CONSTRUCT 36" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT

K111 Ex. 36" W.W. Built 1950

WHITE ROCK LAKE

GARLAND RD. (S.H. 78)

BLK 3/5255
LOT 15
8366 GARLAND RD
SHOPOFF STEPHEN R & TRUST JOAN S
VOL.2004028 PG.4865

0+00.0 ~ Prop. W.W. Line A
N. 6985391.4411
E. 2515661.2114
Construct: 1- 6.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Ex. 36" W.W. Out (SW)
Connect Prop. 36" W.W. In (NW)
Plug Ex. 36" W.W. In (NE)

1+97.4 ~ Prop. W. Line 1
0+00.0 ~ Prop. W. Line 2
N. 6985469.5081
E. 2515578.8172
Install:
1- 12" x 12" Tee
1- 12" x 8" Reducer
1- 8" Gate Valve
1- 12" Gate Valve
1- 12" 11.25° Horiz. Bend

P.I. 1+09.23 ~ Prop. W.W. Line A
Δ = 61°45'5" Lt
N. 6985448.5523
E. 2515568.0680

P.I. 3+30.12 ~ Prop. W.W. Line A
Δ = 34°03'49" Rt
N. 6985547.5117
E. 2515370.5872
Construct: 1- 6.0' Dia. Pressure-Type W.W. Manhole w/ W.W.M.H. Vent & 2'x2' Concrete Pad per DWU Std Dwg #304 & 306
Connect Prop. 36" W.W. Out (SE)
Connect Prop. 36" W.W. In (NW)

HISTORICAL STRUCTURES. CONTRACTOR SHALL NOT REMOVE OR DAMAGE. INSURE TO PROTECT STRUCTURES DURING ALL CONSTRUCTION ACTIVITIES. NO SEPARATE PAY ITEM.

36" WW

Line A

Line 1

Line 2

12" WATER

8" WATER

12" WATER

Ex. 36" R.C. Wastewater
Ex. 12" R.C. Wastewater
Ex. 42" RCP
Ex. 15" RCP
Ex. 8" C.I. Water
Ex. 12" PVC Water
Ex. 8" Water FB.1 Pg.10
Ex. 8" C.I. Water
Ex. Asphalt Pavement
Ex. Concrete Pavement
Brick Retain. Wall
Brick Pavers
Bustline
C.L. Fence
5/8" CIRF
Sign
Sprinkler Valve
Yard Light
W.C. Gate
2X2 Column
Brick Retain. Wall
16" Cypress
32" Oak
16" Rosebud
6" Ash
24" Hkbry
20" Cedar
18" Mbry
28" Mbry
6" Hkbry
28" Elm
12" Ash
6" Elm
40" Elm
18" Walnut
Ex. 10" Wastewater
Ex. 8" PVC Water
Ex. 42" RCP
Storm MH
Cons. S.W.
Hydrant
F.H.
Ex. 36" R.C. Wastewater
Ex. 15" RCP
Ex. 8" C.I. Water
Ex. 12" PVC Water
Ex. 8" Water FB.1 Pg.10
Ex. 42" RCP
Ex. 12" PVC Water
Ex. 8" C.I. Water
Ex. 8" PVC Water

CONSTRUCT 36" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT

K111 Ex. 36" W.W. Built 1950

WHITE ROCK LAKE

PROP WASTEWATER CURVE 1 DATA
Δ = 22.02.09"
R = 300.00'
L = 115.38'
T = 58.41'
PT: N. 6986012.129 E. 2515228.922
PC: N. 6986139.726 E. 2515297.246

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 411Q-0695 SH. 12.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area Contact ATMOS Energy Corp. Two Working Days Prior To Construction. Call: TEXAS 811 or 811

MATCH MARK 4+29 PROP. WATER LINE I
MATCH MARK 3+50 PROP. W.W. LINE A
See 411Q-1560 SH 34

MATCH MARK 8+75 PROP. WATER LINE I
MATCH MARK 8+00 PROP. W.W. LINE A
See 411Q-1560 SH 36

P.I. 4+15+75 ~ Prop. W.W. Line A
Δ = 12°05'13" Rt
N. 6985622.1737
E. 2515328.6534
Construct 1- 6.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 36" W.W. Out (SE)
Connect Prop. 36" W.W. In (N)

CP #2

Line A

Line I

36" WW

8" WATER

W.W. CURVE 1

Ex. 8" C.I. Water — 411Q-1560 Sh. 4

Ex. 36" R.C. Wastewater

Brick Pavers

Bushline

Inlet

Sign

Trashcan Faucet

30" Pecan
28" Pecan
26" Pecan
12" Hkbry
8" Hkbry
18" Hkbry
16" Pecan
12" Cdrelm
18" Elm
12" Bois d'arc
C.L. Fence
28" Hkbry
14" Hkbry
30" Bois d'arc
12" Cbry
24" Oak
14" Elm
6" Hkbry
6" Pecan
12" Cedar
18" Ash
24" Hkbry
16" Cedar
24" Elm
12" Ced. Elm
18" Hackberry

E. LAWTHER DR.

BLK A/4411
DALLAS ARBORETUM & BOTANICAL GARDENS
LOT 1
8525 GARLAND RD
CITY OF DALLAS
VOL.89020 PG.2034

P.I. 5+21.53 ~ Prop. W. Line I
Δ = 4°32'19" Rt., Pull Pipe
N. 6985652.0339
E. 2515328.8140

4+59.5 ~ Prop. W. Line I
N. 6985595.7997
E. 2515354.3862
Install:
2- 8" 45° Vert. Bends

4+36.6 ~ Prop. W. Line I
N. 6985576.8967
E. 2515367.3887
Install:
1- 8" 11.25° Horiz. Bend

4+72.6 ~ Prop. W. Line I
N. 6985606.5878
E. 2515346.9656
Install:
1- 8" 11.25° Horiz. Bend

4+49.5 ~ Prop. W. Line I
N. 6985587.5607
E. 2515360.0534
Install:
2- 8" 45° Vert. Bends

7+57.6 ~ Prop. W. Line I
Plug Ex. 4" Water (W)
N. 6985877.5378
E. 2515258.8640
Install:
1- 8" x 4" Tee
2- 4" Gate Valves
2- 4" 45° Horiz. Bend
14 LF 4" PVC C900 (DR-14) Water Pipe w/ Class C Emb
Connect to Ex. 4" Water

CONTRACTOR SHALL FIELD VERIFY LOCATION OF SERVICE PRIOR TO CONSTRUCTION.

8+06.6 ~ Prop. W. Line I
N. 6985924.3174
E. 2515244.3533
Install:
1- 8" 11.25° Horiz. Bend

8+57.1 ~ Prop. W. Line I
N. 6985975.0043
E. 2515237.6950
Install:
1- 8" 11.25° Horiz. Bend

K111 Ex. 8" Water Built 1930

INSTALL 446 LF 8" PVC (DR-14) C900 WATER PIPE CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

Line A

MATCH MARK 3+50 PROP. W.W. LINE A

MATCH MARK 8+00 PROP. W.W. LINE A

480 / 475 / 470 / 465 / 460 / 455 / 450 / 445

3'x3' ~ Ex. 24" RCP
FL 462.2 ±

4+75 ~ Prop. W.W. Line A
Construct 1 ea. 6'0" Dia. Pressure-Type W.W. Manhole
Top Elev. = 469.9 ±

WS100 = 469.00

Ex. Grade

Prop. 8" Water, 9' Rt.

36" on 0.066% ←

→ 36" on 0.066%

Abandon Ex. 36" W.W.

450 LF of 36" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "A-1" Embedment

FL 36" 454.231 | FL 36" 454.284 | FL 36" 454.297 | FL 36" 454.330 | FL 36" 454.363 | FL 36" 454.396 | FL 36" 454.429 | FL 36" 454.462 | FL 36" 454.495 | FL 36" 454.528

FL 36" IN 454.274
FL 36" IN 454.214

4:00 | 5:00 | 6:00 | 7:00 | 8:00

REVISIONS

REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #2
"X" CUT SET IN CONCRETE PAVEMENT ON THE WEST EDGE OF LAWTHER DR., +/- 444' NORTH OF GARLAND RD.
N. 6985594.4700; E. 2515338.6950; ELEV = 466.19

CONTROL POINT #3
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR., +/- 880' NORTH OF GARLAND RD.
N. 6986013.1580; E. 2515223.4660; ELEV = 464.55

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES

WATER	42-19W, 42-20W
WASTEWATER	BH E-13, 42-19S, 42-20S

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

APM & Associates, Inc.
Engineering · Planning · CM Services
2201 Main Street, Suite 1100
Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

8" WATER & 36" W.W. MAINS

LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	411Q	1560	35

CONSTRUCT 36" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT

K111 Ex. 36" W.W. Built 1950

WHITE ROCK LAKE

PROP WASTEWATER CURVE 1 DATA
Δ = 22°02'09"
R = 300.00'
L = 115.38'
T = 58.41'
P.C. = 7+74.29 N. 6986236.2439 E. 2515257.2618
P.T. = 8+19.67 N. 6986201.2439 E. 2515226.5922

PROP WASTEWATER CURVE 2 DATA
Δ = 38°11'13"
R = 200.0'
L = 133.65'
T = 69.43'
P.C. = 9+71.35 N. 6986100.1589 E. 2515229.2592
P.T. = 10+70 N. 6986236.2261 E. 2515210.2451

P.T. 10+70.70 ~ Prop. W.W. Line A
N. 6986236.2261
E. 2515210.2451
Construct 1- 6.0' Dia. Pressure-Type W.W.M.H. per DMU Std. Dwg. #304
Connect Prop. 36" W.W. Out (SE)
Connect Prop. 36" W.W. In (NW)

11+54.1 ~ Prop. W. Line 1
N. 6986259.0509
E. 2515206.8440
Install:
2- 8" 45° Vert. Bends

PROP WATER CURVE 1 DATA
Δ = 34°57'04"
R = 361.00'
L = 220.21'
T = 113.65'
P.C. = 12+56.89 N. 6986253.8869 E. 2515622.2068
P.T. = 14+76.10 N. 6986258.9236 E. 2515598.2516

PROP WASTEWATER CURVE 3 DATA
Δ = 34°57'04"
R = 370.00'
L = 225.70'
T = 116.49'
P.C. = 11+76.72 N. 6986343.7591 E. 2515144.5293
P.T. = 14+02.42 N. 6986253.4096 E. 2515090.9406

See 4110-1560 SH 35
MATCH MARK 8+00 PROP. W.W. LINE A
MATCH MARK 8+75 PROP. WATER LINE 1

See 4110-1560 SH 37
MATCH MARK 12+50 PROP. W.W. LINE A
MATCH MARK 13+30 PROP. WATER LINE 1

CP #3
W.W. CURVE 1
W.W. CURVE 2
W.W. CURVE 3
WATER CURVE 1
Line A
Line 1
8" WATER
36" WW
9+00
10+00
11+00
12+00
13+00
Ex. 8" CI. Water 4110-1560 Sh. 4
Ex. 36" R.C. Wastewater 4110-1560 Sh. 4
Brick Paved Drive
Ex. Concrete Pavement
F.B. 1 Pg. 22
Trashcan Recept.
Grate Inlet
Ex. 24" RCP
Sign
12" Chinese Pistache
8" Rosebud
6" Oak
12" Cedar Elm
30" Bois d'arc
18" Bois d'arc
26" Bois d'arc
28" Bois d'arc
12" Cherry
6" Hackberry
16" Mulberry
18" Mulberry
12" Mulberry
18" Elm
28" Elm
44" Elm
26" Elm
Walnut
Bushline
Cl. Fence

10+05.2 ~ Prop. W. Line 1
N. 6986121.4531
E. 2515255.3053
Install:
1- 8" 11.25° Horiz. Bend

10+48.1 ~ Prop. W. Line 1
N. 6986164.1824
E. 2515252.0226
Install:
1- 8" 11.25° Horiz. Bend

P.I. 10+88.23 ~ Prop. W. Line 1
Δ = 15°47'13" Lt., Pull Pipe
N. 6986202.8339
E. 2515241.1995
Install:
1- 8" 11.25° Horiz. Bend
1- 8" Gate Valve

11+44.1 ~ Prop. W. Line 1
N. 6986250.5181
E. 2515212.0586
Install:
2- 8" 45° Vert. Bends

K111 Ex. 8" Water Built 1930

INSTALL 455 LF 8" PVC (DR-14) C900 WATER PIPE
CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

BLK A/4411
DALLAS ARBORETUM & BOTANICAL GARDENS
LOT 1
8525 GARLAND RD
CITY OF DALLAS
VOL. 89020 PG. 2034

E. LAWTHER DR.

N

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 4110-0695 SH. 12.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area Contact ATMOS Energy Corp. Two Working Days Prior To Construction. Call: TEXAS 811 or 811

Line A

MATCH MARK 8+00 PROP. W.W. LINE A
MATCH MARK 12+50 PROP. W.W. LINE A
480
475
470
465
460
455
450
445

WS100 = 469.00

10+57.03 ~ Prop. W.W. Line A
Connect 1- 6.0' Dia. Pressure-Type W.W. Manhole
Top Elev. = 462.5±

10+96 ~ Ex. 24" RCP
FL = 455.91

Ex. Grade

Prop. 8" Water, 15' Rt.

Prop. 8" Water, 9' Rt.

36" on 0.066%

Abandon Ex. 36" W.W.

450 LF of 36" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "A-1" Embedment

FL 36" 454.528
FL 36" 454.561
FL 36" 454.594
FL 36" 454.627
FL 36" 454.660
FL 36" Out 454.693
FL 36" In 454.833
FL 36" 454.726
FL 36" 454.759
FL 36" 454.792
FL 36" 454.825

8+00
9+00
10+00
11+00
12+00

REVISIONS

REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #3
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR., +/- 880' NORTH OF GARLAND RD.
N. 6986013.1580; E. 2515223.4660; ELEV = 464.5

CONTROL POINT #4
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR., +/- 1360' NORTH OF GARLAND RD.
N. 6986459.4850; E. 2515093.7270; ELEV = 464.19

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
42-19W, 42-20W
WASTEWATER
BH E-13, 42-19S, 42-20S

STATE OF TEXAS
ERIC K. KRONER
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LICENSED PROFESSIONAL ENGINEER
11/10/17

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Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

8" WATER & 36" W.W. MAINS

LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	36

CONSTRUCT 36" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT

K111 Ex. 36" W.W. Built 1950

PROP WATER CURVE 1 DATA
Δ = 34°57'04"
R = 361.00'
L = 220.21'
T = 113.65'
P.C. ~ 15+56.89
N. 6986346.4520
E. 2515153.2088
P.T. ~ 14+73.10
N. 6986528.8659
E. 2515098.9236

PROP WASTEWATER CURVE 3 DATA
Δ = 34°57'04"
R = 370.00'
L = 225.70'
T = 116.49'
P.C. ~ 11+76.72
N. 6986343.2539
E. 2515144.5293
P.T. ~ 14+02.42
N. 6986505.4686
E. 2515000.9406

PROP WASTEWATER CURVE 4 DATA
Δ = 44°00'11"
R = 222.00'
L = 170.50'
T = 89.70'
P.C. ~ 15+13.58
N. 6986710.8579
E. 2515097.7975
P.C.C. ~ 16+74.41
N. 6986820.8620
E. 2515169.4560

PROP WASTEWATER CURVE 5 DATA
Δ = 13°53'46"
R = 320.00'
L = 77.61'
T = 39.00'
P.C.C. ~ 16+94.41
N. 6986820.8620
E. 2515169.4560
P.T. ~ 17+69.76
N. 6986869.1167
E. 2515230.0250

N

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 4110-0695 SH. 12.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area Contact ATMOS Energy Corp. Two Working Days Prior To Construction. Call: TEXAS 811 or 811

WHITE ROCK LAKE

P.C. 15+13.91 ~ Prop. W.W. Line A
N. 6986670.6979
E. 2515097.7875
Construct: 1- 6.0' Dia. Pressure-Type W.W. Manhole w/ W.W.M.H. Vent & 2'x2' Concrete Pad per DWU Std Dwg #304 & 306
Connect Prop. 36" W.W. Out (S)
Connect Prop. 36" W.W. In (N)

16+52.1 ~ Prop. W. Line I
N. 6986730.1349
E. 2515119.5310
Install:
1- 8" 11.25° Horiz. Bend

Trashcan Recept.

Line A

Line I

Sign

Ex. Concrete Pavement

15'00

16'00

W.W. CURVE 4

CP #5

4110-1560 Sh.5

FB. 517 Pg. 22

Ex. 8" C.I. Water

WWMH

FH

26" Oak

15+79.6 ~ 18.9' Rt. Prop. W.W. Line A
Abandon Ex. W.W. Manhole Per DWU Std. Dwg. #316

24" Oak

36" Oak

18" Oak

36" WW

CP #4

W.W. CURVE 3

14'00

FB. 1 Pg. 11 & 22

Brick Pavers

4110-1560 Sh. 4

WATER CURVE 1

8" WATER

Ex. 8" C.I. Water 4110-1560 Sh. 4

Ex. 36" R.C. Wastewater 4110-1560 Sh. 4

Ex. 36" R.C. Wastewater 4110-1560 Sh. 5

W.W. CURVE 5

MATCH MARK 13+30 PROP. WATER LINE I
MATCH MARK 12+50 PROP. W.W. LINE A
See 4110-1560 SH 36

MATCH MARK 17+69 PROP. WATER LINE I
MATCH MARK 17+00 PROP. W.W. LINE A
See 4110-1560 SH 38

14" Swgum
10" Cedar
Bushhog
10" Chnry
34" Boise d'arc
16" Chnry
14" Elm
6" Pecan
24" Hkbry
26" Boise d'arc
14" Chnry
6" Hkbry
38" Oak
16" Hkbry
28" Boise d'arc
10" Elm
18" Ash
8" Cedar
C.L. Fence
52" Pecan
Bushhog

E. LAWTHER DR.

BLK A/4411
DALLAS ARBORETUM & BOTANICAL GARDENS
LOT 1
8525 GARLAND RD
CITY OF DALLAS
VOL. 89020 PG. 2034

16+01.2 ~ Prop. W. Line I
N. 6986680.7256
E. 2515107.4215
Install:
1- 8" 11.25° Horiz. Bend

16+29.5 ~ Prop. W. Line I
N. 6986708.1808
E. 2515114.1504
Remove & Deliver Exist. FH
Install:
1- 8"x 6" Tee BBF
1- 6" Gate Valve FMJ
7 LF 6" PVC C900 (DR-14) Water Pipe w/ Class C+ Emb
1- FH as Per DWU Std Dwg #224
1- 8" Gate Valve

16+89.6 ~ Prop. W. Line I
N. 6986764.1151
E. 2515135.3913
Install:
1- 8" 11.25° Horiz. Bend

17+34.7 ~ Prop. W. Line I
N. 6986800.4957
E. 2515162.0871
Install:
1- 8" 11.25° Horiz. Bend

17+58.8 ~ Prop. W. Line I
Plug Ex. 4" Water (NW)
N. 6986816.8021
E. 2515179.8954
Install:
1- 8" x 4" Tee
2- 4" Gate Valves
2- 4" 45° Horiz. Bend
22 LF 4" PVC C900 (DR-14) Water Pipe w/ Class C+ Emb
Connect to Ex. 4" Water

CONTRACTOR SHALL FIELD VERIFY LOCATION OF SERVICE PRIOR TO CONSTRUCTION.

K111 Ex. 8" Water Built 1930

INSTALL 439 LF 8" PVC (DR-14) C900 WATER PIPE CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

Line A

MATCH MARK 12+50 PROP. W.W. LINE A

MATCH MARK 17+00 PROP. W.W. LINE A

480 / 475 / 470 / 465 / 460 / 455 / 450 / 445

15+13.9 ~ Prop. W.W. Line A
Construct 1- 6.0' Dia. Pressure-Type W.W. Manhole w/ W.W.M.H. Vent
Top Elev. = 465.4 ±

15+79.6 ~ 18.9' Rt. Prop. W.W. Line A
Abandon Ex. W.W. Manhole
Per DWU Std. Dwg. #316

WS_{100} = 469.00

Ex. Grade

Prop. 8" Water, 9' Rt.

36" on 0.066%

36" on 0.066%

Abandon Ex. 36" W.W.

Abandon Ex. 36" W.W.

450 LF of 36" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "A-1" Embedment

F.L. 36" 454.885
F.L. 36" 454.888
F.L. 36" 454.891
F.L. 36" 454.924
F.L. 36" 454.957
F.L. 36" 454.990
F.L. 36" OUT 454.999
F.L. 36" IN 454.899
F.L. 36" 455.023
F.L. 36" 455.056
F.L. 36" 455.089
F.L. 36" 455.122

13+00 / 14+00 / 15+00 / 16+00 / 17+00

REVISIONS			
REV. NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD. WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #4
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR. +/- 1360' NORTH OF GARLAND RD.
N. 6986459.4850; E. 2515093.7270; ELEV = 464.19

CONTROL POINT #5
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR. +/- 1644' NORTH OF GARLAND RD.
N. 6986740.6410; E. 2515109.7220; ELEV = 465.47

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
42-19W, 42-20W
WASTEWATER
BH E-13, 42-19S, 42-20S

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/15/17

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FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

8" WATER & 36" W.W. MAINS

LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	37

CONSTRUCT 36" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT

K111 Ex. 36" W.W. Built 1950

PROP WASTEWATER CURVE 5 DATA
Δ = 13°53'46"
R = 320.00'
L = 77.61'
T = 39.00'
P.C. - 16+64.41 N. 6986602.8080 E. 2515169.4580
P.I. - 17+02.02 N. 6986680.1187 E. 2515220.0230

PROP WATER CURVE 2 DATA
Δ = 10°24'09"
R = 1305.00'
L = 236.93'
T = 118.79'
P.C. - 22+09.35 N. 6987035.8740 E. 2515551.1058
P.C.C. - 24+39.59 N. 6987191.9735 E. 2515571.4210

PROP WASTEWATER CURVE 6 DATA
Δ = 10°24'09"
R = 1295.00'
L = 235.12'
T = 117.88'
P.C. - 21+35.18 N. 6987064.3938 E. 2515541.9541
P.C.C. - 23+70.29 N. 6987294.9550 E. 2515560.0050

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 411Q-0695 SH. 12.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area Contact ATMOS Energy Corp. Two Working Days Prior To Construction. Call: TEXAS 811 or 811

WHITE ROCK LAKE

MATCH MARK 17+69 PROP. W.W. LINE A
MATCH MARK 17+00 PROP. W.W. LINE I
See 411Q-1560 SH 37

MATCH MARK 22+18 PROP. WATER LINE I
MATCH MARK 21+50 PROP. W.W. LINE A
See 411Q-1560 SH 39

19+99.3 ~ Prop. W. Line I
N. 6986949.4185
E. 2515379.9596
Install:
2- 8" 45° Vert. Bends

P.C. 21+35.18 ~ Prop. W.W. Line A
N. 6987064.3938
E. 2515541.9541
Construct: 1- 6.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 36" W.W. Out (SW)
Connect Prop. 36" W.W. In (NE)

Trashcan Receptacle

36" WW

CP #6

Line A

W.W. CURVE 5

W.W. CURVE 6

18+00 19+00 20+00 21+00 22+00

Ex. 8" CI. Water 411Q-1560 Sh. 5

Ex. Concrete Pavement

F.B. I Pg. 22

8" WATER

Line I

WATER CURVE 2

Brick Pavers

Bustline

Sign

Ex. 36" R.C. Wastewater 411Q-1560 Sh. 5

Highbank

18" Catalpa

20" Catalpa

32" Oak

42" Cedar

26" Catalpa

12" Pecan

16" Pecan

20" Elm

8" Elm

38" Oak

12" Hkory

12" Cherry

18" Cedar

24" Bois d'arc

C.L. Fence

E. LAWTHER DR.

BLK A/4411

DALLAS ARBORETUM & BOTANICAL GARDENS

LOT 1

8525 GARLAND RD

CITY OF DALLAS VOL.89020 PG.2034

P.I. 18+27.51 ~ Prop. W. Line I
Δ = 4°05'17" Rt., Pull Pipe
N. 6986859.4577
E. 2515233.5705

P.I. 17+87.18 ~ Prop. W. Line I
Δ = 6°49'08" Rt., Pull Pipe
N. 6986835.9468
E. 2515200.8035

19+90.0 ~ Prop. W. Line I
N. 6986944.5322
E. 2515372.0083
Install:
1- 8" Gate Valve

20+09.3 ~ Prop. W. Line I
N. 6986954.6543
E. 2515388.4795
Install:
2- 8" 45° Vert. Bends

K111 Ex. 8" Water Built 1930

INSTALL 449 LF 8" PVC (DR-14) C900 WATER PIPE
CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

Line A

MATCH MARK 17+00 PROP. W.W. LINE A

MATCH MARK 21+50 PROP. W.W. LINE A

480 475 470 465 460 455 450 445

19+35 ~ Ex. 24" RCP
FL 459.91

WS100 = 469.00

Ex. Grade

Prop. 8" Water, 10' Rt.

36" on 0.066%

Abandon Ex. 36" W.W.

21+51.18 ~ Prop. W.W. Line A
Construct 1- 6.0' Dia. Pressure-Type W.W.M.H.
Top Elev. = 462.54

36" on 0.066%

Abandon Ex. 36" W.W.

FL 36" 455.82
FL 36" 455.55
FL 36" 455.08
FL 36" 455.221
FL 36" 455.254
FL 36" 455.287
FL 36" 455.320
FL 36" 455.353
FL 36" 455.386
36" OUT (SW) 455.408
36" IN (NE) 455.408
FL 36" 455.419

17+00 18+00 19+00 20+00 21+00

450 LF of 36" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "A-I" Embedment

REVISIONS

REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
CDD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #5
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR., +/- 1644' NORTH OF GARLAND RD.
N. 6986740.6410; E. 2515109.7220; ELEV = 465.47

CONTROL POINT #6
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR., +/- 30' WEST OF A 24" RCP CULVERT.
N. 6986950.0540; E. 2515353.8390; ELEV = 464.04

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
42-19N, 42-20N
WASTEWATER
BH E-13, 42-19S, 42-20S

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

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FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

8" WATER & 36" W.W. MAINS

LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	411Q	1560	38

CONSTRUCT 36" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT

K111 Ex. 36" W.W. Built 1950

WHITE ROCK LAKE

P.C.: 22+02.66 N. 6987055.8740 E. 2515525.1898

PROP WATER CURVE 2 DATA
Δ = 10°24'09"
R = 1305.00'
L = 236.93'
T = 118.79'

P.C.C.: 24+39.59 N. 6987197.5169 E. 2515427.7740

P.C.C.: 21+51.58 N. 6987062.1938 E. 2515547.1954

PROP WASTEWATER CURVE 6 DATA
Δ = 10°24'09"
R = 1295.00'
L = 235.12'
T = 117.88'

P.C.C.: 23+70.29 N. 6987224.0829 E. 2515750.0260

P.C.C.: 24+39.59 N. 6987197.5169 E. 2515427.7740

PROP WATER CURVE 3 DATA
Δ = 8°41'20"
R = 1880.00'
L = 285.10'
T = 142.82'

P.T.: 27+24.69 N. 6987241.5044 E. 2515139.4293

P.C.C.: 23+70.29 N. 6987224.0829 E. 2515750.0260

PROP WASTEWATER CURVE 7 DATA
Δ = 8°41'20"
R = 2043.56'
L = 309.90'
T = 155.25'

P.T.: 26+86.20 N. 6987202.3139 E. 2515348.4105

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 4110-0695 SH. 12.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area Contact ATMOS Energy Corp. Two Working Days Prior To Construction. Call: TEXAS 811 or 811

See 4110-1560 SH 38
MATCH MARK 21+50 PROP. W.W. LINE A
MATCH MARK 22+18 PROP. WATER LINE I

21+53.3 ~ 18.7' Rt. Prop. W.W. Line A
Abandon Ex. W.W. Manhole Per DWU Std. Dwg. #316

Ex. 8' CI. Water 4110-1560 Sh.5

8" WATER

36" WW

Line A

Line I

P.C.C. 23+70.29 ~ Prop. W.W. Line A
N. 6987204.9529
E. 2515736.0260
Construct: 1- 6.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 36" W.W. Out (SW)
Connect Prop. 36" W.W. In (NE)

Ex. 54" RCP

CP #7

W.W. CURVE 6

W.W. CURVE 7

Ex. Concrete Pavement

F.B. I Pg. 22

Ex. 8" Water 4110-1560 Sh.5

8" WATER

4110-1560 Sh. 5

Inlet to French Drain

Brick Pavers

Ex. 36" Rt. Wastewater

Sign

WATER CURVE 2

WATER CURVE 3

Lowbank

Bushline

6" Cedar
32" Oak
6" Pecan
38" Elm
16" Elm
32" Oak
5/8 Cliff
C.L. Fence
12" Oak
34" Elm
12" Hkbry
24" Elm
32" Oak
18" Hkbry
26" Hkbry
W.L. Fence
34" Cottonwood
34" Willow

E. LAWTHER DR.

BLK A/4411
DALLAS ARBORETUM & BOTANICAL GARDENS
LOT 1
8525 GARLAND RD
CITY OF DALLAS
VOL.89020 PG.2034

23+80.1 ~ Prop. W. Line I
N. 6987158.7628
E. 2515697.6212
Install:
2- 8" 45° Vert. Bends

23+90.1 ~ Prop. W. Line I
N. 6987165.1341
E. 2515705.3288
Install:
2- 8" 45° Vert. Bends

25+74.0 ~ Prop. W. Line I
N. 6987290.9139
E. 2515839.3641
Install:
1- 8" x 6" Tee
1- 8" Gate Valve
1- 6" Gate Valve
2- 6" 45° Horiz. Bends
1- 62" x 98" Precast FM Vault w/ Access Hatch
28 LF 6" PVC C900 (DR-14) Water Pipe w/ Class C Emb
1- 6" Combined Service with 6" Meter per DWU Standards, Page 508

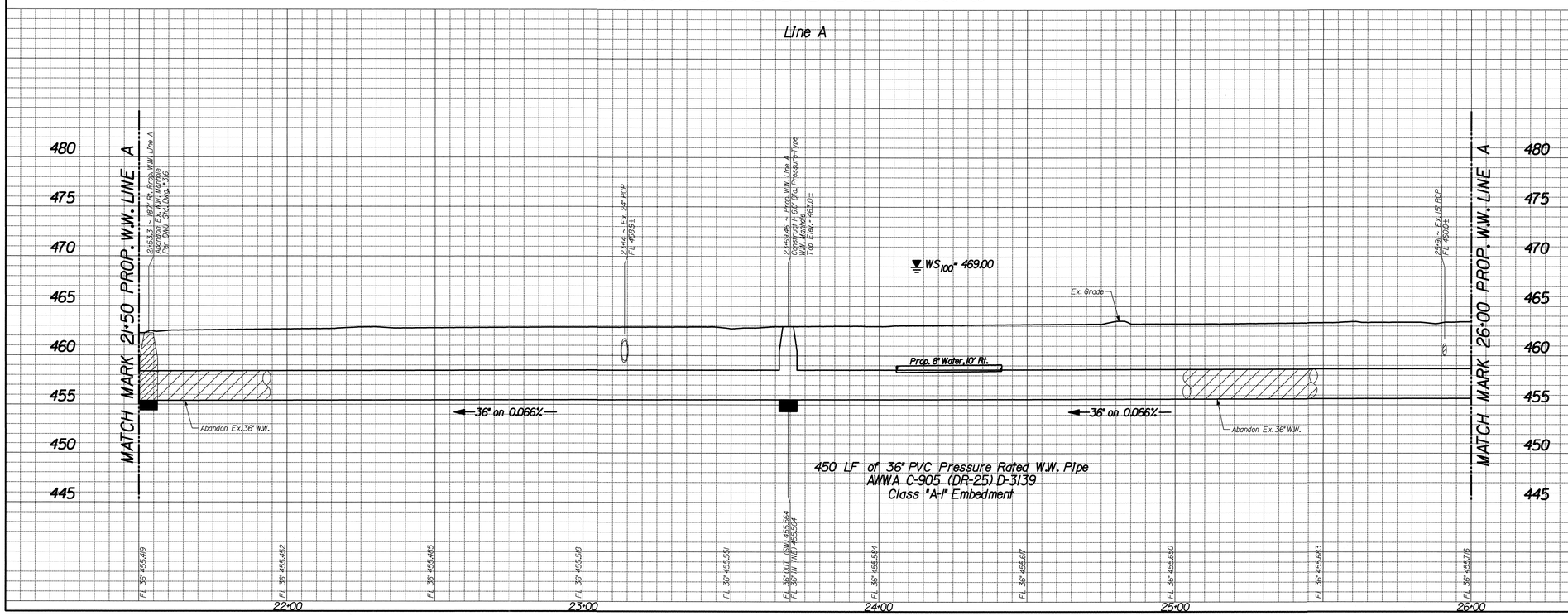
26+57.7 ~ Prop. W. Line I
N. 6987352.4502
E. 2515896.0514
Install:
2- 8" 45° Vert. Bends

26+67.7 ~ Prop. W. Line I
N. 6987359.9687
E. 2515902.6447
Install:
2- 8" 45° Vert. Bends

See 4110-1560 SH 40
MATCH MARK 26+00 PROP. W.W. LINE A
MATCH MARK 26+71 PROP. WATER LINE I

K111 Ex. 8" Water Built 1930

INSTALL 453 LF 8" PVC (DR-14) C900 WATER PIPE
CLASS "C" EMBEDMENT (MIN. 4.0' COVER)



450 LF of 36" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "A-1" Embedment

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WOBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #6
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR., +/- 30' WEST OF A 24" RCP CULVERT.
N. 6986950.0540, E. 2515353.8390, ELEV = 464.04

CONTROL POINT #7
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR., +/- 64' WEST OF A 34" COTTONWOOD TREE.
N. 6987285.9750, E. 2515814.6180, ELEV = 463.59

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
42-19W, 42-20W
WASTEWATER
BH E-13, 42-19S, 42-20S

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CONTRACT NO. 18-021/022 | PID 5826

8" WATER & 36" W.W. MAINS

LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	39

CONSTRUCT 36" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT

K111 Ex. 36" W.W. Built 1950

PROP WATER CURVE 3 DATA
Δ = 8°41'20"
R = 1880.00'
L = 285.10'
T = 142.82'

P.C.C. - 24+39.59
N. 6987430.1360
E. 2515712.7740

P.T. - 26+80.20
N. 6987430.2339
E. 2515948.4053

PROP WASTEWATER CURVE 7 DATA
Δ = 8°41'20"
R = 2043.56'
L = 309.90'
T = 155.25'

P.C.C. - 23+70.02
N. 6987434.6529
E. 2515788.0280

P.T. - 26+80.20
N. 6987430.2339
E. 2515948.4053

PROP WATER CURVE 4 DATA
Δ = 6°27'49"
R = 2793.41'
L = 315.13'
T = 157.73'

P.C.C. - 30+23.71
N. 6987683.3498
E. 2516163.4507

P.R.C. - 30+80.84
N. 6987729.0322
E. 2516237.0081

PROP WASTEWATER CURVE 8 DATA
Δ = 6°27'38"
R = 2803.41'
L = 316.12'
T = 158.23'

P.C.C. - 30+72.48
N. 6987690.0041
E. 2516155.5696

P.R.C. - 31+28.60
N. 6987729.4233
E. 2516163.7695

WHITE ROCK LAKE

P.T. 26+80.20 ~ Prop. W.W. Line A = 0+00.0 ~ Prop. W.W. Line B
N. 6987430.2339
E. 2515948.4053
Construct: 1- 6.0' Dia. Pressure-Type W.W. Manhole w/ W.W.M.H. Vent & 2'x2' Concrete Pad per DWU Std. Dwg. #304 & 306
Connect Prop. 36" W.W. Out (SW)
Connect Prop. 8" W.W. In (SE)
Connect Prop. 36" W.W. In (NE)

P.I. 28+94.69 ~ Prop. W. Line I
Δ = 120°45' Lt.
N. 6987534.9889
E. 2516047.1875

P.I. 28+23.72 ~ Prop. W.W. Line A
Δ = 120°45' Lt
N. 6987541.2368
E. 2516039.3787
Connect Prop. 36" W.W. Out (SW)
Connect Prop. 36" W.W. In (NE)

Ex. 24" RCP

Trashcan Receptacle

36" WW

Line A

W.W. CURVE 7

8" WATER

Ex. 36" R.C. Wastewater 4110-1560 Sh. 5

4110-1560 Sh. 6

WATER CURVE 3

Line B

8" WW

Ex. 8" W.W. 4110-1560 Sh. 6

Ex. Private 6" W.W.

Ex. Concrete Pavement

Brick Pavers

FB. 1 Pg. 22

Line I

Ex. 8" Water 4110-1560 Sh. 6

W.W. CURVE 8

WATER CURVE 4

Sgn

Ex. 36" R.C. Wastewater

Sgn 4110-1560 Sh. 6

CATV

W/ Fence

C.L. Fence

Bushline

16" Willow

32" Willow

14" Willow

18" Mulberry

12" Elm

16" Cedar

12" Hackberry

8" Elm

16" Hackberry

6" Mulberry

28" Mulberry

26" Hackberry

18" Cedar Elm

16" Cedar Elm

26" Cedar Elm

E. LAWTHER DR.

MATCH MARK 26+00 PROP. W.W. LINE A
MATCH MARK 26+71 PROP. WATER LINE I
See 4110-1560 SH 39

MATCH MARK 31+21 PROP. WATER LINE I
MATCH MARK 30+50 PROP. W.W. LINE A
See 4110-1560 SH 41

27+46.3 ~ Prop. W. Line I
N. 6987420.2369
E. 2515953.1415
Install:
2- 8" 45° Vert. Bends

0+12.4 ~ Prop. W.W. Line B
Remove Ex. 6' Dia. W.W.M.H. (No Separate Pay Item)
Plug Ex. 36" W.W. Out (SW)
Plug Ex. 36" W.W. In (NE)

0+34.4 ~ Prop. W.W. Line B
N. 6987409.1803
E. 2515975.5579
Remove Ex. 4' Dia. W.W. Manhole
Construct: 1- 4.0' Dia. Pressure-Type W.W.M.H. per DWU Std. Dwg. #304
Connect Prop. 8" W.W. Out (NW)
Connect Ex. 6" W.W. In (SE)

28+06.0 ~ Prop. W. Line I
N. 6987466.4192
E. 2515990.9906
Install:
2- 8" 45° Vert. Bends

29+10.0 ~ Prop. W. Line I
N. 6987547.0535
E. 2516056.6103
Install:
1- 8" Gate Valve

BLK A/4411
DALLAS ARBORETUM & BOTANICAL GARDENS
LOT 1
8525 GARLAND RD
CITY OF DALLAS
VOL. 89080 PG. 2034

CONSTRUCT 8" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT SEE 4110-1560 SH. 49 FOR PROFILE

K111 Ex. 8" Water Built 1930

INSTALL 450 LF 8" PVC (DR-14) C900 WATER PIPE CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 4110-0695 SH. 12.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area Contact ATMOS Energy Corp. Two Working Days Prior To Construction. Call: TEXAS 811 or 811

Line A

480
475
470
465
460
455
450
445

MATCH MARK 26+00 PROP. W.W. LINE A

MATCH MARK 30+50 PROP. W.W. LINE A

25+80.20 ± Prop. W.W. Line A = 0+00.0 ± Prop. W.W. Line B
Construct 1- 6.0' Dia. Pressure-Type W.W. Manhole w/ W.W.M.H. Vent & Ex. 4" RCP @ Elev. = 463.85

27+70 ± Ex. 24" RCP
FL 460.1 ±

WS100 = 469.00

Ex. Grade

Prop. 8" Water, 10' Rt.

36" on 0.066%

36" on 0.066%

Abandon Ex. 36" W.W.

450 LF of 36" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "A-1" Embedment

FL 36" 455.76
FL 36" 455.49
FL 36" 455.69 OW
FL 8" IN 457.20 SE
FL 36" IN 455.69 NE
FL 36" 455.92
FL 36" 455.85
FL 36" 455.848
FL 36" 455.881
FL 36" 455.944
FL 36" 455.947
FL 36" 455.980
FL 36" 456.013

26+00
27+00
28+00
29+00
30+00

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD. WOBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #7
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR., +/- 64' WEST OF A 34" COTTONWOOD TREE.
N. 6987285.9750; E. 2515814.6180; ELEV = 463.59

CONTROL POINT #8
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR., +/- 68' SW OF THE NORTH EXIT OF DALLAS ARBORETUM.
N. 6987761.0240; E. 2516205.6380; ELEV = 463.85

Horizontal Scale: 1" = 20'
0' 20' 40'

Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES

WATER
42-19W, 42-20W

WASTEWATER
BH E-13, 42-19S, 42-20S

STATE OF TEXAS
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CONTRACT NO. 18-021/022 | PID 5826

8" WATER & 8", 36" W.W. MAINS

LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	40

CONSTRUCT 36" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT

K111 Ex. 36" W.W. Built 1950

CONSTRUCT 8" WASTEWATER MAINS ALONG NEW HORIZONTAL ALIGNMENT SEE 4110-1560 SH. 49 FOR PROFILE

WHITE ROCK LAKE

MATCH MARK 31+21 PROP. WATER LINE I
MATCH MARK 30+50 PROP. W.W. LINE A
See 4110-1560 SH 40

See 4110-1560 SH 42
MATCH MARK 35+00 PROP. W.W. LINE A
MATCH MARK 35+72 PROP. WATER LINE I

PROP WATER CURVE 4 DATA
Δ - 6°27'49"
R - 2793.41'
L - 315.13'
T - 157.73'
P.C. - 30+08.67
N. 6987983.8480
E. 2516163.4501
P.T. - 31+23.57
N. 6987983.7357
E. 2516478.1009

PROP WASTEWATER CURVE 8 DATA
Δ - 6°27'38"
R - 2803.41'
L - 316.12'
T - 158.23'
P.C. - 30+07.22
N. 6987990.0041
E. 2516155.5896
P.T. - 31+23.34
N. 6987982.8553
E. 2516471.7698

PROP WASTEWATER CURVE 9 DATA
Δ - 13°02'23"
R - 1015.00'
L - 231.00'
T - 116.00'
P.R.C. - 33+28.60
N. 6987927.6533
E. 2516363.7695
P.T. - 35+59.60
N. 6988101.0443
E. 2516601.0938

PROP WATER CURVE 5 DATA
Δ - 13°02'52"
R - 1025.00'
L - 233.42'
T - 117.22'
P.R.C. - 33+38.71
N. 6987937.7522
E. 2516671.1281
P.T. - 35+72.13
N. 6988106.4822
E. 2516608.8714

0+14.4 ~ Prop. W.W. Line C
Remove Ex. 6' Dia. W.W.M.H. (No Separate Pay Item)
Plug Ex. 36" W.W. Out (SW)
Plug Ex. 36" W.W. In (NE)

33+93.9 ~ Prop. W. Line I
N. 6987917.2790
E. 2516367.6140
Install:
2- 8" 45° Vert. Bends

P.R.C. 33+28.60 ~ Prop. W.W. Line A = 0+00.0 ~ Prop. W.W. Line C
N. 6987927.6533
E. 2516363.7695
Construct: 1- 6.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 36" W.W. Out (SW)
Connect Prop. 8" W.W. In (SE)
Connect Prop. 36" W.W. In (NE)

34+16.2 ~ Prop. W.W. Line A = 0+00.0 ~ Prop. W.W. Line D
N. 6987994.3704
E. 2516420.4251
Construct: 1- 6.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 36" W.W. Out (SW)
Connect Prop. 8" W.W. In (SE)
Connect Prop. 36" W.W. In (NE)

0+16.1 ~ Prop. W.W. Line D
N. 6987984.6626
E. 2516433.2911
Remove Ex. 6' Dia. W.W. Manhole
Construct: 1- 4.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 8" W.W. Out (NW)
Plug Ex. 36" W.W. Out (SW)
Plug Ex. 36" W.W. In (NE)
Connect Ex. 8" W.W. In (SE)

35+02.4 ~ Prop. W. Line I
N. 6988000.2463
E. 2516437.5141
Install:
1- 8" Gate Valve

CP #8

36" WW

Line A

W.W. CURVE 8

8" WATER

Ex. 8" Water 4110-1560 Sh6

Ex. 36" R.C. Wastewater

4110-1560 Sh. 6

Ex. 15" RCP

Ex. Concrete Pavement

FB. 1 Pg. 11 & 22

W.W. CURVE 9

Line I

8" WATER

Ex. 8" Water 4110-1560 Sh6

Ex. 36" R.C. Wastewater, 4110-1560 Sh. 6

Ex. 8" PVC Wastewater 4110-1560 Sh. 4

Ex. 8" PVC Water 4110-1560 Sh. 4

WATER CURVE 4

WATER CURVE 5

E. LAWTHER DR.

Line D 8" WW

Line C 8" WW

Ex. Private 6" W.W.

Ex. Private 8" Water

Ex. Private 6" Water

Lowbank Bustline

Sgn

Wi Fence

CL. Fence

Gate

4X4 Column

4X4SQ

FH

WWMH

WM

Tree Legend

18" Cbtry
6" Hkbry
28" Cbtry
14" Elm
12" Hkbry
3-12" Cbtry

33+66.4 ~ Prop. W. Line I
N. 6987897.5662
E. 2516348.5212
Remove & Deliver Exist. FH
Install:
1- 8"x 6" Tee BBF
1- 6" Gate Valve FMJ
8 LF 6" PVC C900 (DR-14) Water Pipe w/ Class C+ Emb
1- FH as Per DWU Std Dwg #224
1- 8" Gate Valve

34+03.9 ~ Prop. W. Line I
N. 6987466.4192
E. 2515990.9906
Install:
2- 8" 45° Vert. Bends

0+28.0 ~ Prop. W.W. Line C
N. 6987908.7877
E. 2516384.4599
Construct: 1- 4.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 8" W.W. Out (NW)
Connect Ex. 8" W.W. In (SE)

34+20.8 ~ Prop. W. Line I
N. 6987937.1404
E. 2516385.8673
Install:
1- 8" x 8" Tee
1- 8" Gate Valve
2- 8" 45° Horiz. Bends
18 LF 8" PVC C900 (DR-14) Water Pipe w/ Class C+ Emb
Plug Ex. 8" Water (NW)

34+57.7 ~ Prop. W. Line I
N. 6987979.1600
E. 2516421.1833
Install:
1- 8" x 8" Tee
2- 8" Gate Valves
2- 8" 45° Horiz. Bends
16 LF 8" PVC C900 (DR-14) Water Pipe w/ Class C+ Emb
Plug Ex. 8" Water (NW)

34+82.4 ~ Prop. W. Line I
N. 6987984.4139
E. 2516425.3209
Install:
2- 8" 45° Vert. Bends

34+92.4 ~ Prop. W. Line I
N. 6987992.3109
E. 2516431.4556
Install:
2- 8" 45° Vert. Bends

35+05.4 ~ Prop. W. Line I
N. 6988002.6415
E. 2516439.3204
Install:
1- 8"x 6" Tee BBF
1- 6" Gate Valve FMJ
2- 6" 45° Horiz. Bends
13 LF 6" PVC C900 (DR-14) Water Pipe w/ Class C+ Emb
Plug Ex. 6" Water (NW)

34+99.4 ~ Prop. W. Line I
N. 6987997.8510
E. 2516435.7078
Install:
1- 8" x 8" Tee
1- 8" Gate Valve
2- 8" 45° Horiz. Bends
13 LF 8" PVC C900 (DR-14) Water Pipe w/ Class C+ Emb
Plug Ex. 8" Water (NW)

K111 Ex. 8" Water Built 1930

INSTALL 451 LF 8" PVC (DR-14) C900 WATER PIPE CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

BLK A/4411
DALLAS ARBORETUM & BOTANICAL GARDENS
LOT 1
8525 GARLAND RD
CITY OF DALLAS
VOL.89020 PG.2034

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 4110-0695 SH. 12.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area Contact ATMOS Energy Corp. Two Working Days Prior To Construction. Call: TEXAS 811 or 811

Line A

480 475 470 465 460 455 450 445

MATCH MARK 30+50 PROP. W.W. LINE A

MATCH MARK 35+00 PROP. W.W. LINE A

Ex. Grade

WS100 = 469.00

Prop. 8" Water, 10' Rt.

36" on 0.066% — 36" on 0.066% — 36" on 0.066%

Abandon Ex. 36" W.W.

Abandon Ex. 36" W.W.

33+28.60 ~ Prop. W.W. Line A = 0+00.0 ~ Prop. W.W. Line C
Construct: 1- 6.0' Dia. Pressure-Type W.W. Manhole
T.O.P. Elev. = 465.19±

34+16.2 ~ Prop. W.W. Line A = 0+00.0 ~ Prop. W.W. Line D
Construct: 1- 6.0' Dia. Pressure-Type W.W. Manhole
T.O.P. Elev. = 464.10±

Ex. 15" RCP

450 LF of 36" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "A-I" Embedment

FL. 36" 456.03 | FL. 36" 456.06 | FL. 36" 456.09 | FL. 36" 456.12 | FL. 36" 456.15 | FL. 36" 456.18 | FL. 36" 456.21 | FL. 36" 456.24 | FL. 36" 456.27 | FL. 36" 456.30

FL. 36" OUT (SW) 456.97
FL. 8" IN (SE) 459.00
FL. 36" IN (NE) 458.97

FL. 36" OUT (SW) 457.59
FL. 8" IN (SE) 461.69
FL. 36" IN (NE) 458.25

31+00 32+00 33+00 34+00 35+00

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
CDD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #8
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR., +/- 68' SW OF THE NORTH EXIT OF DALLAS ARBORETUM.
N. 6987761.0240, E. 2516205.6380, ELEV = 463.85

CONTROL POINT #9
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR., +/- 330' SOUTHWEST OF A 3'X4' BOX CULVERT.
N. 6988191.4460, E. 2516540.8760, ELEV = 463.96

Horizontal Scale: 1" = 20'
0' 20' 40'

Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
42-19W, 42-20W
WASTEWATER
BH E-13, 42-19S, 42-20S

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

APM & Associates, Inc.
Engineering · Planning · CM Services
2201 Main Street, Suite 1100
Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

8" WATER & 8", 36" W.W. MAINS
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	41

CONSTRUCT 36" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT

K111 Ex. 36" W.W. Built 1950

WHITE ROCK LAKE

PROP WATER CURVE 5 DATA
Δ = 130°2'52"
R = 1025.00'
L = 233.42'
T = 117.22'

PROP WASTEWATER CURVE 9 DATA
Δ = 130°2'23"
R = 1015.00'
L = 231.00'
T = 116.00'

PROP WATER CURVE 6 DATA
Δ = 13°54'38"
R = 613.00'
L = 148.83'
T = 74.78'

PROP WASTEWATER CURVE 10 DATA
Δ = 13°54'38"
R = 600.00'
L = 145.67'
T = 73.20'

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 4110-0695 SH. 12.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area Contact ATMOS Energy Corp. Two Working Days Prior To Construction. Call: TEXAS 811 or 811

See 4110-1560 SH 41
MATCH MARK 35+00 PROP. W.W. LINE A
MATCH MARK 35+72 PROP. WATER LINE I

See 4110-1560 SH 43
MATCH MARK 40+25 PROP. W.W. LINE A
MATCH MARK 39+50 PROP. WATER LINE I

35+03.8 ~ 17.5' Rt. Prop. W.W. Line A
Abandon Ex. W.W. Manhole Per DWU Std. Dwg. #316

P.C. 37+26.41 ~ Prop. W.W. Line A
N. 6988258.2456
E. 2516583.0169
Construct 1- 6.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 36" W.W. Out (SW)
Connect Prop. 36" W.W. In (NE)

36" WW

W.W. CURVE 9

Ex. 8" Water 4110-1560 Sh6

8" WATER

WATER CURVE 5

Ex. 36" R.C. Wastewater 4110-1560 Sh 6

CP #9

FB.1 Pg. 12 & 22

Ex. Concrete Pavement

Line A

Line I

WATER CURVE 6

W.W. CURVE 10

Brick Pavers

Trashcan Recept.

Sign

WWMH

Lowbank

Bushline

Column

E. LAWTHER DR.

BLK A/4411
DALLAS ARBORETUM & BOTANICAL GARDENS
LOT 1
8525 GARLAND RD
CITY OF DALLAS
VOL.89020 PG.2034

K111 Ex. 8" Water Built 1930

INSTALL 453 LF 8" PVC (DR-14) C900 WATER PIPE CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

Line A

MATCH MARK 35+00 PROP. W.W. LINE A

MATCH MARK 39+50 PROP. W.W. LINE A

35+03.8 ~ 17.5' Rt. Prop. W.W. Line A
Abandon Ex. W.W. Manhole Per DWU Std. Dwg. #316

37+26.41 ~ Prop. W.W. Line A
Construct 1 - 6.0' Dia. Pressure-Type W.W.M.H.
Top Elev. = 463.91±

WS100 = 469.00

Ex. Grade

Prop. 8" Water, 10' Rt.

Prop. 8" Water, 9' Rt.

36" on 0.066% —

Abandon Ex. 36" W.W.

450 LF of 36" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "A-1" Embedment

FL 36" = 456.30
FL 36" = 456.343
FL 36" = 456.376
FL 36" = 456.409
FL 36" = 456.442
FL 36" OUT (SW) 456.459
FL 36" IN (NE) 456.489
FL 36" = 456.475
FL 36" = 456.508
FL 36" = 456.541
FL 36" = 456.574
FL 36" = 456.607

480 475 470 465 460 455 450 445

35+00 36+00 37+00 38+00 39+00

REVISIONS

REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #9
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR., +/- 330' SOUTHWEST OF A 3'X4' BOX CULVERT.
N. 6988191.4460, E. 2516540.8760, ELEV = 463.96

CONTROL POINT #10
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR., +/- 175' NORTHEAST OF A 3'X4' BOX CULVERT.
N. 6988669724.0, E. 2516741.1400, ELEV = 465.11

Horizontal Scale: 1" = 20'
0' 20' 40'

Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES

WATER
42-19N, 42-20N

WASTEWATER
BH E-13, 42-19S, 42-20S

STATE OF TEXAS
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FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

8" WATER & 36" W.W. MAINS

LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	42

CONSTRUCT 36" & 30" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT

K111 Ex. 36" W.W. Built 1950

CONSTRUCT 8" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT SEE 4110-1560 SH. 49 FOR PROFILE

WHITE ROCK LAKE

See 4110-1560 SH 42
MATCH MARK 39+50 PROP. W.W. LINE A
MATCH MARK 40+25 PROP. WATER LINE I

0+30.2 ~ Prop. W.W. Line E
N. 6988860.2911
E. 2516771.0872
Construct: 1- 4.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 8" W.W. Out (W)
Plug Ex. 36" W.W. Out (S)
Plug Ex. 36" W.W. In (N)
Connect Ex. 8" W.W. In (E)

P.I. 43+61.46 ~ Prop. W.W. Line A ~ 0+00.0 ~ Prop. W.W. Line E
Δ = 10°00'34" Lt
N. 6988868.5526
E. 2516742.0052
Construct: 1- 6.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 36" W.W. Out (S)
Connect Prop. 8" W.W. In (E)
Connect Prop. 30" W.W. In (N)

P.I. 42+00.33 ~ Prop. W.W. Line A
Δ = 11°15'00" Lt
N. 6988707.9488
E. 2516729.0592
Construct: 1- 6.0' Dia. Pressure-Type W.W. Manhole w/ W.W.M.H. Vent & 2'x2' Concrete Pad per DWU Std Dwg #304 & 306
Connect Prop. 36" W.W. Out (S)
Connect Prop. 36" W.W. In (N)

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 4110-0695 SH. 12.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area Contact ATMOS Energy Corp. Two Working Days Prior To Construction. Call: TEXAS 811 or 811

MATCH MARK 44+79 PROP. W.W. LINE A
MATCH MARK 44+00 PROP. WATER LINE I
See 4110-1560 SH 44

Trashcan Recept.
Sign
Ex. 4' x 3' RCB
Ex. 15" RCP
Ex. 24" RCP
Ex. Concrete Pavement
40+00
41+00
42+00
43+00
44+00
36" WW
30" WW
8" WATER
Line A
Line I
CP #10
FB. 1 Pg. 12 & 22
4110-1560 Sh. 6
4110-1560 Sh. 7
Ex. 8" Water
Ex. 36" R.C. Wastewater
Ex. 8" Wastewater
Low point
Low bank
Bushline
Shrub
Conc. Alley
W. Fence
C.L. Fence
Shrub
Shrub
Shrub

CONSTRUCT 30" & 18" WASTEWATER MAINS ALONG NEW HORIZONTAL ALIGNMENT

K111 Ex. 36" W.W. Built 1950

WHITE ROCK LAKE

P.I. 46+22.37 ~ Prop. W.W. Line A
Δ = 34°26'26" Rt
N. 6989128.3035
E. 2516617.4477
Construct: 1- 5.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 30" W.W. Out (SE)
Connect Prop. 30" W.W. In (NE)

P.I. 48+25.10 ~ Prop. W.W. Line A
Δ = 15°10'42" Rt
N. 6989305.5490
E. 2516815.8575
Construct: 1- 5.0' Dia. Pressure-Type W.W.M.H. per DWU Std Dwg #304
Connect Prop. 30" W.W. Out (SW)
Connect Prop. 18" W.W. In (NE)

DO NOT ENTER!

THIS IS AN ENVIRONMENTALLY SENSITIVE AREA AND IS NOT TO BE DISTURBED. CONTRACTOR SHALL COORDINATE WITH PARKS DEPARTMENT PERSONNEL PRIOR TO ANY CONSTRUCTION IN THIS AREA.

Blockland Prairie Boundary

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 4110-0695 SH. 12.

2. ALL ASPHALT REPAIRS SHALL BE SLURRY SEALED EDGE TO EDGE ALONG WINFREY POINT DR WITHIN THE LIMITS SHOWN IN ACCORDANCE WITH THE DALLAS WATER UTILITIES STANDARDS SPECIFICATIONS, LATEST VERSION.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area
Contact ATMOS Energy Corp. Two Working Days Prior To Construction.
Call: TEXAS 811 or 811

E. LAWTHER DR.

WINFREY POINT DR.

Line A

Line 1

46+17.4 ~ Prop. W. Line 1
N. 6989037.4970
E. 2516708.8362
Install:
1- 8" 22.5° Horiz. Bend

46+49.7 ~ Prop. W. Line 1
N. 6989069.5010
E. 2516705.1098
Install:
1- 8" 22.5° Horiz. Bend

46+71.8 ~ Prop. W. Line 1
N. 6989090.7791
E. 2516711.1543
Install:
1- 8" 11.25° Horiz. Bend

45+62.5 ~ Prop. W. Line 1
N. 6988989.5082
E. 2516735.5920
Install:
2- 8" 45° Vert. Bends

47+00.0 ~ Prop. W. Line 1
N. 6989115.9886
E. 2516723.8593
Install:
2- 8" 45° Vert. Bends

47+64.6 ~ Prop. W. Line 1
N. 6989173.6551
E. 2516752.9218
Install:
1- 8" 11.25° Horiz. Bend

45+47.5 ~ Prop. W. Line 1
N. 6988976.4077
E. 2516742.8961
Install:
1- 8" 22.5° Horiz. Bend

SLURRY SEAL LIMITS, SEE NOTE 2.

BLK 2999
WHITE ROCK EAST PARK
ACS 824.4861
9511 WINFREY POINT WAY
CITY OF DALLAS
1500 MARILLA ST
DALLAS, TX 75201

K111 Ex. 8" Water Built 1930

INSTALL 450 LF 8" PVC (DR-14) C900 WATER PIPE CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

MATCH MARK 44+79 PROP. WATER LINE 1
MATCH MARK 44+00 PROP. W.W. LINE A
See 4110-1560 SH 43

MATCH MARK 49+29 PROP. WATER LINE 1
MATCH MARK 48+50 PROP. W.W. LINE A
See 4110-1560 SH 45

30" WW
8" WATER
18" WW

Ex. 36" R.C. Wastewater 4110-1560 Sh. 7
Ex. 8" Water 4110-1560 Sh. 7
FB. 1 Pg. 12 & 22

Ex. Concrete Pavement
Ex. Asphalt Pavement
Brick Pavers
Gutter Inlet
Sign
Ex. 24" RCP
Ex. 8" RCP
Bushline
6' Wooden Bal.
6' Wooden Bar
10 LF Concrete Encasement
Conc. Alley
Bushes
EV
OE
PP

36" Pecan
40" Pecan
46" Pecan
24" Pecan
24" Ash
18" Ash
30" Ash
68" Ash
14" Cdrelm

Abandon Ex. 36" W.W.

Line A

MATCH MARK 44+00 PROP. W.W. LINE A

MATCH MARK 48+50 PROP. W.W. LINE A

44+51.8 ~ Prop. W.W. Line A
Prop. 8" Water
F.L. 464.2±

46+01.6 ~ Prop. W.W. Line A
Prop. 8" Water
F.L. 464.2±

46+22.37 ~ Prop. W.W. Line A
Construct 1- 5.0' Dia. Pressure-Type W.W. Manhole
Top Elev. = 467.3±

49+25.0 ~ Prop. W.W. Line A
Construct 1- 5.0' Dia. Pressure-Type W.W. Manhole
Top Elev. = 467.3±

WS100 = 469.00

Ex. Grade

Prop. 8" Water, (Varies) Rt.

30" on 0.066%

18" on 1.40%

Abandon Ex. 36" W.W.

425 LF of 30" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "A-1" Embedment

25 LF of 18" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "B-2a" Embedment

F.L. 30" 456.304
F.L. 30" 456.937
F.L. 30" 456.910
F.L. 30" 457.003
F.L. 30" 457.036
F.L. 30" OUT (S) 457.051
F.L. 30" IN (W) 457.051
F.L. 30" 457.269
F.L. 30" 457.402
F.L. 30" 457.735
F.L. 30" 457.769
F.L. 30" OUT (S) 457.784
F.L. 18" IN (W) 457.795
F.L. 18" 458.100

480 475 470 465 460 455 450 445

44+00 45+00 46+00 47+00 48+00

REVISIONS

REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #10
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR. +/- 175' NORTHEAST OF A 3'X4' BOX CULVERT.
N. 6988669724.0; E. 2516714.1400; ELEV = 465.11

CONTROL POINT #11
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF BLK 5/4413, +/- 500' SOUTH OF EXISTING SOFTBALL FIELD.
N. 6989189.3850; E. 2516912.0830; ELEV = 468.28

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
42-19M, 42-20W
WASTEWATER
BH E-13, 42-19S, 42-20S

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

APM & Associates, Inc.
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2201 Main Street, Suite 1100
Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

8" WATER & 30", 18" W.W. MAINS

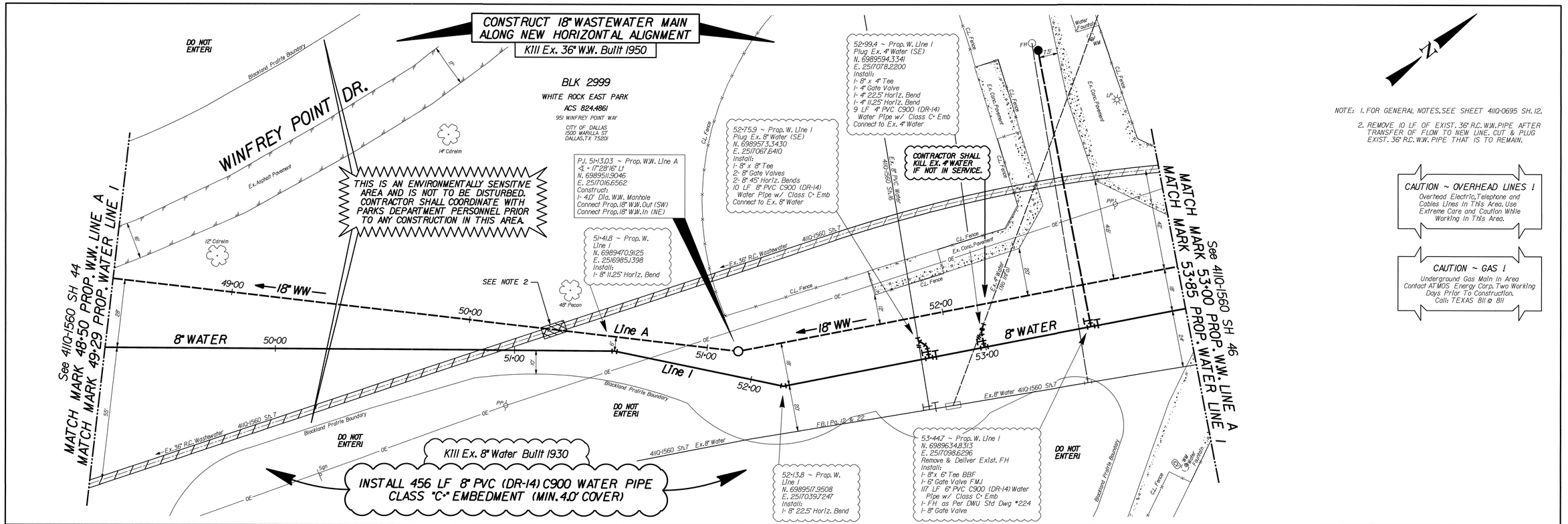
LAWTHER DRIVE

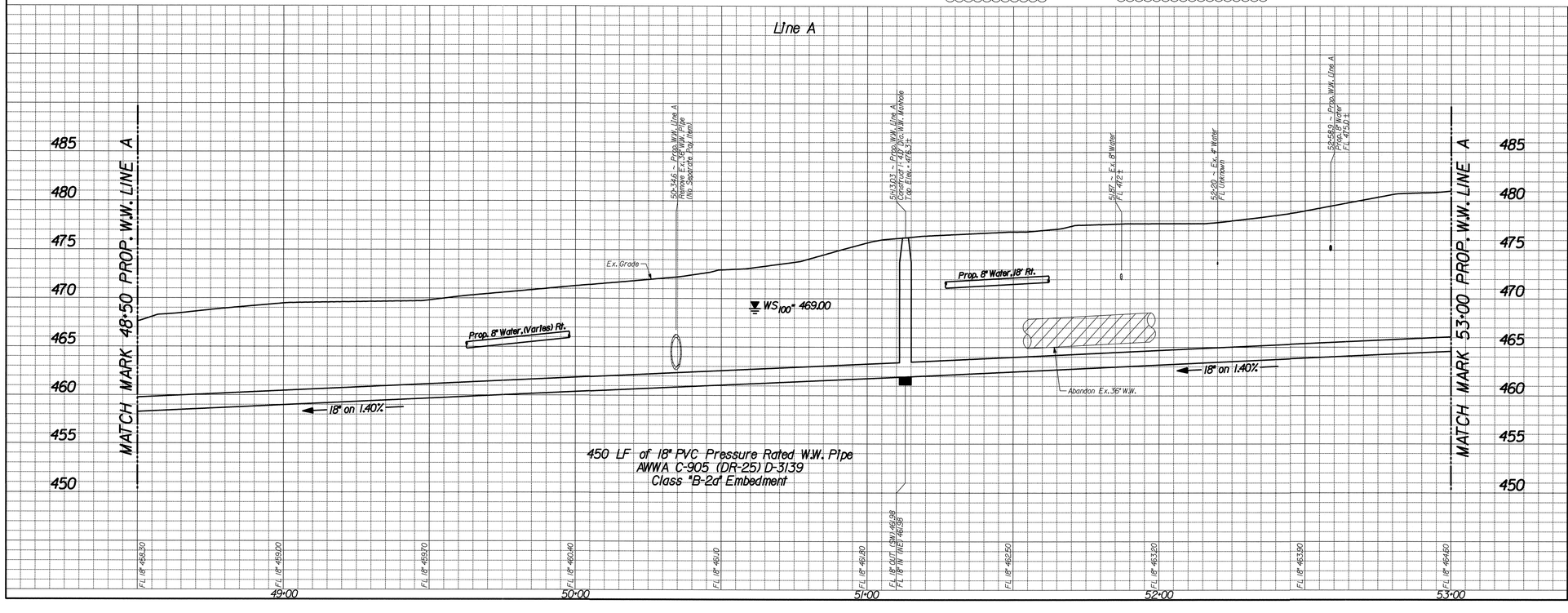
GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	44





450 LF of 18" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "B-2d" Embedment

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD. WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #11
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF BLK 5/4413, +/- 500' SOUTH OF EXISTING SOFTBALL FIELD.
N. 6989189.3850; E. 2516912.0830; ELEV = 468.28

CONTROL POINT #12
"X" CUT SET AT THE EDGE OF CONCRETE PVMT AT EAST SOFTBALL FIELD, +/- 150' SOUTH OF AN EXISTING BUILDING.
N. 6989674.1650; E. 2517129.4010; ELEV = 482.24

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
42-19W, 42-20W
WASTEWATER
BM E-13, 42-19S, 42-20S

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED
PROFESSIONAL ENGINEER
11/10/17

APM & Associates, Inc.
Engineering · Planning · Civil Services
2201 Main Street, Suite 1100
Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

8" WATER & 18" W.W. MAINS
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	45

CONSTRUCT 18" WASTEWATER MAIN ALONG NEW HORIZONTAL ALIGNMENT

KIII Ex. 36" W.W. Built 1950

54+97.4 ~ Prop. W.W. Line A
N. 6989855.1632
E. 2517189.6503
Construct:
1- 4.0' Dia. W.W. Manhole
Connect Prop. 18" W.W. Out (SW)
Connect Ex. 6" W.W. In (NW)
Plug Ex. 6" W.W. Out (SE)
Connect Prop. Lat. In (S)
Connect Prop. 18" W.W. In (NE)

54+87.3 ~ 9.1' Rt. Prop. W.W. Line A
Abandon Ex. W.W. Manhole Per DWU Std. Dwg. #516

P.I. 55+53.92 ~ Prop. W.W. Line A
∆ = 43°52'25" Rt
N. 6989905.6261
E. 2517215.0822
Construct:
1- 4.0' Dia. W.W. Manhole
Connect Prop. 18" W.W. Out (SW)
Connect Prop. 18" W.W. In (E)

Cut and Plug Ex. 18" W.W. In (SE)

P.I. 56+78.27 ~ Prop. W.W. Line A
∆ = 40°12'08" Rt
N. 6989946.8890
E. 2517332.3867
Construct:
1- 6.0' Dia. W.W. Manhole
Connect Prop. 18" W.W. Out (W)
Plug Ex. 36" W.W. Out (SW)
Connect Ex. 36" W.W. In (N)
Connect Prop. 18" W.W. In (E)

54+91.8 ~ Prop. W. Line I
N. 6989741.4956
E. 2517186.1222
Install:
1- 8" 22.5° Horiz. Bend
1- 8" 11.25° Horiz. Bend

54+49.2 ~ Prop. W. Line I
N. 6989728.5510
E. 2517145.6605
Install:
1- 8" 45° Horiz. Bend

57+21.9 ~ Prop. W.W. Line A
N. 6989931.3790
E. 2517373.1700
Remove Ex. 4' Dia. W.W. Manhole
Construct:
1- 4.0' Dia. Drop Conn. W.W. M.H.
Connect Prop. 18" W.W. Out (W)
Plug Ex. 18" W.W. Out (NW)
Connect Ex. 10" W.W. In (E)

57+42.4 ~ Prop. W. Line I
N. 6989938.6050
E. 2517340.7311
Install:
2- 8" 45° Vert. Bends

57+52.4 ~ Prop. W. Line I
N. 6989946.4854
E. 2517346.8873
Install:
2- 8" 45° Vert. Bends

58+15.8 ~ Prop. W. Line I
N. 6989996.4611
E. 2517385.9284
Install:
1- 8" 45° Horiz. Bend

MATCH MARK 53+85 PROP. WATER LINE I
MATCH MARK 53+00 PROP. W.W. LINE A
See 4110-1560 SH 45

MATCH MARK See 4110-1560 SH 47 58+50 PROP. WATER LINE I

Line A — 18" WW — SEE NOTE 2

Line I — 8" WATER

Ex. 36" R.C. Wastewater — 4110-1560 Sh. 8

Ex. 6" Wastewater 4110-1560 Sh. 8

Abandoned 6" Wastewater 4110-1560 Sh. 8

Abandoned 10" Wastewater

Ex. 18" D.I.P. W.W. 4110-1560 Sh. 8

Ex. 10" D.I.P. W.W. 4110-1036 Sh. 7

Abandon 16" Conc. F.M. WW 4110-1561B Sh. 4

Abandon 24" R.C. F.M. WW 4110-1561C Sh. 3

Ex. 8" Water 4110-1560 Sh. 7

FB. 1 Pg. 12 & 22

CP #12

CP #13

BLK 2999
WHITE ROCK EAST PARK
ACS 824.4861
951 WINFREY POINT WAY
CITY OF DALLAS
1500 MARILLA ST
DALLAS, TX 75201

EMERALD ISLE DR.

SLURRY SEAL LIMITS. SEE NOTE 3.

Ex. Gravel Pavement

Ex. Asphalt Pavement

Ex. Conc. Pavement

Ex. Building

Trashcan Recept.

Water Fountain

4- 8" Wooden Bol

3- 8" W.B. 6" Oak

28" Ash

42" Acorn

30" Ash

8" Wooden Pole

Sign

Cl. Fence

Conc. S/W

Ex. Grade

NOTE:
1. FOR GENERAL NOTES, SEE SHEET 4110-0695 SH. 12.
2. REMOVE 10 LF OF EXIST. 36" R.C. W.W. PIPE AFTER TRANSFER OF FLOW TO NEW LINE. CUT & PLUG EXIST. 36" R.C. W.W. PIPE THAT IS TO REMAIN.
3. ALL ASPHALT REPAIRS SHALL BE SLURRY SEALED EDGE TO EDGE ALONG EMERALD ISLE DR WITHIN THE LIMITS SHOWN IN ACCORDANCE WITH THE DALLAS WATER UTILITIES STANDARDS SPECIFICATIONS, LATEST VERSION.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area Contact ATMOS Energy Corp. Two Working Days Prior To Construction. Call: TEXAS 811 or 811

KIII Ex. 8" Water Built 1930

INSTALL 465 LF 8" PVC (DR-14) C900 WATER PIPE CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

Line A

MATCH MARK 53+00 PROP. W.W. LINE A

Ex. Grade

Prop. 8" Water, 18' Rt.

18" on 1.40%

18" on 2.82%

18" on 2.82%

18" on 2.82%

Abandon Ex. 36" W.W.

Abandon Ex. 18" W.W.

Ex. 10" W.W.

253 LF of 18" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "B-2d" Embedment

168 LF of 18" PVC Pressure Rated W.W. Pipe
AWWA C-905 (DR-25) D-3139
Class "B-1d" Embedment

54+65.2 ~ Prop. W.W. Line A
Remove Ex. 36" W.W. Pipe
(No Special Requirements)

54+87.3 ~ 9.1' Rt. Prop. W.W. Line A
Abandon Ex. W.W. Manhole
Per DWU Std. Dwg. #516

54+97.4 ~ Prop. W.W. Line A
Construct 1- 4.0' Dia. W.W. Manhole
Top Elev. = 482.1 ±

55+53.92 ~ Prop. W.W. Line A
Construct 1- 4.0' Dia. W.W. Manhole
Top Elev. = 482.2 ±

56+78.27 ~ Prop. W.W. Line A
Construct 1- 6.0' Dia. W.W. Manhole
Top Elev. = 482.1 ±

Ch 2.0 ~ Prop. W.W. Line F
Prop. 8" Water
El. 471.4 ±

57+21.9 ~ Prop. W.W. Line A
Remove Ex. 4' W.W. Manhole
Construct 1- 4.0' Dia. Drop Conn. W.W. M.H.
Top Elev. = 482.1 ±

Fl. 18" 466.80
Fl. 18" 465.30
Fl. 18" 466.00
Fl. 18" 466.70
Fl. 18" 468.98
Fl. 18" 470.39
Fl. 18" 471.86
Fl. 18" 473.27
Fl. 18" 474.73

53+00 54+00 55+00 56+00 57+00

495 490 485 480 475 470 465 460

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD. W/DBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #12
"X" CUT SET AT THE EDGE OF CONCRETE PVMT AT EAST SOFTBALL FIELD, +/- 150' SOUTH OF AN EXISTING BUILDING.
N. 6989674.1650; E. 2517129.4010; ELEV = 482.24

CONTROL POINT #13
"X" CUT SET AT THE EDGE OF CONCRETE PVMT ON THE EAST SIDE OF EMERALD ISLE DR. +/- 60' EAST OF EX. WWMH.
N. 6989951.9660; E. 2517428.7490; ELEV=481.70

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
42-19N, 42-20N
WASTEWATER
BH E-13, 42-19S, 42-20S

STATE OF TEXAS
ERIC K. KRONER
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FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

8" WATER & 18" W.W. MAINS

LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	46

INSTALL 500 LF 8" PVC (DR-14) C900 WATER PIPE
CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

K111 Ex. 8" Water Built 1930

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 4110-0695 SH. 12.

2. ALL ASPHALT REPAIRS SHALL BE SLURRY SEALED EDGE TO EDGE ALONG EMERALD ISLE DR., WHITE ROCK LAKE TRAIL AND E. LAWTHER DR WITHIN THE LIMITS SHOWN IN ACCORDANCE WITH THE DALLAS WATER UTILITIES STANDARDS SPECIFICATIONS, LATEST VERSION.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area Contact ATMOS Energy Corp. Two Working Days Prior To Construction. Call: TEXAS 811 @ 811

WINFREY POINT DR.

WHITE ROCK LAKE TRAIL

EMERALD ISLE DR.

MATCH MARK 58+50 PROP. WATER LINE 1

See 4110-1560 SH 46

MATCH MARK 63+50 PROP. WATER LINE 1

SLURRY SEAL LIMITS, SEE NOTE 2.

8" WATER 59+00

60+00

61+00 Line 1

62+00

63+00 8" WATER

59+63.9 ~ Prop. W. Line 1 = 0+00.0 ~ Prop. W. Line 3
N. 6990143.4035
E. 2517367.8783
Install:
1- 8" x 8" Tee
1- 8" Gate Valve

60+26.7 ~ Prop. W. Line 1
N. 6990205.7356
E. 2517360.2216
Install:
1- 8" 11.25° Horiz. Bend

60+62.2 ~ Prop. W. Line 1
N. 6990241.1909
E. 2517362.8545
Install:
1- 8" 11.25° Horiz. Bend

62+88.6 ~ Prop. W. Line 1
N. 6990449.3133
E. 2517293.6337
Install:
1- 8" 45° Horiz. Bend

62+70.3 ~ Prop. W. Line 1
N. 6990431.5969
E. 2517288.7215
Install:
1- 8" 45° Horiz. Bend

61+38.6 ~ Prop. W. Line 1
N. 6990317.0516
E. 2517353.5360
Install:
1- 8" 22.5° Horiz. Bend

BLK 2999
WHITE ROCK EAST PARK
ACS 824.4861
951 WINFREY POINT WAY
CITY OF DALLAS
1500 MARILLA ST
DALLAS, TX 75201

CP #14
MAG NAIL SET AT THE EDGE OF ASPHALT PAVEMENT ON THE EAST SIDE OF EMERALD ISLE DR. +/- 46' NORTH OF A 16" PECAN.
N. 6990185.2690; E. 2517455.1540; ELEV = 474.40

CP #15
PK NAIL SET AT THE EDGE OF ASPHALT PAVEMENT ON THE SOUTH SIDE OF WHITE ROCK LAKE TRAIL +/- 32' WEST OF A 28" CEDAR.
N. 6990403.1960; E. 2517220.2010; ELEV=463.48

CP #16
"X" CUT SET ON TOP OF CONCRETE BOLLARD AT THE SOUTH ENTRANCE OF SUNSET INN CIR., +/- 11' EAST OF THE SOUTH COLUMN OF GATE.
N. 6990602.1520; E. 2517575.5180; ELEV=464.70

PROP. 8" WATER LINE 3
SEE 4110-1560 SH. 48

Abandoned 16" Conc. F.M. WW. 4110-1560B Sh. 4

Abandoned 24" R.C.P. F.M. WW. 4110-1560C Sh. 3

Ex. 8" Water F.B.1 Pg. 12 & 22

INSTALL 400 LF 8" PVC (DR-14) C900 WATER PIPE
CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

K111 Ex. 8" Water Built 1930

MATCH MARK 63+50 PROP. WATER LINE 1

MATCH MARK 67+50 PROP. WATER LINE 1

See 4110-1560 SH 48

WHITE ROCK LAKE TRAIL

E. LAWTHER DR.

SUNSET INN CIR.

SLURRY SEAL LIMITS, SEE NOTE 2.

64+00

65+00

66+00

67+00

8" WATER

Line 1

WATER CURVE 7

PROP WATER CURVE 7 DATA
Δ = 41°49'35"
R = 200.00'
L = 146.00'
T = 76.43'
P.C. = 65+30.58
N. 6990143.9417
E. 2517457.2232
P.T. = 66+76.58
N. 6990243.9681
E. 2517490.1681

BLK 2999
WHITE ROCK EAST PARK
ACS 824.4861
951 WINFREY POINT WAY
CITY OF DALLAS
1500 MARILLA ST
DALLAS, TX 75201

Ex. 8" Water F.B.1 Pg. 12 & 22

REVISIONS			
REV. NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD. WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #14
MAG NAIL SET AT THE EDGE OF ASPHALT PAVEMENT ON THE EAST SIDE OF EMERALD ISLE DR. +/- 46' NORTH OF A 16" PECAN.
N. 6990185.2690; E. 2517455.1540; ELEV = 474.40

CONTROL POINT #15
PK NAIL SET AT THE EDGE OF ASPHALT PAVEMENT ON THE SOUTH SIDE OF WHITE ROCK LAKE TRAIL +/- 32' WEST OF A 28" CEDAR.
N. 6990403.1960; E. 2517220.2010; ELEV=463.48

CONTROL POINT #16
"X" CUT SET ON TOP OF CONCRETE BOLLARD AT THE SOUTH ENTRANCE OF SUNSET INN CIR., +/- 11' EAST OF THE SOUTH COLUMN OF GATE.
N. 6990602.1520; E. 2517575.5180; ELEV=464.70

Horizontal Scale: 1" = 20'
0' 20' 40'

Vertical Scale: 1" = 6'
0' 6' 12'

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

REFERENCES
WATER 42-19N, 42-20W
WASTEWATER BH E-13, 42-19S, 42-20S

APM & Associates, Inc.
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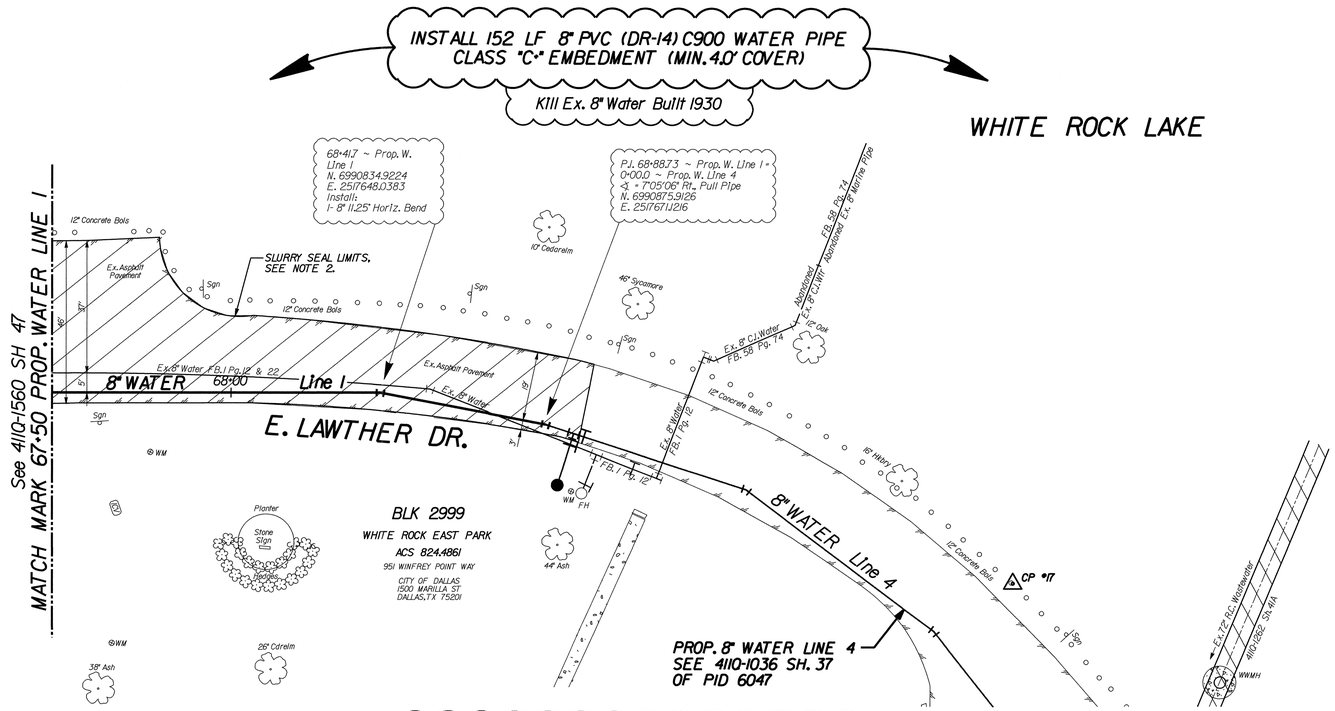
FIRM REG. #3091

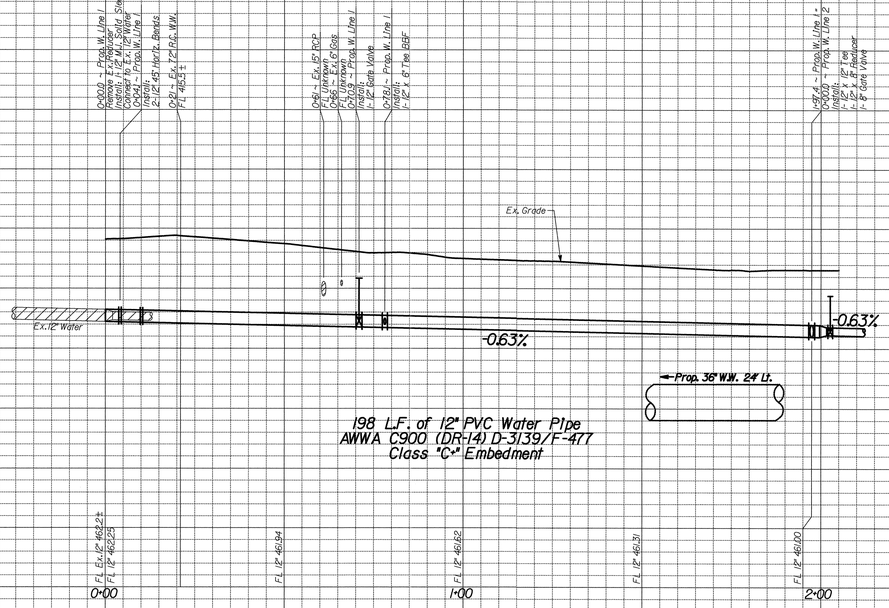
CONTRACT NO. 18-021/022 | PID 5826

8" WATER MAIN
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	47

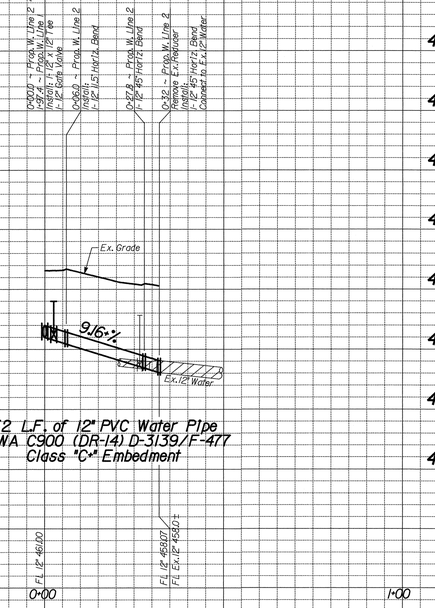

INSTALL 152 LF 8" PVC (DR-14) C900 WATER PIPE
CLASS "C" EMBEDMENT (MIN. 4.0' COVER)
KIII Ex. 8" Water Built 1930
WHITE ROCK LAKE
68+41.7 ~ Prop. W. Line 1
N. 6990834.9224
E. 2511648.0383
Install:
1- 8" 11.25° Horiz. Bend
P.I. 68+88.73 ~ Prop. W. Line 1 = 0+00.0 ~ Prop. W. Line 4
Δ = 7°05'06" Rt. Pull Pipe
N. 6990875.9126
E. 2511671.1216
SLURRY SEAL LIMITS, SEE NOTE 2.
8" WATER 68+00 Line 1
E. LAWTHER DR.
See 4110-1560 SH 47
MATCH MARK 67+50 PROP. WATER LINE 1
BLK 2999
WHITE ROCK EAST PARK
ACS 824.4861
951 WINFREY POINT WAY
CITY OF DALLAS
1500 MARILLA ST
DALLAS, TX 75201
8" WATER Line 4
PROP. 8" WATER LINE 4
SEE 4110-1036 SH. 37
OF PID 6047
CP #17
INSTALL 105 LF 8" PVC (DR-14) C900 WATER PIPE
CLASS "C" EMBEDMENT (MIN. 4.0' COVER)
KIII Ex. 8" Water Built 1930
P.I. 0+08.59 ~ Prop. W. Line 3
Δ = 41°41'12" Lt., Pull Pipe
N. 6990144.4508
E. 2511376.4035
0+71.0 ~ Prop. W. Line 3
N. 6990166.2312
E. 2511433.4904
Install:
1- 8" 22.5° Horiz. Bend
0+00.0 ~ Prop. W. Line 3 = 59+63.9 ~ Prop. W. Line 1
See Install Note On 4110-1560 Sh. 47
N. 6990143.4035
E. 2511367.8783
SLURRY SEAL LIMITS, SEE NOTE 2.
WINFREY POINT DR.
8" WATER Line 3
EMERALD ISLE DR.
0+03.0 ~ Prop. W. Line 3
N. 6990799.4110
E. 2511863.8558
Install:
1- 8" Gate Valve
PROP. 8" WATER LINE 1
SEE 4110-1560 SH. 47
0+45.8 ~ Prop. W. Line 3
N. 6990151.7106
E. 2511412.9363
Install:
1- 8" 22.5° Horiz. Bend
1+05.0 ~ Prop. W. Line 3
Plug Ex. 8" Water (NW)
N. 6990190.7355
E. 2511452.7461
Install:
1- 8" Gate Valve
2- 8" 45° Horiz. Bends
Connect to Ex. 8" Water
CP #14
BLK 2999
WHITE ROCK EAST PARK
ACS 824.4861
951 WINFREY POINT WAY
CITY OF DALLAS
1500 MARILLA ST
DALLAS, TX 75201
Ex. 72" RCP, Westminster
4110-1262, Sh. 48A
Ex. 8" Water FB. 1 Pg. 12 & 22
Ex. 12" Water
Ex. 8" Water FB. 58 Pg. 14
Abandoned Ex. 8" Marrita Pipe
Ex. 8" C.I. Water FB. 58 Pg. 14
Ex. 8" Water FB. 1 Pg. 12
Ex. Asphalt Pavement
12" Concrete Bols
16" Cedarelm
16" Sycamore
16" Hkbry
16" Oak
16" Pecan
18" Pecan
32" Pecan
34" Pecan
36" Elm
12" Ash
44" Ash
26" Cdrelm
38" Ash
Planter
Stone Sign
Trees
Sign
WM
WWMH
Ex. Gravel Parking
Ex. Gravel Driveway
Ex. Concrete Driveway
Ex. Metal Fence
8" Wooden Bd.
Bushline
Ex. Asphalt Pavement
Ex. 18" RCP
Ex. 8" W.L.
Ex. 6" W.L.
Ex. 8" Water
Ex. 8" G.P. Water
Ex. 8" Gate Valve & Vault
Ex. 8" Water FB. 1 Pg. 12 & 22
Ex. 8" Water FB. 1 Pg. 12 & 22
Ex. 8" Water (NW)
Ex. 8" Water FB. 1 Pg. 12 & 22
Ex. 8" Water FB. 1 Pg. 12 & 22
Ex. 8" Water FB. 1 Pg. 12 & 22

Line 1
SEE 411Q-1560 SH. 34 FOR PLAN VIEW



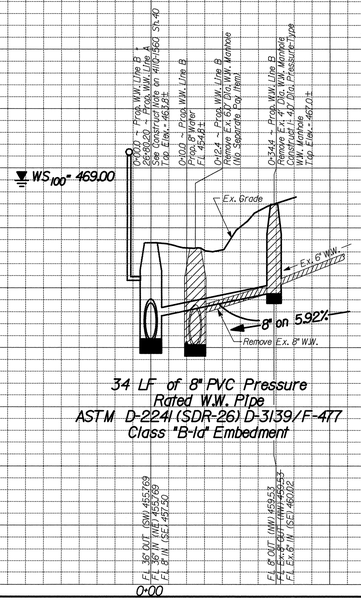
198 L.F. of 12" PVC Water Pipe
AWWA C900 (DR-14) D-3139/F-477
Class "C" Embedment

Line 2
SEE 411Q-1560 SH. 34 FOR PLAN VIEW



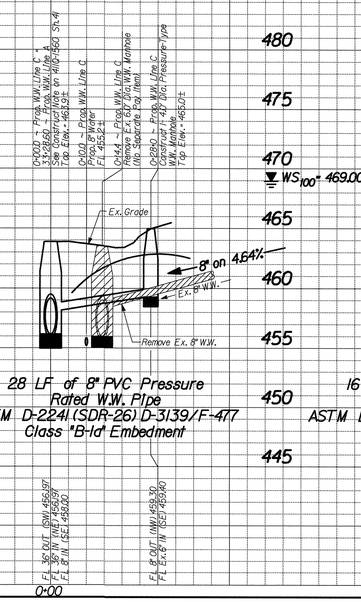
32 L.F. of 12" PVC Water Pipe
AWWA C900 (DR-14) D-3139/F-477
Class "C" Embedment

Line B
SEE 411Q-1560 SH. 40 FOR PLAN VIEW



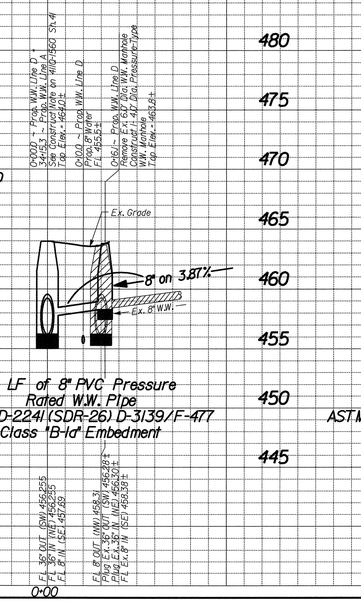
34 L.F. of 8" PVC Pressure
Rated W.W. Pipe
AST.M D-2241 (SDR-26) D-3139/F-477
Class "B-Id" Embedment

Line C
SEE 411Q-1560 SH. 41 FOR PLAN VIEW



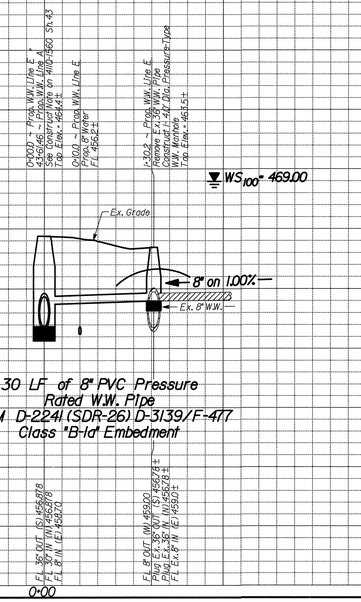
28 L.F. of 8" PVC Pressure
Rated W.W. Pipe
AST.M D-2241 (SDR-26) D-3139/F-477
Class "B-Id" Embedment

Line D
SEE 411Q-1560 SH. 41 FOR PLAN VIEW



16 L.F. of 8" PVC Pressure
Rated W.W. Pipe
AST.M D-2241 (SDR-26) D-3139/F-477
Class "B-Id" Embedment

Line E
SEE 411Q-1560 SH. 43 FOR PLAN VIEW



30 L.F. of 8" PVC Pressure
Rated W.W. Pipe
AST.M D-2241 (SDR-26) D-3139/F-477
Class "B-Id" Embedment

REVISIONS			
REV. NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
42-19N, 42-20W
WASTEWATER
BH E-13, 42-19S, 42-20S

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

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2201 Main Street, Suite 1100
Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

12" WATER & 8" W.W. MAINS
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	411Q	1560	49

PUBLIC WORKS NOTES

GENERAL

1. THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) PUBLIC WORKS CONSTRUCTION STANDARDS - NORTH CENTRAL TEXAS, OCTOBER 2004 EDITION, AND THE CITY OF DALLAS ADDENDUM TO THE PUBLIC WORKS CONSTRUCTION STANDARDS - NORTH CENTRAL TEXAS, ARE HEREINAFTER, COLLECTIVELY REFERRED TO AS "THE STANDARD SPECIFICATIONS".
2. THE WORK ORDER FOR THIS PROJECT IS ESTIMATED TO BE ISSUED DURING THE MONTH OF . THE CONTRACTOR SHALL BEGIN WORK ON THE DATE SPECIFIED ON THE WORK ORDER. ANY REVISIONS/CHANGE ORDERS PROVIDED TO CONTRACTOR FOR ADDITIONAL WORK OR REDUCTION IN WORK DOES NOT CONSTITUTE A NEW START DATE.
3. THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS BEFORE ANY WORK MAY BEGIN. ALL PERMIT FEES SHALL BE CONSIDERED INCIDENTAL TO PAY ITEMS PROVIDED. STREET EXCAVATION PERMIT APPLICATIONS MUST BE SUBMITTED IN ROOM 312 OF THE OAK CLIFF MUNICIPAL CENTER, AT LEAST TWO WORKING DAYS BEFORE THE START OF CONSTRUCTION. FOR MORE INFORMATION, CALL (214) 948-4290.
4. THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION SCHEDULE UPDATE TO THE ENGINEER AND THE CONSTRUCTION INSPECTOR WITH THE MONTHLY PAY ESTIMATE.
5. THE CONTRACTOR WILL BE PAID ONLY FOR THE WORK WHICH IS COMPLETED IN STRICT CONFORMANCE TO THE CITY OF DALLAS STANDARD CONSTRUCTION DETAILS, FILE 251D-1, UPDATED SEPTEMBER 2002; THE STANDARD SPECIFICATIONS; DALLAS WATER UTILITIES STANDARD DRAWINGS, UPDATED OCTOBER 2016; AND ALL ADDENDUMS AND APPLICABLE SPECIFICATIONS AS STATED IN THE SPECIAL PROVISIONS.
6. NO FINAL PAYMENT TO CONTRACTOR SHALL BE RELEASED PRIOR TO THE ACCEPTANCE OF THE FINAL INSPECTION FROM THE AUTHORIZED PERSONNEL OF CITY OF DALLAS PARKS DEPARTMENT AND DWU.
7. THE CONTRACTOR SHALL CONTACT THE ENGINEER SHOULD ANY DISCREPANCIES BE FOUND IN THE CONSTRUCTION PLANS AND/OR THE SPECIAL PROVISIONS. THE CONTRACTOR WILL NOT BE COMPENSATED FOR ANY WORK NOT AUTHORIZED BY THE ENGINEER.
8. THE CONTRACTOR SHALL NOTIFY THE CITY OF DALLAS CONSTRUCTION INSPECTOR OR DISTRICT SUPERINTENDENT TWO WORKING DAYS BEFORE STARTING WORK, SO THAT PROPER JOB INSPECTION CAN BE SCHEDULED.
9. THE CONTRACTOR SHALL NOTIFY THE CITY OF DALLAS CONSTRUCTION INSPECTOR OR DISTRICT SUPERINTENDENT ONE WORKING DAY IN ADVANCE OF ANY CONCRETE PLACING OR ASPHALT LAYING OPERATION.
10. THE CONTRACTOR MUST FURNISH AT LEAST TWO PHONE NUMBERS WHERE RESPONSIBLE PERSONNEL CAN BE REACHED IN CASE OF EMERGENCY DURING WORKING AND NON-WORKING HOURS. IF THERE ARE ANY CHANGES, THE INFORMATION MUST BE UPDATED IMMEDIATELY FOR THE DURATION OF THE PROJECT.
11. IF CULTURAL RESOURCES (ARCHAEOLOGICAL FINDINGS UNEARTHED) ARE LOCATED DURING CONSTRUCTION, WORK SHALL STOP IMMEDIATELY IN THAT AREA.
12. THE ENGINEER/INSPECTOR WILL NOT SUPERVISE, DIRECT OR HAVE CONTROL OVER THE CONTRACTOR'S WORK; NOR WILL THE ENGINEER/INSPECTOR HAVE AUTHORITY OVER OR BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION; FOR THE SAFETY PRECAUTIONS AND PROGRAMS INCIDENT TO THE WORK OF CONTRACTOR; OR FOR ANY FAILURE OF CONTRACTOR TO COMPLY WITH LAWS, RULES, REGULATIONS, ORDINANCES, CODES OR ORDERS APPLICABLE TO CONTRACTOR FURNISHING AND PERFORMING THE WORK.

PAVING

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTING BENCHMARKS AFFECTED BY THE CONSTRUCTION OR ESTABLISHING NEW ONES (NO SEPARATE PAY ITEM).
14. ALL CONCRETE SHALL BE PLACED IN COMPLIANCE WITH THE SPECIFIED CLASSES AND QUALITY OF CONCRETE IN THE STANDARD SPECIFICATIONS, ITEM 303, "PORTLAND CEMENT CONCRETE PAVEMENT", UNLESS OTHERWISE MODIFIED BY THE PLANS AND SPECIAL PROVISIONS OF THE PROJECT. ALL OTHER CONCRETE NOT SPECIFIED SHALL BE CLASS A CONCRETE.
15. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE COMPLETE CONCRETE MIX (BATCH) DESIGN AT THE PRE-CONSTRUCTION CONFERENCE AND/OR AT LEAST TEN WORKING DAYS PRIOR TO THE START OF ANY CONCRETE PLACING OPERATIONS (FAX INFORMATION IS NOT ACCEPTABLE). IF VOLUMETRIC CONCRETE IS USED, THE SAME INFORMATION IS REQUIRED. (NOTE: VOLUMETRIC CONCRETE IS NOT APPROVED FOR PLACEMENT OF CONCRETE FOR STREET OR ALLEY PAVING, BUT MAY BE USED FOR SIDEWALK, CURB AND GUTTER, DRIVEWAY APPROACH, AND COMPOSITE GABION CONCRETE BEAMS. A SHEET OF TRUCK GATE SETTINGS FROM THE SUPPLIER MUST BE APPROVED BY THE ENGINEER, IN ADDITION TO THE COMPLETE CONCRETE MIX DESIGN.)
16. ALL REINFORCING STEEL AND DOWEL BARS IN PAVEMENT SHALL BE SUPPORTED AND MAINTAINED AT THE CORRECT CLEARANCES BY THE USE OF BAR CHAIRS OR OTHER APPROVED SUPPORT.
17. THE USE OF WOOD FORMS FOR PAVEMENT CONSTRUCTION WILL BE PERMITTED ONLY FOR LEAVEOUTS, ALLEYS, SIDEWALKS, DRIVEWAYS, BARRIER FREE RAMPS AND INTERSECTIONS. WOOD FORMS MAY BE PERMITTED FOR OTHER USES, BUT ONLY ON A CASE-BY-CASE BASIS, AND MUST BE EXPLICITLY AUTHORIZED BY THE ENGINEER.
18. DUMMY JOINTS SHALL BE SAWED IN THE PAVEMENT ON THIS PROJECT. DUMMY JOINTS WILL BE SPACED 15 FEET ON CENTERS UNLESS DIRECTED OTHERWISE BY THE ENGINEER. SPACING VARIATIONS SHALL BE MADE AT BLOCKOUTS, CONSTRUCTION JOINTS AND STREET INTERSECTIONS TO LINE UP WITH EXISTING PAVING JOINTS AS DIRECTED BY THE CITY OF DALLAS. THE SPACING BETWEEN ANY JOINT SHALL NOT BE LESS THAN 10 FEET NOR MORE THAN 20 FEET. ALL DUMMY JOINTS WILL BE SAWED NOT LATER THAN 12 HOURS AFTER THE PLACEMENT OF THE PAVEMENT, AS DIRECTED BY THE CITY OF DALLAS. SEE THE STANDARD CONSTRUCTION DETAILS, FILE 251D-1, FOR ADDITIONAL INFORMATION.
19. DRIVE APPROACHES DAMAGED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED TO MATCH THE EXISTING CONDITIONS, AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE CITY OF DALLAS OR ITS REPRESENTATIVE. DRAINAGE PIPE UNDER DRIVE APPROACHES AND E. LAWTHER DR. DAMAGED BY THE CONTRACTOR SHALL BE REPLACED OR REPAIRED TO EQUAL OR BETTER THAN EXISTING CONDITION, AT THE CONTRACTOR'S EXPENSE.
20. BARRIER FREE RAMPS WILL BE BUILT WITH THIS PROJECT. PAY ITEMS WILL BE THOSE SHOWN ON THE PLANS. LOCATIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO CLEAR OBSTRUCTIONS. RAMPS SHALL BE INSTALLED AS SHOWN IN THE STANDARD CONSTRUCTION DETAILS, FILE 251D-1, SHEET 9006. ALL BARRIER FREE RAMPS SHALL MEET TEXAS ACCESSIBILITY STANDARDS (T.A.S.) REQUIREMENTS FOR SLOPE, TEXTURE, SURFACE FINISH AND COLOR.
21. WHEN BARRIER FREE RAMPS AND/OR SIDEWALKS ARE PLACED IMMEDIATELY ADJACENT TO CONCRETE CURB AND GUTTER, THE CONCRETE FOR THE CURB AND GUTTER SHALL BE PLACED FIRST AND ALLOWED TO CURE BEFORE CONCRETE FOR BARRIER FREE RAMPS AND/OR SIDEWALKS IS PLACED. THIS SEPARATION IS NECESSARY TO SATISFY THE REQUIREMENTS FOR KEYWAY OR KEYWAY REPLACEMENT AND THE DIFFERENT STRENGTHS OF CONCRETE REQUIRED FOR EACH AS SHOWN IN THE STANDARD CONSTRUCTION DETAILS, FILE 251D-1, SHEETS 9005 & 9006.
22. VARIABLE HEIGHT CURB AT INTERSECTIONS AND SLOPING CURBS AT DRIVES WILL BE BUILT TO MATCH FUTURE BARRIER FREE RAMPS AS DIRECTED BY THE ENGINEER. NO SEPARATE PAY ITEMS ARE PROVIDED.
23. DURING SIDEWALK REPLACEMENT, IF ADJACENT RETAINING WALLS ARE DAMAGED OR REMOVED AS A RESULT OF CONTRACTOR'S ACTIONS, THEY ARE TO BE REPLACED WITH A WALL OF EQUAL OR BETTER QUALITY, USING LIKE-KIND MATERIAL. NO SEPARATE PAY ITEMS ARE PROVIDED.
24. WHEN BARRIER FREE RAMP IS PAID AS EACH, ANY RETAINING WALL BUILT ADJACENT TO THE BARRIER FREE RAMP WILL BE MEASURED AND PAID FOR UPRIGHT PORTION ONLY. THE FOOTING PORTION OF THIS SECTION OF RETAINING WALL SHALL BE INCIDENTAL TO THE BARRIER FREE RAMP.
25. THE PROPOSED SIDEWALK ALIGNMENT MAY BE REVISED AS DIRECTED BY THE ENGINEER TO PREVENT THE REMOVAL OF TREES, ENSURING THAT ADEQUATE WIDTH IS RETAINED FOR HANDICAP ACCESS.
26. THE CONTRACTOR SHALL PROTECT ALL EXISTING FENCES AND MAIL BOXES. ANY DAMAGES DUE TO CONTRACTOR'S ACTION SHALL BE REPAIRED AT HIS/HER EXPENSE.
27. MAIL BOXES WILL BE RESET AS DIRECTED BY THE ENGINEER. ALL MAIL BOXES TO BE REMOVED SHALL BE STORED AND RESET AS SOON AS ALLOWED BY CONSTRUCTION ACTIVITIES. ALL MAIL BOXES DAMAGED BY CONSTRUCTION ACTIVITIES (OR WHILE BEING STORED) SHALL BE REPLACED WITH MAIL BOXES OF EQUAL OR BETTER QUALITY, AND OF A SIMILAR STYLE TO THOSE BEING REPLACED. SEE THE SPECIAL PROVISION.
28. WHEN ENCROACHING MASONRY WALLS AND LANDSCAPING PLANTS AND MATERIALS ARE TO BE REMOVED, SUITABLE MATERIAL AND PLANTS WILL BE SALVAGED FOR THE PROPERTY OWNER AS DIRECTED BY THE ENGINEER. PLANTS, SHRUBBERY, LANDSCAPING, OR ANY LIVING TREES SHALL BE PROTECTED AND SHALL NOT BE REMOVED FROM THE WORK SITE. DAMAGE TO THESE MATERIALS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHOULD CONTACT THE ENGINEER PRIOR TO ANY REMOVAL.
29. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXISTING FACILITIES IN AND AROUND THE PROJECT AREA. THESE INCLUDE TREES, PLANTINGS, CONCRETE PAVING, BENCHES, SIGNS AND OTHER FACILITIES FOUND ON SITE. THE CONTRACTOR SHALL REPAIR OR REPLACE, AT NO COST TO THE CITY, ANY FACILITIES DAMAGED DURING CONSTRUCTION.
30. BEFORE THE START OF THE CONSTRUCTION, SPRINKLER SYSTEMS MUST BE CHECKED IN THE PRESENCE OF THE PROPERTY OWNER. ANY DAMAGES TO EXISTING SPRINKLER SYSTEMS DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ADJUSTMENT OF SPRINKLER SYSTEMS REQUIRES OBTAINING A COST ESTIMATE FOR ADJUSTMENT OF ALL RELATED COMPONENTS INCLUDING, BUT NOT LIMITED TO, VALVES, PIPES, WIRING & HEADS. THE COST ESTIMATE WILL BE SUBMITTED TO THE ENGINEER FOR REVIEW, AND WILL BE ADDED TO THE CONTRACT, IF APPROVED.
31. THE LOCATIONS OF DRIVEWAYS, STEPS, ETC., AS SHOWN ON THESE PLANS ARE APPROXIMATE. ACCURATE LOCATIONS SHALL BE DETERMINED AT THE TIME OF CONSTRUCTION AFTER CONSULTATION WITH THE ENGINEER.

ENVIRONMENTAL

32. THE CONTRACTOR MUST HAVE A WRITTEN AGREEMENT WITH THE PROPERTY OWNER ON FILE WITH THE CITY OF DALLAS BEFORE THE CONTRACTOR MAY USE OR PLACE ANY MATERIALS OR EQUIPMENT ON PRIVATE PROPERTY. IN ADDITION, THE CONTRACTOR SHALL PROVIDE A COPY OF THE TEMPORARY CERTIFICATE OF OCCUPANCY (C.O.) OR SPECIAL USE PERMIT (S.U.P.) AS REQUIRED OF THE PROPERTY OWNER, PER CITY OF DALLAS ORDINANCE NO. 22996. WHEN THE CONTRACTOR ELECTS TO PLACE EXCESS FILL ON PRIVATE PROPERTY ON A PERMANENT BASIS. LETTERS OF FINAL APPROVAL AND RELEASE FROM THE AFFECTED PROPERTY OWNER(S) MUST BE SUBMITTED TO THE CITY OF DALLAS BEFORE FINAL PAYMENT WILL BE AUTHORIZED ON THIS PROJECT. NO EXCESS EXCAVATED MATERIAL SHALL BE DEPOSITED IN LOW AREAS OR ALONG ANY NATURAL DRAINAGE WAY, WITHOUT WRITTEN PERMISSION FROM THE ENGINEER. IF THE CONTRACTOR PLACES EXCESS MATERIAL IN AREAS WITHOUT WRITTEN PERMISSION, DAMAGE RESULTING FROM SUCH FILL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH FILL MATERIAL SHALL BE REMOVED AT CONTRACTOR'S OWN COST, IF THE CITY OF DALLAS SO DIRECTS. THE AREA SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION.
33. THE CITY OF DALLAS RESERVES THE RIGHT TO ISSUE THE WORK ORDER FOR PAY ITEM 101, CLEARING AND GRUBBING, SEPARATE AND APART FROM THE WORK ORDER FOR THE REMAINDER OF THE PROJECT. AFTER THE CLEARING AND GRUBBING HAS BEEN COMPLETED TO THE SATISFACTION OF THE ENGINEER, THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR MAINTENANCE OF THE SITE, BARRICADES OR THE WARNING FACILITIES OF OTHERS UNTIL THE ISSUANCE OF THE WORK ORDER FOR THE REMAINDER OF THE PROJECT.
34. NO TREES SHALL BE CUT EXCEPT ON SPECIFIC AUTHORITY OF THE ENGINEER. LIMBS OVERHANGING THE BARRIER FREE RAMPS OR SIDEWALK TRIMMED TO A HEIGHT OF 8 FEET FROM THE GROUND & SHAVING OF TREE ROOTS SHALL BE INCIDENTAL TO PAY ITEM 101, CLEARING & GRUBBING, OR INCIDENTAL TO THE PROJECT WHEN PAY ITEM 101 IS NOT PROVIDED.
35. PAY ITEM 102, UNCLASSIFIED EXCAVATION, WILL NOT INCLUDE CONCRETE WORK OR ANY OTHER MATERIAL REMOVED AS SEPARATE PAY ITEMS.
36. THE CONTRACTOR MAY EXCAVATE THE PROPOSED ROADWAY, FULL WIDTH, ONLY WITH THE PRIOR APPROVAL OF THE ENGINEER AND THE CITY OF DALLAS.
37. THE QUANTITY OF UNCLASSIFIED EXCAVATION NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT IS ESTIMATED TO BE APPROXIMATELY 5,400 CUBIC YARDS.
38. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND SIDEWALKS ADJACENT TO THE PROJECT FREE OF MUD AND DEBRIS FROM THE CONSTRUCTION AT ALL TIMES.
39. ALL STORM WATER POLLUTION PREVENTION MEASURES SHALL BE USED IN COMPLIANCE WITH THE STANDARD SPECIFICATIONS, ITEM 201, "TEMPORARY EROSION, SEDIMENTATION, AND WATER POLLUTION PREVENTION AND CONTROL". EROSION CONTROL MEASURES SHALL BE REMOVED UPON THE SUCCESSFUL COMPLETION OF THE PROJECT.
40. ALL WASTE MATERIAL AND/OR EXCESS EXCAVATION NOT USED AS PART OF THE WORK SHALL BE REMOVED FROM THE JOB SITE AND DISPOSED OF IN A TIMELY MANNER AT ACCEPTABLE LOCATIONS IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS (NO SEPARATE PAY ITEM).
41. THE CONTRACTOR SHALL HAVE AN ON-SITE SPILL RESPONSE KIT. CONSTRUCTION PERSONNEL SHALL BE TRAINED ON HOW TO USE THE SPILL RESPONSE KIT. THE CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE CITY OF DALLAS ENVIRONMENTAL POLICY. NO SPILLS WILL BE ALLOWED TO ENTER THE STORM DRAINAGE SYSTEM.

TRAFFIC

42. THE CONTRACTOR SHALL MAINTAIN PROPER BARRICADES AND SAFETY MEASURES FOR THE PROTECTION OF THE TRAVELING PUBLIC DURING THE CONSTRUCTION OF THIS PROJECT AS COVERED IN THE STANDARD SPECIFICATIONS, ITEM 107.19. "PROTECTION OF WORK AND OF PERSONS AND PROPERTY".
43. ALL BARRICADES, WARNING SIGNS, LIGHTS, DEVICES, ETC., FOR THE GUIDANCE AND PROTECTION OF TRAFFIC AND PEDESTRIANS MUST CONFORM TO THE INSTALLATION SHOWN IN THE LATEST TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), AS CURRENTLY AMENDED BY THE TEXAS DEPARTMENT OF TRANSPORTATION.
44. THE CONTRACTOR SHALL PREPARE DETAILED TRAFFIC CONTROL PLANS SHOWING ALL SIGNS AND DETOUR ROUTES IN ACCORDANCE WITH THE TMUTCD AND SUBMIT THEM TO THE CITY OF DALLAS FOR APPROVAL PRIOR TO SETTING UP FOR CONSTRUCTION. THE CONTRACTOR SHALL BE REQUIRED TO DEVELOP A SEQUENCE OF CONSTRUCTION, IF DIFFERING FROM THE PLANS PROVIDED, ALONG WITH THE TRAFFIC CONTROL PLAN AND SCHEDULE AND SUBMIT THEM FOR REVIEW AND APPROVAL BY THE CITY OF DALLAS.
45. PAY LIMITS FOR MEASUREMENT OF PAY ITEM 1601A, TRAFFIC CONTROL, SHALL INCLUDE REMOVAL, INSTALLATION AND MAINTENANCE OF ALL TEMPORARY TRAFFIC CONTROL DEVICES (WARNING SIGNS, BARRICADES, ELECTRICAL ARROW BOARD, FLAGMEN, TEMPORARY PAVEMENT MARKINGS FOR DETOUR (IF APPLICABLE) AND ANY OTHER TEMPORARY TRAFFIC CONTROL MEASURES) IMPLEMENTED, AS DIRECTED BY THE ENGINEER TO MAINTAIN THE NECESSARY TRAFFIC THROUGH THE PROJECT. PAY ITEM 1601A SHALL ALSO INCLUDE REMOVING AND RESETTING/ REPLACING EXISTING TRAFFIC CONTROL SIGNS.
46. THE CONTRACTOR SHALL REMOVE ALL EXISTING PAVEMENT MARKINGS IN DETOUR AREAS TO AVOID CONFLICTS WITH TEMPORARY PAVEMENT MARKINGS, AS DIRECTED BY THE ENGINEER (INCIDENTAL TO PAY ITEM 1601A). DETOURS OUTSIDE THE PROJECT LIMITS THAT ROUTE TRAFFIC AROUND A CLOSED ROADWAY SHALL UTILIZE EXISTING PAVEMENT MARKINGS.
47. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN REMOVING AND RESETTING TRAFFIC CONTROL SIGNS. ANY TRAFFIC CONTROL SIGNS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL REPLACEMENT TRAFFIC CONTROL SIGNS WILL BE FABRICATED AND INSTALLED BY THE CITY OF DALLAS TRANSPORTATION DIVISION.
48. ACCESS TO ABUTTING PROPERTY WILL BE MAINTAINED BY PAVING DOUBLE DRIVES ONE AT A TIME OR BY PAVING WIDE DRIVES ONE-HALF WIDTH AT A TIME, AS DIRECTED BY THE ENGINEER. ACCESS TO ABUTTING PROPERTY DURING THE CONSTRUCTION OF THIS PROJECT SHALL BE MAINTAINED FOR EMERGENCY TRAFFIC. PAYMENT FOR A LEAVEOUT WILL NOT BE MADE.
49. STREET INTERSECTIONS WILL BE KEPT OPEN TO TRAFFIC BY PAVING ONE-HALF WIDTH AT A TIME, AS DIRECTED BY THE ENGINEER. PAYMENT FOR A LEAVEOUT WILL BE PROVIDED IN SUCH CASES. ITEM 500 OR ITEM 520 MAY BE USED, AS DIRECTED BY THE ENGINEER.
50. NO SIGNS ARE TO BE RELOCATED OR REMOVED WITHOUT PRIOR APPROVAL BY THE CITY OF DALLAS TRANSPORTATION DIVISION. THE CONTRACTOR MUST CALL RUSSELL FINLEY AT (469) 583-3654 OR PAUL THOMPSON AT (469) 258-7305, AND OBTAIN PERMISSION AT LEAST TWO WORKING DAYS IN ADVANCE FOR CHANGES IN THESE SIGNS.
51. THE CONTRACTOR SHALL COORDINATE WITH DALLAS AREA RAPID TRANSIT (DART) FOR REMOVING AND RESETTING ANY DART BUS STOP AND/OR LIGHT RAIL SHELTERS, BENCH SIGNS OR OTHER AMENITIES.

UTILITIES

52. FOR UTILITY'S GENERAL NOTES SEE SHEET 411Q 0695 SHEET 12.

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11/10/17

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CONTRACT NO. 18-021/022 | PID 5826

GENERAL NOTES

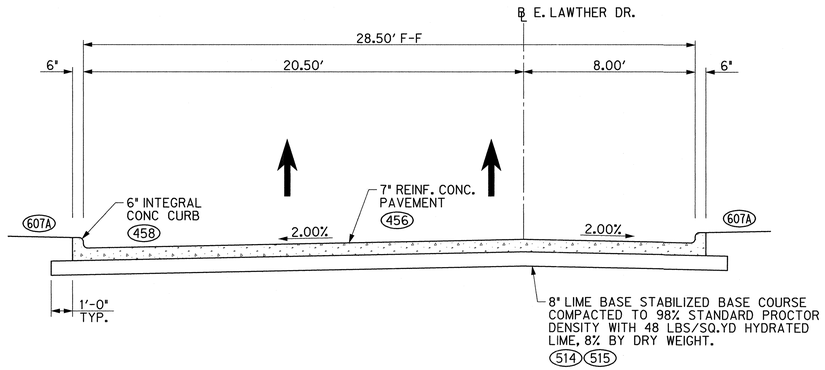
LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

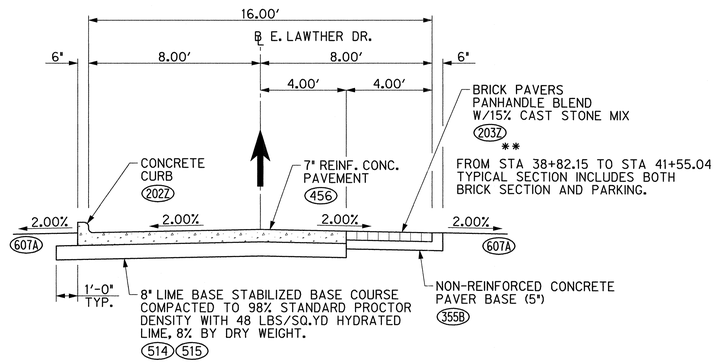
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	411Q	1560	50



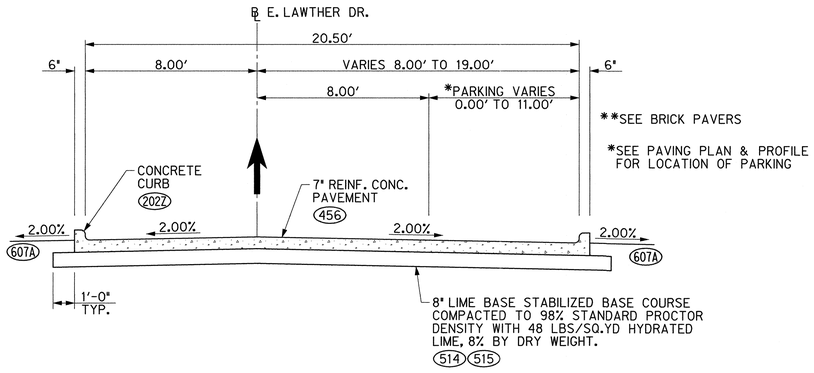
PROPOSED ROADWAY TYPICAL SECTION

N.T.S



PROPOSED ROADWAY TYPICAL SECTION

N.T.S



PROPOSED ROADWAY TYPICAL SECTION

N.T.S

ITEM NO.	DESCRIPTION	UNIT	PAVING SUMMARY 411Q-1560											ITEM NO.	CALC. TOTAL	BID TOTAL
			63	64	65	66	67	68	69	70	71	72	73			
102	UNCLASSIFIED STREET EXCAVATION	C.Y.	568	537	642	402	690	308	524	308	528	640	212	102	5359	5500
107	SELECT BORROW MAT'L	C.Y.	9	8	2	12	10	16	27	18	13	12	23	107	140	150
200	REMOVE CONC. (PVMT, CURB, DRIVE, APRON, SIDEWALK & BASE	S.Y.	1074	1074	1074	1074	1074	1074	1074	1074	1074	1074	1074	200	11814	12000
355B	REINFORCED CONCRETE BRICK PAVER BASE (5")	S.F.	1054	1703	1126	1279	499	2033	886	1961	2033	2038	973	355B	15585	15600
456	7-INCH THICK REINFORCED CONCRETE PAVEMENT	S.Y.	884	708	881	822	1043	625	945	640	762	807	342	456	8459	8500
457	6-INCH THICK REINFORCED CONCRETE DRIVEWAY	S.Y.	-	-	-	-	-	-	-	119	-	-	29	457	148	150
458	6-INCH HIGH CONCRETE INTEGRAL CURB	L.F.	293	-	-	-	-	-	-	-	-	-	-	458	293	300
458Z	CONCRETE CURB (SPECIAL)	L.F.	224	435	546	517	662	374	587	388	376	375	185	458Z	4669	4700
460	REINFORCED CONCRETE STREET HEADER	L.F.	71	-	-	-	-	-	-	-	-	-	20	460	91	100
514	LIME STABILIZATION BASE COURSE	S.Y.	948	766	954	891	1132	674	1023	692	812	857	366	514	9115	9150
515	HYDRATED LIME	TON	23	19	23	22	28	17	25	17	20	21	9	515	224	225
604	SAWED BREAKOUT GROOVE	L.F.	9	-	-	-	-	-	-	26	-	-	24	604	59	60
607A	BERMUDA OR ST AUGUSTINE GRASS BLOCK SODDING	S.Y.	452	501	504	503	507	500	502	502	503	503	237	607A	5214	5225
613	PAVEMENT LEAVEOUT	EA.	5	2	2	2	2	2	2	9	1	3	1	613	31	35
644Z	BRICK PAVERS PANHANDLE BLEND	S.F.	1008	1553	1071	1190	451	1885	843	1824	1916	1939	920	644Z	14600	14600
722C	REFL PAV MRK TY I(W) 4" PARKING	L.F.	-	22	88	55	121	-	110	-	44	66	-	722C	506	550

ITEM NO.	DESCRIPTION	UNIT	DRAINAGE SUMMARY 411Q-1560					ITEM NO.	CALC. TOTAL	BID TOTAL
			72	75	76	77				
521A	STABILIZED CONSTRUCTION ENTRANCE	EA.		1	0	1		521A	2	2
645	GEOTEXTILE SILT FENCE	L.F.		1819	1788	1098		645	4705	4750
645A	ROCK FILTER DAM	EA.		-	6	2		645A	8	8
1002	18 IN CLASS III REINF CONC PIPE	L.F.	54					1002	54	55
1213Z	PRECAST #26 CATCH BASIN	EA.	1					1213Z	1	1
1225A	INLET PROTECTION	EA.		6	2	5		1225A	13	15
1246	RCP WYE OR PIPE TO PIPE CONN	EA.	1					1246	1	1

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FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

TYPICAL SECTION & QUANITITY SUMMARY

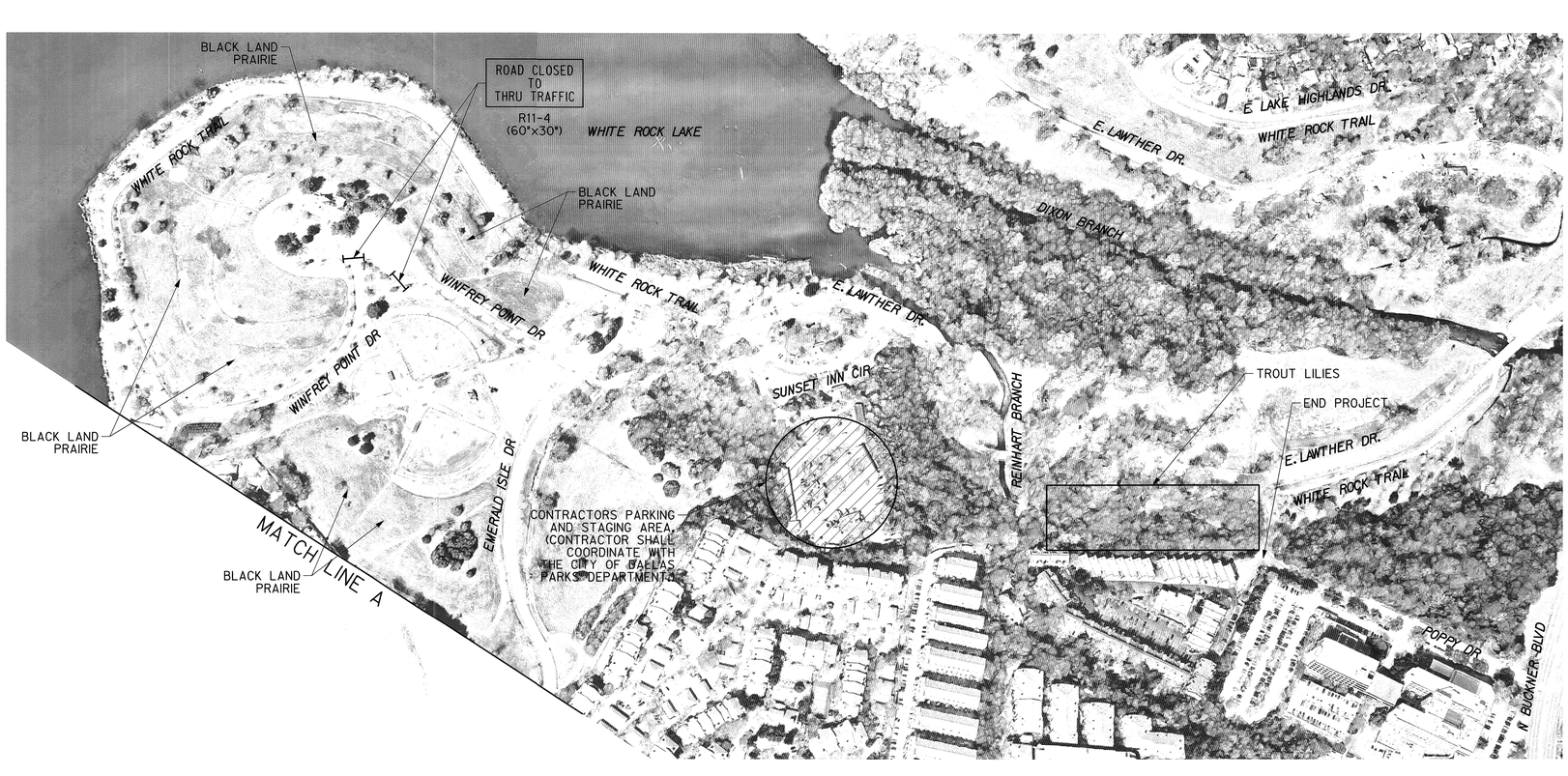
LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	411Q	1560	51



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CONTRACT NO. 18-021/022 | PID 5826

OVERALL PROJECT LAYOUT

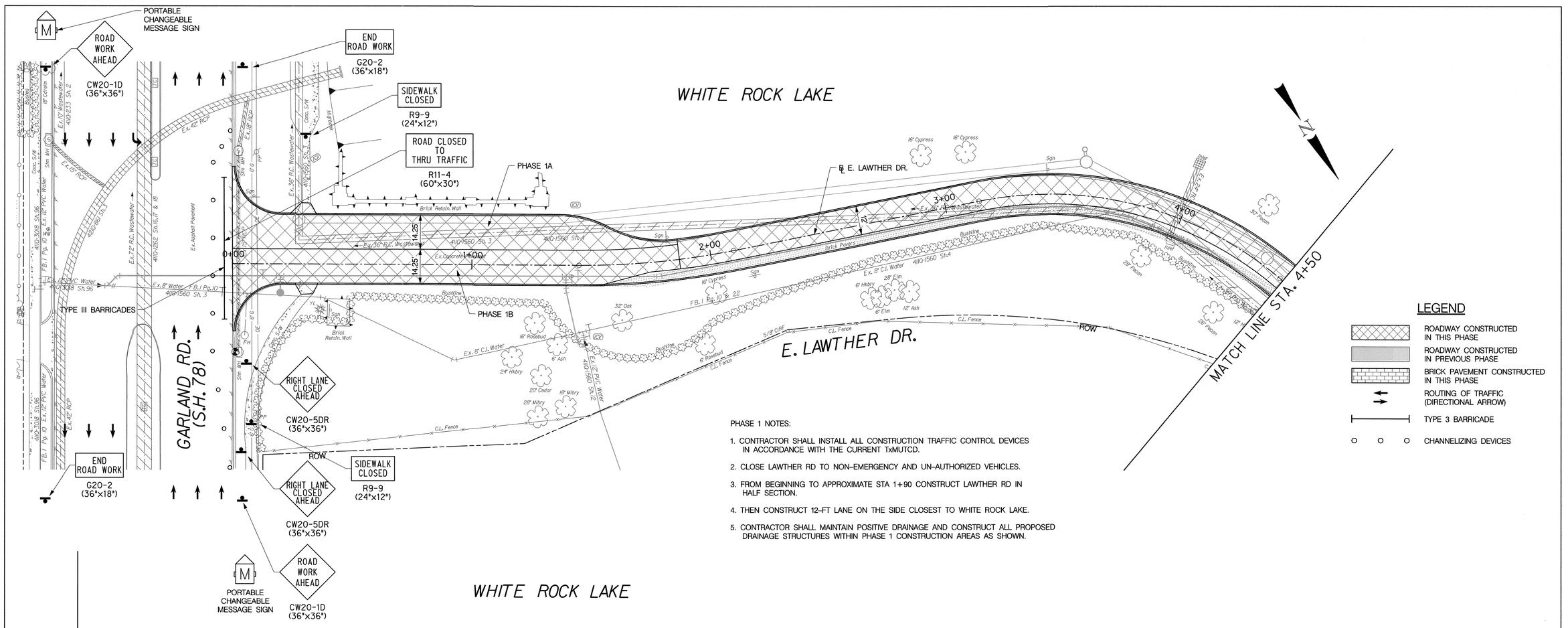
LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	52



PHASE 1 NOTES:

1. CONTRACTOR SHALL INSTALL ALL CONSTRUCTION TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT TxMUTCD.
2. CLOSE LAWTHER RD TO NON-EMERGENCY AND UN-AUTHORIZED VEHICLES.
3. FROM BEGINNING TO APPROXIMATE STA 1+90 CONSTRUCT LAWTHER RD IN HALF SECTION.
4. THEN CONSTRUCT 12-FT LANE ON THE SIDE CLOSEST TO WHITE ROCK LAKE.
5. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AND CONSTRUCT ALL PROPOSED DRAINAGE STRUCTURES WITHIN PHASE 1 CONSTRUCTION AREAS AS SHOWN.

Horizontal Scale: 1" = 20'

0' 20' 40'

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FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

TRAFFIC CONTROL - PHASE 1

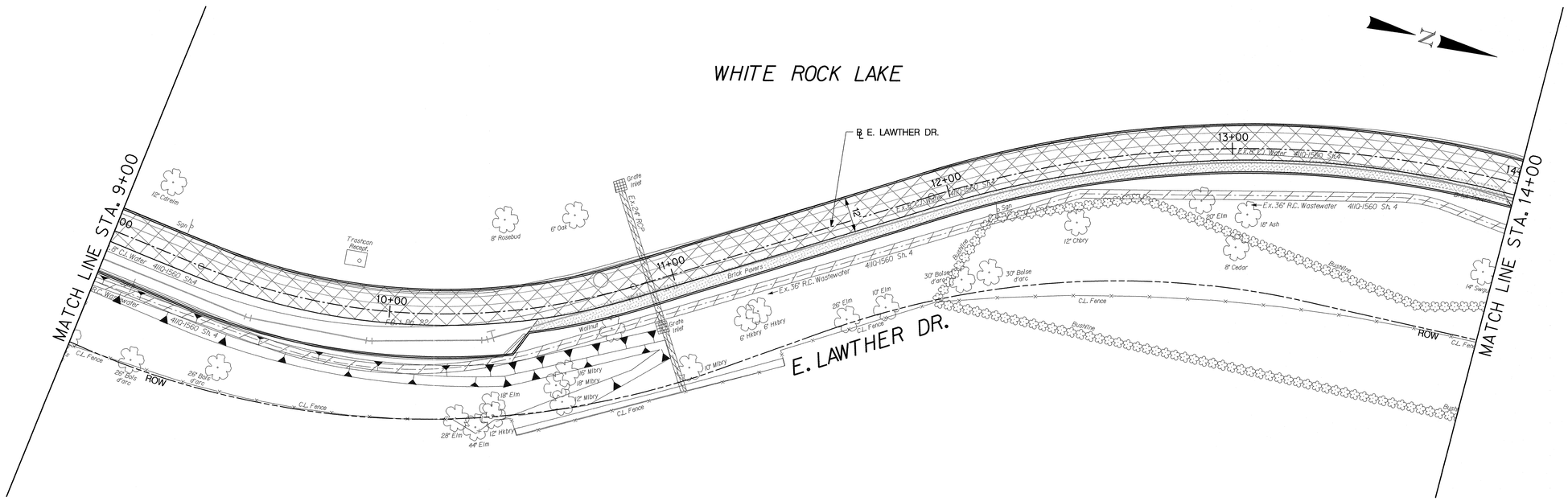
LAWTHER DRIVE

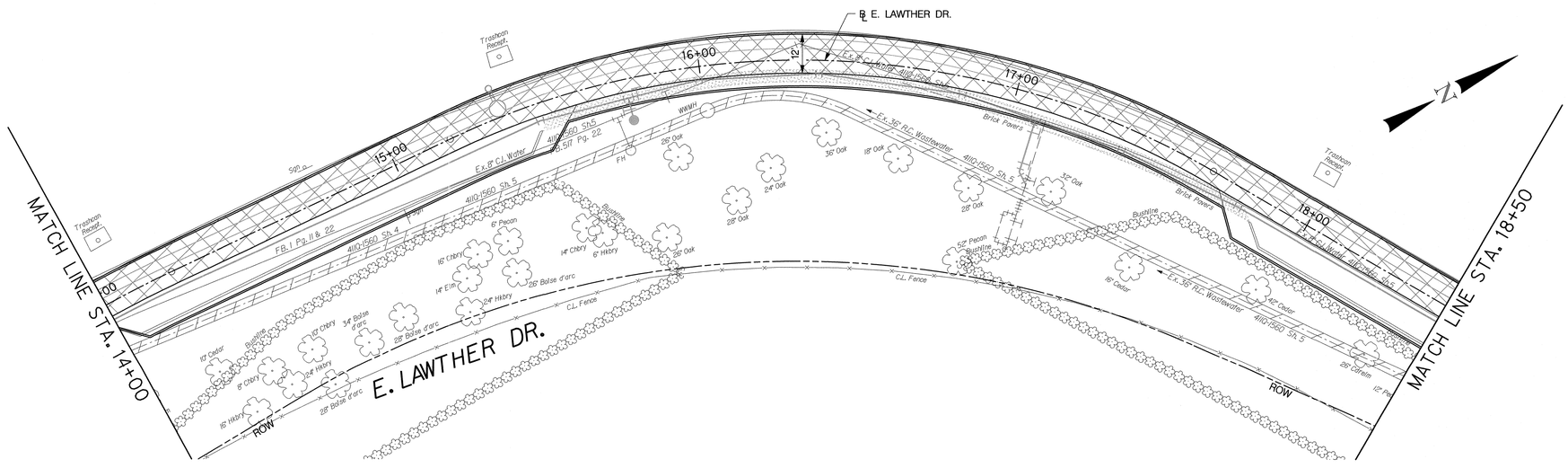
GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	53





Horizontal Scale: 1" = 20'

0' 20' 40'

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED
PROFESSIONAL ENGINEER
11/10/17

APM & Associates, Inc.
Engineering · Planning · CM Services
2201 Main Street, Suite 1100
Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

TRAFFIC CONTROL - PHASE I

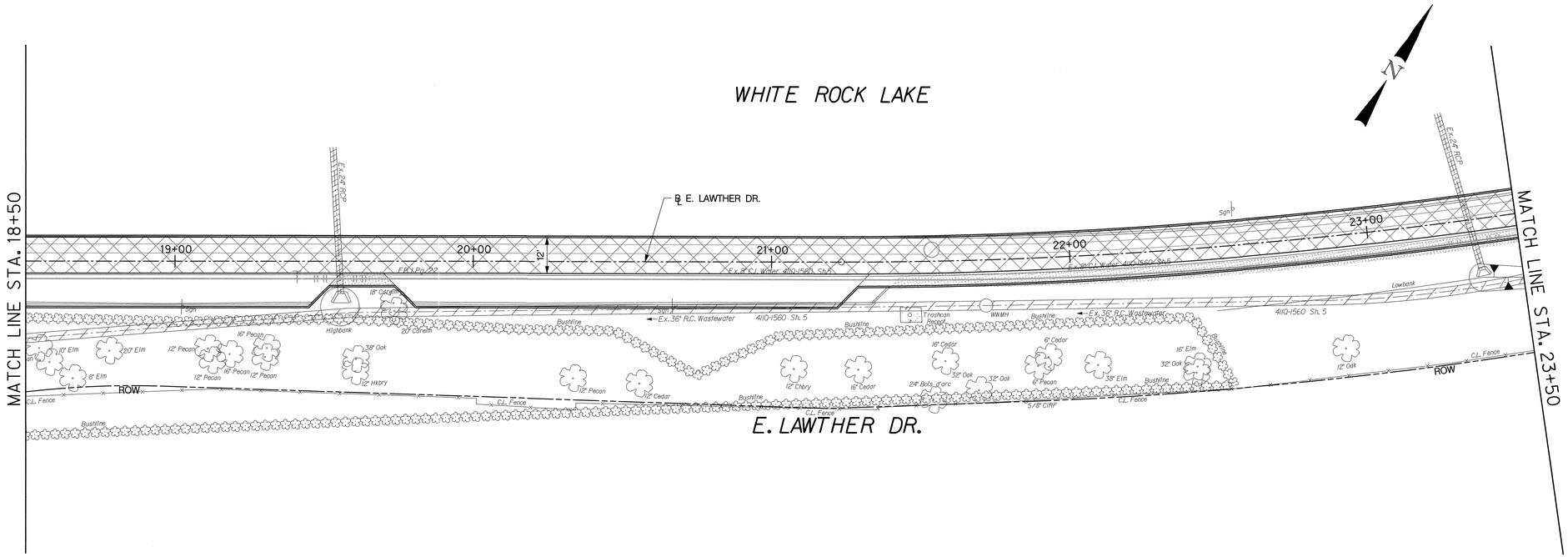
LAWTHER DRIVE

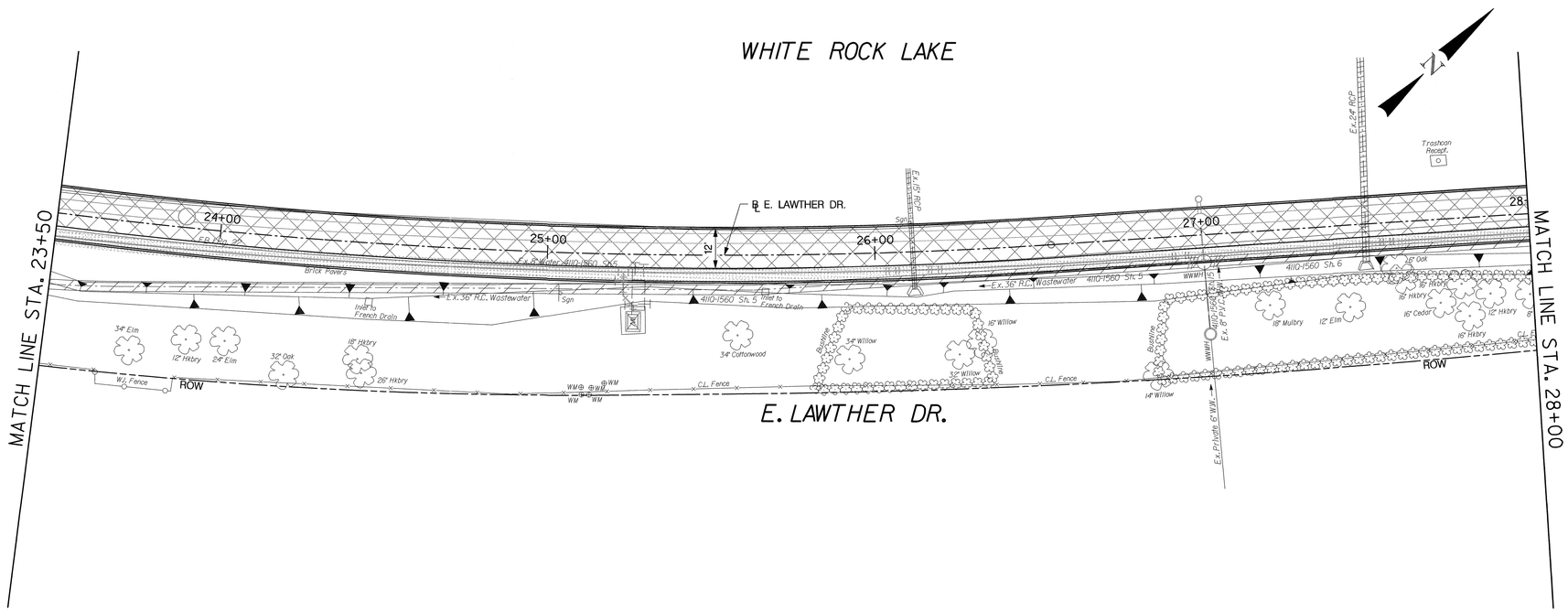
GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	54





LEGEND

- ROADWAY CONSTRUCTED IN THIS PHASE
- ROADWAY CONSTRUCTED IN PREVIOUS PHASE
- TEMPORARY ASPHALT PAVEMENT
- BRICK PAVEMENT CONSTRUCTED IN THIS PHASE
- ROUTING OF TRAFFIC (DIRECTIONAL ARROW)
- TYPE 3 BARRICADE
- CHANNELIZING DEVICES

Horizontal Scale: 1" = 20'

0' 20' 40'

STATE OF TEXAS
ERIC K. KRONER
88551
REGISTERED
PROFESSIONAL
ENGINEER
11/10/17

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FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

TRAFFIC CONTROL - PHASE 1

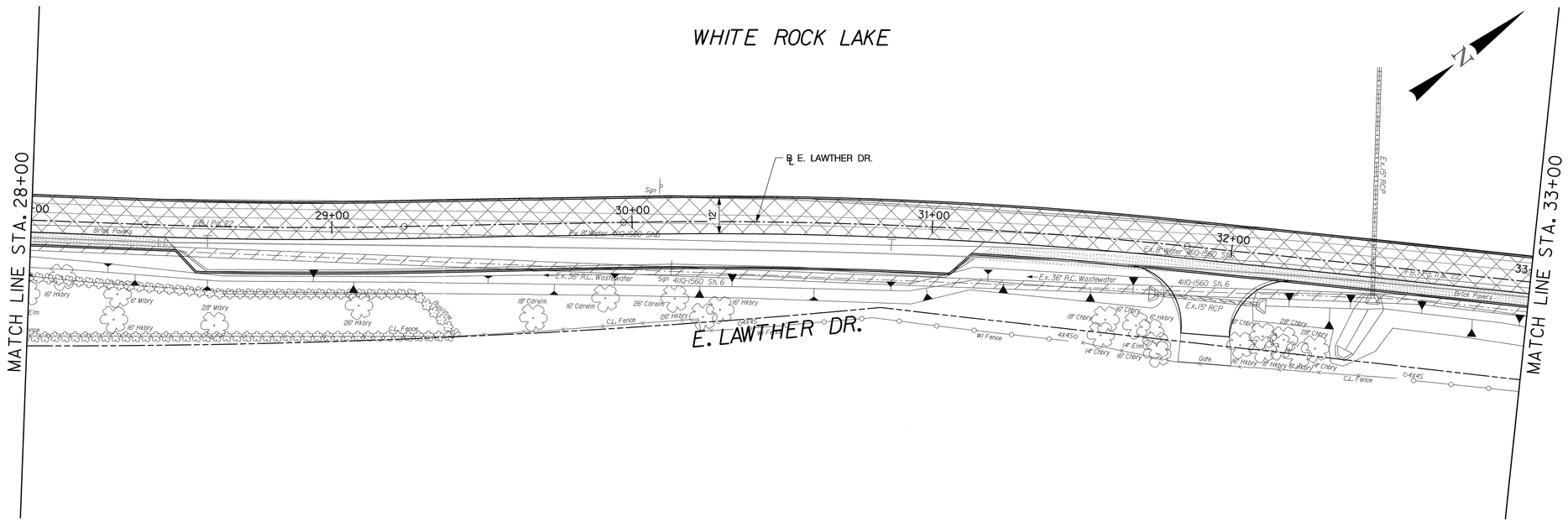
LAWTHER DRIVE

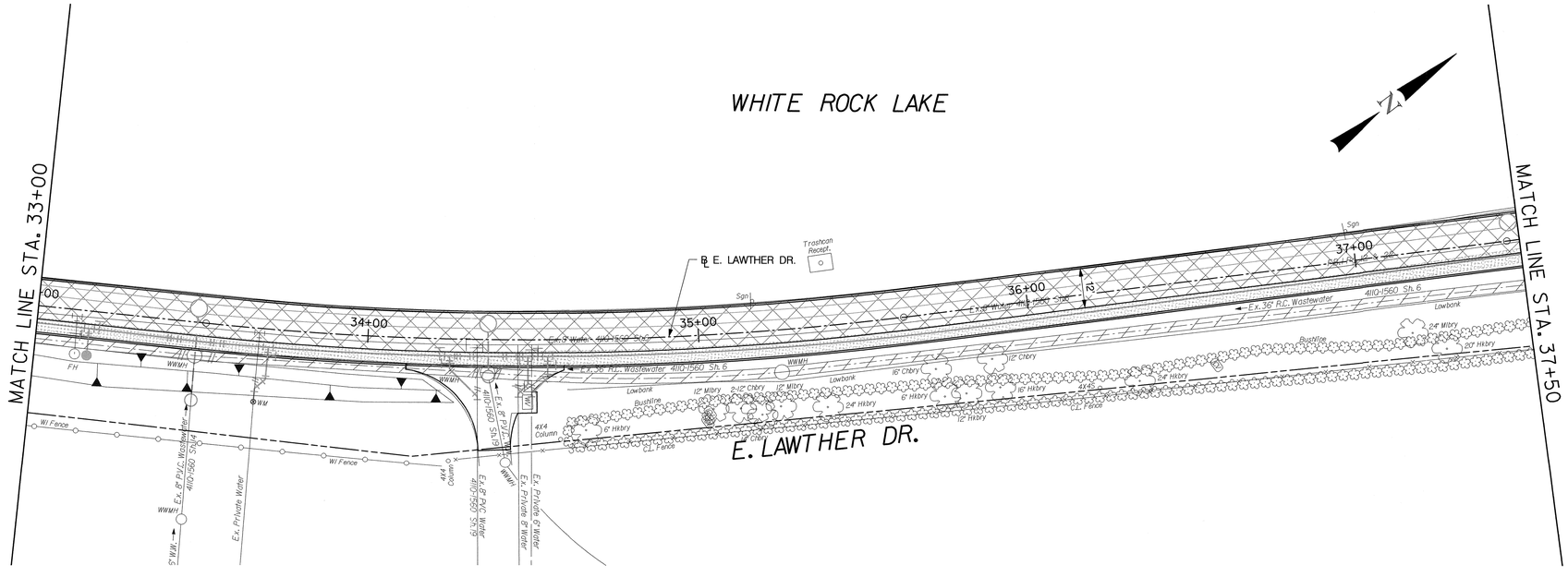
GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	55





Horizontal Scale: 1" = 20'

0' 20' 40'

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED
PROFESSIONAL ENGINEER
11/10/17

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CONTRACT NO. 18-021/022 | PID 5826

TRAFFIC CONTROL - PHASE I

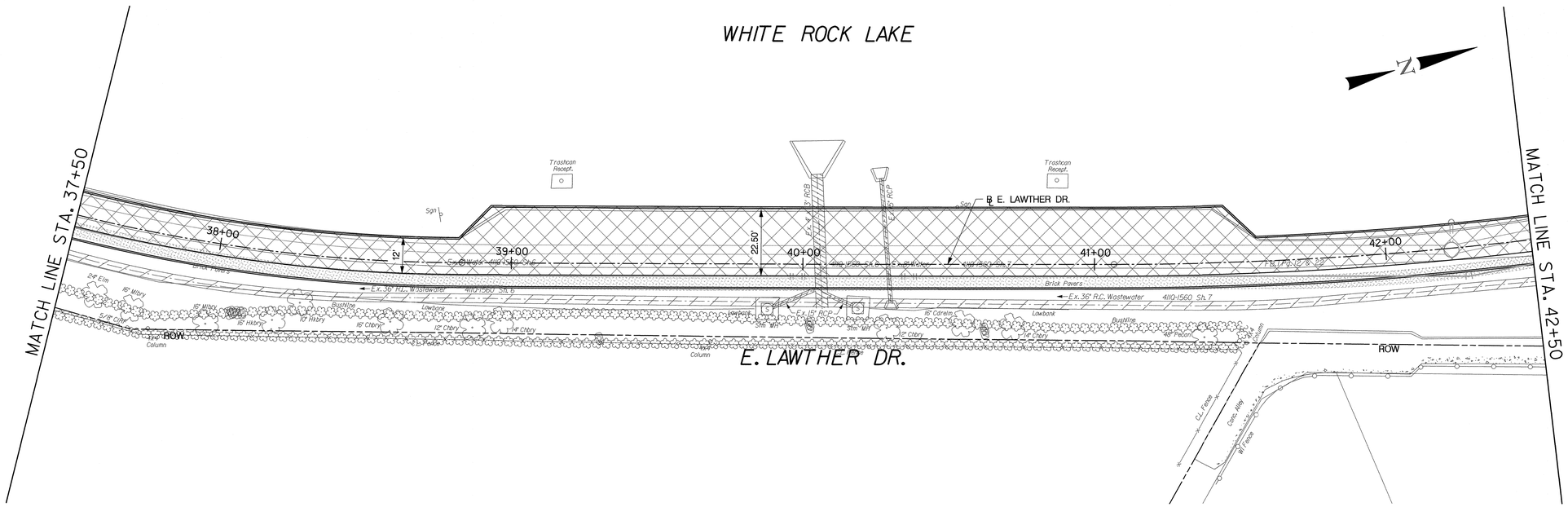
LAWTHER DRIVE

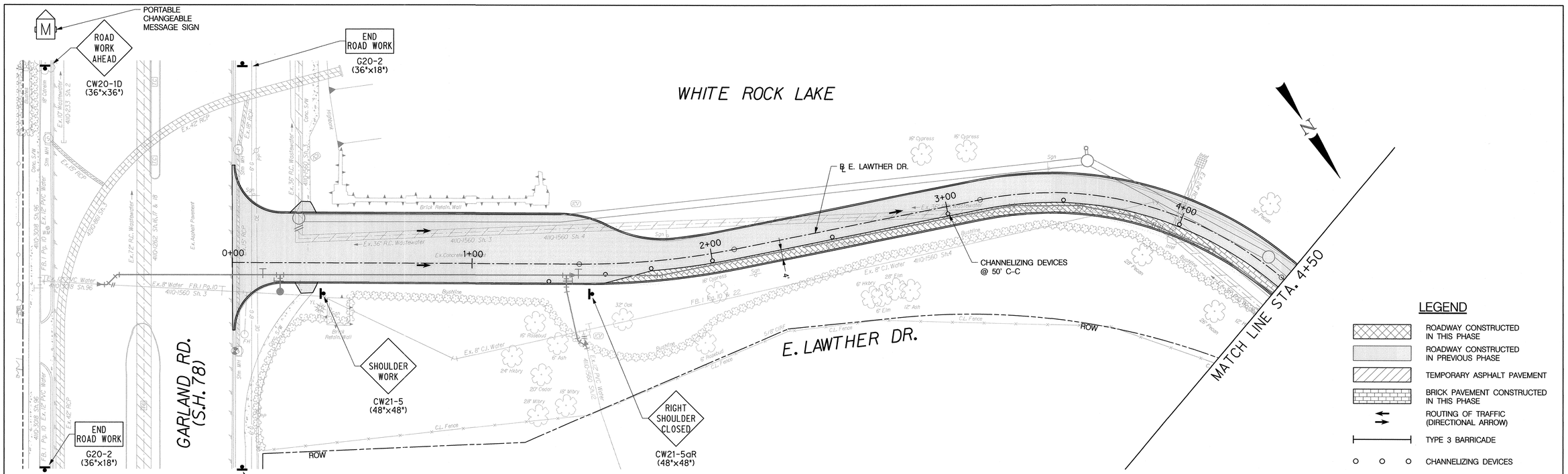
GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

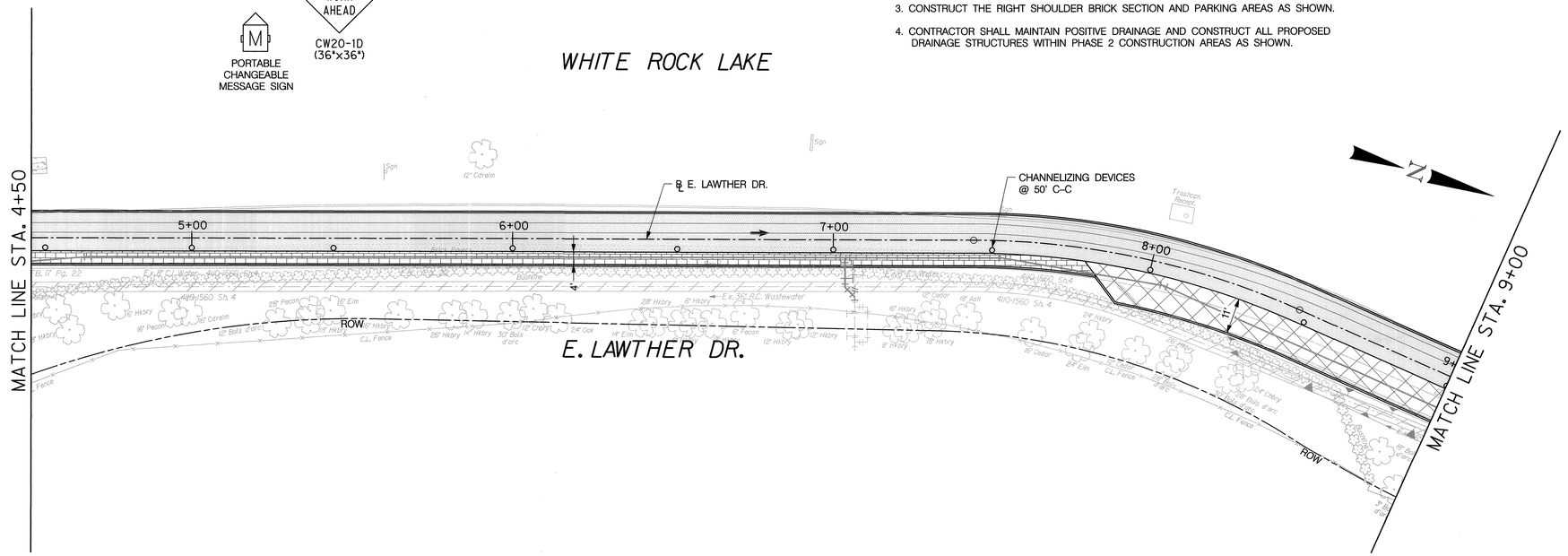
DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	56


WHITE ROCK LAKE
N
MATCH LINE STA. 37+50
MATCH LINE STA. 42+50
38+00
39+00
40+00
41+00
42+00
℄ E. LAWTHER DR.
12'
22.50'
Trashcan Recept.
Trashcan Recept.
Sign
Ex. 24" RCP
Ex. 15" RCP
Ex. 36" R.C. Wastewater 4110-1560 Sta. 6
Ex. 36" R.C. Wastewater 4110-1560 Sta. 7
Brick Pavers
Lowbank
Bustline
Curb
ROW
E. LAWTHER DR.
Ex. 15" RCP
Ex. 24" RCP
Ex. 24" RCP
Ex. 24



PHASE 2 NOTES:

1. CONTRACTOR SHALL REMOVE ALL PHASE 1 CONSTRUCTION TRAFFIC CONTROL DEVICES AND INSTALL PHASE 2 CONSTRUCTION TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT TxMUTCD.
2. OPEN E. LAWTHER DR. TO TRAFFIC, CLOSING RIGHT SHOULDER TO VEHICULAR TRAFFIC.
3. CONSTRUCT THE RIGHT SHOULDER BRICK SECTION AND PARKING AREAS AS SHOWN.
4. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AND CONSTRUCT ALL PROPOSED DRAINAGE STRUCTURES WITHIN PHASE 2 CONSTRUCTION AREAS AS SHOWN.



Horizontal Scale: 1" = 20'

0' 20' 40'

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

APM & Associates, Inc.
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Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022			PID 5826		

TRAFFIC CONTROL - PHASE 2

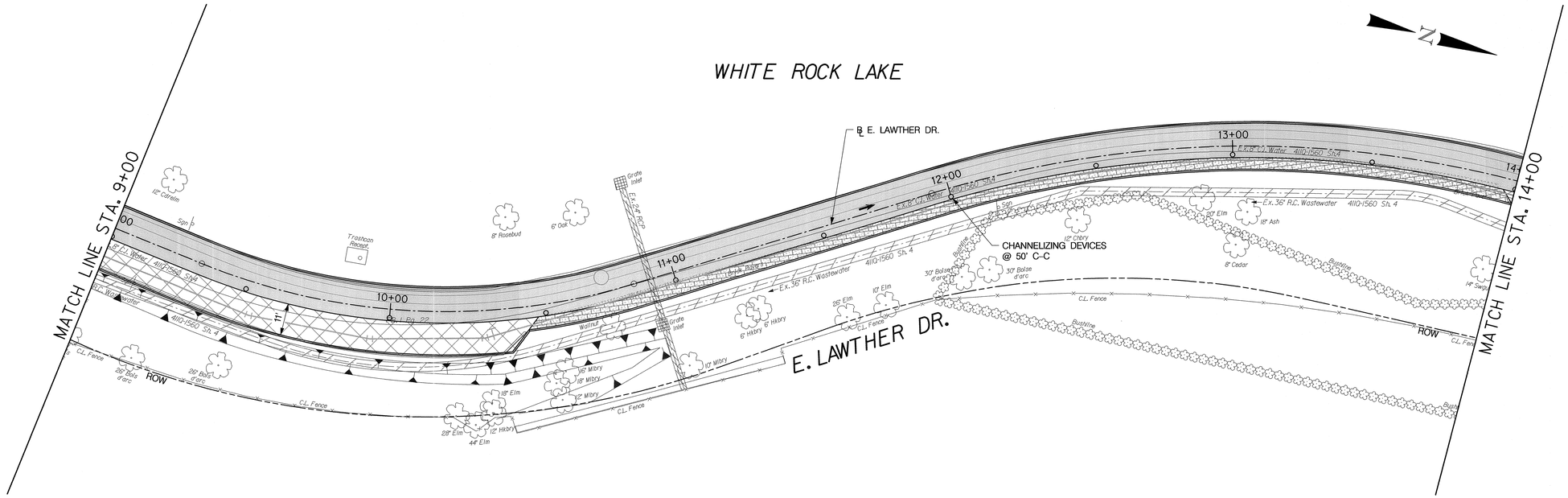
LAWTHER DRIVE

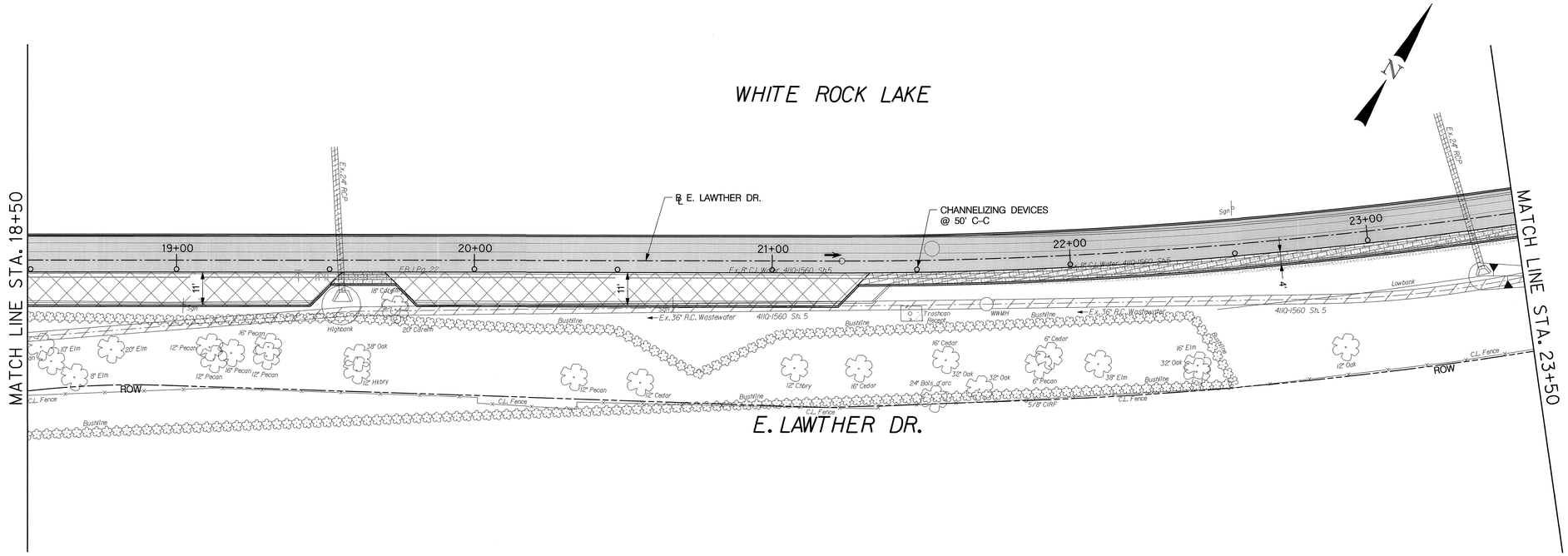
GARLAND RD. TO WEST OF SUNSET INN CIR.

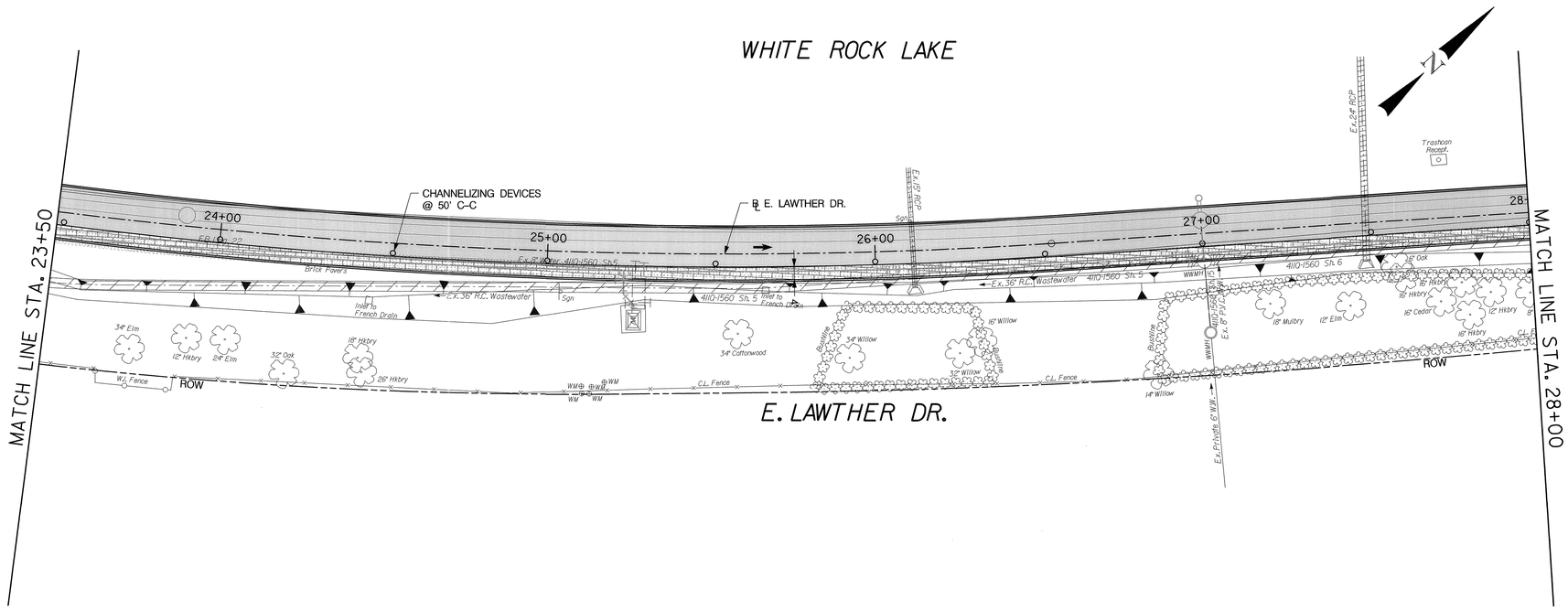
DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	58


WHITE ROCK LAKE
MATCH LINE STA. 9+00
MATCH LINE STA. 14+00
℄ E. LAWTHER DR.
E. LAWTHER DR.
CHANNELIZING DEVICES @ 50' C-C
9+00
10+00
11+00
12+00
13+00
14+00
ROW
C.L. Fence
Bushline
Brick Pavers
Trashcan Receptacle
Grate Inlet
Ex. 36" R.C. Wastewater 4110-1560 Sh. 4
Ex. 8" C.I. Water 4110-1560 Sh. 4
Ex. 8" C.I. Water 4110-1560 Sh. 5
Ex. 36" R.C. Wastewater 4110-1560 Sh. 5
Ex. 8" C.I. Water 4110-1560 Sh. 5
Ex. 36" R.C. Wastewater 4110-1560 Sh. 4
Ex. 8" C.I. Water 4110-1560 Sh. 4
Ex. 54" RCP
Ex. 8" C.I. Water
Ex. 36" R.C. Wastewater
Ex. 8" C.I. Water 4110-1560 Sh. 4
Ex. 8" C.I. Water 4110-1560 Sh. 5
Ex. 36" R.C. Wastewater 4110-1560 Sh. 5
Ex. 8" C.I. Water 4110-1560 Sh. 5
Ex. 36" R.C. Wastewater 4110-1560 Sh. 5
Ex. 8" C.I. Water 4110-1560 Sh. 5
Ex. 36" R.C. Wastewater 4110-1560 Sh. 4
Ex. 8" C.I. Water 4110-1560 Sh. 4
Ex. 8" C.I. Water 4110-1560 Sh. 5
Ex. 36" R.C. Wastewater 4110-1560 Sh. 5
Ex. 8" C.I. Water 4110-1560 Sh. 5
Ex. 36" R.C. Wastewater 4110-1560 Sh. 5
Ex. 8" C.I. Water 4110-1560 Sh. 5
Ex. 36" R.C. Wastewater 4110-1560 Sh. 5
Ex. 8" C.I. Water 4110-1560 Sh. 5
Ex. 36" R.C. Wastewater 4110-1560 Sh. 4
Ex. 8" C.I. Water 4110-1560 Sh. 4





LEGEND

- ROADWAY CONSTRUCTED IN THIS PHASE
- ROADWAY CONSTRUCTED IN PREVIOUS PHASE
- TEMPORARY ASPHALT PAVEMENT
- BRICK PAVEMENT CONSTRUCTED IN THIS PHASE
- ROUTING OF TRAFFIC (DIRECTIONAL ARROW)
- TYPE 3 BARRICADE
- CHANNELIZING DEVICES

Horizontal Scale: 1" = 20'

0' 20' 40'

STATE OF TEXAS
ERIC K. KRONER
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PROFESSIONAL ENGINEER
11/10/17

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Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

TRAFFIC CONTROL - PHASE 2

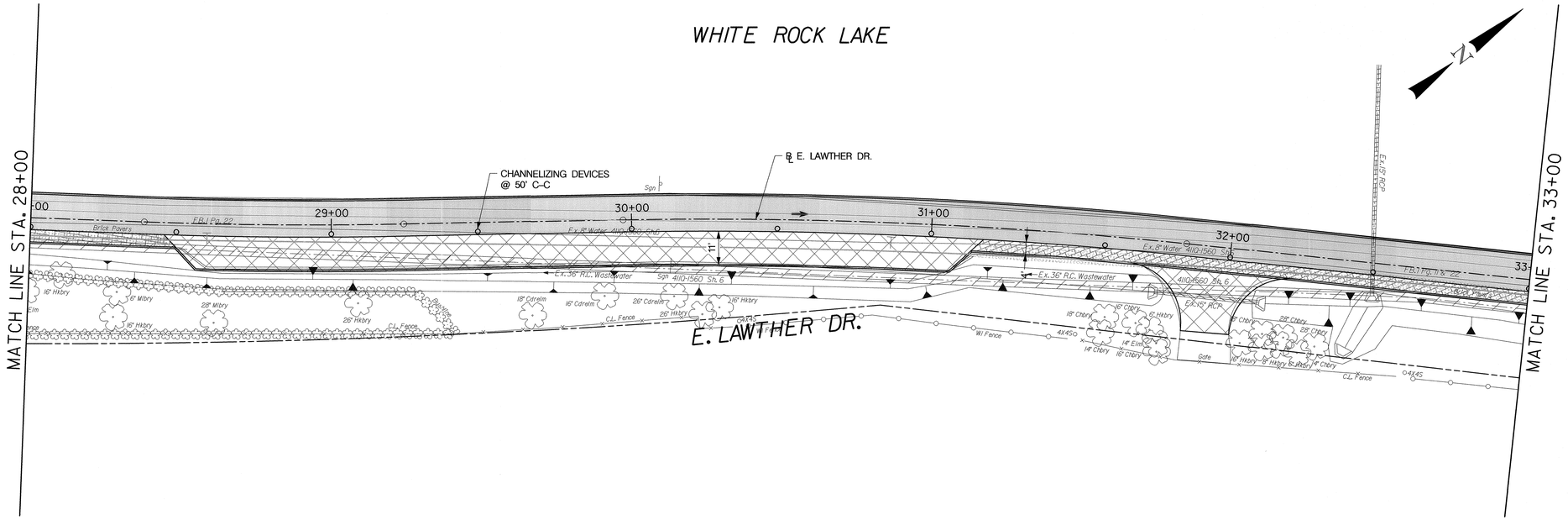
LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	60



LEGEND

- ROADWAY CONSTRUCTED IN THIS PHASE
- ROADWAY CONSTRUCTED IN PREVIOUS PHASE
- TEMPORARY ASPHALT PAVEMENT
- BRICK PAVEMENT CONSTRUCTED IN THIS PHASE
- ROUTING OF TRAFFIC (DIRECTIONAL ARROW)
- TYPE 3 BARRICADE
- CHANNELIZING DEVICES

Horizontal Scale: 1" = 20'

0' 20' 40'

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

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CONTRACT NO. 18-021/022 | PID 5826

TRAFFIC CONTROL - PHASE 2

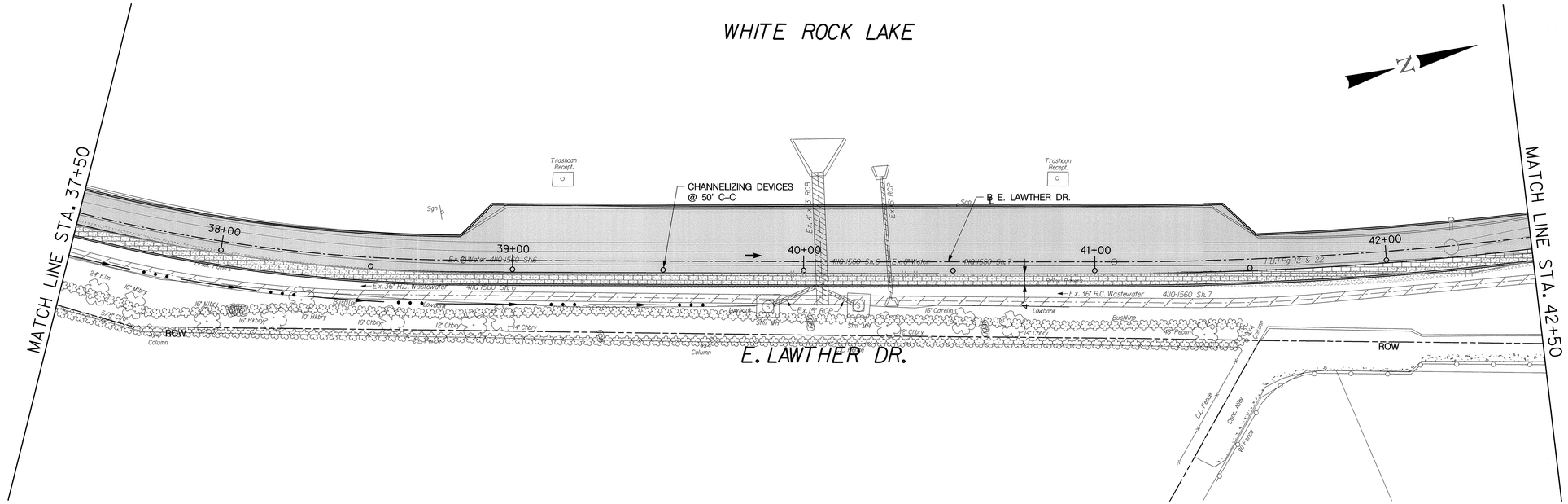
LAWTHER DRIVE

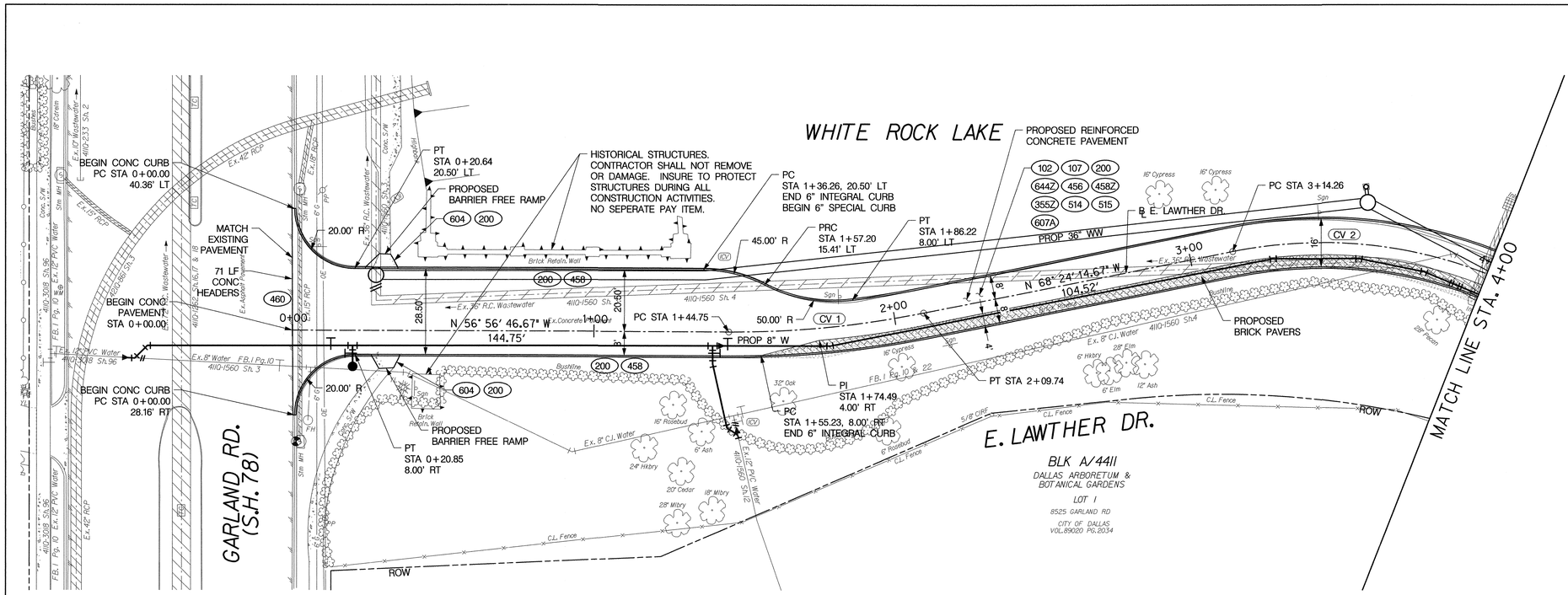
GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	61


WHITE ROCK LAKE
N
MATCH LINE STA. 37+50
MATCH LINE STA. 42+50
38+00
39+00
40+00
41+00
42+00
CHANNELIZING DEVICES @ 50' C-C
℄ E. LAWTHER DR.
Trashcan Recept.
Trashcan Recept.
Ex. 24" RCP
Ex. 42" RCP
Ex. 48" RCP
Sign
Ex. 6" Water 4110-1560 Sh. 6
4110-1560 Sh. 6
Ex. 8" Water
4110-1560 Sh. 7
Ex. 36" R.C. Wastewater
4110-1560 Sh. 6
Ex. 36" R.C. Wastewater
4110-1560 Sh. 7
Ex. 16" R.C.P.
Sta. 41+04.37
Bridge Rail
Lawbank
Bustline
Lawbank
Bustline
Ex. Concrete Pavement
Curb Inlet
Sta. 41+04.37
Sta. 41+04.37
Sta. 41+04.37



CV 1
PI STA 1+77.35
△ = 11° 27' 28.00" (LT)
D = 17° 37' 46.09"
T = 32.60'
L = 64.99'
R = 325.00'
PC STA 1+44.75
PT STA 2+09.74

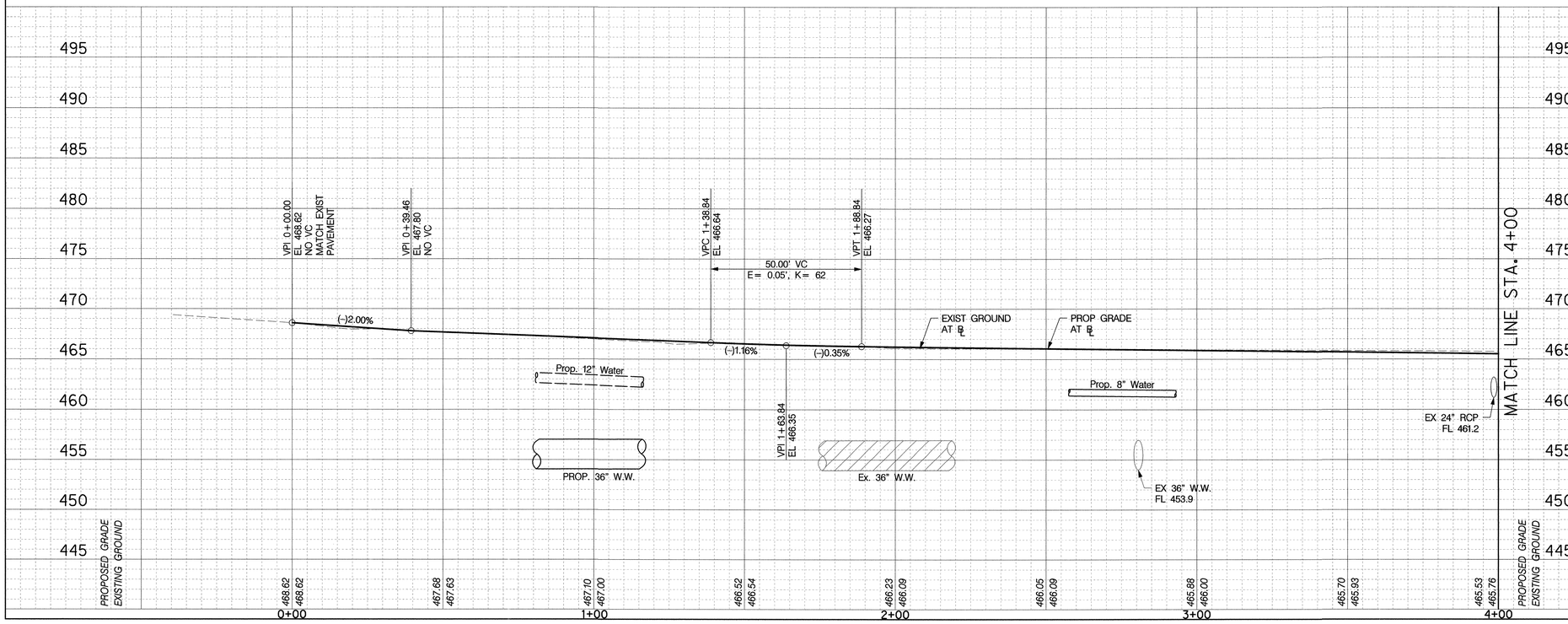
CV 2
PI STA 3+86.20
△ = 51° 14' 35.20" (RT)
D = 38° 11' 49.87"
T = 71.94'
L = 134.15'
R = 150.00'
PC STA 3+14.26
PT STA 4+48.41

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE PAVING DETAILS SHEET XXXX, SHT 2 FOR PARKING DETAIL.

UTILITY LOCATION NOTE:

The location of existing utilities shown on these plans are approximate and based on existing plans and data furnished by utility companies. It is the responsibility of the contractor to verify the location and depth of all existing utilities that may conflict with construction. Call 811 two working days prior to construction for onsite locations. Any damage to existing utilities shall be repaired at contractor's expense, at no additional cost.



REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #1
"X" CUT SET IN CONCRETE SIDEWALK AT THE NORTHWEST CORNER OF LAWTHER DR. & GARLAND RD.
N. 6985386.4960; E. 2515657.3530; ELEV = 467.86

CONTROL POINT #2
"X" CUT SET ON THE WEST EDGE OF CONCRETE PAVEMENT OF LAWTHER DR., ± 444' NORTH OF GARLAND RD.
N. 6985594.4700; E. 2515338.6950; ELEV = 466.19

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

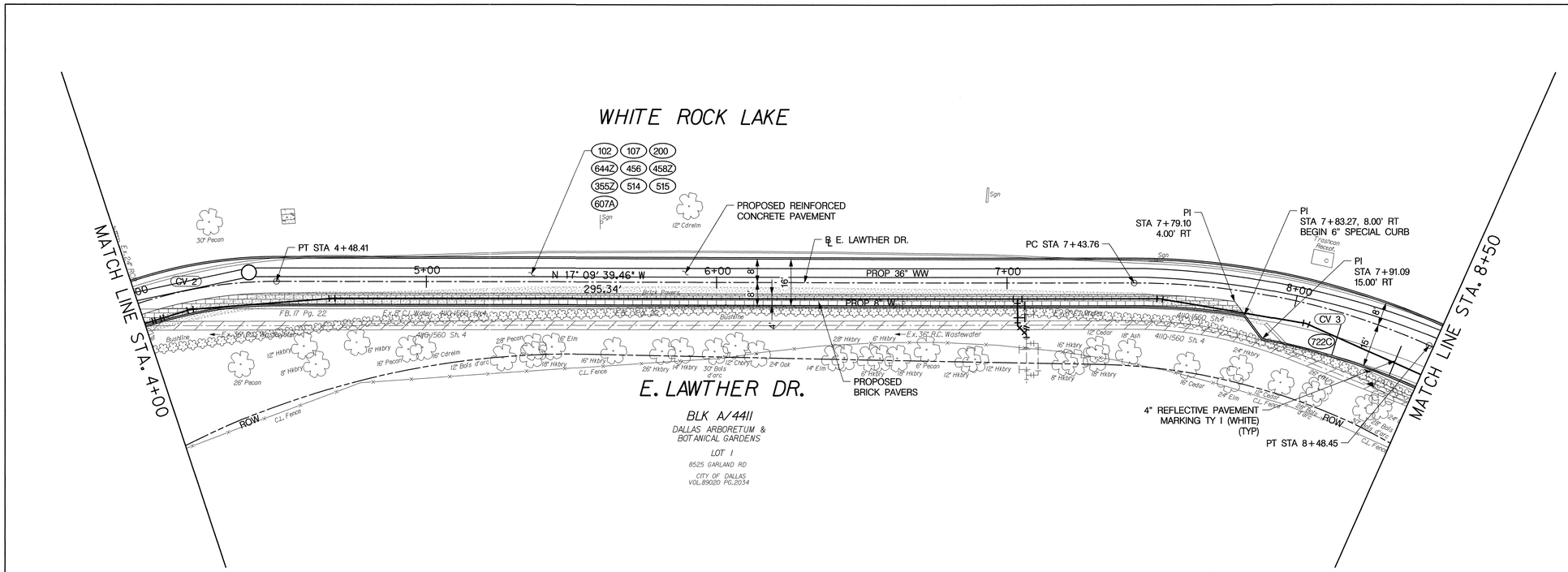
STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

APM & Associates, Inc.
Engineering · Planning · CM Services
2201 Main Street, Suite 1100 Dallas, TX. 75201 (214) 748-4888 FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

PAVING PLAN & PROFILE
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	63



CV 2
PI STA 3+86.20
△ = 51° 14' 35.20" (RT)
D = 38° 11' 49.87"
T = 71.94'
L = 134.15'
R = 150.00'
PC STA 3+14.26
PT STA 4+48.41

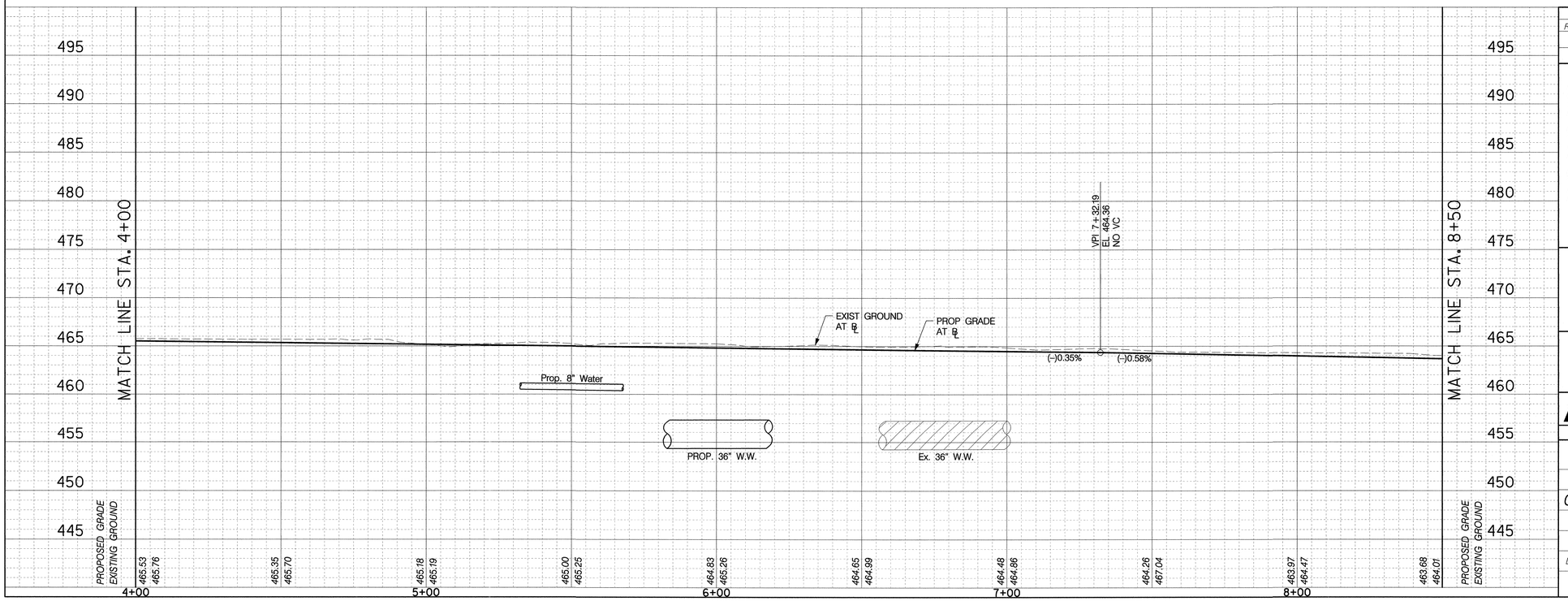
CV 3
PI STA 7+96.89
△ = 23° 59' 38.28" (RT)
D = 22° 55' 05.92"
T = 53.13'
L = 104.69'
R = 250.00'
PC STA 7+43.76
PT STA 8+48.45

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE PAVING DETAILS SHEET XXXX, SHT 2 FOR PARKING DETAIL.

UTILITY LOCATION NOTE:

The location of existing utilities shown on these plans are approximate and based on existing plans and data furnished by utility companies. It is the responsibility of the contractor to verify the location and depth of all existing utilities that may conflict with construction. Call 811 two working days prior to construction for onsite locations. Any damage to existing utilities shall be repaired at contractor's expense, at no additional cost.



REVISIONS

REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR.& GARLAND RD.
ELEV = 469.27

CONTROL POINT #2
"X" CUT SET IN CONCRETE PAVEMENT ON THE WEST EDGE OF LAWTHER DR., +/- 444' NORTH OF GARLAND RD.
N. 6985594.4700; E. 2515338.6950; ELEV = 466.19

CONTROL POINT #3
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR., +/- 880' NORTH OF GARLAND RD.
N. 6986013.1580; E. 2515223.4660; ELEV = 464.55

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

STATE OF TEXAS
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PROFESSIONAL ENGINEER
11/10/17

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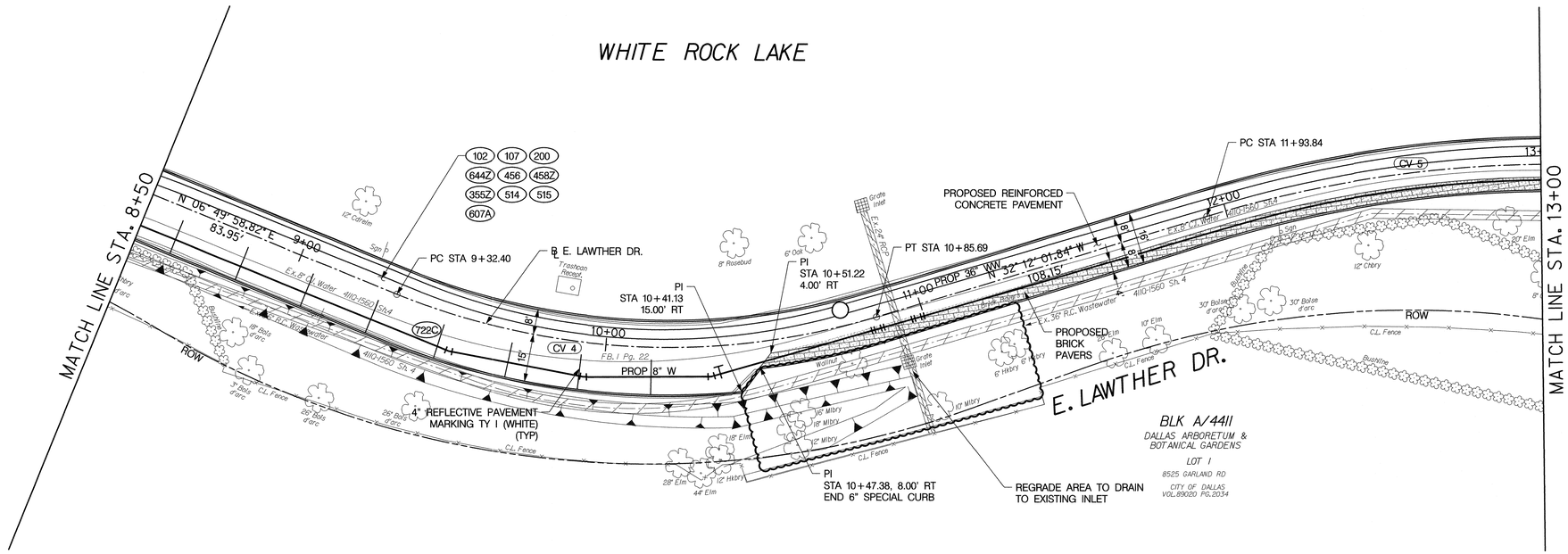
CONTRACT NO. 18-021/022 | PID 5826

PAVING PLAN & PROFILE
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	64



CV 4
PI STA 10+12.16
△ = 39° 02' 00.66" (LT)
D = 25° 27' 53.25"
T = 79.75'
L = 153.28'
R = 225.00'
PC STA 9+32.40
PT STA 10+85.69

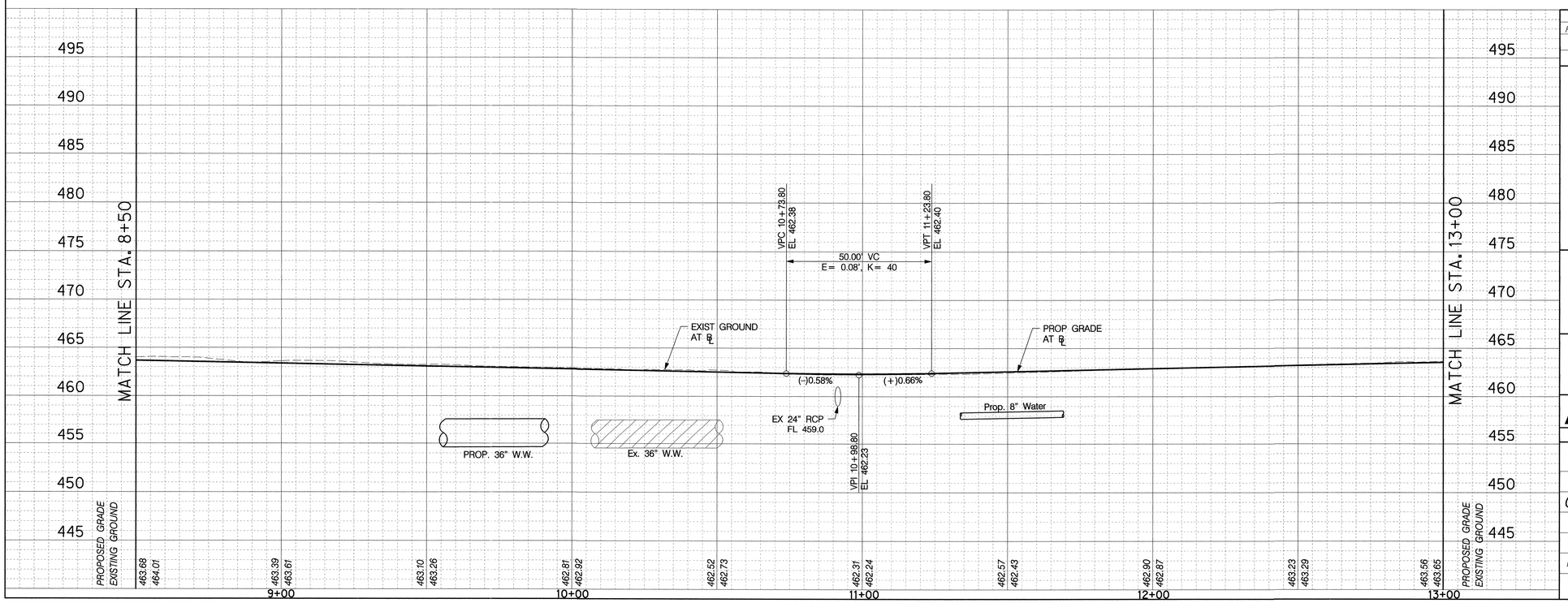
CV 5
PI STA 13+12.04
△ = 34° 59' 31.98" (RT)
D = 15° 16' 43.95"
T = 118.21'
L = 229.02'
R = 375.00'
PC STA 11+93.84
PT STA 14+22.86

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE PAVING DETAILS SHEET XXXX, SHT 2 FOR PARKING DETAIL.

UTILITY LOCATION NOTE:

The location of existing utilities shown on these plans are approximate and based on existing plans and data furnished by utility companies. It is the responsibility of the contractor to verify the location and depth of all existing utilities that may conflict with construction. Call 811 two working days prior to construction for onsite locations. Any damage to existing utilities shall be repaired at contractor's expense, at no additional cost.



REVISIONS

REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV - 469.27

CONTROL POINT #3
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR. +/- 880' NORTH OF GARLAND RD.
N. 6986013.580; E. 2515223.4660; ELEV - 464.5

CONTROL POINT #4
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR. +/- 1360' NORTH OF GARLAND RD.
N. 6986459.4850; E. 2515093.7270; ELEV - 464.19

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

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11/10/17

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FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

PAVING PLAN & PROFILE

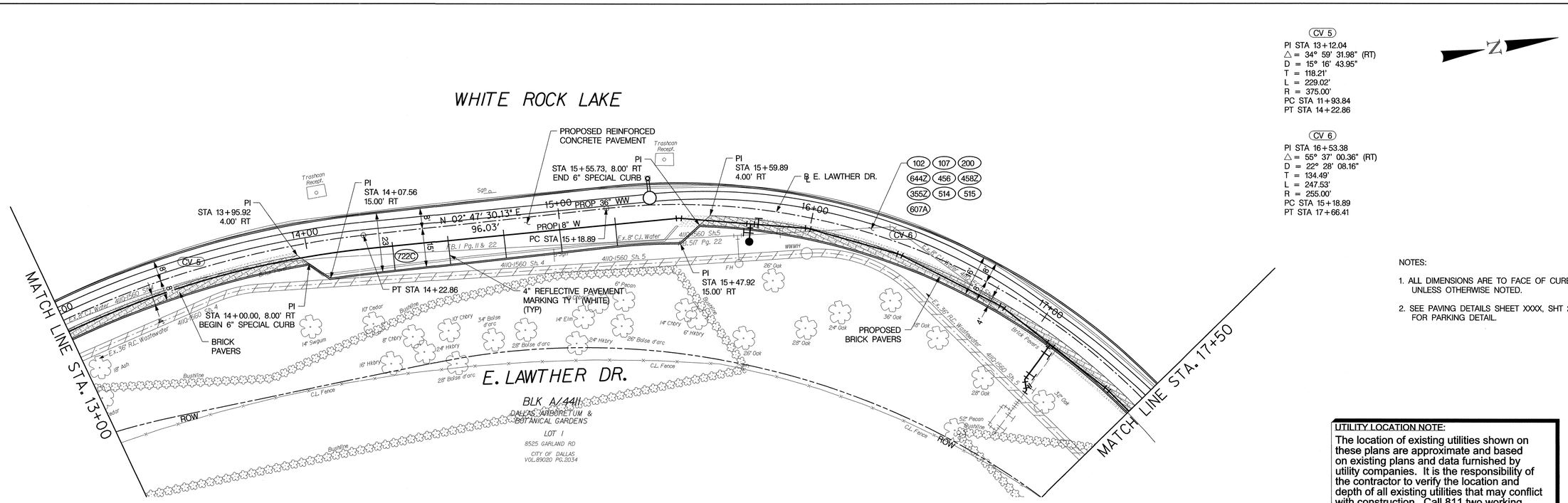
LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	65



NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE PAVING DETAILS SHEET XXXX, SHT 2 FOR PARKING DETAIL.

UTILITY LOCATION NOTE:
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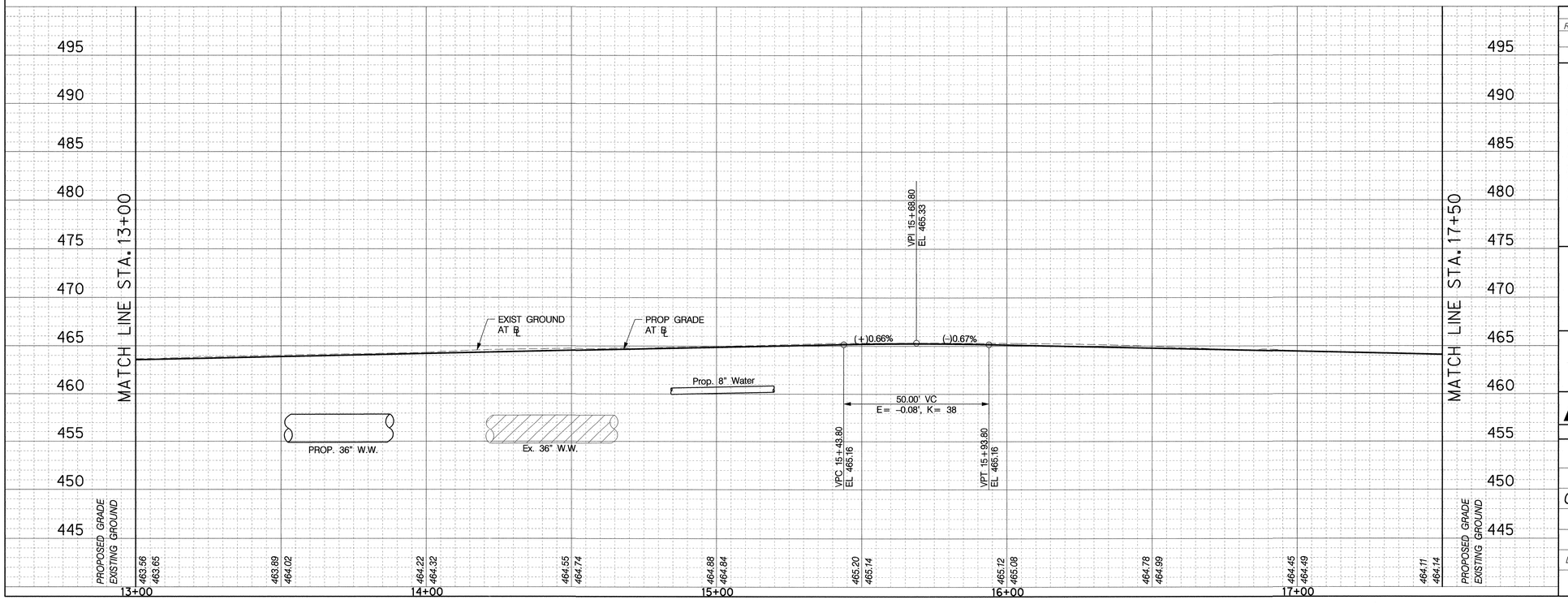


REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV - 469.27

CONTROL POINT #4
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR. +/- 1360' NORTH OF GARLAND RD.
N. 6986459.4850; E. 2515093.7270; ELEV - 464.19

CONTROL POINT #5
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR. +/- 1644' NORTH OF GARLAND RD.
N. 6986740.6410; E. 2515109.7220; ELEV - 465.47

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

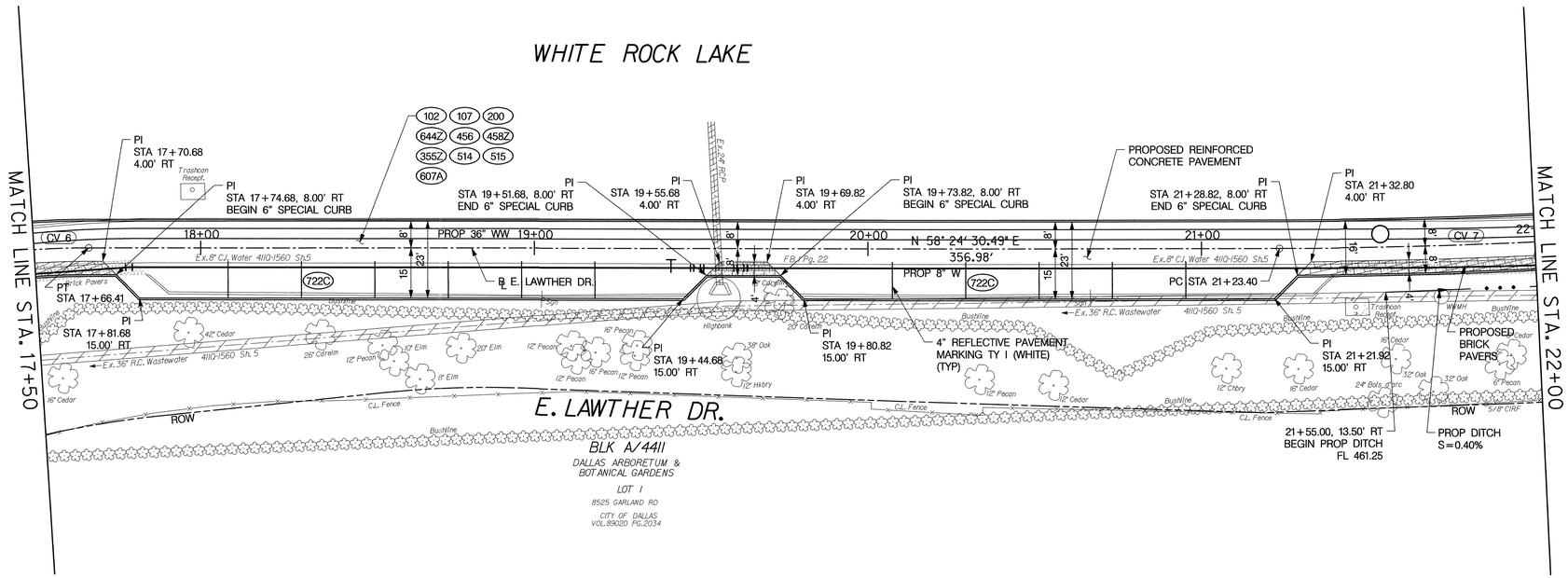
STATE OF TEXAS
ERIC K. KRONER
88551
PROFESSIONAL ENGINEER
11/10/17

APM & Associates, Inc.
Engineering · Planning · CM Services
2201 Main Street, Suite 1100
Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

PAVING PLAN & PROFILE
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	66

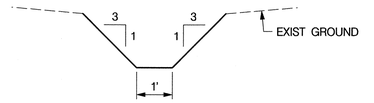


CV 6
PI STA 16+53.38
△ = 55° 37' 00.36" (RT)
D = 22° 28' 08.16"
T = 134.49'
L = 247.53'
R = 255.00'
PC STA 15+18.89
PT STA 17+66.41

CV 7
PI STA 23+91.14
△ = 18° 59' 59.37" (LT)
D = 03° 34' 51.55"
T = 267.75'
L = 530.58'
R = 1600.00'
PC STA 21+23.40
PT STA 26+53.97

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE PAVING DETAILS SHEET XXXX, SHT 2 FOR PARKING DETAIL.



TYPICAL SECTION
PROPOSED DITCH

UTILITY LOCATION NOTE:
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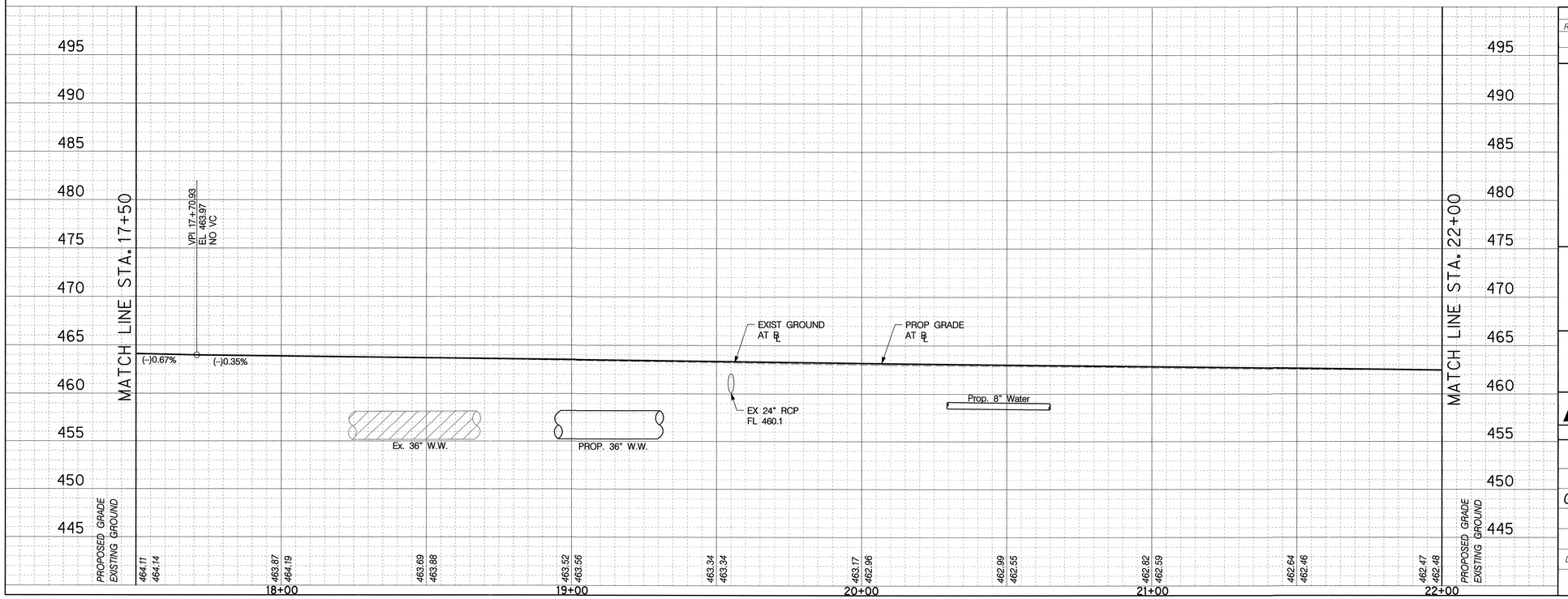

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV - 469.27

CONTROL POINT #5
"X" CUT SET ON TOP OF CONCRETE CURB ON THE WEST EDGE OF LAWTHER DR. +/- 1644' NORTH OF GARLAND RD.
N. 6986740.6410, E. 2515097.220; ELEV - 465.47

CONTROL POINT #6
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR. +/- 30' WEST OF A 24" RCP CULVERT.
N. 6986950.0540, E. 2515353.8390, ELEV - 464.04

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

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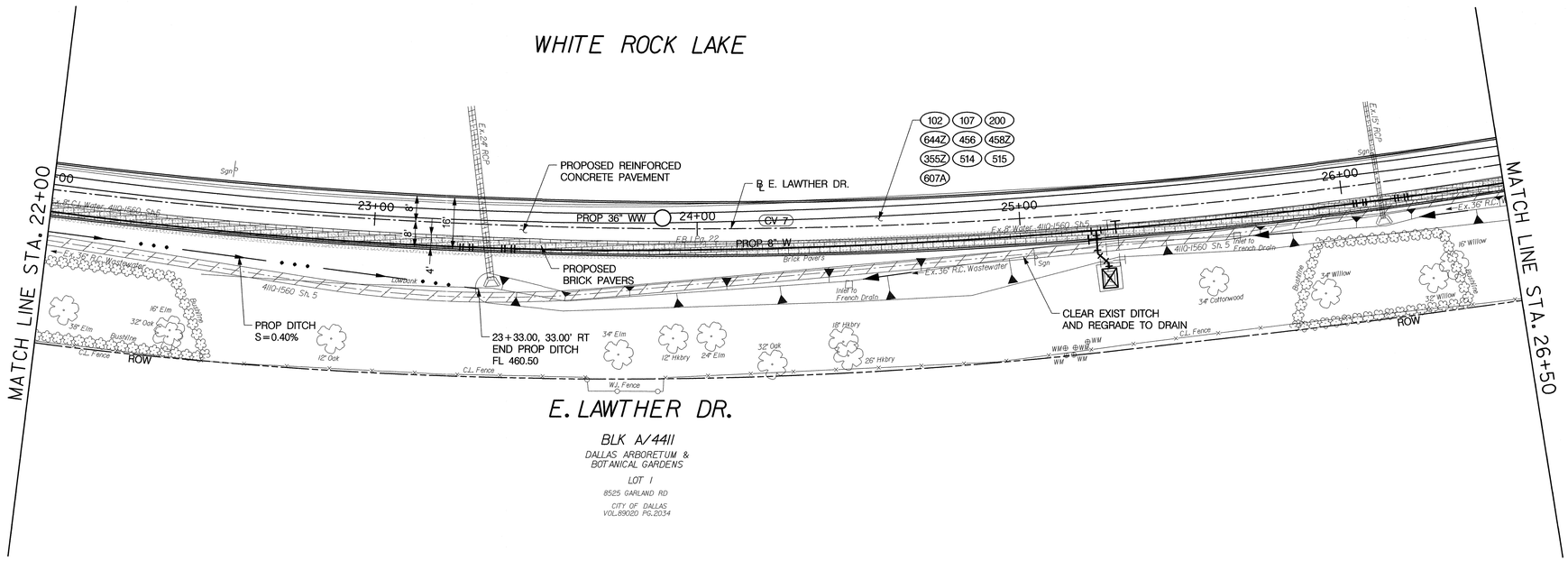
PAVING PLAN & PROFILE
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

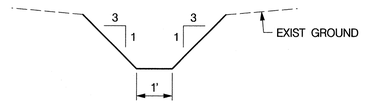
DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	67



CV 7
PI STA 23+91.14
△ = 18° 59' 59.37" (LT)
D = 03° 34' 51.55"
T = 267.75'
L = 530.58'
R = 1600.00'
PC STA 21+23.40
PT STA 26+53.97

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE PAVING DETAILS SHEET XXXX, SHT 2 FOR PARKING DETAIL.



TYPICAL SECTION
PROPOSED DITCH

UTILITY LOCATION NOTE:
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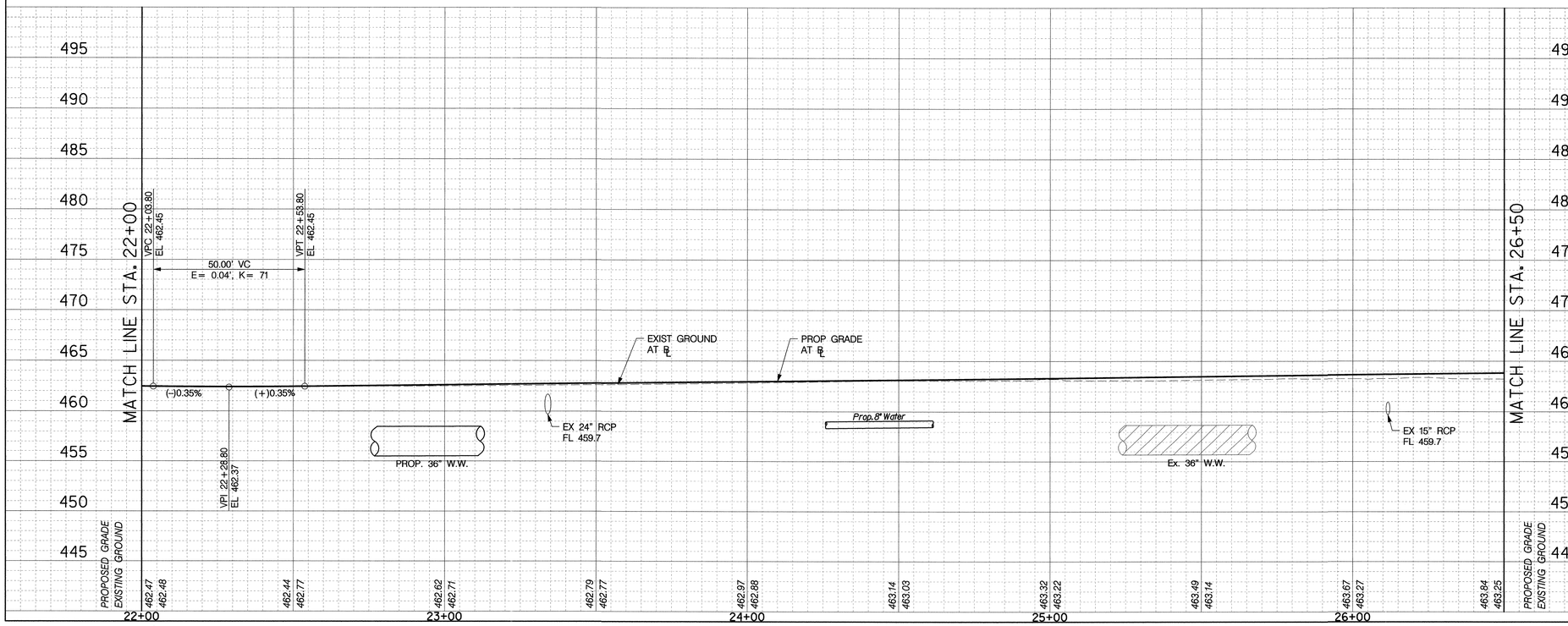

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV - 469.27

CONTROL POINT #6
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR. +/- 30' WEST OF A 24" RCP CULVERT.
N. 6986950.0540; E. 2515353.8390; ELEV - 464.04

CONTROL POINT #7
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR. +/- 64' WEST OF A 34" COTTONWOOD TREE.
N. 6987285.9750; E. 2515814.6180; ELEV - 463.59

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

STATE OF TEXAS
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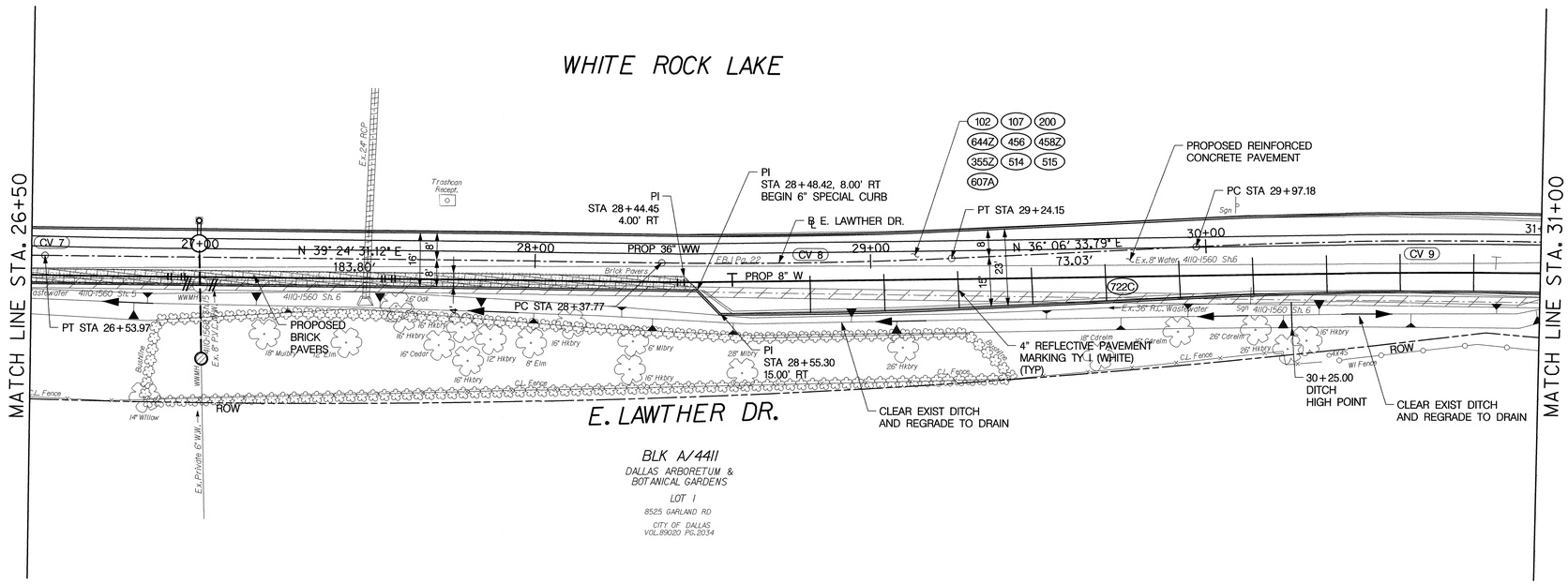
PAVING PLAN & PROFILE
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	68



CV 7
PI STA 23+91.14
△ = 18° 59' 59.37" (LT)
D = 03° 34' 51.55"
T = 267.75'
L = 530.58'
R = 1600.00'
PC STA 21+23.40
PT STA 26+53.97

CV 8
PI STA 28+80.97
△ = 03° 17' 57.33" (LT)
D = 03° 49' 10.99"
T = 43.20'
L = 86.37'
R = 1500.00'
PC STA 28+37.77
PT STA 29+24.15

CV 9
PI STA 30+91.29
△ = 07° 10' 48.65" (RT)
D = 03° 49' 10.99"
T = 94.11'
L = 187.98'
R = 1500.00'
PC STA 29+97.18
PT STA 31+85.15

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE PAVING DETAILS SHEET XXXX, SHT 2 FOR PARKING DETAIL.

UTILITY LOCATION NOTE:

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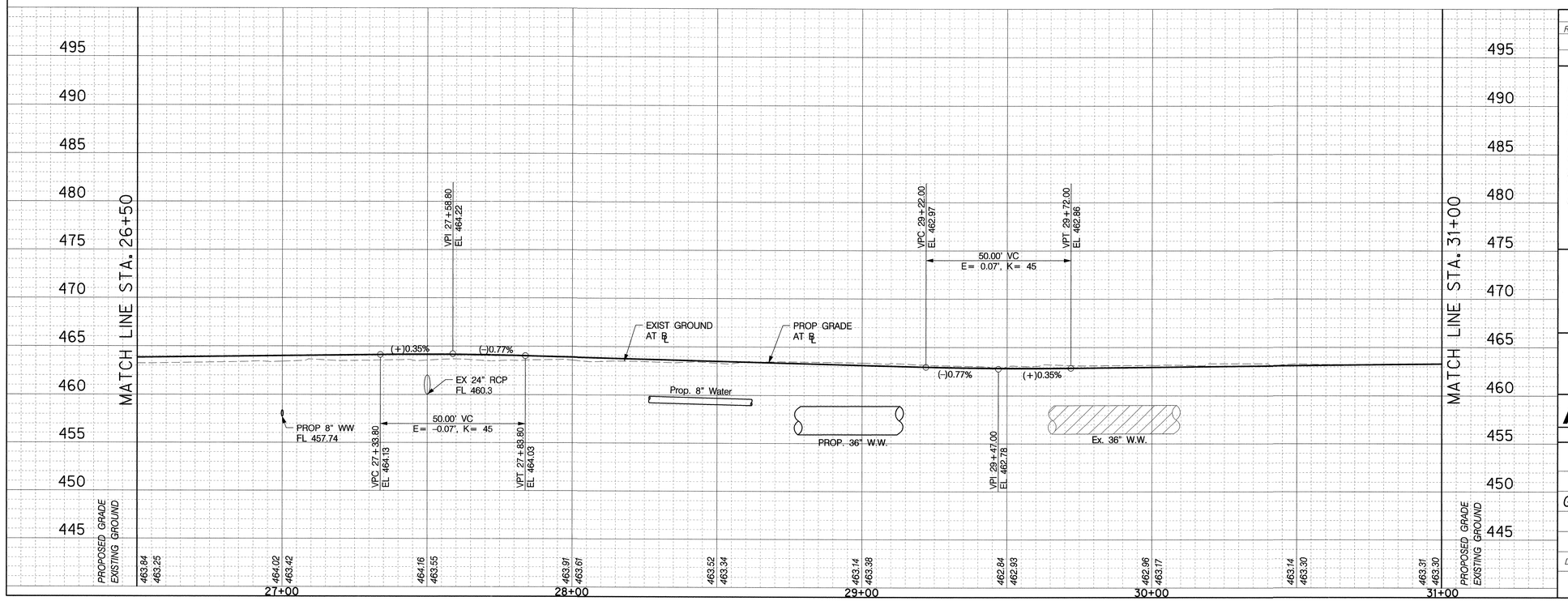

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #7
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR. +/- 64' WEST OF A 34" COTTONWOOD TREE.
N. 6987285.9750; E. 2515814.5180; ELEV = 463.59

CONTROL POINT #8
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR. +/- 68' SW OF THE NORTH EXIT OF DALLAS ARBORETUM.
N. 6987761.0240; E. 2516205.6380; ELEV = 463.85

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

STATE OF TEXAS
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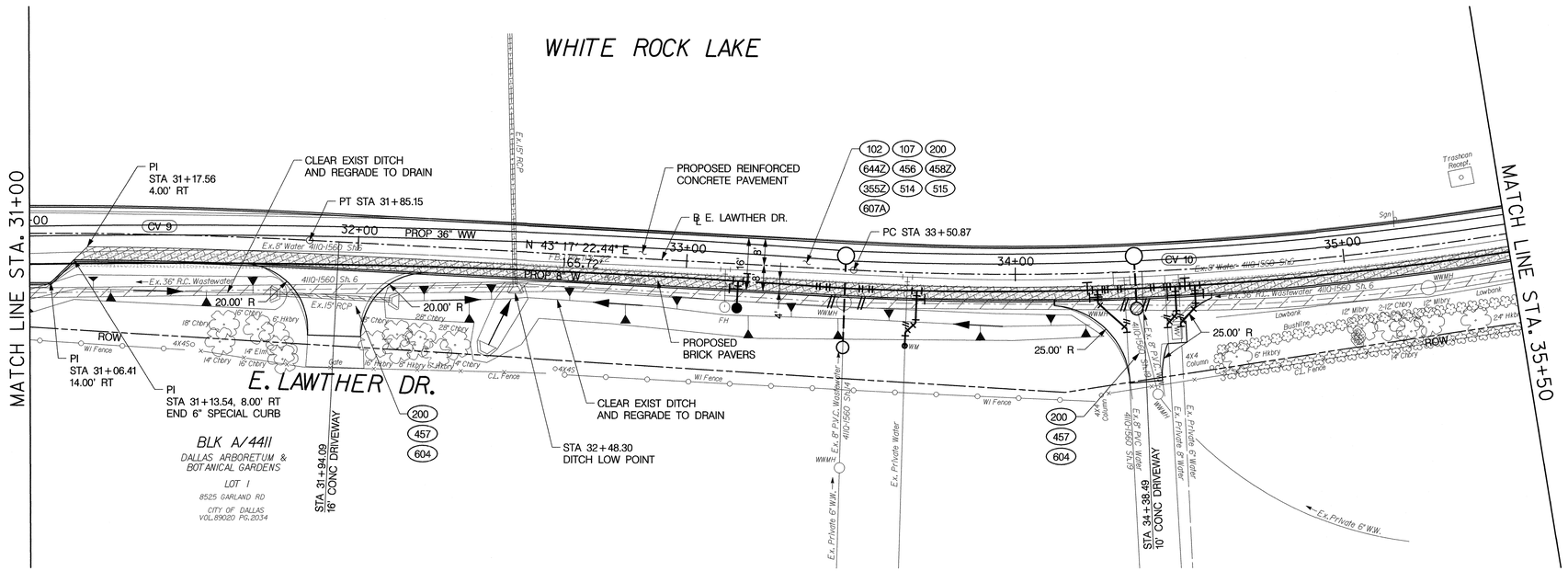
PAVING PLAN & PROFILE
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	69



CV 9
PI STA 30+91.29
△ = 07° 10' 48.65" (RT)
D = 03° 49' 10.99"
T = 94.11'
L = 187.98'
R = 1500.00'
PC STA 29+97.18
PT STA 31+85.15

CV 10
PI STA 34+57.08
△ = 13° 05' 59.15" (LT)
D = 06° 11' 38.90"
T = 106.21'
L = 211.49'
R = 925.00'
PC STA 33+50.87
PT STA 35+62.36

NOTES:

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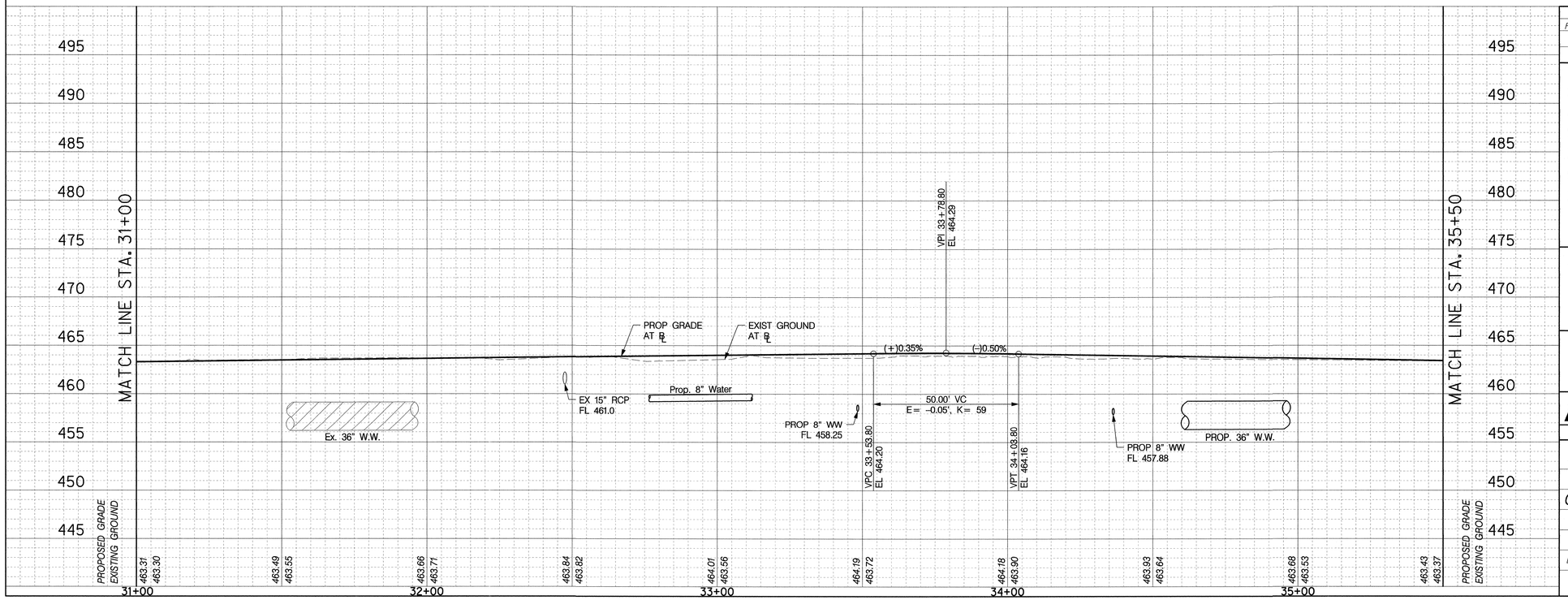

REVISIONS

REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT #8
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR. +/- 68' SW OF THE NORTH EXIT OF DALLAS ARBORETUM.
N. 6987761.0240; E. 2516205.6380; ELEV = 463.85

CONTROL POINT #9
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR. +/- 330' SOUTHWEST OF A 3'X4' BOX CULVERT.
N. 6988191.4460; E. 2516540.8760; ELEV = 463.96

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

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CONTRACT NO. 18-021/022 | PID 5826

PAVING PLAN & PROFILE

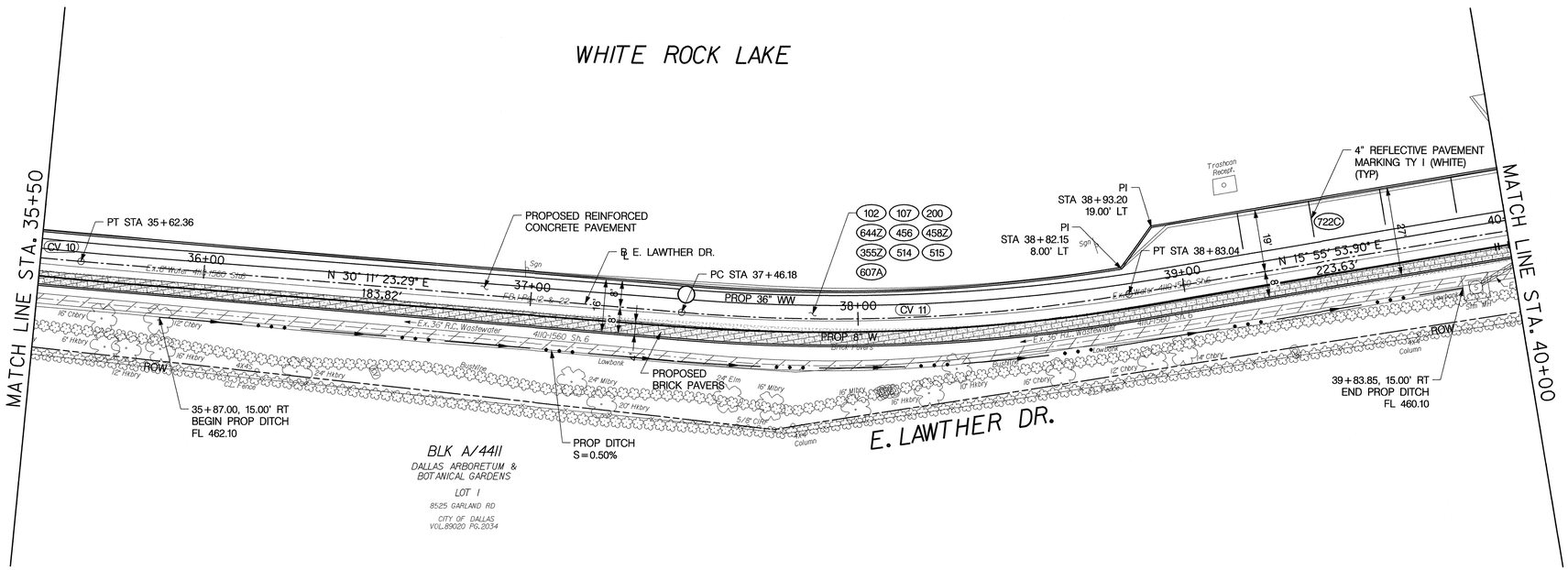
LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	411Q	1560	70



CV 10
PI STA 34+57.08
△ = 13° 05' 59.15" (LT)
D = 06° 11' 38.90"
T = 106.21'
L = 211.49'
R = 925.00'
PC STA 33+50.87
PT STA 35+62.36

CV 11
PI STA 38+14.97
△ = 14° 15' 29.39" (LT)
D = 10° 25' 02.69"
T = 68.79'
L = 136.87'
R = 550.00'
PC STA 37+46.18
PT STA 38+83.04

NOTES:

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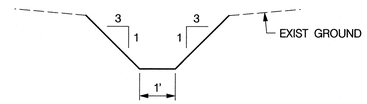
2. SEE PAVING DETAILS SHEET XXXX, SHT 2 FOR PARKING DETAIL.



TYPICAL SECTION
PROPOSED DITCH

UTILITY LOCATION NOTE:

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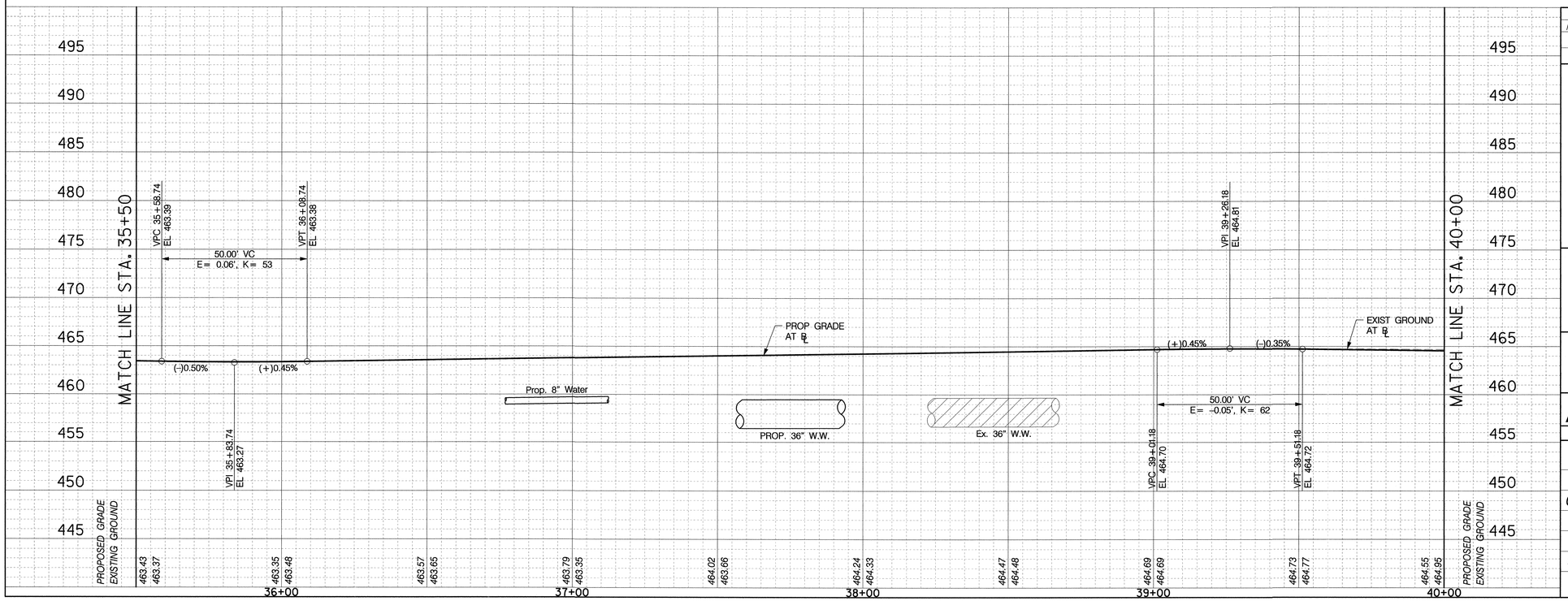

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR.& GARLAND RD.
ELEV = 469.27

CONTROL POINT #9
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR.,+/- 330' SOUTHWEST OF A 3'X4' BOX CULVERT.
N. 6988191.4460; E. 2516540.8760; ELEV = 463.96

CONTROL POINT #10
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR.,+/-175' NORTHEAST OF A 3'X4' BOX CULVERT.
N. 6988669.7240; E. 2516714.1400; ELEV = 465.11

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

STATE OF TEXAS
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PAVING PLAN & PROFILE

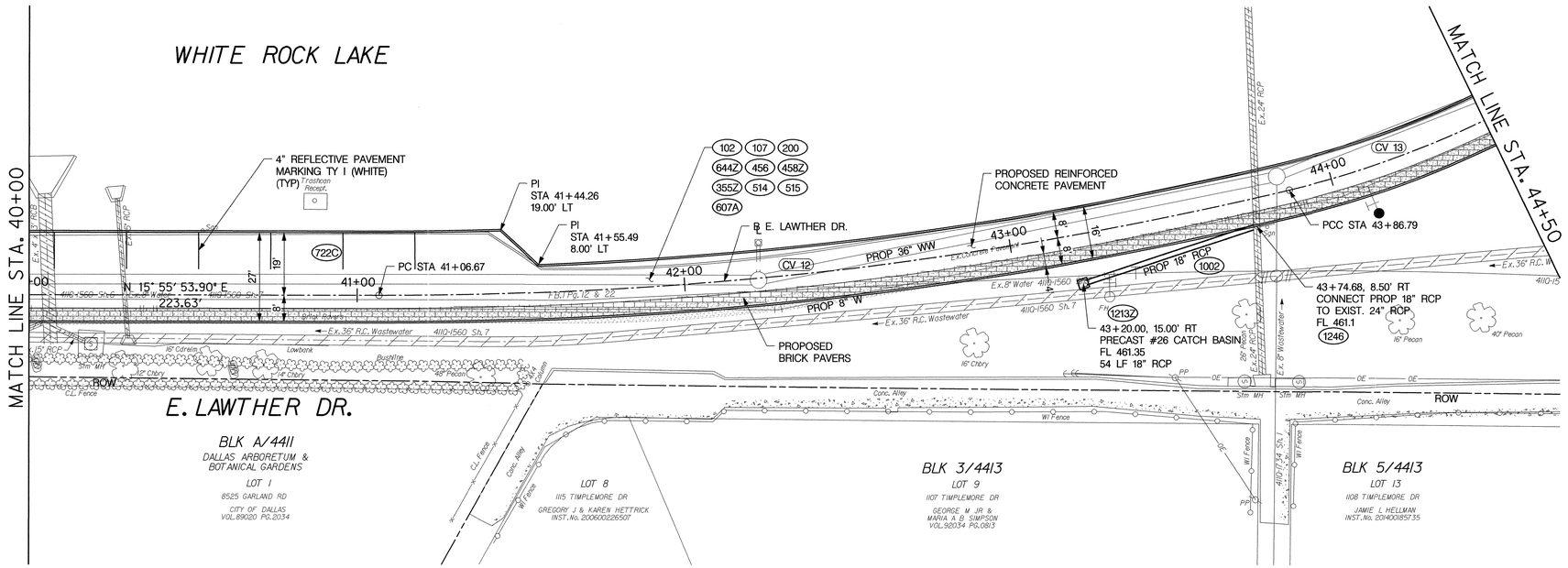
LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	411Q	1560	71



CV 12
PI STA 42+47.37
△ = 13° 22' 28.51" (LT)
D = 04° 46' 28.73"
T = 140.70'
L = 280.12'
R = 1200.00'
PC STA 41+06.67
PCC STA 43+86.79

CV 13
PI STA 44+77.81
△ = 34° 50' 54.65" (LT)
D = 19° 45' 25.75"
T = 91.02'
L = 176.38'
R = 290.00'
PCC STA 43+86.79
PT STA 45+63.17

NOTES:

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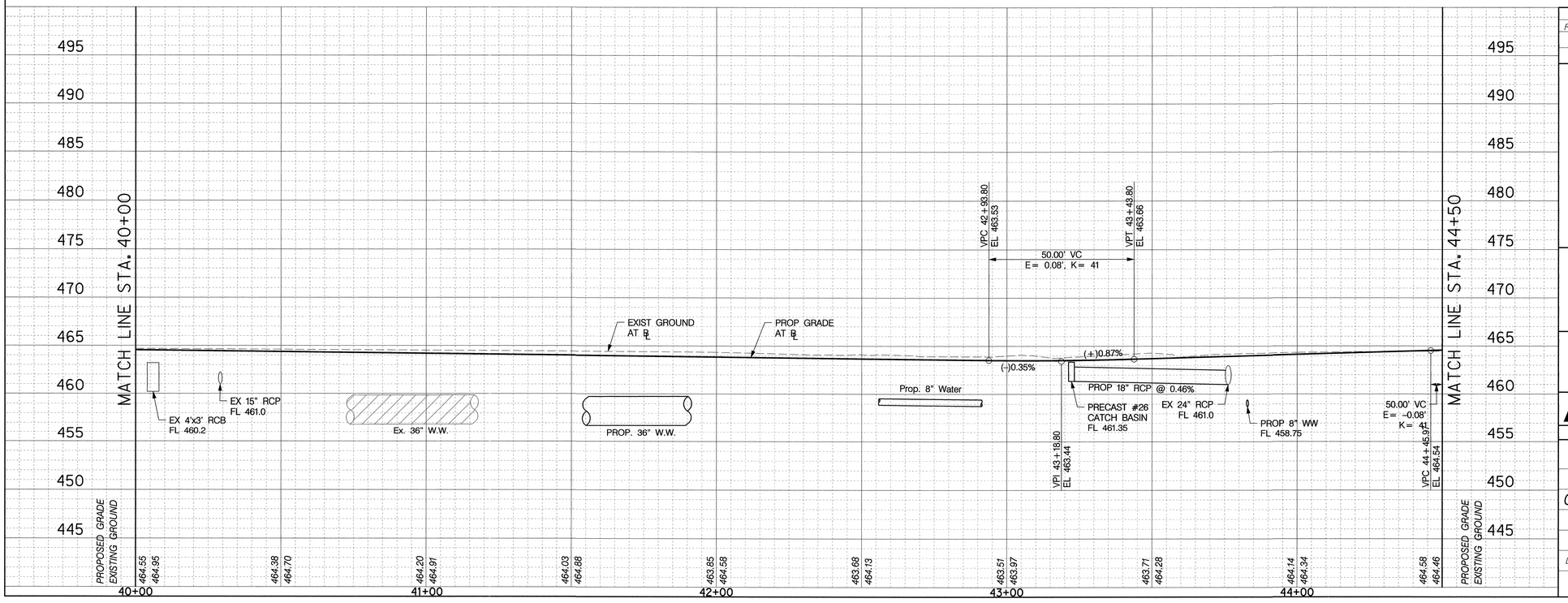

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR.& GARLAND RD.
ELEV - 469.27

CONTROL POINT "10"
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR.+/- 175' NORTHEAST OF A 3'X4' BOX CULVERT.
N. 6988669.7240; E. 2516714.1400; ELEV = 465.11

CONTROL POINT "11"
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF BLK 5/4413, +/- 500' SOUTH OF EXISTING SOFTBALL FIELD.
N. 6989189.3850; E. 2516912.0830; ELEV = 468.28

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

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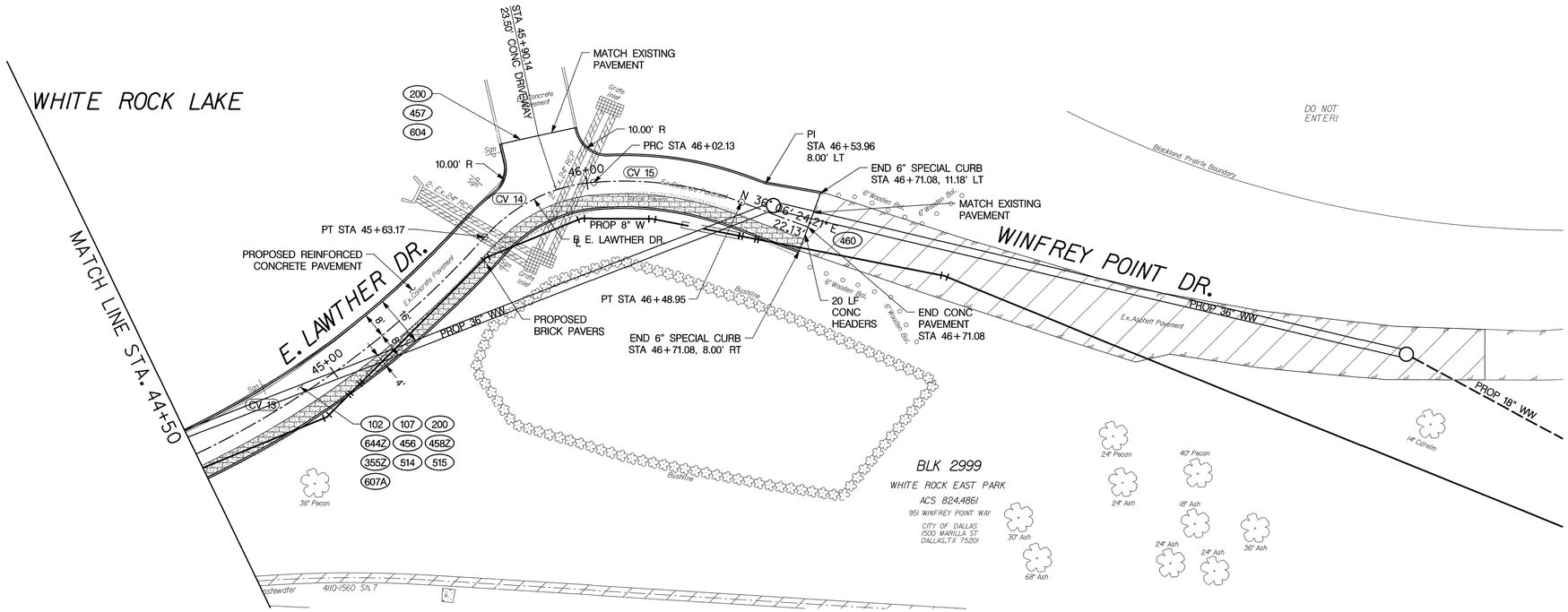
CONTRACT NO. 18-021/022 | PID 5826

PAVING PLAN & PROFILE
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	72



CV 13
PI STA 44+77.81
△ = 34° 50' 54.65" (LT)
D = 19° 45' 25.75"
T = 91.02'
L = 176.38'
R = 290.00'
PCC STA 43+86.79
PT STA 45+63.17

CV 14
PI STA 45+83.62
△ = 42° 55' 23.23" (RT)
D = 110° 11' 04.19"
T = 20.44'
L = 38.96'
R = 52.00'
PC STA 45+63.17
PRC STA 46+02.13

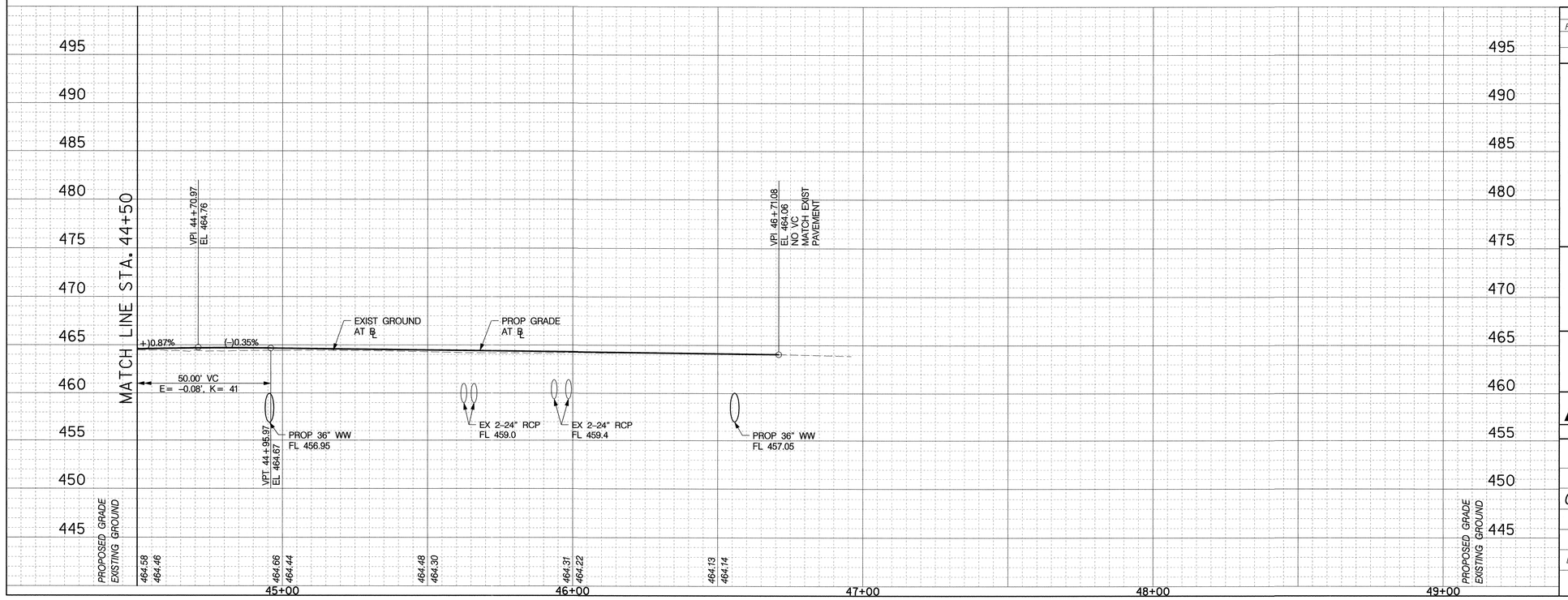
CV 15
PI STA 46+25.93
△ = 25° 28' 30.24" (RT)
D = 54° 24' 50.33"
T = 23.80'
L = 46.82'
R = 105.30'
PRC STA 46+02.13
PT STA 46+48.95

NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE PAVING DETAILS SHEET XXXX, SHT 2 FOR PARKING DETAIL.

UTILITY LOCATION NOTE:

The location of existing utilities shown on these plans are approximate and based on existing plans and data furnished by utility companies. It is the responsibility of the contractor to verify the location and depth of all existing utilities that may conflict with construction. Call 811 two working days prior to construction for onsite locations. Any damage to existing utilities shall be repaired at contractor's expense, at no additional cost.



REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
COD STD.WDBM SET ON CONCRETE STORM SEWER DROP INLET AT THE SOUTHEAST CORNER OF BREEZWOOD DR. & GARLAND RD.
ELEV = 469.27

CONTROL POINT "10"
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF LAWTHER DR. +/- 175' NORTHEAST OF A 3'X4' BOX CULVERT.
N. 6988669.7240; E. 2516714.1400; ELEV = 465.11

CONTROL POINT "11"
"X" CUT SET ON TOP OF CONCRETE CURB ON THE NORTH SIDE OF BLK 5/4413, +/- 500' SOUTH OF EXISTING SOFTBALL FIELD.
N. 6989189.3850; E. 2516912.0830; ELEV = 468.28

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

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FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

PAVING PLAN & PROFILE

LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	73

A. GENERAL SITE DATA

1. PROJECT LIMITS: *E. Lawther Rd. from Garland Rd. to west of Sunset Inn Cir.*

2. PROJECT SITE MAPS:

- *Project Location Map: Title Sheet (4110-1560 Sh. 52)*
- *Approx. Slopes Anticipated After Major Grading and Areas of Soil Disturbance: Typ Sects (4110-1560 Sh. 51)*
- *Major Controls and Locations of Stabilization Practices: Erosion Control Plan (4110-1560 Sh. 75 thru 77)*
- *Surface Waters and Discharge Locations: Drainage Layout (4110-1560 Sh. 63 thru 73)*

3. PROJECT DESCRIPTION:

The reconstruction of existing roadway consists of grading, concrete paving, brick pavers, curb & gutter, and water & wastewater replacements.

4. MAJOR SOIL DISTURBING ACTIVITIES:

Soil disturbing activities will include preparing the right of way, clearing and grubbing, excavation and embankment for roadways, removal of ex. pavement, structure installation, storm sewer construction, erosion and sediment controls, and water installation.

5. EXISTING CONDITION OF SOIL & VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER:

The soil is generally a very dark grayish brown to olive brown stiff clay.
The vegetative cover consists of grass, weeds, native trees and worked ground.

6. TOTAL PROJECT AREA: *4.27* Acres

7. TOTAL AREA TO BE DISTURBED: *4.27* Acres *(100%)*

8. WEIGHTED RUNOFF COEFFICIENT

BEFORE CONSTRUCTION: *0.55*
AFTER CONSTRUCTION: *0.55*

9. NAME OF RECEIVING WATERS:

This project drains into White Rock Lake.

10. DESIGNATED CRITICAL HABITAT AND HISTORIC PROPERTY:

A. This project is within the City of Dallas's White Rock Lake Park. There are several designated Habitats and Historic properties in the vicinity of this project.

B. These are the Dallas Arboretum and Botanical Gardens, White Rock Lake, White Rock Lake Trail, Winsfrey Point, Black Land Prairie and Trout Lilies.

C. This project is within an environmentally sensitive area and there are areas not to be disturbed. Contractor shall coordinate with the City of Dallas Parks Department personnel prior to any construction activity.

B. SUGGESTED EROSION AND SEDIMENT CONTROLS

1. SOIL STABILIZATION PRACTICES: (Select T = Temporary or P = Permanent, as applicable)

T	TEMPORARY SEEDING	T,P	PRESERVATION OF NATURAL RESOURCES
	MULCHING (Hay or Straw)		FLEXIBLE CHANNEL LINER
	BUFFER ZONES		RIGID CHANNEL LINER
	PLANTING		SOIL RETENTION BLANKET
	SEEDING	P	COMPOST MANUFACTURED TOPSOIL
P	SODDING		OTHER:

2. STRUCTURAL PRACTICES: (Select T = Temporary or P = Permanent, as applicable)

T	SILT FENCES
	HAY BALES
T	ROCK FILTER DAMS
	DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
	DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
	DIVERSION DIKE AND SWALE COMBINATIONS
	PIPE SLOPE DRAINS
	PAVED FLUMES
T	ROCK BEDDING AT CONSTRUCTION EXIT
	TIMBER MATTING AT CONSTRUCTION EXIT
	CHANNEL LINERS
	SEDIMENT TRAPS
	SEDIMENT BASINS
T	STORM INLET SEDIMENT TRAP
	STONE OUTLET STRUCTURES
P	CURBS AND GUTTERS
	STORM SEWERS
	VELOCITY CONTROL DEVICES
P	OTHER: *(Existing Storm Sewer System)*

3. STORM WATER MANAGEMENT:

1. Runoff will be provided by curb and gutter, ditches and existing storm sewer system. The existing storm sewer system shall convey the runoff to the lake and away from the project.

4. STORM WATER MANAGEMENT ACTIVITIES: (Sequence of Construction)

The Storm Water Management Activities by Phases are as follows:

1. Install structural controls and inlet protection at existing inlets prior to disturbance of existing topsoil.

2. Install silt fence:
A. Around embankment and excavation location and topsoil stockpiles.
B. Around all existing inlets as soon as they are functional.

3. When all construction activity is complete and the site is stabilized and approved by the engineer, remove all temporary structural controls and re-sod any areas disturbed by their removal. Any perimeter controls shall remain in place until final stabilization of the area upstream.

5. NON-STORM WATER DISCHARGES:

Non-storm water discharges should be filtered before being allowed to mix with storm water. These discharges consist of non-polluted ground water, spring water, foundation and/or footing drain water; and water used for dust control, pavement washing and vehicle wash water containing no detergents.

C. OTHER REQUIREMENTS & PRACTICES

1. MAINTENANCE:

All erosion and sediment controls shall be maintained in good working order. If a repair is necessary, it shall be performed at the earliest date possible but no later than 7 calendar days after the surrounding exposed ground has dried sufficiently to prevent further damage from heavy equipment. Disturbed areas on which construction activities have ceased, temporarily or permanently, shall be stabilized within 14 calendar days unless they are scheduled to and do resume within 21 calendar days. The areas adjacent to creeks and drainage ways shall have priority followed by devices protecting storm sewer inlets.

2. INSPECTION:

Contractor shall inspect disturbed areas, material storage areas exposed to precipitation, structural control measures, and vehicle entry and exit areas at least once every 14 calendar days and within 24 hours of a storm event of 0.5 inches or greater or once every 7 days on the same day of the week each week, regardless if there has been a rainfall event. The SWP3 must reflect the schedule in use. An Inspection and Maintenance Report shall be filed for each inspection. Based on the inspection results, the controls shall be revised as per the inspection report.

3. WASTE MATERIALS:

All waste materials shall be collected in a metal dumpster having a secure cover. The dumpster shall meet all state and local city solid waste management regulations. All trash and debris from construction shall be deposited in the dumpster. The dumpster shall be emptied, as necessary or as required by local regulation, and hauled to a local approved land fill site. The burying of construction waste on the project site shall not be permitted.

4. HAZARDOUS WASTE (INCLUDING SPILL REPORTING):

As a minimum, any products in the following categories are considered to be hazardous: paints, acids, solvents, asphalt products, chemical additives for soil stabilization and concrete curing compounds or additives. In the event of a spill which may be hazardous, the spill coordinator shall be contacted immediately.

5. SANITARY WASTE:

All sanitary waste shall be collected from the portable units, as necessary or as required by local regulation, by a licensed sanitary waste management contractor.

6. OFF-SITE VEHICLE TRACKING:

The Contractor shall be required, on a regular basis or as may be directed by the Engineer, to dampen haul roads for dust control, stabilize construction entrances and to remove excess dirt from the roadway.

7. MANAGEMENT PRACTICES:

1. Disposal areas, stockpiles and haul roads shall be constructed in a manner that will minimize and control the amount of sediment that may enter receiving waters. Disposal areas shall not be located in any wetland, body of water or stream bed.

2. Construction staging areas and vehicle maintenance areas shall be constructed by the Contractor in a manner to minimize the runoff of pollutants.

3. All waterways shall be cleared as soon as practicable of temporary embankment, temporary bridges, matting, false work, piling, debris or other obstructions placed during construction operations that are not a part of the finished work.

8. OTHER:

The SWP3 located at the project field office shall contain site information including a copy of the construction schedule information, construction site notice, certification statement, inspection reports, required maps, and the TPDES general construction permit.

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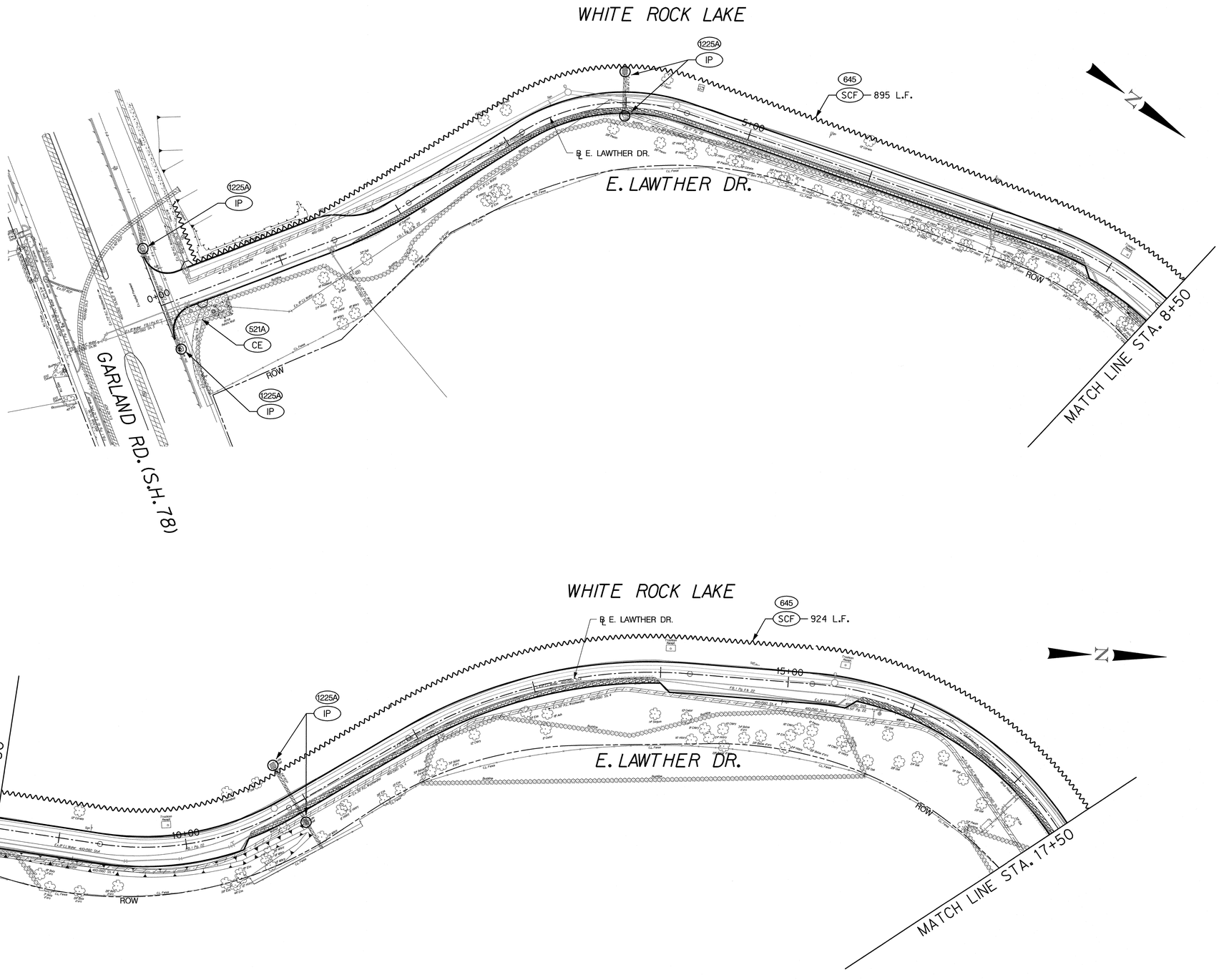
CONTRACT NO. 18-021/022 | PID 5826

EROSION CONTROL NOTES

LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	74



LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD — ROCK FILTER DAM (TYPE 2 & 3)
- IP — EROSION CONTROL LOGS (ESTIMATED @: 24 L.F. FOR AREA INLETS AND 16 L.F. FOR CURB INLETS)
- CE — CONSTRUCTION ENTRANCE AND EXIT

Horizontal Scale: 1" = 40'

0' 40' 80'

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SW3P

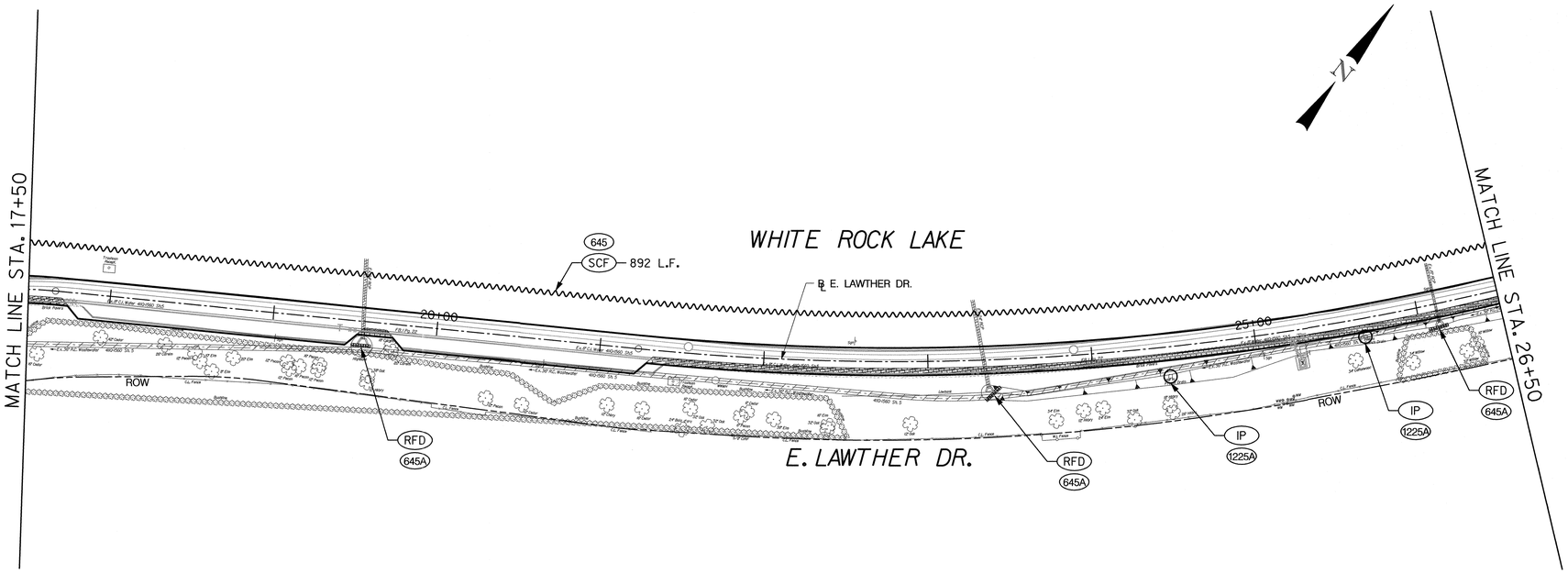
LAWTHER DRIVE

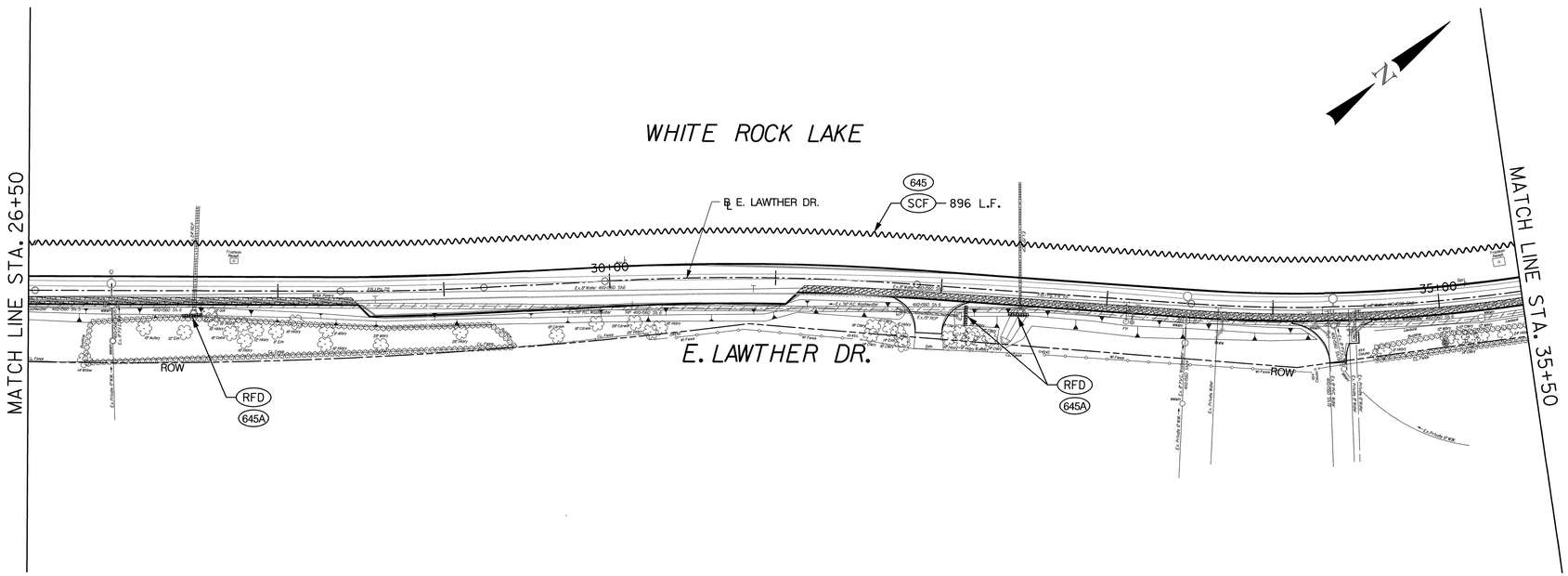
GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	411Q	1560	75





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0' 40' 80'

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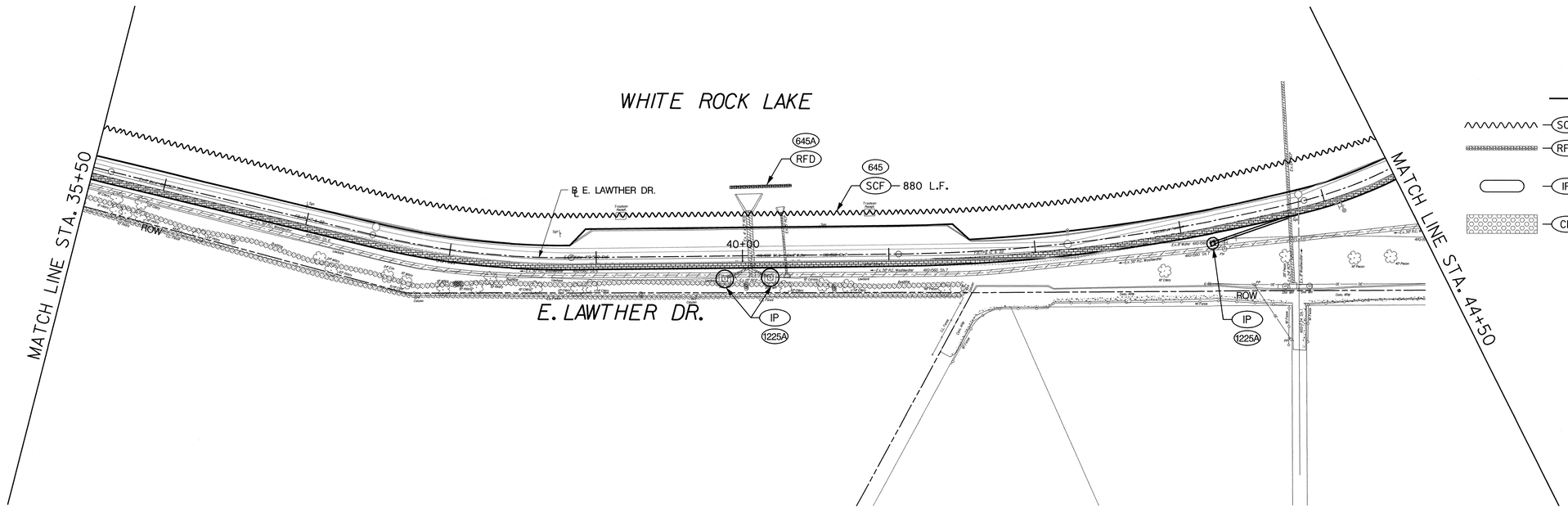
DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	411Q	1560	76



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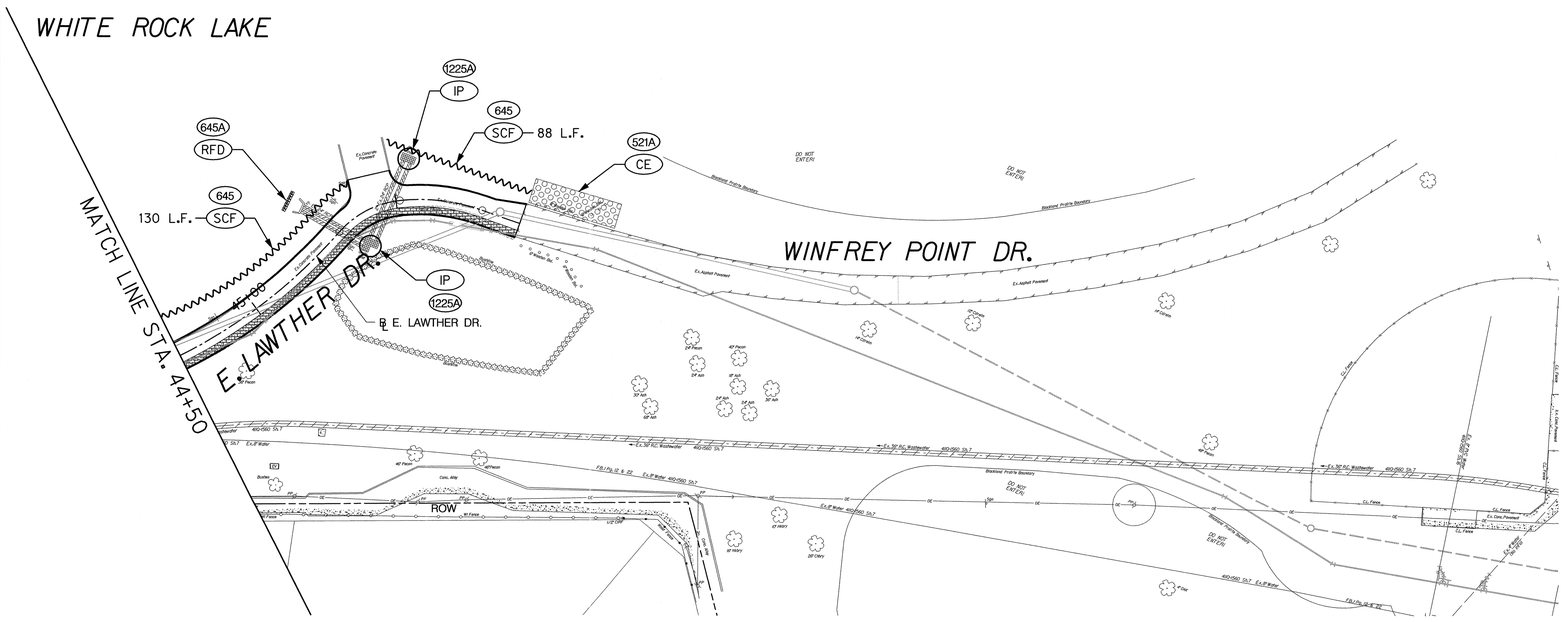

Horizontal Scale: 1" = 40'

0' 40' 80'

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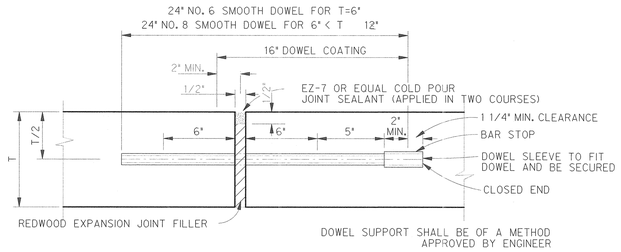
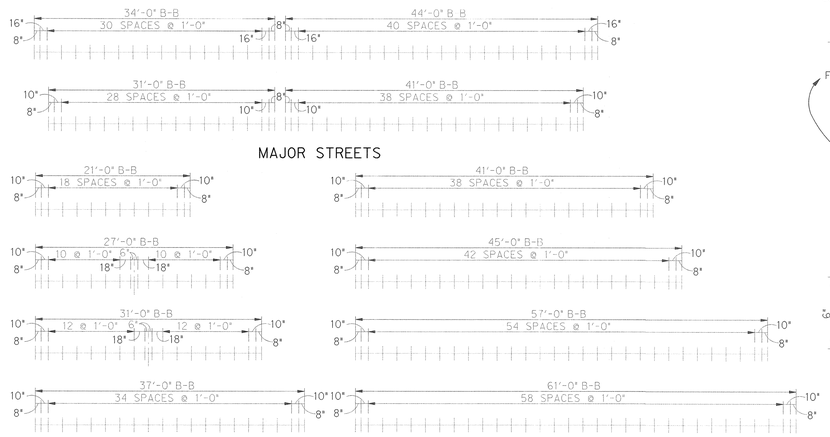
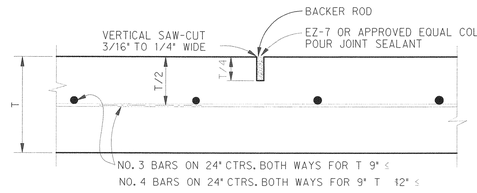


TRANSVERSE EXPANSION JOINT

IDENTICAL FOR STREETS AND ALLEYS

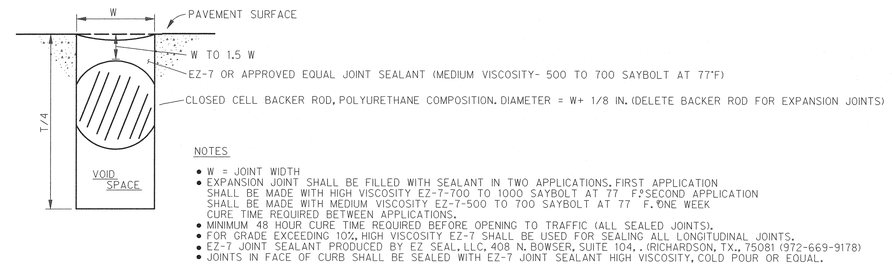


SPACING DIAGRAM FOR DOWELS AT EXPANSION JOINTS



SAWED DUMMY JOINT

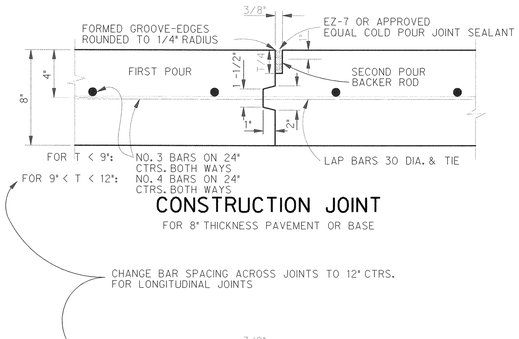
IDENTICAL FOR STREETS AND ALLEYS EXCEPT
ALLEY LONGITUDINAL REINFORCEMENT BARS



NOTES

- W = JOINT WIDTH
- EXPANSION JOINT SHALL BE FILLED WITH SEALANT IN TWO APPLICATIONS. FIRST APPLICATION SHALL BE MADE WITH HIGH VISCOSITY EZ-7-700 TO 1000 SAYBOLT AT 77 F. SECOND APPLICATION SHALL BE MADE WITH MEDIUM VISCOSITY EZ-7-500 TO 700 SAYBOLT AT 77 F. ONE WEEK CURE TIME REQUIRED BETWEEN APPLICATIONS.
- MINIMUM 48 HOUR CURE TIME REQUIRED BEFORE OPENING TO TRAFFIC (ALL SEALED JOINTS).
- FOR GRADE EXCEEDING 10%, HIGH VISCOSITY EZ-7 SHALL BE USED FOR SEALING ALL LONGITUDINAL JOINTS.
- EZ-7 JOINT SEALANT PRODUCED BY EZ SEAL, LLC, 408 N. BOWSER, SUITE 104, . (RICHARDSON, TX., 75081 (972-669-9178)
- JOINTS IN FACE OF CURB SHALL BE SEALED WITH EZ-7 JOINT SEALANT HIGH VISCOSITY, COLD POUR OR EQUAL.

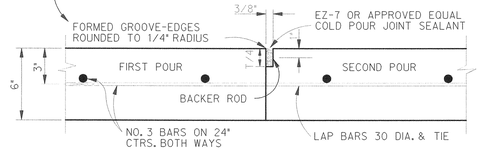
TYPICAL JOINT SEALING DETAIL



CONSTRUCTION JOINT

FOR 8" THICKNESS PAVEMENT OR BASE

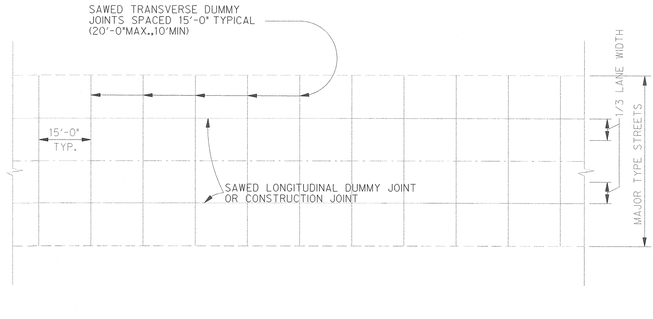
CHANGE BAR SPACING ACROSS JOINTS TO 12" CTRS. FOR LONGITUDINAL JOINTS



CONSTRUCTION JOINT

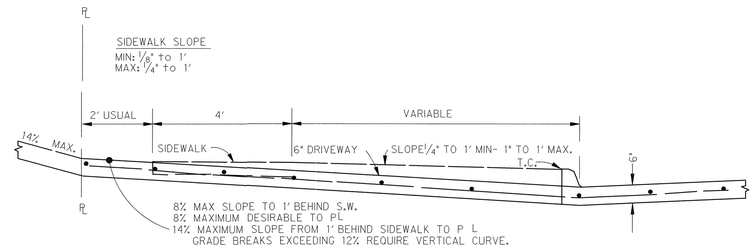
FOR 6" MINIMUM THICKNESS PAVEMENT OR BASE

IDENTICAL FOR STREETS AND ALLEYS EXCEPT
ALLEY LONGITUDINAL REINFORCEMENT BARS

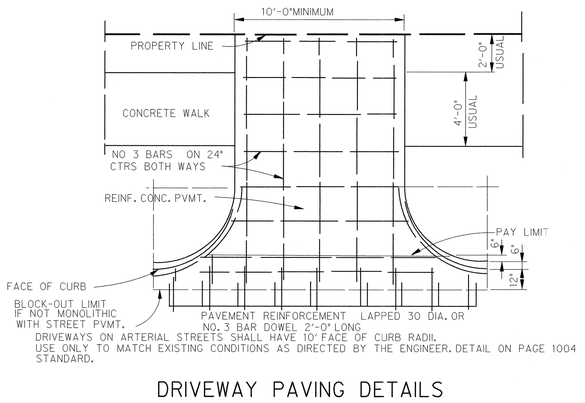


SPACING DIAGRAM FOR JOINTS

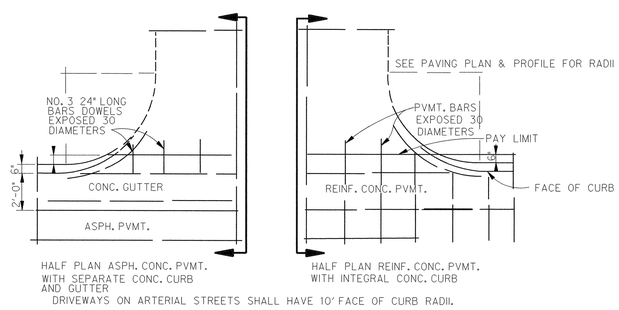
- IDENTICAL FOR STREETS (CONCRETE PAVEMENT OR BASE) AND ALLEYS EXCEPT THAT EXPANSION JOINTS FOR ALLEYS SHALL BE PLACED AT THE END OF THE RETURN IN LINE WITH THE PROPERTY LINE.
- SPACING OF EXPANSION JOINTS SHALL NOT EXCEED 150 FEET.
- ALL EXPANSION JOINT DOWEL BARS SHALL BE HELD FIRMLY IN PLACE PARALLEL WITH THE PAVEMENT SURFACE WITH WIRE BASKETS MODIFIED TO MOLD AROUND THE REDWOOD EXPANSION BOARD.
- FOR ALL LONGITUDINAL CONSTRUCTION JOINTS PROVIDE TIE BARS AS FOLLOWS:
  - #3 BARS ON 12"C-C FOR PAVEMENT THICKNESS < 9 IN.
  - #4 BARS ON 12"C-C FOR PAVEMENT THICKNESS > 9 IN. AND < 12 IN.
- ALL TIE BARS SHALL BE 24" MIN. LENGTH AND CENTERED ON THE LONGITUDINAL JOINT.



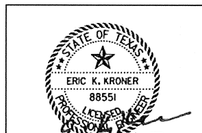
SECTION THRU. PRIVATE DRIVE



DRIVEWAY PAVING DETAILS



PLAN



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PAVING DETAILS

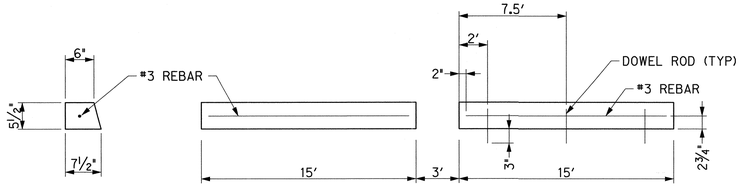
LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

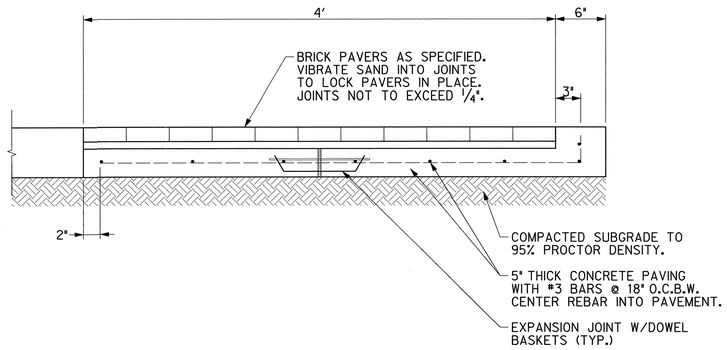
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	78



RUSTIC CURB DETAIL
N.T.S

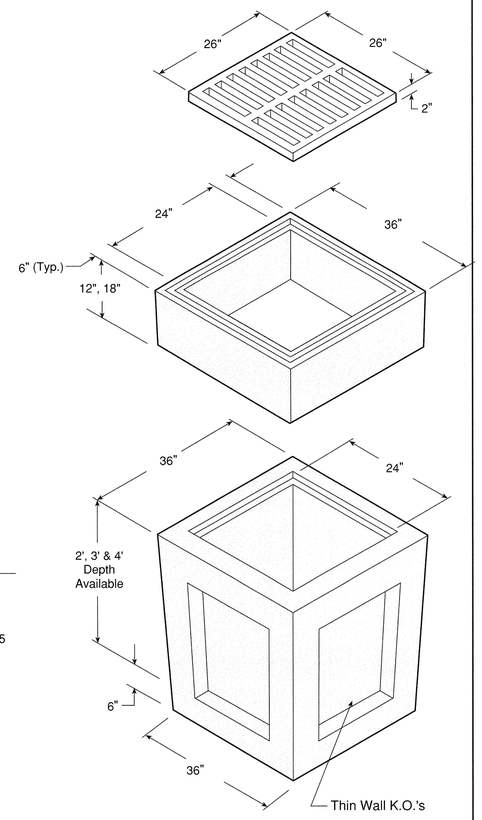
NOTES:
1. DOWEL AND EPOXY CURB INTO THE PAVEMENT.
2. CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.
3. NATIVE ROCK AGGREGATE USED IN THE CONCRETE MIX.
4. MEDIUM SAND BLAST FINISH ON BACK, TOP, FRONT AND SIDES AT GAP LOCATIONS.
5. CENTER ALL CURB OPENNINGS AT LOW POINTS IN THE PAVING PROFILE. ADJUST LENGTHS OF CURBS AND OPENNINGS AS DETERMINED BY CITY OF DALLAS PARKS DEPARTMENT.



BRICK PAVER NOTES:
1. PAVERS ARE PAVESTONE-PANHANDLE BLEND WITH 15% CAST STONE MIX.
2. SAND IN THE BEDDING COURSE SHALL BE WASHED WELL GRADED ANGULAR SAND WITH A MAXIMUM SIZE OF 3/16". SAND CONFORMING TO ASTM C33 FOR CONCRETE AGGREGATES IS ACCEPTABLE. DO NOT USE MANSONS SAND.
3. PAVERS TO BE LAID TO THE LINE AND GRADES SHOWN ON THE PAVING PLAN & PROFILE.
4. POLYMERIC JOINTING SAND TO BE SWEPT AND/OR VIBRATED BETWEEN PAVER TO LOCK INTO PLACE.
5. CONTRACTOR TO SUBMIT SUB-BASE JOINT PLAN FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
6. COMPACTION REQUIREMENTS NOTED ARE A MINIMUM STANDARD.
7. CONTRACTOR SHALL COORDINATE WITH PARKS DEPARTMENT TO SALVAGE ALL EXISTING BRICK PAVERS THAT ARE THE CORRECT STYLE AND CONDITION.
8. ALL NON-CONFORMING BRICK PAVERS SHALL BE REPLACED WITH NEW CONFORMING BRICK PAVERS. SEE NOTE 1.

BRICK/UNIT PAVER DETAIL
N.T.S

Precast Drainage Structures



Materials & Features

MAXIMUM PIPE SIZE: 18" I.D. R.C.P.

CONCRETE: 5,000 PSI

REINFORCING: per ASTM A-615 or A-185

CAST IRON FRAME & GRATE
per ASTM A 48; Class 30/35

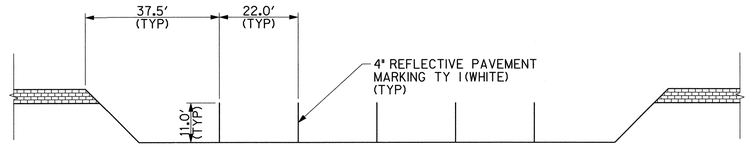
GRATE WEIGHT: 100 Lbs.

CATCH BASIN WEIGHT:
2'..... 1,580 Lbs.
3'..... 2,500 Lbs.
4'..... 3,420 Lbs.

EXTENSION WEIGHT:
12"..... 500 Lbs.
18"..... 750 Lbs.

-No Scale-
All dimensions subject to allowable specification tolerances.

TITLE	PLANT	STATE	SECTION.PAGE	DATE	
#26 Catch Basin	Waco	TX	8.6	07-01-06	Hanson



PARKING DETAIL
N.T.S

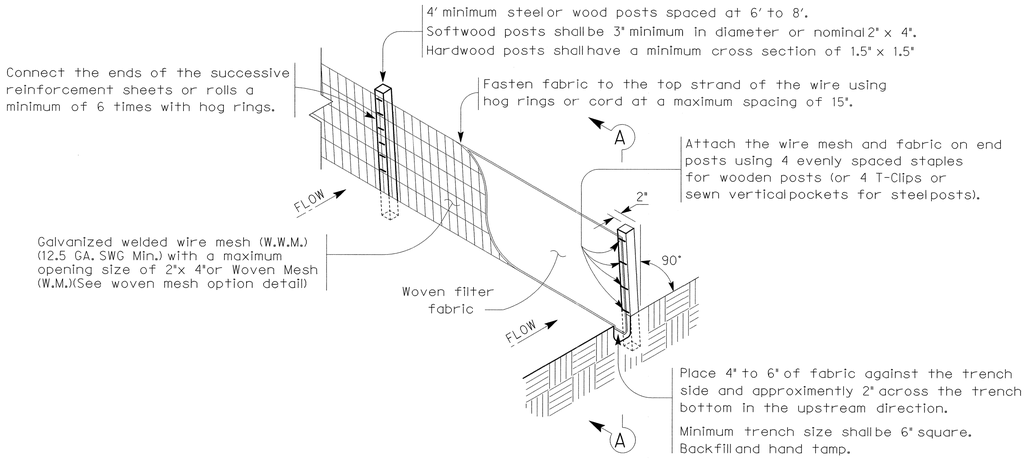
STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

APM & Associates, Inc.
Engineering · Planning · CM Services
2201 Main Street, Suite 1100
Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

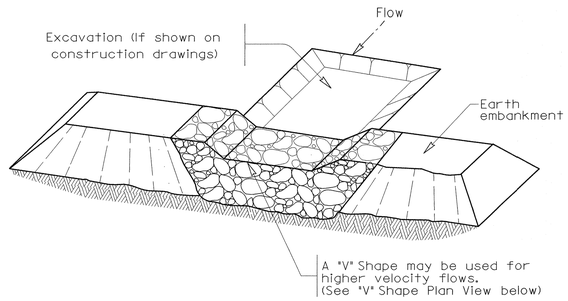
CONTRACT NO. 18-021/022 | PID 5826

PAVING & DRAINAGE DETAILS
LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

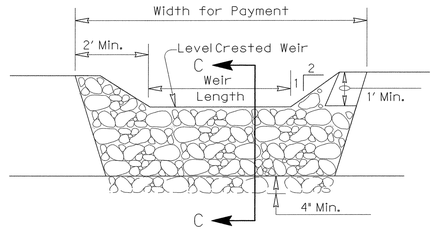
DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	4110	1560	79



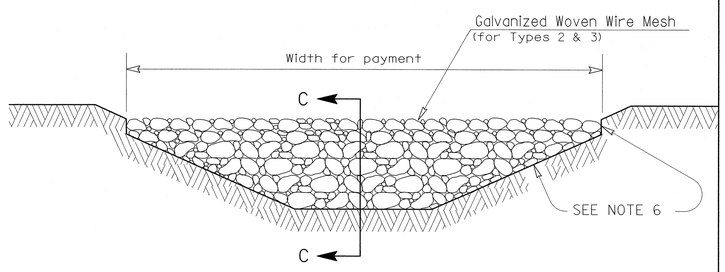
TEMPORARY SEDIMENT CONTROL FENCE



FILTER DAM AT SEDIMENT TRAP
TYPE 2



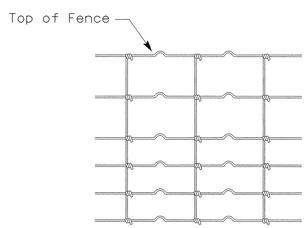
PROFILE



FILTER DAM AT CHANNEL SECTIONS
TYPE 2 or TYPE 3

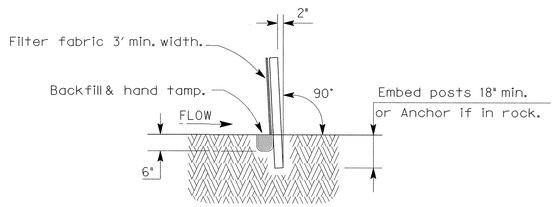
GENERAL NOTES

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.

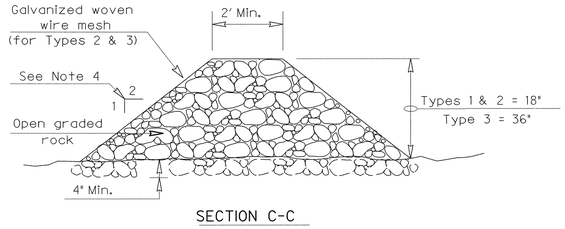


HINGE JOINT KNOT WOVEN MESH (OPTION) DETAIL

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.



SECTION A-A



SECTION C-C

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.

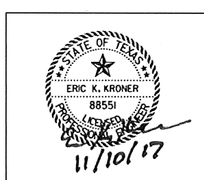
Sediment control fence should be sized to filter a maximum flow through rate of 100 GPM/FT^2. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

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 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.



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2201 Main Street, Suite 1100
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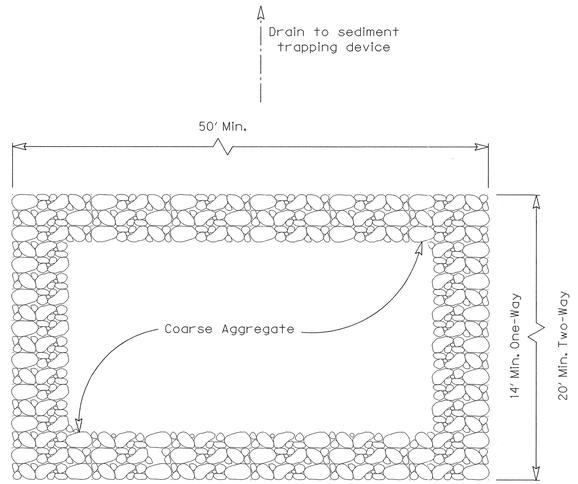
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

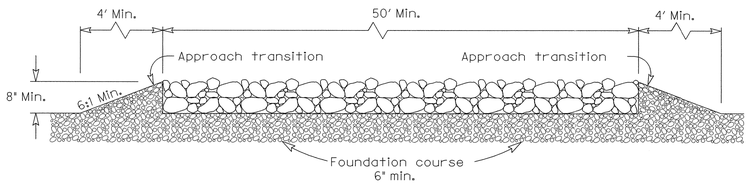
EROSION CONTROL DETAILS

LAWTHER DRIVE
GARLAND RD. TO WEST OF SUNSET INN CIR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	80



PLAN VIEW



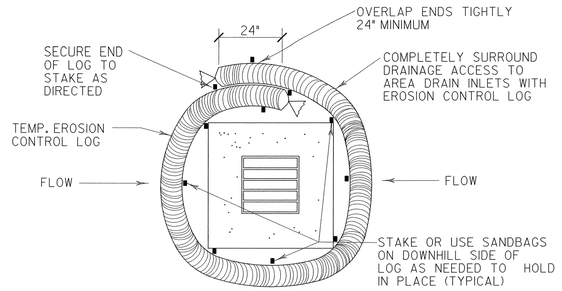
ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 1)

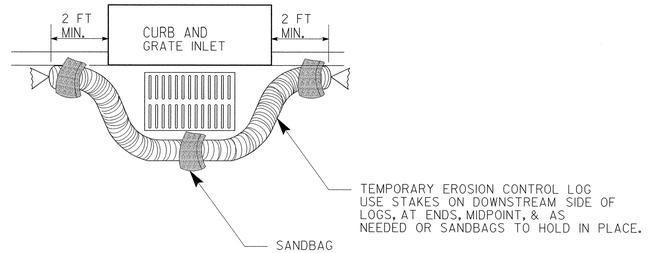
ROCK CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 1)

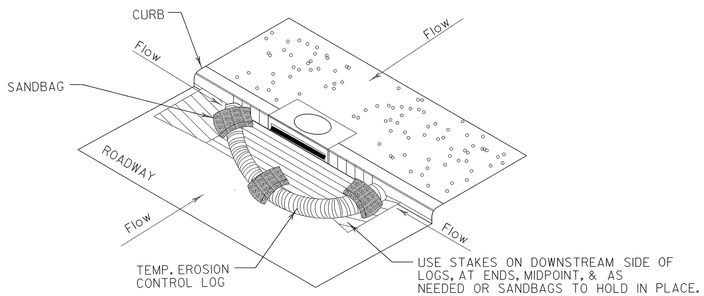
1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50'.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other materials as 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.



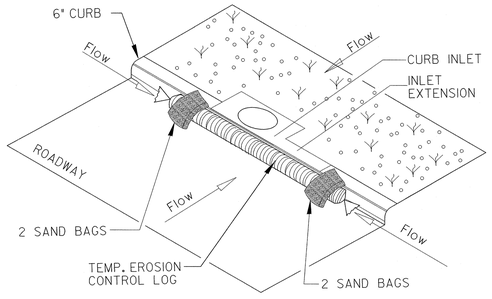
EROSION CONTROL LOG AT DROP INLET



EROSION CONTROL LOG AT CURB & GRADE INLET

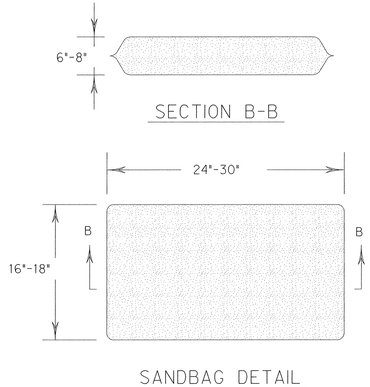


EROSION CONTROL LOG AT CURB INLET



EROSION CONTROL LOG AT CURB INLET

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.



SECTION B-B

SANDBAG DETAIL

STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/10/17

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Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 5826

EROSION CONTROL DETAILS

LAWTHER DRIVE

GARLAND RD. TO WEST OF SUNSET INN CIR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1560	81

WHITE ROCK LAKE

INSTALL 425 LF 8" PVC (DR-14) C900 WATER PIPE
CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

K111 Ex. 8" Water Built 1930s

BLK 2999
WHITE ROCK EAST PARK
ACS 824.4861
951 WINFREY POINT WAY
CITY OF DALLAS
1500 MARILLA ST
DALLAS, TX 75201

E. LAWTHER DR.

CP #1

Abandoned Ex. 8" CI Water Fd. 38' Tgt. 14

Abandoned Ex. 8" CI Water Fd. 38' Tgt. 14

Ex. 8" CI Water Fd. 38' Tgt. 14

Ex. 8" Water

Ex. 8" Water

Ex. 12" V.C.T. Wastewater 4110-1052 Sh. 41A

Ex. 12" V.C.T. Wastewater 4110-1052 Sh. 41A

WWMH

P.I. 0+58.90 ~ Prop. W. Line 4
∢ = 19°14'43" Rt.
N. 6990923.2783
E. 2517706.1328
Install:
1- 8" 22.5° Bend, Pull Pipe

P.I. 2+53.91 ~ Prop. W. Line 4
∢ = 18°25'40" Rt.
N. 6991003.4436
E. 2517882.3092
Install:
1- 8" 22.5° Bend, Pull Pipe

P.I. 3+34.89 ~ Prop. W. Line 4
∢ = 20°33'43" Rt.
N. 6991004.9479
E. 2517963.2800
Install:
1- 8" 22.5° Bend, Pull Pipe

P.I. 4+05.57 ~ Prop. W. Line 4
∢ = 7°53'10" Rt., Pull Pipe
N. 6990981.3576
E. 2518029.9058

0+00.0 ~ Prop. W. Line 4 ~
P.I. 68+88.73 ~ Prop. W. Line 1
∢ = 7°05'06" Rt., Pull Pipe
See Install Note On
4110-1560 Sh. 48
N. 6990875.9126
E. 2517671.1216

P.I. 1+24.64 ~ Prop. W. Line 4
∢ = 14°47'32" Rt.
N. 6990960.3116
E. 2517760.4539
Install:
1- 8" 11.25° Bend, Pull Pipe

Plug Ex. 8" Water (SW)

0+08.3 ~ Prop. W. Line 4
N. 6990882.5726
E. 2517676.0411
Remove & Deliver Exist. FH
Install:
1- 8"x 6" Tee BBF
1- 6" Gate Valve FMJ
15 LF 6" PVC C900 (DR-14) Water Pipe w/ Class C Emb
1- FH as Per DWU Std Dwg #224
1- 8" Gate Valve

SLURRY SEAL LIMITS, SEE NOTE 2.

0+00 Line 1 - 8" WATER

1+00 Line 4

2+00

3+00 8" WATER

4+00

Line 4

Ex. Asphalt Pavement

Ex. 12" V.C.T. Wastewater 4110-1052 Sh. 41A

SUNSET INN CIR.

Ex. 12" V.C.T. Wastewater 4110-1052 Sh. 41A

Ex. Asphalt Pavement

Trashcan Receptacle

Sign

12" Concrete Bols

18" Hkbry

18" Elm

46" Pecan

46" Sycamore

12" Oak

32" Pecan

24" Pecan

22" Pecan

6" Hkbry

16" Elm

16" Pecan

44" Ash

26" Elm

FH

WM

FH

WM

PROP. 8" WATER LINE 1
SEE 4110-1560 SH. 48
OF PID 5826

MATCH MARK 4+25 PROP. WATER LINE 4

See 4110-1036 SH 38
MATCH MARK 8+40 PROP. WATER LINE 4

Highbank

Highbank

4110-1035 Sh. 8

WWMH

Ex. 8" V.C.T. Wastewater

P.I. 5+45.81

Conc. Guard Rail

Conc. Guard Rail

BM

8+27.1 ~ Prop. W. Line 4
N. 6990955.8656
E. 2518411.1659
Install:
1- 8" 45° Rotated Bend

16.00' 47 LF 18" RCP (BAR 22.0)

14" Thk. Slope Support Piers

REINHART BRANCH

Highbank

Ex. 8" V.C.T. Wastewater 4110-1036 Sh. 8

WWM

8" Wood Bols

7+76.0 ~ Prop. W. Line 4
N. 6990919.9600
E. 2518374.8834
Install:
1- 8" 45° Rotated Bend

30" Elm

7+60.1 ~ Prop. W. Line 4
N. 6990920.0429
E. 2518359.0040
Install:
1- 8" 45° Vert. Bend

7+53.1 ~ Prop. W. Line 4
N. 6990920.0798
E. 2518351.9492
Install:
2- 8" 22.5° Horiz. Bends

P.I. 6+88.44 ~ Prop. W. Line 4
∢ = 13°53'39" Lt.
N. 6990895.7658
E. 2518292.0455
Install:
1- 8" 11.25° Bend, Pull Pipe

P.I. 6+49.35 ~ Prop. W. Line 4
∢ = 13°53'39" Lt.
N. 6990890.1922
E. 2518253.3544
Install:
1- 8" 11.25° Bend, Pull Pipe

P.I. 6+10.26 ~ Prop. W. Line 4
∢ = 11°17'36" Lt.
N. 6990894.0726
E. 2518214.4571
Install:
1- 8" 11.25° Bend, Pull Pipe

P.I. 5+69.36 ~ Prop. W. Line 4
∢ = 10°23'37" Lt.
N. 6990906.0254
E. 2518175.3371
Install:
1- 8" 11.25° Bend, Pull Pipe

INSTALL 415 LF 8" PVC (DR-14) C900 WATER PIPE
CLASS "C" EMBEDMENT (MIN. 4.0' COVER)

BLK 2999
WHITE ROCK EAST PARK
ACS 824.4861
951 WINFREY POINT WAY
CITY OF DALLAS
1500 MARILLA ST
DALLAS, TX 75201

SLURRY SEAL LIMITS, SEE NOTE 2.

MATCH MARK 4+25 PROP. WATER LINE 4

5+00 8" WATER

6+00

7+00 Line 4

E. LAWTHER DR.

8" Wood Bols

Ex. Asphalt Pavement

Trashcan Receptacle

Sign

EM

U/G

T Pipe

12" Concrete Bols

28" Pecan

18" Pecan

28" Pecan

28" Pecan

36" Pecan

44" Pecan

16" Pecan

20" Pecan

32" Pecan

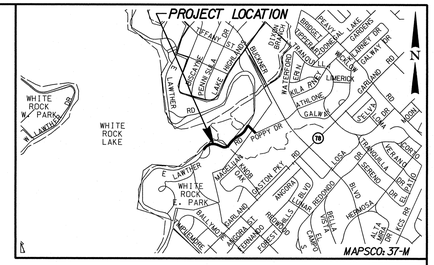
24" Pecan

14" Pecan

32" Pecan

16" Pecan

Ex. 54" R.C.P. Wastewater 4110-1052 Sh. 28



NOTE: 1. FOR GENERAL NOTES, SEE SHEET 4110-1560 SH. 2.

2. ALL ASPHALT REPAIRS SHALL BE SLURRY SEALED EDGE TO EDGE ALONG E. LAWTHER DR WITHIN THE LIMITS SHOWN IN ACCORDANCE WITH THE DALLAS WATER UTILITIES STANDARDS SPECIFICATIONS, LATEST VERSION.

CAUTION ~ ELECTRIC !
Underground Electrical Cables In Area
Contact TXU Two Working
Days Prior To Construction.
Tele: 1-800-344-8377

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
STD.WDBM SET ON CONCRETE GUARD RAIL ON E SIDE OF BRIDGE OVER REINHART BRANCH AND LAWTHER DR.
ELEV = 463.73

CONTROL POINT #1
"X" CUT SET IN CONC. AT THE NW SIDE OF LAWTHER DR & SUNSET INN CIR. +/- 64' SW OF A 72" W.W. MH & +/- 42' NE OF A 16" HACKBERRY TREE.
N. 6990985.5160, E. 2517754.7320, ELEV = 464.63

CONTROL POINT #2
"X" CUT SET IN CONC. PATCH +/- 790' SW OF INTERSECTION OF LAWTHER DR & POPPY DR. +/- 75' NORTH OF BRIDGE OVER REINHART BRANCH.
N. 6991020.8710, E. 2518325.9890, ELEV = 461.98

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
28-34W, 29-34W
WASTEWATER
BH- 19, 28-34S, 29-34S

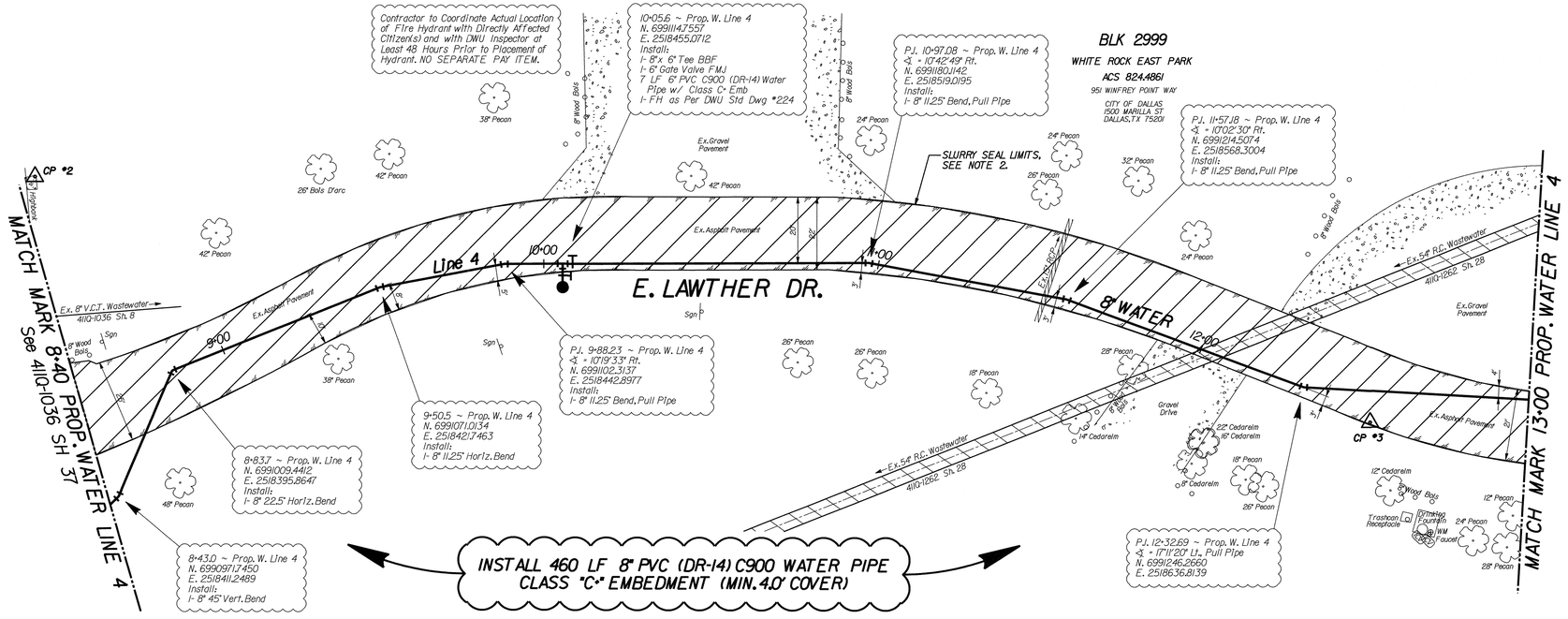
STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED
PROFESSIONAL ENGINEER
11/10/17

APM & Associates, Inc.
Engineering · Planning · CM Services
2201 Main Street, Suite 1100
Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 6047

8" WATER MAIN
LAWTHER DRIVE
SUNSET INN CIR. TO POPPY DR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV. 2017	4110	1036	37



N

NOTE: 1. FOR GENERAL NOTES, SEE SHEET 411Q-0695 SH. 12.

2. ALL ASPHALT REPAIRS SHALL BE SLURRY SEALED EDGE TO EDGE ALONG E. LAWTHER DR AND POPPY DR WITHIN THE LIMITS SHOWN IN ACCORDANCE WITH THE DALLAS WATER UTILITIES STANDARDS SPECIFICATIONS, LATEST VERSION.

REVISIONS			
REV. NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
STD.WDBM SET ON CONCRETE GUARD RAIL ON E SIDE OF BRIDGE OVER REINHART BRANCH AND LAWTHER DR.
ELEV = 463.73

CONTROL POINT #2
"X" CUT SET IN CONC. PATCH, +/- 790' SW OF INTERSECTION OF LAWTHER DR & POPPY DR, +/- 75' NORTH OF BRIDGE OVER REINHART BRANCH.
N. 6991020.8710, E. 2518325.9890, ELEV = 461.98

CONTROL POINT #3
MAG NAIL WITH WASHER SET IN ASPHALT AT THE SOUTH SIDE OF LAWTHER DR +/- 380' SW OF INTERSECTION OF LAWTHER DR & POPPY DR.
N. 6991252.9400; E. 2518658.2260; ELEV = 464.60

CONTROL POINT #4
"X" CUT SET IN CONC. AT THE SE CORNER OF INTERSECTION OF LAWTHER DR & POPPY DR, +/- 22' NE OF OUTFLOW OF 2- 12' PLASTIC STORM PIPES.
N. 6991534.3680; E. 2518988.6270; ELEV = 463.28

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
28-34W, 29-34W
WASTEWATER
BH-19, 28-34S, 29-34S

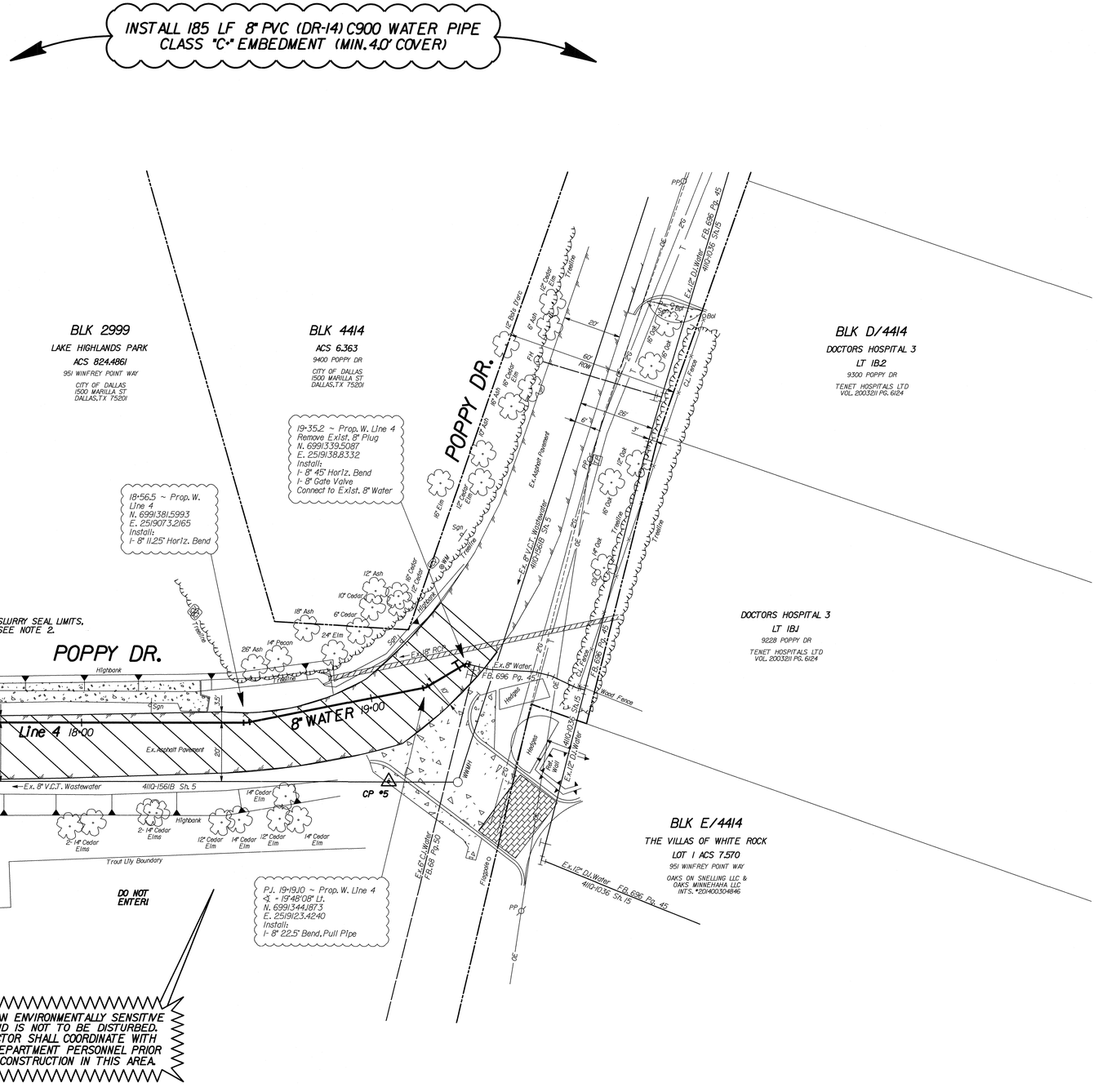
STATE OF TEXAS
ERIC K. KRONER
88551
LICENSED PROFESSIONAL ENGINEER
11/8/17

APM & Associates, Inc.
Engineering · Planning · CM Services
2201 Main Street, Suite 1100
Dallas, TX. 75201 (214) 748-4888
FIRM REG. #3091

CONTRACT NO. 18-021/022 | PID 6047

8" WATER MAIN
LAWTHER DRIVE
SUNSET INN CIR. TO POPPY DR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV 2017	411Q	1036	38



NOTE: 1. FOR GENERAL NOTES, SEE SHEET 4110-0695 SH. 12.

2. ALL ASPHALT REPAIRS SHALL BE SLURRY SEALED EDGE TO EDGE ALONG POPPY DR WITHIN THE LIMITS SHOWN IN ACCORDANCE WITH THE DALLAS WATER UTILITIES STANDARDS SPECIFICATIONS, LATEST VERSION.

CAUTION ~ OVERHEAD LINES !
Overhead Electric, Telephone and Cables Lines In This Area. Use Extreme Care and Caution While Working In This Area.

CAUTION ~ GAS !
Underground Gas Main In Area
Contact ATMOS Energy Corp, Two Working Days Prior To Construction.
Call: TEXAS 811 @ 811

CAUTION ~ TELEPHONE !
Underground Telephone Cables In Area
Contact S.B.C. Two Working Days Prior To Construction.
Call: TEXAS 811 @ 811

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1			
2			

BENCHMARKS & CONTROL POINTS

BENCHMARK
STD.WDBM SET ON CONCRETE GUARD RAIL ON E SIDE OF BRIDGE OVER REINHART BRANCH AND LAWTHER DR.
ELEV = 463.73

CONTROL POINT #4
"X" CUT SET IN CONC. AT THE SE CORNER OF INTERSECTION OF LAWTHER DR & POPPY DR, +/- 22' NE OF OUTFLOW OF 2- 12" PLASTIC STORM PIPES.
N. 6991534.3680; E. 2518988.6270; ELEV = 463.28

CONTROL POINT #5
"X" CUT SET IN CONCRETE SIDEWALK AT THE ENTRANCE TO ADDRESS # 9000 POPPY DR, +/- 43' NORTH OF A FLAG POLE.
N. 6991332.1300; E. 2519091.1200; ELEV = 471.875

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER 28-34W, 29-34W
WASTEWATER BH-19, 28-34S, 29-34S

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CONTRACT NO. 18-021/022 | PID 6047

8" WATER MAIN
LAWTHER DRIVE
SUNSET INN CIR. TO POPPY DR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER	SHEET
APM	APM	NOV/ 2017	4110	1036	39