CONSTRUCTION PLANS FOR

WOLF CREEK PHASE 2

27 SINGLE FAMILY LOTS
AN ADDITION TO THE CITY OF LUCAS
COLLIN COUNTY, TEXAS
39.67 AC.

DECEMBER 5, 2006 FOR CONSTRUCTION

WOLF CREEK, PHASE 2
CITY OF LUCAS, DENTON COUNTY, TEXAS

CAUTION!!!!!
EXISTING UTILITIES

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North Texas Municipal Water District Notes

A. North Texas Municipal Water District (NTMWD's) 60-inch sanitary sewer trunk main is located within limits of construction.

B. Operation of heavy earthmoving equipment, compaction equipment or heavy construction equipment, such as concrete trucks, shall be restricted to specific crossing points across NTMWD easements, as approved by the NTMWD. The crossings shall be designated and verified to provide a minimum of five- feet of cover.

C. To assure that placing of significant loads over the NTMWD pipeline does not damage the existing pipeline, no materials shall be stockpiled on the NTMWD easement, without authorization from the NTMWD. If the contractor desires to use NTMWD's easement for stockpile of materials, contact NTMWD's Engineering Department at (972) 442-5405 so your plans for use of NTMWD's easement can be reviewed.

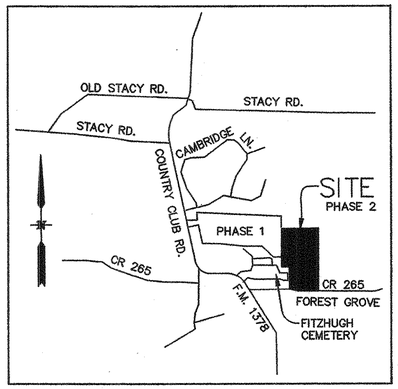
D. A minimum of three feet separation between the bottom of the pavement and top of NTMWD pipeline is required. In addition, if separation between the bottom of the pavement and the top of the pipeline is less than 3.5 feet, a thickened pavement section is required.

E. Crossing of the NTMWD easement with other utilities, such as TV cable, phone, gas, water and electric, shall be coordinated with the NTMWD to avoid damage to the NTMWD facilities.

F. Outdoor lighting, screening walls or other facilities shall not be installed in NTMWD easements without written approval of the NTMWD.

G. Unless otherwise shown or required a minimum of one-foot clearance shall be provided for all utilities crossing the NTMWD pipelines.

H. "The contractor shall contact NTMWD Engineering at (972) 442-5405 at least 48 hours prior to performing any work in the vicinity of the NTMWD facilities."



VICINITY MAP
N.T.S.

SHEET INDEX

RECORD DRAWINGS

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ENGINEERING CONCEPTS & DESIGNS, L.P.

Todd Wintters 1-31-08
TODD WINTTERS, P.E. DATE

APPROVED
CITY OF LUCAS
CITY ENGINEER DATE
Stacy Carrell 3-12-07

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OWNER / DEVELOPER
WOLF CREEK LUCAS INVESTORS, L.P.
2505 N. PLANO ROAD, SUITE 3000
RICHARDSON, TX. 75082
(972) 644-2400

ENGINEERINGCONCEPTS & DESIGN, L.P.
ENGINEERING / PROJECT MANAGEMENT / CONSTRUCTION SERVICES
2801 CAPITAL, WYLIE, TX 75098
972-941-8400 FAX: 972-941-8401 WWW.ECDLP.COM

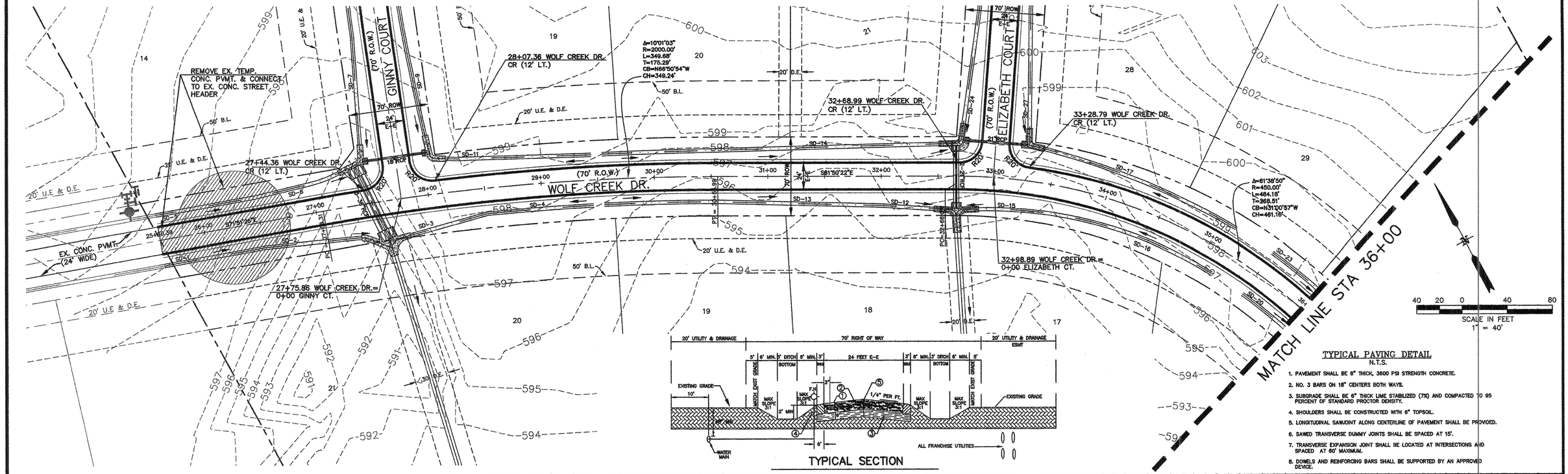
REVISIONS:

DATE: DECEMBER 5, 2006
PROJECT NO.: 7515
DWG FILE NAME: 7515 COVER.DWG

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF CONSTRUCTION. THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY TODD D. WINTTERS, P.E. 87085

STATE OF TEXAS
TODD D. WINTTERS
87085
REGISTERED PROFESSIONAL ENGINEER
12.5.06

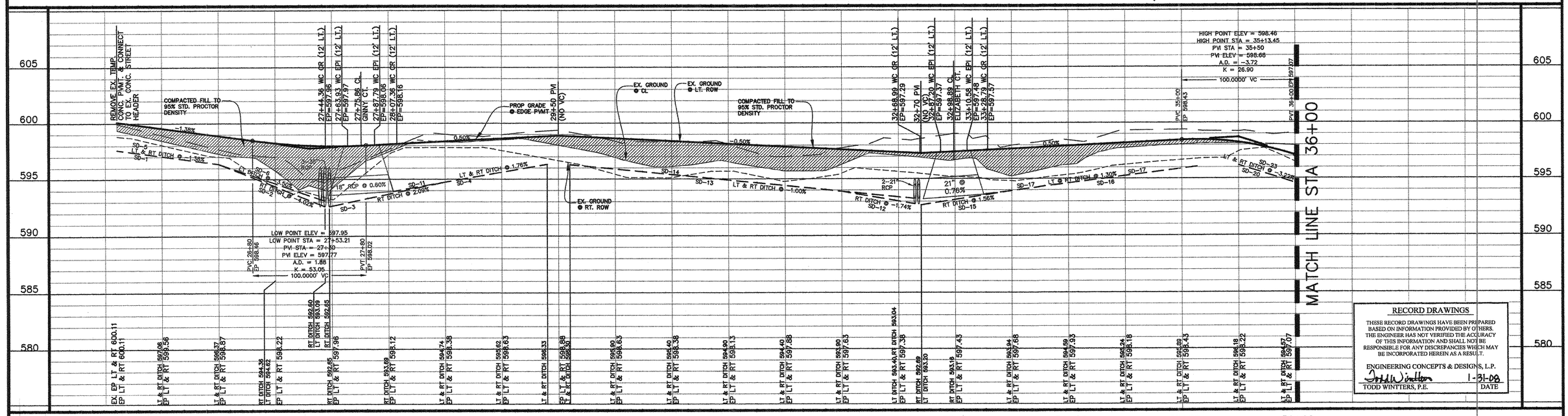
7515/dwg/7515 COVER.DWG



TYPICAL PAVING DETAIL

N.T.S.

1. PAVEMENT SHALL BE 6" THICK, 3600 PSI STRENGTH CONCRETE.
2. NO. 3 BARS ON 18" CENTERS BOTH WAYS.
3. SUBGRADE SHALL BE 6" THICK LIME STABILIZED (7%) AND COMPACTED TO 95 PERCENT OF STANDARD PROCTOR DENSITY.
4. SHOULDERS SHALL BE CONSTRUCTED WITH 6" TOPSOIL.
5. LONGITUDINAL SAWJOINT ALONG CENTERLINE OF PAVEMENT SHALL BE PROVIDED.
6. SAWED TRANSVERSE DUMMY JOINTS SHALL BE SPACED AT 15'.
7. TRANSVERSE EXPANSION JOINT SHALL BE LOCATED AT INTERSECTIONS AND SPACED AT 60' MAXIMUM.
8. DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE.



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BENCHMARKS:

#1. SQUARE CHISELED IN WEST END OF HDWL LOCATED ON THE SOUTH SIDE OF COUNTRY BROOK LN. AND THE WEST SIDE OF F.M.1378
ELEV: 617.95

#2. SQUARE CHISELED IN WEST END OF HDWL LOCATED ON THE EAST SIDE OF F.M. 1378 ON BRIDGE OVER WHITE ROCK CREEK (EAST) FEMA RM133
ELEV: 590.08

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CHECKED:	TW	DATE:	DECEMBER 2006
PROJECT NO.:	07515		
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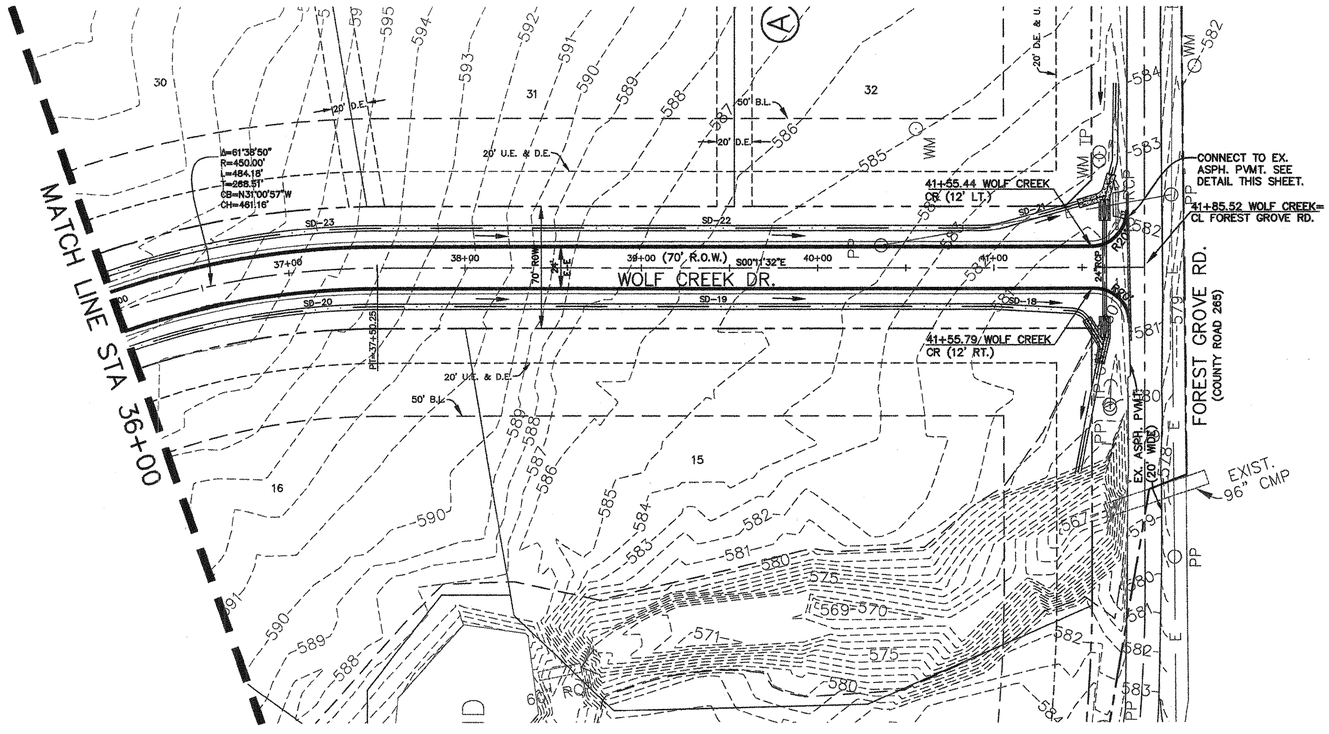
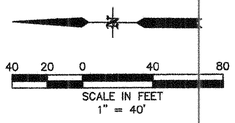
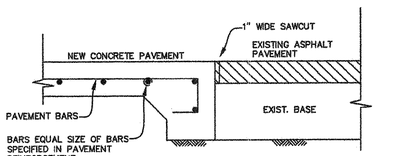
PAVING PLAN & PROFILE
WOLF CREEK DR. 25+60.39 - 36+00
WOLF CREEK PHASE 2
CITY OF LUCAS, COLLIN COUNTY, TEXAS

SHEET 3 OF 14

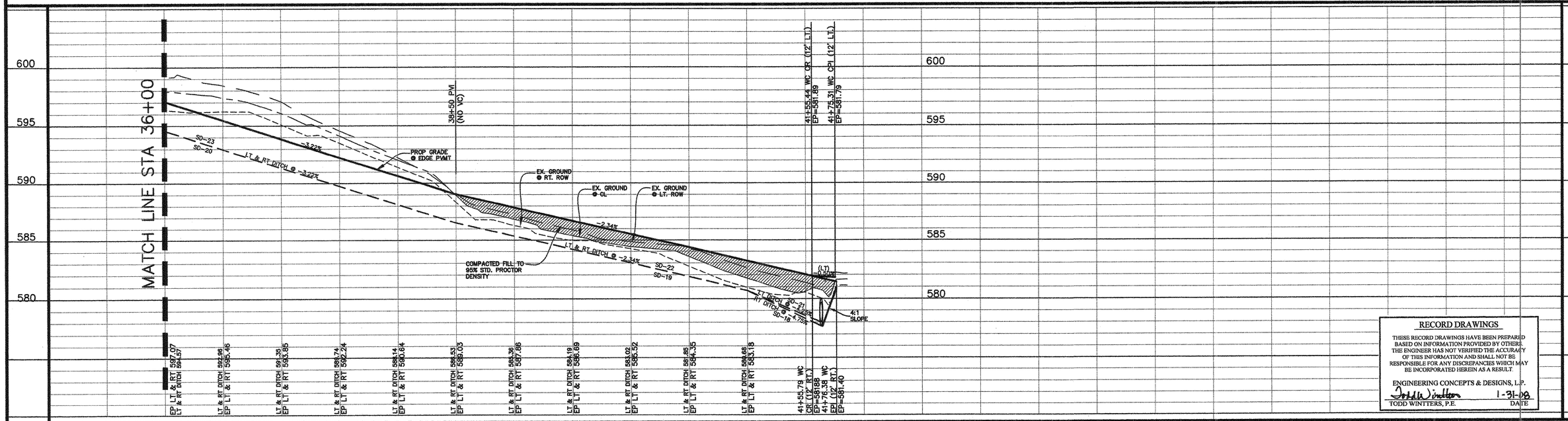




NOTE:
FOR TYPICAL PAVING SECTION AND PAVING DETAIL NOTES SEE SHEET 3.



CONNECTION TO EXISTING ASPHALT PAVEMENT
N.T.S.



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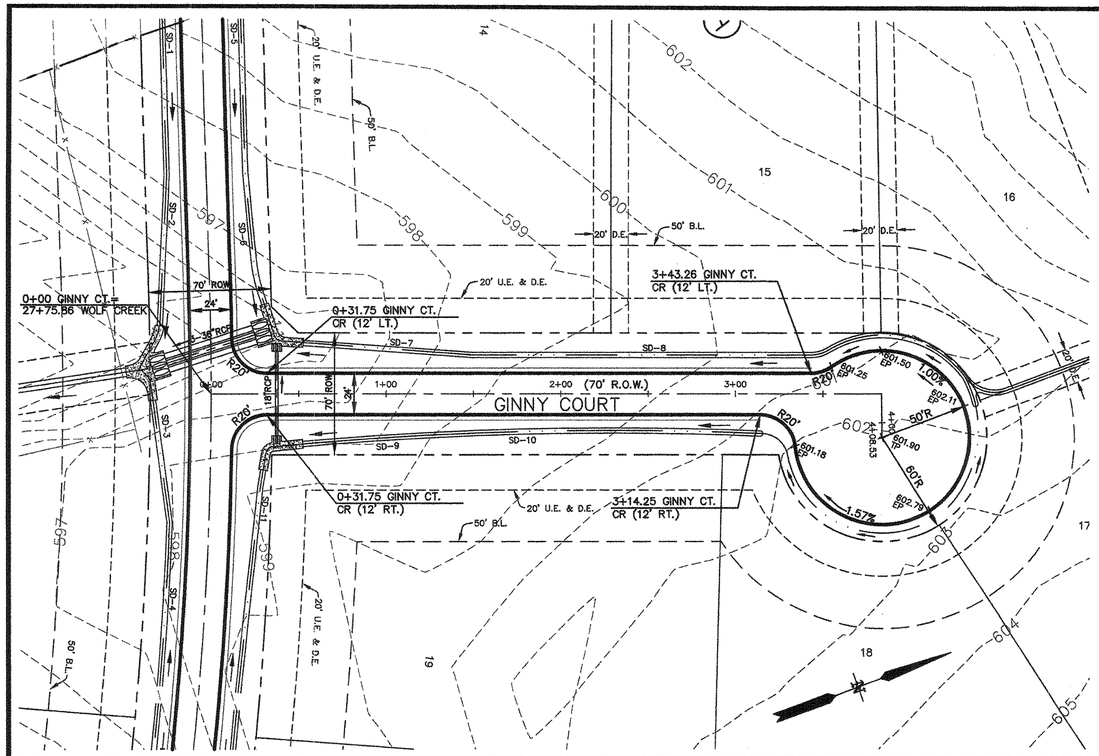
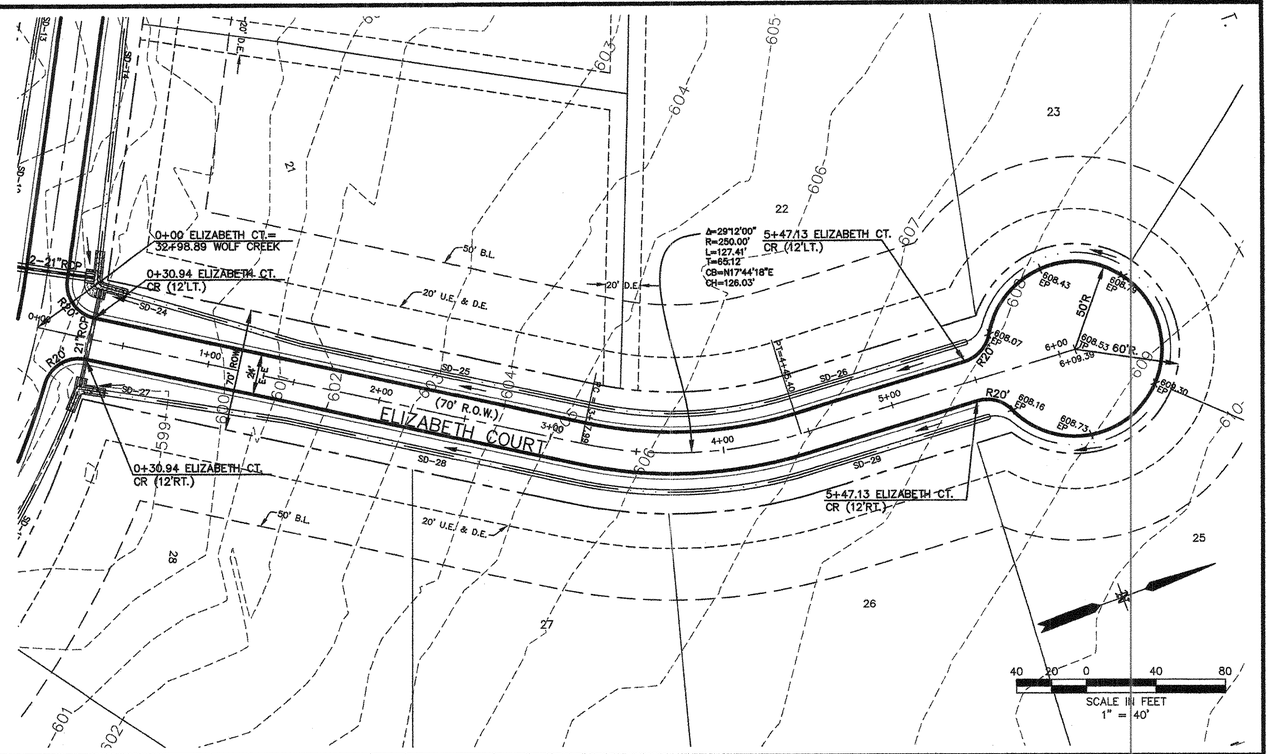
STATE OF TEXAS TODD D. WINTTERS 87085 REGISTERED PROFESSIONAL ENGINEER 12.5.06

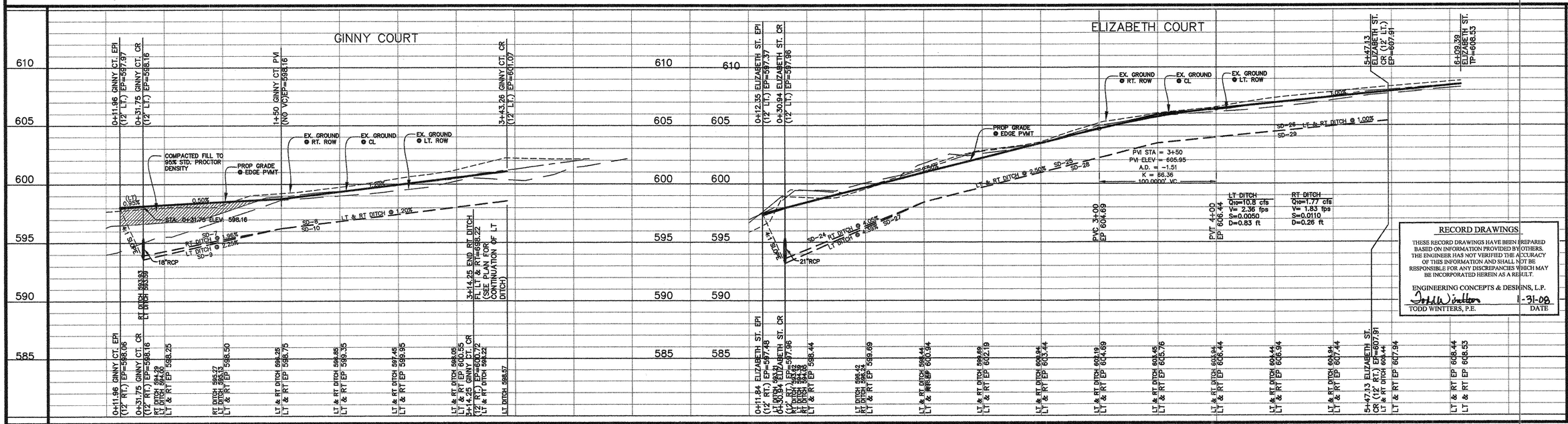
PAVING PLAN & PROFILE
WOLF CREEK DR. 36+00 - END
WOLF CREEK PHASE 2

CITY OF LUCAS, COLLIN COUNTY, TEXAS

SHEET 4 OF 14







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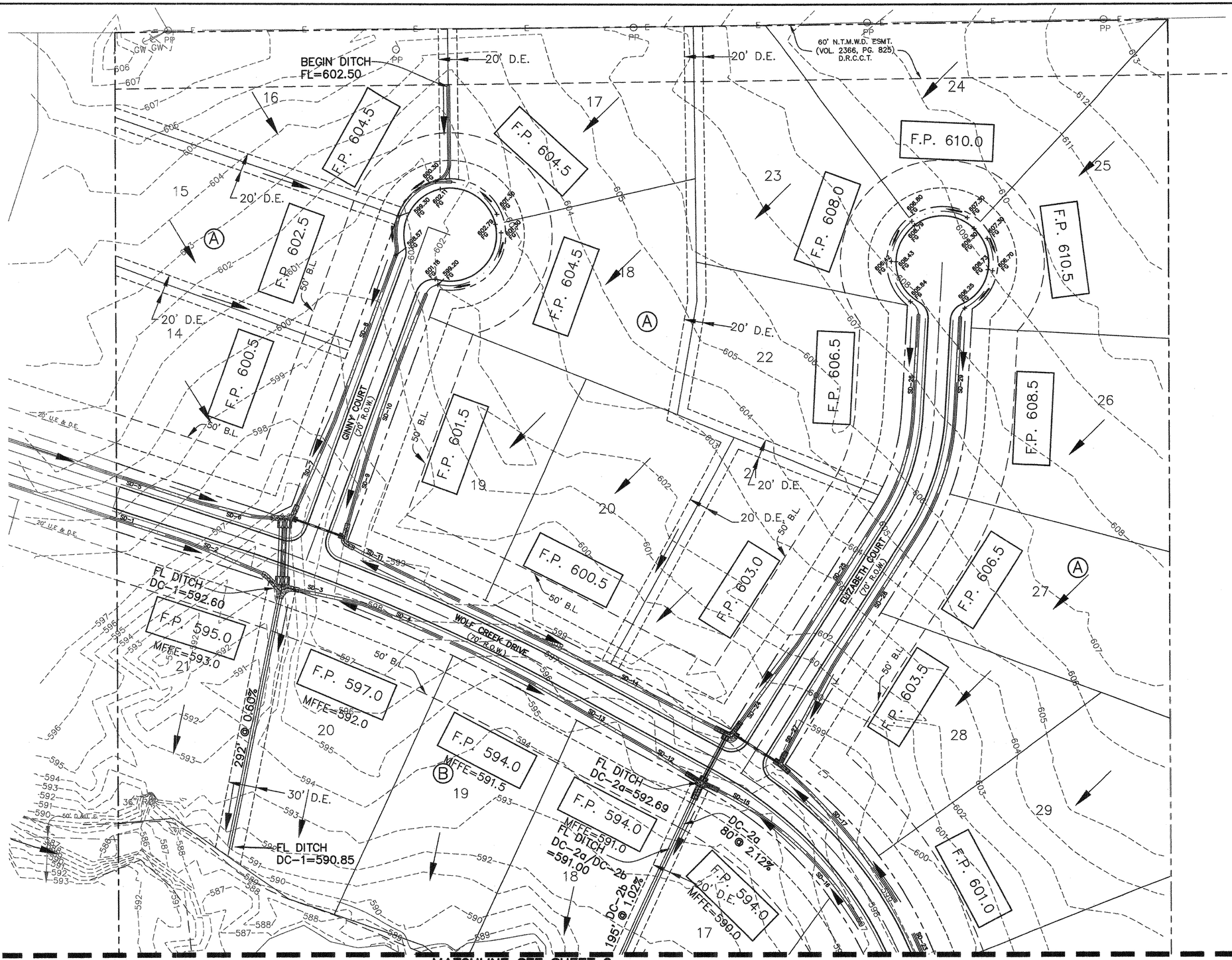
PAVING PLAN & PROFILE
GINNY CT. & ELIZABETH CT.
WOLF CREEK PHASE 2

CITY OF LUCAS, COLLIN COUNTY, TEXAS

SHEET 5 OF 14



50 25 0 50 100

SCALE IN FEET
1" = 50'

LEGEND

- STONE SILTATION STRUCTURE
- 6" NON-REINF CONC. RIPRAP
- CONCRETE RIP RAP
- x EG 610.50 — EX. SPOT ELEVATION
- x FG 610.50 — PROPOSED SPOT ELEVATION
- TREELINE AREAS TO BE REMOVED

TYPICAL PAD DIMENSIONS

40' × 100'

NOTE:
ALL RIPRAP FOR DRAINAGE TO BE CONCRETE (NO ROCK).

NOTE:
FINISH PAD ELEVATIONS ARE SHOWN FOR REFERENCE ONLY. PADS TO BE CONSTRUCTED BY THE HOME BUILDER.

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Todd Wintters 1-31-08

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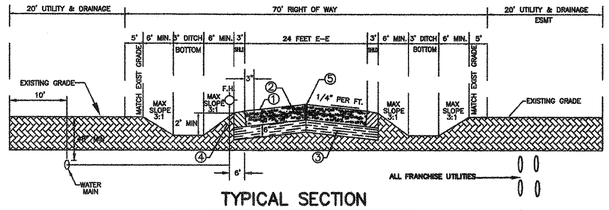
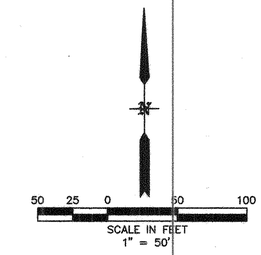
GRADING PLAN
SHEET 1
WOLF CREEK PHASE 2
CITY OF LUCAS, COLLIN COUNTY, TEXAS

SHEET 6 OF 14



TYPICAL SECTION



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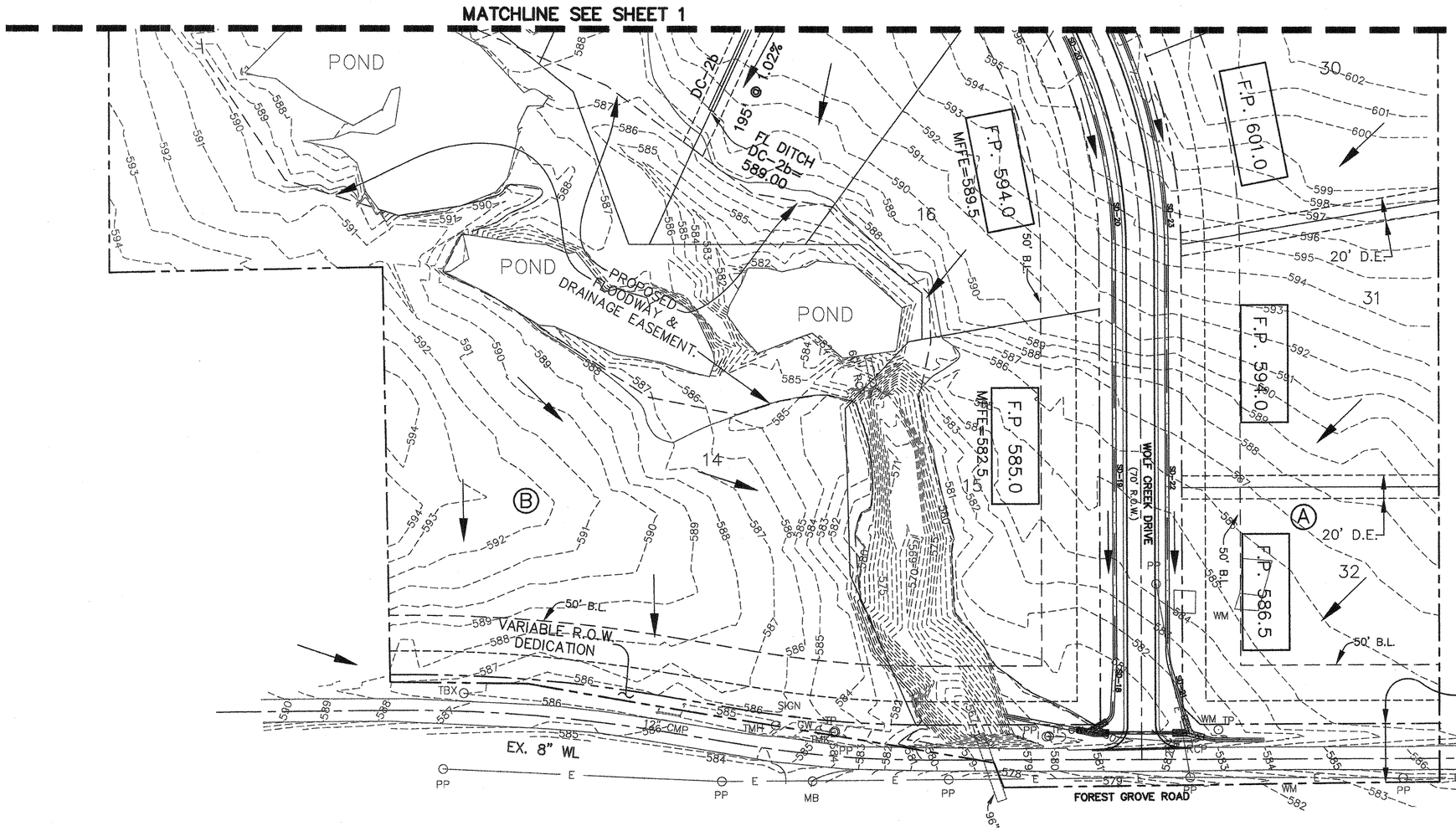
NOTE:
FOR CONSTRUCTION WITHIN N.T.M.W.D. ESMT. REFER TO N.T.M.W.D. NOTES ON COVER SHEET.



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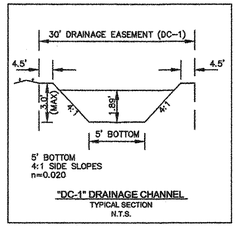
GRADING PLAN SHEET 2 WOLF CREEK PHASE 2

CITY OF LUCAS, COLLIN COUNTY, TEXAS

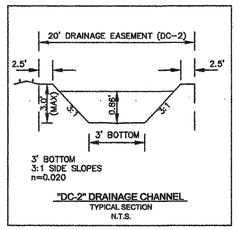
SHEET 7 OF 14

Drainage Channel Design

Ditch No.	Q_{100} (Ft^3/sec)	Slope (Ft/Ft)	Depth (Ft)	Velocity (Ft/sec)
DC-1	129.90	0.0060	1.89	6.46
DC-2a	32.70	0.0212	1.14	7.46
DC-2b	32.70	0.0102	1.32	5.68



"DC-1" DRAINAGE CHANNEL
TYPICAL SECTION
N.T.S.

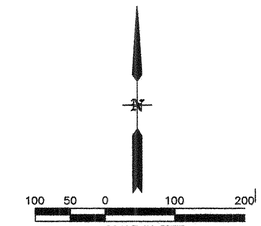


"DC-2" DRAINAGE CHANNEL
TYPICAL SECTION
N.T.S.

NOTE:
CITY OF LUCAS HAS THE AUTHORITY TO REVIEW AND APPROVE SLOPE TREATMENTS AT DRIVEWAYS.

Side Road Ditch Design

Ditch No.	Q100 (Ft3/sec)	Slope (Ft/Ft)	Depth (Ft)	Velocity (Ft/sec)
SD-1	3.52	0.0138	0.50	3.42
SD-2	3.52	0.0402	0.41	5.12
SD-3	1.50	0.0209	0.34	3.23
SD-4	1.00	0.0176	0.30	2.74
SD-5	58.45	0.0138	0.98	6.68
SD-6	58.45	0.0350	0.77	9.33
SD-7	59.20	0.0225	0.88	7.99
SD-8	59.20	0.0120	1.02	6.37
SD-9	3.80	0.0176	0.50	3.83
SD-10	2.50	0.0120	0.46	2.98
SD-11	3.80	0.0176	0.50	3.83
SD-12	1.50	0.0100	0.39	2.45
SD-13	2.00	0.0174	0.39	3.24
SD-14	14.70	0.0100	0.92	4.34
SD-15	1.50	0.0156	0.36	2.90
SD-16	1.00	0.0130	0.32	2.45
SD-17	6.70	0.0076	0.72	3.21
SD-18	4.50	0.0475	0.44	5.79
SD-19	3.00	0.0234	0.43	4.01
SD-20	1.50	0.0322	0.31	3.80
SD-21	18.50	0.0425	0.76	7.90
SD-22	12.50	0.0234	0.74	5.73
SD-23	6.50	0.0322	0.54	5.49
SD-24	1.50	0.0439	0.30	4.27
SD-25	1.00	0.0250	0.28	3.13
SD-26	0.50	0.0100	0.26	1.87
SD-27	7.50	0.0405	0.55	6.20
SD-28	5.00	0.0350	0.49	5.30
SD-29	2.50	0.0100	0.47	2.79
SD-30	15.00	0.0250	0.78	6.16
SD-31	23.00	0.0200	0.96	6.29



DRAINAGE CALCULATIONS

AREA #	AREA (acres)	TC	C	CA	I[100] (in/hr)	Q[100] (in/hr)	COMMENTS
OS1	19.1	20	0.45	8.60	6.80	58.45	58.45 cfs TO LN "1.0"
OS2	133.4	30	0.45	60.0	5.80	348.0	348.0 cfs TO POND
OS3	17.7	20	0.45	7.97	6.80	54.2	54.2 cfs TO AREA 6/DITCH
OS4	13.5	20	0.45	6.08	6.80	41.3	41.3 cfs TO LN "1.0"
1	5.95	20	0.45	2.66	6.80	18.2	18.2 cfs TO LN "1.0"
2	2.48	20	0.45	3.48	6.80	7.59	7.59 cfs TO LN "1.1"
3	5.28	20	0.45	3.92	6.80	16.2	16.2 cfs TO LN "2.0"
4	4.79	20	0.45	7.02	6.80	14.7	14.7 cfs TO LN "2.1"
5	6.03	20	0.45	6.75	6.80	18.5	18.5 cfs TO LN "3.0"
6	1.58	20	0.45	6.75	6.80	4.83	4.83 cfs TO 96" CMP
7	15.0	20	0.45	6.75	6.80	45.9	45.9 cfs TO 96" CMP
				TOTAL = 631.3 cfs TO 96" CMP UNDER FOREST GROVE			

NOTE:
REFER TO WOLF CREEK PHASE 1 FOR DRAINAGE AREAS OS-1, OS-2 & OS-3

NOTE:
LIMITS OF THE 100-YEAR FLOODPLAIN WITHIN THIS SUBDIVISION ARE BASED ON THE FLOOD STUDY FOR WOLF CREEK BY AQUA TERRA ENGINEERING CONSULTANTS, INC..

RECORD DRAWINGS

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ENGINEERING CONCEPTS & DESIGNS, L.P.
TODD WINTTERS, P.E. — DATE 1-31-08

Driveway Culvert Design

Block-Lot	Facing Block / Side of Lot	Culvert Size (in)	No. Barrels	Qm (Ft3/sec)	Slope (%)	Velocity (Ft/sec)
A- 14	WOLF CREEK	36	2	58.45	1.00	4.14
A- 14	GINNY COURT	36	2	59.20	1.00	4.19
A- 15	GINNY COURT	36	2	59.20	1.00	4.19
A- 16	GINNY COURT	36	2	59.20	1.00	4.19
A- 17	GINNY COURT	18	1	10.00	1.00	5.66
A- 18	GINNY COURT	18	1	2.50	1.00	1.41
A- 19	GINNY COURT	18	1	3.80	1.00	2.15
A- 19	WOLF CREEK	18	1	3.80	1.00	2.15
A- 20	WOLF CREEK	18	1	6.00	1.00	3.40
A- 21	GINNY COURT	18	1	3.00	1.00	1.70
A- 21	WOLF CREEK	18	1	5.00	1.00	2.83
A- 22	ELIZABETH COURT	18	1	5.00	1.00	2.83
A- 23	ELIZABETH COURT	18	1	5.00	1.00	2.83
A- 24	ELIZABETH COURT	18	1	5.00	1.00	2.83
A- 25	ELIZABETH COURT	18	1	2.50	1.00	1.41
A- 26	ELIZABETH COURT	18	1	2.50	1.00	1.41
A- 27	ELIZABETH COURT	18	1	5.00	1.00	2.83
A- 28	ELIZABETH COURT	18	1	7.50	1.00	4.24
A- 28	WOLF CREEK	18	1	6.50	1.00	3.68
A- 29	WOLF CREEK	18	1	6.50	1.00	3.68
A- 30	WOLF CREEK	18	1	6.50	1.00	3.68
A- 31	WOLF CREEK	21	1	12.50	1.00	5.20
A- 32	WOLF CREEK	24	1	18.50	1.00	5.89
B- 14	FOREST GROVE ROAD	18	1	3.00	1.00	1.70
B- 15	WOLF CREEK	18	1	1.50	1.00	0.85
B- 16	WOLF CREEK	18	1	1.50	1.00	0.58
B- 17	WOLF CREEK	18	1	1.50	1.00	0.85
B- 18	WOLF CREEK	18	1	2.00	1.00	1.13
B- 19	WOLF CREEK	18	1	2.00	1.00	1.13
B- 20	WOLF CREEK	18	1	3.52	1.00	1.99
B- 21	WOLF CREEK	18	1	3.52	1.00	1.99

CAUTION! EXISTING UTILITIES

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ELEV: 617.95

#2. SQUARE CHISELED IN WEST END OF HDWL LOCATED ON THE EAST SIDE OF F.M. 1378 ON BRIDGE OVER WHITE ROCK CREEK (EAST) FEMA RM133
ELEV: 590.08

ENGINEERINGCONCEPTS & DESIGN, L.P.
ENGINEERING / PROJECT MANAGEMENT / CONSTRUCTION SERVICES
2801 CAPITAL, WYLIE, TX 75098
972-941-8400 FAX: 972-941-8401 WWW.ECDLP.COM

REVISIONS:

DRAWN: ECD — DATE: DECEMBER 2006
CHECKED: TW — DATE: DECEMBER 2006
PROJECT NO.: 07515
DWG FILE NAME: 7515 DAM.DWG

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF CONSTRUCTION. THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY TODD D. WINTTERS, P.E. 87085

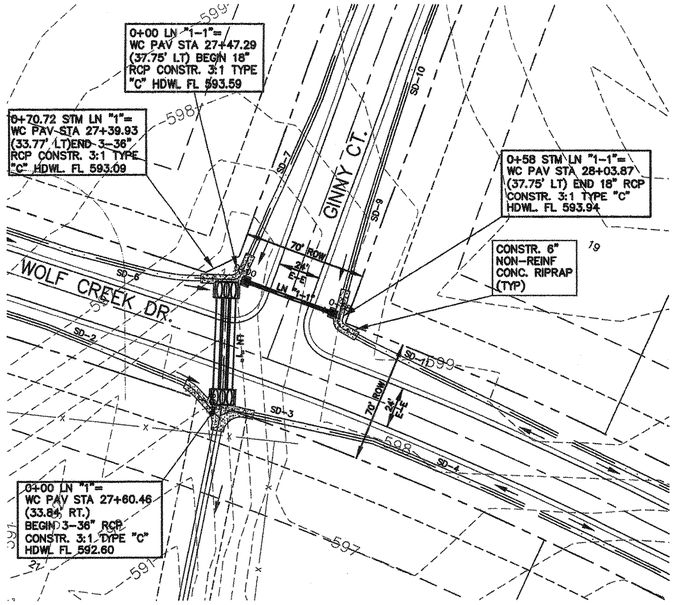
STATE OF TEXAS — TODD D. WINTTERS — 87085 — LICENSED PROFESSIONAL ENGINEER — 12.5.06

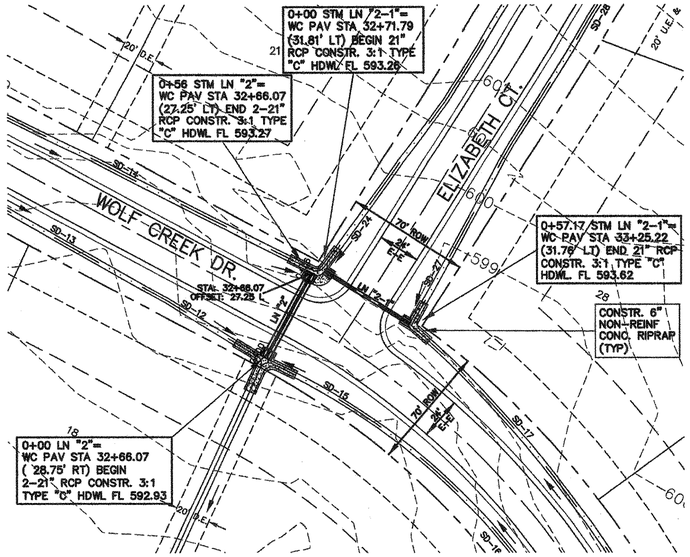
DRAINAGE AREA MAP

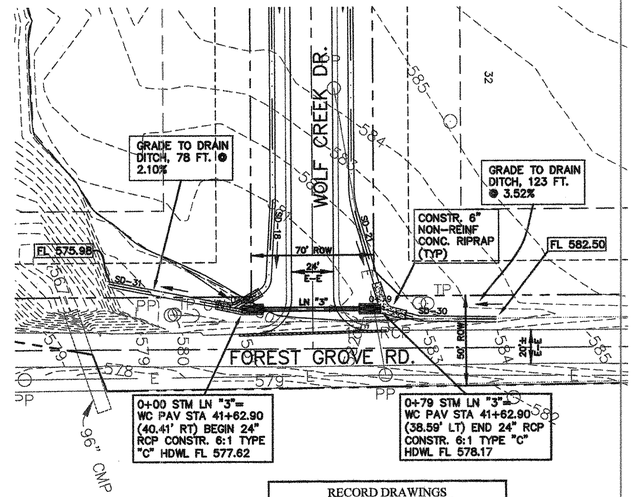
WOLF CREEK PHASE 2

CITY OF LUCAS, COLLIN COUNTY, TEXAS

SHEET 8 OF 14







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ENGINEERING CONCEPTS & DESIGNS, L.P.

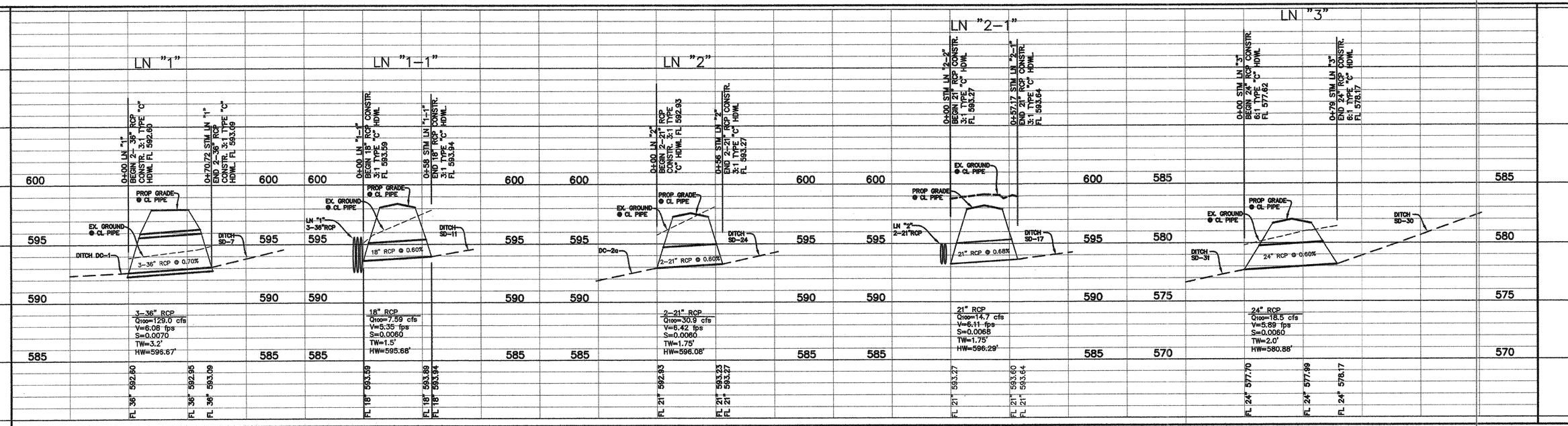
Todd Wintters 1-31-08

TODD WINTTERS, P.E. DATE

N

40 20 0 40 80

SCALE IN FEET
1" = 40 FT



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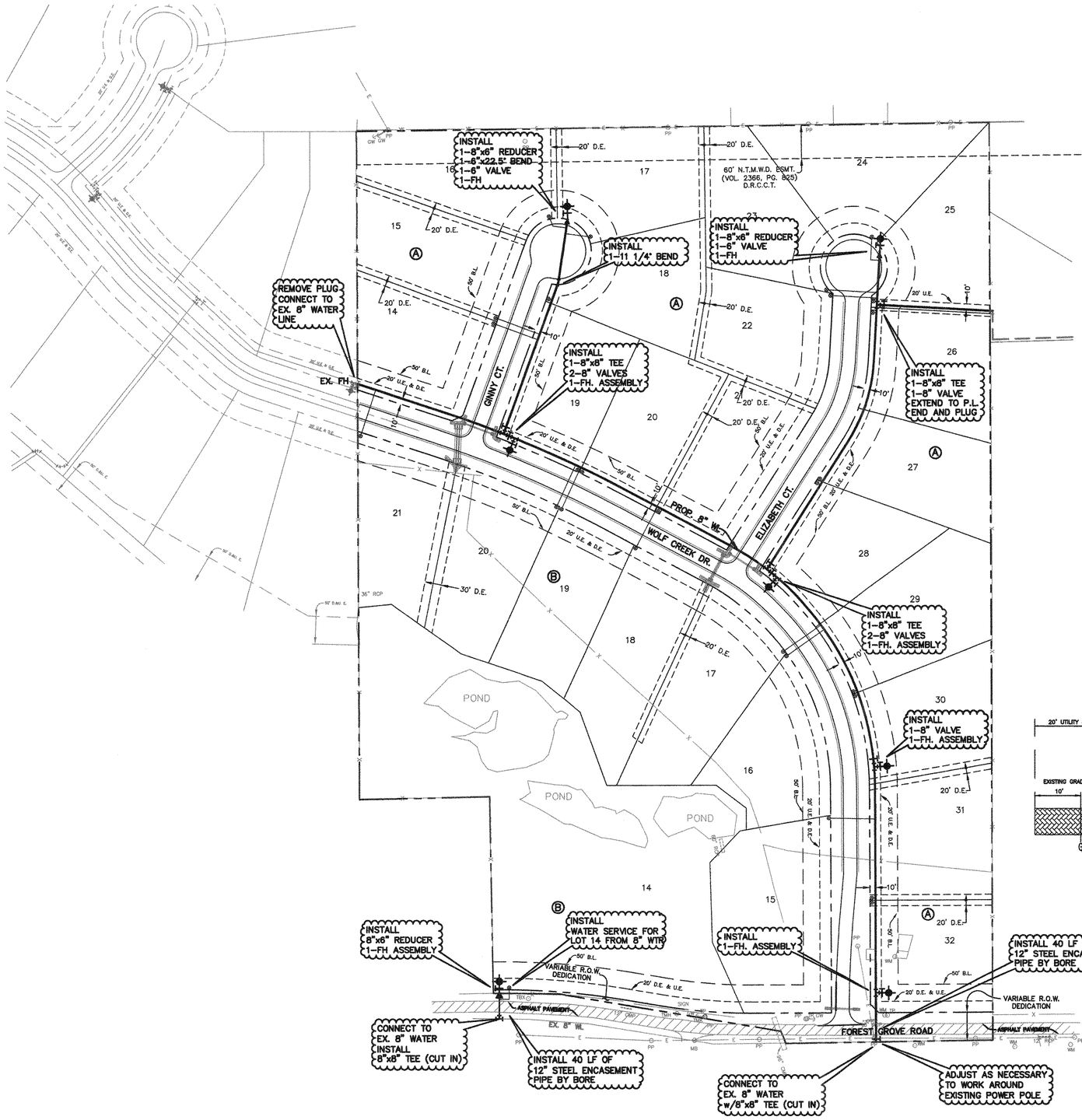
STATE OF TEXAS TODD D. WINTTERS 87085 REGISTERED PROFESSIONAL ENGINEER 12.5.06

STORM SEWER PLAN & PROFILES LINES "1.0", "2.0" & "3.0" WOLF CREEK, PHASE 2

CITY OF LUCAS, COLLIN COUNTY, TEXAS

SHEET 9 OF 14



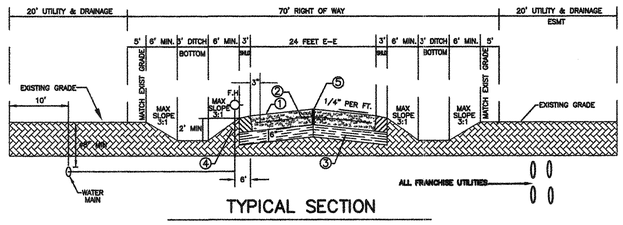
NOTES:

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL & VERTICAL LOCATION OF EX. 8" WATERLINE ALONG FOREST GROVE RD. BEFORE MAKING CONNECTION AND NOTIFY E.C.D. OF ANY DISCREPENCIES. (972) 941-8400
2. NO CONSTRUCTION ALLOWED WITHIN N.T.M.W.D. EASEMENT.
3. ALL WATERLINES TO BE 8" PVC C-900 UNLESS NOTED OTHERWISE.
4. ALL FH.'s TO BE MEULLER, LOCATED 6' FROM E.P.
5. MEGALUG TO BE USED ON ALL CAST IRON FITTINGS.
6. A BLUE STIMSONITE, FIRE-LITE REFLECTOR (OR APPROVED EQUAL) SHALL BE PLACED IN THE CENTER OF THE DRIVE LANE ON THE SIDE OF THE FIRE HYDRANT
7. VALVES 12" AND UNDER TO BE GATE VALVES MEETING REQUIREMENTS OF AWWA C500 OR AWWA C509 (NCTOG ITEM 2.13.1) WITH NON-RISING STEMS.

LEGEND

- WATER VALVE
- FIRE HYDRANT (COMPLETE W/ VALVE AND ASSEMBLY)
- PROPOSED WATER SERVICE
- PROPOSED WATER LINE
- EXISTING WATER LINE

100 50 0 100 200
SCALE IN FEET
1" = 100'



TYPICAL SECTION

RECORD DRAWINGS

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ENGINEERING CONCEPTS & DESIGNS, L.P.
Todd Wintters 2-26-08
TODD WINTTERS, P.E. DATE

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REVISIONS:

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DWG FILE NAME: 7515 WTR.DWG

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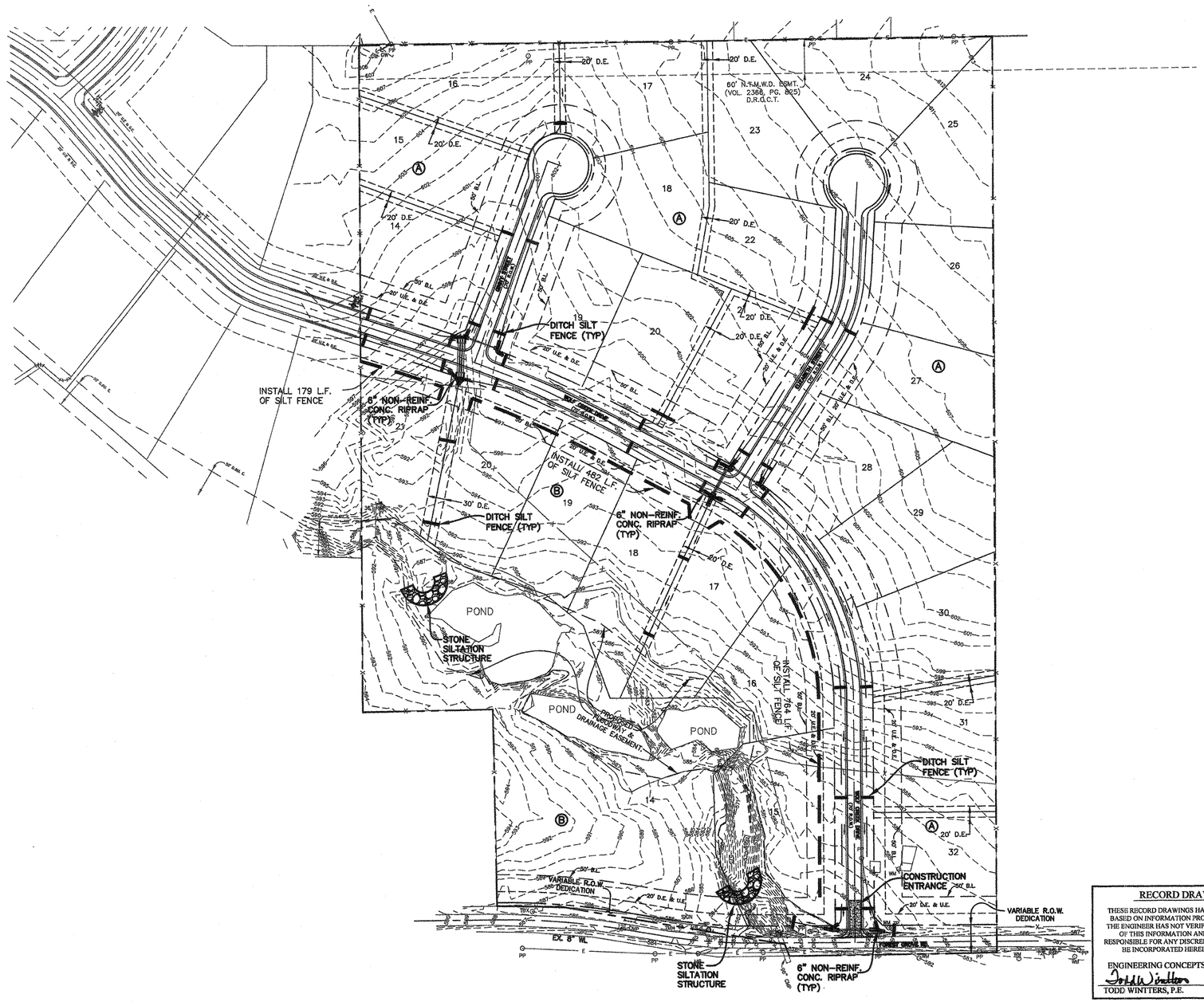
STATE OF TEXAS TODD D. WINTTERS 87085 REGISTERED PROFESSIONAL ENGINEER

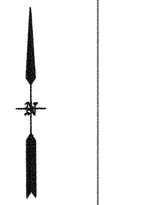
WATER PLAN

WOLF CREEK PHASE 2

CITY OF LUCAS, COLLIN COUNTY, TEXAS

SHEET 10 OF 14





LEGEND

- SILT FENCE
- STONE SILTATION STRUCTURE
- ROCK RIP RAP
- 6" NON-REINF CONC. RIPRAP
- CONSTRUCTION ENTRANCE

NOTES:

1. A STORM WATER POLLUTION PREVENTION PLAN (S.W.P.P.P.) INCLUDING NOTICE OF INTENT (N.O.I.) WILL BE PREPARED BY THE GENERAL CONTRACTOR FOR THIS PROJECT IN ACCORDANCE WITH THE REQUIREMENTS OF THE N.P.D.E.S. GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION.
2. ALL CONTRACTORS WILL COMPLY WITH THE REQUIREMENTS AND INTENT OF THE N.P.D.E.S. GENERAL PERMIT FOR STORM WATER DISCHARGES.
3. EACH CONTRACTOR SHALL SUBMIT A NOTICE OF INTENT (N.O.I.) FOR STORM WATER DISCHARGE PERMIT COVERAGE. THIS SUBMITTAL SHALL BE COORDINATED WITH THE OWNER AND SHALL OCCUR NO LESS THAN 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY.
4. EACH CONTRACTOR SHALL OBTAIN AND SUBMIT TO THE OWNER A POLLUTION PREVENTION CERTIFICATION FROM EACH SUBCONTRACTOR WHOSE WORK IMPACTS THE STORM WATER POLLUTION PREVENTION PLAN (S.W.P.P.P.) PRIOR TO THE PERFORMANCE OF ANY WORK BY SAID SUBCONTRACTOR. THESE CERTIFICATIONS SHALL BECOME A PART OF THE STORM WATER POLLUTION PREVENTION PLAN.
5. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES, AS INDICATED ON THE PLANS AND AS FIELD CONDITIONS WARRANT, PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY. REPAIRS OR MODIFICATIONS TO THE MEASURES WILL BE MADE BY THE CONTRACTOR IF THE CONTROL MEASURES PROVE INEFFECTIVE OR IF ADDITIONAL CONTROL MEASURES ARE NECESSARY.
6. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PREVENT TRACKING OF MUD AND/OR SOILS ONTO EXISTING AND/OR NEW PAVEMENT. ANY TRACKING THAT OCCURS SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
7. CONTRACTOR SHALL CONSTRUCT INLET PROTECTION FOR ALL INCOMPLETE CURB INLETS AND SHALL TAKE EVERY MEASURE TO KEEP SOILS AND SEDIMENTS FROM ENTERING THE STORM SEWER SYSTEM.
8. CONTRACTOR SHALL CONSTRUCT INLET PROTECTION FOR ALL COMPLETED CURB INLETS AND SHALL TAKE EVERY MEASURE TO KEEP SOILS AND SEDIMENTS FROM ENTERING THE STORM SEWER SYSTEM.
9. CONTRACTOR SHALL INSTALL APPROPRIATE INLET PROTECTION AT ALL AREA DRAINS.
10. AT A MINIMUM, PERIMETER CONTROLS SUCH AS SILT FENCE OR STRAW BALES SHALL BE INSTALLED AT ALL DOWN SLOPE BOUNDARIES AND AS WARRANTED WHERE PAVEMENT REMOVAL, UTILITY CONSTRUCTION, GRADING, OR OTHER CONSTRUCTION ACTIVITIES ARE TO BE PERFORMED. THE CONTRACTOR SHALL AT ALL TIMES TAKE SUCH MEASURES AS NECESSARY TO MINIMIZE OFFSITE TRACKING OR TRANSPORT OF SEDIMENT AND DEBRIS.
11. DAMAGE TO ADJACENT PROPERTY AND/OR TO RECEIVING WATERS CAUSED BY IMPROPERLY INSTALLED OR POORLY MAINTAINED EROSION CONTROL MEASURES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ANY SILTATION CAUSED BY HIS OPERATIONS AND/OR FAILURE OF THE EROSION CONTROL MEASURES.
13. CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ACCUMULATED SILT AND SEDIMENT FROM EROSION CONTROL MEASURES WHEN IT REACHES A DEPTH OF SIX (6) INCHES OR IMPAIRS THE EFFECTIVENESS OF THE MEASURES.
14. THE CONTRACTORS REPRESENTATIVE WILL INSPECT THE PROJECT EVERY SEVEN DAYS, AT A MINIMUM, AND AFTER EVERY RAINFALL OF ONE-HALF INCHES OR GREATER TO DETERMINE THE INTEGRITY AND EFFECTIVENESS OF THE EROSION CONTROL MEASURES. A WRITTEN INSPECTION REPORT WILL BE FILED WITH THE POLLUTION PREVENTION PLAN. THIS INSPECTION DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR INSPECTION AND MAINTENANCE OF THE EROSION CONTROL MEASURES OR HIS DUTY TO COMPLY WITH THE INTENT AND CONDITIONS OF THE N.P.D.E.S. GENERAL PERMIT.
15. ALL STOCKPILED SOILS WILL BE SURROUNDED BY A STRAW BALE DIKE, SILT FENCE, SEDIMENT CONTROL SWALE, OR EQUIVALENT MEASURE TO PROPERLY CONTROL SEDIMENT RUNOFF, AS APPROVED BY THE OWNER.
16. CONTRACTOR SHALL STABILIZE ANY AREA WHERE CONSTRUCTION ACTIVITY IS TO BE TEMPORARILY OR PERMANENTLY CEASED FOR MORE THAN 14 DAYS.

RECORD DRAWINGS

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ENGINEERING CONCEPTS & DESIGNS, L.P.

Todd Wintters 1-31-09

TODD WINTTERS, P.E. DATE

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REVISIONS:

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PROJECT NO.: 7515
DWG FILE NAME: 7515 ERO.DWG

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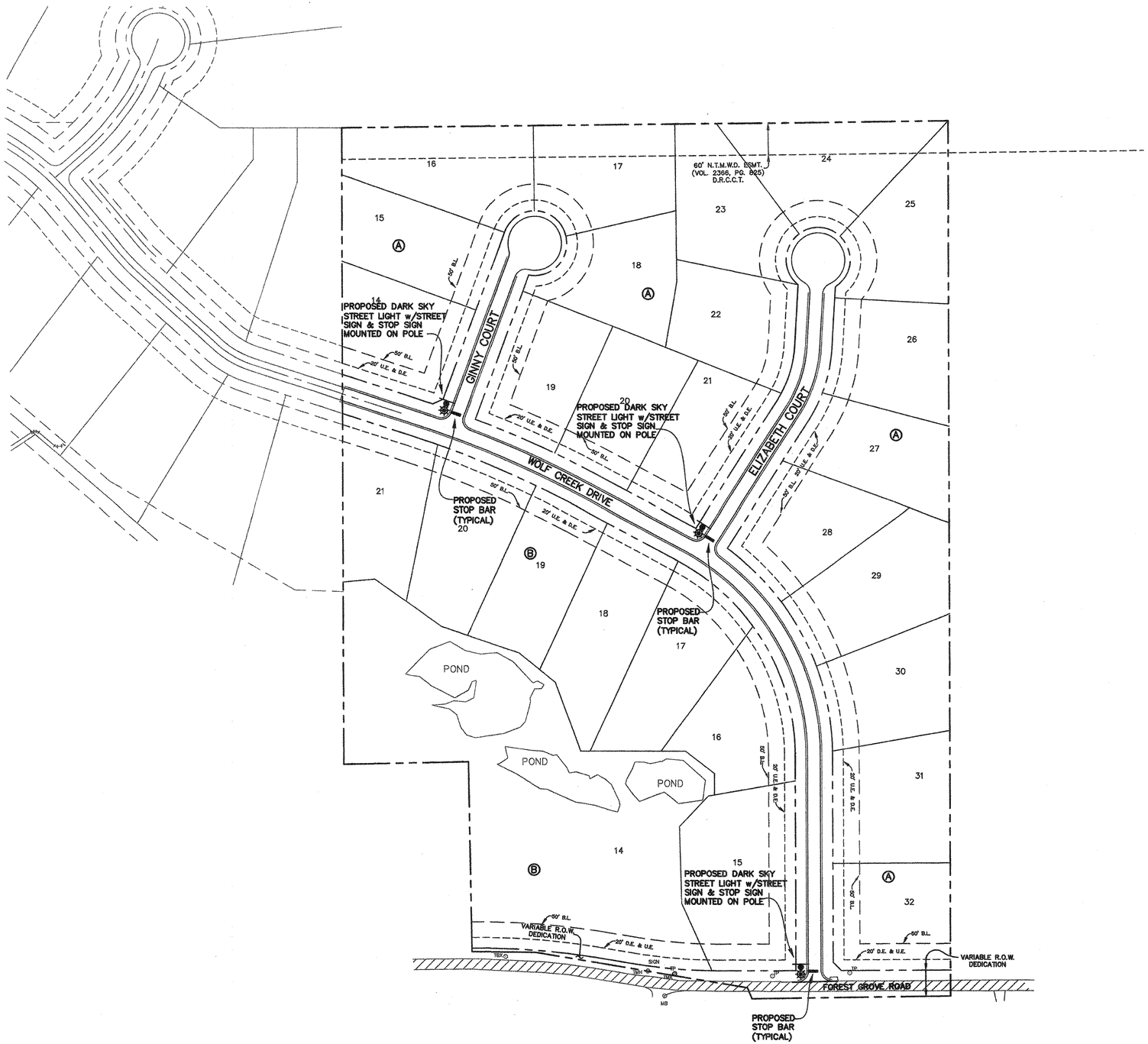
STATE OF TEXAS TODD D. WINTTERS 87085 REGISTERED PROFESSIONAL ENGINEER 12.5.06

EROSION CONTROL PLAN

WOLF CREEK PHASE 2

CITY OF LUCAS, COLLIN COUNTY, TEXAS

SHEET 11 OF 14



N

100 50 0 100 200

SCALE IN FEET
1" = 100'

LEGEND

- PROPOSED DARK SKY STREET LIGHT w/STREET SIGN & STOP SIGN MOUNTED ON POLE
- PROPOSED STOP BAR (24" WIDE THERMOPLASTIC)

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972-941-8400 FAX: 972-941-8401 WWW.ECDLP.COM

REVISIONS:

DRAWN:	ECD	DATE:	DECEMBER 2006
CHECKED:	TW	DATE:	DECEMBER 2006
PROJECT NO.:	07515		
DWG FILE NAME:	7515 SIGN-LIT.DWG		

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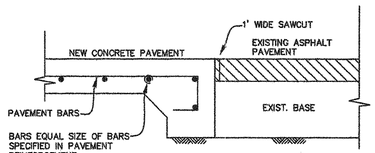
STATE OF TEXAS
TODD D. WINTTERS
87085
REGISTERED PROFESSIONAL ENGINEER
12.5.06

SIGNAGE & LIGHTING PLAN

WOLF CREEK PHASE 2

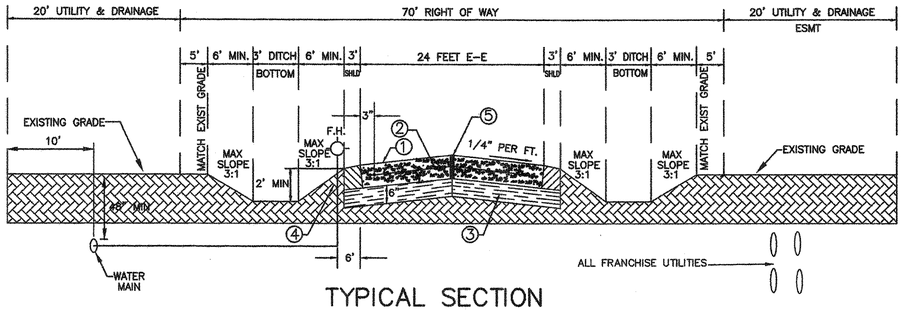
CITY OF LUCAS, COLLIN COUNTY, TEXAS

SHEET 12 OF 14

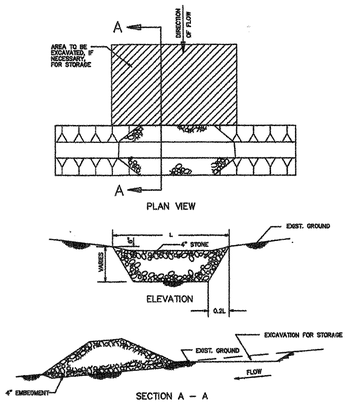


CONNECTION TO EXISTING ASPHALT PAVEMENT

N.T.S.



TYPICAL SECTION



STONE SILTATION STRUCTURE

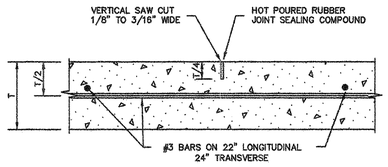
N.T.S.

Stone Siltation Structure To Be Installed Prior To Beginning Work On Site.

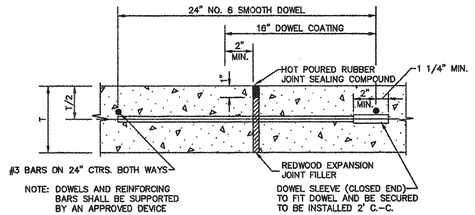
TYPICAL PAVING DETAIL

N.T.S.

1. PAVEMENT SHALL BE 6" THICK, 3600 PSI STRENGTH CONCRETE.
2. NO. 3 BARS ON 18" CENTERS BOTH WAYS.
3. SUBGRADE SHALL BE 6" THICK LIME STABILIZED (7%) AND COMPACTED TO 95 PERCENT OF STANDARD PROCTOR.
4. SHOULDERS SHALL BE CONSTRUCTED WITH 6" TOPSOIL.
5. LONGITUDINAL SAWJOINT ALONG CENTERLINE OF PAVEMENT SHALL BE PROVIDED.
6. SAWED TRANSVERSE DUMMY JOINTS SHALL BE SPACED AT 15'.
7. TRANSVERSE EXPANSION JOINT SHALL BE LOCATED AT INTERSECTIONS AND SPACED AT 60' MAXIMUM.
8. DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

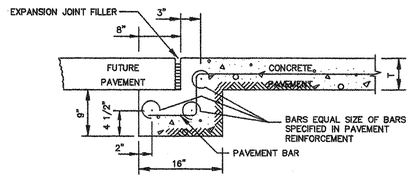


SAWED DUMMY JOINT DETAIL



TRANSVERSE EXPANSION JOINT DETAIL

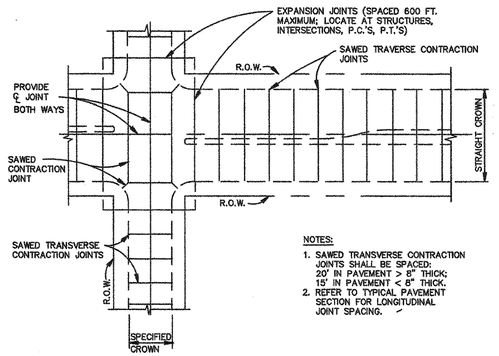
NOTE: SPACE 600' O.C., LOCATE AT INTERSECTIONS



STREET HEADER FOR FUTURE PAVEMENT

N.T.S.

CONSTRUCTION JOINT DETAIL

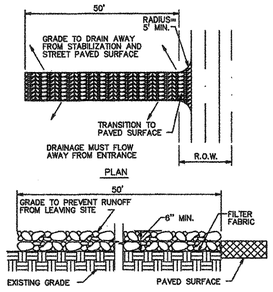


NOTES:

1. SAWED TRANSVERSE CONTRACTION JOINTS SHALL BE SPACED: 20' IN PAVEMENT > 8" THICK; 15' IN PAVEMENT < 8" THICK.
2. REFER TO TYPICAL PAVEMENT SECTION FOR LONGITUDINAL JOINT SPACING.

SPACING DIAGRAM FOR TRANSVERSE JOINTS

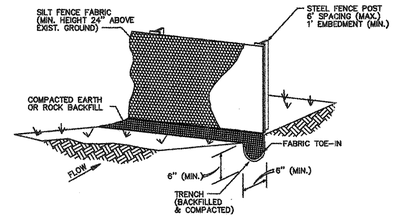
N.T.S.



STABILIZED CONSTRUCTION ENTRANCE / EXIT

N.T.S.

NCTCOG 02270.G
STORM WATER QUALITY BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES

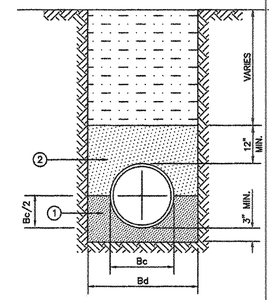


SILT FENCE SHOULD BE SECURELY FASTENED TO BACKING SUPPORT AND POSTS.

SILT FENCE

N.T.S.

NCTCOG 02270.B
STORM WATER QUALITY BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES



① FINE GRADATION CRUSHED STONE – TOP LAYER IS TO BE PLACED TO GRADE TO PROVIDE UNIFORM SUPPORT OF PIPE BARREL. EXCAVATE BELL HOLES.

② SELECT MATERIAL FREE OF ROCKS, CLUMPS OR DEBRIS LARGER THAN 6" IN GREATEST DIMENSION. COMPACT TO 90% STANDARD PROCTOR DENSITY. UNDER STRUCTURES, ROADWAYS AND PAVEMENT, EXCLUDE MATERIAL WITH LL>50 AND COMPACT TO 95% STANDARD PROCTOR DENSITY. GRANULAR BACKFILL MATERIAL SHALL BE WELL GRADED.

STORM SEWER R.C.P. EMBEDMENT

RECORD DRAWINGS

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY DISCREPANCIES WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

ENGINEERING CONCEPTS & DESIGNS, L.P.

Todd Wintters 1-31-08

TODD WINTTERS, P.E. DATE

ENGINEERINGCONCEPTS & DESIGN, L.P.
ENGINEERING / PROJECT MANAGEMENT / CONSTRUCTION SERVICES
2801 CAPITAL, WYLIE, TX 75098
972-941-8400 FAX: 972-941-8401 WWW.ECDLP.COM

REVISIONS:	
DRAWN: ECD	DATE: DECEMBER 2006
CHECKED: TW	DATE: DECEMBER 2006
PROJECT NO.: 7515	
DWG FILE NAME: 7515 DETAILS.DWG	

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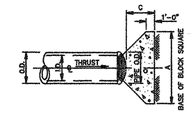
STATE OF TEXAS — TODD D. WINTTERS — 87085 — REGISTERED PROFESSIONAL ENGINEER — 12.5.06

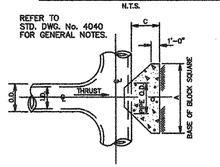
PAVING, DRAINAGE & EROSION CONTROL DETAILS WOLF CREEK, PHASE 2

CITY OF LUCAS, COLLIN COUNTY, TEXAS

SHEET 13 OF 14



PLAN OF PLUG THRUST BLOCK
N.T.S.

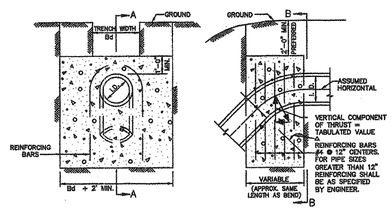


PLAN OF TEE THRUST BLOCK
N.T.S.

I.D. (IN.)	T (IN.)	Δ = 11.25° (FT.)	Δ = 22.50° (FT.)	E (FT.)
4,6,8	0.4	1.5	1.5	0.9
10,12	0.5	1.5	1.5	1.2
16,18	0.6	1.5	1.5	1.6
20	0.7	1.5	1.5	1.8
24	0.9	1.5	1.5	2.1
30	2.9	1.5	1.9	2.6
36	4.5	1.5	2.3	3.3
42	5.0	1.8	2.6	3.8
48	5.5	2.0	3.0	4.3
54	6.0	2.3	3.4	4.8
60	6.5	2.5	3.8	5.3
66	6.8	2.8	4.1	5.7
72	7.5	3.0	4.5	6.3
78	7.5	3.3	4.9	6.7
84	8.0	3.5	5.3	7.2
90	8.5	3.8	5.6	7.7
96	9.0	4.0	6.0	8.2

I.D. (IN.)	G (FT.)	THRUST (TONS)	Δ = 30° EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)
4,6,8	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1
10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2
16,18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.4
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7
30	3.6	27.5	6.5	5.0	1.9	3.5	4.0	0.9
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.6
42	5.1	53.8	8.0	7.0	5.1	5.5	5.0	2.5
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.6
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.6
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19.5
90	10.9	247.1	16.5	15.0	45.0	11.5	11.0	23.9
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9

I.D. (IN.)	G (FT.)	THRUST (TONS)	Δ = 45° EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)
4,6,8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1
10,12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3
16,18	3.2	18.5	4.5	4.5	1.2	3.0	3.5	0.8
20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7
24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1
30	5.4	40.8	6.5	5.0	3.2	5.5	4.0	1.8
36	6.5	58.5	10.0	6.0	5.3	6.5	4.5	2.6
42	7.5	79.8	11.5	7.0	8.1	8.0	5.0	4.2
48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3
54	9.7	131.5	15.0	9.0	17.1	10.5	6.5	8.9
60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0
66	11.8	196.5	18.0	11.0	30.1	12.0	8.5	16.2
72	12.9	233.9	19.5	12.0	38.6	14.0	8.5	20.7
78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9
84	15.0	318.4	23.0	14.0	61.2	15.5	10.5	32.5
90	16.1	365.5	24.5	15.0	74.5	17.5	10.5	39.6
96	17.1	415.8	26.0	16.0	89.5	18.5	11.5	48.5



ELEVATION "B-B"
N.T.S.

SECTION "A-A"
N.T.S.

I.D. (IN.)	THRUST (TONS)	C (FT.)	EARTH A (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK VOL. (C.Y.)
4,6,8	5.1	1.5	2.5	0.3	2.0	0.2
10,12	11.3	1.5	3.5	0.8	2.5	0.3
16,18	25.5	2.0	5.5	1.6	4.0	0.9
20	35.2	2.0	6.0	2.1	4.5	1.1
24	45.2	2.5	7.0	3.1	5.0	1.7
30	71.0	3.0	8.0	4.4	6.0	2.4
36	90.3	4.0	9.0	7.3	6.5	4.2
42	122.9	4.5	10.5	10.1	7.5	5.6
48	160.6	5.0	12.0	13.2	8.0	7.4
54	179.0	5.5	13.5	17.1	9.5	11.2
60	212.0	6.0	15.0	28.4	10.5	15.7
66	257.0	6.5	16.5	36.8	11.5	20.7
72	305.0	7.5	17.5	47.2	12.5	27.2
78	358.0	8.0	19.0	58.5	13.5	33.7
84	416.0	8.5	20.0	72.3	14.5	41.9
90	477.0	9.0	21.0	87.7	15.5	49.7
96	543.0	9.5	23.5	104.8	16.5	61.0

I.D. (IN.)	G (FT.)	THRUST (TONS)	Δ = 11.25° EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)	I.D. (IN.)	G (FT.)	THRUST (TONS)	Δ = 22.50° EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1
16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	16,18	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.3	20	1.8	12.3	3.5	3.5	0.7	2.0	3.0	0.4
24	1.1	8.9	3.0	3.5	0.6	1.5	3.0	0.3	24	2.2	17.7	4.0	4.5	1.0	3.0	3.5	0.5
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	30	2.7	20.7	5.0	4.5	1.5	3.0	4.0	0.8
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5	36	3.3	29.8	5.5	5.5	2.3	4.0	4.0	1.3
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8	42	3.8	40.5	7.0	6.0	3.9	4.5	5.0	2.1
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1	48	4.4	52.9	8.0	7.0	5.7	4.5	6.0	2.8
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	1.4	54	4.9	67.0	9.0	8.0	8.0	6.0	6.0	4.1
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	1.8	60	5.5	82.7	9.5	9.0	10.8	6.0	7.0	5.3
66	3.0	50.3	6.5	8.0	5.1	3.5	8.0	2.7	66	6.0	100.1	10.5	10.0	14.1	6.5	8.0	7.2
72	3.3	59.9	7.5	8.0	6.3	4.0	8.0	3.3	72	6.6	119.1	11.0	11.0	17.8	7.5	8.0	9.1
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	3.9	78	7.1	139.8	12.0	12.0	22.5	8.0	9.0	11.7
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	5.3	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0	14.8
90	4.1	93.5	9.5	10.0	12.3	5.0	10.0	6.3	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0	17.7
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	7.4	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0	21.8

I.D. (IN.)	G (FT.)	THRUST (TONS)	Δ = 67.50° EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)	I.D. (IN.)	G (FT.)	THRUST (TONS)	Δ = 90° EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)
4,6,8	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4,6,8	2.7	7.1	5.0	1.5	0.4	2.0	2.0	0.2
10,12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10,12	4.0	18.0	6.5	2.5	1.0	3.5	2.5	0.5
16,18	4.7	28.3	7.5	4.0	1.8	5.5	3.0	0.9	16,18	6.0	36.0	9.0	4.0	2.4	4.5	4.0	1.0
20	5.2	34.9	9.0	4.0	2.3	5.5	3.5	1.2	20	6.6	44.4	10.0	4.5	3.1	6.0	4.0	1.5
24	6.2	50.3	11.5	4.5	3.5	6.5	4.0	1.6	24	7.9	64.0	14.5	4.5	5.0	8.0	4.0	2.1
30	7.8	78.9	12.0	5.0	4.8	7.5	4.0	2.2	30	9.9	75.0	15.0	5.0	6.7	10.0	4.0	3.3
36	9.4	94.9	14.5	6.0	8.2	8.5	4.5	3.6	36	11.9	108.0	18.0	6.0	11.4	12.0	4.5	5.3
42	10.9	115.5	17.0	7.0	12.6	11.0	5.5	6.3	42	13.9	147.0	21.0	7.0	17.8	14.0	5.5	8.7
48	12.5	150.9	19.0	8.0	18.4	13.0	8.0	9.2	48	15.9	192.0	24.0	8.0	26.2	16.0	6.0	12.4
54	14.0	191.0	21.5	9.0	26.0	15.0	8.5	12.9	54	17.9	243.0	27.0	9.0	36.9	18.0	7.0	18.1
60	15.6	235.8	24.0	10.0	35.6	16.0	7.5	17.6	60	19.8	299.8	30.0	10.0	50.3	20.0	7.5	24.0
66	17.1	285.3	26.0	11.0	46.0	18.0	8.0	23.0	66	21.8	362.8	33.0	11.0	66.3	22.0	8.5	32.5
72	18.7	339.5	28.5	12.0	57.8	19.0	9.0	28.4	72	23.8	431.8	36.0	12.0	85.6	24.0	9.0	41.0
78	20.2	398.6	31.0	13.0	75.7	21.0	9.5	37.4	78	25.7	506.7	39.0	13.0	108.2	26.0	10.0	53.2
84	21.8	462.1	33.5	14.0	94.7	22.0	10.0	46.5	84	27.7	587.7	42.0	14.0	134.4	28.0	10.5	64.8
90	23.3	530.5	35.5	15.0	114.4	24.5	11.0	58.2	90	29.0	674.6	45.0	15.0	164.9	30.0	11.5	81.2
96	24.9	603.6	38.0	16.0	138.9	25.5	12.0	70.0	96	31.6	767.5	48.0	16.0	199.0	32.0	12.0	95.1

TABLES OF DIMENSIONS AND QUANTITIES

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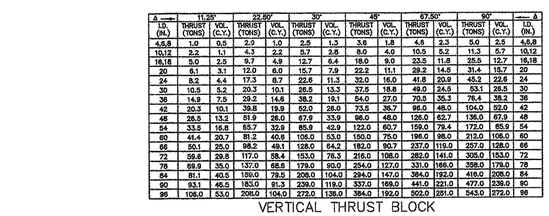
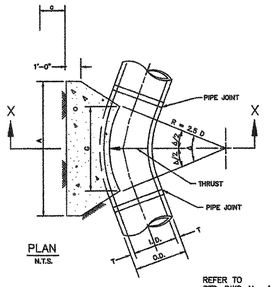


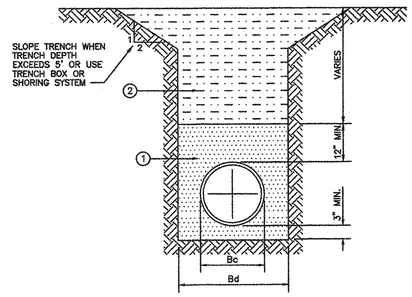
VERTICAL THRUST BLOCK
AT PIPE BEND

SECTION X-X
N.T.S.



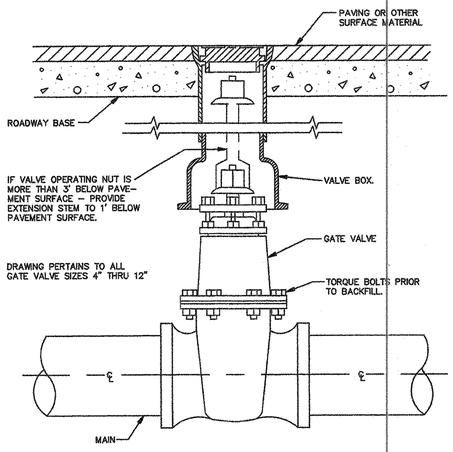
PLAN
N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

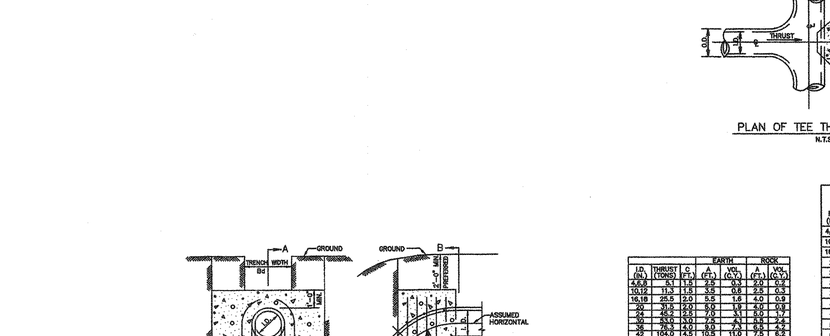


① GRANULAR MATERIAL (SAND) COMPACTED TO 95% STANDARD PROCTOR DENSITY.

② SELECT MATERIAL FREE OF ROCKS, CLUMPS OR DEBRIS LARGER THAN 6" IN GREATEST DIMENSION. COMPACT TO 90% STANDARD PROCTOR DENSITY. UNDER STRUCTURES, ROADWAYS AND PAVEMENT, EXCLUDE MATERIAL WITH LL >50 COMPACT TO 95% STANDARD PROCTOR DENSITY. GRANULAR MATERIAL MUST BE WELL GRADED



GATE VALVE BOX AND
EXTENSION STEM
N.T.S.



WATER SERVICE INSTALLATION
3/4" OR 1" LINE

GENERAL NOTES FOR ALL THRUST BLOCKS:

1. CONCRETE FOR BLOCKING SHALL BE CLASS "B".
2. ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 PSI FOR DUCTILE IRON, P.V.C., AND 150 PSI FOR CONCRETE PIPE.
3. VOLUMES OF THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS "B") IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THE THRUST ON THE VERTICAL BEND.
4. WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
5. POUR CONCRETE FOR BLOCK AGAINST UNDISTURBED EARTH.
6. DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
7. THE SOIL BEARING PRESSURES ARE BASED ON 1000 LBS./S.F. IN SOIL AND 2000 LBS./S.F. IN ROCK.
8. USE POLYETHYLENE WRAP OR EQUAL BETWEEN CONCRETE AND BEND, TEE, OR PLUG TO PREVENT THE CONCRETE FROM STICKING TO IT.
9. CONCRETE SHALL NOT EXTEND BEYOND JOINTS.

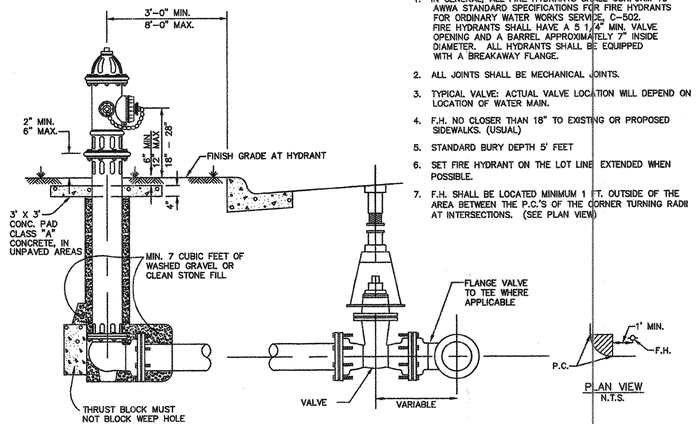
SIZE OF PIPE IN INCHES DIA.	KIND OF PIPE	EXTERNAL DIA. (Be) IN INCHES	TRENCH WIDTH (Bd) IN INCHES
6"	PVC SEWER PIPE	6.28	24
8"	PVC SEWER PIPE	8.16	24
10"	PVC SEWER PIPE	10.2	26

WATER EMBEDMENT

CLASS "B-3"

NOTES:

1. IN GENERAL, ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE, C-502. FIRE HYDRANTS SHALL HAVE A 5 1/4" MIN. VALVE OPENING AND A BARREL APPROXIMATELY 7" INSIDE DIAMETER. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE.
2. ALL JOINTS SHALL BE MECHANICAL JOINTS.
3. TYPICAL VALVE: ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF WATER MAIN.
4. F.H. NO CLOSER THAN 18" TO EXISTING OR PROPOSED SIDEWALKS. (USUAL)
5. STANDARD BURY DEPTH 5' FEET
6. SET FIRE HYDRANT ON THE LOT LINE EXTENDED WHEN POSSIBLE.
7. F.H. SHALL BE LOCATED MINIMUM 1 FT. OUTSIDE OF THE AREA BETWEEN THE P.C.'S OF THE CORNER TURNING RADII AT INTERSECTIONS. (SEE PLAN VIEW)



PLAN VIEW
N.T.S.

FIRE HYDRANT
INSTALLATION

NOTE:

IN UNPAVED AREAS, INSTALL 2' x 2' x 6" CONCRETE VALVE PAD FLUSH WITH THE TOP OF VALVE BOX. REINFORCE WITH #3 BARS ON 6" CENTERS BOTH WAYS.

RECORD DRAWINGS

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY DISCREPANCIES WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

ENGINEERING CONCEPTS & DESIGNS, L.P.

Todd D. Wintters — 1-31-08

TODD WINTTERS, P.E. — DATE

ENGINEERINGCONCEPTS & DESIGN, L.P.
ENGINEERING / PROJECT MANAGEMENT / CONSTRUCTION SERVICES
2801 CAPITAL, WYLIE, TX 75098
972-941-8400 FAX: 972-941-8401 WWW.ECDLP.COM

REVISIONS:

DRAWN: ECD — DATE: DECEMBER 2006
CHECKED: TW — DATE: DECEMBER 2006
PROJECT NO.: 7515
DWG FILE NAME: 7515 DETAILS.DWG

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF CONSTRUCTION. THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY TODD D. WINTTERS, P.E. 87085

STATE OF TEXAS — TODD D. WINTTERS — 87085 — REGISTERED PROFESSIONAL ENGINEER — 12.5.06

WATER DETAILS

WOLF CREEK, PHASE 2

CITY OF LUCAS, COLLIN COUNTY, TEXAS

SHEET 14 OF 14