

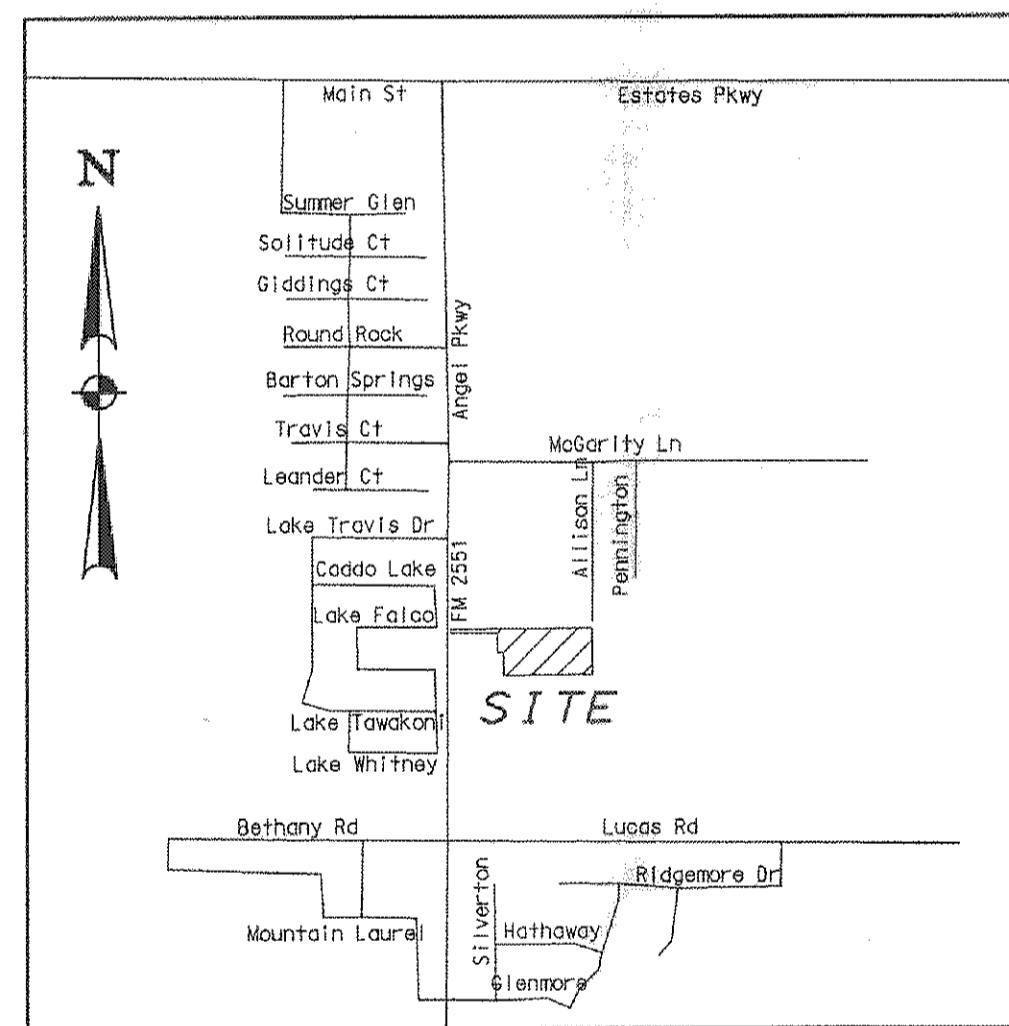
PAVING, GRADING, AND UTILITY IMPROVEMENTS FOR LOT IR BLOCK A SC LUCAS ADDITION PAVING, UTILITY AND GRADING IMPROVEMENTS CITY OF LUCAS, TEXAS

PAVING AND GRADING GENERAL NOTES

- All construction shall conform to the City of Lucas Standard Construction Details and Standard Specifications for Public Works Construction. In the event that an item is not covered, NCTCOG specifications shall be followed. The contractor shall bring any discrepancies to the attention of the engineer for approval or modification.
- Excavation or fill operations shall not interfere with or obstruct pre-construction drainage patterns until such time as on-site drainage improvements are constructed.
- Top of curb elevations are noted with (TC) following them. Gutter elevations are 0.50 feet below top of curb. All other spot elevations shown are to top of pavement or finished grade unless otherwise noted. The intention of this grading plan is preclude ponding water on paving or grassed areas. If the contractor finds any location that will result in ponding water, the Engineer shall be notified for clarification prior to pavement placement.
- All subgrade beneath proposed pavement shall be scarified 8" deep and compacted to 95% Standard Proctor (ASTM-D-698) at or slightly above optimum moisture content.
- All driveways/approaches shall match existing street pavement sections. Firelane and access to the dumpster location and access easement pavement shall be 6" thick 4000 psi concrete with #3 bars on 18" centers both ways. Parking lot pavement shall be 5" thick 4000 psi concrete with #3 bars on 18" centers both ways. Sidewalks shall be 4" thick 4000 psi concrete with #3 bars on 24" centers both ways.
- The trash enclosure foundation shall be constructed of 6" thick 4000 psi concrete with #3 bars on 18" centers both ways. Slab edges shall be 12" wide by 24" deep with two #5 bars top and bottom.
- Sawed transverse dummy joints shall be installed in concrete pavement on 15' centers. Sawed longitudinal dummy joints shall be installed along centerline of fire lane and outside were applicable. All joints shall be filled with an approved sealer.
- Transverse expansion joints shall be installed at all drive returns. Expansion joints shall be placed along all fixed objects such as light poles and foundations.
- Contractor shall adjust all manholes and water valves to match finished grades as shown on drawings.
- Street lights shall be installed 3 1/2 to 4' behind back of curbs as required but shall not encroach on any sidewalks.
- Contractor shall construct barrier free ramps at all intersections per City of Lucas Details. All handicap ramps, stalls, walks and access to the building(s) shall meet ADA standards.
- All conduit for irrigation sleeves shall be class 200 PVC installed 12" below concrete pavement and extend 2' outside of back of curb.
- Contractor shall be responsible for traffic control, warning and safety devices until all work has been accepted by the City of Lucas and the owner.
- Contractor shall be responsible for Trench Safety in compliance with the Occupational Safety and Health Administration's trench safety standards.
- The location of existing utilities shown on these plans are approximate. All utilities may not be shown. It is the responsibility of the contractor to contact the City of Lucas and all area utilities that may conflict with construction prior to beginning work.
- Erosion control shall conform to the North Texas Council of Government Details as approved by the City of Lucas.

Topography and field surveying provided by Roome Surveying, Inc., Texas.

Asbuilt utilities, paving and drainage information obtained from record drawings on file with the City of Lucas.



LOCATION MAP
NOT TO SCALE

UTILITY CONSTRUCTION GENERAL NOTES

- All construction shall conform to the City of Lucas Standard Construction Details and Standard Specifications for Public Works Construction. In the event that an item is not covered, NCTCOG specifications shall be followed. The contractor shall bring any discrepancies to the attention of the engineer for approval or modification.
- All water mains shall be Class 200, AWWA C900 PVC pipe.
- All gate valves shall be City approved resilient Seat Gate Valves (A-2370-series).
- All fire hydrants must meet City of Lucas Specifications.
- Hose/pumper nozzles on fire hydrants shall be 18" above top of curb, or finished grade and shall face the streets or firelane. Fire hydrant shall not be placed less than 2.0' nor more than 6.0' behind the curb.
- All water mains shall have a minimum cover of 48" below finished grade.
- Contractor shall flush and sterilize all water mains.
- The location of existing utilities shown on these plans is approximate. All utilities may not be shown. It is the responsibility of the contractor to contact all area utilities that may conflict with construction prior to beginning work.
- All sanitary sewer pipe outside of the building shall be SDR35 PVC pipe.
- All concrete blocking and embedment for water and sewer line shall be in accordance with the City of Lucas construction standards.
- Contractor shall be responsible for traffic control, warning and safety devices until all work has been accepted by the City of Lucas and the owner.
- Contractor shall be responsible for Trench Safety in compliance with the Occupational Safety and Health Administration's trench safety standards.
- Any water or sanitary sewer service located outside of a street, alley or easement shall be installed by a plumber and be inspected by Building Inspection.
- Fire Department Connection shall be within 50' of a fire hydrant.

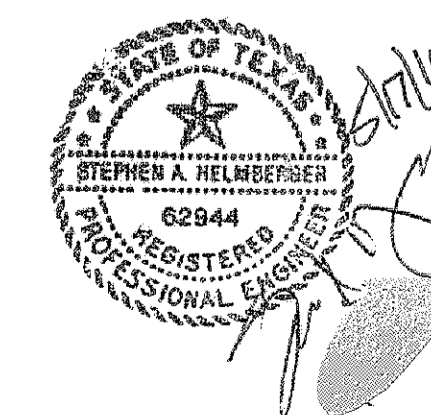
Asbuilt utilities, paving and drainage information obtained from record drawings on file with the City of Lucas.

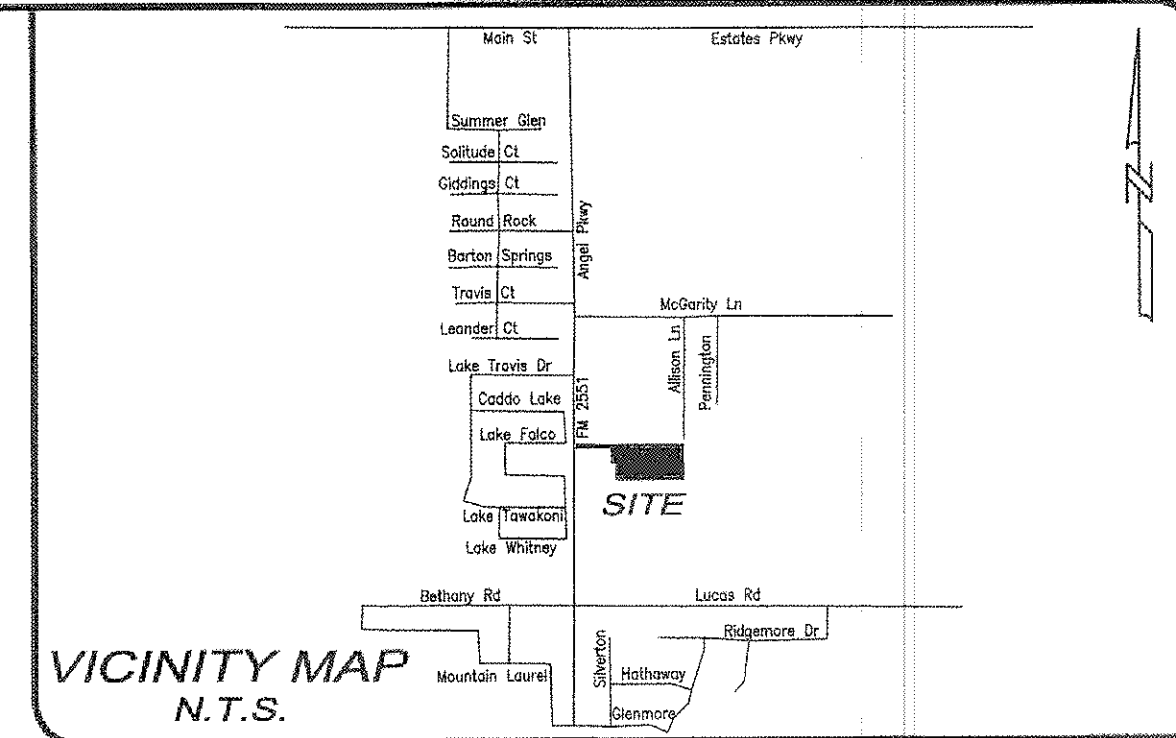
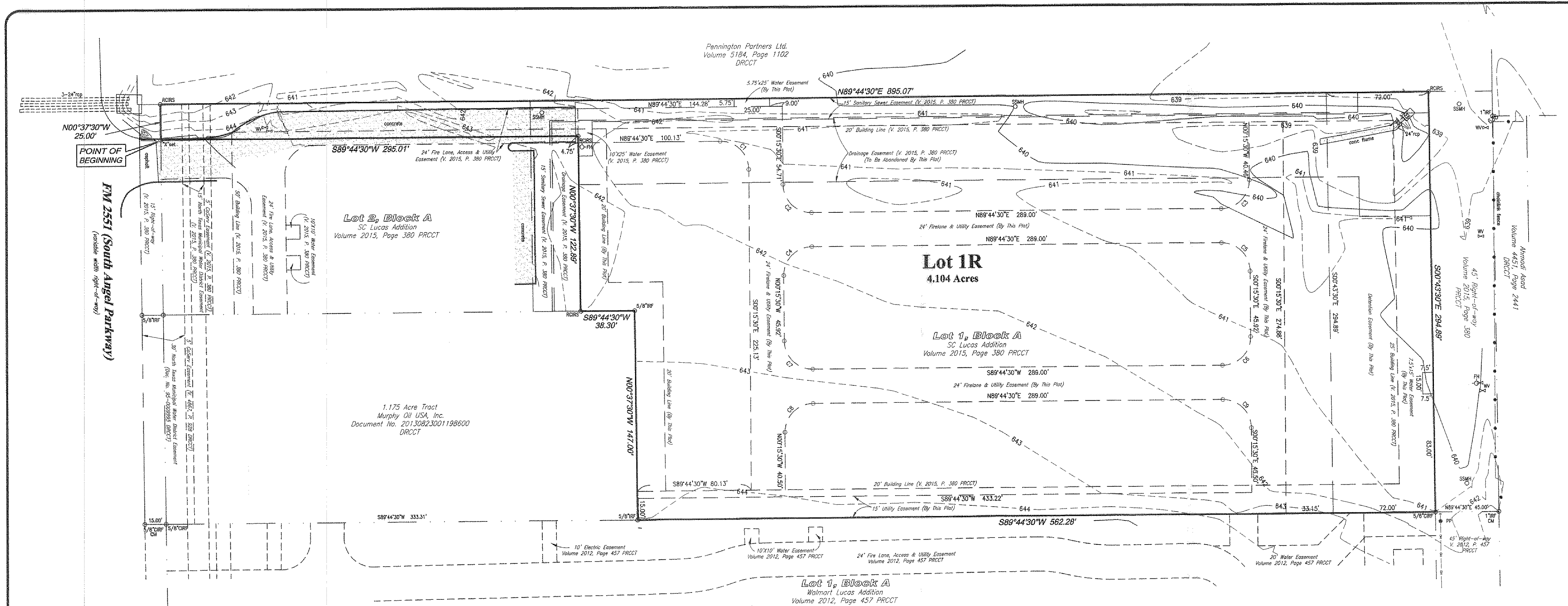
SHEET INDEX

DESCRIPTION	SHEET NO.
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DRAINAGE AREA MAP	C4
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ENGINEER:
HELMBERGER ASSOCIATES, INC.
1525 BOZMAN ROAD
WYLIE, TEXAS 75098
MR. STEPHEN A. HELMBERGER, P.E.
(972) 442-7459
TBPE REGISTRATION NO. 000756

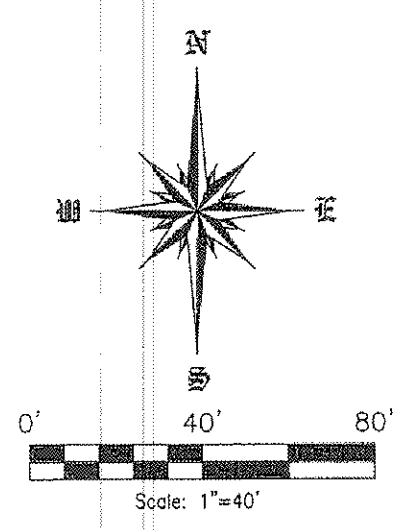
DEVELOPER/APPLICANT:
CYRUS MANAGEMENT
5725 BUENA VISTA DRIVE
FRISCO, TEXAS 75034
MR. CONRAD FEAGIN
(469) 396-8263





Legend

- RODS Rooms Copper Iron Rod Set
- PROCT Plat Records Collin County Texas
- ORCCT Deed Records Collin County Texas
- RF Iron Rod Found
- CH Controlling Measurement
- LP Light Pole
- WU Water Meter
- WV Water Valve
- FN Fire Hydrant
- PP Power Pole
- SSEW Sanitary Sewer Manhole
- OL Overhead Lines
- WF Wire Fence
- City



Curve Table

CURVE	RADIUS	DELTA ANGLE	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	20.00'	90°00'00"	31.42'	S45°15'30"E	28.28'
C2	20.00'	90°00'00"	31.42'	S45°15'30"E	28.28'
C3	20.00'	90°00'00"	31.42'	N44°44'30"W	28.28'
C4	20.00'	90°00'00"	31.42'	N44°44'30"W	28.28'
C5	20.00'	90°00'00"	31.42'	S45°15'30"E	28.28'
C6	20.00'	90°00'00"	31.42'	S44°44'30"W	28.28'
C7	20.00'	90°00'00"	31.42'	N45°15'30"W	28.28'
C8	20.00'	90°00'00"	31.42'	N44°44'30"W	28.28'
C9	20.00'	90°00'00"	31.42'	S45°15'30"E	28.28'

OWNER'S CERTIFICATE

STATE OF TEXAS §
 COUNTY OF COLLIN §

WHEREAS **SC Lucas Road, LP** are the owners of a tract of land situated in the State of Texas, County of Collin, and City of Lucas, being part of the William Snider Survey, Abstract No. 821, and being all of Lot 1, Block A of SC Lucas Addition, an addition to the City of Lucas, Collin County, Texas, according to the plat thereof recorded in Volume 2015, Page 380 of the Plat Records of Collin County, Texas and being more particularly described as follows:

BEGINNING at a 1/2 inch iron rod capped "Roome" set for corner in the east right-of-way line of Farm to Market Road 2551 (South Aragal Parkway) and marking the northwest corner of Lot 2, Block A of said SC Lucas Addition and the most westerly southwest corner of said Lot 1;

THENCE with the east right-of-way line of FM 2551 and the west line of said Lot 1, North 00°37'30" West, 25.00 feet to a 1/2 inch iron rod capped "Roome" set for corner in the south line of a tract of land conveyed to Pennington Partners, Ltd by deed recorded in Volume 5184, Page 1102 of the Deed Records of Collin County, Texas and marking the northwest corner of said Lot 1;

THENCE with the south line of said Pennington Partners, Ltd tract and the north line of said Lot 1, North 89°44'30" East, 895.07 feet to a 1/2 inch iron rod capped "Roome" set for corner marking the northwest corner of a 45 foot wide right-of-way dedicated by said plat of SC Lucas Addition and the northeast corner of said Lot 1;

THENCE with west line of said right-of-way dedication and the east line of Lot 1, South 00°43'30" East, 294.89 feet to a 5/8 inch capped iron rod found for corner marking the northeast corner of Lot 1, Block A of Walmart Lucas Addition, an addition to the City of Lucas, Collin County, Texas, according to the plat thereof recorded in Volume 2012, Page 457 of the Plat Records of Collin County, Texas and the southeast corner of said Lot 1 of SC Lucas Addition;

THENCE with the north line of said Lot 1 of Walmart Lucas Addition and with the south line of said Lot 1 of SC Lucas Addition, South 89°44'30" West, 562.28 feet to a 5/8 inch iron rod found for corner marking the southeast corner of called 1.175 acre tract conveyed to Murphy Oil USA, Inc. by deed recorded in document No. 20130823001198600 of the Deed Records of Collin County, Texas and the southwest corner of said Lot 1 of SC Lucas Addition;

THENCE with the east line of said 1.175 acre tract and with the west line of said Lot 1, North 00°37'30" West, 147.00 feet to a 5/8 inch iron rod found for corner marking the northeast corner of said 1.175 acre tract and an ell corner of said Lot 1;

THENCE with the north line of said 1.175 acre tract and with a south line of said Lot 1, South 89°44'30" West, 38.30 feet to a 1/2 inch iron rod capped "Roome" set for corner marking the southeast corner of aforesaid Lot 2;

THENCE with the east line of said Lot 2 and a west line of said Lot 1, North 00°37'30" West, 122.89 feet to a 1/2 inch iron rod capped "Roome" set for corner marking the northeast corner of said Lot 2 and an ell corner of said Lot 1;

THENCE with the north line of said Lot 2 and a south line of said Lot 1, South 89°44'30" West, 295.01 feet to the Point of Beginning and containing 4.104 acres of land, more or less.

OWNER'S DEDICATION AND ACKNOWLEDGEMENT

STATE OF TEXAS §
 COUNTY OF COLLIN §

NOW THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That WE, **SC Lucas Road, LP** the Owners, do hereby bind themselves and their heirs, assigns and successors of title this plat designating the hereinabove described property as **Replat of Lot 1R, Block A of SC Lucas Addition**, an addition to the City of Lucas, and do hereby dedicate to the public use forever the streets, alleys, and right-of-way easements shown thereon, and do hereby reserve the easement strips shown on this plat for the mutual use and accommodation of garbage collection agencies and all public utilities desiring to use or using same. Any public utility shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other improvements or growths that in any way endanger or interfere with the construction, maintenance or efficiency of its respective systems on any of these easement strips, and any public utility shall at all times have the right of ingress and egress to and from and upon the said easement strips for the purpose of constructing, reconstructing, inspecting, patrolling, without the necessity at any time of procuring the permission of anyone. Additionally, we certify that we are the sole owners of the dedicated property and that no other's interest are attached to this property unless otherwise indicated on the required Mortgage Holder Certification that is included on this plat. This plat approved subject to all platting ordinances, rules, regulations and resolutions of the City of Lucas, Texas.

Witness our hands at LUCAS, Texas, this ____ day of _____, 2015.

Stephen Preston

ACKNOWLEDGEMENT

STATE OF TEXAS §
 COUNTY OF COLLIN §

Before me, the undersigned authority, a Notary Public in and for said County and State, on this day personally appeared **Stephen Preston**, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they each executed the same for the purpose and considerations therein expressed.

Given under my hand and seal of office, this ____ day of _____, 2015.

Notary Public in and for the State of Texas

CITY APPROVAL CERTIFICATE

This plat is hereby approved by the Director of Planning and Community Development of the City of Lucas, Texas, in accordance with the Lucas Development Code, Review & Approval Procedures.

Director of Planning and Community Development _____ Date _____

ATTEST:

Signature _____ Date _____

Print Name & Title _____

The Director of Public Works of the City of Lucas, Texas hereby certifies that to the best of his/her knowledge or belief, this subdivision plat conforms to all requirements of the Lucas Development Code and with engineering construction standards and processes adopted by the City of Lucas, Texas on to which this approval is required.

Director of Public Works _____ Date _____

NOTES

- No portion of subject property lies within a Special Flood Hazard Area inundated by 100-year flood per Flood Insurance Rate Map Number 48085CD405 J of F.E.M.A. Flood Insurance Rate Maps for Collin County, Texas and Incorporated Areas dated June 2, 2009 (Zone X).
- Source bearing per SC Lucas Addition, an addition to the City of Lucas as recorded in Volume 2015, Page 380 of the Plat Records of Collin County, Texas.
- This plat has been completed without the benefit of a title commitment. Subject property is affected by any or all easements of record. Surveyor did not abstract or research records for easements.
- The current zoning is CB Commercial Business.

SURVEYOR'S CERTIFICATE

STATE OF TEXAS §
 COUNTY OF COLLIN §

KNOW ALL MEN BY THESE PRESENTS:

That I, **Michael Cuzzo**, do hereby certify, that I prepared this plat from an actual on the ground survey of the land as described and that the corner monuments shown thereon were properly placed under my personal supervision in accordance with the Platting Rules and Regulations of the City of Lucas Planning and Zoning Commission.

Michael Cuzzo
 R.P.L.S. No. 5693

ACKNOWLEDGEMENT

STATE OF TEXAS §
 COUNTY OF COLLIN §

Before me, the undersigned authority, a Notary Public in and for said County and State, on this day personally appeared **Michael Cuzzo**, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he/she executed the same for the purpose and considerations therein expressed.

Given UNDER MY HAND AND SEAL OF OFFICE, this the ____ day of _____, 2015.

Notary Public in and for the State of Texas

Owner:
 SC Lucas Road, LP
 6210 Commercial Road, Ste 140
 Dallas, TX 75248
 Attn: Stephen Preston

Surveyor:
 Roome Land Surveying
 2000 Avenue G, Suite 810
 Plano, TX 75074
 Attn: Michael Cuzzo
 (972) 423-4372
 mike@roomeinc.com

**Replat of
 Lot 1R, Block A
 SC Lucas Addition**
William Snider Survey, Abstract No. 821
City of Lucas, Collin County, Texas
July 30, 2015

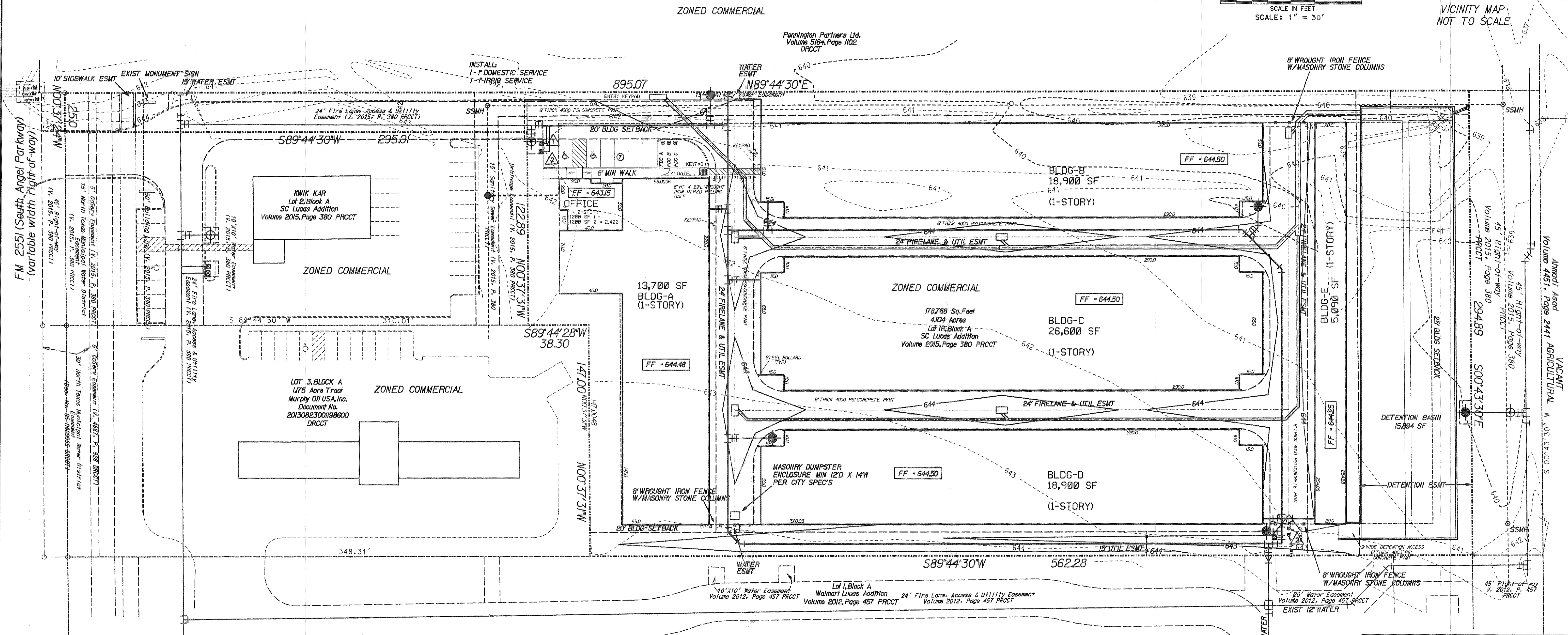
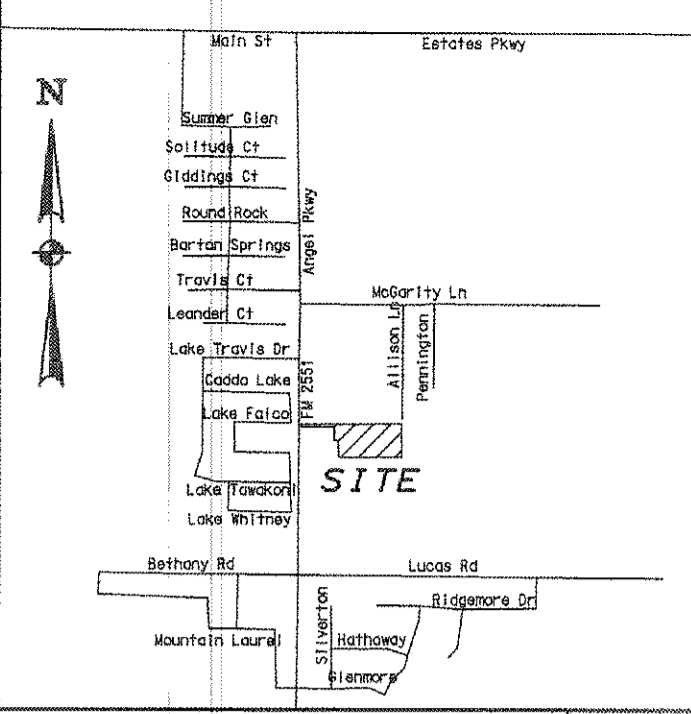
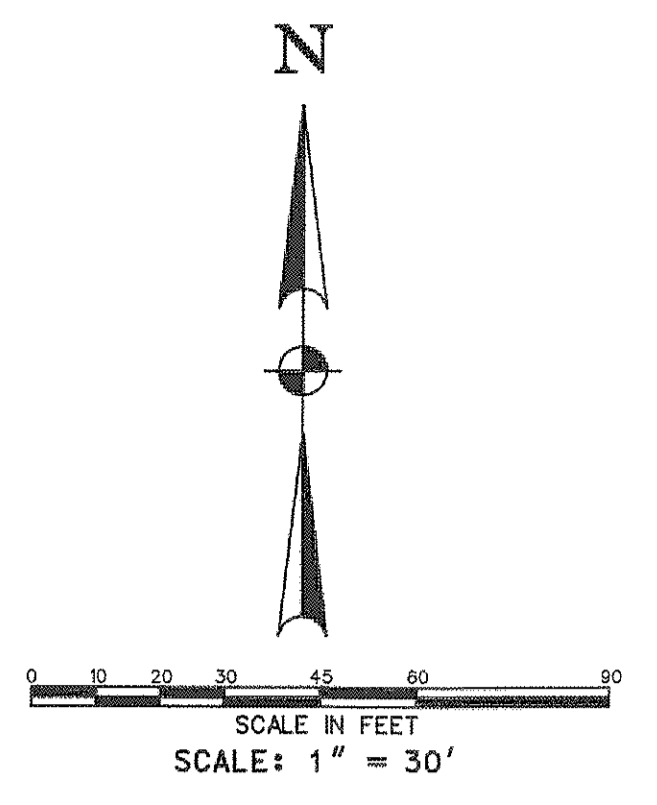
Revised: April 21, 2016
 P:\AC\201502\AC820053.DWG
Roome Land Surveying, Inc.
 TRPLS Firm No. 3001800
 2000 Avenue G, Suite 810
 Plano, Texas 75074
 Phone: (972) 423-4372 / Fax: (972) 423-7523
 www.roomesurveying.com

LINE LEGEND:

- PROPERTY LINE
- DRAINAGE FLOW
- PROPOSED WATER LINE
- ROAD CENTER LINE
- PROPOSED STORM SEWER
- PROPOSED STREET
- 610- EXISTING CONTOUR LINE
- 610- PROPOSED CONTOUR LINE
- BUILDING SETBACK LINE
- DRAINAGE EASEMENT
- DRAINAGE DIVIDE LINE
- ROW / LOT LINE

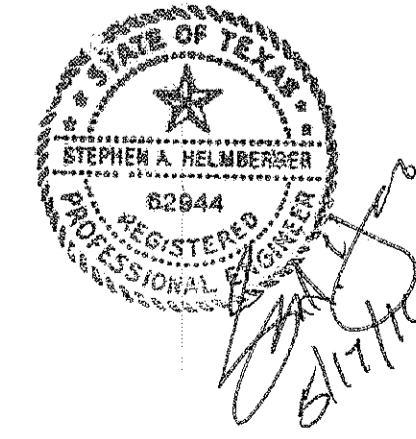
WATER METER SCHEDULE

TYPE	SIZE	NUMBER	SANITARY SEWER
▲ DOMESTIC	1"	1 - PROPOSED	1 - 6"
▲ IRRIGATION	1"	2 - PROPOSED	NA



DEVELOPER/APPLICANT:
 CYRUS MANAGEMENT
 5725 BUENA VISTA DRIVE
 FRISCO, TEXAS 75034
 MR. CONRAD FEAGIN
 (469) 396-8263

ENGINEER:
 HELMBERGER ASSOCIATES, INC.
 1525 BOZMAN ROAD
 WYLIE, TEXAS 75098
 MR. STEPHEN A. HELMBERGER, P.E.
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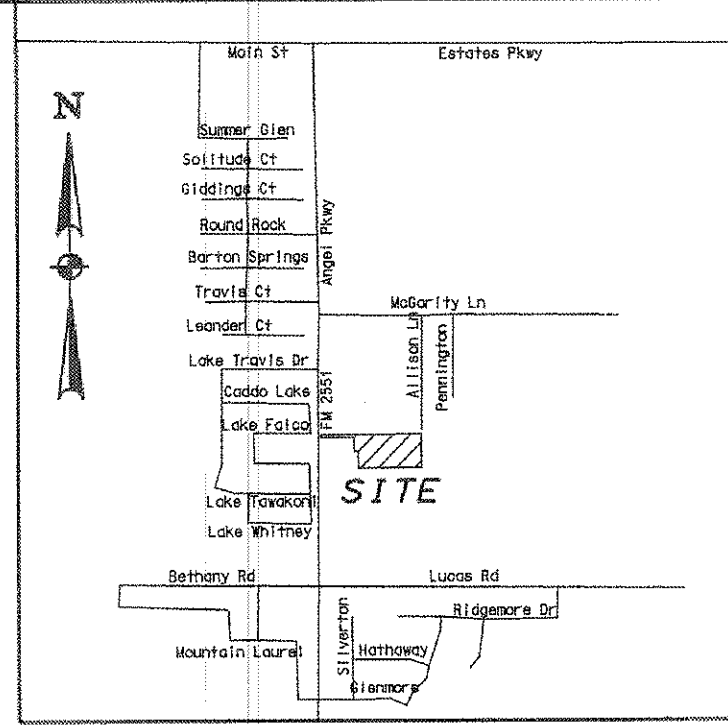
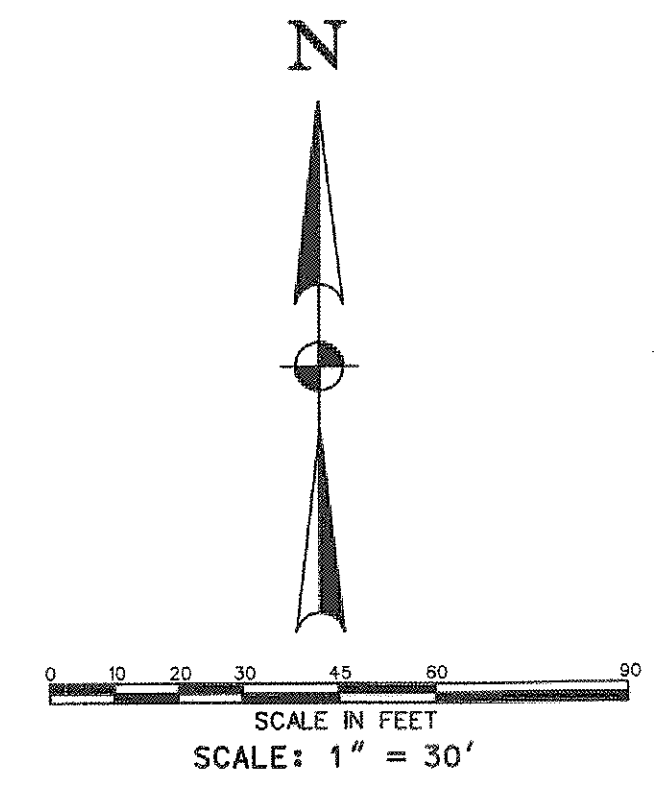


SITE PLAN

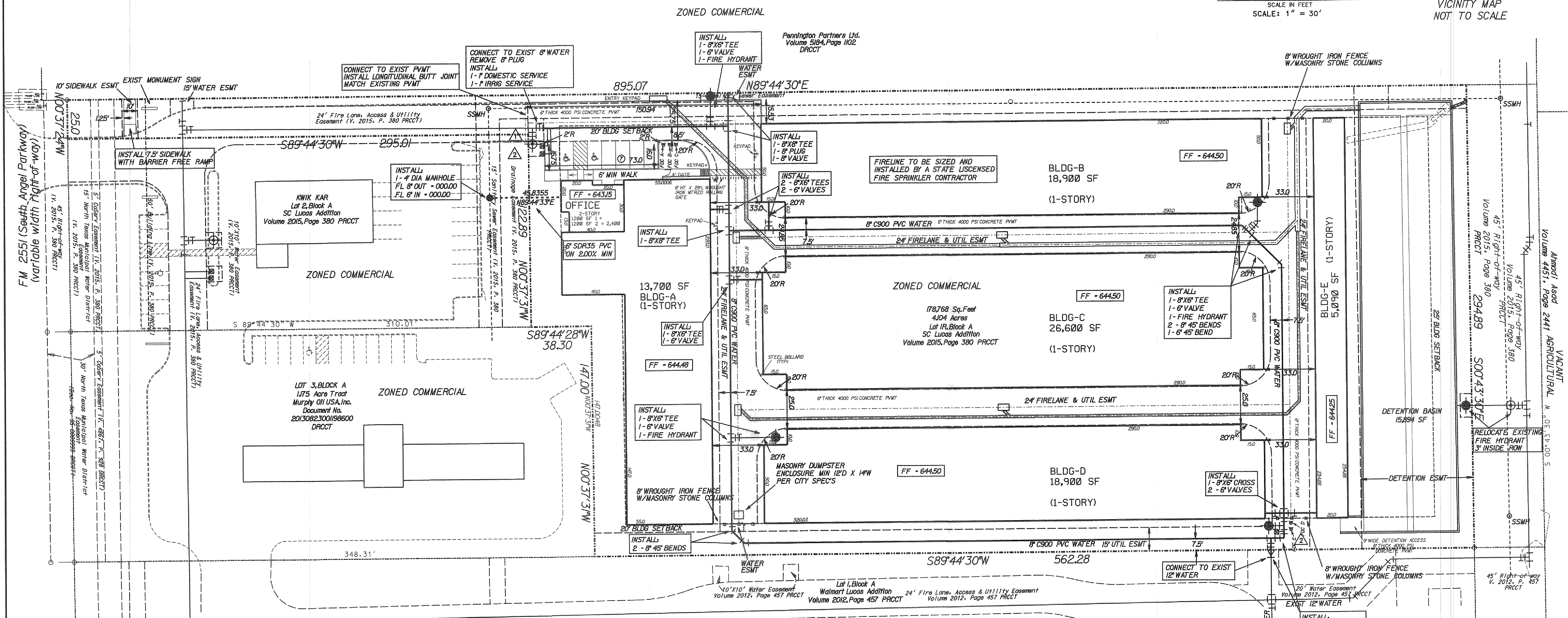
LOT 1R BLOCK A SC LUCAS ADDITION
 CYRUS MANAGEMENT
 CITY OF LUCAS, TEXAS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
HELM.	CAOD	JAN 2016	1"-30'	SPLAN	1528	C1

WATER METER SCHEDULE			
TYPE	SIZE	NUMBER	SANITARY SEWER
DOMESTIC	1"	1 - PROPOSED	1 - 6"
IRRIGATION	1"	2 - PROPOSED	NA

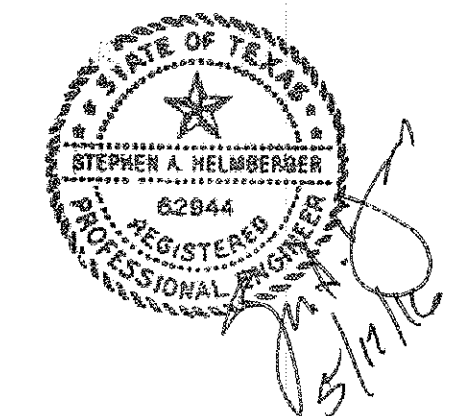


VICINITY MAP
NOT TO SCALE



LINE LEGEND:

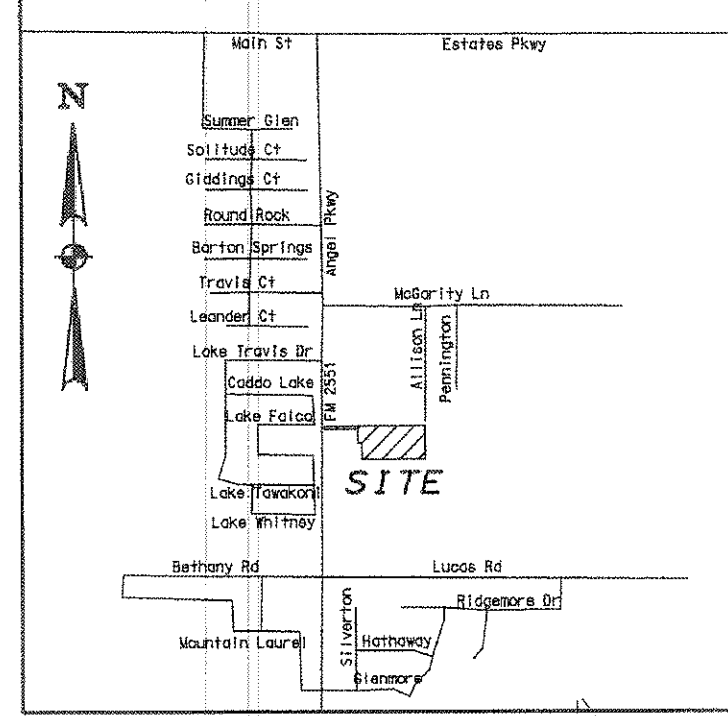
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- PROPOSED STORM SEWER
- PROPOSED STREET
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1525 BOZMAN ROAD
WYLIE, TEXAS 75098
MR. STEPHEN A. HELMSBERGER, P.E.
(972) 442-7459

PAVING AND UTILITY PLAN						
LOT 1R BLOCK A SC LUCAS ADDITION						
CYRUS MANAGEMENT						
CITY OF LUCAS, TEXAS						
TYPE REGISTRATION NO. 000756		H HELMBERGER ASSOCIATES, INC. CIVIL AND ENVIRONMENTAL ENGINEERS				
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
HELM.	CADD	JAN 2016	1"=30'	PBORDER	1528	C2

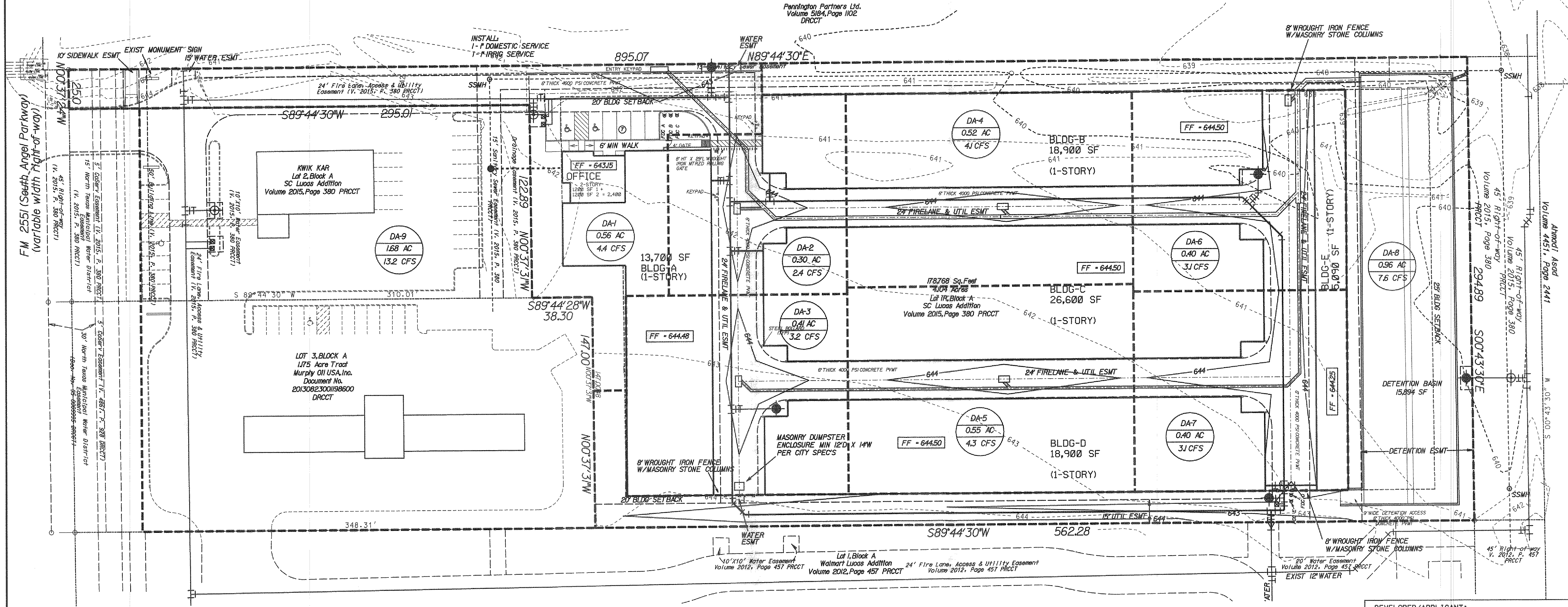
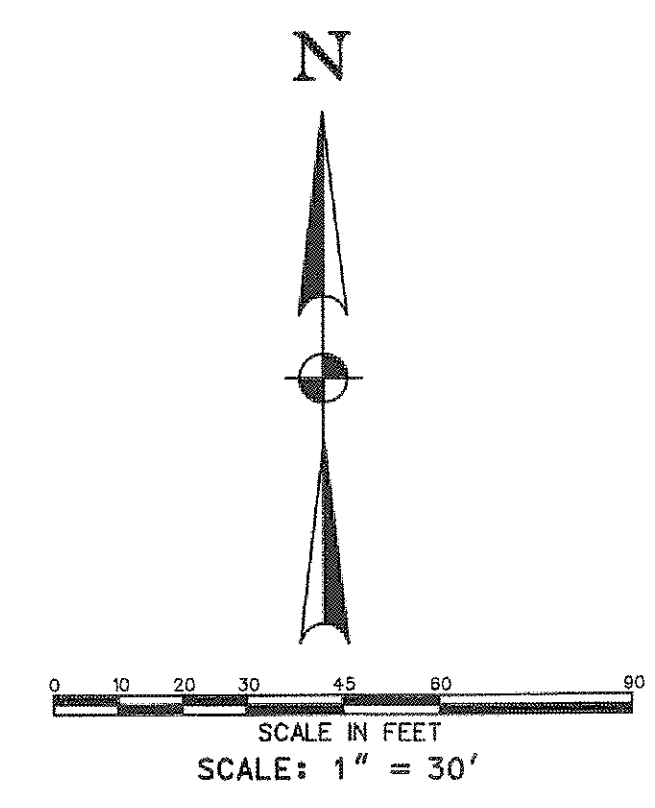


DRAINAGE AREA DESIGN CRITERIA

DRAINAGE AREA **A**
 AREA (ACRES) **0.56 AC**
4.4 CFS

100 YEAR RUNOFF

Q 100 = C I A
 C = Runoff coefficient
 I 100 = Rainfall Intensity = 8.74 in/yr
 A = Area in acres



STORMWATER RUNOFF CALCULATIONS (100 YR STORM)

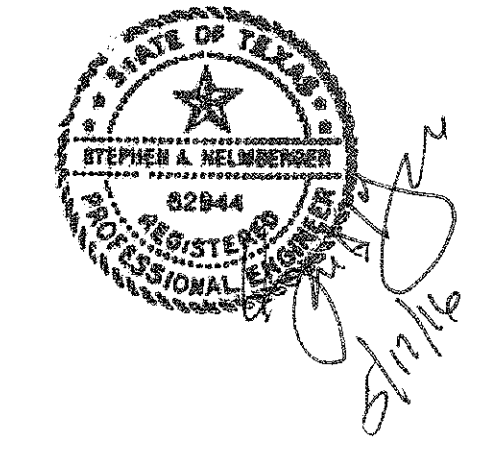
LOCATION	To (MINUTES)	I (100)	A (ACRES)	C	Q100	FLows TO
DA-1	10	8.74	0.56	0.90	4.4 CFS	CURB INLET
DA-2	10	8.74	0.30	0.90	2.4 CFS	GRATE INLET
DA-3	10	8.74	0.41	0.90	3.2 CFS	GRATE INLET
DA-4	10	8.74	0.52	0.90	4.1 CFS	GRATE INLET
DA-5	10	8.74	0.55	0.90	4.3 CFS	GRATE INLET
DA-6	10	8.74	0.40	0.90	3.1 CFS	GRATE INLET
DA-7	10	8.74	0.40	0.90	3.1 CFS	SHEET FLOW
DA-8	10	8.74	0.96	0.90	7.6 CFS	SHEET FLOW
DA-9 (OFFSITE)	10	8.74	1.68	0.90	13.2 CFS	SHEET FLOW

PRE-DEVELOPMENT STORMWATER RUNOFF CALCULATIONS (100 YR STORM)

LOCATION	To (MINUTES)	I (100)	A (ACRES)	C	Q100
DA-1	10	8.74	0.56	0.35	1.7 CFS
DA-2	10	8.74	0.30	0.35	0.9 CFS
DA-3	10	8.74	0.41	0.35	1.3 CFS
DA-4	10	8.74	0.52	0.35	1.6 CFS
DA-5	10	8.74	0.55	0.35	1.7 CFS
DA-6	10	8.74	0.40	0.35	1.2 CFS
DA-7	10	8.74	0.40	0.35	1.2 CFS
DA-8	10	8.74	0.96	0.35	2.9 CFS
DA-9 (OFFSITE)	10	8.74	1.68	0.35	5.1 CFS

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DRAINAGE AREA MAP

LOT 1R BLOCK A SC LUCAS ADDITION
 CYRUS MANAGEMENT
 CITY OF LUCAS, TEXAS

HELMBERGER ASSOCIATES, INC.
 CIVIL AND ENVIRONMENTAL ENGINEERS
 5025 BOZMAN ROAD, WYLLIE, TEXAS 75098 (972) 442-7459

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
HELM.	CADD	JAN 2016	1"=30'	DABORDER	1528	C4

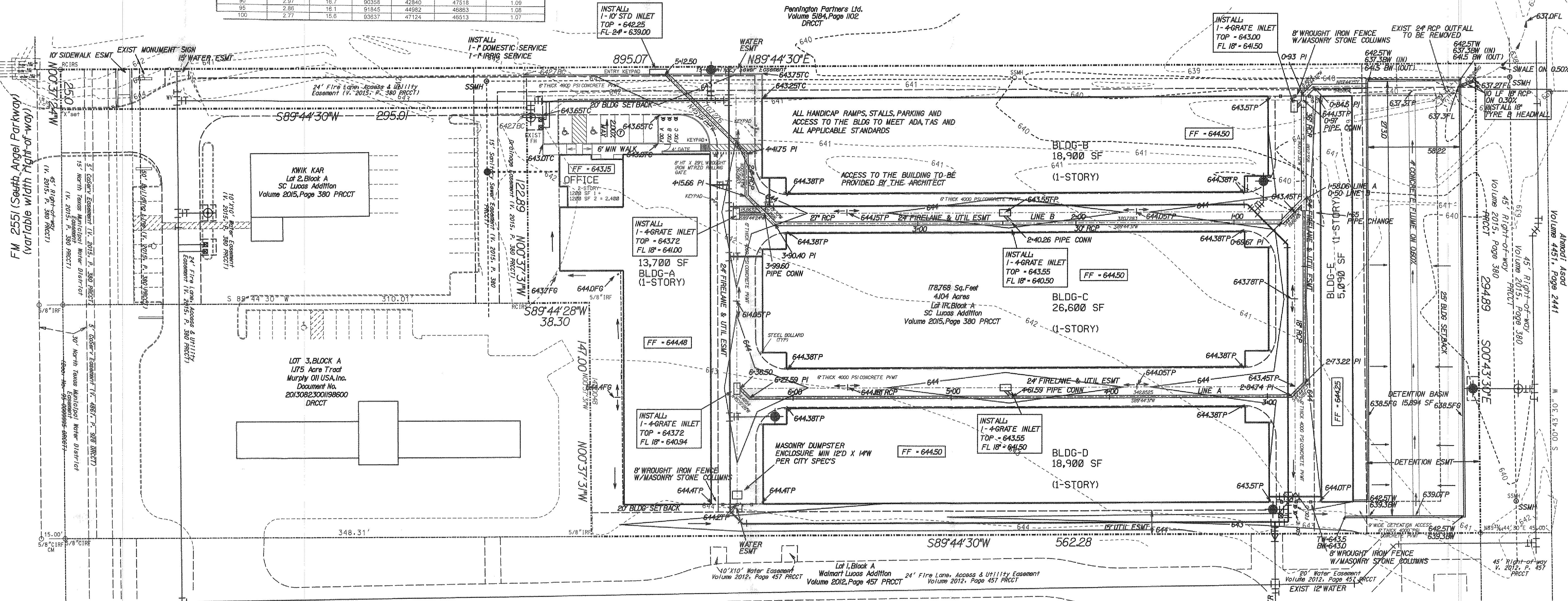
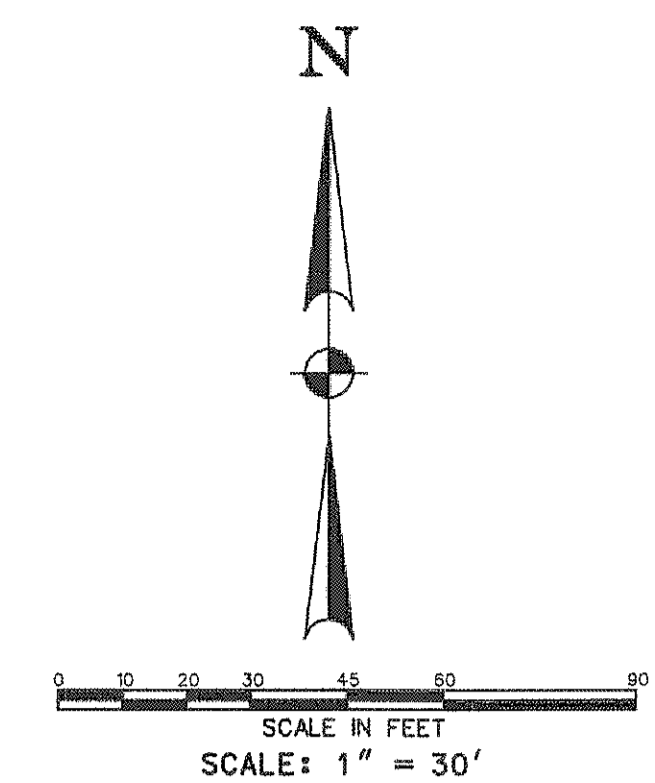
RATING CURVE		
ELEVATION	VOL. (CF)	Q (CFS)
638.0	0	0
639.0	15894	425
640.0	31788	951
640.5	39735	1126
641.0	47682	1276
641.5	55629	1411

Q = CA (26H)^{1/2}
C = 0.60
A = 1767 SF

Clutter = 0.90
A = 6.26 acres
Tc = 10.00 min
Qout = 14.28 cfs
Q Peak in = 49.20 cfs

Pond Outlet release rate

Storage Required						
Time (min)	1d 100 yr	Q=CIA	V _{in} - ft ³	V _{out} - ft ³	Volume - ft ³	Volume - Ac-ft
0	0.00	0.00	0	0	0	0.00
5	11.10	62.5	18761	6426	12335	0.28
10	8.74	49.2	28545	8568	20977	0.48
15	7.52	42.4	38131	10710	27421	0.63
20	7.02	39.6	47461	12852	34609	0.79
25	6.31	35.6	53326	14994	38332	0.88
30	5.75	32.4	58312	17136	41176	0.95
35	5.29	29.8	62598	19278	43310	1.03
40	4.90	27.6	66256	21420	44836	1.03
45	4.58	25.8	69670	23562	46108	1.06
50	4.30	24.2	72879	25704	46975	1.08
55	4.06	22.9	75884	27846	47638	1.09
60	3.85	21.7	78687	29988	48099	1.10
65	3.68	20.6	81420	32130	48290	1.11
70	3.49	19.7	82583	34272	48311	1.11
75	3.34	18.8	84679	36414	48265	1.11
80	3.21	18.1	86809	38556	48253	1.11
85	3.08	17.4	88499	40698	47901	1.10
90	2.97	16.7	90358	42840	47518	1.09
95	2.86	16.1	91845	44982	46863	1.08
100	2.77	15.6	93037	47124	46513	1.07

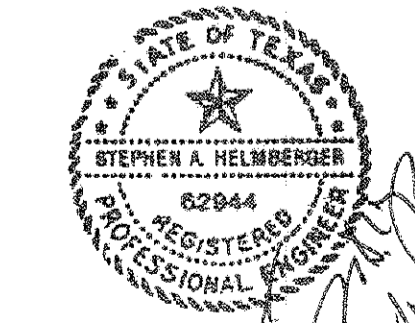


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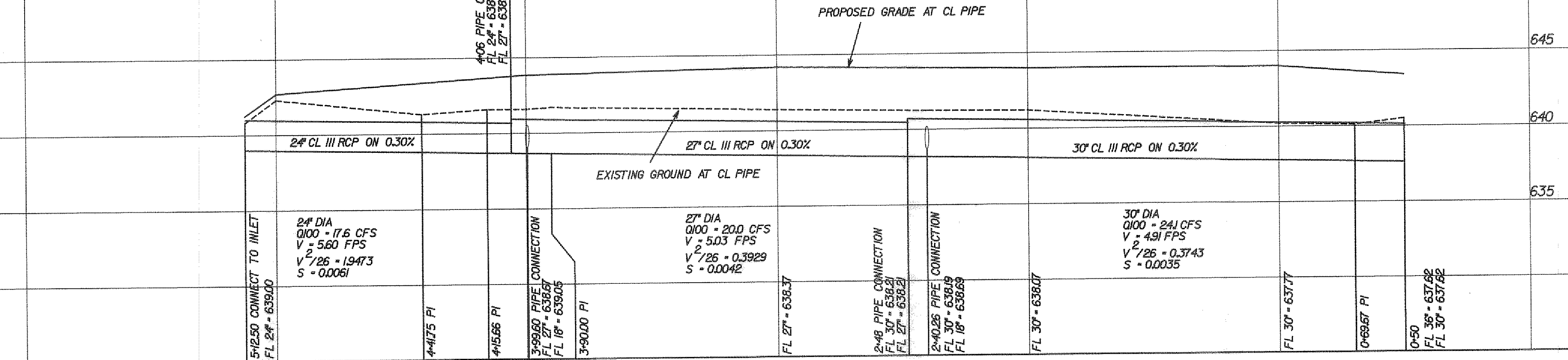
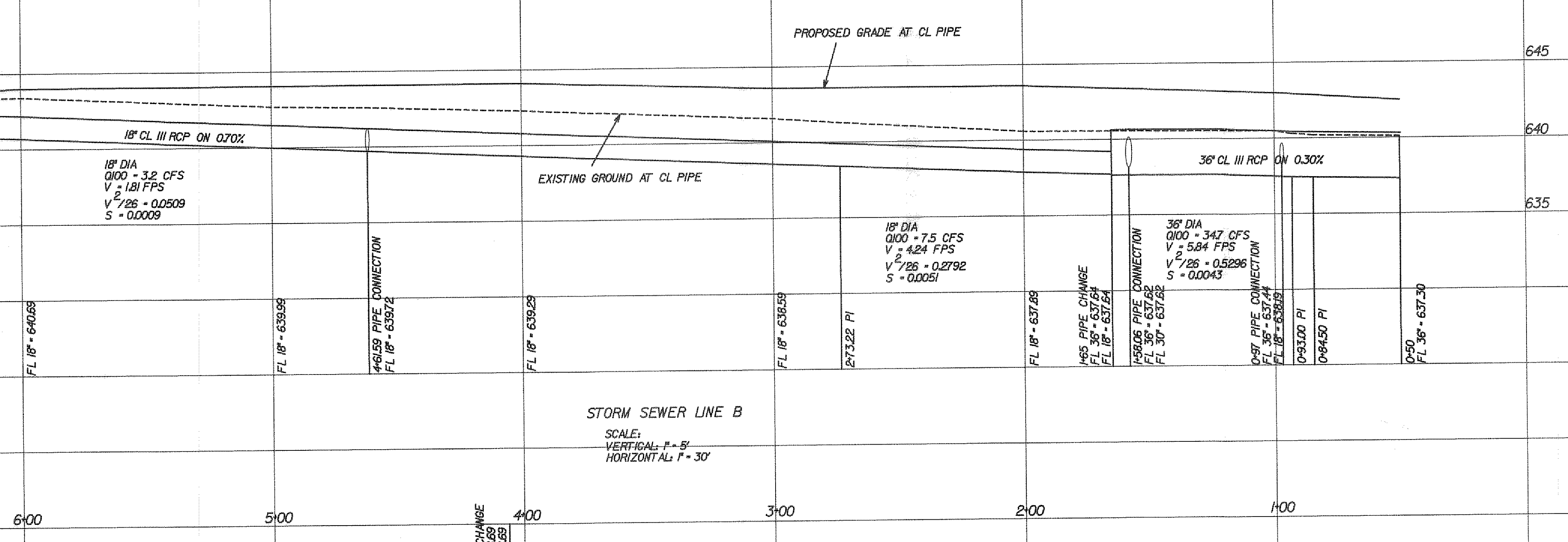
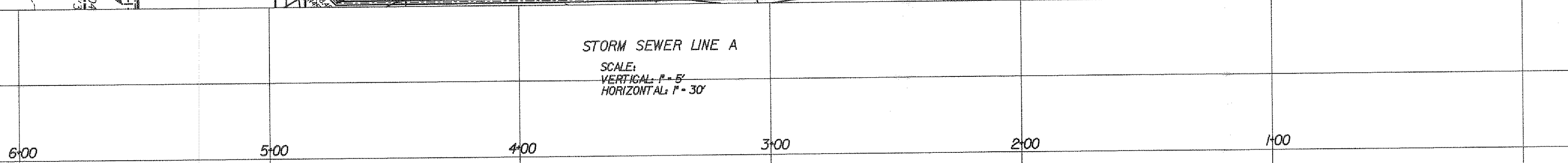
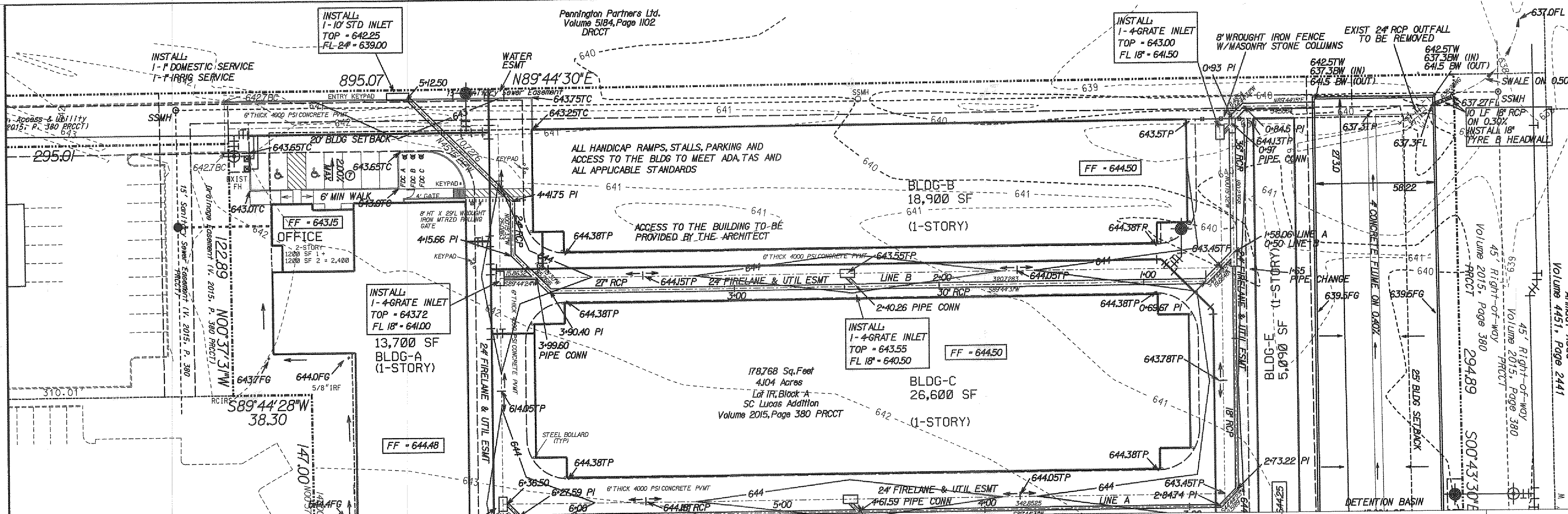
- PROPERTY LINE
- DRAINAGE FLOW
- PROPOSED WATER LINE
- ROAD CENTER LINE
- PROPOSED STORM SEWER
- PROPOSED STREET
- EXISTING CONTOUR LINE
- PROPOSED CONTOUR LINE
- BUILDING SETBACK LINE
- DRAINAGE EASEMENT
- DRAINAGE DIVIDE LINE
- ROW / LOT LINE

DEVELOPER/APPLICANT:
CYRUS MANAGEMENT
5725 BUENA VISTA DRIVE
FRISCO, TEXAS 75034
MR. CONRAD FEAGIN
(469) 396-8263

ENGINEER:
HELMBERGER ASSOCIATES, INC.
1525 BOZMAN ROAD
WYLIE, TEXAS 75098
MR. STEPHEN A. HELMBERGER, P.E.
(972) 442-7459



GRADING AND DRAINAGE PLAN						
LOT 1R BLOCK A SC LUCAS ADDITION						
CYRUS MANAGEMENT						
CITY OF LUCAS, TEXAS						
TYPE	REGISTRATION NO.	HELMBERGER ASSOCIATES, INC. CIVIL AND ENVIRONMENTAL ENGINEERS 1525 BOZMAN ROAD, WYLIE TEXAS 75098 (972) 442-7459				
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
HELM.	CADD	JAN 2016	1"=30'	GBORDER	1528	C3



DEVELOPER/APPLICANT:
CYRUS MANAGEMENT
5725 BUENA VISTA DRIVE
FRISCO, TEXAS 75034
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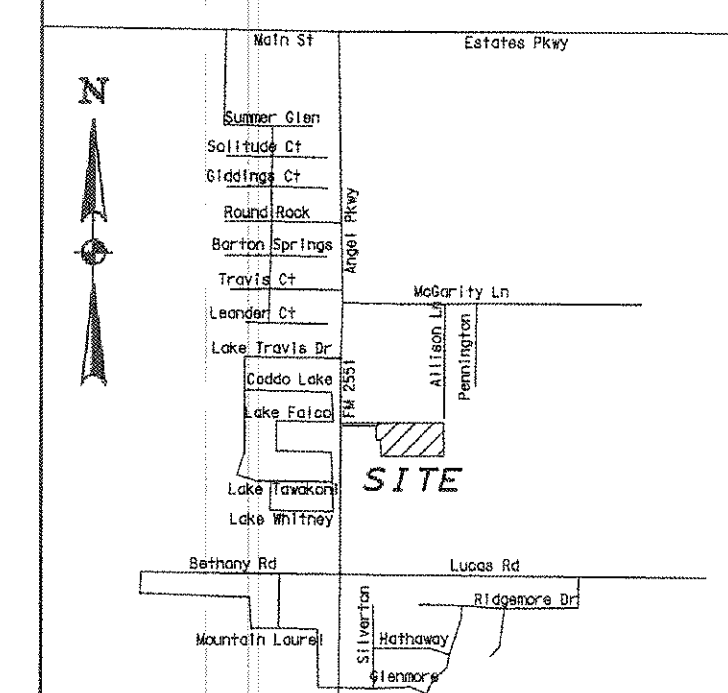
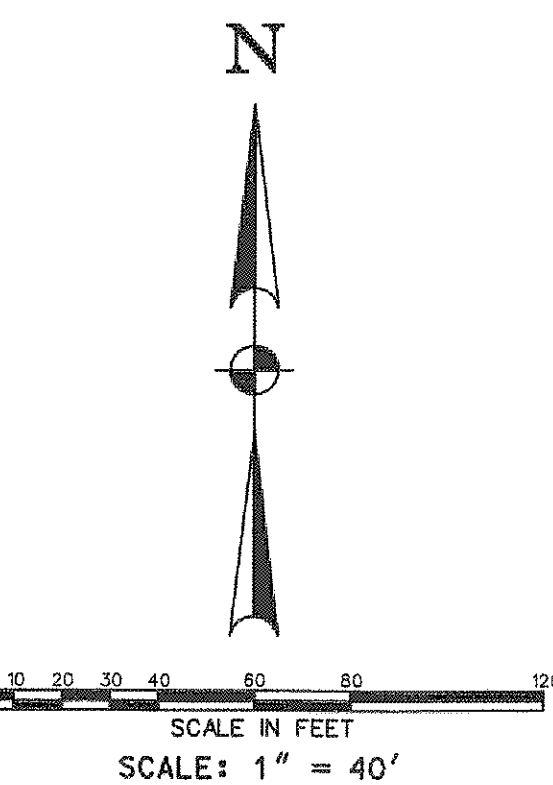
STORM SEWER PROFILE LINE A & B							
LOT 1R BLOCK A SC LUCAS ADDITION							
CYRUS MANAGEMENT							
CITY OF LUCAS, TEXAS							
HELMBERGER ASSOCIATES, INC. CIVIL AND ENVIRONMENTAL ENGINEERS <small>1525 BOZMAN ROAD, WYLIE, TEXAS 75098 (972) 442-7459</small>							
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.	
HELM	CADD	JAN 2016	1"=30'	SS1	152B	C5	

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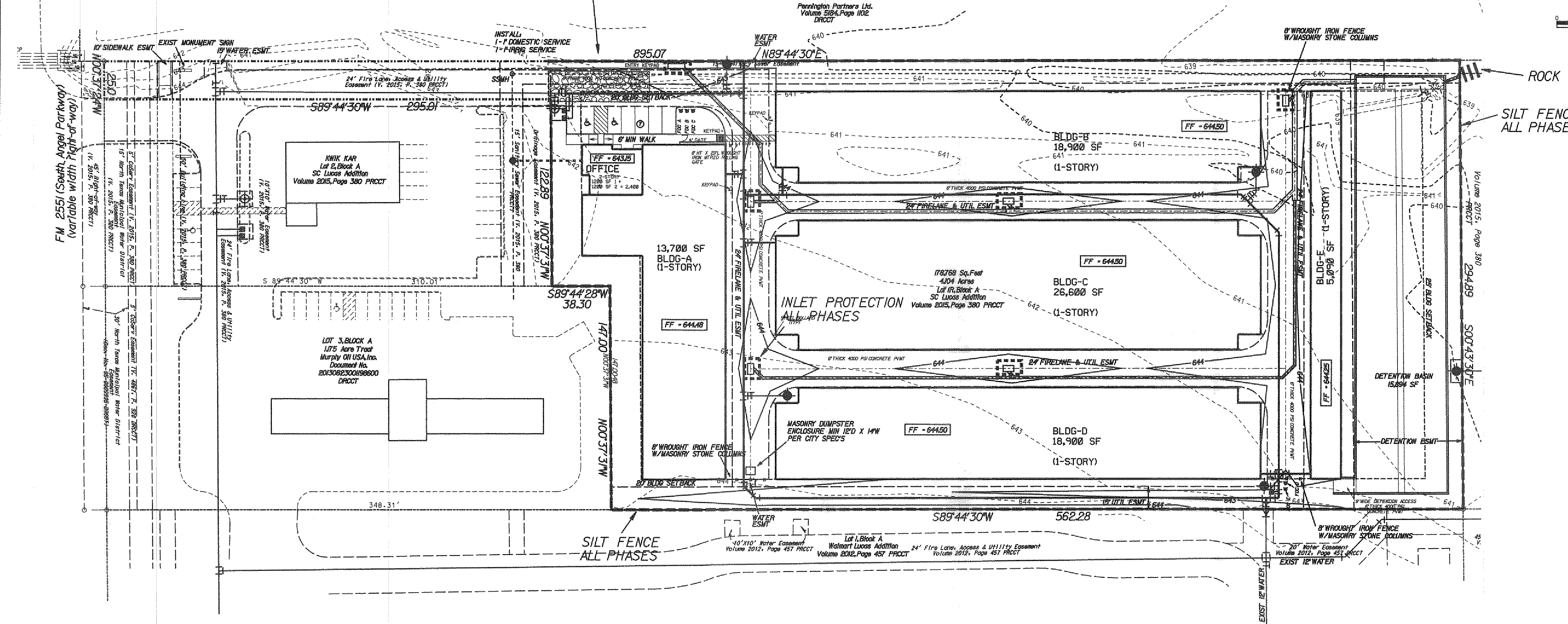
- LINE LEGEND:**
- PROPERTY LINE
 - DRAINAGE FLOW
 - PROPOSED WATER LINE
 - ROAD CENTER LINE
 - PROPOSED STORM SEWER
 - PROPOSED STREET
 - - - - - EXISTING CONTOUR LINE
 - - - - - PROPOSED CONTOUR LINE
 - - - - - BUILDING SETBACK LINE
 - DRAINAGE EASEMENT
 - DRAINAGE DIVIDE LINE
 - ROW / LOT LINE
 - PROPOSED FENCE

NOTE: NO STEEL POSTS ALONG CITY ROW

25' WIDE X 50' LONG (MINIMUM DIMENSIONS)
TEMPORARY STONE
CONSTRUCTION ENTRANCE/EXIT
PHASES 1,2,3 & 4



VICINITY MAP
NOT TO SCALE

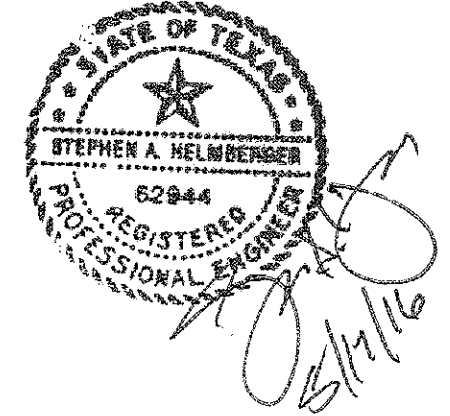


- GENERAL NOTES:**
- EROSION CONTROL DEVICES AS SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBING ACTIVITIES ON THE PROJECT.
 - ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER AND THE CITY.
 - IF THE EROSION CONTROL PLAN AS APPROVED CANNOT CONTROL EROSION AND OFF-SITE SEDIMENTATION FROM THE PROJECT THE EROSION CONTROL PLAN WILL BE REQUIRED TO BE REVISED AND/OR ADDITIONAL EROSION CONTROL DEVICES WILL BE REQUIRED ON SITE.
 - IF OFF-SITE SOIL BORROW OR SPOIL SITES ARE USED IN CONJUNCTION WITH THIS PROJECT, THIS INFORMATION SHALL BE DISCLOSED AND SHOWN ON THE EROSION CONTROL PLAN. OFF-SITE BORROW AND SPOIL AREAS ARE CONSIDERED A PART OF THE PROJECT SITE AND THEREFORE SHALL COMPLY WITH THE CITY EROSION CONTROL REQUIREMENTS. THESE AREAS SHALL BE STABILIZED WITH PERMANENT GROUND COVER PRIOR TO FINAL APPROVAL OF THE PROJECT.
 - TOTAL PROJECT AREA = 4.10 ACRES
DISTURBED AREA = 4.10 ACRES
 - SEE CITY EROSION AND SEDIMENT CONTROL MANUAL FOR LATEST BMP DEVICE STANDARDS AND SPECIFICATIONS.

- LEGEND:**
- SILT FENCE
 - ROCK CHECK DAM
 - TEMPORARY STONE CONSTRUCTION ENTRANCE/EXIT
 - INLET PROTECTION

BMP MAINTENANCE SCHEDULE

BMP	MAINTENANCE FREQUENCY	BY:
SILT FENCE/STONE OVERFLOW	WEEKLY/AFTER RAINS	CONTRACTOR
CONST ENTRANCE	WEEKLY/AFTER RAINS	CONTRACTOR
INLET PROTECTION	WEEKLY/AFTER RAINS	CONTRACTOR



DEVELOPER/APPLICANT:
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HELMBERGER ASSOCIATES, INC.
1525 BOZMAN ROAD
WYLIE, TEXAS 75098
MR. STEPHEN A. HELMSBERGER, P.E.
(972) 442-7459

REV.	BY:	REVISION

- EROSION CONTROL CONSTRUCTION PHASING:**
- PHASE 1 - TOP SOIL REMOVAL AND ROUGH GRADING
 - PHASE 2 - UTILITY INSTALLATION
 - PHASE 3 - BUILDING CONSTRUCTION
 - PHASE 4 - PAVING
 - PHASE 5 - LANDSCAPE AND IRRIGATION

EROSION CONTROL CONSTRUCTION PLAN

TYPE:	INSTALLATION:	REMOVAL:
CONSTRUCTION ENTRANCE	PRIOR TO STARTING	PRIOR TO PAVEMENT PLACEMENT
SILT FENCE/STONE OVERFLOW STRUCTURE	PRIOR TO STARTING	AFTER ESTABLISHING GRASS COVER
INLET PROTECTION	PRIOR TO STARTING	AFTER ESTABLISHING GRASS COVER

EROSION CONTROL PLAN
LOT 1R BLOCK A SC LUCAS ADDITION
CYRUS MANAGEMENT
CITY OF LUCAS, TEXAS

TBPE REGISTRATION NO. 000758

HELMBERGER ASSOCIATES, INC.
CIVIL AND ENVIRONMENTAL ENGINEERS
1525 BOZMAN ROAD, WYLIE, TEXAS 75098 (972) 442-7459

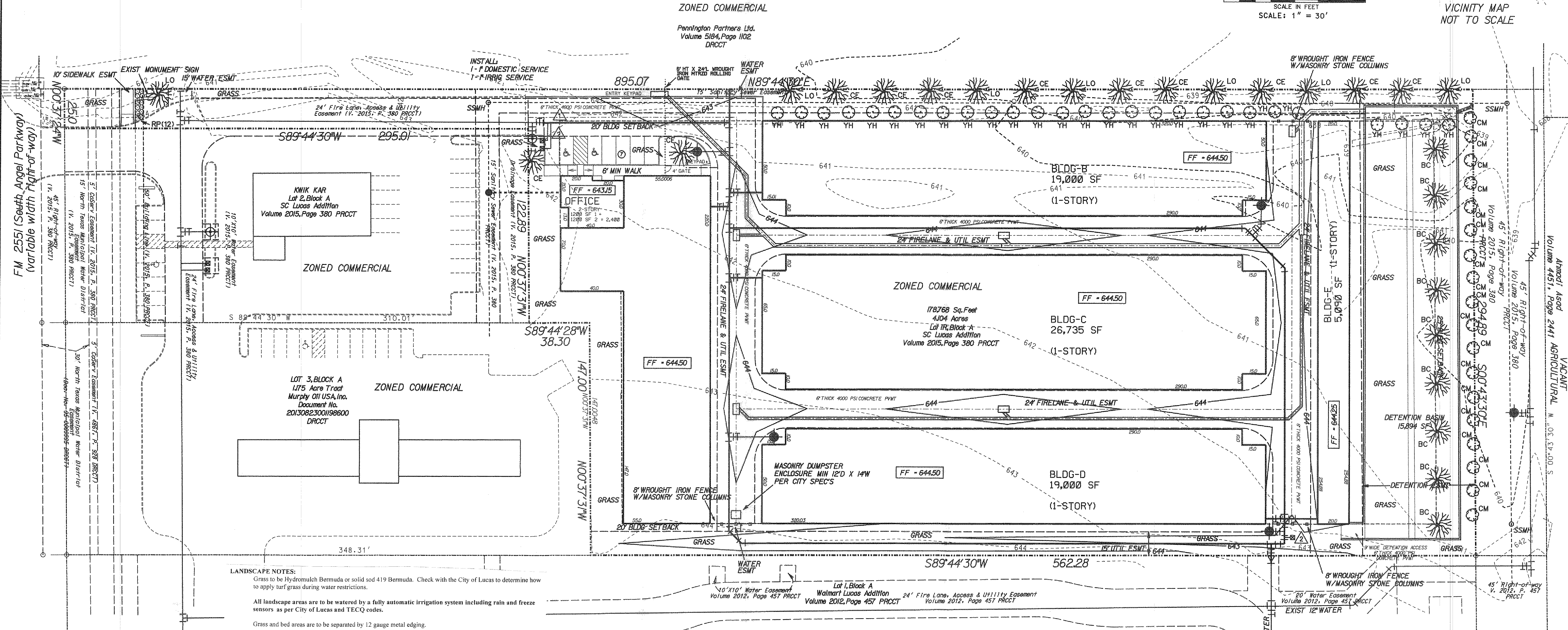
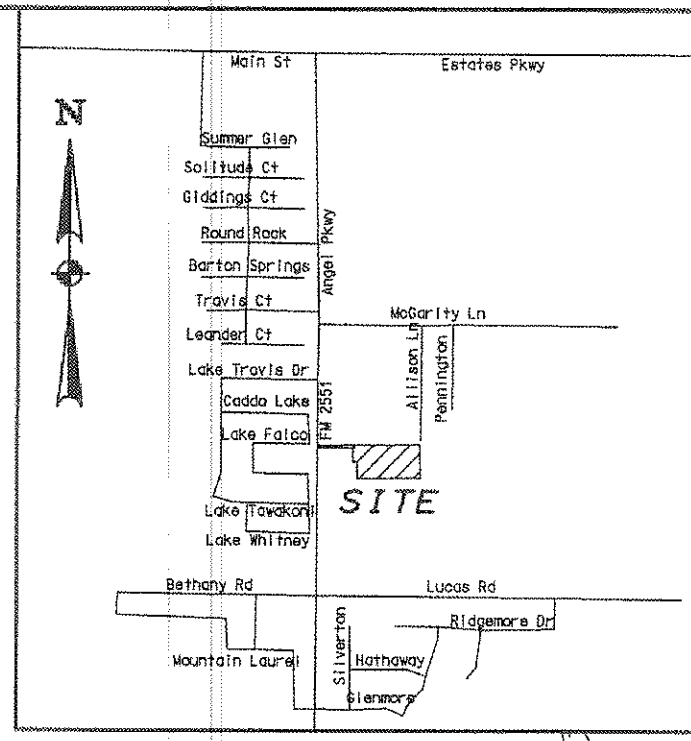
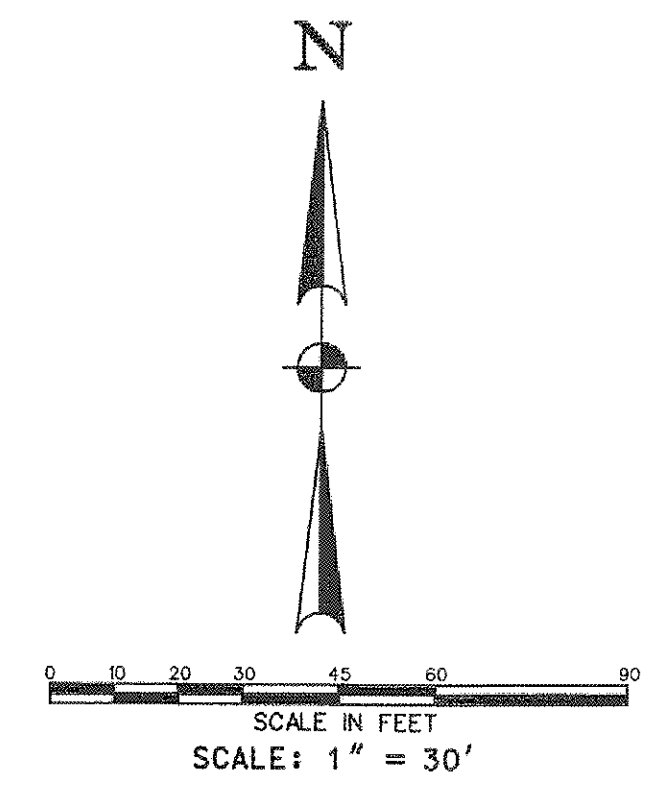
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
HELM.	CADD	JAN 2016	1"=30'	ERBORDER	1528	C6

LINE LEGEND:

- PROPERTY LINE
- DRAINAGE FLOW
- PROPOSED WATER LINE
- ROAD CENTER LINE
- PROPOSED STORM SEWER
- PROPOSED STREET
- EXISTING CONTOUR LINE
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- DRAINAGE DIVIDE LINE
- ROW / LOT LINE

WATER METER SCHEDULE

TYPE	SIZE	NUMBER	SANITARY SEWER
DOMESTIC	1"	1 - PROPOSED	1 - 6"
IRRIGATION	1"	2 - PROPOSED	NA



LANDSCAPE NOTES:

Grass to be Hydromulch Bermuda or solid sod 419 Bermuda. Check with the City of Lucas to determine how to apply turf grass during water restrictions.

All landscape areas are to be watered by a fully automatic irrigation system including rain and freeze sensors as per City of Lucas and TECO codes.

Grass and bed areas are to be separated by 12 gauge metal edging.

Contractor to verify plant material quantities and notify owner of any conflicts.

Bed preparation shall consist of incorporating one 4 cubic foot bale of spagnum peat moss and one 3 cubic foot bag of landscapers mix per 75 sq. ft. into the top six inches of existing soil.

All plant material shall meet American Nursery Standards for height and width in each container size. With the exception of ground cover beds, all plant material shall be mulched with 2" of cedar mulch (minimum).

Trees shall have a root ball of a minimum of 10 inches of diameter for each inch of caliper.

Contractor shall be responsible for locating all utilities and obtaining permits as required by City of Lucas.

LANDSCAPING REQUIREMENTS:

Site: 178770 sq. ft. X 15% = 26816 sq. ft. 26,816 sq. ft.
Provided: (25%) 45,787 sq. ft.

Landscape Edge: (1 shade tree & 8 shrubs per 20 linear feet of street frontage) 45,787 sq. ft.

FM 2551: 25'

Trees Required: 1
Trees Provided: 1
Shrubs Required: 12
Shrubs Provided: 12

Buffer North & East (20' buffer, 3" shade tree 30' o.c., ornamental trees 15' o.c.)

Trees Required: 24
Trees Provided: 24
Ornamentals Required: 45
Ornamentals Provided: 45

Parking Lot Screening: N/A
Interior Parking Lot: 7 spaces (Less than 4000 s.f.)
Trees Required (1 tree per 10 spaces) (7 spaces/10 = .7)
Trees Provided: 2

Parking Lot Perimeter: N/A

PLANT #	PLANT NAME	SIZE	SPACING	HEIGHT*	QUANTITY
RP	Rosemary Prostrata (Rosmarinus officinalis 'Prostratus')	5 gal	24"	12"	12
YH	Yaupon Holly (Ilex vomitoria)	3" cal	A/I	8'-10'	27
CM	Crape Myrtle "Dinamite" (Lagerstroemia indica)	3" cal	A/I	8'-10'	18
LO	Live Oak (Quercus virginiana)	4" cal.	A/I	16'	1
CE	Cedar Elm (Ulmus crassifolia)	4" cal.	A/I	16'	2
BC	Bald Cypress (Taxodium distichum)	4" cal	A/I	16'	9

* Height at time of planting

DEVELOPER/APPLICANT:
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WYLIE, TEXAS 75098
MR. STEPHEN A. HELMBERGER, P.E.
(972) 442-7459

LANDSCAPE PLAN

LOT 1R BLOCK A SC LUCAS ADDITION

CYRUS MANAGEMENT

CITY OF LUCAS, TEXAS

SHARP LANDSCAPES
1129 HUNTINGTON DRIVE
RICHARDSON, TEXAS 75080 972-978-6172

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
HELM.	CADD	JAN 2018	1"=30'	LAND	1528	L1

RATING CURVE

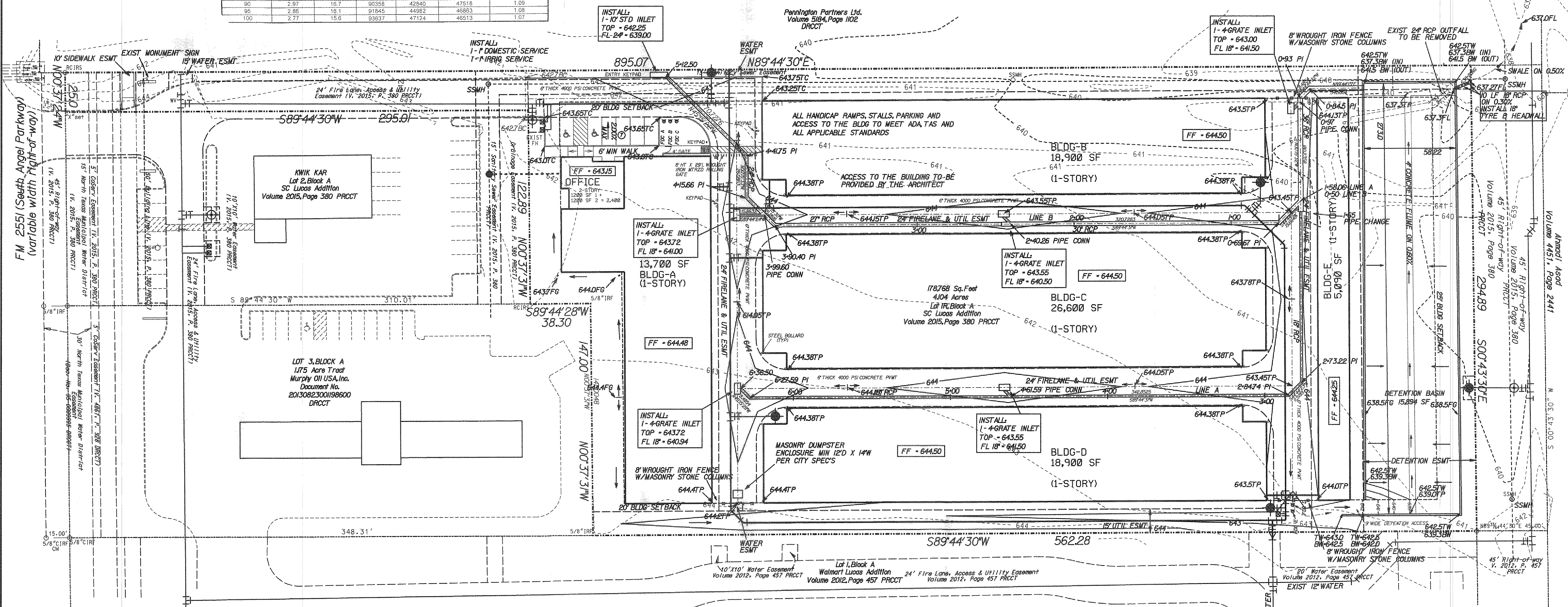
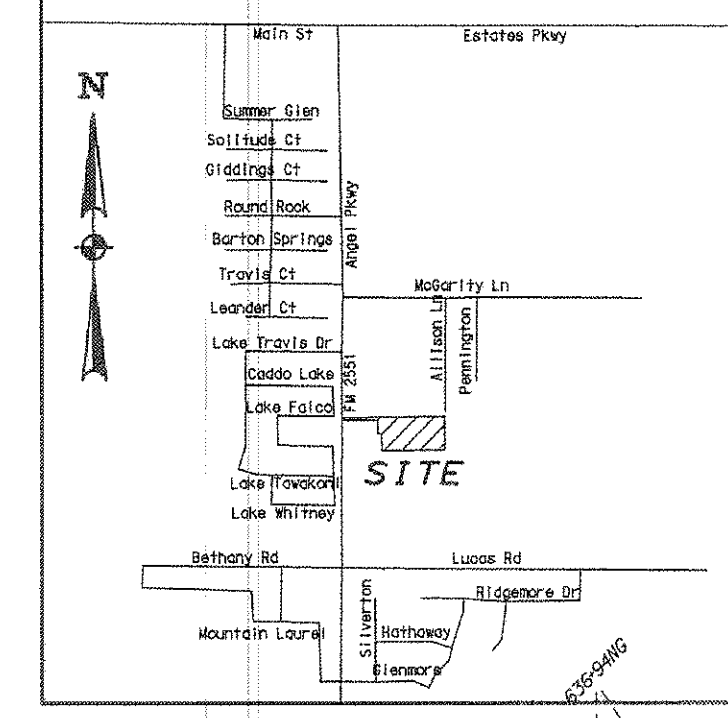
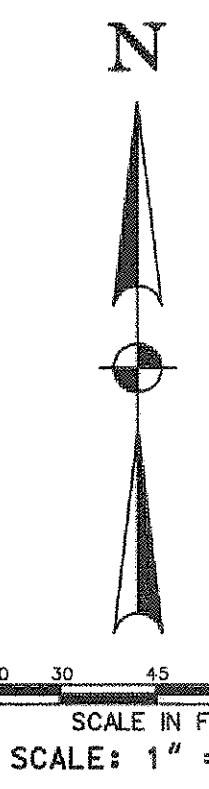
ELEVATION	VOL (CF)	Q (CFS)
638.0	0	0
639.0	15894	4.25
640.0	37788	9.51
640.5	39735	11.26
641.0	47682	12.76
641.5	55629	14.11

$Q = CA (2GH)^{1/2}$
 $C = 0.80$
 $A = 1767 \text{ SF}$

Clutter = 0.90
 A = 5.26 acres
 Tcr = 10.00 min
 Qout = 14.28 cfs
 Q Peak in = 49.20 cfs
 Pond Outlet release rate

Storage Required

Time (min)	Id 100 yr	Q=CIA	V _{in} - ft ³	V _{out} - ft ³	Volume - ft ³	Volume - Ac-ft
0	0.00	0.00	0	0	0	0.00
5	11.10	62.5	18761	8429	12335	0.28
10	8.74	49.2	29545	8588	20977	0.48
15	7.52	42.4	38131	10710	27421	0.63
20	7.02	39.6	47461	12852	34609	0.79
25	6.31	35.6	53326	14994	38332	0.88
30	5.75	32.4	59312	17136	41176	0.95
35	5.29	29.8	62586	19278	43310	0.99
40	4.90	27.6	66256	21420	44836	1.03
45	4.58	25.8	69670	23562	46108	1.06
50	4.30	24.2	72679	25704	46975	1.08
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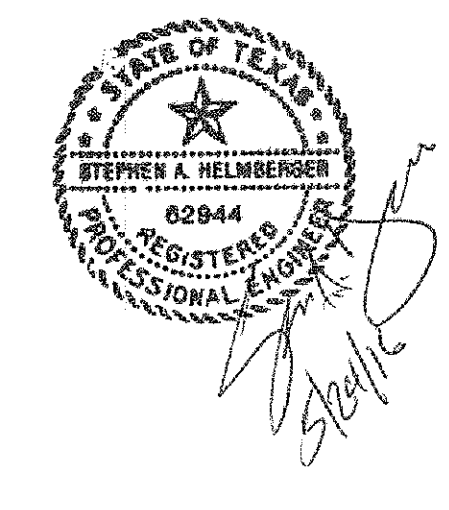


LINE LEGEND:

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GRADING AND DRAINAGE PLAN					
LOT 1R BLOCK A SC LUCAS ADDITION					
CYRUS MANAGEMENT					
CITY OF LUCAS, TEXAS					
TBP# REGISTRATION NO. 000796		HELMBERGER ASSOCIATES, INC. CIVIL AND ENVIRONMENTAL ENGINEERS 9235 BOZMAN ROAD, WYLIE, TEXAS 75098 (972) 442-7459			
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE NO.
HELM.	CADD	JAN 2016	1"=30'	GDBORDER	1528 C3