TIMMERMAN SUBDIVISION

PRELIMINARY PLAN ONLY- NOT FOR RECORDATION

Notes:
1. This plan lies within the full purpose juristiction of the City of Pflugerville.
2. Water and wastewater shall be provided by The City of Pflugerville. No lot in this subdivision shall be occupied until connected to water and wastewater facilities.
3. A 10-ft PUE shall be dedicated along all street frontage(s).
4. Easements dedicated to the public shall also be subject to the terms and conditions of the Engineering Design Manual, as amended. The Grantor [property owner(s)], heirs, successors and assigns shall retain the obligation to maintain the surface of the easement property, including the obligation to regularly mow or cut back vegetation and to keep the surface of the easement property free of litter, debris, and trash.
5. No improvements including but not limited to structures, fences, or landscaping shall be allowed in a public easement, except as approved by the City.
6. The property owner shall provide access to drainage and utility easements as may be necessary and shall not prohibit access for the placement, construction, installation, replacement, repair, maintenance, relocation, removal, operation and inspection of such drainage and utility facilities, and related appurtenances.
7. A six (6) foot wide sidewalk shall be provided on both sides of Biltmore Avenue and on the north side of Helios Way. A ten (10) foot wide sidewalk shall be provided on the south side of Helios way. Any construction associated with Helios Way and Biltmore Avenue will be required with the adjacent site development.
8. This subdivision is subject to all City of Pflugerville ordinances or technical manuals related to Tree Preservation per City Ordinance # 1203-15-02-24 and City Resolution # 1224-09-08-25-8A .
9. The Community Impact Fee rate for water and wastewater will be assessed at the time of final plat.
10. On-site storm water facilities shall be provided to mitigate post-development peak runoff rates for the 2 year, 25 year and 100 year storm events.
11. All electric utility infrastructure including but not limited to telephone, cable television, electric utility lateral and service lines shall be installed underground and in accordance with the City of Pflugerville Engineering Design Manual.
12. The owner of this subdivision , and his or her successors and assigns, assumes responsibility for plans for construction of subdivision improvements which comply with applicable codes and requirements of the City of Pflugerville.
13. Construction plans and specifications for all subdivision improvements shall be reviewed and approved by the City of Pflugerville prior to any construction within the subdivision.
14. Site development construction plans shall be reviewed and approved by the City of Pflugerville prior to any construction.
15. On-site storm water facilities shall be provided to mitigate post-development peak runoff rates for the 2 year, 25 year and 100 year storm events.
16. No portion of this tract is within a flood hazard area as shown on the FEMA Flood Insurance Rate Map Panel #48453C0290J for Travis County, effective 8/14/2014.
17. All proposed fences, walls and landscaping adjacent to intersecting public roadway right-of-way or adjacent to private access drives shall be in compliance with the sight distance requirements of the City of Pflugerville Engineering Design Manual, as amended.
18. Wastewater and water systems shall conform to TCEQ (Texas Commission on Environmental Quality) and State Board of Insurance requirements. The owner understands and acknowledges that plat vacation or re-platting may be required at the owner's sole expense if plans to develop this subdivision do not comply with such codes and requirements.
19. All responsibility for the adequacy of these plans remains with the engineer who prepared them. In Reviewing these plans, the City of Pflugerville must rely on the adequacy of the work of the design engineer.
20. Driveways are anticipated to be located within the joint access easements, however remain subject to the cities driveway spacing requirements.
21. All proposed wastewater easements, public utility easements, and the drainage easement shown on this plan will be publicly owned and maintained. All joint access easements will be privately owned and maintained by the respective property owners.
22. Water for the site will be provided per engineering drawings associated with the Helios Way CIP Project. Wastewater will be provided by the City of Pflugerville. A new line will be constructed along Sunlinght Near Way which will connect to an existing 36" wastewater main that extends to the City of Pflugerville Wastewater Treatment Facility from the north.
23. Access to all lots associated with this plan is limited to Helios Way and Biltmore Avenue. Helios Way is the only access drive provided off of Sunlight Near Way. Biltmore Avenue is the only access drive provided off of E. Pecan Street.
24. A restrictive covenant shall be prepared by the developer and approved by the city prior to final plat approval and recordation of any lot within this preliminary plan which will require access through a joint use driveway .
25. The water utility plan is provided as part of the CIP Helios Way Extension Plan.
26. Where a residential use is proposed in this subdivision, the public parkland dedication and park development fee shall be calculated at a rate required by city ordinance #1203-15-02-24."
27. A multi-family land use is proposed for lot 3, block A and fee in lieu of parkland and the development fee will be provided with the final plat as approved by the parks and recreation commission on November 17, 2016. If additional residential is proposed in the future, additional parkland dedication and development fee will be required in accordance with the ordinance at that time.
28. All road improvements and pro-rata share shall be provided in accordance with the TIA associated with this plan. if it is determined that additional right of way may be needed, that shall be provided with the applicable final plat
29. An update to the TIA has been waived for this submittal as the initial assumptions for the TIA have not changed. However, an update to the TIA may be required depending on cumulative land use in the subdivision.

Basis of bearings is the Texas Coordinate System of 1983, Central Zone 4203 (NAD83/2011).
All distances shown hereon are surface distances. The grid to surface adjustment scale factor is 1.00010. All units are U.S. Survey Feet.

Benchmark Notes

1) BM 10002
On inlet on East Pecan Street
N: 1012.9087.37
E: 3160328.11
Elv: 658.69

2) BM 10003
On Power Pole of Sunlight Nearway and East Pecan Street
N:10128860.06
E:3160754.71
Elv: 655.62

3) BM 10004
On Corner of North Corner of Sunlight Nearway on Helios Way.
N:101275454.48
E:3160045.91
Elv: 660.60

SUBMITTAL DATE:

FIRST SUBMITTAL: MAY 27, 2016

STATE OF TEXAS REGISTERED DAN H. CLARK 6011 PROFESSIONAL LAND SURVEYOR

11/22/2016

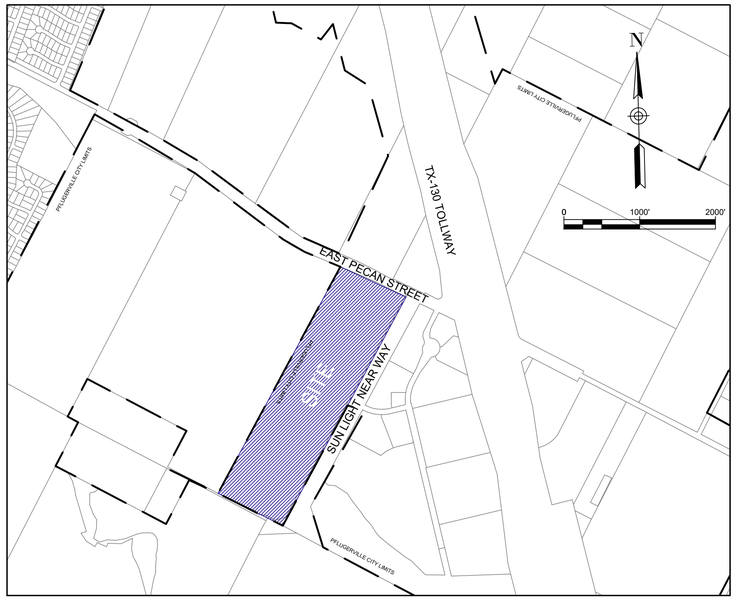
SURVEYOR'S CERTIFICATE

I, Dan H. Clark, Registered Professional Land Surveyor, hereby certify that this parcel plat and legal description of even date represent an actual survey made on the ground under my supervision.

Dan H. Clark
Registered Professional Land Surveyor
Texas Registration No. 6011

Basis of bearings is the Texas Coordinate System of 1983, Central Zone 4203(NAD83/2011). All distances shown hereon are surface and may be converted to grid by using the surface adjustment factor of 1.00010. Units: U.S. Survey Feet.

This survey was prepared without the benefit of a title commitment or report. The surveyor has not abstracted the subject property, nor made any independent investigation or search for easements of record, restrictive covenants or any other encumbrances.



LOT SUMMARY
AREA TABLE

BLOCK	ACREAGE	# LOTS
BLOCK A	20.31	5 LOTS
BLOCK B	9.25	5 LOTS
BLOCK C	39.59	3 LOTS
PROPOSED STREETS (ROW)	3.75	0 LOT
TOTAL	72.90	13 LOTS

STUDIES

STUDY	AUTHOR	DATE
ENGINEER'S REPORT (INCLUDING DRAINAGE REPORT AND WASTEWATER ANALYSIS)	MATTHEW K SUTHERLAND PE	5/23/2016
TRAFFIC IMPACT ANALYSIS (TIMMERMAN 75 ACRE & SH 130 COMMERCE CENTER)	VIVEK DESHPANDE PE	11/7/2016

OWNER/SUBDIVIDER:
COMMERCE TEXAS PROPERTIES INC.
2490 FM 685, HUTTO, TX 78634

SURVEYOR:
HALFF ASSOCIATES, INC.
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TX 78729
(512)-777-4580
TBPLS FIRM NO. 10029607

ENGINEER:
HALFF ASSOCIATES, INC.
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TX 78729
(512)-777-4580

LEGAL DESCRIPTION: 73.35 ACRES SITUATED IN THE TS BARNES SURVEY ABSTRACT NO. 67.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE PFLUGERVILLE AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS)48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR- DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

SHEET LIST

TIMMERMAN
WASTEWATER AND
REGIONAL DETENTION
COMMERCE TEXAS PROPERTIES, INC
2490 FM 685
HUTTO, TEXAS 78634

HALFF
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #312

Revision No.	Date	Description

STATE OF TEXAS
MARK R. SABELLA
123046
LICENSED PROFESSIONAL ENGINEER
01/20/2020

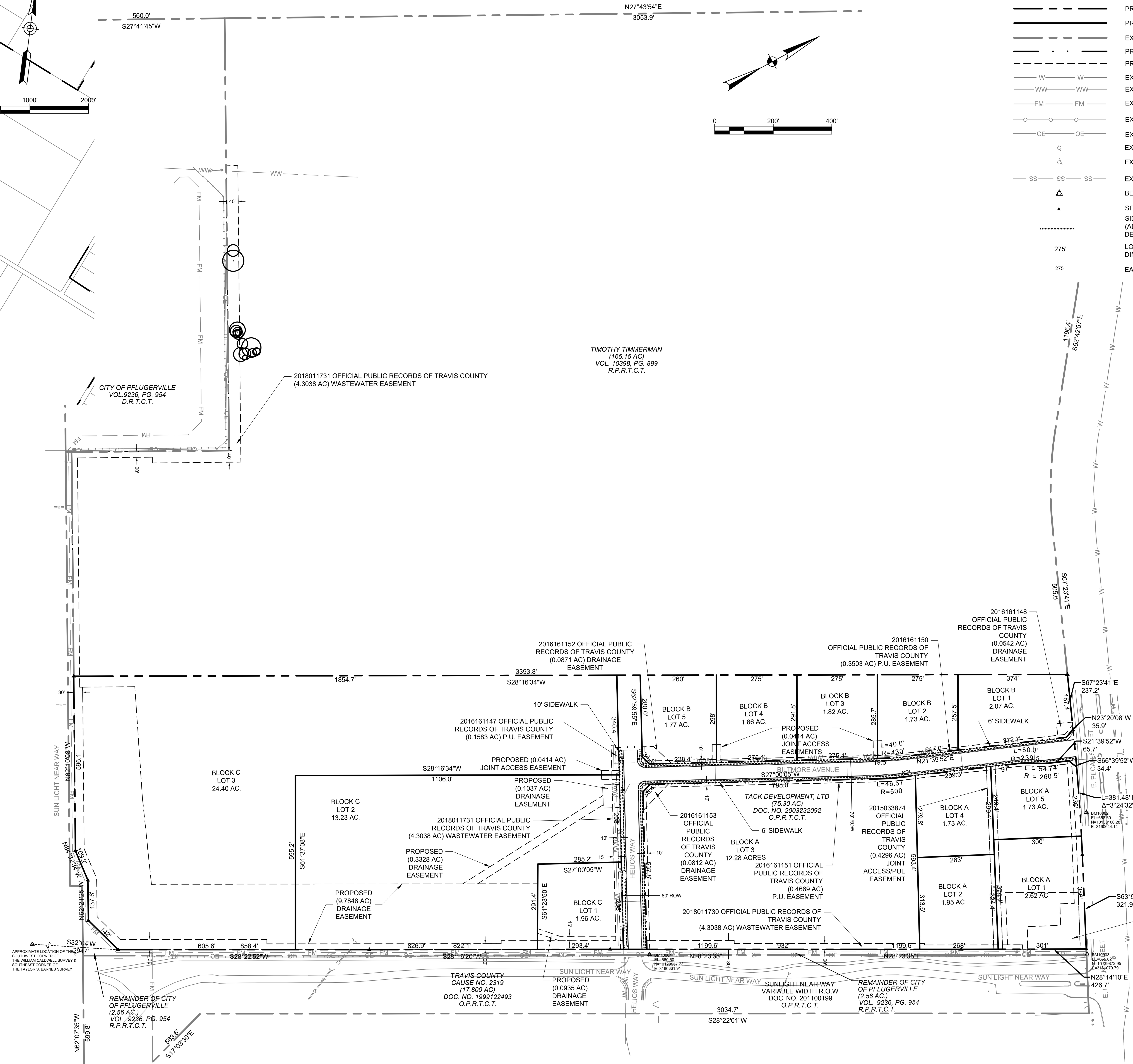
Project No.:	31018
Issued:	12/16/2016
Drawn By:	HA
Checked By:	MS

Sheet Title

COVER SHEET

1 OF 17

Sheet Number



LEGEND

	PROP. PROPERTY LINE
	PROP. LOT LINE
	EX. PROPERTY LINE
	PROP. RIGHT OF WAY
	PROP. EASEMENT LINE
—W—W—	EX. WATER LINE
—WW—WW—	EX. WASTEWATER LINE
—FM—FM—	EX. FORCE MAIN
	EX. FENCE LINE
—OE—OE—	EX. OVERHEAD ELECTRIC
	EX. POWER POLE
	EX. SIGN
—SS—SS—SS—	EX. STORM SEWER
	BENCHMARK
	SITE BOUNDARY PI
	SIDE WALK EDGE (MIN. 6') (ADJACENT SITE DEVELOPMENT)
275'	LOT BOUNDARY LENGTH DIMENSION
275'	EASEMENT LENGTH DIMENSION

LOT DESCRIPTION

Block	LOT #	ACRES
A	1	2.62
A	2	1.95
A	3	12.28
A	4	1.73
A	5	1.73
B	1	2.07
B	2	1.73
B	3	1.82
B	4	1.86
B	5	1.77
C	1	1.96
C	2	13.23
C	3	24.40

LOT SUMMARY

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BLOCK A	20.31	5 LOTS
BLOCK B	9.25	5 LOTS
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2490 FM 685, HUTTO, TX 78634

SURVEYOR:
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AUSTIN, TX 78729
(512)-777-4580
TBPLS FIRM NO. 10029607

ENGINEER:
HALFF ASSOCIATES, INC.
9500 AMBERGLEN BLVD.
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(512)-777-4580

NOTE:
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TIMMERMAN WASTEWATER AND REGIONAL DETENTION

COMMERCE TEXAS PROPERTIES, INC
2490 FM 685
HUTTO, TEXAS 78634

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AUSTIN, TEXAS 78729
TEL (512) 777-4600
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Revision No.	Date	Description

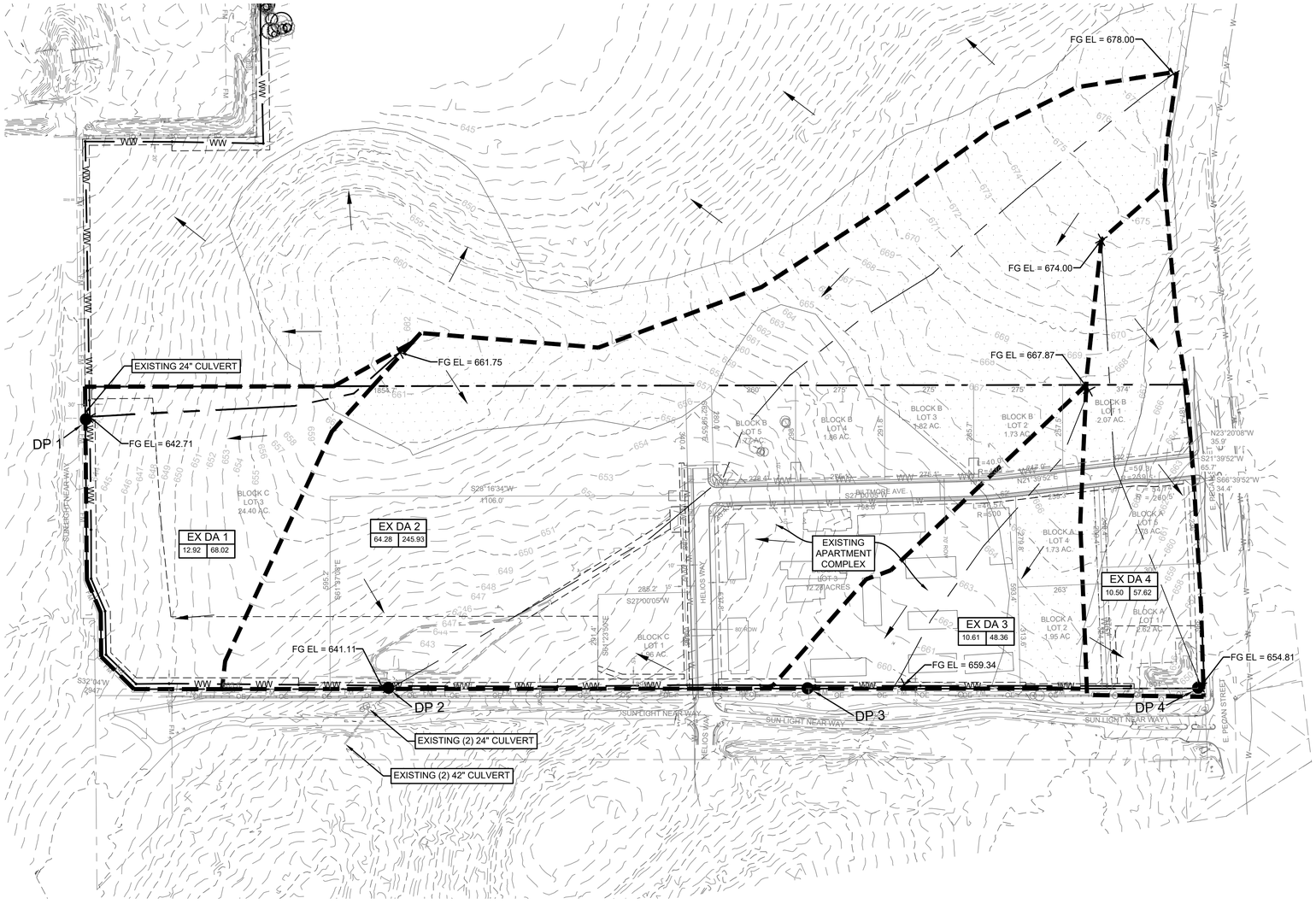
STATE OF TEXAS
MARK R. SABELLA
123046
LICENSED
PROFESSIONAL ENGINEER
01/20/2020

THE SEAL ORIGINALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARK R. SABELLA, PE NO. 123046 ON 1/20/2020. ALTERATION OF A PREVIOUSLY SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT. THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF HALFF ASSOCIATES, INC.
9500 AMBERGLEN BLVD. BUILDING F STE 125
AUSTIN, TEXAS 78729.
TBPE FIRM #F-312

Project No.:	31018
Issued:	12/16/2016
Drawn By:	HA
Checked By:	MS

Sheet Title

PRELIMINARY PLAN



LEGEND

- 733 — EXISTING CONTOUR
- FLOW ARROW
- DRAINAGE BOUNDARY
- TIME OF CONCENTRATION
- EASEMENT
- DP X — DESIGN POINT
- TYPE C SOIL
- DRAINAGE BASIN NO. / EX DA X / XX.XX | XX.XX / DRAINAGE AREA (ACRES) / 25 YEAR Q(CFS)

NOTE:
THERE WILL BE NO DEMOLITION ON THE SITE.

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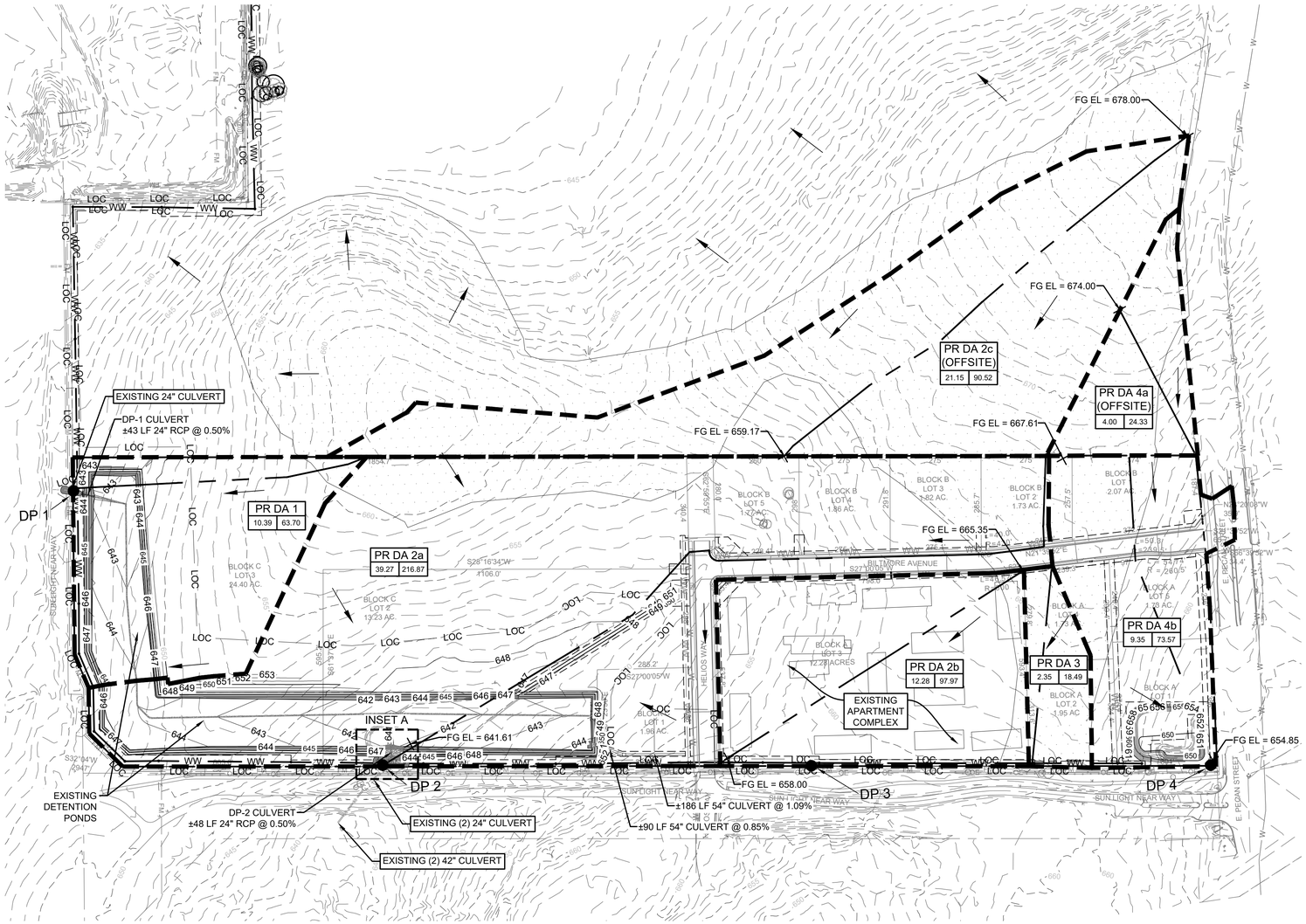
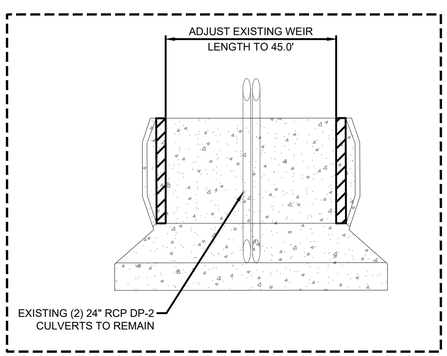
Sheet Title
EXISTING CONDITIONS AND DRAINAGE AREA MAP

3 OF 17
Sheet Number





INSET A
POND DP -2 OUTFALL STRUCTURE
WEIR MODIFICATION

N.T.S.

LEGEND

- 733 — PROPOSED CONTOUR
- 733 — EXISTING CONTOUR
- FLOW ARROW
- DRAINAGE BOUNDARY
- TIME OF CONCENTRATION
- DP # DESIGN POINT
- TYPE C SOIL
- PR DA X (XX.XX | XX.XX) — DRAINAGE BASIN NO. / DRAINAGE AREA (ACRES) / 25 YEAR Q(CFS)

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Checked By:	MS

Sheet Title
PROPOSED GRADING AND DRAINAGE AREA MAP

4 OF 17
Sheet Number

Hydrograph Summary Report

2 - YEAR STORM

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	26.41	2	732	116,954	-------	-------	-------	EX DA 1
2	SCS Runoff	93.19	2	746	559,530	-------	-------	-------	EX DA 2
3	SCS Runoff	18.33	2	738	90,261	-------	-------	-------	EX DA 3
4	SCS Runoff	21.97	2	730	89,433	-------	-------	-------	EX DA 4
5	SCS Runoff	29.63	2	730	129,180	-------	-------	-------	PR DA 1
6	Reservoir	7.721	2	744	129,179	5	643.50	39,489	POND DP 1 OUT
7	SCS Runoff	100.61	2	734	508,131	-------	-------	-------	PR DA 2a
8	SCS Runoff	46.76	2	724	159,430	-------	-------	-------	PR DA 2b
9	SCS Runoff	33.26	2	740	173,695	-------	-------	-------	PR DA 2c (OFFSITE)
10	Combine	149.70	2	734	841,255	7, 8, 9	-------	-------	TO POND DP 2
11	Reservoir	46.48	2	766	841,254	10	644.03	278,223	POND DP 2 OUT
12	SCS Runoff	8.523	2	724	27,318	-------	-------	-------	PR DA 3
13	SCS Runoff	9.103	2	728	34,883	-------	-------	-------	PR DA 4a
14	SCS Runoff	33.91	2	724	108,692	-------	-------	-------	PR DA 4b
15	Combine	41.50	2	724	143,575	13, 14	-------	-------	TO POND DP 4
16	Reservoir	15.20	2	742	143,568	15	651.47	32,318	POND DP 4 OUT

Hydrograph Summary Report

10 - YEAR STORM

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	50.26	2	732	226,149	-------	-------	-------	EX DA 1
2	SCS Runoff	180.51	2	746	1,096,960	-------	-------	-------	EX DA 2
3	SCS Runoff	35.46	2	738	177,405	-------	-------	-------	EX DA 3
4	SCS Runoff	42.37	2	730	175,113	-------	-------	-------	EX DA 4
5	SCS Runoff	49.22	2	730	220,753	-------	-------	-------	PR DA 1
6	Reservoir	14.59	2	754	220,752	5	644.09	69,273	POND DP 1 OUT
7	SCS Runoff	167.48	2	734	869,336	-------	-------	-------	PR DA 2a
8	SCS Runoff	76.14	2	724	264,169	-------	-------	-------	PR DA 2b
9	SCS Runoff	65.91	2	740	347,554	-------	-------	-------	PR DA 2c (OFFSITE)
10	Combine	259.12	2	734	1,481,059	7, 8, 9	-------	-------	TO POND DP 2
11	Reservoir	117.13	2	758	1,481,057	10	645.04	494,984	POND DP 2 OUT
12	SCS Runoff	14.26	2	724	47,170	-------	-------	-------	PR DA 3
13	SCS Runoff	17.81	2	728	69,087	-------	-------	-------	PR DA 4a
14	SCS Runoff	56.73	2	724	187,675	-------	-------	-------	PR DA 4b
15	Combine	71.87	2	724	256,762	13, 14	-------	-------	TO POND DP 4
16	Reservoir	20.86	2	746	256,755	15	652.82	67,496	POND DP 4 OUT

Hydrograph Summary Report

25 - YEAR STORM

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	68.02	2	732	310,324	-------	-------	-------	EX DA 1
2	SCS Runoff	245.93	2	746	1,513,137	-------	-------	-------	EX DA 2
3	SCS Runoff	48.36	2	736	244,945	-------	-------	-------	EX DA 3
4	SCS Runoff	57.62	2	730	241,434	-------	-------	-------	EX DA 4
5	SCS Runoff	63.70	2	730	289,245	-------	-------	-------	PR DA 1
6	Reservoir	17.36	2	756	289,245	5	644.37	93,664	POND DP 1 OUT
7	SCS Runoff	216.87	2	734	1,139,542	-------	-------	-------	PR DA 2a
8	SCS Runoff	97.97	2	724	342,261	-------	-------	-------	PR DA 2b
9	SCS Runoff	90.52	2	740	483,133	-------	-------	-------	PR DA 2c (OFFSITE)
10	Combine	340.60	2	734	1,964,938	7, 8, 9	-------	-------	TO POND DP 2
11	Reservoir	202.32	2	752	1,964,936	10	645.45	596,205	POND DP 2 OUT
12	SCS Runoff	18.49	2	724	62,041	-------	-------	-------	PR DA 3
13	SCS Runoff	24.33	2	728	95,665	-------	-------	-------	PR DA 4a
14	SCS Runoff	73.57	2	724	246,843	-------	-------	-------	PR DA 4b
15	Combine	94.40	2	724	342,507	13, 14	-------	-------	TO POND DP 4
16	Reservoir	31.16	2	744	342,500	15	653.73	93,392	POND DP 4 OUT

RAINFALL PRECIPITATION TABLE (IN)				
	2-YR	10-YR	25-YR	100-YR
SCS 24-HOUR	4.05	6.56	8.43	11.90

Hydrograph Summary Report

100 - YEAR STORM

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	100.67	2	732	469,144	-------	-------	-------	EX DA 1
2	SCS Runoff	366.43	2	746	2,300,254	-------	-------	-------	EX DA 2
3	SCS Runoff	72.15	2	736	372,742	-------	-------	-------	EX DA 3
4	SCS Runoff	85.66	2	730	366,840	-------	-------	-------	EX DA 4
5	SCS Runoff	90.44	2	730	416,561	-------	-------	-------	PR DA 1
6	Reservoir	21.90	2	758	416,560	5	644.94	142,674	POND DP 1 OUT
7	SCS Runoff	308.06	2	734	1,641,845	-------	-------	-------	PR DA 2a
8	SCS Runoff	138.44	2	724	487,215	-------	-------	-------	PR DA 2b
9	SCS Runoff	135.93	2	740	740,523	-------	-------	-------	PR DA 2c (OFFSITE)
10	Combine	491.18	2	734	2,869,584	7, 8, 9	-------	-------	TO POND DP 2
11	Reservoir	362.36	2	748	2,869,585	10	646.07	745,226	POND DP 2 OUT
12	SCS Runoff	26.30	2	724	89,703	-------	-------	-------	PR DA 3
13	SCS Runoff	36.36	2	728	146,024	-------	-------	-------	PR DA 4a
14	SCS Runoff	104.63	2	724	356,903	-------	-------	-------	PR DA 4b
15	Combine	135.97	2	724	502,927	13, 14	-------	-------	TO POND DP 4
16	Reservoir	79.48	2	732	502,920	15	654.36	112,628	POND DP 4 OUT

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020 — Monday, 01 / 13 / 2020

Pond No. 2 - POND DP 1

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 641.60 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	641.60	00	0	0
0.40	642.00	651	87	87
1.40	643.00	29,764	11,604	11,691
2.40	644.00	72,848	49,721	61,412
3.40	645.00	100,290	86,196	147,607
4.40	646.00	104,843	102,548	250,155
5.40	647.00	109,119	106,963	357,118
5.90	647.50	111,271	55,091	412,210

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	0.00	0.00	0.00
Span (in)	= 24.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 641.60	0.00	0.00	0.00
Length (ft)	= 43.00	0.00	0.00	0.00
Slope (%)	= 0.44	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 1.00	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	641.60	0.00	---	---	---	---	---	---	---	---	---	0.000
0.40	87	642.00	0.92 oc	---	---	---	---	---	---	---	---	---	0.921
1.40	11,691	643.00	5.91 oc	---	---	---	---	---	---	---	---	---	5.913
2.40	61,412	644.00	13.58 oc	---	---	---	---	---	---	---	---	---	13.58
3.40	147,607	645.00	22.30 oc	---	---	---	---	---	---	---	---	---	22.30
4.40	250,155	646.00	28.47 oc	---	---	---	---	---	---	---	---	---	28.47
5.40	357,118	647.00	33.52 oc	---	---	---	---	---	---	---	---	---	33.52
5.90	412,210	647.50	35.78 oc	---	---	---	---	---	---	---	---	---	35.78

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020 — Monday, 01 / 13 / 2020

Pond No. 3 - POND DP 2

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 640.53 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	640.53	00	0	0
0.47	641.00	1,429	336	336
1.47	642.00	48,544	24,986	25,322
2.47	643.00	124,036	86,290	111,612
3.47	644.00	194,442	159,239	270,851
4.47	645.00	236,330	215,386	486,237
5.47	646.00	247,018	241,674	727,911
6.47	647.00	262,552	254,785	982,696
6.97	647.50	280,020	135,643	1,118,339

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	0.00	0.00	0.00
Span (in)	= 24.00	0.00	0.00	0.00
No. Barrels	= 2	0	0	0
Invert El. (ft)	= 640.53	0.00	0.00	0.00
Length (ft)	= 48.00	0.00	0.00	0.00
Slope (%)	= 0.57	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 1.00	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 45.00	0.00	0.00	0.00
Crest El. (ft)	= 644.50	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	640.53	0.00	---	---	---	0.00	---	---	---	---	---	0.000
0.47	336	641.00	2.84 oc	---	---	---	0.00	---	---	---	---	---	2.836
1.47	25,322	642.00	14.84 oc	---	---	---	0.00	---	---	---	---	---	14.84
2.47	111,612	643.00	30.06 oc	---	---	---	0.00	---	---	---	---	---	30.06
3.47	270,851	644.00	46.03 oc	---	---	---	0.00	---	---	---	---	---	46.03
4.47	486,237	645.00	57.74 oc	---	---	---	52.98	---	---	---	---	---	110.72
5.47	727,911	646.00	67.45 oc	---	---	---	275.29	---	---	---	---	---	342.74
6.47	982,696	647.00	75.93 oc	---	---	---	592.33	---	---	---	---	---	668.26
6.97	1,118,339	647.50	79.83 oc	---	---	---	778.64	---	---	---	---	---	858.47

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020 — Tuesday, 01 / 14 / 2020

Pond No. 4 - POND DP 4

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 649.26 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	649.26	00	0	0
0.74	650.00	10,120	3,744	3,744
1.74	651.00	23,912	17,016	20,760
2.74	652.00	25,733	24,822	45,583
3.74	653.00	27,901	26,817	72,400
4.74	654.00	29,953	28,927	101,327
5.74	655.00	32,005	30,979	132,306
6.04	655.30	32,606	9,692	141,997

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	12.00	0.00	0.00
Span (in)	= 18.00	12.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 649.26	649.26	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 20.00	0.00	0.00	0.00
Crest El. (ft)	= 653.50	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	649.26	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.74	3,744	650.00	2.55 ic	1.83 ic	---	---	0.00	---	---	---	---	---	4.372
1.74	20,760	651.00	8.47 ic	4.21 ic	---	---	0.00	---	---	---	---	---	12.68
2.74	45,583	652.00	12.00 ic	5.66 ic	---	---	0.00	---	---	---	---	---	17.66
3.74	72,400	653.00	14.71 ic	6.81 ic	---	---	0.00	---	---	---	---	---	21.52
4.74	101,327	654.00	16.99 ic	7.79 ic	---	---	23.55	---	---	---	---	---	48.33
5.74	132,306	655.00	19.00 ic	8.66 ic	---	---	122.35	---	---	---	---	---	150.01
6.04	141,997	655.30	19.57 ic	8.90 ic	---	---	160.83	---	---	---	---	---	189.30

HYDROGRAPH INPUT CONDITIONS			
	AREA	T_C	CN
EX DA 1	12.92	18.50	84.9
EX DA 2	64.28	37.80	83.8
EX DA 3	10.61	25.70	83.6
EX DA 4	10.50	15.30	83.9
PR DA 1	10.39	95.30	16.4
PR DA 2a	39.27	95.20	21.1
PR DA 2b	12.28	5.00	98.0
PR DA 2c (OFFSITE)	21.15	28.20	82.2
PR DA 3	2.35	5.00	94.40
PR DA 4a (OFFSITE)	4.00	12.73	83.00
PR DA 4b	9.35	5.00	94.40

DP 1 STORMWATER RUNOFF SUMMARY				
	Q2 (CFS)	Q10 (CFS)	Q25 (CFS)	Q100 (CFS)
EXISTING DISCHARGE	26.41	50.26	68.02	100.67
TOTAL PROPOSED DISCHARGE	7.72	14.59	17.36	21.90
ΔQ	-18.69	-35.67	-50.66	-78.77

DP 2 STORMWATER RUNOFF SUMMARY				
	Q2 (CFS)	Q10 (CFS)	Q25 (CFS)	Q100 (CFS)
EXISTING DISCHARGE	93.19	180.51	245.93	366.43
TOTAL PROPOSED DISCHARGE	46.48	117.13	202.32	362.36
ΔQ	-46.71	-63.38	-43.61	-4.07

DP 3 STORMWATER RUNOFF SUMMARY				
	Q2 (CFS)	Q10 (CFS)	Q25 (CFS)	Q100 (CFS)
EXISTING DISCHARGE	18.33	35.46	48.36	72.15
TOTAL PROPOSED DISCHARGE	8.52	14.26	18.49	26.30
ΔQ	-9.81	-21.20	-29.87	-45.85

DP 4 STORMWATER RUNOFF SUMMARY				
	Q2 (CFS)	Q10 (CFS)	Q25 (CFS)	Q100 (CFS)
EXISTING DISCHARGE	21.97	42.37	57.62	85.66
TOTAL PROPOSED DISCHARGE	15.20	20.86	31.16	79.48
ΔQ	-6.77	-21.51	-26.46	-6.18

POND SUMMARY			
	TOP OF POND	100-YR WSEL	FREEBOARD
POND DP 1	647.50	644.94	2.56
POND DP 2	647.50	646.07	1.43
POND DP 4	655.30	654.36	0.94

STORMWATER DESIGN METHODOLOGIES:

1. STORMWATER RUNOFF RATES FOR THE PRE AND POST DEVELOPMENT CONDITIONS WERE COMPUTED USING THE SOIL CONSERVATION SERVICES (SCS) UNIT HYDROGRAPH WITHIN THE AUTOCAD CIVIL 3D HYDROGRAPHS EXTENSION.
2. A STANDARD UNIT HYDROGRAPH (SHAPE FACTOR 484) WAS USED.
3. THE SCS 24-HOUR STORM WAS UTILIZED USING PRECIPITATION VALUES FROM NOAA ATLAS 14. THE SCS STORM WAS OF TYPE III DISTRIBUTION WITH A TIME INTERVAL OF TWO MINUTES.
4. COMPOSITE RUNOFF CURVE NUMBERS (RCNs) WERE COMPUTED USING THE AREA WEIGHTING FORMULA
   - 4.1. UNDEVELOPED TYPE D SOILS - 85
   - 4.2. UNDEVELOPED TYPE C SOILS - 82
   - 4.3. DEVELOPED 85% IMPERVIOUS TYPE D SOILS - 95.3
   - 4.4. DEVELOPED 85% IMPERVIOUS TYPE C SOILS - 94.4
5. TIME OF CONCENTRATIONS WERE DERIVED USING THE TR-55 METHOD.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE PFLUGERVILLE AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS)48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR- DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

TIMMERMAN
WASTEWATER AND
REGIONAL DETENTION
COMMERCE TEXAS PROPERTIES, INC
2490 FM 685
HUTTO, TEXAS 78634

HALFF
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #312

Revision No.	Date	Description

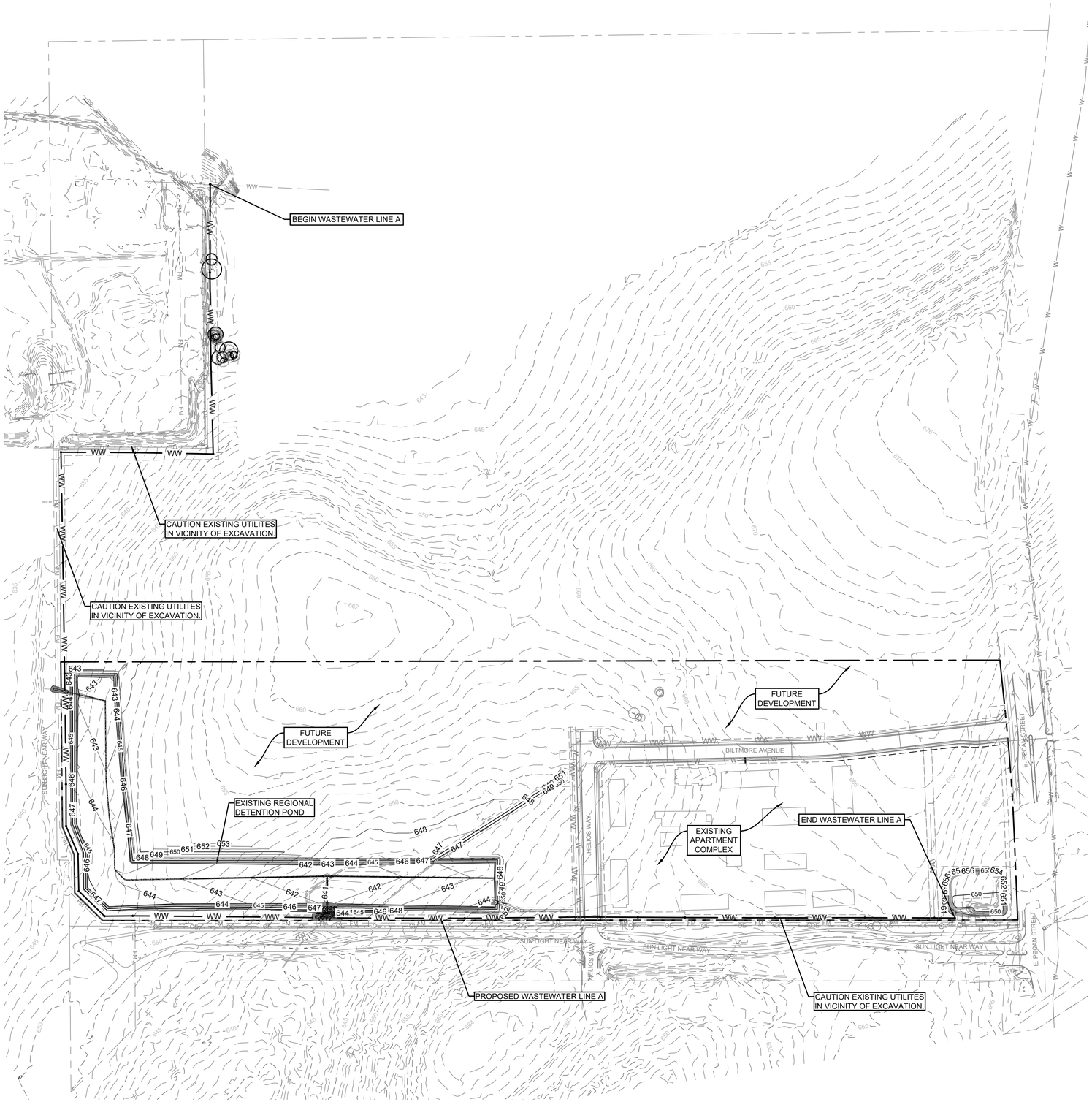
STATE OF TEXAS
MARK R. SABELLA
123046
LICENSED
PROFESSIONAL ENGINEER

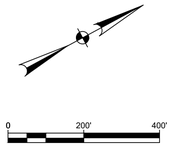
01/20/2020

Project No.:	31018
Issued:	12/16/2016
Drawn By:	HA
Checked By:	MS

Sheet Title

DETENTION POND CALCULATIONS





LEGEND

- PROP. PROPERTY LINE
- PROP. EASEMENT
- PROP. LOT LINE
- PROPOSED WASTEWATER LINE
- EX. PROPERTY LINE
- EX. FORCE MAIN
- EX. TREE
- EX. POWER POLE
- EX. SIGN
- EX. STORM SEWER

TIMMERMAN WASTEWATER AND REGIONAL DETENTION

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Sheet Title

EXISTING CONDITIONS AND PROPOSED GRADING PLAN

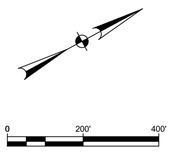
6 OF 17

Sheet Number

WASTEWATER PIPE CALCULATIONS

WW Line	Pipe Size	Material	Beginning Station	Ending Station	Length	Slope	LUE's	ADWF (Gal/Day)	PDWF (Gal/Day)	PDWF (GPM)	PDWF (CFS)	NORMAL DEPTH (FT)	Area (FT^2)	% PIPE CAPACITY	PDWF UNDER 50%	PWWF (Gal/Day)	PWWF (GPM)	PWWF (CFS)	NORMAL DEPTH (FT)	Area (FT^2)	% PIPE CAPACITY	PWWF UNDER 75%	VELOCITY AT PEAK PWWF (FT/S)	Full Flow Velocity (FT/S)
A	10	PVC SDR 26 ASTM D3034	1+15.13	4+33.08	318.0'	1.70%	1006	271620	319876	222.1	0.495	0.23	0.12	22.48%	YES	448486.00	311.45	0.694	0.28	0.16	29.51%	YES	2.73	5.25
	10	PVC SDR 26 ASTM D3034	4+33.08	7+54.70	321.6'	0.33%	851	229770	273957	190.2	0.424	0.33	0.20	36.87%	YES	375942.32	261.07	0.582	0.40	0.26	47.48%	YES	1.43	2.31
	10	PVC SDR 26 ASTM D3034	7+54.70	10+88.86	334.2'	0.33%	851	229770	273957	190.2	0.424	0.33	0.20	36.87%	YES	375942.32	261.07	0.582	0.40	0.26	47.48%	YES	1.43	2.31
	10	PVC SDR 26 ASTM D3034	10+88.86	13+70.42	281.6'	0.33%	707	190890	230952	160.4	0.357	0.30	0.18	32.43%	YES	308126.87	213.98	0.477	0.36	0.23	41.39%	YES	1.37	2.31
	10	PVC SDR 26 ASTM D3034	13+70.42	16+39.01	268.6'	0.33%	707	190890	230952	160.4	0.357	0.30	0.18	32.43%	YES	308126.87	213.98	0.477	0.36	0.23	41.39%	YES	1.37	2.32
	10	PVC SDR 26 ASTM D3034	16+39.01	20+38.53	399.5'	0.33%	549	148230	183250	127.3	0.284	0.27	0.15	28.08%	YES	235112.09	163.27	0.364	0.31	0.18	33.90%	YES	1.27	2.32
	10	PVC SDR 26 ASTM D3034	20+38.53	24+38.53	400.0'	0.33%	549	148230	183250	127.3	0.284	0.27	0.15	28.08%	YES	235112.09	163.27	0.364	0.31	0.18	33.90%	YES	1.27	2.31
	10	PVC SDR 26 ASTM D3034	24+38.53	28+38.54	400.0'	0.33%	443	119610	150829	104.7	0.233	0.24	0.13	23.85%	YES	184391.58	128.05	0.285	0.27	0.15	28.08%	YES	1.18	2.31
	10	PVC SDR 26 ASTM D3034	28+38.54	29+89.77	151.2'	0.33%	443	119610	150829	104.7	0.233	0.24	0.13	23.85%	YES	184391.58	128.05	0.285	0.27	0.15	28.08%	YES	1.18	2.32
	10	PVC SDR 26 ASTM D3034	29+89.77	30+99.09	109.3'	0.33%	443	119610	150829	104.7	0.233	0.24	0.13	23.85%	YES	184391.58	128.05	0.285	0.27	0.15	28.08%	YES	1.18	2.31
	10	PVC SDR 26 ASTM D3034	30+99.09	32+33.28	134.2'	0.34%	443	119610	150829	104.7	0.233	0.24	0.13	23.85%	YES	184391.58	128.05	0.285	0.27	0.15	28.08%	YES	1.19	2.33
	10	PVC SDR 26 ASTM D3034	32+33.28	33+62.89	129.6'	0.35%	443	119610	150829	104.7	0.233	0.24	0.13	23.85%	YES	184391.58	128.05	0.285	0.27	0.15	28.08%	YES	1.21	2.37
	10	PVC SDR 26 ASTM D3034	33+62.89	34+64.75	101.9'	0.33%	443	119610	150829	104.7	0.233	0.24	0.13	23.85%	YES	184391.58	128.05	0.285	0.27	0.15	28.08%	YES	1.19	2.33
	10	PVC SDR 26 ASTM D3034	34+64.75	38+64.76	400.0'	0.33%	443	119610	150829	104.7	0.233	0.24	0.13	23.85%	YES	184391.58	128.05	0.285	0.27	0.15	28.08%	YES	1.18	2.31
	10	PVC SDR 26 ASTM D3034	38+64.76	42+64.79	400.0'	0.33%	385	103950	132897	92.3	0.206	0.23	0.12	22.48%	YES	156484.33	108.67	0.242	0.25	0.14	25.24%	YES	1.13	2.31
	10	PVC SDR 26 ASTM D3034	42+64.79	46+64.79	400.0'	1.59%	385	103950	132897	92.3	0.206	0.15	0.07	12.25%	YES	156484.33	108.67	0.242	0.17	0.08	14.65%	YES	1.99	5.07
	10	PVC SDR 26 ASTM D3034	46+64.79	50+64.81	400.0'	0.33%	374	100980	129477	89.9	0.200	0.22	0.12	21.12%	YES	151647.20	105.31	0.235	0.24	0.13	23.85%	YES	1.11	2.31
	8	PVC SDR 26 ASTM D3034	50+64.81	51+55.01	90.2'	0.50%	304	82080	107548	74.7	0.166	0.20	0.09	25.24%	YES	122780.63	85.26	0.200	0.22	0.10	28.79%	YES	1.26	2.45
	8	PVC SDR 26 ASTM D3034	51+55.01	54+60.77	305.8'	1.13%	178	48060	67032	46.6	0.104	0.13	0.05	13.74%	YES	73054.53	50.73	0.113	0.13	0.05	13.74%	YES	1.41	3.68
	8	PVC SDR 26 ASTM D3034	54+60.77	57+85.70	324.9'	0.50%	178	48060	67032	46.6	0.104	0.16	0.06	18.46%	YES	73054.53	50.73	0.113	0.16	0.06	18.46%	YES	1.06	2.45
	8	PVC SDR 26 ASTM D3034	57+85.70	61+10.81	325.1'	0.50%	178	48060	67032	46.6	0.104	0.16	0.06	18.46%	YES	73054.53	50.73	0.113	0.16	0.06	18.46%	YES	1.06	2.46
	8	PVC SDR 26 ASTM D3034	61+10.81	64+35.74	324.9'	0.50%	178	48060	67032	46.6	0.104	0.16	0.06	18.46%	YES	73054.53	50.73	0.113	0.16	0.06	18.46%	YES	1.06	2.45

Note: Normal Depth calculated using Flowmaster.



LEGEND

- PROPOSED CONTOUR
- EXISTING CONTOUR
- PROPERTY BOUNDARY
- EXISTING WATER LINE
- PROP. WASTEWATER LINE
- FUTURE PROP. WASTEWATER LINE
- EXISTING FORCEMAIN
- OVERHEAD ELECTRIC
- PROP. WASTEWATER MANHOLE
- XXXX — LOT #
- XX.XX — NUMBER OF LUE
- XX.XX — AREA (ACRES)
- AA — USE

Timmerman Wastewater LUE Calculations

Lot #	Use	Lot Area (Acre)	# of Units or Rooms	Building Area (sf)	LUE Demand	LUE Required	Station	LUE Accumulative
A-1	Hotel/Motel	2.62	60		.5/room	30	62+36.45	30
A-2	Restaurant	1.95		25,483	1/200 sf	127	62+36.45	157
A-4	Office	1.73		30,144	1/3,000 sf	10	62+36.45	167
A-5	Office	1.73		30,144	1/3,000 sf	10	62+36.45	178
A-3	Multi-Family	12.28	252		.5/Unit	126	51+55.01	304
B-1	Office	2.07		36,068	1/3,000 sf	12	50+64.81	316
B-2	Office	1.73		30,144	1/3,000 sf	10	50+64.81	326
B-3	Office	1.82		31,712	1/3,000 sf	11	50+64.81	336
B-4	Retail/Shopping	1.86		32,409	1/1660 sf	20	50+64.81	356
B-5	Retail/Shopping	1.77		30,840	1/1660 sf	19	50+64.81	374
C-1	Office	1.89		32,931	1/3,000 sf	11	46+64.79	385
C-2	Office/Warehouse	13.3		231,739	1/4,000 sf	58	38+64.76	443
C-3	Office/Warehouse	24.4		425,146	1/4,000 sf	106	24+38.53	549
Off-1	Office/Warehouse	36.22		631,146	1/4,000 sf	158	16+39.01	707
Off-2	Office/Warehouse	33.08		576,452	1/4,000 sf	144	10+88.86	851
Off-3	Office/Warehouse	35.50		618,535	1/4,000 sf	155	4+33.08	1006

Note: Land use for all lots (excluding A-3) are assumed based on current zoning and using a FAR of 0.4.

TIMMERMAN WASTEWATER AND REGIONAL DETENTION

COMMERCE TEXAS PROPERTIES, INC

2490 FM 685

HUTTO, TEXAS 78634

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TBPE FIRM #F-312

Revision No.	Date	Description

STATE OF TEXAS
MARK R. SABELLA
123046
LICENSED PROFESSIONAL ENGINEER

01/20/2020

Project No.:	31018
Issued:	12/16/2016
Drawn By:	HA
Checked By:	MS

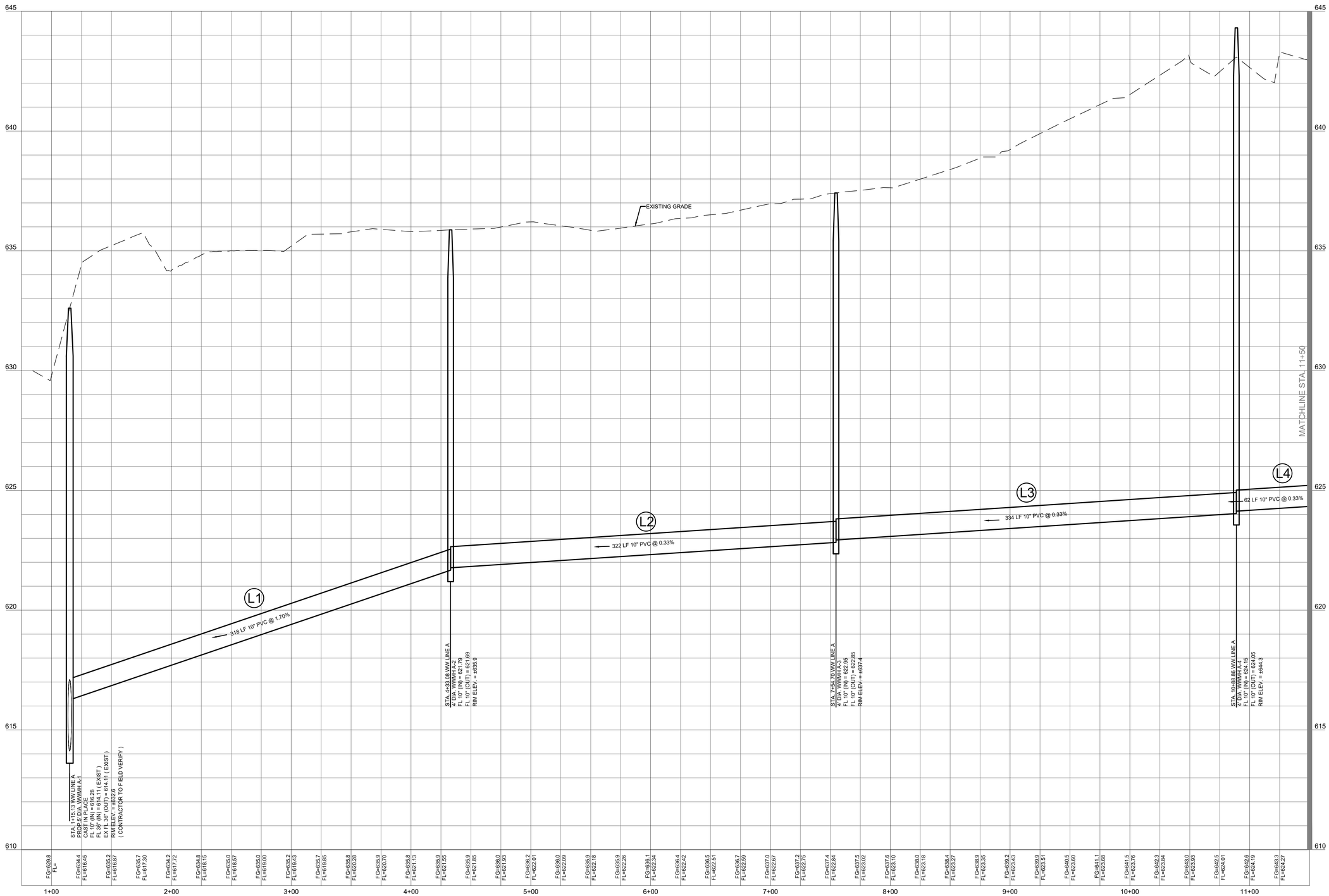
Sheet Title

OVERALL UTILITY PLAN

7 OF 17

Sheet Number

SEE PLAN VIEW ON SHEET 8



NOTE:
1. ALL WASTEWATER LINES MUST HAVE A MINIMUM COVERAGE OF 48" BELOW SUBGRADE.

WW LINE A
STA. 0+75.00 - STA. 11+50.00
SCALE:
1" = 40' (HOR.)
1" = 2' (VERT.)

TIMMERMAN WASTEWATER AND REGIONAL DETENTION

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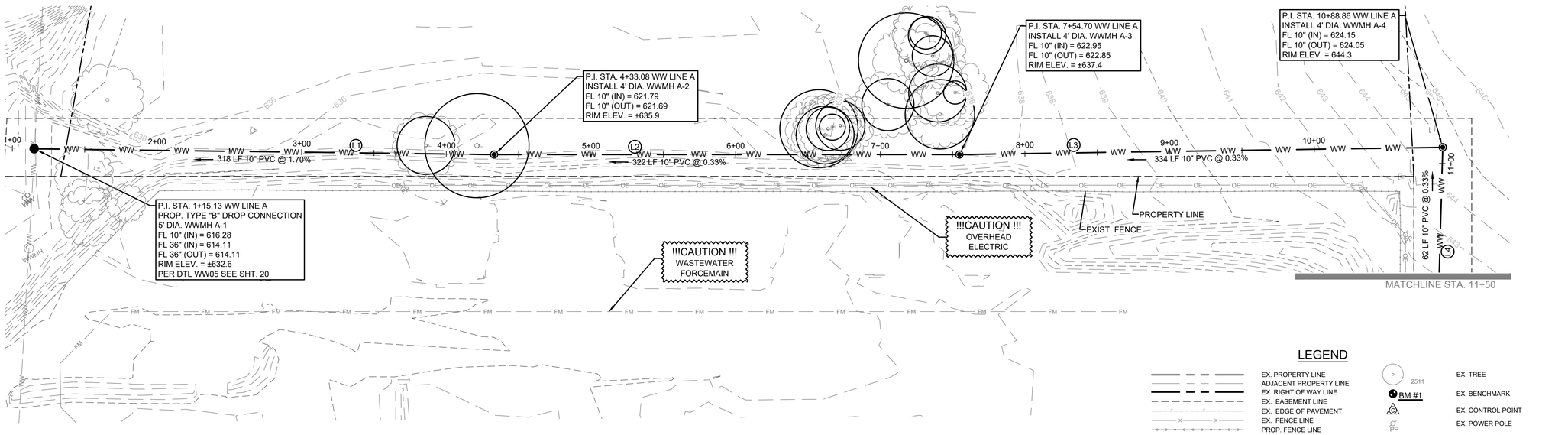
WASTEWATER PLAN AND PROFILE (2 OF 9)



NOTE:
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WASTEWATER LINE DATA

LINE #	DIRECTION	LENGTH	START	END	ALIGNMENT	START STA.	END STA.
L1	S61°29'05"E	317.94'	N 10128573.71 E 3157329.95	N 10128421.93 E 3157609.32	WW LINE A	1+15.14	4+33.08
L2	S62°12'25"E	321.62'	N 10128421.93 E 3157609.32	N 10128271.97 E 3157893.84	WW LINE A	4+33.08	7+54.70
L3	S63°03'52"E	334.16'	N 10128271.97 E 3157893.84	N 10128120.60 E 3158191.74	WW LINE A	7+54.70	10+88.86
L4	S29°24'19"W	281.56'	N 10128120.60 E 3158191.74	N 10127875.31 E 3158053.50	WW LINE A	10+88.86	13+70.42

SEE PROFILE VIEW ON SHEET 9

LEGEND

- EX. PROPERTY LINE
- ADJACENT PROPERTY LINE
- EX. RIGHT OF WAY LINE
- EX. EASEMENT LINE
- EX. EDGE OF PAVEMENT
- EX. FENCE LINE
- PROP. FENCE LINE
- EX. CREEK / RIVER CENTERLINE
- EX. GAS LINE
- EX. OVERHEAD ELECTRIC LINE
- EX. STORM SEWER LINE
- EX. WASTEWATER LINE
- EX. WATER LINE
- EX. FORCE MAIN
- PROP. STORM SEWER LINE
- PROP. WASTEWATER LINE
- PROP. WATER LINE

- EX. TREE
- EX. BENCHMARK
- EX. CONTROL POINT
- EX. POWER POLE
- EX. GUY WIRE
- EX. WASTEWATER CLEANOUT
- EX. WASTEWATER MANHOLE
- EX. SIGN
- PROP. WASTEWATER MANHOLE
- PROP. HEADWALL

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01/20/2020

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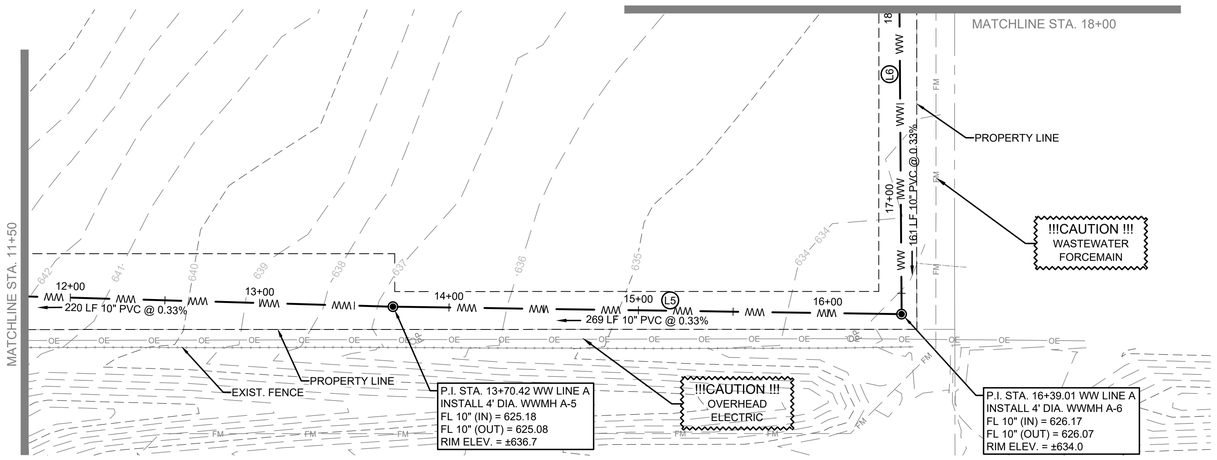
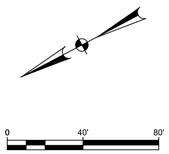
Sheet Title

WASTEWATER PLAN AND PROFILE (1 OF 9)

8 OF 17

Sheet Number



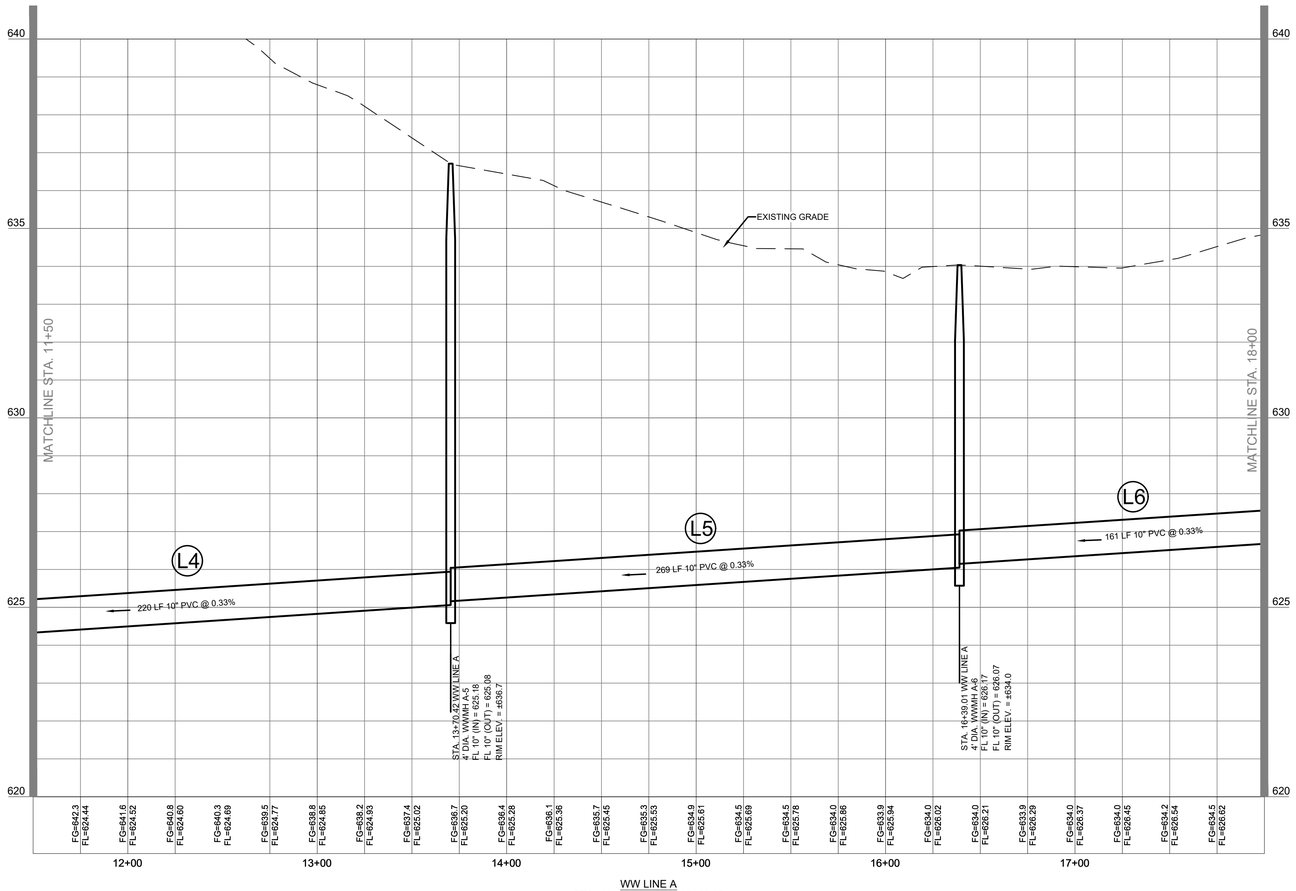


WASTEWATER LINE DATA							
LINE #	DIRECTION	LENGTH	START	END	ALIGNMENT	START STA.	END STA.
L4	S29°24'19"W	281.56'	N 10128120.60 E 3158191.74	N 10127875.31 E 3158053.50	WW LINE A	10+88.86	13+70.42
L5	S28°37'50"W	268.59'	N 10127875.31 E 3158053.50	N 10127639.56 E 3157924.81	WW LINE A	13+70.42	16+39.01
L6	S62°37'07"E	399.52'	N 10127639.56 E 3157924.81	N 10127455.82 E 3158279.57	WW LINE A	16+39.01	20+38.53

LEGEND

- EX. PROPERTY LINE
- ADJACENT PROPERTY LINE
- EX. RIGHT OF WAY LINE
- EX. EASEMENT LINE
- EX. EDGE OF PAVEMENT
- EX. FENCE LINE
- PROP. FENCE LINE
- EX. CREEK / RIVER CENTERLINE
- EX. GAS LINE
- EX. OVERHEAD ELECTRIC LINE
- EX. STORM SEWER LINE
- EX. WASTEWATER LINE
- EX. WATER LINE
- EX. FORCE MAIN
- PROP. STORM SEWER LINE
- PROP. WASTEWATER LINE
- PROP. WATER LINE

- EX. TREE
- EX. BENCHMARK
- EX. CONTROL POINT
- EX. POWER POLE
- EX. GUY WIRE
- EX. WASTEWATER CLEANOUT
- EX. WASTEWATER MANHOLE
- EX. SIGN
- PROP. WASTEWATER MANHOLE
- PROP. HEADWALL



WW LINE A
STA. 11+50.00 - STA. 18+00.00
SCALE:
1" = 40' (HOR.)
1" = 2' (VERT.)

NOTE:
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TIMMERMAN WASTEWATER AND REGIONAL DETENTION

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01/20/2020

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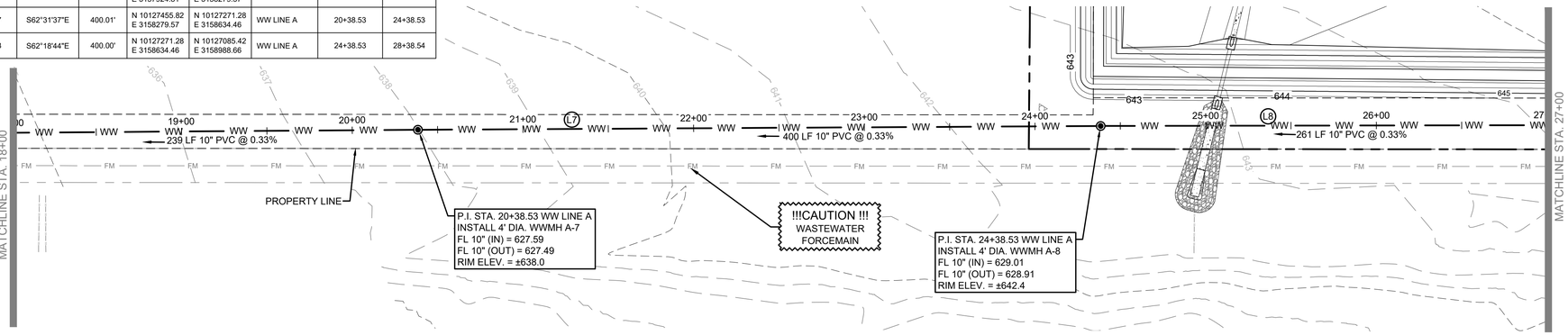
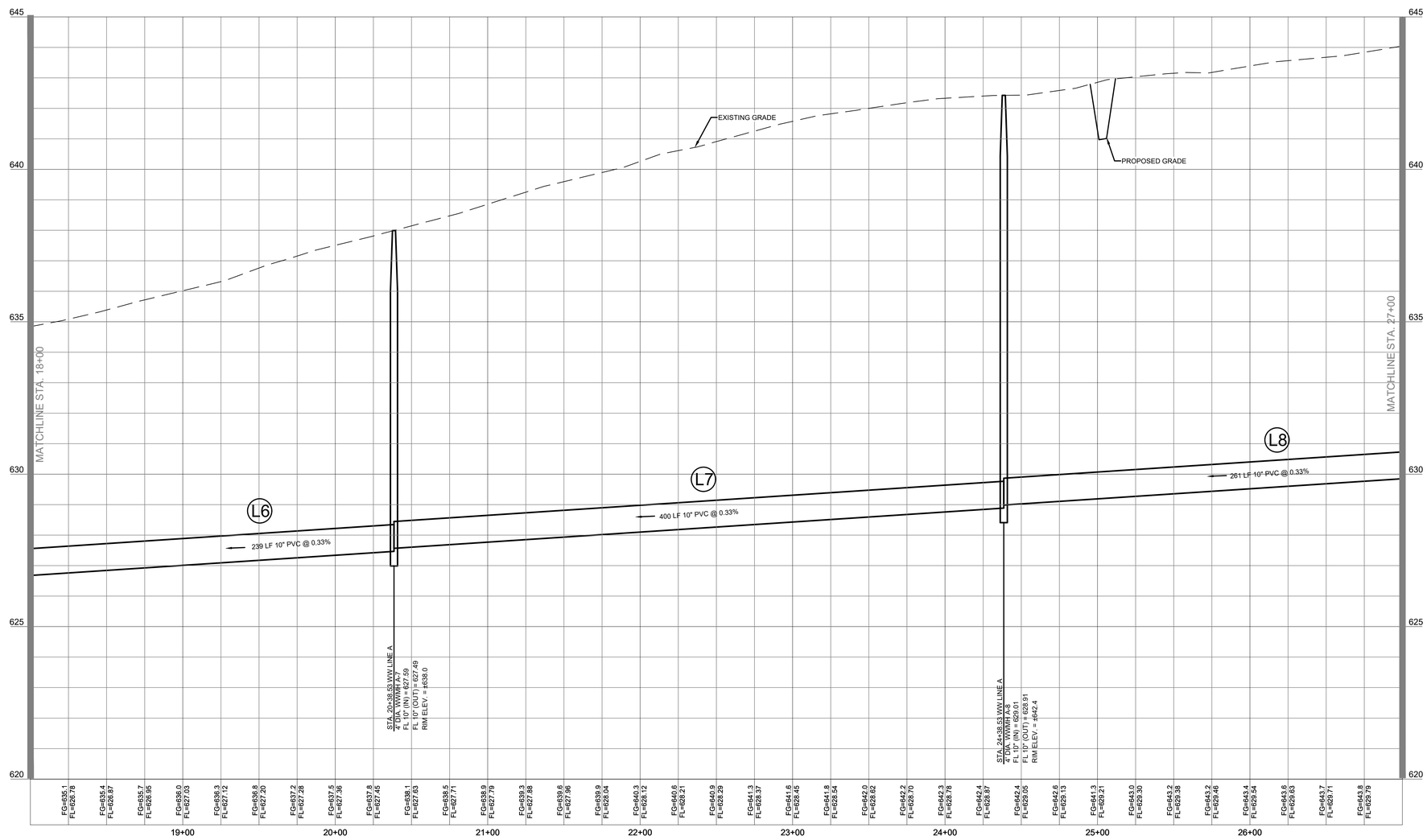
Sheet Title
WASTEWATER PLAN AND PROFILE (3 OF 9)

10 OF 17
Sheet Number

WASTEWATER LINE DATA

LINE #	DIRECTION	LENGTH	START	END	ALIGNMENT	START STA.	END STA.
L6	S62°37'07"E	399.52'	N 10127639.56 E 3157924.81	N 10127455.82 E 3158279.57	WW LINE A	16+39.01	20+38.53
L7	S62°31'37"E	400.01'	N 10127455.82 E 3158279.57	N 10127271.28 E 3158634.46	WW LINE A	20+38.53	24+38.53
L8	S62°18'44"E	400.00'	N 10127271.28 E 3158634.46	N 10127085.42 E 3158988.66	WW LINE A	24+38.53	28+38.54





NOTE:
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WW LINE A
STA. 18+00.00 - STA. 27+00.00
SCALE:
1" = 40' (HOR.)
1" = 2' (VERT.)

0 40' 80'

LEGEND

- EX. PROPERTY LINE
- ADJACENT PROPERTY LINE
- EX. RIGHT OF WAY LINE
- EX. EASEMENT LINE
- EX. EDGE OF PAVEMENT
- EX. FENCE LINE
- PROP. FENCE LINE
- EX. CREEK / RIVER CENTERLINE
- EX. GAS LINE
- EX. OVERHEAD ELECTRIC LINE
- EX. STORM SEWER LINE
- EX. WASTEWATER LINE
- EX. WATER LINE
- EX. FORCE MAIN
- PROP. STORM SEWER LINE
- PROP. WASTEWATER LINE
- PROP. WATER LINE
- EX. TREE
- EX. BENCHMARK
- EX. CONTROL POINT
- EX. POWER POLE
- EX. GUY WIRE
- EX. WASTEWATER CLEANOUT
- EX. WASTEWATER MANHOLE
- EX. SIGN
- PROP. WASTEWATER MANHOLE
- PROP. HEADWALL

TIMMERMAN WASTEWATER AND REGIONAL DETENTION
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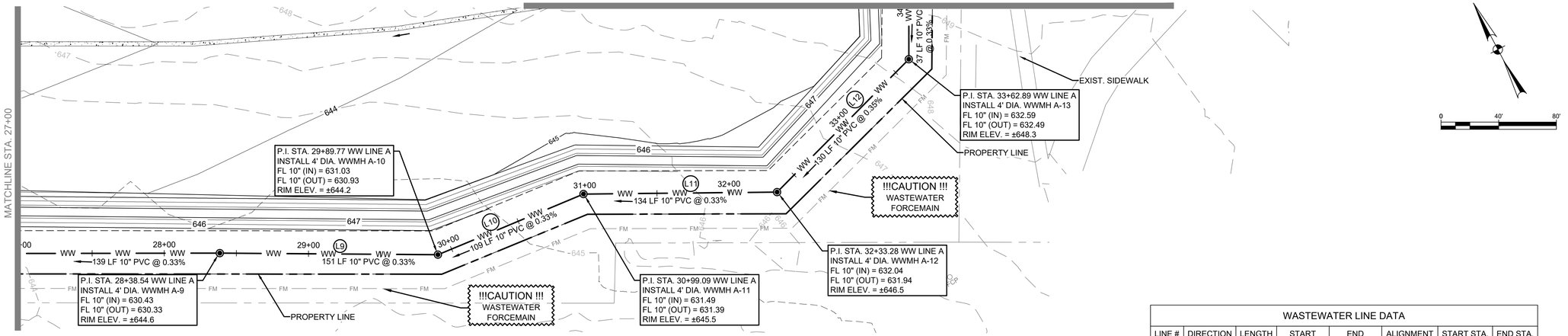
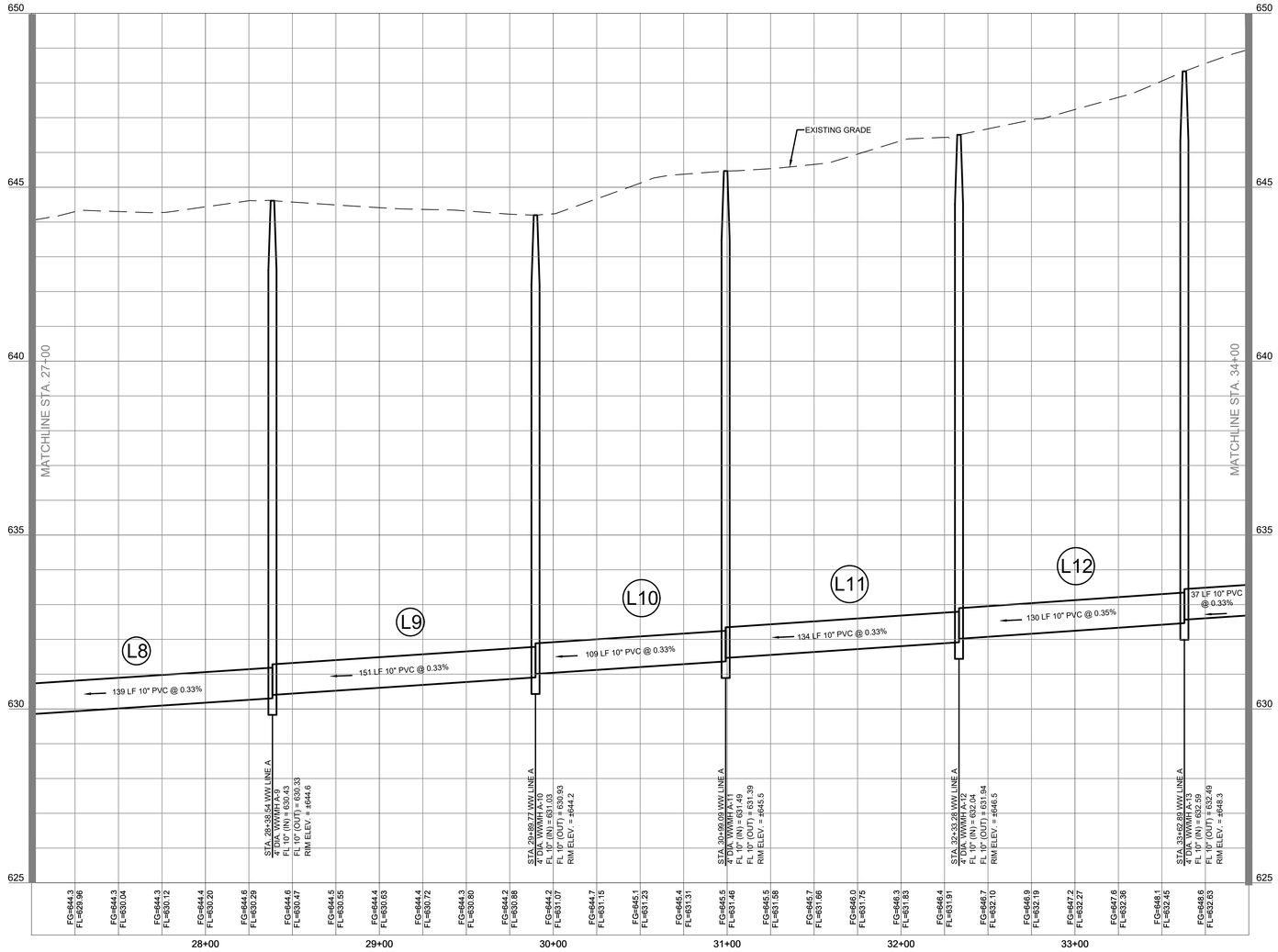
Sheet Title
WASTEWATER PLAN AND PROFILE (4 OF 9)





WASTEWATER LINE DATA							
LINE #	DIRECTION	LENGTH	START	END	ALIGNMENT	START STA.	END STA.
L8	S62°18'44"E	400.00'	N 10127271.28 E 3158634.46	N 10127085.42 E 3158988.66	WW LINE A	24+38.53	28+38.54
L9	S61°47'24"E	151.24'	N 10127085.42 E 3158988.66	N 10127013.93 E 3159121.93	WW LINE A	28+38.54	29+89.77
L10	S84°48'18"E	109.32'	N 10127013.93 E 3159121.93	N 10127004.03 E 3159230.80	WW LINE A	29+89.77	30+99.09
L11	S62°47'02"E	134.19'	N 10127004.03 E 3159230.80	N 10126942.66 E 3159350.14	WW LINE A	30+99.09	32+33.28
L12	N72°34'12"E	129.61'	N 10126942.66 E 3159350.14	N 10126981.49 E 3159473.80	WW LINE A	32+33.28	33+62.89
L13	N27°49'07"E	101.86'	N 10126981.49 E 3159473.80	N 10127071.57 E 3159521.33	WW LINE A	33+62.89	34+64.75

LEGEND

- EX. PROPERTY LINE
- ADJACENT PROPERTY LINE
- EX. RIGHT OF WAY LINE
- EX. EASEMENT LINE
- EX. EDGE OF PAVEMENT
- EX. FENCE LINE
- PROP. FENCE LINE
- EX. CREEK / RIVER CENTERLINE
- EX. GAS LINE
- EX. OVERHEAD ELECTRIC LINE
- EX. STORM SEWER LINE
- EX. WASTEWATER LINE
- EX. WATER LINE
- EX. FORCE MAIN
- PROP. STORM SEWER LINE
- PROP. WASTEWATER LINE
- PROP. WATER LINE
- EX. TREE (2511)
- EX. BENCHMARK (BM #1)
- EX. CONTROL POINT
- EX. POWER POLE
- EX. GUY WIRE
- EX. WASTEWATER CLEANOUT
- EX. WASTEWATER MANHOLE
- EX. SIGN
- PROP. WASTEWATER MANHOLE
- PROP. HEADWALL

NOTE:
1. ALL WASTEWATER LINES MUST HAVE A MINIMUM COVERAGE OF 48" BELOW SUBGRADE.

WW LINE A
STA. 27+00.00 - STA. 34+00.00
SCALE:
1" = 40' (HOR.)
1" = 2' (VERT.)

TIMMERMAN WASTEWATER AND REGIONAL DETENTION

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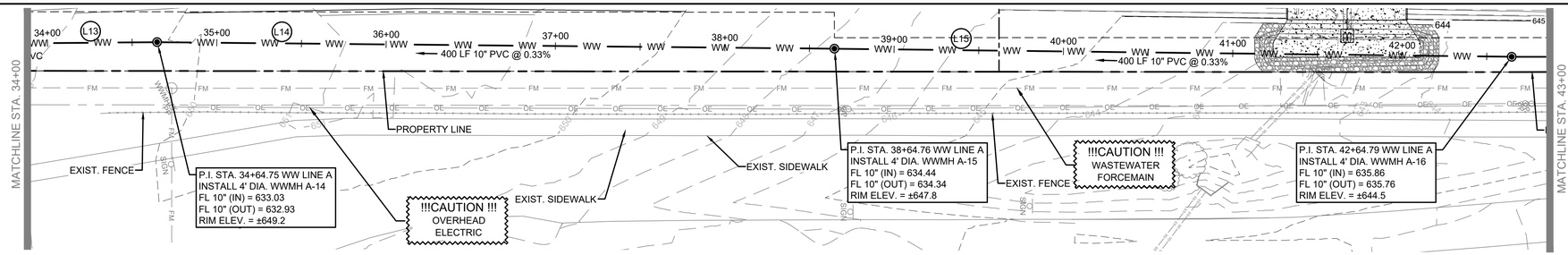
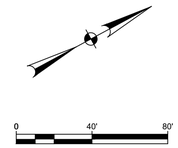
WASTEWATER PLAN AND PROFILE (5 OF 9)

12 OF 17
Sheet Number





WASTEWATER LINE DATA

LINE #	DIRECTION	LENGTH	START	END	ALIGNMENT	START STA.	END STA.
L13	N27°49'07"E	101.86'	N 10126981.49 E 3159473.80	N 10127071.57 E 3159521.33	WW LINE A	33+62.89	34+64.75
L14	N28°52'57"E	400.02'	N 10127071.57 E 3159521.33	N 10127421.83 E 3159714.54	WW LINE A	34+64.75	38+64.76
L15	N29°00'42"E	400.02'	N 10127421.83 E 3159714.54	N 10127771.66 E 3159908.55	WW LINE A	38+64.76	42+64.79
L16	N28°29'14"E	400.00'	N 10127771.66 E 3159908.55	N 10128123.23 E 3160099.34	WW LINE A	42+64.79	46+64.79

LEGEND

- EX. PROPERTY LINE
- ADJACENT PROPERTY LINE
- EX. RIGHT OF WAY LINE
- EX. EASEMENT LINE
- EX. EDGE OF PAVEMENT
- EX. FENCE LINE
- PROP. FENCE LINE
- EX. CREEK / RIVER CENTERLINE
- EX. GAS LINE
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- EX. WATER LINE
- EX. FORCE MAIN
- PROP. STORM SEWER LINE
- PROP. WASTEWATER LINE
- PROP. WATER LINE
- EX. TREE
- EX. BENCHMARK
- EX. CONTROL POINT
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- EX. WASTEWATER CLEANOUT
- EX. WASTEWATER MANHOLE
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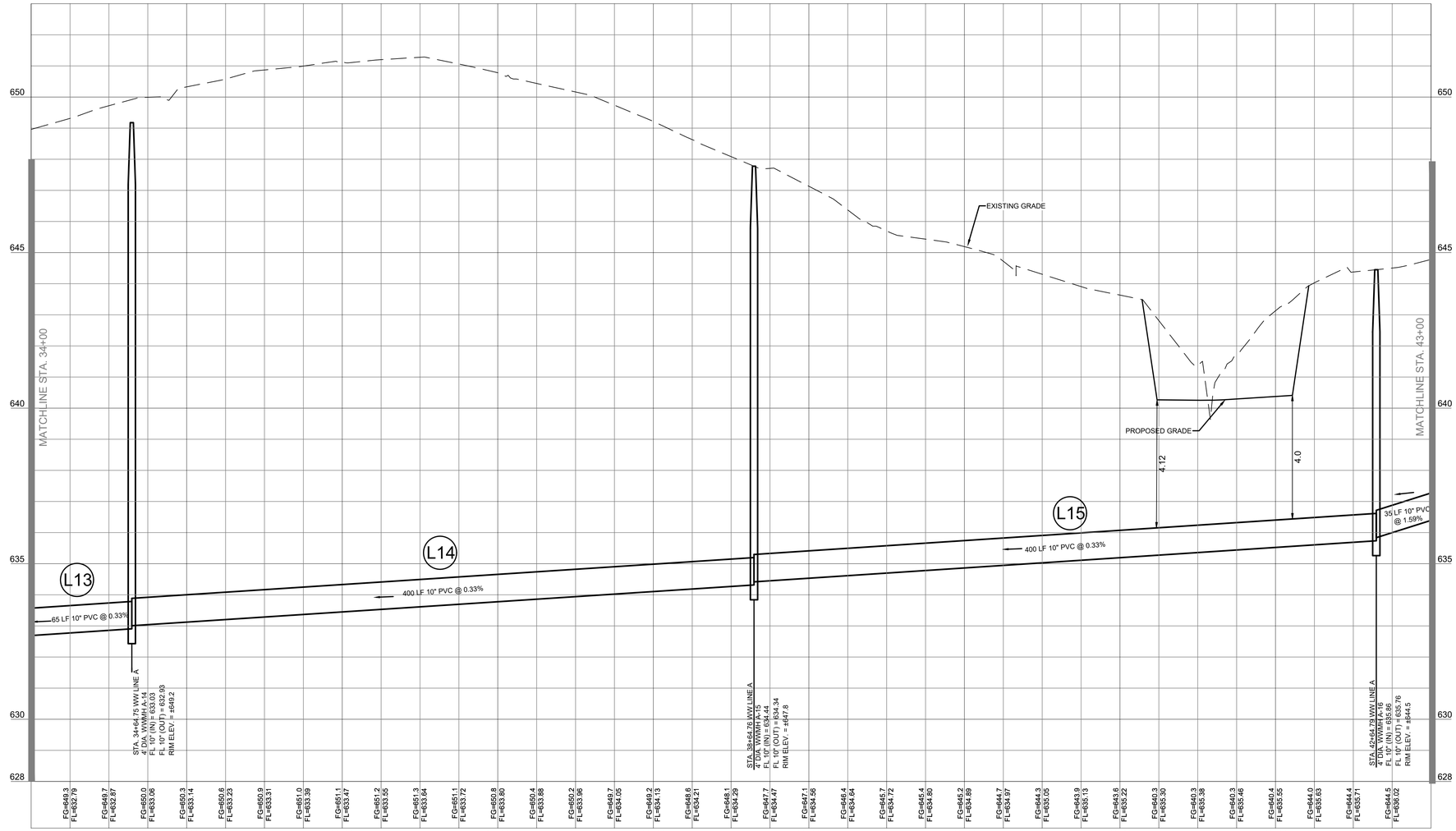
- PROP. HEADWALL



NOTE:
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WW LINE A
STA. 34+00.00 - STA. 43+00.00
SCALE:
1" = 40' (HOR.)
1" = 2' (VERT.)

TIMMERMAN WASTEWATER AND REGIONAL DETENTION

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123046
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01/20/2020

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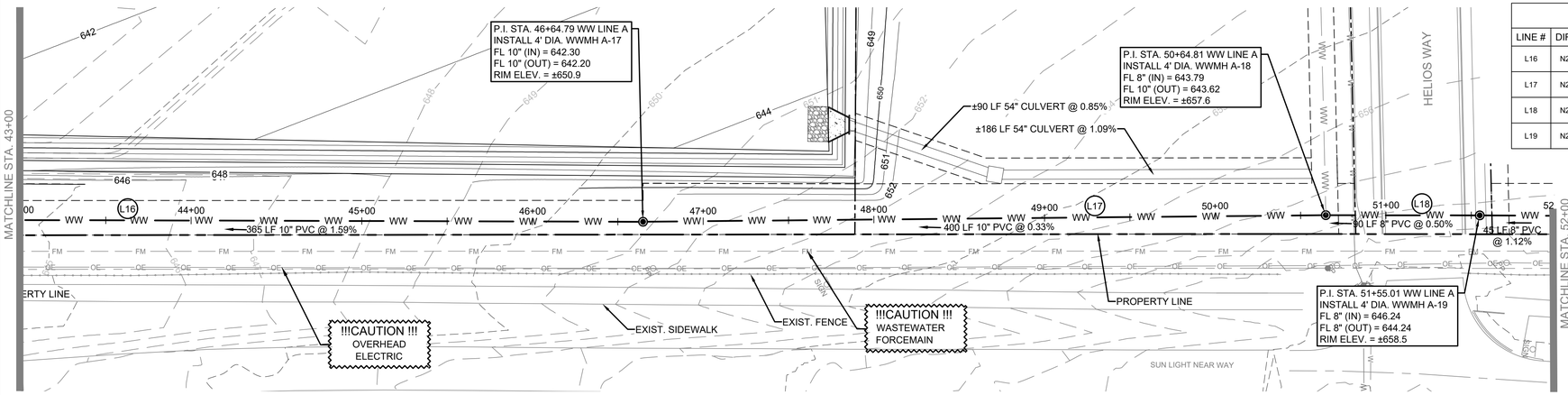
Project No.:	31018
Issued:	12/16/2016
Drawn By:	HA
Checked By:	MS

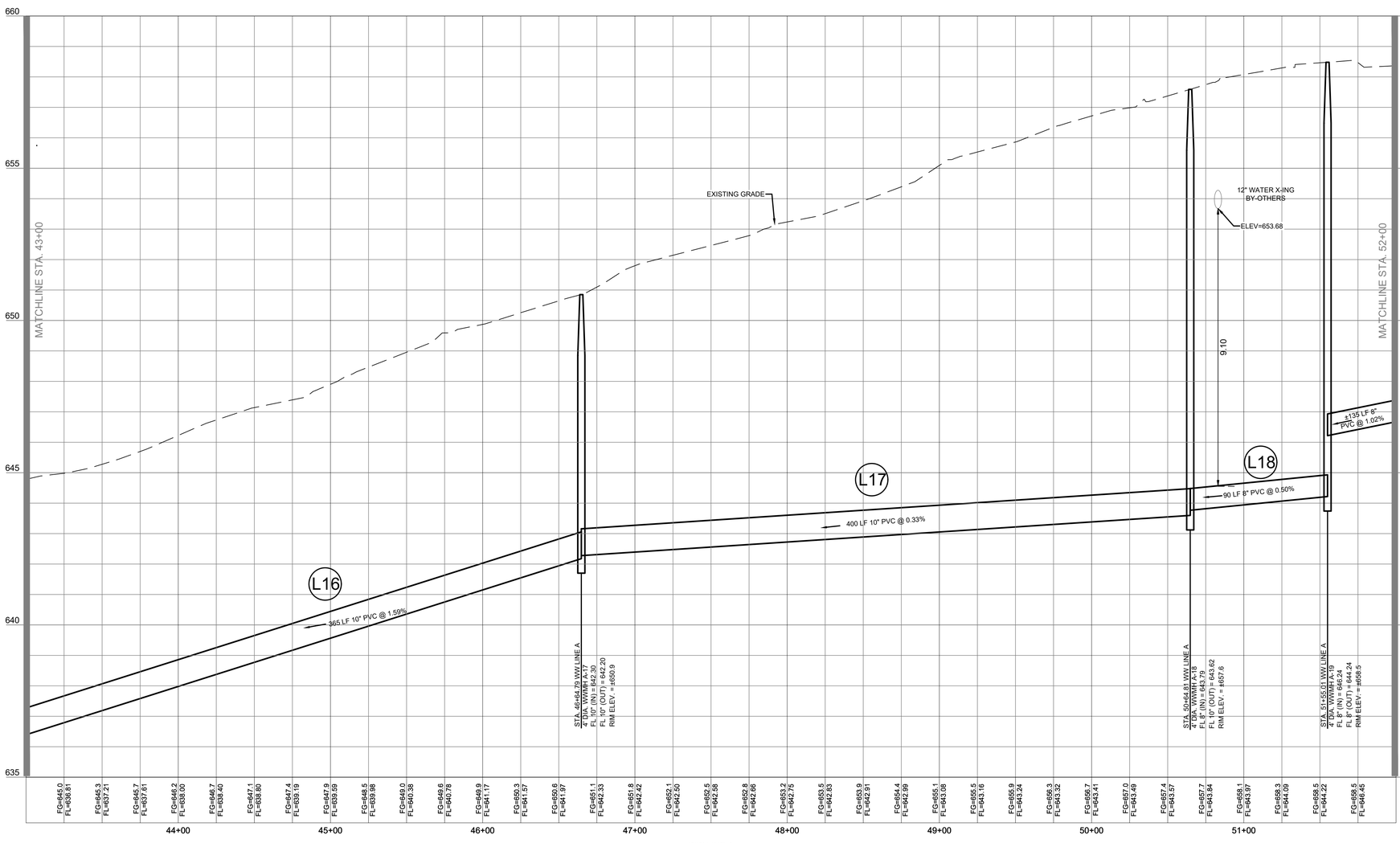
Sheet Title
WASTEWATER PLAN AND PROFILE (6 OF 9)

13 OF 17
Sheet Number



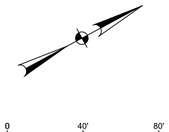
WASTEWATER LINE DATA

LINE #	DIRECTION	LENGTH	START	END	ALIGNMENT	START STA.	END STA.
L16	N28°29'14"E	400.00'	N 10127771.66 E 3159908.55	N 10128123.23 E 3160099.34	WW LINE A	42+64.79	46+64.79
L17	N27°46'46"E	400.02'	N 10128123.23 E 3160099.34	N 10128477.15 E 3160285.77	WW LINE A	46+64.79	50+64.81
L18	N28°23'33"E	90.20'	N 10128477.15 E 3160285.77	N 10128556.50 E 3160328.66	WW LINE A	50+64.81	51+55.01
L19	N28°39'29"E	305.76'	N 10128556.50 E 3160328.66	N 10128824.80 E 3160475.30	WW LINE A	51+55.01	54+60.77



NOTE:
1. ALL WASTEWATER LINES MUST HAVE A MINIMUM COVERAGE OF 48" BELOW SUBGRADE.

WW LINE A
STA. 43+00.00 - STA. 52+00.00
SCALE:
1" = 40' (HOR.)
1" = 2' (VERT.)



LEGEND

- EX. PROPERTY LINE
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- EX. FENCE LINE
- PROP. FENCE LINE
- EX. CREEK / RIVER CENTERLINE
- EX. GAS LINE
- EX. OVERHEAD ELECTRIC LINE
- EX. STORM SEWER LINE
- EX. WASTEWATER LINE
- EX. WATER LINE
- EX. FORCE MAIN
- PROP. STORM SEWER LINE
- PROP. WASTEWATER LINE
- PROP. WATER LINE
- EX. TREE (2511)
- EX. BENCHMARK (BM #1)
- EX. CONTROL POINT
- EX. POWER POLE
- EX. GUY WIRE
- EX. WASTEWATER CLEANOUT
- EX. WASTEWATER MANHOLE
- EX. SIGN
- PROP. WASTEWATER MANHOLE
- PROP. HEADWALL

TIMMERMAN WASTEWATER AND REGIONAL DETENTION

COMMERCE TEXAS PROPERTIES, INC
2490 FM 685
HUTTO, TEXAS 78634

HALFF
9600 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #312

Revision No.	Date	Description

STATE OF TEXAS
MARK R. SABELLA
123046
LICENSED
PROFESSIONAL ENGINEER
01/20/2020

Project No.:	31018
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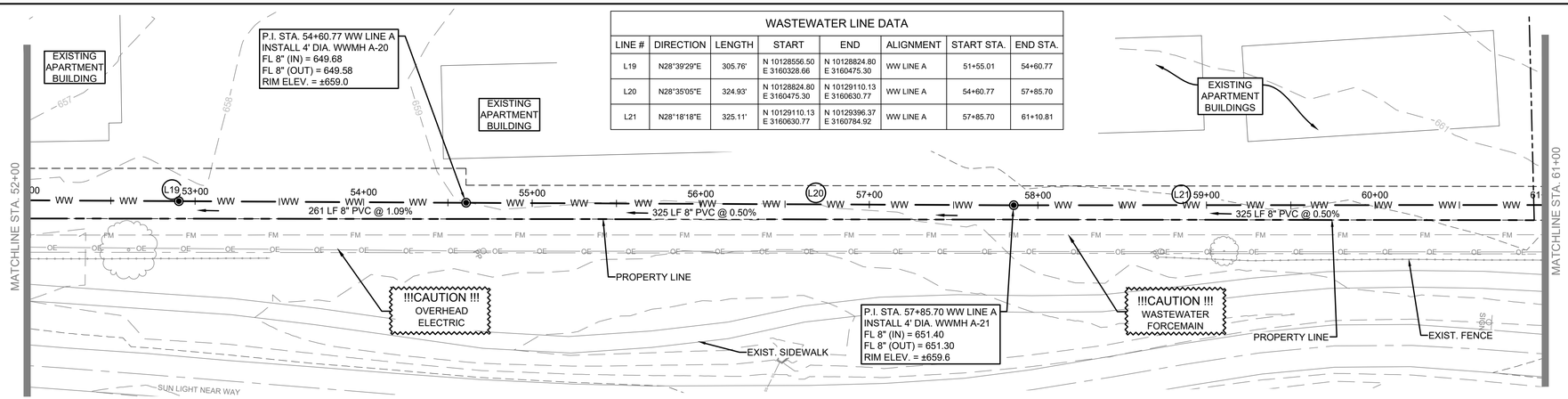
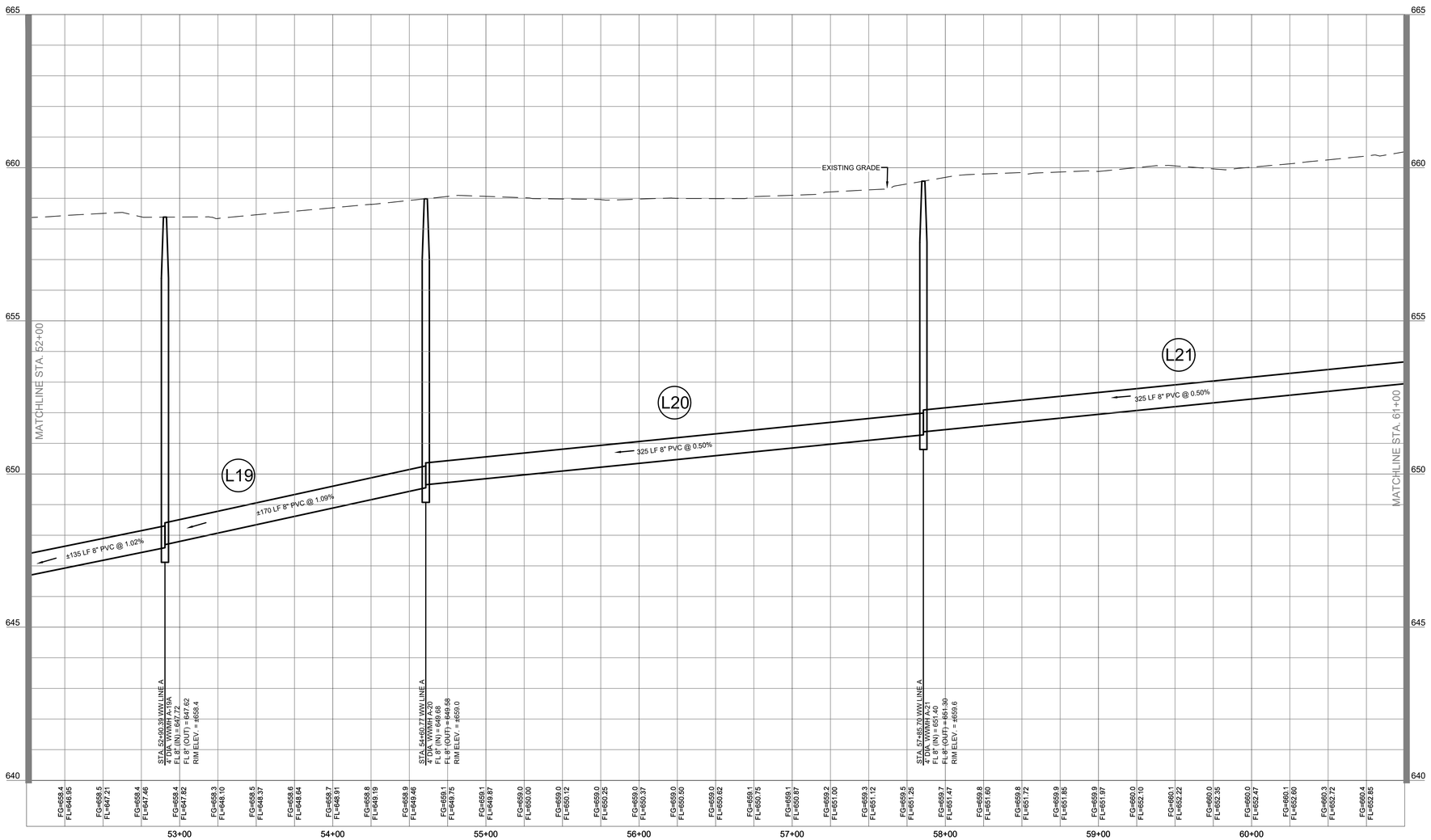
Sheet Title
WASTEWATER PLAN AND PROFILE (7 OF 9)

14 OF 17
Sheet Number



WASTEWATER LINE DATA

LINE #	DIRECTION	LENGTH	START	END	ALIGNMENT	START STA.	END STA.
L19	N28°39'29"E	305.76'	N 10128556.50 E 3160328.66	N 10128824.80 E 3160475.30	WW LINE A	51+55.01	54+60.77
L20	N28°35'05"E	324.93'	N 10128824.80 E 3160475.30	N 10129110.13 E 3160630.77	WW LINE A	54+60.77	57+85.70
L21	N28°18'18"E	325.11'	N 10129110.13 E 3160630.77	N 10129396.37 E 3160784.92	WW LINE A	57+85.70	61+10.81



WW LINE A
STA. 52+00.00 - STA. 61+00.00
SCALE:
1" = 40' (HOR.)
1" = 2' (VERT.)

NOTE:
1. ALL WASTEWATER LINES MUST HAVE A MINIMUM COVERAGE OF 48" BELOW SUBGRADE.

0 40' 80'

LEGEND

- EX. PROPERTY LINE
- ADJACENT PROPERTY LINE
- EX. RIGHT OF WAY LINE
- EX. EASEMENT LINE
- EX. EDGE OF PAVEMENT
- EX. FENCE LINE
- PROP. FENCE LINE
- EX. CREEK / RIVER CENTERLINE
- EX. GAS LINE
- EX. OVERHEAD ELECTRIC LINE
- EX. STORM SEWER LINE
- EX. WASTEWATER LINE
- EX. WATER LINE
- EX. FORCE MAIN
- PROP. STORM SEWER LINE
- PROP. WASTEWATER LINE
- PROP. WATER LINE
- EX. TREE (2511)
- EX. BENCHMARK (BM #1)
- EX. CONTROL POINT
- EX. POWER POLE (PP)
- EX. GUY WIRE
- EX. WASTEWATER CLEANOUT
- EX. WASTEWATER MANHOLE (WWMH)
- EX. SIGN
- PROP. WASTEWATER MANHOLE (WWMH)
- PROP. HEADWALL

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HUTTO, TEXAS 78634

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9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
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123046
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PROFESSIONAL ENGINEER
01/20/2020

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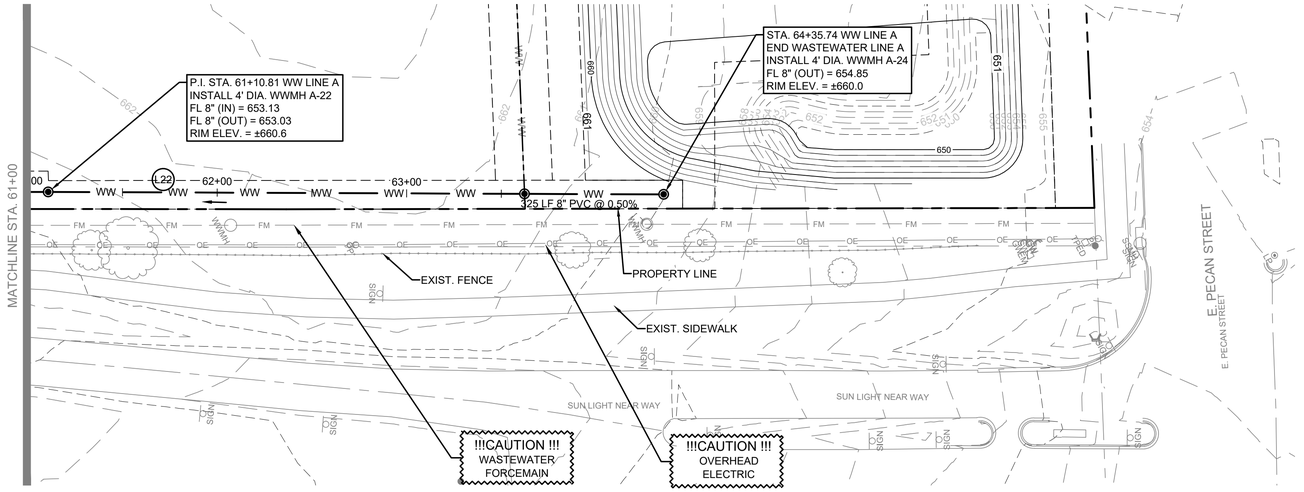
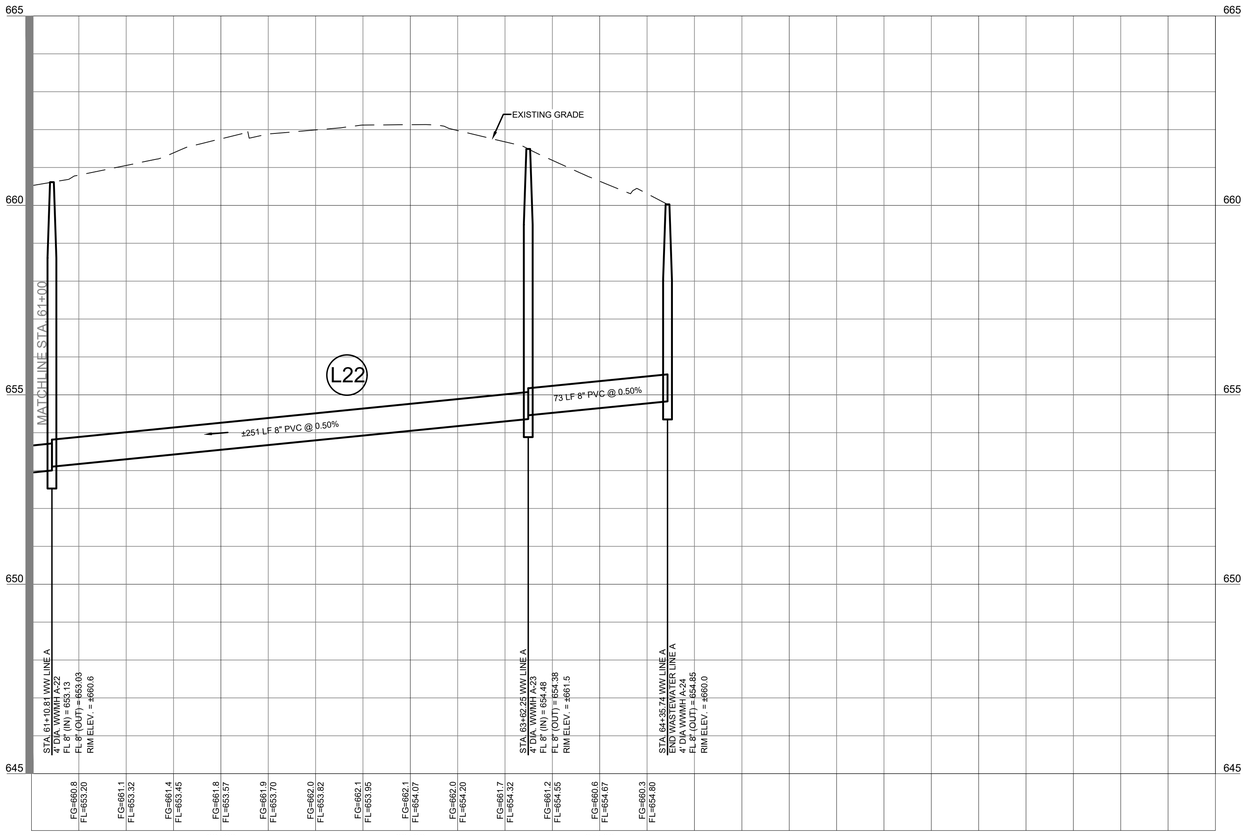
WASTEWATER PLAN AND PROFILE (8 OF 9)

15 OF 17
Sheet Number

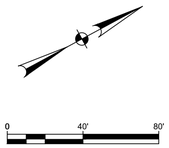
WASTEWATER LINE DATA							
LINE #	DIRECTION	LENGTH	START	END	ALIGNMENT	START STA.	END STA.
L22	N28°33'41"E	324.93'	N 10129396.37 E 3160784.92	N 10129681.76 E 3160940.27	WW LINE A	61+10.81	64+35.74





NOTE:
1. ALL WASTEWATER LINES MUST HAVE A MINIMUM COVERAGE OF 48" BELOW SUBGRADE.

WW LINE A
STA. 61+00.00 - STA. 67+25.00
SCALE:
1" = 40' (HOR.)
1" = 2' (VERT.)



LEGEND

- EX. PROPERTY LINE
- ADJACENT PROPERTY LINE
- EX. RIGHT OF WAY LINE
- EX. EASEMENT LINE
- EX. EDGE OF PAVEMENT
- EX. FENCE LINE
- PROP. FENCE LINE
- EX. CREEK / RIVER CENTERLINE
- EX. GAS LINE
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- EX. STORM SEWER LINE
- EX. WASTEWATER LINE
- EX. WATER LINE
- EX. FORCE MAIN
- PROP. STORM SEWER LINE
- PROP. WASTEWATER LINE
- PROP. WATER LINE
- EX. TREE
- EX. BENCHMARK
- EX. CONTROL POINT
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- EX. GUY WIRE
- EX. WASTEWATER CLEANOUT
- EX. WASTEWATER MANHOLE
- EX. SIGN
- PROP. WASTEWATER MANHOLE
- PROP. HEADWALL

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WASTEWATER PLAN AND PROFILE (9 OF 9)

16 OF 17
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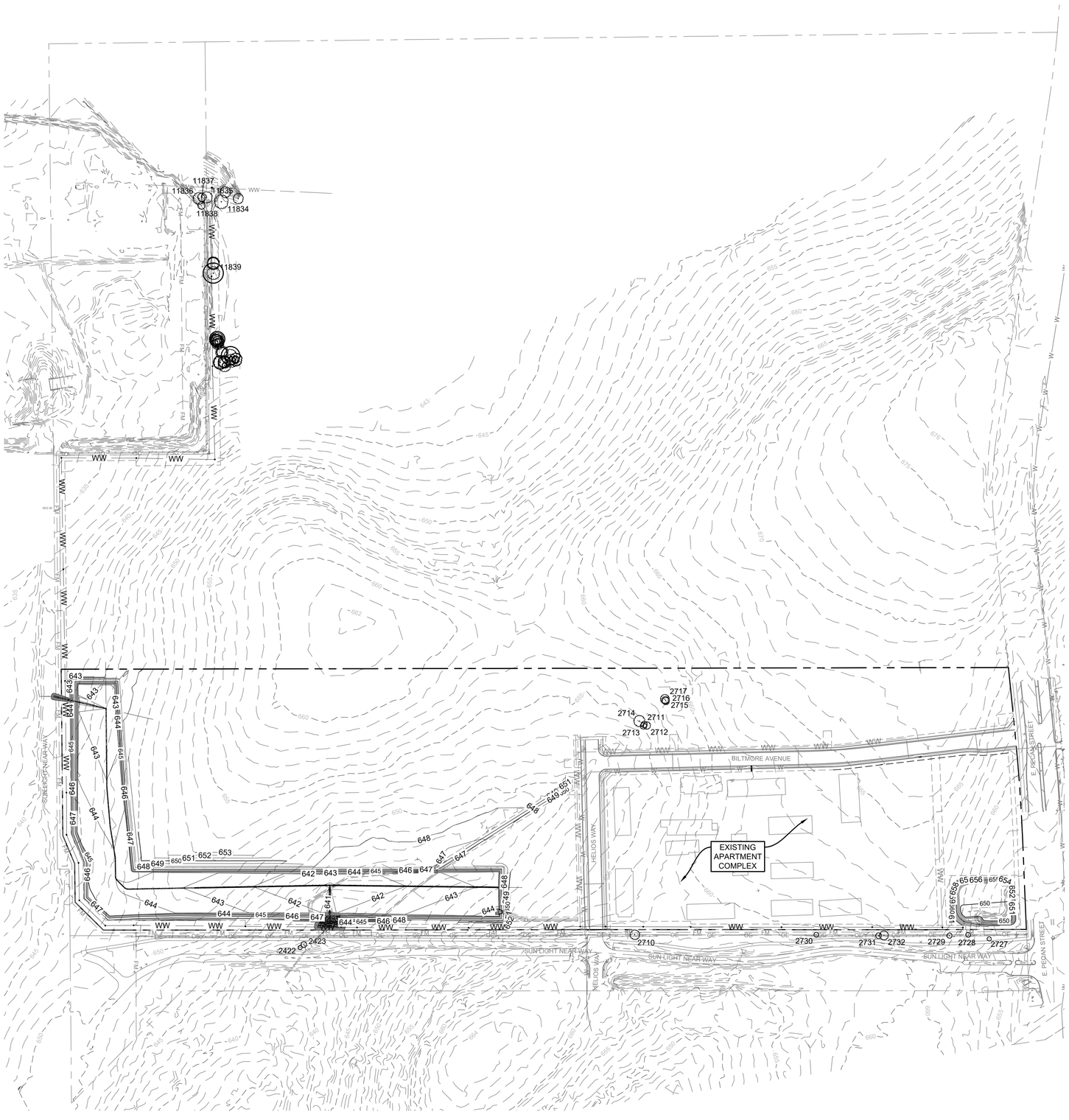

1. All trees not located within the limits of construction and outside of disturbed areas shall be preserved.

2. All trees shown on this plan to be retained shall be protected during construction with fencing.

3. Tree protection fences shall be erected according to city standards for tree 2-3 protection, including types of fencing and signage.

4. Tree protection fences shall be installed prior to the commencement of any site preparation work (clearing, grubbing, or grading) and shall be maintained throughout all phases of the construction project.

5. Erosion and sedimentation control barriers shall be installed or maintained in a manner which does not result in trenching or soil build-up within tree CRZ's or driplines.

6. Tree protection fences shall completely surround the tree or clusters of trees and be placed at the outermost limits of the tree branches (dripline) or CRZ, whichever is greater; and shall be maintained throughout the construction project in order to prevent the following:

   a. Soil compaction in root zone area resulting from vehicular traffic or storage of equipment or material.

   b. Root zone disturbances due to grade changes (greater than 6 inches cut or fill) or trenching not reviewed and authorized by the City Arborist or Administrator.

   c. Wounds to exposed roots, trunk, or limbs by mechanical equipment

   d. Other activities detrimental to trees, such as chemical storage, concrete truck cleaning and fires.

7. Exceptions to installing tree fences at the tree driplines or CRZ, whichever is greater, may be permitted in the following cases:

   a. Where there is to be an approved grade change, impermeable paving surface, or tree well.

   b. Where permeable paving is to be installed, erect the fence at the outer limits of the permeable paving area.

   c. Where trees are close to proposed buildings, erect the fence no closer than 6 feet to the building.

   d. Where there are severe space constraints due to tract size, or other special requirements, contact the City Arborist to discuss alternatives.

8. Where any of the above exceptions result in a fence that is closer than 5 feet to a tree trunk, protect the trunk with strapped-on planking to a height of 8 feet (or to the limits of lower branching) in addition to the reduced fencing provided.

9. Where any of the above exceptions result in areas of unprotected root zones under the dripline or CRZ, whichever is greater, those areas should be covered with 6 inches of organic mulch to minimize soil compaction.

10. Where any of the above exceptions result in damage to the fine, water absorbing roots, supplemental watering shall be required:

   a. Trees shall be watered once every two weeks during periods of hot, dry weather.

   b. Tree crowns are to be sprayed with water periodically to reduce dust accumulation on leaves.

   c. A signed watering contract shall be required.

11. Prior to excavation or grade cutting within tree driplines, a clean cut shall be made between the disturbed and undisturbed root zones with a rock saw or similar equipment to minimize damage to remaining roots.

12. All grading within protected root zone areas shall be done by hand or with small equipment to minimize root damage. Prior to grading, relocate protective fencing to 2 feet behind the grade change area.

13. Any roots exposed by construction activity shall be pruned flush with the soil. Backfill root areas with good quality top soil. If exposed root areas are not backfilled within 2 days, cover them with organic material in a manner which reduces soil temperature and minimizes water loss due to evaporation.

14. When installing concrete adjacent to the root zone of a tree, use a plastic vapor barrier behind the concrete to prohibit leaching of lime into the root zone.

15. Any trenching shall be as far from existing tree trunks as possible. Trench lines shall not run within the CRZ. Boring, tunneling or other techniques may be approved by the City Arborist or Administrator if there is no alternative available.

16. No landscape topsoil dressing greater than four (4) inches shall be permitted within 2-4 the dripline or CRZ, whichever is greater, of trees. No topsoil is permitted on root flares or within 6 inches of tree trunks.

17. Pruning to provide clearance for structures, vehicular traffic and construction equipment shall take place before construction begins. All pruning must be done according to City standards and as outlined in literature provided by the International Society of Arboriculture (ISA pruning techniques).

18. All oak tree cuts, intentional or unintentional, shall be painted immediately (within 10 minutes). Tree paint must be kept on site at all times. All pruning or cutting tools must be sterilized between trees to prevent the spread of disease.

19. Trees approved for removal shall be removed in a manner which does not impact trees to be preserved. Refer to the City of Pflugerville *Tree Technical Manual* for appropriate removal methods.

20. Deviations from the above notes may be considered ordinance violations if there is substantial noncompliance or if a tree sustains damage as a result.

LEGEND

655	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
655	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
SF	SILT FENCE
LOC	LIMITS OF CONSTRUCTION
IP	INLET PROTECTION
TPF	PROPOSED TREE PROTECTION
	PROPERTY LINE

HACK		
TAG #	CALIPER SIZE	TYPE
2727	8"	HACKBERRY
2716	14"	HACKBERRY
2712	12"	ELM
2713	12"	ELM
2714	21"	HACKBERRY
2715	17"	HACKBERRY
2422	8"	HACKBERRY
2717	DOUBLE TRUNK 10" 7"	HACKBERRY
2710	18"	HACKBERRY
2728	9"	HACKBERRY
2729	10"	HACKBERRY
2730	9"	HACKBERRY
2731	11"	HACKBERRY
2732	17"	HACKBERRY
2423	11"	HACKBERRY
2711	14"	HACKBERRY
11834	26"	PECAN
11835	21"	PECAN
11836	22"	PECAN
11837	16"	PECAN
11838	14"	PECAN
11839	14"	PECAN

TIMMERMAN WASTEWATER AND REGIONAL DETENTION

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TREE SURVEY

17 OF 17

Sheet Number