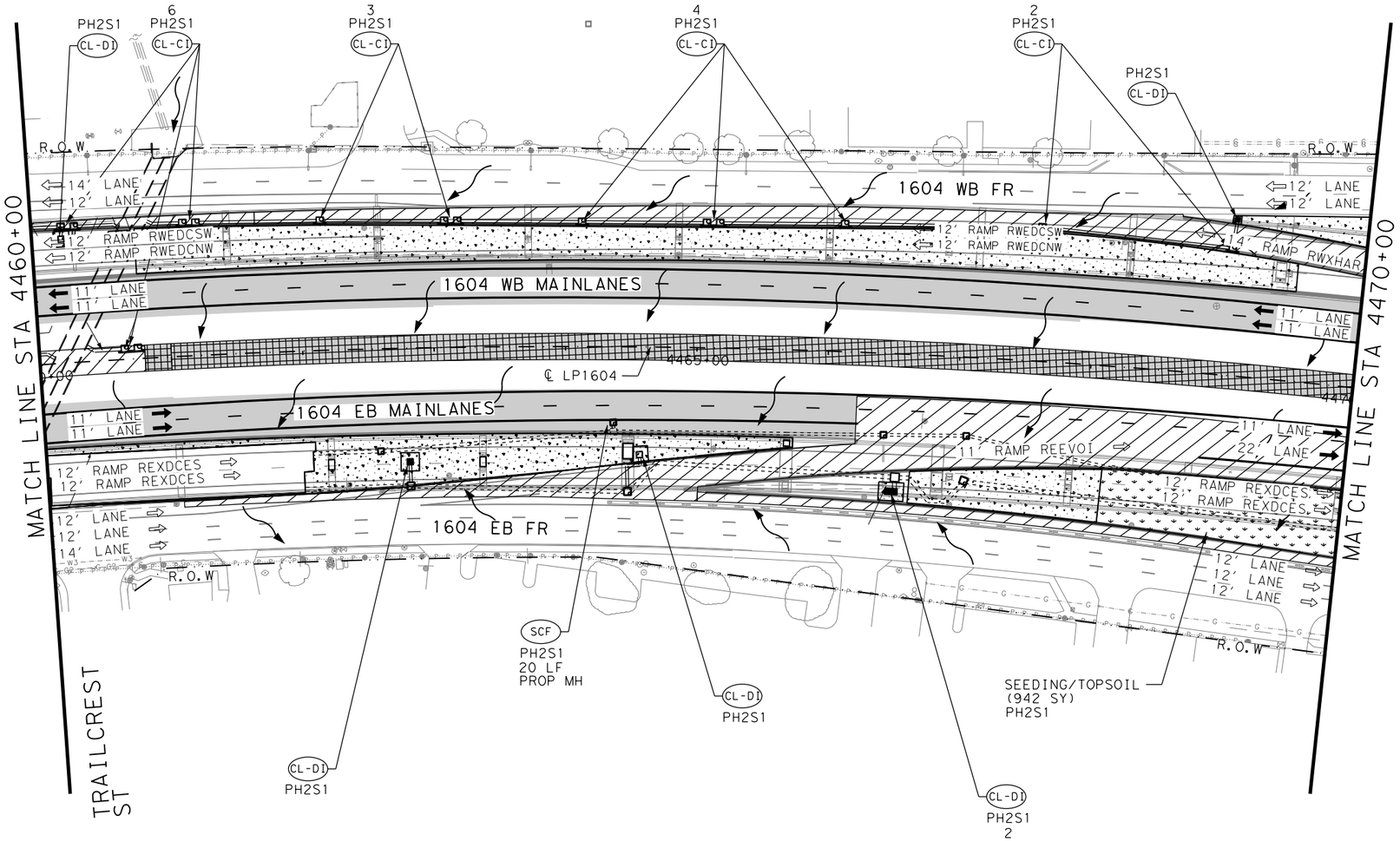

N

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	942
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	14.7
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	942
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	20
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	20
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	420
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	420

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NOTES:

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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FRN 10283

LJA Engineering, Inc.
FRN - F-1386

Texas Department of Transportation
©2023

LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4460+00 TO STA 4470+00

SHEET 4 OF 20

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2724

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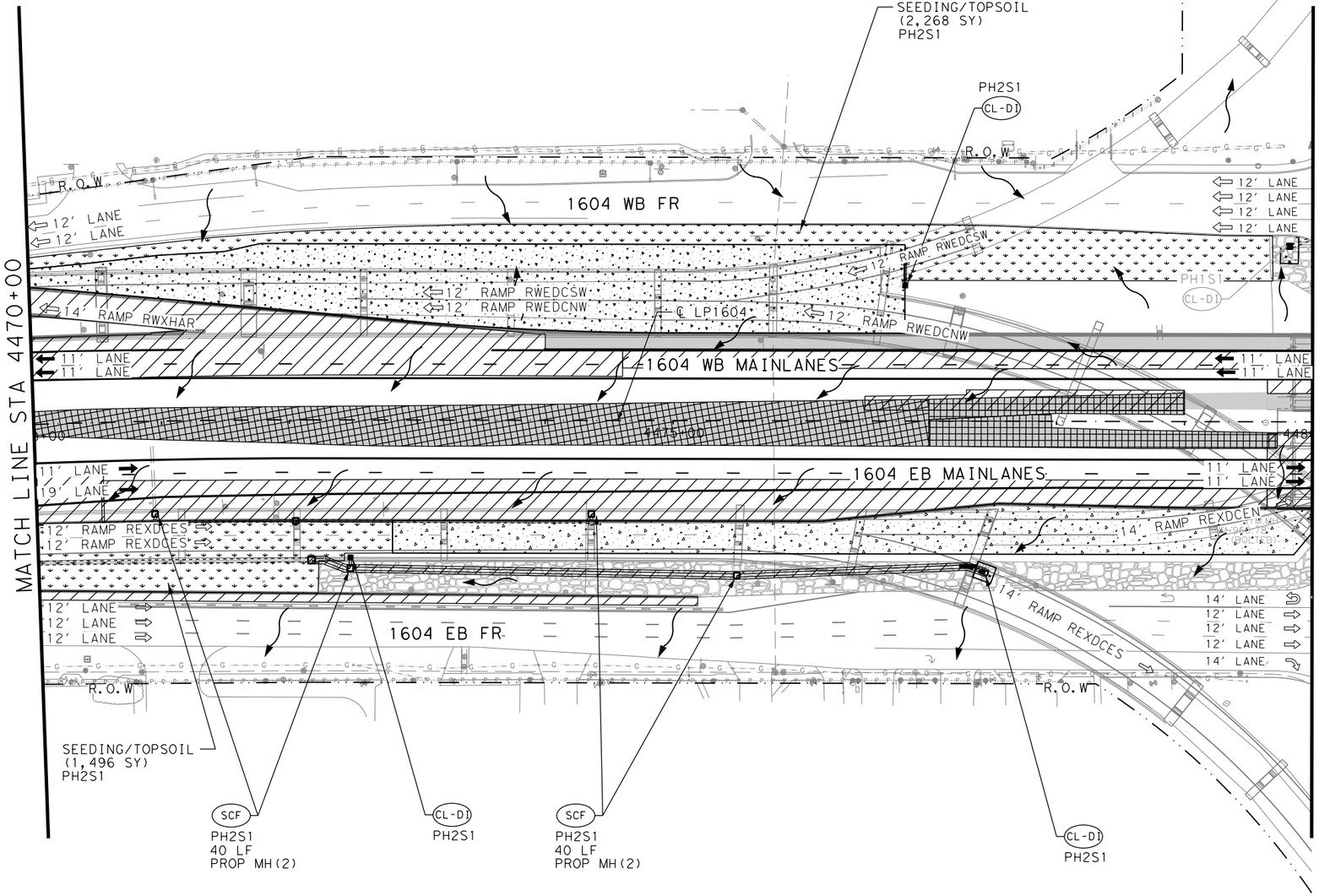

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	3764
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	58.7
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	3764
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	80
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	80
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	60
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	60

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STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'

SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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LJA Engineering, Inc.
FRN-F-1386

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LP 1604

EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4470+00 TO STA 4480+00

SHEET 5 OF 20

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2725

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

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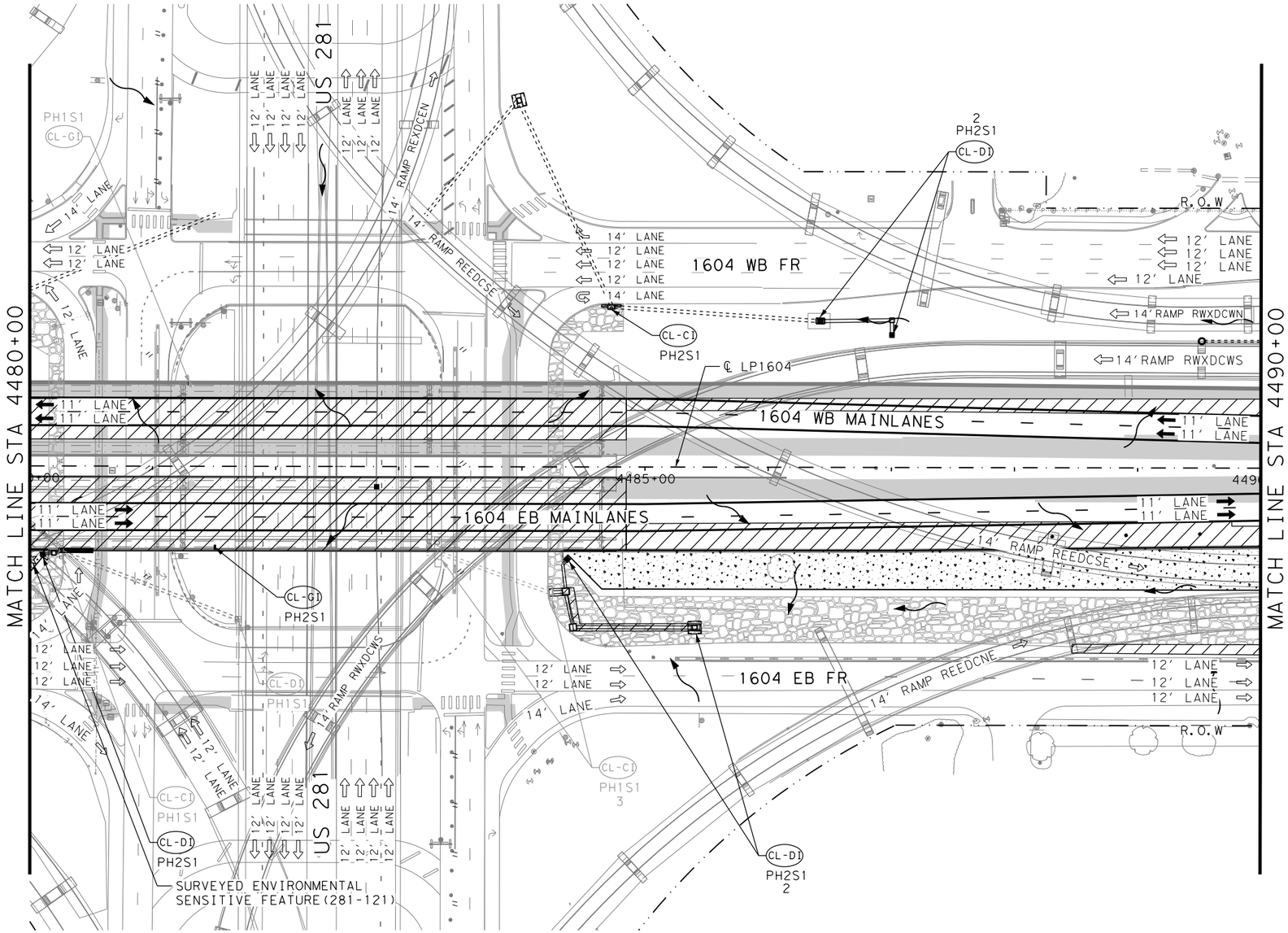

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	136
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	136

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
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- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
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FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4480+00 TO STA 4490+00

SHEET 6 OF 20

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2726

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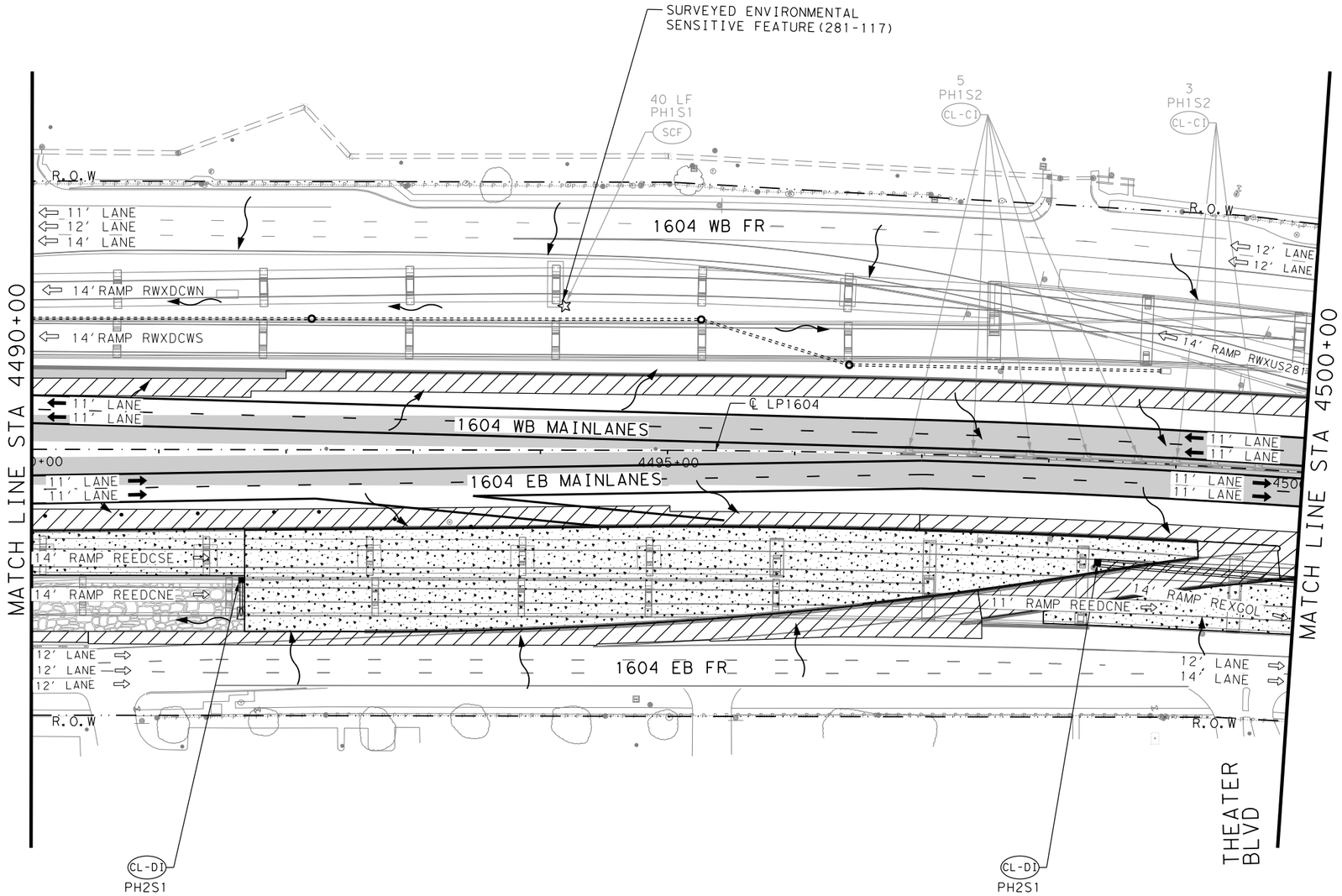

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	144
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	144

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SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4490+00 TO STA 4500+00

SHEET 7 OF 20

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2727

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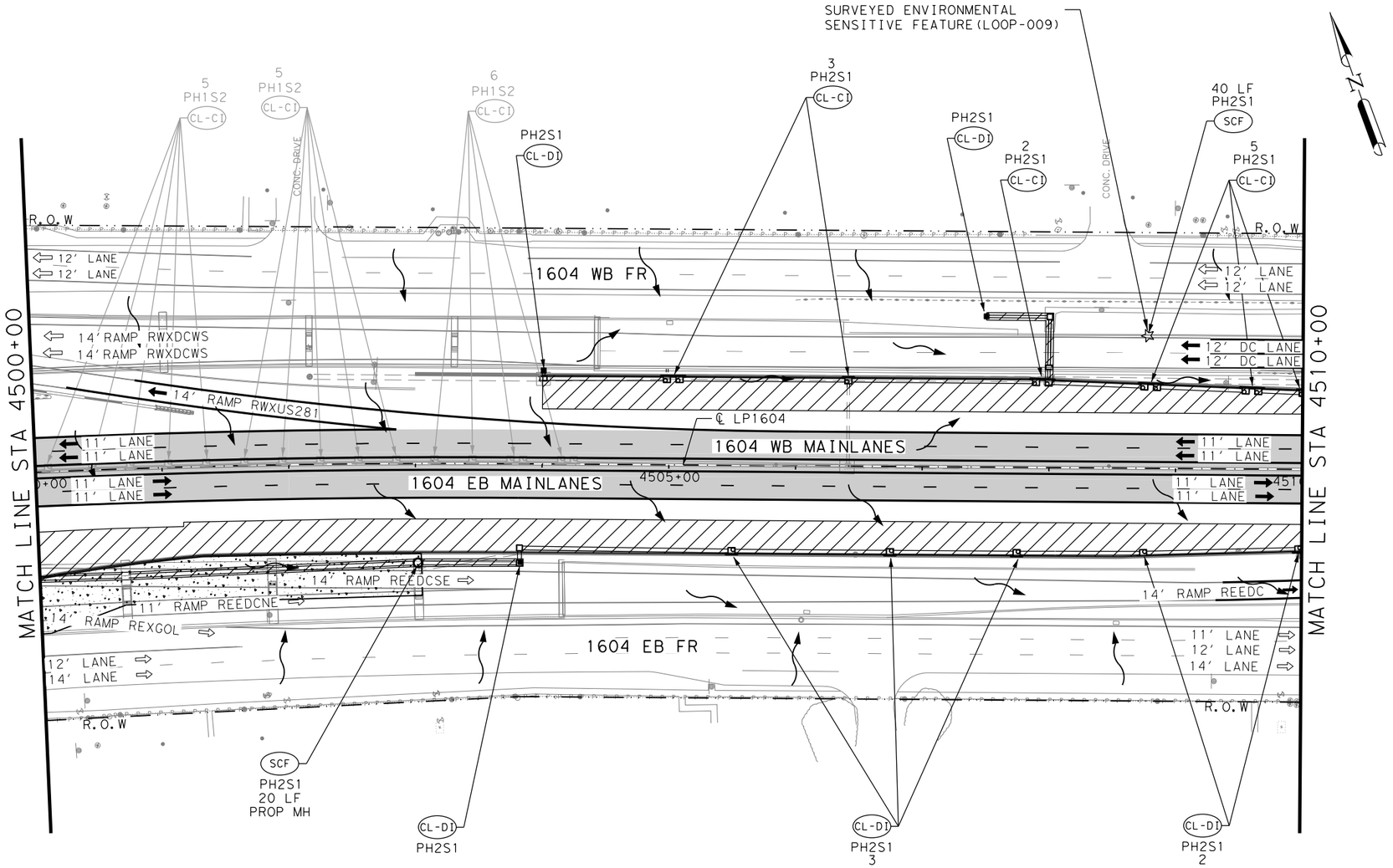

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	60
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	60
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	340
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	340

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4500+00 TO STA 4510+00

SHEET 8 OF 20

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2728

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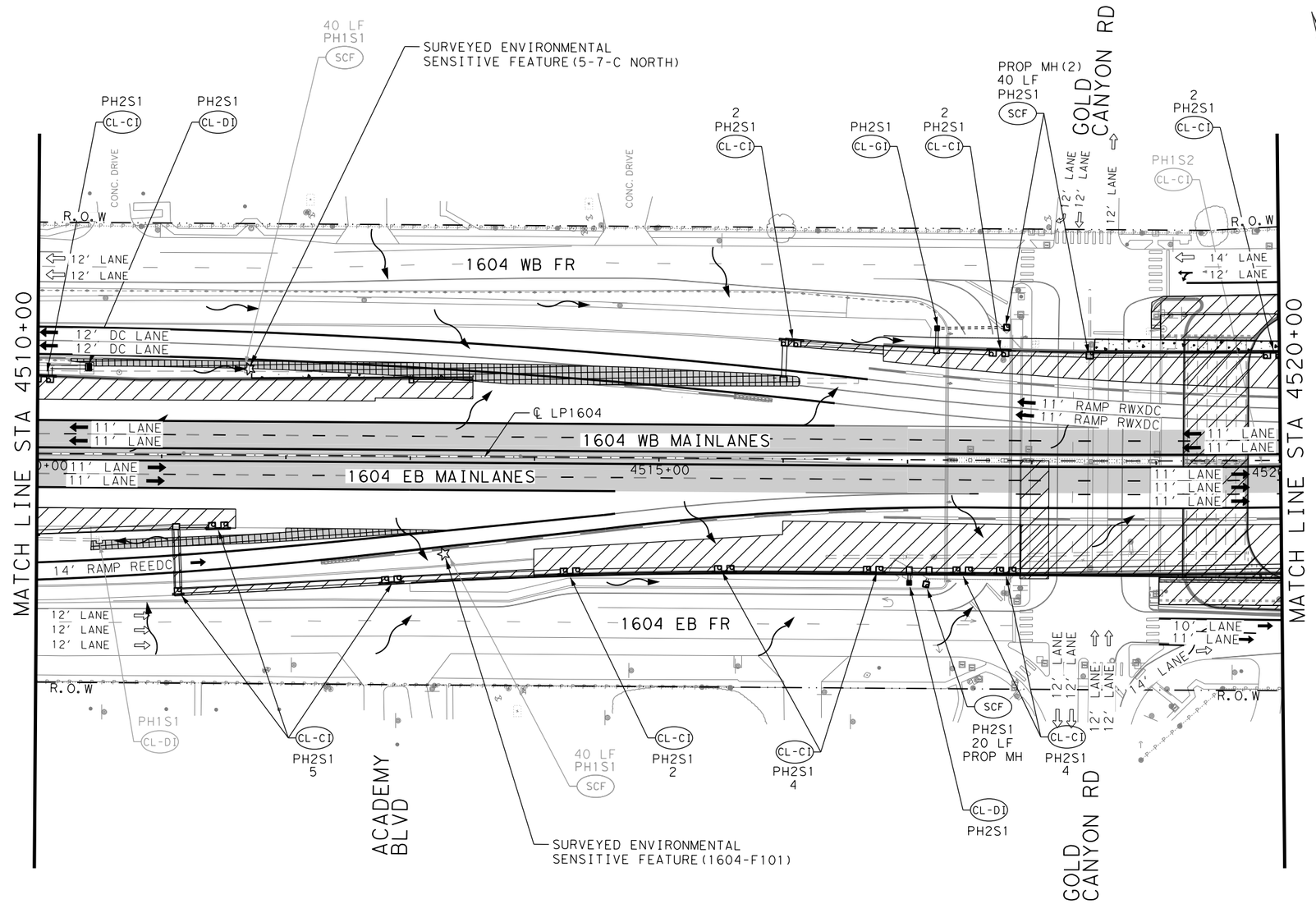

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	60
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	60
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	420
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	420

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- ECL — EROSION CONTROL LOG
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- PERM PAVEMENT THIS PHASE
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- CONSTRUCTON EXIT TY I (111 SY EA)
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- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4510+00 TO STA 4520+00

SHEET 9 OF 20

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2729

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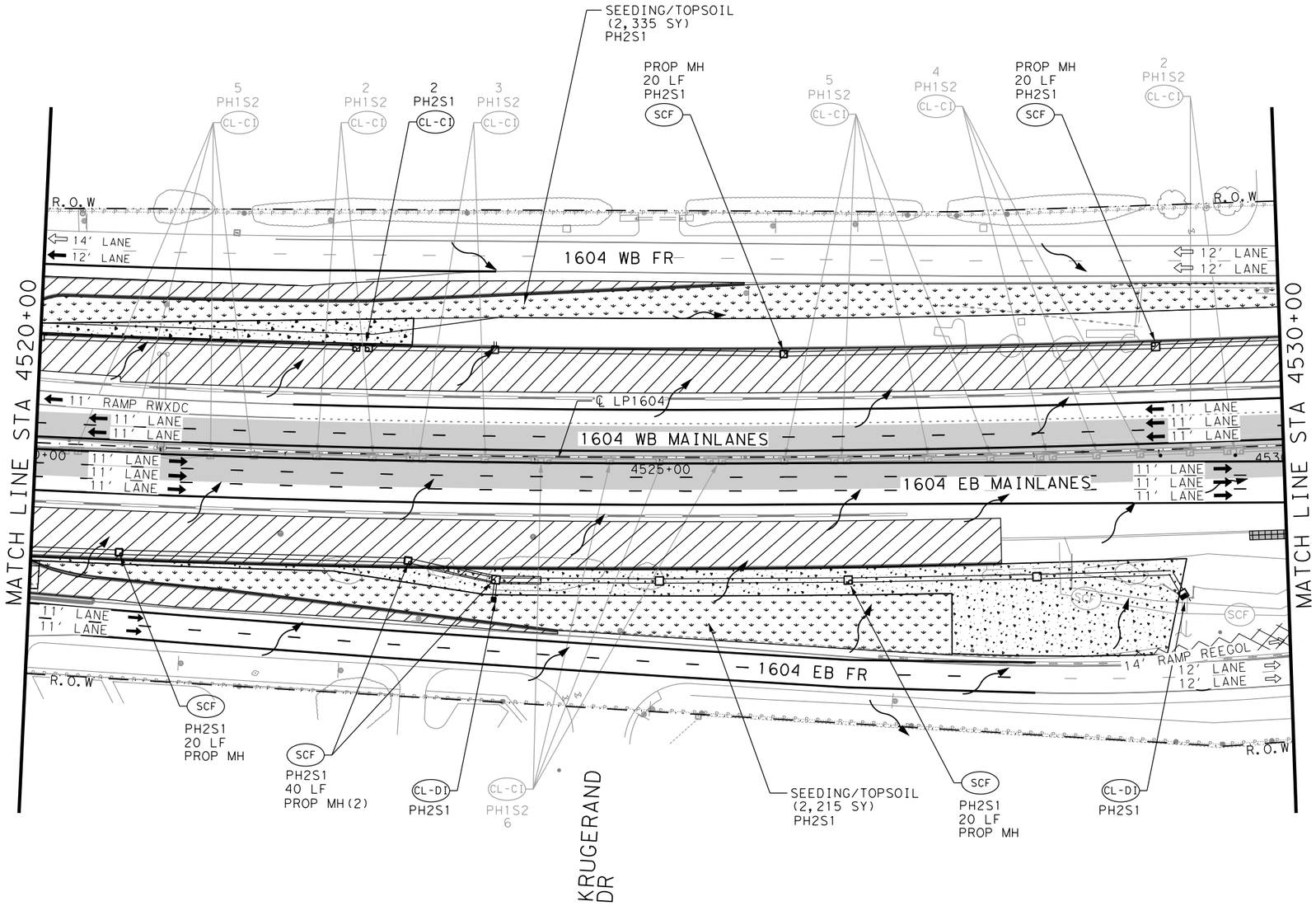

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	4550
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	4550
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	4550
168	VEGETATIVE WATERING	MG	71.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	4550
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	120
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	120
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	76
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	76

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- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
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REV. NO.	DATE	DESCRIPTION	BY

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FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4520+00 TO STA 4530+00

SHEET 10 OF 20

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2730

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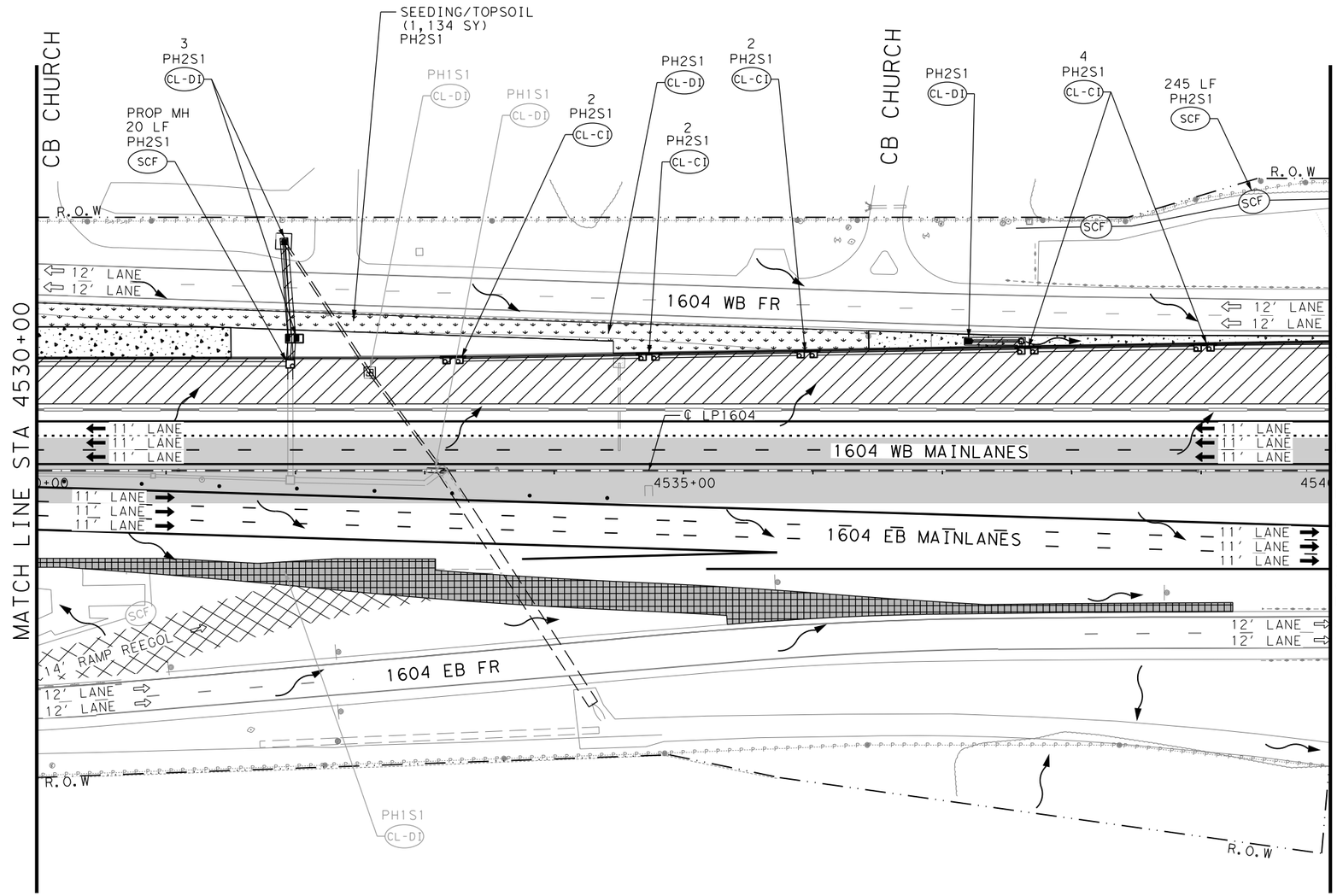

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	1134
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	1134
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	1134
168	VEGETATIVE WATERING	MG	17.7
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	1134
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	2
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	265
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	265
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	280
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	280

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- ECL — EROSION CONTROL LOG
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- PERM PAVEMENT THIS PHASE
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- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4530+00 TO STA 4540+00

SHEET 11 OF 20

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2731

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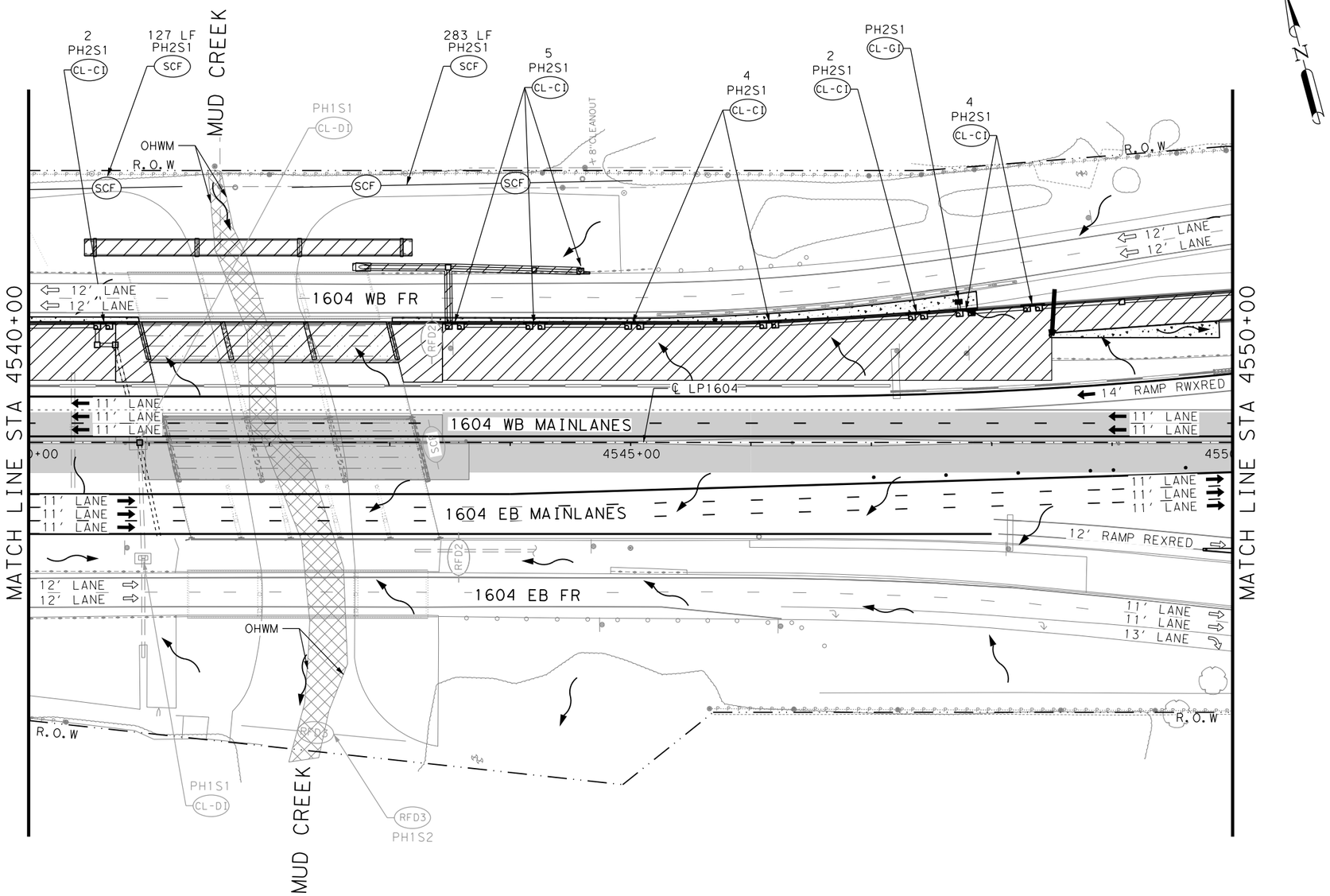

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	2
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	410
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	410
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	326
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	326

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- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
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PROFESSIONAL ENGINEER

2/17/2023

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FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4540+00 TO STA 4550+00

SHEET 12 OF 20

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2732

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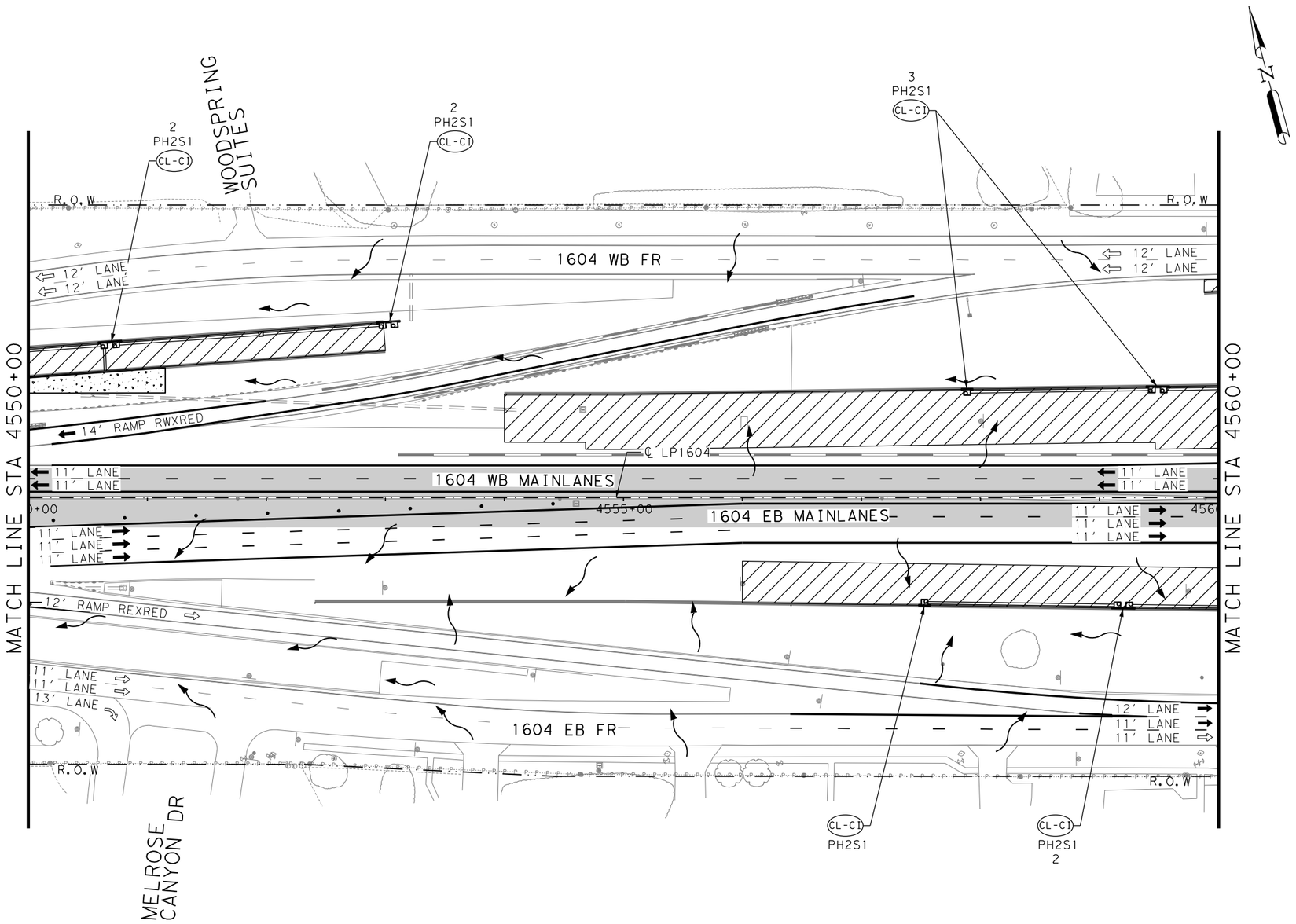

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	180
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	180

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

LEGEND:

- (SCF) TEMPORARY SEDIMENT CONTROL FENCE
- (SCF) TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- (RFD2) ROCK FILTER DAM
- (RFD2) ROCK FILTER DAM PREV PHASE
- (CL-DI) EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- (CL-DI) EROSION CONTROL LOG AT DROP INLET PREV PHASE
- (CL-CI) EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- (CL-CI) EROSION CONTROL LOG AT CURB INLET PREV PHASE
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- (ECL) EROSION CONTROL LOG
- (ECL) EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON, TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation ©2023

LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4550+00 TO STA 4560+00

SHEET 13 OF 20

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2733

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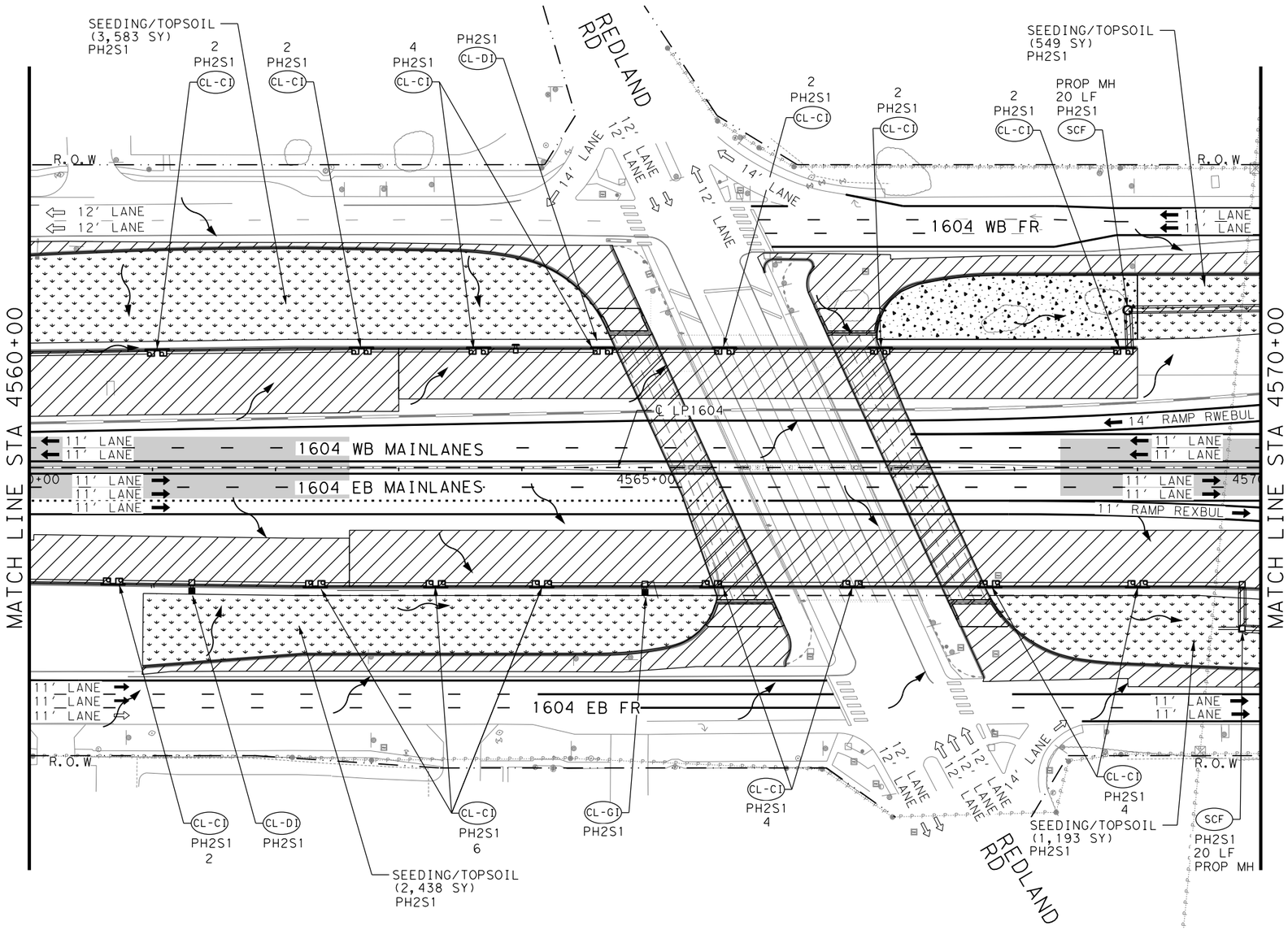

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	7763
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	7763
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	7763
168	VEGETATIVE WATERING	MG	121.1
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	7763
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	40
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	40
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	600
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	600

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
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LEGEND:

- (SCF) TEMPORARY SEDIMENT CONTROL FENCE
- (SCF) TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- (RFD2) ROCK FILTER DAM
- (RFD2) ROCK FILTER DAM PREV PHASE
- (CL-DI) EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- (CL-DI) EROSION CONTROL LOG AT DROP INLET PREV PHASE
- (CL-CI) EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- (CL-CI) EROSION CONTROL LOG AT CURB INLET PREV PHASE
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- (ECL) EROSION CONTROL LOG
- (ECL) EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON, TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4560+00 TO STA 4570+00

SHEET 14 OF 20

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2734

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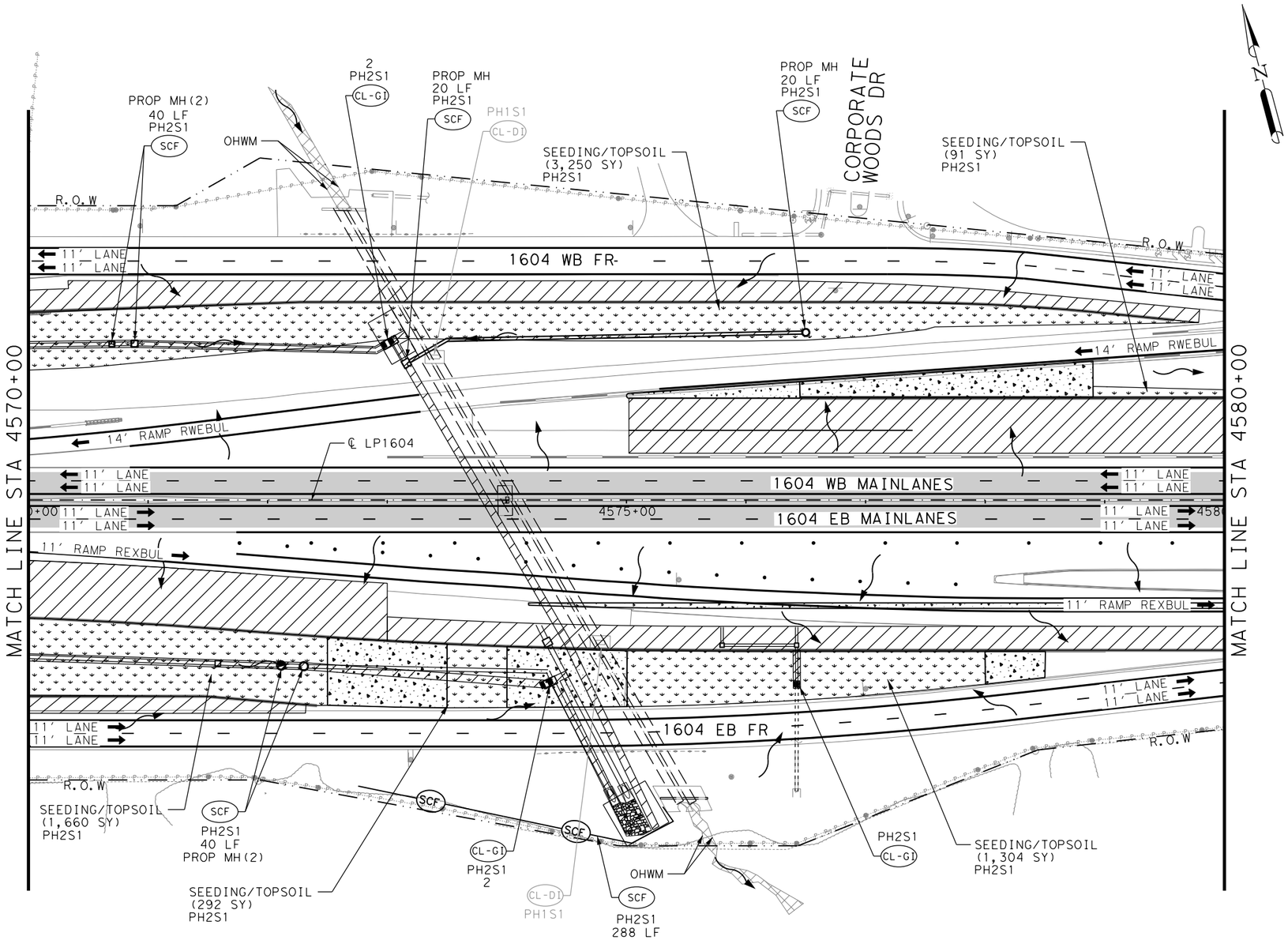

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	6597
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	6597
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	6597
168	VEGETATIVE WATERING	MG	102.9
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	6597
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	2
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	408
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	408
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	100
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	100

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10263

LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation
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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4570+00 TO STA 4580+00

SHEET 15 OF 20

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2735

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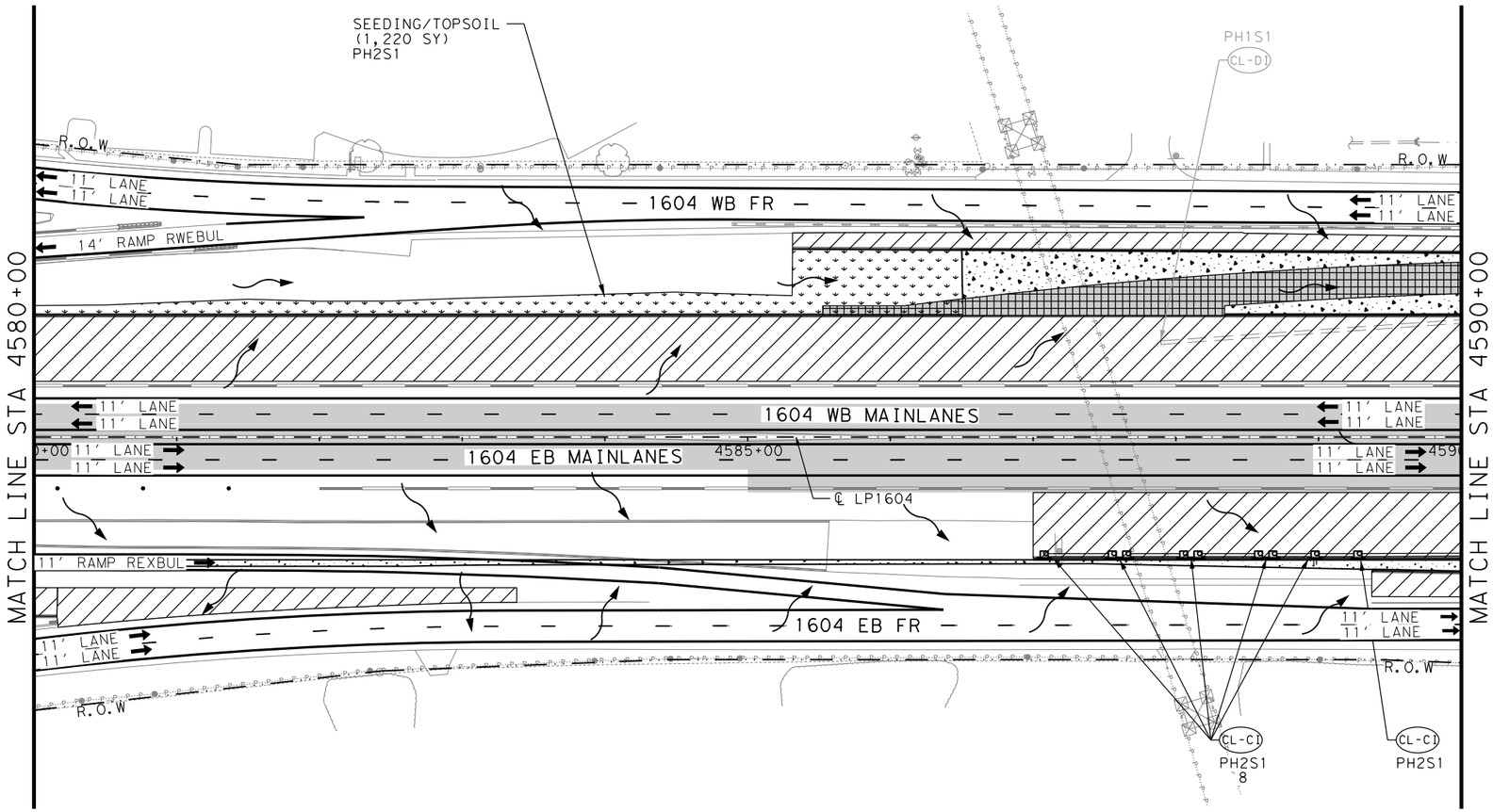

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	1220
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	1220
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	1220
168	VEGETATIVE WATERING	MG	19.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	1220
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	162
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	162

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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LEGEND:

- (SCF) TEMPORARY SEDIMENT CONTROL FENCE
- (SCF) TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- (RFD2) ROCK FILTER DAM
- (RFD2) ROCK FILTER DAM PREV PHASE
- (CL-DI) EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- (CL-DI) EROSION CONTROL LOG AT DROP INLET PREV PHASE
- (CL-CI) EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- (CL-CI) EROSION CONTROL LOG AT CURB INLET PREV PHASE
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- (ECL) EROSION CONTROL LOG
- (ECL) EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10263

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4580+00 TO STA 4590+00

SHEET 16 OF 20

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2736

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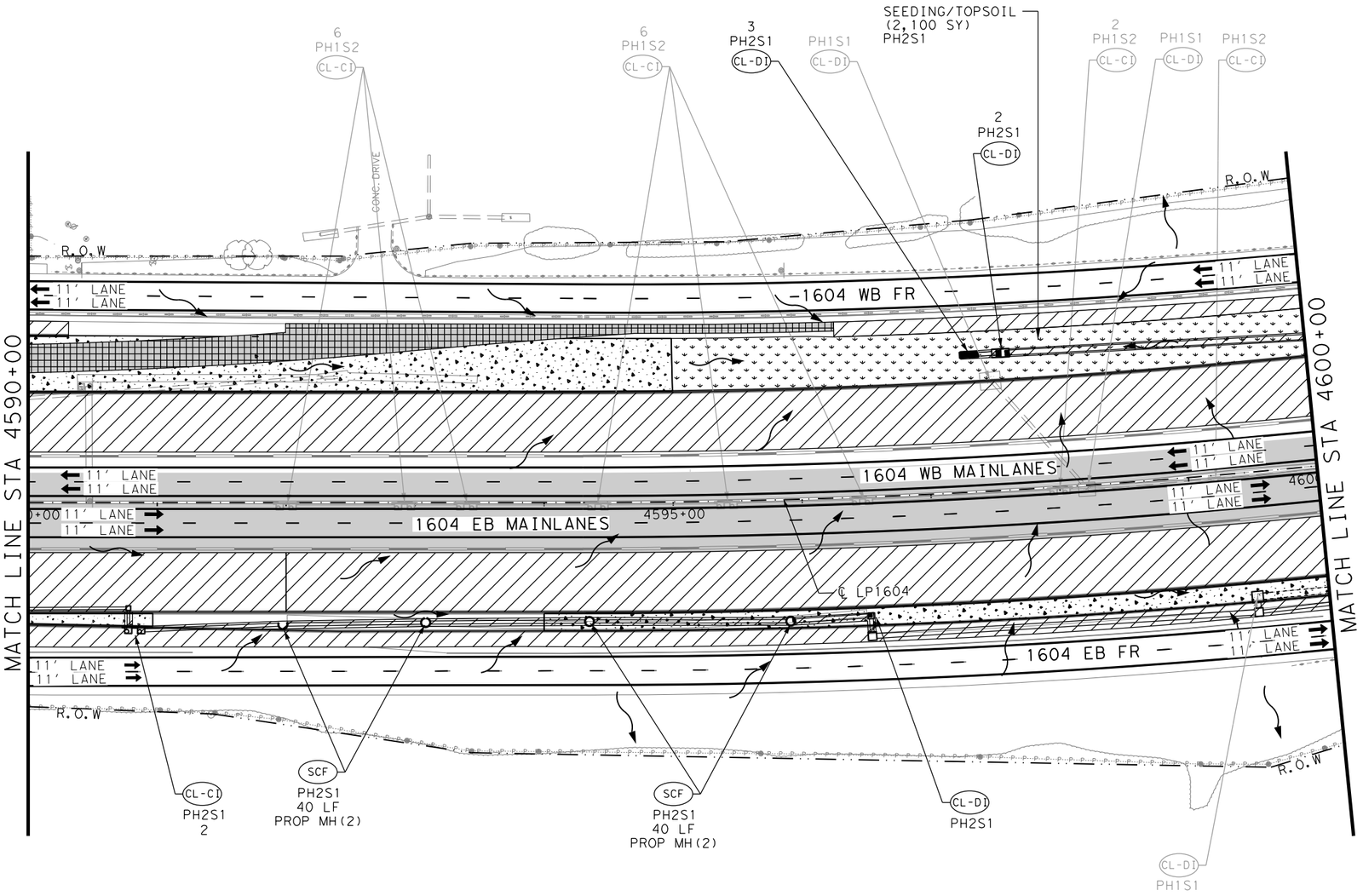

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	2100
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	2100
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	2100
168	VEGETATIVE WATERING	MG	32.8
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	2100
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	80
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	80
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	138
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	138

* FOR CONTRACTOR'S INFORMATION ONLY

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STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
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TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4590+00 TO STA 4600+00

SHEET 17 OF 20

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2737

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

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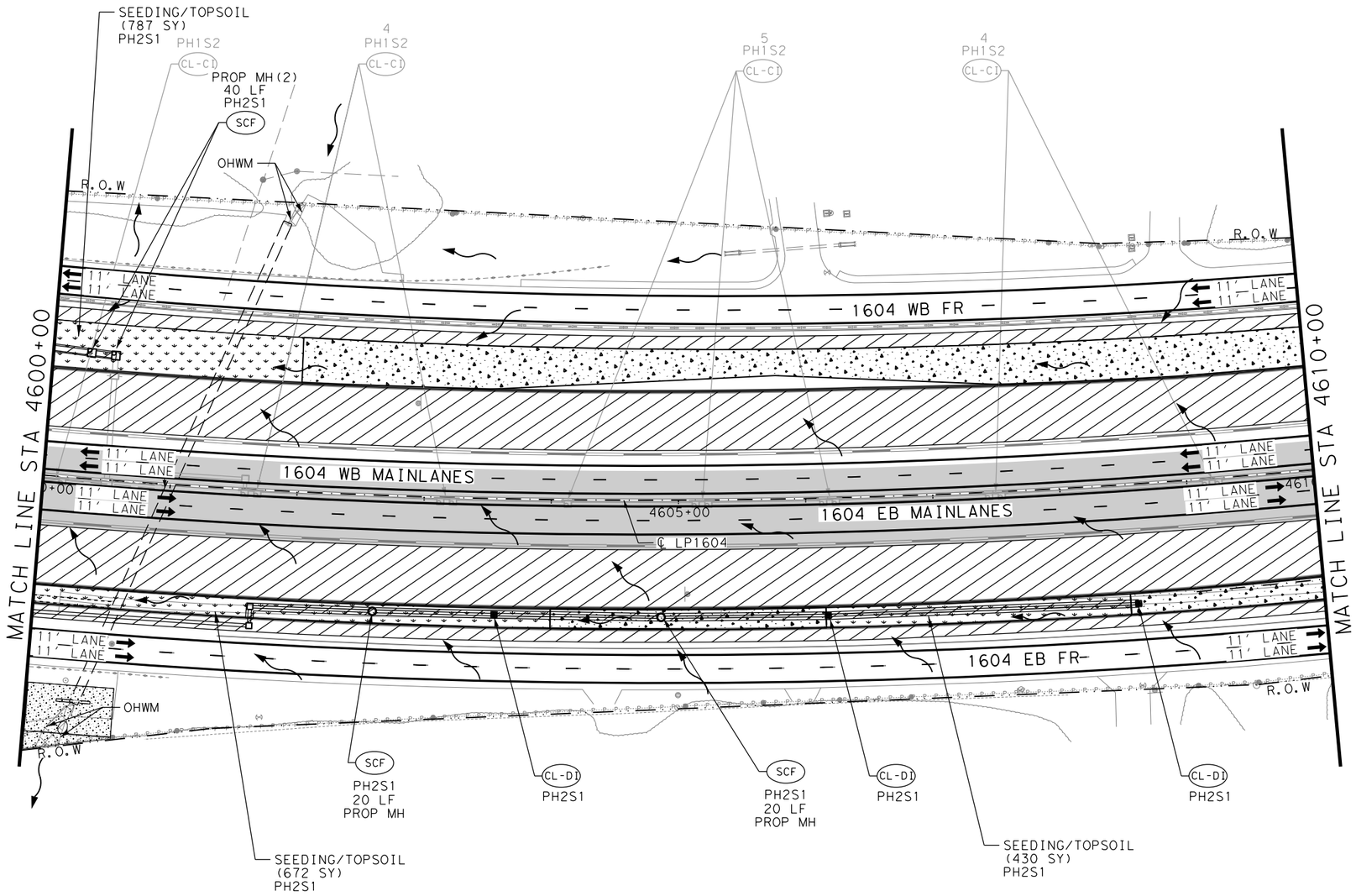

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	1889
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	1889
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	1889
168	VEGETATIVE WATERING	MG	29.5
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	1889
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	80
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	80
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	60
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	60

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON, TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4600+00 TO STA 4610+00

SHEET 18 OF 20

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2738

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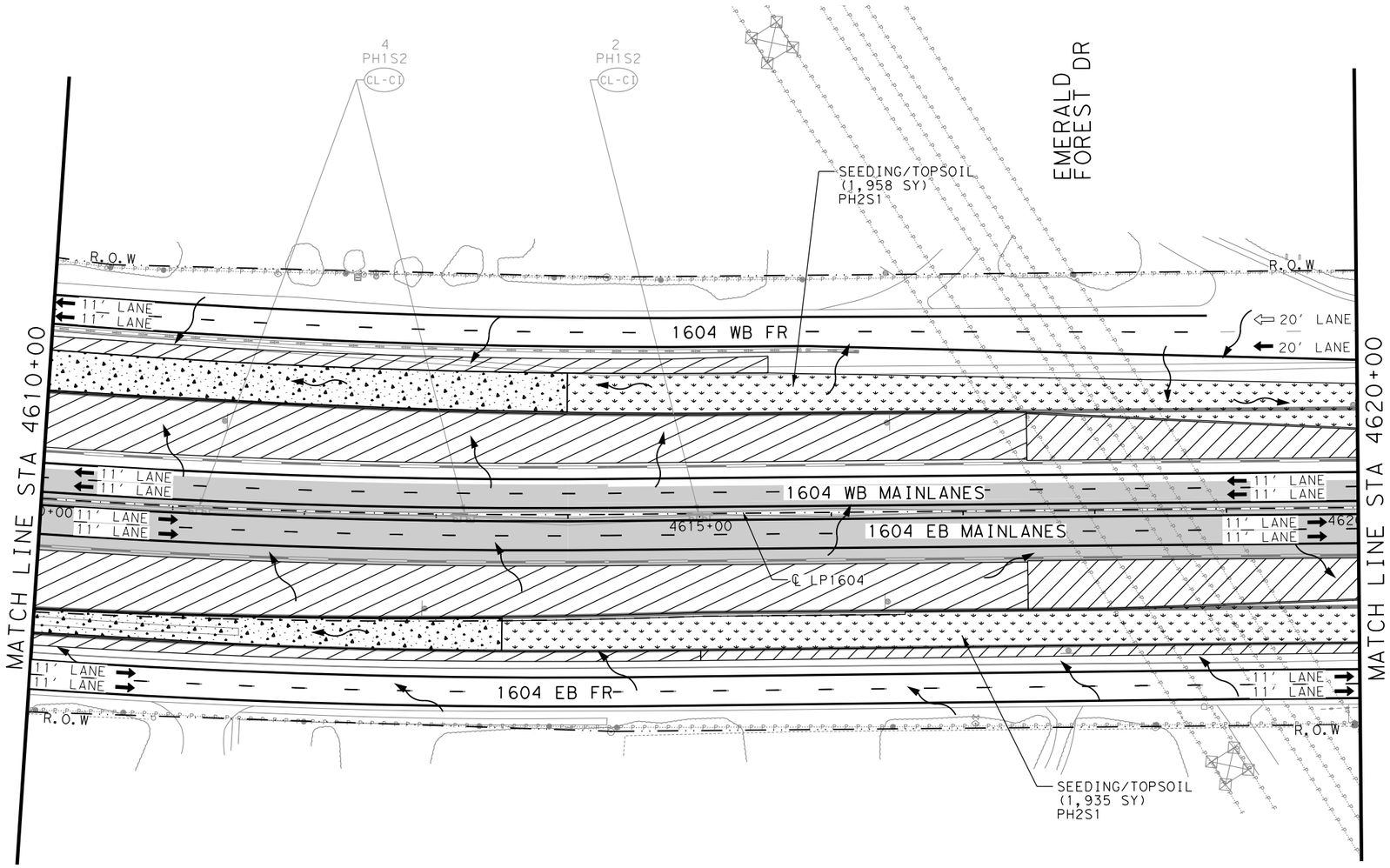

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	3893
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	3893
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	3893
168	VEGETATIVE WATERING	MG	60.7
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	3893
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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NOTES:

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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FRN 10283

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4610+00 TO STA 4620+00

SHEET 19 OF 20

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2739

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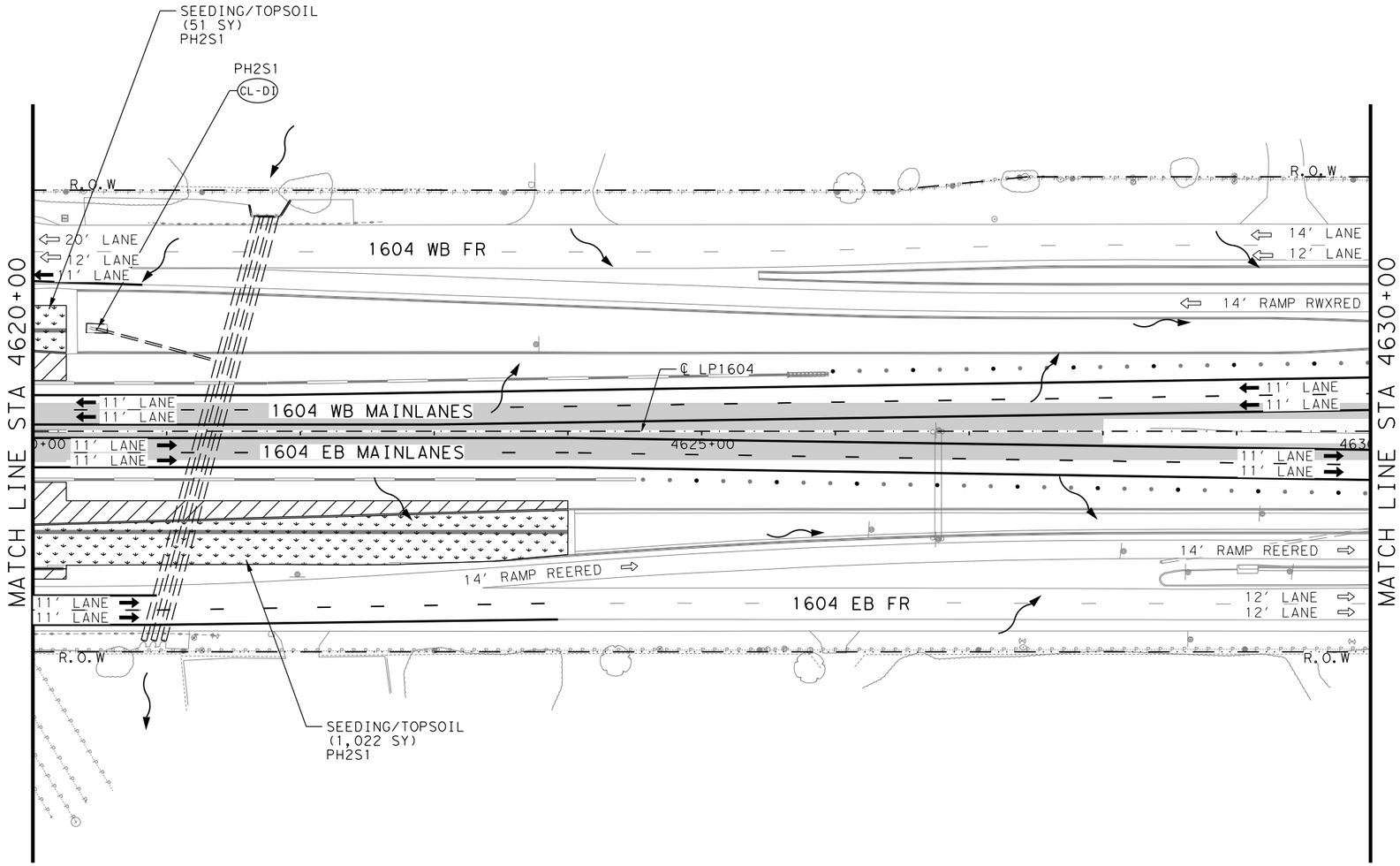

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	1073
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	16.7
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	1073
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	20
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	20

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NOTES:

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- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 1
STA 4620+00 TO STA 4630+00

SHEET 20 OF 20

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2740

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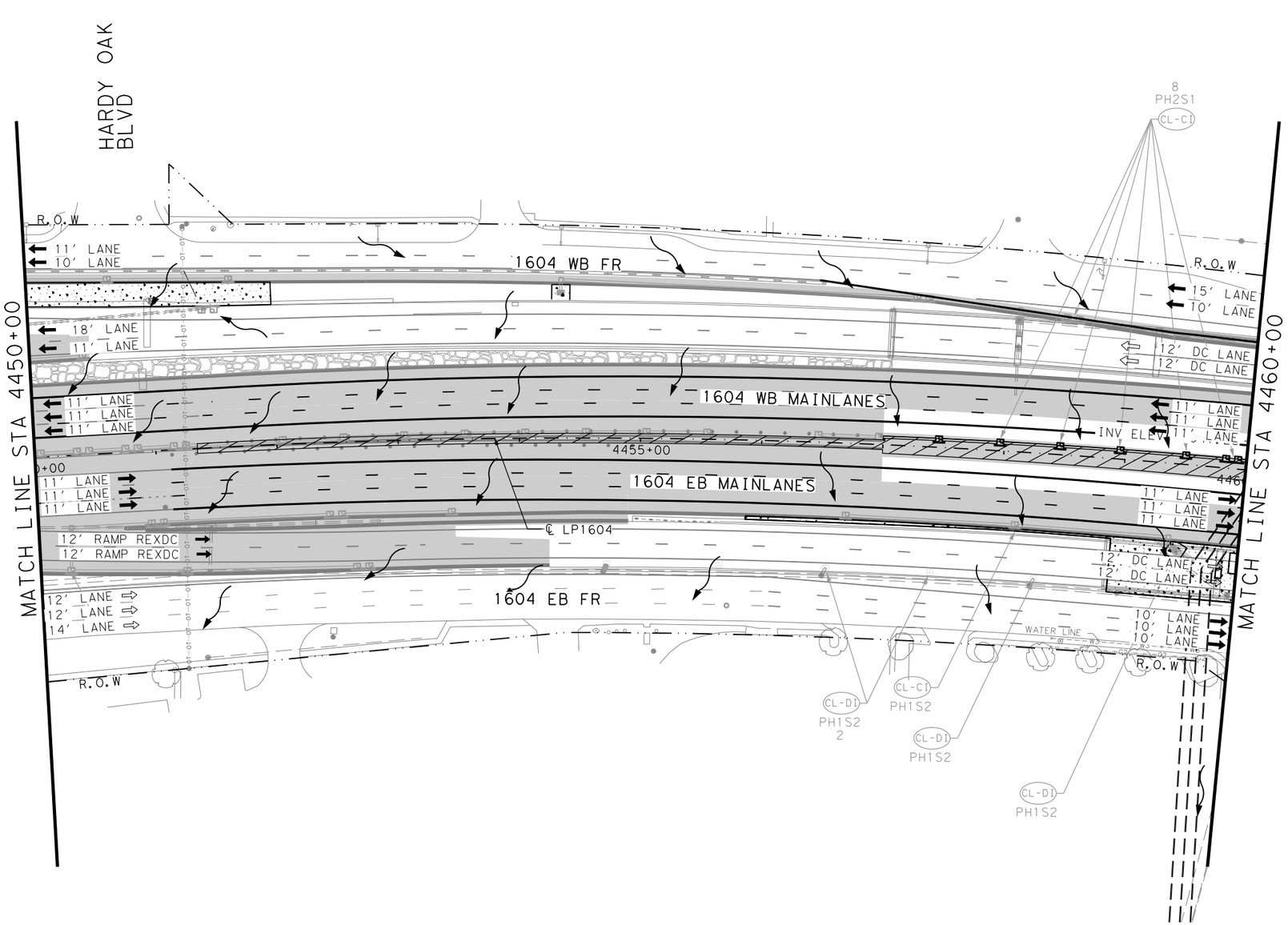

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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NOTES:

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- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4450+00 TO STA 4460+00

SHEET 1 OF 15

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2741

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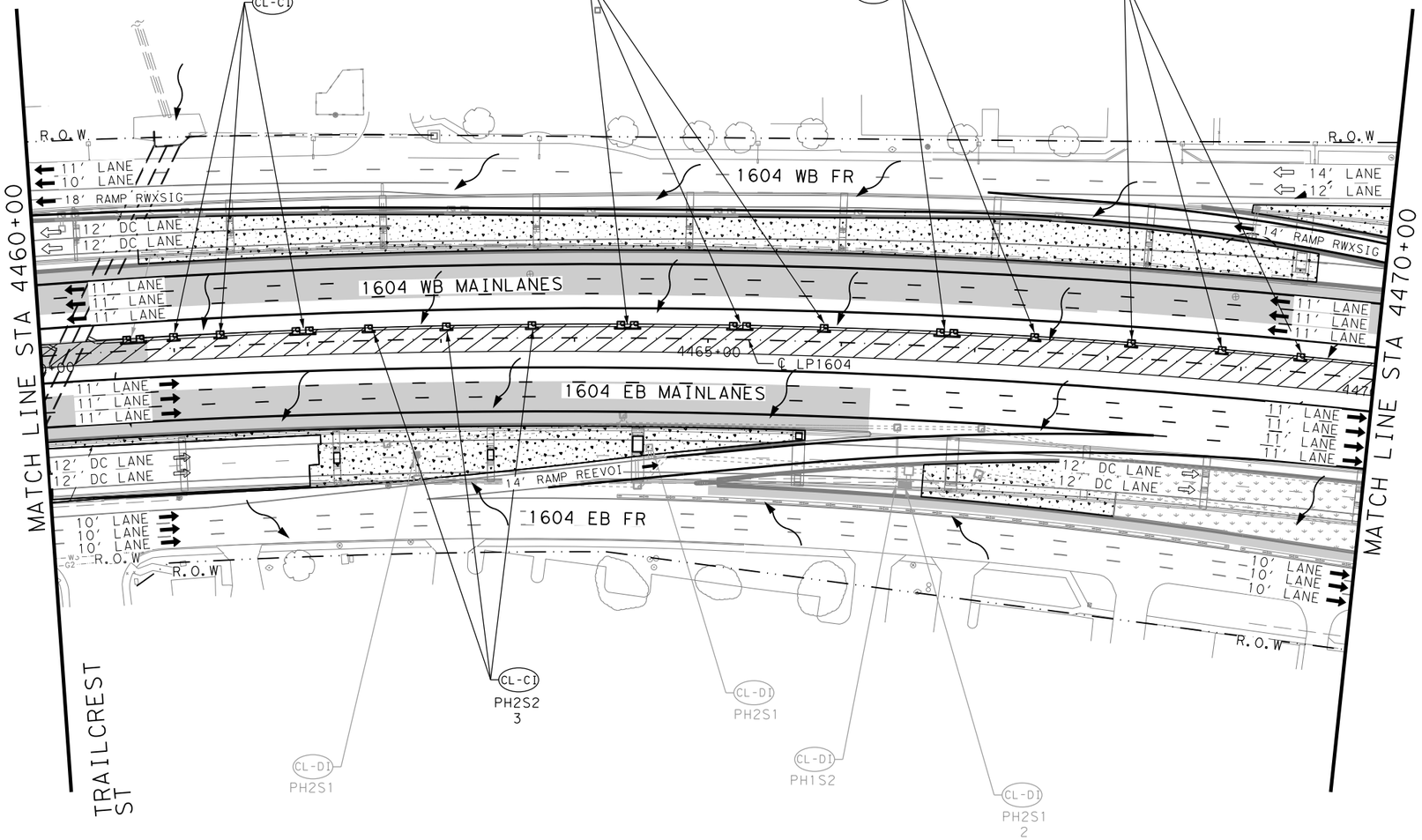

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	324
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	324

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LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FRN 10283

LJA Engineering, Inc.
FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4460+00 TO STA 4470+00

SHEET 2 OF 15

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2742

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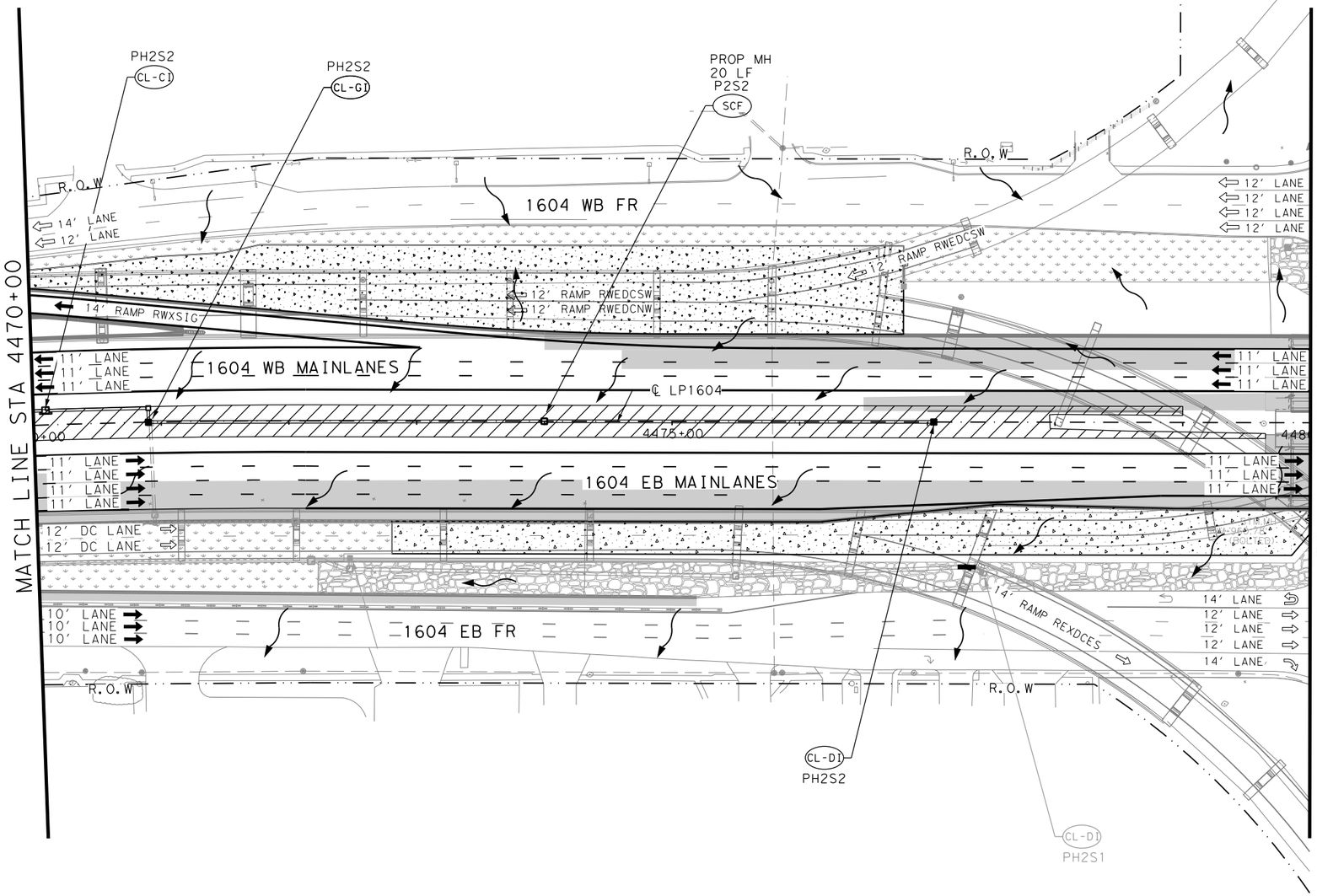

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	20
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	20
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	58
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	58

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10263

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4470+00 TO STA 4480+00

SHEET 3 OF 15

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2743

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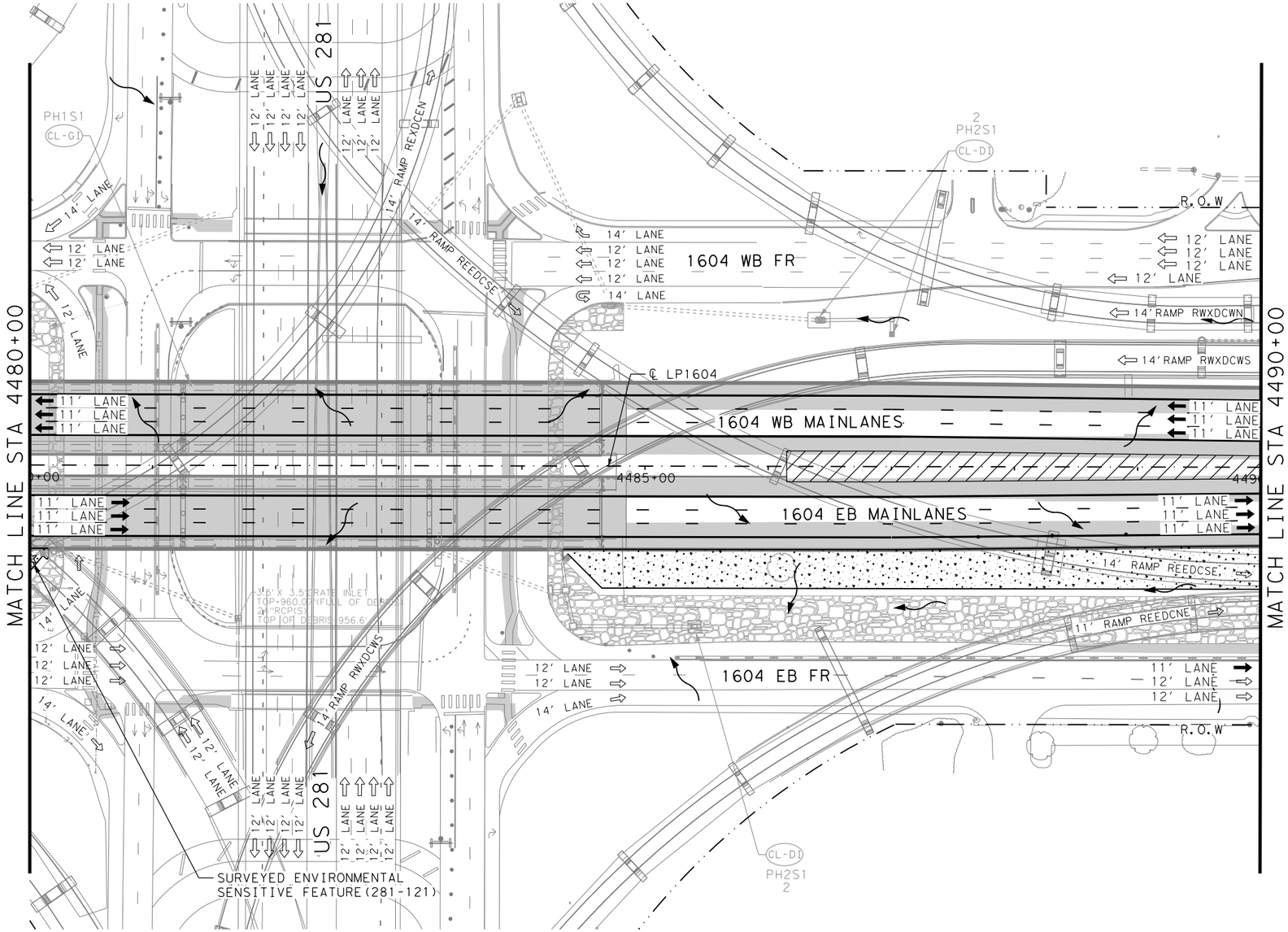

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON, TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4480+00 TO STA 4490+00

SHEET 4 OF 15

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2744

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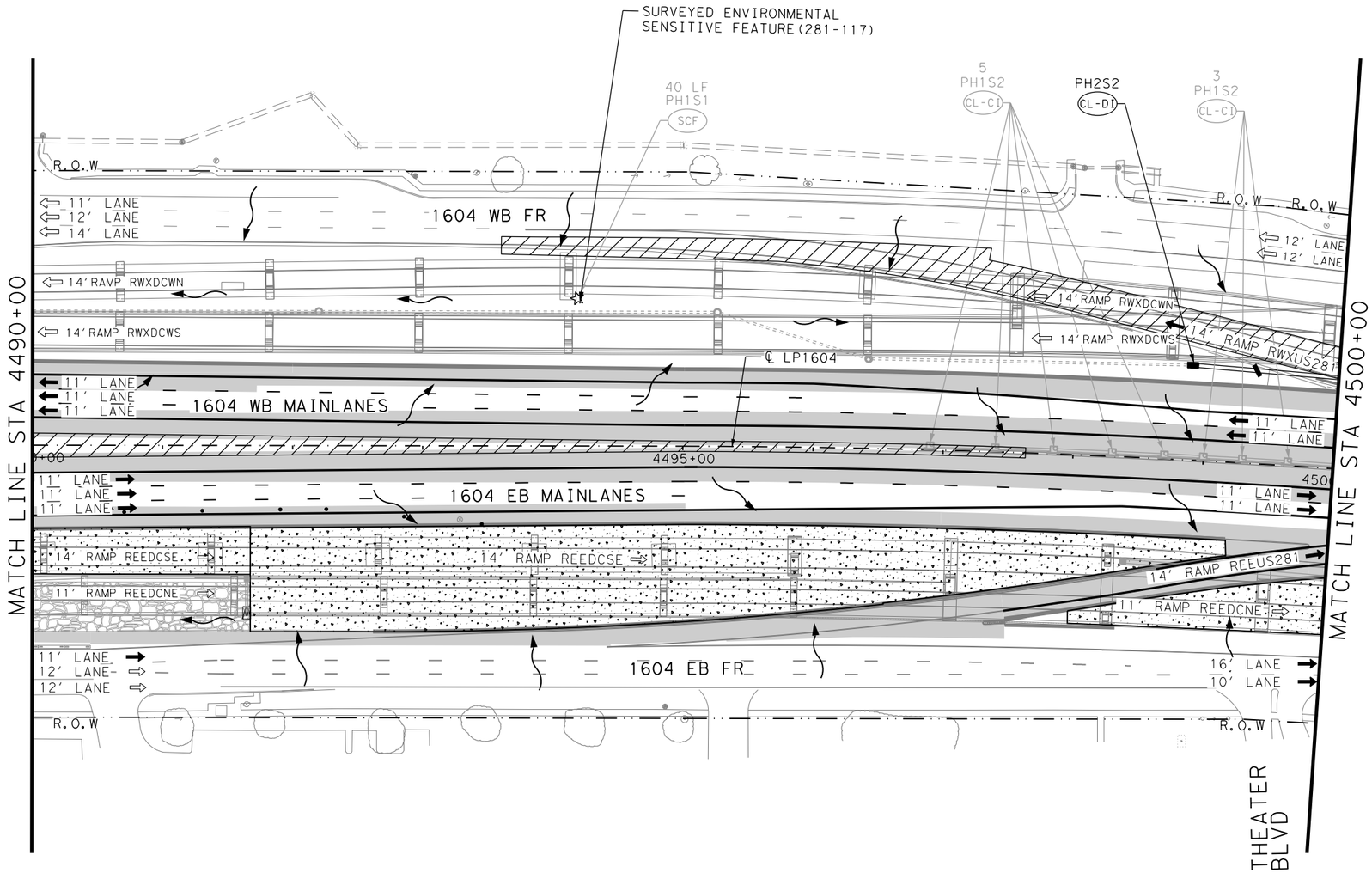

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	20
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	20

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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4490+00 TO STA 4500+00

SHEET 5 OF 15

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2745

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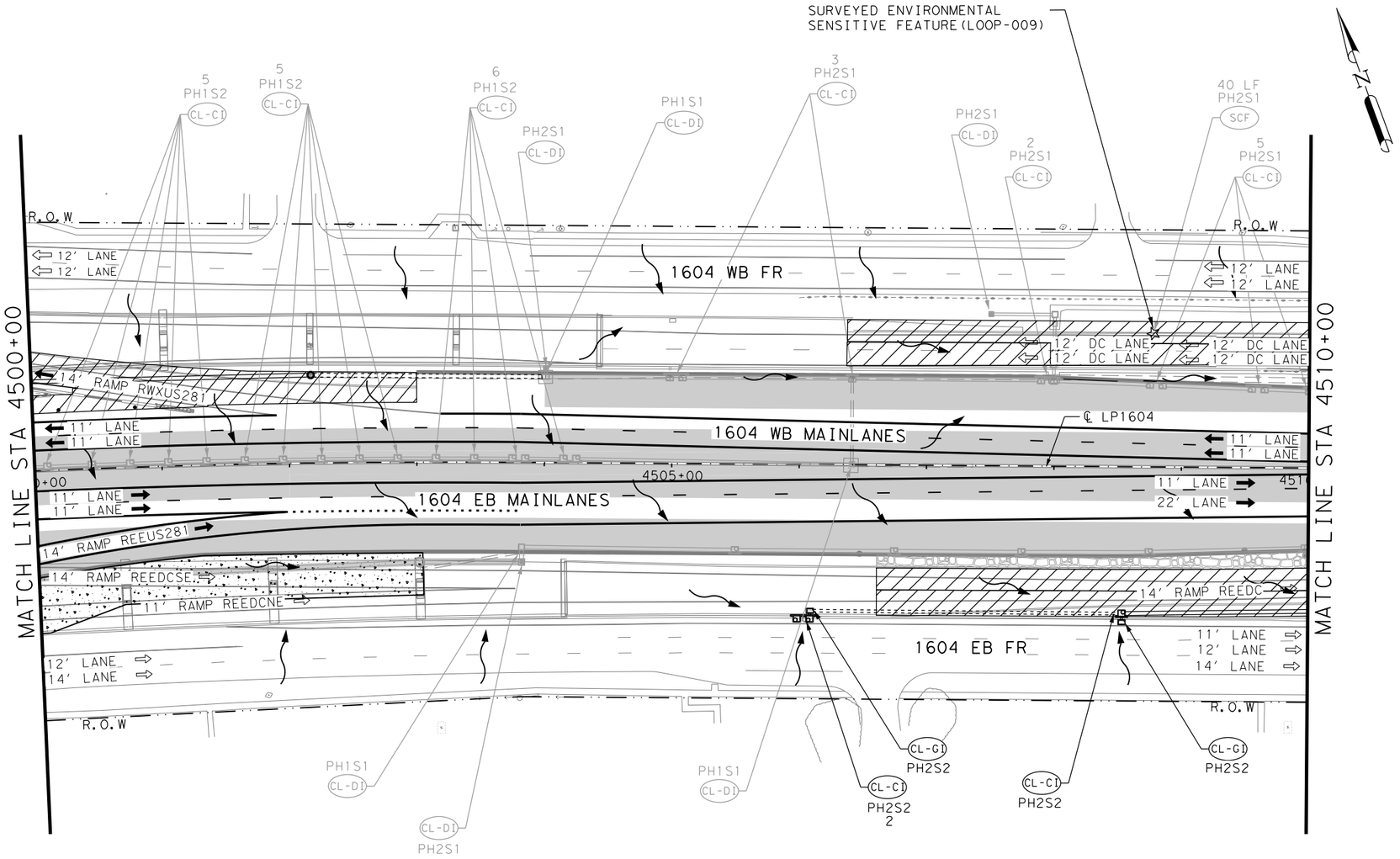

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM)(URBAN)(CLAY)	SY	0
*164	DRILL SEED (TEMP)(WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	94
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	94

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NOTES:

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- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4500+00 TO STA 4510+00

SHEET 6 OF 15

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2746

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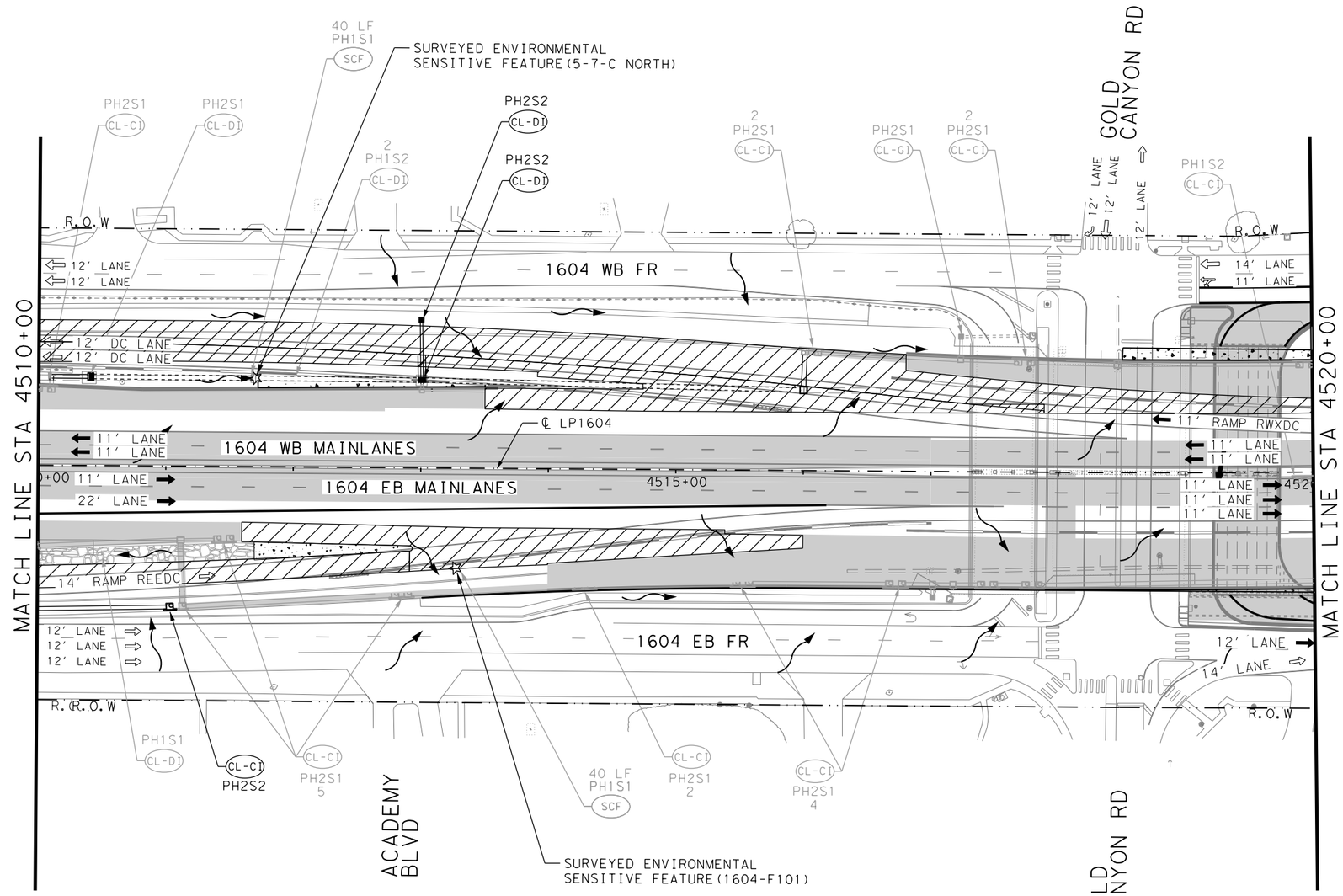

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	20
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	20
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	58
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	58

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LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4510+00 TO STA 4520+00

SHEET 7 OF 15

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2747

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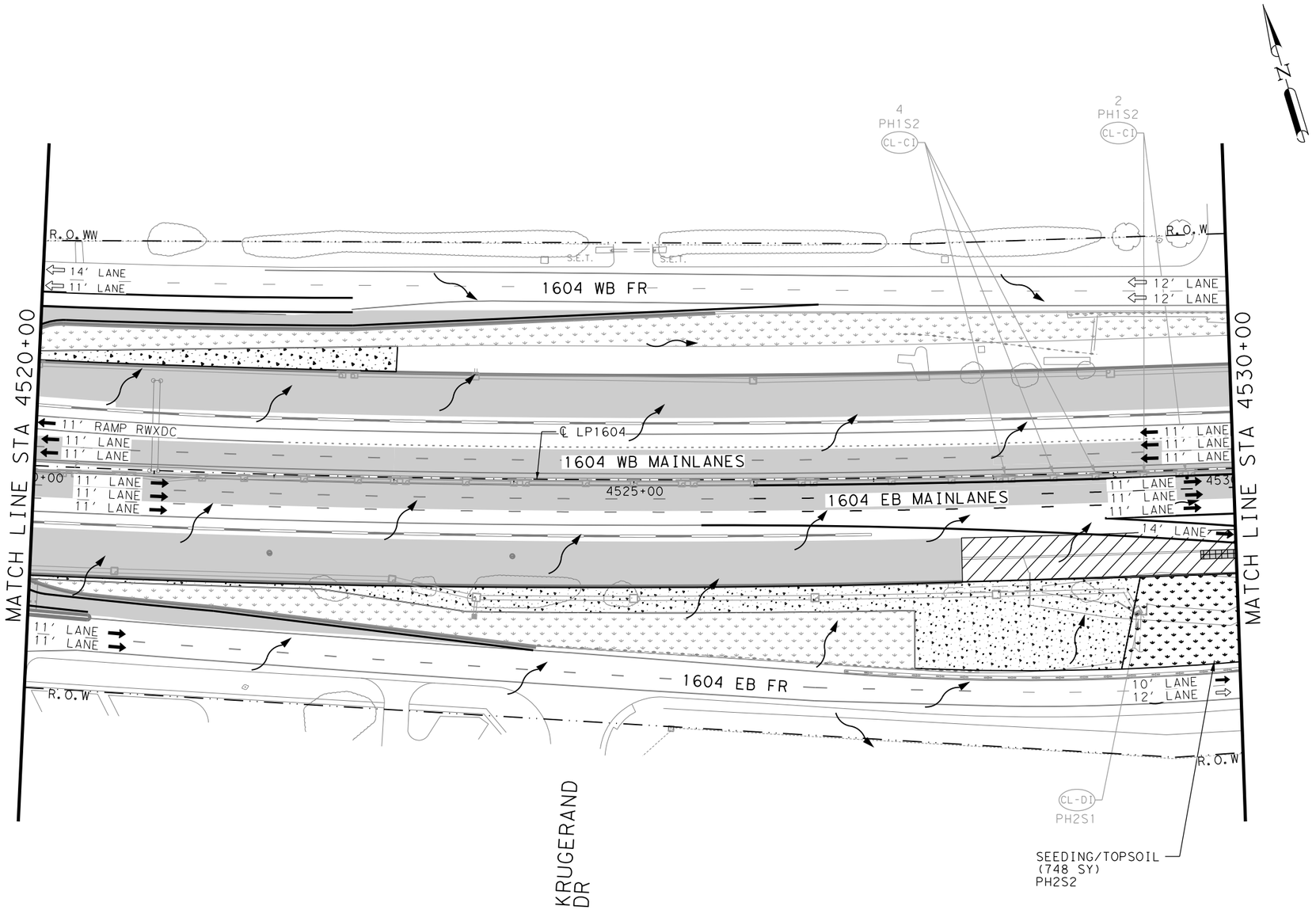

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	748
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	11.7
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	748
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
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LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE		TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4520+00 TO STA 4530+00

SHEET 8 OF 15

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2748

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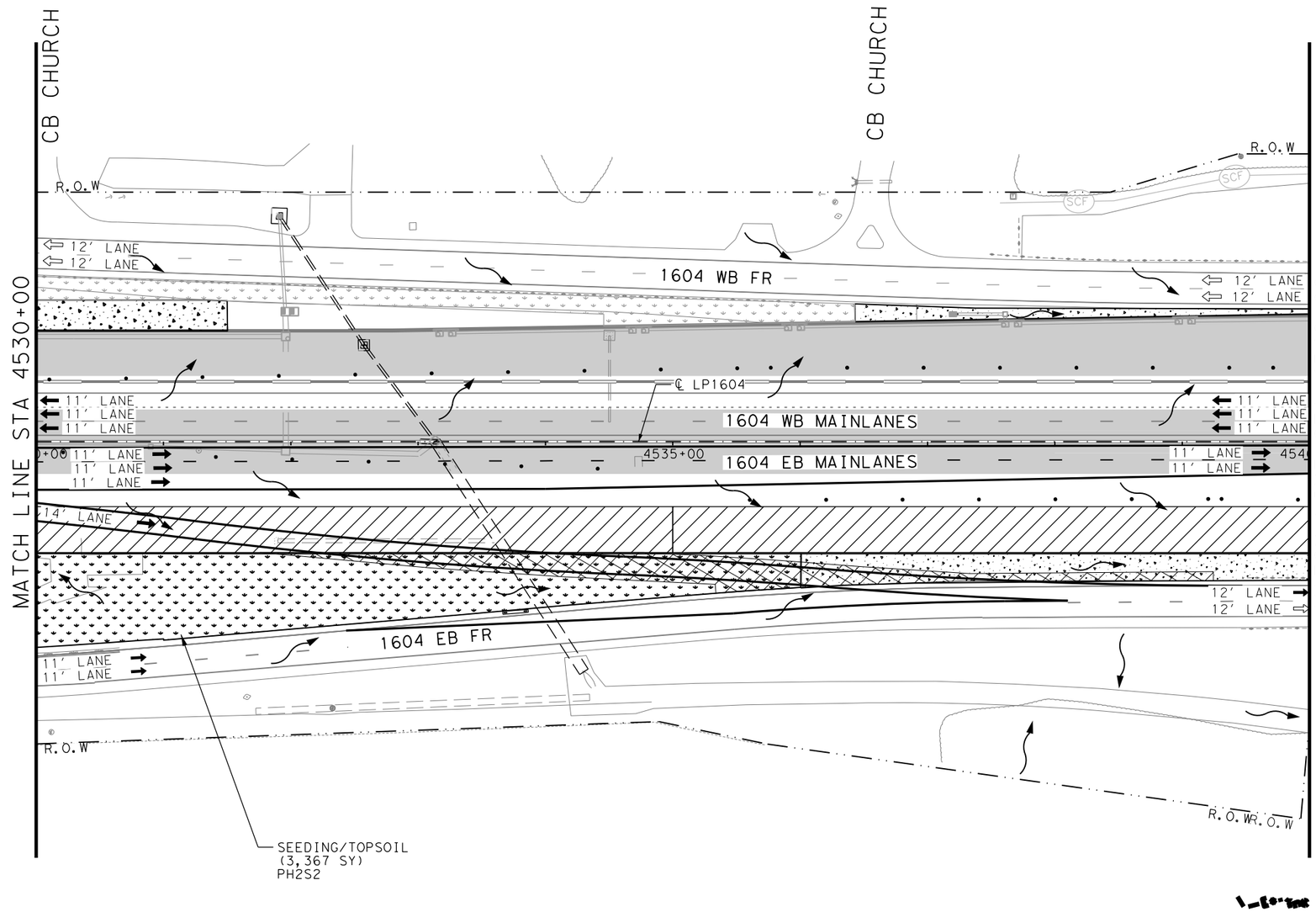

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	3367
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	52.5
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	3367
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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NOTES:

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3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
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- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4530+00 TO STA 4540+00

SHEET 9 OF 15

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2749

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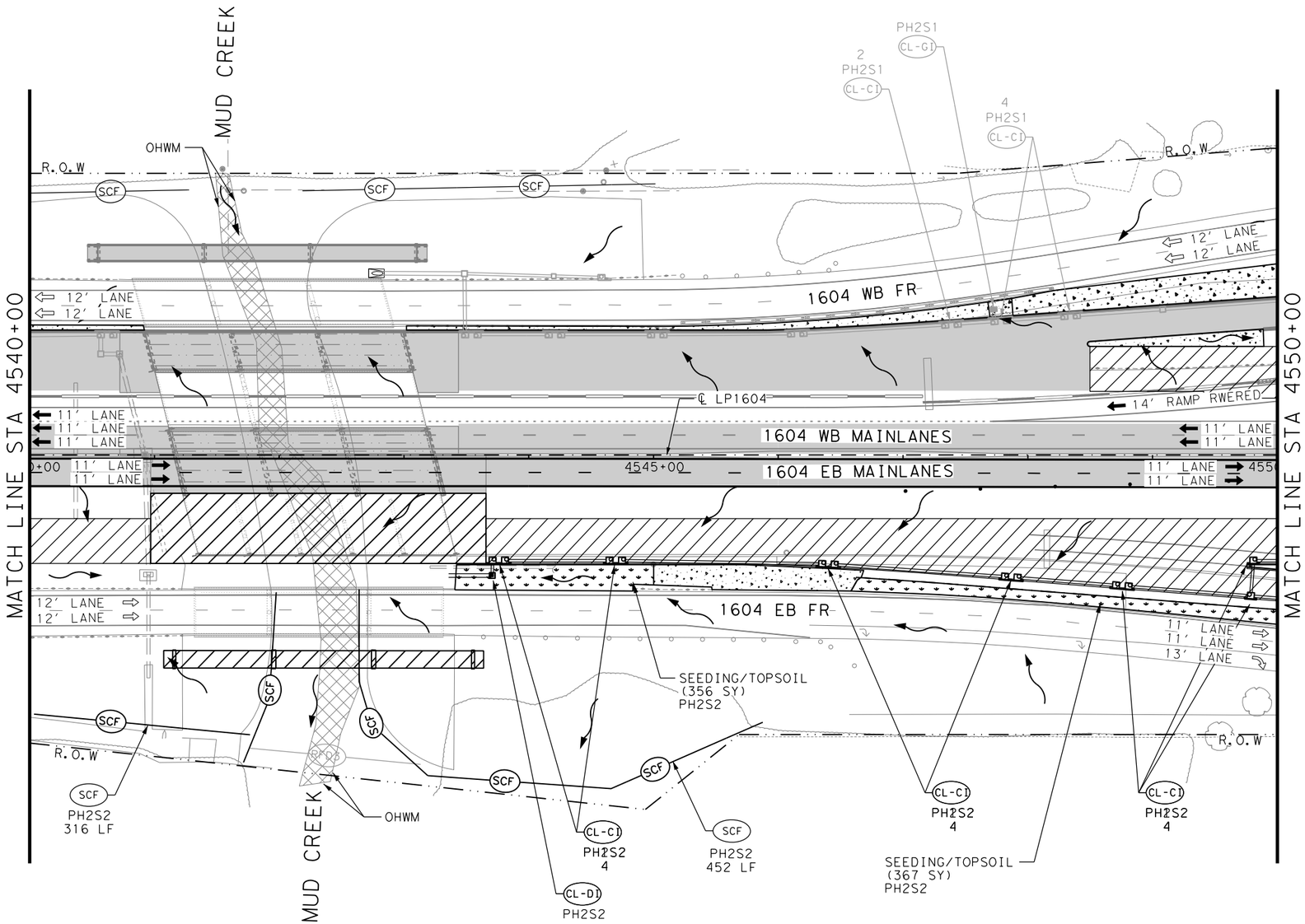

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	723
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	723
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	723
168	VEGETATIVE WATERING	MG	11.3
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	723
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	2
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	768
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	768
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	236
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	236

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- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4540+00 TO STA 4550+00

SHEET 10 OF 15

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2750

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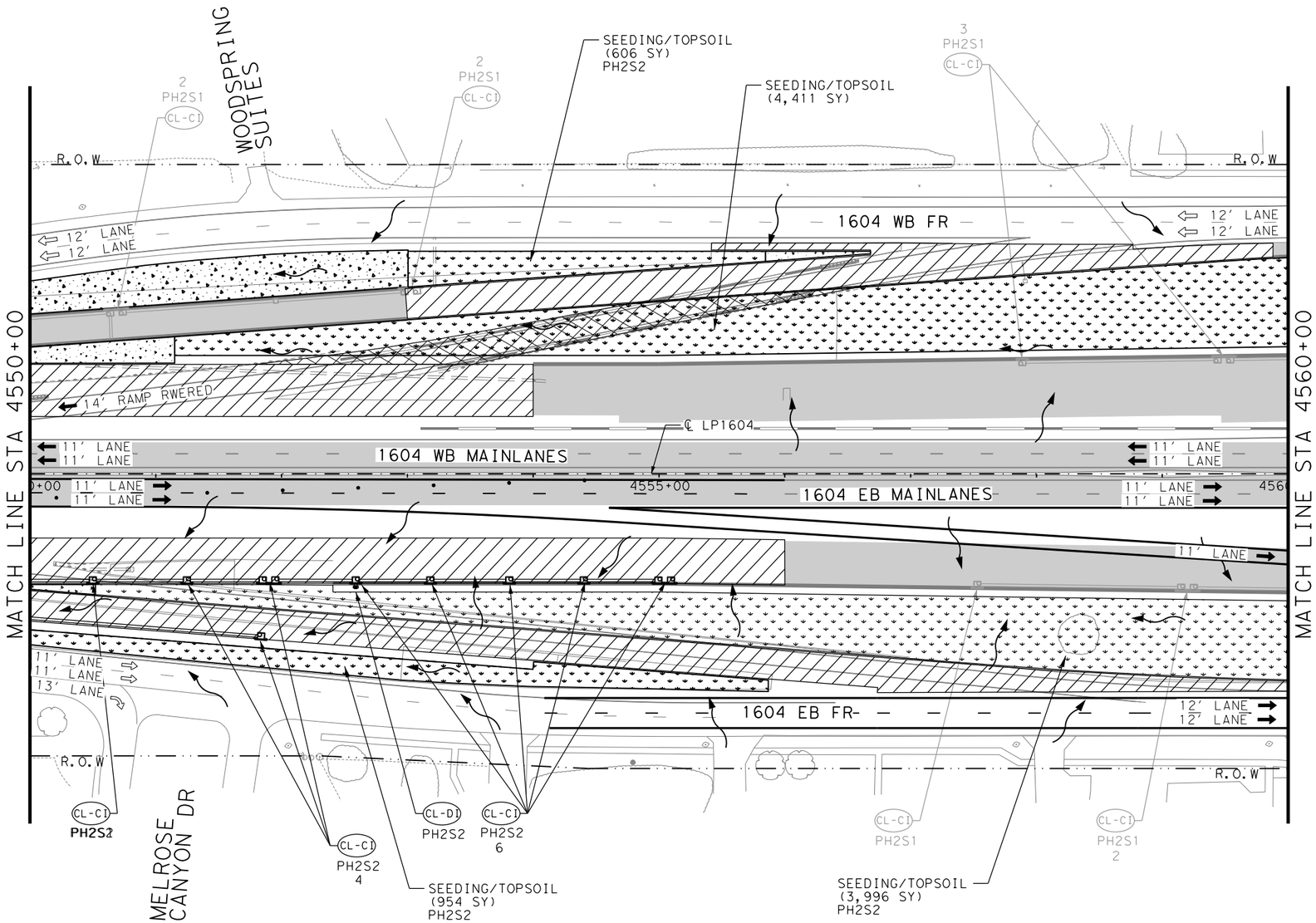

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	9967
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	9967
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	9967
168	VEGETATIVE WATERING	MG	155.5
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	9967
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	218
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	218

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- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10263

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FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4550+00 TO STA 4560+00

SHEET 11 OF 15

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2751

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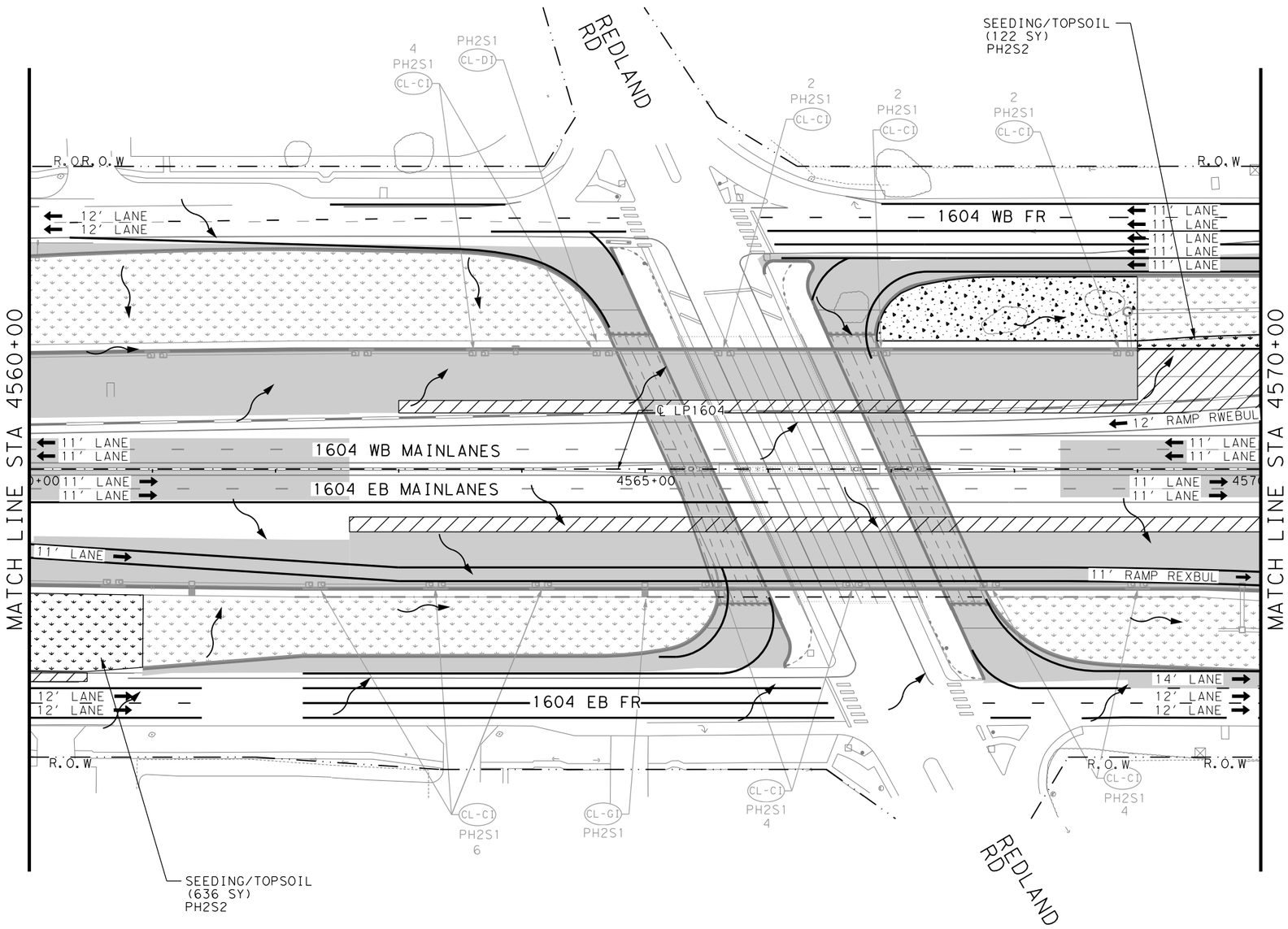

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	758
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	758
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	758
168	VEGETATIVE WATERING	MG	11.8
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	758
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4560+00 TO STA 4570+00

SHEET 12 OF 15

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2752

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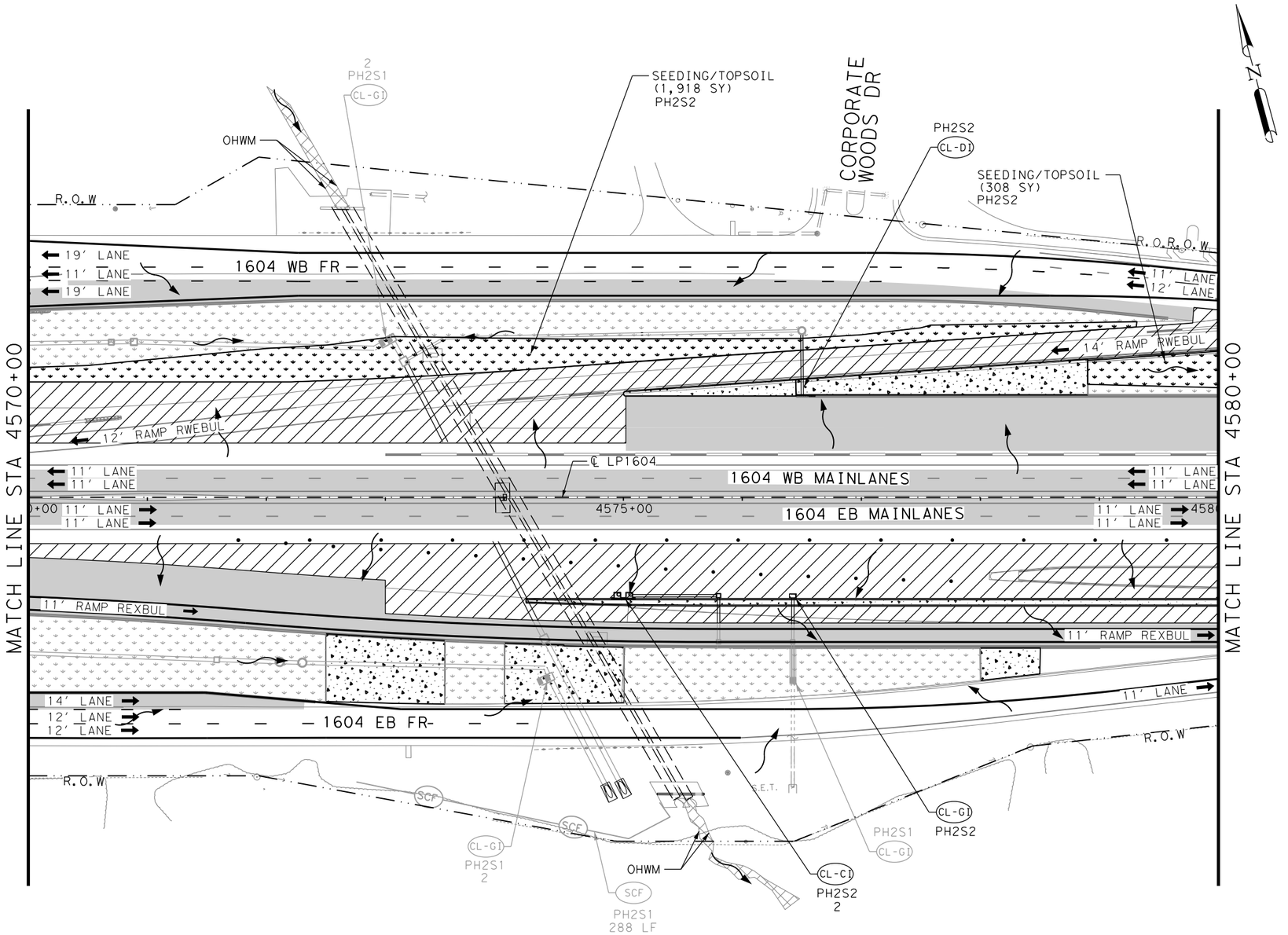

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	2226
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	2226
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	2226
168	VEGETATIVE WATERING	MG	34.7
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	2226
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	76
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	76

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6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10263

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4570+00 TO STA 4580+00

SHEET 13 OF 15

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2753

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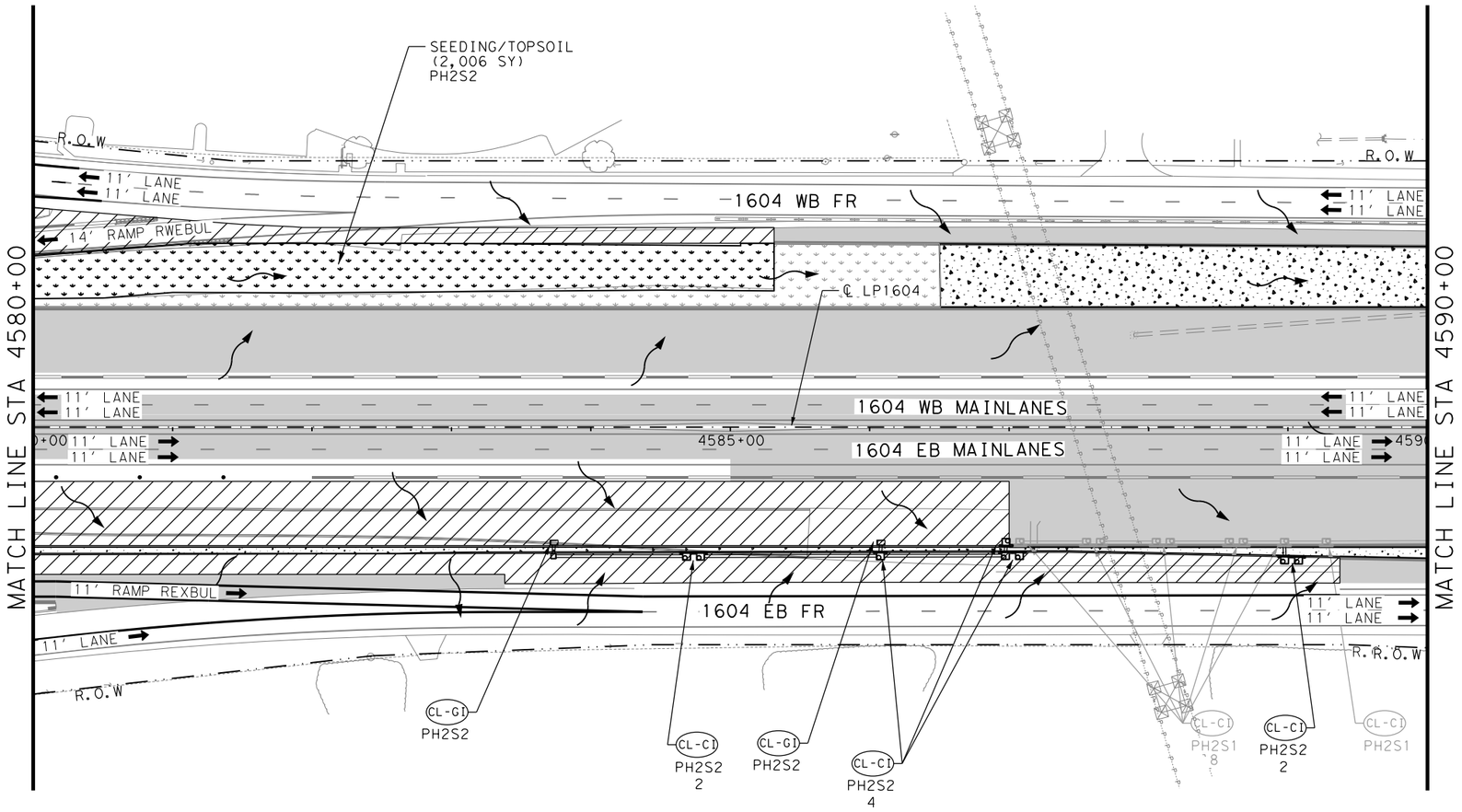

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	2006
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	2006
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	2006
168	VEGETATIVE WATERING	MG	31.3
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	2006
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	184
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	184

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NOTES:

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- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
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REV. NO.	DATE	DESCRIPTION	BY

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LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4580+00 TO STA 4590+00

SHEET 14 OF 15

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2754

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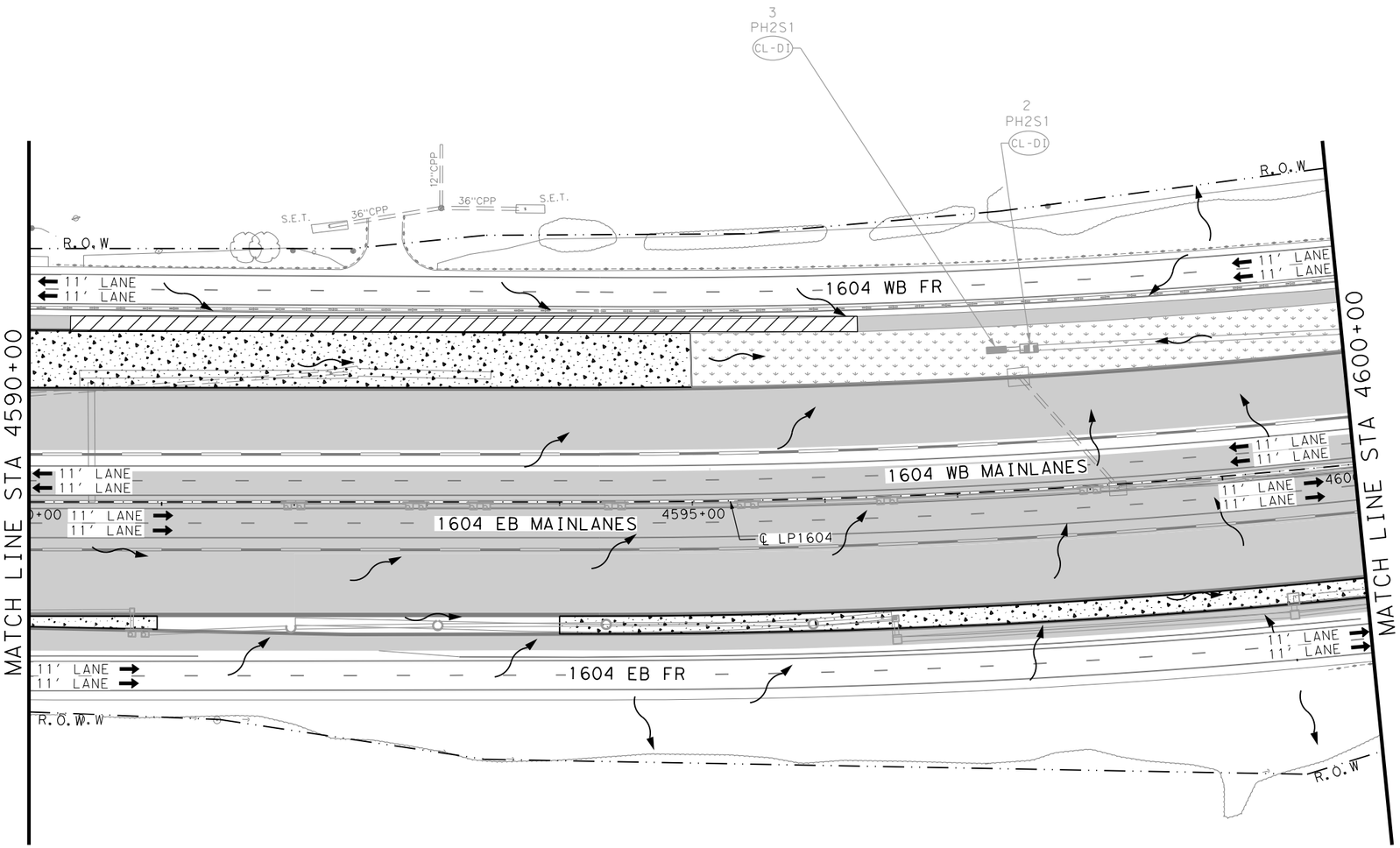

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED	PERM PAVEMENT THIS PHASE	SOD/SEED THIS PHASE
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE	TEMP PAVEMENT THIS PHASE	SOD/SEED PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED	PERM PAVEMENT PREV PHASE	PROP CONC RIPRAP AREA
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE	TEMP PAVEMENT PREV PHASE	REMOVE TEMP PAVEMENT
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG	CONSTRUCTON EXIT TY I (111 SY EA)	PH1 PHASE TREATMENT WAS INSTALLED
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE	CONSTRUCTON EXIT TY I PREV PHASE	TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 2 STEP 2
STA 4590+00 TO STA 4600+00

SHEET 15 OF 15

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2755

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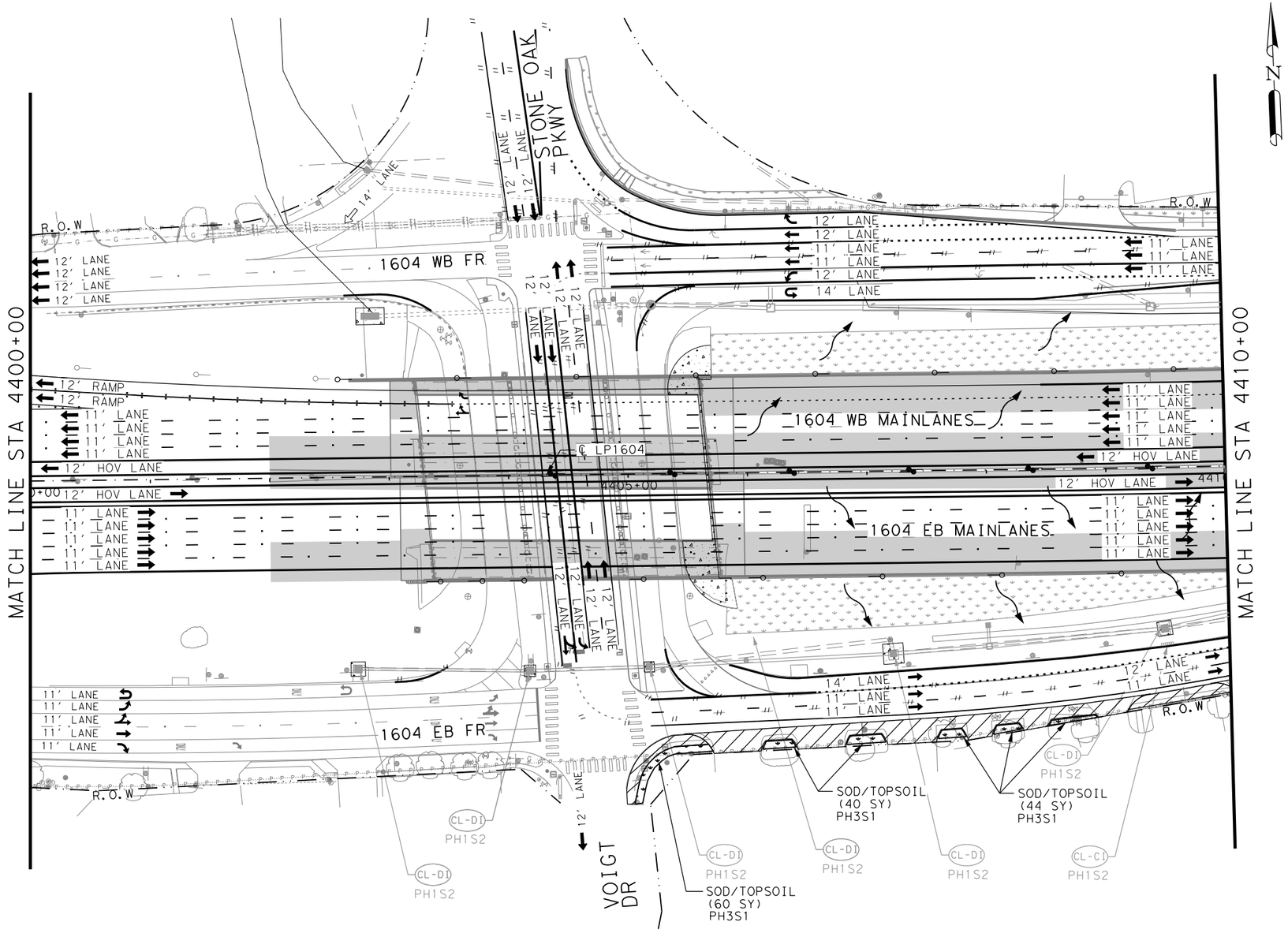

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	144
162	BLOCK SODDING	SY	144
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	2.2
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	144
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
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FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4400+00 TO STA 4410+00

SHEET 1 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2756

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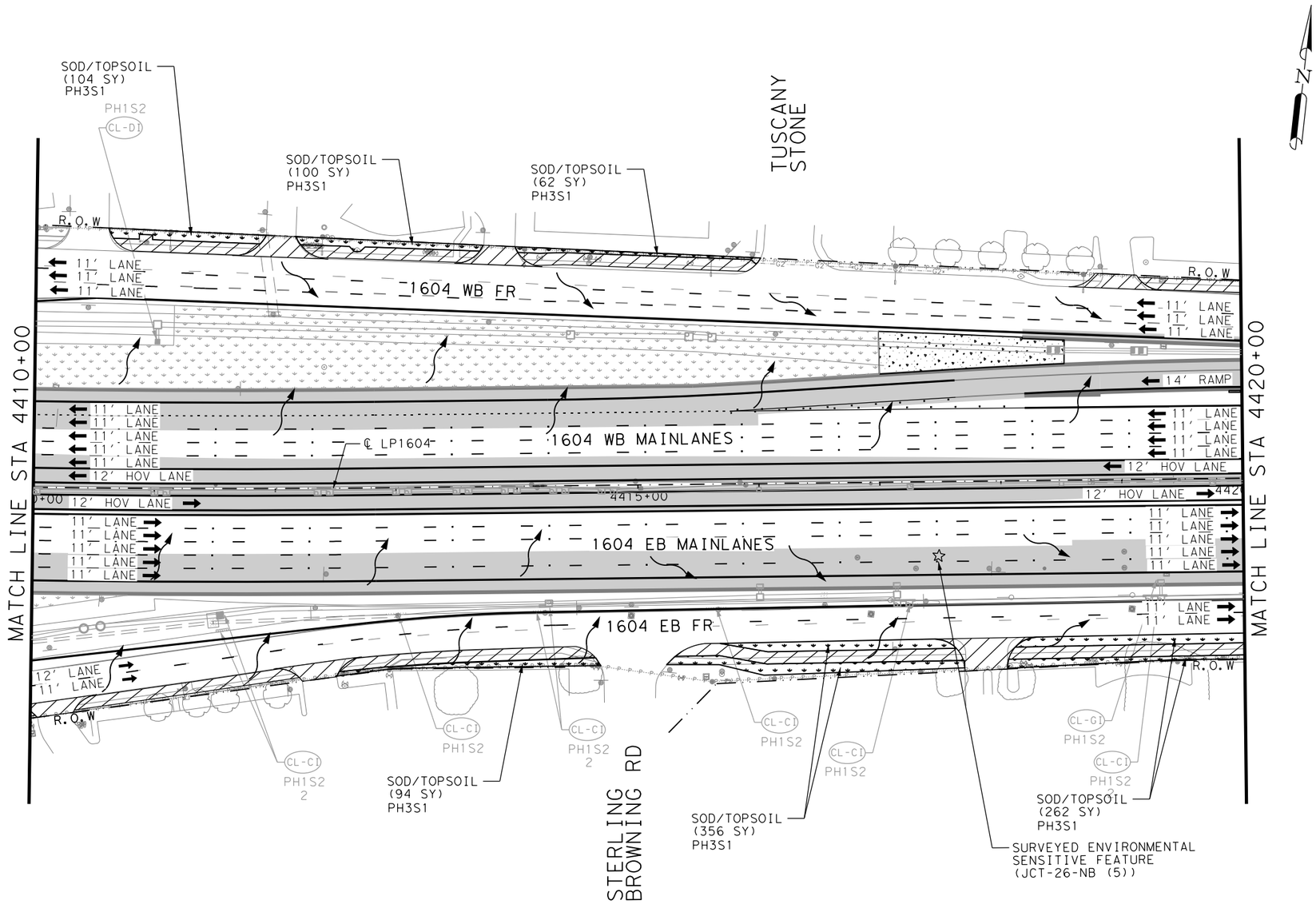

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	978
162	BLOCK SODDING	SY	978
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	15.3
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	978
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
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- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
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2/17/2023

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4410+00 TO STA 4420+00

SHEET 2 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2757

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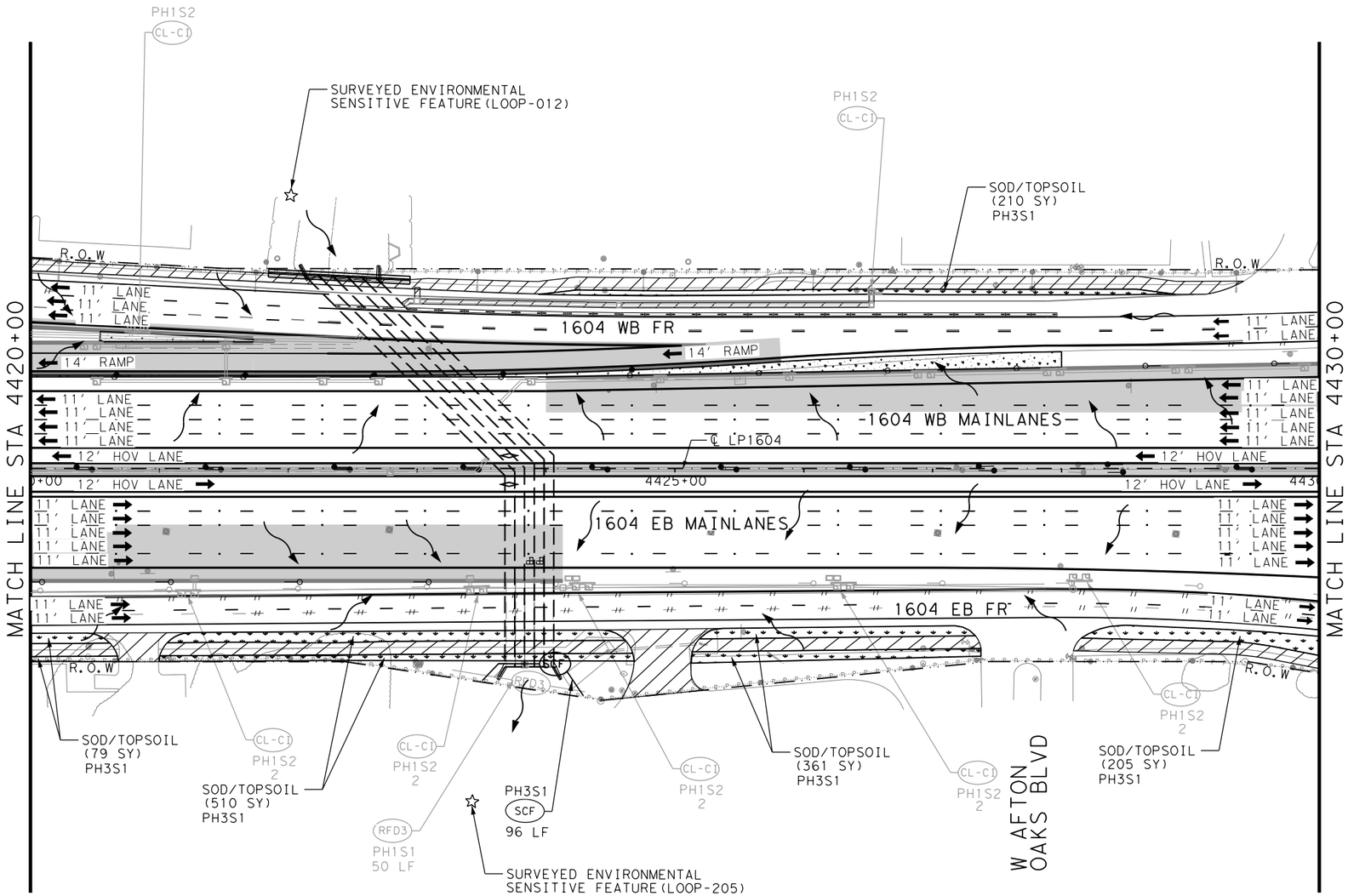

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QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	1365
162	BLOCK SODDING	SY	1365
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	21.3
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	1365
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	96
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	96
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-D1 — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-D1 — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-C1 — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-C1 — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-G1 — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-G1 — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4420+00 TO STA 4430+00

SHEET 3 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2758

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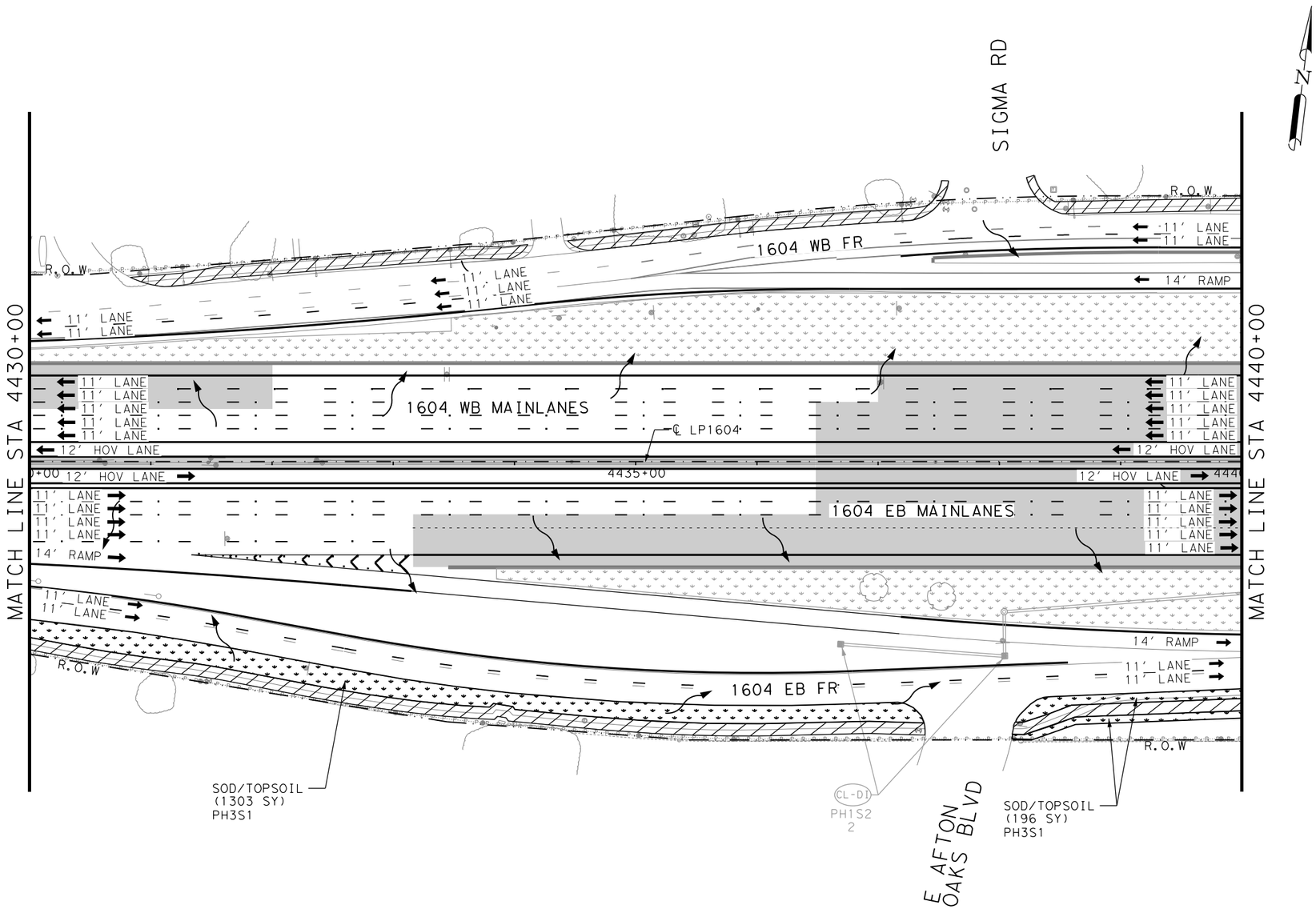

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	1499
162	BLOCK SODDING	SY	1499
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	23.4
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	1499
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS * SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
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LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4430+00 TO STA 4440+00

SHEET 4 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2759

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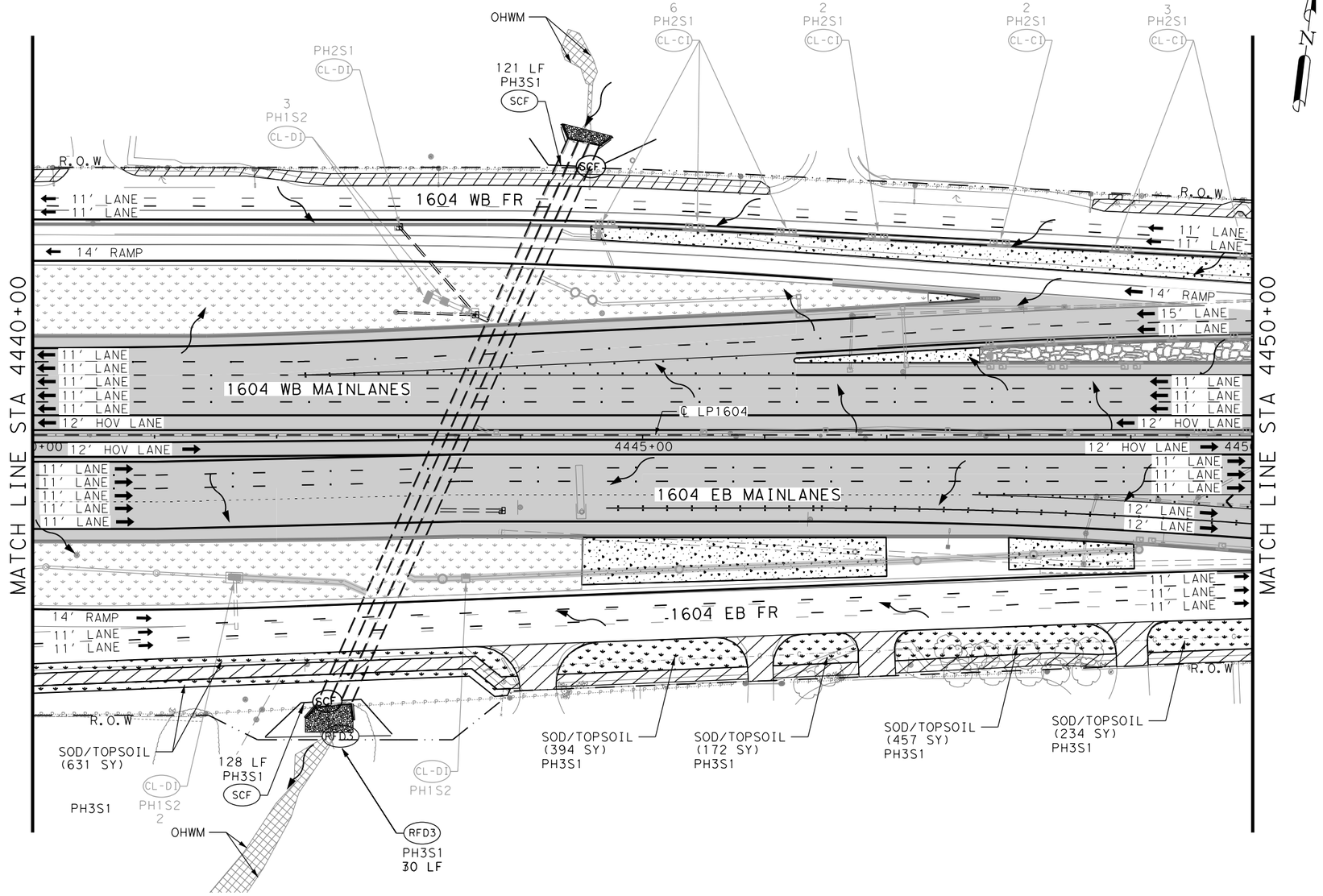

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE
	TEMP PAVEMENT THIS PHASE
	PERM PAVEMENT PREV PHASE
	TEMP PAVEMENT PREV PHASE
	CONSTRUCTON EXIT TY I (111 SY EA)
	CONSTRUCTON EXIT TY I PREV PHASE

	SOD/SEED THIS PHASE
	SOD/SEED PREV PHASE
	PROP CONC RIPRAP AREA
	REMOVE TEMP PAVEMENT
PH1	PHASE TREATMENT WAS INSTALLED
	TRAFFIC FLOW

QUANTITY SUMMARY CSJ 0072-08-130, ETC

ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	1888
162	BLOCK SODDING	SY	1888
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	29.5
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	1888
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	70
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	70
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	2
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	249
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	249
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4440+00 TO STA 4450+00

SHEET 5 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2760

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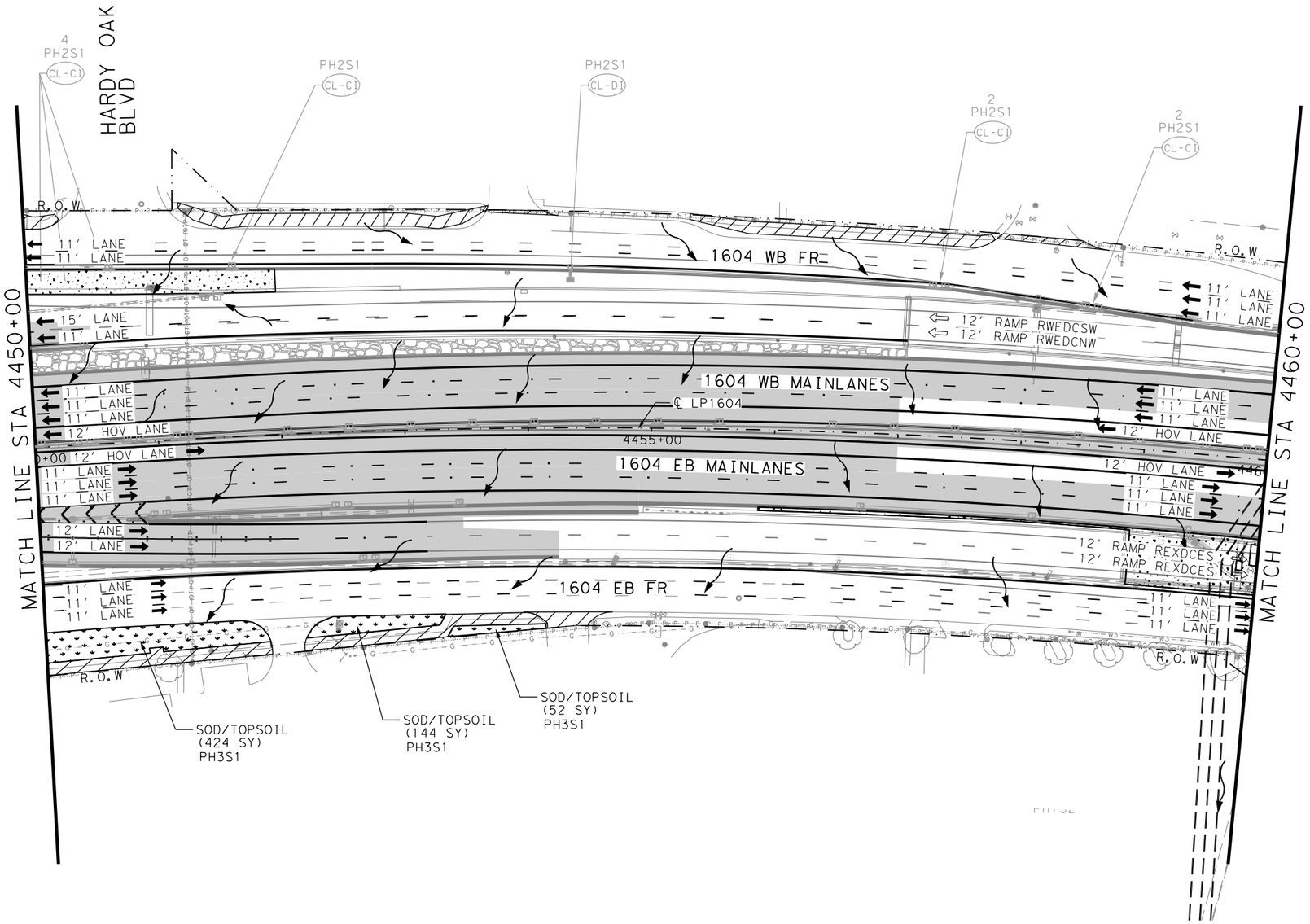

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	620
162	BLOCK SODDING	SY	620
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	9.7
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	620
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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NOTES:

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LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS ★ SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4450+00 TO STA 4460+00

SHEET 6 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2761

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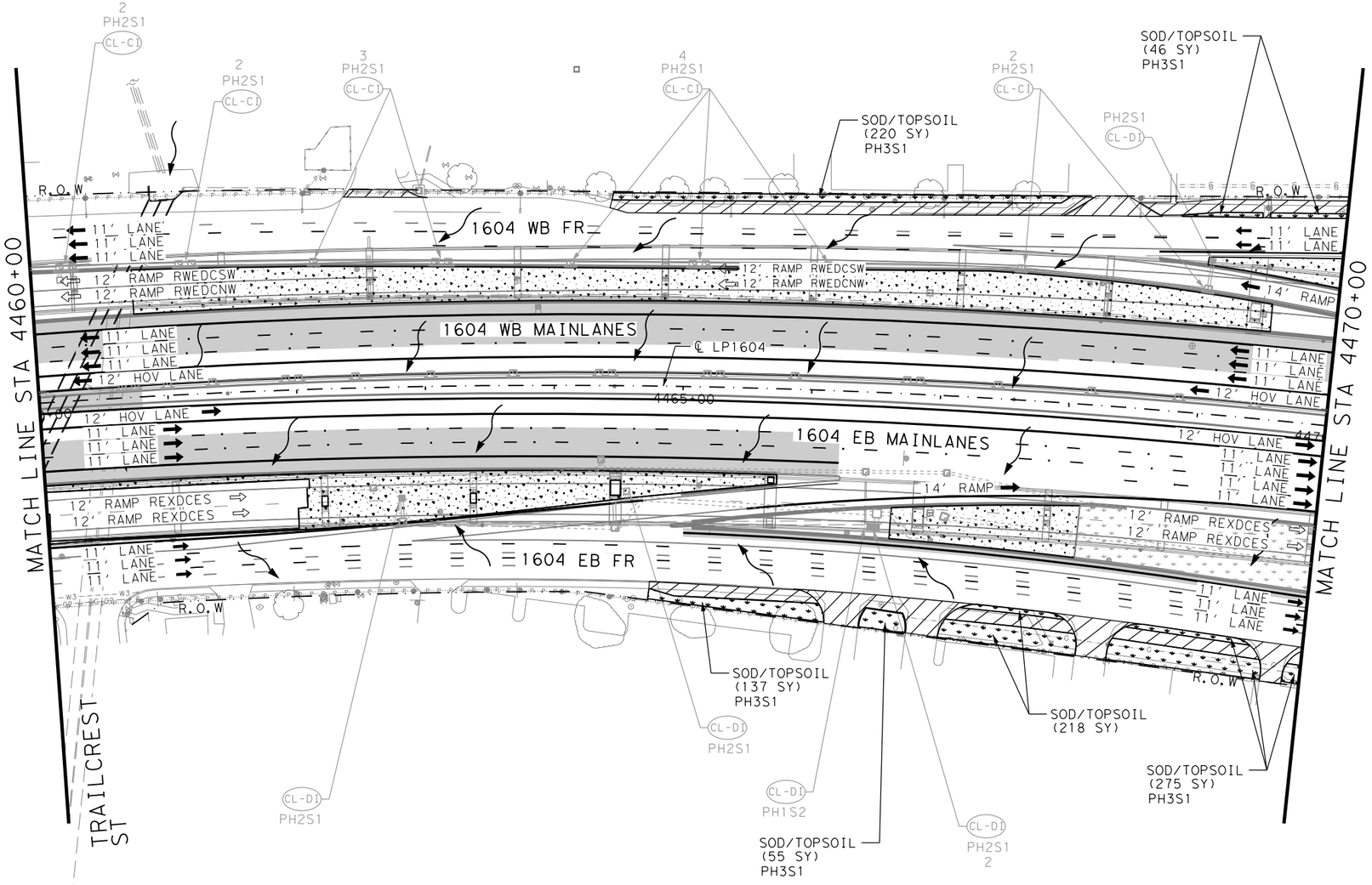

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	951
162	BLOCK SODDING	SY	951
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	14.8
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	951
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4460+00 TO STA 4470+00

SHEET 7 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2762

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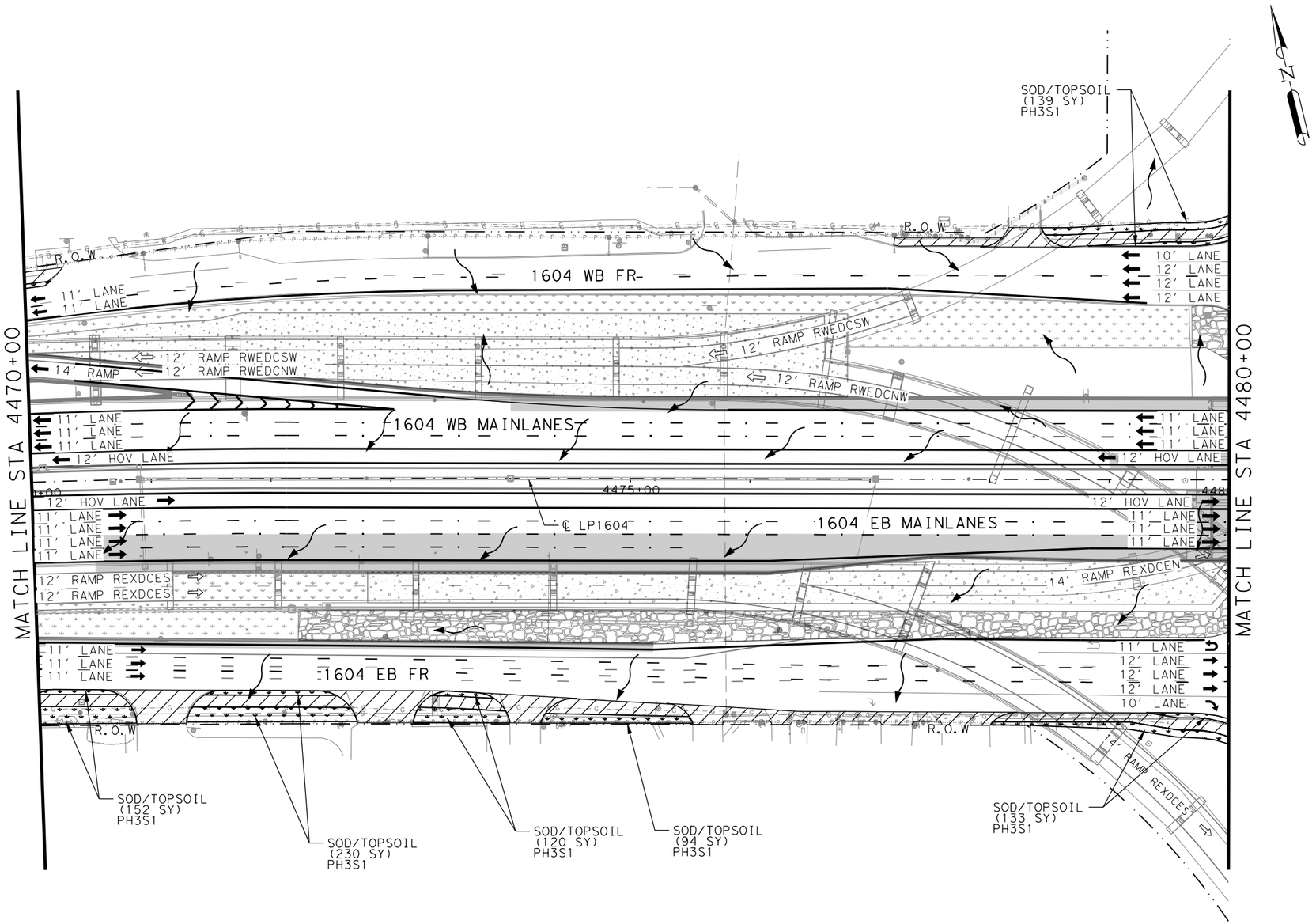

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	868
162	BLOCK SODDING	SY	868
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	13.5
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	868
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
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LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

Texas Department of Transportation
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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4470+00 TO STA 4480+00

SHEET 8 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2763

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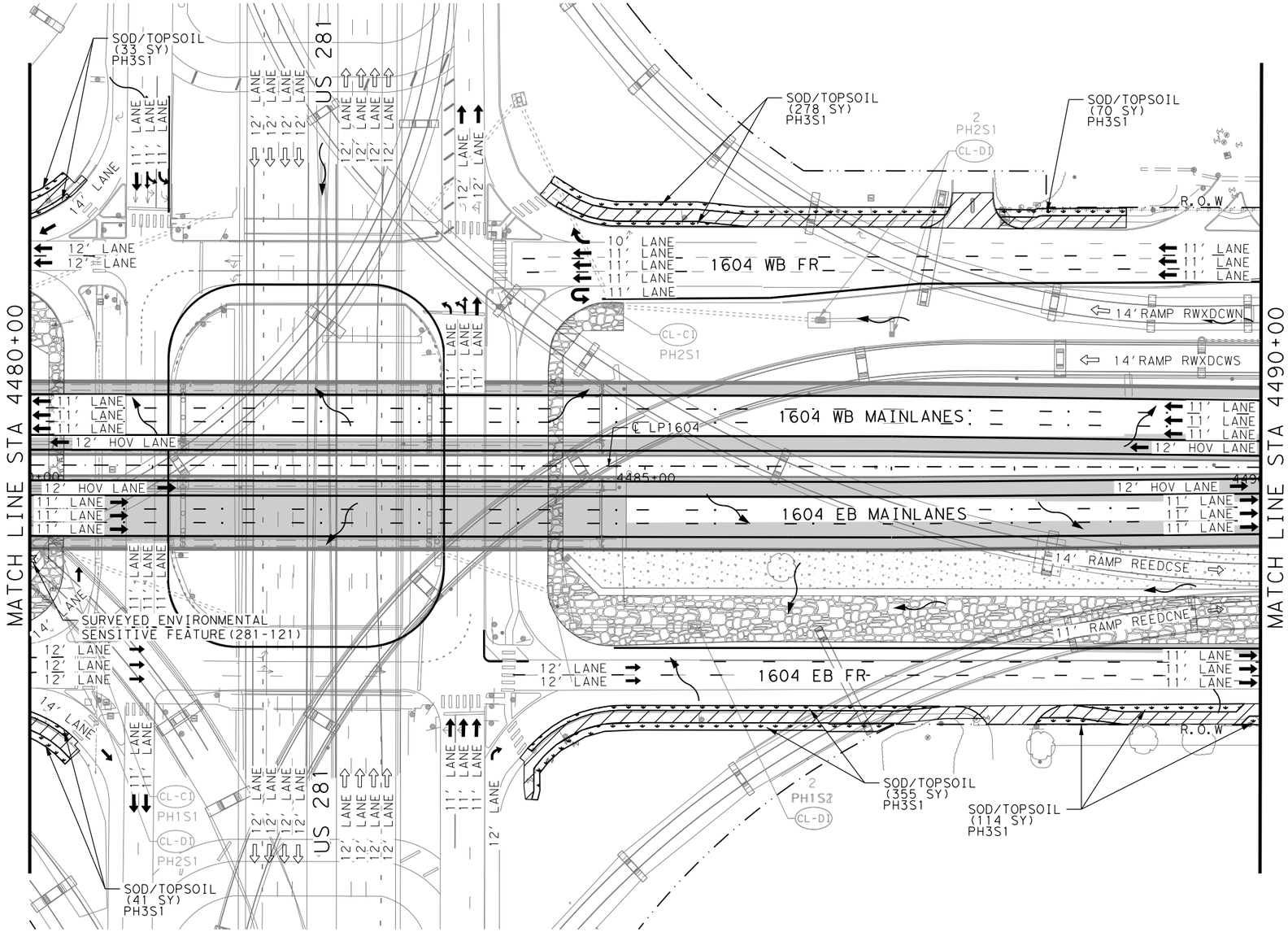

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	891
162	BLOCK SODDING	SY	891
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	13.9
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	891
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON, TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604

EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4480+00 TO STA 4490+00

SHEET 9 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2764

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
RFD2	ROCK FILTER DAM
RFD2	ROCK FILTER DAM PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE
CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
ECL	EROSION CONTROL LOG
ECL	EROSION CONTROL LOG PREV PHASE
	PERM PAVEMENT THIS PHASE
	TEMP PAVEMENT THIS PHASE
	PERM PAVEMENT PREV PHASE
	TEMP PAVEMENT PREV PHASE
	CONSTRUCTON EXIT TY I (111 SY EA)
	CONSTRUCTON EXIT TY I PREV PHASE
	SOD/SEED THIS PHASE
	SOD/SEED PREV PHASE
	PROP CONC RIPRAP AREA
	REMOVE TEMP PAVEMENT
PH1	PHASE TREATMENT WAS INSTALLED
←	TRAFFIC FLOW

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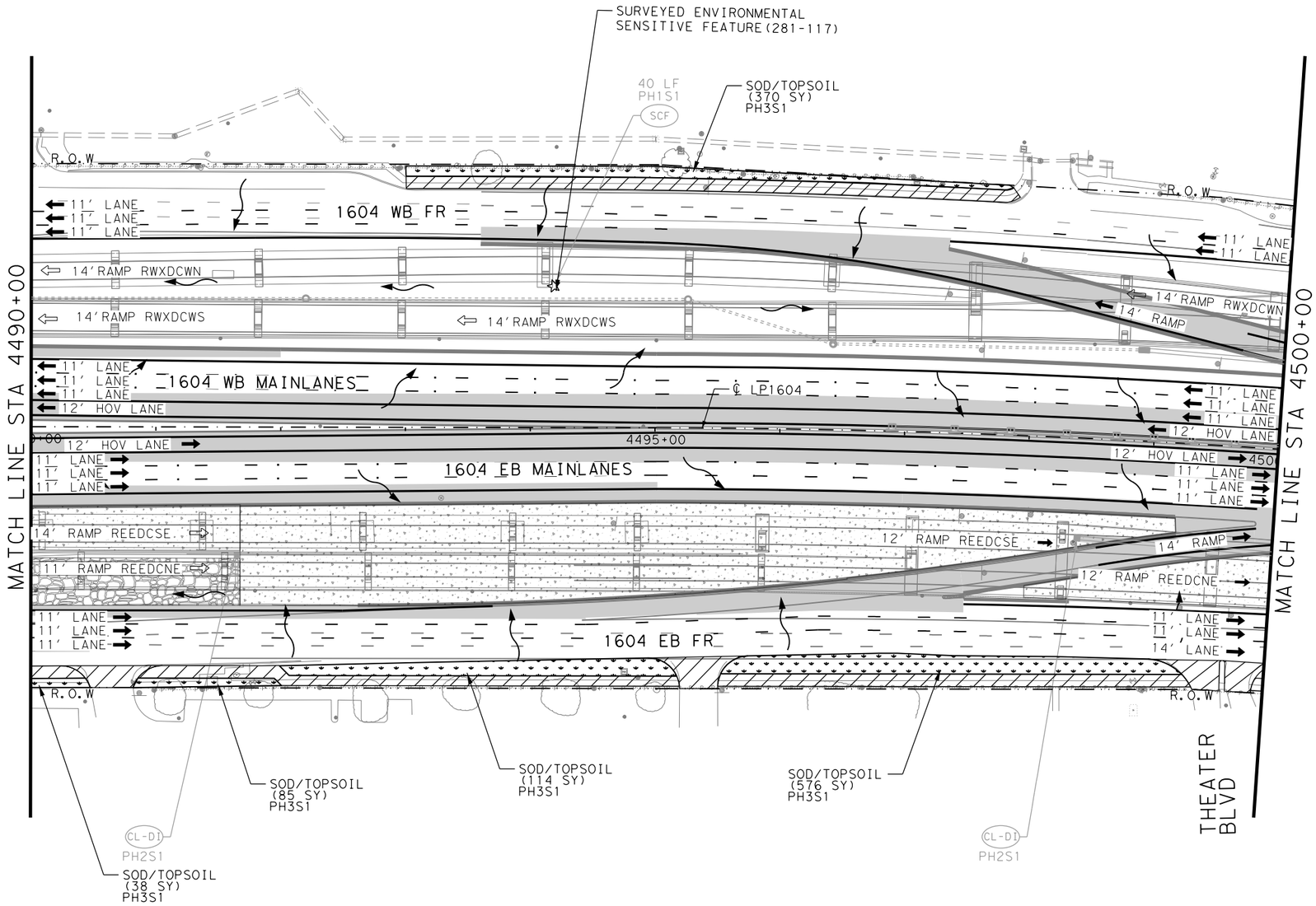

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	1183
162	BLOCK SODDING	SY	1183
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	18.5
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	1183
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
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5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
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LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4490+00 TO STA 4500+00

SHEET 10 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2765

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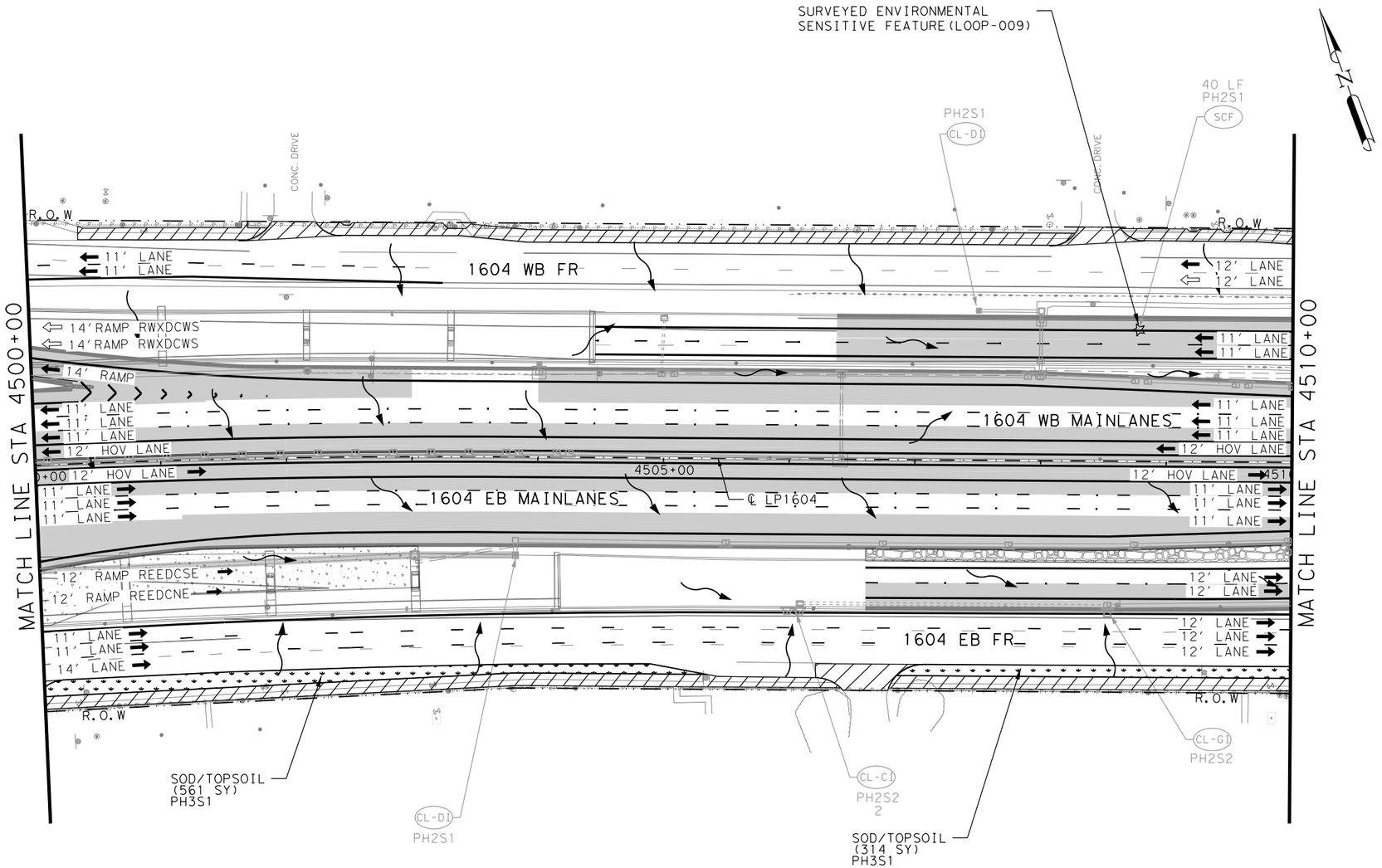

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	875
162	BLOCK SODDING	SY	875
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	13.7
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	875
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
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LEGEND:

- (SCF) TEMPORARY SEDIMENT CONTROL FENCE
- (SCF) TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- (RFD2) ROCK FILTER DAM
- (RFD2) ROCK FILTER DAM PREV PHASE
- (CL-DI) EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- (CL-DI) EROSION CONTROL LOG AT DROP INLET PREV PHASE
- (CL-CI) EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- (CL-CI) EROSION CONTROL LOG AT CURB INLET PREV PHASE
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- (CL-GI) EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- (ECL) EROSION CONTROL LOG
- (ECL) EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4500+00 TO STA 4510+00

SHEET 11 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2766

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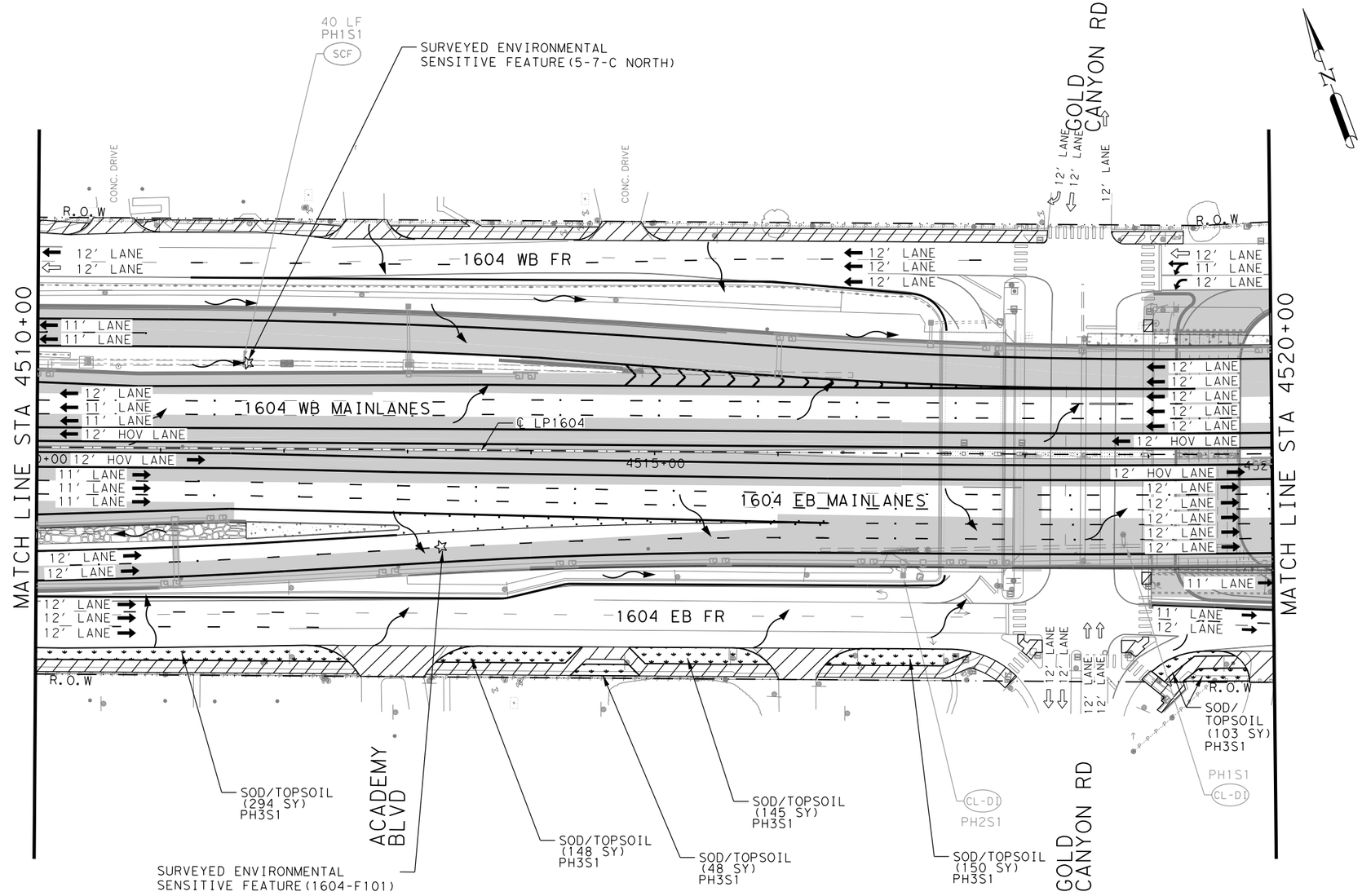

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	888
162	BLOCK SODDING	SY	888
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	13.9
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	888
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4510+00 TO STA 4520+00

SHEET 12 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2767

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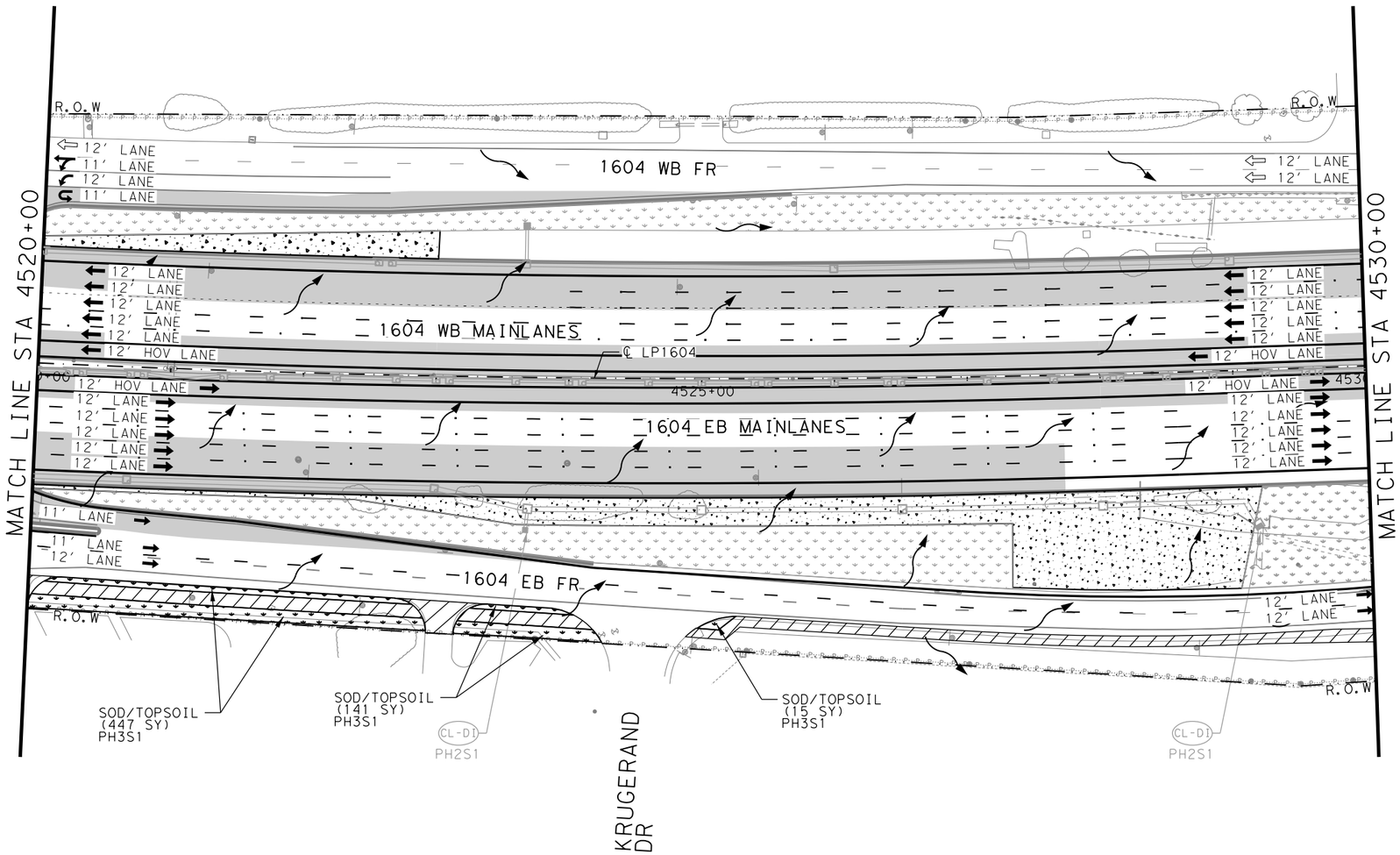

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	603
162	BLOCK SODDING	SY	603
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	9.4
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	603
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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2925 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4520+00 TO STA 4530+00

SHEET 13 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2768

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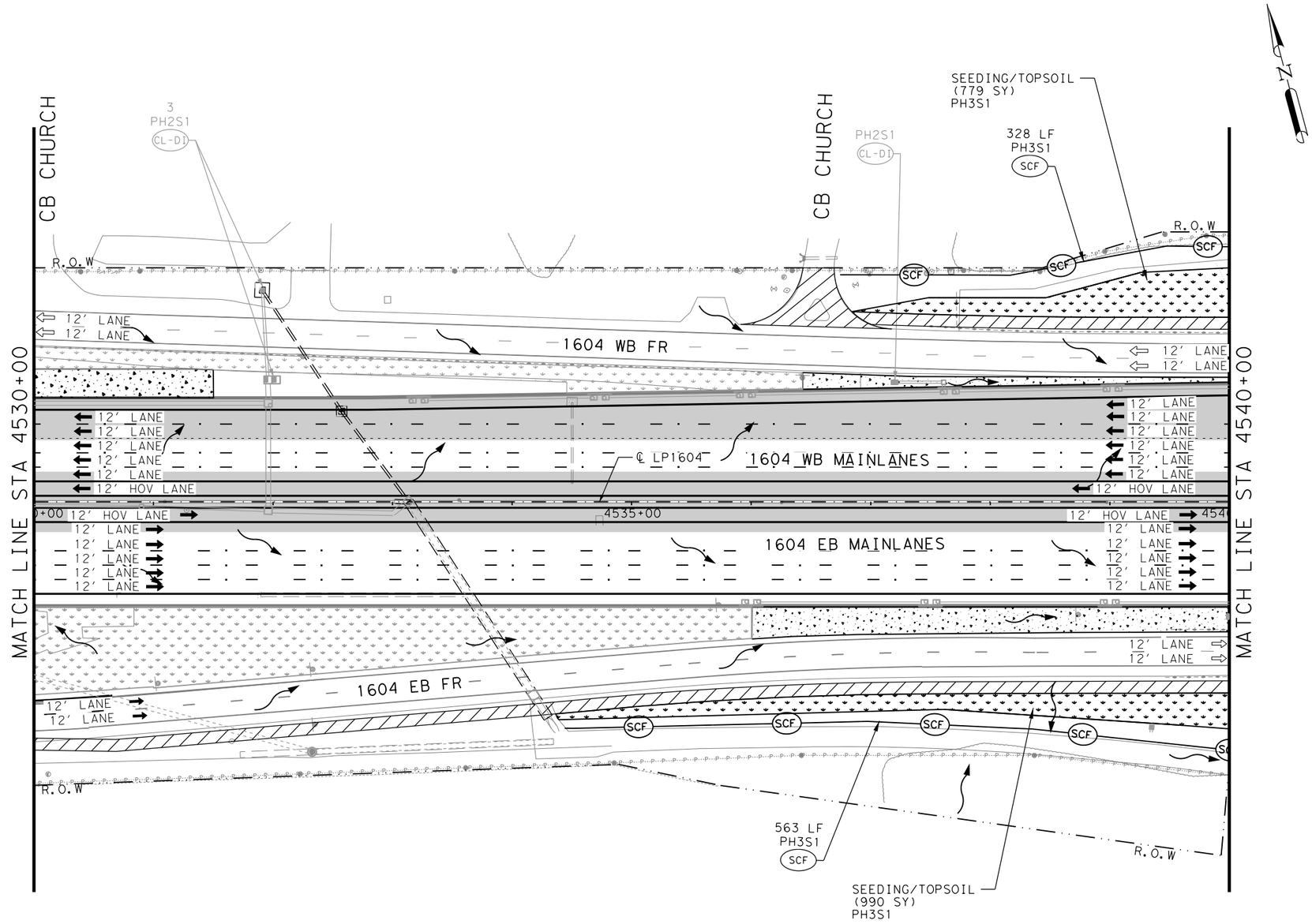

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	1769
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	27.6
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	1769
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	4
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	891
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	891
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

1. REFER TO SW3P NARRATIVE SHEET FOR OTHER NOTES.
2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
4. EXISTING STORM DRAINS/CULVERTS ARE SHOWN AS DASHED.
5. INSTALLED MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR AS DIRECTED BY THE ENGINEER.
6. BACKHOE WORK ESTIMATED AT 2 HOURS PER SEDIMENT CONTROL FENCE AND ROCK FILTER DAM INSTALLATION.
7. SW3P MEASURES SHOWN ARE MINIMUM REQUIREMENTS BASED UPON PROJECT DESIGN. INSTALLATION OF SW3P MEASURES WILL BE AS SHOWN AND MODIFIED TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
8. CONSTRUCTION EXITS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. ALL CONSTRUCTION EXITS WILL BE MOVED AND RESET DURING EACH CONTRUCTION PHASE.

LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

HUMBERTO CONTRERAS
99213
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4530+00 TO STA 4540+00

SHEET 14 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2769

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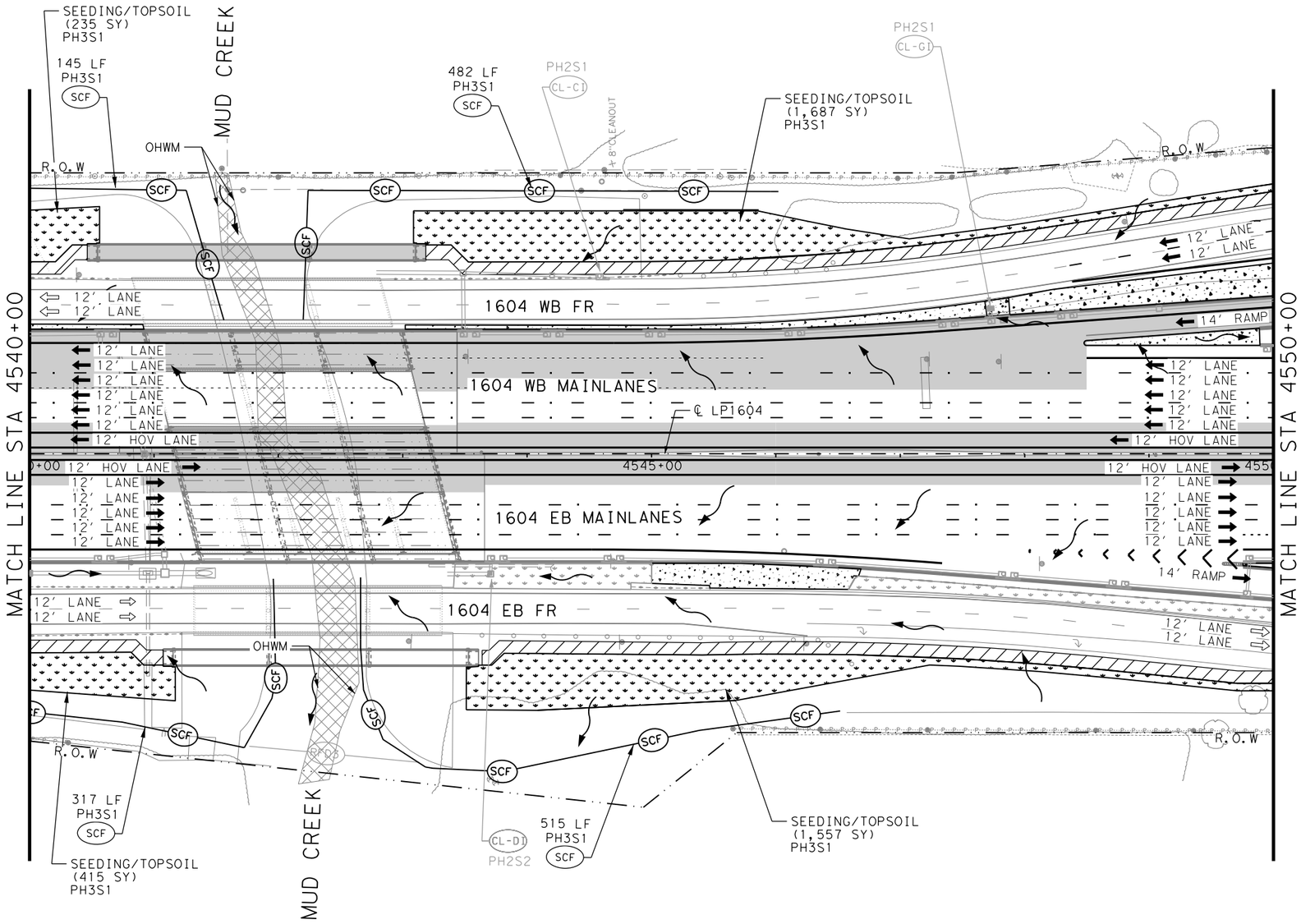

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	3881
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	60.5
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	3881
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	4
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	1459
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	1459
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-D1 — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-D1 — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-C1 — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-C1 — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-G1 — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-G1 — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
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FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4540+00 TO STA 4550+00

SHEET 15 OF 22

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2770

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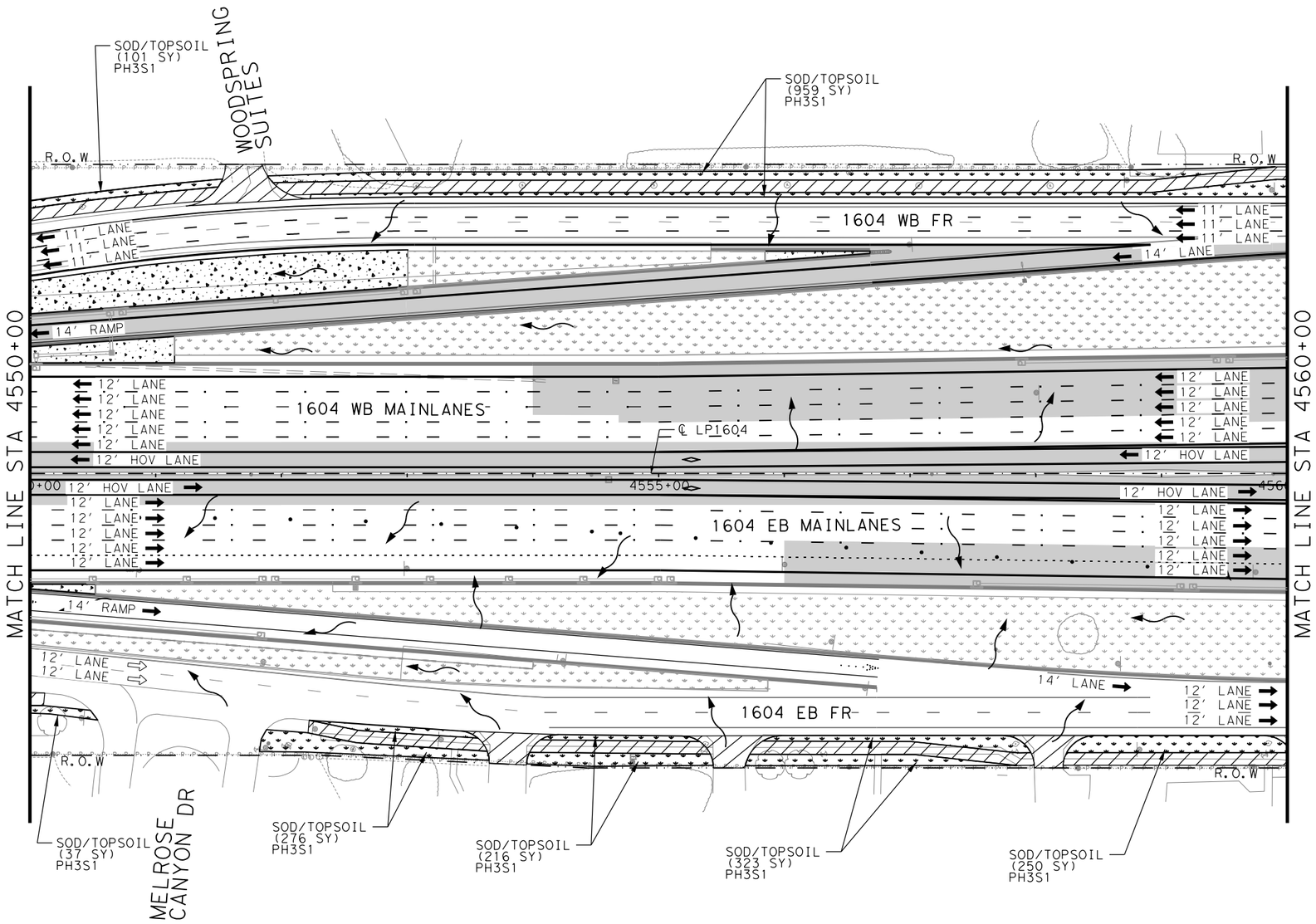

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	2162
162	BLOCK SODDING	SY	2162
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	33.7
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	2162
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
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- RFD2 — ROCK FILTER DAM PREV PHASE
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- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4550+00 TO STA 4560+00

SHEET 16 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2771

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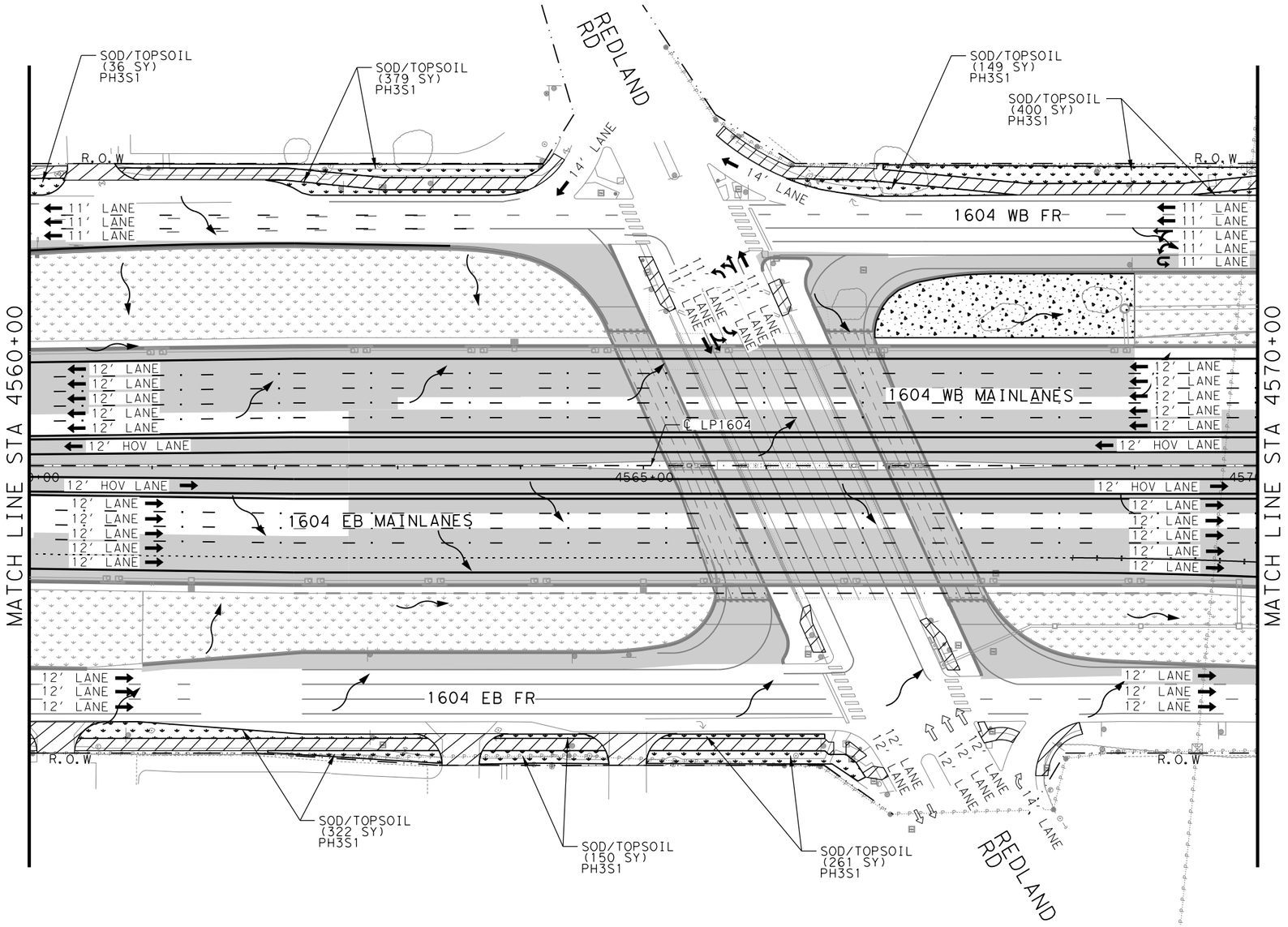

QUANTITY SUMMARY CSJ 0072-08-130,ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	1697
162	BLOCK SODDING	SY	1697
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	26.5
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	1697
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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LEGEND:

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- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
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- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4560+00 TO STA 4570+00

SHEET 17 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2772

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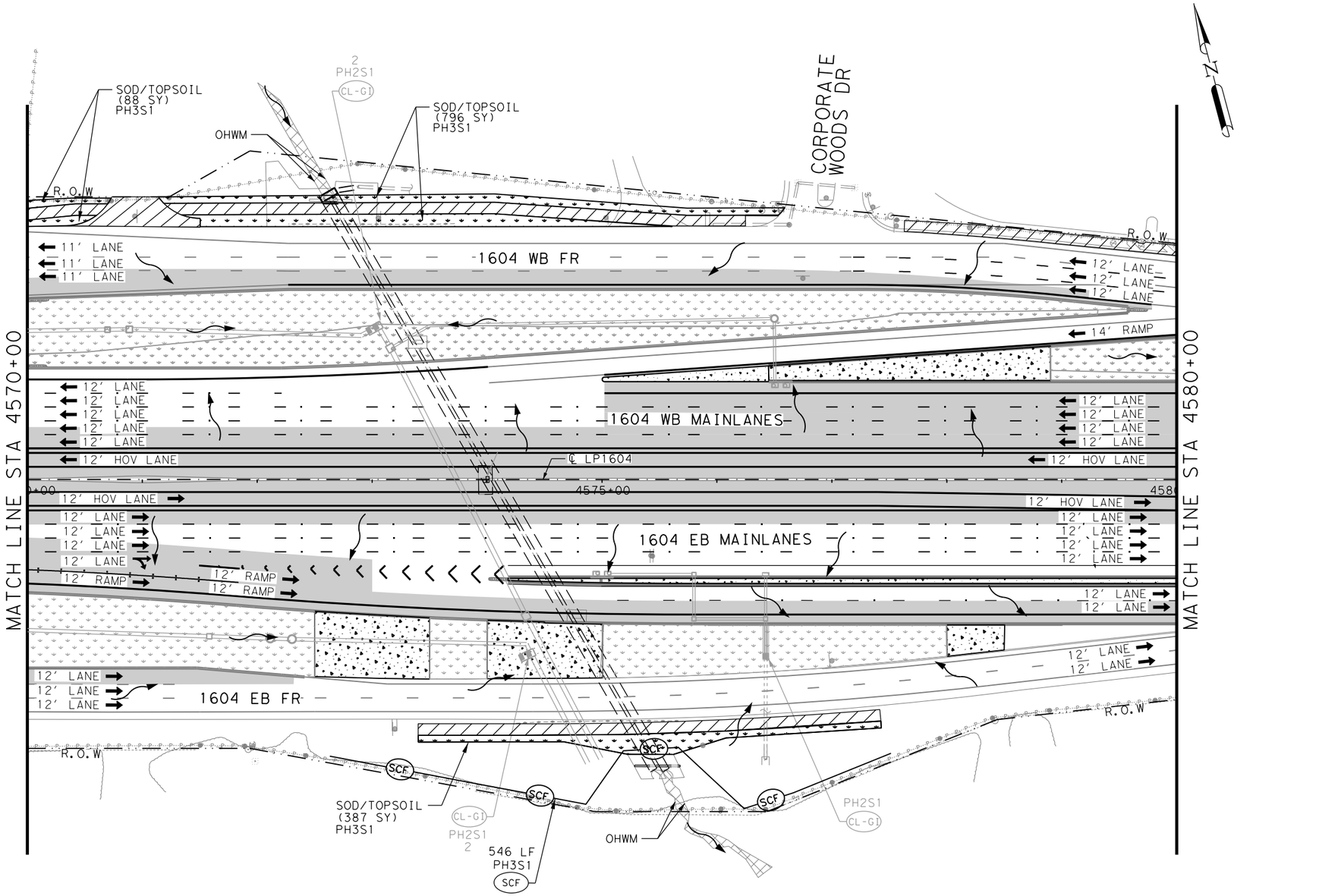

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

QUANTITY SUMMARY CSJ 0072-08-130, ETC

ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	1271
162	BLOCK SODDING	SY	1271
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	19.8
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	1271
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	2
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	546
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	546
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
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FRN - F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4570+00 TO STA 4580+00

SHEET 18 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2773

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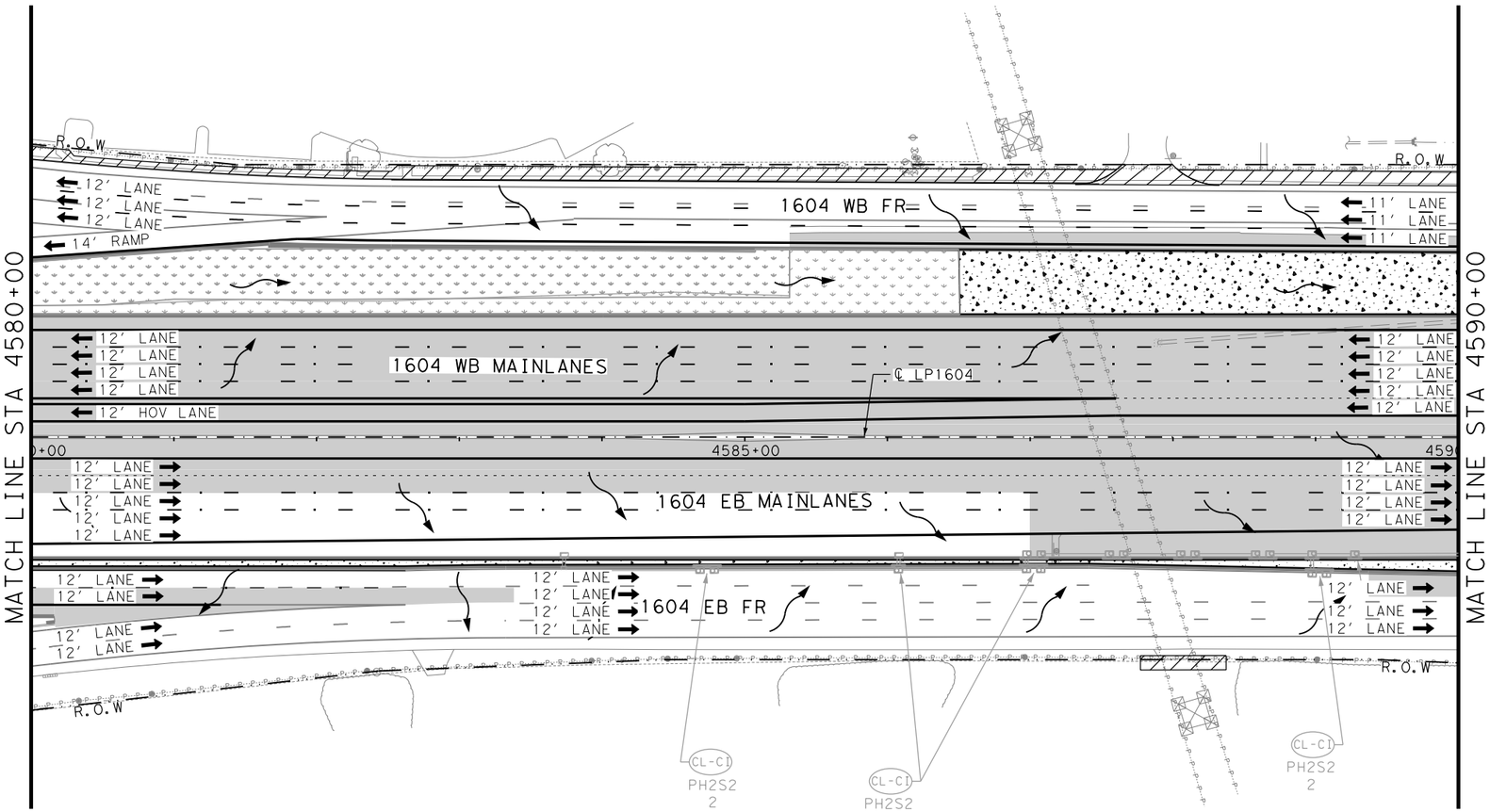

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

* FOR CONTRACTOR'S INFORMATION ONLY

NOTES:

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2. ALL STRUCTURES TO BE PLACED WITHIN TXDOT RIGHT OF WAY AND AS SHOWN ON STANDARDS EC(1)-EC(3).
3. REFER TO SW3P STANDARD SHEETS FOR DETAILS.
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LEGEND:

- SCF — TEMPORARY SEDIMENT CONTROL FENCE
- SCF — TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE
- RFD2 — ROCK FILTER DAM
- RFD2 — ROCK FILTER DAM PREV PHASE
- CL-DI — EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-DI — EROSION CONTROL LOG AT DROP INLET PREV PHASE
- CL-CI — EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
- CL-CI — EROSION CONTROL LOG AT CURB INLET PREV PHASE
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4580+00 TO STA 4590+00

SHEET 19 OF 22

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2774

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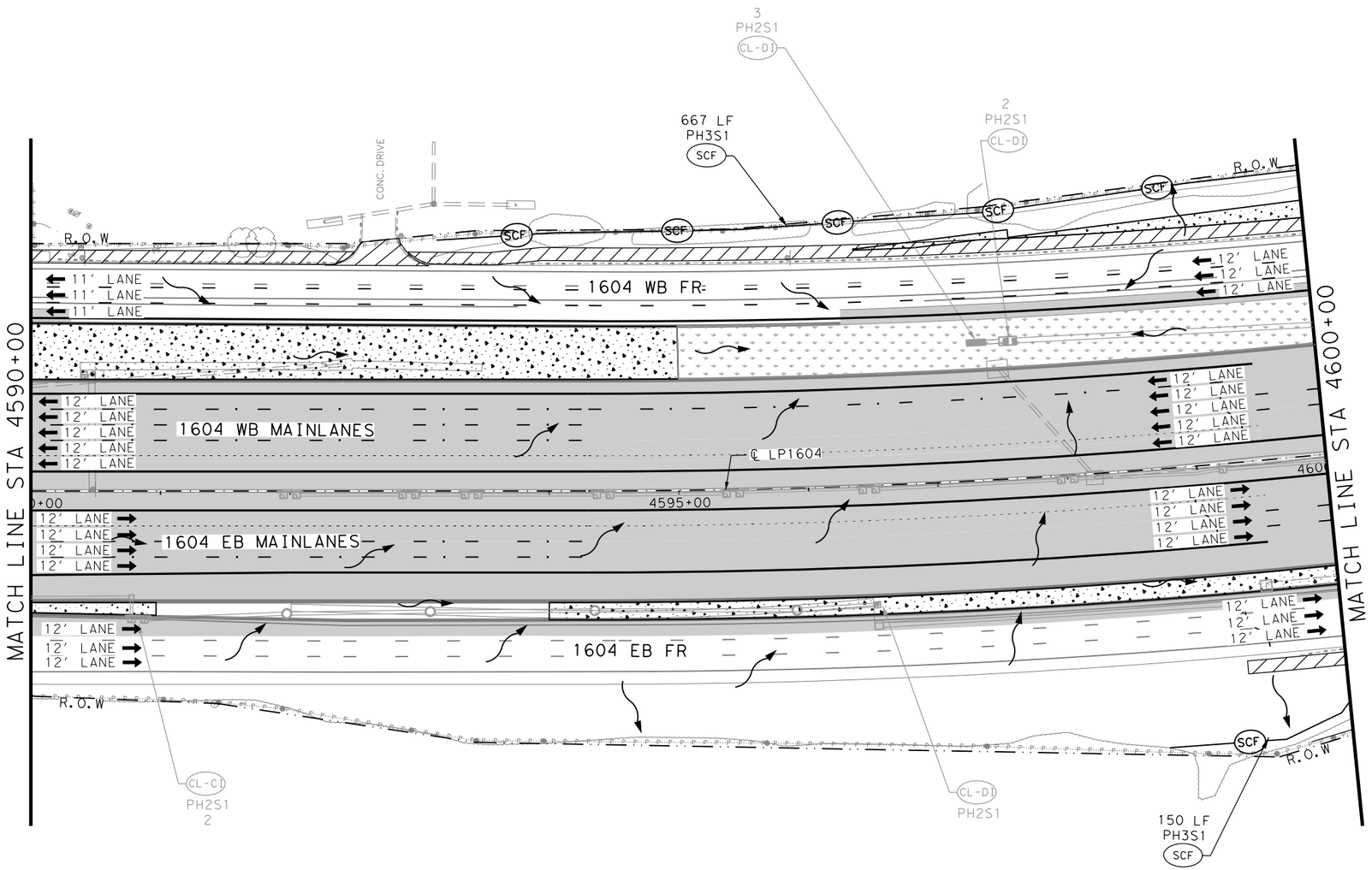

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	2
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	554
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	554
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'

SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp
ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4590+00 TO STA 4600+00

SHEET 20 OF 22

FED.RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2775

LEGEND:

SCF	TEMPORARY SEDIMENT CONTROL FENCE	CL-CI	EROSION CONTROL LOG AT CURB INLET 18 LF EACH LOCATION UNLESS OTHERWISE NOTED
SCF	TEMPORARY SEDIMENT CONTROL FENCE PREV PHASE	CL-CI	EROSION CONTROL LOG AT CURB INLET PREV PHASE
RFD2	ROCK FILTER DAM	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET 20 LF EA LOCATION UNLESS OTHERWISE NOTED
RFD2	ROCK FILTER DAM PREV PHASE	CL-GI	EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
CL-DI	EROSION CONTROL LOG AT DROP INLET 20 LF EACH LOCATION UNLESS OTHERWISE NOTED	ECL	EROSION CONTROL LOG
CL-DI	EROSION CONTROL LOG AT DROP INLET PREV PHASE	ECL	EROSION CONTROL LOG PREV PHASE

	PERM PAVEMENT THIS PHASE		SOD/SEED THIS PHASE
	TEMP PAVEMENT THIS PHASE		SOD/SEED PREV PHASE
	PERM PAVEMENT PREV PHASE		PROP CONC RIPRAP AREA
	TEMP PAVEMENT PREV PHASE		REMOVE TEMP PAVEMENT
	CONSTRUCTON EXIT TY I (111 SY EA)	PH1	PHASE TREATMENT WAS INSTALLED
	CONSTRUCTON EXIT TY I PREV PHASE	←	TRAFFIC FLOW

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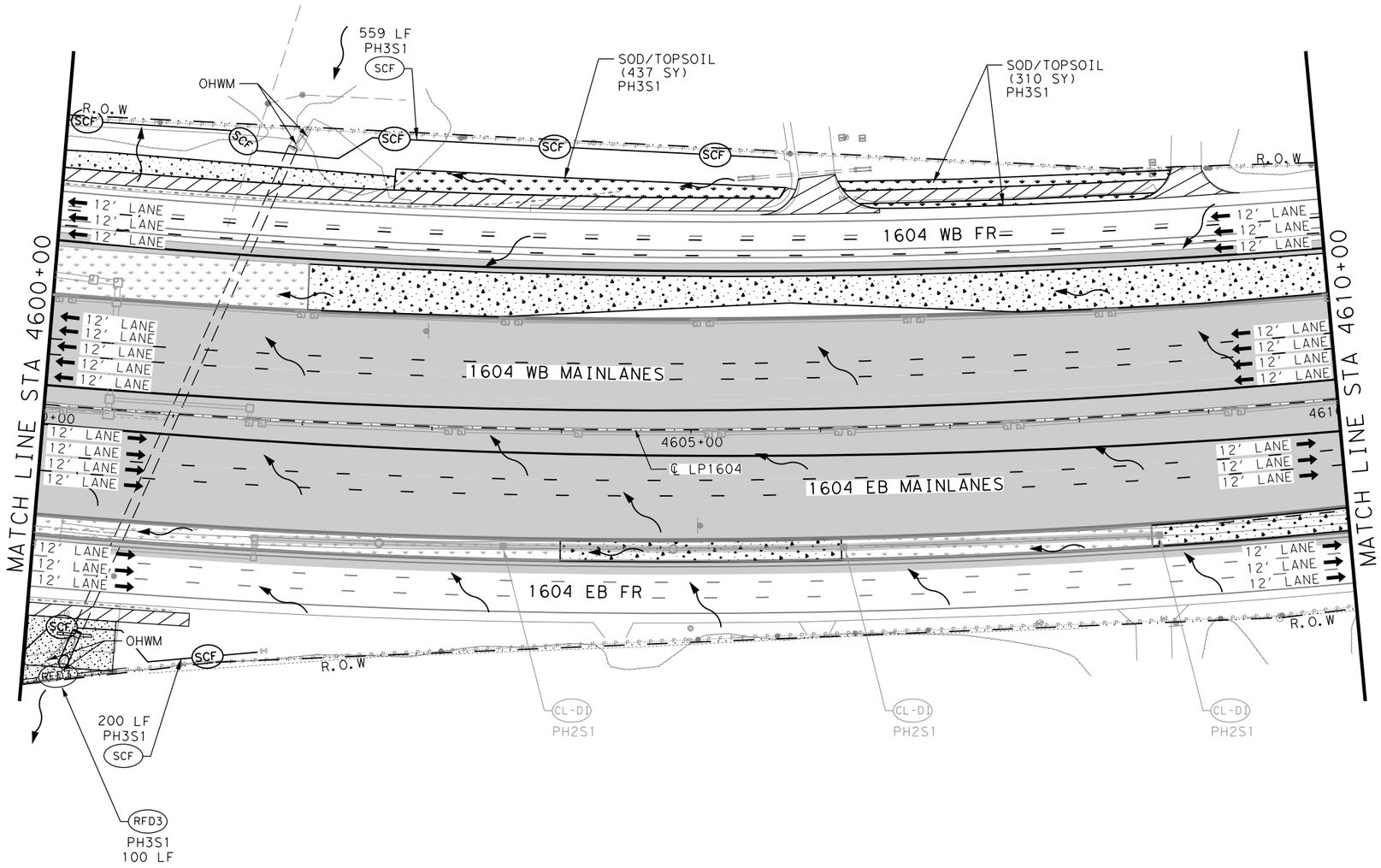

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QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	747
162	BLOCK SODDING	SY	747
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	11.7
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	747
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	100
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	100
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	2
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	759
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	759
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
LICENSED
PROFESSIONAL ENGINEER

2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

CivilCorp ENGINEERS • SURVEYORS
2825 WILCREST DRIVE, SUITE 100, HOUSTON TEXAS 77042
TEL: 713-785-9815 FAX: 713-782-6922 TXENG FIRM 10283

LJA Engineering, Inc.
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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4600+00 TO STA 4610+00

SHEET 21 OF 22

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2776

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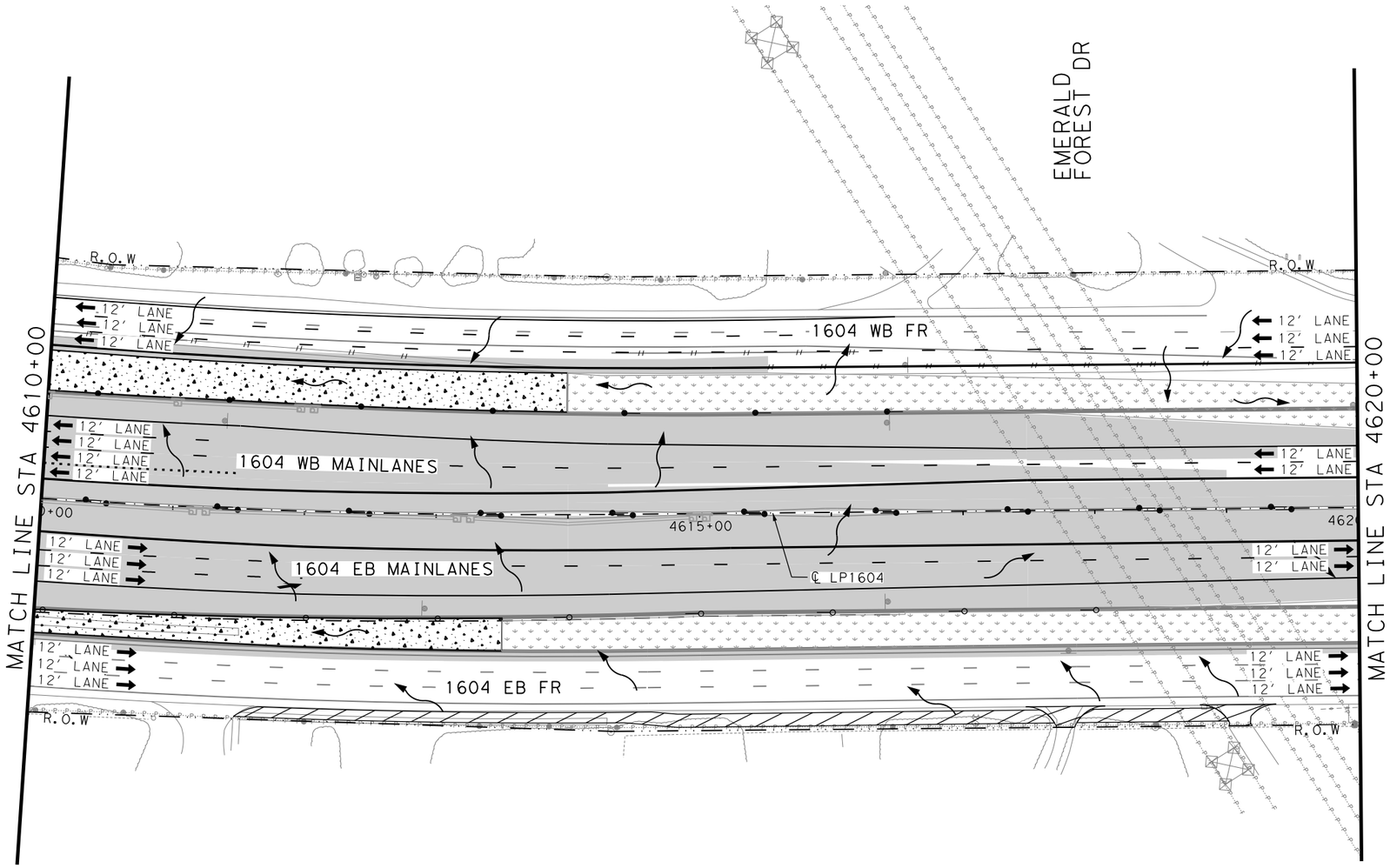

QUANTITY SUMMARY CSJ 0072-08-130, ETC			
ITEM	DESCRIPTION	UNIT	QTY
160	FURNISHING AND PLACING TOPSOIL (4")	SY	0
162	BLOCK SODDING	SY	0
*164	DRILL SEEDING (PERM) (URBAN) (CLAY)	SY	0
*164	DRILL SEED (TEMP) (WARM OR COOL)	SY	0
168	VEGETATIVE WATERING	MG	0.0
169	SOIL RETENTION BLANKETS (CL1) (TY A)	SY	0
506	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0
506	ROCK FILTER DAMS (INSTALL) (TY 4)	LF	0
506	ROCK FILTER DAMS (REMOVE)	LF	0
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0
506	CONSTRUCTION EXITS (REMOVE)	SY	0
506	BACKHOE WORK (EROSION & SEDMT CONT)	HR	0
506	SANDBAGS FOR EROSION CONTROL (6")	LF	0
506	TEMP SEDMT CONT FENCE (INSTALL)	LF	0
506	TEMP SEDMT CONT FENCE (REMOVE)	LF	0
506	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	0
506	BIODEG EROSN CONT LOGS (REMOVE)	LF	0

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- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET PREV PHASE
- ECL — EROSION CONTROL LOG
- ECL — EROSION CONTROL LOG PREV PHASE
- PERM PAVEMENT THIS PHASE
- TEMP PAVEMENT THIS PHASE
- PERM PAVEMENT PREV PHASE
- TEMP PAVEMENT PREV PHASE
- CONSTRUCTON EXIT TY I (111 SY EA)
- CONSTRUCTON EXIT TY I PREV PHASE
- SOD/SEED THIS PHASE
- SOD/SEED PREV PHASE
- PROP CONC RIPRAP AREA
- REMOVE TEMP PAVEMENT
- PH1 — PHASE TREATMENT WAS INSTALLED
- TRAFFIC FLOW

STATE OF TEXAS
HUMBERTO CONTRERAS
99213
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2/17/2023

0' 25' 50' 100'
SCALE: 1"=100'

REV. NO.	DATE	DESCRIPTION	BY

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LJA Engineering, Inc.
FRN-F-1386

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LP 1604
EROSION CONTROL LAYOUT
PHASE 3 STEP 1
STA 4610+00 TO STA 4620+00

SHEET 22 OF 22

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130, ETC	2777

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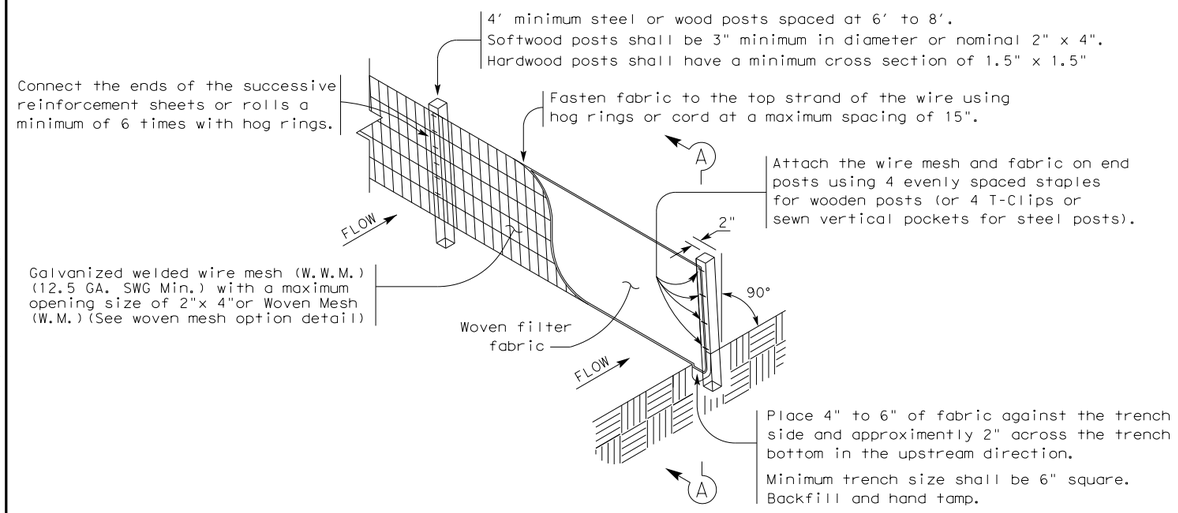
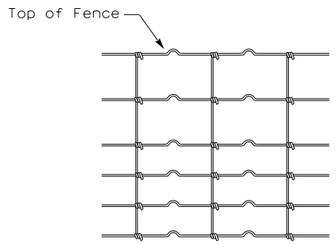
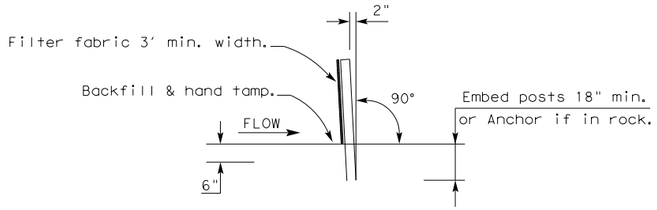


TEMPORARY SEDIMENT CONTROL FENCE

SCF





SECTION A-A

HINGE JOINT KNOT WOVEN MESH (OPTION) DETAIL

Galvanized hinge joint knot woven mesh (12.5 GA.SWG Min.) requires a minimum of five horizontal wires spaced at a maximum of 12 inches apart and all vertical wires spaced at a maximum of 12 inches apart.

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

Sediment control fence should be sized to filter a maximum flow through rate of 100 GPM/FT^2. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

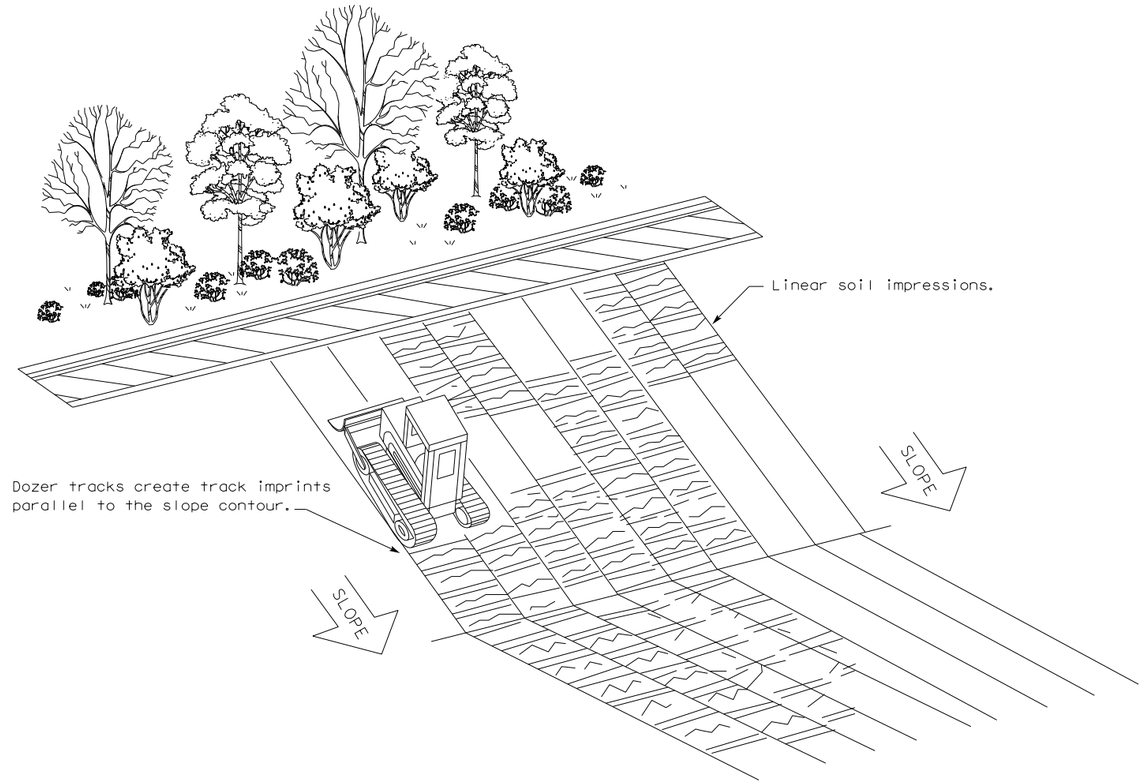
LEGEND

Sediment Control Fence

SCF

GENERAL NOTES

1. Vertical tracking is required on projects where soil distributing activities have occurred unless otherwise approved.
2. Perform vertical tracking on slopes to temporarily stabilize soil.
3. Provide equipment with a track undercarriage capable of producing linear soil impressions measuring a minimum of 12" in length by 2" to 4" in width by 1/2" to 2" in depth.
4. Do not exceed 12" between track impressions.
5. Install continous linear track impressions where the minimum 12" length impressions are perpendicular to the slope or direction of water flow.



VERTICAL TRACKING

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

FENCE & VERTICAL TRACKING

EC(1)-16

FILE: ec116	DN: TxDOT		CK: KM		DW: VP		DN/CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB			HIGHWAY	
REVISIONS	2452	02	130, ETC			LP1604	
	DIST	COUNTY				SHEET NO.	
	SAT	BEXAR				2578	

1/20/2023 $TIME$
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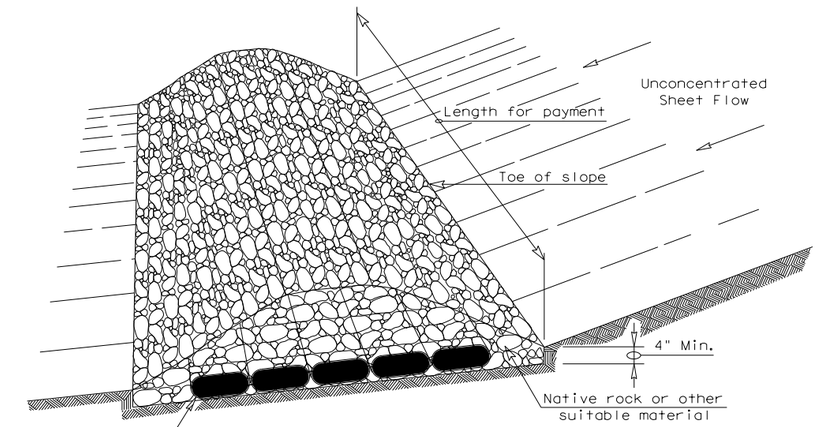
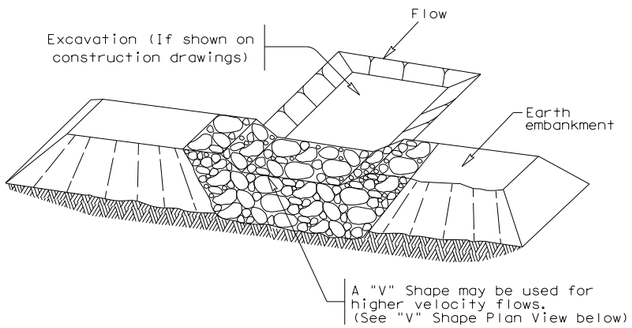


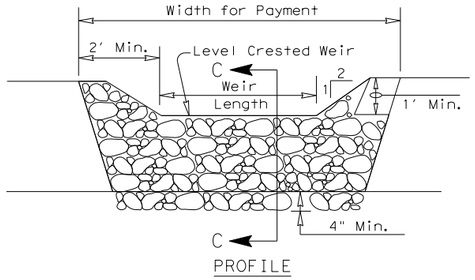
FILTER DAM AT TOE OF SLOPE

RFD1

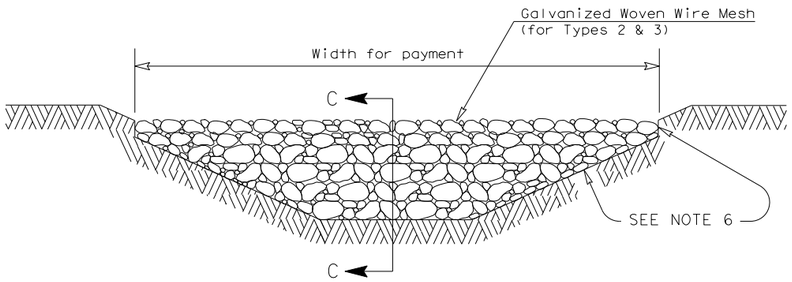


FILTER DAM AT SEDIMENT TRAP

RFD1 OR RFD2

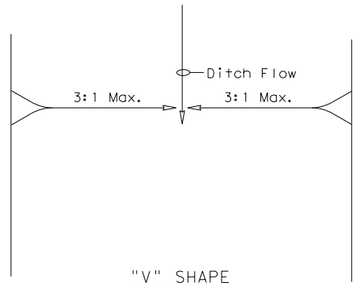


PROFILE

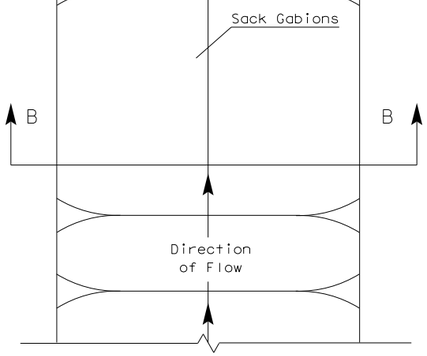


FILTER DAM AT CHANNEL SECTIONS

RFD1 OR RFD2 OR RFD3



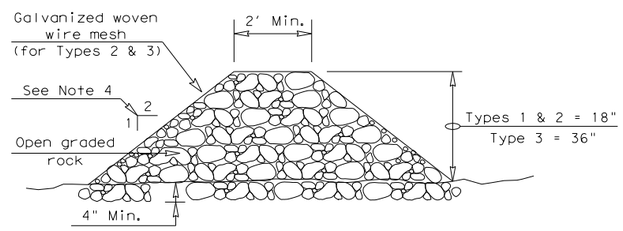
"V" SHAPE
PLAN VIEW



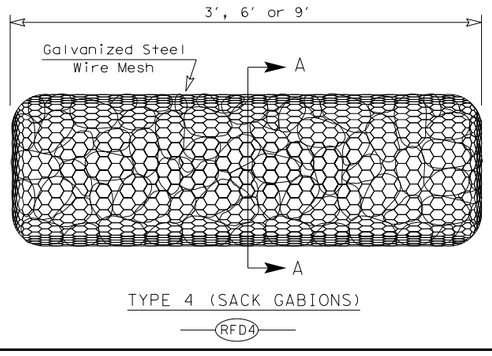
PLAN VIEW

¾" Dia.
Rebar Stakes

SECTION B-B

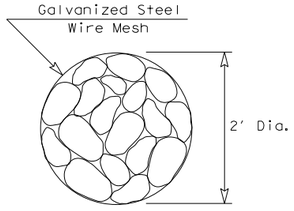


SECTION C-C



TYPE 4 (SACK GABIONS)

RFD4



SECTION A-A

ROCK FILTER DAM USAGE GUIDELINES

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT^2 of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

Type 1 (18" high with no wire mesh) (3" to 6" aggregate): Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approximently 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

Type 2 (18" high with wire mesh) (3" to 6" aggregate): Type 2 may be used in ditches and at dike or swale outlets.

Type 3 (36" high with wire mesh) (4" to 8" aggregate): Type 3 may be used in stream flow and should be secured to the stream bed.

Type 4 (Sack gabions) (3" to 6" aggregate): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

Type 5: Provide rock filter dams as shown on plans.

GENERAL NOTES

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
6. Filter dams should be embedded a minimum of 4" into existing ground.
7. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
8. Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. For in stream use, the mesh should be secured or staked to the stream bed prior to aggregate placement.
9. Sack Gabions should be staked down with ¾" dia. rebar stakes, and have a double-twisted hexagonal weave with a nominal mesh opening of 2 ½" x 3 ¼"
10. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

PLAN SHEET LEGEND

Type 1 Rock Filter Dam — RFD1
Type 2 Rock Filter Dam — RFD2
Type 3 Rock Filter Dam — RFD3
Type 4 Rock Filter Dam — RFD4

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

ROCK FILTER DAMS

EC(2)-16

FILE: ec216	DN: TxDOT	CK: KM	DW: VP	DN/CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	2452	02	130, ETC	LP1604
	DIST	COUNTY		SHEET NO.
	SAT	BEXAR		2579

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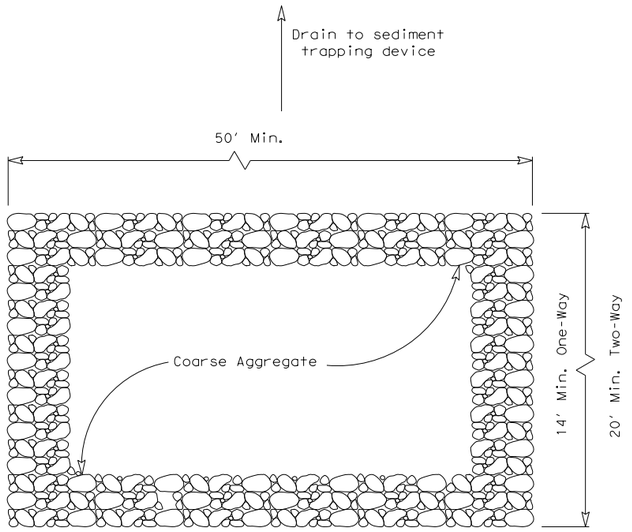
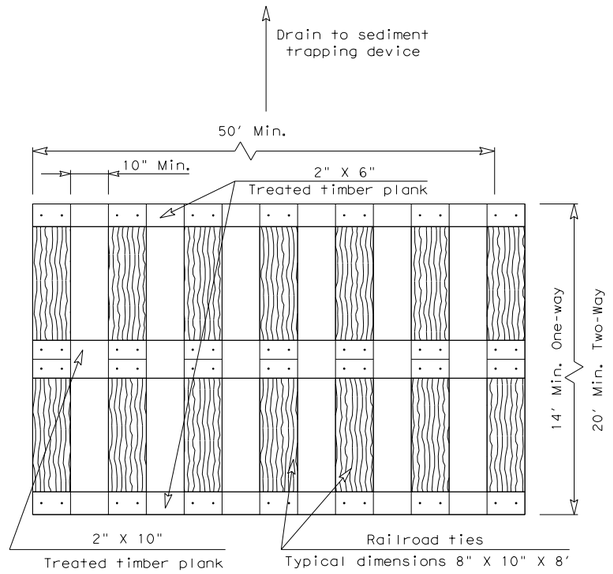


PLAN VIEW



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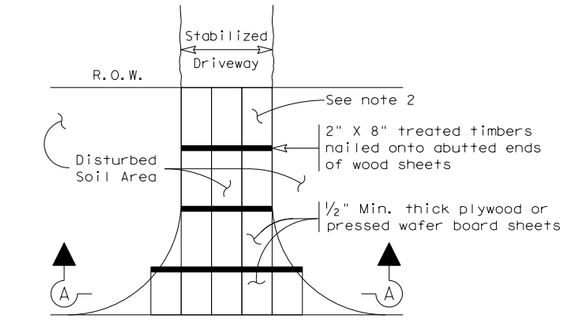
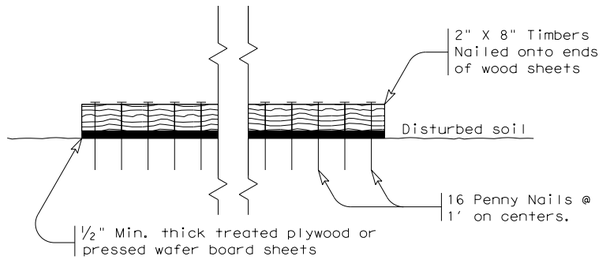


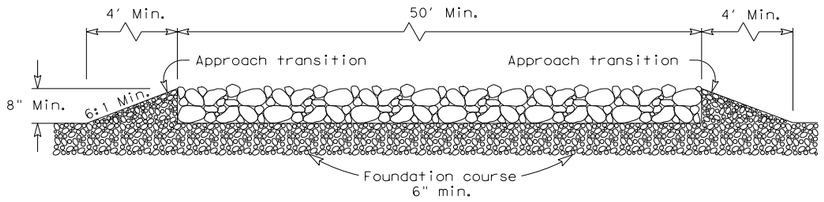
PLAN VIEW



SECTION A-A

CONSTRUCTION EXIT (TYPE 3)

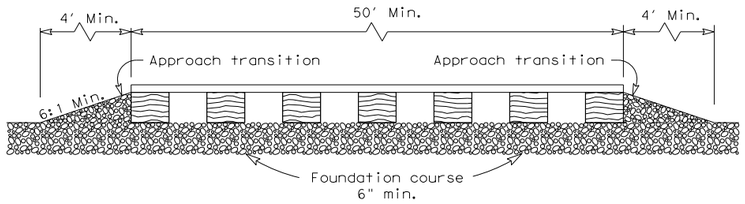
SHORT TERM



ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 1)

ROCK CONSTRUCTION (LONG TERM)



ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 2)

TIMBER CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 1)

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50′.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other materialas approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
7. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.

GENERAL NOTES (TYPE 2)

1. The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50′.
2. The treated timber planks shall be attached to the railroad ties with ½"x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The approach transitions shall be no steeper than 6:1 and constructed as directed by the Engineer.
5. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
6. The construction exit should be graded to allow drainage to a sediment trapping device.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
8. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.

GENERAL NOTES (TYPE 3)

1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

CONSTRUCTION EXITS

EC(3)-16

FILE: ec316	DN: TxDOT		CK: KM		DW: VP	DN/CK: LS
©TxDOT: JULY 2016	CONT	SECT	JOB		HIGHWAY	
REVISIONS	2452	02	130, ETC		LP1604	
	DIST	COUNTY			SHEET NO.	
	SAT	BEXAR			2580	

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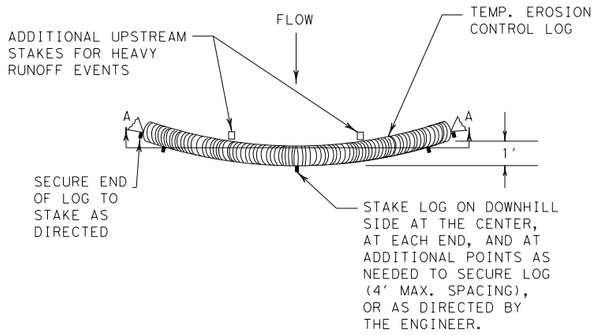
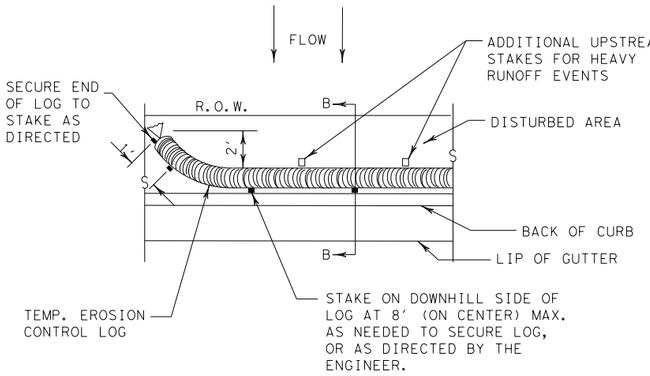


PLAN VIEW



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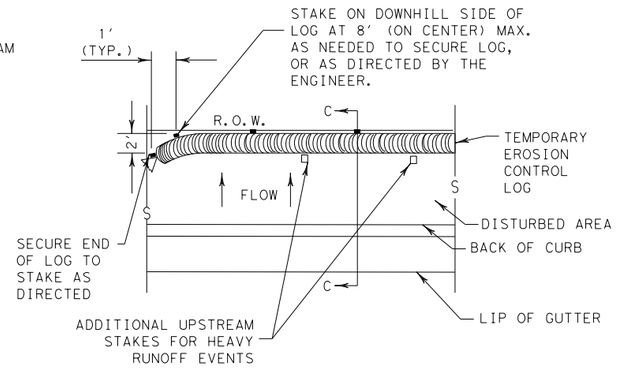

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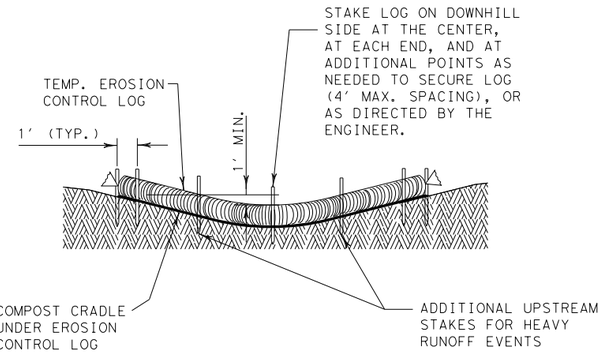
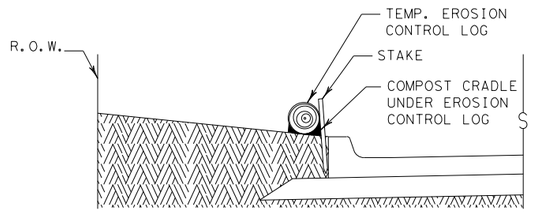


SECTION A-A

EROSION CONTROL LOG DAM

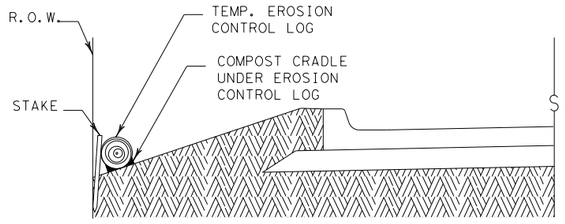
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

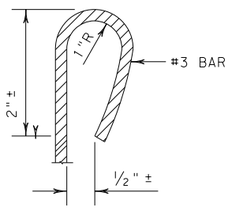
CL-BOC



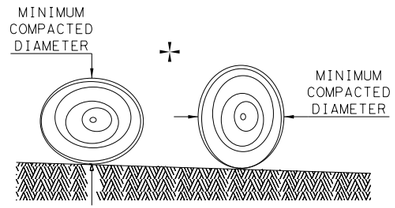
SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW



REBAR STAKE DETAIL



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.

- CL-D — EROSION CONTROL LOG DAM
- CL-BOC — EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW — EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY
- CL-SST — EROSION CONTROL LOGS ON SLOPES STAKE AND TRENCHING ANCHORING
- CL-SSL — EROSION CONTROL LOGS ON SLOPES STAKE AND LASHING ANCHORING
- CL-DI — EROSION CONTROL LOG AT DROP INLET
- CL-CI — EROSION CONTROL LOG AT CURB INLET
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Control logs should be placed in the following locations:

1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	2452	02	130, ETC	LP1604
	DIST	COUNTY		SHEET NO.
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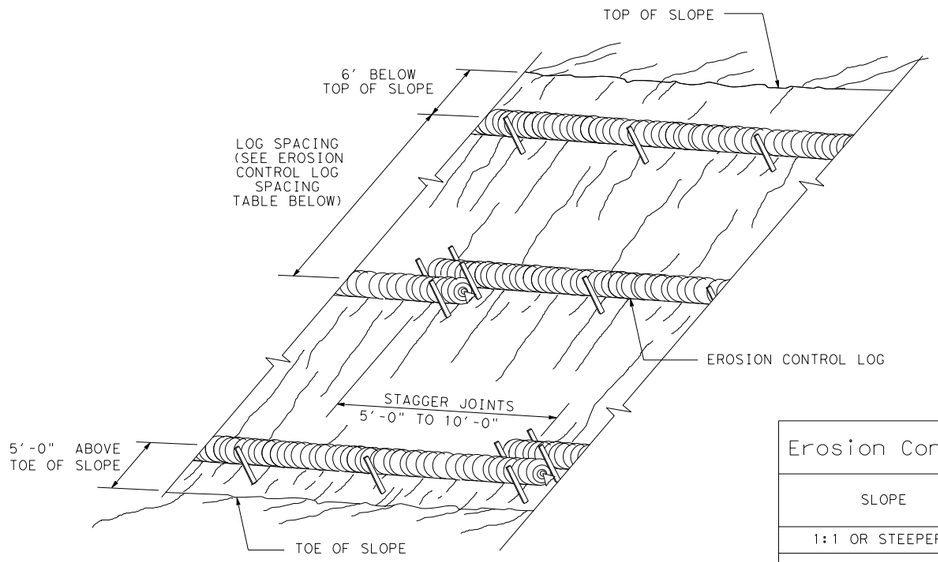
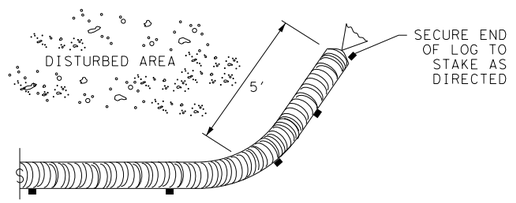


EROSION CONTROL LOGS ON SLOPES
STAKE AND TRENCHING ANCHORING

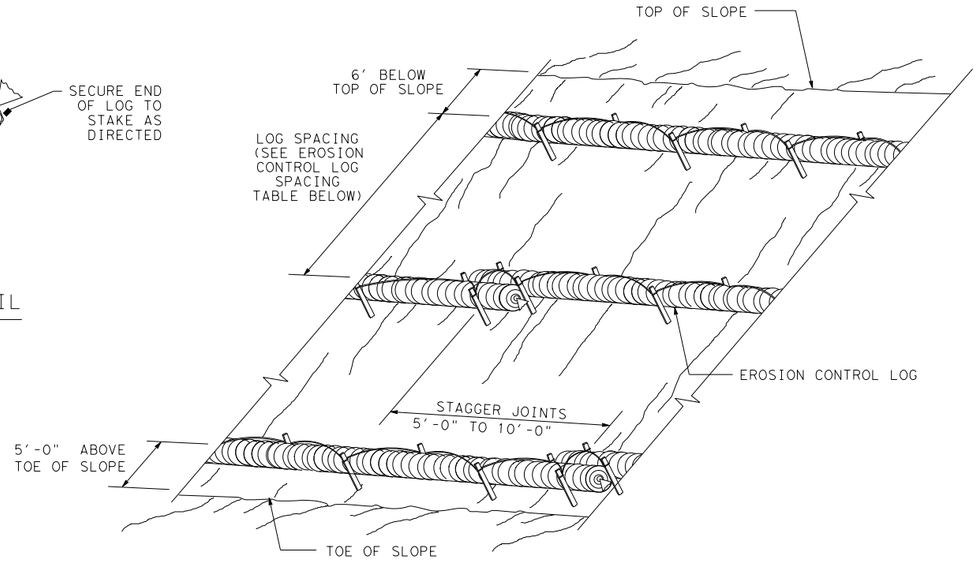
CL-SST



END SECTION RAP DETAIL

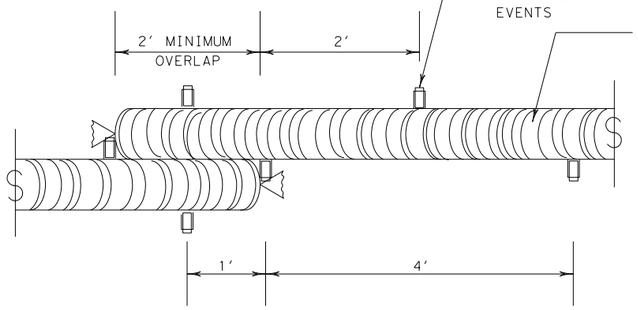
Erosion Control Log Spacing Table				
SLOPE	LOG DIAMETER			
	6"	8"	12"	18"
1:1 OR STEEPER	5'	10'	15'	20'
2:1	10'	20'	30'	40'
3:1	15'	30'	45'	60'
4:1 OR FLATTER	20'	40'	60'	80'

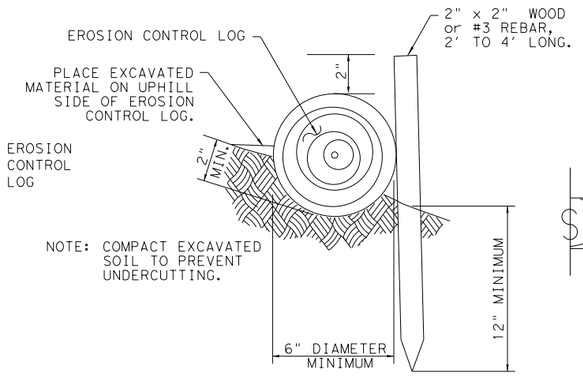
* ADJUSTMENTS CAN BE MADE FOR SOIL TYPE:
SOFT, LOAMY SOILS-ADJUST ROWS CLOSER TOGETHER;
HARD, ROCKY SOILS- ADJUST ROWS FARTHER APART



EROSION CONTROL LOGS ON SLOPES
STAKE AND LASHING ANCHORING

CL-SSL

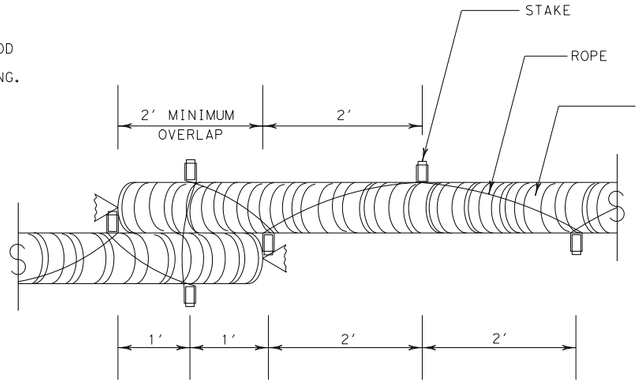




STAKE AND TRENCHING ANCHORING DETAIL

CL-SST

TRENCH DEPTH TABLE	
LOG DIAMETER	DEPTH
6"	2"
8"	3"
12"	4"
18"	5"



STAKE AND LASHING ANCHORING DETAIL

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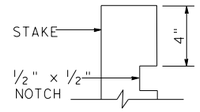
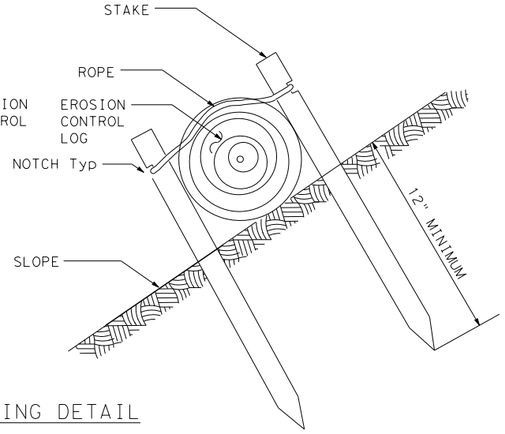


STAKE NOTCH DETAIL



SHEET 2 OF 3

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec116	DN: TxDOT		CK: KM		DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB		HIGHWAY	
REVISIONS	2452	02	130, ETC		LP1604	
	DIST	COUNTY			SHEET NO.	
	SAT	BEXAR			2582	

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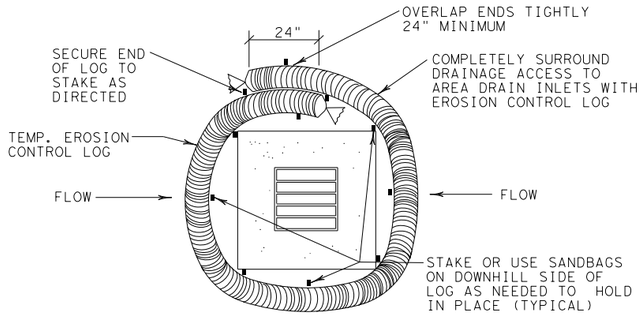
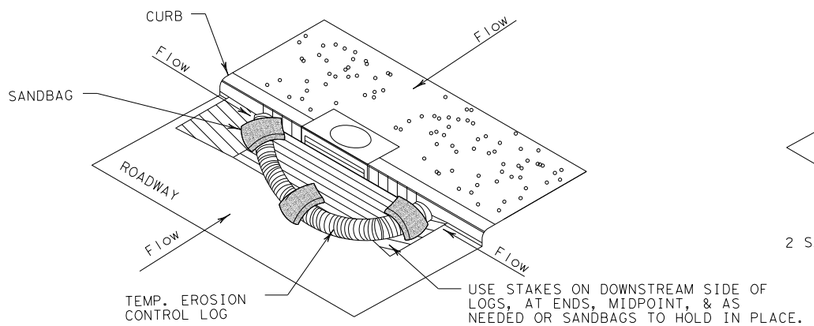


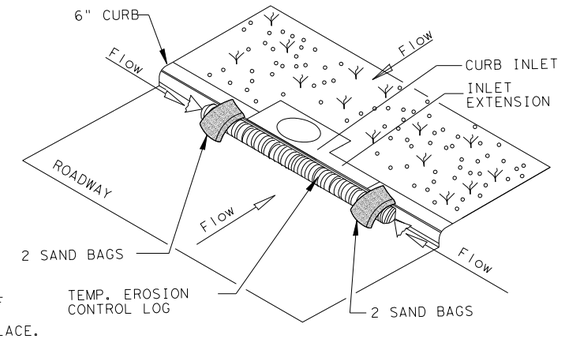
EROSION CONTROL LOG AT DROP INLET

CL-DI



EROSION CONTROL LOG AT CURB INLET

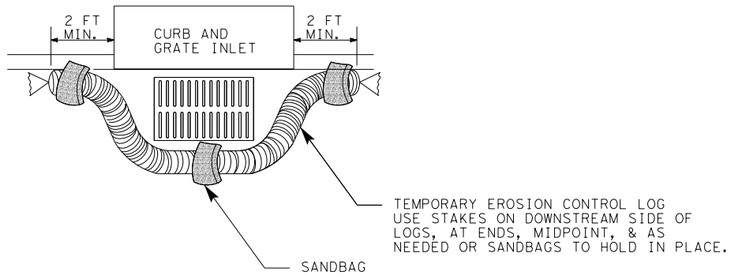
CL-CI



EROSION CONTROL LOG AT CURB INLET

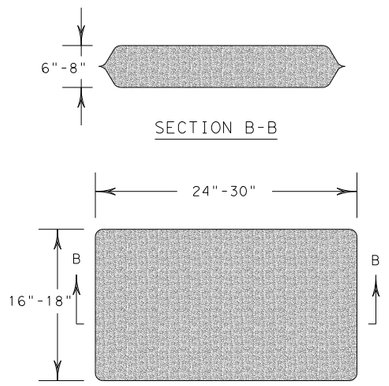
CL-CI

NOTE:
EROSION CONTROL LOGS USED AT CURB INLETS SHOULD ONLY BE USED IF THEY WILL NOT IMPEDE TRAFFIC OR FLOOD THE ROADWAY OR WHEN THE STORM SEWER SYSTEM IS NOT FULLY FUNCTIONAL.



EROSION CONTROL LOG AT CURB & GRADE INLET

CL-GI



SANDBAG DETAIL

Texas Department of Transportation | Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxDOT		CK: KM		DW: LS/PT		CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB		HIGHWAY		
REVISIONS	2452	02	130, ETC		LP1604		
	DIST	COUNTY			SHEET NO.		
	SAT	BEXAR			2583		

1/20/2023 $TIME$
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SAN ANTONIO
WATER SYSTEM

SAWS WATER JOB NO: 22-5017

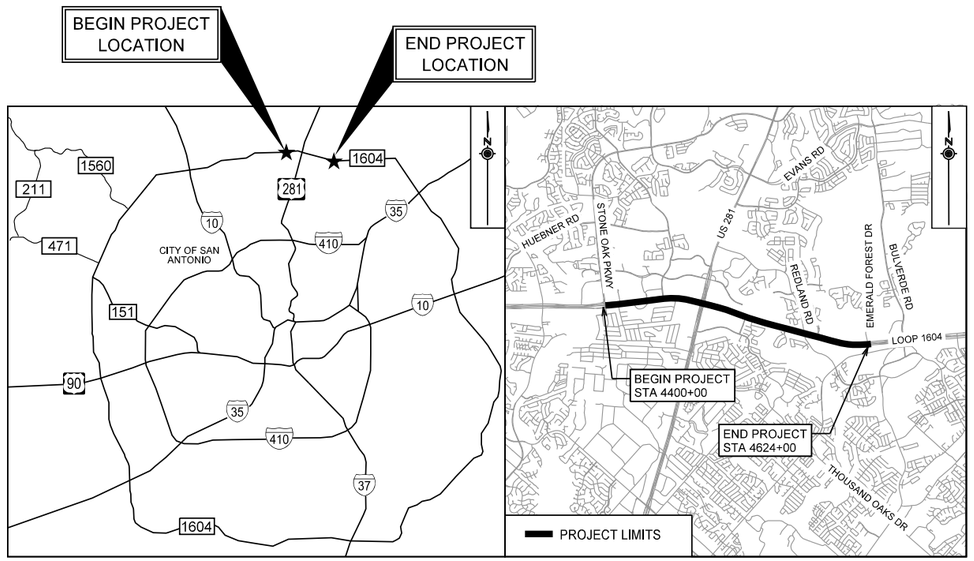
LOOP 1604 SEGMENT 4
STONE OAK PARKWAY TO EMERALD FOREST

CSJ : 2452-02-130

SUBMITTAL PREPARED BY:

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING

40 NE LOOP 410
SUITE 545
SAN ANTONIO, TEXAS 78216
P - 210.491.2391 F - 512.338.1784
TBPE Firm #6535 www.kfriese.com



LOCATION MAP
NOT TO SCALE

SHEET LIST

SHT NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3	QUANTITY SUMMARY TABLE
4	SURFACE ADJUSTMENTS (SHEET 1 OF 5)
5	SURFACE ADJUSTMENTS (SHEET 2 OF 5)
6	SURFACE ADJUSTMENTS (SHEET 3 OF 5)
7	SURFACE ADJUSTMENTS (SHEET 4 OF 5)
8	SURFACE ADJUSTMENTS (SHEET 5 OF 5)
9	DETAILS (SHEET 1 OF 4)
10	DETAILS (SHEET 2 OF 4)
11	DETAILS (SHEET 3 OF 4)
12	DETAILS (SHEET 4 OF 4)

FEBRUARY 2023

Texas Department of Transportation

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GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:

   A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290.
   B. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE."
   C. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION."
   D. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR CONSTRUCTION."
   E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).

2. THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE, HTTPS://APPS.SAWS.ORG/BUSINESS_CENTER/SPECS/CONSTSPECS/ UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.

3. THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500 (DURING REGULAR SAWS WORKING HOURS), AND PROVIDE NOTIFICATION PROCEDURES THE CONTRACTOR WILL USE TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS TWO (2) WEEKS PRIOR TO EXCAVATION. OUTSIDE OF REGULAR SAWS WORKING HOURS THE SAWS EOC SHOULD BE CONTACTED AT 210-704-7297.

4. IF NECESSARY, CONTRACTOR WILL COORDINATE USE OF SAWS PREMISES AT NO ADDITIONAL COST TO SAWS. SUCH EFFORTS INCLUDE, BUT ARE NOT LIMITED TO, OBTAINING SECURITY IDENTIFICATION BADGES REQUIRED FOR ACCESS TO SAWS FACILITIES.

5. LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.

6. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. AS-BUILTS FOR SAWS INFRASTRUCTURE CAN BE OBTAINED AT WEBSITE BELOW. CONTRACTOR SHALL COORDINATE PHYSICAL LOCATES FOR SAWS INFRASTRUCTURE THROUGH THE SAWS INSPECTOR. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS INFRASTRUCTURE. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:

   SAN ANTONIO WATER SYSTEM:
   REQUEST AS-BUILTS: HTTPS://WWW.SAWS.ORG/SERVICE/LOCATES-SERVICE/
   COSA DRAINAGE 210-206-8433
   COSA TRAFFIC SIGNAL OPERATIONS 210-207-7720
   TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION AS A RESULT OF DAMAGES DONE BY THE PROJECT'S CONSTRUCTION.

8. CONTRACTOR SHALL NOT MAKE USE OF DUMPSTERS OR WASTE BINS THAT ARE INTENDED TO SERVE RESIDENTS AND/OR BUSINESSES.

9. ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION AND BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.

10. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.

11. ALL WORK WITHIN THE 100-YEAR FLOODPLAIN SHALL BE DONE IN ACCORDANCE WITH FLOODPLAIN DEVELOPMENT PERMIT.

12. ANY WORK COMPLETED WITHOUT PRIOR WRITTEN AUTHORIZATION WHICH IS NOT INCLUDED IN THESE PLANS AND SPECIFICATIONS WILL NOT BE COMPENSATED BY THE SAN ANTONIO WATER SYSTEM.

13. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS.

    WEEKEND WORK: CONTRACTORS ARE REQUIRED TO SUBMIT REQUEST TO THE SAWS INSPECTION CONSTRUCTION DEPARTMENT BY 12:00PM ON THE WEDNESDAY PRIOR TO THE WEEKEND BEING REQUESTED. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

    ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION AT NO COST TO SAWS.

14. PRE CON SITE VIDEO: BEFORE THE START OF ANY CONSTRUCTION. THE SITE MUST BE VIDEO RECORDED BY THE CONTRACTOR WITH ONE COPY SUBMITTED TO SAWS INSPECTIONS. A PRE-SITE VIDEO WILL PROVIDE ACCURATE DOCUMENTATION OF THE EXISTING CONDITIONS (NSPI).

15. POWER POLE BRACING: CONTRACTORS SHOULD BE ADVISED THAT THERE ARE EXISTING OVERHEAD UTILITY POLES ALONG THE PROJECT CORRIDOR. CONTRACTORS SHOULD FURTHER BE ADVISED THAT IF THE DISTANCE FROM THE OUTSIDE FACE OF A UTILITY TRENCH TO THE FACE OF A UTILITY POLE IS LESS THAN 5 FEET, SAID UTILITY POLE IS SUBJECT TO BRACING, BASED ON A DETERMINATION MADE BY UTILITY POLE OWNER. COSTS INCURRED BY CONTRACTOR FOR BRACING OF THESE UTILITY POLES IS SUBSIDIARY TO THAT RESPECTIVE UTILITY COMPANY'S WORK. IT IS ADVISABLE FOR THE CONTRACTOR TO REVIEW THE CONSTRUCTION DOCUMENTS, AND VISIT THE CONSTRUCTION SITE TO DETERMINE POTENTIAL IMPACTS.

16. CONSTRUCTION SEQUENCING: IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SCHEDULE SEQUENCING FOR REMOVAL AND INSTALLATION OF EXISTING AND PROPOSED SAWS UTILITIES IN CONJUNCTION WITH GENERAL PROJECT CONSTRUCTION. SEQUENCE OF CONSTRUCTION ACTIVITIES SHALL BE CONSIDERED IN ORDER TO MINIMIZE THE EXTENT AND DURATION OF DISTURBANCES.

17. CONTRACTOR SHALL COMPLY WITH APPLICABLE REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE OVERSEEN BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). OSHA INFORMATION AND RELATED MATERIALS MAY BE OBTAINED AT HTTPS://WWW.OSHA.GOV/ OR AT THE OSHA SAN ANTONIO OFFICE LOCATED AT FOUNTAINHEAD TOWER, SUITE 605 8200 W. INTERSTATE 10 SAN ANTONIO, TX 78230 WHICH IS ALSO REACHABLE BY PHONE AT (210) 472-5040.

18. TRENCH EXCAVATION SAFETY PROTECTION: CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREAS IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

19. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS INSPECTION AND/OR SAWS PRODUCTION GROUPS AT LEAST TWENTY-FIVE (25) CALENDAR DAYS IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.
    SAWS PRODUCTION CONTROL CENTER 210-233-2016

20. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAYBE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS, PAYMENT FOR SUCH WORK IS TO BE MADE UNDER ITEM NO. 3000, "HANDLING ASBESTOS CEMENT PIPE".

    AC PIPE REMOVED ON CONSTRUCTION PROJECTS FOR TIE-IN(S) SHOULD BE IN LENGTH OF 26 LINEAR FEET (LF). IENGTHS OF 13 LF SHOULD BE REMOVED WHERE AC PIPE IS BEING REMOVED AND CROSSING PIPES, CONDUITS, OR BOXES.

21. VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSPI)

WATER SECTION

22. DIVISION VALVES: DIVISION VALVES SHWON ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTFICATION TO THE INSPECTOR A MINIMUM OF TWENTY-FIVE (25) CALENDAR DAYS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREAK OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES, OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALAVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VLAVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

CPS ENERGY NOTES:

1. CALL THE TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.

2. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN PROJECT AREA.

3. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS ENERGY OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.

4. CONTRACTOR TO FIELD VERIFY THE DEPTH OF GAS MAINS BEFORE BEGINNING OF CONSTRUCTION.

5. CONTACT GREGORY LEE FROM CPS INSPECTIONS AT (210) 353-5285 AT LEAST 48 HOURS PRIOR TO UNCOVERING THE HIGH PRESSURE GAS MAIN SO CPS CAN VISUALLY INSPECT THE LINE.

AT&T NOTES:

1. THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE.

2. THE CONTRACTOR SHOULD CALL FOR LOCATES THROUGH THE "ONE CALL" UTILITY LOCATE SERVICE (1-800-545-6005) 48 HOURS PRIOR TO CONSTRUCTION/EXCAVATION WORK. CONTRACTORS HAVE THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

NOTES:

1. CONTRACTOR SHALL RESTRAIN PROPOSED PIPES, VALVES AND FITTINGS AT NO ADDITIONAL COST (RL=RESTRAINT LENGTH)

2. CONTRACTOR TO MAINTAIN WATER SERVICE CONNECTIONS AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL ALSO MAINTAIN ACCESS TO ALL EXISTING AND PROPOSED WATER VALVES AT ALL TIMES (NSPI).

3. NSPI - NOT A SEPARATE PAY ITEM.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING OPERATION OF ALL EXISTING UTILITIES AFFECTED BY PROPOSED CONSTRUCTION.

5. CONTRACTOR SHALL BACKFILL THE TRENCH AT THE END OF EACH DAY, INCLUDING TRENCH OUTSIDE OF PAVEMENT. CONTINUOUS ACCESS MUST BE MAINTAINED FOR RESIDENTS.

6. ALL PROPOSED WATER LINES SHALL BE INSTALLED WITH AT LEAST 5 FEET OF COVER TO FINISHED GRADE,UNLESS OTHERWISE NOTED IN PLANS. CONTRACTOR SHALL BE AWARE THAT THIS INCLUDES AREAS WHERE MAINS, FIRE HYDRANTS LEADS, AND SERVICES CROSS PROPOSED DITCHES.

7. MAIL AND TRASH SERVICE IS TO BE MAINTAINED AT ALL TIMES (NSPI).

8. THE CONTRACTOR SHALL RE-ESTABLISH ANY PROPERTY MARKER, BENCHMARK, ETC. DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL LOCATION AND ELEVATION. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VERTICAL AND HORIZONTAL CONTROL SHOWN ON THE PLANS THROUGHOUT THE PROJECT. CONTRACTOR SHALL RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PUBLIC SURVEYOR IN THE STATE OF TEXAS AT NO ADDITIONAL COST TO SAWS.

9. SAWS SHALL MACHINE CHLORINATE NEW MAINS UNLESS OTHERWISE STATED.

10. ALL POWER POLES AND OVERHEAD ELECTRIC WILL BE MOVED BY OTHERS PRIOR TO ANY WATER AND SEWER WORK EXCEPT FOR THE WATER MAIN ADJUSTMENTS BETWEEN SONTERRA PLACE AND JHM WAY.

11. WHERE INDICATED IN THE PLANS, STATION AND OFFSETS FOR PROPOSED FIRE HYDRANTS ARE TO TEE ON THE MAIN. FIRE HYDRANT TO BE INSTALLED IN ACCORDANCE WITH SAWS STD DWG DD-834-01 AND THE SPECIFICATIONS.

12. CONTRACTOR CAN OPEN CUT DRIVEWAYS AND ROADWAY CROSSINGS TO LAY PIPE, HOWEVER TWO WAY TRAFFIC MUST BE MAINTAINED AND WORK NEEDS TO TAKE PLACE DURING OFFPEAK HOURS. SEE TXDOT TRAFFIC CONTROL PHASING AND TCP FOR REQUIREMENTS.

13. CUSTOMER SHUT OFF VALVES ARE INCLUDED AS PART OF SERVICE RELAYS (NSPI)

14. CONTRACTOR TO INSTALL ISOLATION GASKETS AT LOCATIONS WHERE PROPOSED DUCTILE IRON MAINS CONNECT TO EXISTING DUCTILE IRON MAINS. (NSPI)

15. CONTRACTOR SHALL MAINTAIN AT LEAST 5' OF COVER OVER THE PROPOSED WATER MAINS AT ALL TIMES DURING CONSTRUCTION.

16. EXISTING GAS LINES THAT ARE TO BE REMOVED SHALL BE REMOVED BY OTHERS.

17. TRENCH EXCAVATION PROTECTION SHALL NOT BE PAID FOR SEPARATELY WHEN INSTALLING CONCRETE CAPS, SADDLES, OR ENCASEMENT. IT SHALL BE INCLUSIVE TO THE WORK PERFORMED UNDER ITEM 7196 6012 CONCRETE SADDLE. (NSPI)

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
40 NE LOOP 410
SUITE 545
SAN ANTONIO, TEXAS 78216
P 210.491.2391 F 512.338.1784
TBPE Firm Number 6535
www.kfriese.com

STATE OF TEXAS
CHRISTOPHER BOENTGES
109721
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

No.	Revision	Drawn	Approved	Date

REVISIONS

Texas Department of Transportation

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LOOP 1604 SEGMENT 4
(STONE OAK PARKWAY TO EMERALD FOREST)
GENERAL NOTES

SAWS JOB NO: 22-5017

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2

0875ShtGNnote.dgn modified by cboentges on 2/17/2023 - 10:03:03 AM

ITEM NO.	DESCRIPTION	UNIT	SHEET 4 OF 12	SHEET 5 OF 12	SHEET 6 OF 12	SHEET 7 OF 12	SHEET 8 OF 12	TOTAL QUANTITY
500 6001	MOBILIZATION	LS						1
7196 6002	DUCTILE IRON FITTINGS**	TN				0.3		0.3
7196 6011	ADJUST VALVE BOX*	EA	20	23	12	17	5	77
7196 6031	NEW METER BOX	EA	5	12	5	5	1	28
7196 6032	FIRE HYDRANT ASSEMBLY*	EA	4	3	2	7		16
7196 6037	AIR RELEASE VALVE (COMPLETE) (1")*	EA		1				1
7196 6042	RELOCATE FIRE HYDRANT*	EA				3	1	4
7196 6072	RELOC EXIST METER AND NEW METER BOX	EA	5	12	5	5	1	28
7196 6088	TAPPED FIRE HYDRANT*	EA		3	3	1	1	8
7196 6095	CUT-IN TEE (COMPLETE) (8"x8")*	EA				3		3

* BUY AMERICA

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PUBLIC PROJECT ENGINEERING
40 NE LOOP 410
SUITE 545
SAN ANTONIO, TEXAS 78216
P 210.491.2391 F 512.338.1784
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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST)
QUANTITY SUMMARY TABLE

SAWS JOB NO: 22-5017

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	3

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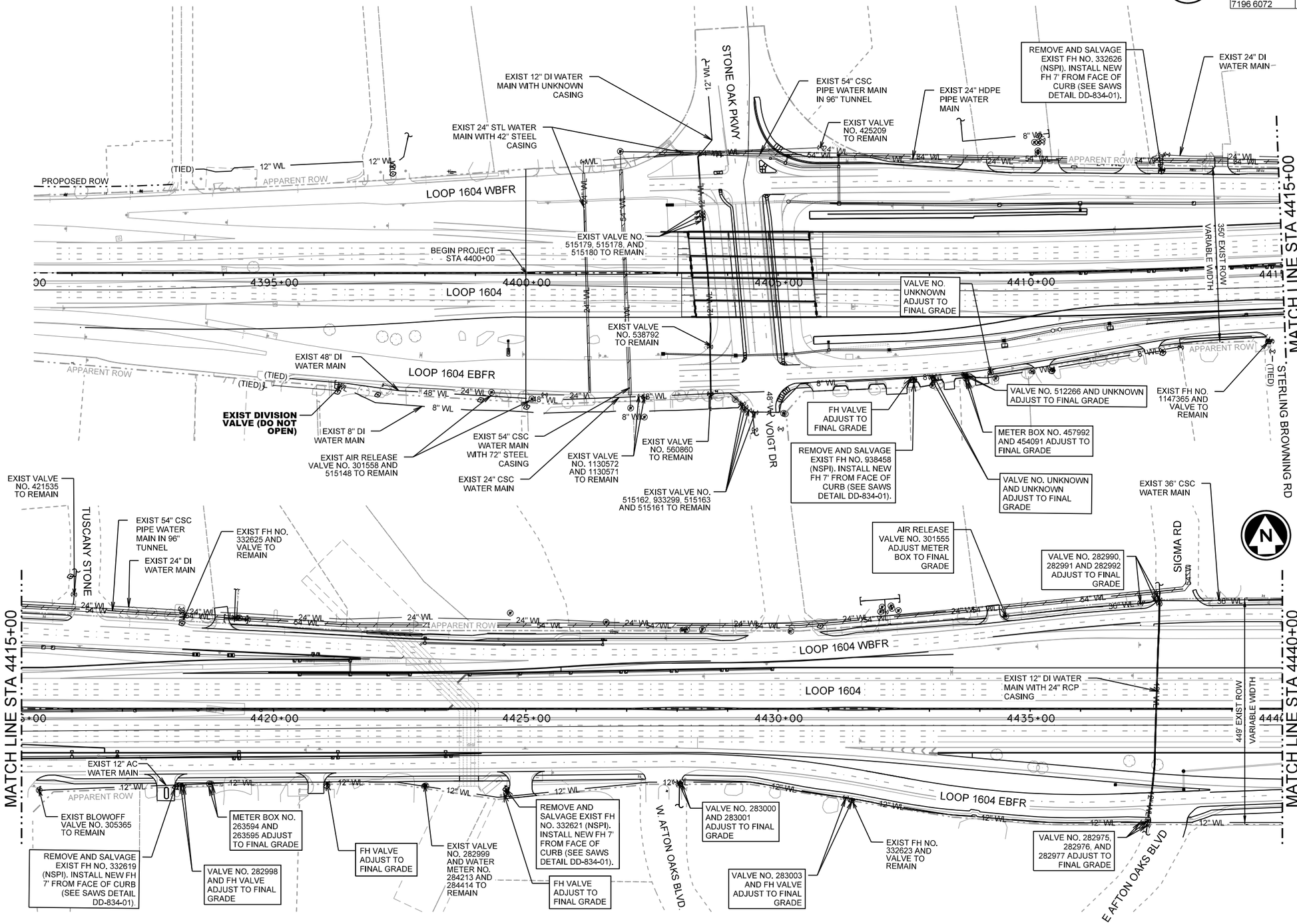
ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
7196 6011	ADJUST VALVE BOX*	EA	20
7196 6031	NEW METER BOX	EA	5
7196 6032	FIRE HYDRANT ASSEMBLY*	EA	4
7196 6072	RELOC EXIST METER AND NEW METER BOX	EA	5



LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN — 6"C.I.
- GAS MAIN — 2"G
- SANITARY SEWER — 8"SS
- STORM SEWER — 24"ST
- UTILITY POLE LINE
- ELECTRIC CABLE — E
- TELEPHONE CABLE — T
- PROP DITCH CENTERLINE
- PROP CONCRETE RIPRAP
- PROP GAS LINE — 2"G
- PROP OVERHEAD UTILITIES — OHE
- NEW UNMETERED SERVICE:
  - 3/4" SINGLE
  - 1" DUAL
- SERVICE RELAY:
  - 3/4"
  - 1" OR LARGER
- SERVICE RELOCATE:
  - 3/4"
  - 1" OR LARGER
- RELOCATE METER
- NEW SERVICE:
  - 3/4"
  - 1" OR LARGER
- APPARENT ROW
- PROPOSED ROW
- EXIST WATER VALVE
- EXIST UTILITY POLE

0 100' 200'

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
40 NE Loop 410
Suite 545
San Antonio, Texas 78216
P 210.491.2391 F 512.338.1784
TBPE Firm Number 6535
www.kfriese.com

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LICENSED PROFESSIONAL ENGINEER
2/17/2023

No.	Revision	Drawn	Approved	Date

REVISIONS

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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST) SURFACE ADJUSTMENTS (SHEET 1 OF 5)

SAWS JOB NO: 22-5017

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	4

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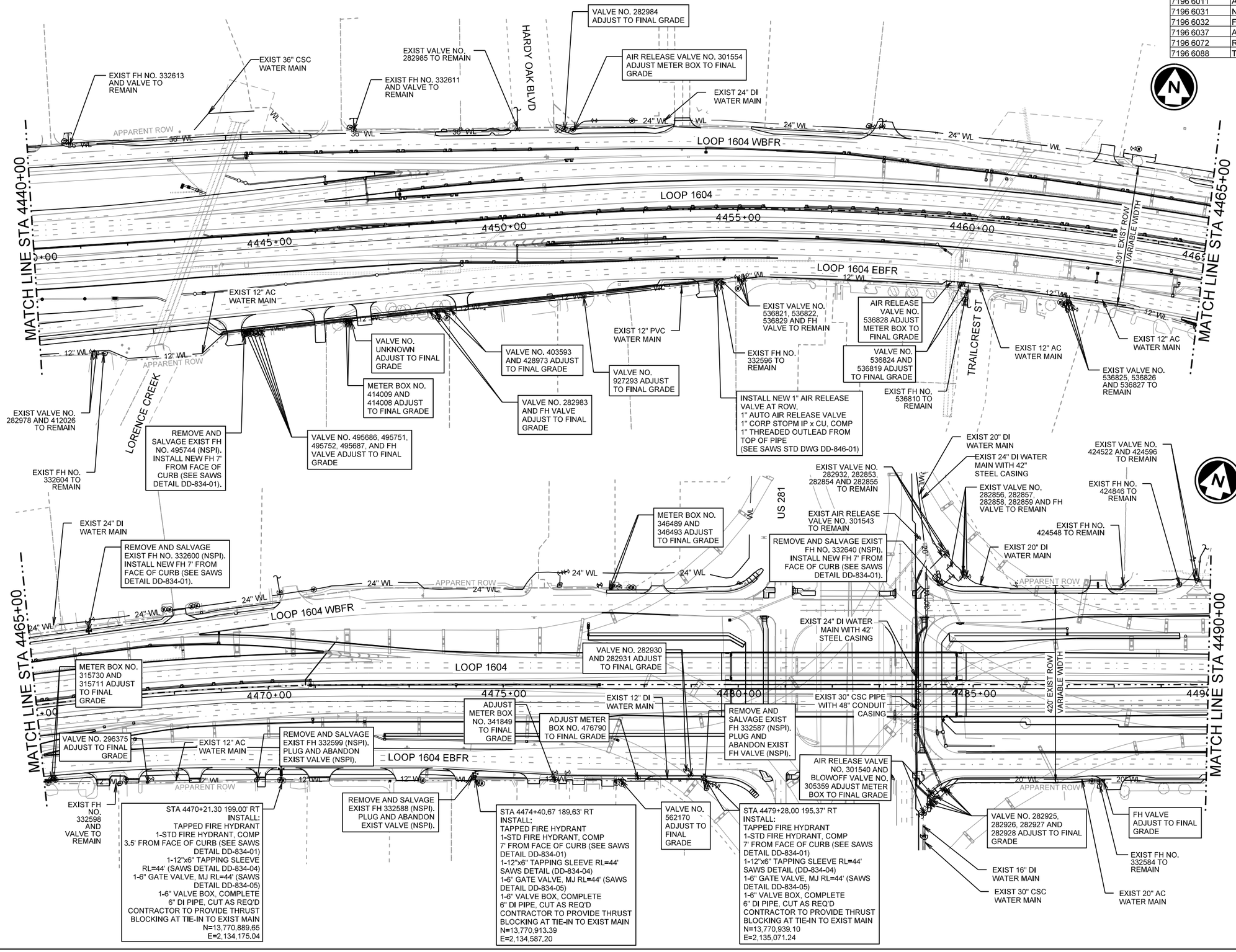
ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
7196 6011	ADJUST VALVE BOX*	EA	23
7196 6031	NEW METER BOX	EA	12
7196 6032	FIRE HYDRANT ASSEMBLY*	EA	3
7196 6037	AIR RELEASE VALVE (COMPLETE) (1")*	EA	1
7196 6072	RELOC EXIST METER AND NEW METER BOX	EA	12
7196 6088	TAPPED FIRE HYDRANT*	EA	3



LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN — 6"C.I.
- GAS MAIN — 2"G
- SANITARY SEWER — 8"SS
- STORM SEWER — 24"ST
- UTILITY POLE LINE
- ELECTRIC CABLE — E
- TELEPHONE CABLE — T
- PROP DITCH CENTERLINE
- PROP CONCRETE RIPRAP
- PROP GAS LINE — 2"G
- PROP OVERHEAD UTILITIES — OHE
- NEW UNMETERED SERVICE: 3/4" SINGLE, 1" DUAL
- SERVICE RELAY: 3/4", 1" OR LARGER
- SERVICE RELOCATE: 3/4", 1" OR LARGER
- RELOCATE METER
- NEW SERVICE: 3/4", 1" OR LARGER
- APPARENT ROW
- PROPOSED ROW
- EXIST WATER VALVE
- EXIST UTILITY POLE

0 100' 200'

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
40 NE Loop 410
Suite 545
San Antonio, Texas 78216
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TBPE Firm Number 6535
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2/17/2023

No.	Revision	Drawn	Approved	Date

REVISIONS

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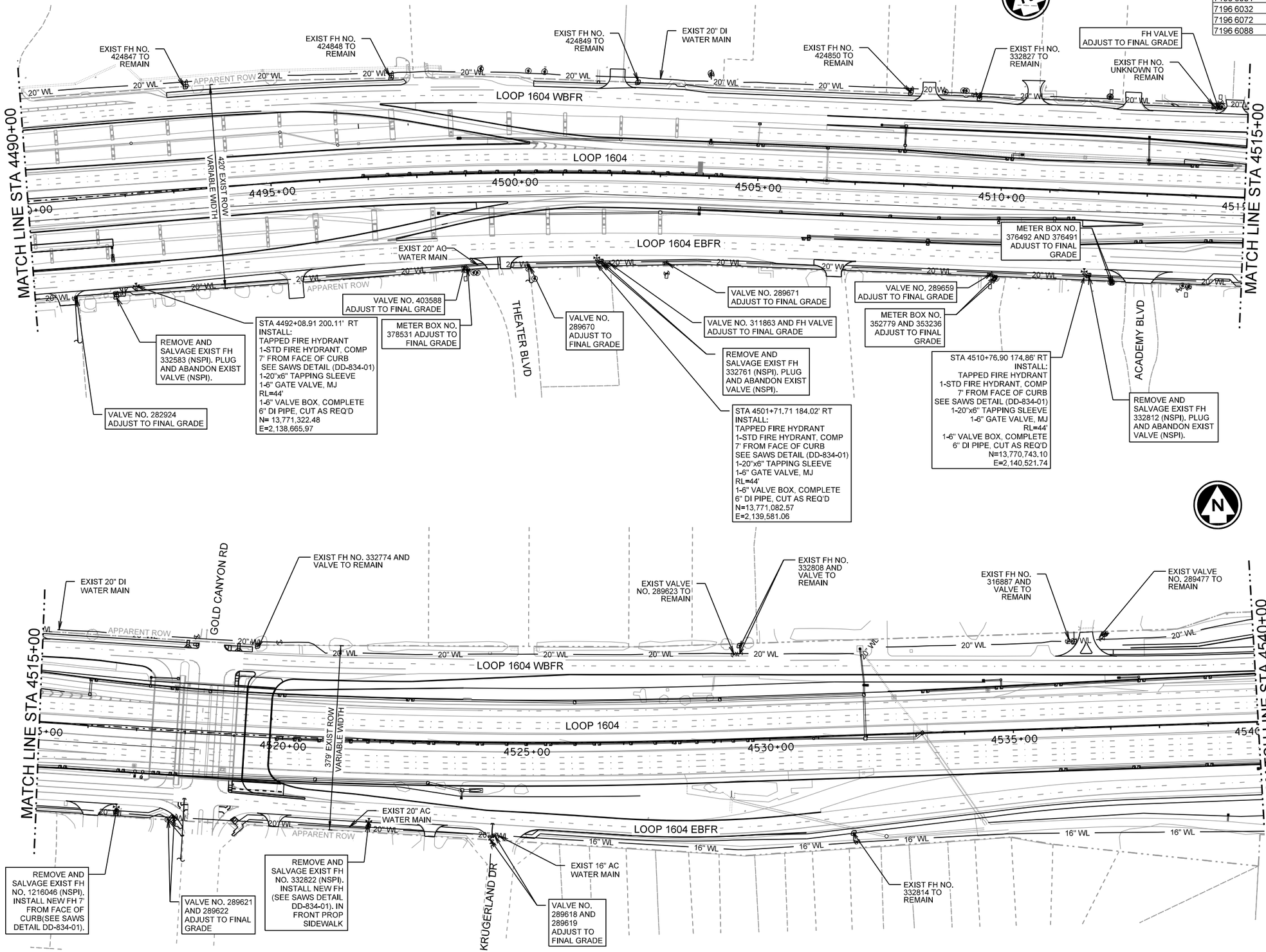
LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST) SURFACE ADJUSTMENTS (SHEET 2 OF 5)

SAWS JOB NO: 22-5017

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	5

0876SHtUTsadj02.dgn modified by cboentges on 2/17/2023 - 10:09:11 AM

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
7196 6011	ADJUST VALVE BOX*	EA	12
7196 6031	NEW METER BOX	EA	5
7196 6032	FIRE HYDRANT ASSEMBLY*	EA	2
7196 6072	RELOC EXIST METER AND NEW METER BOX	EA	5
7196 6088	TAPPED FIRE HYDRANT*	EA	3



LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN — 6"C.I.
- GAS MAIN — 2"G
- SANITARY SEWER — 8"SS
- STORM SEWER — 24"ST
- UTILITY POLE LINE
- ELECTRIC CABLE — E
- TELEPHONE CABLE — T
- PROP DITCH CENTERLINE
- PROP CONCRETE RIPRAP
- PROP GAS LINE — 2"G
- PROP OVERHEAD UTILITIES — OHE
- NEW UNMETERED SERVICE:
  - 3/4" SINGLE
  - 1" DUAL
- SERVICE RELAY:
  - 3/4"
  - 1" OR LARGER
- SERVICE RELOCATE:
  - 3/4"
  - 1" OR LARGER
- RELOCATE METER
- NEW SERVICE:
  - 3/4"
  - 1" OR LARGER
- APPARENT ROW
- PROPOSED ROW
- EXIST WATER VALVE
- EXIST UTILITY POLE

0 100' 200'

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109721
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2/17/2023

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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST)
SURFACE ADJUSTMENTS (SHEET 3 OF 5)

SAWS JOB NO: 22-5017

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	6

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ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
7196 6002	DUCTILE IRON FITTINGS*	TN	0.3
7196 6011	ADJUST VALVE BOX*	EA	17
7196 6031	NEW METER BOX	EA	5
7196 6032	FIRE HYDRANT ASSEMBLY*	EA	7
7196 6042	RELOCATE FIRE HYDRANT*	EA	3
7196 6072	RELOC EXIST METER AND NEW METER BOX	EA	5
7196 6088	TAPPED FIRE HYDRANT*	EA	1
7196 6095	CUT-IN TEE (COMPLETE) (8"x8")*	EA	3

LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN — 6"C.I.
- GAS MAIN — 2"G
- SANITARY SEWER — 8"SS
- STORM SEWER — 24"ST
- UTILITY POLE LINE
- ELECTRIC CABLE — E
- TELEPHONE CABLE — T
- PROP DITCH CENTERLINE
- PROP CONCRETE RIPRAP
- PROP GAS LINE — 2"G
- PROP OVERHEAD UTILITIES — OHE
- NEW UNMETERED SERVICE: 3/4" SINGLE, 1" DUAL
- SERVICE RELAY: 3/4" 1" OR LARGER
- SERVICE RELOCATE: 3/4" 1" OR LARGER
- RELOCATE METER
- NEW SERVICE: 3/4" 1" OR LARGER
- APPARENT ROW
- PROPOSED ROW
- EXIST WATER VALVE
- EXIST UTILITY POLE

0 100' 200'

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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST)
SURFACE ADJUSTMENTS (SHEET 4 OF 5)

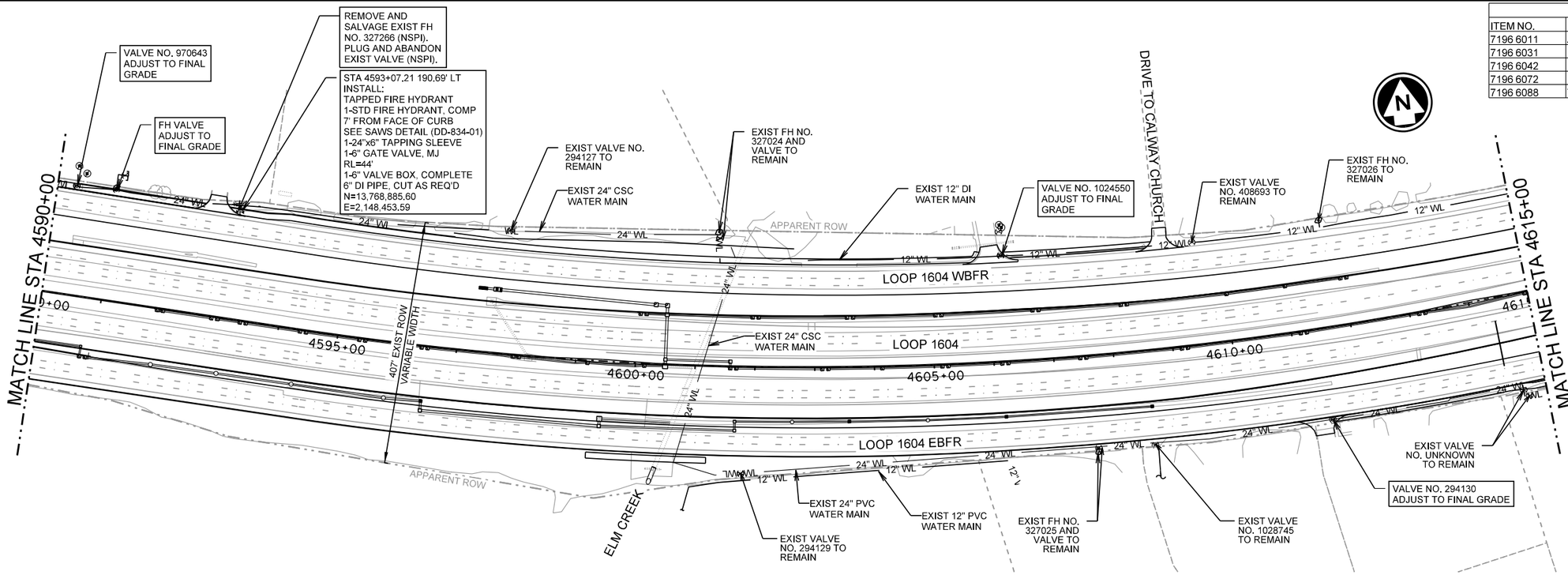
SAWS JOB NO: 22-5017

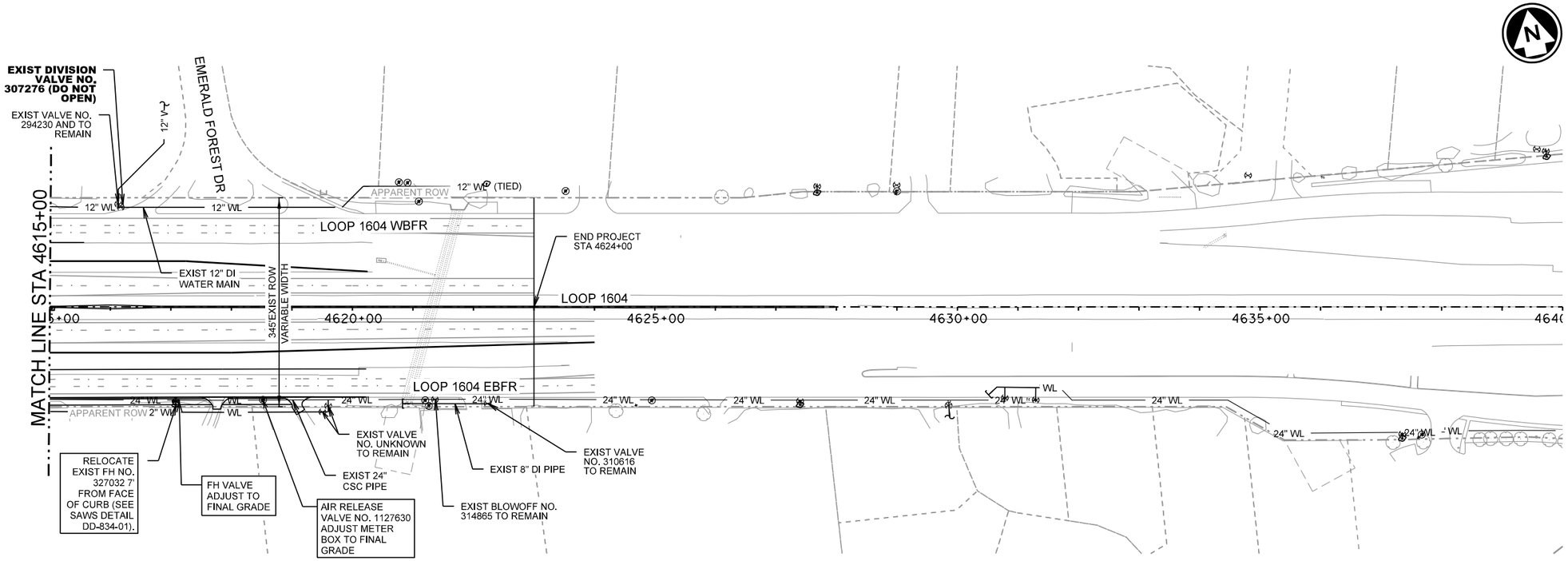
FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	7

2903

0876ShtUTsadj04.dgn modified by cboentges on 2/17/2023 - 10:09:41 AM

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
7196 6011	ADJUST VALVE BOX*	EA	5
7196 6031	NEW METER BOX	EA	1
7196 6042	RELOCATE FIRE HYDRANT*	EA	1
7196 6072	RELOC EXIST METER AND NEW METER BOX	EA	1
7196 6088	TAPPED FIRE HYDRANT*	EA	1





LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN — 6"C.I.
- GAS MAIN — 2"G
- SANITARY SEWER — 8"SS
- STORM SEWER — 24"ST
- UTILITY POLE LINE
- ELECTRIC CABLE — E
- TELEPHONE CABLE — T
- PROP DITCH CENTERLINE
- PROP CONCRETE RIPRAP
- PROP GAS LINE — 2"G
- PROP OVERHEAD UTILITIES — OHE
- NEW UNMETERED SERVICE:
  - 3/4" SINGLE
  - 1" DUAL
- SERVICE RELAY:
  - 3/4"
  - 1" OR LARGER
- SERVICE RELOCATE:
  - 3/4"
  - 1" OR LARGER
- RELOCATE METER
- NEW SERVICE:
  - 3/4"
  - 1" OR LARGER
- APPARENT ROW
- PROPOSED ROW
- EXIST WATER VALVE
- EXIST UTILITY POLE

0 100' 200'

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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST)
SURFACE ADJUSTMENTS (SHEET 5 OF 5)

SAWS JOB NO: 22-5017

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	8

2904

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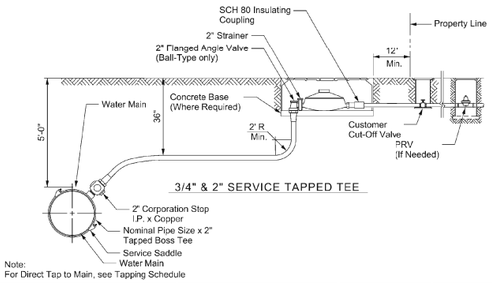
PIPE TAPPING SCHEDULE

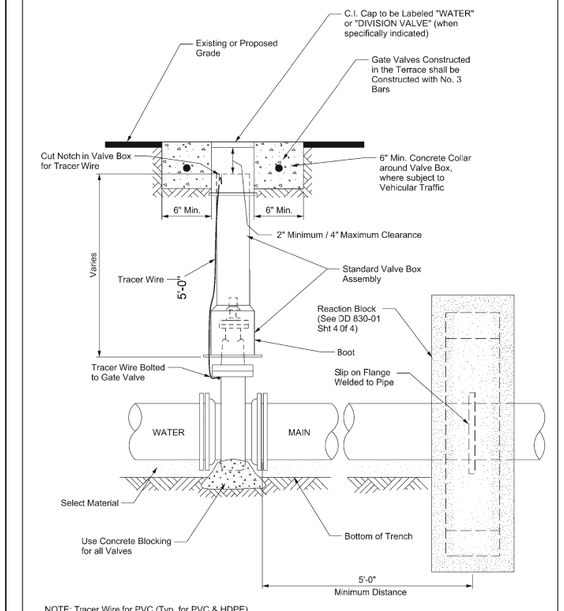
PIPE DIAMETER	SERVICE SIZE			
	3/4"	1"	1½"	2"
6" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
6" C.I., D.I.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
8" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
8" C.I., D.I.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
8" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
10" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
10" C.I., D.I.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
10" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
12" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
12" C.I., D.I.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
12" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
16" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
16" C.I., D.I.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
6" - 16" HDPE	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle



3/4" & 2" SERVICE TAPPED TEE

Note:
For Direct Tap to Main, see Tapping Schedule

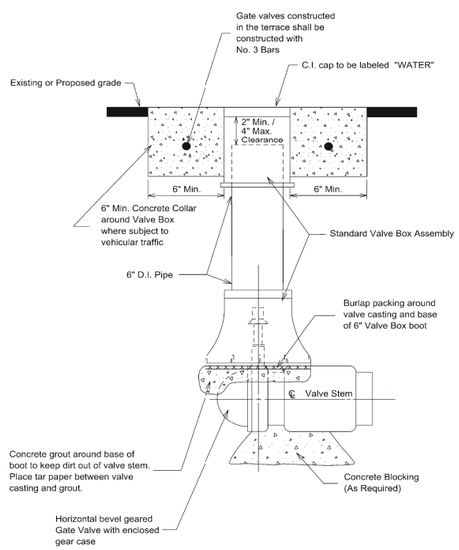
PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	COPPER & HDPE SERVICE INSTALLATION TAPPING SCHEDULE	MARCH 2008	AUG 2019
		DD-824-01	SHEET 3 OF 3



NOTE: Tracer Wire for PVC (Typ. for PVC & HDPE)
NOTE: AI Concrete to be 3,000 psi

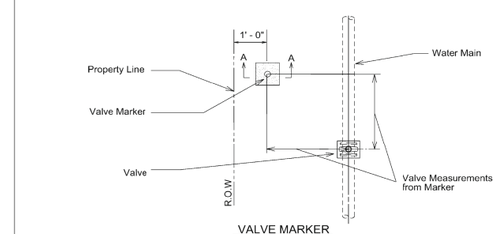
Note: For all work associated with Recycled Water Valves, refer to DD 110-10, Sht. 1 of 1

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	INSTALLATION OF NON-GEARED GATE VALVE WITH VALVE BOX AND EXTENSION	MARCH 2008	AUG 2019
		DD 828-01	SHEET 1 OF 1



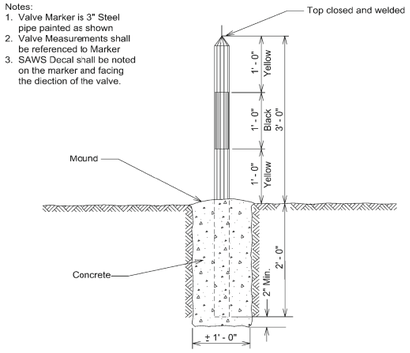
Note: All Concrete to be 3,000 psi.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	INSTALLATION OF GEARED HORIZONTAL GATE VALVE WITH VALVE BOX COMPLETE	MARCH 2008	AUG 2019
		DD-828-02	SHEET 1 OF 1



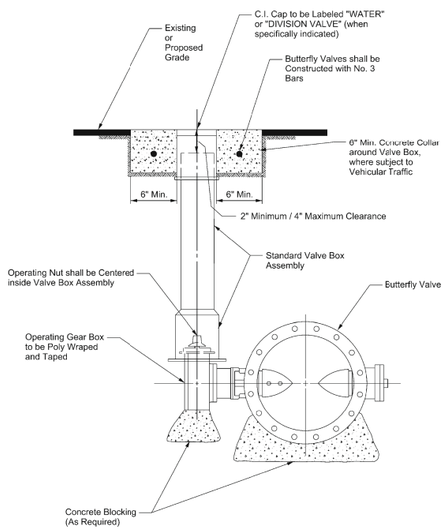
VALVE MARKER

Notes:
1. Valve Marker is 3" Steel pipe painted as shown
2. Valve Measurements shall be referenced to Marker
3. SAWS Decal shall be noted on the marker and facing the diection of the valve.



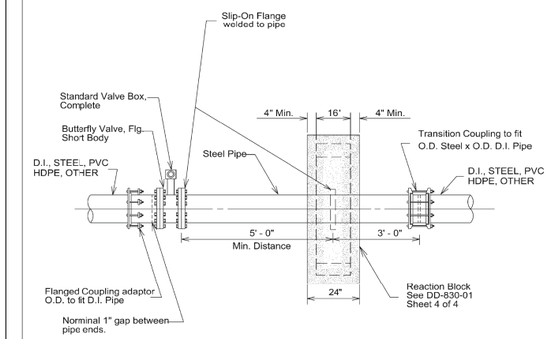
SECTION A-A

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	VALVE MARKER	MARCH 2008	AUG 2019
		DD-828-04	SHEET 1 OF 1

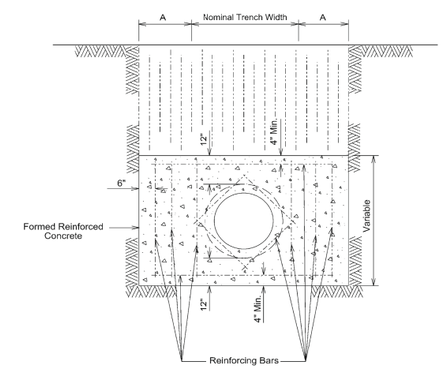


NOTE: All Concrete to be 3,000 psi

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	INSTALLATION OF BURIED BUTTERFLY VALVE WITH VALVE BOX COMPLETE	MARCH 2008	AUG 2019
		DD 830-01	SHEET 1 OF 4



PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL BUTTERFLY VALVE ARRANGEMENT FOR 20" AND LARGER D.I. MAIN	MARCH 2008	AUG 2019
		DD-830-01	SHEET 2 OF 4



END VIEW OF REACTION BLOCK

Main Size	A (Min.)	Reinforcing Bar Size	Bearing Surface Required (in Sq. Ft.)
6"	12"	#4	3
8"	12"	#4	5
12"	18"	#4	8
16"	18"	#4	12
20"	28"	#5	16
24"	28"	#5	23
30"	36"	#5	35
36"	36"	#5	50
42"	36"	#5	70

Note: Concrete shall be 3,000 psi

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	CONCRETE REACTION BLOCK FOR BUTTERFLY VALVES & BLOW-OFF ASSEMBLIES ON D.I. & C.S.C. MAINS	MARCH 2008	AUG 2019
		DD-830-01	SHEET 4 OF 4

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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST)
DETAILS (SHEET 1 OF 4)

SAWS JOB NO: 22-5017

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	9

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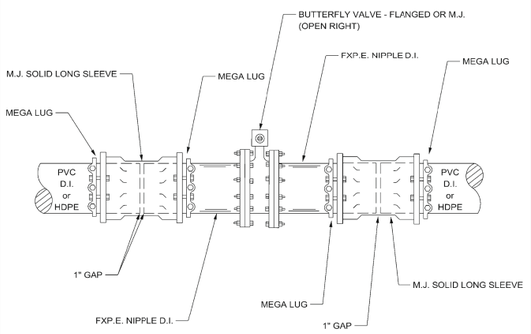
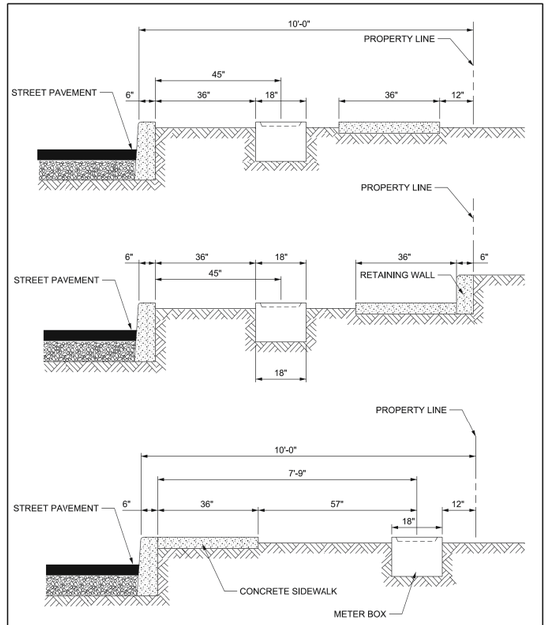
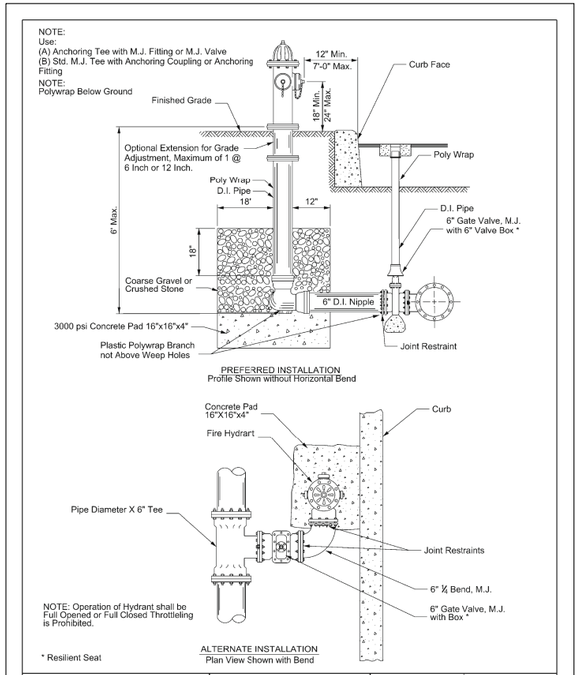


PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	BUTTERFLY VALVE ASSEMBLY ON PVC OR D.I. PIPE N.T.S.	APPROVED MARCH 2008	REVISED AUG 2019
		DD-830-02	SHEET 1 OF 1

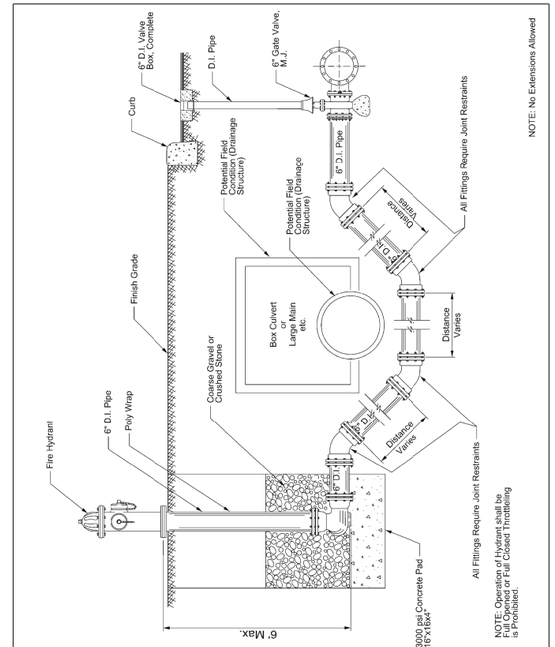


NOTE: METER BOX LOCATION IN COMMERCIAL AND INDUSTRIAL AREAS WILL BE AS DIRECTED BY THE INSPECTOR.

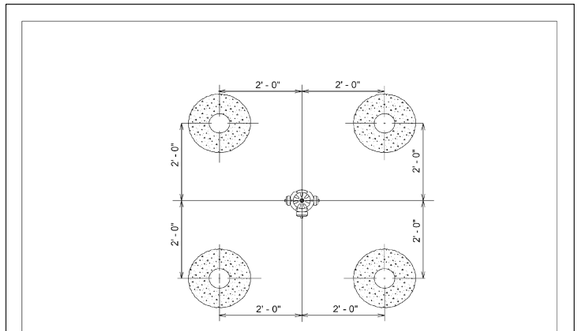
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL METER BOX LOCATION	APPROVED MARCH 2008	REVISED MAY 2013
		DD-833-01	SHEET 1 OF 1



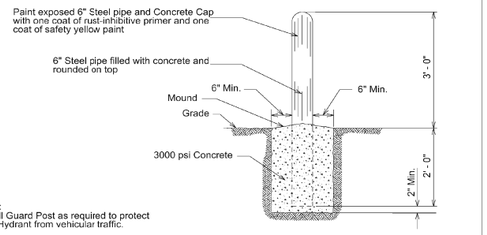
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	FIRE HYDRANT INSTALLATION (JOINT RESTRAINT)	APPROVED MAY 2013	REVISED AUG 2019
		DD-834-01	SHEET 1 OF 3



PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	FIRE HYDRANT WITH OFFSET	APPROVED MAY 2013	REVISED AUG 2019
		DD-834-01	SHEET 2 OF 3

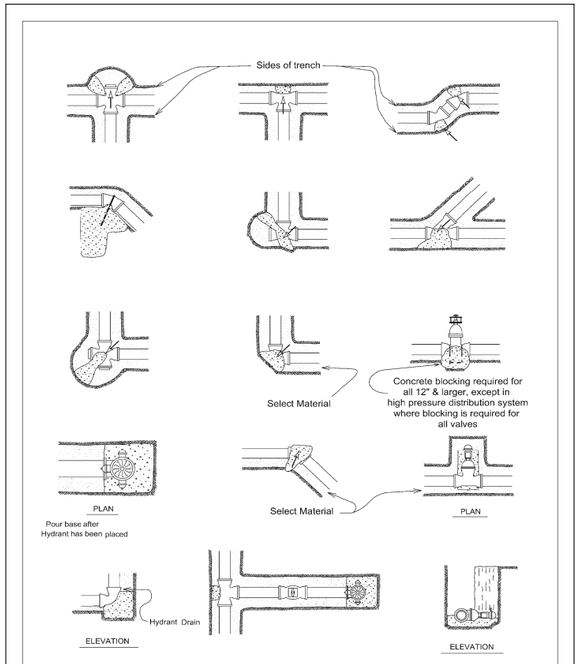


Note:
For Highway installation, see TxDOT Specifications.

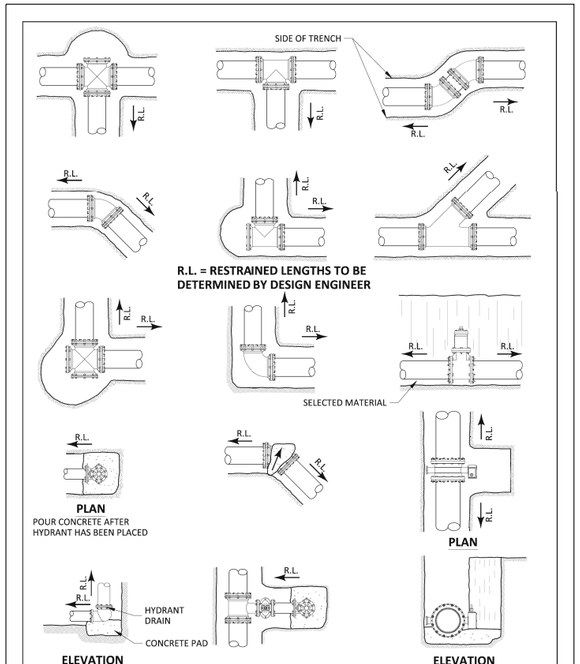


Note:
Install Guard Post as required to protect Fire Hydrant from vehicular traffic.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	FIRE HYDRANT GUARD POST	APPROVED MARCH 2008	REVISED AUG 2019
		DD-834-02	SHEET 1 OF 1



PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	THRUST BLOCKS FOR FITTINGS (WATER ONLY)	APPROVED March 2008	REVISED AUG 2019
		DD-839-01	SHEET 1 OF 2



PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	JOINT RESTRAINTS FOR FITTINGS (WATER ONLY)	APPROVED March 2008	REVISED December 2019
		DD-839-01	SHEET 2 OF 2

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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST)
DETAILS (SHEET 2 OF 4)

SAWS JOB NO: 22-5017

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	10

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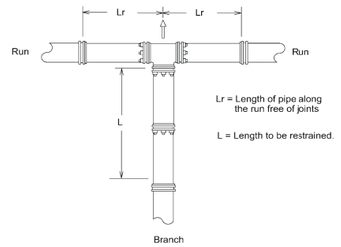


RESTRAINED LENGTH FOR TEES

PIPE SIZE (inch)	BRANCH SIZE (inch)	LENGTH OF RUN (ft.)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
6	4	0	42	31
6	4	5	7	1
6	4	10	1	1
6	6	0	59	44
6	6	5	35	20
6	6	10	11	1
8	4	0	42	31
8	4	5	1	1
8	6	0	59	44
8	6	5	28	13
8	6	10	1	1
8	8	0	77	58
8	8	5	53	34
8	8	10	30	11
8	8	15	6	1

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C pipe bedded in compacted granular material extending to the top of the pipe.The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditiors encountered during the installation.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR TEES	APPROVED March 2008	REVISED AUG 2019	SHEET 1 OF 2
		DD-839-04		

RESTRAINED LENGTH FOR TEES (Cont'd)

PIPE SIZE (inch)	BRANCH SIZE (inch)	LENGTH OF RUN (ft.)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
12	4	0	42	31
12	4	5	1	1
12	6	0	59	44
12	6	5	13	1
12	6	10	1	1
12	8	0	77	58
12	8	5	42	23
12	8	10	7	1
12	8	15	1	1
12	12	0	109	82
12	12	5	86	59
12	12	10	63	35
12	12	15	39	12

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C pipe bedded in compacted granular material extending to the top of the pipe.The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditiors encountered during the installatior.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR TEES	APPROVED MARCH 2008	REVISED AUG 2019	SHEET 2 OF 2
		DD-839-04		

L=LENGTH TO BE RESTRAINED

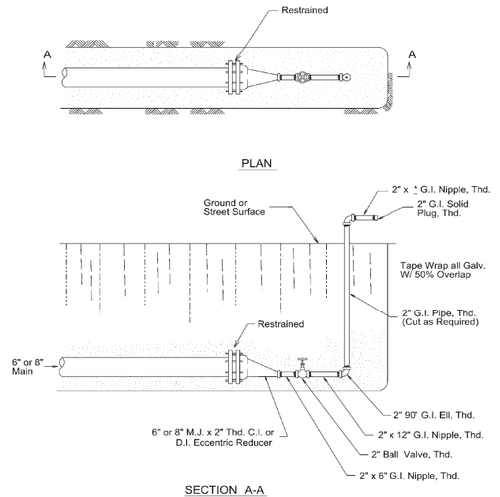
PIPE SIZE (inch)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
6	59	44
8	77	58
10	93	69
12	109	82

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

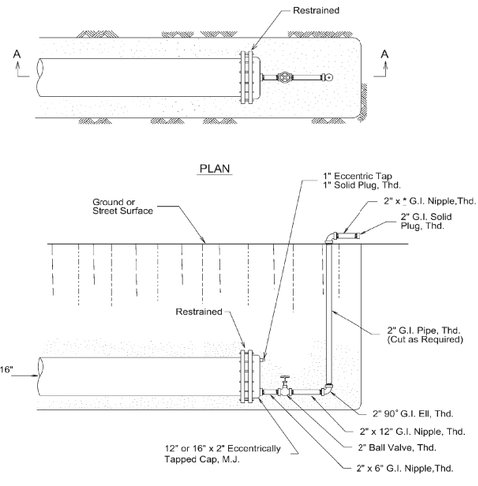
Note:
These calculations are provide for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR DEAD ENDS / INLINE VALVES	APPROVED MARCH 2008	REVISED AUG 2019	SHEET 1 OF 1
		DD-839-05		



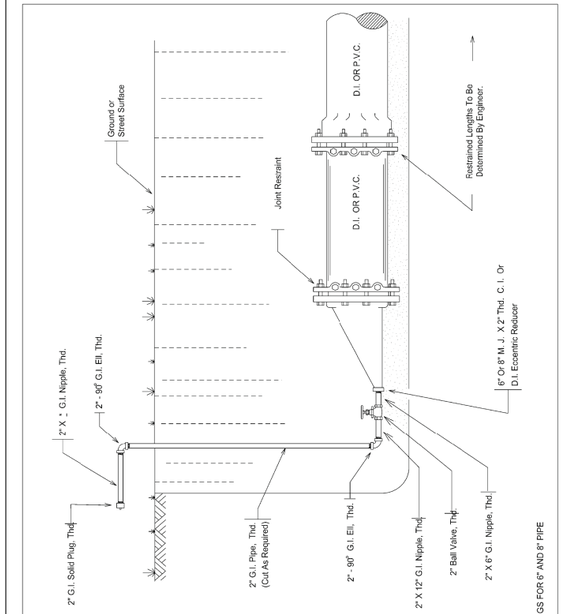
* Cut as required to extend beyond excavation

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	2" TEMPORARY BLOW-OFF ASSEMBLY ON 6" & 8" MAINS	APPROVED MARCH 2008	REVISED AUG 2019	SHEET 1 OF 4
		DD-844-01		



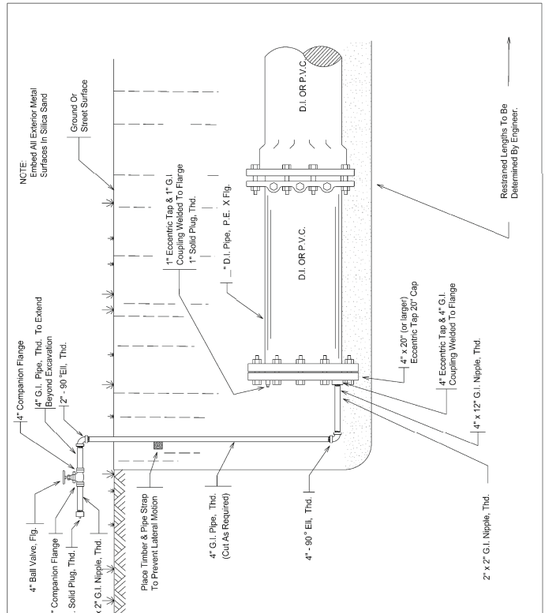
* Cut as required to extend beyond excavation.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	2" TEMPORARY BLOW-OFF ASSEMBLY ON 12" & 16" MAINS	APPROVED March 2008	REVISED AUG 2019	SHEET 2 OF 4
		DD-844-01		



* Cut as required to extend beyond excavation.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	2" (TEMPORARY) BLOW-OFF ASSEMBLY ON 6" & 8" MAINS (JOINT RESTRAINT)	APPROVED March 2008	REVISED AUG 2019	SHEET 3 OF 4
		DD-844-01		



PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	4" (TEMPORARY) BLOW-OFF ASSEMBLY 20" AND LARGER D. I./P.V.C. MAIN (JOINT RESTRAINT)	APPROVED March 2008	REVISED AUG 2019	SHEET 3 OF 4
		DD-844-04		

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
40 NE LOOP 410
SUITE 545
SAN ANTONIO, TEXAS 78216
P 210.491.2391 F 512.338.1784
TBPE Firm Number 6535
www.kfriese.com

STATE OF TEXAS
CHRISTOPHER BOENTGES
109721
LICENSED
PROFESSIONAL ENGINEER
2/17/2023

No.	Revision	Drawn	Approved	Date

REVISIONS

Texas Department of Transportation

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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST)
DETAILS (SHEET 3 OF 4)

SAWS JOB NO: 22-5017

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	11

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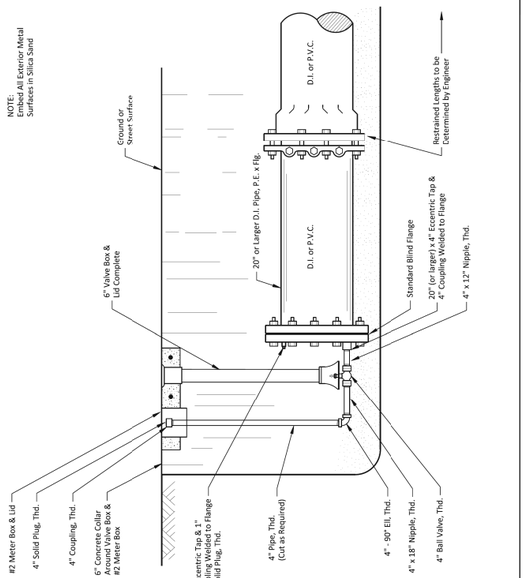
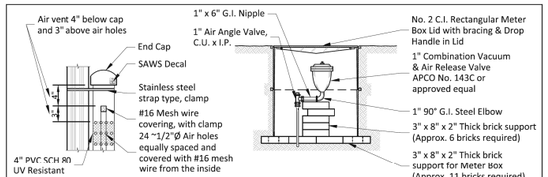


PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	4" (PERMANENT) BLOW-OFF ASSEMBLY ON 20" AND LARGER D.I./P.V.C. MAIN (JOINT RESTRAINT)	APPROVED	REVISED
		MARCH 2008	AUGUST 2019
		DD-844-05	SHEET 3 OF 4



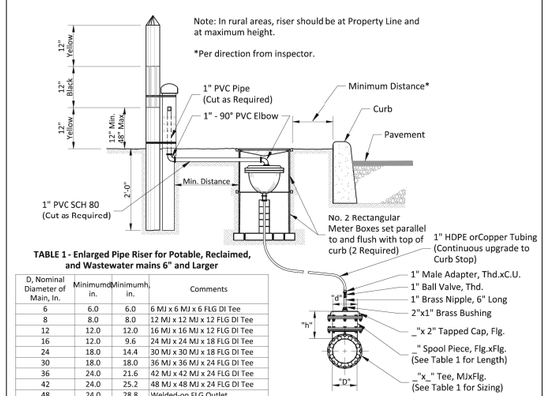
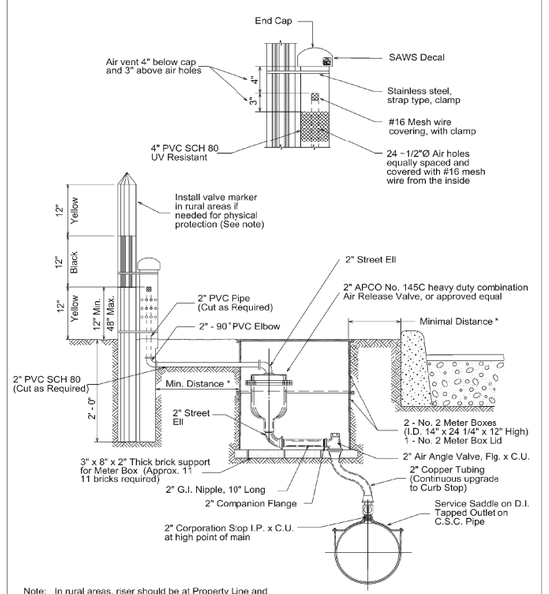


TABLE 1 - Enlarged Pipe Riser for Potable, Reclaimed, and Wastewater mains 6" and Larger

D, Nominal Diameter of Main, In.	Minimum "d" in.	Minimum "h" in.	Comments
6	6.0	6.0	6 MJ x 6 MJ x 6 FLG DI Tee
8	8.0	8.0	12 MJ x 12 MJ x 12 FLG DI Tee
12	12.0	12.0	16 MJ x 16 MJ x 12 FLG DI Tee
16	12.0	9.6	24 MJ x 24 MJ x 18 FLG DI Tee
24	18.0	14.4	30 MJ x 30 MJ x 18 FLG DI Tee
30	18.0	18.0	36 MJ x 36 MJ x 24 FLG DI Tee
36	24.0	21.6	42 MJ x 42 MJ x 24 FLG DI Tee
42	24.0	25.2	48 MJ x 48 MJ x 24 FLG DI Tee
48	24.0	28.8	Welded-on FLG Outlet
54	30.0	32.4	Welded-on FLG Outlet
60	36.0	36.0	Welded-on FLG Outlet
66	24.0	23.1	Welded-on FLG Outlet
72	24.0	25.2	Welded-on FLG Outlet

Air Collection Traps in Air Valve Piping Notes:
1. Dimensions derived from AWWA Manual 2nd Edition: Chapter 6 M51 Air Valves: Air-Release, Air/Vacuum & Combination

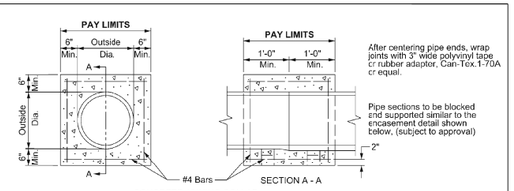
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	INSTALLATION OF 1" AIR RELEASE VALVE	APPROVED	REVISED
		March 2008	August 2019
		DD-846-01	SHEET 1 OF 1



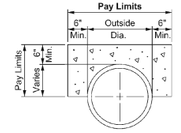
Note: In rural areas, riser should be at Property Line and at maximum height.

* Per direction from inspector.

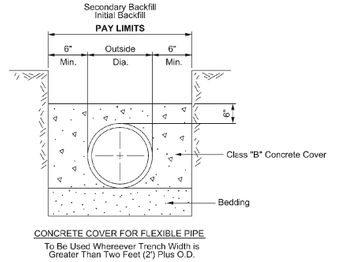
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	INSTALLATION OF 2" AIR RELEASE VALVE	APPROVED	REVISED
		March 2008	AUG 2019
		DD-846-02	SHEET 1 OF 1



CONCRETE JOINING COLLAR



TYPICAL CONCRETE SADDLE



CONCRETE COVER FOR FLEXIBLE PIPE

To Be Used Whereever Trench Width is Greater Than Two Feet (2') Plus O.D.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL CONCRETE DETAILS	APPROVED	REVISED
		MARCH 2008	AUG 2019
		DD 858-02	SHEET 1 OF 1

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
40 NE LOOP 410
SUITE 545
SAN ANTONIO, TEXAS 78216
P 210.491.2391 F 512.338.1784
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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST) DETAILS (SHEET 4 OF 4)

SAWS JOB NO: 22-5017

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	12

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SAN ANTONIO
WATER SYSTEM

STATE OF TEXAS
CHRISTOPHER BOENTGES
109721
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PROFESSIONAL ENGINEER
2/16/2023

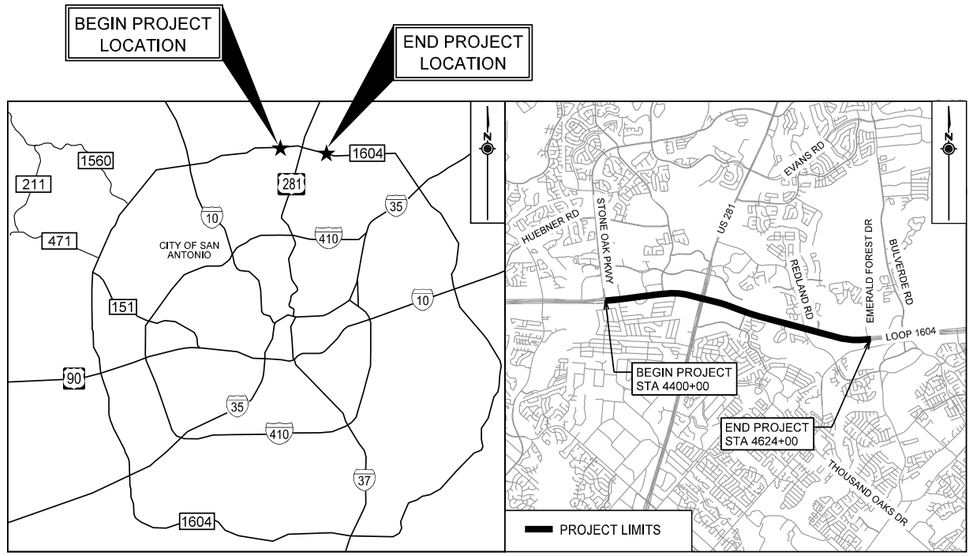
SAWS SEWER JOB NO: 22-5514

LOOP 1604 SEGMENT 4
STONE OAK PARKWAY TO EMERALD FOREST

CSJ : 2452-02-130

SUBMITTAL PREPARED BY:

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
40 NE LOOP 410
SUITE 545
SAN ANTONIO, TEXAS 78216
P - 210.491.2391 F - 512.338.1784
TBPE Firm #6535 www.kfriese.com



LOCATION MAP
NOT TO SCALE

SHEET LIST

SHT NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3	TCEQ NOTES (SHEET 1 OF 2)
4	TCEQ NOTES (SHEET 2 OF 2)
5	QUANTITY SUMMARY TABLE
6	SURFACE ADJUSTMENTS (SHEET 1 OF 5)
7	SURFACE ADJUSTMENTS (SHEET 2 OF 5)
8	SURFACE ADJUSTMENTS (SHEET 3 OF 5)
9	SURFACE ADJUSTMENTS (SHEET 4 OF 5)
10	SURFACE ADJUSTMENTS (SHEET 5 OF 5)
11	DETAILS

FEBRUARY 2023

Texas Department of Transportation

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GENERAL SECTION

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:
   A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290.
   B. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE."
   C. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION."
   D. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR CONSTRUCTION."
   E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).

2. THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE, HTTP://APPS.SAWS.ORG/BUSINESS_CENTER/SPECS/CONSTSPECS/. UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.

3. THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500 (DURING REGULAR SAWS WORKING HOURS), AND PROVIDE NOTIFICATION PROCEDURES THE CONTRACTOR WILL USE TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS TWO (2) WEEKS PRIOR TO EXCAVATION. OUTSIDE OF REGULAR SAWS WORKING HOURS THE SAWS ROC SHOULD BE CONTACTED AT 210-704-7297.

4. IF NECESSARY, CONTRACTOR WILL COORDINATE USE OF SAWS PREMISES AT NO ADDITIONAL COST TO SAWS. SUCH EFFORTS INCLUDE, BUT ARE NOT LIMITED TO, OBTAINING SECURITY IDENTIFICATION BADGES REQUIRED FOR ACCESS TO SAWS FACILITIES.

5. LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.

6. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. AS-BUILTS FOR SAWS INFRASTRUCTURE CAN BE OBTAINED AT WEBSITE BELOW. CONTRACTOR SHALL COORDINATE PHYSICAL LOCATES FOR SAWS INFRASTRUCTURE THROUGH THE SAWS INSPECTOR. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS INFRASTRUCTURE. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:

   SAN ANTONIO WATER SYSTEM:
   REQUEST AS-BUILTS: HTTPS://WWW.SAWS.ORG/SERVICE/LOCATES-SERVICE/
   COSA DRAINAGE 210-206-8433
   COSA TRAFFIC SIGNAL OPERATIONS 210-207-7720
   TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION AS A RESULT OF DAMAGES DONE BY THE PROJECT'S CONSTRUCTION.

8. CONTRACTOR SHALL NOT MAKE USE OF DUMPSTERS OR WASTE BINS THAT ARE INTENDED TO SERVE RESIDENTS AND/OR BUSINESSES.

9. ALL WORK IN TEXAS HIGHWAY DEPARTMENT AND BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.

10. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.

11. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.

12. ANY WORK COMPLETED WITHOUT PRIOR WRITTEN AUTHORIZATION WHICH IS NOT INCLUDED IN THESE PLANS AND SPECIFICATIONS WILL NOT BE COMPENSATED BY THE SAN ANTONIO WATER SYSTEM.

13. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.
    WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.
    ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.

14. PRE CON SITE VIDEO: BEFORE THE START OF ANY CONSTRUCTION. THE SITE MUST BE VIDEO RECORDED BY THE CONTRACTOR WITH ONE COPY SUBMITTED TO SAWS INSPECTIONS. A PRE-SITE VIDEO WILL PROVIDE ACCURATE DOCUMENTATION OF THE EXISTING CONDITIONS (NSPI).

15. POWER POLE BRACING: CONTRACTORS SHOULD BE ADVISED THAT THERE ARE EXISTING OVERHEAD UTILITY POLES ALONG THE PROJECT CORRIDOR. CONTRACTORS SHOULD FURTHER BE ADVISED THAT IF THE DISTANCE FROM THE OUTSIDE FACE OF A UTILITY TRENCH TO THE FACE OF A UTILITY POLE IS LESS THAN 5 FEET, SAID UTILITY POLE IS SUBJECT TO BRACING, BASED ON A DETERMINATION MADE BY UTILITY POLE OWNER. COSTS INCURRED BY CONTRACTOR FOR BRACING OF THESE UTILITY POLES IS SUBSIDIARY TO THAT RESPECTIVE UTILITY COMPANY'S WORK. IT IS ADVISABLE FOR THE CONTRACTOR TO REVIEW THE CONSTRUCTION DOCUMENTS, AND VISIT THE CONSTRUCTION SITE TO DETERMINE POTENTIAL IMPACTS.

16. CONSTRUCTION SEQUENCING: IT IS THE CONTRACTOR SOLE RESPONSIBILITY TO SCHEDULE SEQUENCING FOR REMOVAL AND INSTALLATION OF EXISTING AND PROPOSED SAWS UTILITIES IN CONJUNCTION WITH GENERAL PROJECT CONSTRUCTION. SEQUENCE OF CONSTRUCTION ACTIVITIES SHALL BE CONSIDERED IN ORDER TO MINIMIZE THE EXTENT AND DURATION OF DISTURBANCES.

17. CONTRACTOR SHALL COMPLY WITH APPLICABLE REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE OVERSEEN BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). OSHA INFORMATION AND RELATED MATERIALS MAY BE OBTAINED AT HTTPS://WWW.OSHA.GOV/ OR AT THE OSHA SAN ANTONIO OFFICE LOCATED AT FOUNTAINHEAD TOWER, SUITE 605 8200 W. INTERSTATE 10 SAN ANTONIO, TX 78230 WHICH IS ALSO REACHABLE BY PHONE AT (210) 472-5040.

18. TRENCH EXCAVATION SAFETY PROTECTION: CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREAS IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES, THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

SEWER SECTION:

19. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:
   A. IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT 210-704-SAWS (210-704-7297). PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW.
   B. ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.
   C. CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.
   D. CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.
   E. CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.
   F. MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISING THE AFFECTED SEWER MAINS (AT SAWS DIRECTION) WITHIN 24 HOURS.

   SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO SAWS SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY SAWS, INCLUDING ANY FINES FROM EPA.

   NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND SAWS.

20. THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING OF SEWAGE AROUND EACH SEGMENT OF PIPE TO BE REPLACED, IN ACCORDANCE WITH SAWS SPECIFICATION ITEM NO. 865, "BYPASS PUMPING SMALL DIAMETER SANITARY SEWER MAINS" AND ITEM NO. 864, "BYPASS PUMPING LARGE DIAMETER SANITARY SEWER MAINS" AS APPLICABLE. PAYMENT FOR SUCH WORK WILL BE MADE UNDER THE APPROPIATE BID ITEM ASSOCIATED WITH SANITARY SEWER BYPASS PUMPING IN ACCORDANCE WITH SAWS SPECIFICATION 865 AND 864.

21. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500 AND/OR SAWS PRODUCTION GROUPS AT LEAST ONE WEEK OR MORE IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.

SEWER SECTION CONT.

22. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS (NSPI).

23. MANHOLE REMOVAL: WHERE EXISTING MANHOLES ARE TO BE REPLACED BY THE CONTRACTOR, THE EXISTING MANHOLES SHALL BE REMOVED (NSPI)

24. SMART MANHOLE COVERS: THE CONTRACTOR SHALL NOTIFY SAWS EOC AT 210-704-SAWS (210-233-7297) AND EITHER AMERICA ESPINOZA AT 210-233-2934 OR JOSE A. MARTINEZ AT 210-233-3071 A MINIMUM OF 72 HOURS, NOT COUNTING WEEKENDS OR SAWS HOLIDAYS, BEFORE WORKING ON THE PIPE OR MANHOLE, IN ORDER TO HAVE SAWS REMOVE THE SMART COVER. ANY DAMAGE DONE TO THE SMART COVER WILL BE CHARGED TO THE CONTRACTOR THROUGH A CHANGE ORDER.

25. FLOW METERS IN MANHOLES: THE CONTRACTOR SHALL NOTIFY BOBBY JOHNSON AT 210-233-3493 OR ABEL BORUNDA AT 210-233-3704 A MINIMUM OF 72 HOURS, NOT COUNTING WEEKENDS OR SAWS HOLIDAYS, BEFORE WORKING ON THE PIPE OR MANHOLE, IN ORDER TO HAVE SAWS REMOVE THE FLOW METER IN THE MANHOLE. ANY DAMAGE DONE TO THE FLOW METER WILL BE CHARGED TO THE CONTRACTOR THROUGH A CHANGE ORDER.

NOTES:

1. CONTRACTOR TO VERIFY EXISTING TIE-IN ELEVATIONS BEFORE STARTING CONSTRUCTION.
2. CONTRACTOR SHALL VERIFY AND CONTACT SAWS IF THERE ARE ANY LATERALS CONNECTING TO THE MAIN NOT SHOWN ON THE PLANS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING OPERATION OF ALL EXISTING UTILITIES AFFECTED BY PROPOSED CONSTRUCTION.
4. IF SANITARY SEWER LATERALS ARE WITHIN 9 FEET OF PROPOSED WATER SERVICE LINES, THE SANITARY SEWER LATERALS SHALL BE ENCASED WITH FLOWABLE FILL. THE ENCASEMENT SHALL BE 6-INCHES BELOW THE LATERAL, 6-INCHES ABOVE THE LATERAL, AND 12-INCHES ON EITHER SIDE OF THE LATERAL.
5. THE CONTRACTOR SHALL MAINTAIN AT LEAST TWO FEET OF VERTICAL SEPARATION DISTANCE BETWEEN ALL PROPOSED SEWER LINES (MAINS AND LATERALS) AND EXISTING AND PROPOSED GAS MAINS.
6. THE CONTRACTOR SHALL RE-ESTABLISH ANY PROPERTY MARKER, BENCHMARK, ETC. DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL LOCATION AND ELEVATION. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VERTICAL AND HORIZONTAL CONTROL SHOWN ON THE PLANS THROUGHOUT THE PROJECT. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PUBLIC SURVEYOR IN THE STATE OF TEXAS AT NO ADDITIONAL COST TO SAWS.
7. CONTRACTOR SHALL MAINTAIN ACCESS TO PUBLIC AND PRIVATE FACILITIES DURING CONSTRUCTION.
8. CONTRACTOR MAY ENCOUNTER CONCRETE ENCASEMENT IN THE IMMEDIATE VICINITY OF EXISTING MANHOLES. ANY CONCRETE REMOVAL REQUIRED FOR THE PROPER INSTALLATION OF PROPOSED SEWER MAIN AND TIE-INS SHALL BE AT NO ADDITIONAL COST TO THE OWNER. (NSPI)
9. ALL SAWS WORK SHALL REMAIN WITHIN THE LIMITS OF THE PROPOSED TXDOT ROADWAY WORK.
10. ALL POWER POLES AND OVERHEAD ELECTRIC WILL BE MOVED BY OTHERS PRIOR TO ANY WATER AND SEWER WORK.

CPS ENERGY NOTES:

1. CALL THE TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
2. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES.
3. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN PROJECT AREA.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS ENERGY OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.

AT&T NOTES:

1. THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE.
2. CONTRACTOR IS TO CONTACT THE TELEPHONE COMPANY LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR IS TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
40 NE Loop 410
Suite 545
San Antonio, Texas 78216
P 210.491.2391 F 512.338.1784
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STATE OF TEXAS
CHRISTOPHER BOENTGES
109721
LICENSED
PROFESSIONAL ENGINEER
2/16/2023

No.	Revision	Drawn	Approved	Date

REVISIONS

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LOOP 1604 SEGMENT 4
(STONE OAK PARKWAY TO EMERALD FOREST)
GENERAL NOTES

SAWS JOB NO: 22-5514

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	2

0876ShtGNnotes.dgn modified by cboentges on 2/16/2023 - 7:58:40 AM

TCEQ ORGANIZED SEWAGE COLLECTION SYSTEM GENERAL CONSTRUCTION NOTES

1. THIS ORGANIZED SEWAGE COLLECTION SYSTEM (SCS) MUST BE CONSTRUCTED IN ACCORDANCE WITH 30 TEXAS ADMINISTRATIVE CODE (TAC) 213.5(C), THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) EDWARDS AQUIFER RULES AND ANY LOCAL GOVERNMENT STANDARD SPECIFICATIONS.

2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROPOSED REGULATED PROJECT MUST BE PROVIDED WITH COPIES OF THE SCS PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS MUST BE REQUIRED TO KEEP ON-SITE COPIES OF THE PLAN AND THE APPROVAL LETTER.

3. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE PRESIDING TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
   - THE NAME OF THE APPROVED PROJECT;
   - THE ACTIVITY START DATE; AND
   - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.

4. ANY MODIFICATION TO THE ACTIVITIES DESCRIBED IN THE REFERENCED SCS APPLICATION FOLLOWING THE DATE OF APPROVAL MAY REQUIRE THE SUBMITTAL OF AN SCS APPLICATION TO MODIFY THIS APPROVAL, INCLUDING THE PAYMENT OF APPROPRIATE FEES AND ALL INFORMATION NECESSARY FOR ITS REVIEW AND APPROVAL.

5. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

6. IF ANY SENSITIVE FEATURES ARE DISCOVERED DURING THE WASTEWATER LINE TRENCHING ACTIVITIES, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPLICANT MUST IMMEDIATELY NOTIFY THE APPROPRIATE REGIONAL OFFICE OF THE TCEQ OF THE FEATURE DISCOVERED. A GEOLOGIST'S ASSESSMENT OF THE LOCATION AND EXTENT OF THE FEATURE DISCOVERED MUST BE REPORTED TO THAT REGIONAL OFFICE IN WRITING AND THE APPLICANT MUST SUBMIT A PLAN FOR ENSURING THE STRUCTURAL INTEGRITY OF THE SEWER LINE OR FOR MODIFYING THE PROPOSED COLLECTION SYSTEM ALIGNMENT AROUND THE FEATURE. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY WHILE MAINTAINING THE STRUCTURAL INTEGRITY OF THE LINE.

7. SEWER LINES LOCATED WITHIN OR CROSSING THE 5-YEAR FLOODPLAIN OF A DRAINAGE WAY WILL BE PROTECTED FROM INUNDATION AND STREAM VELOCITIES WHICH COULD CAUSE EROSION AND SCOURING OF BACKFILL. THE TRENCH MUST BE CAPPED WITH CONCRETE TO PREVENT SCOURING OF BACKFILL, OR THE SEWER LINES MUST BE ENCASED IN CONCRETE. ALL CONCRETE SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES.

8. BLASTING PROCEDURES FOR PROTECTION OF EXISTING SEWER LINES AND OTHER UTILITIES WILL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION CRITERIA. SAND IS NOT ALLOWED AS BEDDING OR BACKFILL IN TRENCHES THAT HAVE BEEN BLASTED. IF ANY EXISTING SEWER LINES ARE DAMAGED, THE LINES MUST BE REPAIRED AND RETESTED.

9. ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT. IF MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE.

   THE DIAMETER OF THE MANHOLES MUST BE A MINIMUM OF FOUR FEET AND THE MANHOLE FOR ENTRY MUST HAVE A MINIMUM CLEAR OPENING DIAMETER OF 30 INCHES. THESE DIMENSIONS AND OTHER DETAILS SHOWING COMPLIANCE WITH THE COMMISSION'S RULES CONCERNING MANHOLES AND SEWER LINE/MANHOLE INVERTS DESCRIBED IN 30 TAC 217.55 ARE INCLUDED ON PLAN SHEETS 11 OF 11.

   IT IS SUGGESTED THAT ENTRANCE INTO MANHOLES IN EXCESS OF FOUR FEET DEEP BE ACCOMPLISHED BY MEANS OF A PORTABLE LADDER. THE INCLUSION OF STEPS IN A MANHOLE IS PROHIBITED.

10. WHERE WATER LINES AND NEW SEWER LINE ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC 217.53(D) (PIPE DESIGN) AND 30 TAC 290.44(E) (WATER DISTRIBUTION).

11. WHERE SEWERS LINES DEVIATE FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE ALL CURVATURE OF SEWER PIPE MUST BE ACHIEVED BY THE FOLLOWING PROCEDURE WHICH IS RECOMMENDED BY THE PIPE MANUFACTURER: NOT APPLICABLE.

    IF PIPE FLEXURE IS PROPOSED, THE FOLLOWING METHOD OF PREVENTING DEFLECTION OF THE JOINT MUST BE USED: NOT APPLICABLE.

    SPECIFIC CARE MUST BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC 217.54.

12. NEW SEWAGE COLLECTION SYSTEM LINES MUST BE CONSTRUCTED WITH STUB OUTS FOR THE CONNECTION OF ANTICIPATED EXTENSIONS. THE LOCATION OF SUCH STUB OUTS MUST BE MARKED ON THE GROUND SUCH THAT THEIR LOCATION CAN BE EASILY DETERMINED AT THE TIME OF CONNECTION OF THE EXTENSIONS. SUCH STUB OUTS MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND MATERIAL WITH BOTH THE SEWER LINE AND THE EXTENSION. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW STUB-OUTS MUST BE CONSTRUCTED SUFFICIENTLY TO EXTEND BEYOND THE END OF THE STREET PAVEMENT. ALL STUB-OUTS MUST BE SEALED WITH A MANUFACTURED CAP TO PREVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT ARE TO BE CONNECTED TO AN EXISTING SEWER LINE NOT FURNISHED WITH STUB OUTS MUST BE CONNECTED USING A MANUFACTURED SADDLE AND IN ACCORDANCE WITH ACCEPTED PLUMBING TECHNIQUES.

    IF NO STUB-OUT IS PRESENT AN ALTERNATE METHOD OF JOINING LATERALS IS SHOWN IN THE DETAIL ON PLAN SHEET N/A OF N/A.

    THE PRIVATE SERVICE LATERAL STUB-OUTS MUST BE INSTALLED AS SHOWN ON THE PLAN AND PROFILE SHEETS ON PLAN SHEET N/A OF N/A AND MARKED AFTER BACKFILLING AS SHOWN IN THE DETAIL ON PLAN SHEET N/A OF N/A.

13. TRENCHING, BEDDING AND BACKFILL MUST CONFORM WITH 30 TAC 217.54. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE MUST COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES IA, IB, II OR III. RIGID PIPE BEDDING MUST COMPLY WITH THE REQUIREMENTS OF ASTM C 12 (ANSI A 106.2) CLASSES A, B OR C.

14. SEWER LINES MUST BE TESTED FROM MANHOLE TO MANHOLE. WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEANOUT, IT MUST BE TESTED FROM EXISTING MANHOLE TO NEW MANHOLE. IF A STUB OR CLEANOUT IS USED AT THE END OF THE PROPSOED SEWER LINE, NO PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEANOUT UNLESS IT CAN BE CERTIFIED AS CONFORMING WITH THE PROVISIONS OF 30 TAC 213.5(C)(3)(E).

15. ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH 30 TAC 217.57. THE ENGINEER MUST RETAIN COPIES OF ALL TEST RESULTS WHICH MUST BE MADE AVAILABLE TO THE EXECUTIVE DIRECTOR UPON REQUEST. THE ENGINEER MUST CERTIFY IN WRITING THAT ALL WASTEWATER LINES HAVE PASSED ALL REQUIRED TESTING TO THE APPROPRIATE REGIONAL OFFICE WITHIN 30 DAYS OF TEST COMPLETION AND PRIOR TO USE OF THE NEW COLLECTION SYSTEM. TESTING METHOD WILL BE:

    (a) FOR A COLLECTION SYSTEM PIPE THAT WILL TRANSPORT WASTEWATER BY GRAVITY FLOW, THE DESIGN MUST SPECIFY AN INFILTRATION AND EXFILTRATION TEST OR A LOW-PRESSURE AIR TEST. A TEST MUST CONFORM TO THE FOLLOWING REQUIREMENTS:

    (1) LOW PRESSURE AIR TEST.

    (A) A LOW PRESSURE AIRTEST MUST FOLLOW THE PROCEDURES DESCRIBED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) C-828, ASTM C-924, OR ASTM F-1417 OR OTHER PROCEDURE APPROVED BY THE EXECUTIVE DIRECTOR, EXCEPT AS TO TESTING TIMES AS REQUIRED IN TABLE C.3 IN SUBPARAGRAPH (C) OF THIS PARAGRAPH OR EQUATION C.3 IN SUBPARAGRAPH (B)(II) OF THIS PARAGRAPH.

    (B) FOR SECTIONS OF COLLECTION SYSTEM PIPE LESS THAN 6 INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING ROCEDURE MUST APPLY, UNLESS A PIPE IS TO BE TESTED AS REQUIRED BY PARAGRAPH (2) OF THIS SUBSECTION.

    (I) A PIPE MUST BE PRESSURIZED TO 3.5 POUNDS PER SQUARE INCH (PSI) GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE THE PIPE.

    (II) ONCE THE PRESSURE IS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSI GAUGE TO 2.5 PSI GAUGE IS COMPUTED FROM THE FOLLOWING EQUATION:

    EQUATION C.3

    $$T = \frac{0.085 \times D \times K}{Q}$$

    WHERE:

    T = TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS
    K = 0.000419 x D x L, BUT NOT LESS THAN 1.0
    D = AVERAGE INSIDE PIPE DIAMETER IN INCHES
    L = LENGTH OF LINE OF SAME SIZE BEING TESTED,IN FEET
    Q = RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE

    (C) SINCE A K VALUE OF LESS THAN 1.0 MAY NOT BE USED, THE MINIMUM TESTING TIME FOR EACH PIPE DIAMETER IS SHOWN IN THE FOLLOWING TABLE C.3:

PIPE DIAMETER (INCHES)	MINIMUM TIME (SECONDS)	MAXIMUM LENGTH FOR MINIMUM TIME (FEET)	TIME FOR LONGER LENGTH (SECONDS/FOOT)
6	340	398	0.855
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
21	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

    (D) AN OWNER MAY STOP A TEST IF NO PRESSURE LOSS HAS OCCURRED DURING THE FIRST 25% OF THE CALCULATED TESTING TIME.

    (E) IF ANY PRESSURE LOSS OR LEAKAGE HAS OCCURRED DURING THE FIRST 25% OF A TESTING PERIOD, THEN THE TEST MUST CONTINUE FOR THE ENTIRE TEST DURATION AS OUTLINED ABOVE OR UNTIL FAILURE.

    (F) WASTEWATER COLLECTION SYSTEM PIPES WITH A 27 INCH OR LARGER AVERAGE INSIDE DIAMETER MAY BE AIR TESTED AT EACH JOINT INSTEAD OF FOLLOWING THE PROCEDURE OUTLINED IN THIS SECTION.

    (G) A TESTING PROCEDURE FOR PIPE WITH AN INSIDE DIAMETER GREATER THAN 33 INCHES MUST BE APPROVED BY THE EXECUTIVE DIRECTOR.

    (2) INFILTRATION/EXFILTRATION TEST.

    (A) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF 2.0 FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE.

    (B) AN OWNER SHALL USE AN INFILTRATION TEST IN LIEU OF AN EXFILTRATION TEST WHEN PIPES ARE INSTALLED BELOW THE GROUNDWATER LEVEL.

    (C) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE, OR AT LEAST TWO FEET ABOVE EXISTING GROUNDWATER LEVEL, WHICHEVER IS GREATER.

    (D) FOR CONSTRUCTION WITHIN A 25-YEAR FLOOD PLAIN, THE INFILTRATION OR EXFILTRATION MUST NOT EXCEED 10 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT THE SAME MINIMUM TEST HEAD AS IN SUBPARAGRAPH (C) OF THIS PARAGRAPH.

    (E) IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, AN OWNER SHALL UNDERTAKE REMEDIAL ACTION IN ORDER TO REDUCE THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED. AN OWNER SHALL RETEST A PIPE FOLLOWING A REMEDIATION ACTION.

    (b) IF A GRAVITY COLLECTION PIPE IS COMPOSED OF FLEXIBLE PIPE, DEFLECTION TESTING IS ALSO REQUIRED. THE FOLLOWING PROCEDURES MUST BE FOLLOWED:

    (1) FOR A COLLECTION PIPE WITH INSIDE DIAMETER LESS THAN 27 INCHES, DEFLECTION MEASUREMENT REQUIRES A RIGID MANDREL.

    (A) MANDREL SIZING.

    (I) A RIGID MANDREL MUST HAVE AN OUTSIDE DIAMETER (OD) NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE ID OF A PIPE, AS SPECIFIED IN THE APPROPRIATE STANDARD BY THE ASTMS, AMERICAN WATER WORKS ASSOCIATION, UNI-BELL, OR AMERICAN NATIONAL STANDARDS INSTITUTE, OR ANY RELATED APPENDIX.

    (II) IF A MANDREL SIZING DIAMETER IS NOT SPECIFIED IN THE APPROPRIATE STANDARD, THE MANDREL MUST HAVE AN OD EQUAL TO 95% OF THE ID OF A PIPE. IN THIS CASE, THE ID OF THE PIPE, FOR THE PURPOSE OF DETERMINING THE OD OF THE MANDREL, MUST EQUAL BE THE AVERAGE OUTSIDE DIAMETER MINUS TWO MINIMUM WALL THICKNESSES FOR OD CONTROLLED PIPE AND THE AVERAGE INSIDE DIAMETER FOR ID CONTROLLED PIPE.

    (III) ALL DIMENSIONS MUST MEET THE APPROPRIATE STANDARD.

    (B) MANDREL DESIGN.

    (I) A RIGID MANDREL MUST BE CONSTRUCTED OF A METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200 PSI WITHOUT BEING DEFORMED.

    (II) A MANDREL MUST HAVE NINE OR MORE ODD NUMBER OF RUNNERS OR LEGS.

    (III) A BARREL SECTION LENGTH MUST EQUAL AT LEAST 75% OF THE INSIDE DIAMETER OF A PIPE.

    (IV) EACH SIZE MANDREL MUST USE A SEPARATE PROVING RING.

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
40 NE Loop 410
Suite 545
San Antonio, Texas 78216
P 210.491.2391 F 512.338.1784
TBPE Firm Number 6535
www.kfriese.com

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No.	Revision	Drawn	Approved	Date

REVISIONS

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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST)
TCEQ NOTES
(SHEET 1 OF 2)

SAWS JOB NO: 22-5514

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	3

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TCEQ ORGANIZED SEWAGE COLLECTION SYSTEM
GENERAL CONSTRUCTION NOTES (CON.'T)

(A) METHOD OPTIONS.

(I) AN ADJUSTABLE OR FLEXIBLE MANDREL IS PROPHIBITED.

(II) A TEST MAY NOT USE TELEVISION INSPECTION AS A SUBSTITUTE FOR A DEFLECTION TEST.

(III) IF REQUESTED, THE EXECUTIVE DIRECTOR MAY APROVE THE USE OF A DEFLECTOMETER OF A MANDREL WITH REMOVABLE LEGS OR RUNNERS ON A CASE-BY-CASE BASIS.

(2) FOR A GRAVITY COLLECTION SYSTEM PIPE WITH AN INSIDE DIAMETER 27 INCHES AND GREATER, OTHER TEST METHODS MAY BE USED TO DETERMINE VERTICAL DEFLECTION.

(3) A DEFLECTION TEST METHOD MUST BE ACCURATE TO WITHIN PLUS OR MINUS 0.2% DEFLECTION.

(4) AN OWNER SHALL NOT CONDUCT A DEFLECTION TEST UNTIL AT LEAST 30 DAYS AFTER THE FINAL BACKFILL.

(5) GRAVITY COLLECTION SYSTEM PIPE DEFLECTION MUST NOT EXCEED FIVE PERCENT (5%).

(6) IF A PIPE SECTION FAILS A DEFLECTION TEST, AN OWNER SHALL CORRECT THE PROBLEM AND CONDUCT A SECOND TEST AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.

16. ALL MANHOLES MUST BE TESTED TO MEET OR EXCEED THE REQUIREMENTS OF 30 TAC 217.58.

(a) ALL MANHOLES MUST PASS A LEAKAGE TEST.

(b) AN OWNER SHALL TEST EACH MANHOLE (AFTER ASSEMBLY AND BACKFILLING) FOR LEAKAGE, SEPARATE AND INDEPENDENT OF THE COLLECTION SYSTEM PIPES, BY HYDROSTATIC EXFILTRATION TESTING, VACUUM TESTING, OR OTHER METHOD APPROVED BY THE EXECUTIVE DIRECTOR.

(1) HYDROSTATIC TESTING

(A) THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING OR ANY ALTERNATIVE TEST METHODS IS 0.025 GALLONS PER FOOT DIAMETER PER FOOT OF MANHOLE DEPTH PER HOUR.

(B) TO PERFORM A HYDROSTATIC EXFILTRATION TEST, AN OWNER SHALL SEAL ALL WASTEWATER PIPES COMING INTO A MANHOLE WITH AN INTERNAL PIPE PLUG, FILL THE MANHOLE WITH WATER, AND MAINTAIN THE TEST FOR AT LEAST ONE HOUR.

(C) A TEST FOR CONCRETE MANHOLES MAY USE A 24-HOUR WETTING PERIOD BEFORE TESTING TO ALLOW SATURATION OF THE CONCRETE.

(2) VACUUM TESTING

(A) TO PERFORM A VACUUM TEST, AN OWNER SHALL PLUG ALL LIFT HOLES AND EXTERIOR JOINTS WITH A NON-SHRINK GROUT AND PLUG ALL PIPES ENTERING A MANHOLE.

(B) NO GROUT MUST BE PLACED IN HORIZONTAL JOINTS BEFORE TESTING.

(C) STUB-OUTS, MANHOLE BOOTS, AND PIPE PLUGS MUST BE SECURED TO PREVENT MOVEMENT WHILE A VACUUM IS DRAWN.

(D) AN OWNER SHALL USE A MINIMUM 60 INCH/LB TORQUE WRENCH TO TIGHTEN THE EXTERNAL CLAMPS THAT SECURE A TEST COVER TO THE TOP OF A MANHOLE.

(E) A TEST HEAD MUST BE PLACED AT THE INSIDE OF THE TOP OF A CONE SECTION, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

(F) THERE MUST BE A VACUUM OF 10 INCHES OF MERCURY INSIDE A MANHOLE TO PERFORM A VALID TEST.

(G) A TEST DOES NOT BEGIN UNTIL AFTER THE VACUUM PUMP IS OFF.

(H) A MANHOLE PASSES THE TEST IF AFTER 2.0 MINUTES AND WITH ALL VALVES CLOSED, THE VACUUM IS AT LEAST 9.0 INCHES OF MERCURY.

17. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC 213.5(C)(3)I). AFTER INSTALLATION OF, AND PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SREVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.

AUSTIN REGIONAL OFFICE 12100 PARK 35 CIRCLE, BUILDING A AUSTIN, TX 78753-1808 PHONE (512) 339-2929 FAX (512) 339-3795	SAN ANTONIO REGIONAL OFFICE 14250 JUDSON ROAD SAN ANTONIO, TX 78233-4480 PHONE (210) 290-3096 FAX (210) 545-4329

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
40 NE Loop 410
Suite 545
San Antonio, Texas 78216
P 210.491.2391 F 512.338.1784
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LOOP 1604 SEGMENT 4
(STONE OAK PARKWAY TO EMERALD FOREST)
TCEQ NOTES
(SHEET 2 OF 2)

SAWS JOB NO: 22-5514

FED.RD. DIV.NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	4

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ITEM NO.	DESCRIPTION	UNIT	SHEET 6 OF 11	SHEET 7 OF 11	SHEET 8 OF 11	SHEET 9 OF 11	SHEET 10 OF 11	TOTAL QUANTITIES
500 6001	MOBILIZATION	LS						1
7194 6001	SAN SWR TRENCH EXCAVATION PROTECTION	LF		1269				1269
7194 6016	SAN SWR STRUCTURES (RECONSTRUCT EX MH)*	EA		1				1
7194 6018	EXISTING MANHOLE ADJUSTMENTS*	EA	2	5	1			8
7194 6029	CONCRETE SADDLE	CY		117.5				117.5

* BUY AMERICA

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PUBLIC PROJECT ENGINEERING
40 NE Loop 410
Suite 545
San Antonio, Texas 78216
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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST)
QUANTITY SUMMARY TABLE

SAWS JOB NO: 22-5514

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	5

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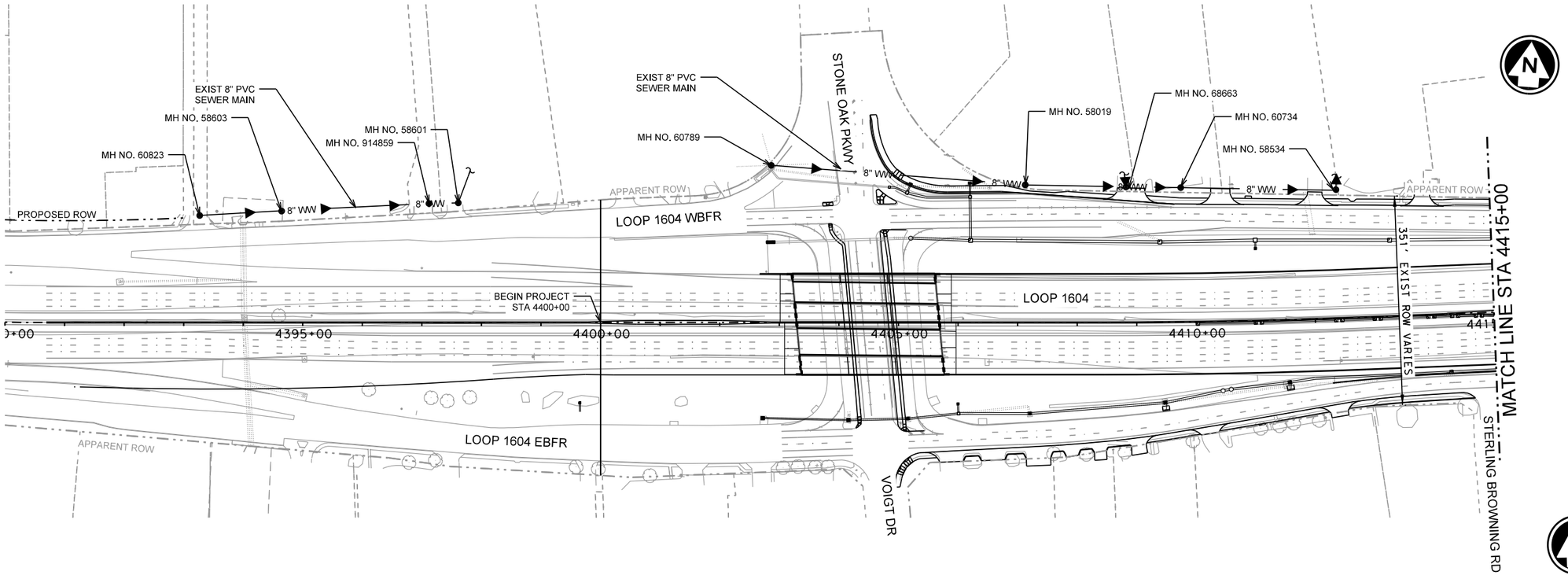
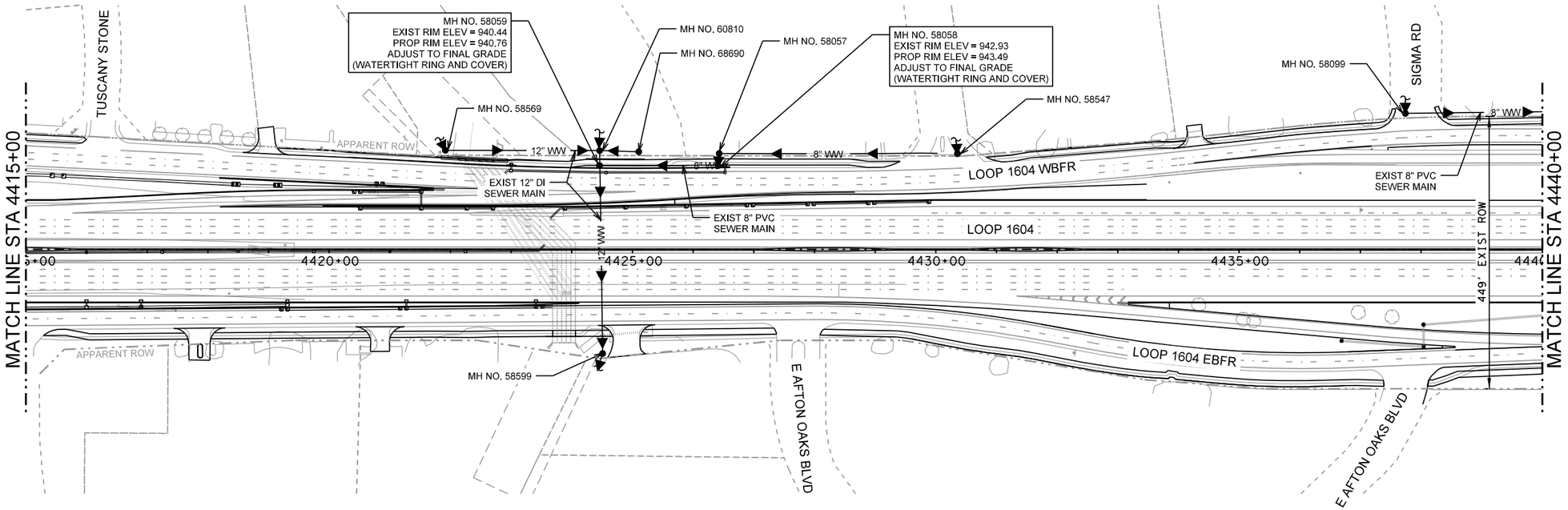
ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
7194 6018	EXISTING MANHOLE ADJUSTMENTS*	EA	2



LEGEND

- PROP SANITARY SEWER LINE
- PROP MANHOLE
- PROP SEWER LATERAL & CLEANOUT
- OHE — EXIST OVERHEAD UTILITIES
- X" WL — EXIST WATERLINE
- X" WW — EXIST WASTEWATER SEWER LINE
- X" G — EXIST GAS LINE
- PROPERTY LINE
- APPARENT ROW
- PROP ROW
- UTILITY POLE

0 100' 200'



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PUBLIC PROJECT ENGINEERING
40 NE Loop 410
Suite 545
San Antonio, Texas 78216
P 210.491.2391 F 512.338.1784
TBPE Firm Number 6535
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STATE OF TEXAS
CHRISTOPHER BOENTGES
109721
LICENSED
PROFESSIONAL ENGINEER
2/16/2023

No.	Revision	Drawn	Approved	Date

REVISIONS

Texas Department of Transportation

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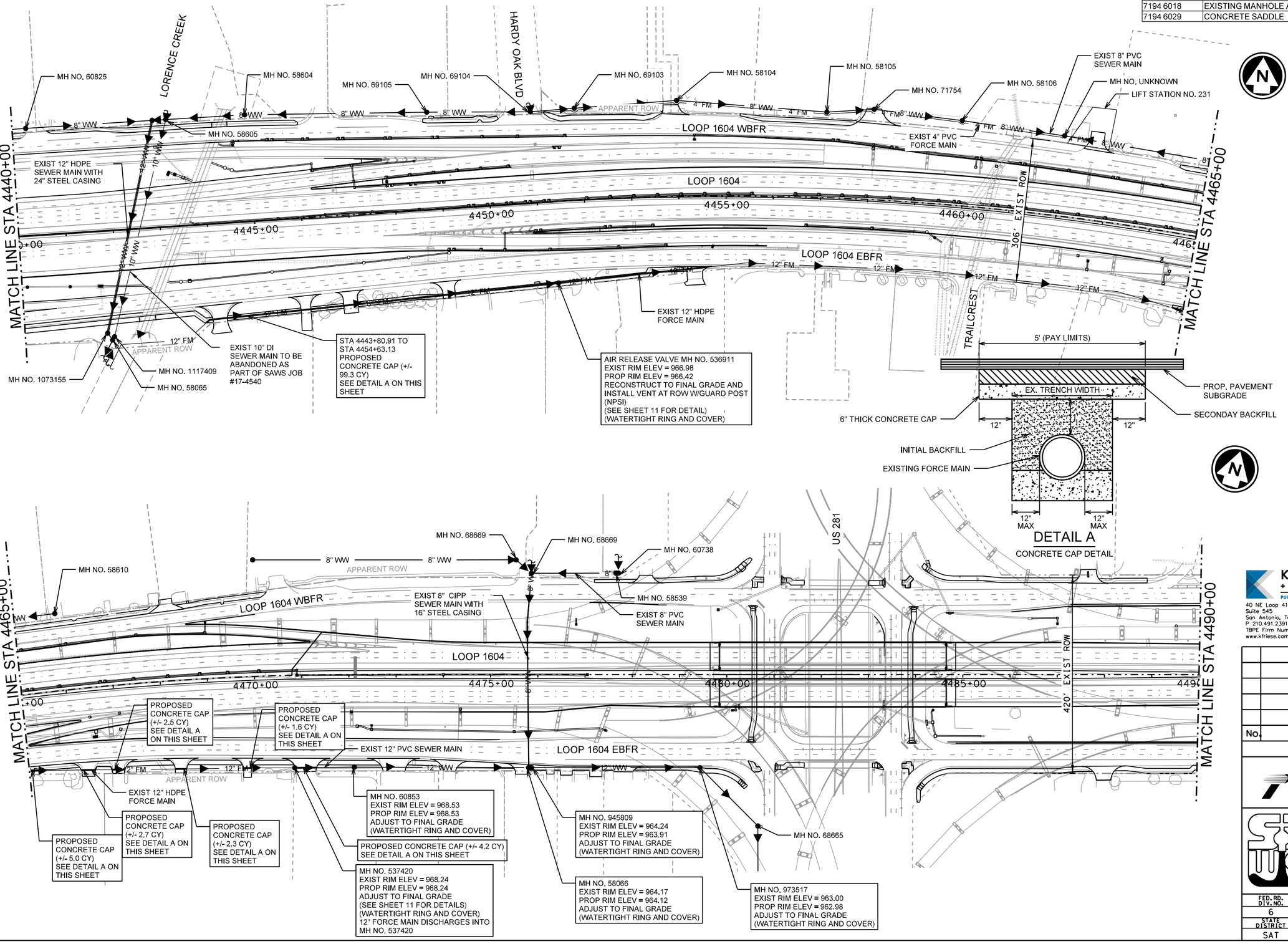
LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST) SURFACE ADJUSTMENTS (SHEET 1 OF 5)

SAWS JOB NO: 22-5514

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	6

0876ShtUTsadj01.dgn modified by cboentges on 2/16/2023 - 7:58:56 AM

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
7194 6001	SAN SWR TRENCH EXCAVATION PROTECTION	LF	1269
7194 6016	SAN SWR STRUCTURES (RECONSTRUCT EX MH)*	EA	1
7194 6018	EXISTING MANHOLE ADJUSTMENTS*	EA	5
7194 6029	CONCRETE SADDLE	CY	117.5



DETAIL A
CONCRETE CAP DETAIL

LEGEND

- PROP SANITARY SEWER LINE
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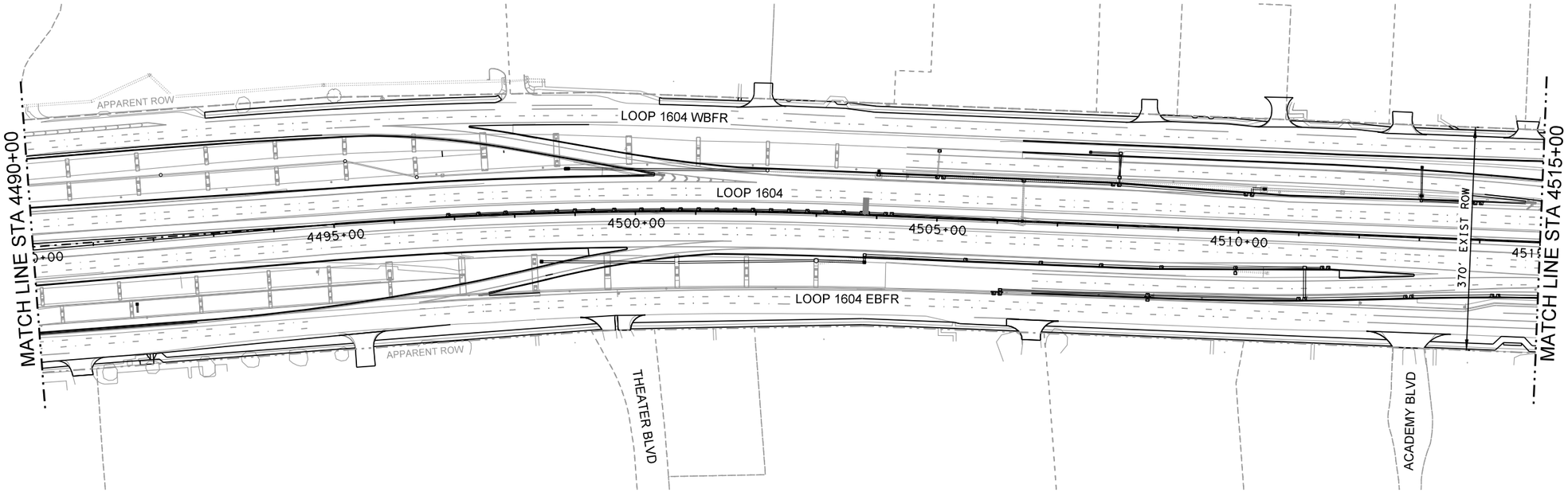
LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST) SURFACE ADJUSTMENTS (SHEET 2 OF 5)

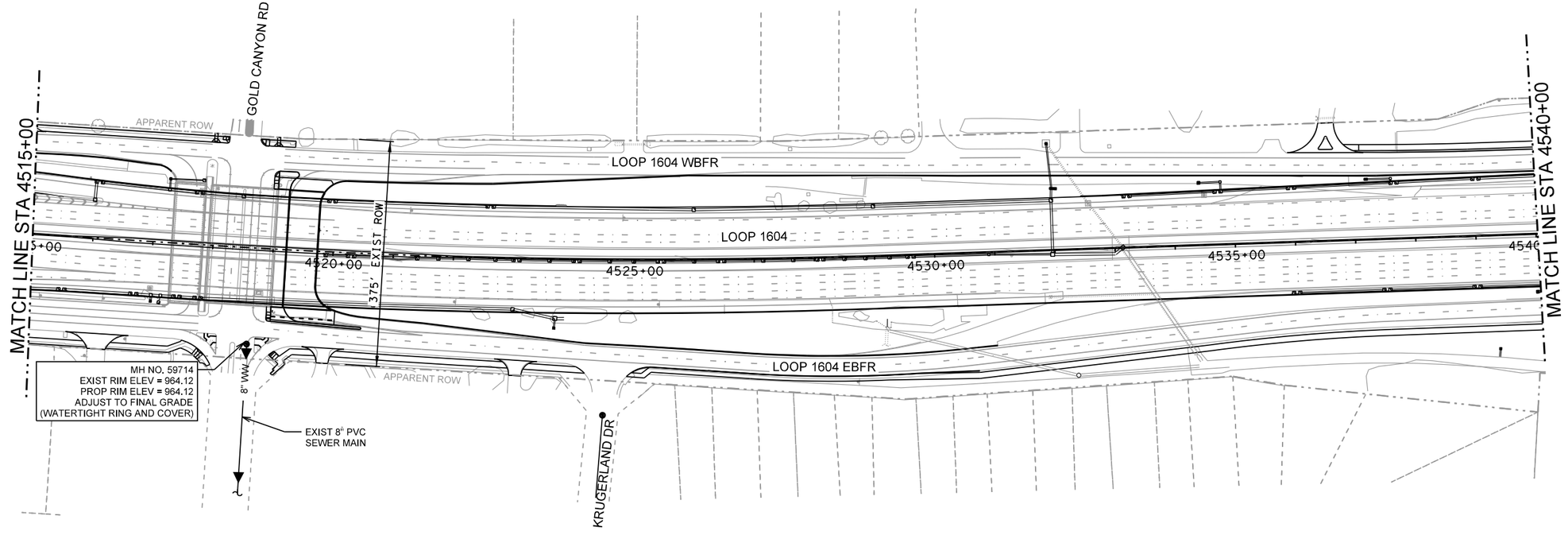
SAWS JOB NO: 22-5514

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	7

0876SHtUTsadj02.dgn modified by cboentges on 2/16/2023 - 7:58:59 AM

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
7194 6018	EXISTING MANHOLE ADJUSTMENTS*	EA	1





LEGEND

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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST) SURFACE ADJUSTMENTS (SHEET 3 OF 5)

SAWS JOB NO: 22-5514

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	8

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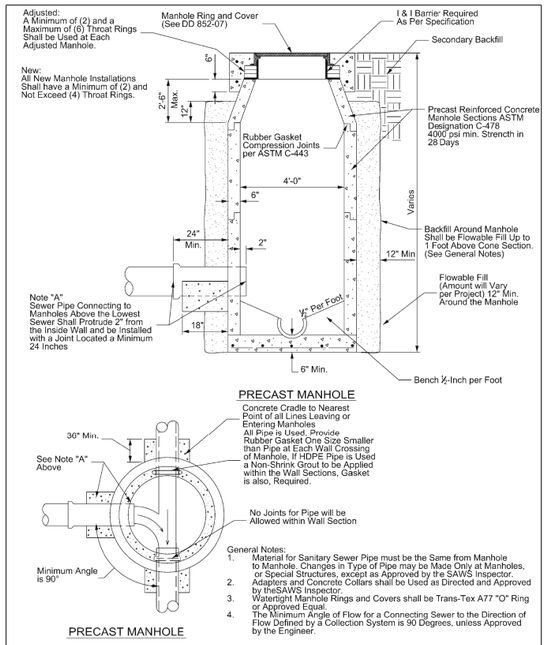
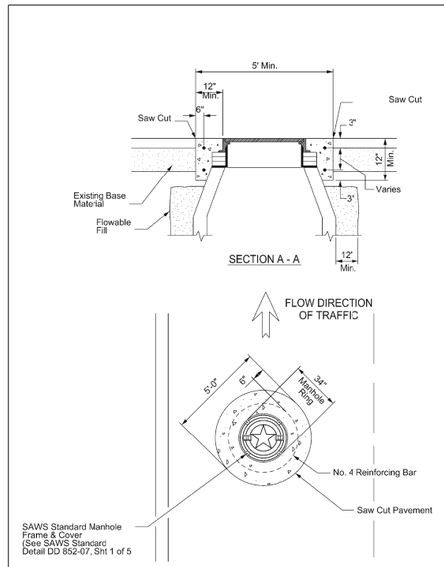
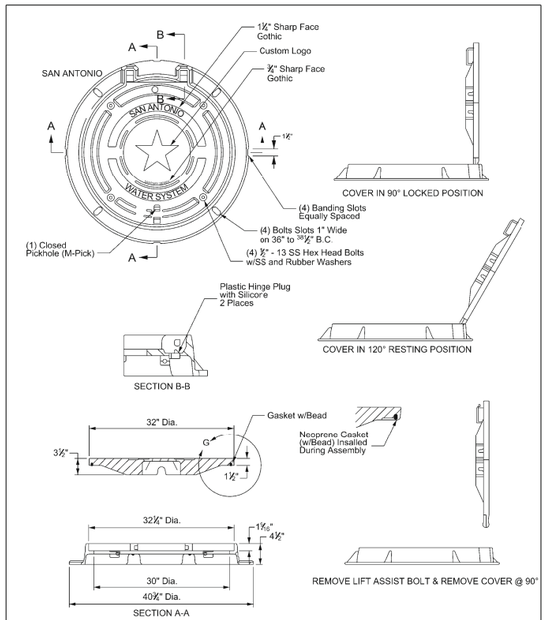


PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	STANDARD PRECAST MANHOLE	APPROVED MAY 2013	REVISED AUG 2019
		DD-852-01	SHEET 1 OF 2



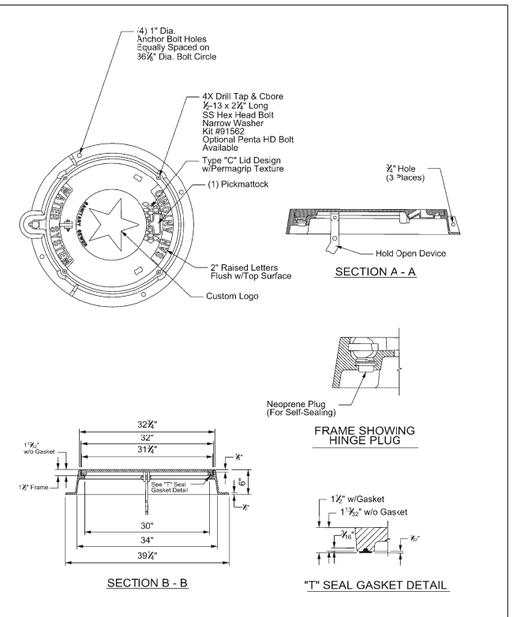
NOTE:
1. The Concrete Shall be 4000 PSI Minimum and Reinforced with No. 4 Bars as Shown.
2. The Concrete Shall Extend to Edge of Saw Cut Pavement.
3. Manhole Ring Encasement is Required on all Manholes.
4. Manhole Lid shall Open in the Direction of Traffic or Downstream in Parkway

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING ENCASEMENT DETAIL	APPROVED AUGUST 2009	REVISED AUG 2019
		DD 852-03	SHEET 1 OF 2



ERGO XL Assembly

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING AND COVER DETAIL	APPROVED MARCH 2008	REVISED AUG 2019
		DD 852-07	SHEET 3 OF 5



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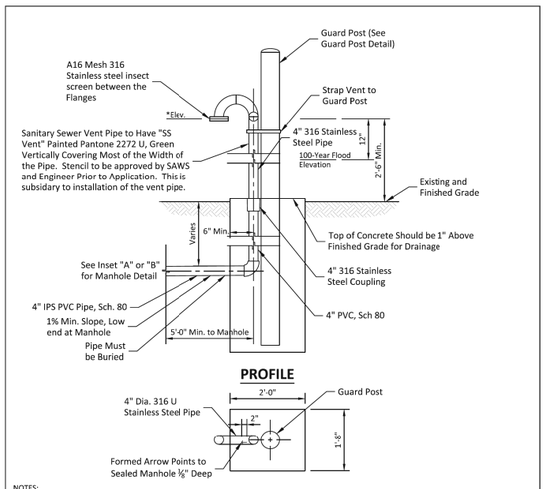
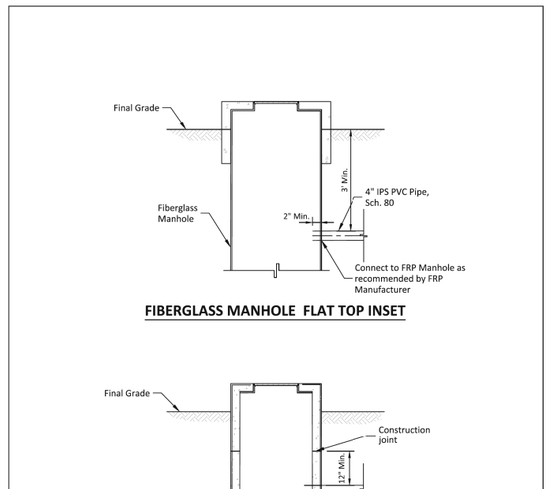
PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING AND COVER DETAIL	APPROVED MARCH 2008	REVISED AUG 2019
		DD 852-07	SHEET 5 OF 5

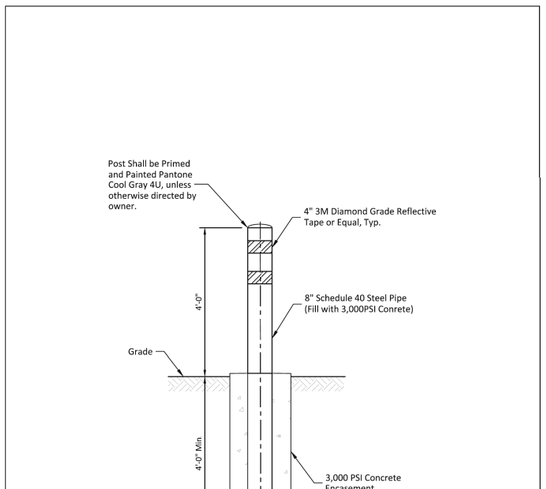


NOTES:
1. Refer to table for minimum elevations of ven: opening.
2. All piping between manhole and guard post must be underground.
3. Backfill around 4" IPS PVC Pipe, Sch. 80, shall be flowable fill with a minimum thickness of 12-inches at no separate pay item.
4. If manhole is located within the ultimate 100 year floodplain elevation, a threaded or flanged ball check valve with floating type ball, shall be installed at down turned opening of vent. A 16 mesh 304 stainless steel insect screen shall be placed in the opening.
5. Manhole vents shall be subsidiary to the cost of the manhole.
6. Refer to plans for location of Vents.

PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	SEWER MAIN VENTED MANHOLE DETAIL	APPROVED DATE	REVISED REV_DATE
		DD-XXX-XX	SHEET 1 OF 3



PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	SEWER MAIN VENTED MANHOLE DETAIL	APPROVED DATE	REVISED REV_DATE
		DD-XXX-XX	SHEET 2 OF 3



PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	GUARD POST DETAIL	APPROVED DATE	REVISED REV_DATE
		DD-XXX-XX	SHEET 3 OF 3

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LOOP 1604 SEGMENT 4 (STONE OAK PARKWAY TO EMERALD FOREST) DETAILS

SAWS JOB NO: 22-5514

FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
6	TEXAS				LP1604
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
SAT	BEXAR	2452	02	130	11

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